Rio Tinto

Kennecott Uranium Company

Sweetwater Uranium Project

Source Material License SUA-1350

License Condition 12.3 – Required Reporting

18 February 2010

- **Semiannual 10 CFR 40.65 Report – Airborne Effluents 2009**
- **ALARA Audit 2009**
- **Land Use Survey 2009**
- **Corrective Action Program Review 2009**

Rio Tinto

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25 January 2010

Mr. Keith I. McConnell, Deputy Director
Division of Waste Management and Environmental Protection
Office of Federal and State Materials and Environmental Management Programs
U.S. Nuclear Regulatory Commission
11545 Rockville Pike, Mail Stop T7-E18
Rockville, MD 20852

Dear Mr. McConnell:

SUBJECT: Sweetwater Uranium Project - Docket Number 40-8584
Source Materials License SUA-1350 - Semiannual 10 CFR 40.65 Report
Airborne Effluents

Enclosed is Kennecott Uranium Company's Semiannual 10 CFR 40.65 Report for the second half of 2009 for airborne effluents. This report addresses the requirements of License Condition 11.5 of SML #SUA-1350, as well as the requirements of 10 CFR 40.65(a)(1).

Kennecott Uranium Company is only required to monitor for ambient gamma and airborne particulates at the downwind location (Air 4A) and radon at the upwind (Air 2) and downwind (Air 4A) locations as long as operations remain suspended as per License Condition 11.5. Kennecott is not required to perform stack, soil, sediment or vegetation sampling as long as operations remain suspended.

Kennecott Uranium Company has examined the data included in this report, calculated the dose to the nearest resident in millirems per year for the second half of 2009 from the licensed activities and concluded that the dose does not exceed the 100 mrem per year dose limit. A copy of the calculation sheet as well as an explanation of the calculation method is included. This is being done at the request of Elaine Brummett, previously of your staff, in an email dated September 7, 2001.

Should you have any questions, please contact me at (307) 328-1476.

Sincerely yours,

Oscar A Paulson
Oscar Paulson
Facility Supervisor

cc: James Webb, Project Manager
Director - USNRC DNMS, Region IV (w/o enc.)
Rich Atkinson

KENNECOTT URANIUM COMPANY
SWEETWATER URANIUM PROJECT
Source Material License SUA-1350

2009
RadTrak Radon Monitor
(pCi/L)

DATE	LOCATION	RADIONUCLIDE	CONCENTRATION	ERROR ESTIMATE	LOWER LIMIT OF DETECTION (LLD)	
				pCi/L	pCi/L-Days	pCi/L
1/4/09 – 3/31/09	Downwind - Air 4A	Radon	2.7 pCi/L	+/- 0.13	6.0	0.06
1/4/09 – 3/31/09	Upwind - Air 2-A[1]	Radon	2.7 pCi/L	+/- 0.13	6.0	0.06
1/4/09 – 3/31/09	Upwind – Air 2-B[1]	Radon	2.9 pCi/L	+/- 0.13	6.0	0.06
	Average – Air 2		**2.8 pCi/L**			
3/31/09 – 6/29/09	Downwind - Air 4A	Radon	2.3 pCi/L	+/- 0.11	6.0	0.06
3/31/09 – 6/29/09	Upwind - Air 2-A[1]	Radon	2.5 pCi/L	+/- 0.12	6.0	0.06
3/31/09 – 6/29/09	Upwind – Air 2-B[1]	Radon	2.6 pCi/L	+/- 0.12	6.0	0.06
	Average – Air 2		**2.6 pCi/L**			
6/29/09 – 10/01/09	Downwind - Air 4A	Radon	2.9 pCi/L	+/- 0.13	6.0	0.06
6/29/09 – 10/01/09	Upwind - Air 2-A[1]	Radon	3.4 pCi/L	+/- 0.14	6.0	0.06
6/29/09 – 10/01/09	Upwind – Air 2-B[1]	Radon	3.7 pCi/L	+/- 0.15	6.0	0.06
	Average – Air 2		**3.6 pCi/L**			
10/01/09 -1/3/10	Downwind - Air 4A	Radon	2.8 pCi/L	+/- 0.12	6.0	0.06
10/01/09 -1/3/10	Upwind - Air 2-A[1]	Radon	3.4 pCi/L	+/- 0.14	6.0	0.06
10/01/09 -1/3/10	Upwind – Air 2-B[1]	Radon	4.1 pCi/L	+/- 0.15	6.0	0.06
	Average – Air 2		**3.8 pCi/L**			

[1] See attached explanation – Item 1

KENNECOTT URANIUM COMPANY
SWEETWATER URANIUM PROJECT
Source Material License SUA-1350

Explanation of RadTrak data:

1. A second RadTrak was deployed at the upwind Air 2 location during all four quarters of 2009 for comparative and quality assurance/quality control purposes. The results from both RadTraks were averaged to generate the final values for all four quarters of 2009 for monitoring station Air 2 (upwind air).

KENNECOTT URANIUM COMPANY
SWEETWATER URANIUM PROJECT
Source Material License SUA-1350

2009
DIRECT RADIATION MEASUREMENTS
(TLD)

Location	Date	Exposure Rate (mr/Qtr)	Lower Limit of Detection (LLD) Millirems
TLD			
0000 - Control	1/5/09 – 4/6/09	34.9	10[1]
0004 - Air 4A	1/5/09 – 4/6/09	39.2	10[1]
TLD			
0000 - Control	4/6/09 – 7/6/09	38.6	10[1]
0004 - Air 4A	4/6/09 – 7/6/09	44.7	10[1]
TLD			
0000 - Control	7/6/09 – 10/1/09	34.7	10[1]
0004 - Air 4A	7/6/09 – 10/1/09	44.6	10[1]
TLD			
0000 - Control	10/1/09 – 1/3/10	39.3	10[1]
0004 - Air 4A	10/1/09 – 1/3/10	46.8	10[1]

[1] Please see the following copy of a letter from ThermoNUtech on Lower Limits of Detection (LLDs).

Thermo NUtech
5635 Jefferson Street NE
Albuquerque, NM 87109
(505) 345-9931 • FAX (505) 761-5410

Lower Limits of Detection (LLDs)

1990 DOELAP Study (See DOELAP Handbook § 3.4)
95% Confidence Level Values

Known Fields: LLD in mrem per period					
Radiation Field		Deployment Period			
Type	Test Source	Monthly*	Quarterly	Semi-Annual*	Annual*
gamma	^{137}Cs	6	11	16	22
X-ray	mixed beam	6	11	16	22
hard beta	$^{90}Sr/Y$	8	13	18	26
soft beta	^{204}Tl	36	63	89	126
slow neutron	^{252}Cf mod.	5	8	11	16
fast neutron	^{252}Cf unmod.	43	74	105	148

*Extrapolated from quarterly values. The study was done using a period of one quarter.

For routine reporting purposes, the LLD is taken to be 10 mrem.
This value is very close to the measured LLD for most commonly encountered radiation fields.
No values less than this nominal LLD are reported.

Subsidiary of Thermo Remediation, a Thermo Electron Company

KENNECOTT URANIUM COMPANY
SWEETWATER URANIUM PROJECT
Source Material License SUA-1350

CONTINUOUS LOW-VOLUME AIR PARTICULATE ANALYSIS

STATION 4A – 2009

Quarter/Date Sampled Air Volume	Radionuclide	Concentration µCi/ml	Error Estimate µCi/ml	LLD µCi/ml	Effluent Conc.* pCi/ml	% Effluent Concentration
1st Quarter	U-nat	4.78 E-17	N/A	1.00 E-16	9.00 E-14	5.31 E-02
1/3/09 – 3/30/09	Th-230	7.44 E-17	3.90 E-17	1.00 E-16	3.00 E-14	2.48 E-01
Air Vol in mLs	Ra-226	2.99 E-17	8.06 E-18	1.00 E-16	9.00 E-13	3.33 E-03
4.73 E+10	Pb-210	1.48 E-14	4.24 E-16	2.00 E-15	6.00 E-13	2.46 E+00
2nd Quarter	U-nat	4.64 E-17	N/A	1.00 E-16	9.00 E-14	5.15 E-02
3/30/09–6/29/09	Th-230	1.61 E-17	1.02 E-17	1.00 E-16	3.00 E-14	5.35 E-02
Air Vol in mLs	Ra-226	2.31 E-17	7.12 E-18	1.00 E-16	9.00 E-13	2.56 E-03
4.40 E+10	Pb-210	1.54 E-14	4.43 E-16	2.00 E-15	6.00 E-13	2.56 E+00
3rd Quarter	U-nat	7.94 E-17	N/A	1.00 E-16	9.00 E-14	8.82 E-02
6/29/09–9/28/09	Th-230	4.90 E-17	1.49 E-17	1.00 E-16	3.00 E-14	1.63 E-01
Air Vol in mLs	Ra-226	4.33 E-17	9.28 E-18	1.00 E-16	9.00 E-13	4.81 E-03
4.54 E+10	Pb-210	1.86 E-14	4.58 E-16	2.00 E-15	6.00 E-13	3.11 E+00
4th Quarter	U-nat	5.74 E-17	N/A	1.00 E-16	9.00 E-14	6.38 E-02
9/28-1/4/10	Th-230	3.24 E-17	1.15 E-17	1.00 E-16	3.00 E-14	1.08 E-01
Air Vol in mLs	Ra-226	-1.38 E-17	9.72 E-18	1.00 E-16	9.00 E-13	-1.54 E-03
4.92 E+10	Pb-210	1.63 E-14	2.90 E-16	2.00 E-15	6.00 E-13	2.71 E+00

LLD's are as published in Reg. Guide 4.14
*Effluent Concentration from the NEW 10 CFR Part 20 - Appendix B - Table 2
Year for Natural Uranium
Year for Thorium-230
Week for Radium-226
Day for Lead-210

RIO TINTO
ENERGY AMERICA

Memorandum

Oscar Paulson
Facility Supervisor
Kennecott Uranium Company

25 January 2010

To: File – 10 CFR 40.65 Report

Subject: Dose to the General Public in Millirems per Year as Represented by the Nearest Resident – Second Half 2009

The following is a dose calculation for the nearest resident (the contract security guard) for the second half of 2009.

Calculation Assumptions:

1. The nearest resident for dose calculation purposes is considered to be the site security officer when he is not on duty and sleeping inside the Security Trailer. The site security officer is scheduled to be on site from 5:30 p.m. on Thursday of each week to 10:00 p.m. the following Sunday, on holidays and at times that the Senior Facility Technician is on vacation. In spite of the fact that the site security officer does not reside on site continuously, no occupancy factor is assigned to him and for dose calculation purposes he is assumed to reside on site continuously. The security officer's trailer is located immediately south of the site's southern chain link fence. As such, the calculated dose to the security officer would also apply to any member of the general public approaching the site fence. No member of the general public would be in close proximity to the site for as long as the security officer, whose dose is calculated based on continuous occupancy, in spite of the fact that he does not reside on site continuously.
2. Radon concentrations are measured in the Security Trailer with RadTrak detectors placed in the kitchen and bedroom and changed quarterly. The results from these detectors are averaged to derive a semiannual radon concentration in Pico curies per liter for the Security Trailer.
3. Radon exposures in working levels are measured semiannually in the Security Trailer using a calibrated Buck Basic 12, Bendix BDX-44, MSA or Sensidyne GilAir II air pump and filter. The filter is read by the modified Kusnetz Method.
4. The radon concentration and exposure are used to calculate the equilibrium factor. The equilibrium factors calculated semiannually are averaged to derive a site equilibrium factor.
5. This equilibrium factor is applied to the upwind radon concentrations to derive a background radon dose and to the average semiannual radon concentration in the Security Trailer to derive a radon dose to the nearest resident. An equilibrium factor table is attached.
6. The dose from the semiannual downwind airborne particulate concentrations of natural uranium, radium-226 and thorium-230 are used to calculate the dose from airborne particulates in the Security Trailer in spite of the fact that the Security Trailer is not downwind of the facility.
7. The gamma dose from the downwind gamma radiation monitor (environmental thermo-luminescent dosimeter) is used to calculate the gamma radiation dose in the Security Trailer.
8. The doses from radon-222, airborne particulate radionuclides and gamma radiation are summed to produce a dose to the nearest resident (the Security Trailer).

9. The radon concentrations measured at the upwind air monitoring stations during the two (2) quarters for a given semiannual period are averaged, corrected for the site equilibrium factor and converted to a background radon dose for the facility.
10. This background radon dose is summed with the background gamma radiation dose (from the revised Environmental Report – dated August 1994) and the doses derived from the background airborne particulate concentrations (natural uranium, radium-226 and thorium-230 as described in the revised Environmental Report dated August 1994) to yield a background radiation dose for the facility for the given semiannual period.
11. The background dose is subtracted from the calculated dose to the nearest resident (Security Trailer) to derive a dose to the nearest resident from the facility.

BACKGROUND

		Average Concentration	Dose (mrem)
Gamma Exposure:			200.70 (approx. 22.9 uR/hr)
Airborne Particulates:			
	U nat	6.2 E-16 µCi/ml	0.34
	Ra-226	3.9 E-16 µCi/ml	0.22
	Th-230	3.9 E-16 µCi/ml	0.65
Gases:			
	Radon-222	3.64 pCi/l	273.9
Total			**475.8**

Notes:
1. An equilibrium factor of 0.171 was used for radon based on twenty-six (26) comparisons of radon-222 and radon-222 daughter concentrations over 16 years. Please see attached sheet entitled "Equilibrium Factors for Nearest Resident".
2. Gamma and airborne particulate background data is from the revised Environmental Report (August 1994).
3. The average background radon concentration of the RadTraks deployed at Air 2 in the third and fourth quarters of 2009 of 3.64 pCi/L was used for the second half 2009 radon concentration.
4. Calculation: (Radon concentration (pCi/l))*(Equilibrium factor)*(0.44 rems/pCi/l) = Dose (rems)

SECURITY TRAILER

		Average Concentration	Dose (mrem)
Gamma Exposure:			182.8
Airborne Particulates:			
	U nat	6.84 E-17 µCi/ml	0.038
	Ra-226	1.48 E-17 µCi/ml	0.001
	Th-230	4.07 E-17 µCi/ml	0.068
Gases:			
	Radon-222	2.04 pCi/l	153.5
Total			**336.4**

Notes:
1. An equilibrium factor of 0.171 was used for radon based on twenty-six (26) comparisons of radon-222 and radon-222 daughter concentrations over 16 years.

2. Downwind airborne particulate concentrations and gamma doses for the third and fourth quarters of 2009 were used for the security trailer. These doses were converted to millirems per year (mrem/yr).
3. Radon concentration was measured in the security trailer for the third and fourth quarters of 2009 and is based on an average of RadTrak units located in two (2) locations; the kitchen and the bedroom.

Second Half – 2009		
	Third Quarter	**Fourth Quarter**
Kitchen	1.9 pCi/L	2.3 pCi/L
Bedroom	1.7 pCi/L	2.2 pCi/L
Trailer Average:		**2.03 pCi/L**

4. The annual gamma dose rate is based upon the TLD dosimeters for the first and second quarters converted to an annual dose rate by doubling of the sum.

The calculated net (dose to the nearest resident minus background dose) annual TEDE from the licensed operations for the second half of 2009 is **0.0** mrem/year, which is below the 100 mrem/year dose limit to members of the general public.

Oscar A Paulson
Oscar Paulson
Avg dose.doc

Kennecott Uranium Company
Sweetwater Uranium Project
Equilibrium Factor for Nearest Residence
(Security Guard Trailer)

Date	Radon Concentration (pCi/L)	Exposure (WL)	Equilibrium Factor
1/1/93 – 6/30/93	3.20	0.009	0.28
1/1/97 – 6/30/97	1.50	0.003	0.20
7/1/97 – 12/31/97	2.20	0.002	0.09
1/1/98 – 6/30/98	1.65	0.003	0.18
1/1/99 – 6/30/99	1.90	0.009	0.47
7/1/99 – 12/31/99	3.25	0.002	0.06
1/1/00 – 6/30/00	2.12	0.004	0.19
7/1/00 – 12/31/00	3.05	0.009	0.30
1/1/01 – 6/30/01	3.60[1]	0.012	0.33
7/1/01 – 12/31/01	2.78	0.013[2]	0.47
1/1/02 – 6/30/02	2.48	0.009[2]	0.34
7/1/02 – 12/31/02	2.80	0.003[2]	0.11
1/1/03 – 6/30/03	2.40	0.004[2]	0.17
7/1/03 – 12/31/03	3.75[3]	0.006[2]	0.16
1/1/04 – 6/30/04	2.08	0.003[2]	0.14
7/1/04 – 12/31/04	3.00	0.0005	0.017
1/1/05 – 6/30/05	2.55	0.0013	0.051
7/1/05 – 12/31/05	3.22	0.0035	0.109
1/1/06 – 6/30/06	2.40	0.000	0.00
7/1/06 – 12/31/06	2.13	0.014	0.66
1/1/07 – 6/30/07	1.65	0.000	0.00
6/30/07 – 12/31/07	2.10[4]	0.0001	0.005
1/1/08 – 6/30/08	3.28	0.000	0.00
6/30/08 – 12/31/08	2.83	0.000	0.00
1/1/09 – 6/30/09	2.25	0.000	0.00
6/30/09 – 12/31/09	2.03	0.002	0.10
Average			**0.171**

1 This value is based upon an average of three (3) RadTrak detectors. The second quarter RadTrak detector in the Security Trailer bedroom was lost.
2 Average of two (2) measurements
3 Fourth quarter 2003 concentration only. Landauer, Inc. lost the third quarter 2003 RadTrak units.
4 This value is based upon an average of three (3) RadTrak detectors. The fourth quarter RadTrak detector in the Security Trailer kitchen was lost.

Calculation Parameters

1. Radon concentrations in the Security Trailer are calculated based upon the results of two (2) RadTrak detectors (one in the kitchen and one in the bedroom) that are changed quarterly. The radon concentration for a given semiannual period is an average of the results of four (4) RadTrak detections, one in the kitchen and one in the bedroom, changed quarterly.
2. Radon exposures (radon daughters concentrations measured in Working Levels) are taken semiannually in the trailer in two (2) locations (kitchen and bedroom) using a Buck Basic 12, Bendix BDX-44, MSA or Sensidyne GilAir II air pump and a filter. The filter is evaluated using the modified Kusnetz Method.
3. The equilibrium factor is calculated.

   Radon Dose (rems) = (Radon Concentration (pCi/L)) * (Equilibrium Factor) * (0.44 rem/pCi/L)
   An occupancy factor may be added as required.
   1 WL ~ 100 pCi/L with daughters present (100% equilibrium)
   Equilibrium Factor Formula: Equilibrium Factor = Exposure (WL) * 100 / Concentration (pCi/L)

Source: National Council on Radiation Protection (NCRP) Report #97

Rio Tinto

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4 February 2010

Mr. Keith McConnell, Deputy Director
Division of Waste Management and Environmental Protection
Office of Federal and State Materials and Environmental Management
U.S. Nuclear Regulatory Commission
11545 Rockville Pike, Mail Stop T7-E18
Rockville, MD 20852

Dear Mr. McConnell:

SUBJECT: Sweetwater Uranium Project – Docket Number 40-8584
Source Material License No. SUA-1350
Annual ALARA Audit

Enclosed is Kennecott Uranium Company's Annual ALARA Audit. This audit addresses conditions 9.3D and 12.3 of Source Material License number SUA-1350.

If you or your staff have any questions or require further information, please contact me at (307) 328-1476.

Sincerely,

Oscar A. Paulson

Oscar A. Paulson
Facility Supervisor

cc: James Webb, Project Manager (NRC) (2)
Director, DNMS (NRC) - Arlington, TX (w/o attachments)
Rich Atkinson

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2 February 2010

To: NRC File

Subject: Sweetwater Uranium Project – Source Materials License SUA-1350: In-House Review of the Radiation Safety Program Including Audits, Inspections, Employee Exposures, Effluent Releases and Environmental Data as Required by License Condition 12.3

As required by License Condition 12.3 of SML #SUA-1350, the radiation safety, health physics and environmental monitoring programs are reviewed herein. In addition, trends in exposure, possible reductions in exposure or effluents under the ALARA concept and the use, maintenance and inspection of radiation monitoring equipment is discussed. The required (License Conditions 9.3 and 12.3) report on the activities of the Safety and Environmental Review Panel (SERP) is also attached.

Attached as part of this review process are the following:

- Summary of Monthly Radiation Safety Meetings
- Summary of Annual Radiation Refresher Training
- Occupational Exposure Assessment - Suspended Operations
- Bioassay Assessment
- Summary of Radiation Instrument Calibrations
- External Gamma Radiation Survey Assessment
- Total and Removable Alpha Radiation Survey Assessment
- Radon Daughter Monitoring Assessment
- Potable Water Quality Summary
- Safety and Environmental Review Panel (SERP) - 2009
- Respiratory Protection – 2009
- Releases for Unrestricted Use – 2009
- Review of Standard Operating Procedures – 2009
- Radiation Work Permits – 2009
- Dose Assessment/Determination of No Requirement for Individual Monitoring or Dose Calculation at the Sweetwater Uranium Project for 2009
- Discussion of other Items (Fire Protection, etc.).

Review of the Programs

A review of the program revealed the following item(s) which required additional attention or correction during the year:

1. Storage of Contaminated Equipment and Ion Exchange Resin on Site

Contaminated equipment now belonging to the Green Mountain Mining Venture (GMMV), but originally stored on site in 1997 by U.S. Energy Corp./Yellowstone Fuels, Inc., continues to be stored on site. The equipment is stored in the Mill Building, Solvent Extraction (SX) Building, in the tailings impoundment, in a designated restricted area within the Main Shop (the Welding Bay). Ownership of this equipment was transferred to the Green Mountain Mining Venture (GMMV) by U.S. Energy Corp./Yellowstone Fuels, Inc., on September 11, 2000.

In addition, approximately 174,740 pounds of an ion exchange resin/water mixture is stored on site in the Number 1 Counter Current Decantation (CCD) thickener tank in the Mill Building. This material now belongs to the Green Mountain Mining Venture (GMMV), but was originally stored on site by U.S. Energy Corp./Yellowstone Fuels, Inc. This material was unloaded on site between April 22 and May 7, 1998. This material is stored submerged in the Number 1 CCD tank in the mill, which is heated to prevent freezing in the winter. Ownership of this ion exchange resin was transferred to the Green Mountain Mining Venture (GMMV) by U.S. Energy Corp./Yellowstone Fuels, Inc. on September 11, 2000.

Additional radon monitoring was performed using the modified Kusnetz method during unloading and RadTrak radon monitors are placed on top and below the CCD thickener (used to store the resin) and are changed quarterly. Air sample filters are collected semiannually near the Number 1 Counter Current Decantation (CCD) thickener tank and analyzed using the modified Kusnetz method. This is done to determine if handling or storing the resin creates elevated radon levels in the area. The results of the monitoring show that the radon levels in the storage area remain at background in spite of resin being stored there.

The stored equipment may have been responsible for previously elevated radon daughter concentrations measured in the Solvent Extraction (SX) Building. This situation has been corrected by operating an exhaust fan to remove accumulated radon and radon daughters. Radon daughter monitoring using the modified Kusnetz method has been performed semiannually in this area. The monitoring shows radon daughter concentrations ranging from 0.012 WL to 0.049 WL.

Changes in the Program

Additional Continuous Radon Monitoring

Continuous RadTrak radon monitors are placed on top and at the base of the Number 1 CCD Thickener and changed on a quarterly basis to monitor radon levels in the area to determine if the storage of resin in the thickener increased radon levels in the Mill Building. Radon levels in the Mill Building remain at background levels.

Trends in Exposure

Operations were suspended in April 1983. Operations have remained suspended since that time. Exposures are low. Individual monitoring of personnel is not required since all exposures are below 10% of the allowable limit. In-plant air samples are collected semiannually. Work performed in the mill and tailings impoundment has been under Standard Operating Procedures (SOPs). The only activities conducted in 2009 were property security, preservation, maintenance, operation of the tailings impoundment and Catchment Basin pumpback system, and construction of two (2) additional lined lagoons on top of the regraded tailings to enhance evaporation and maintain dust control, environmental monitoring, storage of equipment and used ion exchange resin, liner repair and land farming of petroleum contaminated soils.

Storage of some of the equipment, notably some steel pressure vessels in the mill, has caused gamma radiation levels to increase slightly in the area within the mill in which they are stored. An exhaust fan is operated in the SX building continuously to vent any accumulated radon and radon progeny. Radon daughter concentrations in this area varied between 0.012 WL to 0.049 WL.

Gamma exposures in the tailings impoundment have been reduced by the addition of the material excavated from the Catchment Basin area. This material has a lower radium-226 concentration than the tailings and acts as shielding attenuation gamma radiation from the tailings.

Possible Reduction of Personnel Exposures or of Effluents under ALARA

With operations suspended since April 1983, there have been no releases of effluents or employee exposures. The mill, with the exception of the dryer, and yellowcake area has been decontaminated. The dryer is locked and entry is restricted. The yellowcake (precipitation) area has been externally cleaned and the tanks are covered. All thirteen (13) nuclear density gauges in the mill are shuttered and are inventoried semiannually. The gauges were inventoried on June 11 and December 2, 2009. The gauges were leak tested on May 24, 2007.

No leakage was detected. An amendment dated April 9, 1998 was obtained to the nuclear density gauge license, which freed the licensee from testing the on-off mechanism on the thirteen (13) nuclear density gauges in the mill as long as operations remain suspended. This change has caused some reduction in personnel exposure in that personnel now spend less time near the gauges and personnel are not exposed to yellowcake dust associated with testing the on-off mechanism of the gauge in the yellowcake barreling area. A Corrective Action Program (CAP) is in place to address the seepage from the tailings impoundment and Catchment Basin. The pumpback system continues to operate as designed. The fan in the Solvent Extraction (SX) Building is now operated continuously to exhaust any accumulated radon and radon daughters emanating from equipment stored there.

Current Use of Control Equipment

Concurrent with the suspension of mill operations in April 1983, all mill control systems have been shut down. The Mill and Solvent Extraction (SX) buildings are kept locked when personnel are not inside them. Security is maintained on site twenty-four (24) hours a day as required by Section 5.4 of the license application that is cited in License Condition 9.5 of SUA-1350, to prevent unauthorized access to the facility and unauthorized entry into the tailings impoundment. This prevents potential exposure to radioactive materials to unauthorized individuals, who may attempt to gain access to the facility buildings or the tailings impoundment. The tailings retention system continues as a passive control system incorporating a synthetic Hypalon liner to retain the tailings fluids. Seepage has occurred in the past due to a liner failure. Repairs to the liner along the northern, southern and western embankments were completed in 2009 as per Safety and Environmental Evaluation (SEE) #14 and SEE-14 Amended. Tailings impoundment liner repairs and regrading and lagoon construction in the tailings impoundment were discussed with Stephen Cohen, the site's project manager, in a telephone conversation at 12:40 pm on February 28, 2006. In the conversation he stated that changes to the liner repair protocols required a Safety and Environmental Evaluation (SSE) approved by the Safety and Environmental Review Panel (SERP) but that regarding (moving) of tailings and construction of lagoons in the impoundment did not require approval since these activities were part of normal operations in the impoundment and had been conducted in the past under the site's Standard Operating Procedures (SOPs). These repairs were discussed by Kent Bruxvoort of QED Associates in the 2009 Inspection of Tailings Impoundment Liner dated June 23, 2009. In his report he stated:

> *The liner is maintained and repaired where necessary within five vertical feet of the tailings or tailings fluid around the entire perimeter of the impoundment. The liner remains, by observation, plyable. There is no evidence of exposed scrim by either physical or chemical means.*

In addition he also states:

> *Placement of the additional 11(e).2 soils from the catch basin area into the tailings impoundment, regarding of the tailings surface, maintenance and repair of the liner within five vertical feet of the tailings, and completion of lined evaporation lagoons all provide significant measures to manage the tailings: limiting potential for fluid to escape through the damaged liner, limiting potential for windblown tailings, lowering the surface of the tailings to a level everywhere below the surrounding native ground surface, promoting consolidation in the eastern half of the impoundment , and enhanci9ng evaporation. Additionally, the measures taken in 2008 to improve the inside slopes of the embankments has significantly improved the impoundment visually, and created a surface that will better allow potential future re-use of the impoundment.*

A seepage collection (pumpback) system is in operation. This system was extended to include two (2) wells west of the Catchment Basin in 2005. A system using lagoons constructed on the tailings and operated during non-freezing weather serves to minimize dusting, reduce radon emanation and evaporate fluids. A substantial effort was made in 2008 to regrade / level the tailings in order to construct lined lagoons on the tailings surface to control dusting and aid in evaporation of tailings fluid and pumpback water. This effort has been successful and is described by Kent Bruxvoort of QED Associates in the 2009 Inspection of the Tailings Impoundment Liner dated June 23, 2009. In his report he states:

Additionally, during the latter half of 2007 and in 2009 the tailings surface and the additional 11(e).2 soils were regarded. In this tailings regarding effort, beach sands were moved from the elevated western edge of the impoundment to the lower eastern portion of the impoundment. This effort resulted in substantial progress toward meeting tailings management objectives: regarding the tailings to achieve a more regular surface in anticipation of either reclamation of future tailings storage; leveling the tailings to create a surface that is entirely below the bench, more sheltered from wind, and easier to keep moistened; covering the tailings to limit wind erosion potential; and creating stable, flat, bermed areas as evaporation lagoons for tailings dewatering.

The Low Volume air samples taken at Air 4A, (downwind of the tailings impoundment) show levels of natural uranium, thorium-230 and radium-226, which each remained below 1% of the allowable effluent concentrations during 2009, documenting the effectiveness of the lagoons and spray system in controlling dusting on the tailings impoundment. Evaporation will continue to decrease the potential of seepage from the impoundment. A fan is operated continuously in the Solvent Extraction (SX) Building to exhaust any accumulated radon and radon daughters emanating from equipment stored there.

Additional monitor wells were drilled in 2004 around the Catchment Basin. The nature and extent of the contamination of soils and ground water around the Catchment Basin has been described in submittals dated May 12, July 22 and December 15, 2004 and January 18, 2005. Fluid has been pumped out of one of the shallow monitor wells (TMW-90) beginning on September 4, 2003, under Safety and Environmental Evaluation (SEE) #6 and out of the second shallow monitor well (TMW-105) beginning on March 23, 2004 under an amendment to Safety and Environmental Evaluation (SEE) #6. Pumping of these wells was terminated in 2005 since they pumped dry. Additional information about these wells may be found in the Corrective Action Program (CAP) Review. These two wells were removed by the Catchment Basin Excavation in 2006. In addition, TMW-96 and TMW-97 were pumped during 2009.

A license amendment request to excavate the contaminated soils around the Catchment Basin and expand the pumpback system to include wells around the Catchment Basin was approved on May 26, 2005. During 2006 to 2007 a total of 233,268 cubic yards of contaminated soils were excavated around the Catchment Basin. The excavation area was gridded and sampled. It is now backfilled. The fire water lines removed during the course of that excavation were replaced by the end of 2008. The chain link fence along the east side of the Mill area removed by the excavation was replaced. The top of the grade beam was doweled into the twelve (12) inch slab on grade along the east wall of the Mill Building as recommended by QED Associates/JVA Incorporated to address the separation crack in the report dated November 5, 2007. A seepage collection system consisting of two lines of perforated pipe was installed along the west high wall at the excavation bottom to collect any seepage before it migrates to the Battle Spring Formation. To date no seepage has been detected in these collection systems. Plastic liner was placed on the west high wall to separate contaminated soils beneath the Mill Building and tank slabs from the clean backfill. Details concerning the excavation were provided in the Catchment Basin Excavation Completion Report submitted on May 6, 2008. A request for additional Information (RAI) dated November 19, 2008 was received regarding the report. A response to the Request for Additional Information (RAI) was submitted by January 30, 2009. Pump back of contaminated Battle Spring Aquifer water around the Catchment Basin began in the summer of 2005. Details about this expansion of the pumpback system are included in the Corrective Action Program Review.

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In-House Review-2009.doc

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Internal memo

2 February 2010

To: NRC File

Subject: Source Material License SUA-1350 - License Condition 12.3 – Annual ALARA Report

The following areas of the Sweetwater Uranium Project Radiation Safety Program were reviewed to determine if occupational radiation safety exposures were managed to be As Low As Reasonably Achievable (ALARA):

1. Employee Exposure Records:
Individual monitoring and reporting of employee exposures at the Sweetwater Uranium Project is not required as per 10 CFR 20.1502 since employees are unlikely to receive in excess of 10% of the limits for external or internal exposure. Gamma radiation levels and concentrations of airborne radionuclides are assessed and doses tracked to verify that employee doses are below the levels requiring individual monitoring and reporting.

2. Bioassay Results:
All bioassay results from site employees were below the first action level. In addition, pre-job bioassays were taken of any new contract employees and post-job bioassays collected from workers no longer working in the restricted area. All results were below the first action level. All bioassay results for personnel were non-detect (ND).

3. Inspections and Reports:
Daily Mill Foreman inspections and weekly work area inspections by the Radiation Safety Officer have been suspended during the period of mill shutdown as per a letter from the licensee dated June 10, 1983 and a response from NRC dated September 23, 1983.

4. Training:
Annual Radiation Safety Refresher Training was conducted on January 5, 2009. Annual MSHA Refresher Training was conducted on January 8, 2009. In addition, driver training was conducted on January 6, 2009. Also, a first aid class was provided on site on January, 2008. Radiation training of individual contract employees (contractor new hires) was conducted on an as-needed basis. Equipment hazard training was provided on January 6 and June 2, 2009.

5. Safety Meetings:
Monthly radiation safety meetings were held with site and applicable contract personnel. These are enumerated in this document.

6. Radiation Surveys and Sampling:
Gamma, radon and airborne uranium levels in the mill are low. Internal and external dose levels are below 10% of the applicable limits so individual monitoring of personnel and reporting of individual doses are not required.

7. Reports of Overexposure of Workers:
No overexposures have occurred.

8. Standard Operating Procedures (SOPs):
Standard Operating Procedures (SOPs) were reviewed during 2009, as documented in the memorandum entitled "Annual Review of Standard Operating Procedures (SOPs)", dated 3 December 2009.

9. Radiation Work Permits:
No radiation work permits were issued in 2009.

10. Nuclear Density Gauges:
All nuclear density gauges in the mill are stored in place with the shutters closed and locked. All nuclear density gauges are inventoried semiannually. The gauges were inventoried on June 11 and December 1, 2009. All nuclear density gauges in the mill were leak tested on May 24, 2007. All gauges passed the leak test. Leak testing of the gauges is only required every ten (10) years provided they are in storage and not being used, as is the case at the Sweetwater Uranium Project.

11. Safety and Environmental Review Panel (SERP):
Two (2) Safety and Environmental Evaluations (SEE) were issued by the Safety and Environmental Review Panel in 2009. They are documented in this report.

12. Instrument Calibrations:
Instrument calibrations were reviewed. All instruments were within their calibration interval when used.

13. Respiratory Protection:
Members of the site's respirator program were qualified for respirator use by a physician on January 9, June 1, October 16 and November 13, 2009. Annual fit testing and respirator training was conducted on January 12, November 19 and November 30, 2009.

The following is based on the review of the Radiation Safety Program:

Trends in Exposure

Operations were suspended in April 1983. The mill has been cleaned with the exception of the precipitation and drying areas, which are isolated. Exposures remain low since operations are suspended.

Some equipment stored on site, especially some steel pressure vessels stored in the grinding area of the mill, has created the potential for very slight increases in gamma doses. The gamma dose rates from this equipment are not sufficiently high to require posting under 10 CFR 20.1003; however, site employees have been instructed about the vessels and avoid them. The storage of this equipment has caused slight increases in exposure to individuals working near where the equipment is stored. In addition, the equipment has caused slightly elevated radon daughter concentrations in the Solvent Extraction (SX) Building. This situation was corrected by the installation of a vent fan. The vent fan in that building was adjusted to operate continuously beginning on December 11, 2001, to exhaust accumulated radon and radon daughters. Radon daughter concentrations in the Solvent Extraction (SX) Building averaged 0.016 WL in June 2009 and 0.043 WL in December 2009.

Current Use of Control Equipment

Since the mill is not operating use of control equipment is not required in the Mill Building. The mill and solvent extraction (SX) buildings are kept locked to control access. Lagoons are operated in the tailings impoundment when weather conditions permit to control dusting. A fan is operated continuously in the Solvent Extraction (SX) Building to vent any accumulated radon and radon daughters in the building.

The shutters on the nuclear density gauges in the mill are closed and locked.

Contaminated soils were excavated from the Catchment Basin area during 2006. These soils were spread on top of tailings in the tailings impoundment. These soils, since they were lower in radium-226 than the underlying tailings, reduced gamma exposures in the tailings impoundment by acting as shielding. Airborne radionuclide concentrations in the air samples related to the tailings impoundment have been low.

A discrete Shower/Change/Monitoring trailer was installed in the fence south of the Catchment Basin excavation in 2006 to provide a place for workers to shower, change and monitor, to make sure contamination was not being taken off site. This facility included a washing machine, showers and sinks that drained to a buried holding tank which could be pumped to the tailings impoundment. This facility was also used by tailings impoundment workers.

Work was performed in the tailings impoundment including liner repair, tailings regrading, and lagoon construction which has reduced the risk of wind induced liner failure and will ultimately enhance control of blowing tailings. This is discussed in greater detail in Sweetwater Uranium Project – Source Materials License SUA-1350: In-House Review of the Radiation Safety Program Including Audits, Inspections, Employee Exposures, Effluent Releases and Environmental Data as Required by License Condition 12.3

Possible Reduction of Exposure under the ALARA Concept

Exposures are at minimal levels due to suspension of operations. Access to known contaminated areas and to stored equipment with slightly elevated gamma levels is limited and controlled. All nuclear density gauge shutters are closed and locked. An amendment to the sealed source license BML-49-19005-01 dated April 9, 1998 was obtained which freed the licensee from the requirement of testing the on-off mechanism on the gauges every six (6) months. This amendment has caused some reduction in exposures by reducing the time that personnel have to work around the gauges and by eliminating personnel having to work with the gauge in the yellowcake barreling area thus reducing exposure to airborne yellowcake particles.

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Internal memo

2 February 2010

To: NRC File

Subject: Summary of Monthly Radiation Safety Meetings

The following is a summary of the twelve (12) monthly (plus ten (10) additional) Radiation Safety meetings held in 2009:

2009	TOPIC	ATTENDEES
1/12	Discussed respiratory protection and acceptable programs for respiratory protection. Discussed the types of contaminants and types of and need for respiratory protective equipment. Went over equipment use, positive and negative pressure test, maintenance and storage of equipment, physical requirement. Discussed actions to take in event of malfunction of equipment. Conducted fit test of equipment.	ACI, KUC
1/13	Discussed Roller Room air samples; High volume 13.5% of DAC, Breathing Zone 0.649% of DAC. Respirator was used. Bioassays done before and after. Dust was disturbed by sampler. High Volume sample to be retested by laboratory.	KUC
2/4	Discussed radon concentrations in the Senior Facility Technician trailer. Requested that the RadTraks be re-read.	KUC
2/16	Discussed radiation work permit 2008-1. Preparation of 30-40 barrels for removal. Dose very low, between 1.012 to 1.131 millirems. Dose to maximally exposed worker on site 27 millirem. No bioassays exceeding LLD.	KUC
3/10	Discussed dosimeters for February 2009, all non detect for deep dose. Discussed the release of used oil and reviewed analysis results. Recheck of new oil sample will be requested. Reviewed Subpart W and National Mining Association (NMA) response on Subpart W to EPA. Cameco and Cogema received requests to provide information to EPA.	KUC
3/30	Discussed releases for unrestricted use. Lower limit of detection (LLD) on wipes.	KUC
4/20	Discussed Subpart W; Agency continues to believe that 40 CFR Subpart W applies to evaporation ponds at licensed uranium recovery facilities. Talked about food irradiation. Discussed uranium in ground water. Reviewed results for upwind, downwind and Sr. Facility Tech trailer radon concentrations.	KUC
4/27	Discussed 10CFR40.31(e) ban on construction without a license/pre construction activities.	KUC
5/4	Discussed first Quarter Breathing Zone samples Uranium 1.87% of DAC. Radium 226 and Thorium 230 non-detect.	KUC
6/15	Radon; Discussed EPA testing request for fluid retention ponds. Cameco and Cogema are negotiating with the EPA. Discussed radon testing protocol in the letter, barometric pressure and radon fluxes, need for wind speed, direction and sigma theta readings concurrently with measurement. Reviewed radon daughter concentrations in the Mill and Solvent Extraction Buildings	KUC

7/27	Radon; Building ventilation discussed, interior and exterior differences. Both upwind readings were very close. Downwind was lower than the upwind. Security trailer was low.	KUC
8/20	Discussed talk by Dr. Gavin Mudd of Australia 8-18 in Ft. Collins, CO. Invited by CARD. Spoke against coal. Spoke against nuclear energy. Talked about surface disturbance at ERA Ranger. Talked about in-situ mining.	KUC
8/24	Distributed minutes from presentation by Dr. Gavin Mudd. Discussed dosimetry results. Maximum total deep dose for year as of end of July 2009 1 mrem. Discussed breathing zone samples; Radium 226 and Thorium-230 non detect. Natural Uranium 2.19% of DAC, being rechecked.	KUC
8/24 #2	Discussed crane inspections in Mill Building, Leach and CCD. Monitoring and scanning out discussed. Small hand carried items scanned with individual. Issued visitor dosimeter for work. Reviewed radiation safety.	KUC
9/14	Discussed and reviewed Nuclear Regulatory Commission (NRC) inspection. Discussed salient items. Subpart W, EPA 's settlement. Discussed radon results from Cameco, results were very low.	KUC
10/19	Discussed bioassays, all were non detect. RadTraks were low. Showed BBC program on Orion (*atomic bomb powered space craft*).	KUC
11/9	Discussed Tom Zoellner's book *Uranium*. Discussed quote from pg. 234, "One thousandth of a gram of plutonium, if inhaled, causes death in a matter of hours". Discussed toxicological information on plutonium. Talked about respirators and powered air purifying respirator.	KUC
11/19	Discussed dosimetry results. A. Morris' showed results in spite of being on the board adjacent to the control and not being used. E-mailed Landauer, Inc for a recheck. Third Quarter Breathing zone sample showed 2.01% Thorium 230. E-mailed laboratory for recheck. Respiratory protection; demonstrated new stannic chloride puffers. Powered air purifying respirator; protection factor of 25. Reviewed types of respirators and uses.	KUC
11/30	Exchanged dosimeters. Did fit test for North powered air purifying respirator (PAPR) on Oscar Paulson. Demonstrated Respirator.	KUC
12/8	Listened to NPR broadcast on Megatons to Megawatts program; down blending HEU to reactor fuel. Checked Pumpback wells, line from TMW 96 & 97 separated. Line from TMW 57leaked. TMW's 96, 97, 57 & 58 are off, 7,17, 18, 59 and 75 are on.	KUC
12/14	Discussed breathing zone samples. Reviewed standard Operating Procedures. Discussed upcoming radiation training.	KUC
12/17	Reviewed Wall Street Journal article dated December 15, 2009 on CT scans and link to cancer. Discussed dosimetry results and low doses versus doses from CT scans. Proved copy of article. Discussed ALARA and how doses must be justified.	KUC
12/30	Toxic Substance Control Act (TSCA) training. Reviewed TSCA statement. Reviewed *Toxicological Profile for Uranium.* Provided document for review by site personnel.	KUC

Initial key: ACI = Archer Construction, Inc. **KUC** = Kennecott Uranium Company

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MonthlyRadSafetyMeetings.doc

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Internal memo

4 February 2010

To: NRC File

Subject: Annual Radiation Refresher Training

Annual radiation safety training for uranium mill workers was conducted by Tetra Tech MFG Inc. on January 5, 2010, as discussed in the attached letter. The attendees are listed in the letter. A description of the course content is maintained in the file on site.

In addition, the following individuals received radiation worker training on site through videos and direct instruction by the Radiation Safety Officer:

Charles Rider – Securitas Security Services, Inc.	May 7, 2009
Kelly Haag - Adecco Employment Service	September 9, 2009
Shelley Schutterle – Kennecott Uranium Company	November 9, 2009

All individuals who worked within a restricted area during 2009 received radiation worker training.

Oscar A Paulson

Oscar Paulson
Facility Supervisor
Annual RadRefreshTrng.doc

TETRA TECH

January 28, 2009

Oscar Paulson
Sweetwater Uranium Facility
Kennecott Uranium Company
PO Box 1500
Rawlins, Wyoming 82301

RE: Radiation Worker Annual Refresher Training

Dear Oscar:

The following individuals have successfully completed Radiation Worker Annual Refresher Training as of January 5th, 2009:

Eric Marques
Russell Smith
Richard Durazo
Jeremy LaVine
Mike Mariner
Harry Lovato
Lance Smith

Jed Goodman
George Palochak
Charles Seyfang
Stephen Skelley
Randy Archer
Tony Jackson
Anita Morris

Casey Dickinson
Jim McCoy
Tom Feust
Oscar Paulson
Harold Kelley
Jim McMacken

Their certificates of completion are enclosed.

Sincerely,

H R Meyer

H. Robert Meyer, Ph.D.
Project Manager
Tetra Tech Inc.

Craig A Little

Craig A. Little Ph.D.
Trainer
TwoLines, Inc.

Rio Tinto

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Internal memo

27 January 2010

To: NRC File

SUBJECT: Internal Occupational Exposure Assessment – Suspended Operations

The following occupational exposure assessment is based on air samples taken in the Sweetwater Mill and Tailings Impoundment during 2009. Annual intakes (based on airborne concentrations and exposure times) below 10% of the applicable Allowable Limits of Intake (ALI) in Table 1, Column 1 of Appendix B (5 E-2 µCi for Class Y natural uranium) do not require individual monitoring or dose assessment. This assessment is of the Mill Foreman, who is the individual on site who spends the greatest amount of time within the restricted areas and receives the greatest exposure.

Airborne Particulate Air Sampling Results

The results of this sampling are attached. The sampling spreadsheets are listed on the following page.

Time Spent in the Mill Building, Tailings Impoundment and Catchment Basin Excavation (Restricted Area)

The Mill Foreman spent a total of 230 hours (23.0 days) in the Sweetwater Mill and 1110 hours (111.0 days) in the tailings impoundment during calendar year 2009. This is a maximum estimate of time and is based upon the assumption that for each day the Mill Foreman was in the Restricted Area he spent the entire ten (10) hour day there, even though on many occasions a visit to the mill or tailings impoundment in a given day constituted only a few hours inside the building or inside the impoundment. The days he spent in each area are based on his comments in the Alpha Monitor Record, which he signed upon completion of monitoring after leaving a Restricted Area. A table listing the time the Mill Foreman spent in various areas is included with this document.

Dose Calculation Method

10CFR20.1003 states, "Occupational dose does not include dose received from background radiation...". In the interest of simplicity and conservatism, however, background airborne radionuclide concentrations have not been deducted from the concentrations, derived air concentrations (DACs) or percentages of allowable limits of intake (ALIs) presented in the table on the spreadsheet or text that follows.

The following additional steps were followed to ensure that the calculated dose is conservative:

- An assumption of ten (10) hours occupancy (a full working day) in either the Mill Building or tailings impoundment was assumed if the Mill Foreman entered either area on a given day in spite of the fact that actual occupancy may have been far less.
- The average and maximum airborne concentrations for thorium-230 and radium-226, based on breathing zone samples collected on the Mill Foreman and high volume air samples collected in the Mill Building were used to calculate the doses to thorium-230 and radium-226 for the time spent in the Mill Building.
- The average and maximum airborne concentrations for natural uranium, thorium-230 and radium-226 based on high volume air samples were used to calculate the doses for natural uranium, thorium-230 and radium-226 for time spent in the tailings impoundment.
- The average and maximum air sample results for natural uranium, thorium-230 and radium-226 were used to calculate the internal dose since:
    - o The Breathing zone samples collected in the Mill Building are believed to be more representative of worker exposure than high volume air samples of the work area was a whole.

Attached please find in addition to the spreadsheets entitled "Airborne Sampling Results" using average values and using maximum values, the following spreadsheets:

- Mill High Volume Air Samples.
- Tailings Impoundment High Volume Air Samples (with Non-Detect results reported as ND)
- Mill Foreman Breathing Zone Samples (with Non-Detect results reported as ND)
- Mill Foreman Breathing Zone Samples (with Non-detect results reported as the Lower Limit of Detection (LLD))

Dose Calculation Results

An internal dose of 14.6 millirems (0.015 rems) was calculated for the maximally exposed individual (The Mill Foreman) on site for normal duties using average breathing zone sample results collected in the tailings impoundment and from the Mill Foreman. This calculation is on the attached spreadsheet entitled Airborne Sampling Results. A second calculation was made using the maximum natural uranium, radium-225 and thorium-230 results from breathing zone samples collected from the Mill Foreman and in the tailings impoundment. This calculation resulted in an internal dose of 19.2 millirems (0.019 rems). This calculation is on the attached spreadsheet entitled Airborne Sampling Results (using maximum concentrations).

These calculated doses are all less than 10% of the limit of 500 millirems, above which individual monitoring is required as per 10 CFR 20.1502(b)(1). Also, the maximally exposed individual received less than 10% of the ALI for natural uranium, radium-226 and thorium-230 when working in the Mill Building and Tailings Impoundment, meaning that no worker was "...likely to receive in 1 year an intake in excess of 10 percent of the applicable ALI(s) in table 1, Columns 1 and 2 of Appendix B to §20.1001-21.2401: ..." Thus, individual monitoring of occupational intake for airborne particulate radionuclides was not required.

Oscar A. Paulson

Oscar A. Paulson

InternalOccExposAssess.doc

KENNECOTT URANIUM COMPANY
SWEETWATER URANIUM PROJECT
MILL FORMAN
RESTRICTED AREA TIMES

Date	Mill	Tailings	Total
5-Jan-09	5	5	10
13-Jan-09		10	10
14-Jan-09		10	10
15-Jan-09		10	10
19-Jan-09		10	10
21-Jan-09		10	10
29-Jan-09	10	0	10
2-Feb-09		10	10
9-Feb-09		10	10
10-Feb-09		10	10
12-Feb-09		10	10
23-Feb-09		10	10
24-Feb-09		10	10
25-Feb-09		10	10
2-Mar-09	5	5	10
3-Mar-09	5	5	10
4-Mar-09	10	0	10
9-Mar-09		10	10
11-Mar-09		10	10
12-Mar-09		10	10
16-Mar-09		10	10
17-Mar-09	5	5	10
18-Mar-09		10	10
19-Mar-09		10	10
23-Mar-09		10	10
24-Mar-09		10	10
25-Mar-09		10	10
30-Mar-09	5	5	10
31-Mar-09		10	10
1-Apr-09		10	10
2-Apr-09		10	10
6-Apr-09		10	10
7-Apr-09		10	10
8-Apr-09		10	10
13-Apr-09		10	10
20-Apr-09		10	10
22-Apr-09		10	10
23-Apr-09		10	10
28-Apr-09	5	5	10
29-Apr-09		10	10
30-Apr-09	5	5	10
4-May-09		10	10
5-May-09	5	5	10
12-May-09		10	10
19-May-09		10	10
20-May-09	10		10
21-May-09		10	10
27-May-09	10		10
28-May-09		10	10
1-Jun-09	5	5	10
3-Jun-09	5	5	10

Date	Mill	Tailings	Total
4-Jun-09		10	10
9-Jun-09	5	5	10
10-Jun-09		10	10
11-Jun-09	5	5	10
15-Jun-09		10	10
16-Jun-09		10	10
17-Jun-09	5	5	10
18-Jun-09	5	5	10
22-Jun-09		10	10
30-Jun-09		10	10
1-Jul-09		10	10
2-Jul-09		10	10
7-Jul-09		10	10
8-Jul-09		10	10
9-Jul-09		10	10
13-Jul-09		10	10
14-Jul-09		10	10
15-Jul-09		10	10
16-Jul-09		10	10
20-Jul-09		10	10
21-Jul-09		10	10
27-Jul-09		10	10
28-Jul-09		10	10
29-Jul-09	5	5	10
30-Jul-09		10	10
31-Jul-09		10	10
3-Aug-09	5	5	10
4-Aug-09	10		10
5-Aug-09	5	5	10
10-Aug-09		10	10
11-Aug-09		10	10
12-Aug-09		10	10
13-Aug-09	5	5	10
17-Aug-09		10	10
18-Aug-09		10	10
19-Aug-09		10	10
24-Aug-09		10	10
25-Aug-09	5	5	10
26-Aug-09		10	10
27-Aug-09	5	5	10
31-Aug-09		10	10
1-Sep-09		10	10
2-Sep-09		10	10
3-Sep-09		10	10
8-Sep-09		10	10
9-Sep-09	5	5	10
10-Sep-09		10	10
14-Sep-09	5	5	10
15-Sep-09		10	10
16-Sep-09		10	10
17-Sep-09		10	10
21-Sep-09	5	5	10
22-Sep-09		10	10
23-Sep-09		10	10
24-Sep-09		10	10
28-Sep-09		10	10

Date	Mill	Tailings	Total
30-Sep-09		10	10
1-Oct-09		10	10
5-Oct-09	10		10
7-Oct-09		10	10
8-Oct-09		10	10
15-Oct-09		10	10
19-Oct-09		10	10
20-Oct-09	5	5	10
27-Oct-09		10	10
2-Nov-09		10	10
4-Nov-09		10	10
5-Nov-09	5	5	10
10-Nov-09	5	5	10
11-Nov-09		10	10
12-Nov-09		10	10
16-Nov-09		10	10
17-Nov-09		10	10
18-Nov-09	5	5	10
19-Nov-09	5	5	10
24-Nov-09		10	10
30-Nov-09	5	5	10
1-Dec-09		10	10
7-Dec-09		10	10
8-Dec-09	10		10
16-Dec-09		10	10
17-Dec-09	5	5	10
30-Dec-09	10		10
Total:	**230**	**1110**	**1340**

NOTES

If a single area was recorded for a given day an assumption of ten (10) hours for that day in that area is made regardless of actual time spent which would always be less.

Ten (10) hours is the maximum amount of time that could be spent in any area in a day since that is the entire length of the work day.

If multiple areas were checked in the course of a day, the entire ten (10) hour work day was divided evenly between the areas

In most cases only a portion of the entire ten (10) hour work day was spent in restricted areas.

The above described additional hours were probably never really worked in a restricted area but were added to remain conservative.

Kennecott Uranium Company
Sweetwater Uranium Project
Airborne Sampling Results: 2009
(Using Average Values)

Breathing Zone Samples								
			Concentration				**Percent of DAC**	
		(Natural Uranium Only)	**Radium-226**	**Thorium-230**		**Natural Uranium**	**Radium-226**	**Thorium-230**
		(microCuries/ml)	**(microCuries/ml)**	**(microCuries/ml)**				
Average for 2009	Mill Foreman	3.91E-13	4.03E-14	1.35E-14		1.95E+00	1.34E-02	2.24E-01
	Average:	3.91E-13	4.03E-14	1.35E-14		1.95E+00	1.34E-02	2.24E-01
Please see attached spreadsheets								
Lower Limit of Detection (LLD) value used in average if result was non-detect.								
High Volume Air Sampling								
Date	**Location**		**Concentration**				**Percent of DAC**	
		Natural Uranium	**Radium-226**	**Thorium-230**		**Natural Uranium**	**Radium-226**	**Thorium-230**
		(microCuries/ml)	**(microCuries/ml)**	**(microCuries/ml)**				
Average for 2009	Mill Building	9.17E-16	5.86E-16	6.62E-16		4.58E-03	1.95E-04	1.10E-02
Average for 2009	Tailings Impoundment	3.66E-15	2.26E-15	3.26E-15		1.83E-02	7.52E-04	5.43E-02
	Average:	2.29E-15	1.42E-15	1.96E-15		1.14E-02	4.74E-04	1.67E-03
Please see attached spreadsheets								
Lower Limit of Detection (LLD) value used in average if result was non-detect.								
Measured Concentrations Used								
			Concentration				**Percent of DAC**	
		Natural Uranium	**Radium-226**	**Thorium-230**		**Natural Uranium**	**Radium-226**	**Thorium-230**
		(microCuries/ml)	**(microCuries/ml)**	**(microCuries/ml)**				
	Mill Foreman	3.91E-13	4.03E-14	1.35E-14		1.95E+00	1.34E-02	2.24E-01
	Tailings	3.66E-15	2.26E-15	3.26E-15		1.83E-02	7.52E-04	5.43E-02
Exposure Calculations								
Hours Worked During 2007								
	Mill	230						
	Tailings Impoundment	1110						
Exposure		**Natural Uranium**	**Radium-226**	**Thorium-230**		**Total**		
		(millirems)	**(millirems)**	**(millirems)**		**(millirems)**		
	Mill Foreman - Mill	1.12E+01	7.73E-02	1.29E+00		1.26E+01		
	Mill Foreman - Tailings	5.08E-01	2.09E-02	1.51E+00		2.03E+00		
	Total	1.17E+01	9.82E-02	2.80E+00		1.46E+01		

Notes:	Average airborne concentrations for uranium, radium-226 and thorium-230 were used in the calculation for each area (mill, and tailings impoundment)
	No routine air sample collected for the Mill Foreman in the Mill Building or in the tailings impoundment exceeded 10% of the Derived Air Concentration (DAC). The highest airborne natural uranium concentration detected was 0.247% of the DAC, the highest Radium-226 concentration detected was 0.032 % of the DAC and the highest Thorium-230 concentration detected was 3.45 % of the DAC for routine air samples. A single breathing zone sample of 3.55 hours duration collected during the course of a Radiation Work Permit (RWP) had a natural uranium concentration of 13.4% of the DAC. A respirator with a protection factor of ten (10) was worn during that period and the results of that sample are reported separately under the Radiation Work Permit (RWP).
	No worker could have received in excess of 10 percent of the applicable ALIs) in Table 1, Column 1 and 2 of Appendix B to 10 CFR 20.1001 - 20.2401 requiring monitoring of occupational intake.

Kennecott Uranium Company
Sweetwater Uranium Project
Airborne Sampling Results: 2009
(Using Maximum Values)

Breathing Zone Samples								
		Concentration				**Percent of DAC**		
		(Natural Uranium Only)	**Radium-226**	**Thorium-230**		**Natural Uranium**	**Radium-226**	**Thorium-230**
		(microCuries/ml)	**(microCuries/ml)**	**(microCuries/ml)**				
Maximum for 2009	Mill Foreman	4.67E-13	1.61E-13	5.35E-14		2.34E+00	5.37E-02	8.92E-01
	Maximum	4.67E-13	1.61E-13	5.35E-14		2.34E+00	5.37E-02	8.92E-01
Please see attached spreadsheets								
Lower Limit of Detection (LLD) value used in average if result was non-								
High Volume Air Sampling								
Date	**Location**	**Concentration**				**Percent of DAC**		
		Natural Uranium	**Radium-226**	**Thorium-230**		**Natural Uranium**	**Radium-226**	**Thorium-230**
		(microCuries/ml)	**(microCuries/ml)**	**(microCuries/ml)**				
Maximum for 2009	Mill Building	1.61E-15	1.20E-15	1.71E-15		8.05E-03	4.00E-04	2.85E-02
Maximum for 2009	Tailings Impoundment	9.78E-15	6.05E-15	9.11E-15		4.89E-02	2.02E-03	1.52E-01
	Maximum	9.78E-15	6.05E-15	9.11E-15		2.85E-02	1.21E-03	1.67E-03
Please see attached spreadsheets								
Lower Limit of Detection (LLD) value used in average if result was non-								
Measured Maximum Concentrations Used								
		Concentration				**Percent of DAC**		
		Natural Uranium	**Radium-226**	**Thorium-230**		**Natural Uranium**	**Radium-226**	**Thorium-230**
		(microCuries/ml)	**(microCuries/ml)**	**(microCuries/ml)**				
	Mill Foreman	4.67E-13	1.20E-15	1.71E-15		2.34E+00	4.00E-04	2.85E-02
	Tailings	9.78E-15	6.05E-15	9.11E-15		4.89E-02	2.02E-03	1.52E-01
Exposure Calculations								
Hours Worked During 2007								
	Mill	230						
	Tailings Impoundment	1110						
Exposure		**Natural Uranium**	**Radium-226**	**Thorium-230**		**Total**		
		(millirems)	**(millirems)**	**(millirems)**		**(millirems)**		
	Mill Foreman - Mill	1.34E+01	2.30E-03	1.64E-01		1.36E+01		
	Mill Foreman - Tailings	1.36E+00	5.60E-02	4.21E+00		5.63E+00		
	Total	1.48E+01	5.83E-02	4.38E+00		1.92E+01		
Notes:	Maximum airborne concentrations for uranium, radium-226 and thorium-230 were used in the calculation for each area (mill, and tailings impoundment)							
	No routine air sample collected for the Mill Foreman in the Mill Building or in the tailings impoundment exceeded 10% of the Derived Air Concentration (DAC). The highest airborne natural uranium concentration detected was 0.247% of the DAC, the highest Radium-226 concentration detected was 0.032 % of the DAC and the highest Thorium-230 concentration detected was 3.45 % of the DAC for routine air samples. A single breathing zone sample of 3.55 hours duration collected during the course of a Radiation Work Permit (RWP) had a natural uranium concentration of 13.4% of the DAC. A respirator with a protection factor of ten (10) was worn during that period and the results of that sample are reported separately under the Radiation Work Permit (RWP).							
	No worker could have received in excess of 10 percent of the applicable ALIs) in Table 1, Column 1 and 2 of Appendix B to 10 CFR 20.1001 - 20.2401 requiring monitoring of occupational intake.							

Kennecott Uranium Company										
Sweetwater Uranium Project										
Mill Building										
High Volume Air Samples										
2009										
Sample Number	Date			Volume	Sample Lower Limit of Detection (LLD)	Natural Uranium	Thorium 230	Radium 226	Natural Uranium % of DAC	Thorium 230 % of DAC	Radium 226 % of DAC
	Start	Stop		(milliliters)	(microCurie per milliliter)	(microCurie per milliliter)	(microCurie per milliliter)	(microCurie per milliliter)	(Percent)	(Percent)	(Percent)
			MILL								
1	20-Apr-09	21-Apr-09	Grinding Area	2.61E+09	1.00E-16	3.86E-16	2.13E-16	5.72E-16	1.93E-03	3.55E-03	1.91E-04
2	20-Apr-09	21-Apr-09	Precipitation Area	2.64E+09	1.00E-16	7.81E-16	1.71E-15	1.20E-15	3.91E-03	2.85E-02	4.00E-04
3	19-Oct-09	20-Oct-09	Grinding Area	2.59E+09	1.00E-16	8.89E-16	2.54E-16	2.55E-16	4.45E-03	4.23E-03	8.50E-05
4	19-Oct-09	20-Oct-09	Precipitation Area	2.60E+09	1.00E-16	1.61E-15	4.71E-16	3.16E-16	8.05E-03	7.85E-03	1.05E-04
Average:				2.61E+09	1.00E-16	9.17E-16	6.62E-16	5.86E-16	4.58E-03	1.10E-02	1.95E-04
Derived Air Concentrations Used											
	microCurie per milliliter										
Natural Uranium	2.00E-11	Year									
Radium-226	3.00E-10	Week									
Thorium-230	6.00E-12	Year									

Kennecott Uranium Company										
Sweetwater Uranium Project										
Tailings Impoundment										
High Volume Air Samples										
2009										
Sample Number	Date		Volume	Sample Lower Limit of Detection (LLD)	Natural Uranium	Thorium 230	Radium 226	Natural Uranium % of DAC	Thorium 230 % of DAC	Radium 226 % of DAC
	Start	Stop	(milliliters)	(microCurie per milliliter)	(microCurie per milliliter)	(microCurie per milliliter)	(microCurie per milliliter)	(Percent)	(Percent)	(Percent)
1	20-Apr-09	21-Apr-09	2.16E+09	1.00E-16	4.33E-16	3.45E-16	5.86E-16	2.17E-03	5.75E-03	1.95E-04
2	6-Jul-09	6-Jul-09	4.60E+08	1.00E-16	9.78E-15	9.11E-15	6.05E-15	4.89E-02	1.52E-01	2.02E-03
3	19-Oct-09	20-Oct-09	2.39E+09	1.00E-16	7.69E-16	3.14E-16	1.35E-16	3.85E-03	5.23E-03	4.50E-05
Average:			1.67E+09	1.00E-16	3.66E-15	3.26E-15	2.26E-15	1.83E-02	5.43E-02	7.52E-04
Derived Air Concentrations Used										
	microCurie per milliliter									
Natural Uranium	2.00E-11	Year								
Radium-226	3.00E-10	Week								
Thorium-230	6.00E-12	Year								
Notes:										
	Air sampler was located near the northeast corner of the interior of the impoundment.									
	Air sampler was pointed southwest into the prevailing wind to maximize radionuclide concentrations.									

Kennecott Uranium Company									
Sweetwater Uranium Project									
Mill Foreman									
Breathing Zone Samples									
2009									
		Volume	Sample Lower Limit of Detection (LLD)	Natural Uranium	Thorium-230	Radium-226	Natural Uranium % of DAC	Thorium 230 % of DAC	Radium 226 % of DAC
Date	Task	(milliliters)	(microCurie per milliliter)	(microCurie per milliliter)	(microCurie per milliliter)	(microCurie per milliliter)	(Percent)	(Percent)	(Percent)
30-Mar-09	Mill Foreman	6.12E+05	1.00E-16	3.74E-13	1.00E-16	1.00E-16	1.87E+00	1.67E-03	3.33E-05
16-Jun-09	Mill Foreman	8.70E+05	1.00E-16	4.38E-13	1.00E-16	1.00E-16	2.19E+00	1.67E-03	3.33E-05
1-Oct-09	Mill Foreman	1.17E+06	1.00E-16	2.83E-13	1.00E-16	1.00E-16	1.42E+00	1.67E-03	3.33E-05
30-Dec-09	Mill Foreman	1.32E+06	1.00E-16	4.67E-13	5.35E-14	1.61E-13	2.34E+00	8.92E-01	5.37E-02
Average:		9.93E+05	1.00E-16	3.91E-13	1.35E-14	4.03E-14	1.95E+00	2.24E-01	1.34E-02
Notes:	All results listed on the laboratory reports as being less than the specific sample's Lower Limit of Detection (LLD) are entered at the LLD value.								
	Air sample results to date show that the Mill Forman is unlikely to receive in excess of 10% of the applicable ALI thus individual								
	monitoring of intakes is not required.								
			Derived Air Concentrations Used						
			microCurie per milliliter						
			Natural Uranium	2.00E-11	Year				
			Radium-226	3.00E-10	Week				
			Thorium-230	6.00E-12	Year				

Kennecott Uranium Company									
Sweetwater Uranium Project									
Mill Foreman									
Breathing Zone Samples									
2009									
		Volume	Sample Lower Limit of Detection (LLD)	Natural Uranium	Thorium-230	Radium-226	Natural Uranium % of DAC	Thorium 230 % of DAC	Radium 226 % of DAC
Date	Task	(milliliters)	(microCurie per milliliter)	(microCurie per milliliter)	(microCurie per milliliter)	(microCurie per milliliter)	(Percent)	(Percent)	(Percent)
30-Mar-09	Mill Foreman	6.12E+05	1.00E-16	3.74E-13	ND	ND	1.87E+00	ND	ND
16-Jun-09	Mill Foreman	8.70E+05	1.00E-16	4.38E-13	ND	ND	2.19E+00	ND	ND
1-Oct-09	Mill Foreman	1.17E+06	1.00E-16	2.83E-13	ND	ND	1.42E+00	ND	ND
30-Dec-09	Mill Foreman	1.32E+06	1.00E-16	4.67E-13	5.35E-14	1.61E-13	2.34E+00	8.92E-01	5.37E-02
Average:		9.93E+05	1.00E-16	3.91E-13	5.35E-14	1.61E-13	1.95E+00	8.92E-01	5.37E-02

Notes: All results listed on the laboratory reports as being less than the specific sample's Lower Limit of Detection (LLD) are entered as a Non-Detect and not counted in the average.

Air sample results to date show that the Mill Foreman is unlikely to receive in excess of 10% of the applicable ALI thus individual monitoring of intakes is not required.

Derived Air Concentrations Used

	microCurie per milliliter	
Uranium	2.00E-11	Year
Radium-226	3.00E-10	Week
Thorium-230	6.00E-12	Year

Rio Tinto

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Internal memo

27 January 2010

To: NRC File

Subject: Bioassay Assessment

A review of the monthly urinalysis sample results for the Mill Foreman, Senior Facility Technician, Facility Supervisor and urine analysis sample results of contract and other site employees working in 2009 shows that all results are well below the first action level of 15 µg/L. In fact, all urinalysis results for the year 2009 were less than the lower limit of detection (LLD) of 5.0 µg/liter.

Site employees entering the restricted areas were bioassayed monthly. Contract employees working on site who could potentially contact contaminated materials were bioassayed prior to the commencement of work and monthly while working on the site. If an employee ceased to work on the site, a final bioassay was collected, if at all possible. Contract employees who did not work on site during a given month were not bioassayed during that month. Bioassaying of those employees was restarted when they returned to work on site.

The Security Guards were tested monthly in spite of the fact that they did not work in the restricted area in 2009. The site Administrative Coordinator and contract Administrative Assistant were also tested monthly in spite of the fact that they did not work in the restricted area and worked solely in the office.

Please see attached summary of 2009 urinalysis data.

Oscar A. Paulson

Oscar A. Paulson
Facility Supervisor

KENNECOTT URANIUM COMPANY															
BIOASSAY RESULTS		**2009**													
EMPLOYEE TITLE		**EMPLOYER**	January	February	March	April	May	June	July	August	September	October	November	December	**LLD**
Facility Supervisor	FS	Kennecott Uranium Company	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	**5.0**
Mill Foreman	MF	Kennecott Uranium Company	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	**5.0**
Senior Facility Technician	FT	Kennecott Uranium Company	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	**5.0**
Administrative Coordinator [1]	AC	Kennecott Uranium Company	<5.0		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	**5.0**
CONTRACT EMPLOYEE TITLE															
Administrative Assistant [1]	DATA	Adecco	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	**5.0**
Project Manager	PM #1	Archer Construction, Inc.	<5.0												**5.0**
Project Manager	PM #2	Archer Construction, Inc.	<5.0	<5.0				<5.0	<5.0						**5.0**
Equipment Operator	EO# 3	Archer Construction, Inc.	<5.0												**5.0**
Equipment Operator	EO# 6	Archer Construction, Inc.	<5.0	<5.0											**5.0**
Equipment Operator	EO# 15	Archer Construction, Inc.	<5.0												**5.0**
Equipment Operator	EO# 19	Archer Construction, Inc.	<5.0	<5.0				<5.0	<5.0						**5.0**
Equipment Operator	EO# 21	Archer Construction, Inc.	<5.0						<5.0						**5.0**
Equipment Operator	EO# 25	Archer Construction, Inc.	<5.0	<5.0					<5.0						**5.0**
Mechanic	MEC #1	Archer Construction, Inc.	<5.0	<5.0					<5.0						**5.0**
Equipment Operator	EO# 28	Archer Construction, Inc.	<5.0												**5.0**
Equipment Operator	EO # 29	Archer Construction, Inc.	<5.0												**5.0**
Equipment Operator	EO # 31	Archer Construction, Inc.	<5.0	<5.0				<5.0	<5.0						**5.0**
Equipment Operator	EO # 33	Archer Construction, Inc.	<5.0	<5.0				<5.0	<5.0						**5.0**
Equipment Operator	EO # 34	Archer Construction, Inc.	<5.0	<5.0											**5.0**
Equipment Op./Carpenter	EO # 35	Archer Construction, Inc.	<5.0												**5.0**
Carpenter/Equipment Op.	CAR # 2	Archer Construction, Inc.	<5.0												**5.0**
Carpenter/Equipment Op.	CAR # 3	Archer Construction, Inc.	<5.0												**5.0**
Crane Inspector	CRN # 1	American Equipment Inc.								<5.0					**5.0**
Surveyor	SURV	Robert Jack Smith and Associates							<5.0						**5.0**
Security	SEC # 1	Securitas Security	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	**5.0**
Security	SEC # 4	Securitas Security					<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	**5.0**

All samples tested by:
ENERGY LABORATORIES, INC.
All samples below first action level.
A high, low and blank spike sent with each batch.

Notes:
Contract security guards were tested when on site in spite of the fact that they did not enter the restricted area.
Pre-job bioassays were collected on new personnel and final bioassays were collected on personnel leaving the jol
Administrative coordinator and contract administrative assistant were tested in spite of the fact that they worked solely in the off

- No longer employed by contractor
- Not yet hired
- Not on site or did not work in restricted area
- On Vacation

[1] Did not work in restricted area in 2009 / worked solely in office.

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Internal memo

January 26, 2010

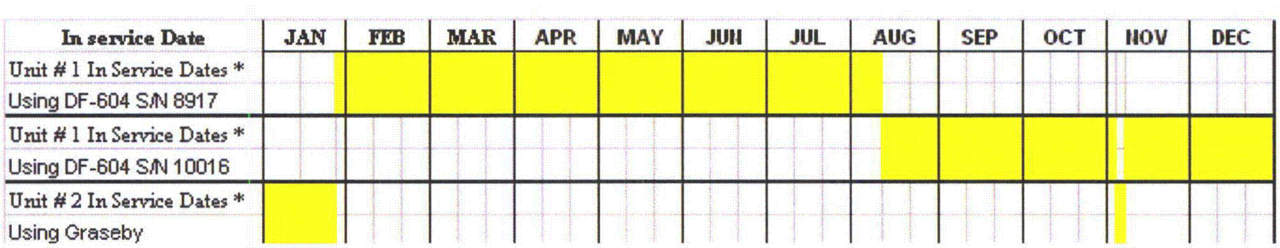
To: NRC File

Subject: Summary of Radiation Instrument Calibrations – 2009

	Instrument	Date(s) Calibrated
Calibration Orifices (Annual calibration required)		
	Lo Vol-40A S/N M100	2-23-09
	Hi Vol-25A S/N 8080978	2-23-09
	Sierra Instruments TE-5025A	2-23-09
Calibrators (Annual calibration required)		
	CD-530-1 Digital Venturi Calibrator S/N 3039	11-30-09
Alpha Detectors		
	43-5 S/N P-2425	2-12-09 & 8-13-09
	43-5 S/N P-2426	1-15-09 & 7-24-09
	43-5 S/N P-2427	6-19-09 & 12-28-09
	43-5 S/N P-2428	1-2-08 & 7-9-08
	43-5 S/N P-2429	2-12-09 & 8-12-09
	43-90 S/N PR-138872	6-19-09 & 12-24-09
	43-90 S/N PR-138874	2-12-09 & 8-12-09
	43-90 S/N 232499	6-11-09 & 12-18-09
	43-1 S/N PR-206925	1-15-09 & 7-23-09
	AC3-5 S/N 3793	12-29-08 & 7-23-09
Gamma Meters/Detectors		
	12S S/N 11816	7-9-09 & 1-19-10
	5 S/N 8170	7-8-09 & 1-18-10
	44-10 S/N 206932	1-14-09 & 7-24-09
	44-10 S/N 233869	1-14-09 & 7-24-09
	19 S/N 16938	7-9-09 & 1-20-10
	44-10 S/N 252103	1-14-09 & 7-23-09
	44-10 S/N 252068	6-15-09 & 12-18-09
Rate Meters		
	177 S/N 14390	2-11-09 & 8-12-09
	177 S/N 14407	6-19-09 & 12-24-09
	2350-1 S/N 192613	6-10-09 & 12-18-09
	2350-1 S/N 216182	1-13-09 & 7-20-09
	2350-1 S/N 235547	6-10-09 & 12-18-09

	2350-1 S/N 235565	1-13-09 & 7-20-09
	Model 3 S/N 157539	6-16-09 & 12-29-09
	Model 12 S/N 12280	1-19-09 & 7-17-09
	PRS-1 S/N 330/3793	12-29-08 & 7-23-09
SAC R4		
	S/N 383	5-27-08 & 11-26-08
SAC R5		
	S/N 614	6-18-09 & 12-23-09
	S/N 965	6-4-09 & 12-14-09
	S/N 602548	6-4-09 & 12-14-09
Scaler		
	MS-2 S/N 738	6-4-09 & 12-11-09
	MS-2 S/N 994	6-18-09 & 12-23-09
Beta Gamma Detector		
	Model 44-1 S/N PR-156890	1-19-09 & 7-17-09
	Model 44-9 S/N PR-093335	6-16-09 & 12-29-09
Air Pumps		
	Buck Basic S/N 12527	Used for personal breathing zone sampling and for radon progeny sampling. Please see attached sheet
	Buck Basic 12 S/N 12486	
	Buck Basic 12 S/N 12494	
Scintillation Detector		
	Model SPA-1 S/N 704727	6-5-09 & 12-14-09
Hi Vol Air Sampler		
	S/N Unit # 1	3-24-09, 4-14-09, 7-29-09, & 10-15-09
	S/N Unit # 2	3-24-09, 4-14-09, 7-29-09, & 10-15-09
	S/N Unit # 3	3-24-09, 4-14-09, 7-23-09, & 10-15-09
	S/N Unit # 4	3-24-09, 4-14-09, 7-6-09, & 10-15-09
Lo Vol Air Sampler (Graseby)		
	Unit #2	1-14-09 & 11-3-09
Lo Vol Air Sampler (F & J Specialties)		
	DF-604 S/N 8240	Unit removed from service / returned.
	DF-604 S/N 10016	Annual Factory calibration: February 5, 2009. Field calibration/checks: 8-17-09, 9-8-09, 10-5-09, 11-2-09, 12-8-09.
	DF-604 S/N 8917	Annual Factory calibration: September 2, 2009. Field Calibration/checks: 2-2-09, 3-9-09, 4-6-09, 5-4-09, 6-1-09, 7-6-09, 8-3-09

<u>Lo Vol Air Sampler In-Service Dates</u>:
One unit is required to be operating at the single required downwind air monitoring station during non-operating periods. The F&J Specialties DF-604 unit Serial Number 8917 was operated at that single location from January 29 to August 17, 2009. The F&J Specialties unit Serial Number 10061 was operated at that single location from August 17 to November 3 and November 5 to December 31, 2009. The Graseby Unit #2 was used at that location from January 1 to January 31, 2009 and November 3 to November 5, 2009.



Note: Portable electronic survey instruments calibrated by a contract laboratory (Energy Laboratories, Inc.) in accordance with ANSI Standard N323A-1997 – American National Standard – Radiation Protection Instrumentation – Test and Calibration, Portable Survey Instruments.

Orifices are calibrated annually as stated in the Environmental Protection Agency Quality Assurance Handbook for Air Pollution Measurement Systems - Volume II – Ambient Air Specific Methods. Calibrators are calibrated annually, as per the manufacturer.

No electronic survey instrument was used on site unless that instrument had been calibrated within the last six (6) months prior to use. Instruments were sent to the off-site calibrator following six (6) months of last calibration. The off-site calibrator experienced severe delays in calibrating and returning instruments to the site. They have since hired another technician and turnaround time has improved.

To insure a high level of accuracy of breathing zone sample volumes, these units were calibrated between each sample event, on the following dates/times:

Buck Basic 12 – S/N B12527

Date	Time
3-18-09	16:52
4-14-09	13:35
7-20-09	14:37
10-12-09	15:11

Buck Basic 12 – S/N B12494

Date	Time	Date	Time
3-16-09	17:30	6-11-09	10:40
3-31-09	14:04	7-20-09	14:37
4-14-09	11:52	10-12-09	15:04
6-1-09	16:48	11-30-09	13:37
6-4-09	10:22	12-9-09	17:59
6-10-09	16:09		

Buck Basic 12 – S/N B12486

Date	Time	Date	Time
3-18-09	16:52	9-29-09	13:42
4-14-09	13:27	10-12-09	14:52
7-5-09	16:56	11-30-09	11:26
9-10-09	11:31	12-30-09	14:37

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Internal memo

28 January 2010

TO: Gamma Radiation Monitoring File

Subject: External Gamma Radiation Survey Assessment

In 2009, gamma surveys of the Mill were conducted on June 23 and November 24, 2009. A gamma survey of the interior of the tailings impoundment was conducted on June 25 and November 25, 2009. Gamma surveys of the Ion Exchange area were conducted on June 23 and November 23, 2009.

Eighteen (18) associated with the Ion Exchange equipment were surveyed on June 23 and November 23, 2009. Twenty-eight (28) locations in the Mill and Solvent Extraction (SX) Buildings were surveyed for gamma radiation on June 23, 2009 while twenty-six (26) locations were surveyed on November 24, 2009

Gamma readings ranged from 28.2 to 578.9 µR/hour (192-µR/hr average for the year) for the Ion Exchange related equipment, to 11.2 to 922 µR/hour (67.0 µR/hr average for the year) in the Mill and Solvent Extraction (SX) Buildings.

The stored equipment was monitored as well on June 23, and December 14, 15 and 16, 2009.The stored equipment ranged from 11.3 to 4719 µR/hr at the equipment surface. The stored equipment generally exhibited higher gamma readings than the existing mill equipment, with the overall effect of slightly increasing gamma doses in the mill in areas where the equipment is stored.

None of the stored equipment exhibited dose rates at thirty (30) centimeters from the equipment (greater than 0.005 rems) sufficient to require posting under 10 CFR 20.1003 as a radiation area. The highest measured gamma dose rate at 30 centimeters from any piece of equipment was 2.70 millirems/hour (0.0027 rems/hr.) in front of a stored pressure vessel (assuming a 1:1 relationship between milli Roentgens and millirems for gamma radiation). Employees and contract personnel have been instructed to avoid certain pieces of stored equipment (pressure vessels) in the mill that exhibit the highest levels of gamma radiation. The area in which the pressure vessels are stored in the mill has been identified.

Two gamma surveys were completed in the tailings impoundment on June 25 and November 25, 2009. This area averaged 100.1 µR/hr for 2009. Due to the large number of readings taken in the impoundment on June 25 and November 25, 2009, the tables with all of the readings are not included. Over 400 readings were taken in the impoundment each time.

Gamma radiation levels from the stored resin in the thickener in the Counter Current Decantation (CCD) area of the mill are tracked. The levels remain low. The results of the monitoring are included on the attached table entitled "Stored Resin Gamma Radiation Monitoring Results".

In spite of the fact that personal monitoring of dose at the site is not required due to the demonstrated low doses to individuals, personal external dosimeters were issued to site and contract personnel. The maximum annual external deep dose above background received by any individual as measured by Luxel dosimeters was 3 millirems. A summary of the dosimetry results is attached.

An assessment of dose (external and internal) to the maximally exposed individual (the Mill Foreman) demonstrating the lack of need for individual monitoring under 10 CFR 20.1502 is maintained on file on site.

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Kennecott Uranium Company		
Sweetwater Uranium Project		
Stored Resin		
Stored Resin Gamma Radiation Monitoring Results		
	GAMMA	
	Top	Bottom
Date	(uR/hr)	(uR/hr)
28-Apr-98	25	60
8-Oct-98	22	160
12-May-99	19	60
17-Nov-99	45	90
21-May-00	30	70
21-Dec-00	40	70
20-Jun-01	40	65
26-Dec-01	90	80
24-Jun-02	60	80
23-Dec-02	14	60
25-Jun-03	20	60
16-Dec-03	41.8	71.7
28-Jun-04	57.8	152
16-Dec-04	28.7	110
8-Jun-05	18	120
22-Dec-05	53.4	262
14-Jun-06	32.7	125
21-Dec-06	50.1	117
26-Jun-07	25.1	111
13-Dec-07	24.9	133
24-Jun-08	27.3	24.3
23-Dec-08	52.6	71.2
23-Jun-09	37.6	73.8
24-Nov-09	43.8	71.9
Average	**37.5**	**95.7**
Standard Deviation:	**17.4**	**48.4**
OAP:2004		
resin0001.xls		

KENNECOTT URANIUM COMPANY				RADIATION DOSIMETRY RESULTS / DEEP DOSE 2009												
EMPLOYEE TITLE		**Dosimeter #**	**EMPLOYER**	**January**	**February**	**March**	**April**	**May**	**June**	**July**	**August**	**September**	**October**	**November**	**December**	**Total**
FACILITY SUPERVISOR	FS	24	KENNECOTT URANIUM CO.	M	M	M	M	M	M	M	M	M	M	M	M	0
MILL FORMAN	MF	26	KENNECOTT URANIUM CO.	M	M	M	M	M	M	M	M	M	M	M	M	0
SR. FACILITY TECHNICIAN	FT	27	KENNECOTT URANIUM CO.	M	M	M	M	M	M	M	M	M	M	M	M	0
ADMINISTRATIVE COORDINATOR	AC	25	KENNECOTT URANIUM CO.	M	M	M	M	M	M	M	M	3	M	M	M	3
CONTRACT EMPLOYEE																
TITLE			**EMPLOYER**													
ADMINISTRATIVE ASSISTANT	AST	75	ADECCO	M	M	M	M	M	M	M	M	M	M	M	M	0
																0
PROJECT MANAGER	PM # 1	29	ARCHER CONSTRUCTION, Inc.	1	M											1
PROJECT MANAGER	PM # 2	31	ARCHER CONSTRUCTION, Inc.	M	M			M	M	M	M					0
EQUIPMENT OPERATOR	EO# 3	38	ARCHER CONSTRUCTION, Inc.	M	M											0
EQUIPMENT OPERATOR	EO# 6	39	ARCHER CONSTRUCTION, Inc.	M	M											0
EQUIPMENT OPERATOR	EO# 15	54	ARCHER CONSTRUCTION, Inc.	M	M			M	M							0
EQUIPMENT OPERATOR	EO# 19	60	ARCHER CONSTRUCTION, Inc.	M	M			M	M	M	1					1
EQUIPMENT OPERATOR	EO# 21	61	ARCHER CONSTRUCTION, Inc.	M	M					M	M					0
EQUIPMENT OPERATOR	EO# 25	73	ARCHER CONSTRUCTION, Inc.	M	M	M	M	M	M	1	M					1
MECHANIC	MEC # 1	74	ARCHER CONSTRUCTION, Inc.	M	M					M						0
EQUIPMENT OPERATOR	EO# 28	78	ARCHER CONSTRUCTION, Inc.	M	M											0
EQUIPMENT OPERATOR	EO# 29	76	ARCHER CONSTRUCTION, Inc.	M	M											0
EQUIPMENT OPERATOR	EO # 31	82	ARCHER CONSTRUCTION, Inc.	M	M					M	M					0
Carpenter/Equipment Operator	CAR # 2	83	ARCHER CONSTRUCTION, Inc.	M	M											0
EQIPMENT OPERATOR	EO # 33	84	ARCHER CONSTRUCTION, Inc.	M	M			M	M	M	M					0
EQUIPMENT OPERATOR	EO # 34	86	ARCHER CONSTRUCTION, Inc.	M	M											0
Carpenter/Equipment Operator	EO # 35	87	ARCHER CONSTRUCTION, Inc.	M	M											0
Carpenter/Equipment Operator	CAR # 3	81	ARCHER CONSTRUCTION, Inc.	M	M											0
CRANE INSPECTOR	CRN # 1	35	AMERICAN EQUIPMENT								1 M-1					1
VISITOR		35		M	M	M	M	M	M	M	1	M	M	M	M	1
VISITOR # 1		36		M	M	M	M	M	M	1	M	M	M	M	M	1
VISITOR # 3		33		M	M	M	M	M	M	M	1	M	M	M	M	1
SURVEYOR	SURV	28	ROBERT JACK SMITH AND ASSOCIATES	M	M	M	M	M	M	M	M	M	M	M	M	0
SECURITY	SEC # 1	49	SECURITAS	1	M	M	M	M	M	M	M	M	M	M	M	1
SECURITY	SEC # 4	88	SECURITAS					M-1	M	M	M	2	M	M	M	2

No longer employed by contractor
Not yet hired
Not on site/did nor work in restricted area during month
Dosimeter lost/Dose estimated by Landauer, Inc.

M = Minimal reporting service of 1 MREM

M-1 - Issued Visitor Dosimeter
M-2 - Issued Visitor-1 Dosimeter
M-3 - Issued Visitor-3 Dosimeter

Employees listed by number to preserve confidentiality

NOTE: Workers new to the site were issued a visitor dosimeter until their assigned/permanent dosimeter arrived from Landauer, Inc.
All exposures are less than 10% of the limits in 10 CFR 20.1502 and as such monitoring and reporting of doses is not required.
This individual tracking of doses using dosimeters exchanged on a monthly basis is being performed to insure that external doses are indeed being maintained ALARA

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Internal memo

1 February 2010

To: Total and Removable Alpha Monitoring File

Subject: Total and Removable Alpha Monitoring Assessment

In 2009 removable alpha monitoring was performed in the Mill and Solvent Extraction (SX) Buildings and in the Ion Exchange area on June 18 and December 2, 2009. Total alpha monitoring was performed on June 24, December 1 and December 2, 2009 (total alphas in the Mill and Ion Exchange areas).

Total and removable alpha monitoring was performed at least four (4) locations related to the Ion Exchange plant and at least nineteen (19) locations related to the Mill and Administration Buildings.

Total alpha contamination levels in the Mill Building ranged between 61.0 and 52,436 dpm/100 cm^2. The single high reading was taken at a location on the centrifuge support frame in the Yellowcake Area of the Mill Building. This area is part of the restricted area. Removable alpha contamination in the Mill Building ranged from 0.9 to 1445.2 dpm/100 cm^2. The single high removable alpha measurement was taken on December 2, 2009 of the southeast corner of the centrifuge support frame in the yellowcake are of the mill building. This item is within the restricted area. Most of the alpha contamination on the centrifuge support frame is fixed in place and non-mobile. The removable contamination on the support frame varied from 19.1 to 1445.2 dpm/100 cm^2 The contamination on the centrifuge frame appears to be fixed to the zinc coating on the galvanized steel support frame.

Total alpha contamination levels in the Ion Exchange area ranged from 15.0 to 2557.3 dpm/100 cm^2. This single high reading was on the elution pump skid. The Ion Exchange area is a restricted area. Removable alpha contamination levels in the Ion Exchange area ranged from 2.7 to 27.9 dpm/100 cm^2. Both the high total and removable alpha readings are below the limits (5000/1000 dpm/100 cm^2) for release for unrestricted use.

Total alpha monitoring of the stored equipment was performed on June 25 and December 14 to 16, 2009. Removable alpha monitoring of the stored equipment was performed on June 18 and December 16, 2009, as well. Total alpha readings for the stored equipment ranged from 22.8 to 198,426 dpm/100 cm^2. Removable alpha readings for the stored equipment ranged from 0.07 to 149,896.4 dpm/100 cm^2. The high total and high removable alpha readings were from rubber liner material on the inside of a connection pipe welded to on of the stored pressure vessels. The high total alpha reading was from rubber liner material inside a connection pipe on vessel 70 while high removable alpha reading was from rubber liner material on the inside of a connection pipe on vessel 71. These openings on the connection pipes are being kept covered to prevent inadvertent contact with these contaminated surfaces.

Nuclear Regulatory Commission (NRC) regulations provide no specific limit on surface contamination levels in the restricted areas. Both of these vessels are stored in the tailings impoundment, a restricted area.

Regulatory Guide 8.30 *Health Physics Surveys in Uranium Recovery Facilities* states in section 2.5:

2.5 Surveys for Surface Contamination in Restricted Area

NRC regulations provide no specific limit on surface contamination levels in restricted areas. However, yellowcake or ore dust lying on surfaces can become resuspended and contribute to the intake of radionuclides, which is limited by 10 CFR 20.1204.

In ore handling areas, surface contamination is not a problem because of the very low specific activity of the ore. In fact, cleanup attempts by methods such as sweeping are likely to produce a more serious hazard through resuspension in the air than if the ore dust were allowed to remain where it lies. When necessary, cleanup may be performed by hosing down the ore dust into floor sumps or by using vacuum suction systems with filtered exhausts.

In leaching and chemical separation areas there is usually little dust and little difficulty with surface contamination.

In the precipitation circuit and the yellowcake drying and barreling areas, surface contamination can be a problem because of the concentrated nature of the yellowcake. The International Atomic Energy Agency (IAEA) recommends (Ref.2) a limit for alpha contamination on such areas as walls, floors, benches, and clothing of 10^{-3} *μ Ci/cm2 (220,000 dpm/100 cm2), which is equivalent to about 2 mg/cm2 of natural uranium. Based on experience, the IAEA concluded that if surface contamination levels are kept below this value, the contribution to airborne radioactivity from surface contamination will be well below applicable limits. The British National Radiological Protection Board also recommends a limit of* 10^{-3} *μ Ci/cm2 for uranium alpha contamination in active areas of plants (Ref.22), based on calculation using resuspension factors rather than experience.*

The NRC staff considers surface contamination levels of 10^{-3} *μ Ci/cm2 acceptable to meet the ALARA concept in UR facilities. The levels are low enough to ensure little contribution to airborne radioactivity, yet are practical to meet. Such an amount of yellowcake surface contamination is readily visible because of the low specific activity of uranium and does not require a survey instrument for detection. It is recommended that surfaces where yellowcake may accumulate be painted in contrasting colors because surveys for surface contamination in work areas are visual rather than by instrument.*

The elevated total and removable alpha readings fall below the 220,000 dpm/100 cm2 threshold.

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Internal memo

2 February 2010

To: Radon Monitoring File

Subject: Radon Daughter Monitoring Assessment

In 2009 radon daughter monitoring was conducted on June 1 and December 8, 2009 in the Ion Exchange Area. Radon daughter monitoring was conducted in the Mill Building on June 2 to 11 and December 9, 2009.

At least twelve (12) locations throughout the Mill and three (3) locations around the IX were sampled for radon daughters. In addition, locations in the Security Trailer and Administration Building were sampled for radon daughters as well. Radon daughter concentrations (in working levels) were at low levels, ranging from ND to 0.004 WL in the Ion Exchange area (average: 0.002) and ND to 0.049 WL in the Mill and Solvent Extraction (SX) Buildings (average: 0.009). The ventilation fan operated continuously in the Solvent Extraction (SX) Building. Radon levels varied in the SX building from 0.012 to 0.049 WL, averaging 0.016 WL in June 2009 and 0.043 WL in December 2009. Radon concentrations have not exceeded the 0.08 WL thresholds in the SX Building which would require weekly monitoring. The fan continues to be effective in controlling radon daughter concentrations.

Radon daughter concentrations were measured in June and December 2009 in the Security Trailer to assist in determining an equilibrium factor for the area, for use in calculating dose to the nearest resident.

Radon daughters were sampled and analyzed using the modified Kusnetz method.

Two (2) RadTrak radon monitors were placed above and beneath the Number 1 Counter-Current Decantation (CCD) tank in the Mill during all four quarters of 2009 to monitor radon levels associated with the used ion exchange resin stored in the Number 1 CCD tank. Radon concentrations below the tank varied from 2.8 to 3.0 pCi/L. Radon concentrations on top of the tank varied from 2.3 to 3.4 pCi/L. These values are at background levels since upwind radon concentrations for the facility varied from 2.6 to 3.8 pCi/L during 2009, as shown in the table below:

2009 Radon Concentrations

Quarter	Bottom of CCD#1 (pCi/L)	Top of CCD#1 (pCi/L)	Upwind (Background) (pCi/L)
1st	3.0	3.4	2.8[2]
2nd	2.8	2.3	2.6[2]
3rd	2.8	2.3	3.6[2]
4th	3.0	3.0	3.8[2]
Average	2.9	2.8	3.2

[2] Average of two (2) Rad Trak units.

Radon daughter concentrations at the top and bottom of CCD#1 were low, ranging from 0.003 to 0.008 WL.

A history of the RadTrak results and the radon daughter sampling results is included on the attached tables entitled "Stored Resin RadTrak Monitoring Results" and "Stored Resin Radon Monitoring Results".

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Kennecott Uranium Company

Sweetwater Uranium Project

Stored Resin RadTrak Monitoring Results

Date		*RadTrak Results* Top (pCi/l)	Bottom (pCi/l)
2nd	Quarter 1998	1.9	2.0
3rd	Quarter 1998	2.3	2.1
4th	Quarter 1998	1.7	1.8
1st	Quarter 1999	3.3	3.3
2nd	Quarter 1999	2.3	2.5
3rd	Quarter 1999	2.3	2.9
4th	Quarter 1999	4.8	4.5
1st	Quarter 2000	2.7	2.7
2nd	Quarter 2000	2.2	3.3
3rd	Quarter 2000	2.8	3.2
4th	Quarter 2000	3.9	4.7
1st	Quarter 2001	2.9	5.2
2nd	Quarter 2001	1.0	1.5
3rd	Quarter 2001	2.0	2.5
4th	Quarter 2001	2.5	3.4
1st	Quarter 2002	2.8	2.6
2nd	Quarter 2002	1.8	2.2
3rd	Quarter 2002	2.9	2.3
4th	Quarter 2002	2.7	4.7
1st	Quarter 2003	2.5	2.8
2nd	Quarter 2003	2.0	3.2
4th	Quarter 2003	3.5	3.3
1st	Quarter 2004	2.9	3.5
2nd	Quarter 2004	1.2	2.4
3rd	Quarter 2004	2.2	2.7
4th	Quarter 2004	3.2	3.4
1st	Quarter 2005	2.1	2.8
2nd	Quarter 2005	1.8	3.2
3rd	Quarter 2005	3.0	3.5
4th	Quarter 2005	3.2	3.5
1st	Quarter 2006	3.0	3.0
2nd	Quarter 2006	2.0	2.7
3rd	Quarter 2006	2.4	2.7
4th	Quarter 2006	3.5	3.7
1st	Quarter 2007	3.8	2.7
2nd	Quarter 2007	2.1	1.2
3rd	Quarter 2007	2.8	3.7
4th	Quarter 2007	2.6	3.1
1st	Quarter 2008	3.4	3.9
2nd	Quarter 2008	2.2	2.9
3rd	Quarter 2008	2.7	3.1
4th	Quarter 2008	3.4	3.4
1st	Quarter 2009	3.4	3.0
2nd	Quarter 2009	2.3	2.8
3rd	Quarter 2009	2.3	2.8
4th	Quarter 2009	3.0	3.0
	Average:	**2.6**	**3.0**
Standard Deviation:		**0.7**	**0.8**
	3.7	**Corrected value**	

Kennecott Uranium Company		
Sweetwater Uranium Project		
Stored Resin		
Stored Resin Radon Monitoring Results		
	RADON	
	Top	Bottom
DATE	(WL)	(WL)
24-Nov-98	0.028	0.023
19-May-99	0.037	0.020
12-Oct-99	0.040	0.057
26-Apr-00	0.008	0.005
21-Nov-00	0.030	0.023
15-May-01	0.027	0.027
10-Dec-01	0.024	0.023
16-Jun-02	0.013	0.012
25-Nov-02	0.027	0.028
2-Jun-03	0.013	0.011
30-Nov-03	0.012	0.007
30-Jun-04	0.010	0.013
2-Dec-04	0.011	0.027
21-Jun-05	0.028	0.016
1-Dec-05	0.022	0.025
12-Jun-06	0.002	0.000
19-Dec-06	0.043	0.043
24-Jun-07	0.005	0.012
10-Dec-07	0.021	0.012
10-Jun-08	0.022	0.027
9-Dec-08	0.009	0.007
2-Jun-09	0.003	0.006
9-Dec-09	0.008	0.008
Average:	**0.019**	**0.019**
Standard Deviation:	**0.012**	**0.013**

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Internal memo

POTABLE WATER QUALITY SUMMARY 2009

Coliform Count Summary

Date	Drake #1 (well head)	Administration Building Water Supply (PWW-1 or PWW-2) (kitchen sink cold tap)	Change/Shower/ Monitoring Trailer (slop sink cold tap)	Sr. Facility Technician Trailer (kitchen sink cold tap)	Security Guard Trailer (kitchen sink cold tap)
1/5/09	Good	Good	Water off		
2/2/09	Good	Good	Water off		
3/9/09	Good	Good	Water off		
4/6/09	Water off/pump down	Good	Good		
4/13/09				Good | *Two (2)* Good | *samples taken)*	Good
5/4/09	Good	Good	Good		Good
6/1/09	Good	Good	Good		Good
7/6/09	Good	Good	Good		Good
8/3/09	Good	Good	TNTC – resampled		TNTC - resampled
8/11/09			TNTC –water shut down and drained		Good
9/8/09	Good	Good	Shut down		Good
10/12/09	Good	Good	Shut down		
11-2-09	Good	Good			
12-7-09	Sample Frozen in Transit	Sample Frozen in Transit			
12-8-09	Good	Sample lost			
12-21-09		Good			

The Administration Building can be supplied by either PWW-1 or PWW-2. The water is tested monthly at the point of use and the results apply to whichever well is supplying the building at that time. The Senior Facility Technician and Security Guard Trailers are supplied by Drake #1 well.

A Change/Shower/Monitoring Trailer was placed into service in late winter of 2006 for use by contract excavation employees. The water in this trailer was tested as well. It is supplied by PWW-1 and PWW-2. Since water in this trailer was no longer required and due to the fact that the water failed to yield a good test, water to the trailer was shut down. There was no actual use of the water in this facility during the 2008-2009 period. The water was off to this trailer from January to March 2009 due to freezing.

The pump in the Drake #1 well went down after the March 9, 2009 sample was taken. It was restored to service in time for the May 4, 2009 sample. However, since service was lost, water was supplied to the Senior Facility Technician and Security Guard trailers from PWW-1 and PWW-2, as is the Administration Building. In spite of the fact that the water from PWW-1 and PWW-2 is tested at the Administration Building kitchen sink cold tap, it was also tested monthly at the Security Guard Trailer and once (April 13, 2009) at the Senior Facility Technician's trailer to assure water quality on that section of the water system, during the period that it was supplied by PWW-1 and PWW-2.

The Senior Facility Technician and Security Guard trailers were reconnected to the Drake #1 Well on Thursday, October 8, 2009. When the August 3, 2009 Security Guard Trailer returned a test of TNTC, bottled water was provided to the two (2) individuals using that portion of the system (the Senior Facility Technician and Security Guard) until the August 11, 2009 satisfactory test result was received.

KENNECOTT URANIUM COMPANY					
POTABLE WATER QUALITY SUMMARY					
2009					
DRAKE #1					
CHEMICAL ANALYSIS SUMMARY:					
Use Suitability	Domestic *	**DRAKE #1**	**DRAKE #1**	**DRAKE #1**	**DRAKE #1**
Parameter	Concentration **	01/19/09	04/21/09	07/07/09	10/07/09
Ammonia (NH3-N)	0.5	-	-	-	-
Arsenic (As)	0.05	0.002	0.002	0.002	0.002
Barium (Ba)	2	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)
Boron (B)	0.75	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)
Cadmium (Cd)	0.005	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)
Chloride (Cl)	250	1	2	2	ND (1.0)
Chromium (Cr)	0.1	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)
Copper (Cu)	1	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)
Cyanide (CN)	0.2	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)
Fluoride (F)	4	0.2	0.2	0.2	0.2
Hydrogen Sulfide (H2S)	0.05	-	-	-	-
Iron (Fe)	0.3	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
Lead (Pb)	0.015	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)
Manganese (Mn)	0.05	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)
Mercury (Hg)	0.002	ND (0.0002)	ND (0.0002)	ND (0.0002)	ND (0.0002)
Nitrogen, Nitrate+Nitrite as N		ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)
Nitrite (NO2-N)	1	-	-	-	-
Oil and Grease	Virtually Free	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)
Phenol	0.001	-	-	-	-
Selenium (Se)	0.05	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)
Silver (Ag)	0.1	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)
Sulfate (SO4)	250	46	43	44	54
Total Dissolved Solids (TDS)	500	171	183	169	164
Zinc (Zn)	5	0.02	0.02	0.02	0.03
pH (Standard Units)	6.5 - 8.5	8.23	8.29	8.14	8.34
Combined Ra226/Ra228 (pCi/L)	5.0 pCi/l	2.8	2.2	1.95	2.2
Natural Uranium (pCi/L)	pCi/L	0.2	ND (0.2)	ND (0.2)	0.3
Uranium - Suspended	mg/L	ND (0.0003)	ND (0.0003)	ND (0.0003)	ND (0.0003)
Uranium - Total	mg/L	0.0003	ND (0.0003)	ND (0.0003)	ND (0.0003)
Lead 210 (pCi/L)	pCi/L	ND (1.0)	1.7 ± 2.9	ND (1.0)	0.6 ± 1.4
Total Strontium 90 (pCi/L)	8.0 pCi/l	-	-	-	-
Gross Alpha Radioactivity *** (pCi/L)	15.0 pCi/l	1.2 +/-0.7	2.2 ± 0.8	2.0 ± 0.5	1.7 ± 0.7
* This list does not include all constituents in the national drinking water standards.					
** mg/L, unless otherwise indicated					
*** Including Radium 226 but excluding Radon and Uranium					

KENNECOTT URANIUM COMPANY					
POTABLE WATER QUALITY SUMMARY					
2009					
PWW-1					
CHEMICAL ANALYSIS SUMMARY:					
Use Suitability	Domestic *	**PWW-1**	**PWW-1**	**PWW-1**	**PWW-1**
Parameter	Concentration **	02/09/09	04/14/09	7/8/2009	10/20/2009
Ammonia (NH3-N)	0.5	-	-	-	-
Arsenic (As)	0.05	0.001	0.002	0.002	0.002
Barium (Ba)	2	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)
Boron (B)	0.75	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)
Cadmium (Cd)	0.005	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)
Chloride (Cl)	250	2	2	2	2
Chromium (Cr)	0.1	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)
Copper (Cu)	1	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)
Cyanide (CN)	0.2	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)
Fluoride (F)	4	0.2	0.2	0.2	0.2
Hydrogen Sulfide (H2S)	0.05	-	-	-	-
Iron (Fe)	0.3	0.16	0.19	0.17	0.23
Lead (Pb)	0.015	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)
Manganese (Mn)	0.05	0.02	0.02	0.02	0.02
Mercury (Hg)	0.002	ND (0.0002)	ND (0.0002)	ND (0.0002)	ND (0.0002)
Nitrogen, Nitrate+Nitrite as N		ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)
Nitrite (NO2-N)	1	-	-	-	-
Oil and Grease	Virtually Free	ND (5)	ND (5)	ND (5)	ND (5)
Phenol	0.001	-	-	-	-
Selenium (Se)	0.05	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)
Silver (Ag)	0.1	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)
Sulfate (SO4)	250	51	47	46	44
Total Dissolved Solids (TDS)	500	164	159	178	231
Zinc (Zn)	5	0.03	0.03	ND (0.01)	ND (0.01)
pH (Standard Units)	6.5 - 8.5	8.11	8.27	8.08	8.35
Combined Ra226/Ra228 (pCi/L)	5.0 pCi/l	2.99	1.77	1.57	1.14
Natural Uranium (pCi/L)	pCi/L	1.1	0.9	1.7	0.8
Uranium - Suspended	mg/L	ND (0.0003)	ND (0.0003)	ND (0.0003)	ND (0.0003)
Uranium - Total	mg/L	0.0016	0.0013	0.0025	0.0012
Lead 210 (pCi/L)	pCi/L	ND (1.0)	ND (1.0)	ND (1.0)	1.3 ± 2.0
Total Strontium 90 (pCi/L)	8.0 pCi/l	-	-	-	-
Gross Alpha Radioactivity *** (pCi/L)	15.0 pCi/l	1.8 ± 0.6	0.9 ± 0.4	1.3 ± 0.4	0.7 ± 0.4
* This list does not include all constituents in the national drinking water standards.					
** mg/L, unless otherwise indicated					
*** Including Radium 226 but excluding Radon and Uranium					

KENNECOTT URANIUM COMPANY					
POTABLE WATER QUALITY SUMMARY					
2009					
PWW-2					
CHEMICAL ANALYSIS SUMMARY:					
Use Suitability	Domestic *	**PWW-2**	**PWW-2**	**PWW-2**	**PWW-2**
Parameter	Concentration **	03/31/09	4/14/2009	9/14/2009	10/20/2009
Ammonia (NH3-N)	0.5	-	-	-	-
Arsenic (As)	0.05	0.002	0.002	0.002	0.002
Barium (Ba)	2	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)
Boron (B)	0.75	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)
Cadmium (Cd)	0.005	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)
Chloride (Cl)	250	1	2	2	2
Chromium (Cr)	0.1	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)
Copper (Cu)	1	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)
Cyanide (CN)	0.2	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)
Fluoride (F)	4	0.2	0.2	0.2	0.2
Hydrogen Sulfide (H2S)	0.05	-	-	-	-
Iron (Fe)	0.3	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
Lead (Pb)	0.015	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)
Manganese (Mn)	0.05	0.01	0.01	0.01	0.01
Mercury (Hg)	0.002	ND (0.0002)	ND (0.0002)	ND (0.0002)	ND (0.0002)
Nitrogen, Nitrate+Nitrite as N		ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)
Nitrite (NO2-N)	1	-	-	-	-
Oil and Grease	Virtually Free	ND (5)	ND (5)	ND (5)	ND (5)
Phenol	0.001	-	-	-	-
Selenium (Se)	0.05	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)
Silver (Ag)	0.1	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)
Sulfate (SO4)	250	42	41	34	37
Total Dissolved Solids (TDS)	500	176	157	166	189
Zinc (Zn)	5	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)
Natural Uranium	pCi/L	1.8	1.9	1.9	2
Uranium - Suspended	mg/L	ND (0.0003)	ND (0.0003)	ND (0.0003)	ND (0.0003)
Uranium - Total	mg/L	0.0027	0.0028	0.0028	0.0027
Pb-210	pCi/L	ND (1)	ND (1)	ND (1)	ND (1)
pH (Standard Units)	6.5 - 8.5	8.45	8.54	8.38	8.51
Combined Ra226/Ra228	5.0 pCi/l	1.54	0.96	1.76	0.85
Total Strontium 90	8.0 pCi/l	-	-	-	-
Gross Alpha Radioactivity ***	15.0 pCi/l	1.4 ± 0.5	1.2 ± 0.4	0.9 ± 0.4	0.7 ± 0.4
* This list does not include all constituents in the national drinking water standards.					
** mg/L, unless otherwise indicated					
*** Including Radium 226 but excluding Radon and Uranium					

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Internal memo

27 January 2010

To: Distribution

Subject: Safety and Environmental Review Panel (SERP) – 2009

During the calendar year 2009 the licensee has not:

- Made changes in the facility as described in the license application (as updated);
- Conducted tests or experiments not presented in the license application (as updated).

During the calendar year 2009 the licensee has:

- Changed reporting titles / updated the organization chart / changed Safety and Environmental Review panel (SERP) Membership.
- Changed the calculated volume of fluid that the impoundment is capable of evaporating on an annual basis due to the construction of a series of lined ponds on top of the tailings.

Change 18
This change is covered by SEE# 18 entitled Optimization of Evaporation and Control of Windblown Tailings in the Sweetwater Uranium Project Tailings Impoundment. This change specifically changes the calculated volume of fluid that the impoundment is capable of evaporating on an annual basis due to the construction of a series of lined ponds on top of the tailings. This changes the calculated volume of fluid that the impoundment is capable of evaporating from 25 million gallons per year to a minimum of 29.2 million gallons per year.

Change 19
This change is covered by SEE # 19 entitled Change in Reporting Titles / Updated Organization Chart / Changes in Safety and Environmental Review Panel (SERP) Membership. This change was an administrative change. It changed the name of the individual to whom the Facility Supervisor reports; from Darryl Maunder, Manager of Environmental and Regulatory Affairs, to James Berson, President of Kennecott Uranium Company. In addition, Roger Strid, Manager-Projects RTEA on the Safety and Environmental Review Panel (SERP) was replaced with James Berson, President of Kennecott Uranium Company. This change was discussed with James Webb of the Nuclear Regulatory Commission (NRC) in telephone conversations on April 8, June 4, and June 18, 2009. In an e-mail dated November 11, James Webb was specifically informed of the change as he requested in the telephone conversation on June 18, 2009.

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Internal memo

2 February 2010

To: Respiratory Protection File

Subject: Respiratory Protection – 2009

The Mill Foreman, Senior Facility Technician, Facility Supervisor and an Archer Construction, Inc.'s Supervisor were the four (4) employees on site that were part of the facility's respirator program in 2009.

Their respiratory physicals and fit tests were conducted on the following dates:

TITLE	RESPIRATOR PHYSICAL	FIT TEST
Mill Foreman	October 16, 2009	November 19, 2009
Senior Facility Technician	June 1, 2009	November 19, 2009
Facility Supervisor	November 13, 2009	November 30, 2009
Archer Construction, Inc. Supervisor	January 9, 2009	January 12, 2009

All fit tests were conducted with stannic chloride irritant smoke. Since Archer Construction, Inc. is no longer working on site, their supervisor is no longer part of the facility's respiratory program. He was examined, fit tested and trained in the event assistance was required in the mill. He never had to don a respirator.

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Internal memo

28 January 2010

To: File

Subject: Releases for Unrestricted Use – 2009

Releases for unrestricted use issued in 2009 were primarily related to the release of equipment used to move tailings in the tailings impoundment. Thirty-two (32) items were released. Total and removable alpha levels on all released equipment were very low since all equipment was thoroughly cleaned prior to monitoring. The maximum removable alpha measurement was 35.3 dpm/100cm^2, less than 10% of the 1000 dpm/100cm^2 release limit. The maximum total alpha measurement was 465.5 dpm/100cm^2, less than 10% of the 5000 dpm/100cm^2 release limit.

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Internal memo

From	Oscar Paulson
To	Standard Operating Procedures File
Reference	**Annual Review of Standard Operating Procedures (SOPs)**
Date	23 December 2009
Number of pages	2

Requirement
License Condition 12.1 states: "An annual report of the review of all existing standard operating procedures, required to be performed by the RSO, shall be prepared and retained on site."

License Condition 9.6 states in part: "In addition, the RSO shall perform a documented review of all existing standard operating procedures at least annually."

Review of Standard Operating Procedures (SOPs) is ongoing throughout the year; however, a final review was performed in December 2009. This review included all Standard Operating Procedures (SOPs) related to the Nuclear Regulatory Commission (NRC) license including Mill Operating Procedures (MOPs), Tailings Operating Procedures (TOPs), Health Physics Procedures (HPs), Environmental Procedures (EPs) and other Standard Operating Procedures (SOPs). Also, SOPs not related to the Nuclear Regulatory Commission (NRC) license were reviewed, revised and updated. The review was conducted over the course of the year and completed on December 23, 2009 with the preparation of this review document. The date of addition or revision for each procedure follows the name of the procedure.

A. Non-Radiologic SOPs

The following non-radiologic procedures were modified:

- The *Extreme Snowfall Plan* was revised on November 16, 2009 to reflect the availability of Archer Construction, Inc. during the winter of 2009-2010 for snow removal.

B. Radiological (NRC License) Related SOPs (HP, EP, TOP, SERP-OP and MOP)

The following procedures were modified:

- HP-2 – *Gamma Survey* – April 21, 2009 and December 22, 2009
- HP-3 – *Beta Survey* – April 22, 2009 and December 22, 2009
- HP-4 – *Radon Daughter Survey* – June 3, 2009
- HP-5 – *Internal and External Occupational Doses* – August 3, 2009 and December 22, 2009
- HP-6 – *Total Alpha Surveys* – April 22, 2009 and December 22, 2009
- HP-7 – *Personnel Alpha Monitoring and Decontamination* – July 30, 2009 and December 22, 2009
- HP-8 – *Removable Alpha Radiation Sampling* – July 30, 2009 and December 22, 2009
- HP-9 – *Management Control, Bioassay Urine and In Vivo Programs* - April 22, 2009

Rio Tinto

- HP-10 – *Air Sampling in the Workplace* - December 22, 2009
- HP-11 – *Personnel Air Sampling* – April 22, 2009
- HP-12 – *In Plant High Volume Particulate Sampling* – April 22, 2009 and December 22, 2009
- HP-13 – *Area Composite High Volume Particulate Sampling* – April 22, 2009 and December 22, 2009
- HP-14 – *Calibration of Equipment* – April 22, 2009 and December 22, 2009
- HP-16 – *Radiological Posting Requirements* – August 3, 2009
- HP-17 – *Yellowcake Pre Shipment Survey* – December 22, 2009
- HP-18 – *Release of Equipment to Unrestricted Areas* – August 4, 2009 and December 22, 2009
- HP-20 – *Radiation Work Permit* – December 22, 2009
- HP-21 – *Respiratory Protection* – November 3, 2009
- HP-25 – *Areas Requiring Personnel Monitoring during Suspended Operations* – April 22, 2009
- HP-33 – *Shipment of Radioactive Samples* – May 28, 2009
- HP-34 – *Personnel Dosimetry for External Exposure* – April 22, 2009
- HP-35 – *Spill, Release, Excursion, Leak and Incident/Event Reporting* – December 22, 2009
- HP-37 – *Spills – Non Operational Periods* – April 22, 2009
- EP-3 – *Low Volume Air Sampling for Operations Using the AccuVol* – May 19, 2009
- EP-4 – *Low Volume Airborne Particulate Sampling for Operations using Direct 115 VAC Connection* – May 19, 2009
- EP-11 – *Thermoluminescent Dosimeter Area (TLD) Monitoring* – May 19, 2009
- EP-12b – *General Surface Water Sampling, Sample Preparation and Water Level Measurement Procedures* – May 19, 2009 and December 22, 2009
- EP-18 – *Meteorological Monitoring* – July 22, 2009
- EP-21 – *Water Sampling for Fecal Coliform Analysis* – December 22, 2009
- EP-22 – *Low Volume Airborne Particulate Sampling for Suspended Operations using the F&J Specialty Products, Inc. Digital Air Monitoring System F&J Model DF-604* – May 19, 2009
- EP-23 – *Low Volume Airborne Particulate Sampling for Operations using the F&J Specialty Products, Inc. Digital Air monitoring System F&J Model DF-604* – May 19, 2009
- EP-24 – *Monthly Flow Verification Procedure for F&J Specialty Products, Inc. Digital Air Monitoring System F&J Model DF-604* – May 19, 2009
- TOP-1 – *General Tailings Impoundment Procedures* – July 9, 2009
- TOP-4 – *Reduction of Voids in Material/Placed in the Tailings Cell for Disposal* – July 7, 2009
- TOP-6 – *Interim Stabilization Program for Tailings* – July 6, 2009
- MOP-14 – *Contaminated Soil Excavation – Catchment Basin Pre-Excavation Procedures (Training/Pre-Job Bioassay), Monitoring and Restricted Area Definition* – April 27, 2009

The following procedure was added:
- EP-26 – *Calculation Procedures for Dose to the Nearest Resident during Periods of Non Operation (Standby)* – December 22, 2009

C. Other Procedures

The *Suspended Operations Procedure* was revised on December 23, 2009.

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Oscar Paulson

Annual SOP Review-2009.doc

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Internal memo

2 February 2010

To: Radiation Work Permit File

Subject Radiation Work Permits

No radiation work permits (RWPs) were issued in 2009.

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Internal memo

2 February 2010

Memo to File

SUBJECT: Dose Assessment/Determination of No Requirement for Individual Monitoring or Dose Calculation at the Sweetwater Uranium Project for 2009

This determination is being prepared to demonstrate that individual monitoring and dose calculation is not required at the Sweetwater Uranium Project due to the low levels of gamma radiation, airborne particulate radionuclides and radon present at the facility. The Sweetwater Uranium Project is a non-operating uranium mill, which suspended operations in the spring of 1983. This assessment is based on background data for the facility and data from radiation surveys and air sampling surveys taken at the facility during 2009.

Background

10 CFR 20 (in 20.1003) in the definition of occupational dose states, "Occupational dose does not include dose received from background radiation...." In order to assess the occupational dose received at the facility the background must be deducted from the total dose received. Background data for gamma radiation and airborne particulate radionuclides were collected in 1976 for the Environmental Report and in 1979 for the pre-operational monitoring program. The average upwind radon concentration for 2087 was used to represent the background radon concentration for the facility.

Item	Average Concentration	Dose
Background Gamma		200.7 mrem/yr (22.9uR/hr)
Airborne Particulates:		
U-nat	6.2E-16 uCi/ml	0.34 mrem/yr
Ra-226	3.9E-16 uCi/ml	0.22 mrem/yr
Th-230	3.9E-16 uCi/ml	0.65 mrem/yr
Pb-210	1.7E-14 uCi/ml	1.39 mrem/yr
Radon-222	3.16 pCi/l	237.76 mrem/yr

Note: Based on calculations prepared by Lyda Hersloff dated December 29, 1993.

Radon-222 concentration based on average of the first, second, third and fourth quarter upwind RadTrak Results. Averages of two (2) RadTrak units were used for each quarter.

The background dose for radon in working levels at the upwind monitoring site assuming daughters present is computed as follows:

(3.16 pCi/l) / (1E3 ml/l) / (1E6 pCi/uCi) = 3.16 E-09 fuci/ml
0.33 WL = 3E-08 uCi/ml (with all daughters present)
[(3.16E-09 uCi/ml) / (3E-08 uCi/ml)] * (0.33 WL) = 0.035 WL for background

The calculated equilibrium factor for the facility (1993 to 2009) average is 0.171. Given that all daughters are not present and the equilibrium factor is 0.171, the actual background radon daughter concentration is:

(0.171) * (0.035 WL) = 0.006 WL

Occupational Dose

1) Gamma Radiation

The average gamma dose at the facility is based on an average of survey results for twenty-eight (28) locations in the mill and twelve (12) locations in the ion exchange area and general surveys in the tailings impoundment and Catchment Basin excavation areas. The results are as follows:

Gamma Survey Results

Area	Total Dose	Background Dose	Occupational Dose
IX Area	194.4 uR/hr	22.9 uR/hr	171.5 uR/hr
Mill	66.9 uR/hr	22.9 uR/hr	44.0 uR/hr
Tailings	100.1 uR/hr	22.9 uR/hr	77.2 uR/hr

Approximately 230 hours (twenty-three 10-hour working days) are estimated to have been spent in the mill and 1,110 hours (one hundred eleven 10 hour working days) are estimated to have been spent in the tailings impoundment by the Mill Foreman in 2009. This estimate is based on the number of entries in the restricted area alpha survey record for 2009, and assuming that each entry constitutes a full ten (10) hour day in either the mill or tailings impoundment, as indicated. If both the mill and tailings impoundment were entered in a single day, then it was assumed that five hours were spent in each area. This assumption is very conservative since many entries in the alpha survey record are the result of a brief (1 - 2 hour) period in either the mill or tailings impoundment.

The table below estimates the gamma dose likely to be received by the Mill Foreman:

Area	Time	Occupational Dose Rate	Total Dose
Mill	230 hours	44.10 μR/hr	10.1 mrem
Tailings	1110 hours	77.2 μR/hr	85.7 mrem
Total			**95.8 mrem**

Gamma survey results for the IX Area are not used in the dose assessment since little time is spent in that area since the unit is shut down.

Since the gamma levels are low in the mill and ion exchange area and only a limited amount of time is spent in these areas, it is unlikely that personnel would receive in one year from sources external to the body a dose in excess of 10% of any of the applicable limits in 20.1201(a); therefore, individual monitoring and dose calculation for external exposure is not required. Gamma doses measured in the Ion Exchange (IX) Area were not used in the estimate due to the very small amount of time spent in that area each year. This estimate assumes a one to one to one (1:1:1) equivalence of exposure (in Roentgens) to absorbed dose (in Rads) to equivalent dose (in REMs). For gamma radiation with a Quality Factor (QF) of one (1), this is acceptable.

Personnel (Luxel) dosimeters were used on site by all personnel during 2009 even though their use was not required, in part, to confirm these calculations. The highest external dose received for the calendar year was 3 millirems, confirming the low external exposure rates on site and the inherent conservative nature of these calculations.

2) Radon

The average radon dose at the facility is based on an average of survey results for three (3) locations in the ion exchange area, at least fourteen (14) locations in the mill and two (2) locations in the Solvent Extraction (SX) Building taken in June and December of 2009. The results are as follows:

Radon Sampling Results

Area	Concentration	Background	Occupational Dose
IX Area	0.002 WL	0.006 WL	0.000 WL
Mill Area	0.009 WL	0.006 WL	0.003 WL

The average occupational radon dose for facility personnel is:

{[(0.003 WL) / (0.33 WL/DAC)] * 230 hours} / (2000 DAC hours/ALI) = 0.0001 ALI
(0.0001 ALI) * (5000 millirems/ALI) = 5.2 millirems

3) **Airborne Particulate Radionuclides (Uranium/Radium-226/Thorium-230)**

The average airborne particulate natural uranium dose at the facility is based on high volume air samples taken in the grinding and precipitation areas of the mill and the tailings impoundment in 2009 and four (4) breathing zone samples taken of the Mill Foreman when working in the Mill Building.

The spreadsheet entitled Airborne Sampling Results (Using Maximum Concentrations) attached to the Internal Occupational Exposure Assessment – Suspended Operations, details the maximum airborne particulate (natural uranium, radium-226 and thorium-230) concentrations. It yields a total dose from exposure to natural uranium, radium-226 and thorium-230 of 19.2 millirems to the maximally exposed individual (the Mill Foreman) from work in both the Mill and tailings impoundment. This is well below the 10% threshold that triggers monitoring and dose calculation. This is an extremely conservative dose estimate

This maximum possible exposure of 14.8 millirems to natural uranium from the Mill and tailings is 0.003 ALI, and is also below the intake limit of 10 milligrams/week for soluble natural uranium listed described in 20.1201(e) as per the calculation below:

(0.00296 ALI/yr) * (5E-02 uCi/ALI) = 1.48E-04 μ Ci/yr
(1.48E-04 μ Ci/yr) * (1 E+06 pCi/uCi) / (677 pCi/mg) =.0.22 mg/yr total intake

This is well below the 10 milligram per week limit.

Based on the levels of airborne natural uranium, radium-226 and thorium-230 as demonstrated by the high volume air samples collected in the Mill Building, the level of natural uranium exhibited by the breathing zone samples collected in the Mill Building, and the levels of natural uranium, radium-226 and thorium-230 exhibited in the high volume air samples collected in the tailings impoundment and the limited time spent in the mill (230 hours), the tailings impoundment by the Mill Foreman in 2009, it is unlikely that personnel would receive in one year an intake in excess of 10 percent of the applicable ALI for uranium (natural) in Table 1, Columns 1 and 2 of Appendix B therefore monitoring and dose calculation for uranium (natural) is not required. It is estimated that the total dose from natural uranium, radium-226 and thorium-230 does not exceed 0.09 millirems.

Conclusions:

1) Monitoring and calculation of external dose is not required at the Sweetwater Uranium Project since no personnel are likely to receive an external occupational dose in excess of 0.5 rem.

2) Monitoring and calculation of internal dose at the Sweetwater Uranium Project is not required because:
   a) Radon dose is calculated at 0.004 rem/yr.
   b) The maximum calculated particulate dose is 0.139 rem/yr.

3) The maximum possible total occupational dose to the maximally exposed individual on site, the Mill Foreman, is as follows:

a)	Estimated external dose:	0.096 rem/yr.
b)	Estimated internal dose (particulates)	0.019 rem/yr.
c)	Estimated internal dose (radon-222)	0.005 rem/yr.
	Total:	0.120 rem/yr.

These estimates are below 10% of the applicable limits that would trigger individual monitoring.

4) Tracking of external doses was done for all site personnel during 2009 using Luxel dosimeters. Due to the proven low dose rates at the facility, use of dosimeters is not required; however, it was done to confirm external exposure data from surveys. The highest annual dose received by any individual was Three (3) millirems. This proves that the external dose estimate based upon surveys is conservative.

Oscar A. Paulson

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Internal memo

1 February 2010

To: **NRC File**

Subject: Compliance with 10 Mrem Constraint Limit for 2009

The following pertains to the dose to a member of the general public from the Sweetwater Uranium Project:

- The mill is not operating so there are no emissions from any stacks.
- The only air emissions excluding radon and its progeny are particulate radionuclides from the tailings impoundment.

The following applies to these particulate emissions:

1. These emissions are monitored at Station 4A by a continuous low-volume system.
2. The radionuclide concentrations and doses encountered at this location are as follows:

U -nat: 5.78E-17 uCi/L	0.032 mrem/yr
Ra-226: 2.41E-17 uCi/L	0.001 mrem/yr
Th-230: 4.30E-17 uCi/L	0.072 mrem/yr
Total:	**0.105 mrem/yr**

3. Background levels for the site are as follows:

U -nat: 6.2E-16 uCi/L	0.34 mrem/yr
Ra-226: 3.9E-16 uCi/L	0.22 mrem/yr
Th-230: 3.9E-16 uCi/L	0.65 mrem/yr
Total:	**1.21 mrem/yr**

Conclusions:

- The 2009 dose from airborne particulate radionuclides was at background levels. The 10 mrem per year constraint limit was not exceeded.

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Internal memo

1 February 2010

To: **NRC File**

Subject: Compliance with 40 CFR 190.10 for 2009

The following pertains to the dose to a member of the general public from the Sweetwater Uranium Project:

- The mill is not operating so there are no emissions from any stacks.
- The only air emissions excluding radon and its progeny are particulate radionuclides from the tailings impoundment.

40 CFR 190.10 states:

Subpart B—Environmental Standards for the Uranium Fuel Cycle

§ 190.10 Standards for normal operations.

Operations covered by this subpart shall be conducted in such a manner as to provide reasonable assurance that:

(a) The annual dose equivalent does not exceed 25 millirems to the whole body, 75 millirems to the thyroid, and 25 millirems to any other organ of any member of the public as the result of exposures to planned discharges of radioactive materials, radon and its daughters excepted, to the general environment from uranium fuel cycle operations and to radiation from these operations.

(b) The total quantity of radioactive materials entering the general environment from the entire uranium fuel cycle, per gigawatt-year of electrical energy produced by the fuel cycle, contains less than 50,000 curies of krypton-85, 5 millicuries of iodine-129, and 0.5 millicuries combined of plutonium-239 and other alpha-emitting transuranic radionuclides with half-lives greater than one year.

The following applies to exposures to planned discharges of radioactive materials, radon and its daughters excepted to the general environment from the Sweetwater Uranium Project.

1. These emissions are monitored at Station 4A by a continuous low-volume system.
2. The radionuclide concentrations and doses encountered at this location are as follows:

U -nat: 5.78E-17 uCi/L	0.032 mrem/yr
Ra-226: 2.41E-17 uCi/L	0.001 mrem/yr
Th-230: 4.30E-17 uCi/L	0.072 mrem/yr
Total:	**0.105 mrem/yr**

3. Background levels for the site are as follows:

U -nat: 6.2E-16 uCi/L	0.34 mrem/yr
Ra-226: 3.9E-16 uCi/L	0.22 mrem/yr
Th-230: 3.9E-16 uCi/L	0.65 mrem/yr
Total:	**1.21 mrem/yr**

Conclusions:

- The 2009 dose from airborne particulate radionuclides was at background levels. The 25 mrem per year limit in 40 CFR 190.10 was not exceeded.

Oscar A Paulson

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Facility Supervisor

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Internal memo

2 February 2010

To: NRC File

SUBJECT: Other Items

The following other items are being evaluated.

Fire Protection:

Fire training was held on site for site and contract employees on August 3 and December 30, 2009.

Emergency fire protection training involving operation of the emergency fire pump and training on the fire water system was conducted on August 3 and December 30, 2009 respectively.

Annual fire extinguisher inspections were conducted on March 18, 2009. Annual fire hose testing was conducted on August 26, 2009.

Electrical ground integrity testing was performed in April 2009.

Environmental Monitoring Data:

Environmental monitoring data for radon, airborne particulate radionuclides and ambient gamma radiation is addressed in the 40.63 Report.

Environmental monitoring data for groundwater including water quality and water level data is addressed in the Corrective Action Report (CAP) Review.

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19 January 2010

Mr. Keith I. McConnell, Deputy Director
Division of Waste Management and Environmental Protection
Office of Federal and State Materials and Environmental Management Programs
U.S. Regulatory Commission
11545 Rockville Pike, Mail Stop T7-E18
Rockville, MD 20852-2738

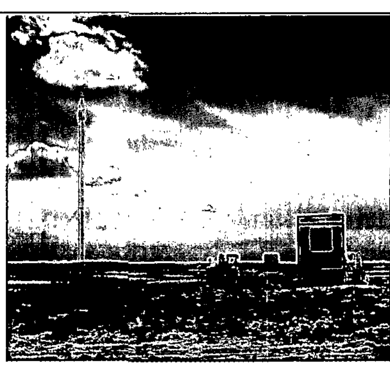
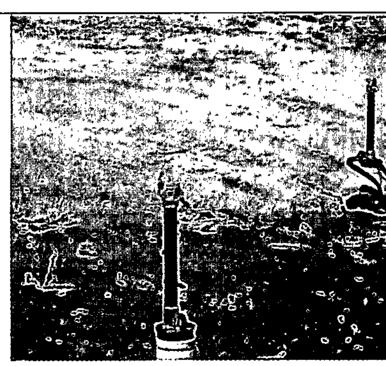
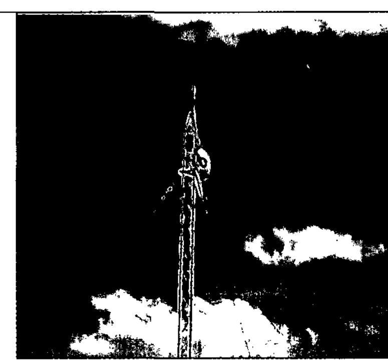
Dear Mr. McConnell:

Subject: Sweetwater Uranium Project - Docket Number 40-8584
Source Materials License #SUA-1350 -- License Conditions 11.2 and 12.3
<u>Land Use Report</u>

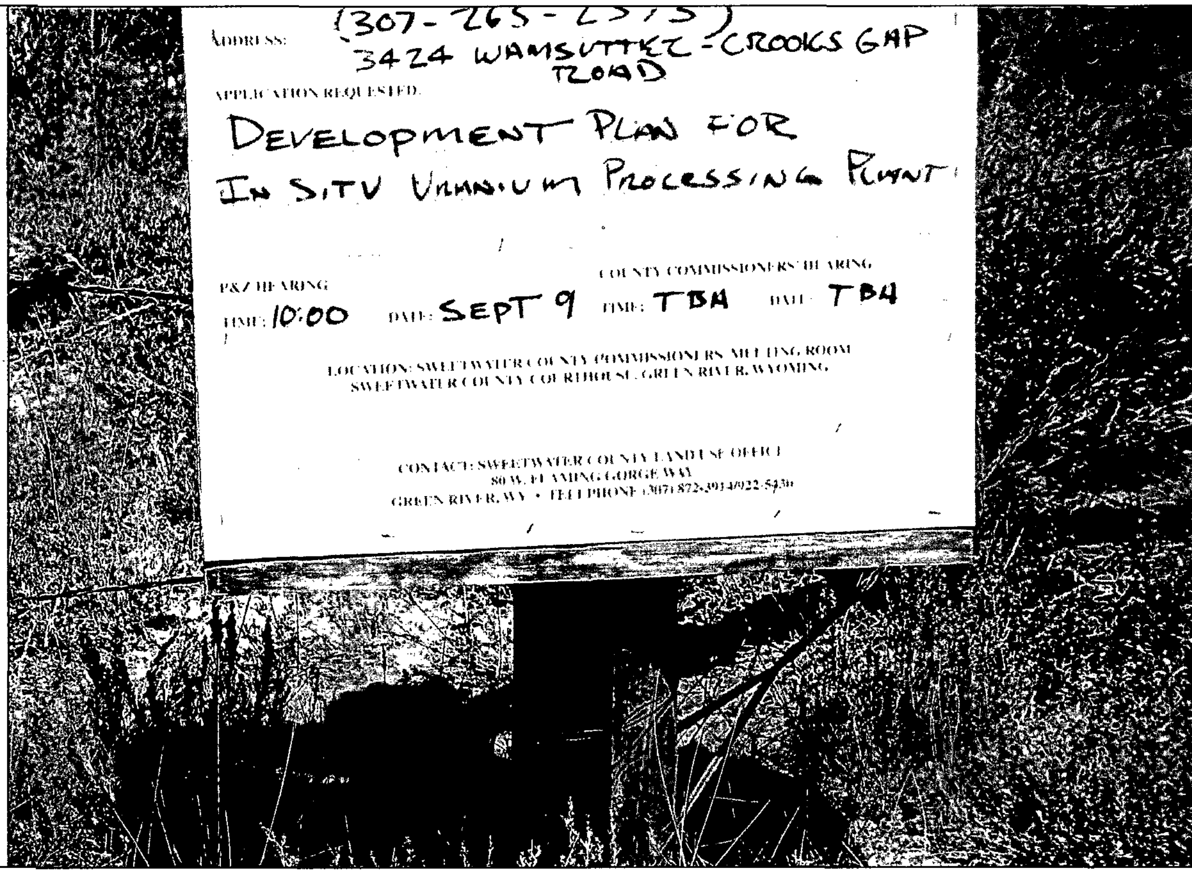
In compliance with License Conditions 11.2 and 12.3 of SML SUA-1350, Kennecott Uranium Company has conducted visual surveys throughout the year (2009) of land use in, and within a five-mile radius of, the Sweetwater Uranium Mill restricted area. Six (6) surveys that included the collection of photographs specifically for use on the Land Use Report were conducted on May 14, August 20, August 25, September 17, November 10, and December 2, 2009. In addition, observations were made throughout the entire year as site personnel traveled around the area.

Limited cattle and sheep grazing, wildlife usage, recreation (mainly hunting during the fall) and oil and gas development and production continue as the principle land uses in the area. There has been noticeable oil and gas drilling activity to the west, north and south of the facility, creating additional traffic along Sweetwater County Road 4-63 south of the facility. Uranium exploration drilling and well completion work is being conducted approximately four miles due north of the facility by UR-Energy. Drilling operations continued in 2009. The area is known as their Lost Creek Project. Their areas of operation including three (3) areas containing wells are shown on the attached map. Extensive uranium related claim staking has been done within a five mile radius of the facility, primarily to the north and west. Wildhorse Uranium holds claims west of the facility. Claims have also been staked east of the facility by another operator.

The following are photographs taken of equipment on site at UR Energy's Lost Creek Project on May 14, 2009:

		
Office Trailer with Newly Installed Microwave Telephone System – May 14, 2009	**Wells – May 14, 2009**	**Newly Installed Mast with Dish for Microwave Telephone System – May 14, 2009**

A hearing with the Sweetwater County Commissioner's was held on September 4, 2009 regarding UR Energy's Lost Creek Project. A sign noticing the hearing was placed immediately east of the Wamsutter to Jeffrey City Road west of the project. A photograph of the sign taken on August 20, 2009 is included below.



Notice of Public Meeting Regarding the Development Plan
August 20, 2009

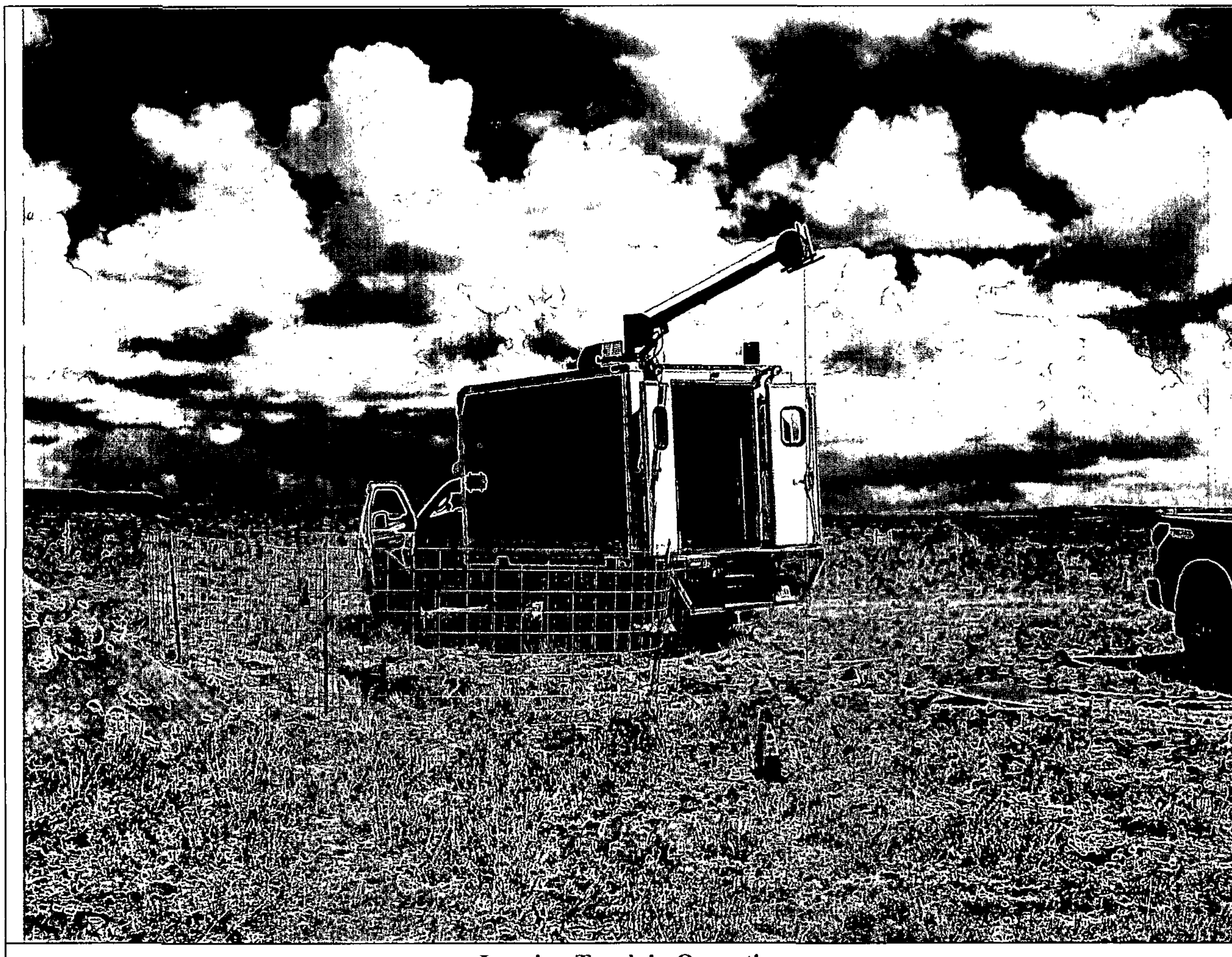
As of December 2009, the following items were observed north of the facility at the Lost Creek Project and west of the facility and are located as follows:

Latitude			Longitude					
Degrees	**Minutes**		**Degrees**	**Minutes**		**Northing**	**Easting**	**Item**
42	6.146	North	107	53.491	West	166533.218	325779.559	Water well/solar panel. Stripping topsoil/Large rig location. This area was reclaimed in 2009. Reclamation was completed during the first week of September 2009 and reclamation related heavy equipment was removed at that time. Please see image below.
42	7.888	North	107	53.015	West	176491.574	340678.327	Water tank/trucks
42	7.883	North	107	52.796	West	225019.203	328861.303	Fence/drill rig
42	7.815	North	107	51.364	West	176675.548	335401.726	Outhouse/drill rigs
42	7.803	North	107	50.943	West	176637.937	337301.247	Laydown yard/logging truck Office/drill rigs/tanks including newly installed microwave telephone system with tower. Please see image below.
42	7.783	North	107	50.197	West	176491.574	340678.327	Water tanks
42	3.078	North	108	0.636	West	147883.447	293438.368	Booster station
42	7.893	North	107	56.741	West	177127.328	310923.421	Public Meeting Notice Sign

The booster station is located west of the facility and is related to oil and gas development.

These items are shown on the attached map entitled "Sweetwater Uranium Project – Land Use Report Map". Photographs of some of these items and other items are provided below.

Drilling operations continued on site until early December 2009. Rigs were still on site on December 2, 2009, however cold weather was impeding operations. Logging was performed with a unit incorporating a prompt fission neutron tool. The unit is shown in operation next to a fenced mud pit in a photograph taken on August 25, 2009:



Logging Truck in Operation
August 25, 2009

UR Energy installed warning signs around their operations immediately prior to the start of hunting season in the area. One such sign was installed on the east side of the power line road immediately north of the Sweetwater Uranium Project's tailings impoundment as shown below in the photograph taken on September 17, 2009:

Warning Sign South of UR Energy's Lost Creek Project – September 17, 2009

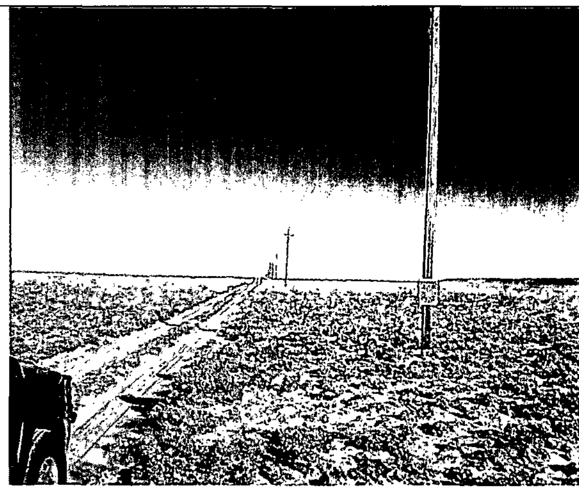
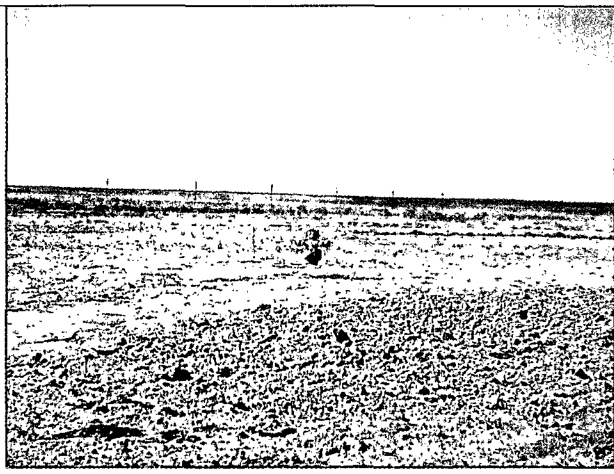
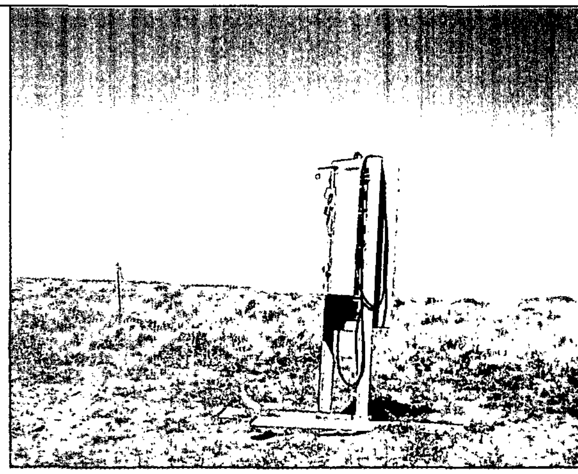


Image of Sign Showing Relationship to Power Line December 2, 2009

The area around the deep well completed by UR Energy was reclaimed by September 17, 2009 as shown in the two (2) photographs below:



Deep Well Head and Surrounding Reclaimed Ground September 17, 2009



Electrical Control Box Remaining Near Deep Well September 17, 2009

A gas booster station related to gas development in the area has been installed west of the facility and is shown on the map. It is however, more than five (5) miles west of the facility.

A pronghorn was shot by hunters south of the tailings impoundment during hunting season in 2009.

The Bureau of Land Management conducted a roundup of feral horses in the vicinity of the site on November 10, 2009. Two (2) helicopters were used to drive the animals into a fenced area for removal. A photograph of the helicopter and a transport truck is provided below:

Helicopter and Fueling and Transport Trucks Used in Feral Horse Roundup
November 11, 2009

All of the petroleum-contaminated soils excavated on site during 2001, 2002 and 2003 were placed on a synthetically lined landfarm approximately fifty (50) acres in area, located outside of the NRC bonded area, but within the Department of Environmental Quality (DEQ) bonded area, west of the facility. The land-farmed materials are being treated by bioremediation with added nutrients. Once the materials meet nationally accepted clean soil standards (<100 milligrams per kilogram diesel range organics), they will be used to backfill the excavation. The excavation and remediation of this petroleum-contaminated soil was described in detail in a separate binder submitted to the NRC in 2003.

Lining of two (2) additional lagoons was performed in the tailings impoundment during 2009. This work was performed by Archer Construction Inc. of Riverton, Wyoming.

Mill operations remain suspended. There are two mobile homes near the south edge of the site's chain link fence. The resident caretaker uses one for approximately four (4) days out of each week and a security guard uses the other (the one closest to the chain link fence) approximately three days of each week. The security guard is considered the nearest resident for purposes of dose calculation and estimation.

The Sweetwater Uranium Project's potable water wells are the only drinking water sources in the area. The Bureau of Land Management (BLM) maintains three water wells with tanks for livestock and wildlife watering within the area. The wells are located one mile southeast, four miles east and five miles northeast of the facility. All of the Bureau of Land Management wells are up gradient of the restricted area in regard to the regional ground water gradient.

If there are any questions regarding this report please contact me at (307) 328-1476 or (307) 324-4924.

Sincerely yours,

Oscar A Paulson

Oscar Paulson
Facility Supervisor/RSO

cc: J. Webb, Project Manager (NRC)
Director, DRSS (NRC) - Arlington, TX
Rich Atkinson

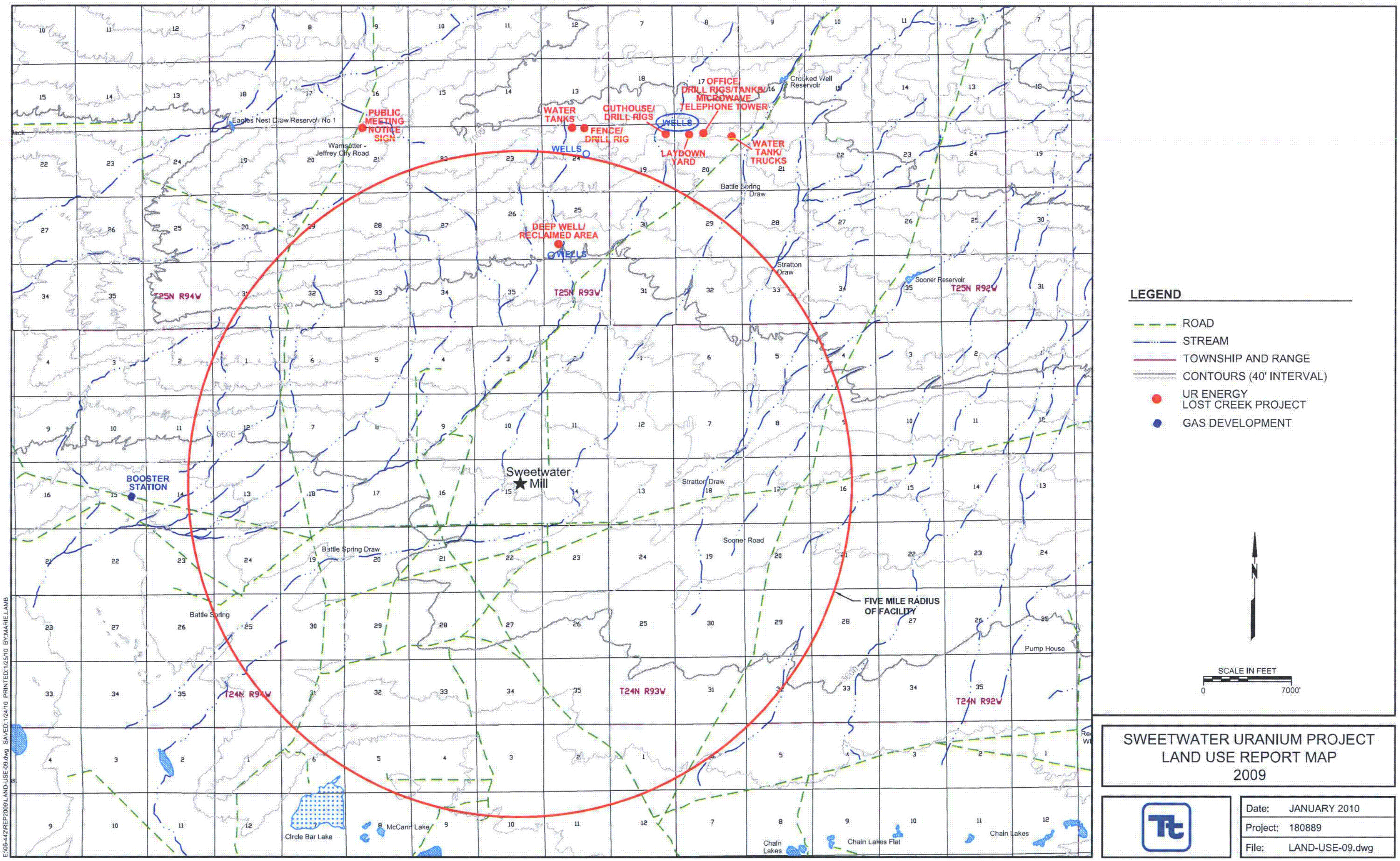
DIESEL CONTAMINATED SOIL EXCAVATION

The excavation was completed in March 2003. A sign-off letter and page changes to the report submitted in February 2003 to make it a final report were submitted on July 31, 2003. The excavation is still open pending remediation of the land-farmed soils to the 100-milligram per kilogram clean soil standard, at which point they can be used as backfill. The average concentration in the land-farmed soils was 23.5 milligrams per kilogram in September 2008; however, some samples are still above the 100-milligram per kilogram clean soil standard.

The State of Wyoming Department of Environmental Quality, Land Quality Division, reviewed the sample data submitted for the land farm in their 2006 Annual Inspection Report and Annual Report Review, stating:

> *"Since Kennecott has followed the permit (i.e. pages I-55 through I-60 in the Mine Plan) in all its land farming procedures at Permit 481, the company is authorized to remove the materials from the portions of the land farm noted in Appendix 13 of the 2005/2006 Annual Report as having DRO concentrations of 100 ppm or less."*

Thus, Kennecott Uranium Company can remove land farmed material from grids with a Diesel Range Organic concentration of 100 parts per million or less and backfill that material into the open excavation.



PUBLIC MEETING NOTICE SIGN
WATER TANKS
OUTHOUSE/ DRILL RIGS
FENCE/ DRILL RIG
WELLS
OFFICE/ DRILL RIGS/TANKS/ MICROWAVE TELEPHONE TOWER
LAYDOWN YARD
WATER TANK/ TRUCKS
DEEP WELL/ RECLAIMED AREA
WELLS
Eagles Nest Draw Reservoir No 1
Wamsutter - Jeffrey City Road
Crooked Well Reservoir
Battle Spring Draw
Stratton Draw
Sooner Reservoir
T25N R94W
T25N R93W
T25N R92W
T24N R94W
T24N R93W
T24N R92W
Sweetwater Mill
BOOSTER STATION
Battle Spring Draw
Sooner Road
Battle Spring
FIVE MILE RADIUS OF FACILITY
Pump House
Circle Bar Lake
McCann Lake
Chain Lakes
Chain Lakes Flat
LEGEND
ROAD
STREAM
TOWNSHIP AND RANGE
CONTOURS (40' INTERVAL)
UR ENERGY LOST CREEK PROJECT
GAS DEVELOPMENT
N
SCALE IN FEET
0
7000'
SWEETWATER URANIUM PROJECT
LAND USE REPORT MAP
2009
Date: JANUARY 2010
Project: 180889
File: LAND-USE-09.dwg

Rio Tinto

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18 February 2010

Mr. Keith I. McConnell, Deputy Director
Division of Waste Management & Environmental Protection
Office of Federal & State Materials & Environmental Management Programs
11545 Rockville Pike, Mail Stop T7-E18
Rockville, MD 20852

Dear Mr. McConnell:

SUBJECT: Sweetwater Uranium Project – Docket Number 40-8584
Source Material License No. SUA-1350
Annual Corrective Action Program Review and Groundwater Monitoring Report

Enclosed is a CD-ROM containing Kennecott Uranium Company's Annual Corrective Action Program Review for 2009.

The report summarizes all monitoring and mitigation efforts in the area of the tailings cell under the ground water corrective action program as defined in License Condition 11.3 of USNRC Source Materials License SUA-1350, and contains the ground water monitoring data required to be submitted under License Condition 12.3.

If you have any questions, please do not hesitate to contact me at (307) 328-1476.

Sincerely,

Oscar A. Paulson

Oscar A. Paulson
Facility Supervisor

cc: Mr. Mark Thiesse, Wyoming DEQ/WQD
James Webb (2), Project Manager, USNRC
Director – NRC DRSS – Region IV (w/o enclosure)
Rich Atkinson – Rio Tinto America

KENNECOTT URANIUM COMPANY
ANNUAL CORRECTIVE ACTION PROGRAM REVIEW
January 2009 through December 2009

EXCURSION PUMPBACK SYSTEM

Perched Wells

All perched wells around the tailings impoundment were essentially dry as of the fall of 1989 and are no longer pumped.

The two (2) perched wells, TMW-90 and TMW-105 that were pumped during 2005 in preparation for the excavation of the contaminated soils beneath and around the Catchment Basin were removed at the completion of the excavation, prior to backfilling. These wells were located west of the Catchment Basin and were pumped to remove previously spilled fluid perched on a clay layer approximately forty (40) feet below ground surface, in part, to prepare the area for future excavation.

These two wells were not considered part of the ground water Corrective Action Program (CAP) since their purpose was to recover spilled fluid as opposed to recovering contaminated ground water from the Battle Spring Aquifer, which is what the CAP regulates.

The use of these wells to recover these fluids was authorized by the site's Safety and Environmental Review Panel (SERP) under Safety and Environmental Evaluation (SEE) #6, approved on September 9, 2003, and an amendment to that document approved on March 26, 2004. These documents were inspected by the Nuclear Regulatory Commission (NRC) during an inspection on July 21, 2004. The inspector concluded that: "The SEEs were found to be technically adequate. The SERP had made decisions in accordance with the conditions of the performance based license."

The table below summarizes the performance of these wells:

WELL #	DATE STARTED	DATE SHUT DOWN	FLOW RATE (Gallons per Minute)	VOLUME PUMPED (Gallons)
TMW-90	03/01/05	11/14/05	0.01	3,693
TMW-105	03/15/05	11/14/05	0.02	7,123

Water sample data, flow information and salts removed data for these wells are included in the 2005 report. The wells were pumped by venturi pumps installed at the well bottom, driven by surface feeded pumps, and a reservoir barrel, which overflowed into a tank that was pumped periodically to the tailings impoundment.

The pumping of these wells was successful in that when the Catchment Basin excavation attained its complete depth (essentially the bottoms of these wells), no substantial amounts of free perched fluid were encountered. Pumping of these wells allowed for a dry excavation bottom. These wells were removed once the excavation attained bottom (approximately 6585 feet above mean sea level) in the area around these wells. The area around TMW-90 was excavated deeper than the planned depth of 6590 feet above mean sea level to remove some hydrocarbon contamination around the well.

Aquifer Wells

Tails Monitor Wells (TMW-) 7, 17, 18, 57, 58, 59, 75, 96 and 97 (pumpback wells west of the Catchment Basin) were pumped into the tails cell during 2009 at the following annualized rates:

WELL #	PUMP HORSEPOWER	ANNUAL AVG. RATE (GPM)
TMW-7	¾ HP	3.63
TMW-17	¾ HP	6.46
TMW-18	¾ HP	8.69
TMW-57	¾ HP	4.18
TMW-58	¾ HP	4.27
TMW-59	¾ HP	7.79
TMW-75	½ HP	3.83
TMW-96	¾ HP	3.36
TMW-97	¾ HP	4.27
TOTAL		**46.48 GPM**

Note: Extended periods of down time are not included in well operating time for computation of flow rates.

TMW-75 and TMW-17 were pumped to collect the portion of the excursion along the cell's north wall. Wells 7, 18 and 59 maintained a cone of depression along the west side of the tailings cell intercepting the major portion of the excursion. TMW-57 and TMW-58 maintained a cone of depression extending west of the western side of the cell, centered on these two (2) wells.

TMW-18 and 59 were pumped at the highest rates since they contained the water with the highest Total Dissolved Solids (TDS) concentrations. Work is in progress to equip all the pumpback wells with ¾ horsepower pumps. The only well remaining without a ¾ HP pump is TMW-75.

TMW-96 and TMW-97, located along the east wall of the Solvent Extraction Building, were pumped to collect the highest levels of uranium in the Catchment Basin plume. TMW-96 and 97 have shown a remarkable drop in contaminant concentrations since pumping started. TMW-96 has gone from a Total Dissolved Solids (TDS) concentration of 2430 mg/L (9/20/04) to 836 mg/L (10/20/09) and a uranium concentration of 760 pCi/L (9/20/04) to 49 pCi/L (7/22/09). TMW-97 has gone from a TDS concentration of 2210 mg/L (3/7/05) to 706 mg/L (6/16/09) and a uranium concentration of 548 pCi/L (3/7/05) to 20.9 pCi/L (7/22/09). Kennecott Uranium Company believes that these declines indicate that the plume associated with the Catchment Basin is of limited extent and that these wells may, in fact, be drawing clean water from beyond the plume's edge into the area, resulting in part in the dramatic reductions in total dissolved solids and natural uranium.

TMW-16 was replaced with a new well, TMW-7, completed approximately sixty (60) feet south of it, on August 18, 2003. TMW-16 exhibited continuing problems and would not, in spite of repeated attempts to clean, acidize or bleach it, yield sufficient water to support a pump. When operating it would yield water; however, the well would frequently cease pumping and be down for extended periods while being cleaned. TMW-7 was screened at a depth (100-150 feet) that fully overlapped the completion interval (120-145 feet) of TMW-16. TMW-16 ceased pumping on May 15, 2003. Pumping was initiated in TMW-7 on December 1, 2003. Completion of this replacement well was discussed with Elaine Brummett in a telephone conversation at 1:50 pm on August 20, 2003, and a follow-up email message on that date. The well produces 3.63 gallons per minute of water and has not required any of the maintenance or cleaning that its predecessor, TMW-16, required. The well was intentionally operated at a lower rate in 2009 in order to allocate pumpback capacity to more contaminated wells, such as TMW-18 and 59.

A pump was installed and started in TMW-58 in late June of 1994. The well was completed in July 1985. TMW-58 continues to yield water at a rate of 4.27 gallons per minute in 2009. Installation of the pump followed receipt of a letter dated April 8, 1994 from NRC/URFO which stated, "We find that the proposed changes to your Corrective Action Program (CAP) are responsive to our review findings submitted to your company on September 3, 1992. We also consider that specific seepage collection locations are no longer required. Rather, Kennecott should use its discretion in maintaining the CAP, and all changes should be described in routine annual progress reports."

This letter was in response to a review prepared by Kennecott Uranium Company and submitted in response to a letter dated September 3, 1992 which was received from NRC/URFO requesting Kennecott Uranium Company to review the most recent monitoring data from the Corrective Action Program (CAP) and propose modifications to the program. The review dated December 4, 1992 and submitted to NRC/URFO contained the following conclusions:

1. The contaminant plume is confined solely to the upper fifty (50) feet of the saturated zone of the Battle Springs Formation. This conclusion is based on the sample results from three (3) monitor wells completed in a deeper sand in 1991, which show no evidence of contamination.
2. The existing five (5) pumpback wells are adequate to recover the groundwater contaminated by past leakage.

Kennecott Uranium Company, in order to accelerate the remediation process, had requested an amendment to SUA-1350 in the December 4, 1992 review to install a pump of at least 1/3 horsepower in TMW-58. Upon receipt of the letter dated December 4, 1992, however, it became clear that such an amendment was not required.

A pump was installed in TMW-57 on May 17, 2001. This well performs well, yielding an average of 4.18 gallons per minute during 2009.

The observed TDS values in TMW-63 and TMW-18 are virtually identical. (See *Comparison of TMW-18 and TMW-63*, below.) There is little difference in Total Dissolved Solids concentrations vertically across the upper fifty-feet of the aquifer.

COMPARISON OF TMW-18 AND TMW-63

MAJOR IONS mg/l:	TMW-18 4/21/09	TMW-63 5/5/09	Reporting Limit (4/21/09)
Ca	581	614	1.0
Mg	49.6	47.4	0.9
Na	108.0	102	0.5
K	6.8	7.2	0.5
CO3	<1	<1	1.0
HCO3	562	564	1.0
SO4	1290	1280	1.0
Cl	81	96	1.0
NO3	<0.1	<0.1	0.10
F	<0.1	<0.1	0.10
SiO2	22.6	24.2	0.2
TDS @ 180□ C.	2560	2600	10
Cond (umho/cm)	3090	2920	1.0
Alk-CaCO3	461	462	1.0
pH (units)	6.72	7.26	0.01
TRACE METALS mg/l:			
Al	<0.10	<0.10	0.10
As	<0.001	<0.001	0.001
Ba	<0.10	<0.10	0.10
Be	<0.01	<0.01	0.01
B	<0.10	<0.10	0.10
Cd	<0.005	<0.005	0.005
Cr	<0.01	<0.01	0.01
Co	<0.001	<0.001	0.001
Cu	<0.01	<0.01	0.01
CN	<0.005	<0.005	0.005
Fe	8.33	2.28	0.07
Pb	<0.01	<0.01	0.01
Mn	1.54	0.57	0.01
Hg	<0.0002	<0.0002	0.0002
Mo	<0.01	<0.01	0.01
Ni	<0.01	<0.01	0.01
Se	0.002	0.001	0.001
Ag	<0.01	<0.01	0.01
Tl	<0.010	<0.010	0.01
V2O5	<0.10	<0.10	0.10
Zn	<0.01	0.01	0.01
RADIOMETRIC pCi/L:			
U	1.0	2.4	0.2
Ra226	2.8 ± 0.33	3.3 ± 0.28	
Ra228	11.7 ± 1	12.7 ± 1.3	
Th230	<0.2	<0.2	
Pb210	<1.0	<1.0	
Gross Alpha	4.4 ± 1	7.6 ± 0.8	
Q.A. DATA:			
Anion/Cation Bal:	1.06	1.06	

In the summer of 1991, TMW-8, TMW-24 and TMW-47 were completed in the Battle Springs Aquifer at depths below 200 feet to test saturated sands beneath a clay layer separating them from the upper fifty (50) feet of the saturated zone. Samples from wells TMWs 8, 24 and 47 (shown on the following table, *Lower Saturated Sand Monitor Well Sampling Results*) however, clearly show that the contaminants have not penetrated the sands beneath the upper fifty (50) feet of the saturated zone since the TDS concentrations in 2009 are all below 250 parts per million.

LOWER SATURATED SAND MONITOR WELL SAMPLING RESULTS

MAJOR IONS mg/l:	**TMW-8 2/4/09**	**TMW-24 2/11/09**	**TMW-47 2/10/09**	**Reporting Limit (7/14/09)**
Ca	24.2	19.38	18.2	0.5
Mg	0.9	0.9	0.8	0.5
Na	36.5	29.2	30.5	0.5
K	1.5	1.4	1.4	0.5
CO3	<1	<1	<1	1.0
HCO3	103	104	103	1.0
SO4	55	36	36	1.0
Cl	3	1	1	1.0
NO3	<0.1	<0.1	<0.1	0.1
F	0.2	0.2	0.2	0.1
SiO2	16.3	12.4	13.3	0.2
TDS @ 180° C.	164	154	140	10
Cond (umho/cm)	137	104	103	1.0
Alk-CaCO3	85	85	85	1.0
pH (units)	8.07	7.91	8.08	0.01
TRACE METALS, mg/l:				
Al	<0.1	<0.1	<0.1	0.10
As	0.002	0.001	0.001	0.001
Ba	<0.1	<0.1	<0.1	0.10
Be	<0.01	<0.01	<0.01	0.01
B	<0.1	<0.1	<0.1	0.10
Cd	<0.005	<0.005	<0.005	0.005
Cr	<0.01	<0.01	<0.01	0.01
Co	<0.001	<0.001	<0.001	0.001
Cu	<0.01	<0.01	<0.01	0.01
CN	<0.005	<0.005	<0.005	0.005
Fe	<0.05	<0.05	<0.05	0.05
Pb	<0.01	<0.01	<0.01	0.01
Mn	0.03	0.01	<0.01	0.01
Hg	<0.0002	<0.0002	<0.0002	0.0002
Mo	<0.01	<0.01	<0.01	0.01
Ni	<0.01	<0.01	<0.01	0.01
Se	<0.001	<0.001	<0.001	0.001
Ag	<0.01	<0.01	<0.01	0.01
Tl	<0.010	<0.01	<0.01	0.010
V2O5	<0.1	<0.1	<0.1	0.10
Zn	<0.01	<0.01	<0.01	0.01
RADIOMETRIC pCi/L:				
U	0.2	0.3	0.8	0.2
Ra226	0.47 ± 0.18	0.96 ± 0.21	4.3 ± 0.44	0.2
Ra228	<1	1.2 ± 0.6	<1	1.0
Th230	<0.2	<0.2	<0.2	0.2
Pb210	<1.0	<1.0	<1.0	1.0
Gross Alpha	1.2 ± 0.4	2.2 ± 0.6	5.1 ± 0.9	1.0
Q.A. DATA %:				
A/C Balance (±5)	-0.23	-2.83	-3.21	

During 1995, Shepherd Miller, Inc. completed a background groundwater study for the area around the Sweetwater Uranium Project. The object of this study was to define background in groundwater around the Sweetwater Uranium Project for a number of chemical and radiological constituents. The study examined the results of over 1000 groundwater samples collected in the vicinity of the project including samples from TMWs 8, 24 and 47 and concluded, *"Water quality sampling of three wells completed within the lower saturated sand, TMWs 8, 24 and 47, shows it to be unaffected by seepage from the cell, indicating that flow from the upper to lower saturated sands is retarded by the claystone layer."* Thus samples from TMWs 8, 24, and 47 show that the contamination is confined to, and distributed in, the upper fifty (50) feet of the saturated zone of the Battle Spring Aquifer and penetrates no deeper.

This issue was re-examined in 2008 by Telesto Solutions, Inc., who in their report entitled "**Final Draft Groundwater Plume Interpretation Revision III**", stated:

> *Monitoring wells TMW-8 and 24 were completed in a deeper sand of the Battle Spring Aquifer to determine if there is downward migration of affected ground water into the lower portion of the aquifer (Kenneco9tt Uranium Company, 1994). Chemical concentration plots of the deep wells and adjacent shallow-completion wells (TMW-58 and -82) confirm the conclusion of no significant downward migration of affected ground water over the period of sampling (1991 to present). The deep wells do not exhibit the concentration spikes for U-Nat, Ra226-228, sulfate and TDS that are observed in the shallow wells (Attachment A).*
>
> *Chemical concentration plots for shallow well TMW-48 and adjacent deep well TMW-47 indicate that impacted ground water is not currently present south of the Tailings Impoundment.*

(Please note that only the *text* from the Telesto Solutions, Inc. report has been included in this discussion. Any attachments or figures mentioned in the quoted text have not been included.)

The 1995 and 2008 evaluations conclude that deeper sands are not impacted by the tailings impoundment leak.

Kennecott Uranium Company submitted a study entitled "Addendum to the Revised Environmental Report Background Ground Water Quality and Detection Standards" on February 2, 1996. This study examined the results of over 1000 water samples, with the intent of defining background parameters for chemical and radiological constituents in the Battle Springs Aquifer around the site. The study proposed new Groundwater Protection Standards (GPS) for the site based upon these newly developed background values. This study was submitted with a request to amend SUA-1350 to change the Groundwater Protection Standards to the levels proposed in the study as well as to eliminate some groundwater protection standards (GPS).

By license amendment dated May 28, 1998, the NRC amended the Groundwater Protection Standards in SUA-1350 to those values requested by Kennecott Uranium Company in an amendment request dated January 1996 entitled "Addendum to the Revised Environmental Report - Background Ground Water Quality and Detection Standards". In addition, Groundwater Protection Standards for barium, cyanide, lead, mercury, molybdenum, silver and thallium were deleted from the license. The table below outlines the changes to the Groundwater Protection Standards in SUA-1350. The control charts reflect these Groundwater Protection Standards.

Constituent	**Former NRC Ground Water Protection Standard, License SUA-1350**	**Revised NRC Ground Water Protection Standard, License SUA-1350**
		(Revised May 28, 1998)
Arsenic	0.05 mg/l	0.05 mg/l
Barium	1.0	Deleted
Beryllium	0.01	0.01 mg/l
Cadmium	0.01	0.01 mg/l
Chromium	0.05	0.05 mg/l
Cyanide	0.005	Deleted
Lead	0.05	Deleted
$Lead^{210}$	1.4 pCi/l	8.9 pCi/l
Mercury	0.002	Deleted
Molybdenum	0.04	Deleted
Nickel	0.01	0.01 mg/l
Ra^{226}/Ra^{228}	2.8 pCi/l	5.8 pCi/l

Constituent	Former NRC Ground Water Protection Standard, License SUA-1350	Revised NRC Ground Water Protection Standard, License SUA-1350
		(Revised May 28, 1998)
Selenium	0.01	0.01 mg/l
Silver	0.05	Deleted
Thallium	0.01	Deleted
Thorium^{230}	10.0 pCi/l	7.0 pCi/l
Natural Uranium	1.7 pCi/l	36.0 pCi/l
Gross Alpha	6.6 pCi/l	15 pCi/l
		Added May 26, 2005
Aluminum	None	1.8 mg/l
Iron	None	0.6 mg/l
Manganese	None	0.2 mg/l
1,1-dichloroethane	None	3.0 mg/l
1,1-dichloroethene	None	0.007 mg/l
DRO	None	10 mg/l
GRO	None	10 mg/l
Naphthalene	None	1.5 mg/l
Toluene	None	1 mg/l
1,1,1-Trichloroethane	None	0.20 mg/l
1,2,4-Trimethylbenzene	None	0.012 mg/l
1,3,5-Trimethylbenzene	None	0.012 mg/l
M+p xylenes	None	10 mg/l

In a submittal dated December 15, 2004 Kennecott Uranium Company proposed groundwater protection standards (GPS) for aluminum, iron, manganese and ten (10) organic constituents. These proposed standards are also based on the background ground water study. They have been approved. They were proposed in response to the contamination of the aquifer found around the Catchment Basin. These are shown as well, in the table above.

The ground water Corrective Action Program was revised to include the groundwater plume around the Catchment Basin by a license amendment dated May 26, 2005. This amendment was granted following these submittals and an Environmental Assessment (EA):

- Source Material License SUA-1350 Request for Amendment to License Condition 11.3 – Groundwater Corrective Action Program – May 12, 2004
- Response to Comments – July 22, 2004
- Response to Request for Additional Information – October 28, 2004
- Environmental Assessment for Amendment of Source Material License SUA-1350 for the Catchment Basin Reclamation – May 5, 2005

This report includes the plume around the tailings impoundment and the Catchment Basin.

Maps of the natural uranium, combined radium 226/228 and total dissolved solids plumes are included in this report. The table on the following page entitled Monitor Well Coordinates shows the screened intervals for the wells around the tailings impoundment and Catchment Basin. The plume exists in the upper saturated fifty (50) feet of the Battle Springs Formation, roughly from 100 to 150 feet below surface.

When wells are sampled the pump is run to the bottom of the well and then retracted several feet and the sample collected. If the well is deeper than the length of hose on the sampling truck reel (approximately 238 feet) the pump is lowered until several wraps of hose remain on the drum and the sample is collected. Provided that the screen is not plugged the water sample will generally come from the section of screen nearest the pump. The two samples (A and B) were collected from TMW-108 during each sample event. The "A" sample is a shallow sample collected at approximately 112 feet below surface, while the "B" sample is a deep sample collected at approximately 143 feet below surface. This was done to compare uranium concentrations in TMW-108 with the slightly higher (2660 pCi/L - 1/13/09) uranium concentrations in the adjoining shallow well, TMW-109.

Water levels of the monitor wells are not collected within one week of pumping of either PWW-1 and/or PWW-2. This prevents the cone of depression from the pumping of these wells from interfering with the cone of depression formed by the nine (9) pump back wells.

TMWs 8, 24 and 47 were intentionally completed solely in the range of 197 to 240 feet below surface to sample the sands beneath the plume. Samples from these wells have never been used to construct natural uranium, combined radium 226/228 or total dissolved solids plume maps. However, in the past, data from TMWs 1, 2, 3, 4, 5 and 6 were used in the construction of plume maps since, except in the case of TMW-1 which is completed from 160 to 260 and 280 to 300, they were screened in the plume and also in the sands beneath the plume. TMWs 1, 2, 3, 4, and 6 are not being used to define the plume since the water being sampled from these wells could come from sands beneath the plume, given how the sample pump is set in the wells as described in the paragraph above.

In addition wells that are outside of the plume lie between TMWs 2, 3, 4 and 6 and the plume, so these wells are not needed to define the plume. In spite of the fact that TMW 5 is not completed solely in the plume, it is being used to define it since it is the only boundary well to the east of it. TMW-1 is not used to define the plume since it is not completed in the contaminated sands. In preparing the Natural Uranium, Radium-226 and Total Dissolved Solids plume maps, the highest measured concentration for 2009 for each well was used.

In October 2008 a water level sensor was installed in TMW-10 so water levels could be read at the surface without having to enter the excavation. A hose and pump were also installed in the well to allow it to be sampled from the surface, as well. Water level data for this well is gathered electronically and not with a water level tape, meaning that only water elevations and not depth to water readings are available.

MONITOR WELL COORDINATES

WELL #:	NORTHING	EASTING	SURFACE ELEVATION	CASING HEIGHT	CASING ELEVATION	T.D. ELEVATION	PERCH (P)/ AQUIFER(A)	SCREEN INTERVAL
TMW 1	150,107.66	324,536.42	6,648.22	0.00	6,648.22	300.00	A	160-260, 280-300
TMW 2	147,133.96	324,360.13	6,626.32	0.77	6,627.09	300.00	A	135-295, 295-300
TMW 3	145,984.03	324,361.03	6,624.74	1.53	6,626.27	300.00	A	100-267
TMW 4	147,141.81	323,176.55	6,625.74	1.15	6,626.89	267.00	A	100-267
TMW 5	149,053.50	328,102.80	6,656.49	2.10	6,658.59	270.00	A	100-267
TMW 6	145,356.25	327,464.50	6,640.26	1.40	6,641.66	267.00	A	100-267
TMW 7	149,339.63	325,014.08	6,652.96	1.44	6,654.40	150.00	A	100-150
TMW 8	149,912.15	324,561.80	6,645.64	0.83	6,646.47	260.00	A	220-240
TMW 15	147,910.39	325,006.29	6,642.09	1.17	6,643.26	128.00	A	78-120
TMW 16	149,397.99	325,023.08	6,654.35	1.27	6,655.62	145.00	A	95-145
TMW 17	149,602.14	325,994.00	6,660.19	0.68	6,660.87	150.00	A	100-150
TMW 18	148,922.42	325,018.57	6,654.91	1.07	6,655.98	146.00	A	96-146
TMW 19	149,601.80	326,095.60	6,660.36	1.18	6,661.54	38.00	P (DRY)	20-38
TMW 20	149,700.99	325,592.79	6,659.62	1.67	6,661.29	59.00	P (DRY)	39-59
TMW 21	149,700.09	325,793.65	6,658.05	1.35	6,659.40	53.00	P (DRY)	33-53
TMW 22	149,701.66	325,893.48	6,658.27	1.41	6,659.68	48.00	P (DRY)	28-48
TMW 23	149,703.49	325,993.59	6,658.32	0.96	6,659.28	44.50	P (DRY)	15-44.5
TMW 24	150,307.90	325,992.24	6,659.20	2.01	6,661.21	245.00	A	215-235
TMW 29	150,108.27	326,786.49	6,655.98	0.66	6,656.64	150.00	A	100-150
TMW 30	149,708.73	326,995.29	6,658.41	0.81	6,659.22	38.50	P (DRY)	18.5-38.5
TMW 31	149,901.61	327,194.15	6,660.04	1.05	6,661.09	149.50	A	99.5-149.5
TMW 34	149,487.48	326,987.78	6,656.35	1.57	6,657.92	35.70	P (DRY)	24.7-35.7
TMW 35	149,509.35	327,198.92	6,656.54	1.21	6,657.75	147.00	A	97-147
TMW 36	149,108.62	327,007.02	6,656.48	1.27	6,657.75	146.00	A	96-146
TMW 37	148,455.68	326,999.77	6,649.39	1.34	6,650.73	138.50	A	88.5-138.5
TMW-38	149,353.55	326,798.27	6,656.78	2.07	6,658.85	97.00	P (DRY)	67-97
TMW 44	147,612.17	325,588.96	6,636.84	0.68	6,637.52	135.00	A	85-135
TMW 45	147,619.66	326,196.14	6,640.37	0.63	6,641.00	135.00	A	85-135
TMW 47	147,310.10	326,491.24	6,638.73	1.62	6,640.35	230.00	A	197-217
TMW 48	147,312.58	326,482.99	6,638.50	1.22	6,639.72	160.00	A	100-150
TMW 49	147,708.93	324,836.10	6,639.23	0.96	6,640.19	150.00	A	100-150
TMW 50	148,198.81	324,697.71	6,646.76	1.04	6,647.80	150.00	A	100-150
TMW 51	147,995.26	324,449.18	6,648.40	1.60	6,650.00	170.00	A	110-160
TMW 52	148,316.56	324,221.64	6,643.25	1.45	6,644.70	150.00	A	100-150
TMW 53	147,849.28	323,913.72	6,640.03	1.44	6,641.47	160.00	A	100-150
TMW 54	149,122.85	324,827.05	6,650.73	1.33	6,652.06	58.51	P (DRY)	43.5-58.5
TMW 55	149,098.35	324,587.76	6,648.10	1.38	6,649.48	75.00	P (DRY)	49-75
TMW 56	149,105.02	324,418.67	6,646.15	1.57	6,647.72	137.00	A	87-137
TMW 57	149,296.82	324,590.47	6,647.74	2.12	6,649.86	137.00	A	87-137
TMW 58	148,915.74	324,570.92	6,645.75	1.21	6,646.96	137.00	A	87-137
TMW 59	148,403.85	325,013.86	6,647.46	0.69	6,648.15	138.00	A	90-138
TMW 61	148,422.32	324,592.68	6,648.30	1.06	6,649.36	150.00	A	100-150
TMW 62	148,789.00	324,277.11	6,645.12	1.01	6,646.13	150.00	A	100-150
TMW 63	148,924.39	325,009.90	6,653.83	0.94	6,654.77	130.00	A	110-130
TMW 64	149,797.71	324,991.71	6,651.55	0.70	6,652.25	150.00	A	97-147
TMW 65	149,805.22	325,191.36	6,653.48	1.40	6,654.88	77.85	P (DRY)	54.7-77.7
TMW 66	149,799.18	325,392.21	6,656.76	1.29	6,658.05	68.00	P (DRY)	58-68
TMW 67	150,003.26	325,192.80	6,655.02	1.61	6,656.63	72.00	P (DRY)	54-72
TMW 68	150,203.84	325,189.90	6,653.60	1.44	6,655.04	93.00	P (DRY)	76-91
TMW 69	149,649.27	324,659.43	6,653.46	1.01	6,654.47	150.00	A	100-150
TMW 70	149,309.09	324,369.82	6,649.83	1.23	6,651.06	160.00	A	100-150
TMW 71	149,835.18	324,420.67	6,652.59	1.93	6,654.52	160.00	A	100-150
TMW 72	149,020.47	322,991.15	6,640.35	1.06	6,641.41	114.00	A	90-114
TMW 73	149,055.70	322,896.82	6,643.31	1.54	6,644.85	115.00	A	90-115
TMW 74	149,799.32	325,791.92	6,659.23	0.95	6,660.18	62.50	P (DRY)	42.5-62.5
TMW 75	149,801.01	325,992.80	6,658.93	1.25	6,660.18	150.00	A	97-147
TMW 76	149,703.72	326,194.12	6,657.24	1.24	6,658.48	76.00	P (DRY)	46-76
TMW 77	149,705.25	326,394.40	6,656.93	1.35	6,658.28	30.50	P (DRY)	15.5-30.5
TMW 78	149,900.26	325,592.38	6,657.66	0.84	6,658.50	150.00	A	99-149
TMW 79	149,905.36	326,388.81	6,659.70	1.82	6,661.52	53.00	P (DRY)	48-60
TMW 80	150,100.82	325,989.30	6,660.04	1.48	6,661.52	83.00	P (DRY)	57-82
TMW 81	150,107.59	326,384.61	6,658.50	1.46	6,659.96	47.50	P (DRY)	37.5-47.5
TMW 82	150,302.15	325,987.47	6,659.56	1.08	6,660.64	150.00	A	100-150
TMW 83	150,307.20	326,379.40	6,657.86	1.01	6,658.87	65.00	P (DRY)	40-65
TMW 84	150,506.27	326,376.61	6,660.36	1.50	6,661.86	147.00	A	97-147
TMW 85			6,657.31	1.81	6,659.12	94.00	P (DRY)	50-90
TMW 86	150,502.85	325,986.77	6,658.16	1.92	6,660.08	89.50	P (DRY)	71.5-89.5
TMW 87	150,200.92	325,789.12	6,658.49	2.11	6,660.60	88.00	P (DRY)	64-88
TMW 88	149,998.44	325,792.37	6,658.71	1.78	6,660.49	85.50	P (DRY)	62.5-85.5
TMW 89	150,809.67	326,137.13	6,659.33	1.42	6,660.75	160.00	A	100-150
TMW 90	148,611.25	323,958.92	6,638.27	1.55	6,639.82	55.00	P (DRY)	35-55
TMW 91	148,518.38	323,956.86	6,638.18	1.43	6,639.61	110.00	A	90-110
TMW-92	148,504.47	323,951.33	6,638.32	1.83	6,640.15	130.00	A	110-130
TMW-93	148,399.92	324,099.96	6,638.62	2.40	6,641.02	145.00	A	95-145
TMW-94	148,400.13	324,000.02	6,638.57	1.96	6,640.53	145.00	A	95-145
TMW-95	148,399.94	323,900.08	6,638.57	2.00	6,640.57	143.00	A	93-143
TMW-96	148,500.01	323,807.75	6,639.26	1.07	6,640.33	145.00	A	95-145
TMW-97	148,599.86	323,799.93	6,639.64	1.75	6,641.39	145.00	A	95-145
TMW-98	148,699.84	323,810.19	6,642.39	1.21	6,643.60	145.00	A	95-145
TMW-99	148,707.32	323,898.85	6,712.42	1.42	6,713.84	145.00	A	95-145
TMW-100	148,799.77	324,004.42	6,638.60	1.25	6,639.85	150.00	A	95-145
TMW-101	148,800.10	324,100.06	6,639.58	2.06	6,641.64	145.00	A	95-145
TMW-102	148,600.02	323,968.63	6,638.18	1.56	6,639.74	150.00	A	130-150
TMW-104	148,508.55	324,122.60	6,637.96	1.75	6,639.71	145.00	A	95-145
TMW-105	148,581.02	323,943.82	6,638.28	1.90	6,640.18	40.00	P (DRY)	20-40
TMW-111	148,800.06	324,200.03	6,642.39	1.56	6,643.95	145.00	A	95-145
TMW-112	148,700.09	324,199.95	6,641.49	1.75	6,643.24	145.00	A	95-145
TMW-113	148,600.06	324,199.95	6,641.55	1.96	6,643.51	145.00	A	95-145
TMW-115	148,499.96	324,199.79	6,640.92	2.00	6,642.92	145.00	A	95-145

A large quantity of diesel contaminated soil was excavated at the Sweetwater Uranium Project between November 2001 and March of 2003. This operation was reported to the Nuclear Regulatory Commission. Two (2) monitor wells, TMW-72 and 73, were completed immediately down gradient of the excavation and are shown on the maps in blue as Contaminated Soil Excavation Monitor Wells. TMW-72 and 73 were completed into the very top of the saturated portion of the Battle Spring Aquifer at 90 – 114 and 90 – 115 feet below surface, respectively. These wells are completed approximately ten feet above and fifteen feet into the saturated zone.

The purpose of these wells was to sample the top of the aquifer for hydrocarbons that may float on top of the aquifer surface. Since these wells were completed solely for monitoring of organics, the sampling/analysis instructions for these wells included only sampling and analyzing for organics. In several instances, however, the wells were sampled and analyzed for inorganics (Guideline 8 plus radiometrics), but since the wells were completed for hydrocarbon monitoring, the inorganic results were never checked and were filed separately from the organic results that were checked. During a review of water sample data these inorganic results were discovered and are presented in the Section entitled Diesel Excavation Monitor Wells. TMW-72, the easternmost well, exhibited elevated, but declining uranium concentrations. The current concentration (10/6/09) is 779 pCi/L (1.15 ppm). TMW-73, the westernmost well, currently exhibits a concentration (10/6/09) of 5310 pCi/l (7.84 ppm).

Upon discovery of this information, the following was done:

- TMW-72 was re-sampled and the sample analyzed for inorganics on October 26, 2006
- TMW-73 was also re-sampled on October 26, 2006 and on November 8, 2006. On November 8, 2006 the well was pumped and samples collected after 59, 450 and 932 gallons had been pumped, to determine if the uranium extended substantially beyond the well bore.
- The results of this sampling are attached in the section entitled Diesel Contaminated Soil Excavation Monitor Wells.

The sample results were reported verbally to Stephen Cohen of the NRC in two telephone conversations on February 7 and 14, 2007.

These results are puzzling for the following reasons:

- TMW-72 and 73 are approximately 106 feet apart and completed to the same depths.
- The wells exhibit vastly different uranium concentrations (779 pCi/L – TMW 72 and 5310 pCi/L – TMW 73).

The source of uranium in these wells is unclear. A number of potential sources have been considered and rejected. The primary concern was that the uranium present was related to the two other sources of groundwater contamination on site, specifically the tailings impoundment and the Catchment Basin.

In 2007 the following was done:

- Six (6) monitor wells (three shallow – depth 115 feet and three deep – depth 145 feet, were completed in a north-south line west of the Mill and Solvent Extraction (SX) Buildings.
    - The odd numbered wells TMW-103, 107 and 109, are shallow.
    - The even numbered wells TMW-106, 108 and 110 are deep.
    - These wells are shown on the map entitled "Well Locations". These are the wells shown in the map entitled Proposed Well Locations in the 2006 CAP Review.
    - These wells were sampled quarterly following completion. The results are included in this report.
- In August 2007 a seventh well TMW-10 was completed in the upper portion of the Battle Spring Formation in the bottom of the diesel contaminates oil excavation. This well was completed by excavation with a trackhoe and installation of fire-inch diameter PVC casing surrounded by a gravel pack in the dug hole. This well was completed in this manner so that:
    - A well could be completed very near to TMW-72 and 73 and upgradient of them.
    - The well excavation could be examined and carefully sampled for any evidence of mineralization.
    - The results of the examination of the well excavation are included.
    - Sampling results for this well are included in this report.

The following table details the most recent (2009) key sampling results of the newly completed wells as well as TMWs 72 and 73:

Well	Depth	Natural Uranium (pCi/L)	Combined Radium-226/228 (pCi/L)
TMW-10	Shallow	2390	65.7
TMW-72	Shallow	779	7.0
TMW-73	Shallow	5310	37.7
TMW-103	Shallow	11.8	31.3
TMW-106	Deep	7.9	31.2
TMW-107	Shallow	7.8	5.8
TMW-108B	Deep	1440	13.8
TMW-109	Shallow	2210	18.2
TMW-110	Deep	3.6	7.9

Shallow – Completed in upper saturated fifteen (15) feet of the aquifer.
Deep – Completed in the upper saturated 45 to 50 feet of the aquifer.
Uses most recent samples.

Kennecott Uranium Company hired Telesto Solutions, Inc. to prepare a groundwater study for the site. This study included:

- Preparation of a Microsoft Access groundwater database.
- Study of the hydrology and ground water chemistry in the vicinity of the mill tailings impoundment and catchment basin excavation.
- Study of scatter plots of zinc, sulfate, chloride, selenium and natural uranium in site water samples.
- An oxygen and sulfur stable isotope study of TMWs 18, 59, 96, 97, 10, 72 and 73, using a sample of water from the North Camp Well as an example of naturally occurring water and a sample of sulphuric acid etched limestone chips from the Mill's acid pump room as a source of sulfate from sulphuric acid used in the mill/process.

A copy of this study was reviewed on site by John L. Saxton, Hydrogeologist, of the Nuclear Regulatory Commission (NRC) during an inspection on August 4 to 5, 2009.

The report concluded by stating the following:

> *An original objective of this evaluation was to identify the existence of historical chemical sources and evaluate the development of ground water chemical plumes extending down gradient of these sources. Compilation of the chemical and water level data show that a highly plausible explanation of the distribution of chemicals in the Battle Spring Aquifer near the mill is that:*
>
> 1. *Tailings leakage created a large, perched water body that sourced (and may continue to source) chemicals to the underlying ground water system. The current signature of this water is that of higher sulfate concentrations and relatively low U-Nat concentrations.*
> 2. *Leakage from the bottom of the Catchment Basin impacted the ground water system during milling. These constituents were pulled toward the pit during pit dewatering and then reversed travel direction with the reversal in ground water gradients back toward the mill area.*
>
> *In terms of the distribution of ground water quality:*
>
> - *All ground waters in the Mill, Diesel Contaminated Soil Excavation and Tailings areas are a mixture of process and natural waters*
> - *Ground water quality near the Diesel Contaminated Soil Area is more like mill process water but different than tailings process water*
> - *Ground water quality to the south and east of the pumping centers is being influenced by background ground water that is being captured along with process influenced ground water*
> - *Anomalies exist within the Battle Springs Aquifer ground water quality such as the extraordinarily high uranium concentration in TMW-73.*
>
> *Natural sources of uranium may influence local concentrations and may contribute to the "patchy distribution" observed in uranium concentrations. Several hypotheses are proposed in this report to explain the patch nature of impacted ground water across the area of interest. These include:*
>
> - *Slow back-diffusion of chemicals from low permeability strata with nearly stagnant ground water into more permeable strata with active ground water flow*
> - *Slow and non-uniform drainage of a historical perched water body that developed around the Tailings Impoundment due to a leak that occurred in the 1980s*

- *Mobilization (dissolution) of chemicals from naturally occurring minerals due to water table fluctuations associated with historical mine dewatering that occurred between 1979 and 1983, but which affected site water levels into the 1990s.*

While the hydrogeologic and chemical data indicate that ground water in the Diesel Contaminated Soil Excavation Area is more like process water than background ground water, and that observed concentrations in the Diesel Contaminated Soil Excavation Area could be highly influenced from the Catchment Basin, there is a weight of evidence that high uranium concentrations may be naturally occurring radioactive material. There are a number of instances in the near vicinity of the Sweetwater mine and mill, and in the Red Desert area, of naturally occurring high uranium concentrations:

1. *The mine area of course yielded an ore body naturally high in uranium concentrations.*
2. *The Lost Creek Schroeckingerite deposits located approximately 15-20 miles northwest of the mill exhibited spotty distributions of soils and ground water with high natural uranium and sulfate concentrations.*
3. *The North Camp Well, located about a mile southwest of the mill, has exhibited natural uranium concentrations in ground water.*
4. *The Metallurgical Test Pit which is located approximately one mile southwest of the mill exhibited high U-Nat and sulfate.*
5. *The Lost Creek background well date collected from wells approximately 3.5 to 6 miles north of the Sweetwater Uranium Project, especially the data from well LC31M, which is completed in the DE Horizon (upper 150 feet of the Battle Spring Formation at that location) shows uranium from 1.4 to 2.1 mg/L and sulfate from 277 to 316 mg/L.*
6. *In the course of excavating in the vicinity of the catchment basin, a dark, organic deposit was discovered which was naturally high in uranium concentrations. This affected area was very limited in extent however other such deposits may exist scattered through the formation. Information about this material is provided in Attachment D.*

The Telesto report specifically discussed natural sources of uranium in the vicinity, stating:

On Site Natural Sources

Soil samples collected from the south side of the excavation at the Petroleum Remediation show elevated solid concentrations of radium with some uranium. The uranium is out of equilibrium with the Ra-226 suggesting that uranium has been leached from the soils leaving the less mobile radium behind. A spreadsheet with an image and sample data for the soil samples is included as Attachment C.

In the course of excavating in the vicinity of the Catchment Basin, a dark, organic deposit was discovered that had measured concentrations of uranium ranging from 21.9 to 2550 mg/Kg (uranium mass divided by total dry mass). This affected area was very limited in extent; however other such deposits may exist scattered through the formation near the mill site. These laboratory results along with a Petrographic report on this material are included in Attachment D.

Figure 27 is an equilibrium diagram of the uranium minerals expected to exist in the Battle Spring Aquifer. These natural uranium minerals, by their presence, have to influence the uranium concentration in ground water. As evidenced by the test pits at the Diesel Contaminated Soil Excavation Area, the uranium mineralization is quite heterogeneous around the site. Under natural conditions, the areas of the Battle Spring Aquifer below the water table that contain uranium mineralization (likely uraninite) probably produces concentrations similar to those determined from the background studies. However, as the water table fluctuates due to mine dewatering or water supply pumping (for example), the geochemical equilibrium of the aquifer changes. Zones that once were saturated now become unsaturated and oxygen (an electron provider) becomes available. Under such oxidized conditions, the stable uranium mineral in the system transfe3rs from uraninite to schoepite. As the ground water table rebounds in the presence of schoepite, the solubility of uranium in the ground water is increased dramatically over that of pre-water table fluctuation. Geochemical equilibrium calculations show that schoepite in equilibrium with ground water containing dissolved oxygen, carbon dioxide, and alkalinity (from calcite) in ground water is approximately five orders of magnitude more soluble than uraninite under anaerobic conditions. That is not to say that schoepite in a natural system will produce five orders of magnitude higher U-Nat concentrations, but that it will provide a potential for higher U-Nat concentrations to be generated than concentrations in the presence of only uraninite. Thus, in a ground water *system with uraninite as the stable uranium-bearing mineral phase, a fluctuation in the ground water table due to pit dewatering would result in a change in the stable uranium-bearing mineralogy such that when the ground water table reestablishes the equilibrium concentration of uranium in ground water could increase.*

During mine dewatering (1979-1983), the water table in the Diesel Contaminated Soil Excavation Area fell by 35 to 40 feet, exposing portions of the previously saturated zone to air. The resulting oxidizing conditions may have increased the solubility of naturally occurring uranium within the aquifer when the water table was depressed. After dewatering ended, the water table rose by 25 to 30 feet to its current stabilized position. As the water table rose, it is possible that the more soluble schoepite mineral could have contributed to the higher U-Nat concentrations observed.

Natural Sources in the Vicinity

A study performed in the area of the barium chloride treatment ponds (Water, Waste & Land, Inc., 1984), concluded that a fluctuating water table was responsible for mobilizing naturally occurring selenium, and this led to increased selenium concentrations in North Camp Well and other ground water wells. The fluctuation resulted from a water table rise associated with fluid disposal at the ponds, followed by a water table fall resulting from pit dewatering. Because the study was performed in 1984, it did not track water quality effects after the end of pit dewatering, which led to a subsequent rise of the water table. While the study focused on selenium, there appeared to be a fairly strong correlation between water table fluctuations and changes in uranium and sulfate concentrations, and a moderate correlation between radium concentration changes in the North Camp Well lending credence to the aforementioned mechanism for increasing uranium ground water concentrations from natural sources.

The largest known (as of 1961) group of Schroeckingerite (a hydrated flou-carbonatesulfate of sodium, calcium and uranium) deposits in the world is located just northwest of the Sweetwater site (Sheridan, et. al. 1961). Schroeckingerite is highly soluble in water and thus exists primarily in the unsaturated zone. It is also an evaporite and thus is most common near the ground surface, although it may be encountered throughout the entire unsaturated zone if conditions exist where it cannot be mobilized by infiltrating meteoric water. While a likely source of uranium in a ground water system that fluctuates through the unsaturated zone, it is not a likely candidate as a significant source in the ground water system on site unless some of it was encountered during placement of wells and transported to the ground water system. However, if Schroeckingerite exists or one existed up gradient of the Sweetwater site in areas where ground water is near the ground surface, its dissolution could have increased concentrations in the ground water. Up gradient ground water would have transported down gradient to Sweetwater, and thusly, this mechanism may explain some of the concentrations of U-nat and sulfate in the ground water system.

Minerals Exploration Company dug a metallurgical test pit in 1975 prior to opening the facility. The test pit is located in the southwest quarter of Section 16, T24N, R93W, approximately one-mile southwest of the Petroleum Remediation Area. The test pit was excavated to a depth of 70 feet. During excavation of the pit, the first seep of ground water occurred at a depth of 58 feet. Standard chemical analyses and radiochemical analyses of ground water collected at the test pit in 1975 were performed, and indicated naturally high levels of both sulfate (1450 mg/L) and uranium (3.15 mg/L and 13.3 mg/L, corresponding to 2130 pCi/L and 9004 pCi/L). These data indicate that mineralized portions of the Battle Spring Aquifer are located quite close to the mill and can exhibit sulfate and uranium concentrations similarly high to those being observed in TMW-73. It should be noted that this test pit and related water were collected prior to mining and milling operations at the site.

A potential in-situ uranium recovery site is in the process of being explored for its commercial potential, with the center of the exploration area located about six miles northeast of the mill and tailings area. This site is located within the same Battle Spring Draw surface drainage basin, and the exploration wells have been drilled into the same Battle Spring Aquifer that underlies the Sweetwater Uranium Facility. Exploration wells have been drilled to depths as great as about 550 feet, with four identified hydrostratigraphic horizons: 1) a shallow unconfined sandstone horizon to a depth of about 175 feet; 2) a deeper confined sandstone horizon from about 175 to 350 feet below the surface; 3) a confined mineralized horizon from about 350 to 500 feet in depth; and 4) an underlying sandstone aquifer below 500 feet.

Exploration well LC31M is of particular interest for the purpose of evaluating the presence of naturally occurring radiological material in the vicinity of the Sweetwater mill. It is located 3.5 miles due north of the *tailings impoundment, and was completed in the upper unconfined sandstone, the same portion of the Battle Spring Aquifer measured by the TMW wells completed at any depth less than about 150 to 175 feet. Chemical tests of the background ground water quality measured at this well show sulfate concentrations of 277 to 316 ppm, and uranium concentrations of 1.40 to 2.10 mg/L (945 to 1422 pCi/L). While not all the exploration wells of the potential Lost Creek project show these more elevated concentrations of uranium, the data indicate spotty, naturally elevated areas of uranium mineralization in a portion of the Battle Spring Aquifer analogous to the Sweetwater site.*

The Sweetwater Uranium ore body is, of course, a natural source. Overburden extracted from above the mineralized zone had measurable quantities of uranium mineralization (Shepherd Miller, Inc., 1999). This mineralization has been shown to increase uranium (and sulfate) concentrations in water bodies. During dewatering, the dewatering wells exhibited low concentrations of uranium and sulfate. After dewatering ceased and ground water started flowing through backfilled overburden material, the water collecting in the pit lake had elevated concentrations of uranium and sulfate. The leaching of naturally occurring uranium and sulfate from the backfill material exhibits that uranium and sulfate minerals exist naturally in the area outside of the ore zone. This observation of elevated uranium and sulfate outside of the ore zone and in the area of the site is also supported by Mason and Miller's (2004) reporting of uranium and high sulfate data in a well in Section 34, Township 25 North, Range 90 West.

(Please note that only the *text* from the Telesto Solutions, Inc. report has been included in this discussion. Any attachments or figures mentioned have not been included.)

The Telesto Solutions, Inc. report concludes by recommending that up to ten (10) additional monitor wells be completed west of the Mill Building to better define the plume to the west. Kennecott Uranium Company is currently considering this option; however, there is no assurance that ten additional monitor wells would resolve the definition of the plume because of naturally occurring analytes present throughout the area.

Additional Discussion of Localized Naturally Occurring Uranium and Radium in Soils Leaching into Groundwater

The Geology of the Lost Creek Schroeckingerite Deposits Sweetwater County, Wyoming (Geological Survey Bulletin 1087-J) by Charles Maxwell et al reported uranium concentrations in water samples collected in bore holes ranging from 0.010 to 46 parts per million. Clearly, very high naturally occurring uranium concentrations in ground water can exist in the Red Desert. The uranium encountered in the water in this borehole may be entirely natural. The levels of uranium in ground water reported in the Survey Bulletin tended to be very spotty, which is similar to the spotty nature of the uranium observed in TMWs 72 and 73.

A test pit was excavated by Union Oil Company of California prior to the start of operations near the southeast corner of Section 16, Township 24 North, Range 93 West, that was 68 feet deep (bottom elevation was approximately 6540 feet above mean sea level). It was excavated to obtain samples of uranium mineralization above the water table. A bulk sample of mineralized sand above the water table was removed that contained 0.011% U_3O_8 and a bulk sample from below the water table was also removed that contained 0.033% U_3O_8. (Recovery of Uranium from Red Desert Sandstone Ore by H_2SO_4 Leach and Solvent Extraction – Hazen Research, Inc. February 18, 1976) This test pit was approximately 0.9 miles southwest of TMW 73. Some soil samples were collected in the diesel contaminated soil excavation along the south wall closest to TMWs 72 and 73. One sample contained 43.3 milligrams per kilogram uranium. It was collected from a depth of approximately 35 feet below ground surface. Background for uranium in surface soils around the project is 2.44 milligrams per kilogram. The concentrations discovered in the above described sample are substantially above background and represent mineralized sands. Localized bodies of mineralized sands could be the source of the elevated uranium in TMWs 72 and 73. A map entitled Background Radionuclide Sample Locations – West End Diesel Contaminated Soil Excavation, showing the locations of four soil samples collected in the excavation as well as the analytical results are included in the section entitled Diesel Excavation Monitor Wells.

The fact that the discharge of water onto the surface at the Barium Chloride Ponds was able to mobilize naturally occurring uranium in surface soils and elevate uranium concentrations in the underlying aquifer shows that uranium mobilized by downward percolating surface water can elevate uranium concentrations in underlying aquifers. Surface water (rainfall, snowmelt) percolating through mineralized sands may be the cause of the elevated uranium concentrations in TMWs 72 and 73.

Naturally occurring high concentrations of uranium are known to exist in the area within forty (40) feet of the surface and rainwater and snow melt could leach uranium from these occurrences down into the Battle Spring Aquifer. The following is sample data for some uraniferous sands found in the northeast corner (Kminus3 area) of the Catchment Basin excavation:

Location	Sample Type	Northing	Easting	Diesel Range	Oil Range	Total Extractable	Natural Uranium (milligrams per kilogram)	Natural Uranium (picocuries per gram)	Thorium 230 (picocuries per gram)	Th230 Uncertainty	Radon Result	Radon Uncertainty
K Minus 3 NORM area	Black material	148982.97	324146.97	226	804	1000	2550	1726.35	393.0	17.0	396	9
K Minus 3 NORM area	Sand	148982.97	324146.97	211	650	834	2350	1590.95	708.0	29.0	326	6.4

This uranium, radium-226 and thorium-230 is clearly naturally occurring as per the attached report entitled "Petrographic Evaluation of Sample #CO7051289-001A".

When TMW-10 was completed in the bottom of the Diesel Contaminated Soil Excavation it was completed by digging a hole into the aquifer with a trackhoe. This allowed the wall of the excavation to be carefully examined and sampled. The south wall of the excavation was photographed with a stadia rod in the image and one-half foot composite samples were collected and tested for uranium and radium-226. The results are included on the spreadsheet that follows. In addition, bulk samples above, at and below the water table were collected and analyzed. The results are included on the second spreadsheet.

This data shows very high naturally occurring radium-226 concentrations comprising what would be considered a relict or "phantom" uranium deposit. Specifically, one in which the soluble uranium had been leached and mobilized by downward percolating groundwater leaving the radium-226 and its gamma emitting decay products behind. Phenomena such as the previously described naturally occurring uranium in organic matter and this naturally occurring radium-226 would provide an explanation for elevated uranium and radium concentrations in TMWs 72, 73, 10 and other wells.

Groundwater data for the seven (7) new wells (TMWs 10, 103, 106, 107, 108, 109 and 110) as well as TMW 72 and 73 were provided to Stephen Cohen at his request in three emails dated September 30, November 8 and November 20, 2007.

The *Uranium (U-nat) Contour Map* (see Maps) shows the 36.0 pCi/L uranium contour in red, based on the 36.0 pCi/L uranium GPS, based on samples taken in 2009 for the tailings and Catchment Basin monitor wells. The highest uranium concentration for 2009 for each well was used to prepare this map. The area encompassed by the 36.0 pCi/L uranium contour on the 2009 map is 48.0 acres. The acreage estimate depends to some extent upon the inferred outline of the plume beneath the tailings impoundment, an area for which there is no sample data. This plume area may vary from year to year based upon differing interpretations of the plume outline position. The plume outline includes the uranium contamination around the Catchment Basin.

The *Combined Radium-226/228 Contour Map* (see Maps) shows the areal extent of the 5.8 pCi/L radium 226/228 plume boundary in green. This map shows the combined radium 226/228 plumes in 2009. The plume as drawn encompasses a total area of 185.5 acres on the 2009 map. This is larger than the 172.75 acres estimated for the end of 2008. This acreage estimate is subject to interpretation since the actual outline of the plume beneath the tailings impoundment is unknown because no monitor wells penetrate the impoundment.

The Total Dissolved Solids - *TDS Contour Map* (see Maps) shows the TDS plume in the vicinity of the tailings impoundment and Catchment Basin in 2009. The area encompassed by the 500 parts per million contour is 183.1 acres on the 2009 map. This is essentially the same as the estimated 183.3 acre area calculated for 2008.

These plume outlines are based on the highest Natural Uranium, Radium-226 and Total Dissolved Solids concentrations in each well for 2009.

In November 1996, as part of the field work program to develop a final design for tailings management for the Sweetwater Uranium Project, eighteen control points (section corners, quarter corners, etc.) covering a nine square mile area around the mill were surveyed with a global positioning system. The original elevation of the southeast corner of Section 15, Township 24 North, Range 93 West was found to be wrong. Please see the memo submitted as Appendix A of the 1996 Corrective Action Program (CAP) Review from Kent Bruxvoort of Shepherd Miller, Inc. This point was used to establish ground surface and casing elevations for the tailings monitor wells (TMW) around the tailings impoundment.

As a result of this discovery, all of the casing elevations for all of the tailings monitor wells and potable water wells (PWW) were resurveyed by Inberg-Miller Engineers, Inc. of Riverton, Wyoming. A mark was filed into the top of the casing in each well and the casing elevation was surveyed at that mark. All water level measurements will now be taken from that mark as well, to insure accuracy and consistency of results. In addition, the casing heights of each well were measured so accurate ground elevations for each well could be obtained. These elevations are listed in Table 2.3 of "Evaluation of Aquifer Test Data", submitted as Appendix B of the 1996 Corrective Action Program (CAP) Review. The correction of the casing heights has affected the piezometric contours for the aquifer.

As work has been performed in the Catchment Basin excavation area (fill added to enhance compaction, etc.) wells have been resurveyed as required. In addition, casing repairs were performed on TMW-1, 5 and 29, requiring resurveying of these wells in 2008.

In December of 1996 a pump test was conducted in the area north of the tailings impoundment as part of the final tailings design field work program. The results of this test were documented in Appendix B, Evaluation of Aquifer Test Data (1996 CAP Review).

As of December 31, 2009, pumping from wells TMW-7, 17, 18, 57, 58, 59, 75, 96 and 97 did not exceed the 25 million gallons allowed under "TOP-1 - General Tailings and Evaporation Impoundment Procedures". On December 31, 2009 a total of 22,103,107 gallons of Battle Spring Aquifer water had been pumped back into the tails cell since the beginning of the year.

As part of the process of obtaining an operating performance based license for the facility, which was granted on August 18, 1999, Elaine Brummett requested in a telephone conversation on July 7, 1999 that a Standard Operating Procedure (SOP) be prepared limiting annual pumpback to no more than 25 million gallons per year and to an annual amount that would cause no net rise in the fluid level in the tailings impoundment, minor seasonal fluctuations excepted. This SOP would extend the 25 million gallon per year pumpback limit that was a pre-existing requirement in License Condition 10.7A of the old license. This language is included in the Standard Operating Procedure entitled "TOP-1 - General Tailings and Evaporation Impoundment Procedures". *Table 1 – Gallons Pumped to Tailings Impoundment* (see Tables) lists the wells pumped, the volumes pumped and the cumulative gallons pumped for years 1986 - 2006. The flow from some wells was reduced and some shut down near the end of the year to keep the total pumped volume below 25 million gallons. It is planned for 2010 to operate the pumpback wells at the following approximate flow rates:

WELL #	Gallons per Minute
TMW-96	5
TMW-97	6
TMW-59	8
TMW-75	3
TMW-17	2.8
TMW-7	3
TMW-57	3
TMW-18	8.6
TMW-58	5.6
Total:	**45**

TMWs 59 and 18 have the highest Total Dissolved Solids concentrations (2460 ppm and 2600 ppm) so they will be operated at the highest flow rates with the other less contaminated wells pumped at lower rates so that the total pumped volume does not exceed 25 million gallons.

Some repairs were required during the operation of the pumpback system in 2009. They are as follows:

TMW-18:
- April 20, 2009 – Installed new ¾ horsepower pump.
- December 2, 2009 – Replaced flow meter.

TMW-59:
- April 21, 2009 – Installed new ¾ horsepower pump.
- October 28, 2009 – Replaced flow meter.
- December 10, 2009 – Cleaned flow meter.

A spill of pumpback water from TMW-57, 96 and 97 occurred on December 7, 2009. This spill is documented in Appendix 1.

The following groundwater contour maps are included with this report:

- *May 2009 Piezometric Contour Map* shows the groundwater contours around the tailings impoundment and Catchment Basin in May of 2009.
- *September 2009 Piezometric Contour Map* shows the groundwater contours around the tailings impoundment and Catchment Basin in September of 2009.

Five (5) foot contours are in red while one (1) foot contours are in dashed black on both maps. These maps show the extent of the cone of depression created by the pumpback wells. These maps were created using groundwater elevation data from all of the aquifer monitor wells regardless of the completion depth, since the piezometric surface is believed to be a property of the aquifer as a whole.

No water levels were collected within one (1) week of operation of PWW-1 and/or PWW-2 so that the operation of these wells would not interfere with the depiction of the potentiometric surface created by the operation of the pumpback wells.

Salts/Contaminants Removed from the Battle Springs Aquifer

Table 2 – Mass of Salts and Other Constituents Removed from the Perched and Battle Springs Aquifers and Pumped Back into the Tailings Cell lists the cumulative quantities of salts (contaminants) pumped back from the Battle Springs Aquifer into the tailings cell via the pumpback system. Charts showing the quantities of salts returned to the tailings cell are also included for each of the wells pumped back into the impoundment in 2009.

TMWs 90 and 105 were removed during the course of the excavation of the contaminated soils around the Catchment Basin in 2006. They were no longer present in 2009.

TAILINGS IMPOUNDMENT WATER EVAPORATION SYSTEM

The tails impoundment pump was returned to service by January 19, 2009. The transfer pump remained in operation throughout the year to pump fluid from the southeast corner into the lined ponds.

Operation of the evaporative drip system, which allows tailings fluid to drip down exposed portions of the liner on the western embankment of the impoundment, was suspended in 2000. Two sections of liner used as surfaces on which tailings fluid was allowed to drip were damaged by high winds by April 10, 2000, requiring the operation of the drip system to be terminated.

Extensive regrading of the tailings was performed during 2008. Regraded areas were bermed and lined to create shallow ponds on the tailings surface to enhance evaporation and prevent blowing tailings. Lagoons 2-W and 4-W were lined in the summer of 2009. Included with this report are the following four (4) maps showing the changes to the impoundment over time:

- *Existing Impoundment Configuration – January 2006*
  This map shows the distribution of the tailings and evaporation ponds prior to commencement of the Catchment Basin excavation.
- *Existing Contours – October 2007*
  This map shows the distribution of the tailings and evaporation ponds after addition of the 233,268 cubic yards of material removed from the Catchment Basin excavation in 2006 and 2007.
- *Existing Contours – December 29, 2008*
  This map shows the distribution of the tailings and evaporation ponds after the 2008 tailings regrading and lagoon construction effort.
- *Impoundment – December 2009*
  This map shows the water covered areas as of December 2009.

The areas not water covered are currently frozen. In the case of Lagoon 8-W and Lagoon 7-W, these are composed of wet materials with some standing fluid. These non water covered areas will either be flooded or sprayed with tailings fluid following thawing so that they will be kept wet to minimize blowing tailings.

TAILINGS IMPOUNDMENT FLUID LEVEL

The fluid level on September 30, 2009 was 6619.7 feet above MSL. This elevation is taken in the deepest pool in the impoundment's southeast corner. The fluid level at this location was fairly stable in 2009 since no regrading work was being performed and pumpback water was being directed into the lined lagoons.

Current water covered area (pool area plus lagoons) is estimated to be approximately 1,206,603 square feet (2009 Method 115 Report). The water covered area has increased from the 2008 area (676,921.8 square feet) in spite of evaporative losses from the main pool due to the construction of lagoons on the exposed tailings surface. This area is based on a ground survey of the impoundment conducted by Robert Jack Smith and Associates on July 28, 2009.

The pool level did not fluctuate much in 2009 since no regrading work was being performed and the pumpback water was being directed into the lined ponds. At no time did fluids rise to within five (5) feet of the top of the repaired liner.

Substantial repairs were made to the tailings impoundment liner in 2007 and 2008 along the interiors of the northern and eastern embankments. The tailings were regraded in 2008 and thirteen (13) lined evaporation ponds were constructed on top of the regraded tailings. Two (2) additional ponds were lined in the summer of 2009.

The work was described in the Kent Bruxvoort Consulting Engineers (KBC) June 23, 2009 report entitled *2009 Inspection of Tailings Impoundment Liner*, as follows:

> *This effort resulted in substantial progress toward meeting tailings management objectives: regrading the tailings to achieve a more regular surface in anticipation of either reclamation or future tailings storage; leveling the tailings to create a surface that is entirely below the bench, more sheltered from wind, and easier to keep moistened; covering the tailings to limit wind erosion potential; and creating stable, flat, bermed areas as evaporation lagoons for tailings dewatering.*

In conclusion, the report stated:

> ***Conclusions.*** *Above the bench, the liner is only intact and functional in the northwest corner of the impoundment, and in this area the key trench at the crest remains functional. The liner along the bench and the seam at the bench is functional along the west half of the impoundment. The liner is maintained and repaired where necessary within five vertical feet of the tailings or tailings fluid around the entire perimeter of the impoundment. The liner remains, by observation, pliable. There is no evidence of exposed scrim by either physical or chemical means.*
>
> *Placement of the additional 11(e).2 soils from the catch basin area into the tailings impoundment, regrading of the tailings, and completion of lined evaporation lagoons all provide significant measures to manage the tailings: limiting potential for fluid to escape through the damaged liner, limiting potential for windblown tailings, lowering the surface of the tailings to a level everywhere below the surrounding native ground surface, promoting consolidation in the eastern half of the impoundment, and enhancing evaporation. Additionally, the measures taken in 2008 to improve the inside side slopes of the embankments has significantly improved the impoundment visually, and created a surface that will better allow potential future re-use of the impoundment.*

Copies of Kent Bruxvoort's 2009 inspection reports of the impoundment (2009 Inspection of Tailings Impoundment Liner, Embankments and Diversion Channel are included in Appendices 2, 3 and 4.

The substantial regrading of the tailings and material excavated from the Catchment Basin area that was performed in 2007 and 2008 has resulted in a more organized and manageable impoundment.

The evaporative capacity of the tailings impoundment currently stands at a minimum of 29.22 million gallons per year. Please refer to the table below:

Tailings Impoundment Evaporation Capacity

Lagoon Designation	Area	Annual Evaporation		
		Maximum Rate	Minimum Rate	
	(square feet)	60.7	42.49	Inches per year
1-O	81,798.56	3,095,164.46	2,166,615.13	
1-W	99,531.68	3,766,165.55	2,636,315.89	
1-E	100,230.07	3,792,591.84	2,654,814.29	
2-E	77,418.51	2,929,428.35	2,050,599.85	
2-W	60,862.93	2,302,984.04	1,612,088.83	
3-W	68,249.06	2,582,466.80	1,807,726.76	
4-W	60,862.93	2,302,984.04	1,612,088.83	
3-E	53,191.59	2,012,709.26	1,408,896.48	
4-E	78,433.96	2,967,851.83	2,077,496.28	
5-W	58,665.02	2,219,817.63	1,553,872.34	
5-E	57,500.41	2,175,750.11	1,523,025.08	
6-W	60,862.93	2,302,984.04	1,612,088.83	
6-E	68,160.91	2,579,131.30	1,805,391.91	
8-E	112,197.27	4,245,417.07	2,971,791.95	
9-W	65,113.85	2,463,834.02	1,724,683.81	
Total:	**1,103,079.68**	**41,739,280.34**	**29,217,496.24**	

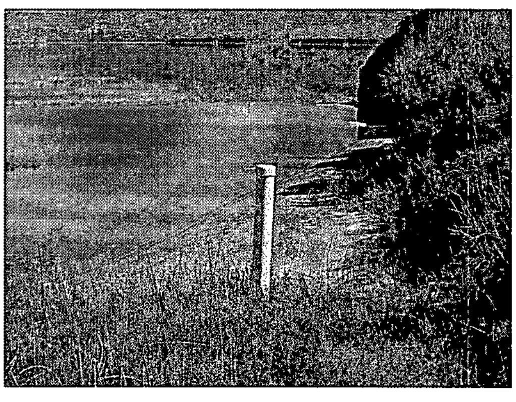
The above table shows the amount of fluid that can be evaporated from the existing tailings impoundment lagoons based upon their area and a maximum evaporation rate (pan evaporation rate) of 60.7 inches per year and a minimum evaporation rate (lake evaporation rate) of 0.7 times the pan rate. The pan evaporation rate is from the site's Revised Environmental Report dated August 1994. Determination of a lake evaporation at 70 percent of pan evaporation is based on Seller, 1965. Even at the minimum calculated evaporation rate the currently lined lagoons are more than adequate to evaporate the current maximum pumpback volume of 25 million gallons per year. Thus the tailings impoundment in its current configuration can evaporate the currently generated pumpback volumes.

The Safety and Environmental Review Panel (SERP) approved Safety and Environmental Evaluation (SEE) 18 – Optimization of Evaporation and Control of Windblown Tailings in the Sweetwater Uranium Project Tailings Impoundment. SEE-18 changes the calculated volume of fluid that the impoundment is capable of evaporating on an annual basis due to the construction of a series of lined ponds on top of the tailings. This changes the calculated volume of fluid that the impoundment is capable of evaporating from 25 million gallons per year to a minimum of 29.2 million gallons per year.

BATTLE SPRINGS AQUIFER WATER LEVELS

Recovery of the cone of depression caused by dewatering operations around the Sweetwater Pit was complete by 1998. The current water level in the pit stands at 6538.67 feet above MSL on September 23, 2009, a rise of 0.50 feet from a level of 6538.17 feet above MSL on October 20, 2008. Please see attached chart entitled *Sweetwater Pit Water Levels.* Kennecott Uranium Company believes that water levels in the pit have reached "steady state". This 0.50 foot drop in pit lake surface elevation observed during 2009 is a normal fluctuation in the lake level.

Beginning in January 2009 a section of slotted pipe was installed in a hole in the sand along the shore of the pit lake. Please see image below.



The top of the pipe section was surveyed by Robert Jack Smith and Associates on Monday, January 5, 2009. The elevation of the top of the pipe section is 6542.68 feet above mean sea level. Pit lake elevations are now taken by measuring down from the pipe section top to the top of the water inside of it. This is a superior system to the use of a rebar since it is not susceptible to ice damage and there is no uncertainty due to wave action.

The wells closest to the pit have shown the greatest recoveries, while those farthest from the pit are the least affected. TMW-7, 17, 18, 57, 58, 59, 75, 96 and 97 showed decreased water levels since they are being actively pumped. The greatest decrease in water level was in the area of TMW-18. This is logical since TMW-18 yields a pumpback rate of 8.55 gpm. The spreadsheet *Groundwater Elevations 11/96 to Present* is included at the end of this section.

The reclaimed pit remains as a lake and evaporative sink. Water loss via evaporation from the pit lake surface creates a slight permanent cone of depression around the pit, meaning that the potentiometric surface of the aquifer in that area will never return to pre-mining levels.

GROUNDWATER DIRECTION AND VELOCITY / EFFECTIVENESS OF THE PUMPBACK SYSTEM

The regional ground water flow is to the southwest (the center of the Great Divide Basin). Localized flows in the Battle Spring Aquifer immediately surrounding the Sweetwater Pit are toward the pit since it is an evaporative sink as described in the section above.

The groundwater in the immediate vicinity of the tailings impoundment and Catchment Basin is flowing toward TMWs 7, 17, 18, 57, 58, 59, 75, 96 and 97, as these wells have overcome regional groundwater flows toward the southwest due to pumping in 2009. The piezometric contour maps show the potentiometric surface of the Battle Springs Aquifer around the tailings impoundment and Catchment Basin in May and September 2009. The cone of depression created by the pumpback wells encompasses the existing plume. The groundwater contour maps for May and September 2009 clearly show a cone of depression by the western edge of the tailings impoundment and around the Solvent Extraction (SX) Building by the Catchment Basin pumpback wells TMW 96 and TMW 97.

The Telesto Solutions, Inc. report entitled **"Final Ground Plume Interpretation"** dated February 2009, states:

> *The ground water level contour map (Figure 6) clearly shows that well pumping at the site has created an effective containment system, which removes chemical mass and eliminates offsite migration. These beneficial effects are being accomplished at a modest total pumping rate of about 50 gpm.*

Clearly, ground water within the impacted area is flowing in toward the pumpback wells. The report continues by stating:

> *The water level contours and flow directions on Figure 6 clearly show that the ground water pumping wells are providing complete containment of any water that could be impacted by the Tailings Impoundment, or facilities in the Catchment Basin area. Flow within the Battle Spring Aquifer conver4ges towards the pumping centers and there is no potential for off-site excursion of potentially impacted ground water or wells that show elevated concentrations of U-Nat or Ra 226-228.*

Ground water in the vicinity of the mill and tailings impoundment flows toward the pumpback wells.

PROGRESS TOWARD ATTAINING GROUNDWATER PROTECTION STANDARDS

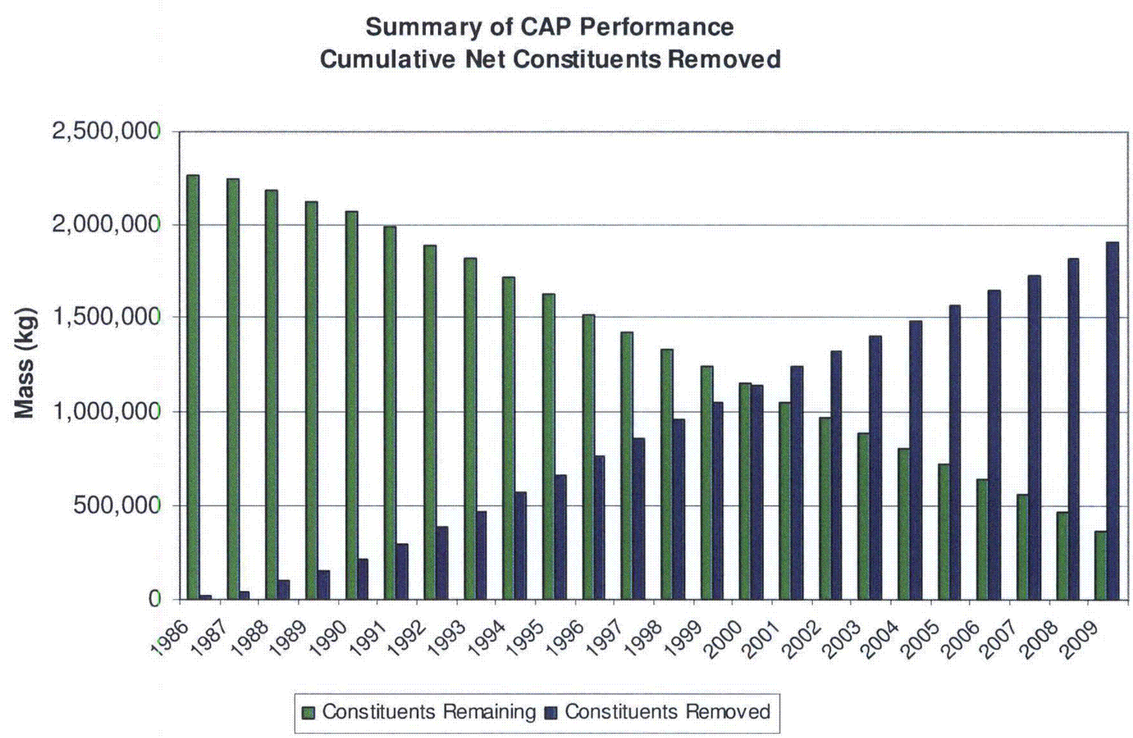
The pumping of aquifer wells TMW-7, 17, 18, 58, 59 and 75 at the toe, north and west of the tails cell, will continue to intercept any contaminated water coming through. The capture of contaminated water at the toe of the tails cell will prevent any hazardous constituents that may be present from migrating away from the cell and thus, in time, attain groundwater protection standards (GPS). A pump was installed in TMW-57 in May 2001. A new well, TMW-7, was completed on August 18, 2003. A pump was installed and started in it on December 1, 2003.

The major portion of the excursion lies beneath the tailings impoundment, as seen on the respective contour maps. This makes sense given the fact that the fluids leaked from the impoundment's northeast corner and flowed to the west under the impoundment to the sink created by the then mostly dewatered Sweetwater Pit. The impacted fluids beneath the tailings impoundment can only be collected from wells at or near the edge of the impoundment since wells cannot be drilled through the bottom of the lined impoundment. This limitation greatly hinders removal of impacted fluids from the aquifer. The most impacted fluids lie beneath the impoundment as shown on the TDS Contour Maps. The pumpback well with the highest TDS (2830 ppm – February 16, 2009), for example, is TMW-18, which lies immediately against the western embankment. Being forced to recover impacted fluids from the edge of the plume and being unable to recover fluids from the area of highest concentration, the plume's core, prolongs any attempt to attain groundwater protection standards (GPS).

The following italicized text (February 7, 2004) and a bar graph (updated on February 10, 2010) are from a consultant's report prepared by Kent Bruxvoort Consulting dated February 7, 2004.

> *"The CAP has been successful in containing and reducing quantities and concentrations of hazardous constituents beneath the impoundment. As of the fourth quarter of 2002, about 248.4 million gallons of groundwater had been pumped back into the impoundment. A cumulative net amount of 1,323,500 kg of contaminants has been pumped back, representing 58 percent of the estimated total amount released. In calculating this net amount, background quantities of constituents, as defined by concentrations in the background monitoring well, TMW-5, were subtracted from the total mass of constituents pumped. The following plot compares the cumulative net mass of contaminants removed to the cumulative amount of released contaminants remaining in the aquifer. The average pumpback volume from 1993 through 2002 was 93,000 kg/year."*

The plot has been updated with 2009 data and is shown below. The mass of salts recovered for 2009 also includes salts recovered from the plume around the Catchment Basin. The volume of fluids leaked from the Catchment Basin and the mass of salts associated with that fluid is unknown. As such, no adjustment was made to the mass of constituents remaining to reflect constituents leaked from the Catchment Basin. Since the bar graph below only addresses constituents from the tailings impoundment leak for which the volume is known and not the Catchment Basin leak, which was of unknown volume, it is only considered valid for evaluating the performance of the Corrective Action Program (CAP) as related to the tailings impoundment.



The pumpback program was also reviewed by Telesto Solutions, Inc. in their report, **"Final Groundwater Plume Interpretation"** dated February 2009. In it they stated:

> *The ground water level contour map (Figure 6) clearly shows that well pumping at the site has created an effective containment system which removes chemical mass and eliminates offsite migration. The beneficial effects are being accomplished at a modest total pumping rate of about 50 gpm.*

AREAL EXTENT AND CONCENTRATION OF HAZARDOUS CONSTITUENTS

The areal extent of the excursion at this time is shown by the Uranium, Combined Radium and TDS Contour Maps. All hazardous constituents (except for Uranium, Combined Ra226/228 and Gross Alpha) have stabilized below groundwater protection standards in the majority of aquifer wells. TDS values of over 500 ppm, Natural Uranium values of over 36.0 pCi/L and Radium 226/228 values 5.8 pCi/L show a plume north, northeast and west of the tails cell and around the Catchment Basin. The surface area underlain by the plume varies depending upon the constituent in question. The Combined Radium 226/228 plume covers approximately 185.5 acres, as drawn. The 500 ppm TDS contour shown defines an area of approximately 183.1 acres. The 36 pCi/L Uranium plume covers an area of 48.0 acres. These areas are from the 2009 maps.

These areas are based on the included plume maps which show the plumes as being open ended to the west. This is because it is still unclear as to whether natural uranium, radium-226 and total dissolved solids encountered in the top of the aquifer in TMW-10, 72 and 73 are natural or process related. This question can be further addressed by the completion of additional monitor wells to the west, which has been recommended by Telesto Solutions, Inc. This option is under consideration by Kennecott Uranium Company; however, there is no assurance that ten additional monitor wells would resolve the definition of the plume because of naturally occurring analytes present throughout the area.

VERTICAL EXTENT OF CONTAMINATION

TMW-8, 24 and 47 (see page 5) were each completed in deeper sand than the other monitor wells. The sample results from these wells clearly show that groundwater contamination from the cell has not migrated into deeper sands. These results show that the contamination is confined to the upper fifty (50) feet of the saturated portion of the Battle Springs Formation.

This was substantiated by Shepherd Miller, Inc. when they completed the groundwater background study. In the study they concluded, *"Water quality sampling of three wells completed within the lower saturated sand, TMW's 8, 24 and 47, shows it to be unaffected by seepage from the cell, indicating that flow from the upper to lower saturated sands is retarded by the clay stone layer."*

This issue was also investigated by Telesto Solutions, Inc. and discussed in their February 2009 report, **"Final Ground Water Plume Interpretation".** In the report they stated:

> *Monitoring wells TMW-8 and 24 were completed in a deeper sand of the Battle Spring Aquifer to determine if there is downward migration of affected ground water into the lower portion of the aquifer (Kenneco9tt Uranium Company, 1994). Chemical concentration plots of the deep wells and adjacent shallow-completion wells (TMW-58 and -82) confirm the conclusion of no significant downward migration of affected ground water over the period of sampling (1991 to present). The deep wells do not exhibit the concentration spikes for U-Nat, Ra226-228, sulfate and TDS that are observed in the shallow wells (Attachment A).*
>
> *Chemical concentration plots for shallow well TMW-48 and adjacent deep well TMW-47 indicate that impacted ground water is not currently present south of the Tailings Impoundment.*

(Please note that only the *text* from the Telesto Solutions, Inc. report has been included in this discussion. Any attachments or figures mentioned in the quoted text have not been included.)

ESTIMATE OF TIME NEEDED TO OBTAIN COMPLIANCE

In a letter to the NRC dated July 29, 1999, Kennecott Uranium Company stated: "In the eleven years of CAP operation (1988 through 1998), 47 percent of the estimated mass of released contaminants have been removed via pumping." Based upon this estimate of the mass of released contaminants removed by pumpback operations, an estimate of ten (10) years to terminate the Corrective Action Program (CAP) was made. This estimate was revised and updated by Kent Bruxvoort Consulting on February 7, 2004. This update concludes that 58% of the estimated total amount of the contaminants had been returned to the tailings impoundment by the end of 2002. This February 7, 2004 update has been subsequently revised and now shows that 83.8% of the estimated total amount of the contaminants had been removed by the end of 2009.

However, the scope of the CAP has changed with the license amendment request granted on May 26, 2005 to include the contaminated plume in the aquifer around the Catchment Basin. The volume of fluid released through the unlined bottom of the Catchment Basin is unknown, so the mass of salts added to the aquifer from the Catchment Basin cannot be accurately estimated.

This estimate of ten (10) years for the tailings impoundment plume is based solely on removal of contaminants that leaked from the tailings impoundment and does not include contaminants that escaped from the bottom of the Catchment Basin. Any estimate is also subject to change depending upon future plans. For example, should operations at the mill resume, use of pumpback fluids as a source of mill feed water has been considered as a means to hasten removal of the impacted fluids. In addition, contaminants entering the Battle Spring Aquifer from the Catchment Basin are not included in this estimate, since their volume is unknown.

Telesto Solutions, Inc. discussed the plume in their February 2009 report entitled **"Final Groundwater Plume Interpretation"**. In discussing remediation times for the entire plume involving both contaminants from the tailings impoundment and the Catchment Basin, they stated:

> *The migration distance between TMW-89 and pumping well TMW-75 is about 310 feet, so the computed ground water travel time between these wells is on the order of 3.3 years. Industrial experience in ground water remediation has shown that in the absence of operating chemical sources, the time required for ground water cleanup is typically 5 or more times the ground water travel time to pumping wells. So it would be reasonable to assume that the current ground water pump and treat system will need to be operated for a minimum of 17 years. This differs from original estimates included in previous CAP Reviews that were based on contamination being derived solely from the tailings impoundment leak. This new time estimate includes remediation of fluids leaked from the Catchment Basin as well. The volume of fluid leaked from the Catchment Basin is unknown. This computed time frame is valid only if chemical sources are no longer operating.*
>
> *Simple calculations suggest that in areas where chemicals in ground water are purely residual (that is, not affected by a current chemical source such as naturally occurring minerals), the additional time for remediation is likely to be on the order of 10 to 20 years. In these areas, one would expect to see systematic decreases in chemical concentration, which should eventually fall below regulatory levels.*
>
> *As discussed in previous sections, a common situation observed at the site is chemical concentrations that are above ground water protection standards or corrective action levels, and which are either increasing or do not show a consistent downward trend. This suggests that mechanisms exist which are continuing to introduce chemical mass into the ground water aquifer. Where this occurs, the additional time for remediation is likely to be significantly longer than 20 years.*
>
> *Two mechanisms can be envisioned for introducing chemical mass into the active ground water flow system. One possibility is that chemically affected water exists in low permeability strata that contain essentially stagnant ground water. Chemical transport out of the low permeability strata may occur by diffusion that slowly bleeds chemical mass from the stagnant zones and into the more permeable zones with active ground water flow induced by pumping. Although this "back-diffusion" process was first recognized decades ago, it has recently become an active topic in the technical literature and is the subject of current research. An important characteristic of this transport mechanism is that it is a very slow process that cannot be sped up by increasing the flow rate of ground water pumping systems. This is because pumping increases flow in the permeable zones, but does not have a significant effect on the low permeability zones with stagnant ground water.*
>
> *Another mechanism that may delay the introduction of chemical mass into ground water is the perched water body that historically existed north, east and west of the tailings impoundment. Having been fed by tailings leakage, the perched water contained high concentrations of regulated chemicals. After the tailings leak was mitigated, the perched water body would have drained slowly downward towards the water table. Even though saturated conditions in the historical perched water zone are largely gone, slow unsaturated flow to water table is probably ongoing and this can introduce chemicals to ground water at the water table. In addition, typical heterogeneity in the geologic system likely leads to non-uniform vertical drainage that causes more chemicals to enter the ground water at some locations compared to others. The result is chemical hotspots that do not correspond to expected lateral transport originating at or below the tailings. This mechanism likely operated in the vicinity of the Tailings Impoundment, within the area outlined by the historical maximum extent of the perched water body (see Figure 1).*

(Please note that only the text from the Telesto Solutions, Inc. report has been included in this discussion. Any attachments of figures mentioned in the quoted text have not been included.)

PUMPBACK WATER SPILLS DURING 2009

In 2009 a minor spill of pumpback water involving three wells (TMW-57, 96 and 97), occurred, as follows:

December 7, 2009:
Due to extremely cold temperatures, a hose carrying pumpback water from TMW-57 cracked, spraying pumpback water, and a hose carrying pumpback water from TMW-96 and 97 broke, spilling pumpback water. The water spilled onto already frozen ground, freezing in place immediately. The pumpback water did not penetrate into the ground nor did it flow very far, since it froze quickly. A total of approximately 10,302 gallons was spilled.

The spill was reported to James Webb of the Nuclear Regulatory Commission at 1:40 pm on Monday, December 7, 2009 and reported via email at 11:05 am on December 8, 2009. It was also reported by telephone to Mark Thiesse of the Wyoming Department of Environmental Quality, Water Quality Division. Detailed information about the spill is included in Appendix 1.

The following pertains to this spill:

- The concentrations of radionuclides in these spills of pumpback water were below the limits in 10 CFR 20 Appendix B Table 2 – Effluent Concentrations – Water.
- The spilled water entered no drainages.
- The spill occurred on private land.
- Spilled water froze immediately on the surface and did not penetrate the ground. (Please see Appendix 1.)
- The spill occurred over the area impacted by the cone of depression of the pumpback system.
- The spill was promptly reported and documented.

Due to the very low concentrations of radionuclides in the spill of pumpback water (below 10 CFR 20 Appendix B Table 2 – Effluent Concentration – Water), the spill did not require reporting under 10 CFR 20 Subpart M or 10 CFR 40.60, or to any State or Federal agency. No reporting was required under License Condition 12.2, so no written report within thirty (30) days after initial notification was required. In spite of the fact that reporting was not required, the spill was reported by telephone and email to the NRC. Documentation regarding the spill is maintained in the site's 40.36 file as required.

AQUIFER WATER QUALITY

Water quality (as judged by a decreasing trend in TDS values) in aquifer monitor wells TMWs 4, 17, 18, 35, 44, 50, 51, 56, 57, 69, 70 and 71 is improving. An increasing trend in TDS values is observed in TMWs 7, 15, 36, 58, and 62. TMW-4 has shown anomalous, though slowly improving, total dissolved solids (TDS) concentrations, manganese, iron and nickel values, as well as a depressed pH, though it appears to be slowly rising over time. Total Dissolved Solids in TMW-4 have declined from 692 mg/L (1/4/05) to 332 mg/L (7/7/09). In the same time period nickel has declined from 0.16 mg/L to 0.02 mg/L, manganese has declined from 0.61 mg/L to 0.19 mg/L and iron declined from 28.1 mg/L to 1.92 mg/L. During the same time period, pH has increased from 6.34 to 7.24. The elevated TDS in this well is clearly due to factors other than the tailings impoundment plume, since wells with lower TDS values and no anomalous nickel values (TMW-2 and 53) lie between TMW-4 and the plume. The anomalous total dissolved solids values observed in TMW-6 in 2005 have declined from 608 mg/L (1/10/05) to 509 mg/L (7/7/09). TMW-45 and 48 (both with lower TDS concentrations) lay between TMW-6 and the plume. The elevated total dissolved solids concentrations in these two wells and anomalous iron, manganese and nickel values in TMW-4 may be due to mobilization of materials used to complete the wells. Kennecott Uranium Company will continue to provide a specific discussion regarding these wells until it is clear that the situation is fully understood or resolved.

TMW-4 still exhibits nickel values that exceed the Groundwater Protection Standard (GPS) as seen in the July 7, 2009 sample. TMWs 78, 99 and 112 exhibited nickel values that exceed the GPS in 2008. TMWs 99 and 112 are in the vicinity of the Catchment Basin. The groundwater plume is primarily a Total Dissolved Solids, Natural Uranium and Combined Radium-226/228 plume, with some localized exceedances of other metals, primarily nickel.

Kennecott Uranium Company believes that an increase in TDS followed by a decrease in pH is the first sign of seepage in a monitor well. An increase in TDS appears first because the native soils are alkaline and neutralize the low pH tails cell water. Most metals will not migrate through these soils until the buffering capacity of the soil has been exhausted. This is clearly shown in the Uranium Contour Map, which shows the limited areal extent of the Uranium plume when compared to the areal extent of groundwater with TDS in excess of 500 ppm shown in the TDS Contour Map.

The Battle Spring Aquifer pumpback wells around the Catchment Basin exhibit anomalous TDS, radium, uranium, iron and manganese values, with two (2) wells (TMWs 99 and 112) currently exhibiting anomalous nickel values. Four (4) of the wells immediately surrounding the Catchment Basin showed traces of organic contamination in 2009. They are as follows:

- TMW-91 – DRO, 1,1dichloroethane
- TMW-99 – 1,1,dichloroethane
- TMW-102 – DRO
- TMW-115 – methyl ethyl ketone

The methyl ethyl ketone in TMW-115 is believed to be related to the primer and glue used to repair damage to the well casing.

Telesto Solutions, Inc., in their report entitled **"Final Ground Water Plume Investigation"** dated February 2009 discussed the constituents in the four Point of Compliance (POC) wells, stating:

> *The four POC wells specified in the NRC permit (TMW-15, 16, 17 and 18) were plotted with time for each regulated constituent to identify possible trends of non-compliance levels. Note that two of these wells (TMW-17 and TMW-18) were used as pumpback wells during 2007 and 2008 and have been used as pumpback wells for some time in the past. The ground water protection standards that apply to these wells are listed in Table 2. Figures 7 through 10 are time plots of Ra226-228, U-Nat, iron (Fe), and manganese (Mn), respectively, the only analytes exceeding NRC permit standards in the POC wells. The plots indicate the following exceedances for the time period January 1, 2007 and March 1, 2008:*
>
> - *TMW-15: Ra 226-228 (just above standard)*
> - *TMW-16: Ra226-228, U-Nat*
> - *TMW-17: No exceedances*
> - *TMW-18: Ra 226-228, Fe, Mn*
>
> *The following trends are observed in the POC wells over the past several years:*
>
> - *TMW-15: Ra 226-228 fluctuating between 2 and 9 pCi/L with no apparent trend*
> - *TMW-16: Ra 226-228 fluctuating between 11 and 18 pCi/L with a general increasing trend; a sharp rise in U-Nat in 2003 (when pumping in the well was terminated), followed by a decreasing trend from about 390 pCi/L to about 220 pCi/L*
> - *TMW-17: Ra 226-228 fluctuating between 1 and 6 pCi/L with no apparent trend*
> - *TMW-18: Ra 226-228 fluctuating between 11 and 22 pCi/L (omitting one high value) with an apparent increasing trend; significantly increasing Fe from 4 to 8 mg/L; gradually increasing Mn from 1 to 1.5 mg/L.*
>
> *Note that TMW-16 was used as a pumping well until May 2003, but became inefficient due to continued plugging by bacteria. As a replacement, pumping began in TMW-7 in December 2003 and it has been pumped to the present.*

Kennecott Uranium Company
Sweetwater Uranium Project
Diesel Contaminated Soil Excavation
South Pit Wall Uranium Study

Depth Above Hole Bottom (feet)	Elevation (Feet above mean sea level)	Gamma Exposure (micro/R/hour)	Density (grams per cubic centimeter)	Moisture (Percent)	Chemical Uranium Concentration (milligrams per kilogram)	Chemical Uranium Concentration (Percent)	Chemical U3O8 Concentration (milligrams per kilogram)	Chemical U3O8 Concentration (Percent)	Radium-226 (picocuries per gram)	Gamma Equivalent Uranium Concentration (milligrams per kilogram)	Gamma Equivalent Uranium Concentration (Percent)	Notes	Sample Sequence Image
7.50	6556.2											Nail Set - Five (5) feet Above Water table	
7.00		156										Dry	
6.75			2.48	10.8	51.7	0.005	61.0	0.006	65	196	0.020	Dry	
6.50		222										Dry	
6.25			2.73	10.6	14	0.001	16.5	0.002	113	340	0.034	Dry	
6.00		351										Dry	
5.75			2.35	12.3	13.1	0.001	15.4	0.002	209	631	0.063	Dry	
5.50		422										Dry	
5.25			2.54	12.6	33.3	0.003	39.2	0.004	301	909	0.091	Dry	
5.00		464										Dry	
4.75			2.62	11.8	14.8	0.001	17.5	0.002	254	766	0.077	Dry	
4.50		524										Dry	
4.25			2.59	14.3	16.1	0.002	19.0	0.002	206	623	0.062	Dry	
4.00		548										Dry	
3.75			2.68	14.8	18.8	0.002	22.2	0.002	332	1000	0.100	Dry	
3.50		634										Dry	
3.25			2.44	16.3	26.3	0.003	31.0	0.003	224	676	0.068	Dry	
3.00		593										Dry	
2.75			2.69	18.5	39.7	0.004	46.9	0.005	379	1150	0.115	Dry	
2.50	6552.4	691										Top of Water Table - Nail Set	
2.25			2.66	17.1	33	0.003	38.9	0.004	265	799	0.080	Wet	
2.00		751										Wet	
1.75			2.76	18.8	18.3	0.002	21.6	0.002	306	923	0.092	Wet	
1.50		655										Wet	
1.25			2.29	20.3	23.7	0.002	28.0	0.003	309	933	0.093	Wet	
1.00		448										Wet	
0.75			2.43	21.6	26.6	0.003	31.3	0.003	44.1	133	0.013	Wet	
0.50		351										Wet	
0.25			2.53	26.7	22	0.002	25.9	0.003	58.7	177	0.018	Wet	
0.00		340										Wet	
Average:		477	2.56	16.2	25.1	0.003	29.6	0.003	219.0	661	0.066		
Median:		464	2.57	15.6	22.9	0.002	27.0	0.003	239.0	721	0.072		
Maximum:		751	2.76	26.7	51.7	0.005	61.0	0.006	379.0	1150	0.115		
Minimum:		156	2.29	10.6	13.1	0.001	15.4	0.002	44.1	133	0.013		
Standard Deviation:		173	0.14	4.7	11.1	0.001	13.1	0.001	109.4	331	0.033		
Coordinates:													
	Northing	Easting	Elevation										
Nail at 7.5 Feet	149142.0	323018.63	6556.2										
Nail at Water Table	149144.1	323019.84	6552.41										

Kennecott Uranium Company Sweetwater Uranium Project Diesel Contaminated Soil Excavation South Pit Wall Uranium Study										
Bulk Sample Identification	Chemical Uranium Concentration as U	Chemical Uranium Concentration as U	Chemical Uranium Concentration as U3O8	Chemical Uranium Concentration as U3O8	Radium-226	Gamma Equivalent Uranium Concentration as U	Gamma Equivalent Uranium Concentration as U	Gamma Equivalent Uranium Concentration as U3O8	Gamma Equivalent Uranium Concentration as U3O8	Equilibrium ratio
	(miligrams per kilogram)	(Percent)	(miligrams per kilogram)	(Percent)	(picocuries per gram)	(miligrams per kilogram)	(Percent)	(miligrams per kilogram)	(Percent)	Chemical uranium divided by gamma equivalent uranium
Above Water Table - Barrel #1	23.9	0.002	28.2	0.003	225	679	0.068	800	0.080	0.04
Above Water Table - Barrel #2	35.2	0.004	41.4	0.004	277	838	0.084	988	0.099	0.04
At Water Table	24.7	0.002	29.1	0.003	226	681	0.068	803	0.080	0.04
Below Water Table	20	0.002	23.6	0.002	77.4	234	0.023	276	0.028	0.09
bulk_sampling_bottom.xls										
Oap:9/30/2007										

Gareth D. Mitchell
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Email: n8h@psu.edu

June 13, 2007

Mr. Steve Dobos
Energy Laboratories, Inc.
2393 Salt Creek Hwy.
Casper, WY 82602

RE: **Petrographic Evaluation of Sample #C07051289-001A from P.O. # 1845**

Dear Mr. Dobos,

Work requested in your purchase order of 5-29-07 for sample #C07051289-001A to perform carbon identification using reflected-light optical microscopy has been completed and the final report is attached.

If there are any questions or concerns, please call or e-mail me directly.

Thank you.

Sincerely,

Gareth Mitchell

Enclosure: Report

Final Report

To: Mr. Steve Dobos
From: Gareth D. Mitchell
Date: June 13, 2007
Subject: **Petrographic Evaluation of Sample #C07051289-001A from P.O. # 1845**

Request

A sample identified as **#C07051289-001A** was received 6-7-07 for petrographic evaluation. The sample had been shipped in a cooler containing bags of ice and was still cold when received. Consequently, the specimen was placed under refrigeration until sample preparation was initiated. As established from our email conversation of 5-24-07, optical microscopy was to be employed to determine the nature of the organic matter found in the sample and specifically to determine if "any naturally-occurring organic matter" (such as lignin, kerogen, bitumen, etc. that might have precipitated uranium at this location) was present.

Procedures

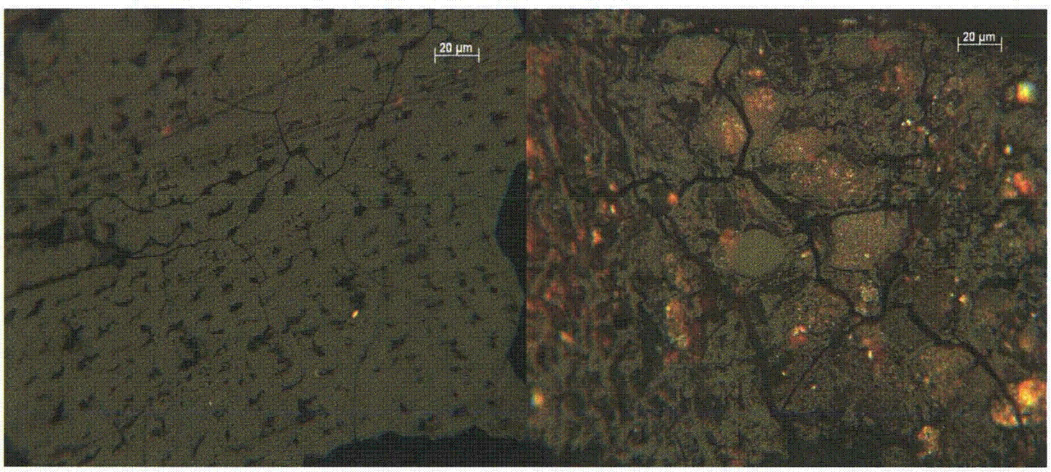
The sample was found to be composed of three fairly large angular particles (~10 g) and a coarse powder (~11 g). These components were separated and allowed to come to room temperature before they were inspected. The largest particle was soft, organic matter which had prominent bedding and considerable surface moisture, whereas the particulate matter ranged in particle size (0.5 – 3.0 mm), appeared to be a mixture of light and dark colored materials and was agglomerated with surface moisture. To prepare an optical mount suitable for reflected-light microscopy, the moisture content had to be reduced. The large particle was placed in a drying pan and a one-quarter split of the particulate sample retrieved by riffling was placed in second pan. Both samples were placed in a vacuum oven between 30-50°C for about 18 hrs with the result that the large particle had become swollen, desiccated and broken into smaller segments, while the particulate sample was composed of individual loose particles.

Remnants of the large particle were glued fast to the bottom of a 28 mm sample mold and embedded under vacuum with a cold-setting epoxy (EL01). The particulate sample (EL02) was vacuum impregnated in epoxy resin and placed in a centrifuge to establish a density/particle-size gradient. After hardening, the sample was cut longitudinally to expose the particle gradation and mounted 25 mm sample mold with additional epoxy. Both specimen surfaces were ground using 400 and 600 grit papers and polished using 0.3 and 0.05 micron alumina slurries on a high-nap cloth and silk, respectively. The sample was examined first in air using blue-light (436 nm) irradiation inspecting the 520 nm emission surface at 500X magnification and then using white light employing an oil immersion objective at 625X magnification using Zeiss research microscopes. In addition, a few reflectance readings were taken from the main organic component identified in EL01. A Leitz MPV2 reflectance photometer system at 625 X magnification in oil immersion and polarized white-light was used to collect maximum reflectance values from 11 different areas and the mean value is provided below. Mean reflectance values are an acceptable procedure for determination of organic maturity.

Results

The organic matter observed in both specimens (EL01 and EL02) separated from sample #C07051289-001A is basically humified woody tissue of very low maturity (mean maximum reflectance in oil of 0.18 % ±0.01) that contains fluorescent and presumably resinous material within open cell lumens and along some open fractures. A few fluorescent bodies appearing to be amorphous organic matter were the only other organic matter observed in either sample.

As seen in the photomicrographs below, the regular alignment of cell wall and filled or open lumens taken from EL01 are compared with a fragment of humified and gelified woody tissue found in specimen EL02. The large particle separated as EL01 was composed entirely



EL01 **EL02**

of woody tissue that had gone through the biochemical stage of coalifiaction in which the cell walls were gelified and converted to humic matter. The tissue observed in the EL01 photograph exhibits little detail within the remnant cell walls and most of the lumens were filled with amorphous humic material or a fluorescing resin (dark areas), suggesting that the tissue has gone beyond the peat stage. However, the very low mean reflectance suggests that it may not have reached the rank of lignite in terms of coal maturity.

The photograph of the dominant organic matter in specimen EL02 shows many rounded bodies which in brown coal terminology are referred to as gelinite. As the name implies the humic matter from which they were derived were once gelatinous and have since formed into these amorphous bodies surrounded by the remnants of cell walls. In addition to organic matter, specimen EL02 contained mostly angular fragments of minerals and rocks composed of quartz, other silicates and carbonate. Furthermore, some of the organic material had been infilled and was in the early stage of being replaced by silica.

These observations demonstrate that the organic matter contained in sample #C07051289-001A were derived from terrestrial plants with secondary woody tissues that have gone through at least the initial stage of coalification. Depending upon stratigraphy and sample location in the field, the type and condition of organic matter and mineralization observed suggests that it is naturally occurring.

KENNECOTT URANIUM COMPANY
Sweetwater Pit Water Levels
Recovery of water level after suspension of dewatering activities in May, 1983

DATE	ELAPSED TIME DAYS	WATER ELEVATION	WATER LEVEL CHANGE
04/25/83	0	6425.00	0.00
06/27/83	63	6440.00	15.00
07/04/83	70	6441.70	16.70
08/03/83	100	6450.00	25.00
01/16/84	266	6475.00	50.00
02/27/84	308	6481.00	56.00
05/07/84	378	6486.10	61.10
06/26/84	428	6488.60	63.60
08/28/84	491	6491.50	66.50
10/01/84	525	6492.80	67.80
11/19/84	574	6494.60	69.60
01/03/85	619	6497.30	72.30
02/26/85	673	6500.00	75.00
03/06/85	681	6500.40	75.40
05/14/85	750	6502.90	77.90
08/15/85	843	6505.39	80.39
04/14/86	1085	6513.19	88.19
06/23/86	1155	6514.87	89.87
09/26/86	1250	6515.93	90.93
04/14/87	1450	6520.42	95.42
06/23/87	1520	6521.80	96.80
09/16/87	1605	6522.33	97.33
11/01/87	1651	6523.41	98.41
11/19/87	1669	6523.41	98.41
03/08/88	1779	6525.00	100.00
06/06/88	1869	6526.31	101.31
07/25/88	1918	6526.54	101.54
08/30/88	1954	6526.55	101.55
10/10/88	1995	6526.88	101.88
10/31/88	2016	6526.88	101.88
04/03/89	2170	6529.29	104.29
07/24/89	2282	6529.77	104.77
08/28/89	2317	6529.51	104.51
09/25/89	2345	6529.63	104.63
04/23/90	2555	6531.67	106.67
06/11/90	2604	6531.48	106.48
07/02/90	2625	6531.99	106.99
10/08/90	2723	6532.02	107.02
11/11/90	2757	6531.98	106.98
04/17/91	2914	6531.44	106.44
07/02/91	2990	6533.64	108.64
08/14/91	3033	6534.17	109.17
09/05/91	3055	6533.49	108.49
10/07/91	3087	6533.36	108.36
12/10/91	3151	6533.84	108.84
04/29/92	3292	6535.24	110.24
05/26/92	3319	6534.96	109.96
09/14/92	3430	6533.70	108.70
11/05/92	3482	6535.34	110.34
05/04/93	3662	6536.93	111.93
06/30/93	3719	6536.51	111.51
08/18/93	3768	6536.55	111.55
10/11/93	3822	6536.38	111.38
06/06/94	4060	6537.20	112.20
07/05/94	4089	6537.69	112.69
09/21/94	4167	6536.90	111.90
10/10/94	4186	6536.80	111.80
04/05/95	4363	6538.23	113.23
05/01/95	4389	6538.37	113.37
06/10/95	4429	6538.86	113.86
07/06/95	4455	6538.78	113.78
08/02/95	4482	6538.57	113.57
09/07/95	4518	6538.31	113.31

KENNECOTT URANIUM COMPANY
Sweetwater Pit Water Levels
Recovery of water level after suspension of dewatering activities in May, 1983

DATE	ELAPSED TIME DAYS	WATER ELEVATION	WATER LEVEL CHANGE
10/03/95	4544	6538.24	113.24
11/02/95	4574	6538.21	113.21
05/13/96	4767	6539.40	114.40
08/09/96	4855	6538.90	113.90
09/03/96	4880	6538.70	113.70
10/03/96	4910	6538.50	113.50
10/08/96	4915	6538.60	113.60
12/03/96	4971	6538.66	113.66
03/31/97	5089	6539.44	114.44
04/25/97	5114	6539.43	114.43
05/29/97	5148	6539.55	114.55
06/11/97	5161	6539.70	114.70
07/28/97	5208	6539.30	114.30
09/01/97	5243	6539.20	114.20
09/22/97	5264	6539.16	114.16
10/15/97	5287	6539.01	114.01
11/25/97	5328	6539.00	114.00
12/03/97	5336	6538.99	113.99
05/04/98	5488	6540.25	115.25
05/18/98	5502	6540.40	115.40
06/11/98	5526	6540.38	115.38
07/01/98	5546	6540.40	115.40
07/29/98	5574	6540.26	115.26
08/20/98	5596	6540.10	115.10
09/29/98	5636	6539.92	114.92
10/06/98	5643	6539.84	114.84
11/05/98	5673	6539.80	114.80
11/10/98	5678	6539.78	114.78
11/30/98	5698	6539.72	114.72
12/03/98	5701	6539.72	114.72
12/16/98	5714	6539.71	114.71
03/31/99	5819	6540.43	115.43
04/02/99	5821	6540.40	115.40
04/28/99	5847	6540.56	115.56
05/22/99	5871	6540.70	115.70
06/09/99	5889	6540.72	115.72
06/27/99	5907	6540.64	115.64
07/19/99	5929	6540.41	115.41
08/08/99	5949	6540.32	115.32
08/29/99	5970	6540.17	115.17
09/08/99	5980	6540.12	115.12
09/19/99	5991	6540.01	115.01
10/21/99	6023	6539.82	114.82
10/27/99	6029	6539.80	114.80
11/10/99	6043	6539.76	114.76
11/17/99	6050	6539.81	114.81
11/22/99	6055	6539.76	114.76
12/06/99	6069	6539.76	114.76
12/14/99	6077	6539.76	114.76
12/23/99	6086	6539.67	114.67
04/28/00	6213	6540.15	115.15
05/03/00	6218	6540.82	115.82
05/26/00	6241	6540.17	115.17
06/01/00	6247	6540.12	115.12
06/30/00	6276	6539.79	114.79
07/17/00	6293	6539.54	114.54
07/30/00	6306	6539.37	114.37
08/10/00	6317	6539.24	114.24
06/17/00	6263	6539.18	114.18
08/28/00	6335	6539.03	114.03
08/30/00	6337	6539.04	114.04
09/03/00	6341	6539.03	114.03
09/17/00	6355	6538.88	113.88

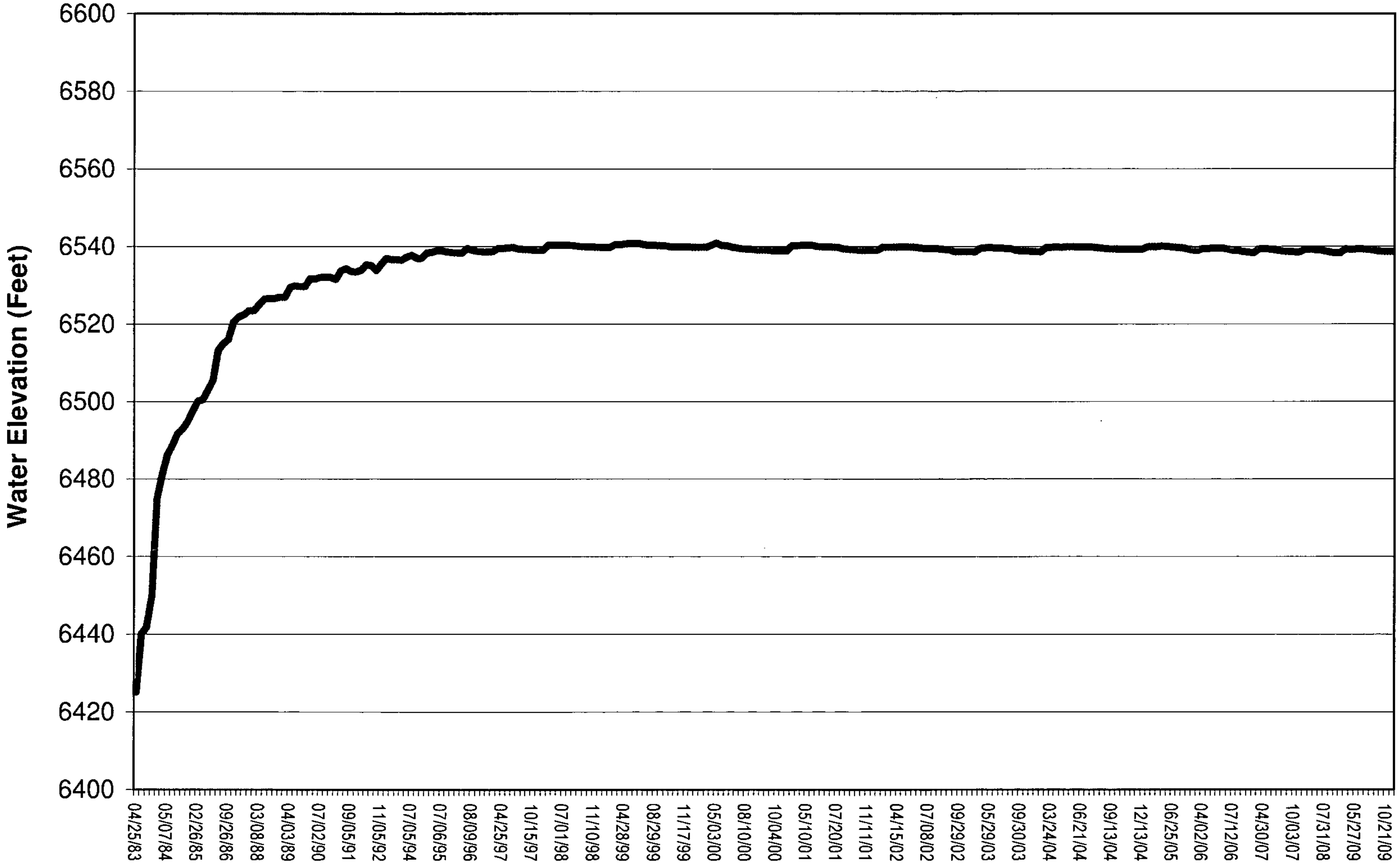
KENNECOTT URANIUM COMPANY
Sweetwater Pit Water Levels
Recovery of water level after suspension of dewatering activities in May, 1983

DATE	ELAPSED TIME DAYS	WATER ELEVATION	WATER LEVEL CHANGE
10/04/00	6372	6538.86	113.86
10/22/00	6390	6538.83	113.83
11/13/00	6412	6538.75	113.75
04/05/01	6555	6540.07	115.07
04/16/01	6566	6540.13	115.13
04/24/01	6574	6540.30	115.30
05/10/01	6590	6540.22	115.22
05/16/01	6596	6540.20	115.20
06/21/01	6632	6539.89	114.89
07/02/01	6643	6539.83	114.83
07/03/01	6644	6539.84	114.84
07/16/01	6657	6539.78	114.78
07/20/01	6661	6539.68	114.68
08/21/01	6693	6539.35	114.35
09/06/01	6709	6539.22	114.22
09/26/01	6729	6539.11	114.11
10/18/01	6751	6538.98	113.98
11/05/01	6769	6538.84	113.84
11/11/01	6775	6538.90	113.90
11/27/01	6791	6538.98	113.98
12/03/01	6797	6538.98	113.98
03/31/02	6915	6539.75	114.75
04/04/02	6919	6539.75	114.75
04/08/02	6923	6539.77	114.77
04/15/02	6930	6539.77	114.77
04/29/02	6944	6539.82	114.82
05/16/02	6961	6539.76	114.76
05/28/02	6973	6539.74	114.74
06/27/02	7003	6539.53	114.53
07/03/02	7009	6539.44	114.44
07/08/02	7014	6539.40	114.40
07/09/02	7015	6539.40	114.40
07/17/02	7023	6539.28	114.28
07/29/02	7035	6539.13	114.13
08/06/02	7043	6539.07	114.07
09/03/02	7071	6538.51	113.51
09/29/02	7097	6538.63	113.63
10/09/02	7107	6538.65	113.65
10/14/02	7112	6538.61	113.61
11/06/02	7135	6538.43	113.43
03/16/03	7265	6539.42	114.42
04/21/03	7301	6539.54	114.54
05/29/03	7339	6539.61	114.61
06/17/03	7358	6539.49	114.49
06/26/03	7367	6539.55	114.55
07/16/03	7387	6539.34	114.34
07/17/03	7388	6539.33	114.33
08/31/03	7433	6538.91	113.91
09/30/03	7463	6538.74	113.74
10/07/03	7470	6538.75	113.75
10/20/03	7483	6538.63	113.63
11/16/03	7510	6538.49	113.49
12/03/03	7527	6538.57	113.57
03/21/04	7636	6539.65	114.65
03/24/04	7639	6539.65	114.65
03/28/04	7643	6539.75	114.75
04/05/04	7651	6539.65	114.65
04/18/04	7664	6539.80	114.80
05/20/04	7696	6539.84	114.84
06/15/04	7722	6539.70	114.70
06/21/04	7728	6539.73	114.73
07/04/04	7741	6539.76	114.76
07/07/04	7744	6539.70	114.70

KENNECOTT URANIUM COMPANY
Sweetwater Pit Water Levels
Recovery of water level after suspension of dewatering activities in May, 1983

DATE	ELAPSED TIME DAYS	WATER ELEVATION	WATER LEVEL CHANGE
07/26/04	7763	6539.52	114.52
08/10/04	7778	6539.40	114.40
08/24/04	7792	6539.26	114.26
09/13/04	7812	6539.26	114.26
09/20/04	7819	6539.17	114.17
10/04/04	7833	6539.15	114.15
11/07/04	7867	6539.16	114.16
11/11/04	7871	6539.18	114.18
11/22/04	7882	6539.20	114.20
12/13/04	7903	6539.21	114.21
03/16/05	7996	6539.78	114.78
03/27/05	8007	6539.82	114.82
04/05/05	8016	6539.82	114.82
05/18/05	8059	6539.95	114.95
06/08/05	8080	6539.82	114.82
06/25/05	8097	6539.70	114.70
07/06/05	8108	6539.58	114.58
07/18/05	8120	6539.47	114.47
08/17/05	8150	6539.18	114.18
09/19/05	8183	6538.90	113.90
10/17/05	8211	6538.86	113.86
04/02/06	8378	6539.37	114.37
04/03/06	8379	6539.27	114.27
04/12/06	8388	6539.45	114.45
04/18/06	8394	6539.45	114.45
05/10/06	8416	6539.40	114.40
06/19/06	8456	6539.14	114.14
07/12/06	8479	6538.94	113.94
07/26/06	8493	6538.84	113.84
08/30/06	8528	6538.50	113.50
09/13/06	8542	6538.40	113.40
10/08/06	8567	6538.26	113.26
03/26/07	8736	6539.18	114.18
04/30/07	8771	6539.26	114.26
05/31/07	8802	6539.20	114.20
06/26/07	8828	6539.06	114.06
07/25/07	8857	6538.85	113.85
08/30/07	8893	6538.66	113.66
09/11/07	8905	6538.59	113.59
10/03/07	8927	6538.45	113.45
10/15/07	8939	6538.39	113.39
04/01/08	9108	6539.11	114.11
05/30/08	9167	6539.21	114.21
06/04/08	9172	6539.09	114.09
06/27/08	9195	6538.97	113.97
07/31/08	9229	6538.73	113.73
08/19/08	9248	6538.38	113.38
09/08/08	9268	6538.26	113.26
10/20/08	9310	6538.17	113.17
03/31/09	9472	6539.26	114.26
04/20/09	9492	6539.07	114.07
05/27/09	9529	6539.21	114.21
06/16/09	9549	6539.29	114.29
07/16/09	9579	6539.13	114.13
08/12/09	9606	6539.04	114.04
09/09/09	9634	6538.78	113.78
09/23/09	9648	6538.67	113.67
10/21/09	9676	6538.63	113.63
11/09/09	9695	6538.56	113.56

KENNECOTT URANIUM COMPANY
Sweetwater Pit Water Levels
April 25, 1983 through December 31, 2009



KENNECOTT URANIUM COMPANY														
PIT LAKE		2005						2006				2007		
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	2/9/2005	4/5/2005	4/11/2005	6/7/2005	8/3/2005	11/8/2005	4/10/2006	6/6/2006	8/28/2006	10/7/2006	4/18/2007	6/3/2007	8/16/2007
TDS A/C Balance *(dec. %)*		1.06	1.01	1	1.01	1.04	0.98	0.98	1	0.9	1	0.96	0.98	0.94
Alk-CaC03		99	102	94	96	88	98	99	94	90	89	100	98	98
Aluminum (Al)	GPS (1.8)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic (As)	GPS (.05)	0.001	0.002	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Barium (Ba)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beryllium (Be)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Bicarbonate (HCO3)		121	125	115	117	107	117	120	115	109	106	122	120	119
Boron (B)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Calcium (Ca)		113	116	96	110	112	109	119	109	111	114	113	116	120
Carbonate (CO3)		<1	<1	<1	<1	<1	1	<1	<1	<1	1	<1	<1	<1
Chloride (Cl)		16	20	17	20	19	20	19	20	47	18	19	19	18
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt (Co)		<0.01	<0.01	<0.01	<0.001	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001
Cond *(umhos/cm)*		971	968	986	962	1000	993	968	985	1060	1000	1030	1120	1040
Cond-Field *(umhos/cm)*				660	700	800	660	650	918	1014	982	969	989	1023
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Fluoride (F)		0.4	0.4	0.3	0.3	0.4	0.3	0.3	0.2	0.4	0.4	0.4	0.4	0.5
Gross Alpha *(pCi/L)*	GPS (15)	2	<1	3.1	1.2	2.7	2.8	2.3	2.7	2.4	3.2	1.7	7.7	13
Iron (Fe)	GPS (0.6)	<0.05	<0.05	<0.05	0.06	<0.05	<0.05	<0.05	<0.05	0.06	<0.05	<0.05	<0.05	<0.05
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Lead (Pb)		<0.03	<0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Magnesium (Mg)		10.1	10.1	8.8	10.1	10.4	10.3	10.7	10.9	10	10.7	10.7	10.9	11.2
Manganese (Mn)	GPS (0.2)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum (Mo)		<0.08	<0.08	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nickel (Ni)	GPS (.01)	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen, Nitrate+Nitrite as N		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
pH *(Std. Units)*	GPS (6.8)	8.19	8.24	8.06	8.26	8.24	8.33	7.44	7.56	8.23	8.34	8.06	8.16	8.2
pH (Field) *(Std. Units)*				7.7	8	7.8	8.27	8.39	8.21	8.23	8.13	7.83	8.09	8
Potassium (K)		6.2	6.3	6.4	5.9	6.3	6.4	6.2	6.9	6	6.5	6.6	6.6	6.7
Combined Ra226/228 *(pCi/L)*	GPS (5.8)	4.4	1.2	4.4	2.5	1.8	3.2	1.5	9.6	3.3	4.5	1.1	3.6	2.1
Radium 226 *(pCi/L)*		1.8	1.2	2.3	2.5	1.8	2	1.5	1.5	3.3	2.4	1.1	3.6	2.1
Radium 228 *(pCi/L)*		2.6	<1	2.1	<1	<1	1.2	<1	2.2	<1	2.1	<1	<1	<1
Selenium (Se)	GPS (.01)	0.009	0.01	0.01	0.009	0.01	0.009	0.01	0.01	0.01	0.01	0.01	0.01	0.011
Silica (SiO2)		<1	<1	<1	<1	<1	<1	1	<1	<1	<1	<1	<1	<1
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		93.1	91.9	81.1	91.8	89.2	92.1	83.4	91.9	89	96.1	95.4	95.3	99.5
TDS @ 180° *C.*	GPS (500)	716	690	637	672	692	670	676	680	644	694	680	700	694
Sulfate (SO4)		376	374	367	372	372	386	394	386	401	398	403	407	425
Temperature *(C)*				8	14	26	8.2	7.6	25.1	22.5	15	10.2	15.6	20.2
Thallium (Tl)	GPS (7.0)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Thorium 230 *(pCi/L:)*		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Uranium, natural *(pCi/L)*	GPS (36)	2850	2650	3090	2960	2920	3010	2720	3000	3050	2010	3040	2990	2920
Vanadium (V205)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Zinc (ZN)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01

KENNECOTT URANIUM COMPANY										
PIT LAKE			2008				2009			
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	10/3/2007	4/21/2008	6/4/2008	8/25/2008	10/29/2008	4/15/2009	6/16/2009	8/12/2009	10/21/2009
TDS A/C Balance *(dec. %)*		1.12	2.62	2.96	1.01	2.44	4.9	-3.39	-3.25	-2.63
Alk-CaC03		96	93	88	92	94	98	94	93	98
Aluminum (Al)	GPS (1.8)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic (As)	GPS (.05)	0.001	0.001	<0.002	0.001	<0.002	<0.002	0.001	<0.002	<0.002
Barium (Ba)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beryllium (Be)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Bicarbonate (HCO3)		117	114	107	112	115	120	115	113	119
Boron (B)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Calcium (Ca)		99.6	122	117	117	117	121	104	112	108
Carbonate (CO3)		<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloride (Cl)		21	19	13	19	16	17	17	17	17
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt (Co)		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cond *(umhos/cm)*		1080	1000	1050	1040	1060	1060	1020	1020	1040
Cond-Field *(umhos/cm)*		962	904	978	1042	980	897	1021	1040	1055
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Fluoride (F)		0.3	0.3	0.4	0.3	0.4	0.4	0.3	0.4	0.4
Gross Alpha *(pCi/L)*	GPS (15)	12.9	15.8	3.7	7.8	4.9	14	3	13	2.7
Iron (Fe)	GPS (0.6)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<1	<1	1.7	4.4	<1	<1	<1	<1	<1
Lead (Pb)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Magnesium (Mg)		8.9	11.3	11.1	10.6	10.6	10.4	9.3	9	9.7
Manganese (Mn)	GPS (0.2)	<0.01	0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum (Mo)		<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nickel (Ni)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen, Nitrate+Nitrite as N		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
pH *(Std. Units)*	GPS (6.8)	7.92	8.19	8.11	8.19	8.07	8.21	8.23	8.37	8.2
pH (Field) *(Std. Units)*		8.1	7.7	7.8	8.2	7.5	7.9	7.7	8	7.6
Potassium (K)		7.2	6.5	7	6.5	7.1	7.7	6.4	5.7	6.5
Combined Ra226/228 *(pCi/L)*	GPS (5.8)	4.4	3.4	0.8	3.3	3.3	4.4	3.8	5.3	4
Radium 226 *(pCi/L)*		1.8	2.4	<2	2.5	2.4	2.2	2.6	2.8	2.4
Radium 228 *(pCi/L)*		2.6	1	0.8	0.8	0.9	2.2	1.2	2.5	1.6
Selenium (Se)	GPS (.01)	0.01	0.009	0.009	0.01	0.01	0.01	0.009	0.01	0.01
Silica (SiO2)		<1	<1	<1	<1	<1	1	<1	<1	<1
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		90.8	97.6	103	97	102	115	88.3	86.2	92.9
TDS @ 180° *C.*	GPS (500)	750	708	737	737	761	724	726	722	717
Sulfate (SO4)		382	404	415	409	407	409	398	411	408
Temperature *(C)*		13.5	7.9	12	20.6	15.7	6.1	18.5	18.2	13.9
Thallium (Tl)	GPS (7.0)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Thorium 230 *(pCi/L:)*		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Uranium, natural *(pCi/L)*	GPS (36)	2990	3120	3080	3190	3135	3060	3050	3040	3160
Vanadium (V205)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Zinc (ZN)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

TAILS CELL WATER LEVELS	
Date	Surface Elevation
3/18/83	6649.50
6/6/83	6656.70
6/23/83	6656.00
7/11/83	6655.50
7/22/83	6655.40
7/28/83	6655.30
8/5/83	6655.02
8/15/83	6654.69
8/19/83	6654.55
9/6/83	6653.93
9/12/83	6653.80
9/20/83	6653.50
6/27/83	6653.50
10/4/83	6653.30
10/13/83	6653.10
10/19/83	6652.90
10/27/83	6652.80
11/2/83	6652.70
4/13/84	6652.00
4/23/84	6651.70
5/1/84	6651.80
5/7/84	6651.60
5/16/84	6651.60
5/23/84	6651.50
5/30/84	6651.20
6/5/84	6651.00
6/14/84	6650.90
6/19/84	6650.90
6/26/84	6650.70
7/2/84	6650.60
7/17/84	6650.20
7/23/84	6650.00
7/30/84	6649.90
8/6/84	6649.90
8/13/84	6649.90
8/20/84	6649.90
8/28/84	6649.40
9/4/84	6649.30
9/17/84	6648.80
10/1/84	6648.70
10/11/84	6648.40
10/24/84	6648.40
10/30/84	6648.30
11/19/84	6647.90
1/3/85	6647.70
3/6/85	6647.70
4/22/85	6647.10
4/29/85	6647.10
5/6/85	6646.90
5/14/85	6646.50
5/21/85	6646.60
5/29/85	6646.40

TAILS CELL WATER LEVELS	
Date	Surface Elevation
6/3/85	6646.20
6/11/85	6646.00
7/9/85	6645.30
7/17/85	6645.00
7/18/85	6645.00
7/23/85	6645.00
7/24/85	6645.10
7/29/85	6645.00
7/31/85	6645.20
8/9/85	6645.00
8/15/85	6644.40
8/26/85	6644.30
9/9/85	6644.00
9/16/85	6644.00
9/30/85	6643.70
10/14/85	6643.70
10/23/85	6643.50
10/31/85	6643.50
11/6/85	6643.40
4/14/86	6642.80
4/22/86	6642.90
5/6/86	6642.63
5/15/86	6642.47
6/2/86	6642.11
6/9/86	6641.93
6/23/86	6641.73
7/7/86	6641.26
7/14/86	6641.06
7/28/86	6640.99
8/4/86	6640.52
8/11/86	6640.35
8/28/86	6640.19
9/8/86	6639.65
9/29/86	6639.65
04/14/87	6639.52
04/27/87	6639.20
05/05/87	6638.95
05/11/87	6638.84
06/23/87	6638.32
07/06/87	6637.95
07/13/87	6637.98
08/03/87	6637.31
08/24/87	6636.96
08/30/87	6637.13
09/08/87	6637.05
09/21/87	6636.66
09/30/87	6636.51
10/12/87	6636.12
11/19/87	6636.32
06/07/88	6635.04
06/13/88	6635.16
06/28/88	6634.62

TAILS CELL WATER LEVELS	
Date	Surface Elevation
07/11/88	6634.14
07/25/88	6633.70
08/01/88	6633.44
08/08/88	6633.27
08/22/88	6633.02
08/30/88	6632.91
09/05/88	6632.50
09/30/88	6632.40
10/10/88	6632.37
10/31/88	6632.03
04/03/89	6632.45
04/17/89	6632.54
05/01/89	6631.88
06/01/89	6631.52
06/19/89	6630.83
06/26/89	6630.87
07/14/89	6630.49
07/24/89	6630.16
08/22/89	6629.60
08/28/89	6629.54
09/25/89	6629.02
11/20/89	6628.96
03/29/90	6629.27
04/10/90	6630.45
04/23/90	6629.67
05/02/90	6629.54
06/11/90	6628.71
07/02/90	6629.29
07/24/90	6628.83
10/08/90	6627.85
11/11/90	6626.58
04/07/91	6627.70
07/02/91	6626.55
08/14/91	6625.90
09/05/91	6625.06
10/07/91	6624.55
04/28/92	6626.10
05/26/92	6625.30
09/14/92	6623.62
11/05/92	6622.20
05/04/93	6623.58
06/30/93	6623.33
08/18/93	6621.25
10/11/93	6621.05
06/06/94	6620.90
07/05/94	6620.70
09/21/94	6619.40
10/10/94	6618.90
04/05/95	6620.20
05/01/95	6620.30
06/28/95	6621.10
07/31/95	6620.34

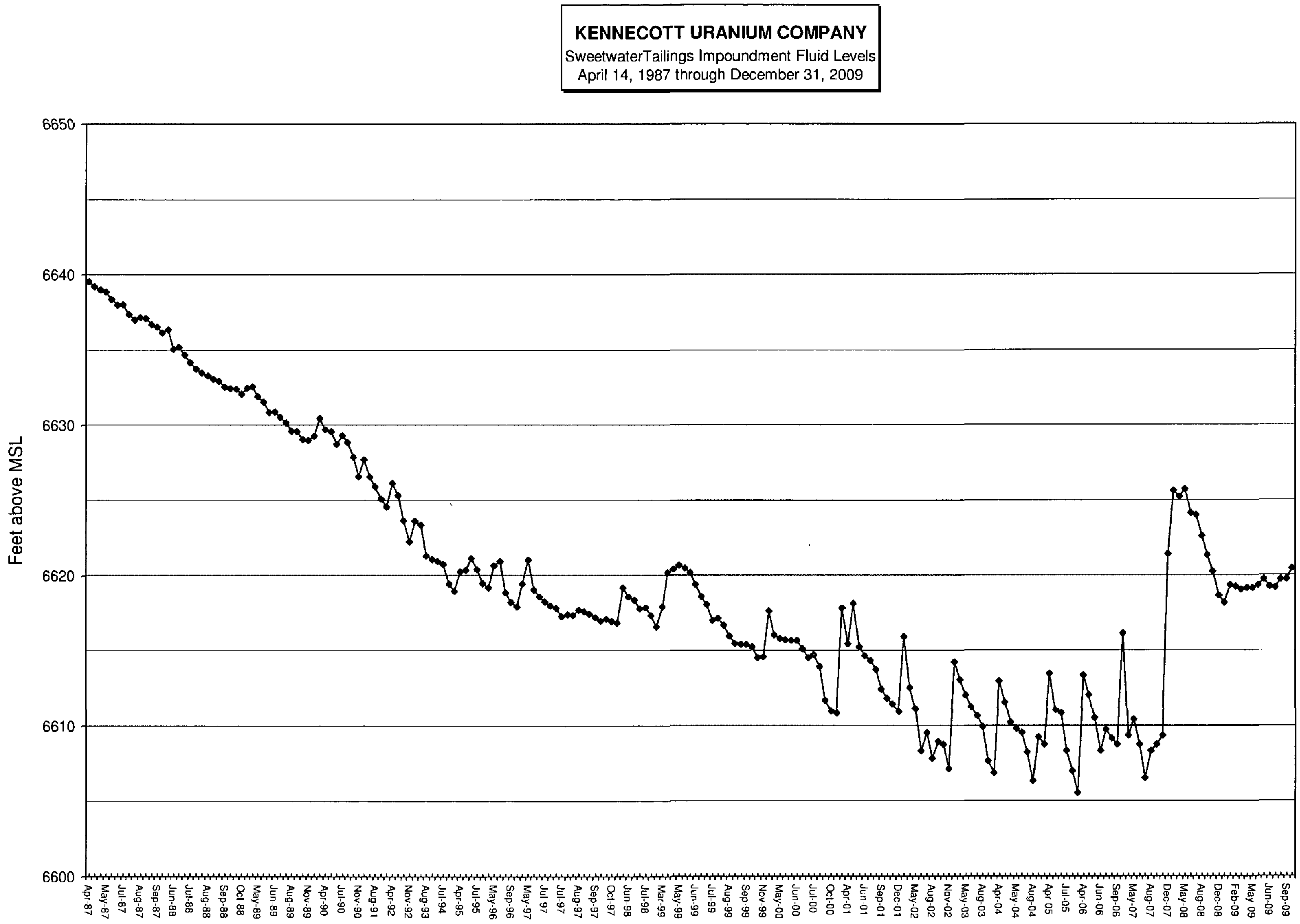
TAILS CELL WATER LEVELS	
Date	Surface Elevation
09/01/95	6619.42
10/03/95	6619.15
05/13/96	6620.60
06/14/96	6620.90
08/09/96	6618.80
09/11/96	6618.20
10/03/96	6617.90
04/18/97	6619.40
05/29/97	6621.00
06/11/97	6619.00
06/25/97	6618.54
07/02/97	6618.22
07/09/97	6617.97
07/16/97	6617.80
7/30/97	6617.25
8/4/97	6617.36
8/11/97	6617.30
8/18/97	6617.66
8/26/97	6617.55
9/2/97	6617.40
9/8/97	6617.17
9/18/97	6616.93
9/29/97	6617.06
10/9/97	6616.90
10/16/97	6616.80
5/14/98	6619.12
6/22/98	6618.55
7/1/98	6618.30
7/14/98	6617.76
7/27/98	6617.84
8/11/98	6617.30
9/14/98	6616.55
3/17/99	6617.9
4/19/99*	6620.15
4/27/99	6620.39
5/20/99	6620.65
5/27/99	6620.45
6/3/99	6620.15
6/17/99	6619.35
6/30/99	6618.55
7/18/99*	6618.02
7/27/99	6616.96
7/28/99*	6617.09
8/11/99	6616.64
8/23/99	6615.93
9/15/99	6615.42
9/23/99	6615.38
9/29/99	6615.38
10/6/99	6615.19
10/22/99	6614.48
11/17/99	6614.56
4/6/00	6617.60

TAILS CELL WATER LEVELS

Date	Surface Elevation
5/4/00	6616.00
5/24/00	6615.76
6/7/00	6615.65
6/29/00	6615.62
6/30/00	6615.62
7/3/00	6615.07
7/13/00	6614.47
7/24/00	6614.67
8/8/00	6613.90
10/2/00	6611.65
10/9/00	6610.94
11/9/00	6610.80
4/3/01	6617.80
4/15/01	6615.40
4/20/01	6618.10
5/16/01	6615.20
6/26/01	6614.60
7/18/01	6614.30
8/16/01	6613.70
9/17/01	6612.40
10/11/01	6611.80
11/19/01	6611.40
12/22/01	6610.90
4/8/02	6615.9
5/13/02	6612.5
5/23/02	6611.1
6/20/02	6608.3
7/23/02	6609.5
8/19/02	6607.8
9/11/02	6608.9
10/8/02	6608.7
11/5/02	6607.1
4/17/03	6614.2
5/7/03	6613.0
5/14/03	6612.0
6/23/03	6611.2
7/14/03	6610.6
8/7/03	6609.9
9/10/03	6607.6
10/6/03	6606.8
4/5/04	6612.9
4/12/04	6611.5
4/21/04	6610.2
5/27/04	6609.75
6/17/04	6609.5
7/22/04	6608.2
8/11/04	6606.3
9/14/04	6609.2
10/14/04	6608.7
4/6/05	6613.4
5/10/05	6611.0
6/2/05	6610.8

TAILS CELL WATER LEVELS

Date	Surface Elevation
7/15/05	6608.35
8/17/05	6606.95
9/20/05	6605.50
4/4/06	6613.30
4/25/06	6612.00
5/24/06	6610.50
6/26/06	6608.30
7/27/06	6609.70
8/23/06	6609.10
9/19/06	6608.70
3/13/07	6616.10
4/20/07	6609.30
5/29/07	6610.40
6/21/07	6608.70
7/25/07	6606.50
8/27/07	6608.30
9/24/07	6608.70
10/16/07	6609.30
12/14/07	6618.37
3/31/08	6622.61
4/14/08	6622.21
5/30/08	6622.71
6/27/08	6621.11
7/31/08	6621.02
8/8/08	6619.60
10/08/08	6618.24
10/31/08	6620.21
12/01/08	6618.61
12/29/08	6618.11
1/19/09	6619.30
2/25/09	6619.20
3/31/09	6619.00
4/30/09	6619.10
5/12/09	6619.10
6/9/09	6619.70
7/27/09	6619.12
8/31/09	6619.70
9/30/09	6619.70
10/27/09	6620.40



Notes:

- Pool elevation measured by surveying fluid elevation in pool in impoundment's southeast corner.
- Rise in pool elevation (2008) due to changes in size/configuration of pool caused by ongoing tailings regrading work.

KENNECOTT URANIUM COMPANY			CGL = Chemical & Geological Laboratories			ELI = Energy Laboratories, Inc.								
SWEETWATER TAILINGS CELL			CLI = Core Laboratories, Inc.			MEC = Minerals Exploration Company								
Surface Water Analysis														
WYDEQ III Livestock Standard		1980	1981	1982	1983	1984	1985	1986		1987	1988	1989	1990	1991
	Std	12/30/80	12/17/81	7/16/82	8/16/83	6/4/84	8/1/85	4/11/86	7/10/86	7/6/87	7/12/88	3/29/89	6/12/90	10/31/91
FIELD DATA mg/l:		(CGL)	(MEC)	(MEC)	(CGL)	(CLI)	(CLI)	(CLI)	(CLI)	(CLI)	(CLI)			
Temperature (C)			5	14					16.8	18.6	18.5	6.2	13.8	
pH (Std. Units)			0.9	1.99					1.76	1.72	2.16	2.18	2.19	
Cond (umho/cm)			15800	16100					11300	9200	8009	3560	5290	
TDS									1000+	1000+	1000+	1000+	1000+	
MAJOR IONS mg/l:														
Alk-CaC03		0	50	ND	0	-5	0	-1	0	1	-1	0	0	0
Bicarbonate (HCO3)		0		0	0	-1	0	0	0			0	0	0
Calcium (Ca)		158	126.7	61.2	370	420	472	519	502	497	510	320	478	580
Carbonate (CO3)		0		0	0	-1	0	0	0			0	0	0
Chloride (Cl)	2000	28	39.5	100	160	200	140	215	183	200	244	139	479	551
Fluoride (F)		0.45	0.5	1.6	0.09	0.22	8	5.4	0.3	14.5	11.9	-0.1	-0.1	0.1
Magnesium (Mg)		10		124	164	192	230	125	310	350	220	220	513	566
Nitrate-N (NO2)	10	0.11	ND	ND	23.33	17.5	29.3	11.6	25	24	0.5	1.12	5.09	-0.01
Potassium (K)		3	1.4	610	42	44	45	96	53	61	63	29	41.2	10.8
Silica (SiO2)		18.6	186.4	280.9	496	556	527	523	435	43	79	364	618	681
Sodium (Na)		337	99.8	109.2	166	184	225	232	283	258	302	180	596	680
Sulfate (SO4)	3000	1090	9529	9311.7	7400	6200	9200	8880	10400	10400	12600	5743	12760	14084
NON-METALS:														
Cyanide (CN)												-0.005	-0.005	-0.005
PHYSICAL PROPERTIES:														
Cond (umho/cm)		3075	15800	17455	11000	10870	10830	11360	11800			7872	13611	13752
pH (units)	-2	2.3	0.9	2	1.4	1.8	1.7	1.82	1.9			2.3	1.97	2.57
TDS @ 180°	5000	1322	12958	13646	9640	10580	14178	13990	14100	14700	16600	8464	19352	20408
TRACE METALS mg/l:														
Aluminum (Al)	5	15.7	151.4	180.3	312	360	375	378		423	567	320	485	818
Arsenic (As)	0.2	-0.01	0.288	0.425	0.78	0.326	0.18	0.23	0.36	0.126	0.447	0.223	0.41	0.26
Barium (Ba)						0.052	0.01	0.01				-0.1	-0.1	-0.1
Beryllium (Be)												0.16	0.24	0.23
Boron (B)	5	-1	0	-4.5	0.19	0.13	0.15	-0.1	-0.1	3	0.75	-0.1	0.1	0.13
Cadmium (Cd)	0.05	-0.01	-0.005	-0.005	0.02	-0.01	0.23	-0.01	0.03	0.05		-0.005	0.024	0.093
Chromium (Cr)	0.05	0.06	1.7	1.95	3.59	-0.05	1.7	3.1	0.56	2.48	35	1.5	2.45	3.65
Cobalt (Co)	1													
Copper (Cu)	0.5	0.04	0.9	1	1.09	0.86	1.1	1.1	1.2	1.5	1.46	0.76	1.31	2.11
Iron (Fe)		32.5		1350	898	836	815	830	750	1290	1550		1297	1676
Lead (Pb)	0.1	-0.05	0.8	0.75	0.66	0.48	0.33	0.49	0.42	-0.05	0.4	0.05	0.11	0.39
Manganese (Mn)		0.82	23.2	22.5	19	26.9	26	26.6	27.7	30	48.7	22	46.2	74.87
Mercury (Hg)	0.005	-0.001	-0.005	-0.005	-0.0004	-0.0004	0.0004	0.0043	-0.0004	-0.0004	-0.0004	-0.001	-0.001	-0.002
Molybdenum (Mo)		-0.1	0.1	-0.1	-0.1	-0.1	-0.02	-0.02	-0.02	0.3	-0.5	-0.01	0.01	0.04
Nickel (Ni)		0.07	1.3	1.3	1.91	0.93	1.1	1.2	1.2	1.8	2.33	1.1	2.68	3.93
Selenium (Se)	0.05	-0.01	0.032	-0.005	0.02	0.012	0.009	0.029	0.023	0.002	0.424	0.262	0.531	0.44
Silver (Ag)							-0.02	-0.02				-0.01	0.01	0.02
Thallium (Tl)												-0.015	0.49	-0.015
Vanadium (V205)	0.1	0.41	2.8	3.2	2.91	2.72	3.1	4.3	4.7	7.6	9.64	2.5	2.04	2.06
Zinc (ZN)	25	1.11	31	1.64	1.7	1.72	3.1	2.1	2.2	3	4	1.9	4.03	6.02
RADIOMETRIC pCi/l:														
Uranium, natural	3385	3012.7	3100.1	2.66 E-6	3046.5	3047	44	2006	2832	5416	4690 (0.2)	2269	8023	7777 (0.2)
Radium 226		114 +/- 3	99.14 +/- 2.09	47.47 E-9 +/- 0.89 E-9	102 +/- 12	59 +/- 2	11.2 +/- 0.5	41.9 +/- 9	25 +/- 5.1	13 +/- 0.8	12.7 +/- 1	303 +/- 8.3	439 +/- 9.6	126 +/- 4.4
Radium 228												15.1 +/- 2.0	-1	15.8 +/- 2.1
Combined Ra226/228	5											318.1	439	141.8
Thorium 230		1-24 +/- 68	3035 +/- 6.93	8.64 E-6 +/- 1.47 E-7	864 +/- 1195	23567 +/- 1717	6857 +/- 68	18461	39334 +/- 337	11000 +/- 77	15200 +/- 105	11521 +/- 195	2831 +/- 45.1	2820 +/- 14
Lead (Pb210)		394 +/- 20	1541 +/- 37	625 +/- 4.21 E-1	513 +/- 5	2850 +/- 52	2598.6 +/- 160	2134 +/- 8	1890 +/- 124	1440 +/- 89	2.0 +/- 1.1	76.9 +/- 5.3	90.9 +/- 8.7	-1
Polonium (Po210)		64 +/- 11	361 +/- 25	2.89 E-8 +/- 1.02 E-8	640 +/- 7	1581 +/- 40	476 +/- 8	176 +/- 14	782 +/- 29	1.8 +/- 0.6	17.5 +/- 1.1			
Gross Alpha	15											14093 +/- 119	3325 +/- 58	3000 +/- 55
QUALITY ASSURANCE DATA:														
A/C Balance					51.4	49.1	57.86	12.69					1.115	0.964
(Energy Labs Inc unless noted)														

KENNECOTT URANIUM COMPANY			***Revised***											
SWEETWATER TAILINGS CELL			*08/22/97*											
Surface Water Analysis														
WYDEQ III Livestock Standard		1992			1993		1994		1995	1996	1997	1998	1999	2000
	Std	4/14/92	8/11/92	10/22/92	7/1/93	9/23/93	3/24/94	7/28/94	3/31/95	6/22/96	6/3/97	6/2/98	6/2/99	6/6/00
FIELD DATA mg/l:														
Temperature (C)				11.3	18.6	15.8	3.2	21.3	2	17.1	18	14	14	16
pH (Std. Units)				2.4	2.2	2.1	3	2.4	2.33	2.53		2.8	2.8	2.7
Cond (umho/cm)				13930	12450	13140	14700	12510	11310	13400	11200	11600	13000	9000
TDS				6980	6180	6590	8010	6210	5650	6690				
MAJOR IONS mg/l:														
Alk-CaC03		0	0	0	0	0	0	0	0	0	0	-1	-1	-1
Bicarbonate (HCO3)		0	0	0	0	0	0	0	0	0	0	-0.1	-0.1	-0.1
Calcium (Ca)		588	726	529	445	449	423	421	348	707	389	378	431	410
Carbonate (CO3)		0	0	0	0	0	0	0	0	0	0	-0.1	-0.1	-0.1
Chloride (Cl)	2000	538	49.4	532	460	558	661	579	445	628	502	503	574	607
Fluoride (F)		84.7	-0.1	0.18	-0.1	0.11	0.13	0.1	0.12	26.5	24	24.1	25.1	30.4
Magnesium (Mg)		580	632	699	548	729	578	810	761	1010	880	830	880	931
Nitrate-N (NO2)	10	146	97.1	-0.1	-0.1	0.2	2.7	0.14	0.27	0.3	1.86	0.14	1.1	0.83
Potassium (K)		14.3	9.17	5	2.9	0.9	1	1.1	0.87	0.7	1.03	1	1.9	0.5
Silica (SiO2)		745	393	631	554	615	476	495	338	364	252	237	232	188
Sodium (Na)		683	777	669	465	663	682	627	541	870	606	607	651	657
Sulfate (SO4)	3000	13850	13300	14793	10701	12976	12145	13539	11000	14281	13120	12300	12200	11500
NON-METALS:														
Cyanide (CN)		-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005
PHYSICAL PROPERTIES:														
Cond (umho/cm)		1420	12449	13115	12560	13928	14313	13085	11823	12495	11800	12600	12900	14300
pH (units)	-2	2.23	2.24	2.34	2.58	2.46	2.43	2.48	2.7	2.55	2.61	2.82	2.81	2.83
TDS @ 180°	5000	21061	19300	21140	15441	17532	16887	17665	14566	19167	15900	18700	18600	19900
TRACE METALS mg/l:														
Aluminum (Al)	5	874	979	906	676	854	863	912	800	920	974	1000	1150	916
Arsenic (As)	0.2	0.46	0.4	0.02	0.14	0.16	0.12	0.114	0.099	0.097	0.068	0.081	0.073	0.078
Barium (Ba)		-0.1	0.37	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0.89
Beryllium (Be)		0.23	-0.01	0.26	0.23	-0.01	0.31	0.22	0.19	0.3	0.24	0.24	0.26	0.27
Boron (B)	5	-0.1	0.15	-0.1	3.98	4.5	3.08	1.9	0.78	-0.1	0.56	-0.1	0.75	-0.1
Cadmium (Cd)	0.05	-0.005	0.021	-0.005	-0.005	-0.005	-0.005	-0.01	0.07	0.11	0.028	0.022	0.02	0.038
Chromium (Cr)	0.05	2.86	3.79	3.36	3.75	3.3	3.08	2.25	2.52	3.21	2.38	2.12	2.23	2.35
Cobalt (Co)	1		2.085	1.78	2.55	6.65	2.45	-	1.47	2.19	1.83	2.47	1.69	2.07
Copper (Cu)	0.5	2.28	2.79	2.41	2.48	2.82	1.73	1.83	1.88	2.55	2	1.93	1.8	2.03
Iron (Fe)		1703	638	1540	1256	1478	1125	991	840	874	722	573	418	348
Lead (Pb)	0.1	-0.01	-0.01	-0.01	-0.01	0.41	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Manganese (Mn)		62.9	83.9	72.2	66.7	76	65.4	63.1	62.2	82.4	80	76	78.6	79.5
Mercury (Hg)	0.005	-0.0002	-0.0002	-0.0002	-0.0002	-0.0002	-0.0002	-0.0002	-0.0002	-0.0002	-0.0002	-0.0002	-0.0002	0.0006
Molybdenum (Mo)		0.11	0.33	-0.01	-0.01	-0.01	-0.01	-0.1	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Nickel (Ni)		3.69	5.08	4.14	4.95	5.73	4.35	4.06	3.6	5.37	4.3	5.7	4	6.16
Selenium (Se)	0.05	0.614	0.426	0.62	0.608	0.618	0.385	0.847	0.349	0.608	0.888	0.655	0.641	0.706
Silver (Ag)		2.05	-0.01	0.12	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Thallium (Tl)		-0.015	-0.015	-0.015	-0.015	-0.015	-0.015	-0.015	-0.015	-0.01	-0.01	-0.01	-0.01	-0.01
Vanadium (V205)	0.1	2.05	2.38	1.93	2.1	1.89	1.5	1.2	1.14	1.37	1.4	0.87	0.75	0.57
Zinc (ZN)	25	5.72	7.02	6.45	6.38	7.71	6.67	5.95	5.9	0.79	6.68	7.48	6.99	7.65
RADIOMETRIC pCi/l:														
Uranium, natural	3385	7212	8480	6177	9030	10507	9864	10311	9242	8973	8400	10800	11200	12000
Radium 226		70.1 +/- 2.9	74.4 +/- 7.6	54.7 +/- 2.5	38.1 +/- 3.1	40.4 +/- 1.8	53.9 +/- 3.3	112 +/- 6	25.7 +/- 2.1	55.3 +/- 1.9	60.6 +/- 2.6	45.8 +/- 2.0	567 +/- 2.3	83.1 +/- 3.0
Radium 228		1.8 +/- 0.7	4.2 +/- 0.9	5.8 +/- 0.7	9.0 +/- 2.9	3.5 +/- 0.9	9.6 +/- 9.4	7.6 +/- 5.4	-1	6.7 +/- 0.5	-1	1.9 +/- 1.1	2.9 +/- 0.5	3.6 +/- 0.2
Combined Ra226/228	5	71.9	78.6	60.5	47.1	43.9	63.5	119.6	25.7	62	60.6	47.7	569.9	86.7
Thorium 230		19310 +/- 105	18700 +/- 119	5487 +/- 44	9880 +/- 104	3266 +/- 54	650 +/- 403	4136 +/- 371	28217 +/- 623	7550 +/- 160	4526 +/- 86	6360 +/- 108	2340 +/- 44.1	11500 +/- 212
Lead (Pb210)		6.3 +/- 0.8	5.4 +/- 3.8	5 +/- 0.7	-1	-1	3.5 +/- 2.1	9.0 +/- 8.1	1.8 +/- 1.1	7.9 +/- 0.9	6.6 +/- 2.3	-1	5.0 +/- 1.8	-1
Polonium (Po210)														
Gross Alpha	15	20000 +/- 400	27300 +/- 165	5541 +/- 74.4	9919+/-99	3312 +/- 58	718 +/- 26.8	4276 +/- 22	28244 +/- 168	16600 +/- 130	274 +/- 9.4	300 +/- 10.7	261 +/- 9.9	162 +/- 6.0
QUALITY ASSURANCE DATA:														
A/C Balance		1.033	1.13	1.037	1.064	0.999	1.044	1	1.02	1.02	0.96	1.2	1.2	1.35
(Energy Labs Inc unless noted)														

KENNECOTT URANIUM COMPANY										
SWEETWATER TAILINGS CELL										
Surface Water Analysis										
WYDEQ III Livestock Standard		2001	2002	2003	2004	2005	2006	2007	2008	2009
	Std	6/5/01	6/12/02	6/4/03	6/15/04	6/7/05	6/6/06	6/4/07	5/13/08	6/9/09
FIELD DATA mg/l:										
Temperature (C)		10	12	14	16	14	27.2	4	4.2	12.3
pH (Std. Units)		2.8	2.8	2.8	16.2	2.1	2.78	3.34	3.1	7.8
Cond (umho/cm)		1200	9600	10400	9000	8000	12550	10140	9860	11610
TDS										
MAJOR IONS mg/l:										
Alk-CaC03		-1	-1	-1	-1	-1	-1	-1	-1	-1
Bicarbonate (HCO3)		-1	-1	-1	-1	-1	-1	-1	-1	-1
Calcium (Ca)		469	410	459	470	436	501	549	486	436
Carbonate (CO3)		-1	-1	-1	-1	-1	-1	-1	-1	-1
Chloride (Cl)	2000	610	680	678	820	651	683	649	695	786
Fluoride (F)		36.5	42.4	43.7	38.4	16	44.9	13.5	0.2	0.2
Magnesium (Mg)		1130	992	1130	1300	1140	1290	1110	1080	1040
Nitrate-N (NO2)	10	0.67	0.4	2.4	0.17	-0.1	0.3	0.5	0.3	0.3
Potassium (K)		0.7	-1	1.5	1	-0.5	1.4	5.3	5.9	5
Silica (SiO2)		175	151	138	130	119	117	105	48	103
Sodium (Na)		733	724	801	810	726	725	743	829	998
Sulfate (SO4)	3000	13100	12500	13400	14000	12500	13500	10300	9950	10600
NON-METALS:										
Cyanide (CN)		-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005
PHYSICAL PROPERTIES:										
Cond (umho/cm)		14000	14200	14100	14100	13600	13200	11500	12100	12700
pH (units)	-2	2.81	2.83	2.88	2.95	2.94	3.09	3.37	3.55	3.01
TDS @ 180°	5000	19400	20400	20100	21000	19100	18100	13600	14800	15200
TRACE METALS mg/l:										
Aluminum (Al)	5	1220	1150	1250	1300	1230	1060	554	495	495
Arsenic (As)	0.2	0.039	0.036	0.023	0.06	0.027	0.019	0.012	0.017	0.009
Barium (Ba)		-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Beryllium (Be)		0.2	0.32	0.18	0.25	0.33	0.35	0.2	0.18	0.15
Boron (B)	5	0.5	0.63	-0.22	-0.1	0.3	0.4	0.4	0.4	-0.1
Cadmium (Cd)	0.05	0.019	0.034	0.02	0.03	0.019	0.017	0.014	0.028	0.018
Chromium (Cr)	0.05	1.83	2.47	1.31	2	1.7	1.44	0.55	0.24	0.31
Cobalt (Co)	1	1.95	2.78	1.87	3	2.63	2.96	2.09	2.21	2.03
Copper (Cu)	0.5	1.54	2.04	1.76	1.9	1.64	1.54	0.58	0.44	0.49
Iron (Fe)		313	250	232	230	139	115	59.5	135	134
Lead (Pb)	0.1	-0.01	-0.01	0.02	-0.01	-0.01	-0.01	0.02	-0.01	-0.01
Manganese (Mn)		61.7	94	70.4	110	84.4	94.4	67.4	79.6	80.2
Mercury (Hg)	0.005	-0.0002	0.0005	-0.0004	0.0005	-0.0002	-0.0002	-0.0002	-0.0004	-0.0004
Molybdenum (Mo)		-0.01	-0.01	-0.01	-0.01	0.04	-0.01	-0.01	-0.01	-0.01
Nickel (Ni)		4.6	7.01	5.79	7.2	6.8	6.92	4.39	4.97	5.52
Selenium (Se)	0.05	0.591	0.618	0.579	0.24	0.534	0.461	0.414	0.287	0.256
Silver (Ag)		-0.01	0.05	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Thallium (Tl)		-0.01	-0.01	-0.01	0.16	-0.01	-0.01	-0.01	-0.01	-0.01
Vanadium (V205)	0.1	0.4	0.5	0.3	0.2	0.2	0.2	-0.1	-0.1	-0.1
Zinc (ZN)	25	5.8	9.19	11.6	9.5	8.25	7.48	5.72	4.75	6
RADIOMETRIC pCi/l:										
Uranium, natural	3385	12300	12321.4	12000	11000	10300	11100	8530	6350	7980
Radium 226		59.8 +/- 2.3	55.9 +/- 2.3	69.8+/-2.5	46.2 +/- 2.2	23.8 +/- 1.8	1.5 +/- 0.4	20.2+/-1.7	25.2	10
Radium 228		1.9 +/- 1.0	-1	-1	-1	-1	8.9+/-1.1	-1	2.3	1.3
Combined Ra226/228	5	61.7	55.9	69.8	46.2	23.8	10.4	20.2	27.5	11.3
Thorium 230		9440 +/- 78	3250 +/- 30.3	1890+/-19.7	2110 +/- 34.9	1650+/-24.3	1620+/-113	671+/-58.2	216	361
Lead (Pb210)		-1	-2.7	-2.7	-1	-1	-1	-1	1.9	6.2
Polonium (Po210)						-	-	-	-	-
Gross Alpha	15	149 +/- 6.4	124 +/- 5.0	212+/-7.2	222 +/- 10.9	83.3 +/- 5.3	127+/-6.0	43.9+/-2.0	83.4	48.8
QUALITY ASSURANCE DATA:										
A/C Balance		1.17	1.19	1.09	1.17	1.22	1.07	1.01	2.66	-1.87
(Energy Labs Inc unless noted)										

KENNECOTT URANIUM COMPANY
Groundwater Elevations

Well	*Revised Measuring						Well not pumping					
Well	Measuring	2009					= Resurveyed					
No.	Point Elev.	*Jan-09*	*Feb-09*	*Mar-09*	*Apr-09*	*May-09*	*Jun-09*	*Jul-09*	*Aug-09*	*Sep-09*	*Oct-09*	*Nov-09*	*Dec-09*
TMW-1		105.32	105.27	105.11	105.16	105.17	105.29	105.18	105.26	105.39	105.21	105.31	105.36
TMW-1	6648.22	6,544.34	6,544.39	6,544.55	6,544.50	6,544.49	6,544.37	6,544.48	6,544.40	6,544.27	6,544.45	6,544.35	6,544.30
TMW-2		84.78	84.78	84.53	86.74	86.74	84.66	84.68	84.66	84.79	84.78	84.78	84.72
TMW-2	6627.09	6,542.31	6,542.31	6,542.56	6,540.35	6,540.35	6,542.43	6,542.41	6,542.43	6,542.30	6,542.31	6,542.31	6,542.37
TMW-3		84.36	84.36	84.15	88.55	88.55	84.26	84.25	84.29	84.41	84.21	84.21	84.30
TMW-3	6626.27	6,541.91	6,541.91	6,542.12	6,537.72	6,537.72	6,542.01	6,542.02	6,541.98	6,541.86	6,542.06	6,542.06	6,541.97
TMW-4		85.24	85.24	85.16	87.29	87.29	85.31	85.27	85.36	85.38	85.49	85.49	85.41
TMW-4	6626.89	6,541.65	6,541.65	6,541.73	6,539.60	6,539.60	6,541.58	6,541.62	6,541.53	6,541.51	6,541.40	6,541.40	6,541.48
TMW-5		110.37	110.43	110.39	110.42	110.40	110.40	110.37	110.36	110.51	110.31	110.41	110.41
TMW-5	6658.59	6,548.10	6,548.04	6,548.08	6,548.05	6,548.07	6,548.07	6,548.10	6,548.11	6,547.96	6,548.16	6,548.06	6,548.06
TMW-6		97.09	97.02	96.97	99.08	99.08	97.09	97.00	97.15	97.23	97.11	97.00	97.18
TMW-6	6641.66	6,544.57	6,544.64	6,544.69	6,542.58	6,542.58	6,544.57	6,544.66	6,544.51	6,544.43	6,544.55	6,544.66	6,544.48
TMW-7		111.38	111.38	112.58	114.60	114.88	114.99	114.93	115.09	114.73	114.73	116.63	116.68
TMW-7	6654.40	6,543.31	6,543.31	6,542.11	6,540.09	6,539.81	6,539.70	6,539.76	6,539.60	6,539.96	6,539.96	6,538.06	6,538.01
TMW-8		102.89	102.89	102.66	102.71	102.75	102.86	102.79	102.82	102.92	102.75	102.89	102.94
TMW-8	6646.47	6,543.58	6,543.58	6,543.81	6,543.76	6,543.72	6,543.61	6,543.68	6,543.65	6,543.55	6,543.72	6,543.58	6,543.53
TMW-10		Note 1: Readings taken with permanently installed submersible pressure transducer directly as elevations. Depth to water data is not available.											
TMW-10	6556.92	6,543.93	6,544.05	6,544.20	6,544.28	6,544.54	6,544.65	6,544.66	6,545.35	6,544.76	6,544.60	6,544.73	6,544.45
TMW-15		100.42	100.62	100.79	100.89	100.94	100.94	100.86	100.81	100.91	100.90	100.90	101.10
TMW-15	6643.26	6,542.84	6,542.64	6,542.47	6,542.37	6,542.32	6,542.32	6,542.40	6,542.45	6,542.35	6,542.36	6,542.36	6,542.16
TMW-16		111.96	111.96	111.86	111.12	112.42	112.58	112.48	112.75	112.69	112.71	112.70	112.93
TMW-16	6655.62	6,543.66	6,543.66	6,543.76	6,544.50	6,543.20	6,543.04	6,543.14	6,542.87	6,542.93	6,542.91	6,542.92	6,542.69
TMW-17		115.73	122.95	119.64	120.12	117.07	117.07	116.50	122.35	121.95	121.95	123.83	123.79
TMW-17	6660.87	6,545.14	6,537.92	6,541.23	6,540.75	6,543.80	6,543.80	6,544.37	6,538.52	6,538.92	6,538.92	6,537.04	6,537.08
TMW-18		112.70	112.70	125.05	126.97	127.25	126.99	126.90	127.41	126.92	126.92	127.18	127.15
TMW-18	6655.98	6,543.28	6,543.28	6,530.93	6,529.01	6,528.73	6,528.99	6,529.08	6,528.57	6,529.06	6,529.06	6,528.80	6,528.83
TMW-24		114.62	114.55	114.74	114.79	114.63	114.65	114.62	114.62	114.89	114.77	114.77	114.82
TMW-24	6661.21	6,546.59	6,546.66	6,546.47	6,546.42	6,546.58	6,546.56	6,546.59	6,546.59	6,546.32	6,546.44	6,546.44	6,546.39
TMW-29		109.89	109.90	110.29	110.22	110.12	110.12	110.06	110.06	110.45	110.59	110.59	110.48
TMW-29	6656.64	6,547.20	6,547.19	6,546.80	6,546.87	6,546.97	6,546.97	6,547.03	6,547.03	6,546.64	6,546.50	6,546.50	6,546.61
TMW-31		114.10	114.12	114.55	114.50	114.37	114.30	114.26	114.29	114.60	114.75	114.75	114.65
TMW-31	6661.09	6,546.99	6,546.97	6,546.54	6,546.59	6,546.72	6,546.79	6,546.83	6,546.80	6,546.49	6,546.34	6,546.34	6,546.44
TMW-35		111.14	111.14	111.51	111.52	111.38	111.31	111.13	111.13	111.68	111.74	111.74	111.67
TMW-35	6657.75	6,546.61	6,546.61	6,546.24	6,546.23	6,546.37	6,546.44	6,546.62	6,546.62	6,546.07	6,546.01	6,546.01	6,546.08
TMW-36		111.66	111.71	112.13	112.10	111.96	111.96	111.96	111.96	112.23	112.38	112.38	112.28
TMW-36	6657.75	6,546.09	6,546.04	6,545.62	6,545.65	6,545.79	6,545.79	6,545.79	6,545.79	6,545.52	6,545.37	6,545.37	6,545.47
TMW-37		104.75	105.27	105.27	105.22	105.12	105.12	105.10	105.10	105.29	105.17	105.08	105.39
TMW-37	6650.73	6,545.98	6,545.46	6,545.46	6,545.51	6,545.61	6,545.61	6,545.63	6,545.63	6,545.44	6,545.56	6,545.65	6,545.34
TMW-44		93.84	94.11	94.32	94.31	94.27	94.27	94.14	94.14	94.39	94.27	97.12	94.38
TMW-44	6637.52	6,543.68	6,543.41	6,543.20	6,543.21	6,543.25	6,543.25	6,543.38	6,543.38	6,543.13	6,543.25	6,540.40	6,543.14
TMW-45		96.56	97.05	97.07	97.03	96.98	96.98	96.90	96.90	97.10	96.99	96.82	97.05
TMW-45	6641.00	6,544.44	6,543.95	6,543.93	6,543.97	6,544.02	6,544.02	6,544.10	6,544.10	6,543.90	6,544.01	6,544.18	6,543.95
TMW-47		95.29	95.14	95.38	95.47	95.35	95.35	95.30	95.30	95.51	95.29	94.36	95.37
TMW-47	6640.35	6,545.06	6,545.21	6,544.97	6,544.88	6,545.00	6,545.00	6,545.05	6,545.05	6,544.84	6,545.06	6,545.99	6,544.98
TMW-48		95.00	95.02	95.39	95.36	95.29	95.25	95.17	95.17	95.40	95.26	95.14	95.32
TMW-48	6639.72	6,544.72	6,544.70	6,544.33	6,544.36	6,544.43	6,544.47	6,544.55	6,544.55	6,544.32	6,544.46	6,544.58	6,544.40
TMW-49		97.31	97.51	97.50	97.84	97.81	97.81	97.65	97.65	97.85	97.76	97.92	97.92
TMW-49	6640.19	6,542.88	6,542.68	6,542.69	6,542.35	6,542.38	6,542.38	6,542.54	6,542.54	6,542.34	6,542.43	6,542.27	6,542.27
TMW-50		105.05	105.25	105.37	105.79	105.85	105.85	105.67	105.67	105.90	105.77	106.04	106.04
TMW-50	6647.80	6,542.75	6,542.55	6,542.43	6,542.01	6,541.95	6,541.95	6,542.13	6,542.13	6,541.90	6,542.03	6,541.76	6,541.76
TMW-51		107.38	107.54	107.61	108.04	107.96	107.97	107.79	107.79	108.00	107.91	108.15	108.15
TMW-51	6650.00	6,542.62	6,542.46	6,542.39	6,541.96	6,542.04	6,542.03	6,542.21	6,542.21	6,542.00	6,542.09	6,541.85	6,541.85
TMW-52		102.12	102.45	102.58	103.07	102.85	102.85	102.61	101.59	102.82	102.83	103.13	103.13
TMW-52	6644.70	6,542.58	6,542.25	6,542.12	6,541.63	6,541.85	6,541.85	6,542.09	6,543.11	6,541.88	6,541.87	6,541.57	6,541.57
TMW-53		99.14	99.35	99.32	99.76	99.58	99.58	99.39	99.39	99.54	99.51	99.72	99.72
TMW-53	6641.47	6,542.33	6,542.12	6,542.15	6,541.71	6,541.89	6,541.89	6,542.08	6,542.08	6,541.93	6,541.96	6,541.75	6,541.75
TMW-54		53.54	53.54	53.51	53.71	53.97	54.13	54.30	54.30	54.66	54.67	54.88	55.11
TMW-54	6,652.06	6,598.52	6,598.52	6,598.55	6,598.35	6,598.09	6,597.93	6,597.76	6,597.76	6,597.40	6,597.39	6,597.18	6,596.95
TMW-55		52.57	52.57	52.48	52.68	52.92	53.04	53.25	53.25	53.53	53.49	53.71	53.85
TMW-55	6,649.48	6,596.91	6,596.91	6,597.00	6,596.80	6,596.56	6,596.44	6,596.23	6,596.23	6,595.95	6,595.99	6,595.77	6,595.63
TMW-56		104.64	104.64	104.82	105.23	105.51	105.63	105.51	105.69	105.82	105.63	105.59	105.73
TMW-56	6,647.72	6,543.08	6,543.08	6,542.90	6,542.49	6,542.21	6,542.09	6,542.21	6,542.03	6,541.90	6,542.09	6,542.13	6,541.99
TMW-57		104.95	104.95	110.75	110.42	110.45	110.49	110.21	110.08	109.52	109.52	109.44	109.41
TMW-57	6,649.86	6,544.91	6,544.91	6,539.11	6,539.44	6,539.41	6,539.37	6,539.65	6,539.78	6,540.34	6,540.34	6,540.42	6,540.45
TMW-58		104.21	104.21	104.17	107.60	108.02	108.14	108.10	108.37	107.79	107.79	107.95	108.00
TMW-58	6,646.96	6,542.75	6,542.75	6,542.79	6,539.36	6,538.94	6,538.82	6,538.86	6,538.59	6,539.17	6,539.17	6,539.01	6,538.96
TMW-59		111.05	111.26	111.88	117.20	118.50	118.50	114.58	117.02	113.46	113.46	115.84	115.97
TMW-59	6,648.15	6,537.10	6,536.89	6,536.27	6,530.95	6,529.65	6,529.65	6,533.57	6,531.13	6,534.69	6,534.69	6,532.31	6,532.18

KENNECOTT URANIUM COMPANY
Groundwater Elevations

	*Revised							Well not pumping					
Well	**Measuring**	*2009*						**= Resurveyed**					
No.	**Point Elev.**	*Jan-09*	*Feb-09*	*Mar-09*	*Apr-09*	*May-09*	*Jun-09*	*Jul-09*	*Aug-09*	*Sep-09*	*Oct-09*	*Nov-09*	*Dec-09*
TMW-61		106.60	106.84	106.97	107.45	107.56	107.56	107.35	107.55	107.57	107.48	107.75	107.75
TMW-61	6,649.36	6,542.76	6,542.52	6,542.39	6,541.91	6,541.80	6,541.80	6,542.01	6,541.81	6,541.79	6,541.88	6,541.61	6,541.61
TMW-62		104.05	104.05	104.31	104.59	104.79	104.83	104.76	104.96	105.05	104.91	105.26	105.14
TMW-62	6,646.13	6,542.23	6,542.23	6,541.97	6,541.69	6,541.49	6,541.45	6,541.52	6,541.32	6,541.23	6,541.37	6,541.02	6,541.14
TMW-63		111.45	117.45	117.01	118.17	118.40	118.44	118.37	118.66	118.50	118.56	115.65	118.21
TMW-63	6,654.77	6,543.32	6,537.32	6,537.76	6,536.60	6,536.37	6,536.33	6,536.40	6,536.11	6,536.27	6,536.21	6,539.12	6,536.56
TMW-64		107.97	107.97	107.95	107.98	108.13	108.26	108.17	108.15	108.23	108.30	108.44	108.51
TMW-64	6,652.25	6,544.25	6,544.25	6,544.27	6,544.24	6,544.09	6,543.96	6,544.05	6,544.07	6,543.99	6,543.92	6,543.78	6,543.71
TMW-67		71.82	71.67	71.69	71.69	71.75	71.75	71.86	71.88	71.99	71.95	71.95	72.00
TMW-67	6,656.63	6,584.81	6,584.96	6,584.94	6,584.94	6,584.88	6,584.88	6,584.77	6,584.75	6,584.64	6,584.68	6,584.68	6,584.63
TMW-69		110.59	110.59	110.49	110.63	110.88	111.04	110.95	110.95	111.12	111.65	111.15	111.25
TMW-69	6,654.47	6,543.88	6,543.88	6,543.98	6,543.84	6,543.59	6,543.43	6,543.52	6,543.52	6,543.35	6,542.82	6,543.32	6,543.22
TMW-70		107.81	107.81	107.92	108.98	108.46	108.58	108.48	108.64	108.62	108.58	108.78	108.69
TMW-70	6,651.06	6,543.25	6,543.25	6,543.14	6,542.08	6,542.60	6,542.48	6,542.58	6,542.42	6,542.44	6,542.48	6,542.28	6,542.37
TMW-71		110.63	110.63	110.44	110.53	110.75	110.90	110.80	110.80	110.98	110.90	111.15	111.00
TMW-71	6,654.52	6,543.89	6,543.89	6,544.08	6,543.99	6,543.77	6,543.62	6,543.72	6,543.72	6,543.54	6,543.62	6,543.37	6,543.52
TMW-72		99.08	98.73	98.41	98.99	100.35	98.51	98.38	98.59	98.44	98.57	98.69	98.48
TMW-72	6,640.35	6,541.27	6,541.62	6,541.94	6,541.36	6,540.00	6,541.84	6,541.97	6,541.76	6,541.91	6,541.78	6,541.66	6,541.87
TMW-73		101.47	101.20	100.86	100.25	100.65	100.85	100.58	100.58	100.65	100.83	100.76	100.51
TMW-73	6,643.31	6,541.84	6,542.11	6,542.45	6,543.06	6,542.66	6,542.46	6,542.73	6,542.73	6,542.66	6,542.48	6,542.55	6,542.80
TMW-75		115.53	116.05	116.83	117.76	115.95	115.95	116.62	116.78	116.31	116.31	118.95	118.90
TMW-75	6,660.18	6,544.65	6,544.13	6,543.35	6,542.42	6,544.23	6,544.23	6,543.56	6,543.40	6,543.87	6,543.87	6,541.23	6,541.28
TMW-78		113.45	113.68	113.85	113.75	113.68	113.68	113.61	113.61	114.19	114.29	114.29	114.39
TMW-78	6,658.50	6,545.05	6,544.82	6,544.65	6,544.75	6,544.82	6,544.82	6,544.89	6,544.89	6,544.31	6,544.21	6,544.21	6,544.11
TMW-82		114.47	114.61	114.84	114.83	114.65	114.61	114.58	114.58	114.94	114.88	114.88	114.91
TMW-82	6,660.64	6,546.17	6,546.03	6,545.80	6,545.81	6,545.99	6,546.03	6,546.06	6,546.06	6,545.70	6,545.76	6,545.76	6,545.73
TMW-83		64.01	64.02	64.04	64.05	64.04	64.04	64.04	64.04	63.09	64.10	64.10	64.10
TMW-83	6,658.87	6,594.86	6,594.85	6,594.83	6,594.82	6,594.83	6,594.83	6,594.83	6,594.83	6,595.78	6,594.77	6,594.77	6,594.77
TMW-84		115.14	115.29	115.49	115.43	115.29	115.26	115.21	115.21	115.64	115.65	115.65	115.65
TMW-84	6,661.86	6,546.72	6,546.57	6,546.37	6,546.43	6,546.57	6,546.60	6,546.65	6,546.65	6,546.22	6,546.21	6,546.21	6,546.21
TMW-87		89.88	89.84	89.86	89.85	89.87	89.87	89.88	89.88	89.90	89.89	89.89	89.89
TMW-87	6,660.60	6,570.72	6,570.76	6,570.74	6,570.75	6,570.73	6,570.73	6,570.72	6,570.72	6,570.70	6,570.71	6,570.71	6,570.71
TMW-89		114.01	114.11	114.30	114.29	114.19	114.19	114.08	114.31	114.41	114.36	114.36	114.40
TMW-89	6,660.75	6,546.74	6,546.64	6,546.45	6,546.46	6,546.56	6,546.56	6,546.67	6,546.44	6,546.34	6,546.39	6,546.39	6,546.35
TMW-90													
TMW-90	6,639.82												
TMW-91		102.33	102.33	103.16	103.53	102.93	102.93	102.63	102.63	103.01	103.35	103.35	103.52
TMW-91	6,639.61	6,542.06	6,542.06	6,541.23	6,540.86	6,541.46	6,541.46	6,541.76	6,541.76	6,541.38	6,541.04	6,541.04	6,540.87
TMW-92		102.50	102.50	103.60	103.68	103.19	103.19	102.87	102.87	103.45	103.86	103.86	103.89
TMW-92	6,640.15	6,542.21	6,542.21	6,541.11	6,541.03	6,541.52	6,541.52	6,541.84	6,541.84	6,541.26	6,540.85	6,540.85	6,540.82
TMW-93		98.89	98.89	99.49	99.30	99.47	99.47	99.21	99.21	99.29	99.89	99.89	99.91
TMW-93	6,641.02	6,542.13	6,542.13	6,541.53	6,541.72	6,541.55	6,541.55	6,541.81	6,541.81	6,541.73	6,541.13	6,541.13	6,541.11
TMW-94		98.95	98.95	99.69	99.38	99.53	99.53	99.25	99.25	99.58	100.04	100.04	100.04
TMW-94	6,640.53	6,541.58	6,541.58	6,540.84	6,541.15	6,541.00	6,541.00	6,541.28	6,541.28	6,540.95	6,540.49	6,540.49	6,540.49
TMW-95		99.17	99.17	100.09	99.68	99.78	99.78	99.45	99.62	99.89	100.32	100.32	100.38
TMW-95	6,640.57	6,541.40	6,541.40	6,540.48	6,540.89	6,540.79	6,540.79	6,541.12	6,540.95	6,540.68	6,540.25	6,540.25	6,540.19
TMW-96		98.00	98.00	104.21	100.82	99.93	99.93	99.24	99.15	100.95	100.95	102.29	102.35
TMW-96	6,640.36	6,542.36	6,542.36	6,536.15	6,539.54	6,540.43	6,540.43	6,540.87	6,540.96	6,539.16	6,539.16	6,537.82	6,537.76
TMW-97		99.24	99.24	103.98	100.95	100.54	100.54	100.12	100.28	101.49	101.49	103.27	103.50
TMW-97	6,641.54	6,542.30	6,542.30	6,537.56	6,540.59	6,541.00	6,541.00	6,541.19	6,541.03	6,539.82	6,539.82	6,538.04	6,537.81
TMW-98		98.81	98.81	99.52	99.24	99.35	99.35	99.07	99.07	99.36	99.74	99.74	99.88
TMW-98	6,643.60	6,543.84	6,543.84	6,543.13	6,543.41	6,543.30	6,543.30	6,541.84	6,541.84	6,541.55	6,541.17	6,541.17	6,541.03
TMW-99		98.30	98.30	99.11	98.83	98.92	89.82	98.68	98.68	99.09	99.40	99.40	99.53
TMW-99	6,643.84	6,545.54	6,545.54	6,544.73	6,545.01	6,544.92	6,554.02	6,541.81	6,541.81	6,541.40	6,541.09	6,541.09	6,540.96
TMW-100		100.95	100.95	101.69	101.19	101.39	101.39	101.17	101.17	101.55	101.58	101.75	101.75
TMW-100	6,639.85	6,542.25	6,542.25	6,541.51	6,542.01	6,541.81	6,541.81	6,542.03	6,542.03	6,541.65	6,541.62	6,541.45	6,541.45
TMW-101		101.80	101.80	102.59	102.10	102.32	102.32	102.13	102.44	102.51	102.73	102.73	102.67
TMW-101	6,641.64	6,542.06	6,542.06	6,541.27	6,541.76	6,541.54	6,541.54	6,541.73	6,541.42	6,541.35	6,541.13	6,541.13	6,541.19
TMW-102		104.77	104.77	104.37	105.60	106.13	106.13	104.05	103.88	104.95	104.08	104.08	105.45
TMW-102	6,639.74	6,539.46	6,539.46	6,539.86	6,538.63	6,538.10	6,538.10	6,540.18	6,540.35	6,539.28	6,540.15	6,540.15	6,538.78
TMW-103		100.95	100.72	100.67	100.72	100.14	100.14	100.53	99.59	100.69	100.58	100.72	100.72
TMW-103	6,642.87	6,541.92	6,542.15	6,542.20	6,542.15	6,542.73	6,542.73	6,542.34	6,543.28	6,542.18	6,542.29	6,542.15	6,542.15
TMW-104		101.62	101.62	102.49	101.95	102.12	102.12	101.88	102.03	102.29	102.66	102.66	102.61
TMW-104	6,639.71	6,542.32	6,542.32	6,541.45	6,541.99	6,541.82	6,541.82	6,542.06	6,541.91	6,541.65	6,541.28	6,541.28	6,541.33
TMW-105													
TMW-105	6,640.18												
TMW-106		100.35	100.19	100.22	100.35	100.60	100.60	100.06	100.12	100.25	100.09	100.29	100.29
TMW-106	6,642.25	6,541.90	6,542.06	6,542.03	6,541.90	6,541.65	6,541.65	6,542.19	6,542.13	6,542.00	6,542.16	6,541.96	6,541.96

KENNECOTT URANIUM COMPANY
Groundwater Elevations

	*Revised							Well not pumping					
Well	**Measuring**	*2009*						**= Resurveyed**					
No.	**Point Elev.**	*Jan-09*	*Feb-09*	*Mar-09*	*Apr-09*	*May-09*	*Jun-09*	*Jul-09*	*Aug-09*	*Sep-09*	*Oct-09*	*Nov-09*	*Dec-09*
TMW-107		97.56	97.24	97.69	97.62	97.49	97.49	97.20	97.35	97.51	97.32	97.69	97.69
TMW-107	6,638.80	6,541.24	6,541.56	6,541.11	6,541.18	6,541.31	6,541.31	6,541.60	6,541.45	6,541.29	6,541.48	6,541.11	6,541.11
TMW-108		99.78	100.02	100.33	100.30	99.91	99.91	99.70	99.70	100.04	99.86	100.29	100.29
TMW-108	6,641.43	6,541.65	6,541.41	6,541.10	6,541.13	6,541.52	6,541.52	6,541.73	6,541.73	6,541.39	6,541.57	6,541.14	6,541.14
TMW-109		99.50	99.68	99.78	99.94	99.61	99.61	99.41	99.41	99.61	99.53	99.91	99.91
TMW-109	6,641.21	6,541.71	6,541.53	6,541.43	6,541.27	6,541.60	6,541.60	6,541.80	6,541.80	6,541.60	6,541.68	6,541.30	6,541.30
TMW-110		97.44	97.15	97.51	97.50	97.38	97.38	97.09	97.09	97.41	97.21	97.55	97.55
TMW-110	6,638.71	6,541.27	6,541.56	6,541.20	6,541.21	6,541.33	6,541.33	6,541.62	6,541.62	6,541.30	6,541.50	6,541.16	6,541.16
TMW-111		101.84	101.84	101.50	102.09	102.41	102.41	102.21	102.38	102.55	102.41	112.66	112.66
TMW-111	6,643.95	6,542.55	6,542.55	6,542.89	6,542.30	6,541.98	6,541.98	6,542.18	6,542.01	6,541.84	6,541.98	6,531.73	6,531.73
TMW-112		103.18	103.39	103.18	103.68	103.58	103.58	103.51	103.52	103.73	103.58	103.89	103.89
TMW-112	6,643.24	6,542.40	6,542.19	6,542.40	6,541.90	6,542.00	6,542.00	6,542.07	6,542.06	6,541.85	6,542.00	6,541.69	6,541.69
TMW-113		102.17	102.38	102.18	102.58	102.55	102.55	102.51	102.50	102.71	102.57	102.87	102.87
TMW-113	6,643.51	6,542.20	6,541.99	6,542.19	6,541.79	6,541.82	6,541.82	6,541.86	6,541.87	6,541.66	6,541.80	6,541.50	6,541.50
TMW-115		100.61	100.87	100.68	101.08	101.01	101.01	102.18	102.03	102.35	102.23	102.57	102.57
TMW-115	6,642.92	6,541.96	6,541.70	6,541.89	6,541.49	6,541.56	6,541.56	6,540.39	6,540.54	6,540.22	6,540.34	6,540.00	6,540.00
M-1		147.03	147.09	147.18	147.18	147.18	147.18	147.09	147.17	147.52	127.25	127.25	147.15
M-1	6,711.30	6,564.27	6,564.21	6,564.12	6,564.12	6,564.12	6,564.12	6,564.21	6,564.13	6,563.78	6,584.05	6,584.05	6,564.15
M-2		65.89	65.94	65.81	65.89	65.89	65.92	65.94	65.95	65.87	65.87	65.86	65.93
M-2	6,607.29	6,541.40	6,541.35	6,541.48	6,541.40	6,541.40	6,541.37	6,541.35	6,541.34	6,541.42	6,541.42	6,541.43	6,541.36
PWW-1		99.91	99.91	99.82	99.88	99.97	99.99	99.99	100.01	99.97	99.97	100.03	99.98
PWW-1	6,643.08	6,543.17	6,543.17	6,543.26	6,543.20	6,543.11	6,543.09	6,543.09	6,543.07	6,543.11	6,543.11	6,543.05	6,543.10
PWW-2		103.94	103.94	103.93	104.07	104.20	104.21	104.19	104.20	104.19	104.19	104.28	104.25
PWW-2	6,646.85	6,542.91	6,542.91	6,542.92	6,542.78	6,542.65	6,542.64	6,542.66	6,542.65	6,542.66	6,542.66	6,542.57	6,542.60

Appendix 1

Spill of Pumpback Water – December 7, 2009

December 7, 2009 Spill of Pumpback Water

Sudden and severe cold in the early hours of December 7, 2009 caused a line carrying pumpback water from TMW-57 to leak and spray pumpback water on the ground and caused the line carrying pumpback water from TWMs-96 and 97 to break. The pumpback water from each spill immediately froze upon hitting the ground. The following pertains to this incident:

Spill Description:	**TMWs-96 and 97**		
	Date:	**Time:**	
Start:	6-Dec-09	23:30	
Stop:	7-Dec-09	11:30	
Estimated Duration:		720	minutes
Flow Rate of TMW-96:		3.96	
Flow Rate of TMW-97:		8.96	
Total Flow Rate of Pipe:		12.92	gallons per minute
Estimated Volume Released:		9302.4	gallons
Radionuclides:	**Table 2 Effluent Concentration**	**Concentration**	**Fractional Concentration**
	(pCi/L)	**(pCi/L)**	
Natural uranium:	300	25.0	0.0833
Radium-226	60	2.1	0.0350
Radium-228	60	5.2	0.0867
Thorium-230	100	0.1	0.0009
Sum of fractions:			0.2059

Spill Description:	**TMW-57**		
	Date:	**Time:**	
Start:	6-Dec-09	23:30	
Stop:	7-Dec-09	11:30	
Estimated Duration:		720	minutes
Total Flow Rate of Pipe:		Spray from hole in pipe.	
Estimated Volume Released:		1000	gallons
Radionuclides:	**Table 2 Effluent Concentration**	**Concentration**	**Fractional Concentration**
	(pCi/L)	**(pCi/L)**	
Natural uranium:	300	1.5	0.0050
Radium-226	60	0.6	0.0102
Radium-228	60	3.2	0.0533
Thorium-230	100	0.2	0.0020
Sum of fractions:			0.0705

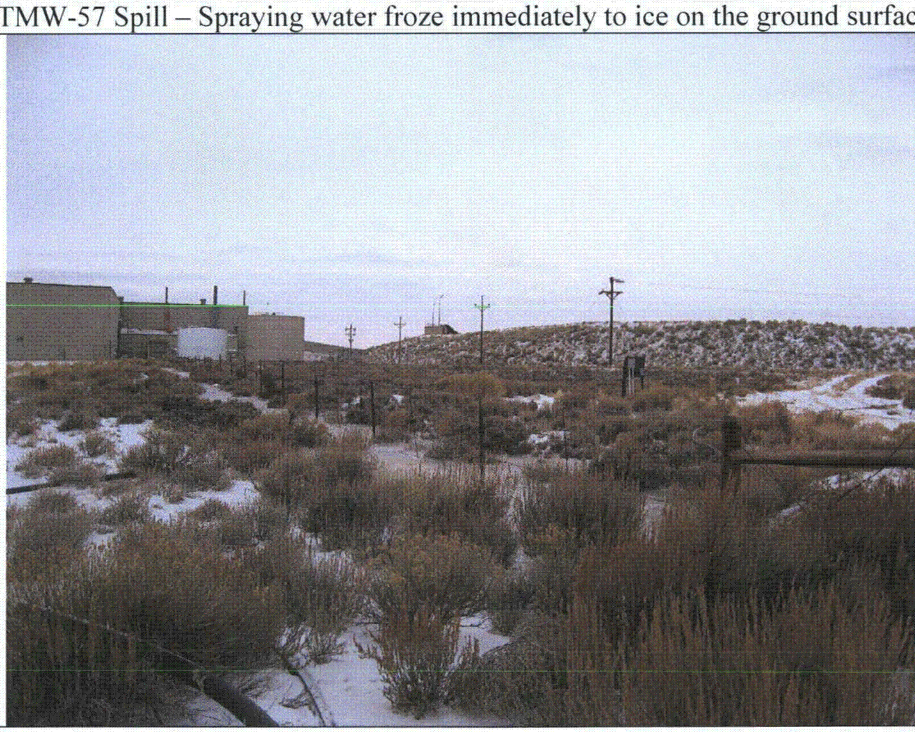
Notes:

- The radionuclide concentrations used in the above calculations are based on actual analyses of samples of the accumulated ice collected on December 7, 2009, following the spills.
- The concentrations of radionuclides in the fluid are below the limits in 10 CFR 20 Appendix B Table 2 - Effluent Concentrations. The sum of fractions for the four (4) radionuclides involved does not exceed unity.
- The spills did not enter any drainages.
- The spills occurred entirely on private land owned by the licensee.

- The spills occurred within the site's fenced area so there is no public access to the spill area.
- All spilled fluid pooled on the ground surface and froze in place.
- All spilled fluid accumulated above the plume in the underlying aquifer.
- The affected areas were surveyed on Monday, December 14, 2009.

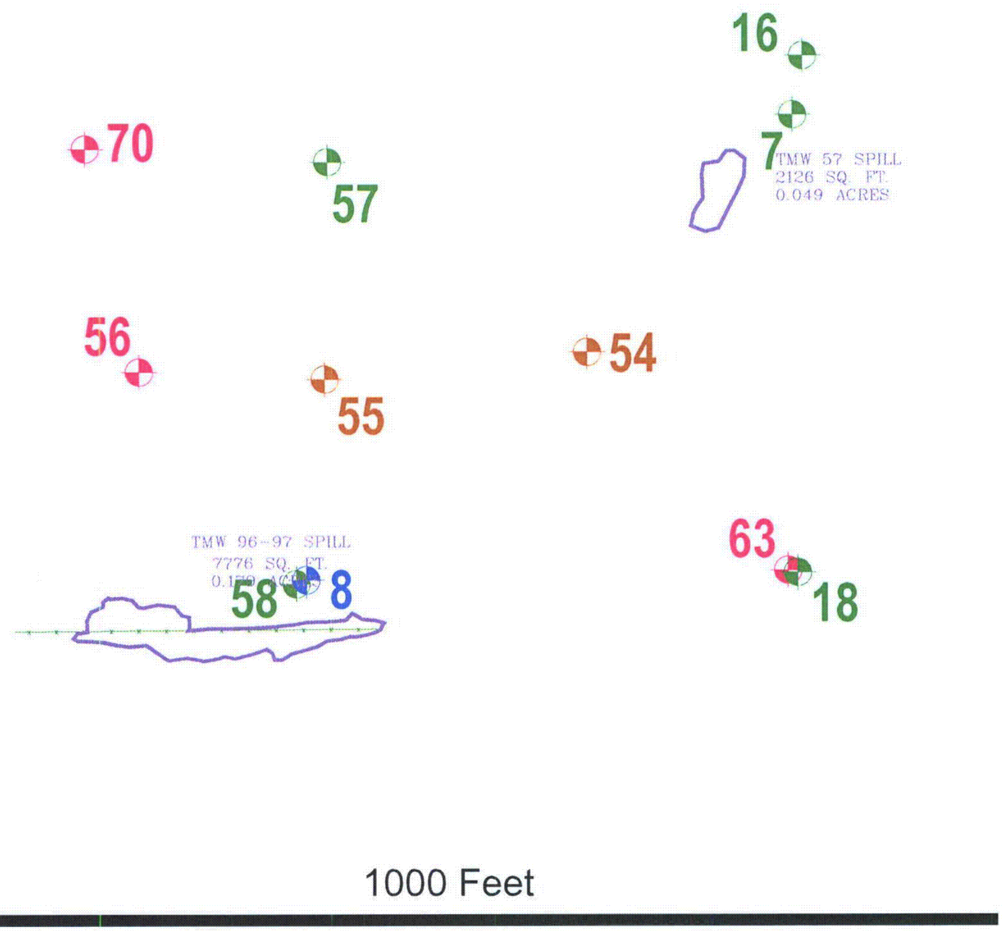
Images of the spills are included below:

TMW-57 Spill – Spraying water froze immediately to ice on the ground surface



TMW-96/97 Spill – Spilled water froze immediately to ice on the ground surface in a ditch along the fence

A map of the impacted area is included below:



The area of the spill is within the area of impact from windblown tailings material from the impoundment. A description of this area that is impacted by windblown material was submitted in Final design Volume VI Existing Impoundment Reclamation Plan.

Analysis results of the spilled water follow in this section. This spill was promptly reported to the Nuclear Regulatory Commission (NRC). A copy of the e-mail follows in this section as well.

The frozen spilled water was removed from both areas by Thursday, February 4, 2010. The ice was placed in the tailings impoundment. Remediation of the frozen spilled water was discussed with James Webb of the Nuclear Regulatory Commission (NRC) in a telephone conversation on January 25, 2010. He was notified of the removal of the accumulated ice via e-mail on Thursday, February 4, 2010. A copy of the e-mail is included in this section.

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LABORATORY ANALYTICAL REPORT

RECEIVED JAN 25 2010

Client:	Kennecott Uranium	**Report Date:**	01/20/10
Project:	Sweetwater Uranium	**Collection Date:**	12/07/09 15:00
Lab ID:	C09120329-001	**DateReceived:**	12/09/09
Client Sample ID:	TMW 57 Spill	**Matrix:**	Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Alkalinity, Total as CaCO3	32	mg/L		5		A2320 B	12/10/09 16:27 / dvg
Carbonate as CO3	ND	mg/L		5		A2320 B	12/10/09 16:27 / dvg
Bicarbonate as HCO3	39	mg/L		5		A2320 B	12/10/09 16:27 / dvg
Calcium	41.3	mg/L		0.5		E200.7	12/15/09 14:29 / cp
Chloride	4	mg/L		1		E300.0	12/14/09 14:37 / ljl
Fluoride	ND	mg/L		0.1		A4500-F C	12/10/09 12:12 / dvg
Magnesium	3.0	mg/L		0.5		E200.7	12/15/09 14:29 / cp
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	12/16/09 11:37 / jal
Potassium	1.2	mg/L		0.5		E200.7	12/15/09 14:29 / cp
Silica	5.4	mg/L		0.2		E200.7	12/15/09 14:29 / cp
Sodium	14.7	mg/L		0.5		E200.7	12/15/09 14:29 / cp
Sulfate	107	mg/L		1		E300.0	12/14/09 14:37 / ljl
NON-METALS							
Cyanide, Total	ND	mg/L		0.005		Kelada mod	12/14/09 14:36 / eli-b
PHYSICAL PROPERTIES							
Conductivity @ 25 C	220	umhos/cm		1		A2510 B	12/10/09 17:23 / lr
pH	7.97	s.u.		0.01		A4500-H B	12/10/09 17:23 / lr
Solids, Total Dissolved TDS @ 180 C	132	mg/L		10		A2540 C	12/11/09 15:54 / lr
METALS - DISSOLVED							
Aluminum	ND	mg/L		0.1		E200.8	12/11/09 03:41 / sml
Arsenic	ND	mg/L		0.001		E200.8	12/11/09 03:41 / sml
Barium	ND	mg/L		0.1		E200.8	12/11/09 03:41 / sml
Beryllium	ND	mg/L		0.01		E200.8	12/11/09 03:41 / sml
Boron	0.1	mg/L		0.1		E200.7	12/15/09 14:29 / cp
Cadmium	ND	mg/L		0.005		E200.8	12/11/09 03:41 / sml
Chromium	ND	mg/L		0.01		E200.8	12/11/09 03:41 / sml
Cobalt	0.001	mg/L		0.001		E200.8	12/11/09 03:41 / sml
Copper	ND	mg/L		0.01		E200.8	12/11/09 03:41 / sml
Iron	ND	mg/L		0.05		E200.8	12/11/09 03:41 / sml
Lead	ND	mg/L		0.01		E200.8	12/11/09 03:41 / sml
Manganese	0.03	mg/L		0.01		E200.8	12/11/09 03:41 / sml
Mercury	ND	mg/L		0.0002		E200.8	12/11/09 03:41 / sml
Molybdenum	ND	mg/L		0.01		E200.8	12/11/09 03:41 / sml
Nickel	ND	mg/L		0.01		E200.8	12/11/09 03:41 / sml
Selenium	ND	mg/L		0.001		E200.8	12/11/09 03:41 / sml
Silver	ND	mg/L		0.01		E200.8	12/11/09 03:41 / sml
Thallium	ND	mg/L		0.01		E200.8	12/11/09 03:41 / sml
Vanadium	ND	mg/L		0.1		E200.8	12/11/09 03:41 / sml
Zinc	0.02	mg/L		0.01		E200.8	12/11/09 03:41 / sml

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

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LABORATORY ANALYTICAL REPORT

Client:	Kennecott Uranium	**Report Date:**	01/20/10
Project:	Sweetwater Uranium	**Collection Date:**	12/07/09 15:00
Lab ID:	C09120329-001	**DateReceived:**	12/09/09
Client Sample ID:	TMW 57 Spill	**Matrix:**	Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - DISSOLVED							
Gross Alpha minus Rn & U	0.6	pCi/L	U			E900.1	12/31/09 12:31 / cgr
Gross Alpha minus Rn & U Precision (±)	0.4	pCi/L				E900.1	12/31/09 12:31 / cgr
Gross Alpha minus Rn & U MDC	0.6	pCi/L				E900.1	12/31/09 12:31 / cgr
Lead 210	-0.9	pCi/L	U			E909.0M	01/04/10 09:45 / dm
Lead 210 precision (±)	2.8	pCi/L				E909.0M	01/04/10 09:45 / dm
Lead 210 MDC	4.7	pCi/L				E909.0M	01/04/10 09:45 / dm
Radium 226	0.61	pCi/L				E903.0	12/29/09 00:15 / jah
Radium 226 precision (±)	0.22	pCi/L				E903.0	12/29/09 00:15 / jah
Radium 226 MDC	0.24	pCi/L				E903.0	12/29/09 00:15 / jah
Radium 228	3.2	pCi/L				RA-05	12/22/09 09:40 / plj
Radium 228 precision (±)	1.2	pCi/L				RA-05	12/22/09 09:40 / plj
Radium 228 MDC	1.8	pCi/L				RA-05	12/22/09 09:40 / plj
Thorium 230	0.2	pCi/L	U			E907.0	12/18/09 08:42 / ep
Thorium 230 precision (±)	0.1	pCi/L				E907.0	12/18/09 08:42 / ep
Thorium 230 MDC	0.2	pCi/L				E907.0	12/18/09 08:42 / ep
Uranium	0.0021	mg/L		0.0003		E200.8	12/11/09 03:41 / sml
Uranium, Activity	1.5	pCi/L		0.2		E200.8	12/11/09 03:41 / sml
DATA QUALITY							
A/C Balance (± 5)	-0.122	%				Calculation	12/16/09 12:10 / kbh
Anions	2.99	meq/L				Calculation	12/16/09 12:10 / kbh
Cations	2.98	meq/L				Calculation	12/16/09 12:10 / kbh
Solids, Total Dissolved Calculated	197	mg/L				Calculation	12/16/09 12:10 / kbh
TDS Balance (0.80 - 1.20)	0.670					Calculation	12/16/09 12:10 / kbh

Report Definitions:
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MDC - Minimum detectable concentration
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ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client:	Kennecott Uranium	**Report Date:**	01/20/10
Project:	Sweetwater Uranium	**Collection Date:**	12/07/09 14:45
Lab ID:	C09120329-002	**DateReceived:**	12/09/09
Client Sample ID:	TMW 96 and 97 Spill	**Matrix:**	Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Alkalinity, Total as CaCO3	130	mg/L		5		A2320 B	12/10/09 16:35 / dvg
Carbonate as CO3	ND	mg/L		5		A2320 B	12/10/09 16:35 / dvg
Bicarbonate as HCO3	158	mg/L		5		A2320 B	12/10/09 16:35 / dvg
Calcium	169	mg/L		0.5		E200.7	12/15/09 14:46 / cp
Chloride	24	mg/L		1		E300.0	12/14/09 14:53 / ljl
Fluoride	0.2	mg/L		0.1		A4500-F C	12/10/09 12:17 / dvg
Magnesium	12.3	mg/L		0.5		E200.7	12/15/09 14:46 / cp
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	12/16/09 11:39 / jal
Potassium	5.5	mg/L		0.5		E200.7	12/15/09 14:46 / cp
Silica	16.6	mg/L		0.2		E200.7	12/15/09 14:46 / cp
Sodium	48.6	mg/L		0.5		E200.7	12/15/09 14:46 / cp
Sulfate	460	mg/L		1		E300.0	12/14/09 14:53 / ljl
NON-METALS							
Cyanide, Total	ND	mg/L		0.005		Kelada mod	12/14/09 14:38 / eli-b
PHYSICAL PROPERTIES							
Conductivity @ 25 C	1110	umhos/cm		1		A2510 B	12/10/09 17:26 / lr
pH	7.91	s.u.		0.01		A4500-H B	12/10/09 17:26 / lr
Solids, Total Dissolved TDS @ 180 C	815	mg/L		10		A2540 C	12/11/09 15:54 / lr
METALS - DISSOLVED							
Aluminum	ND	mg/L		0.1		E200.8	12/11/09 03:46 / sml
Arsenic	ND	mg/L		0.001		E200.8	12/11/09 03:46 / sml
Barium	ND	mg/L		0.1		E200.8	12/11/09 03:46 / sml
Beryllium	ND	mg/L		0.01		E200.8	12/11/09 03:46 / sml
Boron	ND	mg/L		0.1		E200.7	12/15/09 14:46 / cp
Cadmium	ND	mg/L		0.005		E200.8	12/11/09 03:46 / sml
Chromium	ND	mg/L		0.01		E200.8	12/11/09 03:46 / sml
Cobalt	ND	mg/L		0.001		E200.8	12/11/09 03:46 / sml
Copper	ND	mg/L		0.01		E200.8	12/11/09 03:46 / sml
Iron	ND	mg/L		0.05		E200.8	12/11/09 03:46 / sml
Lead	ND	mg/L		0.01		E200.8	12/11/09 03:46 / sml
Manganese	0.11	mg/L		0.01		E200.8	12/11/09 03:46 / sml
Mercury	ND	mg/L		0.0002		E200.8	12/11/09 03:46 / sml
Molybdenum	ND	mg/L		0.01		E200.8	12/11/09 03:46 / sml
Nickel	ND	mg/L		0.01		E200.8	12/11/09 03:46 / sml
Selenium	ND	mg/L		0.001		E200.8	12/11/09 03:46 / sml
Silver	ND	mg/L		0.01		E200.8	12/11/09 03:46 / sml
Thallium	ND	mg/L		0.01		E200.8	12/11/09 03:46 / sml
Vanadium	ND	mg/L		0.1		E200.8	12/11/09 03:46 / sml
Zinc	ND	mg/L		0.01		E200.8	12/11/09 03:46 / sml

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ND - Not detected at the reporting limit.

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LABORATORY ANALYTICAL REPORT

Client:	Kennecott Uranium	**Report Date:**	01/20/10
Project:	Sweetwater Uranium	**Collection Date:**	12/07/09 14:45
Lab ID:	C09120329-002	**DateReceived:**	12/09/09
Client Sample ID:	TMW 96 and 97 Spill	**Matrix:**	Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - DISSOLVED							
Gross Alpha minus Rn & U	3.0	pCi/L				E900.1	12/31/09 12:31 / cgr
Gross Alpha minus Rn & U Precision (±)	0.8	pCi/L				E900.1	12/31/09 12:31 / cgr
Gross Alpha minus Rn & U MDC	0.6	pCi/L				E900.1	12/31/09 12:31 / cgr
Lead 210	-0.4	pCi/L	U			E909.0M	01/04/10 09:45 / dm
Lead 210 precision (±)	2.8	pCi/L				E909.0M	01/04/10 09:45 / dm
Lead 210 MDC	4.7	pCi/L				E909.0M	01/04/10 09:45 / dm
Radium 226	2.1	pCi/L				E903.0	12/29/09 00:15 / jah
Radium 226 precision (±)	0.32	pCi/L				E903.0	12/29/09 00:15 / jah
Radium 226 MDC	0.21	pCi/L				E903.0	12/29/09 00:15 / jah
Radium 228	5.2	pCi/L				RA-05	12/22/09 09:40 / plj
Radium 228 precision (±)	1.2	pCi/L				RA-05	12/22/09 09:40 / plj
Radium 228 MDC	1.6	pCi/L				RA-05	12/22/09 09:40 / plj
Thorium 230	0.09	pCi/L	U			E907.0	12/18/09 08:42 / ep
Thorium 230 precision (±)	0.09	pCi/L				E907.0	12/18/09 08:42 / ep
Thorium 230 MDC	0.1	pCi/L				E907.0	12/18/09 08:42 / ep
Uranium	0.0370	mg/L		0.0003		E200.8	12/11/09 03:46 / sml
Uranium, Activity	25.0	pCi/L		0.2		E200.8	12/11/09 03:46 / sml
DATA QUALITY							
A/C Balance (± 5)	-4.71	%				Calculation	12/16/09 12:11 / kbh
Anions	12.8	meq/L				Calculation	12/16/09 12:11 / kbh
Cations	11.7	meq/L				Calculation	12/16/09 12:11 / kbh
Solids, Total Dissolved Calculated	816	mg/L				Calculation	12/16/09 12:11 / kbh
TDS Balance (0.80 - 1.20)	1.00					Calculation	12/16/09 12:11 / kbh

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

Paulson, Oscar (CCC)

From: Paulson, Oscar (CCC)
Sent: Tuesday, December 08, 2009 11:05 AM
To: 'Webb, James'
Cc: Schutterle, Shelley (CCC); Haag, Kelly (RTEA-Temp)
Subject: Spill of Pumpback Fluid - December 7, 2009

James Webb:

As described briefly to you in our telephone conversation at 1:40 p.m. on Monday, December 7, 2009, severe cold during the early morning hours of December 7, 2009 caused the hose carrying pumpback fluid from TMWs-96 and 97 to freeze and separate, causing a spill of pumpback fluid west of the tailings impoundment and north of the road connecting the Mill Area with the tailings impoundment. In addition, freezing of the line from TMW-57 during the same time period caused some pumpback water to spray out of the line depositing ice on surrounding vegetation and on the ground in the vicinity of TMW-57.

The following pertains to the incident:

Spill Description	**TMWs-96 and 97**	
	Date:	***Time:***
Start:	6-Dec-09	23:30
Stop:	7-Dec-09	11:30
Estimated Duration:	720	minutes
Flow Rate of TMW-96:	3.96	gallons per minute
Flow Rate of TMW-96:	8.98	gallons per minute
Total Flow Rate in Pipe:	12.94	gallons per minute
Estimated Volume Released:	9316.8	gallons

Radionuclides:

	Table 2 Effluent Concentration (pCi/L)	**TMW-96 Concentrations (pCi/L)**	**TMW-97 Concentrations (pCi/L)**	**Estimated Fluid Concentration (Adjusted for Flow Rates) (pCi/L)**	**Fractional Concentration**
Natural uranium:	300	49.0	20.9	29.5	0.0983
Radium-226	60	4.4	3.5	3.8	0.0629
Radium-228	60	8.0	7.4	7.6	0.1264
Thorium-230	100	0.2	0.2	0.2	0.0020
Sum of Fractions:					0.2896

Spill Description	**TMW-57**	
	Date:	**Time:**
Start:	6-Dec-09	23:30
Stop:	7-Dec-09	11:30

Estimated Duration:	720	minutes
Flow Rate of Well:	Spray from hole in pipe	
Estimated Volume Released:	<1,000.	gallons

Radionuclides:

	Table 2 Effluent Concentration (pCi/L)	TMW-57 Concentrations (pCi/L)	Fractional Concentration
Natural uranium:	300	3.5	0.0117
Radium-226	60	2.7	0.0450
Radium-228	60	5.6	0.0933
Thorium-230	100	0.2	0.0020
Sum of Fractions:			0.1520

Notes:

Concentrations based on most recent samples collected from the wells
The fluid on the ground was sampled, analytical results are pending.
The concentrations of radionuclides in the fluid are below the limits in 10 CFR 20 Appendix B Table 2 - Effluent Concentrations
The spills did not enter any drainages.
The spills occurred entirely on private land owned by the licensee.
The spills occurred within the site's fenced area so there is no public access to the spill area.
All spilled fluid pooled on the ground surface and froze in place.
All spilled fluid accumulated above the plume in the underlying aquifer.
The affected areas will be surveyed on Monday, December 14, 2009.
The spills will be documented in the site's 40.36 File.

Oscar Paulson
Facility Supervisor
Kennecott Uranium Company
Sweetwater Uranium Project
P.O. Box 1500
42 Miles Northwest of Rawlins
Rawlins, Wyoming 82301-1500

Telephone: (307)-324-4924
Fax: (307)-324-4925
Cellular: (307)-320-8758

E-mail: oscar.paulson@riotinto.com

Paulson, Oscar (CCC)

From: Paulson, Oscar (CCC)
Sent: Thursday, February 04, 2010 3:56 PM
To: 'Webb, James'
Cc: Schutterle, Shelley (CCC); Haag, Kelly (RTEA-Temp)
Subject: Removal of Frozen Spilled Pump Back Water

James Webb:

The frozen pump back water from the spill that occurred on December 7, 2009 has been removed. Removing it while still frozen has proven to be the best option.

Oscar Paulson

Facility Supervisor
Kennecott Uranium Company
Sweetwater Uranium Project
P.O. Box 1500
42 Miles Northwest of Rawlins
Rawlins, Wyoming 82301-1500

Telephone: (307)-324-4924
Fax: (307)-324-4925
Cellular: (307)-320-8758

E-mail: oscar.paulson@riotinto.com

Appendix 2

2009 Inspection of Diversion Channel

Kent Bruxvoort Consulting Engineers

June 1, 2009

Oscar Paulson
Sweetwater Uranium Facility
Kennecott Uranium Company
P.O. Box 1500
Rawlins, WY 82301-1500

RE: 2009 INSPECTION OF DIVERSION CHANNEL

Dear Oscar:

Overview. On May 29, 2009, I inspected the Sweetwater Uranium Project diversion channel, located east of the tailings impoundment, which was designed to divert Battle Spring Draw runoff around the impoundment during facility operations and standby. It will be modified, or a new channel constructed, during site reclamation to divert Probable Maximum Precipitation runoff around the tailings. I have performed the annual inspections since 1994 and have documented the characteristics of the diversion channel, considering both larger and smaller scale processes in bed and bank erosion or deposition. The objective of the inspection is to determine whether the channel is performing as designed and whether any maintenance is required to allow the channel to continue functioning as designed.

The discussion below is organized by the five relatively unique channel reaches observed to have formed within the channel since its construction in 1980. The attached Figure 1 is an aerial photograph of the channel downloaded from Google Earth; the aerial photo was taken in July, 2006. The berm located to the west of the channel is comprised of soil material excavated from the channel. The berm serves no hydraulic purpose. It is essentially a spoil pile created during channel construction. Nonetheless, the berm is a stable feature—erosion from the sides of the berm is negligible and native vegetation is growing across the entire berm.

Reach 1. This most upstream reach is about 350 feet in length and is characterized by the deposition of sand (Photograph 1) derived from the headcutting that has occurred at the entrance to the channel (see Photograph 2). The amount of headcutting appears similar to that observed in 2008. An estimated 3 feet of sediment is deposited near the upstream end of the reach, and a total of about 580 cubic yards of sandy sediment is estimated to be deposited within this reach. The banks of the channel in this reach, with the exception of the entrance itself, are stable.

Reach 2. The second reach, progressing downstream, is approximately 150 feet in length. It has a shallow, low-flow channel that meanders across the channel bottom. This reach has more vegetation on the bed than the first reach, which provides some control against erosion (Photograph 3). The banks in this reach exhibit only minor erosion.

Reach 3. This middle reach is about 470' long, has the greatest percentage of channel bed covered by vegetation, and has no low flow channel (see Photograph 4). The banks of this reach have two to three specific locations where storm water or snowmelt runoff enters the channel, creating some rill erosion, with consequent local fan deposition of bank sediments.

Reach 4. Reach 4 is about 460 feet in length. It has experienced some minor rill erosion along the banks where local runoff enters the channel. It has less bed vegetation that Reaches 2 and 3, and has a shallow low flow channel (Photograph 5).

Reach 5. This most downstream reach, about 470 feet in length, begins near the location of an isolated sandstone outcrop. This outcrop acts as a sort of erosional benchmark; if it were to be buried this would be evidence of deposition, and if it were to become more exposed this would be evidence of scour. The outcrop remains little changed from previous observations. Reach 5 has more grass in its bed and little evidence of a low flow channel (Photograph 6). The bed material is more clayey than elsewhere, which may be evidence of some minor deposition as the channel transitions to its outlet. The banks are shorter in this reach, and exhibit localized, minor rill erosion.

Bank Erosion. Bank erosion throughout the length of the diversion channel occurs as localized rilling where runoff flows into the channel. Broader, lateral migration from flows within the channel is not occurring. Photographs 7 through 12 show examples of the localized bank erosion (stationing is indicated in these photo captions—0+00 is at the upstream end). At a few locations along the east bank, it appears that bank erosion is more a result of cattle traffic than of flowing water (Photograph 9 for example).

Conclusion. Little evidence of change in the channel's form has been observed from 2008 to 2009, either in terms of vertical adjustment of the channel bed or in terms of lateral movement of the channel's banks. The diversion channel's capacity has not decreased measurably since its construction, and the channel is expected to continue to operate as designed. If you have any questions, please do not hesitate to contact me.

Best regards,

KBC Engineers

Kent Bruxvoort

Kent Bruxvoort
Wyoming PE #6645

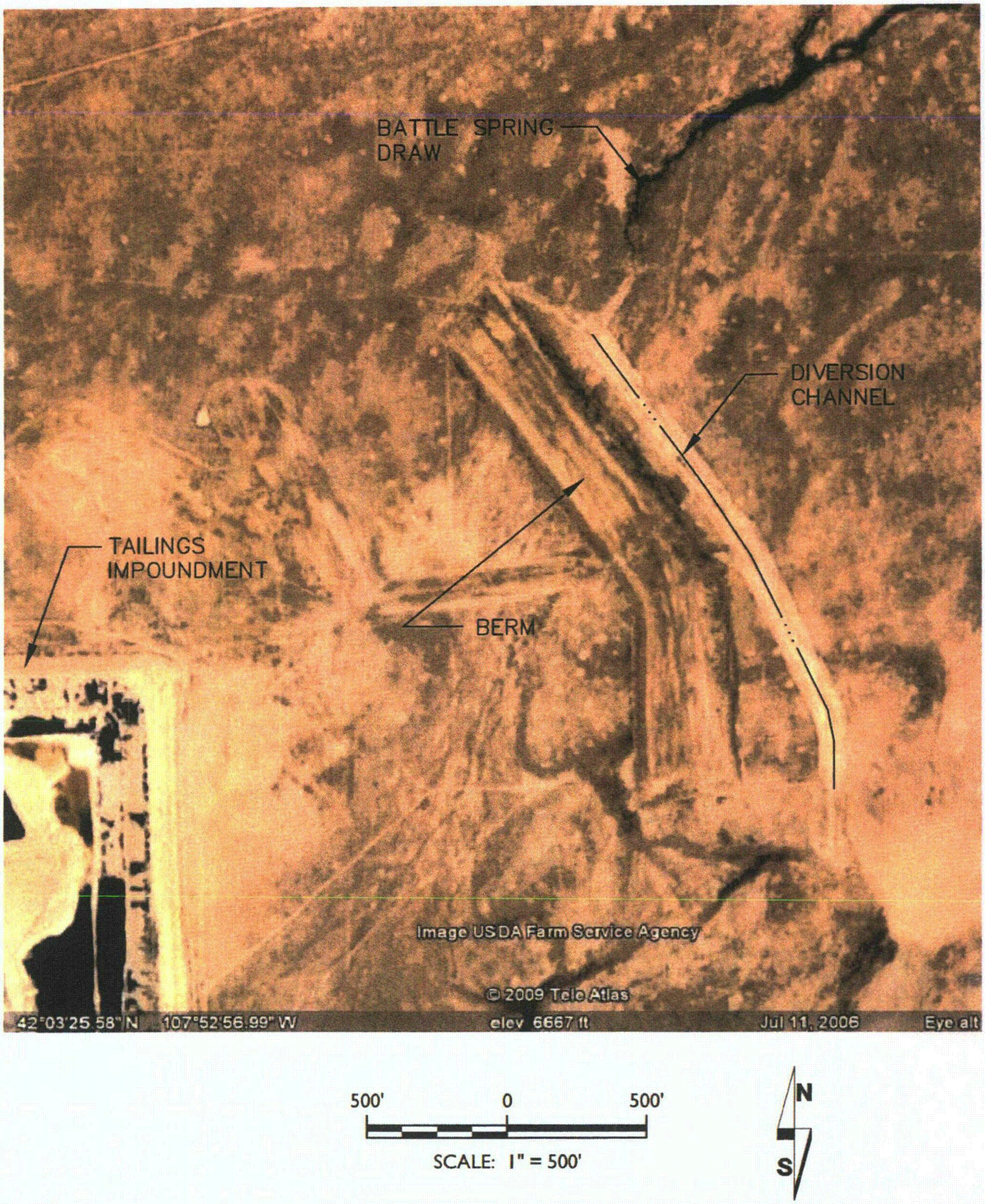
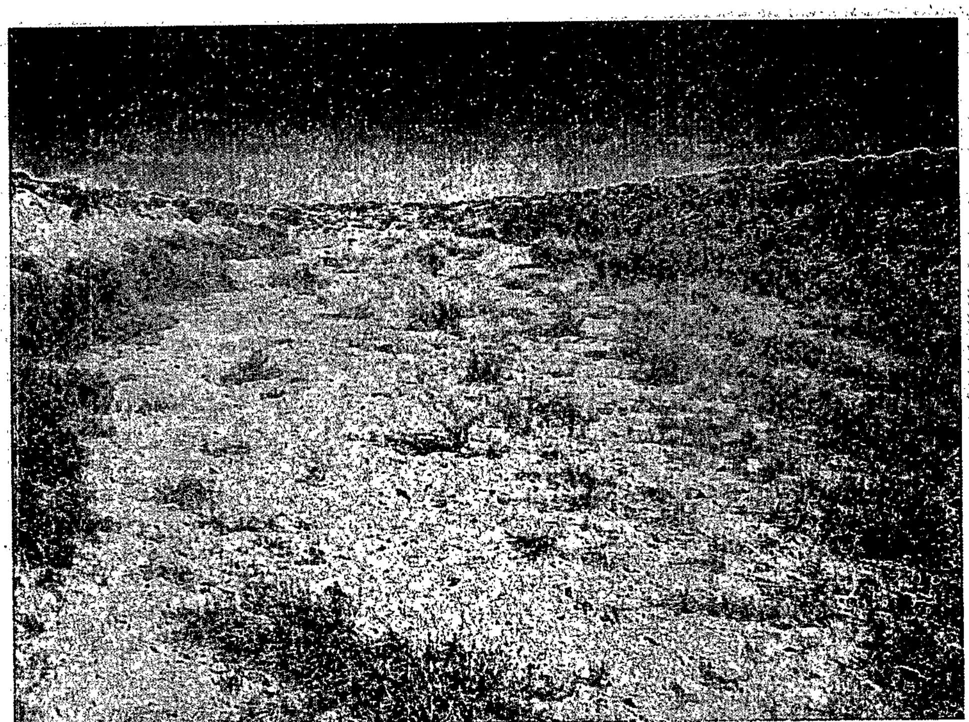
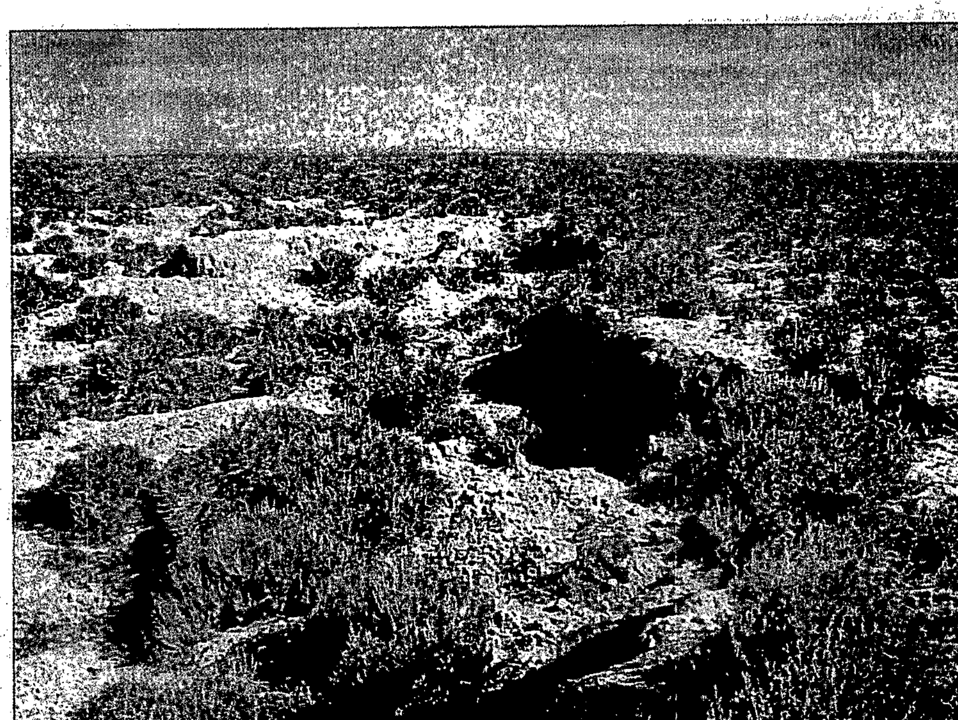


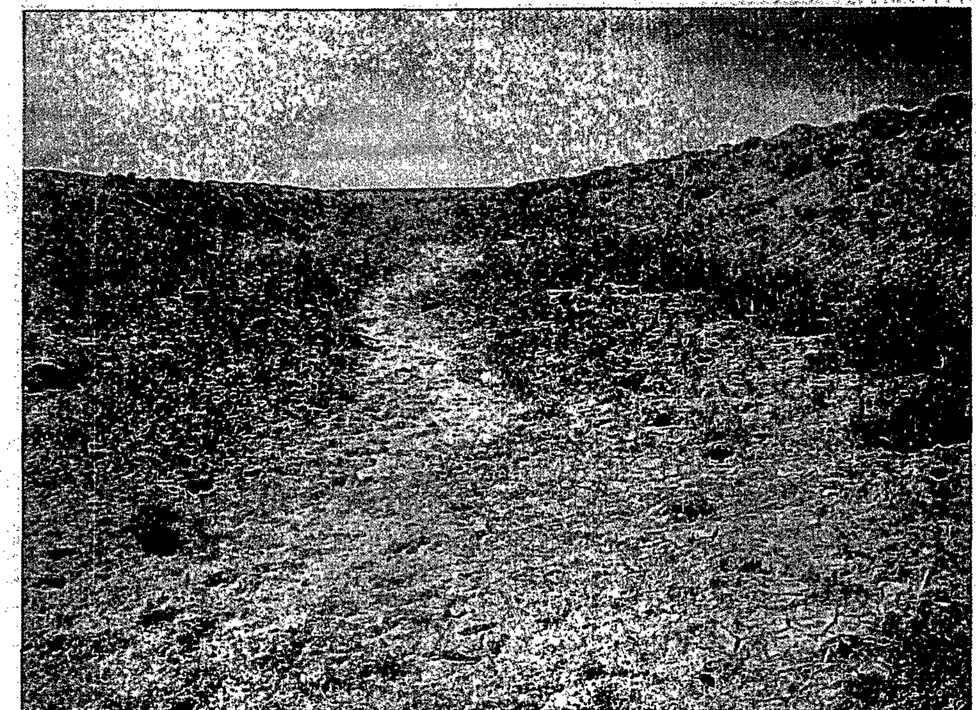
FIGURE	SWEETWATER URANIUM FACILITY	kbc	DATE: JUN 2009
1	AERIAL PHOTO, DIVERSION CHANNEL		PROJECT NO.: RioT0901
			DRAWN BY: KJB

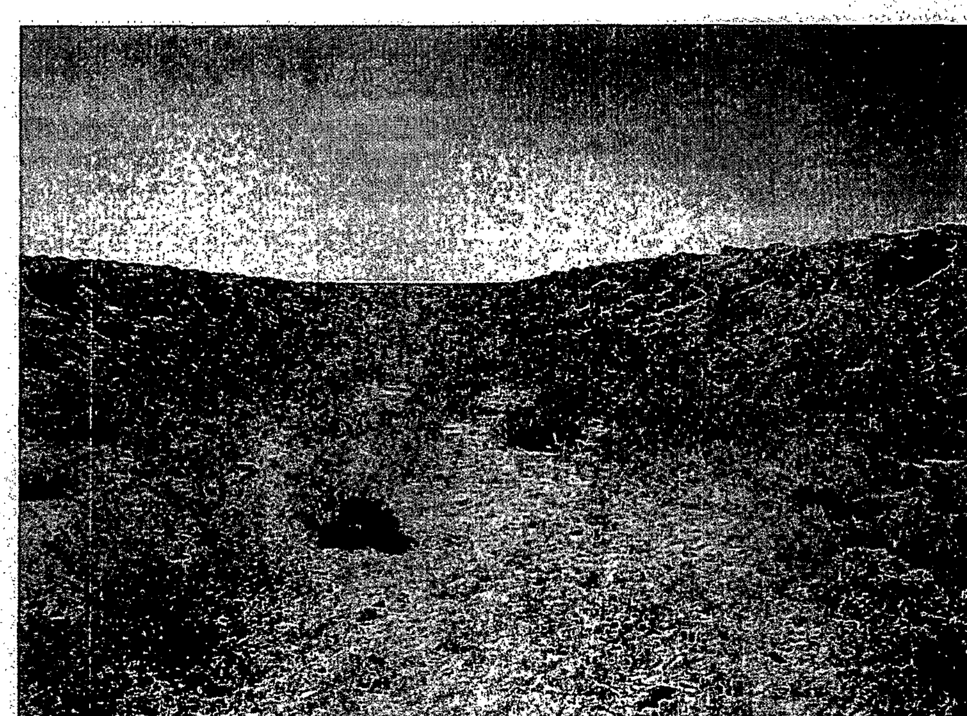


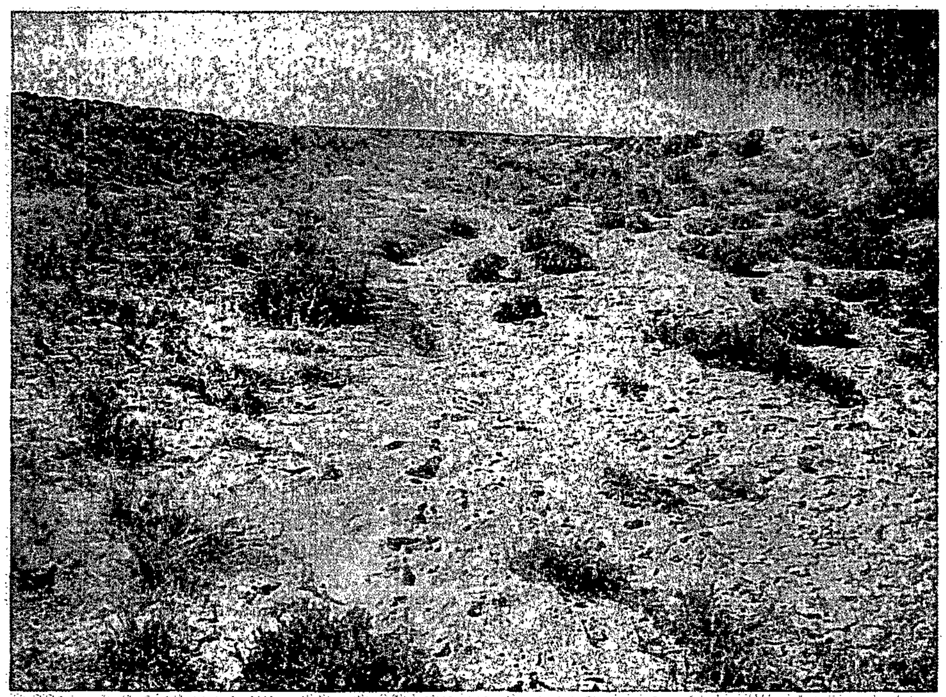
Photograph 1. Depositional reach, Reach 1, looking upstream.



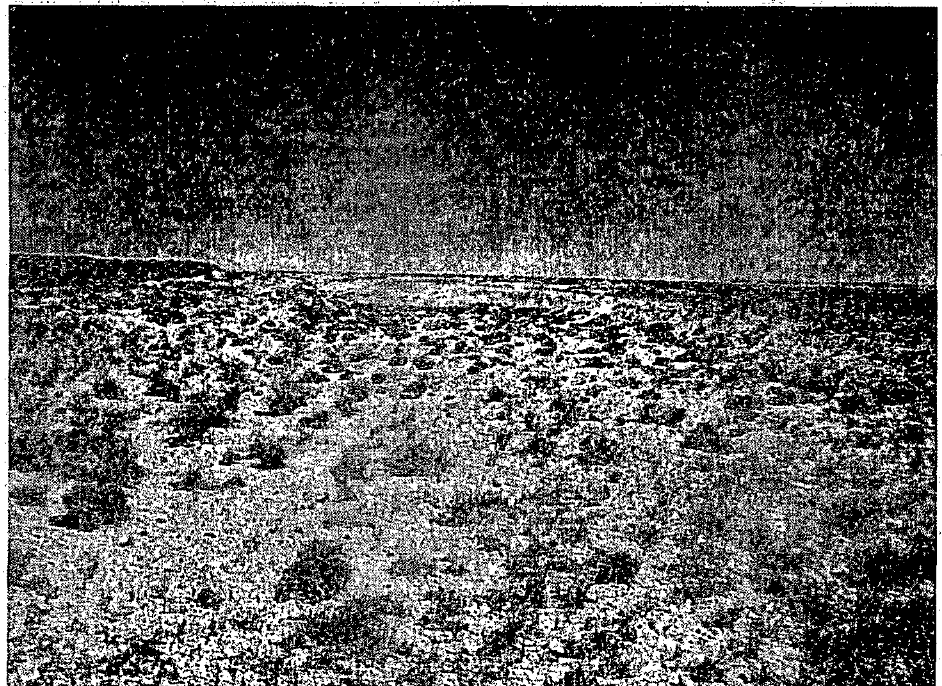
Photograph 2. Headward erosion at channel entrance, looking northeast.


Photograph 3. Reach 2; note low-flow channel, looking downstream.

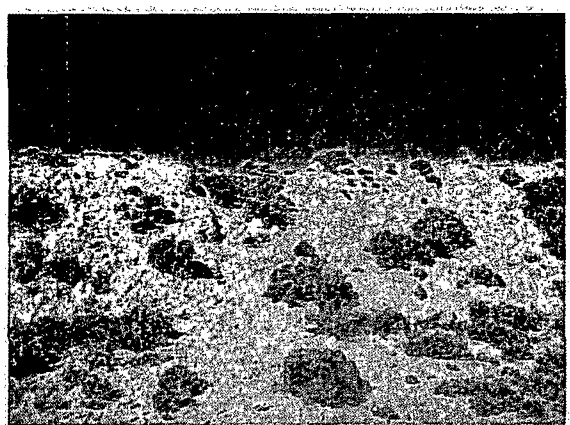

Photograph 4. Reach 3; note bed vegetation, looking downstream.



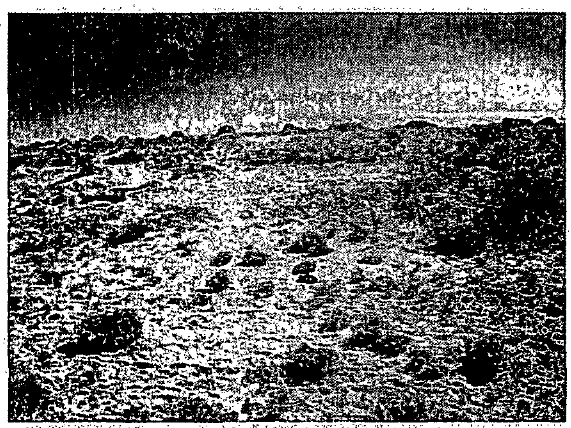
Photograph 5. Reach 4, less vegetation and shallow low flow channel, looking downstream.



Photograph 6. Downstream-most reach, Reach 5, looking upstream from near channel outlet.


Photograph 7. West bank, Station 6+00.


Photograph 8. East bank, Station 6+00.


Photograph 9. East bank, Station 8+00.


Photograph 10. East bank, Station 10+00.


Photograph 11. East bank, Station 11+40.


Photograph 12. West bank, Station 16+00.

Appendix 3

2009 Inspection of Tailings Impoundment Embankments

Kent Bruxvoort Consulting Engineers

June 2, 2009

Oscar Paulson
Sweetwater Uranium Facility
Kennecott Uranium Company
P.O. Box 1500
Rawlins, WY 82301-1500

RE: 2009 INSPECTION OF TAILINGS IMPOUNDMENT EMBANKMENTS

Dear Oscar:

Introduction. On May 29, 2009 I inspected the tailings impoundment embankments at the Sweetwater Uranium Facility, both inside and outside the impoundment. These observations were performed so that any conditions affecting performance of the embankments could be noted, and rectified by the licensee.

Embankments Observation. I observed the exterior of the four tailings embankments by driving slowly around its exterior perimeter, and walking to those portions of the embankments that could not be reached by vehicle or that required closer observation, and observed the interior by driving slowly along the entire impoundment crest. The tailings regrading effort that occurred in 2007 and 2008, and that will continue in 2009, has lowered the formerly elevated, beach portions of the tailings and has resulted in the installation of a number of pools internal to the impoundment. This has enhanced evaporation of tailings fluid as well as water from the Battle Spring Draw Aquifer which is being pumped into the impoundment as part of the facility's Corrective Action Program. The elevations of fluids in the impoundment are well below the surrounding ground elevations, which vary from approximately 6,635 feet above mean sea level at the impoundment's southwest corner to 6,660 feet at its northeast corner. Consequently, there is almost no potential for tailings fluid to escape through the embankments, even in the event of a hypothetical, catastrophic failure of an embankment.

The embankment ranges in height at its exterior perimeter from about 25 feet at its northeast corner to about 50 feet at its southwest corner. No significant evidence of either settlement or displacement of the embankment was observed during the May 2009 field visit. Some rilling of the exterior surface has occurred, primarily along the west, south, and east sides of the exterior embankment. Two to three rills on each of the west, south and east sides were observed, but none extend to a point at which the crest may be compromised. Nonetheless, existing rills should continue to be monitored and repaired at any point at which a rill may extend to the crest.

Photographs 1 and 2 were taken of the north embankment and show the evenness of the crest. Photographs 3 and 4 of the east embankment show rilling that has developed along the external edge of the embankment. Photographs 5 and 6 show the south embankment. Photographs 7 and 8 are of rilling along the west embankment. Photograph 7 shows a rill toward the northern end of the western embankment which especially should be watched. While this rill does not currently extend to the crest, it should be monitored during 2009 and repaired if it enlarges any further to the point where it may extend to and potentially erode a portion of the crest.

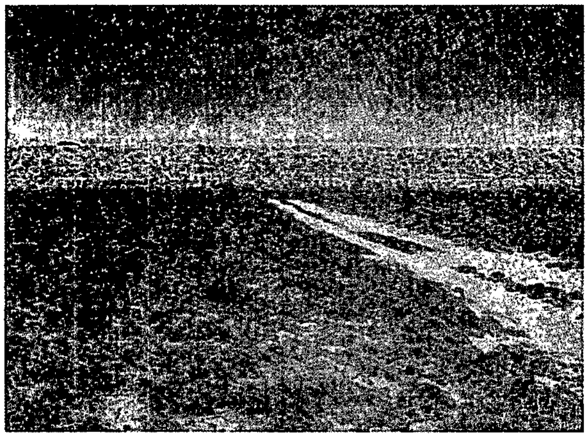
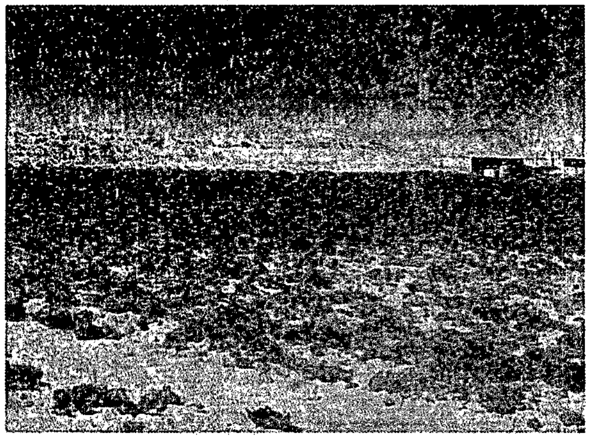
If you have any questions regarding this inspection and any observations or recommendations, please do not hesitate to contact me.

Best regards,

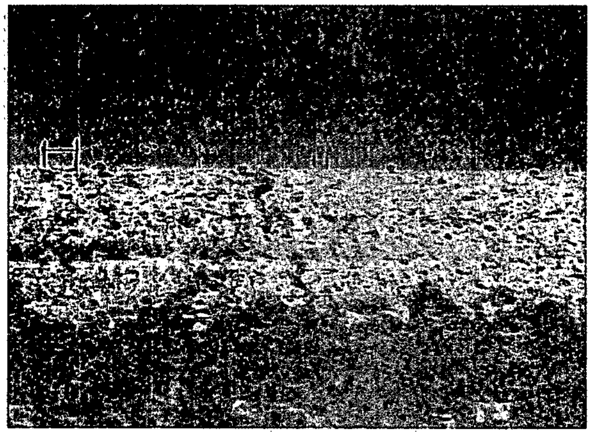
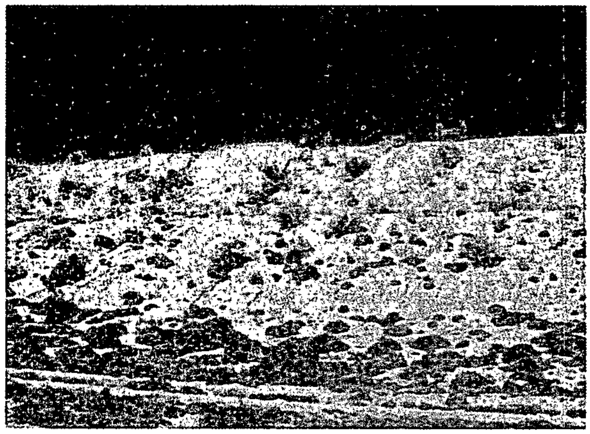
KBC Engineers

Kent Bruxvoort

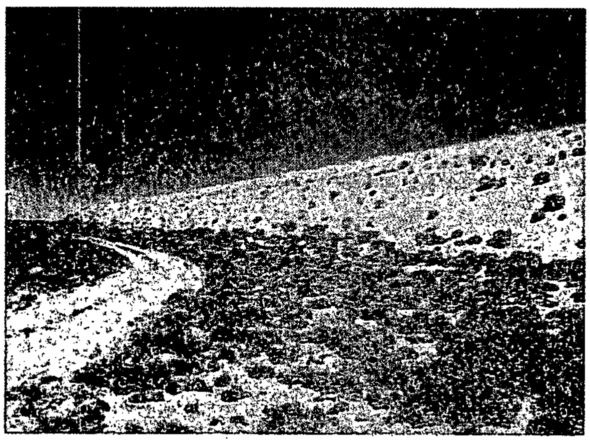
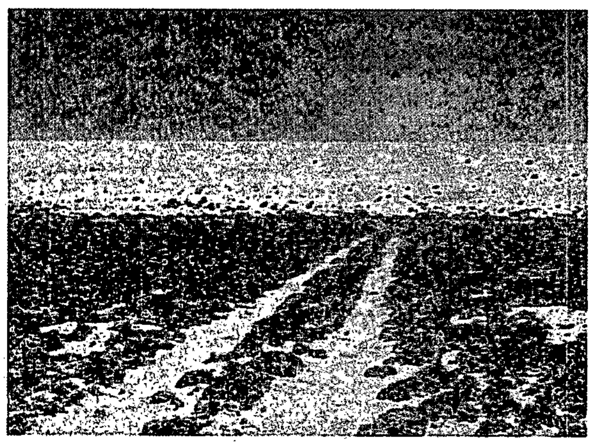
Kent Bruxvoort
Wyoming PE #6645

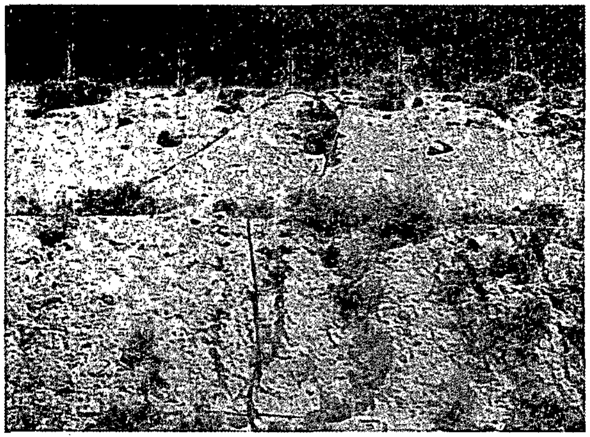
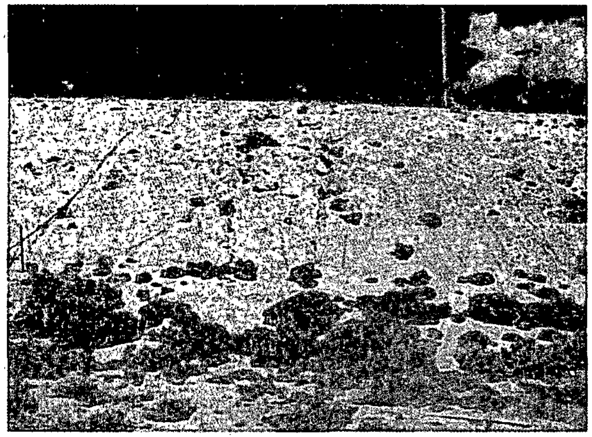
Photographs 1 and 2. Exterior of the north embankment.

Photographs 3 and 4. Exterior of the east embankment, showing some external rilling.

Photographs 5 and 6. Exterior of the south embankment.

Photographs 7 and 8. Rilling along the western embankment; the rill in Photo 7 (on the left) should be monitored to ensure that it does not expand to compromise the crest.

Appendix 4

2009 Inspection of Tailings Impoundment Liner

Kent Bruxvoort Consulting Engineers

June 16, 2009

Oscar Paulson
Sweetwater Uranium Facility
Kennecott Uranium Company
P.O. Box 1500
Rawlins, WY 82301-1500

RE: 2009 INSPECTION OF TAILINGS IMPOUNDMENT LINER

Dear Oscar:

On May 29, 2009 I inspected specific details of the Sweetwater Uranium Project's tailings impoundment liner, per recommendations in a July 13, 1979 letter report from D'Appolonia Consulting Engineers, Inc. D'Appolonia's letter report recommended inspection as follows:

> "Annual inspection (by a registered engineer and by a person not involved with the daily inspection) should be made to assess the soil cover at the top of the dike (and at the bench until it is covered by water), assure that the membrane is not being pulled from the trenches, assure that chemical or physical action is not exposing the scrim in the Hypalon, and evaluate the general character of the Hypalon, particularly significant decrease in membrane plyability."

From February 2006 through May 2007 an estimated total of 230,000 cubic yards of additional 11(e).2 soils from the vicinity of the facility's catch basin were placed near the northeast portion of the impoundment. A ramp was constructed from the west embankment in the center of the impoundment to allow access to the tailings surface. Additionally, during the latter half of 2007 and in 2008 the tailings surface and the additional 11(e).2 soils were regraded. In this tailings regrading effort, beach sands were moved from the elevated western edge of the impoundment to the lower eastern portion of the impoundment. This effort resulted in substantial progress toward meeting tailings management objectives: regrading the tailings to achieve a more regular surface in anticipation of either reclamation or future tailings storage; leveling the tailings to create a surface that is entirely below the bench, more sheltered from wind, and easier to keep moistened; covering the tailings to limit wind erosion potential; and creating stable, flat, bermed areas as evaporation lagoons for tailings dewatering.

Photographs 1 through 6 depict the condition of the impoundment observed on May 29, 2009. The attached Figure 1 presents the existing topography of the tailings impoundment (surveyed December 2008), and indicates the progress which has been made toward creation of the evaporation lagoons. Originally, 20 discrete cells were anticipated to be laid out. As of the date of the inspection, 13 evaporation lagoons were completed (1-0, 1-W & 1-E, 2-E, 3W & 3E, 4E, 5W & 5E, 6W & 6E, 8-E, and 9-W). Each lagoon is lined with a single Hypalon liner to limit the amount of water that could infiltrate into the tailings which would have to be pumped from

204 Walnut Street, Suite F, Fort Collins, CO 80524 • office: 970.416.8382 • fax: 970.416.8392

the free pool back into the lagoons. An additional two evaporation lagoons are scheduled for completion in 2009 (2W and 4W). Of the remaining five cells, 7W & 8W are composed of significant percentages of slimes tailings and are not scheduled for lining in the near future, but are moistened or flooded for wind erosion control and evaporation; 7E & 9E are located in the southeast corner where the free water pool is located; and the northwestern most cell is dedicated to storage of equipment contaminated as part of source material processing.

In regrading the tailings, the surface has been everywhere lowered to elevations below the surrounding native ground. The surfaces of the lagoons range in elevation from 6,625 feet to 6,632 feet, with bench elevations up to about 6,635 feet. At the southwest corner, the bench elevation of about 6,630 feet is four feet lower than the elevation of the native ground adjacent to the toe of the southwest corner of the impoundment. At the northeast corner, the bench elevation of about 6,634 feet is 22 feet lower than the elevation of the native ground adjacent to the outside toe of the impoundment.

The visual inspection was performed by driving slowly around the crest of the impoundment, and by walking along the bench. Large portions of the liner have been damaged between the crest and the bench on all four sides of the impoundment, and below the bench on portions of the east and north embankments. Past failure of the liner has been documented elsewhere.

Tailings/Fluid Surface to Bench. The liner has been damaged below the bench along the east and north embankments. However, the liner within five vertical feet of the tailings or tailings fluid surface has been maintained intact, with one exception at the time of inspection: a portion of liner was in the process of repair just to the north of the ramp on the west embankment. The liner remains, by observation, plyable. There is no evidence of exposed scrim by either physical or chemical means. Photograph 1 depicts the liner below the bench in the southeast corner of the impoundment, near the free water pool. Photographs 2a and 2b depict typical liner repairs.

Bench. The bench, after tailings regrading, is everywhere exposed (except where under the ramp). The bench is observed to be functioning as designed only along the western half of the impoundment (Photograph 3 depicts the bench along the west half of the south embankment). Elsewhere the key trench along the bench is rendered as non-functioning due to tears of the liner or erosion of embankment soils that has billowed the liner at the bench.

Bench to Crest. Between the bench and the crest of the impoundment, the liner is functional only in the impoundment's northwest corner: along the west half of the north embankment (Photograph 4) and the north half of the west embankment. Everywhere else the liner has been significantly torn and is in many places non-existent. However, efforts were made in 2008 to improve the surface of exposed soil eroded during the 1980s when the liner had failed. The soil has been smoothed along the east embankment (Photograph 5) and along portions of the north and west embankments. This effort has provided a significant visual upgrade of the embankments and will facilitate potential future lining and re-use of the impoundment.

Crest. A key trench that is functioning as designed only exists in those areas where the liner still exists: along the west half of the north embankment, and the north half of the west embankment.

The crest appears to be graded when needed and is relatively smooth for safe vehicle traffic and is unimpacted by erosion from the outside edges of the embankments.

Fluid Levels. Fluid into the impoundment includes precipitation and groundwater pumped as part of the facility's Corrective Action Program. Evaporation from the impoundment, both naturally and through the enhanced evaporation system employed by the Sweetwater staff, has helped to offset these fluid inputs, as shown in Table 1 below. During 2008 a total of 24,034,020 gallons of groundwater were pumped into the impoundment. However, the tailings regrading effort of 2007/2008 also raised the elevation of the tailings surface below the free pool, displacing much of the pool volume. Consequently, elevations of the pool surface measured prior to 2008 cannot be compared to post-2008 elevations without taking into account the tailings regrading. Note in Table 1 how the water surface of the pool rose in late 2007, and has stabilized at an elevation of about 6,620 feet.

Table 1. Summary of Tailings Impoundment Fluid Levels

End-of-Year Measurement Date	Fluid Elevation, Pool Surface
November 19, 1987	6636.32
October 31, 1988	6632.03
November 20, 1989	6628.96
November 11, 1990	6626.58
October 7, 1991	6624.55
November 5, 1992	6622.20
October 11, 1993	6621.05
October 10, 1994	6618.90
October 3, 1995	6619.15
October 3, 1996	6617.90
October 16, 1997	6616.80
September 14, 1998	6616.55
November 17, 1999	6614.56
November 9, 2000	6610.80
November 19, 2001	6611.40
November 5, 2002	6607.10
October 6, 2003	6606.80
October 14, 2004	6608.70
September 5, 2005	6605.50
September 19, 2006	6608.70
October 16, 2007	6609.30
December 14, 2007	6618.37
October 31, 2008	6620.21
June 4, 2009	6619.70

Evaporation. Pan evaporation data have been collected at the project's weather station and were presented in the August 5, 1994 Revised Environmental Report, listing average annual evaporation at 5.44 inches and average annual pan evaporation at 60.7 inches. However, the listed pan evaporation rate did not accurately take into consideration measurement techniques. From about April through October, water was added to the pan and decreases in pan water levels were noted. The precipitation that fell into the pan during that period of time was not noted, but certainly added to the total amount of evaporated water. Thus, an adjustment must be made. Since the average precipitation during the months of April through October is 4.43 inches (Table 2.8-7 of the Revised Environmental Report), the better estimate for pan evaporation would be 65.1 inches (60.7 inches of evaporated water replaced by staff into the pan plus 4.4 inches of average precipitation falling into the pan during the affected months).

A range of potential evaporation rates was estimated from the site's pan evaporation data, using multipliers of 0.7 (for typical lake evaporation) to 1.0 (for near optimum evaporative conditions). The evaporative capacity (using 65.1 inches of pan evaporation) was estimated to be between 27,876,000 and 39,822,000 gallons per year for the 22.53 acres within the current 13 evaporation lagoons, which is in excess of the maximum amount of groundwater which may be pumped into the impoundment as part of the Corrective Action Program (25,000,000 gallons). Combined with the approximately 9,483,000 gallons of meteoric water added to the impoundment (5.44 inches per year into the 64.2-acre impoundment), the evaporative capacity of the impoundment is in approximate stasis with the amount of water added to the impoundment each year.

Conclusions. Above the bench, the liner is only intact and functional in the northwest corner of the impoundment, and in this area the key trench at the crest remains functional. The liner along the bench and the seam at the bench is functional along the west half of the impoundment. The liner is maintained and repaired where necessary within five vertical feet of the tailings or tailings fluid around the entire perimeter of the impoundment. The liner remains, by observation, plyable. There is no evidence of exposed scrim by either physical or chemical means.

Placement of the additional 11(e).2 soils from the catch basin area into the tailings impoundment, regrading of the tailings surface, maintenance and repair of the liner within five vertical feet of the tailings, and completion of lined evaporation lagoons all provide significant measures to manage the tailings: limiting potential for fluid to escape through the damaged liner, limiting potential for windblown tailings, lowering the surface of the tailings to a level everywhere below the surrounding native ground surface, promoting consolidation in the eastern half of the impoundment, and enhancing evaporation. Additionally, the measures taken in 2008 to improve the inside side slopes of the embankments has significantly improved the impoundment visually, and created a surface that will better allow potential future re-use of the impoundment.

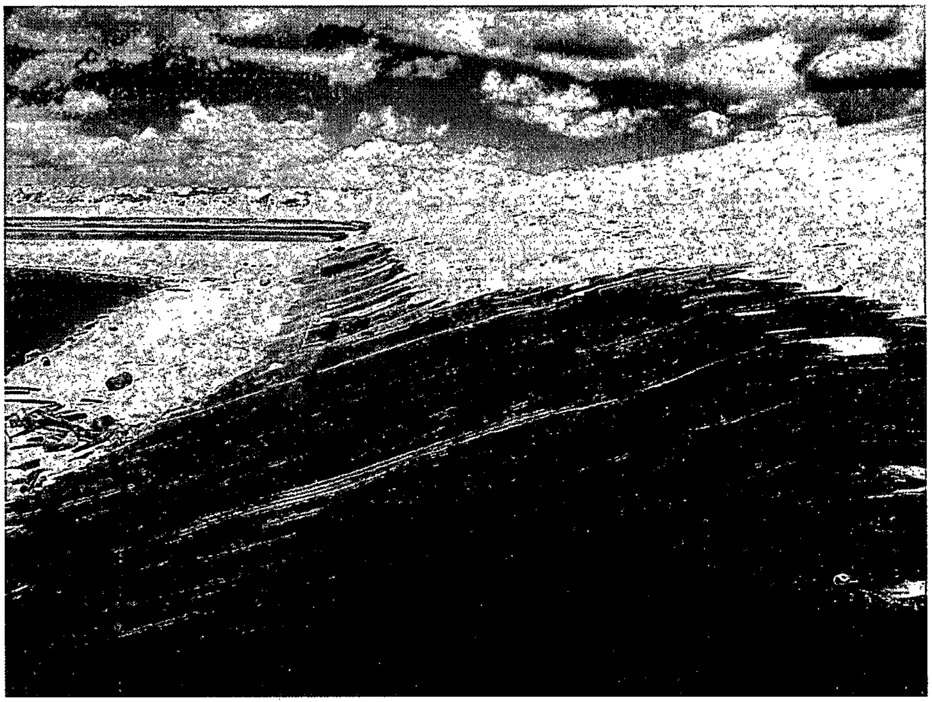
If you have any questions regarding this inspection and any observations or recommendations, please do not hesitate to contact me.

Best regards,

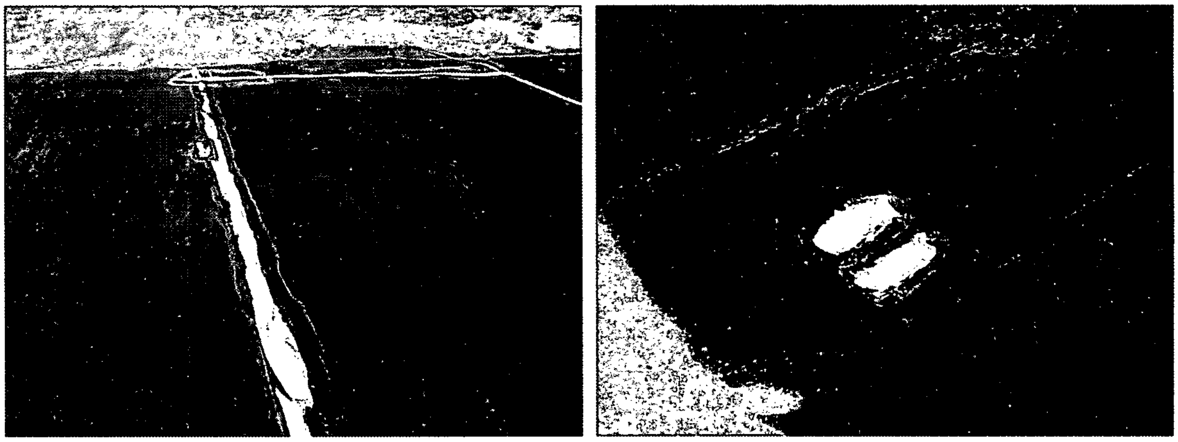
KBC Engineers

Kent Bruxvoort

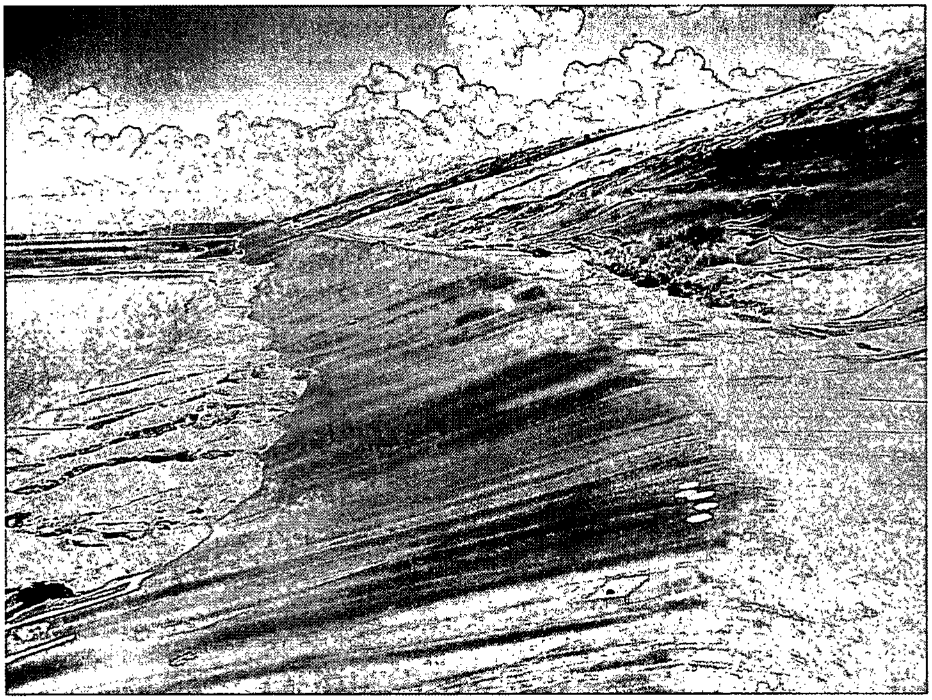
Kent Bruxvoort
Wyoming PE #6645



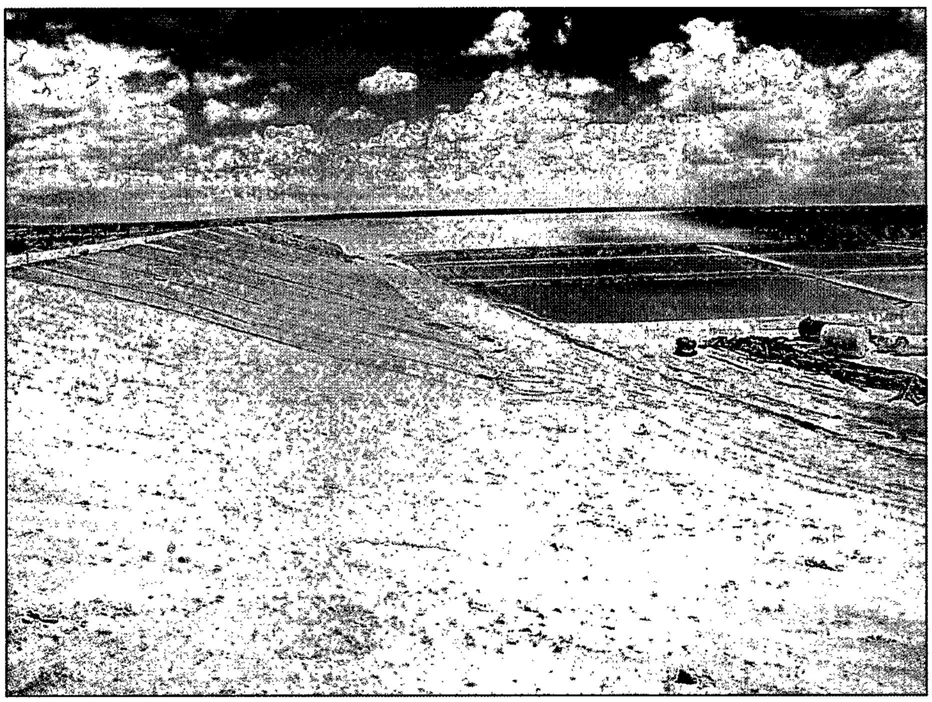
Photograph 1. Liner below bench, southeast corner near free water pool.



Photographs 2a and 2b. Repaired liner segments.



Photograph 3. Bench, south embankment.



Photograph 4. West half of north embankment; functional liner between bench and crest; also note evaporation lagoons on tailings surface.

Photograph 5. East embankment, improved (smoothed) surface.

Photograph 6. North embankment, partially improved.

TABLES

TABLE 1

GALLONS PUMPED TO TAILINGS IMPOUNDMENT

WELL:	TYPE:	April 1, 1986 to April 1, 1987	April 1, 1987 to April 1, 1988	April 1, 1988 to April 1, 1989	April 1, 1989 to April 1, 1990	April 1, 1990 to January 1, 1991	January 1, 1991 to December 1, 1991	December 1, 1991 to December 31, 1992	December 31, 1992 to December 31, 1993	December 31, 1993 to December 31, 1994
TMW 7	Aquifer									
TMW 16	Aquifer		973,474.00	1,669,570.00	1,012,740.00	824,139.00	375,942.00	825,270.00	1,202,150.00	976,840.00
TMW 17	Aquifer	3,652,911.00	3,699,987.00	3,096,627.00	2,289,813.00	2,526,771.00	5,248,474.00	5,988,820.00	4,284,690.00	4,387,290.00
TMW 18	Aquifer	743,540.00	1,612,795.00	3,125,776.00	4,329,036.00	4,286,378.00	5,905,911.00	5,262,910.00	5,019,830.00	5,307,990.00
TMW 55	Perch				**101,875.00**					
TMW 57	Aquifer									
TMW 58	Aquifer									2,713,490.00
TMW 59	Aquifer			277,190.00	1,035,242.00	1,262,117.00	2,237,358.00	2,478,090.00	1,528,780.00	2,356,260.00
TMW 65	Perch		*							
TMW 75	Aquifer			2,296,870.00	1,898,236.00	1,161,418.00	2,228,506.00	6,747,830.00	2,031,570.00	2,761,170.00
TMW 76	Perch	43,293.00	*							
TMW 79	Perch	39,875.00								
TMW 80	Perch	56,675.90	*	**53,655.00**						
TMW 83	Perch		**241,028.00**	*	*					
TMW 85	Perch	2,266.30								
TMW 91	Aquifer									
TMW 96	Aquifer									
TMW 97	Aquifer									
Bison Basin	Disposal				561,120.00					
GMIX	Disposal									
Subtotal:		4,538,561.20	6,527,284.00	10,519,688.00	11,228,062.00	10,060,823.00	15,996,191.00	21,302,920.00	14,067,020.00	18,503,040.00
Cumulative Gallons Pumped:			11,065,845.20	21,585,533.20	32,813,595.20	42,874,418.20	58,870,609.20	80,173,529.20	94,240,549.20	112,743,589.20

** **Bold** number is combined total of this well plus wells marked by asterisk.*

TABLE 1

GALLONS PUMPED TO TAILINGS IMPOUNDMENT

WELL:	TYPE:	December 31, 1994 to December 31, 1995	December 31, 1995 to December 31, 1996	December 31, 1996 to December 31, 1997	December 31, 1997 to December 31, 1998	December 31, 1998 to December 31, 1999	December 31, 1999 to December 31, 2000	December 31, 2000 to December 31, 2001	December 31, 2001 to December 31, 2002
TMW 7	Aquifer								
TMW 16	Aquifer	1,916,500.00	2,114,160.00	1,821,300.00	1,819,410.00	1,500,750.00	1,234,950.00	1,939,100.00	955,970.00
TMW 17	Aquifer	3,875,680.00	3,534,560.00	2,406,940.00	1,882,910.00	1,597,310.00	3,436,750.00	1,530,080.00	991,590.00
TMW 18	Aquifer	3,760,740.00	4,577,190.00	3,945,330.00	5,361,630.00	5,454,370.00	5,449,610.00	5,669,760.00	6,099,470.00
TMW 55	Perch								
TMW 57	Aquifer							1,958,380.00	2,165,880.00
TMW 58	Aquifer	3,853,980.00	3,450,330.00	3,680,030.00	2,558,000.00	3,081,960.00	2,854,470.00	2,312,330.00	1,738,740.00
TMW 59	Aquifer	2,307,730.00	2,048,600.00	2,099,550.00	2,236,360.00	2,148,390.00	2,231,660.00	1,953,690.00	1,654,000.00
TMW 65	Perch								
TMW 75	Aquifer	2,434,410.00	2,837,230.00	2,211,080.00	2,076,280.00	1,792,490.00	2,782,610.00	2,734,650.00	2,551,680.00
TMW 76	Perch								
TMW 79	Perch								
TMW 80	Perch								
TMW 83	Perch								
TMW 85	Perch								
TMW 91	Aquifer								
TMW 96	Aquifer								
TMW 97	Aquifer								
Bison Basin	Disposal								
GMIX	Disposal							15,000.00	
Subtotal:		18,149,040.00	18,562,070.00	16,164,230.00	15,934,590.00	15,575,270.00	17,990,050.00	18,112,990.00	16,157,330.00
Cumulative Gallons Pump		130,892,629.20	149,454,699.20	165,618,929.20	181,553,519.20	197,128,789.20	215,118,839.20	233,231,829.20	249,389,159.20

TABLE 1

GALLONS PUMPED TO TAILINGS IMPOUNDMENT

WELL:	TYPE:	December 31, 2002 to December 31, 2003	December 31, 2003 to December 31, 2004	January 1, 2005 to December 31, 2005	January 1, 2006 to December 31, 2006	January 1, 2007 to December 31, 2007	January 1, 2008 to December 31, 2008	January 1, 2009 to December 31, 2009	
TMW 7	Aquifer	262,880.00	3,371,090.00	2,638,080.00	2,011,900.00	2,807,610.00	2,679,730.00	1,651,640.00	15,422,930.00
TMW 16	Aquifer	1,008,140.00							22,170,405.00
TMW 17	Aquifer	1,440,200.00	2,196,440.00	2,121,860.00	1,475,180.00	2,602,950.00	4,433,800.00	3,234,660.00	71,936,293.00
TMW 18	Aquifer	5,356,710.00	4,085,050.00	4,150,670.00	4,326,090.00	4,450,800.00	3,663,220.00	3,816,850.00	105,761,656.00
TMW 55	Perch								101,875.00
TMW 57	Aquifer	1,364,700.00	1,907,680.00	2,066,070.00	2,619,800.00	2,963,350.00	1,532,830.00	1,705,610.00	18,284,300.00
TMW 58	Aquifer	2,122,770.00	2,705,370.00	1,776,710.00	2,170,120.00	821,270.00	508,430.00	2,316,780.00	38,664,780.00
TMW 59	Aquifer	1,754,410.00	1,741,170.00	2,233,710.00	2,312,760.00	2,829,940.00	2,577,980.00	4,056,297.00	45,361,284.00
TMW 65	Perch								-
TMW 75	Aquifer	2,249,480.00	2,175,390.00	2,351,240.00	1,088,240.00	945,160.00	1,597,030.00	1,893,450.00	50,846,020.00
TMW 76	Perch								43,293.00
TMW 79	Perch								39,875.00
TMW 80	Perch								110,330.90
TMW 83	Perch								241,028.00
TMW 85	Perch								2,266.30
TMW 91	Aquifer			4,702.00					4,702.00
TMW 96	Aquifer			1,490,620.00	3,969,900.00	3,108,420.00	2,908,420.00	1,505,790.00	12,983,150.00
TMW 97	Aquifer			1,606,540.00	4,374,660.00	3,067,380.00	4,132,580.00	1,922,030.00	15,103,190.00
Bison Basin	Disposal								561,120.00
GMIX	Disposal								15,000.00
Subtotal:		15,559,290.00	18,182,190.00	20,440,202.00	24,348,650.00	23,596,880.00	24,034,020.00	22,103,107.00	397,653,498.20
Cumulative Gallons Pump		264,948,449.20	283,130,639.20	303,570,841.20	327,919,491.20	351,516,371.20	375,550,391.20	397,653,498.20	

KENNECOTT URANIUM COMPANY

TABLE 2

MASS OF SALTS AND OTHER CONSTITUENTS REMOVED FROM THE PERCHED AND BATTLE SPRINGS AQUIFERS
AND PUMPED BACK INTO THE TAILINGS CELL
AS OF DECEMBER 31, 2009

SALTS	**TMW-7**	TMW-16	**TMW-17**	**TMW-18**	TMW-55	**TMW-57**	**TMW-58**	**TMW-59**	TMW-65	**TMW-75**	TMW-76	TMW-79	TMW-80	TMW-83	TMW-85	TMW-91	**TMW-96**	**TMW-97**	TAILS CELL
(KG)	(KG)	(KG)	(KG)	(KG)	(KG)	(KG)	(KG)	(KG)	(KG)	(KG)	(KG)	(KG)	(KG)	(KG)	(KG)	(KG)	(KG)	(KG)	(KG)
MAJOR IONS																			
Bicarbonate	12152.12	27851.82	43605.41	218644.82	0.00	9193.94	31183.02	65596.81	0.00	35756.74	0.00	0.00	0.00	0.00	0.00	2.49	6982.77	7136.70	458,106.64
Calcium	10298.01	33391.21	35230.79	237988.37	0.00	8832.38	34505.85	94351.65	0.00	33989.68	0.00	0.00	0.00	0.00	0.00	6.33	9064.75	8951.48	506,610.50
Carbonate	0.00	576.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.01	4.70	584.63
Chloride	1608.54	5014.43	5808.04	36936.92	0.00	1018.48	4143.24	13896.08	0.00	4904.83	0.00	0.00	0.00	0.00	0.00	1.01	1346.23	1208.11	75,885.91
Fluoride	2.96	2.42	33.62	6.59	0.00	10.37	14.59	20.24	0.00	26.86	0.00	0.00	0.00	0.00	0.00	0.00	5.50	8.23	131.38
Magnesium	815.35	2572.42	2203.06	15757.70	0.00	673.28	2646.41	11279.09	0.00	2630.90	0.00	0.00	0.00	0.00	0.00	0.49	646.10	673.57	39,898.37
Nitrate(NO3)	0.00	29.88	118.86	173.01	0.00	0.00	4.52	15.74	0.00	34.27	0.00	0.00	0.00	0.00	0.00	0.00	1.47	1.04	378.79
Potassium	216.04	481.94	928.52	2667.36	0.00	234.59	632.69	1193.71	0.00	704.21	0.00	0.00	0.00	0.00	0.00	0.08	196.12	204.38	7,459.64
Silica	968.75	1430.36	3677.58	8996.98	0.00	928.35	2226.46	3554.26	0.00	2936.25	0.00	0.00	0.00	0.00	0.00	0.23	658.79	784.04	26,162.05
Sodium	2963.26	7454.19	11852.57	35595.80	0.00	2813.09	7880.75	15502.81	0.00	9710.66	0.00	0.00	0.00	0.00	0.00	1.28	2479.70	2605.97	98,860.08
Sulfate	22508.24	76973.64	80568.83	481857.28	281.43	21189.95	79832.02	242066.63	407.23	75286.44	2509.88	274.72	966.02	848.22	18.02	16.37	22474.60	20985.87	1,129,065.39
TDS	45766.73	148300.36	160760.56	965726.24	456.46	40598.32	151701.30	438312.33	673.46	153941.81	4529.50	531.92	1651.65	1423.79	33.85	28.12	40838.43	40575.37	2,195,850.20
TRACE METALS																			
Aluminum	0.00	1.04	0.00	59.53	0.00	0.41	0.00	1.48	0.00	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	62.90
Arsenic	0.01	0.03	0.00	0.06	0.00	0.00	0.00	0.01	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.19
Barium	0.00	0.22	1.53	1.52	0.00	0.00	0.00	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.21
Beryllium	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
Boron	0.19	0.57	0.40	3.52	0.00	0.25	1.13	5.95	0.00	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.00	13.62
Cadmium	0.00	0.01	0.00	0.12	0.00	0.00	0.00	0.03	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
Chromium	0.00	0.43	0.59	1.90	0.00	0.04	0.22	0.22	0.04	0.01	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.48
Cobalt	0.00	0.03	0.00	0.43	0.00	0.51	0.24	2.16	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.39
Copper	0.00	0.22	0.70	0.69	0.00	0.00	0.00	0.19	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.88
Cyanide	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Iron	74.37	51.35	24.23	2505.63	0.00	20.15	59.58	5579.27	0.00	28.53	0.00	0.00	0.00	0.00	0.00	0.00	1.66	5.53	8,350.30
Lead	0.00	0.00	0.00	1.57	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.69
Manganese	19.38	35.54	20.81	412.39	0.00	9.75	28.92	611.97	0.00	22.73	0.00	0.00	0.00	0.00	0.00	0.00	5.43	6.55	1,173.47
Mercury	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Molybdenum	0.00	0.02	0.17	0.06	0.00	0.00	0.00	0.26	0.00	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.77
Nickel	0.00	0.32	0.81	2.27	0.00	0.57	0.26	2.73	0.00	0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.41
Selenium	0.00	0.06	0.11	0.43	0.07	0.01	0.13	0.16	0.18	0.12	0.41	0.03	0.25	0.22	0.00	0.00	0.23	0.01	2.42
Silver	0.00	0.27	0.56	0.48	0.00	0.00	0.00	0.06	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.39
Thallium	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vanadium	0.25	0.00	0.55	2.36	0.00	0.00	0.10	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.29
Zinc	0.18	2.94	7.32	7.56	0.00	0.80	4.00	2.82	0.00	2.58	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.02	28.26
RADIOMETRICS																			
Uranium (mg/l)	0.44	24.09	3.71	2.05	0.00	0.50	2.08	1.54	0.00	11.17	0.00	0.00	0.00	0.00	0.00	0.00	2.39	2.59	50.56

TMW-7												
CONTAMINANTS REMOVED												
(Started pumping 12/01/03)	**2009**											
DATE FS:	16-Feb-09			15-Apr-09			20-Jul-09			12-Oct-09		
		VOLUME 2009	CUMULATIVE		VOLUME 2009	CUMULATIVE		VOLUME 2009	CUMULATIVE		VOLUME 2009	CUMULATIVE
GALLONAGE		112,500.00	13,883,790.00		453,630.00	14,337,420.00		466,710.00	14,804,130.00		618,800.00	15,422,930.00
CONSTITUENTS	ANALYSIS	QUANTITY REMOVED	QUANTITY REMOVED	ANALYSIS	QUANTITY REMOVED	QUANTITY REMOVED	ANALYSIS	QUANTITY REMOVED	QUANTITY REMOVED	ANALYSIS	QUANTITY REMOVED	QUANTITY REMOVED
MAJOR IONS	(PPM)	(KG)	(KG)	(PPM)	(KG)	(KG)	(PPM)	(KG)	(KG)	(PPM)	(KG)	(KG)
Bicarbonate	211.00	89.86	10862.54	227.00	389.80	11252.34	207.00	365.70	11618.05	228.00	534.07	12152.12
Calcium	169.00	71.97	9092.48	219.00	376.06	9468.55	203.00	358.64	9827.18	201.00	470.82	10298.01
Carbonate	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chloride	35.00	14.91	1369.12	41.00	70.40	1439.53	36.00	63.60	1503.13	45.00	105.41	1608.54
Fluoride	0.10	0.04	2.79	0.10	0.17	2.96	0.00	0.00	2.96	0.00	0.00	2.96
Magnesium	19.60	8.35	674.51	23.70	40.70	715.21	23.80	42.05	757.26	24.80	58.09	815.35
Nitrate	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Potassium	3.50	1.49	191.47	4.60	7.90	199.37	4.00	7.07	206.43	4.10	9.60	216.04
Silica	16.30	6.94	877.52	13.60	23.35	900.88	18.00	31.80	932.68	15.40	36.07	968.75
Sodium	55.00	23.42	2591.04	70.10	120.37	2711.42	62.60	110.59	2822.01	60.30	141.25	2963.26
Sulfate	451.00	192.06	19765.24	489.00	839.70	20604.93	425.00	750.84	21355.78	492.00	1152.47	22508.24
TDS	911.00	387.96	40281.79	972.00	1669.10	41950.88	895.00	1581.19	43532.07	954.00	2234.66	45766.73
TRACE METALS												
Al	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.01
Ba	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Be	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B	0.00	0.00	0.19	0.00	0.00	0.19	0.00	0.00	0.19	0.00	0.00	0.19
Cd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Co	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cu	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fe	3.10	1.32	43.44	5.03	8.64	52.08	5.06	8.94	61.02	5.70	13.35	74.37
Pb	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mn	0.85	0.36	14.09	0.87	1.49	15.58	0.96	1.70	17.28	0.90	2.11	19.38
Hg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mo	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ni	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Se	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ag	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tl	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
V2O5	0.00	0.00	0.25	0.00	0.00	0.25	0.00	0.00	0.25	0.00	0.00	0.25
Zn	0.00	0.00	0.16	0.00	0.00	0.16	0.00	0.00	0.16	0.01	0.02	0.18
RADIOMETRICS												
U mg/l	0.03	0.01	0.31	0.02	0.03	0.35	0.02	0.03	0.38	0.03	0.06	0.44

TMW-17												
BATTLE SPRING AQUIFER												
CONTAMINANTS REMOVED	**2009**											
DATE FS	19-Jan-09			15-Apr-09			20-Jul-09			12-Oct-09		
(Started pumping 7/1/86)		VOLUME 2009	CUMULATIVE		VOLUME 2009	CUMULATIVE		VOLUME 2009	CUMULATIVE		VOLUME 2009	CUMULATIVE
GALLONAGE		808,160.00	69,509,793.00		306,020.00	69,815,813.00		753,740.00	70,569,553.00		1,366,740.00	71,936,293.00
CONSTITUENTS	ANALYSIS	QUANTITY REMOVED	QUANTITY REMOVED	ANALYSIS	QUANTITY REMOVED	QUANTITY REMOVED	ANALYSIS	QUANTITY REMOVED	QUANTITY REMOVED	ANALYSIS	QUANTITY REMOVED	QUANTITY REMOVED
	(PPM)	(KG)	(KG)	(PPM)	(KG)	(KG)	(PPM)	(KG)	(KG)	(PPM)	(KG)	(KG)
MAJOR IONS												
Bicarbonate	136.00	416.05	42,283.88	143.00	165.65	42,449.54	144.00	410.86	42,860.40	144.00	745.01	43,605.41
Calcium	80.70	246.88	34,459.28	86.20	99.86	34,559.13	82.00	233.96	34,793.10	84.60	437.69	35,230.79
Carbonate	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chloride	8.00	24.47	5,738.57	7.00	8.11	5,746.68	7.00	19.97	5,766.65	8.00	41.39	5,808.04
Fluoride	0.10	0.31	32.70	0.10	0.12	32.82	0.10	0.29	33.10	0.10	0.52	33.62
Magnesium	5.10	15.60	2,157.54	5.10	5.91	2,163.45	5.00	14.27	2,177.71	4.90	25.35	2,203.06
Nitrate(NO3)	0.00	0.00	118.86	0.00	0.00	118.86	0.00	0.00	118.86	0.00	0.00	118.86
Potassium	2.70	8.26	900.85	3.10	3.59	904.44	3.00	8.56	913.00	3.00	15.52	928.52
Silica	15.10	46.19	3,538.30	12.60	14.60	3,552.90	16.50	47.08	3,599.97	15.00	77.61	3,677.58
Sodium	37.00	113.19	11,533.56	37.10	42.98	11,576.54	36.00	102.72	11,679.25	33.50	173.32	11,852.57
Sulfate	189.00	578.19	78,923.22	185.00	214.31	79,137.53	168.00	479.34	79,616.87	184.00	951.96	80,568.83
TDS	431.00	1318.52	157,137.75	407.00	471.47	157,609.23	410.00	1169.82	158,779.05	383.00	1981.52	160,760.56
TRACE METALS												
Aluminum	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arsenic	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barium	0.00	0.00	1.53	0.00	0.00	1.53	0.00	0.00	1.53	0.00	0.00	1.53
Beryllium	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Boron	0.00	0.00	0.40	0.00	0.00	0.40	0.00	0.00	0.40	0.00	0.00	0.40
Cadmium	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chromium	0.00	0.00	0.59	0.00	0.00	0.59	0.00	0.00	0.59	0.00	0.00	0.59
Cobalt	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Copper	0.00	0.00	0.70	0.00	0.00	0.70	0.00	0.00	0.70	0.00	0.00	0.70
Cyanide	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Iron	0.16	0.49	23.57	0.08	0.09	23.66	0.00	0.00	23.66	0.11	0.57	24.23
Lead	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Manganese	0.04	0.12	20.45	0.04	0.05	20.49	0.04	0.11	20.61	0.04	0.21	20.81
Mercury	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Molybdenum	0.00	0.00	0.17	0.00	0.00	0.17	0.00	0.00	0.17	0.00	0.00	0.17
Nickel	0.00	0.00	0.81	0.00	0.00	0.81	0.00	0.00	0.81	0.00	0.00	0.81
Selenium	0.00	0.00	0.11	0.00	0.00	0.11	0.00	0.00	0.11	0.00	0.00	0.11
Silver	0.00	0.00	0.56	0.00	0.00	0.56	0.00	0.00	0.56	0.00	0.00	0.56
Thallium	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vanadium	0.00	0.00	0.55	0.00	0.00	0.55	0.00	0.00	0.55	0.00	0.00	0.55
Zinc	0.00	0.00	7.32	0.00	0.00	7.32	0.00	0.00	7.32	0.00	0.00	7.32
RADIOMETRICS												
Uranium (mg/l)	0.01	0.02	3.65	0.01	0.01	3.65	0.01	0.02	3.68	0.01	0.03	3.71

TMW-18												
BATTLE SPRING AQUIFER												
CONTAMINANTS REMOVED	**2009**											
DATE FS	16-Feb-09			21-Apr-09			20-Jul-09			12-Oct-09		
(Started pumping 10/8/86)		VOLUME 2009	CUMULATIVE		VOLUME 2009	CUMULATIVE		VOLUME 2009	CUMULATIVE		VOLUME 2009	CUMULATIVE
GALLONAGE		487,060.00	102,431,866.00		976,600.00	103,408,466.00		1,176,720.00	104,585,186.00		1,176,470.00	105,761,656.00
CONSTITUENTS	ANALYSIS	QUANTITY REMOVED	QUANTITY REMOVED	ANALYSIS	QUANTITY REMOVED	QUANTITY REMOVED	ANALYSIS	QUANTITY REMOVED	QUANTITY REMOVED	ANALYSIS	QUANTITY REMOVED	QUANTITY REMOVED
	(PPM)	(KG)	(KG)	(PPM)	(KG)	(KG)	(PPM)	(KG)	(KG)	(PPM)	(KG)	(KG)
MAJOR IONS												
Bicarbonate	579.00	1067.52	211650.11	562.00	2077.62	213727.73	538.00	2396.45	216124.18	566.00	2520.64	218644.82
Calcium	624.00	1150.48	230749.70	581.00	2147.86	232897.56	578.00	2574.63	235472.19	565.00	2516.18	237988.37
Carbonate	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chloride	88.00	162.25	35880.32	81.00	299.44	36179.76	82.00	365.26	36545.02	88.00	391.90	36936.92
Fluoride	0.00	0.00	6.59	0.00	0.00	6.59	0.00	0.00	6.59	0.00	0.00	6.59
Magnesium	53.60	98.82	15144.53	49.60	183.36	15327.90	47.70	212.47	15540.37	48.80	217.33	15757.70
Nitrate(NO3)	0.00	0.00	173.01	0.00	0.00	173.01	0.00	0.00	173.01	0.00	0.00	173.01
Potassium	9.60	17.70	2580.76	6.80	25.14	2605.90	6.80	30.29	2636.19	7.00	31.17	2667.36
Silica	25.10	46.28	8704.09	22.60	83.55	8787.64	25.40	113.14	8900.78	21.60	96.19	8996.98
Sodium	112.00	206.50	34319.13	108.00	399.26	34718.39	99.20	441.87	35160.26	97.80	435.54	35595.80
Sulfate	1430.00	2636.52	465730.95	1290.00	4768.91	470499.87	1250.00	5567.96	476067.83	1300.00	5789.45	481857.28
TDS	2830.00	5217.74	934037.36	2560.00	9463.89	943501.25	2540.00	11314.10	954815.35	2450.00	10910.89	965726.24
TRACE METALS												
Aluminum	0.00	0.00	59.53	0.00	0.00	59.53	0.00	0.00	59.53	0.00	0.00	59.53
Arsenic	0.00	0.00	0.06	0.00	0.00	0.06	0.00	0.00	0.06	0.00	0.00	0.06
Barium	0.00	0.00	1.52	0.00	0.00	1.52	0.00	0.00	1.52	0.00	0.00	1.52
Beryllium	0.00	0.00	0.08	0.00	0.00	0.08	0.00	0.00	0.08	0.00	0.00	0.08
Boron	0.10	0.18	3.52	0.00	0.00	3.52	0.00	0.00	3.52	0.00	0.00	3.52
Cadmium	0.00	0.00	0.12	0.00	0.00	0.12	0.00	0.00	0.12	0.00	0.00	0.12
Chromium	0.00	0.00	1.90	0.00	0.00	1.90	0.00	0.00	1.90	0.00	0.00	1.90
Cobalt	0.00	0.00	0.43	0.00	0.00	0.43	0.00	0.00	0.43	0.00	0.00	0.43
Copper	0.00	0.00	0.69	0.00	0.00	0.69	0.00	0.00	0.69	0.00	0.00	0.69
Cyanide	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Iron	8.98	16.56	2399.97	8.33	30.79	2430.76	8.57	38.17	2468.94	8.24	36.70	2505.63
Lead	0.00	0.00	1.57	0.00	0.00	1.57	0.00	0.00	1.57	0.00	0.00	1.57
Manganese	1.34	2.47	394.49	1.54	5.69	400.19	1.38	6.15	406.33	1.36	6.06	412.39
Mercury	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Molybdenum	0.00	0.00	0.06	0.00	0.00	0.06	0.00	0.00	0.06	0.00	0.00	0.06
Nickel	0.00	0.00	2.27	0.00	0.00	2.27	0.00	0.00	2.27	0.00	0.00	2.27
Selenium	0.00	0.01	0.42	0.00	0.01	0.43	0.00	0.00	0.43	0.00	0.00	0.43
Silver	0.00	0.00	0.48	0.00	0.00	0.48	0.00	0.00	0.48	0.00	0.00	0.48
Thallium	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vanadium	0.00	0.00	2.36	0.00	0.00	2.36	0.00	0.00	2.36	0.00	0.00	2.36
Zinc	0.00	0.00	7.56	0.00	0.00	7.56	0.00	0.00	7.56	0.00	0.00	7.56
RADIOMETRICS												
Uranium (mg/l)	0.00	0.00	2.03	0.00	0.01	2.04	0.00	0.01	2.04	0.00	0.01	2.05

TMW-57												
CONTAMINANTS REMOVED												
PERCHED AQUIFER WELL	**2009**											
DATE FS	3/11/09			4/15/09			7/22/09			10/12/09		
(Started pumping May 2001)		VOLUME 2009	CUMULATIVE		VOLUME 2009	CUMULATIVE		VOLUME 2009	CUMULATIVE		VOLUME 2009	CUMULATIVE
GALLONAGE		218410.00	16797100.00		557320.00	17354420.00		544310.00	17898730.00		385570.00	18284300.00
CONSTITUENTS	ANALYSIS	QUANTITY REMOVED	QUANTITY REMOVED	ANALYSIS	QUANTITY REMOVED	QUANTITY REMOVED	ANALYSIS	QUANTITY REMOVED	QUANTITY REMOVED	ANALYSIS	QUANTITY REMOVED	QUANTITY REMOVED
MAJOR IONS	(PPM)	(KG)	(KG)	(PPM)	(KG)	(KG)	(PPM)	(KG)	(KG)	(PPM)	(KG)	(KG)
Bicarbonate	130.00	107.48	8440.42	134.00	282.70	8723.12	135.00	278.16	9001.28	132.00	192.66	9193.94
Calcium	113.00	93.43	8250.86	111.00	234.18	8485.04	101.00	208.10	8693.14	95.40	139.24	8832.38
Carbonate	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chloride	12.00	9.92	960.07	11.00	23.21	983.28	10.00	20.60	1003.89	10.00	14.60	1018.48
Fluoride	0.10	0.08	9.81	0.10	0.21	10.02	0.10	0.21	10.23	0.10	0.15	10.37
Magnesium	7.30	6.04	632.88	7.40	15.61	648.50	7.00	14.42	662.92	7.10	10.36	673.28
Nitrate(NO3)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Potassium	3.10	2.56	216.65	3.40	7.17	223.82	3.10	6.39	230.21	3.00	4.38	234.59
Silica	13.80	11.41	854.46	11.00	23.21	877.67	15.60	32.14	909.81	12.70	18.54	928.35
Sodium	41.30	34.15	2600.00	42.10	88.82	2688.82	36.30	74.79	2763.61	33.90	49.48	2813.09
Sulfate	250.00	206.69	19846.74	252.00	531.64	20378.38	226.00	465.66	20844.04	237.00	345.91	21189.95
TDS	510.00	421.65	37869.42	509.00	1073.83	38943.25	493.00	1015.80	39959.04	438.00	639.28	40598.32
TRACE METALS												
Aluminum	0.00	0.00	0.20	0.10	0.21	0.41	0.00	0.00	0.41	0.00	0.00	0.41
Arsenic	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barium	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Beryllium	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Boron	0.00	0.00	0.25	0.00	0.00	0.25	0.00	0.00	0.25	0.00	0.00	0.25
Cadmium	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chromium	0.00	0.00	0.04	0.00	0.00	0.04	0.00	0.00	0.04	0.00	0.00	0.04
Cobalt	0.00	0.00	0.50	0.00	0.00	0.50	0.00	0.00	0.51	0.00	0.00	0.51
Copper	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cyanide	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Iron	0.07	0.06	19.40	0.08	0.17	19.57	0.16	0.33	19.90	0.17	0.25	20.15
Lead	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Manganese	0.08	0.07	9.27	0.08	0.17	9.44	0.09	0.19	9.63	0.08	0.12	9.75
Mercury	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Molybdenum	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nickel	0.00	0.00	0.57	0.00	0.00	0.57	0.00	0.00	0.57	0.00	0.00	0.57
Selenium	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.01
Silver	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Thallium	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vanadium	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Zinc	0.00	0.00	0.80	0.00	0.00	0.80	0.00	0.00	0.80	0.00	0.00	0.80
RADIOMETRICS												
Uranium (mg/l)	0.01	0.00	0.47	0.01	0.01	0.48	0.01	0.01	0.49	0.00	0.01	0.50

TMW-58												
BATTLE SPRING AQUIFER												
CONTAMINANTS REMOVEI	**2009**											
DATE FS	11-Mar-09			15-Apr-09			22-Jul-09			12-Oct-09		
(Started pumping 6/20/94)		VOLUME 2009	CUMULATIVE		VOLUME 2009	CUMULATIVE		VOLUME 2009	CUMULATIVE		VOLUME 2009	CUMULATIVE
GALLONAGE		194250.00	36542250.01		797950.00	37340200.01		783470.00	38123670.01		541110.00	38664780.01
CONSTITUENTS	ANALYSIS	QUANTITY REMOVED	QUANTITY REMOVED	ANALYSIS	QUANTITY REMOVED	QUANTITY REMOVED	ANALYSIS	QUANTITY REMOVED	QUANTITY REMOVED	ANALYSIS	QUANTITY REMOVED	QUANTITY REMOVED
MAJOR IONS	(PPM)	(KG)	(KG)	(PPM)	(KG)	(KG)	(PPM)	(KG)	(KG)	(PPM)	(KG)	(KG)
Bicarbonate	219.00	161.03	29122.39	251.00	758.16	29880.56	252.00	747.37	30627.93	271.00	555.10	31183.02
Calcium	272.00	200.01	32167.61	294.00	888.05	33055.65	288.00	854.14	33909.79	291.00	596.06	34505.85
Carbonate	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chloride	46.00	33.82	3782.65	44.00	132.91	3915.55	45.00	133.46	4049.01	46.00	94.22	4143.24
Fluoride	0.10	0.07	13.79	0.10	0.30	14.09	0.10	0.30	14.39	0.10	0.20	14.59
Magnesium	19.40	14.27	2465.08	22.90	69.17	2534.25	22.00	65.25	2599.50	22.90	46.91	2646.41
Nitrate(NO3)	0.00	0.00	4.52	0.00	0.00	4.52	0.00	0.00	4.52	0.00	0.00	4.52
Potassium	4.40	3.24	594.02	5.00	15.10	609.12	4.70	13.94	623.06	4.70	9.63	632.69
Silica	13.40	9.85	2104.45	13.80	41.68	2146.13	17.00	50.42	2196.55	14.60	29.91	2226.46
Sodium	50.00	36.77	7394.44	63.00	190.30	7584.74	59.20	175.57	7760.31	58.80	120.44	7880.75
Sulfate	638.00	469.13	74462.82	677.00	2044.93	76507.75	654.00	1939.60	78447.35	676.00	1384.67	79832.02
TDS	1250.00	919.15	141288.60	1290.00	3896.53	145185.13	1320.00	3914.80	149099.93	1270.00	2601.37	151701.30
TRACE METALS												
Aluminum	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arsenic	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barium	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Beryllium	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Boron	0.10	0.07	0.33	0.10	0.30	0.63	0.10	0.30	0.93	0.10	0.20	1.13
Cadmium	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chromium	0.00	0.00	0.22	0.00	0.00	0.22	0.00	0.00	0.22	0.00	0.00	0.22
Cobalt	0.00	0.00	0.22	0.00	0.01	0.23	0.00	0.00	0.23	0.00	0.00	0.24
Copper	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cyanide	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Iron	0.74	0.54	54.46	0.41	1.24	55.70	0.74	2.19	57.90	0.82	1.68	59.58
Lead	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Manganese	0.26	0.19	26.78	0.27	0.82	27.59	0.27	0.80	28.39	0.26	0.53	28.92
Mercury	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Molybdenum	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nickel	0.00	0.00	0.26	0.00	0.00	0.26	0.00	0.00	0.26	0.00	0.00	0.26
Selenium	0.00	0.00	0.13	0.00	0.00	0.13	0.00	0.00	0.13	0.00	0.00	0.13
Silver	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Thallium	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vanadium	0.00	0.00	0.10	0.00	0.00	0.10	0.00	0.00	0.10	0.00	0.00	0.10
Zinc	0.00	0.00	4.00	0.00	0.00	4.00	0.00	0.00	4.00	0.00	0.00	4.00
RADIOMETRICS												
Uranium (mg/l)	0.02	0.01	1.94	0.02	0.06	2.00	0.02	0.05	2.04	0.02	0.03	2.08

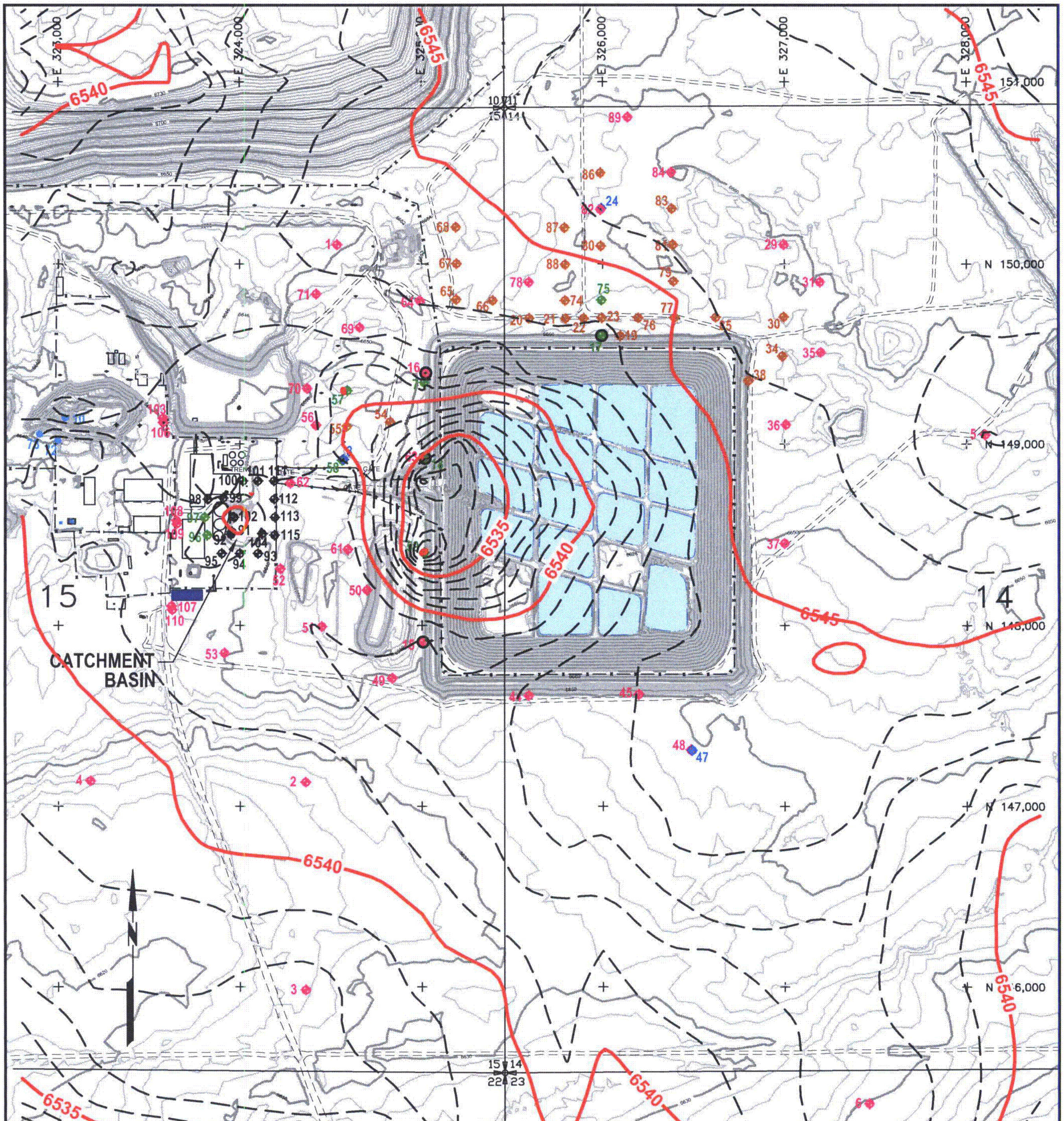
TMW-59												
CONTAMINANTS REMOVED	**2009**											
DATE FS	16-Feb-09			15-Apr-09			20-Jul-09			20-Oct-09		
(Started pumping 9/1/88)		*VOLUME 2009*	*CUMULATIVE*		*VOLUME 2009*	*CUMULATIVE*		*VOLUME 2009*	*CUMULATIVE*		*VOLUME 2009*	*CUMULATIVE*
GALLONAGE		662260.00	41967247.00		1163670.00	43130917.00		1174530.00	44305447.00		1055837.00	45361284.00
CONSTITUENTS	ANALYSIS	QUANTITY REMOVED	QUANTITY REMOVED	ANALYSIS	QUANTITY REMOVED	QUANTITY REMOVED	ANALYSIS	QUANTITY REMOVED	QUANTITY REMOVED	ANALYSIS	QUANTITY REMOVED	QUANTITY REMOVED
	(PPM)	(KG)	(KG)	(PPM)	(KG)	(KG)	(PPM)	(KG)	(KG)	(PPM)	(KG)	(KG)
MAJOR IONS												
Bicarbonate	303.00	759.60	61653.55	299.00	1317.09	62970.64	312.00	1387.18	64357.81	310.00	1239.00	65596.81
Calcium	508.00	1273.52	87923.08	519.00	2286.18	90209.26	502.00	2231.93	92441.19	478.00	1910.46	94351.65
Carbonate	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chloride	79.00	198.05	12799.16	86.00	378.83	13177.99	86.00	382.36	13560.35	84.00	335.73	13896.08
Fluoride	0.20	0.50	17.68	0.20	0.88	18.56	0.20	0.89	19.45	0.20	0.80	20.24
Magnesium	72.20	181.00	10373.23	72.20	318.04	10691.27	71.80	319.23	11010.50	67.20	268.58	11279.09
Nitrate(NO3)	0.00	0.00	15.74	0.00	0.00	15.74	0.00	0.00	15.74	0.00	0.00	15.74
Potassium	9.00	22.56	1098.83	7.90	34.80	1133.63	7.40	32.90	1166.53	6.80	27.18	1193.71
Silica	17.90	44.87	3121.24	16.40	72.24	3193.48	20.70	92.03	3285.52	17.20	68.74	3354.26
Sodium	101.00	253.20	14251.98	105.00	462.52	14714.50	96.40	428.60	15143.10	90.00	359.71	15502.81
Sulfate	1470.00	3685.18	224045.02	1420.00	6255.06	230300.08	1370.00	6091.13	236391.21	1420.00	5675.42	242066.63
TDS	2560.00	6417.73	406361.56	2510.00	11056.48	417418.03	2560.00	11381.96	428800.00	2380.00	9512.33	438312.33
TRACE METALS												
Aluminum	0.00	0.00	1.48	0.00	0.00	1.48	0.00	0.00	1.48	0.00	0.00	1.48
Arsenic	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.01
Barium	0.00	0.00	0.94	0.00	0.00	0.94	0.00	0.00	0.94	0.00	0.00	0.94
Beryllium	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Boron	0.10	0.25	5.95	0.00	0.00	5.95	0.00	0.00	5.95	0.00	0.00	5.95
Cadmium	0.00	0.00	0.03	0.00	0.00	0.03	0.00	0.00	0.03	0.00	0.00	0.03
Chromium	0.00	0.00	0.22	0.00	0.00	0.22	0.00	0.00	0.22	0.00	0.00	0.22
Cobalt	0.01	0.03	2.02	0.01	0.05	2.07	0.01	0.04	2.12	0.01	0.04	2.16
Copper	0.00	0.00	0.19	0.00	0.00	0.19	0.00	0.00	0.19	0.00	0.00	0.19
Cyanide	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Iron	43.30	108.55	4924.38	52.00	229.06	5153.43	52.00	231.20	5384.63	48.70	194.64	5579.27
Lead	0.00	0.00	0.12	0.00	0.00	0.12	0.00	0.00	0.12	0.00	0.00	0.12
Manganese	3.98	9.98	557.01	4.24	18.68	575.68	4.35	19.34	595.02	4.24	16.95	611.97
Mercury	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Molybdenum	0.00	0.00	0.26	0.00	0.00	0.26	0.00	0.00	0.26	0.00	0.00	0.26
Nickel	0.01	0.03	2.60	0.01	0.04	2.65	0.01	0.04	2.69	0.01	0.04	2.73
Selenium	0.00	0.00	0.16	0.00	0.00	0.16	0.00	0.00	0.16	0.00	0.00	0.16
Silver	0.00	0.00	0.06	0.00	0.00	0.06	0.00	0.00	0.06	0.00	0.00	0.06
Thallium	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vanadium	0.00	0.00	0.03	0.00	0.00	0.03	0.00	0.00	0.03	0.00	0.00	0.03
Zinc	0.00	0.00	2.82	0.00	0.00	2.82	0.00	0.00	2.82	0.00	0.00	2.82
RADIOMETRICS												
Uranium (mg/l)	0.01	0.03	1.40	0.01	0.05	1.45	0.01	0.05	1.50	0.01	0.04	1.54

TMW-75												
CONTAMINANTS REMOVED	**2009**											
DATE FS	19-Jan-09			15-Apr-09			20-Jul-09			12-Oct-09		
(Started pumping 5/1/88)		VOLUME 2009	CUMULATIVE		VOLUME 2009	CUMULATIVE		VOLUME 2009	CUMULATIVE		VOLUME 2009	CUMULATIVE
GALLONAGE		316850.00	49269420.00		332260.00	49601680.00		436090.00	50037770.00		808250.00	50846020.00
CONSTITUENTS	ANALYSIS	QUANTITY REMOVED	QUANTITY REMOVED	ANALYSIS	QUANTITY REMOVED	QUANTITY REMOVED	ANALYSIS	QUANTITY REMOVED	QUANTITY REMOVED	ANALYSIS	QUANTITY REMOVED	QUANTITY REMOVED
	(PPM)	(KG)	(KG)	(PPM)	(KG)	(KG)	(PPM)	(KG)	(KG)	(PPM)	(KG)	(KG)
MAJOR IONS												
Bicarbonate	138.00	165.52	34855.89	150.00	188.66	35044.55	146.00	241.01	35285.57	154.00	471.17	35756.74
Calcium	90.70	108.79	33196.74	132.00	166.02	33362.76	124.00	204.70	33567.46	138.00	422.22	33989.68
Carbonate	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chloride	10.00	11.99	4816.81	14.00	17.61	4834.42	13.00	21.46	4855.88	16.00	48.95	4904.83
Fluoride	0.20	0.24	26.26	0.10	0.13	26.38	0.10	0.17	26.55	0.10	0.31	26.86
Magnesium	6.00	7.20	2572.44	9.50	11.95	2584.39	8.90	14.69	2599.08	10.40	31.82	2630.90
Nitrate(NO3)	0.00	0.00	34.27	0.00	0.00	34.27	0.00	0.00	34.27	0.00	0.00	34.27
Potassium	3.10	3.72	682.93	3.70	4.65	687.59	3.40	5.61	693.20	3.60	11.01	704.21
Silica	13.60	16.31	2854.55	12.00	15.09	2869.64	15.70	25.92	2895.56	13.30	40.69	2936.25
Sodium	41.20	49.42	9448.64	46.80	58.86	9507.50	43.00	70.98	9578.49	43.20	132.17	9710.66
Sulfate	193.00	231.49	73475.55	286.00	359.71	73835.26	286.00	472.12	74307.39	320.00	979.06	75286.44
TDS	501.00	600.90	150341.20	571.00	718.17	151059.37	597.00	985.52	152044.88	620.00	1896.93	153941.81
TRACE METALS												
Aluminum	0.00	0.00	0.44	0.00	0.00	0.44	0.00	0.00	0.44	0.00	0.00	0.44
Arsenic	0.00	0.00	0.07	0.00	0.00	0.07	0.00	0.00	0.07	0.00	0.00	0.07
Barium	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Beryllium	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Boron	0.00	0.00	1.23	0.00	0.00	1.23	0.00	0.00	1.23	0.00	0.00	1.23
Cadmium	0.00	0.00	0.08	0.00	0.00	0.08	0.00	0.00	0.08	0.00	0.00	0.08
Chromium	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.01
Cobalt	0.00	0.00	0.02	0.00	0.00	0.02	0.00	0.00	0.02	0.00	0.00	0.02
Copper	0.00	0.00	0.08	0.00	0.00	0.08	0.00	0.00	0.08	0.00	0.00	0.08
Cyanide	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Iron	0.00	0.00	27.41	0.16	0.20	27.61	0.17	0.28	27.89	0.21	0.64	28.53
Lead	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Manganese	0.05	0.06	22.19	0.08	0.10	22.29	0.08	0.13	22.42	0.10	0.31	22.73
Mercury	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Molybdenum	0.00	0.00	0.26	0.00	0.00	0.26	0.00	0.00	0.26	0.00	0.00	0.26
Nickel	0.00	0.00	0.45	0.00	0.00	0.45	0.00	0.00	0.45	0.00	0.00	0.45
Selenium	0.00	0.00	0.12	0.00	0.00	0.12	0.00	0.00	0.12	0.00	0.00	0.12
Silver	0.00	0.00	0.02	0.00	0.00	0.02	0.00	0.00	0.02	0.00	0.00	0.02
Thallium	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vanadium	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Zinc	0.00	0.00	2.58	0.00	0.00	2.58	0.00	0.00	2.58	0.00	0.00	2.58
RADIOMETRICS												
Uranium (mg/l)	0.01	0.01	11.04	0.02	0.03	11.07	0.02	0.03	11.10	0.02	0.07	11.17

TMW-96												
CONTAMINANTS REMOVEI	2009											
DATE FS	17-Feb-09			15-Apr-09			22-Jul-09			20-Oct-09		
Started pumping June 30, 2005		VOLUME 2009	CUMULATIVE		VOLUME 2009	CUMULATIVE		VOLUME 2009	CUMULATIVE		VOLUME 2009	CUMULATIVE
GALLONAGE		466500.00	11943860.00		421740.00	12365600.00		220190.00	12585790.00		397360.00	12983150.00
CONSTITUENTS	ANALYSIS	QUANTITY REMOVED	QUANTITY REMOVED	ANALYSIS	QUANTITY REMOVED	QUANTITY REMOVED	ANALYSIS	QUANTITY REMOVED	QUANTITY REMOVED	ANALYSIS	QUANTITY REMOVED	QUANTITY REMOVED
	(PPM)	(KG)	(KG)	(PPM)	(KG)	(KG)	(PPM)	(KG)	(KG)	(PPM)	(KG)	(KG)
MAJOR IONS												
Bicarbonate	144.00	254.29	6397.65	150.00	239.47	6637.12	144.00	120.03	6757.15	150.00	225.63	6982.77
Calcium	184.00	324.92	8353.25	189.00	301.73	8654.98	174.00	145.03	8800.01	176.00	264.73	9064.75
Carbonate	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	3.01	3.01
Chloride	20.00	35.32	1261.28	21.00	33.53	1294.81	22.00	18.34	1313.14	22.00	33.09	1346.23
Fluoride	0.10	0.18	5.11	0.10	0.16	5.27	0.10	0.08	5.35	0.10	0.15	5.50
Magnesium	12.50	22.07	598.43	12.10	19.32	617.75	12.90	10.75	628.50	11.70	17.60	646.10
Nitrate(NO3)	0.00	0.00	1.47	0.00	0.00	1.47	0.00	0.00	1.47	0.00	0.00	1.47
Potassium	5.00	8.83	180.52	4.30	6.86	187.38	3.80	3.17	190.55	3.70	5.57	196.12
Silica	14.10	24.90	606.79	12.20	19.48	626.27	15.20	12.67	638.94	13.20	19.86	658.79
Sodium	51.00	90.06	2279.06	51.00	81.42	2360.48	51.00	42.51	2402.98	51.00	76.71	2479.70
Sulfate	444.00	784.06	20746.73	440.00	702.44	21449.17	429.00	357.58	21806.75	444.00	667.85	22474.60
TDS	823.00	1453.33	37567.19	827.00	1320.27	38887.47	832.00	693.48	39580.95	836.00	1257.49	40838.43
TRACE METALS												
Aluminum	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arsenic	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.01
Barium	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Beryllium	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Boron	0.00	0.00	0.38	0.00	0.00	0.38	0.00	0.00	0.38	0.00	0.00	0.38
Cadmium	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chromium	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cobalt	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Copper	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cyanide	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Iron	0.00	0.00	1.47	0.12	0.19	1.66	0.00	0.00	1.66	0.00	0.00	1.66
Lead	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Manganese	0.10	0.18	4.99	0.11	0.18	5.17	0.09	0.08	5.25	0.12	0.18	5.43
Mercury	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Molybdenum	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nickel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Selenium	0.00	0.01	0.21	0.00	0.00	0.22	0.01	0.01	0.23	0.00	0.00	0.23
Silver	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Thallium	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vanadium	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Zinc	0.00	0.00	0.04	0.00	0.00	0.04	0.00	0.00	0.04	0.00	0.00	0.04
RADIOMETRICS												
Uranium (mg/l)	0.03	0.06	2.22	0.03	0.05	2.27	0.07	0.06	2.33	0.04	0.06	2.39

TMW-97												
CONTAMINANTS REMOVED	**2009**											
DATE FS	11-Mar-09			16-Jun-09			22-Jul-09			20-Oct-09		
Started pumping September 6, 2005		VOLUME 2009	CUMULATIVE		VOLUME 2009	CUMULATIVE		VOLUME 2009	CUMULATIVE		VOLUME 2009	CUMULATIVE
GALLONAGE		619,000.00	13,800,160.00		462,890.00	14,263,050.00		218,880.00	14,481,930.00		621,260.00	15,103,190.00
CONSTITUENTS	ANALYSIS	QUANTITY REMOVED	QUANTITY REMOVED	ANALYSIS	QUANTITY REMOVED	QUANTITY REMOVED	ANALYSIS	QUANTITY REMOVED	QUANTITY REMOVED	ANALYSIS	QUANTITY REMOVED	QUANTITY REMOVED
	(PPM)	(KG)	(KG)	(PPM)	(KG)	(KG)	(PPM)	(KG)	(KG)	(PPM)	(KG)	(KG)
MAJOR IONS												
Bicarbonate	120.00	281.18	6471.66	121.00	212.02	6683.68	121.00	100.25	6783.94	150.00	352.76	7136.70
Calcium	142.00	332.73	8181.52	137.00	240.06	8421.58	140.00	116.00	8537.58	176.00	413.90	8951.48
Carbonate	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	4.70	4.70
Chloride	18.00	42.18	1109.92	18.00	31.54	1141.46	18.00	14.91	1156.38	22.00	51.74	1208.11
Fluoride	0.10	0.23	7.73	0.10	0.18	7.91	0.10	0.08	7.99	0.10	0.24	8.23
Magnesium	8.80	20.62	621.10	9.70	17.00	638.10	9.60	7.95	646.05	11.70	27.52	673.57
Nitrate(NO3)	0.00	0.00	1.04	0.00	0.00	1.04	0.00	0.00	1.04	0.00	0.00	1.04
Potassium	3.20	7.50	187.16	3.30	5.78	192.94	3.30	2.73	195.67	3.70	8.70	204.38
Silica	13.30	31.16	713.77	15.20	26.63	740.40	15.20	12.59	753.00	13.20	31.04	784.04
Sodium	39.00	91.38	2379.92	41.70	73.07	2452.99	43.00	35.63	2488.61	49.90	117.35	2605.97
Sulfate	319.00	747.47	19038.97	353.00	618.54	19657.51	343.00	284.19	19941.70	444.00	1044.17	20985.87
TDS	634.00	1485.57	36803.87	706.00	1237.07	38040.94	686.00	568.39	38609.33	836.00	1966.04	40575.37
TRACE METALS												
Aluminum	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arsenic	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barium	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Beryllium	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Boron	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cadmium	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chromium	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cobalt	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Copper	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cyanide	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Iron	0.00	0.00	5.29	0.09	0.16	5.45	0.10	0.08	5.53	0.00	0.00	5.53
Lead	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Manganese	0.09	0.21	6.04	0.09	0.16	6.20	0.08	0.07	6.26	0.12	0.28	6.55
Mercury	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Molybdenum	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nickel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Selenium	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01
Silver	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Thallium	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vanadium	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Zinc	0.00	0.00	0.00	0.01	0.02	0.02	0.00	0.00	0.02	0.00	0.00	0.02
RADIOMETRICS												
Uranium (mg/l)	0.02	0.05	2.42	0.03	0.05	2.47	0.03	0.03	2.50	0.04	0.09	2.59

MAPS



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BY ROBERT JACK SMITH & ASSOC.
INC. CONSULTING LAND
SURVEYORS
P.O. BOX 1104, 1015 HARSHMAN ST.
RAWLINS, WY 82301

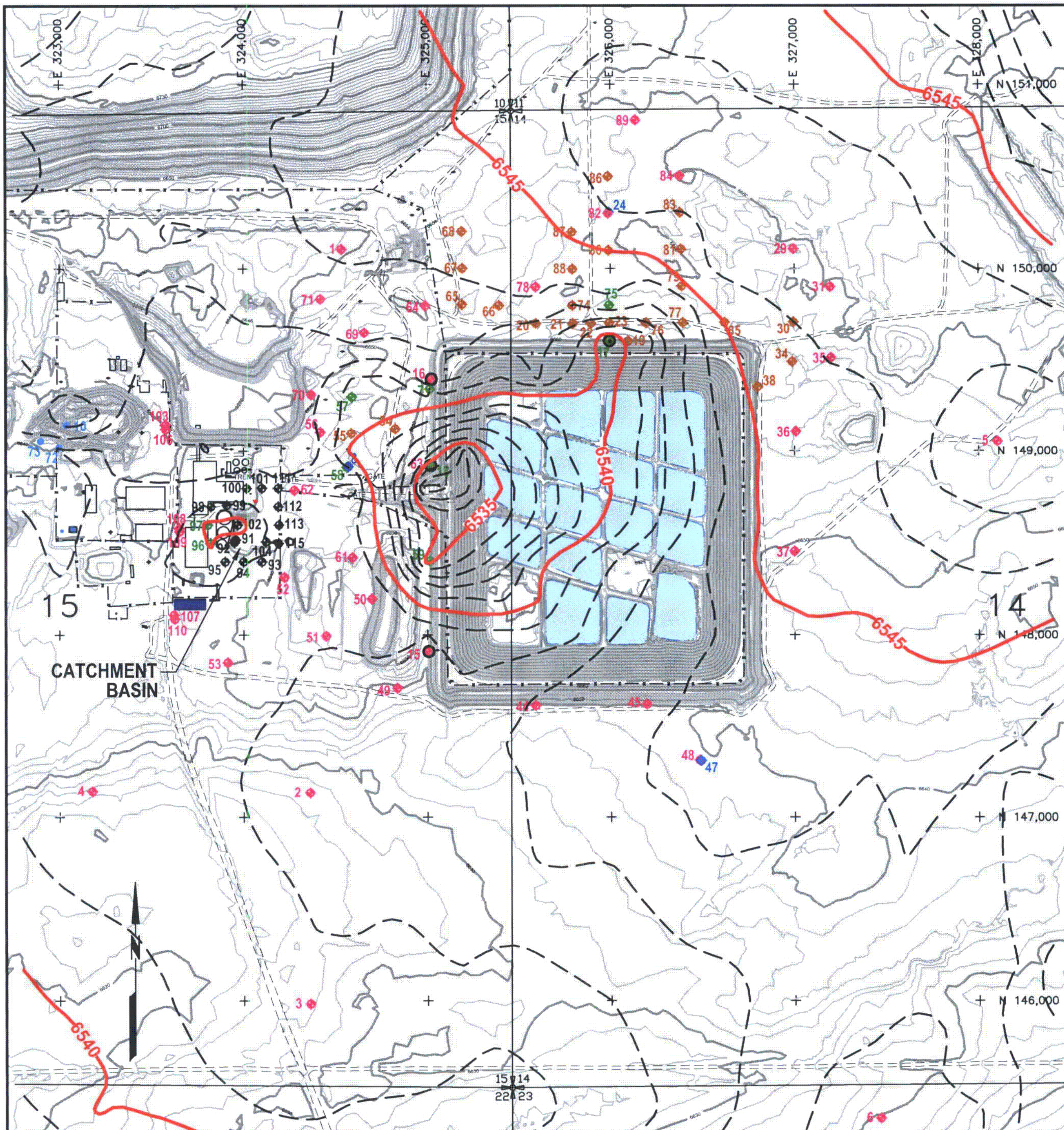
LEGEND

- 5' GROUNDWATER CONTOUR
- 1' GROUNDWATER CONTOUR
- SHALLOW WELLS (PERCHED)
- DEEP AQUIFER WELLS
- AQUIFER WELLS
- PUMPBACK WELLS, AQUIFER
- COMPLIANCE MONITORING WELLS
- POINT OF COMPLIANCE (POC) WELLS (TAILINGS IMPOUNDMENT)
- CONTAMINATED SOIL EXCAVATION MONITOR WELLS

NOTE:
ALL WELLS HAVE A TMW PREFIX (TYP.)

SWEETWATER URANIUM FACILITY
SPRING 2009 PIEZOMETRIC CONTOUR MAP
2009 CORRECTIVE ACTION PROGRAM REVIEW

Date:	FEBRUARY 2010
Project:	06-442\REP2010\
File:	2010-GW-Spring-09.dwg



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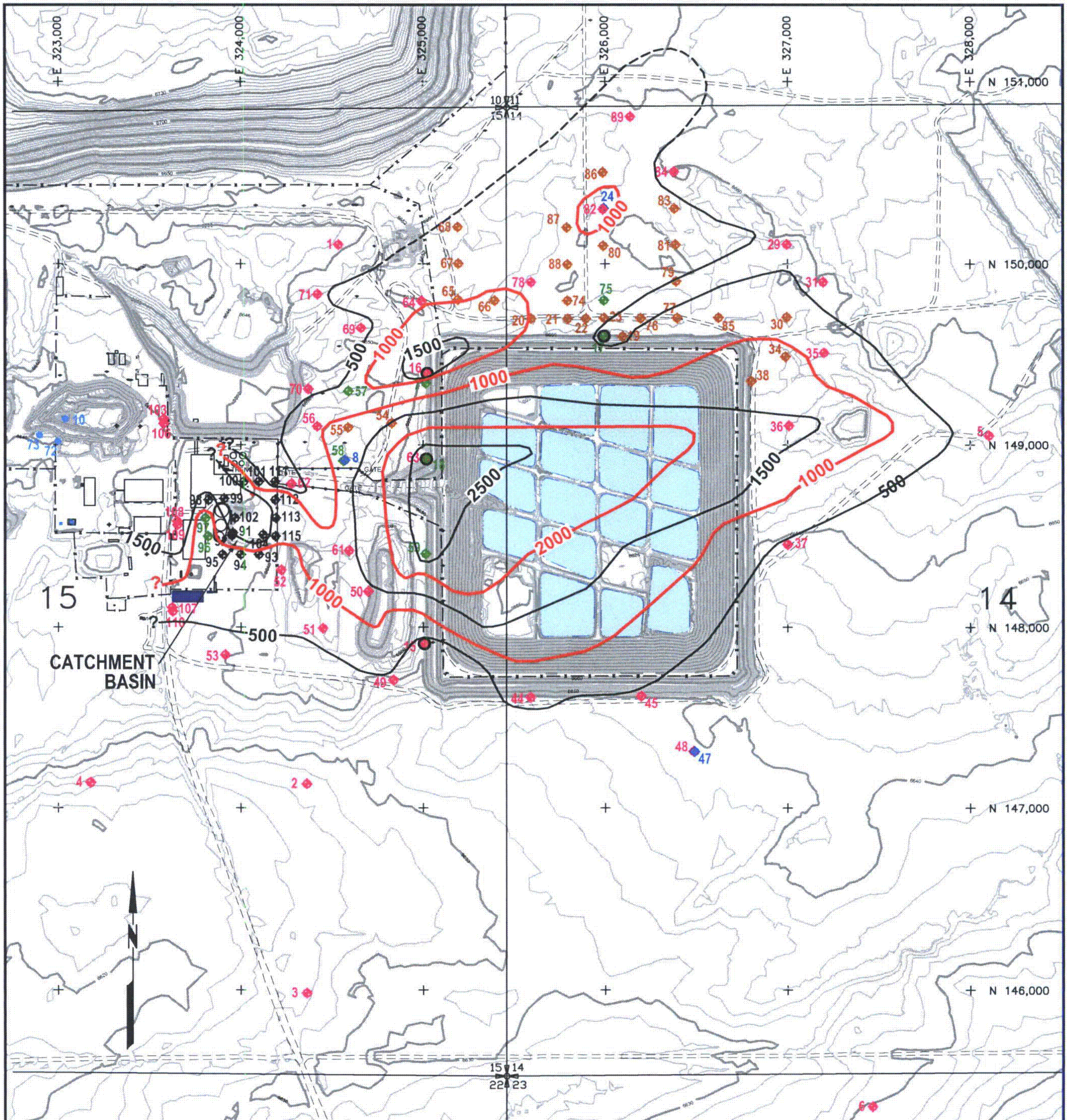
LEGEND

- 5' GROUNDWATER CONTOUR
- 1' GROUNDWATER CONTOUR
- SHALLOW WELLS (PERCHED)
- DEEP AQUIFER WELLS
- AQUIFER WELLS
- PUMPBACK WELLS, AQUIFER
- COMPLIANCE MONITORING WELLS
- POINT OF COMPLIANCE (POC) WELLS (TAILINGS IMPOUNDMENT)
- CONTAMINATED SOIL EXCAVATION MONITOR WELLS

NOTE:
ALL WELLS HAVE A TMW PREFIX (TYP.)

SWEETWATER URANIUM FACILITY
FALL 2009 PIEZOMETRIC CONTOUR MAP
2009 CORRECTIVE ACTION PROGRAM REVIEW

Date:	FEBRUARY 2010
Project:	06-442\REP2010\
File:	2010-GW-Fall-09.dwg



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LEGEND

500 ppm TDS CONTOUR

TOTAL DISSOLVED SOLIDS (TDS) CONTOURS BASED ON THE HIGHEST TOTAL DISSOLVED SOLIDS (TDS) RESULT FOR GIVEN WELL FOR 2009.

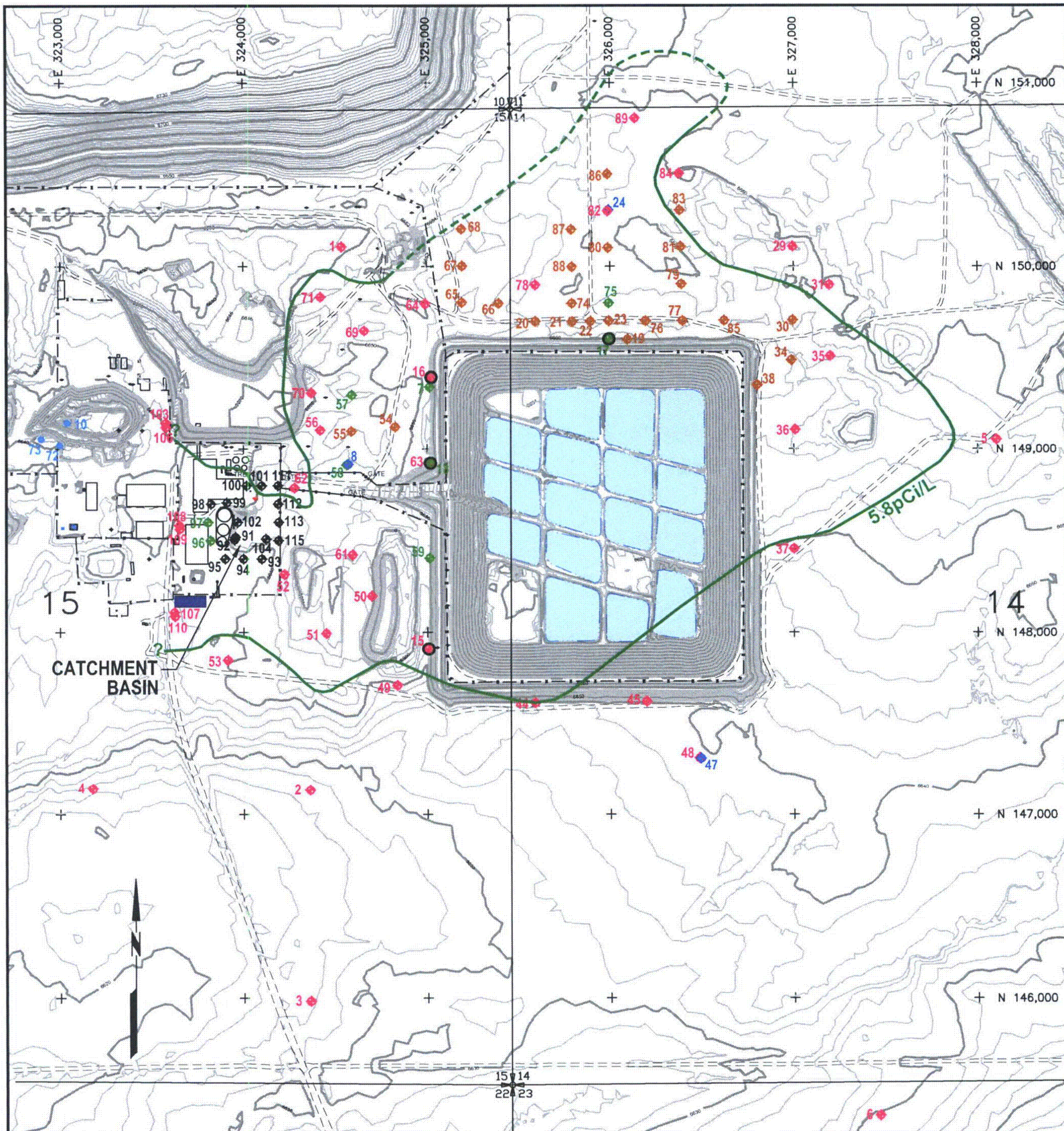
NOTE:
ALL WELLS HAVE A TMW PREFIX (TYP.)

LEGEND

- SHALLOW WELLS (PERCHED)
- DEEP AQUIFER WELLS
- AQUIFER WELLS
- PUMPBACK WELLS, AQUIFER
- COMPLIANCE MONITORING WELLS
- POINT OF COMPLIANCE (POC) WELLS (TAILINGS IMPOUNDMENT)
- CONTAMINATED SOIL EXCAVATION MONITOR WELLS

SWEETWATER URANIUM FACILITY
TDS CONTOUR MAP
2009 CORRECTIVE ACTION PROGRAM REVIEW

Date:	FEBRUARY 2010
Project:	06-442\REP2010\
File:	2010-TDS-FIG.dwg



SCALE IN FEET

0 800

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5.8 PCI/L COMBINED RADIUM-226/228 CONTOUR BASED ON HIGHEST COMBINED RADIUM-266/228 RESULT FOR GIVEN WELL FOR 2009.

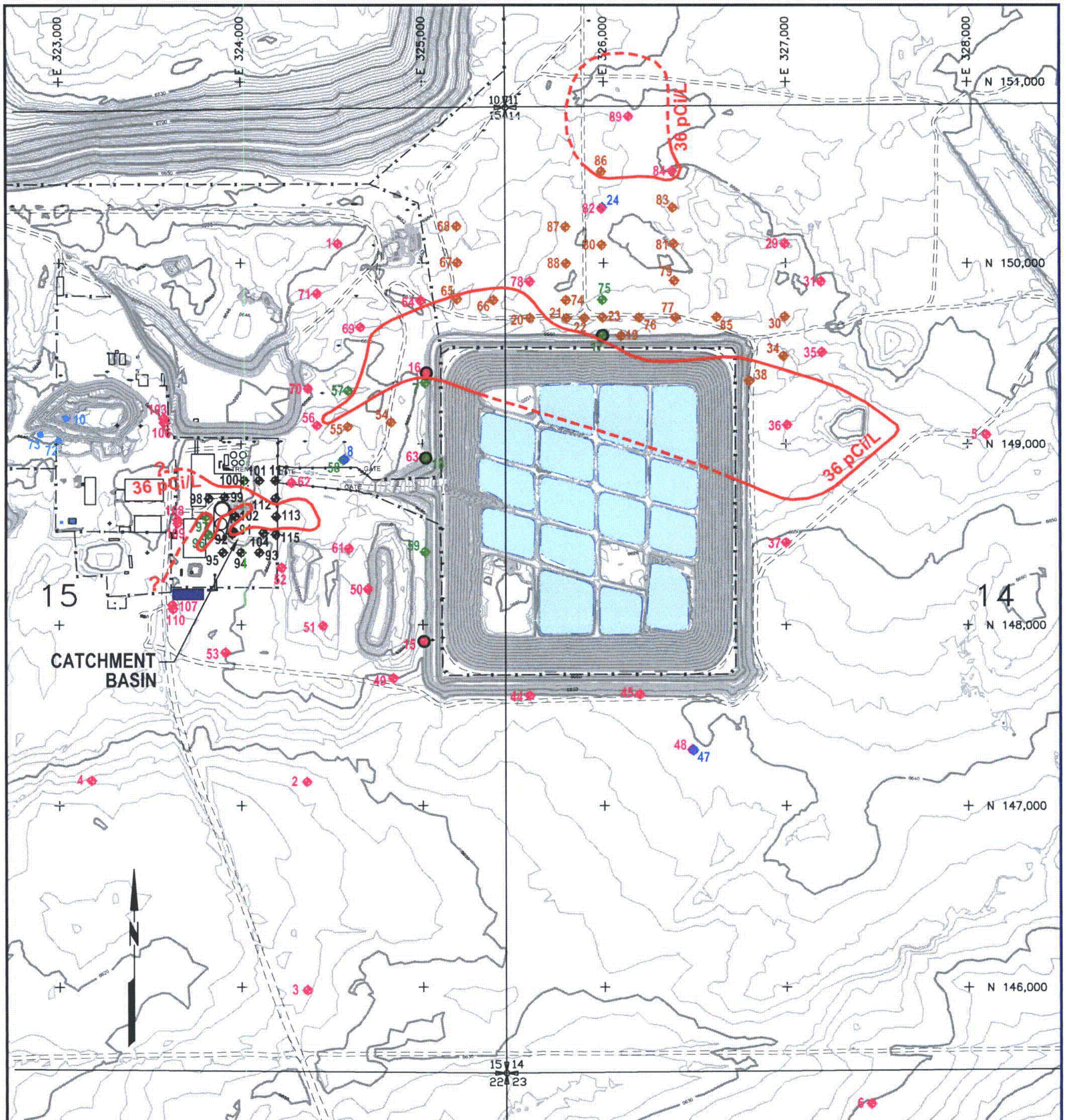
NOTE:
ALL WELLS HAVE A TMW PREFIX (TYP.)

LEGEND

- SHALLOW WELLS (PERCHED)
- DEEP AQUIFER WELLS
- AQUIFER WELLS
- PUMPBACK WELLS, AQUIFER
- COMPLIANCE MONITORING WELLS
- POINT OF COMPLIANCE (POC) WELLS (TAILINGS IMPOUNDMENT)
- CONTAMINATED SOIL EXCAVATION MONITOR WELLS

SWEETWATER URANIUM FACILITY
COMBINE RADIUM-226/228 CONTOUR MAP
2009 CORRECTIVE ACTION PROGRAM REVIEW

Date:	FEBRUARY 2010
Project:	06-442\REP2010\
File:	2010-RAD-FIG.dwg



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0 800

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RAWLINS, WY 82301

36 PCI/L URANIUM CONTOUR BASED ON HIGHEST NATURAL URANIUM RESULT FOR GIVEN WELL IN 2009.

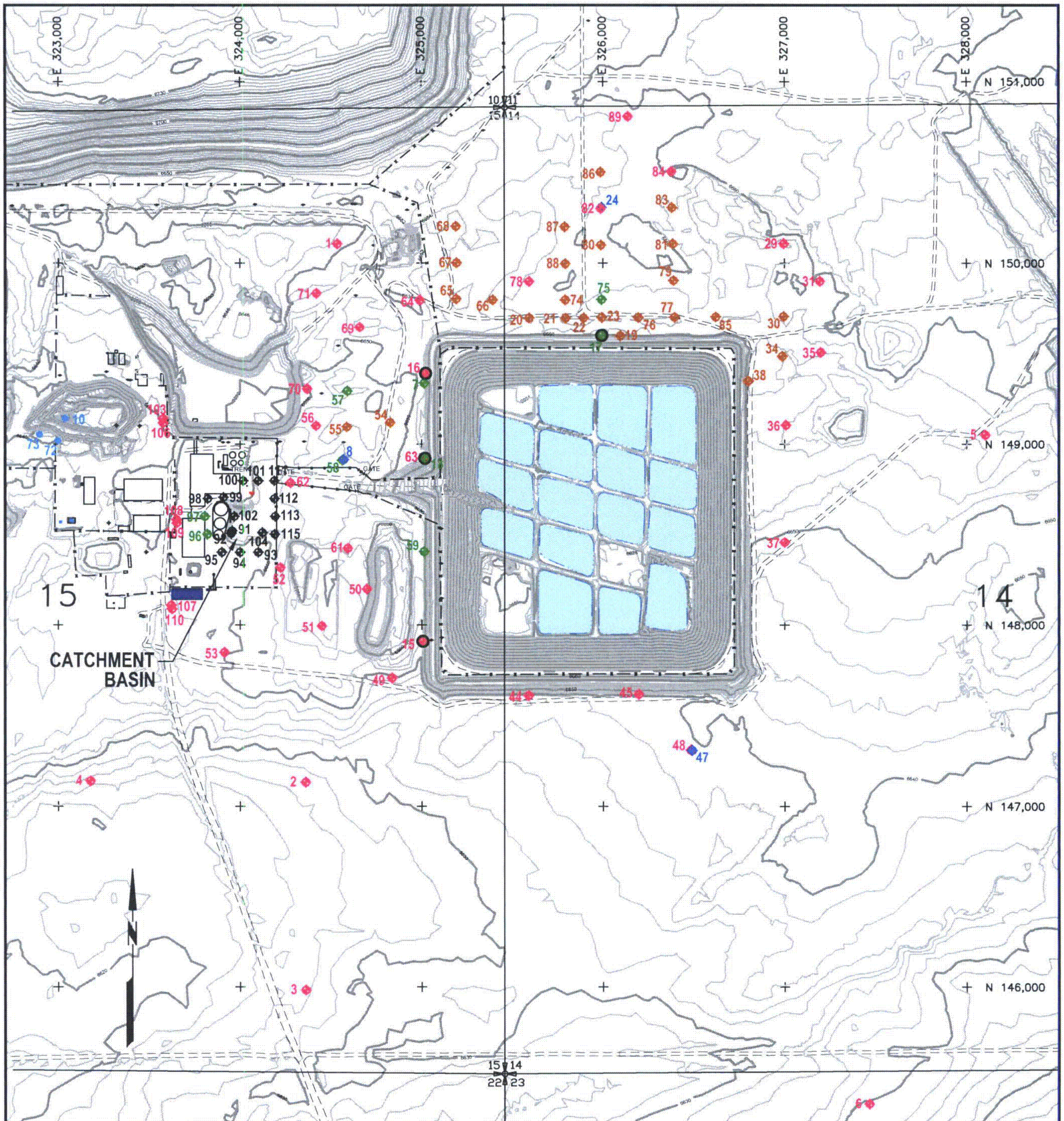
NOTE:
ALL WELLS HAVE A TMW PREFIX (TYP.)

LEGEND

- SHALLOW WELLS (PERCHED)
- DEEP AQUIFER WELLS
- AQUIFER WELLS
- PUMPBACK WELLS, AQUIFER
- COMPLIANCE MONITORING WELLS
- POINT OF COMPLIANCE (POC) WELLS (TAILINGS IMPOUNDMENT)
- CONTAMINATED SOIL EXCAVATION MONITOR WELLS

SWEETWATER URANIUM FACILITY
URANIUM (U-nat) CONTOUR MAP
2009 CORRECTIVE ACTION PROGRAM REVIEW

Date:	FEBRUARY 2010
Project:	06-442\REP2010\
File:	2010-UR-FIG.dwg



SCALE IN FEET

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SURVEYORS
P.O. BOX 1104, 1015 HARSHMAN ST.
RAWLINS, WY 82301

NOTE:
ALL WELLS HAVE A TMW PREFIX (TYP.)

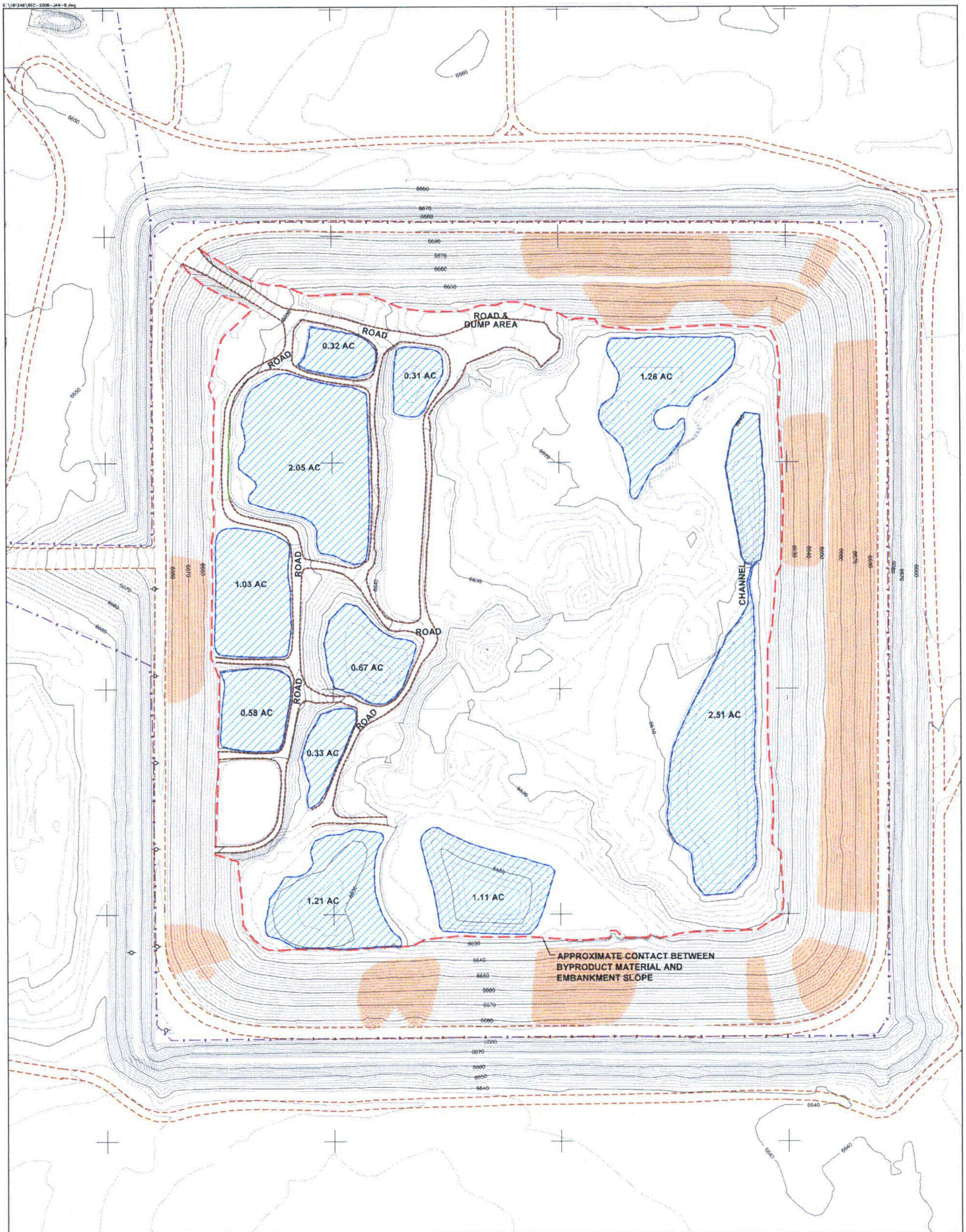
LEGEND

- SHALLOW WELLS (PERCHED)
- DEEP AQUIFER WELLS
- AQUIFER WELLS
- PUMPBACK WELLS, AQUIFER
- COMPLIANCE MONITORING WELLS
- POINT OF COMPLIANCE (POC) WELLS (TAILINGS IMPOUNDMENT)
- CONTAMINATED SOIL EXCAVATION MONITOR WELLS

SWEETWATER URANIUM FACILITY
MONITOR WELL LOCATIONS
2009 CORRECTIVE ACTION PROGRAM REVIEW

Date:	FEBRUARY 2010
Project:	06-442\REP2010
File:	2010-Wells.dwg

E:\181246\REC-2006-JAN-B.dwg



NOTES:

1. TOPOGRAPHY OF TAILINGS AREA FROM GPS SURVEY BY ROBERT JACK SMITH & ASSOC. AUGUST 23, 2005.
2. SURROUNDING TOPOGRAPHY FROM NOVEMBER 3, 1996 AERIAL PHOTOGRAPHY.
3. APPROXIMATE TAILINGS POND AREAS FROM AUGUST 23, 2005 GPS SURVEY DATA AND JULY 25, 2005 DIGITAL PHOTOGRAPHY BY MFG, INC.
4. APPROXIMATE SYNTHETIC LINER AREAS FROM JULY 25, 2005 DIGITAL PHOTOGRAPHY BY MFG, INC.

LEGEND:

- APPROXIMATE POND AREAS, JULY-AUGUST 2005
- APPROXIMATE AREAS OF WIND-DAMAGED SYNTHETIC LINER, JULY 2005

SCALE IN FEET
100 0 200

No.	DESCRIPTION	BY	CHKD.	DATE
A	PREPARED FOR KEC USE AND CONTRACTOR BIDDING	CLS		01/06

REVISIONS

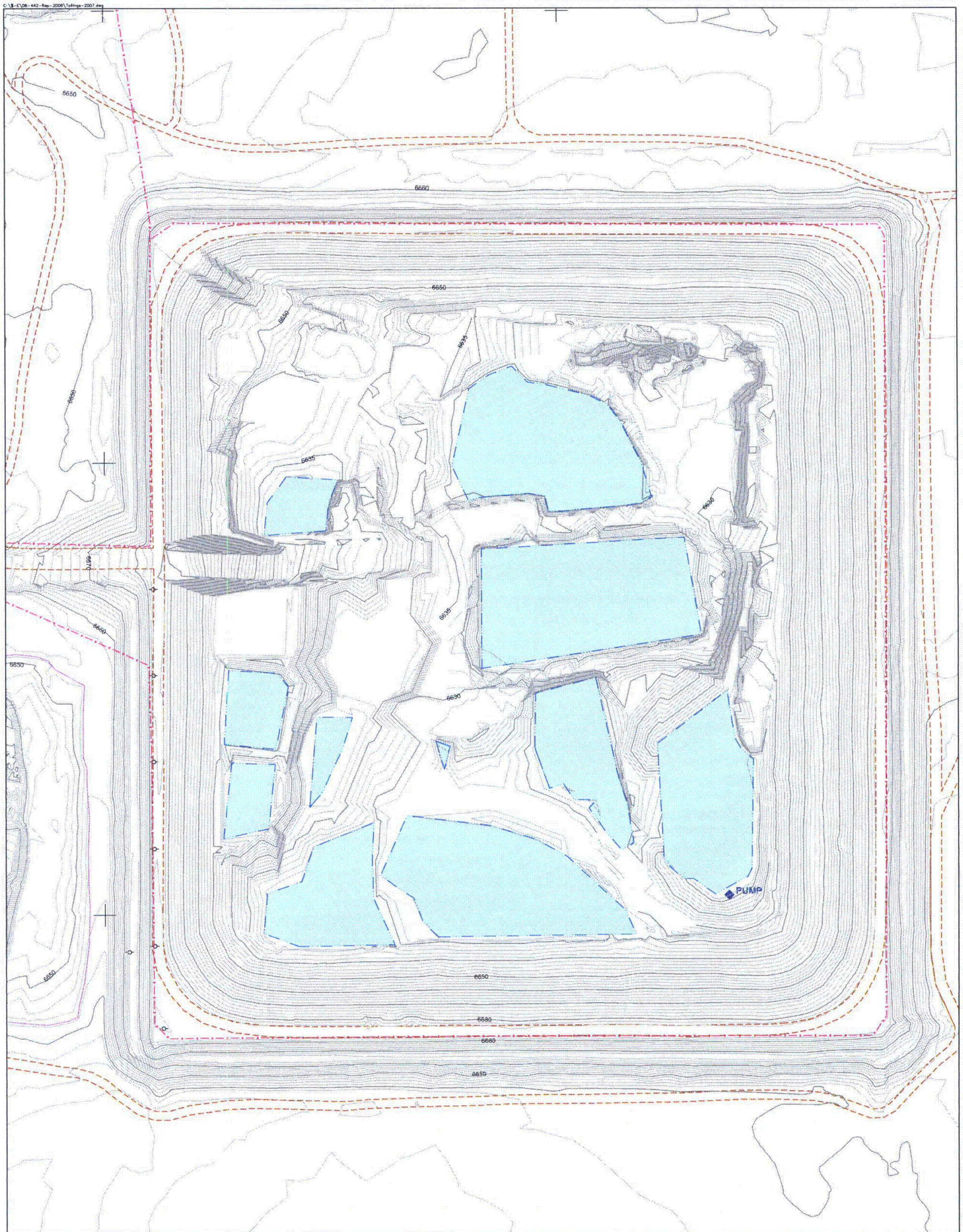
PREPARED BY
consulting scientists and engineers

PREPARED FOR
Kennecott Energy

SWEETWATER URANIUM PROJECT

EXISTING IMPOUNDMENT CONFIGURATION

PROJECT: 181246	DATE: JANUARY 2006	DRAWING	REVISION
SCALE: AS SHOWN	CAD FILE: REC-2006-JAN-B.dwg	1	A



LEGEND:

WATER COVERED AREA

SCALE IN FEET

100 0 200

REVISIONS No.	DESCRIPTION	BY	CHKD.	DATE

PREPARED BY

TETRA TECH

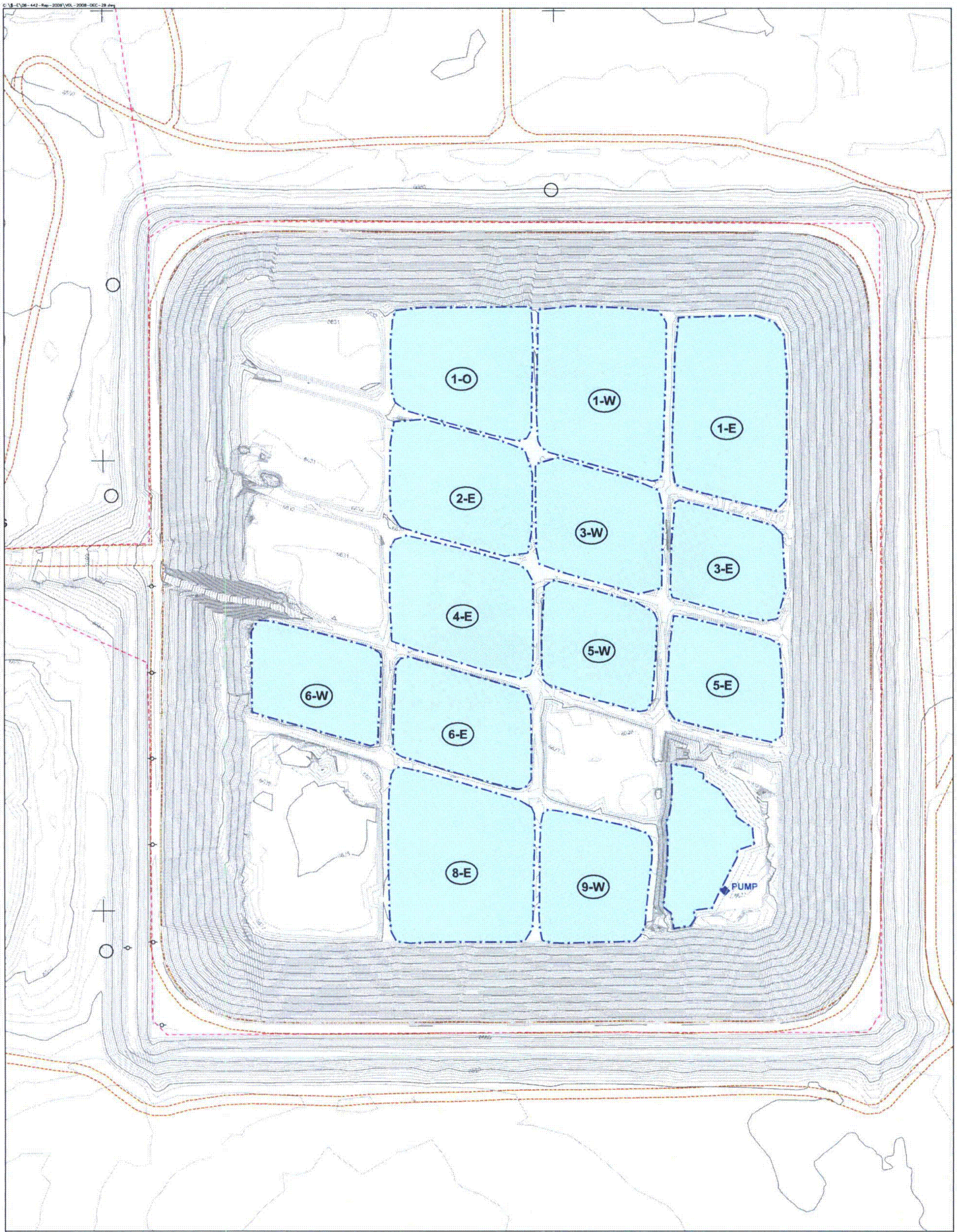
PREPARED FOR

RIO TINTO ENERGY AMERICA

SWEETWATER URANIUM PROJECT

EXISTING CONTOURS
OCTOBER 2007

PROJECT: 180889 (181246)	DATE: FEBRUARY 2009	DRAWING -	REVISION
SCALE: AS SHOWN	ACAD FILE: TAILINGS-2007.dwg		



LEGEND:

1W POND DESIGNATION

WATER COVERED AREA

POST-REGRADING CONTOURS FROM DECEMBER 29, 2008

SCALE IN FEET

100 0 200

No.	DESCRIPTION	BY	CHKD.	DATE

REVISIONS

PREPARED BY

TETRA TECH

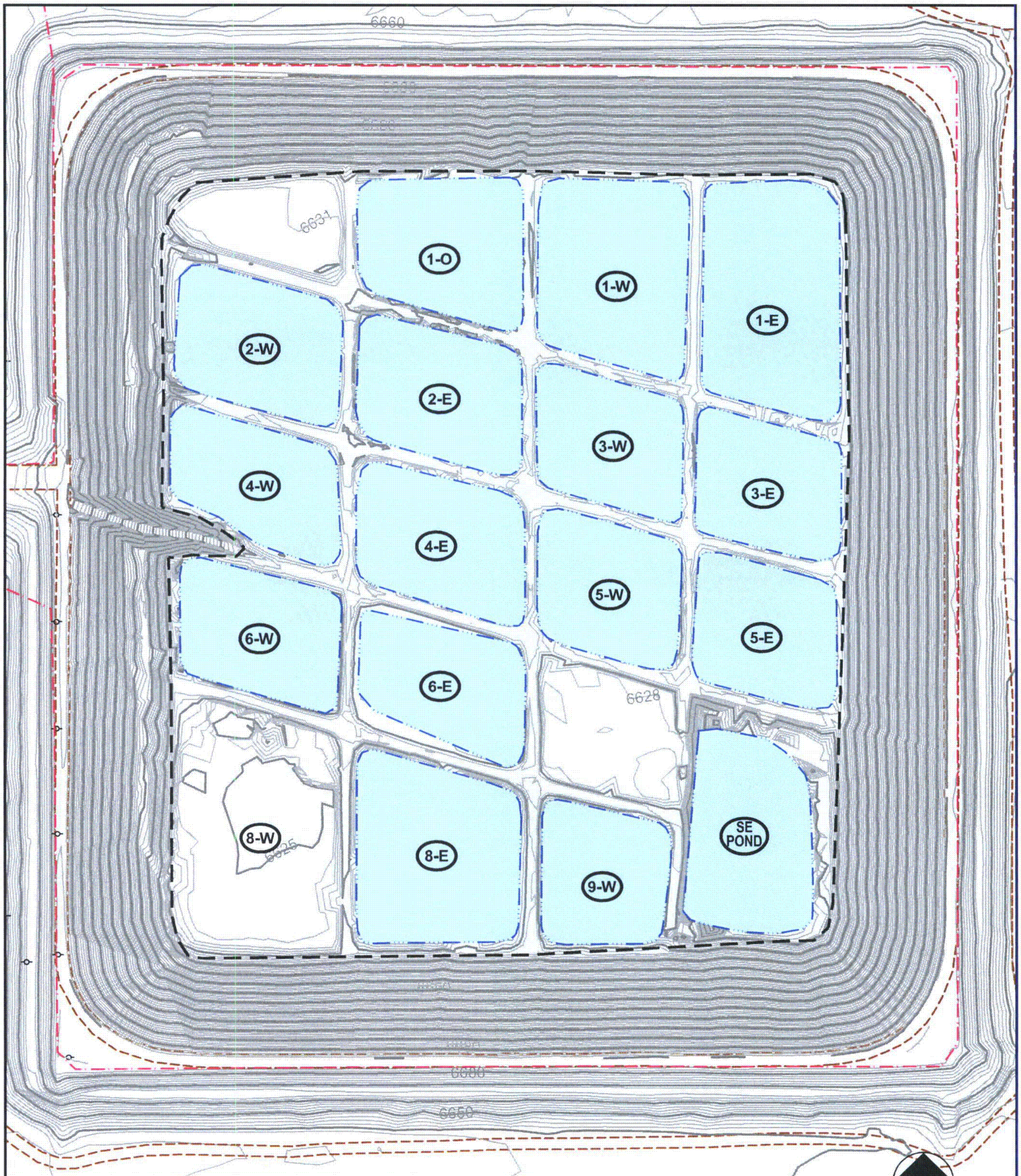
PREPARED FOR

RIO TINTO ENERGY AMERICA

SWEETWATER URANIUM PROJECT

EXISTING CONTOURS
DECEMBER 29, 2008

PROJECT: 180889 (181246)	DATE: JANUARY 2009	DRAWING: -	REVISION:
SCALE: AS SHOWN	CAD FILE: VOL-2008-DEC-29.dwg		



LEGEND:

1W POND DESIGNATION

WATER COVERED AREA

POST-REGRADING CONTOURS

SCALE IN FEET

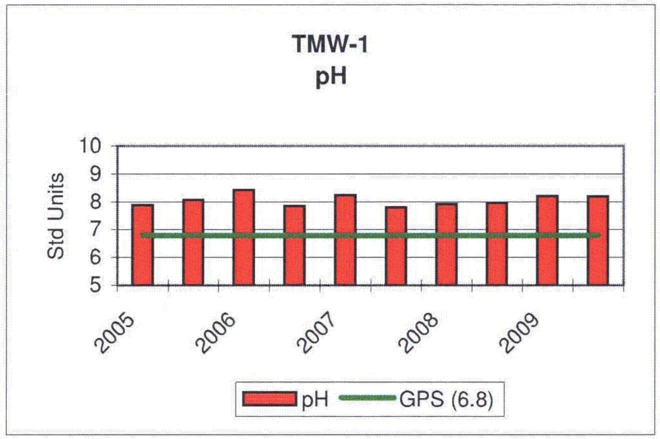
0 250'

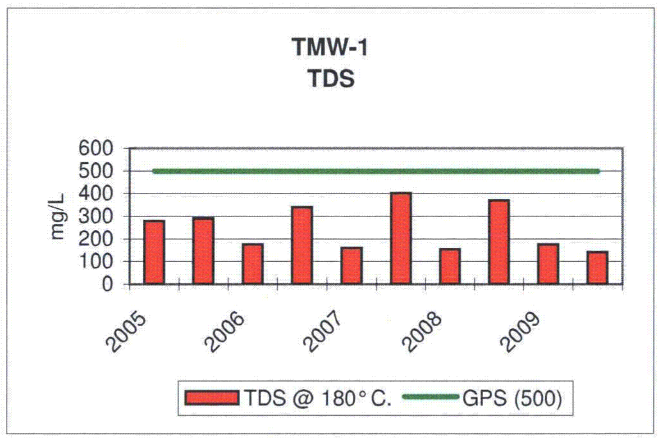
SWEETWATER URANIUM FACILITY
TAILINGS IMPOUNDMENT – DECEMBER 2009

Date:	FEBRUARY 2010
Project:	06-442\REP2010\
File:	Tailings 2009-Dec.dwg

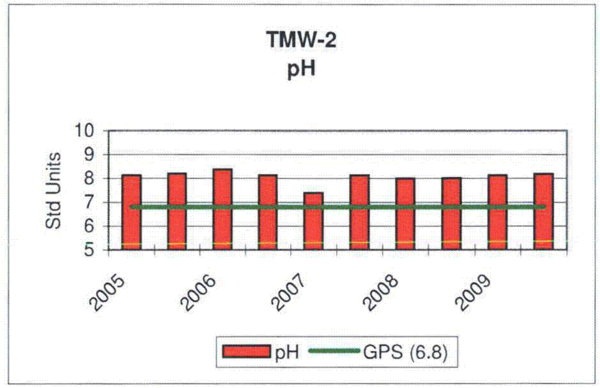
TAILINGS MONITOR WELL DATA ANALYSES & CONTROL CHARTS

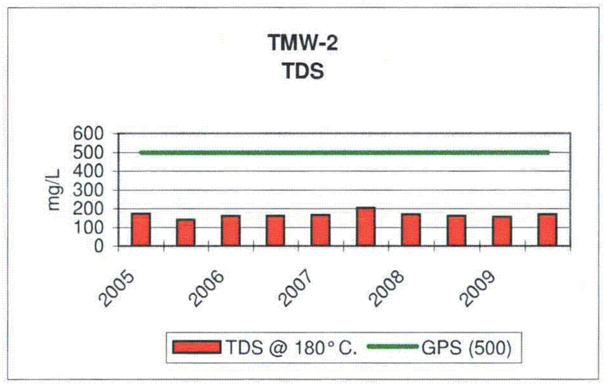
KENNECOTT URANIUM COMPANY											
TMW-1		2005		2006		2007		2008		2009	
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	1/4/2005	7/12/2005	1/11/2006	7/25/2006	1/10/2007	7/17/2007	2/13/2008	7/15/2008	1/14/2009	7/6/2009
TDS A/C Balance *(dec. %)*		1.05	0.92	0.97	0.99	0.86	1.09	0.282	5.82	3.15	-2.63
Alk-CaC03		99	108	90	110	85	116	87	114	83	83
Aluminum (Al)	GPS (1.8)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic (As)	GPS (.05)	0.002	<0.001	0.001	<0.001	<0.002	<0.001	0.002	<0.001	0.001	0.001
Barium (Ba)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beryllium (Be)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Bicarbonate (HCO3)		120	132	107	134	104	142	106	139	101	102
Boron (B)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Calcium (Ca)		46.7	60.9	22.2	72.2	28.1	79.6	19	90	17.8	16.6
Carbonate (CO3)		<1	<1	2	<1	<1	<1	<1	<1	<1	<1
Chloride (Cl)		2	2	2	4	3	4	1	3	1	2
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt (Co)		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cond *(umhos/cm)*		412	500	280	526	291	556	240	549	257	247
Cond-Field *(umhos/cm)*		400	280	230	500	270	515	223	489	219	223
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Fluoride (F)		0.2	0.2	<0.1	0.1	0.2	0.1	0.2	0.1	0.2	0.2
Gross Alpha *(pCi/L)*	GPS (15)	1.9	4	1.3	2.1	1.2	2.8	1.3	2.6	0.9	1.1
Iron (Fe)	GPS (0.6)	<0.05	0.14	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Lead (Pb210) *(pCi/L)*	GPS (8.9)		<1	<1	<1	<1	<1	1.7	0.8	-0.3	0.1
Lead (Pb)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Magnesium (Mg)		2.4	3.6	1.2	4.4	1.7	5.1	0.9	5.2	0.8	0.8
Manganese (Mn)	GPS (0.2)	0.05	0.07	0.02	0.08	0.03	0.09	0.01	0.07	0.01	0.01
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum (Mo)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nickel (Ni)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen, Nitrate+Nitrite as N		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
pH *(Std. Units)*	GPS (6.8)	7.88	8.06	8.42	7.85	8.24	7.8	7.91	7.96	8.2	8.19
pH (Field) *(Std. Units)*		7.6	7.3	7.78	7.51	7.84	7.8	8.9	7.8	8	7.1
Potassium (K)		1.8	1.7	1	1.5	1.5	2.6	1.4	2.5	1.2	1.3
Combined Ra226/228 *(pCi/L)*	GPS (5.8)	1.4	1.7	1	3.4	1.1	5.2	2	4.3	1.52	0.87
Radium 226 *(pCi/L)*		1.4	1.7	1	2.2	1.1	2.4	0.9	2.3	0.52	0.37
Radium 228 *(pCi/L)*		<1	<1	<1	1.2	<1	2.8	1.1	2.1	1	0.5
Selenium (Se)	GPS (.01)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silica (SiO2)		12	11	11	10	11	9	15	7	12.9	14.5
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		39.4	36.8	36.5	34.4	33.6	34.3	35.2	34.4	39.8	30.8
TDS @ 180° *C.*	GPS (500)	279	290	176	340	160	402	154	369	175	142
Sulfate (SO4)		102	134	53	153	56	164	38	163	44	32
Temperature *(C)*		10	12	9.8	14.4	9.4	12.6	9.6	11.9	9.7	11.2
Thallium (Tl)	GPS (7.0)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Thorium 230 *(pCi/L:)*		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.1	0	0	0.04
Uranium, natural *(pCi/L)*	GPS (36)			4.2	21.3	8.9	20.8	4.6	17.3	3.4	2.1
Vanadium (V205)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Zinc (ZN)		<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01

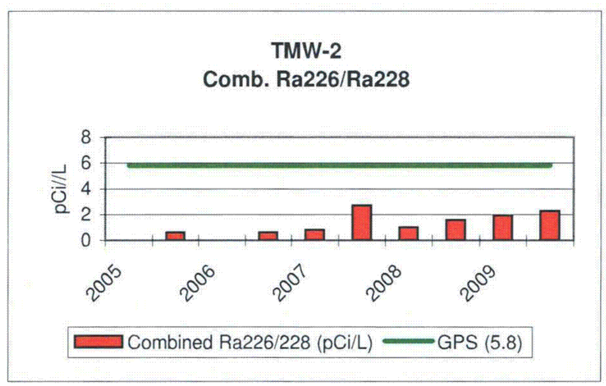

TMW-1
pH
Std Units
10
9
8
7
6
5
2005
2006
2007
2008
2009
pH
GPS (6.8)


TMW-1
TDS
mg/L
600
500
400
300
200
100
0
2005
2006
2007
2008
2009
TDS @ 180° C.
GPS (500)

KENNECOTT URANIUM COMPANY											
TMW-2		2005		2006		2007		2008		2009	
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	1/4/2005	7/12/2005	1/16/2006	8/10/2006	2/11/2007	7/18/2007	1/8/2008	7/21/2008	2/3/2009	7/7/2009
TDS A/C Balance *(dec. %)*		1.07	0.82	0.94	0.88	0.85	1.16	0.124	2.82	0.319	-1.21
Alk-CaC03		84	88	88	88	92	90	89	89	89	89
Aluminum (Al)	GPS (1.8)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic (As)	GPS (.05)	0.002	0.002	0.001	0.001	0.001	0.001	0.001	0.002	0.001	0.001
Barium (Ba)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beryllium (Be)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Bicarbonate (HCO3)		103	107	104	107	112	110	108	109	108	109
Boron (B)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Calcium (Ca)		18.7	21.3	24	26.8	29.9	24.8	26.8	27.9	24.1	23.8
Carbonate (CO3)		<1	<1	1	<1	<1	<1	<1	<1	<1	<1
Chloride (Cl)		2	2	3	6	3	2	3	2	1	2
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt (Co)		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cond *(umhos/cm)*		256	277	270	293	282	268	249	284	134	280
Cond-Field *(umhos/cm)*		260	180	230	252	255	248	231	248	233	283
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Fluoride (F)		0.2	0.2	<0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Gross Alpha *(pCi/L)*	GPS (15)	<1	1.6	<1	1.2	<1	1.3	1.4	1.2	1.5	2.1
Iron (Fe)	GPS (0.6)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<1	<1	<1	<1	<1	<1	<1	2.3	3	<1
Lead (Pb)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Magnesium (Mg)		0.9	0.9	1.3	1.4	1.6	1.3	1.3	1.5	1.3	1.2
Manganese (Mn)	GPS (0.2)	<0.01	<0.01	0.01	0.01	0.02	0.01	0.02	0.01	0.01	0.01
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum (Mo)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nickel (Ni)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen, Nitrate+Nitrite as N		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
pH *(Std. Units)*	GPS (6.8)	8.12	8.2	8.37	8.13	7.39	8.12	7.99	8.01	8.12	8.18
pH (Field) *(Std. Units)*		7.9	8.5	7.8	7.39	7.45	8.4	8.3	8.2	7.8	7.3
Potassium (K)		1.3	1.1	1.5	2	1.8	1.5	1.7	1.5	1.5	1.5
Combined Ra226/228 *(pCi/L)*	GPS (5.8)	0	0.6	0	0.6	0.8	2.7	1	1.58	1.93	2.26
Radium 226 *(pCi/L)*		<0.2	0.6	<0.2	0.6	0.8	0.5	1	0.68	0.93	0.86
Radium 228 *(pCi/L)*		<1	<1	<1	<1	<1	2.2	<1	0.9	1	1.4
Selenium (Se)	GPS (.01)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silica (SiO2)		13	12	13	13	14	13	15	18	16.6	15.4
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		35.6	34.2	31.6	32.6	35.4	34.4	31.4	31.5	32.9	29.7
TDS @ 180° *C.*	GPS (500)	173	140	160	160	166	204	170	161	156	169
Sulfate (SO4)		39	45	44	47	55	46	47	44	45	40
Temperature *(C)*		11	13	7.5	14.2	10	11	4.5	10.5	10.1	12.1
Thallium (Tl)	GPS (7.0)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Thorium 230 *(pCi/L:)*		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0	0.04	0.003
Uranium, natural *(pCi/L)*	GPS (36)	0.3	0.6	0.3	0.4	0.4	0.3	0.7	0.5	0.3	0.3
Vanadium (V205)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Zinc (ZN)		0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

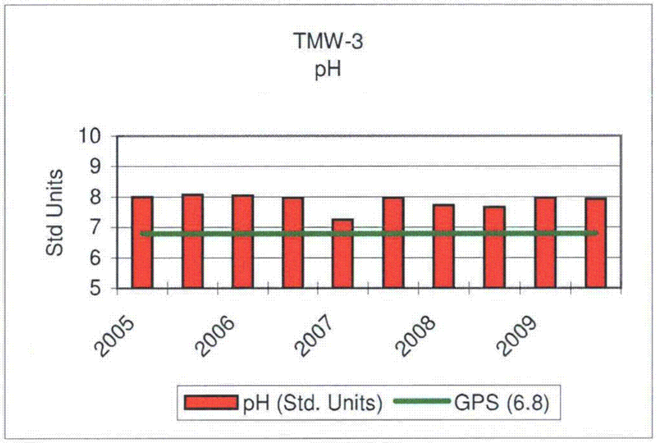

TMW-2
pH
Std Units
10
9
8
7
6
5
2005
2006
2007
2008
2009
pH
GPS (6.8)

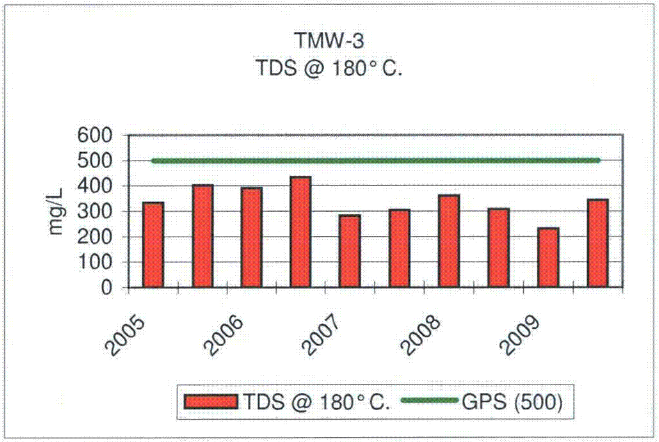

TMW-2
TDS
mg/L
600
500
400
300
200
100
0
2005
2006
2007
2008
2009
TDS @ 180° C.
GPS (500)


TMW-2
Comb. Ra226/Ra228
pCi/L
8
6
4
2
0
2005
2006
2007
2008
2009
Combined Ra226/228 (pCi/L)
GPS (5.8)

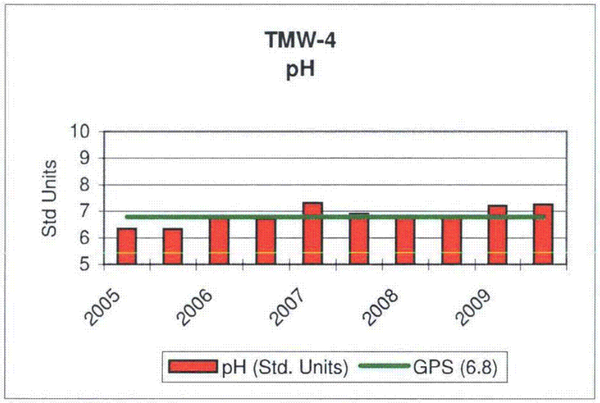
TMW-2

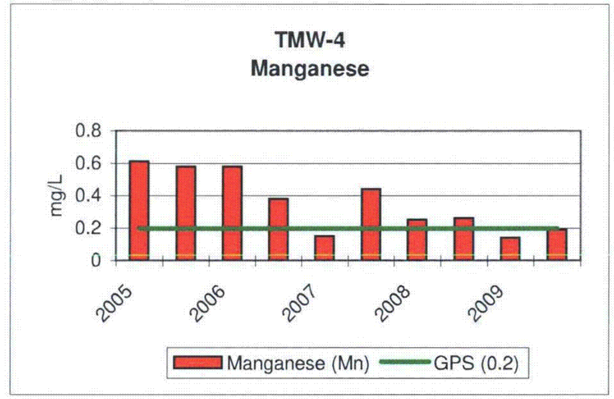
KENNECOTT URANIUM COMPANY											
TMW-3		2005		2006		2007		2008		2009	
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	1/4/2005	7/12/2005	1/12/2006	8/15/2006	2/11/2007	7/22/2007	1/15/2008	7/21/2008	2/3/2009	7/13/2009
TDS A/C Balance *(dec. %)*		1.07	0.94	0.98	0.96	0.88	0.89	0.54	3.04	0.933	-2.12
Alk-CaC03		96	107	103	100	98	100	104	98	91	96
Aluminum (Al)	GPS (1.8)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic (As)	GPS (.05)	0.001	0.001	0.001	0.001	0.002	0.001	0.001	0.001	0.001	0.001
Barium (Ba)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beryllium (Be)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Bicarbonate (HCO3)		117	130	125	122	120	120	127	119	111	118
Boron (B)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Calcium (Ca)		57.2	85.5	77.7	91.3	57.6	62.7	84.3	63.3	42.2	52.6
Carbonate (CO3)		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloride (Cl)		4	4	6	6	5	4	5	4	2	4
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt (Co)		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cond *(umhos/cm)*		481	657	593	690	445	493	620	479	266	470
Cond-Field *(umhos/cm)*		480	380	440	629	407	477	601	425	332	481
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Fluoride (F)		0.2	0.2	<0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2
Gross Alpha *(pCi/L)*	GPS (15)	<1	<1	2.4	1.5	<1	<1	3	1.6	1.5	2.3
Iron (Fe)	GPS (0.6)	0.06	0.24	<0.05	<0.05	<0.05	<0.05	0.12	0.1	<0.05	0.1
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<1	<1	<1	<1	<1	<1	<1	4.9	3.9	0.7
Lead (Pb)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Magnesium (Mg)		4	7	6.8	7.6	4.1	5.3	6.9	5	2.9	3.9
Manganese (Mn)	GPS (0.2)	0.04	0.05	0.06	0.05	0.03	0.04	0.05	0.03	0.02	0.04
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum (Mo)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nickel (Ni)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen, Nitrate+Nitrite as N		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
pH *(Std. Units)*	GPS (6.8)	8	8.07	8.04	7.97	7.25	7.97	7.72	7.66	7.97	7.92
pH (Field) *(Std. Units)*		7.2	7.6	7.51	7.32	7.47	8	8.2	7.8	7.6	6.9
Potassium (K)		1.9	2	2.3	2.4	2.2	2.1	2.6	2	1.8	2
Combined Ra226/228 *(pCi/L)*	GPS (5.8)	2.9	2.4	1.1	3.6	3.8	1.2	1.9	1.68	1.84	3.1
Radium 226 *(pCi/L)*		1	2.4	1.1	2.1	1.3	1.2	1.9	0.58	0.64	1.1
Radium 228 *(pCi/L)*		1.9	<1	<1	1.5	2.5	<1	<1	1.1	1.2	2
Selenium (Se)	GPS (.01)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silica (SiO2)		13	13	14	15	14	12	14	17.6	16.5	15.7
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		38.2	41.6	38.6	42.1	41.9	39.8	38.4	36.1	35.8	34.2
TDS @ 180° *C.*	GPS (500)	333	402	390	434	282	304	361	307	231	343
Sulfate (SO4)		134	208	189	226	137	154	209	135	95	126
Temperature *(C)*		10	15	8.5	12.3	8.7	11	9.2	10.6	9.6	11.9
Thallium (Tl)	GPS (7.0)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Thorium 230 *(pCi/L:)*		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Uranium, natural *(pCi/L)*	GPS (36)	0.7	1.5	1.3	1.9	0.5	1	1.5	0.9	0.5	2
Vanadium (V205)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Zinc (ZN)		0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01

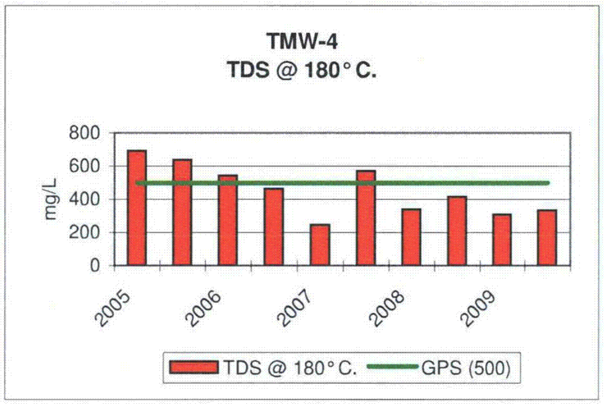

TMW-3
pH
Std Units
10
9
8
7
6
5
2005
2006
2007
2008
2009
pH (Std. Units)
GPS (6.8)

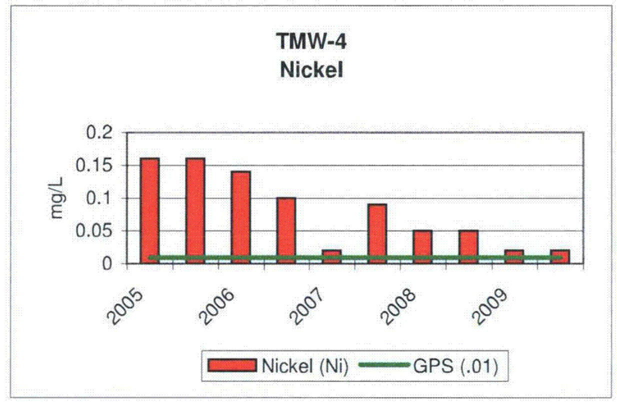

TMW-3
TDS @ 180° C.
mg/L
600
500
400
300
200
100
0
2005
2006
2007
2008
2009
TDS @ 180° C.
GPS (500)

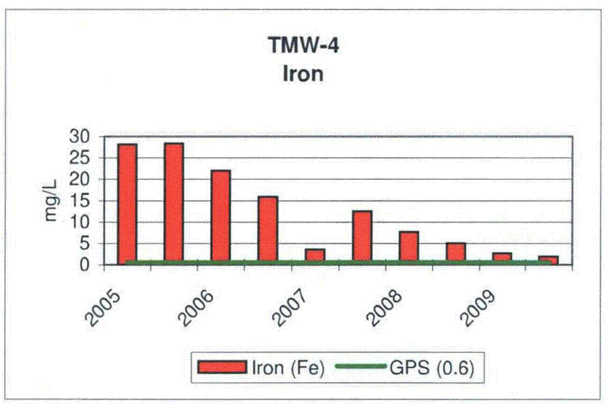
KENNECOTT URANIUM COMPANY											
TMW-4		2005		2006		2007		2008		2009	
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	1/4/2005	7/12/2005	1/12/2006	7/25/2006	2/11/2007	7/17/2007	1/15/2008	7/15/2008	1/20/2009	7/7/2009
TDS A/C Balance *(dec. %)*		1.1	0.98	0.95	0.97	0.84	1.07	1.78	4.27	-4.5	-3.09
Alk-CaC03		30	28	70	54	70	64	66	68	71	72
Aluminum (Al)	GPS (1.8)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic (As)	GPS (.05)	0.003	0.002	0.001	0.002	0.001	0.001	0.001	<0.001	<0.001	<0.001
Barium (Ba)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beryllium (Be)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Bicarbonate (HCO3)		36	35	85	66	85	78	81	83	86	88
Boron (B)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Calcium (Ca)		105	106	90.6	74.9	39.8	88.5	55.3	74.3	37.8	48.7
Carbonate (CO3)		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloride (Cl)		6	4	5	4	5	5	4	3	4	4
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt (Co)		0.1	0.101	0.095	0.062	0.017	0.061	0.036	0.034	0.013	0.019
Cond *(umhos/cm)*		864	956	789	693	441	776	567	610	461	521
Cond-Field *(umhos/cm)*		880	500	590	613	419	718	549	559	407	542
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Fluoride (F)		0.3	0.3	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2
Gross Alpha *(pCi/L)*	GPS (15)	3.1	5.6	2.3	<1	<1	2.1	3	1.8	1.7	1.8
Iron (Fe)	GPS (0.6)	28.1	28.3	22	15.9	3.57	12.5	7.61	4.97	2.62	1.92
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Lead (Pb)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Magnesium (Mg)		24	25.9	21.8	16	6.7	18.3	9.4	12.1	6	7
Manganese (Mn)	GPS (0.2)	0.61	0.58	0.58	0.38	0.15	0.44	0.25	0.26	0.14	0.19
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum (Mo)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nickel (Ni)	GPS (.01)	0.16	0.16	0.14	0.1	0.02	0.09	0.05	0.05	0.02	0.02
Nitrogen, Nitrate+Nitrite as N		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
pH *(Std. Units)*	GPS (6.8)	6.34	6.32	6.73	6.71	7.31	6.89	6.82	6.82	7.2	7.24
pH (Field) *(Std. Units)*		6.2	6.7	6.65	6.73	6.65	7.2	7.1	6.9	6.8	6.3
Potassium (K)		3.1	3	3	1.8	3	2.7	2.6	2.5	2	2
Combined Ra226/228 *(pCi/L)*	GPS (5.8)	4.6	5.8	2.8	7.5	1.3	3.8	1.2	3.2	2.66	3.28
Radium 226 *(pCi/L)*		1.2	3.2	1	1.2	<0.2	1.5	1.2	0.7	0.86	0.98
Radium 228 *(pCi/L)*		3.4	2.6	1.8	6.3	1.3	2.3	<1	2.5	1.8	2.3
Selenium (Se)	GPS (.01)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silica (SiO2)		18	18	17	16	12	14	13	8	11.5	13.9
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		43.7	44.8	41.9	42	41.6	47	41.3	45.1	42.2	38.4
TDS @ 180° *C.*	GPS (500)	692	637	541	462	244	568	337	414	306	332
Sulfate (SO4)		410	435	347	287	140	318	213	227	151	167
Temperature *(C)*		10	14	8	18.8	9.9	12.1	9.5	10.9	9.9	10.7
Thallium (Tl)	GPS (7.0)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Thorium 230 *(pCi/L:)*		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Uranium, natural *(pCi/L)*	GPS (36)	2.9	4.5	4.9	5.5	2.9	5.2	4	3.3	3.1	2.4
Vanadium (V205)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Zinc (ZN)		0.11	0.08	0.08	0.06	0.01	0.05	0.03	0.02	0.01	<0.01

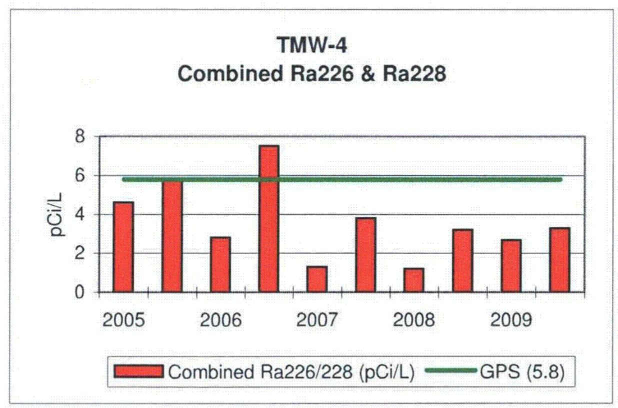

TMW-4
pH
Std Units
10
9
8
7
6
5
2005
2006
2007
2008
2009
pH (Std. Units)
GPS (6.8)


TMW-4
Manganese
mg/L
0.8
0.6
0.4
0.2
0
2005
2006
2007
2008
2009
Manganese (Mn)
GPS (0.2)

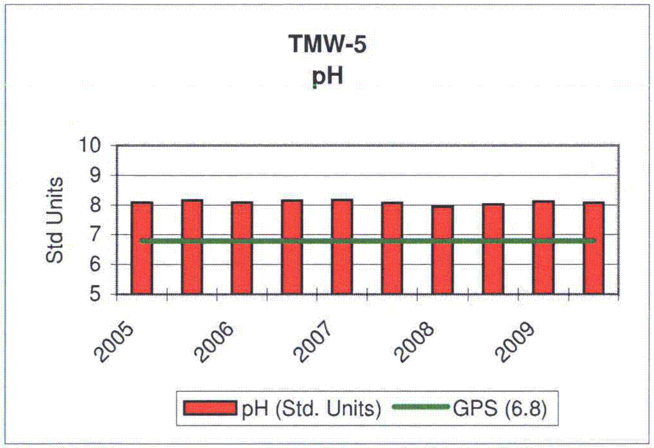

TMW-4
TDS @ 180° C.
mg/L
800
600
400
200
0
2005
2006
2007
2008
2009
TDS @ 180° C.
GPS (500)


TMW-4
Nickel
mg/L
0.2
0.15
0.1
0.05
0
2005
2006
2007
2008
2009
Nickel (Ni)
GPS (.01)

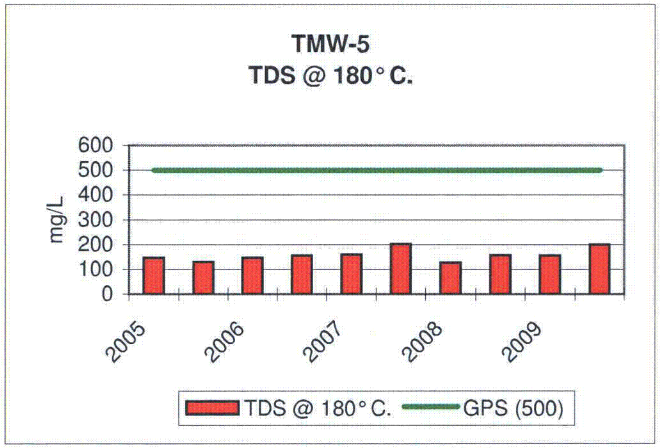

TMW-4
Iron
mg/L
30
25
20
15
10
5
0
2005
2006
2007
2008
2009
Iron (Fe)
GPS (0.6)


TMW-4
Combined Ra226 & Ra228
pCi/L
8
6
4
2
0
2005
2006
2007
2008
2009
Combined Ra226/228 (pCi/L)
GPS (5.8)

KENNECOTT URANIUM COMPANY											
TMW-5		2005		2006		2007		2008		2009	
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	1/10/2005	7/12/2005	1/16/2006	8/15/2006	2/11/2007	7/18/2007	1/15/2008	7/23/2008	2/3/2009	7/13/2009
TDS A/C Balance *(dec. %)*		0.91	0.88	0.88	0.93	0.94	1.13	0.857	2.5	0.028	-3.18
Alk-CaC03		90	83	92	88	89	94	90	91	90	90
Aluminum (Al)	GPS (1.8)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic (As)	GPS (.05)	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	<0.001	0.001
Barium (Ba)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beryllium (Be)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Bicarbonate (HCO3)		109	101	113	107	109	115	110	111	110	110
Boron (B)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Calcium (Ca)		23.9	20.3	23.5	24.2	25	25.9	24.4	25.7	23.6	21.9
Carbonate (CO3)		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloride (Cl)		<1	<1	2	2	2	2	2	1	1	2
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt (Co)		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cond *(umhos/cm)*		256	247	264	283	262	270	238	266	118	266
Cond-Field *(umhos/cm)*		260	160	220	236	238	244	248	235	222	279
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Fluoride (F)		0.2	0.2	<0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2
Gross Alpha *(pCi/L)*	GPS (15)	<1	<1	<1	1.4	1.3	1.3	2.3	1.8	2.2	2.8
Iron (Fe)	GPS (0.6)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.05	<0.05	<0.05	<0.05
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<1	<1	<1	<1	<1	<1	<1	1.6	2.2	0
Lead (Pb)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Magnesium (Mg)		1.2	1	1.2	1	1.2	1.3	1.1	1.3	1.1	1.1
Manganese (Mn)	GPS (0.2)	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.03	<0.01	<0.01
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum (Mo)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nickel (Ni)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen, Nitrate+Nitrite as N		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
pH *(Std. Units)*	GPS (6.8)	8.08	8.16	8.08	8.15	8.17	8.07	7.94	8.02	8.11	8.07
pH (Field) *(Std. Units)*		7.9	7.5	7.64	7.36	7.57	8.3	8.5	8	7.8	7
Potassium (K)		1.5	1.1	1.5	1.4	1.6	1.5	1.7	1.5	1.5	1.4
Combined Ra226/228 *(pCi/L)*	GPS (5.8)	0.8	0.6	ND	2.6	3.3	0.5	0.9	1.88	2.9	2.2
Radium 226 (pCi/L)		0.8	0.6	<0.2	1.1	1.3	0.5	0.9	0.88	1.1	1.1
Radium 228 *(pCi/L)*		<1	<1	<1	1.5	2	<1	<1	1	1.8	1.1
Selenium (Se)	GPS (.01)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silica (SiO2)		13	13	14	15	13	13	15	18.3	17.2	15.6
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		31.4	31	29.8	32.2	32.5	33.9	30.2	31	30.6	27.8
TDS @ 180° *C.*	GPS (500)	146	130	146	156	160	202	127	157	156	200
Sulfate (SO4)		36	31	37	40	41	44	41	38	38	34
Temperature *(C)*		14	14	7.8	11.7	9.1	13	10	11	10.2	12
Thallium (Tl)	GPS (7.0)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Thorium 230 *(pCi/L:)*		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Uranium, natural *(pCi/L)*	GPS (36)	0.5	0.5	0.4	0.3	0.3	0.4	0.6	0.4	0.3	1
Vanadium (V205)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Zinc (ZN)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.03	<0.01	0.01

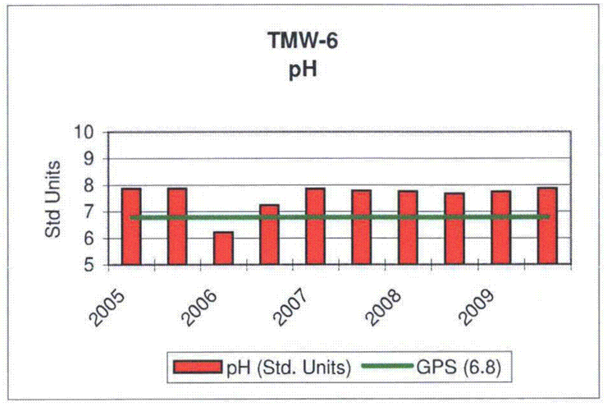


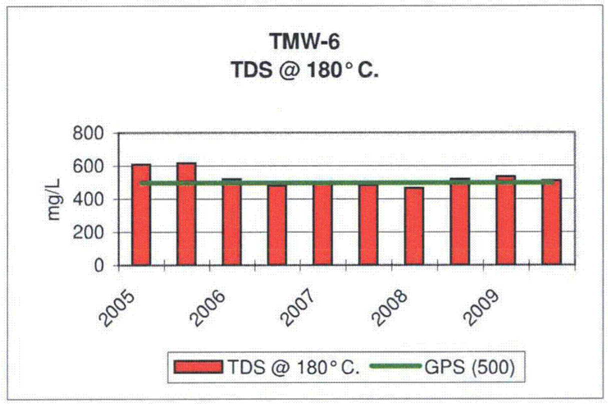
TMW-5
pH
Std Units
10
9
8
7
6
5
2005
2006
2007
2008
2009
pH (Std. Units)
GPS (6.8)

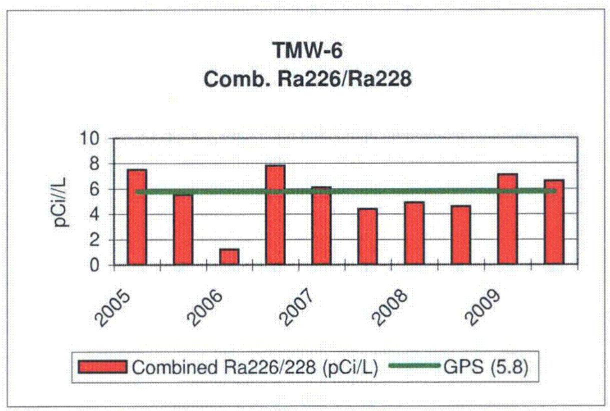


TMW-5
TDS @ 180° C.
mg/L
600
500
400
300
200
100
0
2005
2006
2007
2008
2009
TDS @ 180° C.
GPS (500)

KENNECOTT URANIUM COMPANY											
TMW-6		2005		2006		2007		2008		2009	
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	1/10/2005	7/13/2005	1/12/2006	8/15/2006	2/11/2007	7/22/2007	1/15/2008	7/22/2008	1/20/2009	7/7/2009
TDS A/C Balance *(dec. %)*		1	1	0.97	0.9	0.94	0.89	0.704	5.95	-5.08	-1.75
Alk-CaC03		154	150	142	146	119	140	142	139	136	139
Aluminum (Al)	GPS (1.8)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic (As)	GPS (.05)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium (Ba)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beryllium (Be)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Bicarbonate (HCO3)		188	183	174	179	145	170	173	169	166	169
Boron (B)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Calcium (Ca)		142	138	116	116	118	116	117	125	98.6	106
Carbonate (CO3)		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloride (Cl)		5	9	7	5	6	5	6	5	5	5
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt (Co)		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cond *(umhos/cm)*		861	848	757	783	783	750	780	758	774	763
Cond-Field *(umhos/cm)*		780	480	560	718	730	736	741	697	682	774
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Fluoride (F)		0.2	0.1	<0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2
Gross Alpha *(pCi/L)*	GPS (15)	2.6	4.2	3	2.2	2.9	3.4	5.5	3.9	2.8	2.9
Iron (Fe)	GPS (0.6)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.07	0.07	<0.05	<0.05
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<1	<1	7.1	<1	<1	<1	<1	4	<1	<1
Lead (Pb)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Magnesium (Mg)		12.1	12	10.4	9.4	10.3	10.2	9.6	10.4	9	8.8
Manganese (Mn)	GPS (0.2)	0.09	0.09	0.08	0.07	0.08	0.07	0.08	0.08	0.08	0.08
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum (Mo)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nickel (Ni)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen, Nitrate+Nitrite as N		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
pH *(Std. Units)*	GPS (6.8)	7.87	7.87	6.21	7.23	7.85	7.78	7.76	7.67	7.74	7.87
pH (Field) *(Std. Units)*		7.3	7.2	7.41	7.31	7.3	7.7	8	7.5	7.2	7.2
Potassium (K)		3.4	2.5	2.9	2.8	3	3	3.3	2.9	2.8	2.8
Combined Ra226/228 *(pCi/L)*	GPS (5.8)	7.5	5.5	1.2	7.8	6.1	4.4	4.9	4.6	7.1	6.6
Radium 226 *(pCi/L)*		3.1	3.3	1.2	3.6	2.3	2.6	3.4	1.7	3.1	2.8
Radium 228 *(pCi/L)*		4.4	2.2	<1	4.2	3.8	1.8	1.5	2.9	4	3.8
Selenium (Se)	GPS (.01)	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silica (SiO2)		13	15	14	14	13	12	14	17.1	12.1	14.4
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		41.4	42	39.6	39.3	39.9	42.1	39.3	39.2	38.8	35
TDS @ 180° *C.*	GPS (500)	608	616	518	480	496	484	464	518	534	509
Sulfate (SO4)		300	305	256	258	265	268	265	239	257	238
Temperature *(C)*		11	13	8.6	14.7	9.7	13	9.3	10.4	10.7	10.9
Thallium (Tl)	GPS (7.0)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Thorium 230 *(pCi/L:)*		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Uranium, natural *(pCi/L)*	GPS (36)	3.7	3.3	2.8	2.4	2.5	2.5	2.3	2.5	2.8	2.3
Vanadium (V205)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Zinc (ZN)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02

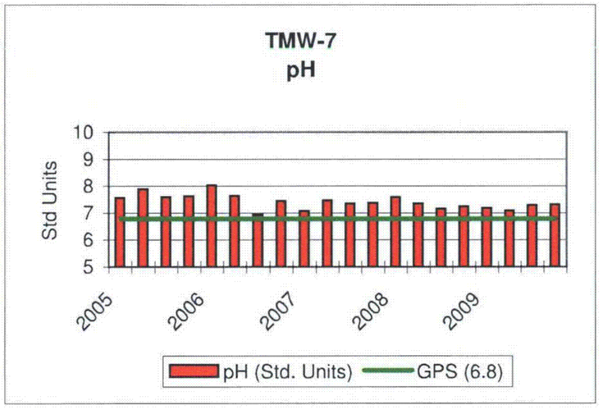

TMW-6
pH
Std Units
10
9
8
7
6
5
2005
2006
2007
2008
2009
pH (Std. Units)
GPS (6.8)

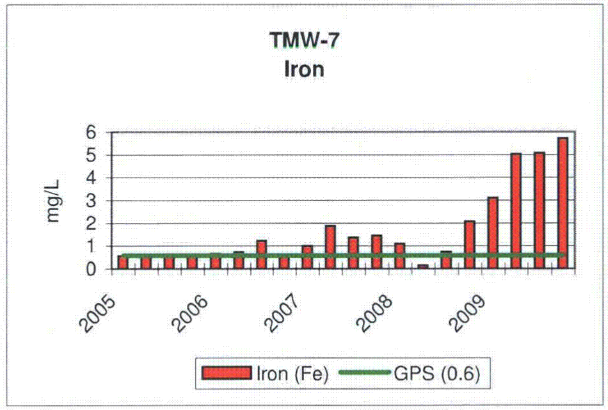

TMW-6
TDS @ 180° C.
mg/L
800
600
400
200
0
2005
2006
2007
2008
2009
TDS @ 180° C.
GPS (500)

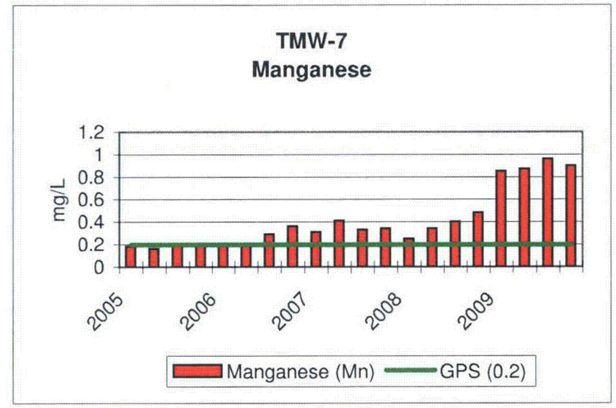

TMW-6
Comb. Ra226/Ra228
pCi/L
10
8
6
4
2
0
2005
2006
2007
2008
2009
Combined Ra226/228 (pCi/L)
GPS (5.8)

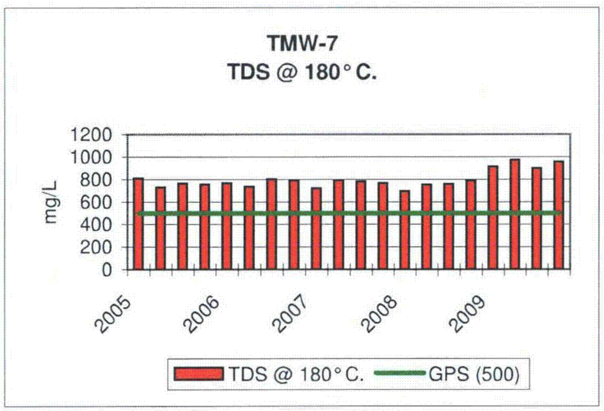
KENNECOTT URANIUM COMPANY																
TMW-7		2005				2006				2007				2008		
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	1/5/2005	4/6/2005	7/11/2005	11/7/2005	1/11/2006	4/10/2006	7/3/2006	10/5/2006	1/10/2007	4/11/2007	7/22/2007	10/1/2007	1/13/2008	4/14/2008	7/28/2008
TDS A/C Balance *(dec. %)*		1.08	0.96	1	1.08	1.03	0.97	1.03	1.01	0.96	0.97	1.04	1.1	3.18	0.696	4.24
Alk-CaC03		171	173	169	170	175	171	166	168	167	179	170	169	160	162	170
Aluminum (Al)	GPS (1.8)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic (As)	GPS (.05)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium (Ba)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beryllium (Be)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Bicarbonate (HCO3)		208	211	206	207	214	209	203	205	204	218	210	206	195	198	207
Boron (B)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Calcium (Ca)		173	180	180	156	171	178	171	180	170	183	166	150	153	167	167
Carbonate (CO3)		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloride (Cl)		21	23	22	22	22	24	32	27	26	30	24	27	22	24	23
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt (Co)		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cond *(umhos/cm)*		1050	1040	1100	1070	1040	1030	1110	1100	1040	1150	1090	1120	1010	1030	1090
Cond-Field *(umhos/cm)*		1040	740	680	680	800	680	1021	1118	1089	1018	1012	952	938	1018	1022
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Fluoride (F)		0.1	<1	0.1	<0.1	<0.1	0.1	<0.1	<0.1	0.1	0.2	<0.1	0.1	0.1	<0.1	<0.1
Gross Alpha *(pCi/L)*	GPS (15)	2.8	1.8	5	1.8	1.9	2	1.5	2.6	1.7	5.4	2.5	3.5	3.6	5.5	1.6
Iron (Fe)	GPS (0.6)	0.55	0.56	0.64	0.64	0.65	0.72	1.22	0.52	0.99	1.87	1.36	1.44	1.09	0.14	0.74
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Lead (Pb)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Magnesium (Mg)		11.6	11.8	12.6	11.8	12.6	12.8	12.9	15.6	13.9	16.2	13.6	11.8	10.7	13.8	10.8
Manganese (Mn)	GPS (0.2)	0.18	0.16	0.2	0.21	0.21	0.2	0.29	0.36	0.31	0.41	0.33	0.34	0.25	0.34	0.4
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum (Mo)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nickel (Ni)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen, Nitrate+Nitrite as N		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
pH *(Std. Units)*	GPS (6.8)	7.56	7.88	7.58	7.62	8.03	7.63	6.93	7.44	7.07	7.46	7.35	7.37	7.58	7.35	7.15
pH (Field) *(Std. Units)*		6.6	6.6	6.6	7.06	7.08	7.19	6.91	6.9	6.98	7.04	7.1	7.1	7.4	7	7
Potassium (K)		3.6	3.7	3.6	3.3	3.6	3.6	3.7	3.7	3.7	3.9	3.7	4	3.5	3.7	1.9
Combined Ra226/228 *(pCi/L)*	GPS (5.8)	5	4.1	5.9	4.7	5.5	1.7	4.6	4.8	2.5	4.9	6.3	7.1	7.6	5.7	2.8
Radium 226 *(pCi/L)*		1.2	1.4	1.8	1.9	1.3	1.7	1.6	1.9	2.5	2	2.3	1.2	2	1.4	1.4
Radium 228 *(pCi/L)*		3.8	2.7	4.1	2.8	4.2	<1	3	2.9	<1	2.9	4	5.9	5.6	4.3	1.4
Selenium (Se)	GPS (.01)	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silica (SiO2)		18	18	18	17	17	18	18	16	18	17	15	17	17	8	8
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		48.5	49.9	49.2	46.4	49.2	45.6	48.5	52.4	50.9	49.8	49.8	47.5	40.9	49	48
TDS @ 180° *C.*	GPS (500)	807	728	762	753	764	734	798	790	720	790	780	766	694	749	755
Sulfate (SO4)		371	366	377	340	364	369	386	383	366	405	375	336	351	383	399
Temperature *(C)*		9	11	18	9.5	9.2	11.7	14.9	12.7	9.4	9.4	12.8	12	7.8	14.8	15.3
Thallium (Tl)	GPS (7.0)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Thorium 230 *(pCi/L:)*		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.1	0
Uranium, natural *(pCi/L)*	GPS (36)	2.8	3.1	3.2	3.7	3.3	4.1	4.4	4.7	3.6	4.7	5.1	5.1	4.5	5.4	5.4
Vanadium (V205)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1
Zinc (ZN)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01

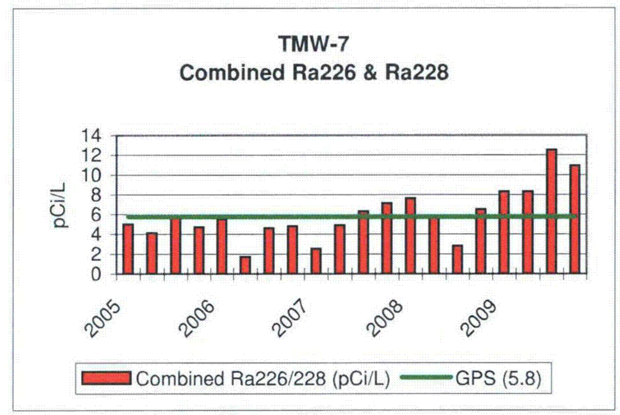
KENNECOTT URANIUM COMPANY						
TMW-7			2009			
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	10/14/2008	2/16/2009	4/15/2009	7/20/2009	10/12/2009
TDS A/C Balance *(dec. %)*		2.21	-5.04	3.18	5.84	-1.54
Alk-CaC03		168	173	186	170	187
Aluminum (Al)	GPS (1.8)	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic (As)	GPS (.05)	<0.001	<0.001	<0.001	<0.001	<0.001
Barium (Ba)		<0.1	<0.1	<0.1	<0.1	<0.1
Beryllium (Be)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01
Bicarbonate (HCO3)		205	211	227	207	228
Boron (B)		<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005
Calcium (Ca)		178	169	219	203	201
Carbonate (CO3)		<1	<1	<1	<1	<1
Chloride (Cl)		28	35	41	36	45
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt (Co)		<0.001	<0.001	<0.001	<0.001	<0.001
Cond *(umhos/cm)*		1140	1220	1380	1200	1330
Cond-Field *(umhos/cm)*		1077	1071	1272	1318	1219
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005
Fluoride (F)		<0.1	0.1	0.1	<0.1	<0.1
Gross Alpha *(pCi/L)*	GPS (15)	2.4	6.2	4.5	4.8	3.1
Iron (Fe)	GPS (0.6)	2.06	3.1	5.03	5.06	5.7
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<1	<1	<1	<1	<1
Lead (Pb)		<0.01	<0.01	<0.01	<0.01	<0.01
Magnesium (Mg)		16.4	19.6	23.7	23.8	24.8
Manganese (Mn)	GPS (0.2)	0.48	0.85	0.87	0.96	0.9
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum (Mo)		<0.01	<0.01	<0.01	<0.01	<0.01
Nickel (Ni)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen, Nitrate+Nitrite as N		<0.1	<0.1	<0.1	<0.1	<0.1
pH *(Std. Units)*	GPS (6.8)	7.24	7.18	7.08	7.28	7.31
pH (Field) *(Std. Units)*		6.9	8.4	6.7	6.5	6.8
Potassium (K)		3.6	3.5	4.6	4	4.1
Combined Ra226/228 *(pCi/L)*	GPS (5.8)	6.5	8.3	8.3	12.5	10.9
Radium 226 *(pCi/L)*		1.4	1.9	2.5	3.9	2.9
Radium 228 *(pCi/L)*		5.1	6.4	5.8	8.6	8
Selenium (Se)	GPS (.01)	<0.001	<0.001	<0.001	<0.001	<0.001
Silica (SiO2)		19.2	16.3	13.6	18	15.4
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		51	55	70.1	62.6	60.3
TDS @ 180° *C.*	GPS (500)	789	911	972	895	954
Sulfate (SO4)		378	451	489	425	492
Temperature *(C)*		11.6	8.4	11	15.9	11.3
Thallium (Tl)	GPS (7.0)	<0.01	<0.01	<0.01	<0.01	<0.01
Thorium 230 *(pCi/L:)*		0.1	-0.07	0.03	-0.2	0.09
Uranium, natural *(pCi/L)*	GPS (36)	6.4	22.1	13.3	13.2	17
Vanadium (V205)		<0.1	<0.1	<0.1	<0.1	<0.1
Zinc (ZN)		0.01	<0.01	<0.01	<0.01	<0.01


TMW-7
pH
Std Units
10
9
8
7
6
5
2005
2006
2007
2008
2009
pH (Std. Units)
GPS (6.8)

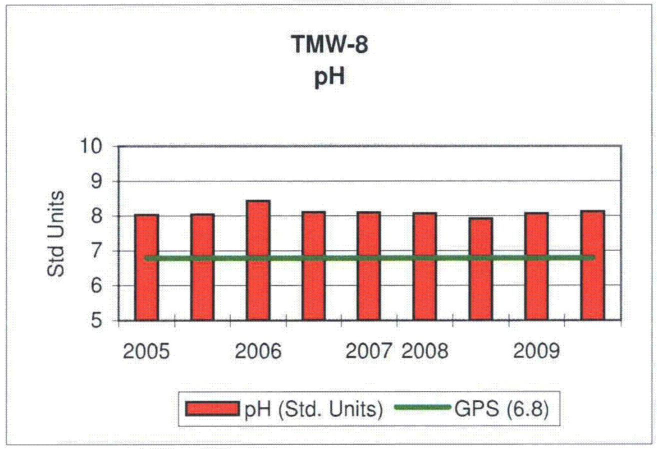

TMW-7
Iron
mg/L
6
5
4
3
2
1
0
2005
2006
2007
2008
2009
Iron (Fe)
GPS (0.6)

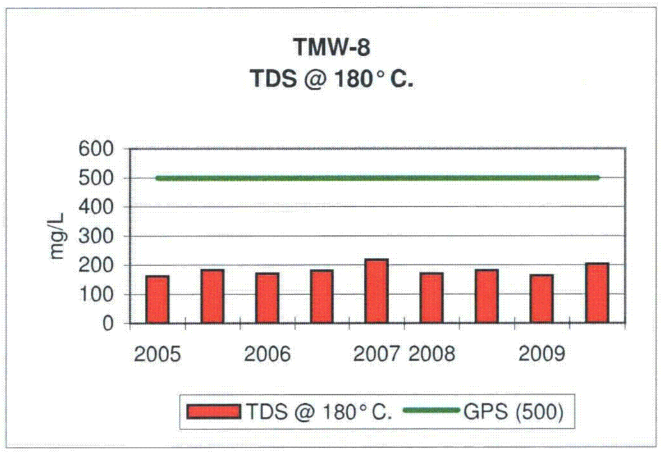

TMW-7
Manganese
mg/L
1.2
1
0.8
0.6
0.4
0.2
0
2005
2006
2007
2008
2009
Manganese (Mn)
GPS (0.2)


TMW-7
TDS @ 180° C.
mg/L
1200
1000
800
600
400
200
0
2005
2006
2007
2008
2009
TDS @ 180° C.
GPS (500)

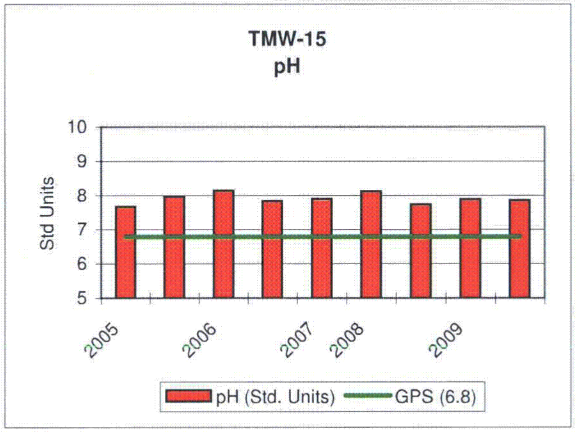

TMW-7
Combined Ra226 & Ra228
pCi/L
14
12
10
8
6
4
2
0
2005
2006
2007
2008
2009
Combined Ra226/228 (pCi/L)
GPS (5.8)

KENNECOTT URANIUM COMPANY										
TMW-8		2005		2006		2007	2008		2009	
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	1/10/2005	7/13/2005	1/17/2006	8/23/2006	7/18/2007	2/13/2008	7/23/2008	2/4/2009	7/14/2009
TDS A/C Balance *(dec. %)*		0.88	1.01	0.95	0.95	1.15	0.233	3.88	-0.23	-2.65
Alk-CaC03		84	83	85	84	86	89	85	85	85
Aluminum (Al)	GPS (1.8)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic (As)	GPS (.05)	0.002	0.002	0.001	0.002	0.002	0.002	0.002	0.002	0.002
Barium (Ba)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beryllium (Be)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Bicarbonate (HCO3)		103	101	101	102	105	108	103	103	103
Boron (B)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Calcium (Ca)		25.3	24.2	23.6	23.9	25	24.2	26.5	24.2	21.8
Carbonate (CO3)		<1	<1	2	<1	<1	<1	<1	<1	<1
Chloride (Cl)		<1	4	3	3	2	2	<1	3	2
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt (Co)		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cond *(umhos/cm)*		290	280	282	310	287	283	295	137	290
Cond-Field *(umhos/cm)*		260	180	250	270	274	265	263	248	296
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Fluoride (F)		0.2	0.2	<0.1	0.2	0.2	0.2	0.2	0.2	0.2
Gross Alpha *(pCi/L)*	GPS (15)	<1	<1	1.1	<1	<1	1.1	0.6	1.2	1.4
Iron (Fe)	GPS (0.6)	<0.05	<0.05	<0.05	<0.05	<0.05	0.05	0.06	<0.05	<0.05
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<1	<1	<1	<1	<1	-10.7	6.5	1.8	1.6
Lead (Pb)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Magnesium (Mg)		1	0.9	0.9	0.8	1	0.8	1	0.9	0.8
Manganese (Mn)	GPS (0.2)	<0.01	<0.01	0.04	0.04	0.03	0.04	0.04	0.03	0.03
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum (Mo)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nickel (Ni)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen, Nitrate+Nitrite as N		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
pH *(Std. Units)*	GPS (6.8)	8.03	8.04	8.43	8.1	8.09	8.07	7.92	8.07	8.12
pH (Field) *(Std. Units)*		7.1	7.5	7.81	7.7	8.2	8.6	8	7.7	7.3
Potassium (K)		1.6	0.8	1.5	1.3	1.5	1.7	1.5	1.5	1.4
Combined Ra226/228 *(pCi/L)*	GPS (5.8)	1.8	0	0	0.6	0	0.9	1.01	1.27	0.66
Radium 226 *(pCi/L)*		<0.2	<0.2	<0.2	0.6	<0.2	0.4	0.41	0.47	0.46
Radium 228 *(pCi/L)*		1.8	<1	<1	<1	<1	0.5	0.6	0.8	0.2
Selenium (Se)	GPS (.01)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silica (SiO2)		12	13	13	14	13	14	17.4	16.3	15.2
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		36.5	36.3	35.1	35.1	38.7	38	35.9	36.5	32.9
TDS @ 180° *C.*	GPS (500)	161	182	170	180	218	170	181	164	203
Sulfate (SO4)		53	52	51	56	57	54	52	55	48
Temperature *(C)*		13	14	7.9	13.6	12.4	9.3	11.7	10.2	11.7
Thallium (Tl)	GPS (7.0)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Thorium 230 *(pCi/L:)*		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Uranium, natural *(pCi/L)*	GPS (36)	0.6	0.5	0.3	<0.2	0.3	0.3	0.2	0.2	0.2
Vanadium (V205)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Zinc (ZN)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

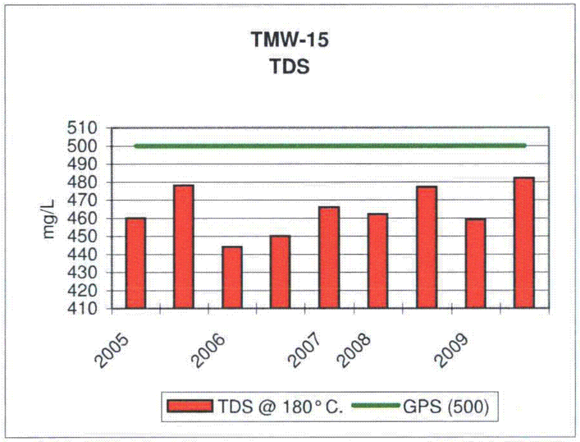

TMW-8
pH
Std Units
10
9
8
7
6
5
2005
2006
2007
2008
2009
pH (Std. Units)
GPS (6.8)


TMW-8
TDS @ 180° C.
mg/L
600
500
400
300
200
100
0
2005
2006
2007
2008
2009
TDS @ 180° C.
GPS (500)

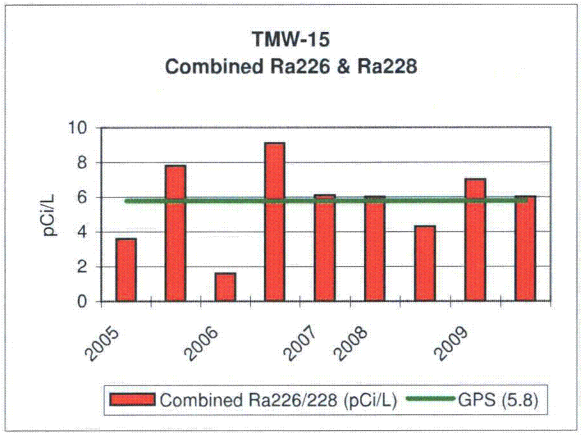
KENNECOTT URANIUM COMPANY										
TMW-15		2005		2006		2007	2008		2009	
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	1/11/2005	7/14/2005	1/16/2006	7/25/2006	7/22/2007	4/21/2008	7/22/2008	2/4/2009	7/20/2009
TDS A/C Balance *(dec. %)*		0.97	1	0.96	0.95	0.95	0.308	4.26	0.718	1.39
Alk-CaC03		121	123	128	122	120	123	125	123	123
Aluminum (Al)	GPS (1.8)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	ND	ND
Arsenic (As)	GPS (.05)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium (Ba)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beryllium (Be)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Bicarbonate (HCO3)		148	150	156	148	150	150	152	150	150
Boron (B)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Calcium (Ca)		106	105	98.8	102	104	108	109	103	100
Carbonate (CO3)		<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloride (Cl)		12	9	8	8	9	8	7	8	8
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt (Co)		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cond *(umhos/cm)*		689	684	679	696	690	684	698	610	691
Cond-Field *(umhos/cm)*		600	400	560	647	669	642	627	623	715
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Fluoride (F)		0.2	0.2	<0.1	0.2	0.2	0.1	0.2	0.2	0.2
Gross Alpha *(pCi/L)*	GPS (15)	1.4	2.5	2.2	1.5	1.8	3.3	2.3	3.9	1.7
Iron (Fe)	GPS (0.6)	<0.05	0.09	<0.05	<0.05	<0.05	0.09	0.08	<0.05	0.05
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<1	<1	<1	<1	<1	0	5	0.7	2.4
Lead (Pb)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Magnesium (Mg)		8.5	8.6	8.3	8.3	8.6	9.3	9	8.3	7.9
Manganese (Mn)	GPS (0.2)	0.07	0.07	0.07	0.08	0.07	0.09	0.07	0.07	0.08
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum (Mo)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nickel (Ni)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen, Nitrate+Nitrite as N		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
pH *(Std. Units)*	GPS (6.8)	7.67	7.96	8.14	7.83	7.89	8.12	7.73	7.88	7.86
pH (Field) *(Std. Units)*		7.1	7.3	7.48	7.65	7.8	7.4	7.6	7.4	7.1
Potassium (K)		3.4	2.3	3	2.2	3.1	3.1	3	2.9	3
Combined Ra226/228 *(pCi/L)*	GPS (5.8)	3.6	7.8	1.6	9.1	6.1	6	4.3	7	6
Radium 226 *(pCi/L)*		1.6	2.9	1.6	1.6	2.1	1.6	1.6	1.8	1.6
Radium 228 *(pCi/L)*		2	4.9	<1	7.5	3.6	4.4	2.7	5.2	4.4
Selenium (Se)	GPS (.01)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silica (SiO2)		14	16	15	15	13	8	9	17.9	16.3
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		36	36.3	35	36.5	38.4	35.4	34	35.5	34.3
TDS @ 180° *C.*	GPS (500)	460	478	444	450	466	462	477	459	482
Sulfate (SO4)		222	227	217	230	237	248	210	224	208
Temperature *(C)*		14	11	9.6	12.7	12	9.5	10.3	10.1	11
Thallium (Tl)	GPS (7.0)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	ND	ND
Thorium 230 *(pCi/L:)*		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Uranium, natural *(pCi/L)*	GPS (36)	1.5	1.5	1.5	2	1.5	1.4	1.3	1.4	1.6
Vanadium (V205)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Zinc (ZN)		<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.01	<0.01	<0.01



TMW-15
pH
Std Units
10
9
8
7
6
5
2005
2006
2007
2008
2009
pH (Std. Units)
GPS (6.8)



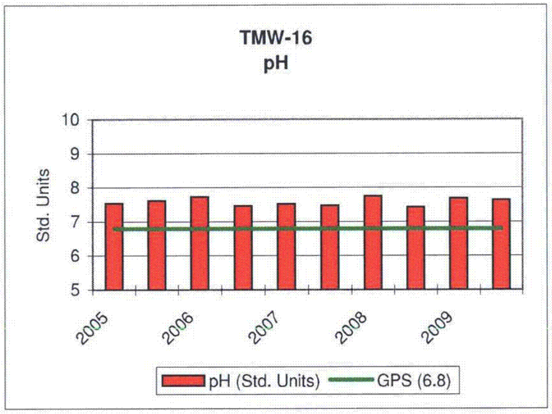
TMW-15
TDS
mg/L
510
500
490
480
470
460
450
440
430
420
410
2005
2006
2007
2008
2009
TDS @ 180° C.
GPS (500)

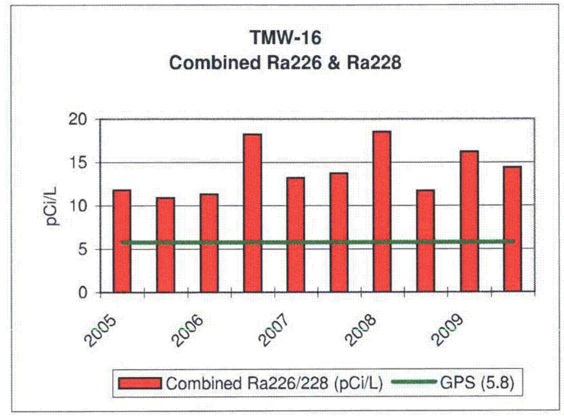


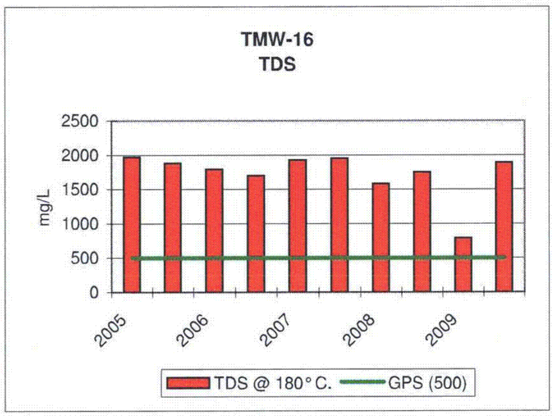
TMW-15
Combined Ra226 & Ra228
pCi/L
10
8
6
4
2
0
2005
2006
2007
2008
2009
Combined Ra226/228 (pCi/L)
GPS (5.8)

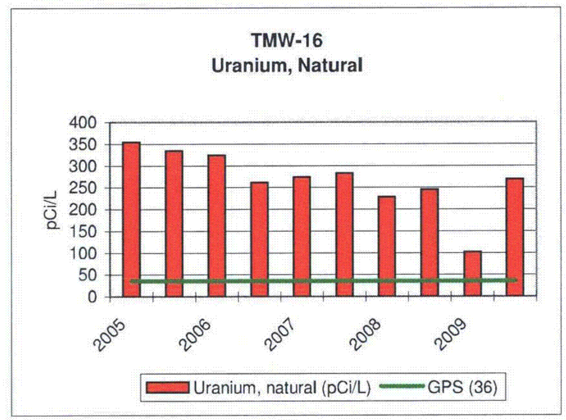
TMW 15.xls

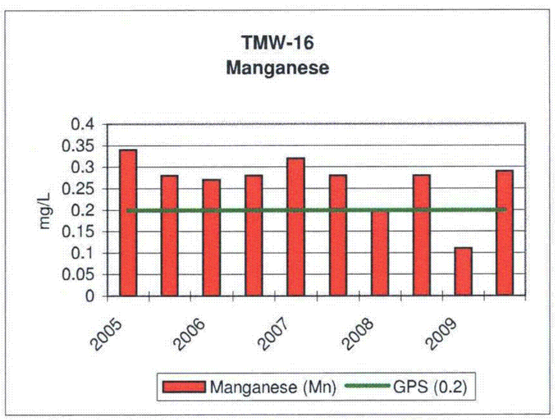
KENNECOTT URANIUM COMPANY											
TMW-16		2005		2006		2007		2008		2009	
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	1/11/2005	7/14/2005	1/17/2006	8/22/2006	1/10/2007	7/22/2007	3/12/2008	8/13/2008	2/4/2009	7/13/2009
TDS A/C Balance *(dec. %)*		1.06	1.06	1.07	0.98	1.05	1.02	1.44	1.91	0.867	-2.32
Alk-CaC03		193	177	192	.186	206	220	202	209	149	204
Aluminum (Al)	GPS (1.8)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic (As)	GPS (.05)	0.001	0.002	0.001	0.001	0.001	0.001	0.001	0.002	ND	ND
Barium (Ba)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beryllium (Be)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Bicarbonate (HCO3)		236	216	235	227	251	260	246	255	182	249
Boron (B)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Calcium (Ca)		422	382	377	356	403	419	309	395	171	370
Carbonate (CO3)		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloride (Cl)		117	102	96	99	100	97	71	82	29	86
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt (Co)		0.002	0.002	0.002	0.001	0.001	<0.001	0.001	0.004	<0.001	0.001
Cond *(umhos/cm)*		2320	2210	2160	2220	2320	2330	1860	2140	1090	2210
Cond-Field *(umhos/cm)*		1820	960	1400	1900	234	249	1705	1936	976	2270
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Fluoride (F)		0.1	<0.1	<0.1	0.1	<0.1	<0.1	0.1	<0.1	0.1	0.1
Gross Alpha *(pCi/L)*	GPS (15)	5.6	5.8	4	9.1	5.3	7.2	7	5.8	7.6	9.1
Iron (Fe)	GPS (0.6)	<0.05	0.34	0.29	0.17	0.36	0.12	0.31	0.28	<0.05	0.1
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<1	<1	<1	<1	<1	<1	-6.7	-3	0.7	-0.2
Lead (Pb)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Magnesium (Mg)		49.6	47.2	44.7	43.8	49.4	50.5	37	52.4	19.4	47.6
Manganese (Mn)	GPS (0.2)	0.34	0.28	0.27	0.28	0.32	0.28	0.2	0.28	0.11	0.29
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum (Mo)		<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.01	<0.01	0.01	<0.01
Nickel (Ni)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01
Nitrogen, Nitrate+Nitrite as N		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
pH *(Std. Units)*	GPS (6.8)	7.54	7.61	7.73	7.46	7.52	7.47	7.75	7.42	7.68	7.63
pH (Field) *(Std. Units)*		6.8	7.1	7.13	7.06	7.09	7.1	7.1	7	7.1	6.3
Potassium (K)		6.6	5.2	5.8	5.7	6.2	6	1	5.9	3.5	5.8
Combined Ra226/228 *(pCi/L)*	GPS (5.8)	11.8	10.9	11.3	18.2	13.2	13.7	18.5	11.7	16.2	14.4
Radium 226 *(pCi/L)*		4.6	4.5	4.3	4.9	7.7	5.1	5.2	3.1	6.1	4.1
Radium 228 *(pCi/L)*		7.2	6.4	7	13.3	5.5	8.6	13.3	8.6	10.1	10.3
Selenium (Se)	GPS (.01)	0.004	0.002	0.002	0.001	0.003	<0.001	<0.001	<0.001	<0.001	<0.001
Silica (SiO2)		11	11	11	12	12	10	11	13	16.4	12.9
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		94.6	94.7	86.9	86	94	104	82	96	53	87.1
TDS @ 180° *C.*	GPS (500)	1970	1880	1790	1700	1930	1950	1580	1750	786	1890
Sulfate (SO4)		1040	1030	934	1010	1040	1100	800	1100	408	1010
Temperature *(C)*		12	13	9.8	13.3	10.5	11.1	9.7	10.4	9.9	12.3
Thallium (Tl)	GPS (7.0)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Thorium 230 *(pCi/L:)*		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.6	<0.2	<0.2
Uranium, natural *(pCi/L)*	GPS (36)	354	334	324	261	274	283	228	245	102	269
Vanadium (V205)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Zinc (ZN)		<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01


TMW-16
pH
Std. Units
10
9
8
7
6
5
2005
2006
2007
2008
2009
pH (Std. Units)
GPS (6.8)


TMW-16
Combined Ra226 & Ra228
pCi/L
20
15
10
5
0
2005
2006
2007
2008
2009
Combined Ra226/228 (pCi/L)
GPS (5.8)

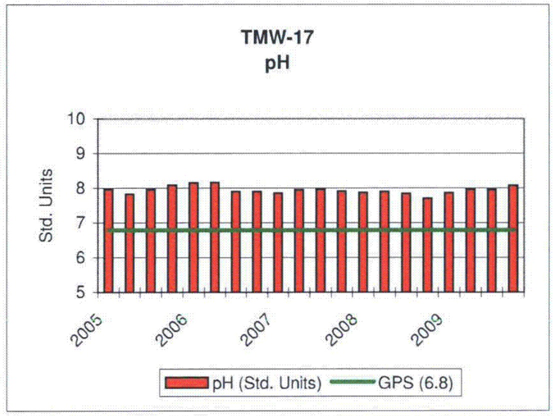

TMW-16
TDS
mg/L
2500
2000
1500
1000
500
0
2005
2006
2007
2008
2009
TDS @ 180° C.
GPS (500)

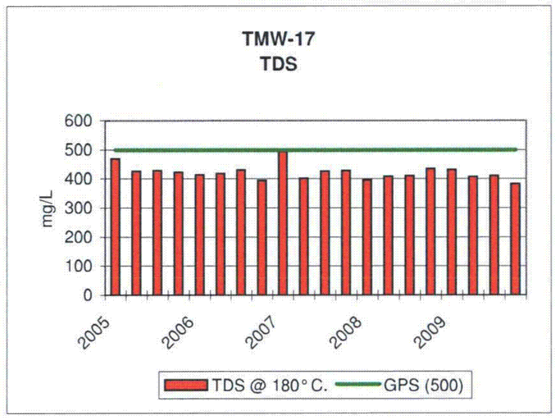

TMW-16
Uranium, Natural
pCi/L
400
350
300
250
200
150
100
50
0
2005
2006
2007
2008
2009
Uranium, natural (pCi/L)
GPS (36)

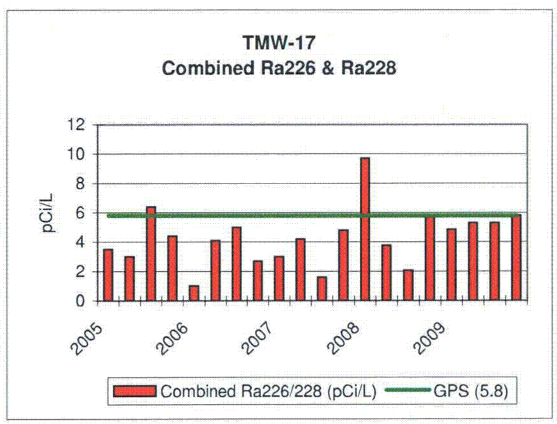

TMW-16
Manganese
mg/L
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
2005
2006
2007
2008
2009
Manganese (Mn)
GPS (0.2)

KENNECOTT URANIUM COMPANY																
TMW-17		2005				2006				2007				2008		
PARAMETER (mg/L unless noted)	Groundwater Protection Standard (GPS) as of 5/26/05	1/5/2005	4/6/2005	7/11/2005	11/7/2005	1/16/2006	4/10/2006	7/3/2006	10/5/2006	3/14/2007	4/11/2007	7/22/2007	10/3/2007	1/13/2008	4/14/2008	7/28/2008
TDS A/C Balance (dec. %)		1.1	0.97	0.99	1.06	0.99	0.98	1.01	0.93	1	0.96	1.05	1.11	0.334	4	2.63
Alk-CaC03		115	117	114	110	112	116	110	120	130	110	120	119	114	112	116
Aluminum (Al)	GPS (1.8)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic (As)	GPS (.05)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium (Ba)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beryllium (Be)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Bicarbonate (HCO3)		141	142	139	134	137	142	134	146	159	134	140	145	139	137	141
Boron (B)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Calcium (Ca)		90.9	96.9	93.7	82.9	88.4	92.9	87.6	90.5	103	88.4	84.6	75.6	83.7	97	85.9
Carbonate (CO3)		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloride (Cl)		8	9	7	10	9	9	14	8	12	8	8	10	8	8	7
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt (Co)		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cond (umhos/cm)		641	645	657	639	627	617	626	616	74	632	613	604	597	607	627
Cond-Field (umhos/cm)		620	500	400	440	510	440	612	593	707	543	594	558	570	584	590
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Fluoride (F)		0.2	0.1	0.2	0.1	<0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1
Gross Alpha (pCi/L)	GPS (15)	1.6	1.4	3.3	2.5	1.3	1.9	2.3	1.7	2.4	4.7	1.6	2.7	4	3.7	1.2
Iron (Fe)	GPS (0.6)	0.11	0.1	0.1	<0.05	<0.05	<0.05	<0.05	0.08	0.25	0.09	0.05	0.1	<0.05	0.07	<0.05
Lead (Pb210) (pCi/L)	GPS (8.9)	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Lead (Pb)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Magnesium (Mg)		5.8	6	6	5.6	5.8	5.9	5.2	5.8	10.3	5.7	5.4	4.5	4.8	6	3.8
Manganese (Mn)	GPS (0.2)	0.05	0.05	0.05	0.05	0.04	0.04	0.04	0.04	0.13	0.04	0.04	0.04	0.04	0.04	0.04
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum (Mo)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nickel (Ni)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen, Nitrate+Nitrite as N		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
pH (Std. Units)	GPS (6.8)	7.96	7.82	7.95	8.08	8.15	8.16	7.9	7.9	7.85	7.94	7.96	7.91	7.87	7.9	7.84
pH (Field) (Std. Units)		6.5	7.1	7.3	7.75	7.51	7.91	7.55	7.7	7.47	7.76	7.8	7.6	8.1	7.7	7.6
Potassium (K)		2.8	2.9	2.8	2.6	3	2.9	2.8	2.9	3	3	2.9	3.2	3.2	3	2.2
Combined Ra226/228 (pCi/L)	**GPS (5.8)**	3.5	3	6.4	4.4	1	4.1	5	2.7	3	4.2	1.6	4.8	9.7	3.76	2.06
Radium 226 (pCi/L)		1.3	0.9	1.7	1.7	1	1.2	0.8	1.1	3	1.2	1.6	0.9	0.8	0.66	0.86
Radium 228 (pCi/L)		2.2	2.1	4.7	2.7	<1	2.9	4.2	1.6	<1	3	<1	3.9	8.9	3.1	1.2
Selenium (Se)	**GPS (.01)**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silica (SiO2)		15	15	15	15	16	16	17	15	14	15	14	15	17	9	8
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		37.4	38.9	38	34.9	36.2	34.8	36	38.4	41.8	37.6	38	34	38.8	37.4	37.1
TDS @ 180°C.	GPS (500)	469	426	428	422	414	418	430	394	494	402	426	428	396	408	410
Sulfate (SO4)		198	202	199	183	192	194	197	190	234	194	182	169	185	193	196
Temperature (C)		8	10	14	8.9	8	10.3	13.2	12.7	8.4	8.6	13.3	10	8.4	11.3	11.1
Thallium (Tl)	GPS (7.0)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Thorium 230 (pCi/L:)		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Uranium, natural (pCi/L)	GPS (36)	4.6	4.4	4.5	4.7	5	5.3	4.8	4.6	22	4.9	5.3	4.8	4.4	4.1	4.1
Vanadium (V205)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Zinc (ZN)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

KENNECOTT URANIUM COMPANY						
TMW-17			2009			
PARAMETER (mg/L unless noted)	Groundwater Protection Standard (GPS) as of 5/26/05	10/14/2008	1/19/2009	4/15/2009	7/20/2009	10/12/2009
TDS A/C Balance (dec. %)		1.07	-2.13	-0.0484	0.713	-1.96
Alk-CaC03	------	115	112	118	118	118
Aluminum (Al)	GPS (1.8)	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic (As)	GPS (.05)	<0.001	<0.001	<0.001	<0.001	<0.001
Barium (Ba)		<0.1	<0.1	<0.1	<0.1	<0.1
Beryllium (Be)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01
Bicarbonate (HCO3)		140	136	143	144	144
Boron (B)		<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005
Calcium (Ca)		95	80.7	86.2	82	84.6
Carbonate (CO3)		<1	<1	<1	<1	<1
Chloride (Cl)		9	8	7	7	8
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt (Co)		<0.001	<0.001	<0.001	<0.001	<0.001
Cond (umhos/cm)		628	616	617	607	598
Cond-Field (umhos/cm)		566	546	572	613	627
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005
Fluoride (F)		0.1	0.1	0.1	0.1	0.1
Gross Alpha (pCi/L)	GPS (15)	1.6	1.3	2.8	2.7	1.9
Iron (Fe)	GPS (0.6)	0.1	0.16	0.08	<0.05	0.11
Lead (Pb210) (pCi/L)	GPS (8.9)	<1	1	<1	<1	<1
Lead (Pb)		<0.01	<0.01	<0.01	<0.01	<0.01
Magnesium (Mg)		5.9	5.1	5.1	5	4.9
Manganese (Mn)	GPS (0.2)	0.05	0.04	0.04	0.04	0.04
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum (Mo)		<0.01	<0.01	<0.01	<0.01	<0.01
Nickel (Ni)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen, Nitrate+Nitrite as N		<0.1	<0.1	<0.1	<0.1	<0.1
pH (Std. Units)	GPS (6.8)	7.7	7.86	7.96	7.95	8.07
pH (Field) (Std. Units)		7.4	7.5	7.6	7.35	7.3
Potassium (K)		2.9	2.7	3.1	3	3
Combined Ra226/228 (pCi/L)	**GPS (5.8)**	5.7	4.83	5.3	5.3	5.8
Radium 226 (pCi/L)		1.9	0.93	1.1	2.1	1.3
Radium 228 (pCi/L)		3.8	3.9	4.2	3.2	4.5
Selenium (Se)	**GPS (.01)**	<0.001	<0.001	<0.001	<0.001	<0.001
Silica (SiO2)		18.5	15.1	12.6	16.5	15
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		35.7	37	37.1	36	33.5
TDS @ 180° C.	GPS (500)	435	431	407	410	383
Sulfate (SO4)		199	189	185	168	184
Temperature (C)		9.1	9.6	9	21.4	10.1
Thallium (Tl)	GPS (7.0)	<0.01	<0.01	<0.01	<0.01	<0.01
Thorium 230 (pCi/L:)		<0.2	0	<0.2	<0.2	<0.2
Uranium, natural (pCi/L)	GPS (36)	4	4.9	4.5	5.8	4.4
Vanadium (V205)		<0.1	<0.1	<0.1	<0.1	<0.1
Zinc (ZN)		<0.01	<0.01	<0.01	<0.01	<0.01


TMW-17
pH
Std. Units
10
9
8
7
6
5
2005
2006
2007
2008
2009
pH (Std. Units)
GPS (6.8)

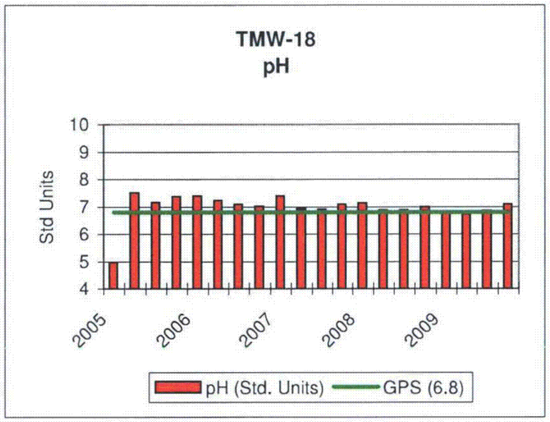

TMW-17
TDS
mg/L
600
500
400
300
200
100
0
2005
2006
2007
2008
2009
TDS @ 180° C.
GPS (500)

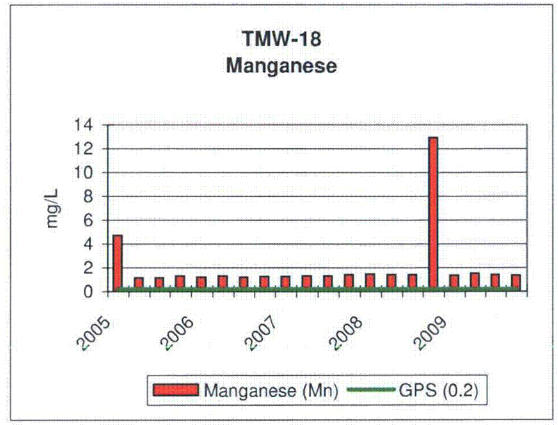

TMW-17
Combined Ra226 & Ra228
pCi/L
12
10
8
6
4
2
0
2005
2006
2007
2008
2009
Combined Ra226/228 (pCi/L)
GPS (5.8)

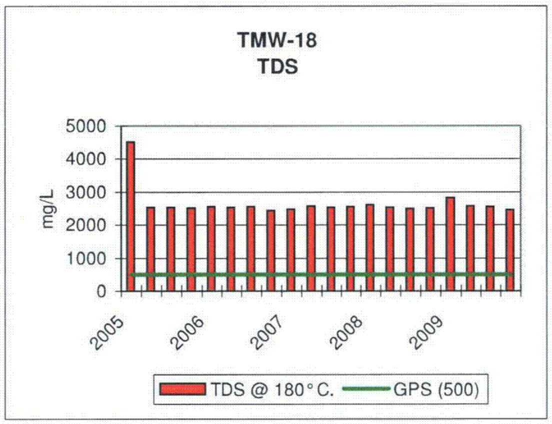
TMW 17.xls

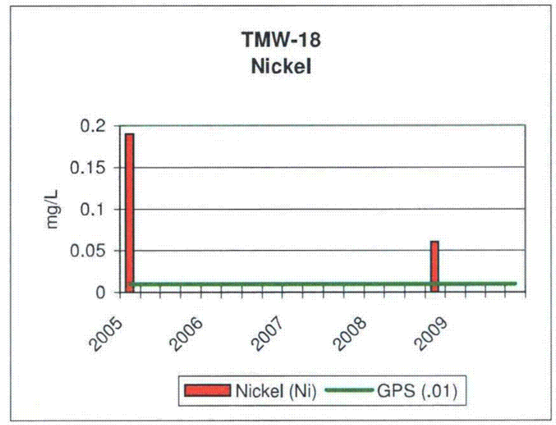
KENNECOTT URANIUM COMPANY															
TMW-18		2005				2006				2007				2008	
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	1/10/2005	4/6/2005	7/11/2005	11/8/2005	1/11/2006	4/10/2006	7/3/2006	10/5/2006	1/25/2007	4/4/2007	7/22/2007	10/1/2007	1/13/2008	4/14/2008
TDS A/C Balance *(dec. %)*		0.98	1.04	1.05	1.04	1.13	0.98	1.05	1.03	1.03	1.06	1.02	1.07	3.47	0.135
Alk-CaC03		5	467	463	458	470	475	444	459	468	467	460	477	465	449
Aluminum (Al)	GPS (1.8)	15	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic (As)	GPS (.05)	0.004	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium (Ba)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beryllium (Be)	GPS (.01)	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Bicarbonate (HCO3)		6	569	565	558	573	580	541	560	571	570	570	582	568	548
Boron (B)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.3
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Calcium (Ca)		1160	629	597	632	607	665	593	596	615	622	626	577	569	611
Carbonate (CO3)		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloride (Cl)		1920	85	83	82	75	102	96	81	84	93	82	93	90	87
Chromium (Cr)	GPS (.05)	0.13	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt (Co)		0.026	<0.001	<0.001	<0.001	<0.001	0.001	0.001	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	0.002
Cond *(umhos/cm)*		6950	2860	2880	2900	2900	2900	2960	2950	2910	3000	2920	3090	2990	2880
Cond-Field *(umhos/cm)*		4800	1600	1420	1470	1750	1580	304	300	303	304	310	297	3040	3010
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Fluoride (F)		0.8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Gross Alpha *(pCi/L)*	GPS (15)	35.6	7.1	14.2	9.1	6.6	7.1	2.6	6.3	4.1	5.4	5	9.7	12.1	12.1
Iron (Fe)	GPS (0.6)	253	6.77	6.95	7.44	6.56	8.21	6.03	7.38	7.09	8.13	6.84	8.19	8.34	8.56
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Lead (Pb)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Magnesium (Mg)		86.5	47.6	48.3	51	44	52	46.9	48.1	47.3	46.8	46.8	45.6	44.8	49.2
Manganese (Mn)	GPS (0.2)	4.72	1.13	1.14	1.29	1.17	1.3	1.2	1.24	1.24	1.3	1.32	1.4	1.48	1.4
Mercury (Hg)		0.0003	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum (Mo)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nickel (Ni)	GPS (.01)	0.19	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen, Nitrate+Nitrite as N		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
pH *(Std. Units)*	GPS (6.8)	4.96	7.51	7.15	7.37	7.39	7.23	7.09	7.01	7.39	6.92	6.89	7.08	7.12	6.87
pH (Field) *(Std. Units)*		4.6	6.1	6.2	6.53	6.6	6.83	6.56	6.49	6.41	6.83	6.7	6.6	6.6	6.6
Potassium (K)		11.1	6.8	6.7	7.1	6.5	7.1	7.4	6.9	7.3	7.7	6.9	8	7.3	6.4
Combined Ra226/228 *(pCi/L)*	GPS (5.8)	40.8	18.1	14.5	18.6	18.3	15.8	16.3	17.8	20.6	19.7	20.9	18	17.9	14.4
Radium 226 *(pCi/L)*		10.5	3.3	5.6	5.3	3.3	2.7	1.7	2.9	6.3	3.6	5.2	2.2	3.4	2.5
Radium 228 *(pCi/L)*		30.3	14.8	8.9	13.3	15	13.1	14.6	14.9	14.3	15.9	15.7	15.8	14.5	11.9
Selenium (Se)	GPS (.01)	0.008	0.003	0.001	0.001	0.001	0.002	0.001	0.002	0.002	0.002	0.002	0.002	<0.001	<0.001
Silica (SiO2)		61	23	24	24	21	25	25	22	22	24	20	24	24	11
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		100	104	100	101	94.2	92.2	94	101	96.6	99.2	100	102	93.5	94
TDS @ 180° *C.*	GPS (500)	4510	2530	2520	2510	2540	2530	2540	2430	2470	2570	2520	2540	2600	2520
Sulfate (SO4)		1240	1260	1260	1240	1120	1340	1280	1240	1240	1260	1300	1240	1320	1340
Temperature *(C)*		13	11	14	8.7	8.7	9.5	13.3	10.9	6.6	9.5	13.1	12	9.7	12
Thallium (Tl)	GPS (7.0)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Thorium 230 *(pCi/L:)*		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Uranium, natural *(pCi/L)*	GPS (36)	3.4	0.9	1	1.1	1	0.9	0.9	1	0.9	1	1	1.2	1	1
Vanadium (V205)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Zinc (ZN)		0.19	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01

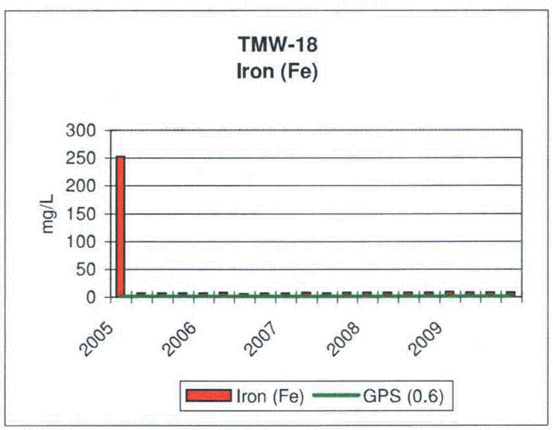
KENNECOTT URANIUM COMPANY							
TMW-18				2009			
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	7/28/2008	10/14/2008	2/16/2009	4/21/2009	7/20/2009	10/12/2009
TDS A/C Balance *(dec. %)*		1.3	-2.19	-1.4	-0.592	0.11	-2.99
Alk-CaC03		463	450	474	461	441	464
Aluminum (Al)	GPS (1.8)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic (As)	GPS (.05)	<0.001	0.005	<0.001	<0.001	<0.001	<0.001
Barium (Ba)		<0.1	0.3	<0.1	<0.1	<0.1	<0.1
Beryllium (Be)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Bicarbonate (HCO3)		565	549	579	562	538	566
Boron (B)		<0.1	<0.1	0.1	<0.1	<0.1	<0.1
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Calcium (Ca)		624	590	624	581	578	565
Carbonate (CO3)		<1	<1	<1	<1	<1	<1
Chloride (Cl)		82	88	88	81	82	88
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt (Co)		0.001	0.008	<0.001	<0.001	<0.001	<0.001
Cond *(umhos/cm)*		2950	2980	3250	3090	2850	2810
Cond-Field *(umhos/cm)*		3040	2890	2820	2920	2910	2950
Copper (Cu)		<0.01	0.02	<0.01	<0.01	<0.01	<0.01
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Fluoride (F)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Gross Alpha *(pCi/L)*	GPS (15)	3.4	4.3	6.8	4.4	6.8	5
Iron (Fe)	GPS (0.6)	8.5	8.47	8.98	8.33	8.57	8.24
Lead (Pb210) *(pCi/L)*	GPS (8.9)	2.1	<1	<1	<1	<1	<1
Lead (Pb)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Magnesium (Mg)		43.4	49	53.6	49.6	47.7	48.8
Manganese (Mn)	GPS (0.2)	1.41	12.9	1.34	1.54	1.38	1.36
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum (Mo)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nickel (Ni)	GPS (.01)	<0.01	0.06	<0.01	<0.01	<0.01	<0.01
Nitrogen, Nitrate+Nitrite as N		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
pH *(Std. Units)*	GPS (6.8)	6.86	6.99	6.8	6.72	6.84	7.09
pH (Field) *(Std. Units)*		6.6	6.5	6.5	6.4	6.4	6.5
Potassium (K)		3.2	6.8	9.6	6.8	6.8	7
Combined Ra226/228 *(pCi/L)*	GPS (5.8)	6	26.8	19.5	14.5	16.9	21.2
Radium 226 *(pCi/L)*		2.9	5.3	3.3	2.8	4.1	3.8
Radium 228 *(pCi/L)*		3.1	21.5	16.2	11.7	12.8	17.4
Selenium (Se)	GPS (.01)	0.001	0.001	0.003	0.002	<0.001	<0.001
Silica (SiO2)		11	24.4	25.1	22.6	25.4	21.6
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		103	99	112	108	99.2	97.8
TDS @ 180° *C.*	GPS (500)	2490	2510	2830	2560	2540	2450
Sulfate (SO4)		1380	1350	1430	1290	1250	1300
Temperature *(C)*		11.9	9.9	8.6	9.9	13.2	9.7
Thallium (Tl)	GPS (7.0)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Thorium 230 *(pCi/L:)*		<0.2	<0.2	<0.2	<0.2	0.3	0.2
Uranium, natural *(pCi/L)*	GPS (36)	1.1	11	1.2	1	0.9	0.9
Vanadium (V205)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Zinc (ZN)		<0.01	0.04	<0.01	<0.01	<0.01	<0.01

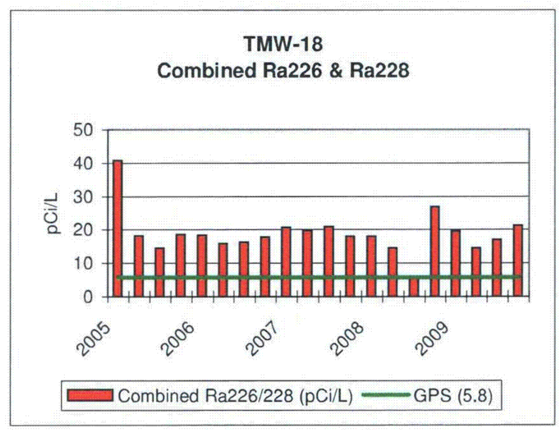

TMW-18
pH
Std Units
10
9
8
7
6
5
4
2005
2006
2007
2008
2009
pH (Std. Units)
GPS (6.8)


TMW-18
Manganese
mg/L
14
12
10
8
6
4
2
0
2005
2006
2007
2008
2009
Manganese (Mn)
GPS (0.2)

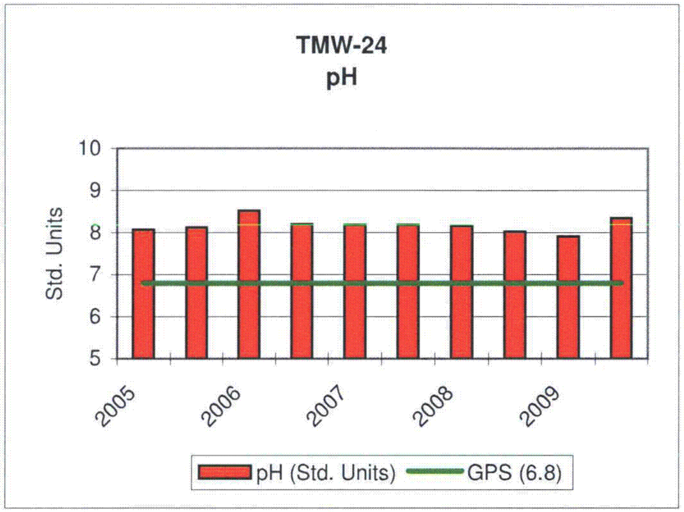

TMW-18
TDS
mg/L
5000
4000
3000
2000
1000
0
2005
2006
2007
2008
2009
TDS @ 180 ° C.
GPS (500)

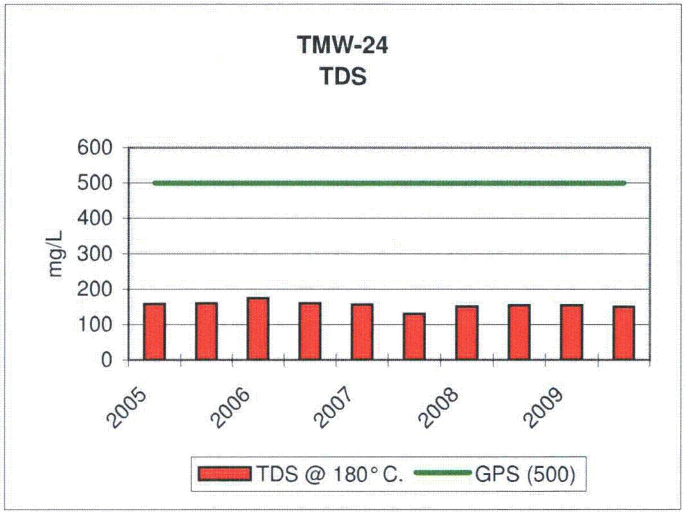

TMW-18
Nickel
mg/L
0.2
0.15
0.1
0.05
0
2005
2006
2007
2008
2009
Nickel (Ni)
GPS (.01)


TMW-18
Iron (Fe)
mg/L
300
250
200
150
100
50
0
2005
2006
2007
2008
2009
Iron (Fe)
GPS (0.6)


TMW-18
Combined Ra226 & Ra228
pCi/L
50
40
30
20
10
0
2005
2006
2007
2008
2009
Combined Ra226/228 (pCi/L)
GPS (5.8)

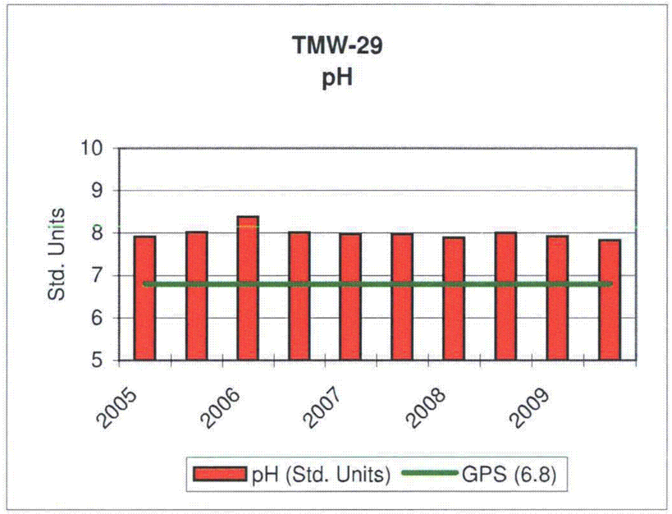
KENNECOTT URANIUM COMPANY											
TMW-24		2005		2006		2007		2008		2009	
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	2/1/2005	8/3/2005	2/8/2006	8/22/2006	2/15/2007	8/17/2007	3/12/2008	8/26/2008	2/11/2009	8/11/2009
TDS A/C Balance *(dec. %)*		1.03	1.07	1.12	1.03	0.99	0.8	0.331	1.07	-2.83	-0.827
Alk-CaC03		82	85	88	86	80	90	90	86	85	86
Aluminum (Al)	GPS (1.8)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic (As)	GPS (.05)	0.002	0.002	<0.001	0.001	0.001	0.001	0.002	0.002	0.001	0.002
Barium (Ba)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beryllium (Be)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Bicarbonate (HCO3)		100	103	104	105	98	110	110	104	104	105
Boron (B)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Calcium (Ca)		22.1	20.6	22.6	21	22.4	23.4	22	22.8	19.8	20.3
Carbonate (CO3)		<1	<1	2	<1	<1	<1	<1	<1	<1	<1
Chloride (Cl)		3	2	2	3	2	2	2	<1	1	2
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt (Co)		<0.001	<0.01	<0.001	<0.01	<0.001	<0.01	<0.001	<0.001	<0.001	<0.001
Cond *(umhos/cm)*		245	245	243	266	242	220	247	217	104	240
Cond-Field *(umhos/cm)*		240	180	195	226	218	218	227	221	210	271
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Fluoride (F)		0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2
Gross Alpha *(pCi/L)*	GPS (15)	1	<1	<1	1.3	<1	1.1	0.9	1.7	2.2	2.1
Iron (Fe)	GPS (0.6)	<0.05	<0.05	<0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Lead (Pb)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Magnesium (Mg)		1	1	1.1	0.9	1.1	1.1	0.9	1	0.9	0.9
Manganese (Mn)	GPS (0.2)	<0.01	<0.01	0.01	0.01	0.01	0.01	<0.01	0.01	0.01	0.01
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum (Mo)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nickel (Ni)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen, Nitrate+Nitrite as N		<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
pH *(Std. Units)*	GPS (6.8)	8.07	8.12	8.52	8.2	8.18	8.18	8.16	8.02	7.91	8.34
pH (Field) *(Std. Units)*		7.3	8.2	8.2	7.68	7.24	7.8	7.9	7.9	7.7	8.1
Potassium (K)		1.5	1.1	1.6	1.3	1.6	1.5	3.2	1.5	1.4	1.5
Combined Ra226/228 *(pCi/L)*	GPS (5.8)	0	0.8	0.6	3.5	1.3	0.9	0.9	1.54	2.16	3.1
Radium 226 *(pCi/L)*		<0.2	0.8	0.6	0.9	1.3	0.9	0.5	0.34	0.96	1
Radium 228 *(pCi/L)*		<1	<1	<1	2.6	<1	<1	0.4	1.2	1.2	2.1
Selenium (Se)	GPS (.01)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silica (SiO2)		13	13	14	14	13	14	14	8	12.4	13
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		30.2	29.2	30.4	28.5	30.6	31	30.6	29.6	29.2	28.2
TDS @ 180° *C.*	GPS (500)	158	160	174	160	156	130	151	154	154	150
Sulfate (SO4)		33	33	32	37	37	36	36	36	36	29
Temperature *(C)*		12	11	10.7	12.9	9.7	9	10.1	11	10.1	11.8
Thallium (Tl)	GPS (7.0)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Thorium 230 *(pCi/L:)*		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Uranium, natural *(pCi/L)*	GPS (36)	2.7	2.2	1.2	0.4	0.5	0.3	0.3	0.3	0.3	0.2
Vanadium (V205)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Zinc (ZN)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

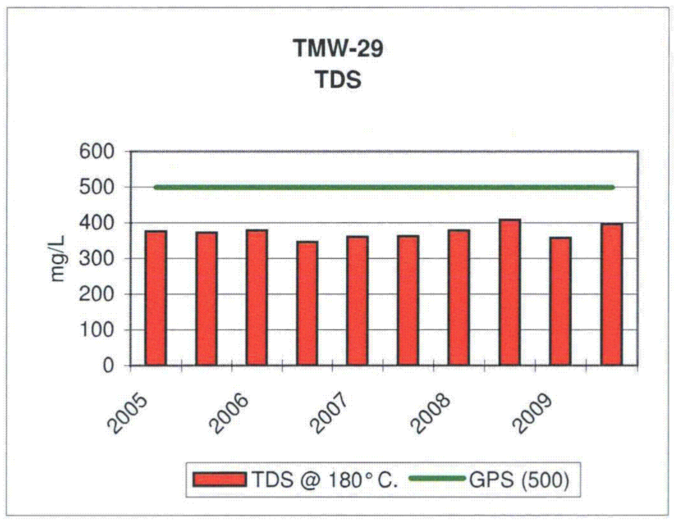

TMW-24
pH
Std. Units
10
9
8
7
6
5
2005
2006
2007
2008
2009
pH (Std. Units)
GPS (6.8)


TMW-24
TDS
mg/L
600
500
400
300
200
100
0
2005
2006
2007
2008
2009
TDS @ 180° C.
GPS (500)

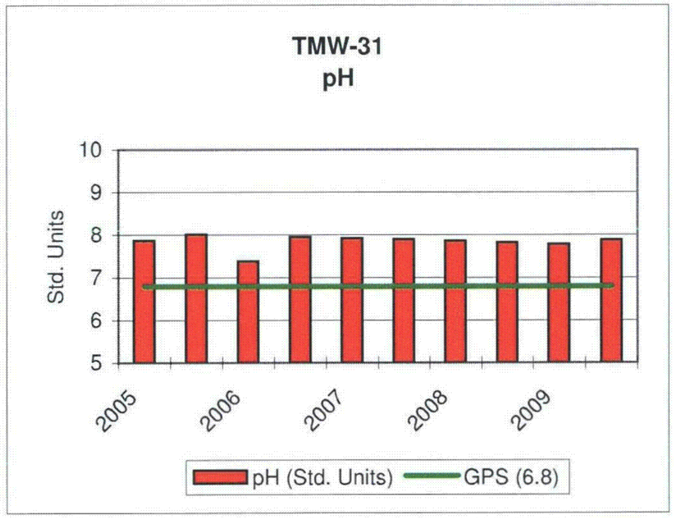
TMW 24.xls

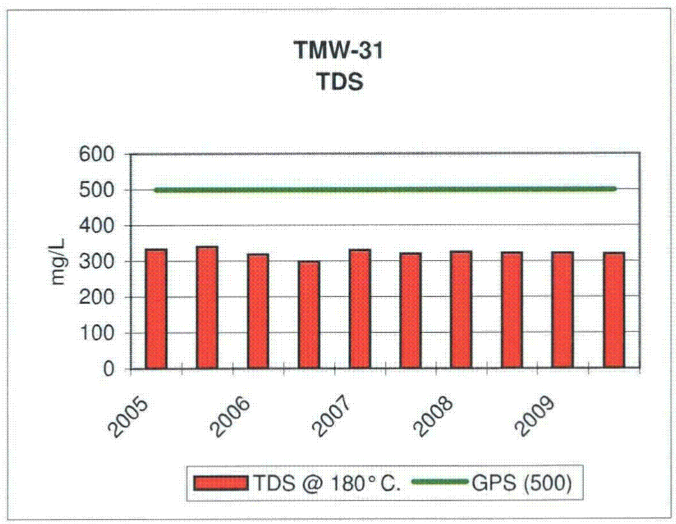
KENNECOTT URANIUM COMPANY											
TMW-29		2005		2006		2007		2008		2009	
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	2/1/2005	8/3/2005	2/8/2006	8/16/2006	2/15/2007	8/16/2007	3/9/2008	8/17/2008	2/10/2009	8/4/2009
TDS A/C Balance *(dec. %)*		1.02	1.07	1.05	0.94	0.96	0.95	1.99	4.09	-1.83	3.35
Alk-CaC03		112	114	115	114	113	120	118	111	112	115
Aluminum (Al)	GPS (1.8)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic (As)	GPS (.05)	<0.001	<0.001	<0.001	0.001	<0.001	0.001	0.001	0.002	0.001	0.002
Barium (Ba)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beryllium (Be)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Bicarbonate (HCO3)		137	140	137	139	138	146	144	136	137	140
Boron (B)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Calcium (Ca)		79.6	72.8	79	76.7	78.6	82.3	79	101	70.4	80.2
Carbonate (CO3)		<1	<1	2	<1	<1	<1	<1	<1	<1	<1
Chloride (Cl)		6	6	7	7	7	6	6	7	6	6
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt (Co)		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cond *(umhos/cm)*		554	553	545	583	553	550	566	588	433	581
Cond-Field *(umhos/cm)*		520	340	430	519	525	509	525	562	485	603
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Fluoride (F)		0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2
Gross Alpha *(pCi/L)*	GPS (15)	3.8	1.5	2.5	<1	1.3	1.9	2.9	1.7	3	2.4
Iron (Fe)	GPS (0.6)	<0.1	<0.05	<0.1	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<1		<1	<1	<1	<1	<1	<1	5	<1
Lead (Pb)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Magnesium (Mg)		5.2	4.9	5.2	4.8	5.3	5.4	4.8	6.5	4.6	5.2
Manganese (Mn)	GPS (0.2)	0.03	0.04	0.05	0.06	0.06	0.06	0.05	0.06	0.04	0.04
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum (Mo)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nickel (Ni)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen, Nitrate+Nitrite as N		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
pH *(Std. Units)*	GPS (6.8)	7.91	8.02	8.38	8.01	7.97	7.97	7.89	8	7.92	7.83
pH (Field) *(Std. Units)*		7.5	7.8	7.56	7.41	7.12	7.6	7.6	7.7	7.5	8
Potassium (K)		2.6	2.3	2.9	2.8	2.9	2.8	3.1	3.2	2.5	3
Combined Ra226/228 *(pCi/L)*	GPS (5.8)	3.8	0.9	3.6	3.2	1.2	0.7	4.1	4.7	2.99	3.42
Radium 226 *(pCi/L)*		1.4	0.9	1.3	1.3	1.2	0.7	1.2	1	0.99	0.52
Radium 228 *(pCi/L)*		2.4	<1	2.3	1.9	<1	<1	2.9	3.7	2	2.9
Selenium (Se)	GPS (.01)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silica (SiO2)		14	14	14	15	14	14	14	19	13.9	16.4
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		36.2	33.8	34.5	34.9	35.1	35.4	32	37.2	32.3	35.4
TDS @ 180° *C.*	GPS (500)	376	372	378	346	360	362	378	408	358	396
Sulfate (SO4)		156	145	148	159	165	165	169	205	151	153
Temperature *(C)*		11	13	9.7	13.1	9.4	9.9	9.4	10.2	9.9	11.8
Thallium (Tl)	GPS (7.0)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Thorium 230 *(pCi/L:)*		<0.2		<0.2	<0.02	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Uranium, natural *(pCi/L)*	GPS (36)	5.6	6	6.7	6.1	5.4	6.7	7	8	6	6.2
Vanadium (V205)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Zinc (ZN)		<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01


TMW-29
pH
Std. Units
10
9
8
7
6
5
2005
2006
2007
2008
2009
pH (Std. Units)
GPS (6.8)

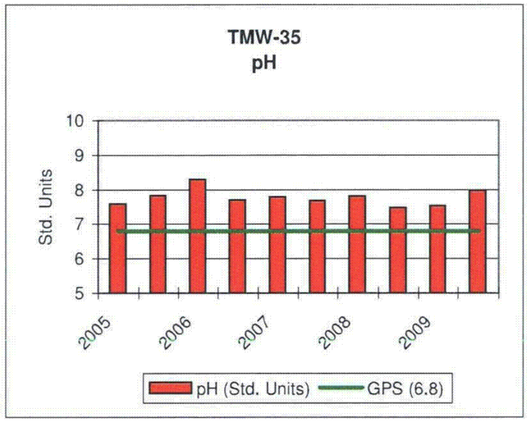

TMW-29
TDS
mg/L
600
500
400
300
200
100
0
2005
2006
2007
2008
2009
TDS @ 180° C.
GPS (500)

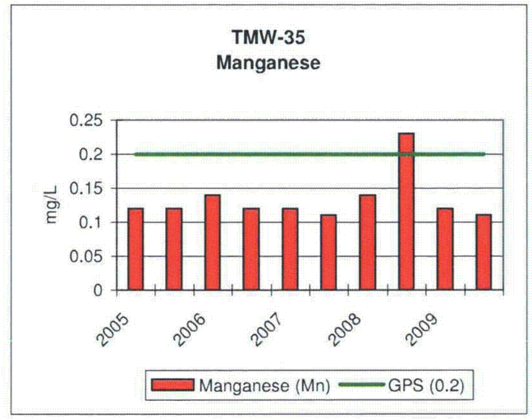
KENNECOTT URANIUM COMPANY											
TMW-31		2005		2006		2007		2008		2009	
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	2/1/2005	8/3/2005	2/7/2006	8/16/2006	2/15/2007	8/16/2007	3/9/2008	8/17/2008	2/10/2009	8/4/2009
TDS A/C Balance *(dec. %)*		1.02	1.06	0.98	0.9	0.98	0.94	1.76	2.52	-3.35	3.65
Alk-CaC03		110	112	112	110	109	119	116	110	111	112
Aluminum (Al)	GPS (1.8)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic (As)	GPS (.05)	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium (Ba)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beryllium (Be)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Bicarbonate (HCO3)		134	137	137	134	133	145	141	134	136	137
Boron (B)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Calcium (Ca)		71.4	67.7	71.4	68.2	70.9	73.3	73.7	77.7	64.2	70.4
Carbonate (CO3)		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloride (Cl)		7	7	5	7	7	5	6	5	5	5
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt (Co)		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cond *(umhos/cm)*		501	509	495	528	504	489	501	484	379	516
Cond-Field *(umhos/cm)*		480	280	400	443	479	457	480	468	450	546
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Fluoride (F)		0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2
Gross Alpha *(pCi/L)*	GPS (15)	3	1.2	2.1	1.1	1.5	2.4	2.3	1.8	3.1	2.8
Iron (Fe)	GPS (0.6)	<0.05	0.07	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<1	<1	<1	<1	<1	<1	3.5	<1	2.5	<1
Lead (Pb)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Magnesium (Mg)		5.5	5.3	5.6	5.2	5.6	5.6	5.4	5.7	5	5.2
Manganese (Mn)	GPS (0.2)	0.09	0.08	0.07	0.14	0.14	0.12	0.12	0.14	0.11	0.1
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum (Mo)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nickel (Ni)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen, Nitrate+Nitrite as N		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
pH *(Std. Units)*	GPS (6.8)	7.87	8.01	7.38	7.95	7.92	7.9	7.86	7.82	7.78	7.88
pH (Field) *(Std. Units)*		7.3	7.8	7.62	7.31	7.01	7.6	7.6	7.6	7.4	7.9
Potassium (K)		2.5	2.1	2.4	2.8	2.8	2.5	2.8	2.7	2.3	2.8
Combined Ra226/228 *(pCi/L)*	GPS (5.8)	3.6	1.8	3.5	4.4	3.7	1.1	2.7	4.5	3.6	3.5
Radium 226 *(pCi/L)*		1.6	1.8	1	1.5	1.6	1.1	1.1	1	1.2	1.1
Radium 228 *(pCi/L)*		2	<1	2.5	2.9	2.1	<1	1.6	3.5	2.4	2.4
Selenium (Se)	GPS (.01)	<0.001	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silica (SiO2)		14	14	15	15	14	14	16	18.2	12.5	16.2
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		29.9	29	30.3	30.2	29.9	29.9	28.9	29.6	27.9	29.7
TDS @ 180° *C.*	GPS (500)	332	340	318	298	330	320	324	322	322	320
Sulfate (SO4)		131	128	126	136	142	137	134	148	137	122
Temperature *(C)*		12	13	8.8	12.3	9.4	10.1	9.4	10.8	9.9	11.3
Thallium (Tl)	GPS (7.0)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Thorium 230 *(pCi/L:)*		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Uranium, natural *(pCi/L)*	GPS (36)	1.9	1.9	2.1	1.8	2.1	1.8	1.4	1.6	1.9	1.5
Vanadium (V205)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Zinc (ZN)		<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

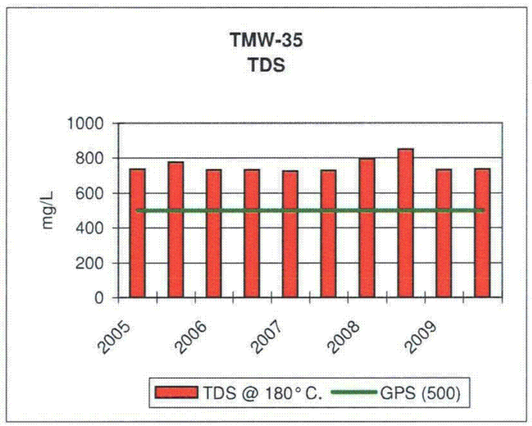

TMW-31
pH
10
9
8
7
6
5
Std. Units
2005
2006
2007
2008
2009
pH (Std. Units)
GPS (6.8)

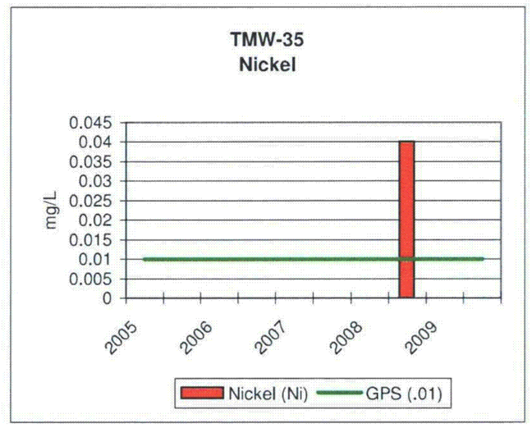

TMW-31
TDS
600
500
400
300
200
100
0
mg/L
2005
2006
2007
2008
2009
TDS @ 180° C.
GPS (500)

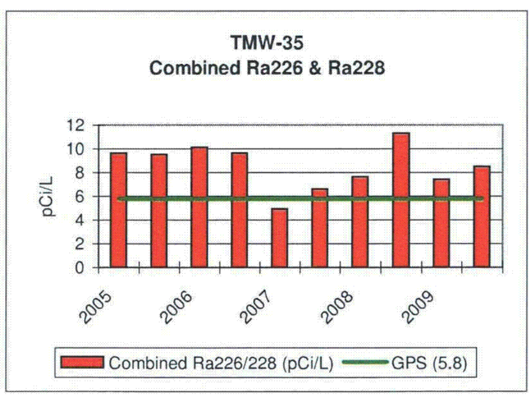
KENNECOTT URANIUM COMPANY											
TMW-35		2005		2006		2007		2008		2009	
PARAMETER *(mg/L unless noted)*	Groundwater Protection *Standard (GPS)* as of 5/26/05	2/1/2005	8/3/2005	2/6/2006	8/16/2006	2/12/2007	8/16/2007	3/6/2008	8/17/2008	2/10/2009	8/4/2009
TDS A/C Balance *(dec. %)*		1.02	1.09	1.03	0.94	0.96	0.96	1.79	0.857	-4.88	1.59
Alk-CaC03		144	146	148	146	146	150	148	135	143	146
Aluminum (Al)	GPS (1.8)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic (As)	GPS (.05)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium (Ba)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beryllium (Be)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Bicarbonate (HCO3)		176	178	180	178	178	183	181	164	174	178
Boron (B)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Calcium (Ca)		168	162	162	175	166	175	161	194	142	160
Carbonate (CO3)		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloride (Cl)		6	8	8	8	7	7	6	5	6	6
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt (Co)		0.001	0.002	0.002	0.002	0.001	0.001	0.003	0.012	0.002	0.001
Cond *(umhos/cm)*		998	1020	1000	1090	1030	1020	1050	1110	945	982
Cond-Field *(umhos/cm)*		900	540	760	980	1003	861	959	1021	865	1018
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Fluoride (F)		0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.2	0.2
Gross Alpha *(pCi/L)*	GPS (15)	7.2	4.6	5.4	2.3	2.7	4.8	5	2.9	5	3.4
Iron (Fe)	GPS (0.6)	0.3	0.43	0.21	0.45	0.26	0.08	<0.05	0.33	0.1	0.05
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<1	<1	<1	<1	<1	<1	<1	1.7	<1	<1
Lead (Pb)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Magnesium (Mg)		19	18.6	18.9	19.8	19	19.8	18.6	26.3	17.1	17.8
Manganese (Mn)	GPS (0.2)	0.12	0.12	0.14	0.12	0.12	0.11	0.14	0.23	0.12	0.11
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum (Mo)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nickel (Ni)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.04	<0.01	<0.01
Nitrogen, Nitrate+Nitrite as N		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
pH *(Std. Units)*	GPS (6.8)	7.58	7.82	8.29	7.69	7.78	7.67	7.8	7.48	7.52	7.98
pH (Field) *(Std. Units)*		7.2	7.4	7.36	7.1	7.52	7.3	7.4	7.2	7.1	7.6
Potassium (K)		3.6	3.2	3.5	3.7	3.8	3.6	3.9	3.9	4	3.7
Combined Ra226/228 *(pCi/L)*	GPS (5.8)	9.6	9.5	10.1	9.6	4.9	6.6	7.6	11.3	7.4	8.5
Radium 226 *(pCi/L)*		2	3	2.2	3.5	1.2	2.1	1.6	1.6	2	2.4
Radium 228 *(pCi/L)*		7.6	6.5	7.9	6.1	3.7	4.5	6	9.7	5.4	6.1
Selenium (Se)	GPS (.01)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silica (SiO2)		15	15	14	16	14	15	15	19	14.5	16.6
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		38.3	36.7	35.1	37.6	38.3	38.3	35.4	37	34.9	36.7
TDS @ 180° *C.*	GPS (500)	737	776	730	730	724	728	794	848	730	735
Sulfate (SO4)		388	384	376	431	414	409	407	527	390	370
Temperature *(C)*		12	16	9	12.9	10.1	10.5	9.3	10.6	9.7	11.7
Thallium (Tl)	GPS (7.0)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Thorium 230 *(pCi/L:)*		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Uranium, natural *(pCi/L)*	GPS (36)	6.2	6.6	6.2	7	6.2	6.4	6.2	6.7	6.6	5.8
Vanadium (V205)		0.1	0.1	0.1	0.1	0.1	0.1	<0.1	<0.1	<0.1	<0.1
Zinc (ZN)		<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01


TMW-35
pH
Std. Units
10
9
8
7
6
5
2005
2006
2007
2008
2009
pH (Std. Units)
GPS (6.8)

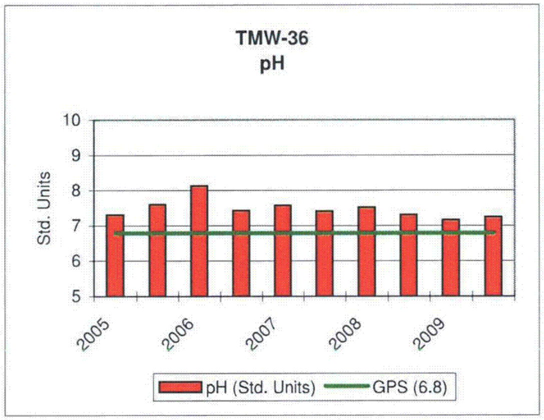

TMW-35
Manganese
mg/L
0.25
0.2
0.15
0.1
0.05
0
2005
2006
2007
2008
2009
Manganese (Mn)
GPS (0.2)

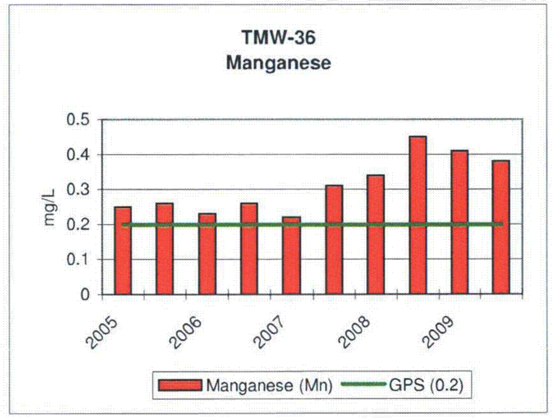

TMW-35
TDS
mg/L
1000
800
600
400
200
0
2005
2006
2007
2008
2009
TDS @ 180° C.
GPS (500)

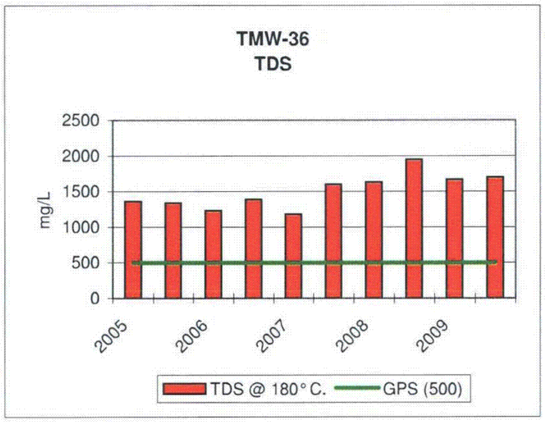

TMW-35
Nickel
mg/L
0.045
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
2005
2006
2007
2008
2009
Nickel (Ni)
GPS (.01)

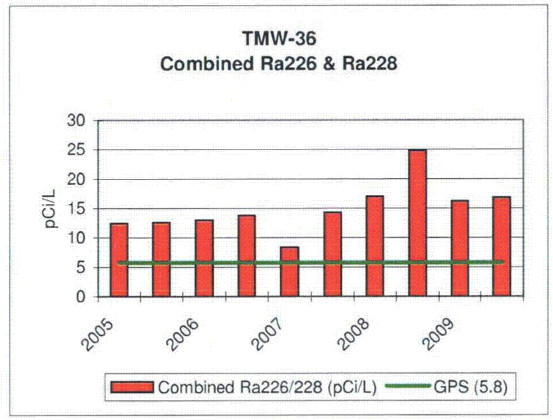

TMW-35
Combined Ra226 & Ra228
pCi/L
12
10
8
6
4
2
0
2005
2006
2007
2008
2009
Combined Ra226/228 (pCi/L)
GPS (5.8)

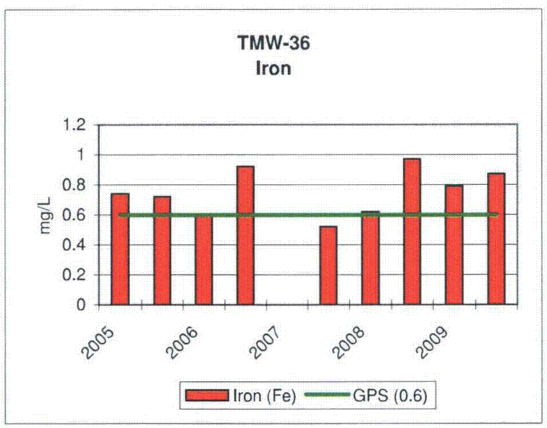
KENNECOTT URANIUM COMPANY											
TMW-36		2005		2006		2007		2008		2009	
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	2/1/2005	8/3/2005	2/6/2006	8/16/2006	2/12/2007	8/16/2007	3/6/2008	8/17/2008	2/10/2009	8/4/2009
TDS A/C Balance *(dec. %)*		1.04	1.1	1.05	0.98	0.99	1.01	4.44	0.573	-1.69	3.42
Alk-CaC03		167	166	160	172	160	185	188	186	174	185
Aluminum (Al)	GPS (1.8)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic (As)	GPS (.05)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium (Ba)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beryllium (Be)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Bicarbonate (HCO3)		204	202	195	210	195	226	229	227	212	226
Boron (B)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Calcium (Ca)		303	277	268	321	262	376	335	469	349	388
Carbonate (CO3)		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloride (Cl)		12	10	12	14	12	11	11	10	11	11
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt (Co)		<0.001	0.001	<0.001	0.001	0.001	0.001	0.002	0.002	0.002	0.002
Cond *(umhos/cm)*		1630	1600	1510	1790	1510	1940	2050	2190	2030	2040
Cond-Field *(umhos/cm)*		1360	740	1080	1660	1427	1671	1821	1951	1676	2110
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Fluoride (F)		0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1
Gross Alpha *(pCi/L)*	GPS (15)	7.5	6.3	4.3	5.3	3.2	8.3	7.5	7.1	9	8.5
Iron (Fe)	GPS (0.6)	0.74	0.72	0.6	0.92	<0.05	0.52	0.62	0.97	0.79	0.87
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Lead (Pb)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Magnesium (Mg)		42.9	41.1	40	46	38.3	53	48.2	69.7	53.2	56.8
Manganese (Mn)	GPS (0.2)	0.25	0.26	0.23	0.26	0.22	0.31	0.34	0.45	0.41	0.38
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum (Mo)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nickel (Ni)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen, Nitrate+Nitrite as N		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
pH *(Std. Units)*	GPS (6.8)	7.31	7.6	8.13	7.43	7.57	7.41	7.52	7.31	7.16	7.24
pH (Field) *(Std. Units)*		6.8	7.2	7.15	6.92	7.13	6.9	6.9	7	6.9	7.1
Potassium (K)		4.7	4.2	4.4	5.1	4.9	5.1	5.9	6.3	6	6.1
Combined Ra226/228 *(pCi/L)*	GPS (5.8)	12.4	12.6	13	13.8	8.4	14.3	17	24.8	16.2	16.8
Radium 226 *(pCi/L)*		4.2	4.1	2.7	4.8	2.6	3.4	4	5.3	4.7	4.5
Radium 228 *(pCi/L)*		8.2	8.5	10.3	9	5.8	10.9	13	19.5	11.5	12.3
Selenium (Se)	GPS (.01)	0.001	<0.001	0.001	0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.001
Silica (SiO2)		12	13	12	13	13	12	11	13	12	12.7
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		45.6	42.5	40.6	44.1	43.3	47.1	44	49	39.7	45.1
TDS @ 180° *C.*	GPS (500)	1360	1340	1230	1390	1180	1600	1630	1950	1670	1700
Sulfate (SO4)		784	735	693	878	723	962	1000	1300	994	980
Temperature *(C)*		12	17	9.9	13.3	21.7	9.9	9.2	10.4	10	11.6
Thallium (Tl)	GPS (7.0)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Thorium 230 *(pCi/L:)*		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Uranium, natural *(pCi/L)*	GPS (36)	50.3	52.8	51	65.9	50.5	72.5	75.9	89.9	72.5	79.5
Vanadium (V205)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Zinc (ZN)		<0.01	0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01


TMW-36
pH
Std. Units
10
9
8
7
6
5
2005
2006
2007
2008
2009
pH (Std. Units)
GPS (6.8)

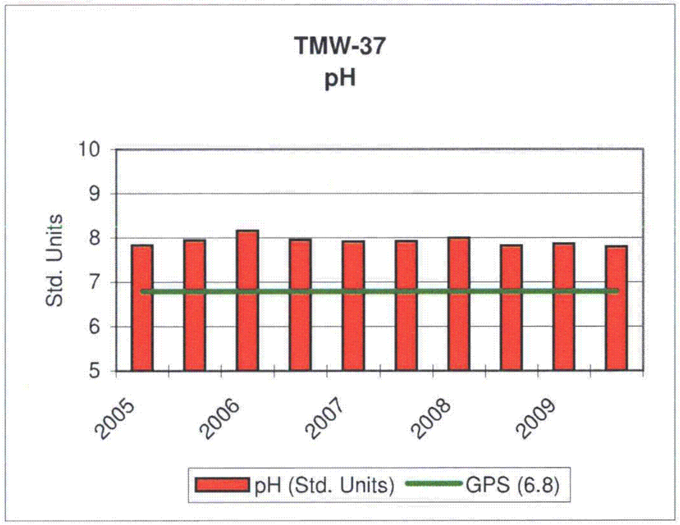

TMW-36
Manganese
mg/L
0.5
0.4
0.3
0.2
0.1
0
2005
2006
2007
2008
2009
Manganese (Mn)
GPS (0.2)

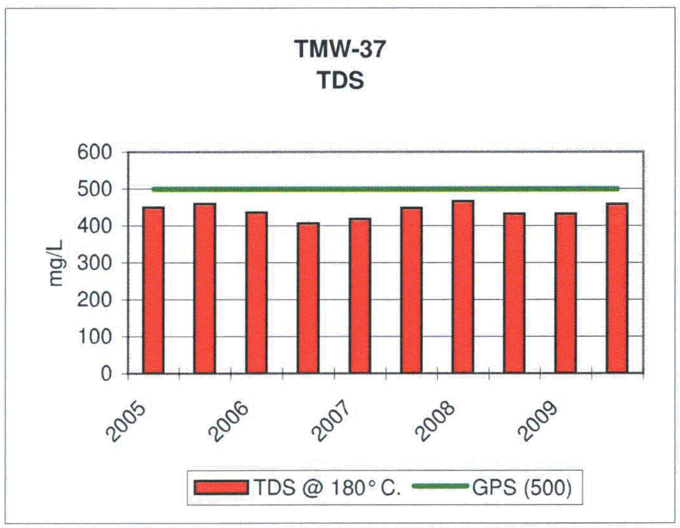

TMW-36
TDS
mg/L
2500
2000
1500
1000
500
0
2005
2006
2007
2008
2009
TDS @ 180° C.
GPS (500)


TMW-36
Combined Ra226 & Ra228
pCi/L
30
25
20
15
10
5
0
2005
2006
2007
2008
2009
Combined Ra226/228 (pCi/L)
GPS (5.8)

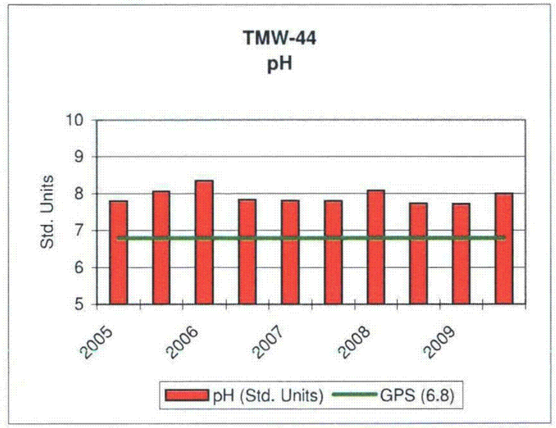

TMW-36
Iron
mg/L
1.2
1
0.8
0.6
0.4
0.2
0
2005
2006
2007
2008
2009
Iron (Fe)
GPS (0.6)

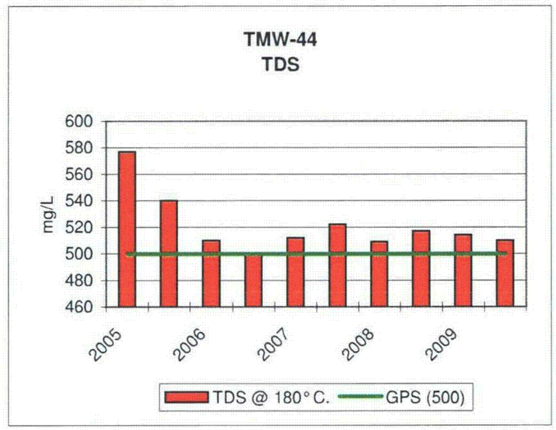
KENNECOTT URANIUM COMPANY											
TMW-37		2005		2006		2007		2008		2009	
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	2/1/2005	8/3/2005	2/2/2006	8/16/2006	2/12/2007	8/16/2007	3/6/2008	8/17/2008	2/3/2009	8/4/2009
TDS A/C Balance *(dec. %)*		1	1.06	1	0.93	0.9	0.99	3.1	3.72	0.748	0.919
Alk-CaC03		122	130	130	124	132	134	130	123	128	126
Aluminum (Al)	GPS (1.8)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic (As)	GPS (.05)	0.036	0.043	0.038	0.039	0.04	0.043	0.04	0.039	0.036	0.039
Barium (Ba)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beryllium (Be)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Bicarbonate (HCO3)		149	159	159	151	160	163	159	150	156	154
Boron (B)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Calcium (Ca)		97.3	95.8	95.9	94.1	102	99.9	88.8	106	97.7	92.6
Carbonate (CO3)		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloride (Cl)		7	8	8	8	7	6	6	5	5	6
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt (Co)		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002
Cond *(umhos/cm)*		645	670	650	682	674	654	625	631	568	649
Cond-Field *(umhos/cm)*		600	700	500	609	658	616	612	604	590	684
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Fluoride (F)		0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2
Gross Alpha *(pCi/L)*	GPS (15)	3.3	2	2.4	1.5	2.1	2.9	2.8	3.1	2.6	3.1
Iron (Fe)	GPS (0.6)	<0.1	0.11	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.05	<0.05
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<1	<1	<1	<1	<1	<1	<1	1.1	1.3	<1
Lead (Pb)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Magnesium (Mg)		8.4	8.3	8.4	7.7	8.8	8.6	7.3	8.7	8.3	7.7
Manganese (Mn)	GPS (0.2)	0.21	0.13	0.09	0.07	0.08	0.07	0.06	0.07	0.05	0.07
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum (Mo)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nickel (Ni)	GPS (.01)	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen, Nitrate+Nitrite as N		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
pH *(Std. Units)*	GPS (6.8)	7.83	7.94	8.16	7.95	7.91	7.92	7.99	7.82	7.86	7.8
pH (Field) *(Std. Units)*		7.3	7.5	7.57	7.21	7.6	7.2	7.2	7.6	7.4	7.6
Potassium (K)		3.4	3	3.3	3.4	3.6	3.3	3.7	3.5	3.4	3.6
Combined Ra226/228 *(pCi/L)*	GPS (5.8)	3.7	1.4	0.9	3.1	4.6	4.5	3.6	5.3	3.9	4.4
Radium 226 *(pCi/L)*		1.9	1.4	0.9	1.8	1.4	4.5	1.3	2.6	1.4	1.8
Radium 228 *(pCi/L)*		1.8	<1	<1	1.3	3.2	<1	2.3	2.7	2.5	2.6
Selenium (Se)	GPS (.01)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silica (SiO2)		9	10	10	11	10	10	11	13.6	13	11.8
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		36.5	34.3	34.4	35.2	36.8	35.8	32.3	35.2	34.9	33.6
TDS @ 180° *C.*	GPS (500)	450	459	436	406	418	448	466	432	432	458
Sulfate (SO4)		195	195	198	203	219	207	200	215	209	191
Temperature *(C)*		13	15	8.4	12.9	17.9	9.9	9.2	10	10.2	10.6
Thallium (Tl)	GPS (7.0)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Thorium 230 *(pCi/L:)*		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Uranium, natural *(pCi/L)*	GPS (36)	7.8	5.6	6.2	6	6	5.6	4.9	4.7	4.6	4.6
Vanadium (V205)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Zinc (ZN)		<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

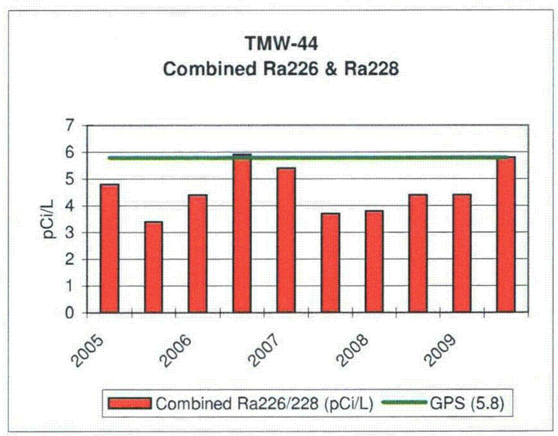

TMW-37
pH
10
9
8
7
6
5
Std. Units
2005
2006
2007
2008
2009
pH (Std. Units)
GPS (6.8)


TMW-37
TDS
600
500
400
300
200
100
0
mg/L
2005
2006
2007
2008
2009
TDS @ 180° C.
GPS (500)

KENNECOTT URANIUM COMPANY											
TMW-44		2005		2006		2007		2008		2009	
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	2/2/2005	8/4/2005	2/6/2006	8/23/2006	2/20/2007	8/16/2007	4/21/2008	8/13/2008	2/11/2009	8/11/2009
TDS A/C Balance *(dec. %)*		1.1	1.04	0.99	0.94	0.93	1	1.73	0.532	-2.4	-1.75
Alk-CaC03		122	120	128	124	122	132	126	126	124	131
Aluminum (Al)	GPS (1.8)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic (As)	GPS (.05)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	<0.001	<0.001
Barium (Ba)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beryllium (Be)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Bicarbonate (HCO3)		149	146	152	152	149	161	153	153	152	160
Boron (B)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Calcium (Ca)		119	117	113	112	117	113	118	116	101	109
Carbonate (CO3)		<1	<1	2	<1	<1	<1	<1	<1	<1	<1
Chloride (Cl)		9	9	10	9	9	8	8	8	8	7
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt (Co)		<0.001	<0.01	<0.001	<0.01	<0.001	<0.01	<0.001	0.003	<0.001	<0.001
Cond *(umhos/cm)*		765	779	747	790	755	756	755	757	653	737
Cond-Field *(umhos/cm)*		600	440	600	730	714	707	699	704	668	809
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Fluoride (F)		0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2
Gross Alpha *(pCi/L)*	GPS (15)	5.4	2.8	2.7	2.3	2.4	2.8	3	2.3	2.6	3.4
Iron (Fe)	GPS (0.6)	0.14	0.13	<0.05	<0.05	<0.05	<0.05	0.07	<0.05	<0.05	<0.05
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<1	<1	<1	<1	<1	<1	<1	3.4	<1	<1
Lead (Pb)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Magnesium (Mg)		10.3	10.2	10.3	9.8	10.5	9.9	11.4	10	8.8	8
Manganese (Mn)	GPS (0.2)	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.07	0.07
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum (Mo)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01
Nickel (Ni)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen, Nitrate+Nitrite as N		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
pH *(Std. Units)*	GPS (6.8)	7.8	8.06	8.35	7.83	7.81	7.8	8.08	7.73	7.72	8
pH (Field) *(Std. Units)*		6.9	8	7.35	7.31	7.09	7.5	7.5	7.4	7.2	7.6
Potassium (K)		3.3	3	2.9	2.9	3.4	2.9	3.2	3	2.8	2.7
Combined Ra226/228 *(pCi/L)*	GPS (5.8)	4.8	3.4	4.4	5.9	5.4	3.7	3.8	4.4	4.4	5.8
Radium 226 *(pCi/L)*		1.6	2	2.1	2.2	1.6	1.3	1.2	2	1.5	2.6
Radium 228 *(pCi/L)*		3.2	1.4	2.3	3.7	3.8	2.4	2.6	2.4	2.9	3.3
Selenium (Se)	GPS (.01)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silica (SiO2)		15	15	15	16	14	15	8	20	14.3	14.2
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		41.3	38	37.8	36.4	40.4	38.6	38.4	38	36.4	33.8
TDS @ 180° *C.*	GPS (500)	577	540	510	500	512	522	509	517	514	510
Sulfate (SO4)		255	252	252	272	280	254	295	272	242	245
Temperature *(C)*		14	12	8.7	11.1	10.2	10.2	9.4	10.1	9.8	11.1
Thallium (Tl)	GPS (7.0)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Thorium 230 *(pCi/L:)*		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Uranium, natural *(pCi/L)*	GPS (36)	1.5	1.5	1.7	1.7	2.1	1.8	2.2	1.7	1.2	1
Vanadium (V205)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Zinc (ZN)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

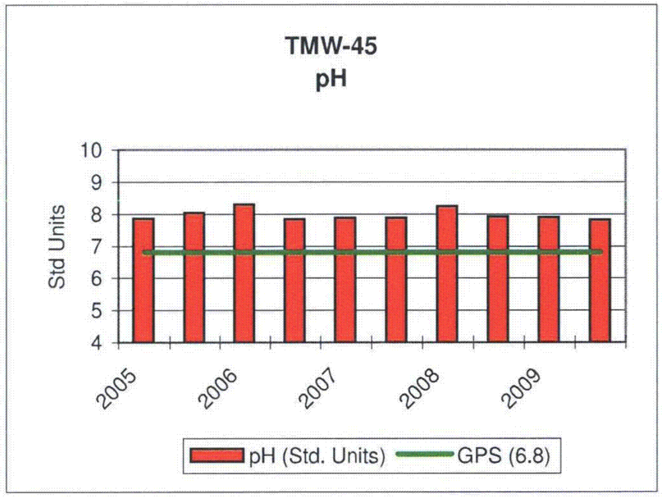

TMW-44
pH
Std. Units
10
9
8
7
6
5
2005
2006
2007
2008
2009
pH (Std. Units)
GPS (6.8)

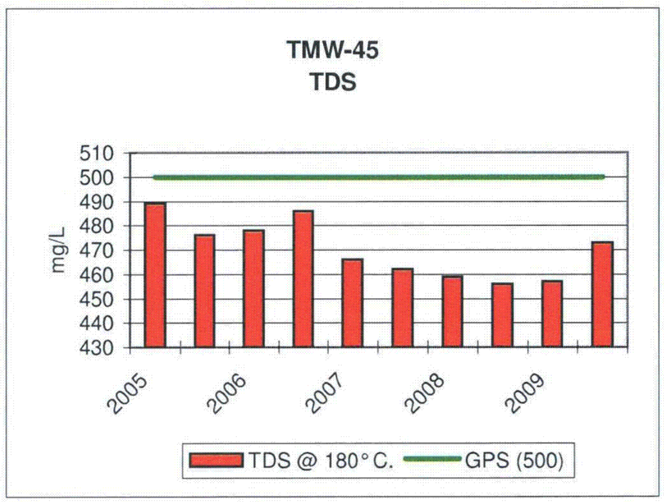

TMW-44
TDS
mg/L
600
580
560
540
520
500
480
460
2005
2006
2007
2008
2009
TDS @ 180° C.
GPS (500)


TMW-44
Combined Ra226 & Ra228
pCi/L
7
6
5
4
3
2
1
0
2005
2006
2007
2008
2009
Combined Ra226/228 (pCi/L)
GPS (5.8)

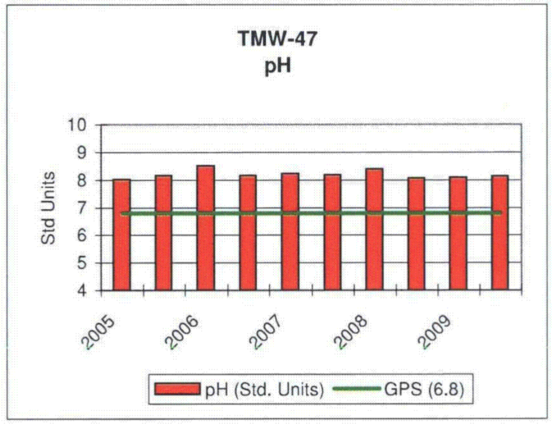
TMW 44.xls

KENNECOTT URANIUM COMPANY											
TMW-45		*2005*		*2006*		*2007*		*2008*		*2009*	
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	2/2/2005	8/4/2005	2/2/2006	8/10/2006	2/20/2007	8/16/2007	4/21/2008	8/13/2008	2/3/2009	8/3/2009
TDS A/C Balance *(dec. %)*		1	1.03	1	1	0.91	0.95	1.6	1.06	0.856	0.415
Alk-CaC03		131	129	140	136	138	143	133	132	132	135
Aluminum (Al)	GPS (1.8)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic (As)	GPS (.05)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	<0.001	<0.001
Barium (Ba)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beryllium (Be)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Bicarbonate (HCO3)		160	158	168	166	168	174	163	161	161	165
Boron (B)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Calcium (Ca)		106	107	104	105	113	108	106	119	103	100
Carbonate (CO3)		<1	<1	2	<1	<1	<1	<1	<1	<1	<1
Chloride (Cl)		7	7	7	8	7	6	6	6	6	6
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt (Co)		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	<0.001	<0.001
Cond *(umhos/cm)*		694	707	693	729	705	689	695	679	605	699
Cond-Field *(umhos/cm)*		640	380	500	650	667	634	637	620	614	740
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Fluoride (F)		0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2
Gross Alpha *(pCi/L)*	GPS (15)	2.4	3.4	3.8	2.4	1.5	3.4	2.4	2	2.9	3.1
Iron (Fe)	GPS (0.6)	0.15	0.14	<0.05	<0.05	<0.05	<0.05	0.06	<0.05	<0.05	<0.05
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<1	<1	<1	<1	<1	<1	0	3.5	2.8	-0.1
Lead (Pb)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Magnesium (Mg)		7.9	8.2	8.2	8.2	8.7	8.3	8.5	8.8	7.7	7.4
Manganese (Mn)	GPS (0.2)	*0.1*	*0.09*	*0.09*	*0.09*	*0.09*	*0.09*	*0.09*	*0.1*	0.08	0.08
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum (Mo)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nickel (Ni)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen, Nitrate+Nitrite as N		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
pH *(Std. Units)*	GPS (6.8)	7.85	8.03	8.3	7.84	7.87	7.87	8.23	7.91	7.89	7.82
pH (Field) *(Std. Units)*		7.2	8.2	7.62	7.28	7.28	7.5	7.5	7.5	7.4	7.6
Potassium (K)		3.2	3	2.9	3.2	2.8	3	3.2	3.2	3.1	3.3
Combined Ra226/228 *(pCi/L)*	GPS (5.8)	3.7	1.5	4.1	2.4	3.4	1.7	3.2	2.9	3.3	2.83
Radium 226 *(pCi/L)*		1.3	1.5	2.4	1.3	1.4	1.7	1.1	1.3	1.5	0.93
Radium 228 *(pCi/L)*		2.4	<1	1.7	1.1	2	<1	2.1	1.6	1.8	1.9
Selenium (Se)	GPS (.01)	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silica (SiO2)		15	15	16	16	18	16	9	21	19.1	15.4
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		38.9	36.4	38	37.4	40.3	37.9	37.4	38.3	36	36.8
TDS @ 180° *C.*	GPS (500)	489	476	478	486	466	462	459	456	457	473
Sulfate (SO4)		213	210	216	225	241	223	246	261	216	208
Temperature *(C)*		11	14	7.7	15.7	10.5	10	9.4	10.2	10.2	11.1
Thallium (Tl)	GPS (7.0)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Thorium 230 *(pCi/L:)*		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.09	0.03
Uranium, natural *(pCi/L)*	GPS (36)	1.4	1.3	2.5	1.3	1.4	1.4	1.2	1.1	1.1	2
Vanadium (V205)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Zinc (ZN)		*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*

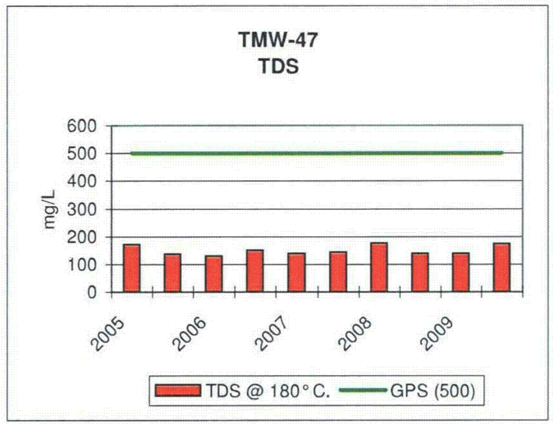

TMW-45
pH
10
9
8
7
6
5
4
Std Units
2005
2006
2007
2008
2009
pH (Std. Units)
GPS (6.8)


TMW-45
TDS
510
500
490
480
470
460
450
440
430
mg/L
2005
2006
2007
2008
2009
TDS @ 180° C.
GPS (500)

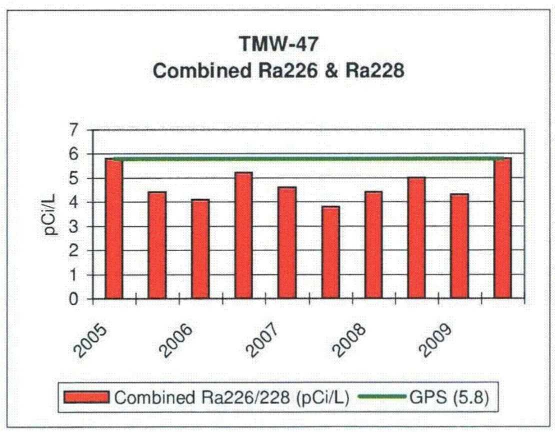
KENNECOTT URANIUM COMPANY											
TMW-47		2005		2006		2007		2008		2009	
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	2/2/2005	8/4/2005	2/2/2006	8/22/2006	2/20/2007	8/17/2007	3/6/2008	8/17/2008	2/10/2009	8/3/2009
TDS A/C Balance *(dec. %)*		1.1	0.85	0.83	0.95	0.85	0.88	1.18	3.63	-3.21	2.95
Alk-CaC03		84	81	85	85	80	89	89	83	85	86
Aluminum (Al)	GPS (1.8)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic (As)	GPS (.05)	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.002
Barium (Ba)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beryllium (Be)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Bicarbonate (HCO3)		103	99	101	104	98	108	108	101	103	105
Boron (B)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Calcium (Ca)		22	22.7	20.2	20	21.3	21.7	19.6	21.7	18.2	19.9
Carbonate (CO3)		<1	<1	2	<1	<1	<1	<1	<1	<1	<1
Chloride (Cl)		2	3	3	2	2	2	2	<1	1	2
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt (Co)		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cond *(umhos/cm)*		254	254	243	265	246	223	159	218	103	243
Cond-Field *(umhos/cm)*		260	160	194	200	219	219	221	217	207	279
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Fluoride (F)		0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2
Gross Alpha *(pCi/L)*	GPS (15)	5.6	7	5.3	4.7	3.7	7.3	5.3	5	5.1	6.3
Iron (Fe)	GPS (0.6)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<1	<1	<1	<1	<1	<1	<1	4.3	5.6	1.3
Lead (Pb)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Magnesium (Mg)		0.9	0.9	0.9	0.7	0.9	0.9	0.7	0.9	0.8	0.8
Manganese (Mn)	GPS (0.2)	0.02	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum (Mo)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nickel (Ni)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen, Nitrate+Nitrite as N		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
pH *(Std. Units)*	GPS (6.8)	8.02	8.15	8.5	8.16	8.23	8.19	8.4	8.07	8.08	8.13
pH (Field) *(Std. Units)*		7.2	7.9	8.01	7.78	7.48	7.8	8.1	7.9	7.8	8.1
Potassium (K)		1.5	1.8	1.4	1.2	1.1	1.3	1.6	1.4	1.4	1.5
Combined Ra226/228 *(pCi/L)*	GPS (5.8)	5.8	4.4	4.1	5.2	4.6	3.8	4.4	5	4.3	5.8
Radium 226 *(pCi/L)*		2.5	4.4	4.1	5.2	4.6	3.8	4.4	5	4.3	4.6
Radium 228 *(pCi/L)*		3.3	<1	<1	<1	<1	<1	<1	<1	<1	1.3
Selenium (Se)	GPS (.01)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silica (SiO2)		13	14	13	15	15	14	14	18	13.3	15.6
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		35.1	31.4	32	30.9	35.1	33.3	32.8	33	30.5	33
TDS @ 180° *C.*	GPS (500)	172	136	130	150	138	144	176	139	140	173
Sulfate (SO4)		37	38	34	37	39	37	35	36	36	29
Temperature *(C)*		11	12	8.5	13.3	11.6	9	10.6	10.2	9.8	11.2
Thallium (Tl)	GPS (7.0)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Thorium 230 *(pCi/L:)*		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0	0.1	0.02	0.05
Uranium, natural *(pCi/L)*	GPS (36)	0.3	0.5	0.9	0.3	0.4	0.3	0.2	0.3	0.8	0.4
Vanadium (V205)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Zinc (ZN)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01



TMW-47
pH
Std Units
10
9
8
7
6
5
4
2005
2006
2007
2008
2009
pH (Std. Units)
GPS (6.8)

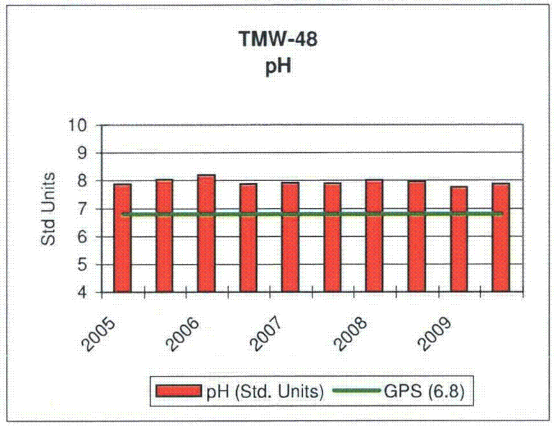


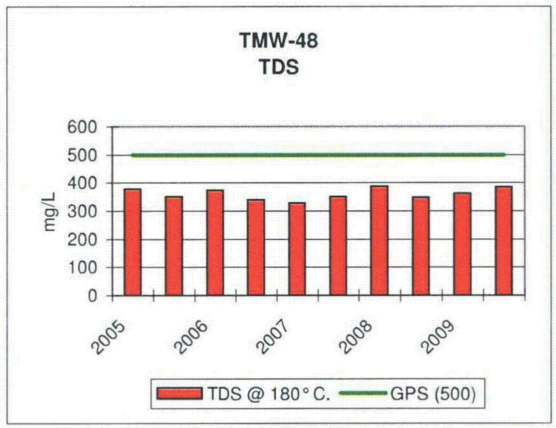
TMW-47
TDS
mg/L
600
500
400
300
200
100
0
2005
2006
2007
2008
2009
TDS @ 180° C.
GPS (500)

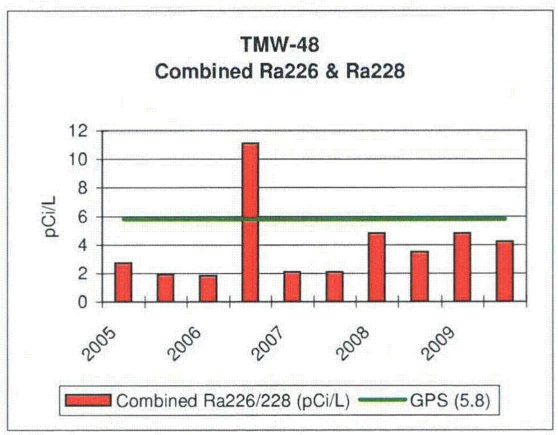


TMW-47
Combined Ra226 & Ra228
pCi/L
7
6
5
4
3
2
1
0
2005
2006
2007
2008
2009
Combined Ra226/228 (pCi/L)
GPS (5.8)

KENNECOTT URANIUM COMPANY											
TMW-48		2005		2006		2007		2008		2009	
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	2/2/2005	8/4/2005	2/2/2006	8/22/2006	2/21/2007	8/16/2007	3/6/2008	8/13/2008	2/10/2009	8/3/2009
TDS A/C Balance *(dec. %)*		1.1	1.04	0.98	0.93	0.87	0.94	1.95	0.593	-2.45	1.12
Alk-CaC03		109	106	115	112	110	117	115	110	110	112
Aluminum (Al)	GPS (1.8)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic (As)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001	0.002	<0.001	<0.001
Barium (Ba)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beryllium (Be)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Bicarbonate (HCO3)		133	129	140	136	134	142	140	135	134	137
Boron (B)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Calcium (Ca)		78.1	75	83.6	77.7	81	80.4	76.5	88.6	70.4	76
Carbonate (CO3)		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloride (Cl)		5	5	6	8	5	5	4	5	4	5
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt (Co)		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cond *(umhos/cm)*		529	534	570	561	539	526	486	532	417	544
Cond-Field *(umhos/cm)*		500	300	420	500	513	492	495	495	482	594
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Fluoride (F)		0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2
Gross Alpha *(pCi/L)*	GPS (15)	4.8	2.9	2.4	2.1	2.9	2.3	3.3	2.5	3.3	3.5
Iron (Fe)	GPS (0.6)	0.13	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	0.06	<0.05	0.07
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<1	<1	<1	2.8	<1	<1	<1	1.8	3.7	1
Lead (Pb)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Magnesium (Mg)		5	4.8	5.5	4.6	5.3	5.2	4.5	5.4	4.4	4.7
Manganese (Mn)	GPS (0.2)	0.07	0.05	0.05	0.04	0.04	0.05	0.04	0.05	0.04	0.04
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum (Mo)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nickel (Ni)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen, Nitrate+Nitrite as N		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
pH *(Std. Units)*	GPS (6.8)	7.87	8.03	8.19	7.88	7.92	7.9	8	7.95	7.76	7.87
pH (Field) *(Std. Units)*		7.1	7.3	7.64	7.41	7.14	7.5	7.7	7.5	7.3	7.7
Potassium (K)		2.7	2.4	2.6	2.4	2.4	2.6	3	2.8	2.4	2.9
Combined Ra226/228 *(pCi/L)*	GPS (5.8)	2.7	1.9	1.8	11.1	2.1	2.1	4.8	3.5	4.8	4.2
Radium 226 *(pCi/L)*		4.9	1.9	1.8	2.4	2.1	2.1	2.5	1.9	2.3	1.8
Radium 228 *(pCi/L)*		1.5	<1	<1	8.7	<1	<1	2.3	1.6	2.5	2.4
Selenium (Se)	GPS (.01)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silica (SiO2)		15	15	15	16	17	15	16	20	14.2	17
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		33.5	30.9	32.3	29.6	34.1	32.8	34.1	33.1	30.7	32.3
TDS @ 180° *C.*	GPS (500)	377	350	374	340	328	350	386	348	361	385
Sulfate (SO4)		147	141	169	160	166	162	150	190	154	151
Temperature *(C)*		11	11	8.6	12.4	10.1	9.9	9.8	9.9	9.8	11.2
Thallium (Tl)	GPS (7.0)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Thorium 230 *(pCi/L:)*		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Uranium, natural *(pCi/L)*	GPS (36)	0.4	0.5	0.7	0.3	0.4	0.3	0.2	0.3	0.9	0.6
Vanadium (V205)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Zinc (ZN)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

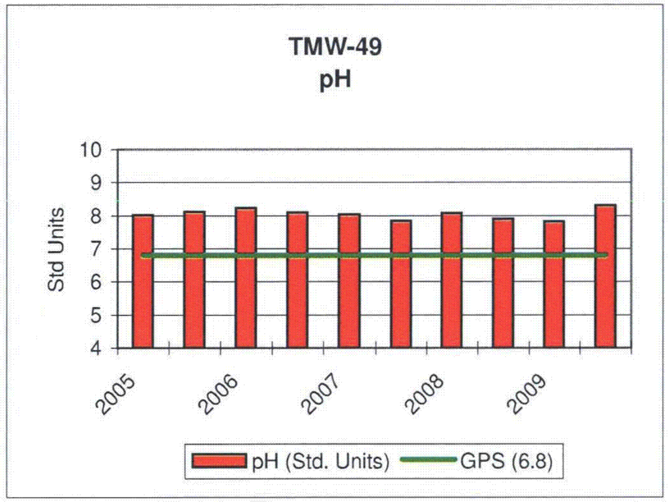

TMW-48
pH
Std Units
10
9
8
7
6
5
4
2005
2006
2007
2008
2009
pH (Std. Units)
GPS (6.8)

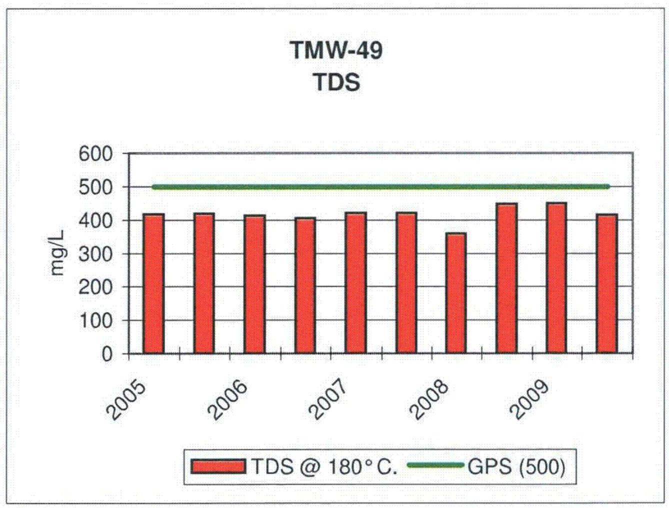

TMW-48
TDS
mg/L
600
500
400
300
200
100
0
2005
2006
2007
2008
2009
TDS @ 180° C.
GPS (500)


TMW-48
Combined Ra226 & Ra228
pCi/L
12
10
8
6
4
2
0
2005
2006
2007
2008
2009
Combined Ra226/228 (pCi/L)
GPS (5.8)

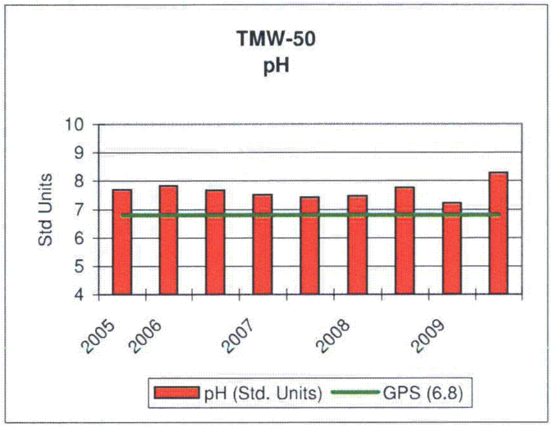
TMW 48.xls

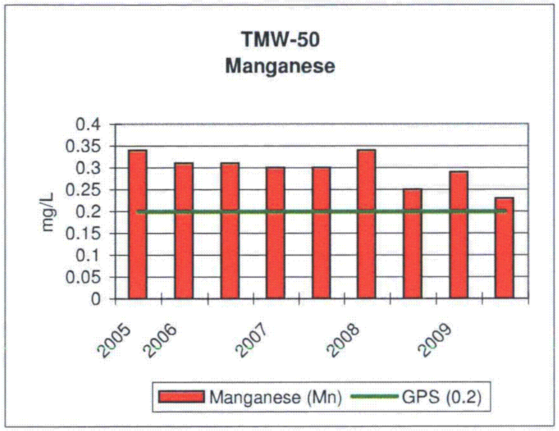
KENNECOTT URANIUM COMPANY											
TMW-49		2005		2006		2007		2008		2009	
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	3/1/2005	12/17/2005	3/2/2006	9/5/2006	2/27/2007	9/17/2007	3/18/2008	9/29/2008	3/5/2009	9/15/2009
TDS A/C Balance *(dec. %)*		0.98	0.96	0.98	0.95	0.98	0.94	1.9	6.46	-3.36	-2.47
Alk-CaC03		107	108	118	115	107	112	112	105	106	111
Aluminum (Al)	GPS (1.8)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic (As)	GPS (.05)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.001
Barium (Ba)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beryllium (Be)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Bicarbonate (HCO3)		131	131	143	140	131	136	137	128	129	136
Boron (B)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Calcium (Ca)		92.7	95.3	89.4	90.7	92.9	89.7	85.2	101	73.6	85.3
Carbonate (CO3)		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloride (Cl)		8	7	6	5	9	7	6	6	6	6
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt (Co)		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cond *(umhos/cm)*		649	635	620	669	639	630	613	628	614	612
Cond-Field *(umhos/cm)*		440	440	450	572	597	586	596	565	560	644
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Fluoride (F)		0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2
Gross Alpha *(pCi/L)*	GPS (15)	2.5	<1	1	1.1	1.3	1.9	2.4	2	3.3	2.5
Iron (Fe)	GPS (0.6)	0.08	<0.05	<0.05	<0.05	<0.05	<0.05	0.05	0.08	<0.05	0.05
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Lead (Pb)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Magnesium (Mg)		4.8	5.2	4.8	4.4	4.9	4.9	4.1	5	4	4.2
Manganese (Mn)	GPS (0.2)	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum (Mo)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nickel (Ni)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen, Nitrate+Nitrite as N		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
pH *(Std. Units)*	GPS (6.8)	8.01	8.12	8.23	8.09	8.04	7.84	8.07	7.9	7.82	8.3
pH (Field) *(Std. Units)*		7.5	7.39	7.74	7.44	8.13	7.1	7.7	7.3	7.4	7.3
Potassium (K)		2.9	2.9	2.6	2.8	3.3	2.9	3.3	3	3	2.9
Combined Ra226/228 *(pCi/L)*	GPS (5.8)	1.9	0.8	1.6	1.2	3.3	3.5	4.4	3.57	3.8	4.7
Radium 226 *(pCi/L)*		1.9	0.8	1.6	1.2	1.6	1	1.3	0.97	1.1	1.5
Radium 228 *(pCi/L)*		<1	<1	<1	<1	1.7	2.5	3.1	2.6	2.7	3.2
Selenium (Se)	GPS (.01)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silica (SiO2)		14	16	15	15	16	14	16	20	13.4	13.8
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		38.7	37.4	38.7	38.9	40.5	38.4	38	40.2	36.2	35.8
TDS @ 180° *C.*	GPS (500)	417	419	412	406	420	420	359	448	449	415
Sulfate (SO4)		198	207	194	200	215	221	200	197	181	199
Temperature *(C)*		13	8	12.2	13.9	8.8	10	9.8	10.7	9.7	10.8
Thallium (Tl)	GPS (7.0)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Thorium 230 *(pCi/L:)*		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Uranium, natural *(pCi/L)*	GPS (36)	2.1	0.5	0.5	0.7	0.4	0.5	0.4	3.3	0.4	0.5
Vanadium (V205)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Zinc (ZN)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

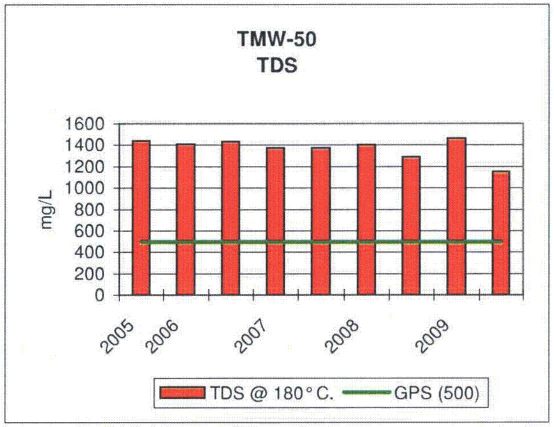

TMW-49
pH
10
9
8
7
6
5
4
Std Units
2005
2006
2007
2008
2009
pH (Std. Units)
GPS (6.8)

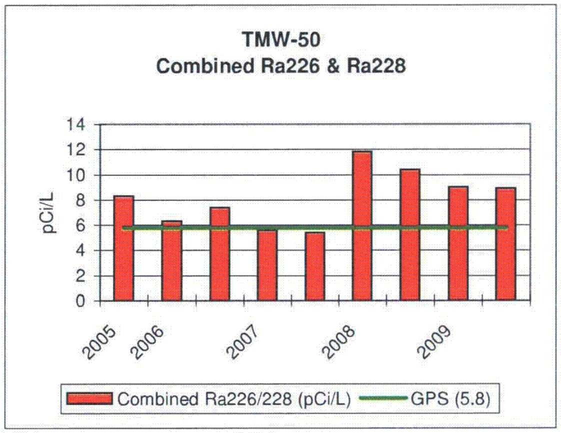

TMW-49
TDS
600
500
400
300
200
100
0
mg/L
2005
2006
2007
2008
2009
TDS @ 180° C.
GPS (500)

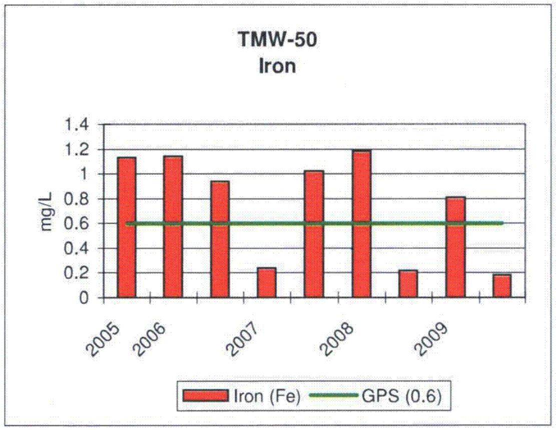
KENNECOTT URANIUM COMPANY										
TMW-50		2005	2006		2007		2008		2009	
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	12/16/2005	3/2/2006	9/5/2006	2/27/2007	9/12/2007	3/31/2008	9/23/2008	3/5/2009	9/15/2009
TDS A/C Balance *(dec. %)*		1	1.01	1.01	0.99	0.96	2.37	-0.752	-1.82	-2.91
Alk-CaC03		232	235	230	210	216	226	197	212	196
Aluminum (Al)	GPS (1.8)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic (As)	GPS (.05)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium (Ba)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beryllium (Be)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Bicarbonate (HCO3)		284	287	281	256	263	276	241	259	239
Boron (B)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Calcium (Ca)		354	330	325	326	326	348	298	308	252
Carbonate (CO3)		<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloride (Cl)		32	36	36	38	36	30	35	32	30
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt (Co)		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cond *(umhos/cm)*		1800	1740	1810	1710	1800	1770	1620	1720	1500
Cond-Field *(umhos/cm)*		1040	1140	1580	1579	1563	1617	1433	1513	1488
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Fluoride (F)		0.1	0.1	<0.1	0.1	0.1	<0.1	<0.1	<0.1	<0.1
Gross Alpha *(pCi/L)*	GPS (15)	3	2.4	2.2	3.1	6.3	3.5	3.7	4.5	3.9
Iron (Fe)	GPS (0.6)	1.13	1.14	0.94	0.24	1.02	1.18	0.22	0.81	0.18
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<1	<1	<1	<1	<1	<1	<1	<1	<1
Lead (Pb)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Magnesium (Mg)		31.8	29.9	27.5	27	29.1	31	25.3	26.7	19.1
Manganese (Mn)	GPS (0.2)	0.34	0.31	0.31	0.3	0.3	0.34	0.25	0.29	0.23
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum (Mo)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nickel (Ni)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen, Nitrate+Nitrite as N		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
pH *(Std. Units)*	GPS (6.8)	7.69	7.82	7.66	7.51	7.41	7.47	7.75	7.22	8.29
pH (Field) *(Std. Units)*		7.09	7.17	7.04	7.53	7.1	7.1	7.2	7	7
Potassium (K)		4.9	4.8	4.8	5.7	5	5	4.3	4.8	4.4
Combined Ra226/228 *(pCi/L)*	GPS (5.8)	8.3	6.3	7.4	5.6	5.4	11.8	10.4	9	8.9
Radium 226 *(pCi/L)*		2.4	3.7	2.2	3.1	2.5	4.2	1.9	2	2.1
Radium 228 *(pCi/L)*		5.9	2.6	5.2	2.5	2.9	7.6	8.5	7	6.8
Selenium (Se)	GPS (.01)	<0.001	0.001	<0.001	0.001	<0.001	0.001	<0.001	<0.001	<0.001
Silica (SiO2)		19	19	18	19	18	19	20.1	17.6	16.6
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		63.6	64.2	60.6	66.4	66.1	71.1	55	59	54.2
TDS @ 180° *C.*	GPS (500)	1440	1410	1430	1370	1370	1400	1290	1460	1150
Sulfate (SO4)		798	761	802	775	808	804	712	761	618
Temperature *(C)*		9.2	9.3	12.8	9.5	10.6	9	9.8	9.6	10.3
Thallium (Tl)	GPS (7.0)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Thorium 230 *(pCi/L:)*		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Uranium, natural *(pCi/L)*	GPS (36)	2.8	3.4	3.4	2.2	3.2	2.7	15.4	2.2	2.1
Vanadium (V205)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Zinc (ZN)		<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01


TMW-50
pH
Std Units
10
9
8
7
6
5
4
2005
2006
2007
2008
2009
pH (Std. Units)
GPS (6.8)

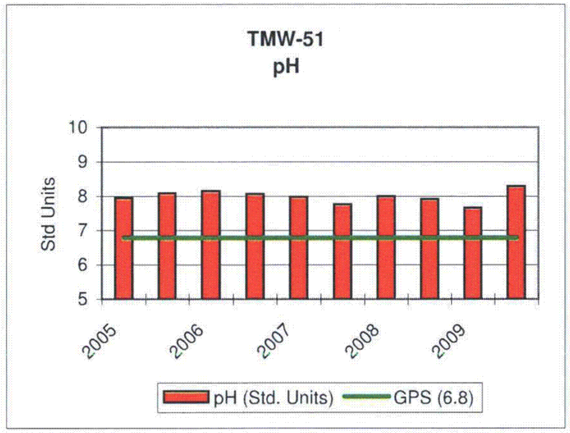

TMW-50
Manganese
mg/L
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
2005
2006
2007
2008
2009
Manganese (Mn)
GPS (0.2)

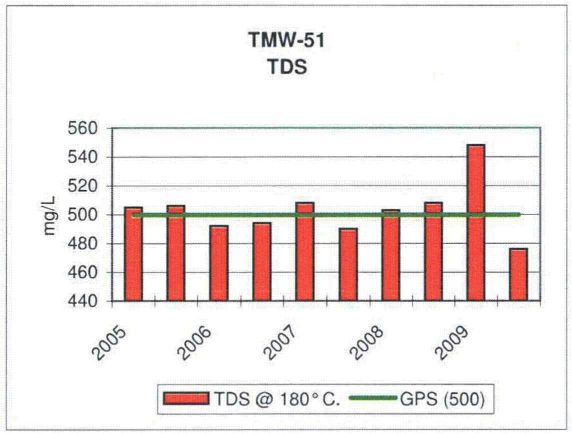

TMW-50
TDS
mg/L
1600
1400
1200
1000
800
600
400
200
0
2005
2006
2007
2008
2009
TDS @ 180° C.
GPS (500)

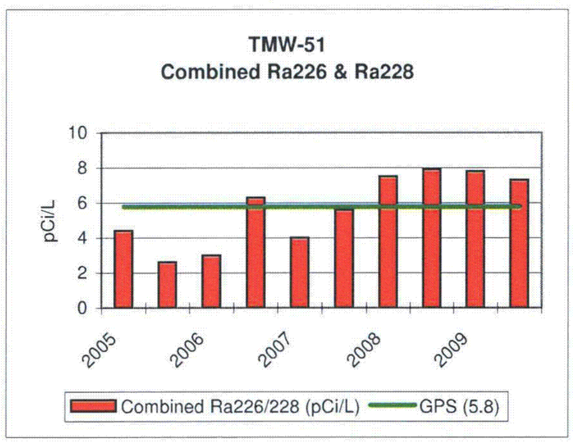

TMW-50
Combined Ra226 & Ra228
pCi/L
14
12
10
8
6
4
2
0
2005
2006
2007
2008
2009
Combined Ra226/228 (pCi/L)
GPS (5.8)


TMW-50
Iron
mg/L
1.4
1.2
1
0.8
0.6
0.4
0.2
0
2005
2006
2007
2008
2009
Iron (Fe)
GPS (0.6)

KENNECOTT URANIUM COMPANY											
TMW-51		2005		2006		2007		2008		2009	
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	3/2/2005	12/16/2005	3/2/2006	9/6/2006	2/28/2007	9/5/2007	3/17/2008	9/23/2008	3/5/2009	9/15/2009
TDS A/C Balance *(dec. %)*		0.99	0.98	0.96	0.94	1.05	0.93	2.48	0.718	-3.84	-3.88
Alk-CaC03		125	125	130	135	150	129	131	124	124	130
Aluminum (Al)	GPS (1.8)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic (As)	GPS (.05)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium (Ba)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beryllium (Be)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Bicarbonate (HCO3)		152	152	159	165	182	157	159	151	151	159
Boron (B)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Calcium (Ca)		114	116	114	113	116	120	103	112	99	103
Carbonate (CO3)		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloride (Cl)		9	6	11	10	8	9	7	8	8	8
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt (Co)		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cond *(umhos/cm)*		767	740	731	777	752	728	711	728	728	726
Cond-Field *(umhos/cm)*		500	510	540	700	719	685	683	664	659	758
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Fluoride (F)		0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.2	0.2
Gross Alpha *(pCi/L)*	GPS (15)	4.1	1.2	1.9	1.4	1.4	1.1	3.4	2.1	3.9	3.4
Iron (Fe)	GPS (0.6)	0.1	<0.05	<0.05	<0.05	<0.05	0.11	0.08	0.05	ND	0.1
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Lead (Pb)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Magnesium (Mg)		8.4	9	8.6	8.3	7.3	8.8	7.2	8.4	7.3	7.3
Manganese (Mn)	GPS (0.2)	0.07	0.07	0.07	0.07	0.06	0.07	0.07	0.07	0.07	0.07
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum (Mo)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01
Nickel (Ni)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen, Nitrate+Nitrite as N		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
pH *(Std. Units)*	GPS (6.8)	7.94	8.08	8.15	8.06	7.98	7.76	8	7.91	7.66	8.29
pH (Field) *(Std. Units)*		7.1	7.53	7.56	7.35	7.62	7.7	7.7	7.6	7.4	7
Potassium (K)		3.4	3.1	3	3	2.7	3.1	3.5	2.9	3.1	3
Combined Ra226/228 *(pCi/L)*	GPS (5.8)	4.4	2.6	3	6.3	4	5.6	7.5	7.9	7.8	7.3
Radium 226 *(pCi/L)*		2.4	1.3	1.6	2	1.6	1.5	1.6	1.5	1.8	1.6
Radium 228 *(pCi/L)*		2	1.3	1.4	4.3	2.4	4.1	5.9	6.4	6	5.7
Selenium (Se)	GPS (.01)	<0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silica (SiO2)		15	16	16	16	13	15	15	18.1	13.4	13.9
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		39.9	38.1	39.2	37.8	32.3	39.2	39	35	37.4	35.1
TDS @ 180° *C.*	GPS (500)	505	506	492	494	508	490	503	508	548	476
Sulfate (SO4)		246	250	241	259	215	257	244	243	246	245
Temperature *(C)*		14	9.8	10.6	12.1	9.8	10.1	9.3	10	10.1	10.9
Thallium (Tl)	GPS (7.0)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Thorium 230 *(pCi/L:)*		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Uranium, natural *(pCi/L)*	GPS (36)	2.2	1.8	2	2	1.3	1.8	1.6	13	1.6	1.9
Vanadium (V205)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Zinc (ZN)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

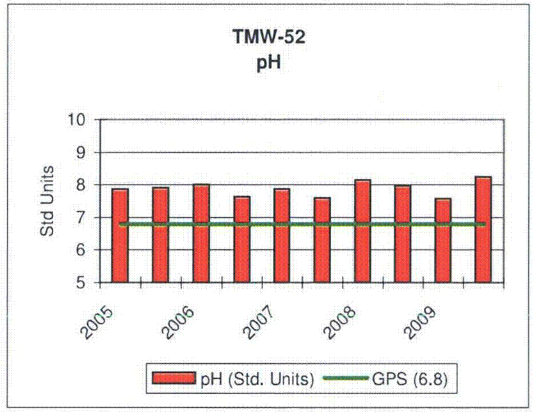

TMW-51
pH
Std Units
10
9
8
7
6
5
2005
2006
2007
2008
2009
pH (Std. Units)
GPS (6.8)

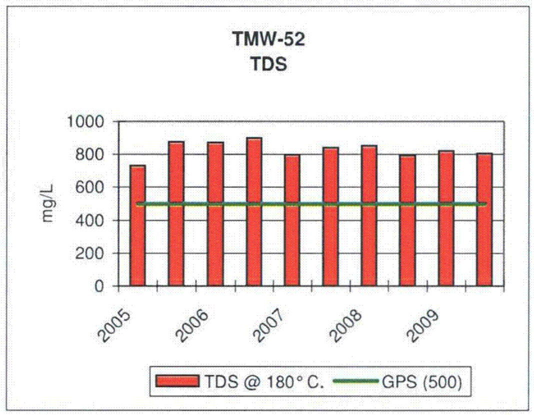

TMW-51
TDS
mg/L
560
540
520
500
480
460
440
2005
2006
2007
2008
2009
TDS @ 180° C.
GPS (500)

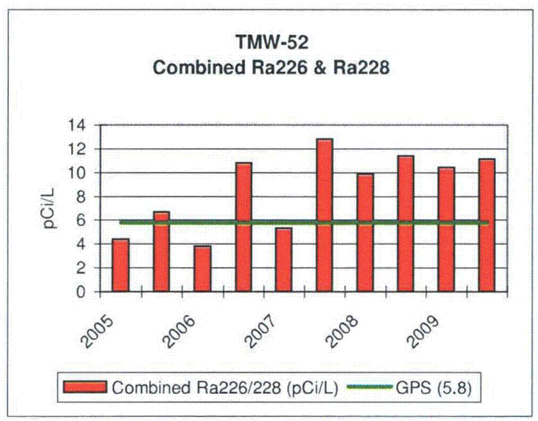

TMW-51
Combined Ra226 & Ra228
pCi/L
10
8
6
4
2
0
2005
2006
2007
2008
2009
Combined Ra226/228 (pCi/L)
GPS (5.8)

tmw 51.xls

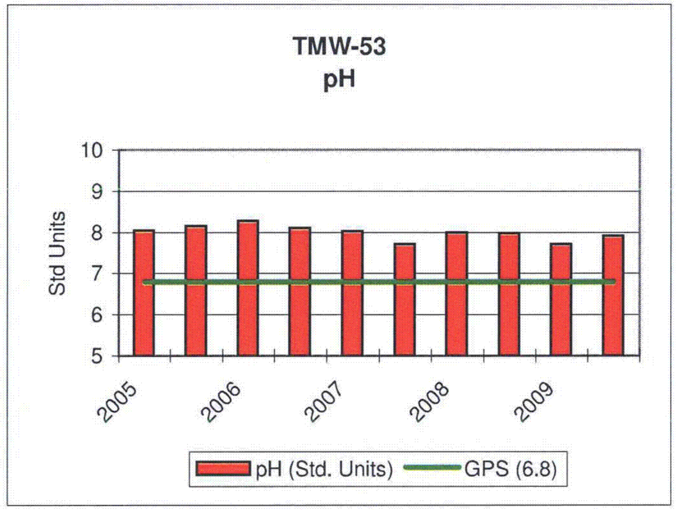
KENNECOTT URANIUM COMPANY											
TMW 52		2005		2006		2007		2008		2009	
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	3/2/2005	12/16/2005	3/1/2006	9/6/2006	2/28/2007	9/5/2007	3/17/2008	9/23/2008	3/5/2009	9/15/2009
TDS A/C Balance *(dec. %)*		1.01	0.99	1	1.02	0.96	0.95	2.63	-1.05	-3.43	-1.87
Alk-CaC03		147	152	158	160	140	159	159	146	144	152
Aluminum (Al)	GPS (1.8)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic (As)	GPS (.05)	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium (Ba)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beryllium (Be)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Bicarbonate (HCO3)		180	186	192	195	171	194	194	178	175	186
Boron (B)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Calcium (Ca)		167	210	203	201	187	206	204	178	152	174
Carbonate (CO3)		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloride (Cl)		15	16	19	19	18	19	17	17	16	17
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt (Co)		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cond *(umhos/cm)*		1030	1180	1150	1240	1100	1170	1120	1080	1070	1080
Cond-Field *(umhos/cm)*		680	760	740	1100	1032	1071	1063	983	948	1118
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Fluoride (F)		0.2	0.1	0.1	<0.1	0.1	0.2	0.1	<0.1	0.1	0.1
Gross Alpha *(pCi/L)*	GPS (15)	3	2.6	3.6	2.3	2.7	5.1	4.9	4.3	5.3	5.2
Iron (Fe)	GPS (0.6)	0.31	0.22	0.18	0.19	0.18	0.27	0.13	<0.05	ND	ND
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Lead (Pb)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Magnesium (Mg)		12	14.6	13.7	12.8	12.9	13.7	13.2	12.3	10.6	11.2
Manganese (Mn)	GPS (0.2)	0.09	0.12	0.11	0.12	0.11	0.12	0.15	0.11	0.11	0.12
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum (Mo)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nickel (Ni)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen, Nitrate+Nitrite as N		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
pH *(Std. Units)*	GPS (6.8)	7.86	7.91	8.01	7.62	7.87	7.59	8.15	7.97	7.56	8.25
pH (Field) *(Std. Units)*		7.1	7.23	7.43	7.31	7.52	7.4	7.5	7.4	7.2	7
Potassium (K)		4.1	4.1	4	4.1	4.5	4.1	4.5	3.6	3.9	3.8
Combined Ra226/228 *(pCi/L)*	GPS (5.8)	4.4	6.7	3.8	10.8	5.3	12.8	9.9	11.4	10.4	11.1
Radium 226 *(pCi/L)*		2.3	2.6	2.3	2.8	3.2	3.6	2.9	2.5	2.6	3.2
Radium 228 *(pCi/L)*		2.1	4.1	1.5	8	2.1	9.2	7	8.9	7.8	7.9
Selenium (Se)	GPS (.01)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silica (SiO2)		15	17	17	17	17	17	19	18.9	14.8	15.4
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		49.5	51.7	53.5	54.6	54	53.3	52.9	46	47.4	46
TDS @ 180° *C.*	GPS (500)	732	875	872	898	796	838	850	794	822	803
Sulfate (SO4)		371	480	464	480	452	471	447	424	387	414
Temperature *(C)*		13	9.6	9.9	14.2	9.2	9.9	9.3	10.4	9.8	10.2
Thallium (Tl)	GPS (7.0)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Thorium 230 *(pCi/L:)*		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Uranium, natural *(pCi/L)*	GPS (36)	5.2	3.5	3.9	3.3	3.7	3.5	2.9	17	3	3.4
Vanadium (V205)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Zinc (ZN)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.29

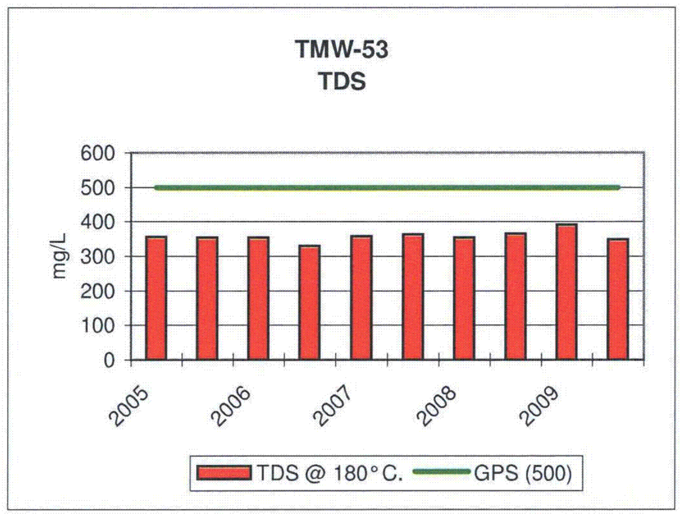

TMW-52
pH
Std Units
10
9
8
7
6
5
2005
2006
2007
2008
2009
pH (Std. Units)
GPS (6.8)


TMW-52
TDS
mg/L
1000
800
600
400
200
0
2005
2006
2007
2008
2009
TDS @ 180° C.
GPS (500)


TMW-52
Combined Ra226 & Ra228
pCi/L
14
12
10
8
6
4
2
0
2005
2006
2007
2008
2009
Combined Ra226/228 (pCi/L)
GPS (5.8)

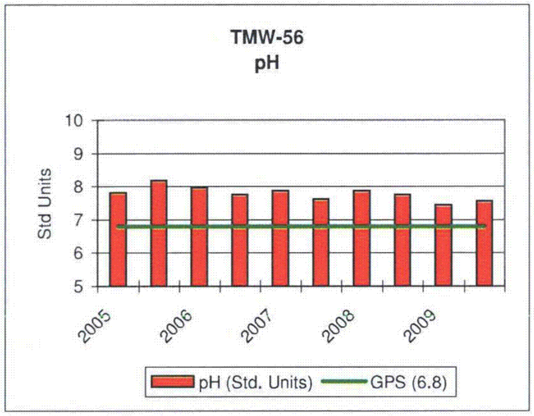
KENNECOTT URANIUM COMPANY											
TMW-53		2005		2006		2007		2008		2009	
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	3/2/2005	12/16/2005	3/1/2006	9/5/2006	2/28/2007	9/5/2007	3/17/2008	9/23/2008	3/5/2009	12/1/2009
TDS A/C Balance *(dec. %)*		0.98	0.95	0.98	0.91	0.92	0.93	1.91	1.92	-3.73	-4.25
Alk-CaC03		99	100	105	110	103	107	107	100	101	107
Aluminum (Al)	GPS (1.8)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic (As)	GPS (.05)	0.002	0.001	0.001	0.001	0.001	0.002	0.002	0.002	0.001	0.001
Barium (Ba)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beryllium (Be)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Bicarbonate (HCO3)		121	122	128	134	126	130	131	122	123	131
Boron (B)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Calcium (Ca)		73.7	75.8	72.2	70.3	76.6	78.6	67.3	76.6	61.1	67.5
Carbonate (CO3)		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloride (Cl)		6	5	7	5	8	6	5	6	5	6
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt (Co)		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cond *(umhos/cm)*		560	556	543	592	563	540	711	546	531	527
Cond-Field *(umhos/cm)*		400	430	420	507	529	517	515	503	483	556
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Fluoride (F)		0.2	0.2	0.2	<0.1	0.2	0.2	0.2	0.1	0.2	0.1
Gross Alpha *(pCi/L)*	GPS (15)	<1	<1	1.1	<1	<1	1.4	1.6	2	2.6	1.8
Iron (Fe)	GPS (0.6)	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Lead (Pb)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Magnesium (Mg)		3.4	3.7	3.4	3.1	3.6	3.7	2.8	3.6	2.9	2.9
Manganese (Mn)	GPS (0.2)	0.04	0.04	0.04	0.04	0.04	0.04	0.03	0.04	0.03	0.03
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum (Mo)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nickel (Ni)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen, Nitrate+Nitrite as N		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
pH *(Std. Units)*	GPS (6.8)	8.04	8.15	8.27	8.11	8.03	7.71	8	7.98	7.71	7.92
pH (Field) *(Std. Units)*		7.1	7.53	7.57	7.36	7.45	7.4	7.8	7.7	7.3	7.1
Potassium (K)		3.1	2.5	2.3	2.5	2.9	2.6	2.8	2.3	2.6	2.5
Combined Ra226/228 *(pCi/L)*	GPS (5.8)	2.6	0.7	1.6	0.7	1.2	3.3	4.3	3.2	4.18	3.6
Radium 226 *(pCi/L)*		1.3	0.7	1.6	0.7	1.2	0.5	1.1	1.2	0.88	0.2
Radium 228 *(pCi/L)*		1.3	<1	<1	<1	<1	2.8	3.2	2	3.3	3.4
Selenium (Se)	GPS (.01)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silica (SiO2)		15	16	15	15	15	15	15	19	13.4	17.3
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		40.6	39.6	42	39.9	43.1	41.6	41	37.6	38.7	35.6
TDS @ 180° *C.*	GPS (500)	355	354	354	330	358	364	354	366	391	349
Sulfate (SO4)		162	170	157	162	180	178	160	164	157	162
Temperature *(C)*		13	6.3	9.8	13.6	9	10.4	9.4	9.9	9.5	9.4
Thallium (Tl)	GPS (7.0)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Thorium 230 *(pCi/L:)*		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.2	<0.2	<0.2	<0.2
Uranium, natural *(pCi/L)*	GPS (36)	0.5	0.4	0.7	0.9	0.3	1	0.3	18.9	0.6	0.9
Vanadium (V205)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Zinc (ZN)		<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

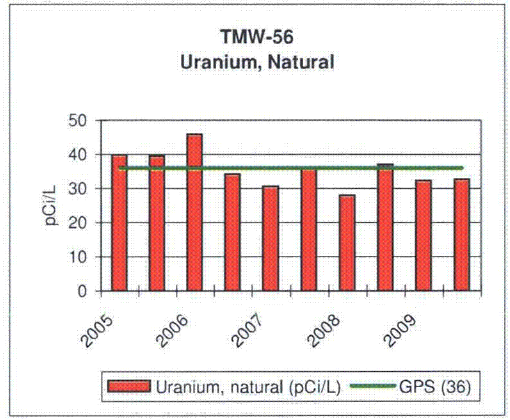

TMW-53
pH
Std Units
10
9
8
7
6
5
2005
2006
2007
2008
2009
pH (Std. Units)
GPS (6.8)

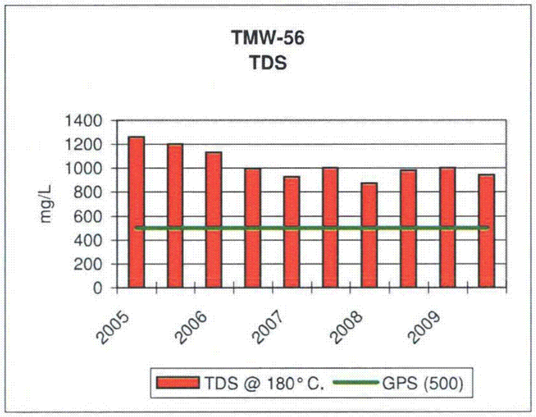

TMW-53
TDS
mg/L
600
500
400
300
200
100
0
2005
2006
2007
2008
2009
TDS @ 180°C.
GPS (500)

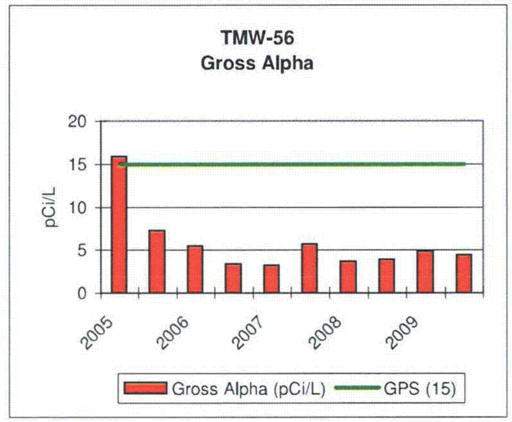
TMW 53.xls

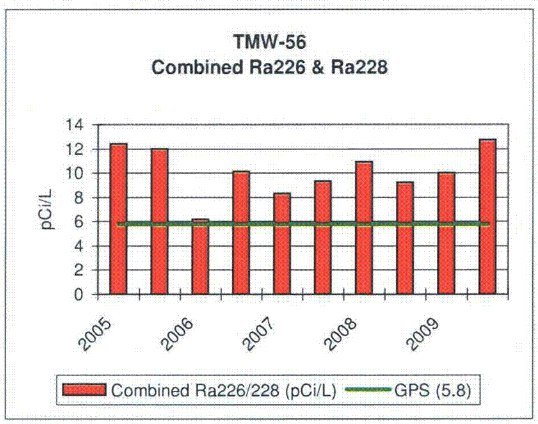
KENNECOTT URANIUM COMPANY											
TMW-56		2005		2006		2007		2008		2009	
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	3/2/2005	12/22/2005	3/2/2006	9/11/2006	2/28/2007	9/17/2007	3/12/2008	9/30/2008	3/5/2009	9/21/2009
TDS A/C Balance *(dec. %)*		1.06	1.08	1.03	0.98	0.98	0.97	3.93	4.22	-2.89	-2.2
Alk-CaC03		90	90	100	91	90	95	98	90	92	98
Aluminum (Al)	GPS (1.8)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic (As)	GPS (.05)	0.02	0.022	0.016	0.017	0.019	0.018	0.017	0.017	0.014	0.017
Barium (Ba)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beryllium (Be)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Bicarbonate (HCO3)		110	110	122	111	110	116	119	110	112	120
Boron (B)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Calcium (Ca)		283	239	256	229	209	218	193	230	189	199
Carbonate (CO3)		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloride (Cl)		46	46	43	36	31	36	33	34	30	33
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt (Co)		0.002	0.002	0.002	0.002	0.001	0.002	0.002	0.001	0.002	0.002
Cond *(umhos/cm)*		1600	1510	1450	1410	1240	1380	1220	1290	1240	1240
Cond-Field *(umhos/cm)*		980	970	940	1217	1158	1212	1150	1165	1119	1256
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Fluoride (F)		0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1
Gross Alpha *(pCi/L)*	GPS (15)	15.9	7.3	5.5	3.4	3.2	5.7	3.7	3.9	4.9	4.4
Iron (Fe)	GPS (0.6)	0.13	0.13	<0.05	<0.05	0.05	<0.05	0.08	0.07	ND	0.21
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Lead (Pb)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Magnesium (Mg)		22	19	21.3	18.5	17.3	18.6	15.3	18.2	16.1	15.6
Manganese (Mn)	GPS (0.2)	0.14	0.14	0.13	0.13	0.1	0.11	0.1	0.11	0.11	0.11
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum (Mo)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nickel (Ni)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen, Nitrate+Nitrite as N		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
pH *(Std. Units)*	GPS (6.8)	7.81	8.17	7.97	7.75	7.86	7.61	7.87	7.76	7.44	7.55
pH (Field) *(Std. Units)*		6.7	7.39	7.43	7.21	7.09	7.4	7.5	7.4	7.3	7.1
Potassium (K)		5.5	4.6	4.6	4.5	4.8	4.7	4.6	4.6	5.7	4.5
Combined Ra226/228 *(pCi/L)*	GPS (5.8)	12.4	12	6.2	10.1	8.3	9.3	10.9	9.2	10	12.7
Radium 226 *(pCi/L)*		5.9	3.6	3.6	2.5	4.7	2.7	3.4	2.4	3.4	4
Radium 228 *(pCi/L)*		6.5	8.4	2.6	7.6	3.6	6.6	7.5	6.8	6.6	8.7
Selenium (Se)	GPS (.01)	<0.001	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silica (SiO2)		9	10	10	10	10	9	9	11.3	9.6	10.5
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		59.4	50.4	58.8	56.1	53.5	54.6	50	55	53.2	49.2
TDS @ 180° *C.*	GPS (500)	1260	1200	1130	996	928	1000	873	980	1000	943
Sulfate (SO4)		716	683	651	609	567	629	546	551	544	537
Temperature *(C)*		12	9.1	11.2	13.3	9.2	10.9	9.1	10	10.1	10
Thallium (Tl)	GPS (7.0)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Thorium 230 *(pCi/L:)*		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Uranium, natural *(pCi/L)*	GPS (36)	39.8	39.4	45.9	34.2	30.5	36.2	27.9	37	32.3	32.6
Vanadium (V205)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Zinc (ZN)		<0.01	0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01


TMW-56
pH
Std Units
10
9
8
7
6
5
2005
2006
2007
2008
2009
pH (Std. Units)
GPS (6.8)


TMW-56
Uranium, Natural
pCi/L
50
40
30
20
10
0
2005
2006
2007
2008
2009
Uranium, natural (pCi/L)
GPS (36)

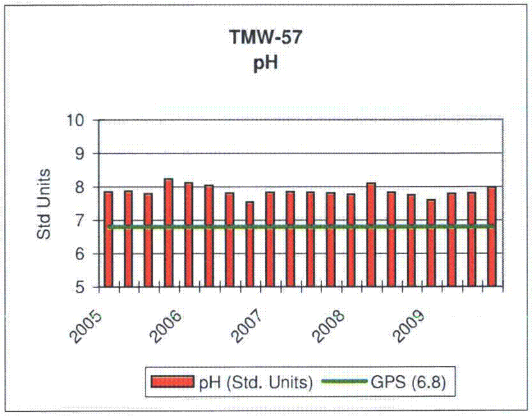

TMW-56
TDS
mg/L
1400
1200
1000
800
600
400
200
0
2005
2006
2007
2008
2009
TDS @ 180° C.
GPS (500)

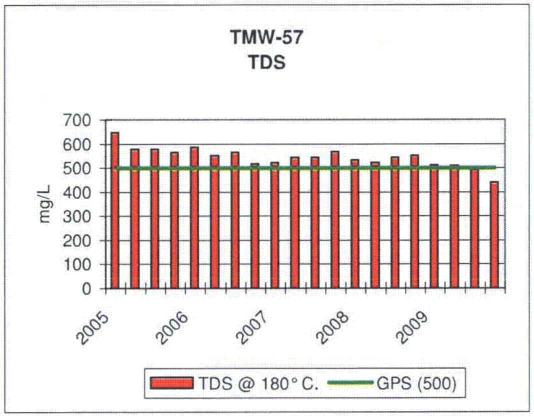

TMW-56
Gross Alpha
pCi/L
20
15
10
5
0
2005
2006
2007
2008
2009
Gross Alpha (pCi/L)
GPS (15)

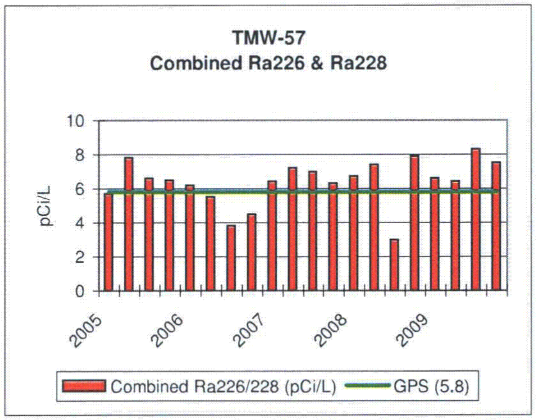

TMW-56
Combined Ra226 & Ra228
pCi/L
14
12
10
8
6
4
2
0
2005
2006
2007
2008
2009
Combined Ra226/228 (pCi/L)
GPS (5.8)

KENNECOTT URANIUM COMPANY																
TMW-57		2005				2006				2007				2008		
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	1/5/2005	4/6/2005	7/11/2005	11/8/2005	1/11/2006	4/10/2006	7/3/2006	10/5/2006	2/12/2007	4/4/2007	7/22/2007	10/1/2007	1/13/2008	4/23/2008	7/28/2008
TDS A/C Balance *(dec. %)*		1.09	0.98	0.99	0.99	1.02	0.98	0.99	0.94	0.94	1	0.96	1.07	0.006	0.557	3.26
Alk-CaC03		122	107	109	110	108	115	104	109	112	111	110	116	111	109	112
Aluminum (Al)	GPS (1.8)	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic (As)	GPS (.05)	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium (Ba)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beryllium (Be)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Bicarbonate (HCO3)		149	131	133	134	131	140	126	132	137	135	140	141	136	133	136
Boron (B)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Calcium (Ca)		129	128	132	125	126	123	119	122	120	122	121	111	116	124	115
Carbonate (CO3)		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloride (Cl)		13	15	13	12	13	15	19	14	14	14	14	17	14	13	13
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt (Co)		0.007	0.004	0.004	0.004	0.005	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.001	0.002	0.001
Cond *(umhos/cm)*		846	866	861	828	812	790	806	789	786	792	798	814	785	768	788
Cond-Field *(umhos/cm)*		840	620	600	550	650	540	774	766	750	746	773	762	736	755	778
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Fluoride (F)		0.2	0.1	0.2	0.2	<0.1	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1
Gross Alpha *(pCi/L)*	GPS (15)	2.9	1.6	5.4	2.7	2.7	3.8	<1	2.4	2.2	2.6	2.7	3.9	4.3	3.1	2.6
Iron (Fe)	GPS (0.6)	0.11	0.09	0.4	0.21	0.48	<0.05	0.09	0.06	<0.05	0.09	<0.05	<0.05	0.06	0.06	<0.05
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Lead (Pb)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Magnesium (Mg)		9.6	8.8	9.6	9.2	9.5	8.7	8.2	8.8	8.6	8	8.8	7.5	9	9.2	6.5
Manganese (Mn)	GPS (0.2)	0.12	0.1	0.11	0.111	0.11	0.08	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.1	0.09
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum (Mo)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nickel (Ni)	GPS (.01)	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen, Nitrate+Nitrite as N		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
pH *(Std. Units)*	GPS (6.8)	7.85	7.87	7.79	8.24	8.11	8.03	7.8	7.53	7.83	7.84	7.82	7.81	7.77	8.09	7.82
pH (Field) *(Std. Units)*		6.7	6.8	6.8	7.06	7.38	7.5	7.39	7.35	7.68	7.67	7.7	7.5	7.9	7.4	7.4
Potassium (K)		3.2	3.5	3.2	3.1	3.1	3.1	3.2	3.2	3.4	3.5	3.3	3.6	3.4	3.3	2.5
Combined Ra226/228 *(pCi/L)*	GPS (5.8)	5.7	7.8	6.6	6.5	6.2	5.5	3.8	4.5	6.4	7.2	7	6.3	6.7	7.4	3
Radium 226 *(pCi/L)*		1.8	2.1	2.2	2.3	2.5	1.6	1.5	1.7	1.9	2.3	3	1.6	2.4	2.1	1.9
Radium 228 *(pCi/L)*		3.9	5.7	4.4	4.2	3.7	3.9	2.3	2.8	4.5	4.9	4	4.7	4.3	5.3	1.1
Selenium (Se)	GPS (.01)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silica (SiO2)		15	14	15	15	14	15	16	14	14	16	13	15	16	8	7
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		42.3	38.2	42.4	42.9	41.8	40.3	42.5	41.8	41.4	39.8	42.2	39.3	39.9	40.2	39.9
TDS @ 180° *C.*	GPS (500)	648	578	578	563	586	550	564	516	522	544	542	566	532	523	542
Sulfate (SO4)		312	316	306	294	302	287	298	279	285	274	297	265	276	302	289
Temperature *(C)*		8	13	19	8.8	9	12.3	17.9	13.8	8.4	12.5	15	15.1	7.1	14.6	17.8
Thallium (Tl)	GPS (7.0)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Thorium 230 *(pCi/L:)*		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Uranium, natural *(pCi/L)*	GPS (36)	4.5	4.5	4.3	4.1	5.6	4.1	3.4	3.7	3.9	3.7	3.8	3.6	3.4	3.7	3.4
Vanadium (V205)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Zinc (ZN)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

KENNECOTT URANIUM COMPANY						
TMW-57			2009			
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	10/14/2008	3/11/2009	4/15/2009	7/22/2009	10/12/2009
TDS A/C Balance *(dec. %)*		2.76	2.76	1.94	0.448	-3.37
Alk-CaC03		109	107	109	111	108
Aluminum (Al)	GPS (1.8)	<0.1	<0.1	0.1	<0.1	<0.1
Arsenic (As)	GPS (.05)	<0.001	<0.001	<0.001	<0.001	<0.001
Barium (Ba)		<0.1	<0.1	<0.1	<0.1	<0.1
Beryllium (Be)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01
Bicarbonate (HCO3)		133	130	134	135	132
Boron (B)		<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005
Calcium (Ca)		125	113	111	101	95.4
Carbonate (CO3)		<1	<1	<1	<1	<1
Chloride (Cl)		12	12	11	10	10
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt (Co)		0.001	0.001	0.002	0.002	0.003
Cond *(umhos/cm)*		775	735	741	721	687
Cond-Field *(umhos/cm)*		721	661	710	707	711
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005
Fluoride (F)		0.1	0.1	0.1	0.1	0.1
Gross Alpha *(pCi/L)*	GPS (15)	2.1	3.7	4.4	2	2.5
Iron (Fe)	GPS (0.6)	<0.05	0.07	0.08	0.16	0.17
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<1	4.6	<1	<1	<1
Lead (Pb)		<0.01	<0.01	<0.01	<0.01	<0.01
Magnesium (Mg)		8.7	7.3	7.4	7	7.1
Manganese (Mn)	GPS (0.2)	0.09	0.08	0.08	0.09	0.08
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum (Mo)		<0.01	<0.01	<0.01	<0.01	<0.01
Nickel (Ni)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen, Nitrate+Nitrite as N		<0.1	<0.1	<0.1	<0.1	<0.1
pH *(Std. Units)*	GPS (6.8)	7.75	7.59	7.78	7.8	7.99
pH (Field) *(Std. Units)*		7.4	7.6	7.1	7	7.2
Potassium (K)		3.2	3.1	3.4	3.1	3
Combined Ra226/228 *(pCi/L)*	GPS (5.8)	7.9	6.6	6.4	8.3	7.5
Radium 226 *(pCi/L)*		2.3	1.7	2.2	2.7	2.4
Radium 228 *(pCi/L)*		5.6	4.9	4.2	5.6	5.1
Selenium (Se)	GPS (.01)	<0.001	<0.001	<0.001	<0.001	<0.001
Silica (SiO2)		17.7	13.8	11	15.6	12.7
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		39.2	41.3	42.1	36.3	33.9
TDS @ 180° *C.*	GPS (500)	550	510	509	493	438
Sulfate (SO4)		275	250	252	226	237
Temperature *(C)*		12.6	7.7	14.8	19.9	12
Thallium (Tl)	GPS (7.0)	<0.01	<0.01	<0.01	<0.01	<0.01
Thorium 230 *(pCi/L:)*		<0.2	<0.2	<0.2	<0.2	<0.2
Uranium, natural *(pCi/L)*	GPS (36)	3.4	3.4	3.4	3.5	3.3
Vanadium (V205)		<0.1	<0.1	<0.1	<0.1	<0.1
Zinc (ZN)		<0.01	<0.01	<0.01	<0.01	<0.01


TMW-57
pH
Std Units
10
9
8
7
6
5
2005
2006
2007
2008
2009
pH (Std. Units)
GPS (6.8)

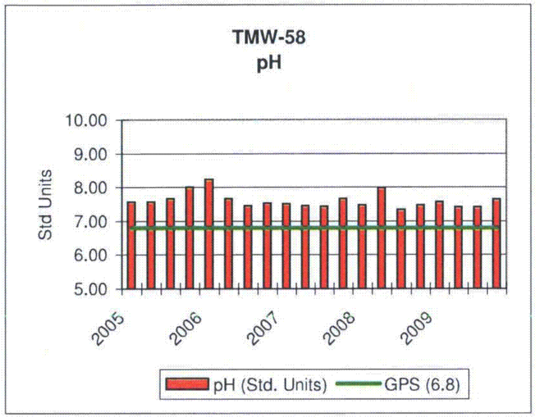

TMW-57
TDS
mg/L
700
600
500
400
300
200
100
0
2005
2006
2007
2008
2009
TDS @ 180° C.
GPS (500)

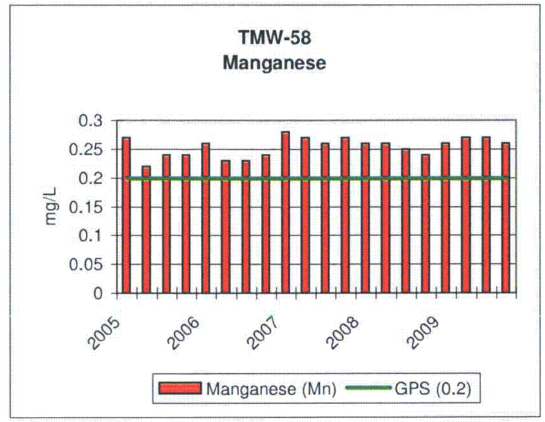

TMW-57
Combined Ra226 & Ra228
pCi/L
10
8
6
4
2
0
2005
2006
2007
2008
2009
Combined Ra226/228 (pCi/L)
GPS (5.8)

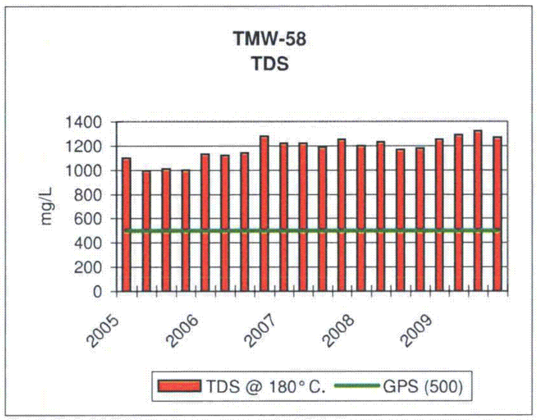
Graphs

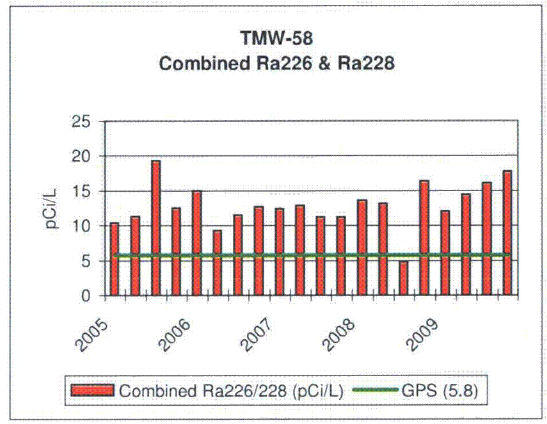
KENNECOTT URANIUM COMPANY																
TMW-58		2005				2006				2007				2008		
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	1/5/2005	4/6/2005	7/11/2005	11/8/2005	1/11/2006	4/10/2006	7/3/2006	10/5/2006	2/12/2007	4/4/2007	7/22/2007	10/1/2007	1/13/2008	4/23/2008	7/28/2008
TDS A/C Balance *(dec. %)*		1.09	0.99	1.07	0.99	1.11	1.01	1.05	1.11	0.98	1.07	0.98	1.11	4.29	0.024	2.75
Alk-CaC03		167	161	161	165	180	189	192	201	194	198	200	202	194	182	192
Aluminum (Al)	GPS (1.8)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic (As)	GPS (.05)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	<0.001
Barium (Ba)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beryllium (Be)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Bicarbonate (HCO3)		204	197	196	201	220	230	234	246	237	242	240	246	236	222	234
Boron (B)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	0.1
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Calcium (Ca)		235	227	220	230	238	246	253	277	290	268	281	255	255	296	276
Carbonate (CO3)		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloride (Cl)		28	33	35	32	31	40	36	38	44	39	40	41	40	46	39
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt (Co)		0.008	0.004	0.004	0.004	0.006	0.003	0.002	0.002	0.004	0.002	0.002	0.002	0.002	0.002	0.002
Cond *(umhos/cm)*		1370	1360	1350	1360	1420	1420	1510	1530	1610	1610	1570	1680	1590	1580	1560
Cond-Field *(umhos/cm)*		1240	820	820	840	1020	920	1384	1475	1498	1492	1512	1464	1418	1521	1508
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Fluoride (F)		0.1	0.1	0.1	0.1	<0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	<0.1	0.1
Gross Alpha *(pCi/L)*	GPS (15)	5.4	3.5	11.5	8	5	5.5	5.7	5.1	4.8	4.3	4.7	7.7	9.4	7.2	3.9
Iron (Fe)	GPS (0.6)	0.42	0.61	0.17	0.54	0.33	0.3	0.83	0.74	<0.05	0.62	0.52	0.46	0.6	0.23	0.12
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	2.6
Lead (Pb)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Magnesium (Mg)		20.6	18.2	19.1	20	20.7	22	19.4	22.4	24	22.1	22.8	19.9	19	24.1	18.6
Manganese (Mn)	GPS (0.2)	0.27	0.22	0.24	0.24	0.26	0.23	0.23	0.24	0.28	0.27	0.26	0.27	0.26	0.26	0.25
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum (Mo)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nickel (Ni)	GPS (.01)	0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen, Nitrate+Nitrite as N		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
pH *(Std. Units)*	GPS (6.8)	7.56	7.57	7.66	8.01	8.23	7.67	7.45	7.53	7.51	7.46	7.44	7.67	7.47	7.99	7.33
pH (Field) *(Std. Units)*		6.5	6.8	6.5	7.04	6.99	7.26	7	6.99	7.28	7.26	7.1	7.1	7.2	7.1	7
Potassium (K)		4.3	4.4	3.9	4.4	4	4.7	4.4	4.5	5	4.5	4.7	5.2	4.8	4.8	3.2
Combined Ra226/228 *(pCi/L)*	GPS (5.8)	10.4	11.3	19.3	12.5	15	9.3	11.5	12.7	12.4	12.9	11.2	11.2	13.6	13.1	4.8
Radium 226 *(pCi/L)*		2.6	2.2	6.5	5	3.8	3.2	3	4	4.4	4.3	3.8	0.9	4.6	3.5	3.4
Radium 228 *(pCi/L)*		7.8	9.1	12.8	7.5	11.2	6.1	8.5	8.7	8	8.6	7.4	10.3	9	9.6	1.4
Selenium (Se)	GPS (.01)	0.003	0.001	0.001	0.001	0.001	<0.001	<0.001	0.001	0.003	<0.001	0.001	0.001	<0.001	0.004	0.001
Silica (SiO2)		15	14	14	15	14	17	16	16	15	15	14	16	16	7	7
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		54.2	45.3	54.8	55.4	54.4	53.2	58.2	60.3	61.2	56.1	61	58.9	55.2	59	58.6
TDS @ 180° *C.*	GPS (500)	1100	993	1010	1000	1130	1120	1140	1280	1220	1220	1190	1250	1200	1230	1170
Sulfate (SO4)		554	561	503	554	549	613	587	615	685	614	673	608	642	697	673
Temperature *(C)*		8	13	23	9.7	8.5	13	23.5	16.2	7.7	14.7	21.7	18.9	7	13.2	17.3
Thallium (Tl)	GPS (7.0)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Thorium 230 *(pCi/L:)*		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Uranium, natural *(pCi/L)*	GPS (36)	16.5	13.2	15.1	13.1	16.2	11.8	11.6	12.4	18.1	14	13.7	13.3	13.1	18	12.4
Vanadium (V205)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	<0.1
Zinc (ZN)		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	0.02	<0.01	0.02	<0.01

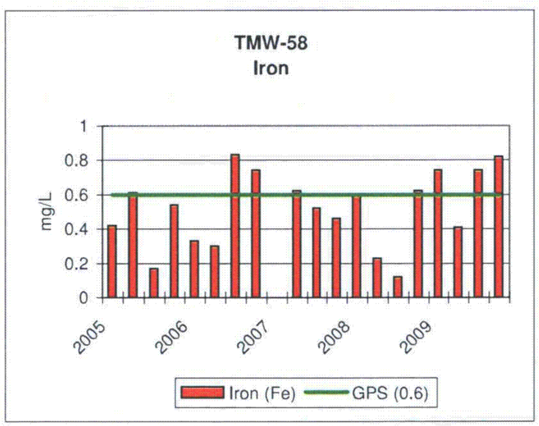
KENNECOTT URANIUM COMPANY						
TMW-58			2009			
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	10/14/2008	3/11/2009	4/15/2009	7/22/2009	10/12/2009
TDS A/C Balance *(dec. %)*		-1.05	-1.93	-0.0757	-0.372	-1.84
Alk-CaC03		190	179	205	206	222
Aluminum (Al)	GPS (1.8)	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic (As)	GPS (.05)	<0.001	<0.001	<0.001	<0.001	<0.001
Barium (Ba)		<0.1	<0.1	<0.1	<0.1	<0.1
Beryllium (Be)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01
Bicarbonate (HCO3)		231	219	251	252	271
Boron (B)		0.1	0.1	0.1	0.1	0.1
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005
Calcium (Ca)		278	272	294	288	291
Carbonate (CO3)		<1	<1	<1	<1	<1
Chloride (Cl)		34	46	44	45	46
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt (Co)		0.001	0.002	0.002	0.001	0.001
Cond *(umhos/cm)*		1590	1570	1720	1660	1630
Cond-Field *(umhos/cm)*		1416	1321	1432	1566	1618
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005
Fluoride (F)		0.1	0.1	0.1	0.1	0.1
Gross Alpha *(pCi/L)*	GPS (15)	2.9	5.9	4.5	6.6	4.6
Iron (Fe)	GPS (0.6)	0.62	0.74	0.41	0.74	0.82
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<1	4.5	<1	<1	<1
Lead (Pb)		<0.01	<0.01	<0.01	<0.01	<0.01
Magnesium (Mg)		21.8	19.4	22.9	22	22.9
Manganese (Mn)	GPS (0.2)	0.24	0.26	0.27	0.27	0.26
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum (Mo)		<0.01	<0.01	<0.01	<0.01	<0.01
Nickel (Ni)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen, Nitrate+Nitrite as N		<0.1	<0.1	<0.1	<0.1	<0.1
pH *(Std. Units)*	GPS (6.8)	7.48	7.57	7.42	7.42	7.65
pH (Field) *(Std. Units)*		7	7.2	6.8	6.6	6.9
Potassium (K)		4.5	4.4	5	4.7	4.7
Combined Ra226/228 *(pCi/L)*	GPS (5.8)	16.4	12	14.4	16.1	17.7
Radium 226 *(pCi/L)*		2.9	3.2	4.6	5.8	4
Radium 228 *(pCi/L)*		13.5	8.8	9.8	10.3	13.7
Selenium (Se)	GPS (.01)	<0.001	0.002	0.001	<0.001	<0.001
Silica (SiO2)		17.1	13.4	13.8	17	14.6
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		57	50	63	59.2	58.8
TDS @ 180° *C.*	GPS (500)	1180	1250	1290	1320	1270
Sulfate (SO4)		669	638	677	654	676
Temperature *(C)*		12.2	7.8	14.4	19.1	12.3
Thallium (Tl)	GPS (7.0)	<0.01	<0.01	<0.01	<0.01	<0.01
Thorium 230 *(pCi/L:)*		<0.2	<0.2	<0.2	<0.2	<0.2
Uranium, natural *(pCi/L)*	GPS (36)	11.4	13.3	13.3	11.1	10.5
Vanadium (V205)		<0.1	<0.1	<0.1	<0.1	<0.1
Zinc (ZN)		<0.01	<0.01	<0.01	<0.01	<0.01


TMW-58
pH
Std Units
10.00
9.00
8.00
7.00
6.00
5.00
2005
2006
2007
2008
2009
pH (Std. Units)
GPS (6.8)


TMW-58
Manganese
mg/L
0.3
0.25
0.2
0.15
0.1
0.05
0
2005
2006
2007
2008
2009
Manganese (Mn)
GPS (0.2)


TMW-58
TDS
mg/L
1400
1200
1000
800
600
400
200
0
2005
2006
2007
2008
2009
TDS @ 180° C.
GPS (500)

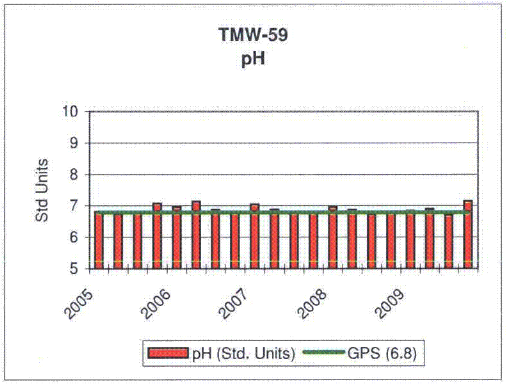

TMW-58
Combined Ra226 & Ra228
pCi/L
25
20
15
10
5
0
2005
2006
2007
2008
2009
Combined Ra226/228 (pCi/L)
GPS (5.8)

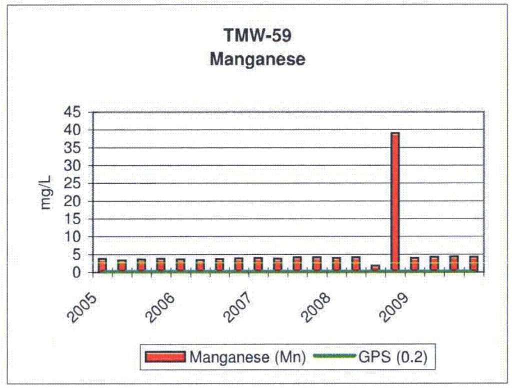

TMW-58
Iron
mg/L
1
0.8
0.6
0.4
0.2
0
2005
2006
2007
2008
2009
Iron (Fe)
GPS (0.6)

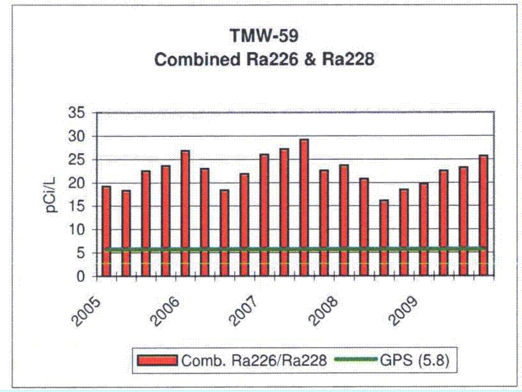
Graphs

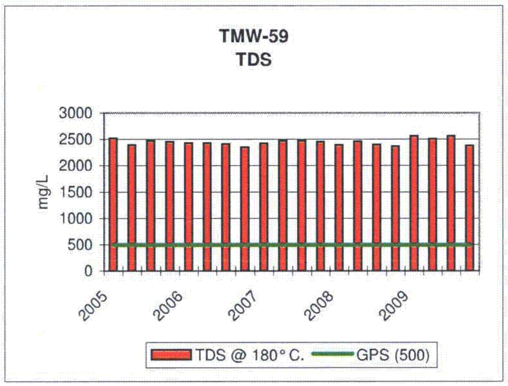
KENNECOTT URANIUM COMPANY															
TMW-59		2005				2006				2007				2008	
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	1/5/2005	4/6/2005	7/11/2005	11/7/2005	1/11/2006	4/10/2006	7/3/2006	10/5/2006	1/25/2007	4/11/2007	7/22/2007	10/1/2007	1/13/2008	4/14/2008
TDS A/C Balance *(dec. %)*		1.09	1.07	1.06	1.12	1.15	1.01	1.1	1.03	1.03	1.06	1.09	1.11	2.1	0.189
Alk-CaC03		244	246	257	305	262	305	246	231	318	302	280	256	274	232
Aluminum (Al)	GPS (1.8)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic (As)	GPS (.05)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium (Ba)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beryllium (Be)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Bicarbonate (HCO3)		298	300	313	372	320	372	300	281	388	368	350	312	334	283
Boron (B)		<0.1	0.1	<0.1	0.1	0.1	0.1	<0.1	0.1	0.1	0.1	0.1	<0.1	<0.1	0.7
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Calcium (Ca)		530	491	518	465	489	548	480	521	532	531	497	481	473	510
Carbonate (CO3)		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloride (Cl)		95	91	88	82	80	96	78	82	88	90	87	87	82	90
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt (Co)		0.013	0.013	0.012	0.014	0.013	0.11	0.012	0.012	0.012	0.013	0.013	0.013	0.012	0.012
Cond *(umhos/cm)*		2740	2790	2780	2850	2750	2800	2820	2810	2780	2840	2830	2980	2840	2750
Cond-Field *(umhos/cm)*		240	1660	1340	1530	1720	1450	307	290	296	300	300	291	2920	2880
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Fluoride (F)		0.2	0.2	0.2	0.2	<0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2
Gross Alpha *(pCi/L)*	GPS (15)	6.6	4.9	22.8	8.8	9.3	10.2	4.9	6.4	4.3	10.3	6.5	14.2	17.9	15.8
Iron (Fe)	GPS (0.6)	45.6	47.2	45.9	45.6	42.4	48.4	51.2	47.8	45.8	46.6	46	52.2	48.8	52.5
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<1	<1	<1	<1	8.7	<1	<1	<1	<1	<1	<1	<1	<1	<1
Lead (Pb)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Magnesium (Mg)		69.1	63.9	69.5	66.5	63.3	71	64.1	70.2	68.4	67.9	67.3	64	62.5	70.7
Manganese (Mn)	GPS (0.2)	3.79	3.35	3.65	3.8	3.63	3.42	3.75	3.9	3.97	3.83	4.12	4.14	4.02	4.2
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum (Mo)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nickel (Ni)	GPS (.01)	0.02	0.03	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.02
Nitrogen, Nitrate+Nitrite as N		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
pH *(Std. Units)*	GPS (6.8)	6.81	6.74	6.83	7.08	6.96	7.14	6.87	6.83	7.04	6.88	6.82	6.82	6.96	6.87
pH (Field) *(Std. Units)*		6.2	6.1	6.3	6.59	6.71	7.11	6.57	6.6	6.49	6.82	6.7	6.7	6.8	6.7
Potassium (K)		7.7	7.9	7.1	6.9	6.8	7.1	8.2	7.4	8	7.6	7.2	8.1	7.8	6.7
Combined Ra226/228 *(pCi/L)*	GPS (5.8)	19.2	18.30	22.50	23.60	26.80	23.00	18.40	21.90	26.00	27.20	29.20	22.60	23.70	20.80
Radium 226 *(pCi/L)*		3.4	3.7	8.6	7.2	5.7	4.5	3.7	5.2	9.1	5.3	8.2	4.1	7.2	2.5
Radium 228 *(pCi/L)*		15.8	14.6	13.9	16.4	21.1	18.5	14.7	16.7	16.9	21.9	21	18.5	16.5	18.3
Selenium (Se)	GPS (.01)	0.002	0.002	<0.001	0.001	<0.001	0.002	0.002	0.002	0.002	0.001	0.001	0.001	<0.001	0.001
Silica (SiO2)		19	17	19	19	16	20	18	18	18	18	17	18	17	9
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		94.9	87.7	97.7	92	90.4	91.6	93	101	94.4	91.4	95.9	94.5	87.1	85
TDS @ 180° *C.*	GPS (500)	2520	2390	2470	2450	2430	2430	2410	2350	2420	2470	2470	2450	2390	2460
Sulfate (SO4)		1350	1340	1360	1260	1200	1380	1300	1350	1340	1340	1320	1290	1370	1440
Temperature *(C)*		9	11	15	9.9	8.7	10.3	14.2	12.5	7.3	8.4	13.5	12	8.1	11.3
Thallium (Tl)	GPS (7.0)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Thorium 230 *(pCi/L:)*		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Uranium, natural *(pCi/L)*	GPS (36)	5.1	5.1	5.6	7	6.7	8.3	6.9	6.6	6.1	6.2	7.4	7.4	6.7	7.1
Vanadium (V205)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Zinc (ZN)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	0.02	0.01	<0.01

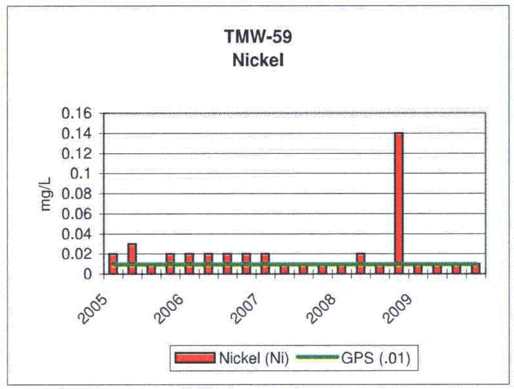
KENNECOTT URANIUM COMPANY							
TMW-59				2009			
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	7/30/2008	10/14/2008	2/16/2009	4/15/2009	7/20/2009	10/20/2009
TDS A/C Balance *(dec. %)*		2.75	-4.72	-2.59	-0.365	-0.955	-4.98
Alk-CaC03		280	250	248	245	256	254
Aluminum (Al)	GPS (1.8)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic (As)	GPS (.05)	0.001	0.003	<0.001	<0.001	<0.001	<0.001
Barium (Ba)		<0.1	0.3	<0.1	<0.1	<0.1	<0.1
Beryllium (Be)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Bicarbonate (HCO3)		342	305	303	299	312	310
Boron (B)		<0.1	<0.1	0.1	<0.1	<0.1	<0.1
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Calcium (Ca)		502	496	508	519	502	478
Carbonate (CO3)		<1	<1	<1	<1	<1	<1
Chloride (Cl)		76	80	79	86	86	84
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt (Co)		0.012	0.104	0.01	0.011	0.01	0.01
Cond *(umhos/cm)*		2790	2820	2980	3000	2820	2780
Cond-Field *(umhos/cm)*		2940	2800	2710	2620	2940	2960
Copper (Cu)		<0.01	0.02	<0.01	<0.01	<0.01	<0.01
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Fluoride (F)		0.2	0.2	0.2	0.2	0.2	0.2
Gross Alpha *(pCi/L)*	GPS (15)	7.1	4.9	9.4	10.8	9.7	6.5
Iron (Fe)	GPS (0.6)	52.7	50.8	43.3	52	52	48.7
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<1	<1	<1	<1	1.5	<1
Lead (Pb)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Magnesium (Mg)		73.4	69.7	72.2	72.2	71.8	67.2
Manganese (Mn)	GPS (0.2)	1.81	39	3.98	4.24	4.35	4.24
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum (Mo)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nickel (Ni)	GPS (.01)	0.01	0.14	0.01	0.01	0.01	0.01
Nitrogen, Nitrate+Nitrite as N		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
pH *(Std. Units)*	GPS (6.8)	6.74	6.76	6.84	6.9	6.71	7.15
pH (Field) *(Std. Units)*		6.6	6.7	6.8	6.3	6.4	6.6
Potassium (K)		9.2	7.4	9	7.9	7.4	6.8
Combined Ra226/228 *(pCi/L)*	GPS (5.8)	16.10	18.44	19.7	22.5	23.2	25.7
Radium 226 *(pCi/L)*		2.7	0.24	3.4	4.6	3.7	3.9
Radium 228 *(pCi/L)*		13.4	18.2	16.3	17.9	19.5	21.8
Selenium (Se)	GPS (.01)	<0.001	0.001	<0.001	0.001	<0.001	<0.001
Silica (SiO2)		9.8	19.5	17.9	16.4	20.7	17.2
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		105	93	101	105	96.4	90
TDS @ 180° *C.*	GPS (500)	2400	2370	2560	2510	2560	2380
Sulfate (SO4)		1450	1480	1470	1420	1370	1420
Temperature *(C)*		15.4	9.9	8.6	10.5	12.2	9.7
Thallium (Tl)	GPS (7.0)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Thorium 230 *(pCi/L:)*		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Uranium, natural *(pCi/L)*	GPS (36)	6.6	71.5	7.6	7.3	7.1	7.5
Vanadium (V205)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Zinc (ZN)		<0.01	0.05	<0.01	<0.01	<0.01	<0.01

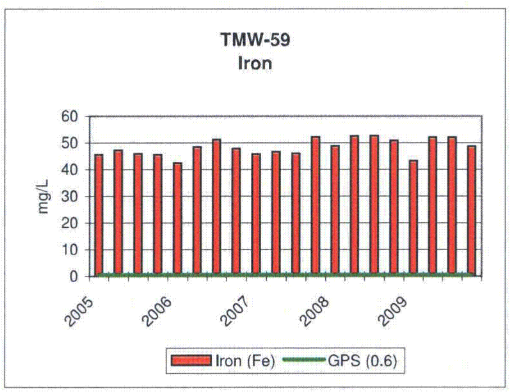

TMW-59
pH
Std Units
10
9
8
7
6
5
2005
2006
2007
2008
2009
pH (Std. Units)
GPS (6.8)

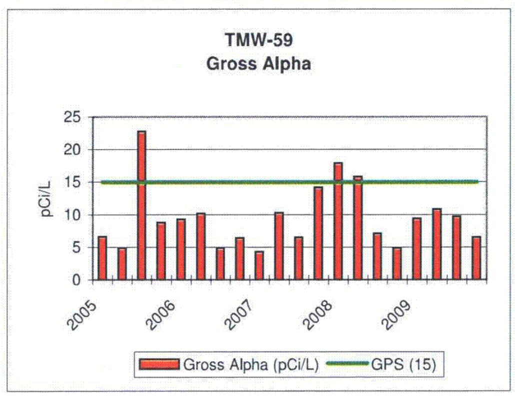

TMW-59
Manganese
mg/L
45
40
35
30
25
20
15
10
5
0
2005
2006
2007
2008
2009
Manganese (Mn)
GPS (0.2)


TMW-59
Combined Ra226 & Ra228
pCi/L
35
30
25
20
15
10
5
0
2005
2006
2007
2008
2009
Comb. Ra226/Ra228
GPS (5.8)

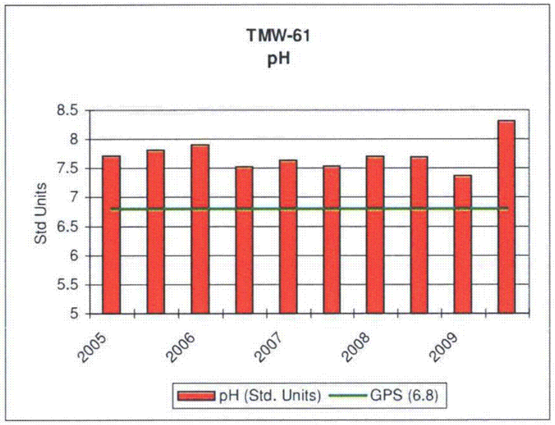

TMW-59
TDS
mg/L
3000
2500
2000
1500
1000
500
0
2005
2006
2007
2008
2009
TDS @ 180° C.
GPS (500)

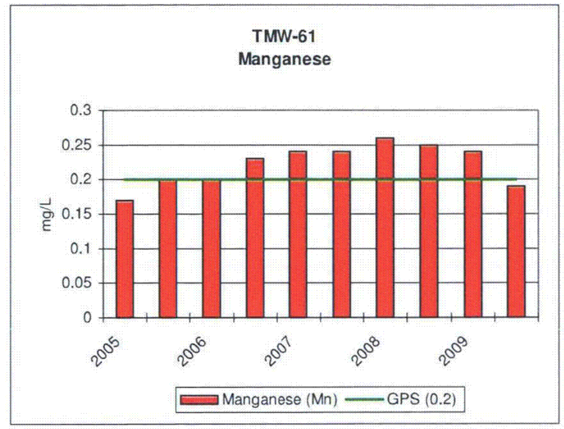

TMW-59
Nickel
mg/L
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
2005
2006
2007
2008
2009
Nickel (Ni)
GPS (.01)

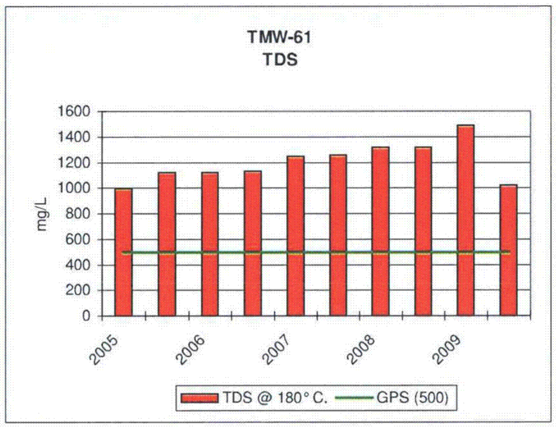

TMW-59
Iron
mg/L
60
50
40
30
20
10
0
2005
2006
2007
2008
2009
Iron (Fe)
GPS (0.6)

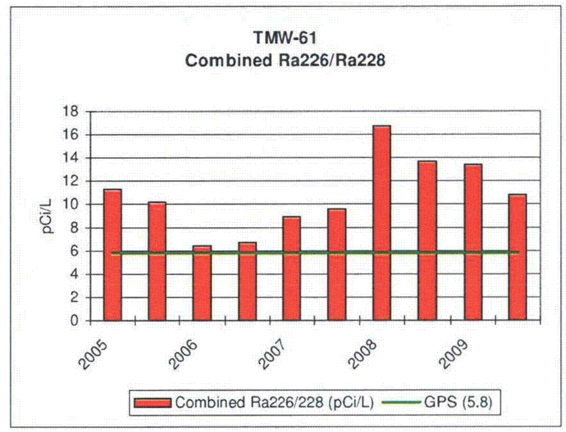

TMW-59
Gross Alpha
pCi/L
25
20
15
10
5
0
2005
2006
2007
2008
2009
Gross Alpha (pCi/L)
GPS (15)

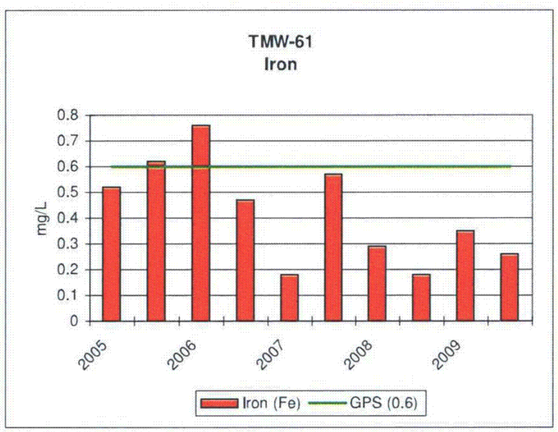
KENNECOTT URANIUM COMPANY											
TMW-61		2005		2006		2007		2008		2009	
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	3/2/2005	12/16/2005	3/2/2006	9/11/2006	2/27/2007	9/12/2007	3/18/2008	9/23/2008	3/5/2009	9/15/2009
TDS A/C Balance *(dec. %)*		1	1	1.02	1	0.98	0.96	3.59	0.939	-0.866	-1.88
Alk-CaC03		171	192	220	210	208	230	251	227	243	187
Aluminum (Al)	GPS (1.8)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic (As)	GPS (.05)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium (Ba)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beryllium (Be)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Bicarbonate (HCO3)		208	235	268	256	254	281	306	277	297	228
Boron (B)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Calcium (Ca)		241	265	267	267	299	309	313	319	319	236
Carbonate (CO3)		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloride (Cl)		24	25	25	22	30	31	32	30	32	23
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt (Co)		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cond *(umhos/cm)*		1350	1450	1450	1610	1600	1700	1720	1650	1760	1370
Cond-Field *(umhos/cm)*		840	890	990	1440	1471	1469	1593	1466	1520	1373
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Fluoride (F)		<0.1	<0.1	<0.1	0.1	0.1	0.1	<0.1	<0.1	<0.1	<0.1
Gross Alpha *(pCi/L)*	GPS (15)	10.5	5.1	5.7	3.9	4.3	6.9	7	5.1	6.9	4.5
Iron (Fe)	GPS (0.6)	0.52	0.62	0.76	0.47	0.18	0.57	0.29	0.18	0.35	0.26
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Lead (Pb)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Magnesium (Mg)		14.6	17.9	16.8	16.4	18.6	19.6	18.4	20.3	20.3	13.5
Manganese (Mn)	GPS (0.2)	0.17	0.2	0.2	0.23	0.24	0.24	0.26	0.25	0.24	0.19
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum (Mo)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nickel (Ni)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen, Nitrate+Nitrite as N		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
pH *(Std. Units)*	GPS (6.8)	7.71	7.81	7.9	7.52	7.64	7.54	7.7	7.69	7.37	8.31
pH (Field) *(Std. Units)*		6.7	7.24	7.35	7.04	7.61	7.2	7.2	7.3	7.1	7.1
Potassium (K)		5.1	4.7	4.5	4.4	5.6	5	5.6	4.5	6.6	4.4
Combined Ra226/228 *(pCi/L)*	GPS (5.8)	11.3	10.2	6.4	6.7	8.9	9.6	16.7	13.7	13.4	10.8
Radium 226 *(pCi/L)*		4.5	3.6	5.3	1.4	6.1	3.8	6.3	3.4	4.4	3.6
Radium 228 *(pCi/L)*		6.8	6.6	1.1	5.3	2.8	5.8	10.4	10.3	9	7.2
Selenium (Se)	GPS (.01)	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silica (SiO2)		19	21	20	19	19	19	19	21.6	18	17
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		55.9	57.8	60.4	58.4	64.8	64.4	62	57	67.8	53.8
TDS @ 180° *C.*	GPS (500)	995	1120	1120	1130	1250	1260	1320	1320	1490	1020
Sulfate (SO4)		533	615	579	621	709	724	747	693	736	555
Temperature *(C)*		13	9.1	9.5	12.4	9.5	11.2	9.3	10.1	9.9	11
Thallium (Tl)	GPS (7.0)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Thorium 230 *(pCi/L:)*		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Uranium, natural *(pCi/L)*	GPS (36)	1.8	2.4	3	3.4	3.4	3.9	4	15.9	4.1	2.5
Vanadium (V205)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Zinc (ZN)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01


TMW-61
pH
Std Units
8.5
8
7.5
7
6.5
6
5.5
5
2005
2006
2007
2008
2009
pH (Std. Units)
GPS (6.8)


TMW-61
Manganese
mg/L
0.3
0.25
0.2
0.15
0.1
0.05
0
2005
2006
2007
2008
2009
Manganese (Mn)
GPS (0.2)


TMW-61
TDS
mg/L
1600
1400
1200
1000
800
600
400
200
0
2005
2006
2007
2008
2009
TDS @ 180° C.
GPS (500)


TMW-61
Combined Ra226/Ra228
pCi/L
18
16
14
12
10
8
6
4
2
0
2005
2006
2007
2008
2009
Combined Ra226/228 (pCi/L)
GPS (5.8)


TMW-61
Iron
mg/L
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
2005
2006
2007
2008
2009
Iron (Fe)
GPS (0.6)