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

2008
RadTrak Radon Monitor
(pCi/L)

DATE	LOCATION	RADIONUCLIDE	CONCENTRATION	STD DEVIATION/ STD COUNTING ERROR	LOWER LIMIT OF DETECTION (LLD)	
				%	pCi/L-Days	pCi/L
1/2/08 – 4/1/08	Downwind - Air 4A	Radon	2.1 pCi/L	5.4	6.0	0.06
1/2/08 – 4/1/08	Upwind - Air 2	Radon	3.4 pCi/L	4.4	6.0	0.06
4/1/08 – 7/2/08	Downwind - Air 4A	Radon	1.6 pCi/L	4.9	6.0	0.06
4/1/08 – 7/2/08	Upwind - Air 2	Radon	2.2 pCi/L	4.4	6.0	0.06
7/2/08 – 10/1/08	Downwind - Air 4A	Radon	2.9 pCi/L	4.3	6.0	0.06
7/2/08 – 10/1/08	Upwind - Air 2-A[1]	Radon	5.1 pCi/L	3.4	6.0	0.06
8/6/08 – 10/1/08	Upwind - Air 2-B[1]	Radon	2.0 pCi/L	4.6	6.0	0.06
10/1/08 – 1/4/09	Downwind - Air 4A	Radon	2.9 pCi/L	4.2	6.0	0.06
10/1/08 – 1/4/09	Upwind - Air 2-A[2]	Radon	3.2 pCi/L	4.0	6.0	0.06
10/1/08 – 1/4/09	Upwind - Air 2 –B[2]	Radon	3.6 pCi/L	3.8	6.0	0.06
	Average (Air2)[2]		3.4 pCi/L			

[1] See attached explanation – Item 1
[2] See attached explanation – Item 2

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

Explanation of RadTrak data:

1. At 10:23am on August 5, 2008 during a routine check of the monitoring station the RadTrak unit was found on the ground because the holder had fallen apart. The holder was repaired and the RadTrak unit replaced. Because the RadTrak Unit had lain on the ground for an undetermined period of time and because the effect of lying on the ground and the result was unknown, a second RadTrak unit (Upwind Air 2-B) was installed at the station on August 6, 2008. Both RadTraks were collected on October 1, 2008 and send for processing. The initial RadTrak unit (Upwind Air 2-A) had a slightly elevated reading (5.1 pCi/L) while the RadTrak installed on August 6, 2008 (Upwind Air 2-B) had a low reading (2.0 pCi/L). The RadTraks were reread by Landauer, Inc. They reported that there was no change in the results. The e-mail from Landauer, Inc. is attached. This information was discussed in a telephone conversation with James Webb and the discussion is documented in the attached e-mail dated November 4, 2008. For dose calculation purposes it has been decided to use the average of the third quarter RadTrak data from January 1992 to June 2008 in place of the third quarter 2008 RadTrak reading. This value is 3.89 pCi/L. A listing of the Air 2 RadTrak monitoring data used in generating this average value is attached.

2. Since a second RadTrak holder was installed at the Air 2 monitoring location on August 6, 2008, a second RadTrak was deployed at the Air 2 location during the fourth quarter of 2008 for comparative and quality assurance/quality control purposes. The results from both RadTraks were averaged to generate the final value for the fourth quarter of 2008 for monitoring station Air – 2.

Paulson, Oscar (RTEA)

From: Paulson, Oscar (RTEA)
Sent: Tuesday, November 04, 2008 4:24 PM
To: 'James Webb'
Cc: Schutterle, Shelley (RTEA)
Subject: Sweetwater Uranium Project - SUA-1350 Downwind Radon Detector

James Webb:

This e-mail will document our discussion over the telephone regarding the upwind radon detector for the facility. The following pertains:

- At 10:23 a.m. on August 5, 2008 the upwind/background RadTrak radon detector for the facility was found on the ground during a routine check. The RadTrack holder had fallen apart.
- The RadTrak holder was repaired, the RadTrak unit replaced in it and the holder remounted on the support.
- Radon concentrations are higher near the so there was a concern that the detector's reading could be elevated because of the time it spent near the ground.
- Due to this concern, a second RadTrak holder and RadTrak detector was installed at that location on August 6, 2008.
- Both RadTrak detectors were collected at the beginning of the next quarter (October 1, 2008) and replaced with new ones for the fourth quarter 2008.
- The readings for the two (2) upwind /background RadTrak detectors were as follows:

Date Placed	Date Retrieved	Result
July 2, 2008	October 1, 2008	5.1 picoCuries per liter
August 6, 2008	October 1, 2008	2.0 picoCuries per liter

- The result for the unit left in place for the quarter that fell to the ground appears elevated.
- The result for the unit installed on August 6, 2008 appears low.
- This is based on the average upwind reading for the facility (July 1, 1991 to July 3, 2007) of 3.14 picoCuries per liter
- Landauer, Inc. is rereading both of the RadTrak detectors to verify the results.
- In cases like this in the past, the facility has used the average value for the upwind detector, in place of the actual upwind detector value for a quarter in which the upwind detector was damaged.

If you have any questions please do not hesitate to contact me.

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

Kennecott Uranium Company - Sweetwater Uranium Facility

UPWIND RADON DATA
RADTRAK DATA ONLY
AIR 2 MONITORING STATION

	START DATE	END DATE	DETECTOR TYPE	STATION AIR 2 pCi/L	AIR 2 AVERAGES pCi/L	AIR 2 FIRST QUARTERS pCi/L	AIR 2 SECOND QUARTERS pCi/L	AIR 2 THIRD QUARTERS pCi/L
1991	01-Jul-91	01-Aug-91	TRACKETCH	4.20				
	01-Aug-91	01-Sep-91	TRACKETCH	4.20	4.20			4.20
	01-Sep-91	01-Oct-91	TRACKETCH	4.20				
	01-Oct-91	01-Nov-91	TRACKETCH	2.80				
	01-Nov-91	01-Dec-91	TRACKETCH	2.80	2.80			
	01-Dec-91	03-Jan-92	TRACKETCH	2.80				
1992	10-Jan-92	07-Feb-92	TRACKETCH	3.90				
	07-Feb-92	03-Mar-92	TRACKETCH	3.20	4.34	4.34		
	03-Mar-92	02-Apr-92	TRACKETCH	5.93				
	02-Apr-92	11-May-92	TRACKETCH	3.07				
	11-May-92	01-Jun-92	TRACKETCH	3.07	3.07		3.07	
	01-Jun-92	01-Jul-92	TRACKETCH	3.07				
	01-Jul-92	01-Aug-92	TRACKETCH	3.80				
	01-Aug-92	01-Sep-92	TRACKETCH	3.80	3.80			3.80
	01-Sep-92	06-Oct-92	TRACKETCH	3.80				
	06-Oct-92	01-Nov-92	TRACKETCH	3.00				
	01-Nov-92	01-Dec-92	TRACKETCH	3.00	3.00			
	01-Dec-92	04-Jan-93	TRACKETCH	3.00				
1993	04-Jan-93	01-Feb-93	TRACKETCH	3.20				
	01-Feb-93	01-Mar-93	TRACKETCH	3.20	3.20	3.20		
	01-Mar-93	01-Apr-93	TRACKETCH	3.20				
	01-Apr-93	01-May-93	TRACKETCH	2.50				
	01-May-93	01-Jun-93	TRACKETCH	2.50	2.50		2.50	
	01-Jun-93	30-Jun-93	TRACKETCH	2.50				
	30-Jun-93	01-Aug-93	TRACKETCH	4.80				
	01-Aug-93	18-Aug-93	TRACKETCH	4.80	4.80			4.80
	18-Aug-93	01-Oct-93	TRACKETCH	4.80				
	01-Oct-93	04-Nov-93	TRACKETCH	4.80				
	04-Nov-93	30-Nov-93	TRACKETCH	4.80	4.80			
	30-Nov-93	03-Jan-94	TRACKETCH	4.80				
1994	03-Jan-94	31-Jan-94	TRACKETCH	5.30				
	31-Jan-94	21-Feb-94	TRACKETCH	5.30	5.30	5.30		
	21-Feb-94	31-Mar-94	TRACKETCH	5.30				
	31-Mar-94	27-Apr-94	TRACKETCH	3.10				
	27-Apr-94	31-May-94	TRACKETCH	3.10	3.10		3.10	
	31-May-94	01-Jul-94	TRACKETCH	3.10				
	01-Jul-94	03-Aug-94	TRACKETCH	3.70				
	03-Aug-94	07-Sep-94	TRACKETCH	3.70	3.70			3.70
	07-Sep-94	03-Oct-94	TRACKETCH	3.70				
	03-Oct-94	02-Nov-94	TRACKETCH	3.00				
	02-Nov-94	01-Dec-94	TRACKETCH	3.00	3.00			
	01-Dec-94	03-Jan-95	TRACKETCH	3.00				

Kennecott Uranium Company - Sweetwater Uranium Facility								
UPWIND RADON DATA								
RADTRAK DATA ONLY								
AIR 2 MONITORING STATION								
						AIR 2	AIR 2	AIR 2
				STATION	AIR 2	FIRST	SECOND	THIRD
			DETECTOR	AIR 2	AVERAGES	QUARTERS	QUARTERS	QUARTERS
	START DATE	END DATE	TYPE	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L
1995	03-Jan-95	01-Feb-95	TRACKETCH	3.10				
	01-Feb-95	02-Mar-95	TRACKETCH	3.10	3.10	3.10		
	02-Mar-95	31-Mar-95	TRACKETCH	3.10				
	31-Mar-95	30-Apr-95	TRACKETCH	2.40				
	30-Apr-95	31-May-95	TRACKETCH	2.40	2.40		2.40	
	31-May-95	30-Jun-95	TRACKETCH	2.40				
	30-Jun-95	31-Jul-95	TRACKETCH	4.50				
	31-Jul-95	31-Aug-95	TRACKETCH	4.50	4.50			4.50
	31-Aug-95	30-Sep-95	TRACKETCH	4.50				
	30-Sep-95	31-Oct-95	TRACKETCH	4.80				
	31-Oct-95	30-Nov-95	TRACKETCH	4.80	4.80			
	30-Nov-95	03-Jan-96	TRACKETCH	4.80				
1996	03-Jan-96	01-Feb-96	TRACKETCH	2.20				
	01-Feb-96	01-Mar-96	TRACKETCH	2.20	2.20	2.20		
	01-Mar-96	01-Apr-96	TRACKETCH	2.20				
	01-Apr-96	01-May-96	TRACKETCH	2.90				
	01-May-96	01-Jun-96	TRACKETCH	2.90	2.90		2.90	
	01-Jun-96	01-Jul-96	TRACKETCH	2.90				
	01-Jul-96	01-Aug-96	TRACKETCH	4.10				
	01-Aug-96	01-Sep-96	TRACKETCH	4.10	4.10			4.10
	01-Sep-96	30-Sep-96	TRACKETCH	4.10				
	30-Sep-96	01-Nov-96	TRACKETCH	2.90				
	01-Nov-96	01-Dec-96	TRACKETCH	2.90	2.90			
	01-Dec-96	03-Jan-97	TRACKETCH	2.90				
1997	03-Jan-97	01-Feb-97	TRACKETCH	1.70				
	01-Feb-97	01-Mar-97	TRACKETCH	1.70	1.70	1.70		
	01-Mar-97	01-Apr-97	TRACKETCH	1.70				
	01-Apr-97	01-May-97	TRACKETCH	3.40				
	01-May-97	01-Jun-97	TRACKETCH	3.40	3.40		3.40	
	01-Jun-97	30-Jun-97	TRACKETCH	3.40				
	30-Jun-97	01-Aug-97	TRACKETCH	2.70				
	01-Aug-97	01-Sep-97	TRACKETCH	2.70	2.70			2.70
	01-Sep-97	01-Oct-97	TRACKETCH	2.70				
	01-Oct-97	01-Nov-97	TRACKETCH	3.90				
	01-Nov-97	01-Dec-97	TRACKETCH	3.90	3.90			
	01-Dec-97	03-Jan-98	TRACKETCH	3.90				
1998	03-Jan-98	03-Feb-98	TRACKETCH	2.40				
	03-Feb-98	03-Mar-98	TRACKETCH	2.40	2.40	2.40		
	03-Mar-98	01-Apr-98	TRACKETCH	2.40				
	01-Apr-98	01-May-98	TRACKETCH	2.20				
	01-May-98	01-Jun-98	TRACKETCH	2.20	2.20		2.20	
	01-Jun-98	01-Jul-98	TRACKETCH	2.20				
	01-Jul-98	01-Aug-98	TRACKETCH	3.00				
	01-Aug-98	01-Sep-98	TRACKETCH	3.00	3.00			3.00
	01-Sep-98	30-Sep-98	TRACKETCH	3.00				
	30-Sep-98	30-Oct-98	TRACKETCH	2.80				
	30-Oct-98	30-Nov-98	TRACKETCH	2.80	2.80			
	30-Nov-98	04-Jan-99	TRACKETCH	2.80				

Kennecott Uranium Company - Sweetwater Uranium Facility

UPWIND RADON DATA
RADTRAK DATA ONLY
AIR 2 MONITORING STATION

	START DATE	END DATE	DETECTOR TYPE	STATION AIR 2 pCi/L	AIR 2 AVERAGES pCi/L	AIR 2 FIRST QUARTERS pCi/L	AIR 2 SECOND QUARTERS pCi/L	AIR 2 THIRD QUARTERS pCi/L
1999	04-Jan-99	04-Feb-99	TRACKETCH	2.60				
	04-Feb-99	04-Mar-99	TRACKETCH	2.60	2.60	2.60		
	04-Mar-99	11-Apr-99	TRACKETCH	2.60				
	11-Apr-99	11-May-99	TRACKETCH	2.70				
	11-May-99	11-Jun-99	TRACKETCH	2.70	2.70		2.70	
	11-Jun-99	04-Jul-99	TRACKETCH	2.70				
	04-Jul-99	04-Aug-99	TRACKETCH	3.90				
	04-Aug-99	04-Sep-99	TRACKETCH	3.90	3.90			3.90
	04-Sep-99	03-Oct-99	TRACKETCH	3.90				
	03-Oct-99	03-Nov-99	TRACKETCH	6.40				
	03-Nov-99	03-Dec-99	TRACKETCH	6.40	6.40			
	03-Dec-99	02-Jan-00	TRACKETCH	6.40				
2000	02-Jan-00	02-Feb-00	TRACKETCH	1.80				
	02-Feb-00	02-Mar-00	TRACKETCH	1.80	1.80	1.80		
	02-Mar-00	04-Apr-00	TRACKETCH	1.80				
	04-Apr-00	04-May-00	TRACKETCH	3.50				
	04-May-00	04-Jun-00	TRACKETCH	3.50	3.50		3.50	
	04-Jun-00	05-Jul-00	TRACKETCH	3.50				
	05-Jul-00	05-Aug-00	TRACKETCH	5.70				
	05-Aug-00	05-Sep-00	TRACKETCH	5.70	5.70			5.70
	05-Sep-00	01-Oct-00	TRACKETCH	5.70				
	01-Oct-00	01-Nov-00	TRACKETCH					
	01-Nov-00	01-Dec-00	TRACKETCH		No data. Knocked Down			
	01-Dec-00	02-Jan-01	TRACKETCH					
2001	02-Jan-01	02-Feb-01	TRACKETCH	6.20				
	02-Feb-01	02-Mar-01	TRACKETCH	6.20	6.20	6.20		
	02-Mar-01	01-Apr-01	TRACKETCH	6.20				
	01-Apr-01	01-May-01	TRACKETCH	2.50				
	01-May-01	01-Jun-01	TRACKETCH	2.50	2.50		2.50	
	01-Jun-01	01-Jul-01	TRACKETCH	2.50				
	01-Jul-01	01-Aug-01	TRACKETCH	3.10				
	01-Aug-01	01-Sep-01	TRACKETCH	3.10	3.10			3.10
	01-Sep-01	01-Oct-01	TRACKETCH	3.10				
	01-Oct-01	01-Nov-01	TRACKETCH	4.10				
	01-Nov-01	01-Dec-01	TRACKETCH	4.10	4.10			
	01-Dec-01	02-Jan-02	TRACKETCH	4.10				
2002	02-Jan-02	02-Feb-02	TRACKETCH	2.70				
	02-Feb-02	02-Mar-02	TRACKETCH	2.70	2.70	2.70		
	02-Mar-02	31-Mar-02	TRACKETCH	2.70				
	31-Mar-02	30-Apr-02	TRACKETCH	2.30				
	30-Apr-02	31-May-02	TRACKETCH	2.30	2.30		2.30	
	31-May-02	01-Jul-02	TRACKETCH	2.30				
	01-Jul-02	01-Aug-02	TRACKETCH	3.40				
	01-Aug-02	01-Sep-02	TRACKETCH	3.40	3.40			3.40
	01-Sep-02	01-Oct-02	TRACKETCH	3.40				
	01-Oct-02	01-Nov-02	TRACKETCH	4.20				
	01-Nov-02	01-Dec-02	TRACKETCH	4.20	4.20			
	01-Dec-02	02-Jan-03	TRACKETCH	4.20				

Kennecott Uranium Company - Sweetwater Uranium Facility

UPWIND RADON DATA
RADTRAK DATA ONLY
AIR 2 MONITORING STATION

	START DATE	END DATE	DETECTOR TYPE	STATION AIR 2 pCi/L	AIR 2 AVERAGES pCi/L	AIR 2 FIRST QUARTERS pCi/L	AIR 2 SECOND QUARTERS pCi/L	AIR 2 THIRD QUARTERS pCi/L
2003	02-Jan-03	02-Feb-03	TRACKETCH	2.60				
	02-Feb-03	02-Mar-03	TRACKETCH	2.60	2.60	2.60		
	02-Mar-03	31-Mar-03	TRACKETCH	2.60				
	31-Mar-03	30-Apr-03	TRACKETCH	3.90				
	30-Apr-03	31-May-03	TRACKETCH	3.90	3.90		3.90	
	31-May-03	30-Jun-03	TRACKETCH	3.90				
	30-Jun-03	30-Jul-03	TRACKETCH					
	30-Jul-03	30-Aug-03	TRACKETCH		No data. Lost by Landauer			
	30-Aug-03	01-Oct-03	TRACKETCH					
	01-Oct-03	01-Nov-03	TRACKETCH	3.50				
	01-Nov-03	01-Dec-03	TRACKETCH	3.50	3.50			
	01-Dec-03	01-Jan-04	TRACKETCH	3.50				
2004	01-Jan-04	01-Feb-04	TRACKETCH	2.70				
	01-Feb-04	01-Mar-04	TRACKETCH	2.70	2.70	2.70		
	01-Mar-04	01-Apr-04	TRACKETCH	2.70				
	01-Apr-04	01-May-04	TRACKETCH	2.40				
	01-May-04	01-Jun-04	TRACKETCH	2.40	2.40		2.40	
	01-Jun-04	30-Jun-04	TRACKETCH	2.40				
	30-Jun-04	30-Jul-04	TRACKETCH	3.60				
	30-Jul-04	30-Aug-04	TRACKETCH	3.60	3.60			3.60
	30-Aug-04	03-Oct-04	TRACKETCH	3.60				
	03-Oct-04	03-Nov-04	TRACKETCH	3.90				
	03-Nov-04	03-Dec-04	TRACKETCH	3.90	3.90			
	03-Dec-04	01-Jan-05	TRACKETCH	3.90				
2005	01-Jan-05	01-Feb-05	TRACKETCH	2.30				
	01-Feb-05	01-Mar-05	TRACKETCH	2.30	2.30	2.30		
	01-Mar-05	04-Apr-05	TRACKETCH	2.30				
	04-Apr-05	04-May-05	TRACKETCH	2.60				
	04-May-05	04-Jun-05	TRACKETCH	2.60	2.60		2.60	
	04-Jun-05	03-Jul-05	TRACKETCH	2.60				
	03-Jul-05	03-Aug-05	TRACKETCH	4.30				
	03-Aug-05	03-Sep-05	TRACKETCH	4.30	4.30			4.30
	03-Sep-05	01-Oct-05	TRACKETCH	4.30				
	01-Oct-05	01-Nov-05	TRACKETCH	3.90				
	01-Nov-05	01-Dec-05	TRACKETCH	3.90	3.90			
	01-Dec-05	01-Jan-06	TRACKETCH	3.90				
2006	01-Jan-06	01-Feb-06	TRACKETCH	2.60				
	01-Feb-06	01-Mar-06	TRACKETCH	2.60	2.60	2.60		
	01-Mar-06	03-Apr-06	TRACKETCH	2.60				
	03-Apr-06	03-May-06	TRACKETCH	4.60				
	03-May-06	03-Jun-06	TRACKETCH	4.60	4.60		4.60	
	03-Jun-06	05-Jul-06	TRACKETCH	4.60				
	05-Jul-06	05-Aug-06	TRACKETCH	3.60				
	05-Aug-06	05-Sep-06	TRACKETCH	3.60	3.60			3.60
	05-Sep-06	02-Oct-06	TRACKETCH	3.60				
	02-Oct-06	02-Nov-06	TRACKETCH	3.50				
	02-Nov-06	02-Dec-06	TRACKETCH	3.50	3.50			
	02-Dec-06	02-Jan-07	TRACKETCH	3.50				

Kennecott Uranium Company - Sweetwater Uranium Facility

UPWIND RADON DATA
RADTRAK DATA ONLY
AIR 2 MONITORING STATION

	START DATE	END DATE	DETECTOR TYPE	STATION AIR 2 pCi/L	AIR 2 AVERAGES pCi/L	AIR 2 FIRST QUARTERS pCi/L	AIR 2 SECOND QUARTERS pCi/L	AIR 2 THIRD QUARTERS pCi/L
2007	02-Jan-07	02-Feb-07	TRACKETCH	16.90				
	02-Feb-07	02-Mar-07	TRACKETCH	16.90	Erroneous Data, Found on Ground			
	02-Mar-07	02-Apr-07	TRACKETCH	16.90				
	02-Apr-07	02-May-07	TRACKETCH					
	02-May-07	02-Jun-07	TRACKETCH		No data. Damaged - No Reading			
	02-Jun-07	03-Jul-07	TRACKETCH					
	03-Jul-07	01-Aug-07	TRACKETCH	3.90				
	01-Aug-07	01-Sep-07	TRACKETCH	3.90	3.90			3.90
	01-Sep-07	03-Oct-07	TRACKETCH	3.90				
	03-Oct-07	01-Nov-07	TRACKETCH	3.40				
	01-Nov-07	01-Dec-07	TRACKETCH	3.40	3.40			
	01-Dec-07	02-Jan-08	TRACKETCH	3.40				
2008	02-Jan-08	01-Feb-08	TRACKETCH	3.40				
	01-Feb-08	01-Mar-08	TRACKETCH	3.40	3.40	3.40		
	01-Mar-08	01-Apr-08	TRACKETCH	3.40				
	01-Apr-08	01-May-08	TRACKETCH	2.20				
	01-May-08	01-Jun-08	TRACKETCH	2.20	2.20		2.20	
	01-Jun-08	02-Jul-08	TRACKETCH	2.20				
	02-Jul-08	01-Aug-08	TRACKETCH	5.10				
	01-Aug-08	01-Sep-08	TRACKETCH	5.10	5.10			
	01-Sep-08	01-Oct-08	TRACKETCH	5.10				
			AVERAGE		**3.17**	**3.07**	**2.89**	**3.89**

1-IF MORE THAN ONE READING WAS TAKEN FOR THE PERIOD THEN THE RESULT SHOWN
IS AN AVERAGE OF THE READINGS TAKEN

2-IF THREE (3) IDENTICAL READINGS FOR A SINGLE STATION APPEAR
IN SUCCESSION AND ARE MARKED BY A SINGLE VERTICAL LINE
IN ALL THREE MONTHS OF A GIVEN CALENDER QUARTER
dssssss
THE INDIVIDUAL MONTHLY READINGS ARE THE SINGLE QUARTERLY READING
REPEATED FOR EACH MONTH

Paulson, Oscar (RTEA)

From: Rose Elza [relza@landauerinc.com]
Sent: Wednesday, November 05, 2008 2:54 PM
To: Paulson, Oscar (RTEA)
Subject: RE: RadTrak Rechecks

There was no change in the results.

Rose Elza
Customer Service Representative
Radon Products
Landauer, Inc.
(708) 441-8342 direct
(708) 755-7048 fax
(800) 528-8327 X 8342
relza@landauerinc.com
www.landauerinc.com

Dosimetry for the Twenty-First Century

From: Paulson, Oscar (RTEA) [mailto:Oscar.Paulson@riotinto.com]
Sent: Monday, November 03, 2008 1:02 PM
To: Rose Elza
Cc: Schutterle, Shelley (RTEA); Haag, Kelly (RTEA-Temp)
Subject: RE: RadTrak Rechecks

Rose:

Thank you!

Oscar

From: Rose Elza [mailto:relza@landauerinc.com]
Sent: Monday, November 03, 2008 11:53 AM
To: Paulson, Oscar (RTEA)
Subject: RE: RadTrak Rechecks

I'll have them re-read. I'll let you know the results of the re-read as soon as they become available.

Rose Elza
Customer Service
HomeBuyer's Preferred, Inc.
(708) 441-8342 direct
(708) 755-7048 fax
(800) 325-5506 x8342
relza@homebuyerspreferred.com
www.homebuyerspreferred.com
A wholly owned subsidiary of Landauer, Inc. (NYSE:LDR)

Setting The Industry Standard For Quality In Radon Protection Plan Services

From: Paulson, Oscar (RTEA) [mailto:Oscar.Paulson@riotinto.com]

Sent: Monday, November 03, 2008 12:38 PM
To: Rose Elza
Cc: Schutterle, Shelley (RTEA)
Subject: RadTrak Rechecks

Rose:

Please recheck the following two (2) RadTrak detector results:

- Detector Number: 4729311
- Detector Number: 4745499

Thanks!

Oscar

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

CONFIDENTIAL and PROPRIETARY information of Rio Tinto Energy America (C) 2006. All rights reserved. This work contains information that is confidential and proprietary to Rio Tinto Energy America . The senders contact information is also protected by the Rio Tinto Energy America Data Protection Policy, and should not be circulated. Removal of this notice, use, transfer, republication, disclosure and/or copying of all or part of this message, or its attachments, is strictly prohibited, except with the express, written permission of Rio Tinto Energy America . If you have received this e-mail message in error please return it and contact Oscar Paulson at (307)-324-4924

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

2008
DIRECT RADIATION MEASUREMENTS
(TLD)

Location	Date	Exposure Rate (mr/Qtr)	Lower Limit of Detection (LLD) Millirems
TLD			
0000 - Control	1/2/08 – 4/1/08	36.2	10[1]
0004 - Air 4A	1/2/08 – 4/1/08	39.0	10[1]
TLD			
0000 - Control	4/1/08 – 7/1/08	33.4	10[1]
0004 - Air 4A	4/1/08 – 7/1/08	42.8	10[1]
TLD			
0000 – Control	7/1/08 – 10/1/08	38.2	10[1]
0004 - Air 4A	7/1/08 – 10/1/08	43.2	10[1]
TLD			
0000 - Control	10/1/08 – 1/5/09	36.0	10[1]
0004 - Air 4A	10/1/08 – 1-5-09	46.1	10[1]

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

Thermo NUtec
8635 Jefferson Street
Albuquerque, NM 871
(505) 345-9931 • FAX (505) 761-54

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	123
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.

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

CONTINUOUS LOW-VOLUME AIR PARTICULATE ANALYSIS

STATION 4A – 2008

Quarter/Date Sampled Air Volume	Radionuclide	Concentration µCi/ml	Error Estimate µCi/ml	LLD µCi/ml	Effluent Conc.* µCi/ml	% Effluent Concentration
1st Quarter	U-nat	<1.00 E-16	N/A	1.00 E-16	9.00 E-14	<1.11 E-01
1/2/08 – 3/31/08	Th-230	1.08 E-16	3.68 E-17	1.00 E-16	3.00 E-14	3.59 E-01
Air Vol in mLs	Ra-226	<1.00 E-16	N/A	1.00 E-16	9.00 E-13	<1.11 E-02
3.81E+10	Pb-210	1.45 E-14	5.41 E-16	2.00 E-15	6.00 E-13	2.42 E+00
2nd Quarter	U-nat	<1.00 E-16	N/A	1.00 E-16	9.00 E-14	<1.11 E-01
3/31/08 – 7/1/08	Th-230	1.45 E-16	4.19 E-17	1.00 E-16	3.00 E-14	4.82 E-01
Air Vol in mLs	Ra-226	<1.00 E-16	N/A	1.00 E-16	9.00 E-13	<1.11 E-02
4.77 E+10	Pb-210	7.09 E-15	6.02 E-16	2.00 E-15	6.00 E-13	1.18 E+00
3rd Quarter	U-nat	<1.00E-16	N/A	1.00 E-16	9.00 E-14	<1.11E-01
7/1/08 – 10/6/08	Th-230	<1.00E-16	N/A	1.00 E-16	3.00 E-14	<3.33E-01
Air Vol in mLs	Ra-226	<1.00E-16	N/A	1.00 E-16	9.00 E-13	<1.11E-02
4.72E+10	Pb-210	2.18e-14	5.93E-16	2.00 E-15	6.00 E-13	3.64E+00
4th Quarter	U-nat	<1.00E-16	N/A	1.00 E-16	9.00 E-14	<1.11E-01
10/6/08 –1/3/09	Th-230	1.63E-16	5.95E-17	1.00 E-16	3.00 E-14	5.43E-01
Air Vol in mLs	Ra-226	<1.00E-16	N/A	1.00 E-16	9.00 E-13	<1.11E-02
3.87E+10	Pb-210	9.46E-15	2.00E-15	2.00 E-15	6.00 E-13	1.59E+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

27 January 2009

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 2008

The following is a dose calculation for the nearest resident (the contract security guard) for the second half of 2008.

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 sites' 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 counted 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 for 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	3.65 pCi/l	290.7
Total			**492.6**

Notes:

1. An equilibrium factor of 0.181 was used for radon based on twenty-four (24) comparisons of radon-222 and radon-222 daughter concentrations over 15 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 for the third quarter of 2008 (3.89 pCi/L) at the upwind air station (Air 2) was used to calculate background radon dose.
4. Calculation: (Radon concentration (pCi/l))*(Equilibrium factor)*(0.44 rems/pCi/l) = Dose (rems)
5. The average background radon concentration of the Rad Traks deployed in the fourth quarter of 2008 of 3.4 pCi/L was used for the fourth quarter 2008 concentration.

SECURITY TRAILER

		Average Concentration	Dose (mrem)
Gamma Exposure:			178.6
Airborne Particulates:			
	U nat	1.00 E-16 µCi/ml	0.06
	Ra-226	1.00 E-16 µCi/ml	0.01
	Th-230	1.32 E-16 µCi/ml	0.22
Gases:			
	Radon-222	2.83 pCi/l	225.4
Total			**404.3**

Notes:

1. An equilibrium factor of 0.181 was used for radon based on twenty-four (24) comparisons of radon-222 and radon-222 daughter concentrations over 15 years.
2. Downwind airborne particulate concentrations and gamma doses for the third and fourth quarters of 2008 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 2008 and is based on an average of RadTrak units located in two (2) locations; the kitchen and the bedroom. The monitoring results are in the table below.

Second Half - 2008			
	Third Quarter	Fourth Quarter	
Kitchen	2.4 pCi/L	3.4 pCi/L	
Bedroom	2.6 pCi/L	2.9 pCi/L	
Trailer Average:			**2.83** pCi/L

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

The calculated net (dose to the nearest resident minus background dose) annual TEDE from the licensed operations for the second half of 2008 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	3.2	0.009	0.28
1/1/97 – 6/30/97	1.5	0.003	0.20
7/1/97 – 12/31/97	2.2	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	3.0	0.0005[2]	0.017
1/1/05 – 6/30/05	2.55	0.0013[2]	0.051
7/1/05 – 12/31/05	3.22	0.0035[2]	0.109
1/1/06 – 6/30/06	2.40	0.0[2]	0.0
7/1/06 – 12/31/06	2.13	0.014[2]	0.66
1/1/07 – 6/30/07	1.65	0.0[2]	0.0
6/30/07 – 12/31/07	2.10[4]	0.0001[2]	0.005
1/1/08 – 6/30/08	3.28	0.0[2]	0.0
6/30/08 – 12/31/08	2.83	0[2]	0.00
Average			**0.181**

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

Memorandum

Oscar Paulson
Facility Supervisor
Kennecott Uranium Company

2 February 2009

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)
Darryl Maunder – Rio Tinto Energy America

RIO TINTO
ENERGY AMERICA

Memorandum

Oscar Paulson
Facility Supervisor
Kennecott Uranium Company

11 February 2009

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 10, 2008. Annual MSHA Refresher Training was conducted on January 7, 2008. In addition, driver training was conducted on January 3, 2008. Also, a first aid class was provided on site on January 23, 2008. Radiation training of individual contract employees (contractor new hires) was conducted on an as-needed basis. Equipment hazard training was provided on January 24, 2008.

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 2008, as documented in the memorandum entitled "Annual Review of Standard Operating Procedures (SOPs)", dated 22 December 2008.

9. Radiation Work Permits:
A single Radiation Work Permit (RWP) was issued in 2008. This permit was issued because the work performed was not covered in any existing SOP; not necessarily because the work involved any above-normal exposure to radiation or radionuclides.

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 17 and December 21, 2008. 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):
A single Safety and Environmental Evaluation (SEE) was issued by the Safety and Environmental Review Panel in 2008. It is 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 June 2 and August 20, and October 31, 2008. Annual fit testing and respirator training was conducted on November 13, 2008.

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 0.046 WL in June 2008 and 0.033 WL in December 2008.

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.

Oscar A Paulson

Oscar Paulson
Facility Supervisor

RIO TINTO
ENERGY AMERICA

Memorandum

Oscar Paulson
Facility Supervisor
Kennecott Uranium Company

18 February 2009

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) - 2008
- Respiratory Protection – 2008
- Releases for Unrestricted Use – 2008
- Review of Standard Operating Procedures – 2008
- Radiation Work Permits – 2008
- Dose Assessment/Determination of No Requirement for Individual Monitoring or Dose Calculation at the Sweetwater Uranium Project for 2008
- Discussion of other Items (Fire Protection, Security/Fencing, East Wall of the Mill Building, 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 0.015 WL to 0.052 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 2008 were property security, preservation, maintenance, operation of the tailings impoundment and Catchment Basin pumpback system, regrading of the tailings and construction of 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 0.015 WL to 0.052 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 17 and December 21, 2008. 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 2008 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 2008 Inspection of Tailings Impoundment Liner and Embankment dated May 30, 2008. In his report he stated:

Tailings/Fluid Surface to Bench. *The liner has been damaged below the bench along the east embankment and the east half of the north embankment. However, the liner within five vertical feet of the tailings or tailings fluid surface has been maintained intact or repaired where necessary. The repairs consist of adhering a segment of used liner from the impoundment by cleaning and gluing per manufacturer's specifications (Photographs 7 and 8). The repairs are expected to be effective at limiting the potential for tailings fluid to escape through the liner.*

In addition he also states:

Liner Conclusions/Recommendations. *Above the bench, the liner is only intact and functional in the northwest corner of the impoundment. The liner along the bench and the seam at the bench is functional along the south embankment, and the west half of the north embankment. The liner remains, by observation, pliable. There is no evidence of exposed scrim by either physical or chemical means.*

Liner repair and regrading of 11(e)2 soils and mill tailings within the tailings impoundment limit the potential for fluid to escape.

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 2008 Inspection of the Tailings Impoundment Liner and Embankment dated May 30, 2008. In his report he states:

Recent Efforts. *Over the last two years, two separate excavation tasks have altered the configuration of the surface of the tailings. First, 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 east central portion of the impoundment. Second, during the latter half of 2007 through the present, tailings as wells as the additional 11(e)2 soils have been regraded. In the tailings regrading effort, beach sands from the west half of the* *impoundment have been removed from the margins of the impoundment, lowering the surface of the tailings to below the bench throughout most of the impoundment, and shifting tailings to parts of the impoundment in which the tailings surface was lower. This effort has resulted in substantial progress toward the following tailings management objectives:*

1) Regrading the tailings to achieve a more planar surface in anticipation of either reclamation or future tailings storage;
2) Adding a depth of primarily sandy tailings from the west half of the impoundment to tailings areas in the east half that are more fine-grained and less consolidated;
3) Combining and leveling the tailings to create a surface that is entirely below the bench, more sheltered from wind, and easier to keep moistened;
4) Creating stable, flat, bermed areas as evaporation cells for tailings dewatering; and
5) Creating a more uniform surface, above which the existing liner can be more readily maintained.

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 2008, 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 2008.

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 ha s 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.

Oscar A Paulson
Oscar Paulson

RIO TINTO ENERGY AMERICA

Memorandum

Oscar Paulson
Facility Supervisor
Kennecott Uranium Company

February 2, 2009

To: NRC File

Subject: Summary of Monthly Radiation Safety Meetings

The monthly radiation safety meetings included all contract personnel on site at the time of the meeting. The following is a summary of the twelve (12) monthly (plus ten (10) additional) Radiation Safety meetings held in 2008:

2008	TOPIC	ATTENDEES
1/21	Uranium toxicity, Reviewed Rocky Mountain Chronicle article. Discussed chemical toxicity of uranium and discussed Dr. Standler's description of uranium toxicity. Reviewed dosimeter and bioassay results for December 2007.	ACI, KUC
2/18	Discussed the ALARA Report and the bioassay results which were all non-detect for 2007. Discussed deep versus shallow dose. Reviewed paper entitled Acute Chemical Toxicity of Uranium by Ronald L Kathren & Richard K Burklin.	ACI, KUC, RJS
3/26	Discussed bioassay results.	ACI, KUC
4/1	Discussed bioassay retest results.	ACI, KUC
4/7	Discussed in-situ uranium mines including ground water restoration, surety, location of Smith Ranch/Highland. Well Fields – how they run, contamination / plumes, impacts on other operators, and other issues.	ACI, KUC
4/8	Discussed Power Resources, Inc. unqualified Radiation Officer violation. The Safety and Environmental Review Panel (SERP) approved his appointment. Discussed Radiation Safety Officer (RSO) requirements.	ACI, KUC
4/10	Discussed repairs to Mill building wall/structural repairs and working in the restricted area. Discussed the exposure to airborne radionuclides and PPE.	ACI, KUC
4/17	Discussed a breathing sample filter from 4-14-08 which counted 4 to 5 times higher than a tailings filter. Had 6 hours, 7 minutes on filter. Warned personnel to watch for unusual or large amount of dust on surface. If noticed, wipe or wash off. May take alpha readings/wipes in area.	ACI, KUC
4/28	Discussed radon in security trailer, skirting around trailer, lack of air circulation, and placement of a radon detector in trailer.	ACI, KUC
5/5	Discussed bioassay results.	ACI, KUC
5/21	Reviewed breathing zone samples, high volume air samples, dosimeter results, which all were low. Discussed radiation exposure and that the sun is radiation hazard to the skin.	ACI, KUC
6/23	Discussed dosimeters and breathing zone samples. Showed a sample of Trinitite-sand fused by the Trinity nuclear test which is no longer radioactive. Most radionuclides generated by a detonation are short- half life. Discussed weapon testing / Semipalatinsk test site in Kazakhstan.	ACI, KUC
7/30	Discussed Method 115 test. Need to purchase a 500 foot roll 3/8 " polyethylene rope and clocks. Talked about radon emissions, background emissions and the Semipalatinsk test site including increased leukemia possibility and exposure to plutonium related to the site.	ACI, KUC
8/25	Discussed Wall Street Journal article, IAEA food irradiation.	ACI, KUC
9/4	Discussed consumption of fluids in restricted area. Reviewed operating procedures and the need to follow procedures.	ACI, KUC
10/20	Discussed bioassays and showed video, a CNBC program entitled The Nuclear Option. The video discussed Three Mile Island, Chernobyl, vulnerability of plants to terrorist's attacks, recycling/reprocessing of spent nuclear fuel and nuclear waste disposal in the United states/Yucca Mountain.	ACI, KUC
10/27	Discussed HP-38/ water consumption in restricted areas, release of used oil.	ACI, KUC
11/6	Discussed grouting floor in Mill building including no drilling of concrete, no activities that will generate dust, mixing of grout outside so the mixer will stay outside of the restricted area: Discussed personal protective equipment and other issues including wearing Tyveks overalls and gloves, monitoring after leaving building/restricted area, collection of bioassays and collection of a high volume air sample.	ACI, KUC

11/13	Discussed respirators including the need for respiratory protection, Radon/Radon decay products, Uranium; hard fired versus soluble, chemical toxicity or uranium, Radium-226, Thorium-230, respiratory protection equipment, particulate radionuclides, full face versus half face respirators, areas requiring respirators, testing equipment, storage of respirators, proper use and maintenance of respiratory protection equipment and action to be taken in the event of malfunction. Performed fit tests on three (3) workers.	ACI, KUC
11/24	Discussed HP-38; drinking water in tailings / restricted areas and associated procedures including placing bottles in bags. Discussed article on nuclear reactor breaks ins South Africa.	ACI, KUC
12/22	Discussed doses to workers in 2008 including internal dose / committed dose, high volume air sampling results and breathing zone sampling results which all were low. Discussed the external / deep dose monitoring results. External doses are very low and all bioassays were non-detect. Doses were so low that reporting is not required.	ACI, KUC
12/31	Familiarization with new air-packs for emergency use.	ACI, KUC

Initial key: ACI = Archer Construction, Inc., **KUC** = Kennecott Uranium Company, **RJS** = Robert Jack Smith and Associates

Oscar A Paulson

Oscar Paulson
Facility Supervisor

RIO TINTO
ENERGY AMERICA

Memorandum

Oscar Paulson
Facility Supervisor
Kennecott Uranium Company

2 February 2009

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 10, 2008, as discussed in the attached letter. The attendees are listed in the letter. A description of the course content is maintained on file on site.

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

Jerry Fuller – Archer Construction, Inc.	April 14, 2008
Kelly Haag – Adecco Employment Service	April 14, 2008
Jeremy Harding – Archer Construction, Inc.	April 14, 2008
Scott Knowles – Archer Construction, Inc.	April 14, 2008
Brandon LaFoya – Archer Construction, Inc.	April 14, 2008
Jim McCoy – Archer Construction, Inc.	April 14, 2008
Mike Paglia – Archer Construction, Inc.	April 14, 2008
Eric Marquez – Archer Construction, Inc.	August 27, 2008
Russell Smith – Archer Construction, Inc.	August 27, 2008
Chuck Williams – Securitas Security Services, Inc.	August 27, 2008

All individuals who worked within a restricted area during 2008 received radiation worker training.

Oscar A Paulson

Oscar Paulson
Facility Supervisor

TETRA TECH

January 30, 2008

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

RE: Radiation Protection Refresher Training

Dear Oscar:

The following individuals successfully completed 4 hours of radiation protection refresher training on January 10, 2008:

Stephen Skelley
Charles Seyfang
Jeremy LaVine
Brian Johnson
Casey Dickinson
Russell Kobbe
Randell Archer
Lance Smith
Jed Goodman
Tony Jackson
Kathryn Harrison
Eric S. Hall
Harold Kelley
Mark Cress
Mike Mariner
Kenneth Aurell
Anita Morris
Alfred Knowles
James McMacken
Tom Foust
Lehman English
Oscar Paulson
Richard Durazo
George Palochak
Harry Loucito

If you have questions or need additional information, please contact me.

Sincerely,

Tetra Tech

Robert Meyer, Ph.D.
Project Manager

Tetra Tech
3801 Automation Way, Suite 100, Fort Collins CO 80525
Tel 970 223.9600 Fax 970 223.7171 www.tetratech.com

Memorandum

Oscar Paulson
Facility Supervisor
Kennecott Uranium Company

10 February 2009

To: Total and Removable Alpha Monitoring File

Subject: Total and Removable Alpha Monitoring Assessment

In 2008 removable alpha monitoring was performed in the Mill and Solvent Extraction (SX) Buildings and in the Ion Exchange area on June 16 (mill and on Exchange), December 19 (Ion Exchange) and December 21, 2008 (mill). Total alpha monitoring was performed in the mill and Solvent Extraction (SX) Buildings and the Ion Exchange area on June 28 and December 28, 2008.

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 94.1and 50,196 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 1.5 to 1029.5 dpm/100 cm^2. The single high removable alpha measurement was taken on June 16, 2008 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 56.1 to 1029.5 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 61 to 715 dpm/100 cm^2. This single high reading was on the side of the precipitation tank. The Ion Exchange area is a restricted area. Removable alpha contamination levels in the Ion Exchange area ranged from 2.7 to 54.4 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 28, 2008. Removable alpha monitoring of the stored equipment was performed on June 28 and December 17, 2008, as well. Total alpha readings for the exteriors of stored equipment ranged from 61.0 to 34,635 dpm/100 cm^2. Removable alpha readings for the stored equipment ranged from ND to 599.8 dpm/100 cm^2. The high removable reading was from a fiberglass tank stored in the tailings impoundment. The high total alpha reading was from a stored fiberglass tank in the tailings impoundment.

Oscar A Paulson

Oscar Paulson

RIO TINTO ENERGY AMERICA

Memorandum

Oscar Paulson
Facility Supervisor
Kennecott Uranium Company

10 February 2009

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 2008. 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 175 hours (17.5 days) in the Sweetwater Mill and 1285 hours (128.5 days) in the tailings impoundment during calendar year 2008. 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.

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, in breathing zone samples collected on the Mill Foreman, 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 breathing zone 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 breathing zone sample results for natural uranium, thorium-230 and radium-226 were used to calculate the internal dose since:
    - The breathing zone samples are believed to be more representative of worker exposure than high volume air samples of the work area was a whole.

- The average and maximum breathing zone sample results for natural uranium, thorium-230 and radium-226 for the mill and tailings impoundment generally exceed the averages of the high volume air sample results for the above radionuclides in these areas. Thus, their use is inherently conservative.
- The third quarter breathing zone sample for the Mill Foreman was collected late (on October 27, 2008) in 2008. Care will be exercised in the future to insure the timely collection of the sample. Two breathing zone samples were collected for the Mill Foreman for the fourth quarter of 2008.

Attached please find in addition to the spreadsheet entitled "Airborne Sampling Results", the following spreadsheets:

- Mill High Volume Air Samples (with Non-Detect results reported as ND)
- Mill High Volume Air Samples (with Non-detect results reported as the Lower Limit of Detection (LLD))
- Tailings Impoundment High Volume Air Samples (with Non-Detect results reported as ND)
- Tailings Impoundment High Volume Air Samples (with Non-detect results reported as the Lower Limit of Detection (LLD))
- Tailings Impoundment Breathing Zone Samples (with Non-Detect results reported as ND)
- Tailings Impoundment Breathing Zone Samples (with Non-detect results reported as the Lower Limit of Detection (LLD))
- Mill Breathing Zone Samples (with Non-Detect results reported as ND)
- Mill Breathing Zone Samples (with Non-detect results reported as the Lower Limit of Detection (LLD))
- 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 1.09E+01 millirems (10.9 millirems) was calculated for the maximally exposed individual (the Mill Foreman) on site for normal duties (excluding the Radiation Work Permit (RWP)) 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 (excluding the Radiation Work Permit (RWP)). This calculation resulted in an internal dose of 2.60E+01 millirems (26.0 millirems) This calculation is on the attached spreadsheet entitled Airborne Sampling Results (using maximum concentrations). The Radiation Work Permit (RWP) added only 7E-03 (0.007) to 1.25e-10 (0.125) millirems of internal dose from natural uranium, radium-226 and thorium-230.

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

Kennecott Uranium Company
Sweetwater Uranium Project
Airborne Sampling Results

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 2008	Mill Foreman	2.37E-14	3.66E-14	2.50E-14	1.19E-01	1.22E-02	4.17E-01
Average for 2008	Tailings Impoundment	6.56E-15	8.55E-15	1.38E-14	3.28E-02	2.85E-03	2.30E-01
	Average:	1.51E-14	2.26E-14	1.94E-14	7.57E-02	7.53E-03	3.23E-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 2008	Mill Building	3.59E-15	7.72E-16	1.61E-15	1.80E-02	2.57E-04	2.68E-02
Average for 2008	Tailings Impoundment	4.37E-15	1.84E-14	2.34E-14	2.19E-02	6.13E-03	3.90E-01
	Average:	3.98E-15	9.59E-15	1.25E-14	1.99E-02	3.20E-03	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	2.37E-14	3.66E-14	2.50E-14	1.19E-01	1.22E-02	4.17E-01
	Tailings	6.56E-15	8.55E-15	1.38E-14	3.28E-02	2.85E-03	2.30E-01
Exposure Calculations							
Hours Worked During 2007							
	Mill	175					
	Tailings Impoundment	1285					
Exposure		**Natural Uranium**	**Radium-226**	**Thorium-230**	**Total**		
		(millirems)	**(millirems)**	**(millirems)**	**(millirems)**		
	Mill Foreman	5.18E-01	5.34E-02	1.82E+00			
	Tailings	1.05E+00	9.16E-02	7.39E+00			
	Total	1.57E+00	1.45E-01	9.21E+00	1.09E+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 **(Using Maximum Concentrations)**

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 2008	Mill Foreman	2.37E-14	3.66E-14	2.50E-14	1.19E-01	1.22E-02	4.17E-01
Average for 2008	Tailings Impoundment	6.56E-15	8.55E-15	1.38E-14	3.28E-02	2.85E-03	2.30E-01
	Average:	1.51E-14	2.26E-14	1.94E-14	7.57E-02	7.53E-03	3.23E-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 2008	Mill Building	3.59E-15	7.72E-16	1.61E-15	1.80E-02	2.57E-04	2.68E-02
Average for 2008	Tailings Impoundment	4.37E-15	1.84E-14	2.34E-14	2.19E-02	6.13E-03	3.90E-01
	Average:	3.98E-15	9.59E-15	1.25E-14	1.99E-02	3.20E-03	1.67E-03

Please see attached spreadsheets
Lower Limit of Detection (LLD) value used in average if result was non-detect.

Maximum Concentrations Used	**(From Breathing Zone Sample Sheets)**						
		Concentration			**Percent of DAC**		
		Natural Uranium	**Radium-226**	**Thorium-230**	**Natural Uranium**	**Radium-226**	**Thorium-230**
		(microCuries/ml)	**(microCuries/ml)**	**(microCuries/ml)**			
	Mill Foreman	4.93E-14	9.62E-14	4.93E-14	2.47E-01	3.21E-02	8.22E-01
	Tailings	3.67E-14	4.30E-14	2.77E-14	1.84E-01	1.43E-02	4.62E-01

Exposure Calculations

Hours Worked During 2007		
	Mill	175
	Tailings Impoundment	1285

Exposure		**Natural Uranium**	**Radium-226**	**Thorium-230**	**Total**
		(millirems)	**(millirems)**	**(millirems)**	**(millirems)**
	Mill Foreman	1.08E+00	1.40E-01	3.59E+00	
	Tailings	5.89E+00	4.60E-01	1.48E+01	
	Total	6.97E+00	6.01E-01	1.84E+01	2.60E+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 ALI)s) 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										
Tailings Impoundment										
High Volume Air Samples										
2008										
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	2-Jan-08	9-Jan-08	2.37E+09	1.00E-16	3.76E-15	9.29E-15	6.93E-15	0.0188	0.1548	0.0023
2	14-Jan-08	17-Jan-08	3.31E+09	1.00E-16	2.90E-15	1.33E-14	9.38E-15	0.0145	0.2217	0.0031
3	22-Jan-08	21-Feb-08	3.52E+09	1.00E-16	8.80E-16	1.39E-15	9.94E-16	0.0044	0.0232	0.0003
4	25-Feb-08	3-Mar-08	3.59E+09	1.00E-16	7.53E-16	1.92E-15	1.48E-15	0.0038	0.0320	0.0005
5	5-Mar-08	13-Mar-08	4.97E+09	1.00E-16	3.22E-16	8.04E-16	5.43E-16	0.0016	0.0134	0.0002
6	17-Mar-08	20-Mar-08	3.77E+09	1.00E-16	6.90E-16	3.00E-15	1.62E-15	0.0035	0.0500	0.0005
7	24-Mar-08	27-Mar-08	3.61E+09	1.00E-16	2.77E-16	4.87E-15	1.00E-16	0.0014	0.0812	0.0000
8	31-Mar-08	1-Apr-08	1.18E+09	1.00E-16	1.01E-15	4.22E-15	2.37E-15	0.0051	0.0703	0.0008
9	2-Apr-08	2-Apr-08	1.01E+09	1.00E-16	2.28E-15	1.70E-14	9.24E-15	0.0114	0.2833	0.0031
10	3-Apr-08	10-Apr-08	3.67E+09	1.00E-16	9.54E-16	4.66E-15	2.54E-15	0.0048	0.0777	0.0008
11	14-Apr-08	17-Apr-08	3.33E+09	1.00E-16	9.92E-16	7.52E-15	4.48E-15	0.0050	0.1253	0.0015
12	21-Apr-08	24-Apr-08	3.63E+09	1.00E-16	3.97E-15	3.64E-14	6.62E-15	0.0199	0.6067	0.0022
13	28-Apr-08	8-May-08	4.57E+09	1.00E-16	2.10E-15	5.99E-15	4.29E-15	0.0105	0.0998	0.0014
14	12-May-09	15-May-08	2.15E+09	1.00E-16	1.25E-15	5.76E-15	5.71E-15	0.0063	0.0960	0.0019
15	2-Jun-08	5-Jun-08	2.81E+09	1.00E-16	5.69E-16	3.20E-15	1.25E-15	0.0028	0.0533	0.0004
16	9-Jun-08	19-Jun-08	4.58E+09	1.00E-16	1.77E-15	8.32E-15	6.31E-15	0.0089	0.1387	0.0021
17	23-Jun-08	26-Jun-08	2.73E+09	1.00E-16	2.63E-15	2.73E-14	1.89E-14	0.0132	0.4550	0.0063
18	29-Jun-08	3-Jul-08	3.23E+09	1.00E-16	5.23E-15	1.70E-14	1.52E-14	0.0262	0.2833	0.0051
19	7-Jul-08	10-Jul-08	2.81E+09	1.00E-16	2.10E-14	1.47E-13	1.36E-13	0.1050	2.4500	0.0453
20	14-Jul-08	17-Jul-08	2.94E+09	1.00E-16	9.53E-15	4.60E-14	6.37E-14	0.0477	0.7667	0.0212
21	22-Jul-08	24-Jul-08	2.28E+09	1.00E-16	4.91E-15	4.25E-14	6.35E-14	0.0246	0.7083	0.0212
22	28-Jul-08	31-Jul-08	2.40E+09	1.00E-16	8.10E-15	4.93E-14	7.60E-14	0.0405	0.8217	0.0253
23	4-Aug-08	7-Aug-08	2.90E+09	1.00E-16	3.28E-15	1.38E-14	1.60E-14	0.0164	0.2300	0.0053
24	11-Aug-08	14-Aug-08	3.06E+09	1.00E-16	2.75E-15	1.11E-14	7.06E-15	0.0138	0.1850	0.0024
25	18-Aug-08	21-Aug-08	2.19E+09	1.00E-16	5.26E-14	2.05E-13	1.55E-13	0.2630	3.4167	0.0517
26	26-Aug-08	4-Sep-08	4.13E+09	1.00E-16	7.31E-15	2.86E-14	2.64E-14	0.0366	0.4767	0.0088
27	8-Sep-08	18-Sep-08	4.64E+09	1.00E-16	1.16E-15	1.29E-14	5.69E-15	0.0058	0.2150	0.0019
28	23-Sep-08	25-Sep-08	2.52E+09	1.00E-16	2.15E-15	1.15E-14	5.40E-15	0.0108	0.1917	0.0018
29	29-Sep-08	2-Oct-08	2.79E+09	1.00E-16	1.94E-15	9.32E-15	5.31E-15	0.0097	0.1553	0.0018
30	6-Oct-08	9-Oct-08	2.71E+09	1.00E-16	5.41E-15	2.87E-14	1.73E-14	0.0271	0.4783	0.0058
31	13-Oct-08	16-Oct-08	3.00E+09	1.00E-16	1.17E-15	6.01E-15	3.27E-15	0.0059	0.1002	0.0011
32	20-Oct-08	22-Oct-08	1.56E+09	1.00E-16	1.07E-14	6.09E-14	2.50E-14	0.0535	1.0150	0.0083
33	22-Oct-08	23-Oct-08	1.42E+09	1.00E-16	4.94E-16	1.91E-15	1.41E-15	0.0025	0.0318	0.0005
34	27-Oct-08	30-Oct-08	3.37E+09	1.00E-16	3.86E-16	1.22E-15	1.07E-15	0.0019	0.0203	0.0004
35	3-Nov-08	6-Nov-08	3.45E+09	1.00E-16	1.65E-15	6.37E-15	3.68E-15	0.0083	0.1062	0.0012
36	10-Nov-08	12-Nov-08	1.86E+09	1.00E-16	1.83E-15	6.46E-15	1.00E-16	0.0092	0.1077	0.0000
37	17-Nov-08	20-Nov-08	3.09E+09	1.00E-16	2.91E-16	8.73E-16	1.00E-16	0.0015	0.0146	0.0000
38	24-Nov-08	26-Nov-08	1.54E+09	1.00E-16	9.11E-16	3.51E-15	8.46E-16	0.0046	0.0585	0.0003
39	1-Dec-08	4-Dec-08	2.55E+09	1.00E-16	1.33E-15	3.65E-15	2.12E-15	0.0067	0.0608	0.0007
40	8-Dec-08	12-Dec-08	3.73E+09	1.00E-16	4.04E-15	2.09E-14	1.22E-14	0.0202	0.3483	0.0041
41	15-Dec-08	17-Dec-08	3.73E+09	1.00E-16	6.83E-15	7.12E-14	2.76E-14	0.0342	1.1867	0.0092
Average:			2.99E+09	1.00E-16	4.44E-15	2.34E-14	1.84E-14	2.22E-02	3.91E-01	6.12E-03
Derived Air Concentrations Used			Environmental Air Concentrations Used							
	microCurie per milliliter			microCurie per milliliter						

Natural Uranium	2.00E-11	Year	Natural Uranium	9.00E-14	Year					
Radium-226	3.00E-10	Week	**Radium-226**	9.00E-13	Week					
Thorium-	6.00E-12	Year	**Thorium-230**	3.00E-14	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.									
	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.									

Kennecott Uranium Company										
Sweetwater Uranium Project										
Tailings Impoundment										
High Volume Air Samples										
2008										
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	2-Jan-08	9-Jan-08	2.37E+09	1.00E-16	3.76E-15	9.29E-15	6.93E-15	0.0188	0.1548	0.0023
2	14-Jan-08	17-Jan-08	3.31E+09	1.00E-16	2.90E-15	1.33E-14	9.38E-15	0.0145	0.2217	0.0031
3	22-Jan-08	21-Feb-08	3.52E+09	1.00E-16	8.80E-16	1.39E-15	9.94E-16	0.0044	0.0232	0.0003
4	25-Feb-08	3-Mar-08	3.59E+09	1.00E-16	7.53E-16	1.92E-15	1.48E-15	0.0038	0.0320	0.0005
5	5-Mar-08	13-Mar-08	4.97E+09	1.00E-16	3.22E-16	8.04E-16	5.43E-16	0.0016	0.0134	0.0002
6	17-Mar-08	20-Mar-08	3.77E+09	1.00E-16	6.90E-16	3.00E-15	1.62E-15	0.0035	0.0500	0.0005
7	24-Mar-08	27-Mar-08	3.61E+09	1.00E-16	2.77E-16	4.87E-15	ND	0.0014	0.0812	ND
8	31-Mar-08	1-Apr-08	1.18E+09	1.00E-16	1.01E-15	4.22E-15	2.37E-15	0.0051	0.0703	0.0008
9	2-Apr-08	2-Apr-08	1.01E+09	1.00E-16	2.28E-15	1.70E-14	9.24E-15	0.0114	0.2833	0.0031
10	3-Apr-08	10-Apr-08	3.67E+09	1.00E-16	9.54E-16	4.66E-15	2.54E-15	0.0048	0.0777	0.0008
11	14-Apr-08	17-Apr-08	3.33E+09	1.00E-16	9.92E-16	7.52E-15	4.48E-15	0.0050	0.1253	0.0015
12	21-Apr-08	24-Apr-08	3.63E+09	1.00E-16	3.97E-15	3.64E-14	6.62E-15	0.0199	0.6067	0.0022
13	28-Apr-08	8-May-08	4.57E+09	1.00E-16	2.10E-15	5.99E-15	4.29E-15	0.0105	0.0998	0.0014
14	12-May-09	15-May-08	2.15E+09	1.00E-16	1.25E-15	5.76E-15	5.71E-15	0.0063	0.0960	0.0019
15	2-Jun-08	5-Jun-08	2.81E+09	1.00E-16	5.69E-16	3.20E-15	1.25E-15	0.0028	0.0533	0.0004
16	9-Jun-08	19-Jun-08	4.58E+09	1.00E-16	1.77E-15	8.32E-15	6.31E-15	0.0089	0.1387	0.0021
17	23-Jun-08	26-Jun-08	2.73E+09	1.00E-16	2.63E-15	2.73E-14	1.89E-14	0.0132	0.4550	0.0063
18	29-Jun-08	3-Jul-08	3.23E+09	1.00E-16	5.23E-15	1.70E-14	1.52E-14	0.0262	0.2833	0.0051
19	7-Jul-08	10-Jul-08	2.81E+09	1.00E-16	2.10E-14	1.47E-13	1.36E-13	0.1050	2.4500	0.0453
20	14-Jul-08	17-Jul-08	2.94E+09	1.00E-16	9.53E-15	4.60E-14	6.37E-14	0.0477	0.7667	0.0212
21	22-Jul-08	24-Jul-08	2.28E+09	1.00E-16	4.91E-15	4.25E-14	6.35E-14	0.0246	0.7083	0.0212
22	28-Jul-08	31-Jul-08	2.40E+09	1.00E-16	8.10E-15	4.93E-14	7.60E-14	0.0405	0.8217	0.0253
23	4-Aug-08	7-Aug-08	2.90E+09	1.00E-16	3.28E-15	1.38E-14	1.60E-14	0.0164	0.2300	0.0053
24	11-Aug-08	14-Aug-08	3.06E+09	1.00E-16	2.75E-15	1.11E-14	7.06E-15	0.0138	0.1850	0.0024
25	18-Aug-08	21-Aug-08	2.19E+09	1.00E-16	5.26E-14	2.05E-13	1.55E-13	0.2630	3.4167	0.0517
26	26-Aug-08	4-Sep-08	4.13E+09	1.00E-16	7.31E-15	2.86E-14	2.64E-14	0.0366	0.4767	0.0088
27	8-Sep-08	18-Sep-08	4.64E+09	1.00E-16	1.16E-15	1.29E-14	5.69E-15	0.0058	0.2150	0.0019
28	23-Sep-08	25-Sep-08	2.52E+09	1.00E-16	2.15E-15	1.15E-14	5.40E-15	0.0108	0.1917	0.0018
29	29-Sep-08	2-Oct-08	2.79E+09	1.00E-16	1.94E-15	9.32E-15	5.31E-15	0.0097	0.1553	0.0018
30	6-Oct-08	9-Oct-08	2.71E+09	1.00E-16	5.41E-15	2.87E-14	1.73E-14	0.0271	0.4783	0.0058
31	13-Oct-08	16-Oct-08	3.00E+09	1.00E-16	1.17E-15	6.01E-15	3.27E-15	0.0059	0.1002	0.0011
32	20-Oct-08	22-Oct-08	1.56E+09	1.00E-16	1.07E-14	6.09E-14	2.50E-14	0.0535	1.0150	0.0083
33	22-Oct-08	23-Oct-08	1.42E+09	1.00E-16	4.94E-16	1.91E-15	1.41E-15	0.0025	0.0318	0.0005
34	27-Oct-08	30-Oct-08	3.37E+09	1.00E-16	3.86E-16	1.22E-15	1.07E-15	0.0019	0.0203	0.0004
35	3-Nov-08	6-Nov-08	3.45E+09	1.00E-16	1.65E-15	6.37E-15	3.68E-15	0.0083	0.1062	0.0012
36	10-Nov-08	12-Nov-08	1.86E+09	1.00E-16	1.83E-15	6.46E-15	ND	0.0092	0.1077	ND
37	17-Nov-08	20-Nov-08	3.09E+09	1.00E-16	2.91E-16	8.73E-16	ND	0.0015	0.0146	ND
38	24-Nov-08	26-Nov-08	1.54E+09	1.00E-16	9.11E-16	3.51E-15	8.46E-16	0.0046	0.0585	0.0003
39	1-Dec-08	4-Dec-08	2.55E+09	1.00E-16	1.33E-15	3.65E-15	2.12E-15	0.0067	0.0608	0.0007
40	8-Dec-08	12-Dec-08	3.73E+09	1.00E-16	4.04E-15	2.09E-14	1.22E-14	0.0202	0.3483	0.0041
41	15-Dec-08	17-Dec-08	3.73E+09	1.00E-16	3.83E-15	7.12E-14	2.76E-14	0.0192	1.1867	0.0092
Average:			2.99E+09	1.00E-16	4.37E-15	2.34E-14	1.98E-14	2.18E-02	3.91E-01	6.60E-03

Derived Air Concentrations Used			Environmental Air Concentrations Used		
	microCurie per milliliter			microCurie per milliliter	
Natural Uranium	2.00E-11	Year	Natural Uranium	9.00E-14	Year
Radium-226	3.00E-10	Week	Radium-226	9.00E-13	Week
Thorium-	6.00E-12	Year	Thorium-230	3.00E-14	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.				
	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				

Kennecott Uranium Company											
Sweetwater Uranium Project											
Mill Building											
High Volume Air Samples											
2008											
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	14-Apr-08	24-Apr-08	CCD Area	3.85E+09	1.00E-16	8.07E-15	4.34E-15	1.71E-15	0.0404	0.0723	0.0006
2	12-May-08	13-May-08	Mill Precipitation Area	2.78E+09	1.00E-16	4.21E-15	8.63E-16	1.04E-15	0.0211	0.0144	0.0003
3	13-May-08	14-May-08	Mill Grinding Area	2.63E+09	1.00E-16	1.60E-15	3.04E-16	ND	0.0080	0.0051	ND
4	6-Nov-08	6-Nov-08	CCD Area	6.91E+08	1.00E-16	3.91E-15	2.46E-15	1.45E-15	0.0196	0.0410	0.0005
5	9-Nov-08	10-Nov-08	Mill Precipitation Area	2.65E+09	1.00E-16	1.92E-15	9.81E-16	1.51E-16	0.0096	0.0164	0.0001
6	9-Nov-08	10-Nov-08	Mill Grinding Area	2.75E+09	1.00E-16	1.85E-15	7.27E-16	1.82E-16	0.0093	0.0121	0.0001
Average:				2.56E+09	1.00E-16	3.59E-15	1.61E-15	9.07E-16	1.80E-02	2.69E-02	3.02E-04
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										
Derived Air Concentrations Used				**Environmental Air Concentrations Used**							
	microCurie per milliliter				**microCurie per milliliter**						
Natural Uranium	2.00E-11	Year		**Natural Uranium**	9.00E-14	Year					
Radium-226	3.00E-10	Week		**Radium-226**	9.00E-13	Week					
Thorium-230	6.00E-12	Year		**Thorium-230**	3.00E-14	Year					

Kennecott Uranium Company
Sweetwater Uranium Project
Mill Building
High Volume Air Samples
2008

Sample Number	Date Start	Date Stop		Volume (milliliters)	Sample Lower Limit of Detection (LLD) (microCurie per milliliter)	Natural Uranium (microCurie per milliliter)	Thorium 230 (microCurie per milliliter)	Radium 226 (microCurie per milliliter)	Natural Uranium % of DAC (Percent)	Thorium 230 % of DAC (Percent)	Radium 226 % of DAC (Percent)
1	14-Apr-08	24-Apr-08	CCD Area	3.85E+09	1.00E-16	8.07E-15	4.34E-15	1.71E-15	0.0404	0.0723	0.0006
2	12-May-08	13-May-08	Mill Precipitation Area	2.78E+09	1.00E-16	4.21E-15	8.63E-16	1.04E-15	0.0211	0.0144	0.0003
3	13-May-08	14-May-08	Mill Grinding Area	2.63E+09	1.00E-16	1.60E-15	3.04E-16	1.00E-16	0.0080	0.0051	0.0000
4	6-Nov-08	6-Nov-08	CCD Area	6.91E+08	1.00E-16	3.91E-15	2.46E-15	1.45E-15	0.0196	0.0410	0.0005
5	9-Nov-08	10-Nov-08	Mill Precipitation Area	2.65E+09	1.00E-16	1.92E-15	9.81E-16	1.51E-16	0.0096	0.0164	0.0001
6	9-Nov-08	10-Nov-08	Mill Grinding Area	2.75E+09	1.00E-16	1.85E-15	7.27E-16	1.82E-16	0.0093	0.0121	0.0001
Average:				2.56E+09	1.00E-16	3.59E-15	1.61E-15	7.72E-16	1.80E-02	2.69E-02	2.57E-04

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.

Derived Air Concentrations Used	microCurie per milliliter		**Environmental Air Concentrations Used**	microCurie per milliliter	
Natural Uranium	2.00E-11	Year	**Natural Uranium**	9.00E-14	Year
Radium-226	3.00E-10	Week	**Radium-226**	9.00E-13	Week
Thorium-230	6.00E-12	Year	**Thorium-230**	3.00E-14	Year

Kennecott Uranium Company
Sweetwater Uranium Project
Tailings Impoundment
Breathing Zone Samples

2008 Date	Task	Volume (milliliters)	Sample Lower Limit of Detection (LLD) (microCurie per milliliter)	Natural Uranium (microCurie per milliliter)	Thorium 230 (microCurie per milliliter)	Radium 226 (microCurie per milliliter)	Natural Uranium % of DAC (Percent)	Thorium 230 % of DAC (Percent)	Radium 226 % of DAC (Percent)
9-Jan-08	Blade Operator	2.73E+06	3.66E-15	5.49E-15	9.16E-15	3.66E-15	0.027	0.153	0.001
14-Jan-08	Haul Truck Driver	3.11E+06	3.22E-15	ND	ND	ND	ND	ND	ND
21-Jan-08	Trackhoe Operator	3.13E+06	3.19E-15	ND	ND	ND	ND	ND	ND
22-Jan-08	Trackhoe Operator	7.22E+05	1.39E-14	ND	2.77E-14	ND	ND	0.462	ND
13-Feb-08	Truck Driver	2.71E+06	3.69E-15	ND	ND	7.39E-15	ND	ND	0.002
19-Feb-08	Blade Operator	2.95E+06	3.39E-15	ND	8.48E-15	ND	ND	0.141	ND
20-Feb-08	Haul Truck Driver	2.57E+06	3.89E-15	5.83E-15	9.72E-15	2.33E-14	0.029	0.162	0.008
21-Feb-08	Trackhoe Operator	1.62E+06	6.16E-15	1.54E-14	ND	6.16E-15	0.077	ND	0.002
25-Feb-08	Haul Truck Driver	2.79E+06	3.59E-15	ND	5.75E-14	1.26E-14	ND	0.958	0.004
28-Feb-08	Haul Truck Driver	3.48E+06	2.88E-15	ND	ND	1.01E-14	ND	ND	0.003
5-Mar-08	Haul Truck Driver	3.06E+06	3.27E-15	ND	2.12E-14	8.17E-15	ND	0.353	0.003
11-Mar-08	Haul Truck Driver	3.26E+06	3.07E-15	1.38E-14	2.30E-14	6.14E-15	0.069	0.383	0.002
13-Mar-08	Loader Operator	2.87E+06	3.49E-15	ND	6.98E-15	ND	ND	0.116	ND
18-Mar-08	Haul Truck Driver	2.76E+06	3.63E-15	ND	1.81E-14	3.63E-15	ND	0.302	0.001
19-Mar-08	Haul Truck Driver	3.42E+06	2.93E-15	4.39E-15	7.32E-15	2.93E-15	0.022	0.122	0.001
24-Mar-08	Haul Truck Driver	2.42E+06	4.14E-15	6.21E-15	1.66E-14	1.66E-14	0.031	0.277	0.006
25-Mar-08	Haul Truck Driver	1.89E+06	5.28E-15	ND	ND	5.28E-15	ND	ND	0.002
31-Mar-08	Trackhoe Operator	2.73E+06	3.66E-15	ND	ND	ND	ND	ND	ND
2-Apr-08	Haul Truck Driver	2.70E+06	3.70E-15	ND	ND	ND	ND	ND	ND
3-Apr-08	Trackhoe Operator	3.52E+06	2.84E-15	ND	ND	ND	ND	ND	ND
8-Apr-08	Trackhoe Operator	3.20E+06	3.12E-15	3.12E-15	1.25E-14	3.75E-14	0.016	0.208	0.013
9-Apr-08	Haul Truck Driver	3.14E+06	3.19E-15	ND	9.56E-15	4.30E-14	ND	0.159	0.014
10-Apr-08	Trackhoe Operator	2.91E+06	3.44E-15	ND	1.55E-14	2.24E-14	ND	0.258	0.007
16-Apr-08	Blade Operator	1.32E+06	7.59E-15	ND	ND	ND	ND	ND	ND
17-Apr-08	Trackhoe Operator	3.16E+06	3.17E-15	ND	1.43E-14	ND	ND	0.238	ND
21-Apr-08	Tailings Labor	3.10E+06	3.22E-15	ND	2.42E-14	4.19E-14	ND	0.403	ND
22-Apr-08	Haul Truck Driver	3.14E+06	3.18E-15	ND	3.18E-15	ND	ND	0.053	ND
29-Apr-08	Water Truck Driver	9.78E+05	1.02E-14	ND	4.09E-14	ND	ND	0.682	ND
30-Apr-08	Trackhoe Operator	3.63E+06	2.75E-15	2.75E-15	ND	ND	0.014	ND	ND
6-May-08	Loader Operator	3.31E+06	3.02E-15	ND	7.56E-15	ND	ND	0.126	ND
8-May-08	Trackhoe Operator	3.75E+06	2.67E-15	ND	8.01E-15	ND	ND	0.134	ND
13-May-08	Water Truck Driver	2.68E+06	3.73E-15	ND	5.60E-15	ND	ND	0.093	ND
15-May-08	Trackhoe Operator	3.46E+06	2.89E-15	ND	7.23E-15	ND	ND	0.121	ND
19-May-08	Trackhoe Operator	1.11E+06	9.01E-15	1.35E-14	2.07E-13	ND	0.068	3.450	ND
20-May-08	Trackhoe Operator	3.51E+06	2.85E-15	ND	8.55E-15	ND	ND	0.143	ND
3-Jun-08	Blade Operator	2.09E+06	4.78E-15	4.78E-15	9.57E-15	1.44E-14	0.024	0.160	0.005
10-Jun-08	Bulldozer Operator	2.02E+06	4.95E-15	7.42E-15	ND	1.24E-14	0.037	ND	0.004
3-Jul-08	Blade Operator	1.63E+06	6.14E-15	ND	6.14E-15	ND	ND	0.102	ND
13-Aug-08	Bulldozer Operator	3.20E+06	3.13E-15	ND	ND	ND	ND	ND	ND
20-Aug-08	Bulldozer Operator	3.73E+06	2.68E-15	ND	5.10E-15	ND	ND	0.085	ND
21-Aug-08	Trackhoe Operator	3.05E+06	3.28E-15	ND	7.88E-15	ND	ND	0.131	ND
27-Aug-08	Haul Truck Driver	3.19E+06	3.13E-15	3.13E-15	3.13E-15	ND	0.016	0.052	ND
3-Sep-08	Bulldozer Operator	3.02E+06	3.31E-15	ND	ND	ND	ND	ND	ND
9-Sep-08	Blade Operator	3.49E+06	2.86E-15	7.16E-15	1.10E-14	ND	0.036	0.183	ND
10-Sep-08	Trackhoe Operator	1.39E+06	7.21E-15	3.24E-14	ND	ND	0.162	ND	ND
11-Sep-08	Trackhoe Operator	5.19E+05	1.93E-14	2.89E-14	ND	ND	3.000	ND	ND
17-Sep-08	Bulldozer Operator	2.19E+06	4.56E-15	ND	ND	ND	ND	ND	ND
18-Sep-08	Trackhoe Operator	2.05E+06	4.89E-15	3.67E-14	ND	7.33E-15	0.184	ND	0.002
6-Oct-08	Trackhoe Operator	3.27E+06	3.06E-15	ND	ND	8.57E-15	ND	ND	0.003
13-Oct-08	Blade Operator	2.77E+06	3.61E-15	ND	ND	ND	ND	ND	ND
23-Oct-08	Bulldozer Operator	2.14E+06	4.68E-15	ND	ND	ND	ND	ND	ND
25-Oct-08	Trackhoe Operator	1.27E+06	7.86E-15	ND	2.16E-14	1.57E-14	ND	0.360	0.005
28-Oct-08	Trackhoe Operator	2.93E+06	3.41E-15	5.12E-15	1.45E-14	5.12E-15	0.026	0.242	0.002
4-Nov-08	Trackhoe Operator	2.82E+06	3.55E-15	5.32E-15	ND	ND	0.027	ND	ND
5-Nov-08	Bulldozer Operator	1.49E+06	6.70E-15	ND	1.31E-14	ND	ND	0.218	ND
11-Nov-08	Bulldozer Operator	1.31E+06	7.63E-15	ND	ND	ND	ND	ND	ND
19-Nov-08	Trackhoe Operator	3.66E+06	2.73E-15	ND	ND	ND	ND	ND	ND
4-Dec-08	Haul Truck Driver	3.06E+06	3.26E-15	ND	1.47E-14	ND	ND	0.245	ND
17-Dec-08	Blade Operator	7.11E+05	1.41E-14	ND	ND	ND	ND	ND	ND
Average:		2.61E+06	4.72E-15	1.12E-14	1.99E-14	1.43E-14	2.15E-01	3.32E-01	4.32E-03

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 tailings impoundment workers are unlikely to receive in excess of 10% of the applicable ALI thus individual monitoring of intakes is not required.

		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)
Derived Air Concentrations Used									
	microCurie per								
Natural Uranium	2.00E-11								
Radium-226	3.00E-10								
Thorium-230	6.00E-12								

Kennecott Uranium Company
Sweetwater Uranium Project
Tailings Impoundment
Breathing Zone Samples
2008

Date	Task	Volume (milliliters)	Sample Lower Limit of Detection (LLD) (microCurie per milliliter)	Natural Uranium (microCurie per milliliter)	Thorium-230 (microCurie per milliliter)	Radium-226 (microCurie per milliliter)	Natural Uranium % of DAC (Percent)	Thorium 230 % of DAC (Percent)	Radium 226 % of DAC (Percent)
9-Jan-08	Blade Operator	2.73E+06	3.66E-15	5.49E-15	9.16E-15	3.66E-15	0.027	0.153	0.001
14-Jan-08	Haul Truck Driver	3.11E+06	3.22E-15	3.22E-15	3.22E-15	3.22E-15	0.016	0.054	0.001
21-Jan-08	Trackhoe Operator	3.13E+06	3.19E-15	3.19E-15	3.19E-15	3.19E-15	0.016	0.053	0.001
22-Jan-08	Trackhoe Operator	7.22E+05	1.39E-14	1.39E-14	2.77E-14	1.39E-14	0.070	0.462	0.005
13-Feb-08	Truck Driver	2.71E+06	3.69E-15	3.69E-15	3.69E-15	7.39E-15	0.018	0.062	0.002
19-Feb-08	Blade Operator	2.95E+06	3.39E-15	3.39E-15	8.48E-15	3.39E-15	0.017	0.141	0.001
20-Feb-08	Haul Truck Driver	2.57E+06	3.89E-15	5.83E-15	9.72E-15	2.33E-14	0.029	0.162	0.008
21-Feb-08	Trackhoe Operator	1.62E+06	6.16E-15	1.54E-14	6.16E-15	6.16E-15	0.077	0.103	0.002
25-Feb-08	Haul Truck Driver	2.79E+06	3.59E-15	3.59E-15	5.75E-14	1.26E-14	0.018	0.958	0.004
28-Feb-08	Haul Truck Driver	3.48E+06	2.88E-15	2.88E-15	2.88E-15	1.01E-14	0.014	0.048	0.003
5-Mar-08	Haul Truck Driver	3.06E+06	3.27E-15	3.27E-15	2.12E-14	8.17E-15	0.016	0.353	0.003
11-Mar-08	Haul Truck Driver	3.26E+06	3.07E-15	1.38E-14	2.30E-14	6.14E-15	0.069	0.383	0.002
13-Mar-08	Loader Operator	2.87E+06	3.49E-15	3.49E-15	6.98E-15	3.49E-15	0.017	0.116	0.001
18-Mar-08	Haul Truck Driver	2.76E+06	3.63E-15	3.63E-15	1.81E-14	3.63E-15	0.018	0.302	0.001
19-Mar-08	Haul Truck Driver	3.42E+06	2.93E-15	4.39E-15	7.32E-15	2.93E-15	0.022	0.122	0.001
24-Mar-08	Haul Truck Driver	2.42E+06	4.14E-15	6.21E-15	1.66E-14	1.66E-14	0.031	0.277	0.006
25-Mar-08	Haul Truck Driver	1.89E+06	5.28E-15	5.28E-15	5.28E-15	5.28E-15	0.026	0.088	0.002
31-Mar-08	Trackhoe Operator	2.73E+06	3.66E-15	3.66E-15	3.66E-15	3.66E-15	0.018	0.061	0.001
2-Apr-08	Haul Truck Driver	2.70E+06	3.70E-15	3.70E-15	3.70E-15	3.70E-15	0.019	0.062	0.001
3-Apr-08	Trackhoe Operator	3.52E+06	2.84E-15	2.84E-15	2.84E-15	2.84E-15	0.014	0.047	0.001
8-Apr-08	Trackhoe Operator	3.20E+06	3.12E-15	3.12E-15	1.25E-14	3.75E-14	0.016	0.208	0.013
9-Apr-08	Haul Truck Driver	3.14E+06	3.19E-15	3.19E-15	9.56E-15	4.30E-14	0.016	0.159	0.014
10-Apr-08	Trackhoe Operator	2.91E+06	3.44E-15	3.44E-15	1.55E-14	2.24E-14	0.017	0.258	0.007
16-Apr-08	Blade Operator	1.32E+06	7.59E-15	7.59E-15	7.59E-15	7.59E-15	0.038	0.127	0.003
17-Apr-08	Trackhoe Operator	3.16E+06	3.17E-15	3.17E-15	1.43E-14	3.17E-15	0.016	0.238	0.001
21-Apr-08	Tailings Labor	3.10E+06	3.22E-15	3.22E-15	2.42E-14	4.19E-14	0.016	0.403	0.014
22-Apr-08	Haul Truck Driver	3.14E+06	3.18E-15	3.18E-15	3.18E-15	3.18E-15	0.016	0.053	0.001
29-Apr-08	Water Truck Driver	9.78E+05	1.02E-14	1.02E-14	4.09E-14	1.02E-14	0.051	0.682	0.003
30-Apr-08	Trackhoe Operator	3.63E+06	2.75E-15	2.75E-15	2.75E-15	2.75E-15	0.014	0.046	0.001
6-May-08	Loader Operator	3.31E+06	3.02E-15	3.02E-15	7.56E-15	3.02E-15	0.015	0.126	0.001
8-May-08	Trackhoe Operator	3.75E+06	2.67E-15	2.67E-15	8.01E-15	2.67E-15	0.013	0.134	0.001
13-May-08	Water Truck Driver	2.68E+06	3.73E-15	3.73E-15	5.60E-15	3.73E-15	0.019	0.093	0.001
15-May-08	Trackhoe Operator	3.46E+06	2.89E-15	2.89E-15	7.23E-15	2.89E-15	0.014	0.121	0.001
19-May-08	Trackhoe Operator	1.11E+06	9.01E-15	1.35E-14	2.07E-13	9.01E-15	0.068	3.450	0.003
20-May-08	Trackhoe Operator	3.51E+06	2.85E-15	2.85E-15	8.55E-15	2.85E-15	0.014	0.143	0.001
3-Jun-08	Blade Operator	2.09E+06	4.78E-15	4.78E-15	9.57E-15	1.44E-14	0.024	0.160	0.005
10-Jun-08	Bulldozer Operator	2.02E+06	4.95E-15	7.42E-15	4.95E-15	1.24E-14	0.037	0.083	0.004
3-Jul-08	Blade Operator	1.63E+06	6.14E-15	6.14E-15	6.14E-15	6.14E-15	0.031	0.102	0.002
13-Aug-08	Bulldozer Operator	3.20E+06	3.13E-15	3.13E-15	3.13E-15	3.13E-15	0.016	0.052	0.001
20-Aug-08	Bulldozer Operator	3.73E+06	2.68E-15	2.68E-15	5.10E-15	2.68E-15	0.013	0.085	0.001
21-Aug-08	Trackhoe Operator	3.05E+06	3.28E-15	3.28E-15	7.88E-15	3.28E-15	0.016	0.131	0.001
27-Aug-08	Haul Truck Driver	3.19E+06	3.13E-15	3.13E-15	3.13E-15	3.13E-15	0.016	0.052	0.001
3-Sep-08	Bulldozer Operator	3.02E+06	3.31E-15	3.31E-15	1.01E-14	3.31E-15	0.017	0.168	0.001
9-Sep-08	Blade Operator	3.49E+06	2.86E-15	7.16E-15	1.10E-14	2.86E-15	0.036	0.183	0.001
10-Sep-08	Trackhoe Operator	1.39E+06	7.21E-15	3.24E-14	7.21E-15	7.21E-15	0.162	0.120	0.002
11-Sep-08	Trackhoe Operator	5.19E+05	1.93E-14	2.89E-14	1.93E-14	1.93E-14	0.145	0.322	0.006
17-Sep-08	Bulldozer Operator	2.19E+06	4.56E-15	4.56E-15	4.56E-15	4.56E-15	0.023	0.076	0.002
18-Sep-08	Trackhoe Operator	2.05E+06	4.89E-15	3.67E-14	4.89E-15	7.33E-15	0.184	0.082	0.002
6-Oct-08	Trackhoe Operator	3.27E+06	3.06E-15	3.06E-15	3.06E-15	8.57E-15	0.015	0.051	0.003
13-Oct-08	Blade Operator	2.77E+06	3.61E-15	3.61E-15	3.61E-15	3.61E-15	0.018	0.060	0.001
23-Oct-08	Bulldozer Operator	2.14E+06	4.68E-15	4.68E-15	4.68E-15	4.68E-15	0.023	0.078	0.002
25-Oct-08	Trackhoe Operator	1.27E+06	7.86E-15	7.86E-15	2.16E-14	1.57E-14	0.039	0.360	0.005
28-Oct-08	Trackhoe Operator	2.93E+06	3.41E-15	5.12E-15	1.45E-14	5.12E-15	0.026	0.242	0.002
4-Nov-08	Trackhoe Operator	2.82E+06	3.55E-15	5.32E-15	3.55E-15	3.55E-15	0.027	0.059	0.001
5-Nov-08	Bulldozer Operator	1.49E+06	6.70E-15	6.70E-15	1.31E-14	6.70E-15	0.034	0.218	0.002
11-Nov-08	Bulldozer Operator	1.31E+06	7.63E-15	7.63E-15	7.63E-15	7.62E-15	0.038	0.127	0.003
19-Nov-08	Trackhoe Operator	3.66E+06	2.73E-15	2.73E-15	2.73E-15	2.73E-15	0.014	0.046	0.001
4-Dec-08	Haul Truck Driver	3.06E+06	3.26E-15	3.26E-15	1.47E-14	3.26E-15	0.016	0.245	0.001
17-Dec-08	Blade Operator	7.11E+05	1.41E-14	1.41E-14	1.41E-14	1.41E-14	0.071	0.235	0.005
AVERAGE:		2.61E+06	4.72E-15	6.56E-15	1.38E-14	8.55E-15	3.28E-02	2.30E-01	2.85E-03

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 tailings impoundment workers are unlikely to receive in excess of 10% of the applicable ALI thus individual monitoring of intakes is not required.

Date	Task	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
		(milliliters)	(microCurie per milliliter)	(microCurie per milliliter)	(microCurie per milliliter)	(microCurie per milliliter)	(Percent)	(Percent)	(Percent)
Derived Air Concentrations Used:									
	microCurie per								
Natural Uranium	2.00E-11								
Radium-226	3.00E-10								
Thorium-230	6.00E-12								

Kennecott Uranium Company
Sweetwater Uranium Project
Mill
Breathing Zone Samples
2008

Date	Task	Volume (milliliters)	Sample Lower Limit of Detection (LLD) (microCurie per milliliter)	Natural Uranium (microCurie per milliliter)	Thorium-230 (microCurie per milliliter)	Radium-226 (microCurie per milliliter)	Natural Uranium % of DAC (Percent)	Thorium 230 % of DAC (Percent)	Radium 226 % of DAC (Percent)
31-Mar-08	Mill Foreman	4.04E+06	9.61E-15	ND	ND	ND	ND	ND	ND
14-Apr-08	Counter-Current Decantation (CCD)	2.00E+06	5.01E-15	ND	5.01E-15	ND	ND	0.084	ND
21-Apr-08	Counter-Current Decantation (CCD)	8.48E+05	1.18E-14	ND	3.54E-14	1.24E-13	ND	0.590	0.041
23-Apr-08	Counter-Current Decantation (CCD)	3.60E+06	2.78E-15	ND	1.11E-14	ND	ND	0.185	ND
24-Jun-08	Mill Foreman	4.16E+05	2.40E-14	ND	ND	9.62E-14	ND	ND	0.032
27-Oct-08	Mill Foreman	6.48E+05	1.54E-14	2.31E-14	2.93E-14	ND	0.116	0.488	ND
1-Dec-08	Mill Foreman # 1	2.03E+05	4.93E-14	4.93E-14	ND	ND	0.247	ND	ND
1-Dec-08	Mill Foreman # 2	7.95E+05	1.26E-14	ND	ND	ND	ND	ND	ND
Average:		1.57E+06	1.63E-14	3.62E-14	2.02E-14	1.10E-13	1.81E-01	3.37E-01	3.67E-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 workers are 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
Radium-226	3.00E-10
Thorium-230	6.00E-12

Kennecott Uranium Company									
Sweetwater Uranium Project									
Mill									
Breathing Zone Samples									
2008									
		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)
31-Mar-08	Mill Foreman	4.04E+06	9.61E-15	9.61E-15	9.61E-15	9.61E-15	0.048	0.160	0.003
14-Apr-08	Counter-Current Decantation (CCD)	2.00E+06	5.01E-15	5.01E-15	5.01E-15	5.01E-15	0.025	0.084	0.002
21-Apr-08	Counter-Current Decantation (CCD)	8.48E+05	1.18E-14	1.18E-14	3.54E-14	1.24E-13	0.059	0.590	0.041
23-Apr-08	Counter-Current Decantation (CCD)	3.60E+06	2.78E-15	2.78E-15	1.11E-14	2.78E-15	0.014	0.185	0.001
24-Jun-08	Mill Foreman	4.16E+05	2.40E-14	2.40E-14	2.40E-14	9.62E-14	0.120	0.400	0.032
27-Oct-08	Mill Foreman	6.48E+05	1.54E-14	2.31E-14	2.93E-14	1.54E-14	0.116	0.488	0.005
1-Dec-08	Mill Foreman, sample # 1	2.03E+05	4.93E-14	4.93E-14	4.93E-14	4.93E-14	0.247	0.822	0.016
1-Dec-08	Mill Foreman, sample # 2	7.95E+05	1.26E-14	1.26E-14	1.26E-14	1.26E-14	0.063	0.210	0.004
Average:		1.57E+06	1.63E-14	1.73E-14	2.20E-14	3.94E-14	8.64E-02	3.67E-01	1.31E-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 workers are 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								
Radium-226	3.00E-10								
Thorium-230	6.00E-12								

Kennecott Uranium Company									
Sweetwater Uranium Project									
Mill Foreman									
Breathing Zone Samples									
2008									
		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)
31-Mar-08	Mill Foreman	1.04E+06	9.61E-15	9.61E-15	9.61E-15	9.61E-15	0.048	0.160	0.003
24-Jun-08	Mill Foreman	4.16E+05	2.40E-14	2.40E-14	2.40E-14	9.62E-14	0.120	0.400	0.032
27-Oct-08	Mill Foreman	6.48E+05	1.54E-14	2.31E-14	2.93E-14	1.54E-14	0.116	0.488	0.005
1-Dec-08	Mill Foreman # 1	2.03E+05	4.93E-14	4.93E-14	4.93E-14	4.93E-14	0.247	0.822	0.016
1-Dec-08	Mill Foreman # 2	7.95E+05	1.26E-14	1.26E-14	1.26E-14	1.26E-14	0.063	0.210	0.004
Average:		6.20E+05	2.22E-14	2.37E-14	2.50E-14	3.66E-14	1.19E-01	4.16E-01	1.22E-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 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								
Natural Uranium	2.00E-11								
Radium-226	3.00E-10								
Thorium-230	6.00E-12								

Kennecott Uranium Company									
Sweetwater Uranium Project									
Mill Foreman									
Breathing Zone Samples									
2008									
		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)**
31-Mar-08	Mill Foreman	1.04E+06	9.61E-15	ND	ND	ND	ND	ND	ND
24-Jun-08	Mill Foreman	4.16E+05	2.40E-14	ND	ND	9.62E-14	ND	ND	0.032
27-Oct-08	Mill Foreman	6.48E+05	1.54E-14	2.31E-14	2.93E-14	ND	0.116	0.488	ND
1-Dec-08	Mill Foreman # 1	2.03E+05	4.93E-14	4.93E-14	ND	ND	0.247	ND	ND
1-Dec-08	Mill Foreman # 2	7.95E+05	1.26E-14	ND	ND	ND	ND	ND	ND
Average:		6.20E+05	2.22E-14	3.62E-14	2.93E-14	9.62E-14	1.81E-01	4.88E-01	3.21E-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								
Natural Uranium	2.00E-11								
Radium-226	3.00E-10								
Thorium-230	6.00E-12								

Memorandum

Oscar Paulson
Facility Supervisor
Kennecott Uranium Company

February 2, 2008

To: NRC File

Subject: Summary of Radiation Instrument Calibrations – 2008

Instrument		Date(s) Calibrated
Calibration Orifices (Annual calibration required)		
	Lo Vol-40A S/N M100	2-11-08
	Hi Vol-25A S/N 8080978	2-11-08
	Sierra Instruments TE-5025A	2-11-08
Calibrators (Annual calibration required)		
	CD-530-1 Digital Venturi Calibrator S/N 3039	2-19-08 & 11-12-08
Alpha Detectors		
	43-5 S/N P-2425	1-2-08 & 8-6-08
	43-5 S/N P-2426	1-2-08 & 7-9-08
	43-5 S/N P-2427	6-4-08, 12-5-08 & 12-10-08
	43-5 S/N P-2428	1-2-08 & 7-9-08
	43-5 S/N P-2429	12-12-07 & 8-13-08
	43-90 S/N PR-138872	6-3-08, 12-5-08 & 12-10-08
	43-90 S/N PR-138874	2-15-08 & 8-13-08
	43-90 S/N 232499	5-28-08 & 12-1-08
	43-1 S/N PR-206925	1-3-08 & 7-10-08
	AC3-5 S/N 3793	6-12-08 & 12-29-08
Gamma Meters/Detectors		
	12S S/N 11816	6-11-08 & 12-22-08
	5 S/N 8170	6-11-08 & 12-59-08
	44-10 S/N 206932	1-3-08 & 7-11-08
	44-10 S/N 233869	12-21-07 & 7-10-08
	19 S/N 16938	6-11-08 & 12-26-08
	44-10 S/N 252103	1-11-08 & 7-11-08
	44-10 S/N 252068	5-29-08 & 12-1-08
Rate Meters		
	177 S/N 14390	2-14-08 & 8-13-08
	177 S/N 14407	6-2-08 &12-4-08
	2350-1 S/N 192613	5-28-08 & 12-1-08
	2350-1 S/N 216182	12-21-07 & 7-9-08
	2350-1 S/N 235547	5-29-08 & 12-1-08
	2350-1 S/N 235565	12-2-08 & 7-9-08

	Model 3 S/N 157539	6-4-08 & 12-5-08
	Model 12 S/N 12280	12-20-07 & 7-14-08
	PRS-1 S/N 330/3793	6-12-08 & 12-29-08
SAC R4		
	S/N 383	5-27-08 & 11-26-08
SAC R5		
	S/N 614	12-7-07 & 6-12-08
	S/N 965	5-22-08 & 11-24-08
	S/N 602548	5-20-08 & 11-24-08
Scaler		
	MS-2 S/N 738	5-20-08 & 11-24-08
	MS-2 S/N 994	6-12-08 & 12-3-08
Beta Gamma Detector		
	Model 44-1 S/N PR-156890	12-20-07 & 7-14-08
	Model 44-9 S/N PR-093335	6-4-08, 12-8-08 & 12-9-08
Air Pumps		
	Bendix BDX-44 S/N 11-79-170	Used for personal breathing zone sampling for tailings impoundment work. Please see attached sheet
	Buck Basic 12 S/N 12486	
	Buck Basic 12 S/N 12494	
Scintillation Detector		
	Model SPA-1 S/N 704727	5-22-08 & 11-25-08
Hi Vol Air Sampler		
	S/N Unit # 1	1-17-08, 6-26-08, 9-29-08 & 12-7-08
	S/N Unit # 2	1-17-08, 4-14-08, 9-29-08 & 12-7-08
	S/N Unit # 3	1-30-08, 4-10-08, 9-22-08 & 12-7-08
	S/N Unit # 4	1-17-08, 4-2-08, 6-26-08, 9-29-08 & 12-7-08
Lo Vol Air Sampler (Graseby)		
	Unit #2	1-16-08, 2-26-08 & 3-29-08
Lo Vol Air Sampler (F & J Specialties)		
	DF-604 S/N 8240	4-7-08, 5-5-08, 6-2-08, 7-28-08, 8-4-08, 9-8-08, 10-6-08 & 12-2-08. Annual factory calibration: February 19, 2008 and November 2008.
	DF-604 S/N 10016	Annual Factory calibration: December 3, 2008. Unit not used / returned – unit miscalibrated. Unit was originally calibrated in cubic feet per minute (cfm) and the unit was returned to be recalibrated in liters per minute (lpm).

<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 was operated at that single location from January 2 to January 31, 2008, March 5 5o October 30, 2008 and December 2 to December 14, 2008. The Graseby Unit #2 was used at that location from January 31 to March 5, 2008, October 30 to December 2, 2008 and December 13 2008 to February 3, 2009. Units were calibrated monthly when in actual use.

In service Date	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Unit # 1 In Service Dates * DF-604 S/N 8240												
Unit # 2 In Service Dates * (Graseby)												

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:

Bendix BDX-44 S/N 11-79-170

Date	Time
3-29-08	15:51
6-26-08	16:12
9-14-08	17:33

The unit failed on September 14, 2008 and was discarded.

Buck Basic 12 – S/N B12527

Date	Time
10-22-08	18:02
10-27-08	18:06
10-28-08	18:02
11-9-08	16:14
11-25-08	16:46
12-9-08	7:17
12-11-08	16:20
12-21-08	16:26

Unit acquired October 2008

Buck Basic 12 – S/N B12486

Date	Time	Date	Time	Date	Time	Date	Time	Date	Time	Date	Time
1-16-08	16:58	3-12-08	16:57	4-10-08	17:32	5-8-08	17:17	7-5-08	17:40	10-12-08	18:05
1-29-08	15:59	3-16-08	18:01	4-14-08	17:45	5-15-08	17:40	8-3-08	18:19	10-19-08	15:12
2-19-08	17:32	3-22-08	18:11	4-17-08	17:30	5-19-08	17:29	8-20-08	17:35	10-28-08	8:32
2-21-08	7:00	4-1-08	17:50	4-21-08	17:34	6-3-08	17:38	9-2-08	17:45	11-9-08	16:14
2-27-08	17:08	4-3-08	17:37	4-27-08	16:54	6-10-08	17:06	9-14-08	17:33	11-25-08	16:46
3-11-08	7:45	4-9-08	17:54	5-4-08	17:31	6-11-08	13:50	9-24-08	17:08		

Returned from repair- certificate of conformance dated December 8, 2008 issued by A.P. Buck, Inc.

Buck Basic 12 – S/N B12494

Date	Time	Date	Time	Date	Time	Date	Time	Date	Time	Date	Time
1-16-08	16:58	3-25-08	7:45	4-21-08	17:34	6-10-08	17:06	8-20-08	17:35	9-24-08	11:47
1-29-08	15:59	3-29-08	15:41	4-27-08	16:54	6-11-08	13:43	9-2-08	17:45	9-25-08	13:00
2-21-08	7:00	4-1-08	17:50	5-4-08	17:31	6-11-08	18:07	9-3-08	17:07	10-19-08	15:12
2-27-08	17:08	4-3-08	17:37	5-8-08	17:17	6-26-08	16:43	9-10-08	18:10	11-25-08	16:46
3-12-08	16:57	4-10-08	15:28	5-19-08	17:29	7-5-08	17:40	9-10-08	18:10	12-9-08	7:17
3-22-08	06:11	4-17-08	7:00	5-21-08	15:00	8-3-08	18:19	9-14-08	17:33	12-11-08	16:20

Oscar A Paulson

Oscar Paulson
Facility Supervisor

RIO TINTO
ENERGY AMERICA

Memorandum

Oscar Paulson
Facility Supervisor
Kennecott Uranium Company

10 February 2009

Gamma Radiation Monitoring File

Subject: **External Gamma Radiation Survey Assessment**

In 2008, gamma surveys of the mill and ion exchange areas were conducted on June 24 and December 23, 2008. A gamma survey of the interior of the tailings impoundment was conducted on June 23 and December 23, 2008.

At least twenty-nine (29) locations throughout the Mill and Solvent Extraction Buildings and seventeen (17) locations associated with the IX in June 2008 and nineteen (19) locations associated with the IX in December 2008 and Twenty-nine (29) locations associated with the Mill and Solvent Extraction Buildings were surveyed for gamma radiation.

Gamma readings ranged from 38.1 to 690 µR/hour (217-µR/hr average for the year) for the Ion Exchange related equipment, to 12.7 to 846 µR/hour (90.5 µR/hr average for the year) in the Mill and Solvent Extraction (SX) Buildings.

The stored equipment was monitored as well on June 24, and December 23, 2008.The stored equipment ranged from 11.24 to 3060 µR/hr at thirty (30) centimeters from the equipment. 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 sufficient to require posting under 10 CFR 20.1003. The highest measured gamma dose rate at 30 centimeters from any piece of equipment was 2.68 millirems/hour (.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 27 and December 17, 2007. This area averaged 116.5 µR/hr for 2008. (Please see attached table.)

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 27 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.

Oscar A Paulson
Oscar Paulson

Kennecott Uranium Company		
Sweetwater Uranium Project		
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
Average	37.2	97.8
Standard Deviatior	18.2	50.1
OAP:2007		
resin0001.xls		

Kennecott Uranium Company
Sweetwater Uranium Project

Tailings Impoundment Gamma Radiation Survey

Date:	23-Jun-08	**Rate meter:**	Ludlum Model 2350-1
Time:		**Serial Number:**	235547
		Calibration Date:	29-May-08
Check Source:	Cs-137	**Probe:**	Ludlum Model: 44-10
		Serial Number:	PR252068
Serial Number:	2304	**Calibration Date:**	29-May-08
Counts:	254	**Background:**	17.4 microR/hour

Location **SAMPLE NUMBER**	**Reading**	
1	112.0	microR/hour
2	120.0	microR/hour
3	111.0	microR/hour
4	119.0	microR/hour
5	122.0	microR/hour
6	90.4	microR/hour
7	112.3	microR/hour
8	109.0	microR/hour
9	106.0	microR/hour
10	102.0	microR/hour
11	106.0	microR/hour
12	111.0	microR/hour
13	105.0	microR/hour
14	109.0	microR/hour
15	111.0	microR/hour
16	122.5	microR/hour
17	124.0	microR/hour
18	127.0	microR/hour
19	134.0	microR/hour
20	144.0	microR/hour
21	129.0	microR/hour
22	127.0	microR/hour
23	124.0	microR/hour
24	115.0	microR/hour
25	116.0	microR/hour
26	102.0	microR/hour
27	98.7	microR/hour
28	89.6	microR/hour
29	102.0	microR/hour
30	100.0	microR/hour
31	96.0	microR/hour
32	105.0	microR/hour
33	115.0	microR/hour
34	123.0	microR/hour
35	122.0	microR/hour
36	129.0	microR/hour
37	125.0	microR/hour
38	131.3	microR/hour
39	131.0	microR/hour
40	123.0	microR/hour
41	118.0	microR/hour
42	121.0	microR/hour
43	116.0	microR/hour
44	112.0	microR/hour
45	109.0	microR/hour
46	109.0	microR/hour
47	100.0	microR/hour
48	130.0	microR/hour
49	126.0	microR/hour
50	131.0	microR/hour
51	135.0	microR/hour

52	131.0	microR/hour
53	131.0	microR/hour
54	126.5	microR/hour
55	119.0	microR/hour
56	122.0	microR/hour
57	134.0	microR/hour
58	132.0	microR/hour
56	115.0	microR/hour
60	134.0	microR/hour
61	113.0	microR/hour
62	123.0	microR/hour
63	115.0	microR/hour
64	117.0	microR/hour
65	108.0	microR/hour
66	117.0	microR/hour
67	123.0	microR/hour
68	119.0	microR/hour
69	129.5	microR/hour
70	123.0	microR/hour
71	119.0	microR/hour
72	124.0	microR/hour
73	128.0	microR/hour
74	134.0	microR/hour
75	142.0	microR/hour
76	138.0	microR/hour
77	129.0	microR/hour
78	103.0	microR/hour
79	125.0	microR/hour
80	121.0	microR/hour
81	127.0	microR/hour
82	130.0	microR/hour
83	128.0	microR/hour
84	116.0	microR/hour
85	119.0	microR/hour
86	129.0	microR/hour
87	121.0	microR/hour
88	136.5	microR/hour
89	129.0	microR/hour
90	132.0	microR/hour
91	132.0	microR/hour
92	134.0	microR/hour
93	132.0	microR/hour
94	136.0	microR/hour
95	138.5	microR/hour
96	132.0	microR/hour
97	135.0	microR/hour
98	130.0	microR/hour
99	141.0	microR/hour
100	128.0	microR/hour
101	129.0	microR/hour
102	138.0	microR/hour
103	131.0	microR/hour
104	120.0	microR/hour
105	123.0	microR/hour
106	119.0	microR/hour
107	122.0	microR/hour
108	114.0	microR/hour
109	114.0	microR/hour
110	112.0	microR/hour
111	124.0	microR/hour
112	136.0	microR/hour
113	141.0	microR/hour
114	144.0	microR/hour
115	127.0	microR/hour
116	151.0	microR/hour

117	118.0	microR/hour
118	127.0	microR/hour
119	123.0	microR/hour
120	118.0	microR/hour
121	124.0	microR/hour
122	120.0	microR/hour
123	132.0	microR/hour
124	131.0	microR/hour
125	130.0	microR/hour
126	127.0	microR/hour
127	131.0	microR/hour
128	129.0	microR/hour
129	129.0	microR/hour
130	145.0	microR/hour
131	159.0	microR/hour
132	151.0	microR/hour
133	135.0	microR/hour
134	119.0	microR/hour
135	122.0	microR/hour
136	121.0	microR/hour
137	117.0	microR/hour
138	125.0	microR/hour
139	123.0	microR/hour
140	130.0	microR/hour
141	119.0	microR/hour
142	116.0	microR/hour
143	122.0	microR/hour
144	129.0	microR/hour
145	132.0	microR/hour
146	136.0	microR/hour
147	134.0	microR/hour
148	145.0	microR/hour
149	133.0	microR/hour
150	134.0	microR/hour
151	121.0	microR/hour
152	101.0	microR/hour
153	94.0	microR/hour
154	129.0	microR/hour
155	136.0	microR/hour
156	137.0	microR/hour
157	136.0	microR/hour
158	137.0	microR/hour
159	123.0	microR/hour
160	117.0	microR/hour
161	118.0	microR/hour
162	111.0	microR/hour
163	108.0	microR/hour
164	109.0	microR/hour

Average:	123.3
Standard Deviation:	12.0
Median:	123.5
Maximum:	159.0
Minimum:	89.6

kh:6/24/08
gamma_tails12.xls

Kennecott Uranium Company
Sweetwater Uranium Project

Tailings Impoundment Gamma Radiation Survey

Date:	23-Dec-08	Rate meter:	Ludlum Model 2350-1
Time:		Serial Number:	192613
		Calibration Date:	01-Dec-08
Check Source:	CS-137	Probe:	Ludlum Model: 44-10
		Serial Number:	PR-252103
Serial Number:	2304	Calibration Date:	01-Dec-08
Counts:	265	Background:	17.2
Sampled By:	O. Paulson		

Location SAMPLE NUMBER POINT	Reading	
1	37.6	microR/hour
	39.4	microR/hour
	49.6	microR/hour
	57.4	microR/hour
	62.8	microR/hour
	57.4	microR/hour
	62.1	microR/hour
	103.0	microR/hour
	101.0	microR/hour
	95.1	microR/hour
#5	104.0	microR/hour
	89.8	microR/hour
	87.5	microR/hour
	87.5	microR/hour
	79.2	microR/hour
	90.6	microR/hour
	85.4	microR/hour
	94.7	microR/hour
Pond Cross	101.0	microR/hour
	79.4	microR/hour
	95.3	microR/hour
	104.0	microR/hour
	114.0	microR/hour
	107.0	microR/hour
	109.0	microR/hour
#2	107.0	microR/hour
	107.0	microR/hour
	117.0	microR/hour
	108.0	microR/hour
	111.0	microR/hour
	119.0	microR/hour
Pond Cross	114.0	microR/hour
	110.0	microR/hour
	107.0	microR/hour
	107.0	microR/hour
	106.0	microR/hour
	113.0	microR/hour
#3	100.0	microR/hour
	102.0	microR/hour
	100.0	microR/hour
	102.0	microR/hour
	110.0	microR/hour
	109.0	microR/hour
	109.0	microR/hour
Pond Cross	120.0	microR/hour
	111.0	microR/hour
	108.0	microR/hour
	109.0	microR/hour
	112.0	microR/hour
	117.0	microR/hour
	113.0	microR/hour
	114.0	microR/hour

#4	120.0	microR/hour
	110.0	microR/hour
	117.0	microR/hour
	121.0	microR/hour
	121.0	microR/hour
	108.0	microR/hour
Pond Cross	110.0	microR/hour
	105.0	microR/hour
	93.8	microR/hour
	97.3	microR/hour
	91.8	microR/hour
	95.6	microR/hour
#5	100.0	microR/hour

Average:	**99.2**
Standard Deviation:	**19.1**
Median:	**106.0**
Maximum:	**121.0**
Minimum:	**37.6**

radiation.files/gamma.tails_12-23-08

KENNECOTT URANIUM COMPANY

RADIATION DOSIMETRY RESULTS / DEEP DOSE 2008

EMPLOYEE TITLE		Dosimeter #	EMPLOYER	January	February	March	April	May	June	July	August	September	October	November	December	Total
FACILITY SUPERVISOR	FS	24	KENNECOTT URANIUM COMPANY	M	M	M	M	M	M	M	M	M	M	M	M	0
MILL FORMAN	MF	26	KENNECOTT URANIUM COMPANY	M	M	M	M	M	M	M	M	M	M	M	M	0
SR. FACILITY TECHNICIAN	FT	27	KENNECOTT URANIUM COMPANY	M	M	M	M	M	M	M	M	M	M	M	M	0
ADMINISTRATIVE COORDINATOR	AC	25	KENNECOTT URANIUM COMPANY	M	M	M	M	M	M	M	M	M	M	M	M	0
DATA ENTRY	DATA	75	ADECCO		M	M	M	M	M	M	M	M	M	M	M	0
DATA ENTRY	DATA # 2	63	ADECCO	M												0
CONTRACT EMPLOYEE																
TITLE			**EMPLOYER**													
PROJECT MANAGER	PM # 1	29	ARCHER CONSTRUCTION, INC.	M	M	M	M	M	M	M	M	M	M	M	M	0
PROJECT MANAGER	PM # 2	31	ARCHER CONSTRUCTION, INC.	M	M	M	M	M	M	M	M	M	M	M	M	0
SUPERVISOR	SPV # 1	51	ARCHER CONSTRUCTION, INC.	M	M	M	M	M	M	2	M	M	M	M	M	2
EQUIPMENT OPERATOR	EO# 3	38	ARCHER CONSTRUCTION, INC.	M	M	M	M	M	1	M	M	M	M	M	M	1
EQUIPMENT OPERATOR	EO# 6	39	ARCHER CONSTRUCTION, INC.	M	M	M	M	M	M	M	M	M	M	M	M	0
EQUIPMENT OPERATOR	EO# 9	44	ARCHER CONSTRUCTION, INC.	M	M	2	M	4	4	3						13
EQUIPMENT OPERATOR	EO# 14	48	ARCHER CONSTRUCTION, INC.	M	M	1	M	3	6	1						11
EQUIPMENT OPERATOR	EO# 15	54	ARCHER CONSTRUCTION, INC.	M	M	1	M	M	M	M / M-2	M	M	M	M	M	1
EQUIPMENT OPERATOR	EO# 19	60	ARCHER CONSTRUCTION, INC.	M	M	3	M	2	4	9	6	M	3	M	M	27
EQUIPMENT OPERATOR	EO# 21	61	ARCHER CONSTRUCTION, INC.	M	M	M	M	M	M	M	M	M	M	M	M	0
EQUIPMENT OPERATOR	EO# 22	62	ARCHER CONSTRUCTION, INC.	M	M	M	M									0
EQUIPMENT OPERATOR	EO# 23	64	ARCHER CONSTRUCTION, INC.	M	M	1	M	M	M	M						1
EQUIPMENT OPERATOR	EO# 25	73	ARCHER CONSTRUCTION, INC.	M	M	M	M	M	2	7	1	M	M	M	M	10
EQUIPMENT OPERATOR	EO# 26	65	ARCHER CONSTRUCTION, INC.	M												0
MECHANIC	MEC # 1	74	ARCHER CONSTRUCTION, INC.	M	M	M	M	1	M	M	M	M	M	M	M	1
EQUIPMENT OPERATOR	EO# 27	77	ARCHER CONSTRUCTION, INC.			M	M									0
EQUIPMENT OPERATOR	EO# 28	78	ARCHER CONSTRUCTION, INC.			M	M	M	M	M	M	M	M	M	M	0
EQUIPMENT OPERATOR	EO# 29	76	ARCHER CONSTRUCTION, INC.		M - 1	M	M	M	M	M	M	M	M	M	M	0
EQUIPMENT OPERATOR	EO # 30	79	ARCHER CONSTRUCTION, INC.				M	M	M	M						0
EQUIPMENT OPERATOR	EO # 31	82	ARCHER CONSTRUCTION, INC.				M	M	M	M	M	M	M	M	M	0
EQUIPMENT OPERATOR	EO # 32	80	ARCHER CONSTRUCTION, INC.				M	M	M	M						0
Carpenter/Equipment Operator	CAR # 2	83	ARCHER CONSTRUCTION, INC.							M - 1	M - 1	M	M	M	M	0
EQIPMENT OPERATOR	EO # 33	84	ARCHER CONSTRUCTION, INC.								M - 3	M	M	M	M	0
EQUIPMENT OPERATOR	EO # 34	86	ARCHER CONSTRUCTION, INC.								M - 2	M	M	M	M	0
Carpenter/Equipment Operator	EO # 35	87	ARCHER CONSTRUCTION, INC.										M - 1	M	M	0
Carpenter/Equipment Operator	CAR # 3	81	ARCHER CONSTRUCTION, INC.				M	M	M	M	M	M	M	M	M	0
VISITOR		35		M	M	M	M	M	M	M	M	M	M	M	M	0
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	M	M	M	M	M	0
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	M	M	M	M	M	M	1	M	M	M	M	1	2
SECURITY	SEC # 2	50	SECURITAS	M	M											0
SECURITY	SEC # 3	85	SECURITAS									M	M	M	M	0

No longer employed by contractor

Not yet hired

Not on site during month

Dosimeter lost/Dose estimated by Landauer, Inc.

M-1 - Issued Visitor Dosimeter

M-2 - Issued Visitor-1 Dosimeter

M-3 - Issued Visitor-3 Dosimeter

Employees listed by number to preserve confidentiality

M = Minimal reporting service of 1 MREM

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

RIO TINTO
ENERGY AMERICA

Memorandum

Oscar Paulson
Facility Supervisor
Kennecott Uranium Company

10 February 2009

Radon Monitoring File

Subject: **Radon Daughter Monitoring Assessment**

In 2008 radon daughter monitoring was conducted on June 9 and December 9, 2008 in the Ion Exchange Area. Radon daughter monitoring was conducted in the Mill Building on June 10 to 16 and December 9, 2008.

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 0.003 WL in the Ion Exchange area (average: 0.001) and ND to 0.049 WL in the Mill Building (average: 0.010). The ventilation fan operated continuously in the Solvent Extraction (SX) Building. Radon levels varied in the SX building from 0.015 to 0.052 WL, averaging 0.046 WL in June 2008 and 0.033 WL in December 2008. 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 2008 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 2008 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 2.9 to 3.9 pCi/L. Radon concentrations on top of the tank varied from 2.2 to 3.4 pCi/L. These values are at background levels since upwind radon concentrations for the facility varied from 2.2 to 3.6 pCi/L during the second half of 2008, as shown in the table below:

2007 Radon Concentrations

Quarter	Bottom of CCD#1 (pCi/L)	Top of CCD#1 (pCi/L)	Upwind (Background) (pCi/L)
1st	3.9	3.4	3.4
2nd	2.9	2.2	2.2
3rd	3.1	2.7	3.9[1]
4th	3.4	3.4	3.4[2]
Average	3.3	2.9	3.2

[1] Rad Trak holder fell apart. Rad Trak unit found on ground. Used average third quarter background from January 1992 to June 2008. Please see Second Half 2008 40.65 Report.
[2] Average of two (2) Rad Trak units.

Radon daughter concentrations at the top and bottom of CCD#1 were low, ranging from 0.007 to 0.027 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".

Oscar A Paulson
Oscar Paulson

Kennecott Uranium Company
Sweetwater Uranium Project
Stored Resin

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
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

Date	Radon	
	Top (WL)	Bottom (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-June-08	0.022	0.027
9-Dec-08	0.009	0.007
Average	0.021	0.020
Standard Deviation:	0.012	0.013

OAP:

resin0001.xls

POTABLE WATER QUALITY SUMMARY

2008

Coliform Count Summary

Date	Drake # 1 (Well Head)	Administration Building Water Supply (PWW-1 or PWW-2)	Change/Shower/Monitoring Trailer
01/08/08	Good	Good	Good
02/04/08	Replacement required sample exceeded holding time.		
02/11/08	Good	Good	Good
03/03/08	Good	Good	Good
04/07/08	Good	Good	Good
05/05/08	Good	Good	Good
06/02/08	Good	Good	Good
07/21/08	Good	Good	Good
08/04/08	Good	Good	Good
09/15/08	Good	Good	Good
10/06/08	Good	Good	Good
11/03/08	Good	Good	Good
12/01/08	Good	Good	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.

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.

Oscar A Paulson

Oscar Paulson

KENNECOTT URANIUM COMPANY
POTABLE WATER QUALITY SUMMARY
2008
DRAKE #1

CHEMICAL ANALYSIS SUMMARY:

Use Suitability	Domestic *	DRAKE #1	DRAKE #1	DRAKE #1	DRAKE #1
Parameter	Concentration **	01/08/08	04/16/08	08/20/08	10/13/08
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	3	2	ND (1)	1
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	47	48	48
Total Dissolved Solids (TDS)	500	160	168	159	180
Zinc (Zn)	5	0.01	0.03	0.02	0.01
pH (Standard Units)	6.5 - 8.5	8.02	8.19	8.16	8.06
Combined Ra226/Ra228 (pCi/L)	5.0 pCi/l	0.7	2.1	2.1	2.8
Natural Uranium (pCi/L)	pCi/L	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)
Uranium - Suspended	mg/L	ND (0.0003)	ND (0.0003)	ND (0.0003)	ND (0.0003)
Uranium - Total	mg/L	ND (0.0003)	ND (0.0003)	ND (0.0003)	ND (0.0003)
Lead 210 (pCi/L)	pCi/L	ND (1.0)	ND (1.0)	6.7 +/- 9.0	ND (1.0)
Total Strontium 90 (pCi/L)	8.0 pCi/l	-	-	-	-
Gross Alpha Radioactivity *** (pCi/L)	15.0 pCi/l	1.4 +/- 0.5	3.4 +/- 0.8	1.3 +/- 0.4	1.3 +/- 0.8

* 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
2008
PWW-1

CHEMICAL ANALYSIS SUMMARY:

Use Suitability Parameter	Domestic * Concentration **	PWW-1 01/08/08	PWW-1 04/16/08	PWW-1 8/19/2008	PWW-1 11/11/2008
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	3	2	ND (1)	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	0.36	0.41	0.08	0.06
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	0.01
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	49	54	58	54
Total Dissolved Solids (TDS)	500	165	169	174	156
Zinc (Zn)	5	ND (0.01)	ND (0.01)	ND (0.01)	0.02
pH (Standard Units)	6.5 - 8.5	8.02	8.21	8.18	8.26
Combined Ra226/Ra228 (pCi/L)	5.0 pCi/l	0.6	0.69	1.45	1.56
Natural Uranium (pCi/L)	pCi/L	0.6	0.6	0.6	1.8
Uranium - Suspended	mg/L	ND (0.0003)	ND (0.0003)	ND (0.0003)	0.0003
Uranium - Total	mg/L	0.0009	0.0009	0.0008	0.003
Lead 210 (pCi/L)	pCi/L	ND (1.0)	ND (1.0)	ND (1.0)	0.6 ± 2.3
Total Strontium 90 (pCi/L)	8.0 pCi/l	-	-	-	-
Gross Alpha Radioactivity *** (pCi/L)	15.0 pCi/l	1.8 +/- 0.6	2.8 +/- 0.8	1.7 +/- 0.5	0.9 ± 0.6

* 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
2008
PWW-2

CHEMICAL ANALYSIS SUMMARY:

Use Suitability	Domestic *	PWW-2	PWW-2	PWW-2	PWW-2
Parameter	Concentration **	01/08/08	04/30/08	9/24/2008	10/13/2008
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	3	2	2	1
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	41	45	46	44
Total Dissolved Solids (TDS)	500	150	168	160	173
Zinc (Zn)	5	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)
pH (Standard Units)	6.5 - 8.5	8.17	8.51	8.49	8.33
Combined Ra226/Ra228	5.0 pCi/l	ND	1.2 pCi/L	2.26	2.36
Natural Uranium	pCi/L	2	2	1.8	1.9
Uranium - Suspended	mg/L	0.0003	ND (0.0003)	ND (0.0003)	ND (0.0003)
Uranium - Total	mg/L	0.0032	0.0029	0.0027	0.0027
Lead 210 (pCi/L)	pCi/L	ND (1)	ND (1)	ND (1)	ND (1)
Total Strontium 90 (pCi/L)	8.0 pCi/l	N/A	N/A	N/A	N/A
Gross Alpha Radioactivity *** (pCi/L)	15.0 pCi/l	1.4 +/- 0.6	1.0 +/- 0.4	0.9 ± 0.4	0.4 ± 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

RIO TINTO
ENERGY AMERICA

Memorandum

Oscar Paulson
Facility Supervisor
Kennecott Uranium Company

3 February 2009

To: Distribution

Subject: Safety and Environmental Review Panel (SERP) – 2008

During the calendar year 2008 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 2008 the licensee has:

- Changed reporting titles / updated the organization chart.

Change 17
This change is covered by SEE # 17 entitled Change in Reporting Titles/ Updated Organization Chart. This change was an administrative change. It changed the name of the individual to whom the Facility Supervisor reports from john Lucas, Manager of Environmental and Regulatory Affairs to Darryl Maunder, Manager of Environmental and Regulatory Affairs.

Oscar A Paulson
Oscar Paulson

Distribution: George Palochak
Roger Strid

RIO TINTO
ENERGY AMERICA

Memorandum

Oscar Paulson
Facility Supervisor
Kennecott Uranium Company

3 February 2009

To: Respiratory Protection File

Subject: Respiratory Protection – 2008

The Mill Foreman, Senior Facility Technician and Archer Construction, Inc.'s Project Manager were the three (3) employees on site that are part of the facility's respirator program in 2008. They received their respirator physicals on August 20, June 2 and October 17, 2008 respectively.

Annual fit tests with stannic chloride irritant smoke and annual instruction on respirator use were conducted on November 13, 2008.

Oscar A Paulson
Oscar Paulson
Facility Supervisor

RIO TINTO
ENERGY AMERICA

Memorandum

Oscar Paulson
Facility Supervisor
Kennecott Uranium Company

9 February 2009

File

Subject: **Releases for Unrestricted Use – 2008**

Releases for unrestricted use issued in 2008 were primarily related to the release of equipment used to move tailings in the tailings impoundment. Fourteen (14) items were released. One (1) item was a piece of liner material being sent for testing. It had the highest total alpha reading of 426.7 dpm/100cm^2. 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 32.0 dpm/100cm^2, less than 10% of the 1000 dpm/100cm^2 release limit. The maximum total alpha measurement was 426.7 dpm/100cm^2 less than 10% of the 5000 dpm/100cm^2 release limit.

Oscar A Paulson
Oscar Paulson

RIO TINTO
ENERGY AMERICA

Memorandum

Oscar Paulson
Facility Supervisor
Kennecott Uranium Company

22 December 2008

To: Standard Operating Procedures File

Subject: Annual Review of Standard Operating Procedures (SOPs)

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 2008. 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 22, 2008 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 11, 2008 to reflect the availability of Archer Construction, Inc. during the winter of 2008-2009 for snow removal.

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

The following radiologic procedures were modified:

- *HP-2 – Gamma Survey* – December 22, 2008
- *HP-3 – Beta Survey* – December 22, 2008
- *HP-4 – Radon Daughter Survey* – December 22, 2008
- *HP-6 – Total Alpha Surveys* – December 22, 2008
- *HP-7 – Personnel Alpha Monitoring and Decontamination* – December 22, 2008
- *HP-9 – Management Control, Bioassay Urine and In Vivo Programs* – December 22, 2008
- *HP-11 – Personnel Air Sampling* – December 22, 2008
- *HP-12 – In-Plant High Volume Particulate Sampling* – December 22, 2008
- *HP-34 – Personnel Dosimetry for External Exposure* – December 22, 2008

- *EP-1 – Low Volume Airborne Particulate Sampling for Suspended Operations using the AccuVol* – December 22, 2008
- *EP-2 – Low Volume Airborne Particulate Sampling* – December 22, 2008
- *EP-11 – Thermoluminescent Dosimeter (TLD) Air Monitors* – December 22, 2008

- *EP-12b – General Surface Water Sampling, Sample Preparation and Water Level Measurement Procedures* – December 22, 2008
- *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* – December 22, 2008

- *TOP-1 – General Tailings and Evaporation Impoundment Procedures* – December 22, 2008
- *TOP-4 – Reduction of Voids in Materials Placed in the Tailings Cell for Disposal* – December 22, 2008

C. Other Procedures

- The *Suspended Operations Procedure* was revised on April 22 and December 7, 2008.

Oscar A Paulson
Oscar Paulson
AnnualReviewSOPs.doc

RIO TINTO
ENERGY AMERICA

Memorandum

Oscar Paulson
Facility Supervisor
Kennecott Uranium Company

9 February 2009

To: Radiation Work Permit File

Subject **Radiation Work Permits**

A single radiation work permit (Radiation Work Permit 2008-1) was issued in 2008. The following pertains:

Type of Work:	Packaging and loading of thirty (30) to 40 (40) corroded drums previously used to store yellowcake slurry for transport to the tailings impoundment for disposal.
Reason for Work:	Drums were corroded, were useless and were a waste.
Reason for Issuance of Permit:	No Standard Operating Procedure existed for this work so it was performed under a Radiation Work Permit.
Conditions of Work:	Work was performed in the Roller Room which is an area requiring respirator use
Results of Monitoring:	
Bioassays:	All (pre and post job) were non-detect.
Dosimetry:	The single employee performing the work under the permit wore a Luxel dosimeter. All doses (deep, eye and shallow) for the month of December 2008 were Non-Detect (M) meaning they were below one (1) millirem.
High Volume Air Sampling:	High volume air sampling was conducted in the Roller Room throughout the work period. Results are provided on the attached spreadsheet.
Breathing Zone Samples:	One (1) breathing zone sample was collected. The results are provided on the attached spreadsheet.
Radon Decay Products:	A sample was taken in the Roller Room. It was 0.002 WL, which is at background (0.008 WL).

The work under the permit was successfully completed with minimal exposures. Sampling results for the permit are attached.

Oscar A Paulson
Oscar Paulson

Kennecott Uranium Company
Sweetwater Uranium Project
Radiation Work Permit 2008-1
High Volume Air Samples
2008

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	9-Dec-08	11-Dec-08	Mill Roller Room	7.76E+08	1.00E-16	2.68E-12	4.25E-14	4.65E-14	13.4000	0.7083	0.0155
Average:				7.76E+08	1.00E-16	2.68E-12	4.25E-14	4.65E-14	1.34E+01	7.08E-01	1.55E-02

Derived Air Concentrations Used				Environmental Air Concentrations Used		
	microCurie per milliliter				microCurie per milliliter	
Natural Uranium	2.00E-11	Year		Natural Uranium	9.00E-14	Year
Radium-226	3.00E-10	Week		Radium-226	9.00E-13	Week
Thorium-230	6.00E-12	Year		Thorium-230	3.00E-14	Year

Kennecott Uranium Company									
Sweetwater Uranium Project									
Radiation Work Permit 2008-1									
Breathing Zone Samples									
2008									
		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)
11-Dec-08	Mill Building / Roller Room	1.20E+06	8.37E-15	1.30E-13	8.37E-15	8.37E-15	0.650	0.140	0.003
Average:		1.20E+06	8.37E-15	1.30E-13	8.37E-15	8.37E-15	6.50E-01	1.40E-01	2.79E-03
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 foreman is unlikely to receive in excess of 10% of the applicable ALI thus individual monitoring of								
	of intakes is not required.								
Derived Air Concentrations Used									
	microCurie per milliliter								
Natural Uranium	2.00E-11								
Radium-226	3.00E-10								
Thorium-230	6.00E-12								

Kennecott Uranium Company
Sweetwater Uranium Project

Radiation Work Permit Summary

Radiation Work Permit: 2008-1

Type of Work: Packaging and removal of old yellowcake slurry drums from the Roller Room for disposal in the tailings impoundment.

Duration of Work: 3.55 Hours Exposure in Roller Room

Respirator: Used

Type: Half face

Protection Factor: 10

Bioassay Results

EMPLOYEE TITLE	EMPLOYER	Pre-job 8-Dec-08	Post-job 15-Dec-08	LLD
Mill Foreman	Kennecott Uranium Company	<5.0	<5.0	5.0

Not on site during month
Radiation Work Permit: 2008-1
Pre-work bioassays were collected
End of job bioassays were collected

Dosimetry Results

		Dec-08
Mill Foreman	Kennecott Uranium Company	M

Note: M = Non-detect
Lower Limit of Detection (LLD): 1 millirem

High Volume Air Sampling Results

Sample Number	Date Start	Stop		Volume (milliliters)	Sample Lower Limit of Detection (LLD) (microCurie per milliliter)	Natural Uranium (microCurie per milliliter)	Thorium-230 (microCurie per milliliter)	Radium-226 (microCurie per milliliter)	Natural Uranium % of DAC (Percent)	Thorium-230 % of DAC (Percent)	Radium-226 % of DAC (Percent)
1	9-Dec-08	11-Dec-08	Roller Room	7.76E+08	1.00E-16	2.68E-12	4.23E-14	4.65E-14	1.34E+01	7.08E-01	1.55E-02
Average:				7.76E+08	1.00E-16	2.68E-12	4.23E-14	4.65E-14	1.34E+01	7.08E-01	1.55E-02

Derived Air Concentrations Used

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

Note: This high volume air sample had a significantly higher natural uranium concentration than the breathing zone sample.
The breathing zone sample was collected in the immediate vicinity of the worker's face.
The high volume air sample was collected some distance away and was impacted by blowing dust not present in the work area.
Consequently the breathing zone sample results are being used to calculate the internal dose to the worker.
The worker was wearing a half face respirator with a protection factor of 10.

High volume air sampler was operated continuously during period of work in September 2007 in the Grinding and Precipitation Areas of the Mill Building

Breathing Zone Sampling Results

Date	Task			Volume (milliliters)	Sample Lower Limit of Detection (LLD) (microCurie per milliliter)	Natural Uranium (microCurie per milliliter)	Thorium-230 (microCurie per milliliter)	Radium-226 (microCurie per milliliter)	Natural Uranium - % of DAC (Percent)	Thorium-230 % of DAC (Percent)	Radium-226 % of DAC (Percent)
Packaging Old Drums	9-Dec-08	11-Dec-08	Roller Room	1.20E+06	8.37E-15	1.30E-13	8.37E-15	8.37E-15	6.50E-01	1.40E-01	2.79E-03
Average:				1.20E+06	8.37E-15	1.30E-13	8.37E-15	8.37E-15	6.50E-01	1.40E-01	2.79E-03

Note: The high volume air sample had a significantly higher natural uranium concentration than the breathing zone sample.
The breathing zone sample was collected in the immediate vicinity of the worker's face.
The high volume air sample was collected some distance away and was impacted by blowing dust not present in the work area.
Consequently the breathing zone sample results are being used to calculate the internal dose to the worker.
The worker was wearing a half face respirator with a protection factor of 10.

Derived Air Concentrations Used

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

Radon Decay Product Sampling

Date:	Location	Result (Working Levels)
9-Dec-08	Roller Room	0.002

Kennecott Uranium Company
Sweetwater Uranium Project

Radiation Work Permit Summary

Radiation Work Permit:		2008-1	
Type of Work:		Mill Assessment	Packaging and removal of old yellowcake slurry drums from the Roller Room for disposal in the tailings impoundment.
Duration of Work:		3.55 Hours	Exposure in Roller Room
Respirator:	Used		
	Type:	Half face	
	Protection Factor:	10	
Dose calculation			
External Gamma:	<1.0	millirems	Based on dosimeter
Radon		0.002 Working Levels	Air sample collected on December 9, 2008.

Airborne Particulates

	Low Exposure **Based on breathing zone sample** **Percent of DAC**	**High Exposure** **Based on high volume air sample** **Percent of DAC**
Natural uranium	6.50E-01	1.34E+01
Thorium-230	1.40E-01	7.08E-01
Radium-226	2.79E-03	1.55E-02

Dose Summation

Airborne Particulates

	Low Dose Based on Breathing Zone Sample (Millirems)	**High Dose - Based on High Volume Air Sample (Millirems)**
Natural Uranium	0.006	0.119
Thorium-230	0.001	0.006
Radium-226	0.000	0.000
Sum	0.007	0.125
External Gamma (Millirems)		
	1.000	(Used Lower Limit of Detection (LLD) of dosimeter) December 2008 result was non-detect
Radon	0.005	
Summed dose:	1.012	1.131

Notes:

A respirator protection factor of 10 was used in the dose calculations for radon and airborne particulates.
The work under Radiation Work Permit #2008-1 occurred between December 9 to 11, 2008.

The employee's dosimeter reading for the entire month of December 2008 was non-detect (M).

The dosimeter's Lower Limit of Detection (LLD) of 1.0 millirem was used as the external dose for the radiation work permit to be conservative.

No deduction from the measured concentrations for radon or airborne particulates (natural uranium, thorium-230 or Radium-226) was made for background concentrations even though doses to workers are doses excluding natural background.

Memorandum

Oscar Paulson
Facility Supervisor
Kennecott Uranium Company

11 February 2009

Memo to File

SUBJECT: **Dose Assessment/Determination of No Requirement for Individual Monitoring or Dose Calculation at the Sweetwater Uranium Project for 2008**

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 2008.

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	3.23 pCi/l	257.24 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 Rad Trek Results. An average of two (2) Rad Trek units is used for the fourth quarter and an average of third quarter Rad Trek results from January 1992 to June 2008 is used for the third quarter result since the Rad Trak holder broke in the third quarter of 2008 making the unit's data unreliable.

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

(3.23 pCi/l) / (1E3 ml/l) / (1E6 pCi/uCi) = 3.23 E-09 uCi/ml
0.33 WL = 3E-08 uCi/ml (with all daughters present)
[(3.23E-09 uCi/ml) / (3E-08 uCi/ml)] * (0.33 WL) = 0.036 WL for background

The calculated equilibrium factor for the facility (1993 to 2008) average is 0.181. Given that all daughters are not present and the equilibrium factor is 0.181, the actual background radon daughter concentration is:

(0.181) * (0.036 WL) = 0.007 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	217.2 uR/hr	22.9 uR/hr	194.3 uR/hr
Mill	90.5 uR/hr	22.9 uR/hr	67.6 uR/hr
Tailings	116.5 uR/hr	22.9 uR/hr	93.6 uR/hr

Approximately 175 hours (seventeen and one-half 10-hour working days) are estimated to have been spent in the mill and 1,285 hours (one hundred twenty-eight and one-half 10 hour working days) are estimated to have been spent in the tailings impoundment by the Mill Foreman in 2008. This estimate is based on the number of entries in the restricted area alpha survey record for 2008, 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	175 hours	67.6 μR/hr	11.8 mrem
Tailings	1285 hours	93.6 μR/hr	120.3 mrem
Total			**132.1 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 2008 even though their use was not required, in part, to confirm these calculations. The highest external dose received for the calendar year was 27 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 2008. The results are as follows:

Radon Sampling Results

Area	Concentration	Background	Occupational Dose
IX Area	0.001 WL	0.007 WL	0.000 WL
Mill Area	0.010 WL	0.007 WL	0.003 WL

The average occupational radon dose for facility personnel is:

{[(0.003 WL) / (0.33 WL/DAC)] * 175 hours} / (2000 DAC hours/ALI) = 0.0008 ALI
(0.0008 ALI) * (5000 millirems/ALI) = 4.00 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 2008 and five (5) breathing zone samples taken of the Mill Foreman when working in the Mill Building and fifty-nine (59) breathing zone samples collected from workers in the tailings impoundment.

The spreadsheet entitled Airbome Sampling Results (Using Maximum Concentrations) attached to the Internal Occupational Exposure Assessment – Suspended Operations, details the maximum airbome 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 26.0 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 7.0 millirems to natural uranium from the Mill and tailings is 0.0014 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:

(0.0014 ALI/yr) * (5E-02 uCi/ALI) = 7.0E- uCi/yr
(7.05E-05 uCi/yr) * (1 E-06 pCi/uCi) / (677 pCi/mg) = 0.300 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 (175 hours), the tailings impoundment by the Mill Foreman in 2008, 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 26.0 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 0.007 rem/yr.
   b) The maximum calculated particulate dose is 0.026 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:	0.132 rem/yr.
b)	Estimated internal dose (particulates)	0.026 rem/yr.
c)	Estimated internal dose (radon-222)	0.007 rem/yr.
d)	Estimated maximum total dose from Radiation Work Permit (RWP)	0.001 rem/yr.
	Total:	0.166 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 2008 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 Twenty-seven (27) millirems. This proves that the external dose estimate based upon surveys is conservative.

Oscar A. Paulson

Oscar A. Paulson

Memorandum

Oscar Paulson
Facility Supervisor
Kennecott Uranium Company

3 February 2009

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 site employees working inside the restricted area in 2008 shows that all results are well below the first action level of 15 µg/L. In fact, all urinalysis results for the year 2008 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 bioassay sample of the site Security Guard collected on March 17, 2008 returned an initial result of 18.7 µg/liter. The laboratory was contacted immediately upon receipt of the sample results and requested to rerun the sample. As an additional precaution, another urine sample was collected from the Security Guard on March 25, 2008.

The laboratory rechecked the March 17, 2008 sample and reported that it was in fact non-detect. The sample collected on March 25, 2008 from the Security Guard was non-detect was well.

The incident, the results and the fact that the actual result was in fact non-detect was reported to Stephen Cohen of the Nuclear Regulatory Commission (NRC) on April 3, 2008 at 1:00 pm. He stated that a verbal report was sufficient and that there is no need to send an e-mail. He did state that the laboratory error must be reported in the annual ALARA Report.

Please see attached summary of 2008 urinalysis data.

Oscar A Paulson

Oscar A. Paulson
Facility Supervisor

KENNECOTT URANIUM COMPA															
BIOASSAY RESULTS:		2008													
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	5.0
SR. 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	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	5.0
DATA ENTRY	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
DATA ENTRY	DATA # 2	ADECCO	<5.0												5.0
TITLE															
Project Manager	PM #1	ARCHER CONSTRUCTION, INC.	<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 #2	ARCHER CONSTRUCTION, INC.	<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 #3	ARCHER CONSTRUCTION, INC.												<5.0	5.0
Supervisor	SPV #1	ARCHER CONSTRUCTION, INC.	<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	<5.0	5.0
Equipment Operator	EO# 3	ARCHER CONSTRUCTION, INC.	<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
Equipment Operator	EO# 6	ARCHER CONSTRUCTION, INC.	<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
Equipment Operator	EO# 9	ARCHER CONSTRUCTION, INC.	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0						5.0
Equipment Operator	EO# 14	ARCHER CONSTRUCTION, INC.	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0						5.0
Equipment Operator	EO# 15	ARCHER CONSTRUCTION, INC.	<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
Equipment Operator	EO# 19	ARCHER CONSTRUCTION, INC.	<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	5.0
Equipment Operator	EO# 21	ARCHER CONSTRUCTION, INC.	<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	5.0
Equipment Operator	EO# 22	ARCHER CONSTRUCTION, INC.	<5.0	<5.0	<5.0										5.0
Equipment Operator	EO# 23	ARCHER CONSTRUCTION, INC.	<5.0	<5.0	<5.0	<5.0 <5.0	<5.0	<5.0	<5.0						5.0
Equipment Operator	EO# 25	ARCHER CONSTRUCTION, INC.	<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
Equipment Operator	EO# 26	ARCHER CONSTRUCTION, INC.	<5.0												5.0
Mechanic	MEC #1	ARCHER CONSTRUCTION, INC.	<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
Equipment Operator	EO# 27	ARCHER CONSTRUCTION, INC.	<5.0	<5.0											5.0
Equipment Operator	EO# 28	ARCHER CONSTRUCTION, INC.	<5.0	<5.0		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5.0
Equipment Operator	EO # 29	ARCHER CONSTRUCTION, INC.		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5.0
Equipment Operator	EO # 30	ARCHER CONSTRUCTION, INC.				<5.0	<5.0	<5.0	<5.0						5.0
Equipment Operator	EO # 31	ARCHER CONSTRUCTION, INC.				<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5.0
Equipment Operator	EO # 32	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	5.0
Equipment Operator	EO # 34	ARCHER CONSTRUCTION, INC.								<5.0	<5.0 <5.0 <5.0	<5.0	<5.0	<5.0	5.0
Equipment Operator/Carpenter	EO # 35	ARCHER CONSTRUCTION, INC.										<5.0	<5.0	<5.0	5.0
Carpenter/Equipment Operator	CAR # 2	ARCHER CONSTRUCTION, INC.				<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0 <5.0 <5.0	<5.0	5.0
Carpenter/Equipment Operator	CAR # 3	ARCHER CONSTRUCTION, INC.				<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0 <5.0 <5.0	<5.0	5.0
Surveyor	SURV	Robert Jack Smith and Associates		<5.0	<5.0		<5.0	<5.0	<5.0	<5.0		<5.0 <5.0		<5.0 <5.0	5.0
Security	SEC #1	SECURITAS	<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 #2	SECURITAS	<5.0												5.0
Security	SEC #3	SECURITAS								<5.0	<5.0				

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 job site.

All samples tested by:
ENERGY LABORATORIES, INC.
All samples below first action level.
At least a high and low spike sent with each batch.
Some batches sent with a Blank, as well.

- (red) No longer employed by contractor.
- (green) Not yet hired
- (yellow) Did not work on site during month / or on vacation

Surveyor	SURV	Robert Jack Smith and Associates	Not on Site or did not work in restricted area in January, April, September or November, 2008.
Administrative Coordinator	AC	Kennecott Uranium Company	On Vacation when bioassays were collected in September and November. Bioassay for November was collected upon returning the following month.
SR. FACILITY TECHNICIAN	FT	Kennecott Uranium Company	On Vacation June and December 2008. Bioassays for those months were collected upon return the following month.
Project Manager	PM #3	Archer Construction, Inc.	Only on site for one (1) day. Pre-job sample collected. Never entered restricted area.

Oscar Paulson
Facility Supervisor
Kennecott Uranium Company

Memorandum

11 February 2009

To: **NRC File**

Subject: **Compliance with 10 Mrem Constraint Limit for 2008**

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: 1.00E-16 uCi/L	0.056 mrem/yr
Ra-226: 1.00E-16 uCi/L	0.006 mrem/yr
Th-230: 1.29E-16 uCi/L	0.125 mrem/yr
Total:	**0.277 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 2008 dose from airborne particulate radionuclides was at background levels. The 10 mrem per year constraint limit was not exceeded.
-

Oscar A Paulson
Oscar Paulson

RIO TINTO
ENERGY AMERICA

Memorandum

Oscar Paulson
Facility Supervisor
Kennecott Uranium Company

11 February 2009

To: NRC File

SUBJECT: Other Items

The following other items are being evaluated.

Fire Protection:

The fire water lines removed in the course of the Catchment Basin excavation were replaced with appropriate Factory Mutual polyethylene pipe during 2008. The facility fed water lines from the two potable water wells (PWWs-1 and 2) to the fire water and the potable water tanks were replaced as well to insure adequate water supply.

Fire training was held on site for site and contract employees on July 1, 2008 and December 21, 2008.

Fire extinguisher training was held on July 1, 10008 and training with Scott Air Packs was held on December 31, 2008. Annual fire extinguisher inspections were conducted on March 19 to 20, 2008. Annual fire hose testing was conducted on October 8, 2008.

Security:

The section of chain link fence along the east side of the Mill area removed during the course of the Catchment Basin excavation was replaced. Other fencing repairs in the area were made.

East Wall – Mill Building:

The doweling of the top grade beam into the twelve (12) inch slab on grade along the length of the east foundation of the Mill Building was completed as specified by QED Associates/JVA, Incorporated in their report dated November 5, 2007 and included in the Catchment Basin Excavation Completion Report dated May 6, 2008.

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.

Oscar A Paulson
Oscar A. Paulson

Kennecott Uranium Company
Sweetwater Uranium Project
Mill Forman
Restricted Area Times

Date	Mill	Tailings
3-Jan-08		10
8-Jan-08		10
9-Jan-08		10
10-Jan-08		10
14-Jan-08		10
15-Jan-08		10
16-Jan-08		10
17-Jan-08	5	5
11-Feb-08		10
13-Feb-08		10
18-Feb-08		10
20-Feb-08		10
21-Feb-08		10
27-Feb-08		10
28-Feb-08	5	5
5-Mar-08		10
6-Mar-08		10
9-Mar-08	5	5
10-Mar-08		10
11-Mar-08		10
13-Mar-08		10
17-Mar-08		10
18-Mar-08	5	5
19-Mar-08		10
24-Mar-08		10
25-Mar-08		10
26-Mar-08		10
31-Mar-08		10
1-Apr-08		10
2-Apr-08		10
3-Apr-08	5	5
7-Apr-08		10
8-Apr-08		10
9-Apr-08		10
10-Apr-08		10
14-Apr-08	5	5
15-Apr-08	5	5
16-Apr-08		10
17-Apr-08		10
21-Apr-08		10
22-Apr-08		10
23-Apr-08	5	5
24-Apr-08	5	5
28-Apr-08		10
29-Apr-08		10
30-Apr-08	5	5
1-May-08	10	
5-May-08		10
12-May-08	5	5
13-May-08		10
20-May-08		10
21-May-08		10
3-Jun-08		10
4-Jun-08	5	5

5-Jun-08		10
7-Jun-08		10
10-Jun-08		10
11-Jun-08		10
12-Jun-08		10
16-Jun-08		10
17-Jun-08		10
18-Jun-08		10
19-Jun-08		10
23-Jun-08		10
24-Jun-08	5	5
25-Jun-08	5	5
26-Jun-08		10
30-Jun-08		10
1-Jul-08		10
2-Jul-08		10
7-Jul-08		10
8-Jul-08		10
9-Jul-08		10
10-Jul-08		10
14-Jul-08		10
15-Jul-08		10
16-Jul-08	5	5
17-Jul-08		10
24-Jul-08		10
28-Jul-08		10
29-Jul-08		10
30-Jul-08		10
31-Jul-08		10
11-Aug-08	5	5
12-Aug-08		10
13-Aug-08	5	5
14-Aug-08		10
18-Aug-08		10
19-Aug-08		10
20-Aug-08		10
21-Aug-08		10
25-Aug-08	5	5
26-Aug-08		10
27-Aug-08		10
28-Aug-08		10
29-Aug-08		10
2-Sep-08		10
3-Sep-08		10
4-Sep-08		10
8-Sep-08		10
9-Sep-08		10
15-Sep-08		10
16-Sep-08	5	5
17-Sep-08	5	5
18-Sep-08		10
22-Sep-08	5	5
23-Sep-08	5	5
24-Sep-08	5	5
25-Sep-08		10
1-Oct-08	5	5
2-Oct-08		10
6-Oct-08		10
7-Oct-08		10
8-Oct-08		10
13-Oct-08		10
14-Oct-08		10

15-Oct-08		10
16-Oct-08		10
20-Oct-08	5	5
21-Oct-08		10
27-Oct-08	5	5
28-Oct-08		10
3-Nov-08		10
4-Nov-08		10
10-Nov-08	5	5
11-Nov-08		10
12-Nov-08		10
13-Nov-08		10
17-Nov-08		10
18-Nov-08		10
24-Nov-08		10
25-Nov-08		10
26-Nov-08		10
1-Dec-08	5	5
2-Dec-08		10
3-Dec-08		10
4-Dec-08		10
8-Dec-08	5	5
9-Dec-08	5	5
10-Dec-08	5	5
11-Dec-08	5	5
12-Dec-08		10
15-Dec-08		10
16-Dec-08		10
17-Dec-08		10
31-Dec-08	5	5
Total:	**175**	**1285**

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.

RIO TINTO ENERGY AMERICA

Rio Tinto Energy America
Kennecott Uranium Company
PO Box 1500, 42 Miles NW of Rawlins
Rawlins, Wyoming 82301-1500
Tel: (307) 324-4924 Fax: (307) 324-4925

24 February 2009

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 2008.

The report summarizes all monitoring and mitigation efforts in the area of the tailings impoundment under the ground water corrective action program as defined in License Condition 11.3 of USNRC Source Materials License SUA-1350 and also 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)
Darryl Maunder – RTEA, Gillette, WY

KENNECOTT URANIUM COMPANY
ANNUAL CORRECTIVE ACTION PROGRAM REVIEW
January 2008 through December 2008
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. In the August 19, 2004 Inspection Report, 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 feed 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 and 75 and TMW-96 and 97 (pumpback wells west of the Catchment Basin) were pumped into the tails impoundment during 2008 at the following annualized rates:

WELL #	PUMP HORSEPOWER	ANNUAL AVG. RATE
TMW-7	½ HP	7.29 GPM
TMW-17	1/3 HP	10.26 GPM
TMW-18	¾ HP	8.55 GPM
TMW-57	½ HP	4.94 GPM
TMW-58	¾ HP	1.63 GPM
TMW-59	1/3 HP	4.84 GPM

WELL #	PUMP HORSEPOWER	ANNUAL AVG. RATE
TMW-75	½ HP	4.05 GPM
TMW-96		5.82 GPM
TMW-97		8.28 GPM
TOTAL		**55.66 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 impoundment's north wall. Wells 7, 18 and 59 maintained a cone of depression along the west side of the tailings impoundment 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 impoundment, centered on these two (2) wells.

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 819 mg/L (10/14/08) and a uranium concentration of 760 pCi/L (9/20/04) to 20.3 pCi/L (10/14/08). TMW-97 has gone from a TDS concentration of 2210 mg/L (3/7/05) to 658 mg/L (11/10/08) and a uranium concentration of 548 pCi/L (3/7/05) to 10.9 pCi/L (11/10/08). 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 7.29 gallons per minute of water and has not required any of the maintenance or cleaning that its predecessor, TMW-16, required.

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 1.63 gallons per minute in 2008. 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 4.94 gallons per minute.

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

COMPARISON OF TMW-18 AND TMW-63

MAJOR IONS mg/l:	**TMW-18 4/14/08**	**TMW-63 4/16/08**	**Reporting Limit (4/4/07)**
Ca	611	680	1.0
Mg	49.2	50.3	0.5
Na	94	93	8
K	6.4	7.0	0.5
CO3	<1	<1	1.0
HCO3	548	569	1.0
SO4	1340	1410	10
Cl	87	96	1.0
NO3	<0.1	<0.1	0.10
F	<0.1	<0.1	0.10
SiO2	11	11	1.0
TDS @ 180□ C.	2520	2550	10
Cond (umho/cm)	2880	2930	1.0
Alk-CaCO3	449	467	1.0
pH (units)	6.87	7.17	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	0.3	<0.10	0.10
Cd	<0.005	<0.005	0.005
Cr	<0.01	<0.01	0.01
Co	0.002	0.001	0.001
Cu	<0.01	<0.01	0.01
CN	<0.005	<0.005	0.005
Fe	8.56	2.98	0.05
Pb	<0.01	<0.01	0.01
Mn	1.40	0.59	0.01
Hg	<0.0002	<0.0002	0.0002
Mo	<0.01	<0.01	0.01
Ni	<0.01	<0.01	0.01
Se	<0.001	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	1.7	0.2
Ra226	2.5 ± 0.31	3.2 ± 0.33	0.2
Ra228	11.9 ± 1.0	10.3 ± 0.8	1.0
Th230	<0.2	<0.2	0.2
Pb210	<1.0	<1.0	1.0
Gross Alpha	12.1 ± 1.5	10.9 ± 1.4	1.0
Q.A. DATA:			
Anion/Cation Bal:	1.02	0.97	

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 pages, *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 2008 are all below 200 parts per million.

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 (Kennecott 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, Ra 226-228, 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.

LOWER SATURATED SAND MONITOR WELL SAMPLING RESULTS

MAJOR IONS mg/l:	TMW-8 7/23/08	TMW-24 8/26/08	TMW-47 8/17/08	Reporting Limit (7/18/07)
Ca	26.5	22.8	21.7	0.5
Mg	1.0	1.0	0.9	0.5
Na	35.9	29.6	33.0	0.8
K	1.5	1.5	1.4	0.5
CO3	<1	<0.1	<1	1.0
HCO3	103	104	101	1.0
SO4	52	36	36	1.0
Cl	<1	<1	<1	1.0
NO3	<0.1	<0.1	<0.1	0.1
F	0.2	0.2	0.2	0.1
SiO2	17.4	8	18	0.2
TDS @ 180□ C.	181	154	139	10
Cond (umho/cm)	295	217	218	1.0
Alk-CaCO3	85	86	83	1.0
pH (units)	7.92	8.02	8.07	0.01
TRACE METALS, mg/l:				
Al	<0.1	<0.1	<0.1	0.10
As	0.002	0.002	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	0.06	<0.05	<0.05	0.05
Pb	<0.01	<0.01	<0.01	0.01
Mn	0.04	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	0.3	0.2
Ra226	0.41 ± 0.19	0.34 ± 0.16	5.0 ± 0.45	0.2
Ra228	<1	1.2 ± 0.9	0.18 ± 0.3	1.0
Th230	<0.2	<0.2	<0.2	0.2
Pb210	<1.0	<1.0	<1.0	1.0
Gross Alpha	<1.0	1.7 ± 0.5	5.0 ± 0.7	1.0
Q.A. DATA:				
A/C Balance	0.95	1.01	0.900	

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
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 (2080 picoCuries/liter) 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.

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 2008 for each well was used.

Water level data was not collected for TMWs 15 and 44 in January, February and March 2008, and TMWs 45 and 59 in February and March 2008 due to heavy snowfall covering the wells. A decision was made not to attempt to excavate the location for fear of striking and breaking the well casing protruding above ground, with snow removal equipment. A water level was not collected in TMW-10 in September 2008 since it is in the bottom of the Diesel Contaminated Soil Excavation and there was loose material in the highwall above the well, presenting a hazard to anyone working around the well. This loose material was subsequently removed to allow safe access in October 2008, and a water level sensor was installed in the well 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.

Kennecott Uranium Company
Sweetwater Facility
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	6,649.66	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	6,658.47	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	6,657.09	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	6,642.65	145.00	A	95-145
TMW-99	148,707.32	323,898.85	6,712.42	1.42	6,640.84	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	6,643.86	145.00	A	95-145
TMW-102	148,600.02	323,968.63	6,638.18	1.56	6,644.23	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 (10/5/08) is 614 pCi/L (0.906 ppm). TMW-73, the westernmost well, currently exhibits a concentration (10/5/08) of 5500 pCi/l (8.12 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 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 (614 pCi/L – TMW 72 and 5500 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.
- 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 five-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.

The following table details the most recent (2008) 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	2410	48.5
TMW-72	Shallow	614	6.8
TMW-73	Shallow	5500	33.9
TMW-103	Shallow	10.9	24.6
TMW-106	Deep	9.0	24.5
TMW-107	Shallow	9.9	6.9
TMW-108 B	Deep	1280	15.1
TMW-109	Shallow	2080	15.8
TMW-110	Deep	5.5	8.1

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 groundwater 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.

The report concluded by stating:

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 are 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 patchy 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 data 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) and 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 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 2,550 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 contains 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 transfers 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 lead 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 sulfateconcentrations, 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 waters. 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 (prior to site operations) were performed, and indicated naturally high levels of both sulfate (1,450 mg/L) and uranium (3.15 mg/L and 13.3 mg/L, corresponding to 2,130 pCi/L and 9,004 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 1,422 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 a 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 (10) 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. Samples of water collected in this test pit (August 27, 1975 and May 24, 1976) contained 13.3 milligrams per liter uranium and 1450 milligrams per liter sulfate and 3.15 milligrams per liter uranium, respectively. 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	pH	Sulphate	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.

Thus 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 2008 for the tailings and Catchment Basin monitor wells. The highest uranium concentration for 2008 for each well was used to prepare this map. The area encompassed by the 36.0 pCi/L uranium contour on the 2008 map is 47.7 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 2008. The plume as drawn encompasses a total area of 172.7 acres on the 2008 map. This is larger than the 150.05 acres estimated for the end of 2007. 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 2008. The area encompassed by the 500 parts per million contour is 183.3 acres on the 2008 map. This is the same as the estimated 178.9 acre area calculated for 2007.

These plume outlines are based on the highest natural uranium, Radium-226 and Total Dissolved Solids concentrations in each well for 2008.

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 since 1996 are being 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 TMWs 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, 2006, pumping from wells TMW-7, 17, 18, 57, 58, 59 and 75 did not exceed the 25 million gallons allowed under "TOP-1 - General Tailings and Evaporation Impoundment Procedures". On December 31, 2008 a total of 24,034,020 gallons of Battle Spring Aquifer water had been pumped back into the tails impoundment since the beginning of the year. This represents a 1.8% increase from the 2007 volume.

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. (25 million gallons pumped over the course of one year is equivalent to a flow of 47.6 gallons per minute.) It is planned for 2009 to operate the pumpback wells at the following approximate flow rates:

WELL #	Gallons per Minute
TMW-96	7
TMW-97	10
TMW-59	4.8
TMW-75	4
TMW-17	3
TMW-7	3
TMW-57	3
TMW-18	8.6
TMW-58	1.6
Total:	**45**

TMWs 59 and 18 have the highest Total Dissolved Solids concentrations (2460 ppm and 2600 ppm) so they will be operated at their highest flow rates with the other less contaminated wells pumped at other rates so that the total pumped volume does not exceed 25 million gallons. While exhibiting a high Total Dissolved Solids concentration, TMW 58 is only capable of producing 1.6 gallons per minute and will be operated at its maximum rate.

Aside from freezing problems due to severe cold in the first quarter of 2008, only TMW-7 required major repair. TMW-7 required a pump replacement.

The following groundwater contour maps are included with this report:

- *May 2008 Piezometric Contour Map* shows the groundwater contours around the tailings impoundment and Catchment Basin in May of 2008.
- *September 2008 Piezometric Contour Map* shows the groundwater contours around the tailings impoundment and Catchment Basin in September of 2008.

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 impoundment via the pumpback system. Charts showing the quantities of salts returned to the tailings impoundment are also included for each of the wells pumped back into the impoundment in 2008.

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 2008.

TAILINGS IMPOUNDMENT WATER EVAPORATION SYSTEM

The tails impoundment pump was returned to service by April 21, 2008. The systems were shut down for winter in December 2008.

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. Included with this report are the following three (3) 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.

The areas not water covered are currently frozen. In the case of the areas west of Lagoon 8-E and north of Lagoon 9-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 October 3, 2008 was 6621.3 feet above MSL. This elevation is taken in the deepest pool in the impoundment's southeast corner. This fluid level was subject to rapid fluctuation during 2008 due to regrading of the tailings in the impoundment and pumping of fluid from the pool to fill newly constructed lagoons.

Current saturated area (pool area plus lagoons) is estimated to be approximately 676,921.8 square feet (2008 Method 115 Report). The saturated area has increased from the 2007 area (511,830 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 31 to August 1, 2008.

Fluctuations in pool level observed in 2008 and documented on the tailings impoundment fluid level graph are due to the regrading operations, specifically a reduction in the area of the pool in the impoundment's southeast corner. At no time did fluids rise to within five (5) feet of the top of the repaired liner.

There was not a September 2008 pool elevation taken in the impoundment since the surveyor was unavailable in September. An elevation was taken on October 3, 2008 with the October 2008 reading taken on October 31, 2008.

Substantial repairs have been made to the tailings impoundment liner along the interior of the northern and eastern embankments during 2007 and 2008. These repairs were inspected during the Nuclear Regulatory Commission inspection on July 10 and 11, 2007. The Commission discussed these repairs in the inspection report dated August 10, 2007, stating:

> *The inspector toured the tailings impoundment and noted that the freeboard between the top of the pond surface and the top of the pond embankments was greater than the license-required minimum level. The inspector reviewed daily and weekly inspection reports by facility personnel. The licensee also contracted for an annual inspection by an outside registered professional engineer.*
>
> *The annual engineer's inspection identified areas above the interior bench where liner repairs would be needed. The licensee contracted an outside firm to perform liner repairs; these repairs were in process during the inspection. Repair procedures consisted of covering the damaged area with a scrap piece of the original liner and using a new piece of 45-mil reinforced liner to weld the scrap piece to the liner. These repairs are planned to be completed up to a level that will provide approximately 7 feet of freeboard over the planned water surface elevation.*
>
> *The outer slopes of the tailings impoundment were observed to be in good condition. Areas of sloughing were not observed at the toe of the slope. Additionally, no tension cracks were observed along the crest of the impoundment.*

The work in the impoundment was inspected by Kent Bruxvoort of QED Associates, LLC and discussed in the 2008 "Inspection of Tailings Impoundment Liner and Embankment" dated May 30, 2008. He discussed the liner repairs, stating:

> ***Tailings/Fluid Surface to Bench.*** *The liner has been damaged below the bench along the east embankment and the east half of the north embankment. However, the liner within five vertical feet of the tailings or tailings fluid surface has been maintained intact or repaired where necessary. The repairs consist of adhering a segment of used liner from the impoundment by cleaning and gluing per manufacturer's specifications (Photographs 7 and 8). The repairs are expected to be effective at limiting the potential for tailings fluid to escape through the liner.*

In addition he also states:

> ***Liner Conclusions/Recommendations.*** *Above the bench, the liner is only intact and functional in the northwest corner of the impoundment. The liner along the bench and the seam at the bench is functional along the south embankment, and the west half of the north embankment. The liner remains, by observation, pliable. There is no evidence of exposed scrim by either physical or chemical means.*
>
> *Liner repair and regrading of 11(e)2 soils and mill tailings within the tailings impoundment limit the potential for fluid to escape.*

He discussed the regrading effort, stating:

> ***Recent Efforts.*** *Over the last two years, two separate excavation tasks have altered the configuration of the surface of the tailings. First, 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 east central portion of the impoundment. Second, during the latter half of 2007 through the present, tailings as wells as the additional 11(e)2 soils have been regraded. In the tailings regrading effort, beach sands from the west half of the impoundment have been removed from the margins of the impoundment, lowering the surface of the tailings to below the bench throughout most of the impoundment, and shifting tailings to parts of the impoundment in which the tailings surface was lower. This effort has resulted in substantial progress toward the following tailings management objectives:*
>
> 1) *Regrading the tailings to achieve a more planar surface in anticipation of either reclamation or future tailings storage;*
> 2) *Adding a depth of primarily sandy tailings from the west half of the impoundment to tailings areas in the east half that are more fine-grained and less consolidated;*
> 3) *Combining and leveling the tailings to create a surface that is entirely below the bench, more sheltered from wind, and easier to keep moistened;*
> 4) *Creating stable, flat, bermed areas as evaporation cells for tailings dewatering; and*
> 5) *Creating a more uniform surface, above which the existing liner can be more readily maintained.*

Copies of Kent Bruxvoort's 2008 inspection reports of the impoundment (2008 Inspection of Tailings Impoundment Liner and Embankments) and diversion channel (2008 Inspection of Diversion Channel) are included in Appendices 2 and 3.

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 25.99 million gallons per year. Please refer to the table below:

Tailings Impoundment Evaporation Capacity

Lagoon Designation	**Area**	**Annual Evaporation Maximum Rate**	**Annual Evaporation 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	
3-W	68,249.06	2,582,466.80	1,807,726.76	
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:	**981,353.82**	**37,133,312.26**	**25,993,318.58**	

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.

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 6538.17 feet above MSL on October 20, 2008, a drop of 0.22 feet from a level of 6538.39 feet above MSL on October 15, 2007. Please see attached chart entitled *Sweetwater Pit Water Levels.* Kennecott Uranium Company believes that water levels in the pit have reached "steady state". This 0.22 foot drop in pit lake surface elevation observed during 2008 is a normal fluctuation in the lake level. The wells closest to the pit have shown the greatest recoveries, while those farthest from the pit are the least affected. TMWs 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 2008. The piezometric contour maps show the potentiometric surface of the Battle Springs Aquifer around the tailings impoundment and Catchment Basin in May and September 2008. The cone of depression created by the pumpback wells encompasses the existing plume. The groundwater contour maps for May and September 2008 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 Groundwater 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 converges 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

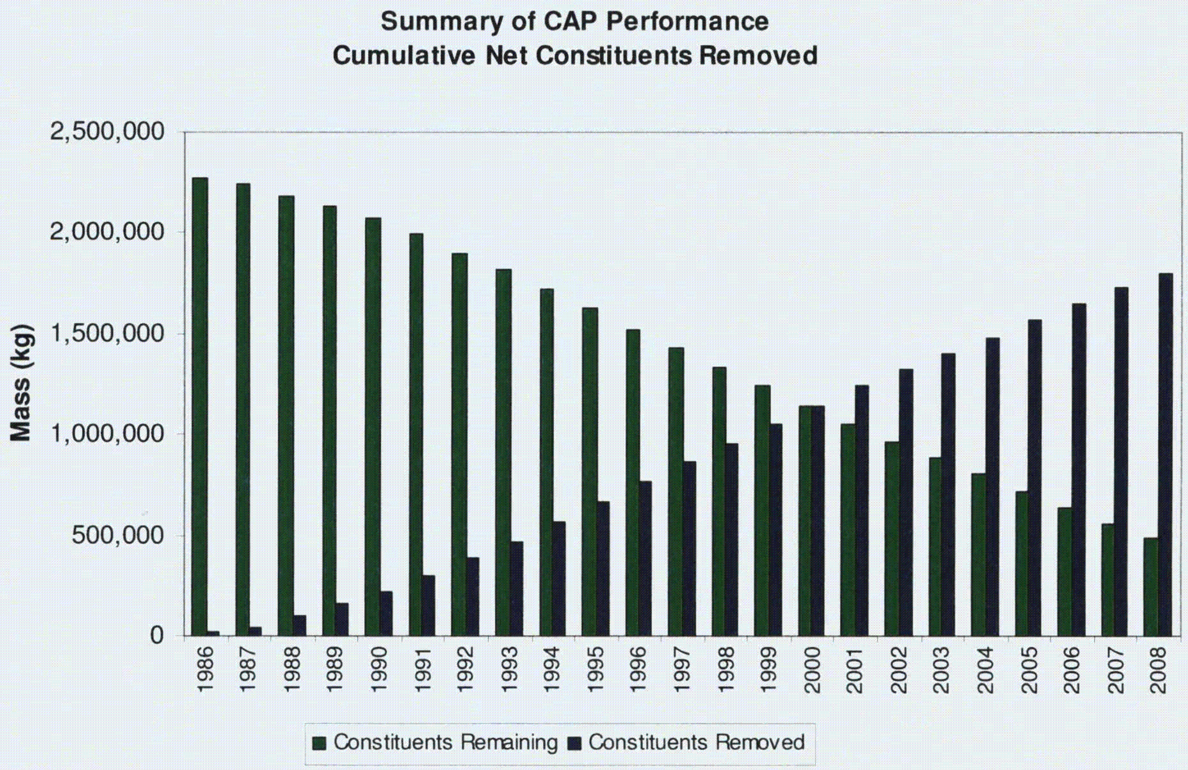
The pumping of aquifer wells TMW-7, 17, 18, 58, 59 and 75 at the toe, north and west of the tails impoundment, will continue to intercept any contaminated water coming through. The capture of contaminated water at the toe of the tails impoundment will prevent any hazardous constituents that may be present from migrating away from the impoundment 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 (2600 ppm – January 13, 2008), 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 21, 2006) 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 2008 data and is shown below. The mass of salts recovered for 2008 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 impoundment 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 172.7 acres, as drawn. The 500 ppm TDS contour shown defines an area of approximately 183.3 acres. The 36 pCi/L Uranium plume covers an area of 47.7 acres. These areas are from the 2008 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 TMWs 10, 72 and 73 is 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 (10) 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 4) were each completed in a deeper sand than the other monitor wells. The sample results from these wells clearly show that groundwater contamination from the impoundment 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 (Kennecott 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, Ra 226-228, 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 72% of the estimated total amount of the contaminants has been removed by the end of 2008.

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 sources such as naturally occurring minerals), the additional time for remediation is likely to be on the order 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 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 or figures mentioned in the quoted text have not been included.)

PUMPBACK WATER SPILLS DURING 2008

In 2008 two (2) minor spills of pumpback water occurred. They are as follows:

May 26, 2008 Spill:
A hose carrying pumpback water from TMW-59 into the tailings impoundment was blown out of the impoundment causing a spill of approximately 3,276 gallons of pumpback water onto the ground near the well west of the impoundment. It was discovered on the morning of May 27, 2008. This spill was promptly reported by telephone (May 27, 2008 at 1:50 pm) and by email (May 27, 2008 at 2:45 pm) to the Nuclear Regulatory Commission (NRC). It was also reported by telephone to Mark Thiesse of the Wyoming Department of Environmental Quality Water Quality Division (DEQ/WQD). Detailed information about the spill is included in Appendix 1.

August 18, 2008 Spill:
A six (6) inch diameter polyethylene line carrying pumpback water from six (6) pumpback wells became plugged and approximately 18,278 gallons of water flowed out of the top of the line and out along the western side of the tailings impoundment. This spill was promptly reported by telephone (August 18, 2008) and email (August 18, 2008 at 4:41 pm) to the NRC. It was also reported by telephone to Mark Thiesse of the Wyoming DEQ/WQD. Detailed information about the spill is included in Appendix 1.

The following pertains to both of these spills:

- The concentrations of radionuclides in these spills of pumpback water were below the limits in 10CFR20 Appendix B Table 2 – Effluent Concentrations – Water.
- The spilled water entered no drainages.
- The spills occurred on private land.
- Spilled water either soaked into the soil or, in the case of the August 18, 2008 spill, a small volume was recovered by pumping.
- The spills occurred over the area impacted by the cone of depression of the pumpback system.
- The spills were promptly reported and documented.

Due to the very low concentrations of radionuclides in these spills of pumpback water (below 10CFR Appendix B Table 2 – Effluent Concentration – Water), these spills did not require reporting under 10 CFR20 Subpart M or 10CFR40.60, 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 spills were reported by telephone and email to the NRC. Documentation regarding the spills 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, 45, 70, 71, 94, 98, 101, 111 and 113 is improving. An increasing trend in TDS values is observed in TMWs 15, 29, 35, 36, 49, 51, 61, 62, 89, 92, 95, 106 and 107. TMW-4 has shown anomalous, though slowly improving, total dissolved solids (TDS) concentrations, manganese, iron and nickel values in the 2008 samples, as well as a depressed pH, though it appears to be slowly rising over time. In the most recent sample (July 15, 2008) the TDS was 414 mg/l which is well below the 500 mg/l threshold. 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 are declining slowly. TMWs 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 15, 2008 sample. TMWs 18, 35, 78, 91, 99, 109 and 112 exhibited nickel values that met or exceeded the GPS in 2008. TMWs 91, 99, 109 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 impoundment 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 wells around the Catchment Basin exhibit anomalous TDS, radium, uranium, iron and manganese values, with three (3) wells (TMWs 91, 99 and 112) currently exhibiting anomalous nickel values. Two of the Catchment Basin wells showed traces of organic contamination in 2008. The following wells yielded results for the following organics: TMW 99 (1,1,-dichloroethane) and TMW 102 (Diesel Range Organics).

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 Ra 226-228, 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: Ra 226-228, 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 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

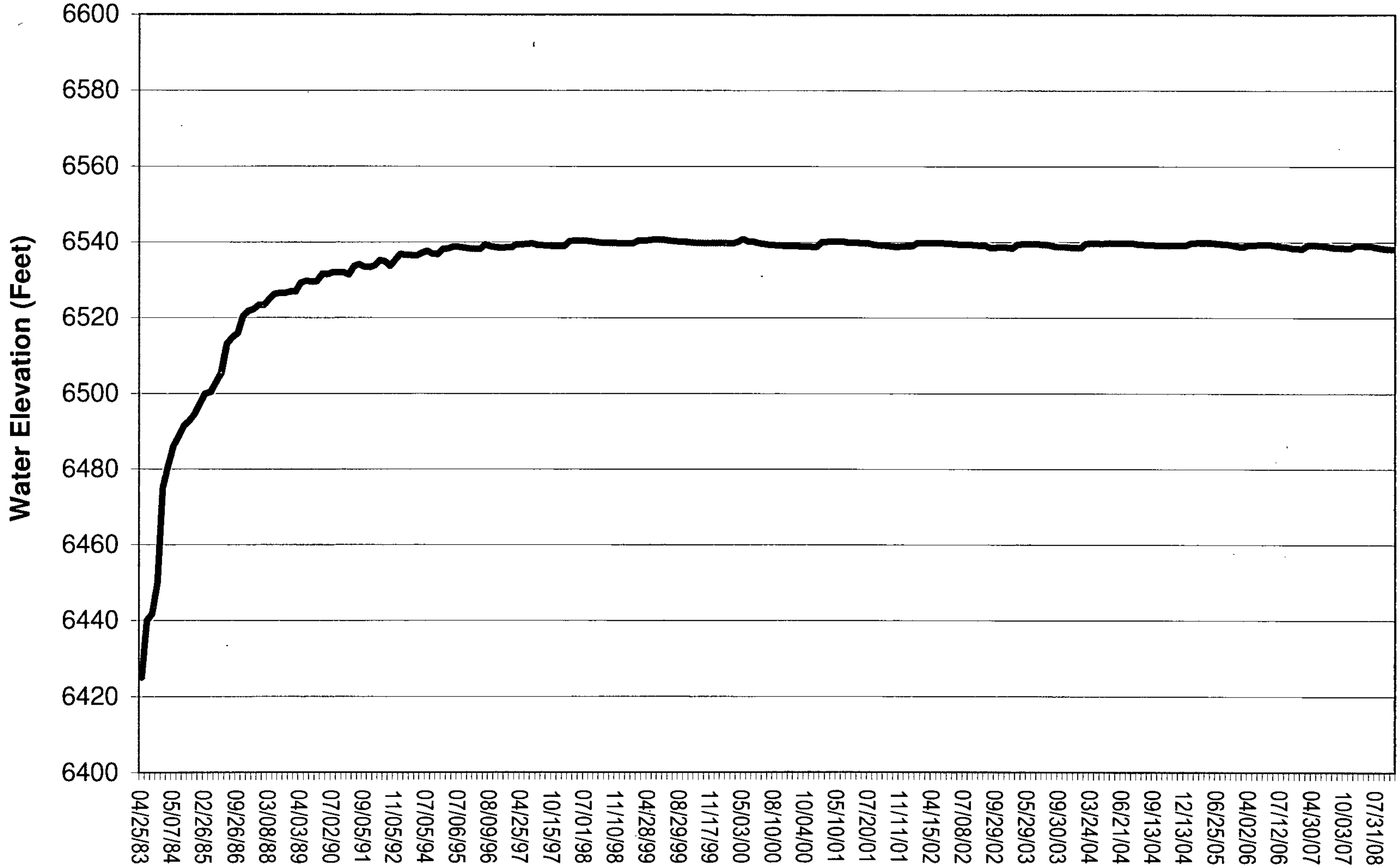
KENNECOTT URANIUM COMPANY
Sweetwater Pit Water Levels
Recovery of water level after suspension of dewatering activities in May, 1983

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

KENNECOTT URANIUM COMPANY
Sweetwater Pit Water Levels
April 25, 1983 through October 20, 2008



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

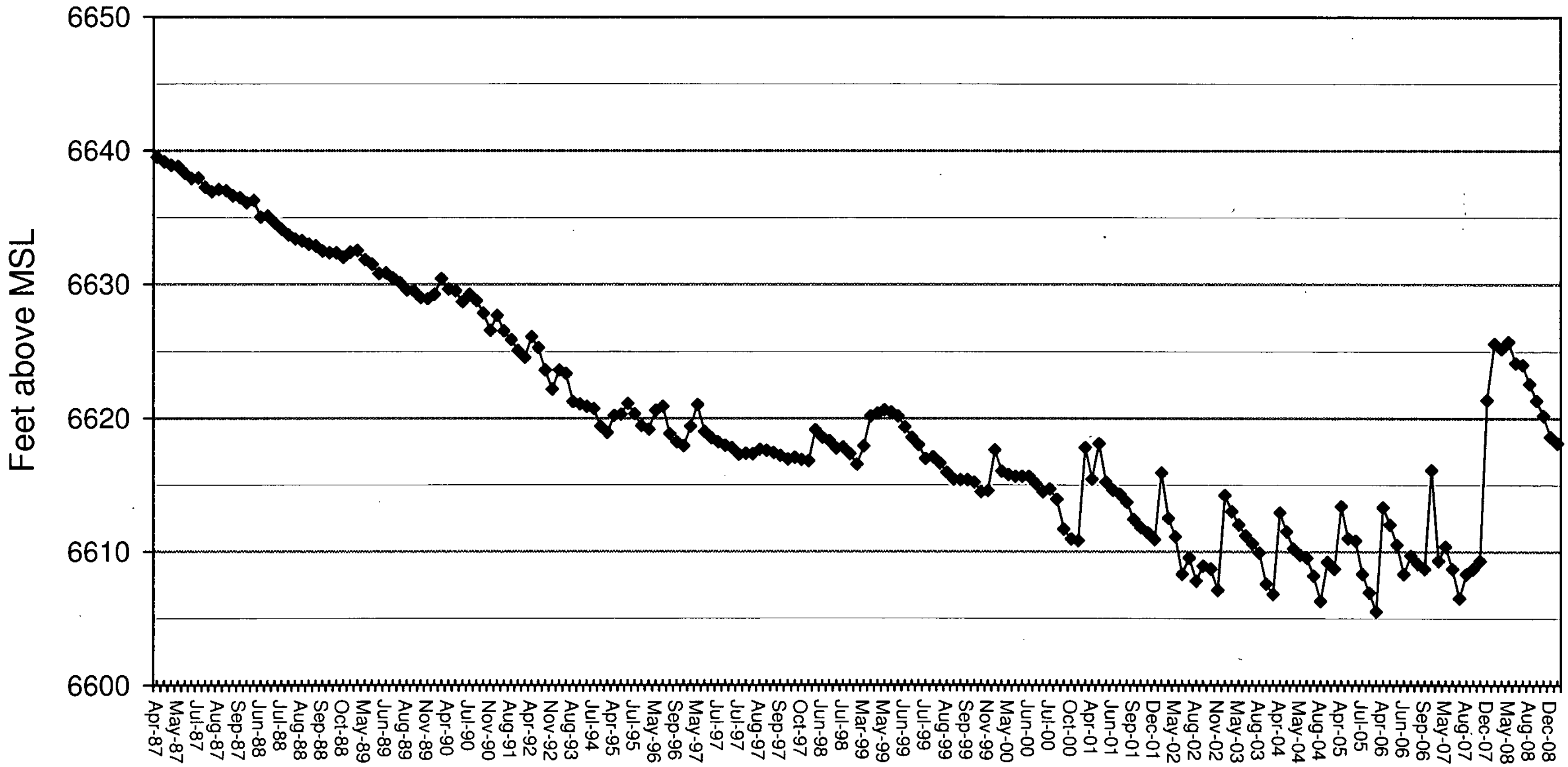
TAILS CELL WATER LEVELS	
Date	Surface Elevation
5/4/00	6616.00
5/24/00	6615.76
6/7/00	6615.65
6/29/00	6615.62
6/30/00	6615.62
7/3/00	6615.07
7/13/00	6614.47
7/24/00	6614.67
8/8/00	6613.90
10/2/00	6611.65
10/9/00	6610.94
11/9/00	6610.80
4/3/01	6617.80
4/15/01	6615.40
4/20/01	6618.10
5/16/01	6615.20
6/26/01	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

KENNECOTT URANIUM COMPANY

SweetwaterTailings Impoundment Fluid Levels

April 14, 1987 through December 31, 2008



Notes:

- Pool elevation measured by surveying fluid elevation in pool in impoundment's southeast corner.
- Rise in pool elevation 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
	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
FIELD DATA mg/l:									
Temperature (C)		10	12	14	16	14		4	4.2
pH (Std. Units)		2.8	2.8	2.8	16.2	2.1		3.34	3.1
Cond (umho/cm)		1200	9600	10400	9000	8000		10140	986
TDS									
MAJOR IONS mg/l:									
Alk-CaC03		-1	-1	-1	-1	-1	-1	-1	-1
Bicarbonate (HCO3)		-1	-1	-1	-1	-1	-1	-1	-1
Calcium (Ca)		469	410	459	470	436	501	549	486
Carbonate (CO3)		-1	-1	-1	-1	-1	-1	-1	-1
Chloride (Cl)	2000	610	680	678	820	651	683	649	695
Fluoride (F)		36.5	42.4	43.7	38.4	16	44.9	13.5	0.2
Magnesium (Mg)		1130	992	1130	1300	1140	1290	1110	1080
Nitrate-N (NO2)	10	0.67	0.4	2.4	0.17	-0.1	0.3	0.5	0.3
Potassium (K)		0.7	-1	1.5	1	-0.5	1.4	5.3	5.9
Silica (SiO2)		175	151	138	130	119	117	105	48
Sodium (Na)		733	724	801	810	726	725	743	829
Sulfate (SO4)	3000	13100	12500	13400	14000	12500	13500	10300	9950
NON-METALS:									
Cyanide (CN)		-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
pH (units)	-2	2.81	2.83	2.88	2.95	2.94	3.09	3.37	3.55
TDS @ 180°	5000	19400	20400	20100	21000	19100	18100	13600	14800
TRACE METALS mg/l:									
Aluminum (Al)	5	1220	1150	1250	1300	1230	1060	554	495
Arsenic (As)	0.2	0.039	0.036	0.023	0.06	0.027	0.019	0.012	0.017
Barium (Ba)		-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
Boron (B)	5	0.5	0.63	-0.22	-0.1	0.3	0.4	0.4	0.4
Cadmium (Cd)	0.05	0.019	0.034	0.02	0.03	0.019	0.017	0.014	0.028
Chromium (Cr)	0.05	1.83	2.47	1.31	2	1.7	1.44	0.55	0.24
Cobalt (Co)	1	1.95	2.78	1.87	3	2.63	2.96	2.09	2.21
Copper (Cu)	0.5	1.54	2.04	1.76	1.9	1.64	1.54	0.58	0.44
Iron (Fe)		313	250	232	230	139	115	59.5	135
Lead (Pb)	0.1	-0.01	-0.01	0.02	-0.01	-0.01	-0.01	0.02	-0.01
Manganese (Mn)		61.7	94	70.4	110	84.4	94.4	67.4	79.6
Mercury (Hg)	0.005	-0.0002	0.0005	-0.0004	0.0005	-0.0002	-0.0002	-0.0002	-0.0004
Molybdenum (Mo)		-0.01	-0.01	-0.01	-0.01	0.04	-0.01	-0.01	-0.01
Nickel (Ni)		4.6	7.01	5.79	7.2	6.8	6.92	4.39	4.97
Selenium (Se)	0.05	0.591	0.618	0.579	0.24	0.534	0.461	0.414	0.287
Silver (Ag)		-0.01	0.05	-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
Vanadium (V205)	0.1	0.4	0.5	0.3	0.2	0.2	0.2	-0.1	-0.1
Zinc (ZN)	25	5.8	9.19	11.6	9.5	8.25	7.48	5.72	4.75
RADIOMETRIC pCi/l:									
Uranium, natural	3385	12300	12321.4	12000	11000	10300	11100	8530	6350
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+/-0.9
Radium 228		1.9 +/- 1.0	-1	-1	-1	-1	8.9+/-1.1	-1	2.3+/-0.7
Combined Ra226/228	5	61.7	55.9	69.8	46.2	23.8	10.4	20.2	27.58
Thorium 230		9440 +/- 78	3250 +/- 30.3	1890+/-19.7	2110 +/- 34.9	1650+/-24.3	1620+/-113	671+/-58.2	216+/-7.9
Lead (Pb210)		-1	-2.7	-2.7	-1	-1	-1	-1	1.9+/-9.6
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+/-3.3
QUALITY ASSURANCE DATA:									
A/C Balance		1.17	1.19	1.09	1.17	1.22	1.07	1.01	-2.66
(Energy Labs Inc unless noted)									

KENNECOTT URANIUM COMPANY
Groundwater Elevations

			*Revised												
Well			**Measuring**	***2008***		**= Resurveyed**									
No.	**Northing**	**Easting**	**Point Elev.**	***Jan-08***	***Feb-08***	***Mar-08***	***Apr-08***	***May-08***	***Jun-08***	***Jul-08***	***Aug-08***	***Sep-08***	***Oct-08***	***Nov-08***	***Dec-08***
TMW-1				105.21	105.21	105.74	105.39	105.48	105.31	105.43	105.80	106.11	106.11	105.43	105.31
TMW-1	150,107.66	324,536.42	6648.22	6,544.40	6,544.40	6,543.87	6,544.22	6,544.13	6,544.35	6,544.23	6,543.86	6,543.55	6,543.55	6,544.23	6,544.35
TMW-2				85.15	84.91	84.90	84.82	84.85	84.77	84.75	84.85	85.21	85.21	84.79	84.72
TMW-2	147,133.96	324,360.13	6627.09	6,541.94	6,542.18	6,542.19	6,542.27	6,542.24	6,542.32	6,542.34	6,542.24	6,541.88	6,541.88	6,542.30	6,542.37
TMW-3				84.38	84.31	84.31	84.30	84.36	84.25	84.33	84.37	84.69	84.69	84.38	84.23
TMW-3	145,984.03	324,361.03	6626.27	6,541.89	6,541.96	6,541.96	6,541.97	6,541.91	6,542.02	6,541.94	6,541.90	6,541.58	6,541.58	6,541.89	6,542.04
TMW-4				85.41	85.29	85.29	85.41	85.56	85.45	85.57	85.49	85.52	85.52	85.53	85.49
TMW-4	147,141.81	323,176.55	6626.89	6,541.48	6,541.60	6,541.60	6,541.48	6,541.33	6,541.44	6,541.32	6,541.40	6,541.37	6,541.37	6,541.36	6,541.40
TMW-5				111.11	111.31	111.31	111.19	111.24	111.18	111.22	111.28	110.56	110.56	110.33	110.37
TMW-5	149,053.50	328,102.80	6658.59	6,547.48	6,547.28	6,547.28	6,547.40	6,547.35	6,547.41	6,547.37	6,547.31	6,547.91	6,547.91	6,548.14	6,548.10
TMW-6				97.09	97.09	97.04	97.04	97.21	97.13	97.10	97.14	96.07	96.07	97.16	97.14
TMW-6	145,356.25	327,464.50	6641.66	6,544.57	6,544.57	6,544.62	6,544.62	6,544.45	6,544.53	6,544.56	6,544.52	6,545.59	6,545.59	6,544.50	6,544.52
TMW-7				117.70	121.67	121.67	121.18	120.50	119.64	119.49	118.64	118.46	117.03	111.82	111.82
TMW-7	149,339.65	325,014.01	6654.40	6,536.99	6,533.02	6,533.02	6,533.51	6,534.19	6,535.05	6,535.20	6,536.05	6,536.23	6,537.66	6,542.87	6,542.87
TMW-8				102.94	102.81	102.82	102.99	103.02	102.74	102.95	103.34	103.09	103.10	102.99	102.89
TMW-8	148,912.15	324,561.80	6646.47	6,543.53	6,543.66	6,543.65	6,543.48	6,543.45	6,543.73	6,543.52	6,543.13	6,543.38	6,543.37	6,543.48	6,543.58
TMW-10				13.35	13.25	12.61	12.61	12.87	12.90	13.01	13.01		13.37	18.53	laptop
TMW-10	149,145.59	323,037.81	6556.92	6,543.57	6,543.67	6,544.31	6,544.31	6,544.05	6,544.02	6,543.91	6,543.91	6,556.92	6,543.55	6,538.39	#VALUE!
TMW-15							101.03	101.04	101.09	101.03	101.09	101.16	101.12	100.94	101.02
TMW-15	147,910.39	325,006.29	6643.26	6,643.26	6,643.26	6,643.26	6,542.23	6,542.22	6,542.17	6,542.23	6,542.17	6,542.10	6,542.14	6,542.32	6,542.24
TMW-16				112.79	112.68	112.66	112.84	113.14	112.63	112.94	113.12	113.13	113.04	112.48	112.52
TMW-16	149,397.99	325,023.08	6655.62	6,542.83	6,542.94	6,542.96	6,542.78	6,542.48	6,542.99	6,542.68	6,542.50	6,542.49	6,542.58	6,543.14	6,543.10
TMW-17				123.24	123.24	123.29	123.29	123.34	122.82	123.29	123.40	123.57	123.61	115.81	115.82
TMW-17	149,602.14	325,994.00	6660.87	6,537.63	6,537.63	6,537.58	6,537.58	6,537.53	6,538.05	6,537.58	6,537.47	6,537.30	6,537.26	6,545.06	6,545.05
TMW-18				113.85	125.02	125.02	126.66	126.90	126.51	126.56	126.12	126.12	126.17	125.74	124.04
TMW-18	148,922.42	325,018.57	6655.98	6,542.13	6,530.96	6,530.96	6,529.32	6,529.08	6,529.47	6,529.42	6,529.86	6,529.86	6,529.81	6,530.24	6,531.94
TMW-24				114.66	114.85	115.03	114.75	114.94	114.74	114.89	114.94	115.30	115.30	114.59	114.68
TMW-24	150,307.90	325,992.24	6661.21	6,546.55	6,546.36	6,546.18	6,546.46	6,546.27	6,546.47	6,546.32	6,546.27	6,545.91	6,545.91	6,546.62	6,546.53
TMW-29				110.39	110.39	110.44	110.28	110.57	110.33	110.48	110.49	110.51	112.59	110.02	110.11
TMW-29	150,108.27	326,786.49	6656.64	6,546.25	6,546.25	6,546.20	6,546.36	6,546.07	6,546.31	6,546.16	6,546.60	6,546.58	6,544.50	6,547.07	6,546.98
TMW-31				114.61	114.61	114.68	114.51	114.76	114.54	114.63	114.65	114.66	114.66	114.34	114.42
TMW-31	149,901.61	327,194.15	6661.09	6,546.48	6,546.48	6,546.41	6,546.58	6,546.33	6,546.55	6,546.46	6,546.44	6,546.43	6,546.43	6,546.75	6,546.67
TMW-35				111.62	111.62	111.62	111.51	111.24	111.57	111.38	111.68	111.68	111.68	111.44	111.51
TMW-35	149,509.35	327,198.92	6657.75	6,546.13	6,546.13	6,546.13	6,546.24	6,546.51	6,546.18	6,546.37	6,546.07	6,546.07	6,546.07	6,546.31	6,546.24
TMW-36				112.22	112.22	112.23	112.16	112.42	112.22	112.22	112.32	112.34	112.34	112.05	112.05
TMW-36	149,108.62	327,007.02	6657.75	6,545.53	6,545.53	6,545.52	6,545.59	6,545.33	6,545.53	6,545.53	6,545.43	6,545.41	6,545.41	6,545.70	6,545.70
TMW-37				105.29	105.27	105.27	105.18	105.29	105.30	105.25	105.29	105.34	105.34	105.11	105.20
TMW-37	148,455.68	326,999.77	6650.73	6,545.44	6,545.46	6,545.46	6,545.55	6,545.44	6,545.43	6,545.48	6,545.44	6,545.39	6,545.39	6,545.62	6,545.53
TMW-44							94.33	94.34	94.40	94.35	94.42	94.42	94.42	94.22	94.35
TMW-44	147,612.17	325,588.96	6637.52	6,637.52	6,637.52	6,637.52	6,543.19	6,543.18	6,543.12	6,543.17	6,543.10	6,543.10	6,543.10	6,543.30	6,543.17
TMW-45				97.06			97.02	97.03	97.07	97.04	97.10	96.11	96.11	96.90	97.05
TMW-45	147,619.66	326,196.14	6641.00	6,543.94	6,641.00	6,641.00	6,543.98	6,543.97	6,543.93	6,543.96	6,543.90	6,544.89	6,544.89	6,544.10	6,543.95
TMW-47				95.35	95.35	95.35	95.35	95.41	95.35	95.42	95.71	95.55	95.55	95.21	95.32
TMW-47	147,310.10	326,491.24	6640.35	6,545.00	6,545.00	6,545.00	6,545.00	6,544.94	6,545.00	6,544.93	6,544.64	6,544.80	6,544.80	6,545.14	6,545.03
TMW-48				95.38	95.33	95.33	95.27	101.65	95.36	95.31	95.40	95.38	95.38	95.22	95.35
TMW-48	147,312.58	326,482.99	6639.72	6,544.34	6,544.39	6,544.39	6,544.45	6,538.07	6,544.36	6,544.41	6,544.32	6,544.34	6,544.34	6,544.50	6,544.37
TMW-49				97.99	97.99	97.99	97.83	97.95	97.52	97.90	97.98	98.99	98.00	97.85	97.87
TMW-49	147,708.93	324,836.10	6640.19	6,542.20	6,542.20	6,542.20	6,542.36	6,542.24	6,542.67	6,542.29	6,542.21	6,541.20	6,542.19	6,542.34	6,542.32
TMW-50				106.00	106.00	105.75	105.75	105.97	105.98	105.82	106.03	105.21	106.03	105.88	105.81
TMW-50	148,198.81	324,697.71	6647.80	6,541.80	6,541.80	6,542.05	6,542.05	6,541.83	6,541.82	6,541.98	6,541.77	6,542.59	6,541.77	6,541.92	6,541.99
TMW-51				108.27	108.27	108.01	108.07	108.18	108.19	108.14	108.22	108.41	108.24	108.14	108.07
TMW-51	147,995.26	324,449.18	6650.00	6,541.73	6,541.73	6,541.99	6,541.93	6,541.82	6,541.81	6,541.86	6,541.78	6,541.59	6,541.76	6,541.86	6,541.93
TMW-52				103.52	103.52	103.06	103.14	103.25	113.23	103.17	102.29	103.45	103.27	103.05	102.95
TMW-52	148,316.56	324,221.64	6644.70	6,541.18	6,541.18	6,541.64	6,541.56	6,541.45	6,531.47	6,541.53	6,542.41	6,541.25	6,541.43	6,541.65	6,541.75
TMW-53				99.95	99.95	99.75	99.76	99.84	99.87	99.85	99.84	100.11	99.91	99.80	99.75
TMW-53	147,849.28	323,913.72	6641.47	6,541.52	6,541.52	6,541.72	6,541.71	6,541.63	6,541.60	6,541.62	6,541.63	6,541.36	6,541.56	6,541.67	6,541.72
TMW-54				54.81	55.12	55.12	55.36	55.41	55.16	54.05	53.80	53.64	53.64	53.57	53.62
TMW-54	149,122.85	324,827.05	6,652.06	6,597.25	6,596.94	6,596.94	6,596.70	6,596.65	6,596.90	6,598.01	6,598.26	6,598.42	6,598.42	6,598.49	6,598.44
TMW-55				54.72	53.89	54.00	54.22	54.27	54.06	53.15	52.94	52.75	52.72	54.62	52.56
TMW-55	149,098.35	324,587.76	6,649.48	6,594.76	6,595.59	6,595.48	6,595.26	6,595.21	6,595.42	6,596.33	6,596.54	6,596.73	6,596.76	6,594.86	6,596.92
TMW-56				105.72	105.25	105.25	105.56	105.57	105.84	105.82	105.94	106.12	106.12	105.38	105.36
TMW-56	149,105.02	324,418.67	6,647.72	6,542.00	6,542.47	6,542.47	6,542.16	6,542.15	6,541.88	6,541.90	6,541.78	6,541.60	6,541.60	6,542.34	6,542.36
TMW-57				106.47	105.57	105.71	105.84	112.74	112.07	112.09	111.82	111.90	111.51	105.73	105.62
TMW-57	149,296.82	324,590.47	6,649.86	6,543.39	6,544.29	6,544.15	6,544.02	6,537.12	6,537.79	6,537.77	6,538.04	6,537.96	6,538.35	6,544.13	6,544.24
TMW-58				105.20	104.16	104.89	105.04	106.60	116.04	106.21	106.26	106.39	106.29	104.99	104.88
TMW-58	148,915.74	324,570.92	6,646.96	6,541.76	6,542.80	6,542.07	6,541.92	6,540.36	6,530.92	6,540.75	6,540.70	6,540.57	6,540.67	6,541.97	6,542.08
TMW-59				111.57			111.58	111.88	111.36	105.76	111.34	111.41	111.59	111.33	111.71
TMW-59	148,403.85	325,013.86	6,648.15	6,536.58	6,648.15	6,648.15	6,536.57	6,536.27	6,536.79	6,542.39	6,536.81	6,536.74	6,536.56	6,536.82	6,536.44
TMW-61				107.65	107.65	107.58	107.59	107.71	107.71	107.49	107.76	107.91	107.75	107.53	107.42
TMW-61	148,422.32	324,592.68	6,649.36	6,541.71	6,541.71	6,541.78	6,541.77	6,541.65	6,541.65	6,541.87	6,541.60	6,541.45	6,541.61	6,541.83	6,541.94
TMW-62				105.06	104.99	104.99	104.93	105.34	105.18	105.36	105.33	105.36	105.36	107.20	104.91
TMW-62	148,789.00	324,277.11	6,646.13	6,541.22	6,541.29	6,541.29	6,541.35	6,540.94	6,541.10	6,540.92	6,540.95	6,540.92	6,540.92	6,539.08	6,541.37
TMW-63				112.52	117.64	117.64	117.90	118.49	117.93	118.13	118.11	118.09	118.04	117.49	116.79
TMW-63	148,924.39	325,009.90	6,654.77	6,542.25	6,537.13	6,537.13	6,536.87	6,536.28	6,536.84	6,536.64	6,536.66	6,536.68	6,536.73	6,537.28	6,537.98
TMW-64				108.51	108.40	108.40	108.50	108.65	108.52	108.59	108.64	108.71	108.71	110.31	108.34
TMW-64	149,797.71	324,991.71	6,652.25	6,543.71	6,543.82	6,543.82	6,543.72	6,543.57	6,543.70	6,543.63	6,543.58	6,543.51	6,543.51	6,541.91	6,543.88
TMW-67				71.96	72.00	72.00	71.86	71.96	71.93	72.07	72.07	72.02	72.02	71.74	71.75
TMW-67	150,003.26	325,192.80	6,656.63	6,584.67	6,584.63	6,584.63	6,584.77	6,584.67	6,584.70	6,584.56	6,584.56	6,584.61	6,584.61	6,584.89	6,584.88
TMW-69				111.18	110.85	110.85	111.08	111.46	111.32	111.36	111.41	111.48	111.45	113.09	111.01
TMW-69	149,649.27	324,659.43	6,654.47	6,543.29	6,543.62	6,543.62	6,543.39	6,543.01	6,543.15	6,543.11	6,543.06	6,542.99	6,543.02	6,541.38	6,543.46
TMW-70				108.71	108.25	108.25	108.74	109.02	108.85	108.88	108.96	109.05	109.05	110.52	108.40
TMW-70	149,309.09	324,369.82	6,651.06	6,542.35	6,542.81	6,542.81	6,542.32	6,542.04	6,542.21	6,542.18	6,542.10	6,542.01	6,542.01	6,540.54	6,542.66

KENNECOTT URANIUM COMPANY

Groundwater Elevations

			*Revised												
Well			Measuring	2008		= Resurveyed									
No.	Northing	Easting	Point Elev.	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08
TMW-71				111.06	110.97	110.97	110.92	111.25	111.09	111.16	111.20	111.27	111.27	113.05	110.99
TMW-71	149,835.18	324,420.67	6,654.52	6,543.46	6,543.55	6,543.55	6,543.60	6,543.27	6,543.43	6,543.36	6,543.32	6,543.25	6,543.25	6,541.47	6,543.53
TMW-72				99.16	99.12	98.95	98.70	99.03	98.52	99.02	98.90	98.92	98.69	99.10	98.47
TMW-72	149,020.47	322,997.15	6,640.35	6,541.19	6,541.23	6,541.40	6,541.65	6,541.32	6,541.83	6,541.33	6,541.45	6,541.43	6,541.66	6,541.25	6,541.88
TMW-73				101.47	101.48	101.22	100.99	101.25	100.73	101.25	101.12	101.15	100.94	101.35	100.86
TMW-73	149,055.70	322,896.82	6,643.31	6,541.84	6,541.83	6,542.09	6,542.32	6,542.06	6,542.58	6,542.06	6,542.19	6,542.16	6,542.37	6,541.96	6,542.45
TMW-75				116.70	116.66	116.69	116.69	115.79	115.25	118.84	118.28	118.45	118.41	115.04	115.03
TMW-75	149,801.01	325,992.80	6,660.18	6,543.48	6,543.52	6,543.49	6,543.49	6,544.39	6,544.93	6,541.34	6,541.90	6,541.73	6,541.77	6,545.14	6,545.15
TMW-78				114.03	114.04	114.04	114.11	114.35	114.13	114.40	114.44	114.44	114.44	113.51	113.54
TMW-78	149,900.26	325,592.38	6,658.50	6,544.47	6,544.46	6,544.46	6,544.39	6,544.15	6,544.37	6,544.10	6,544.06	6,544.06	6,544.06	6,544.99	6,544.96
TMW-82				114.66	114.92	114.75	114.79	115.03	114.75	114.94	114.99	115.02	115.02	114.62	114.74
TMW-82	150,302.15	325,987.47	6,660.64	6,545.98	6,545.72	6,545.89	6,545.85	6,545.61	6,545.89	6,545.70	6,545.65	6,545.62	6,545.62	6,546.02	6,545.90
TMW-83				63.97	63.97	63.98	63.99	64.01	63.99	64.00	64.01	64.02	64.02	64.02	64.02
TMW-83	150,307.20	326,379.40	6,658.87	6,594.90	6,594.90	6,594.89	6,594.88	6,594.86	6,594.88	6,594.87	6,594.86	6,594.85	6,594.85	6,594.85	6,594.85
TMW-84				115.59	115.59	115.56	115.56	115.74	115.49	115.67	115.71	115.70	115.70	115.17	115.30
TMW-84	150,506.27	326,376.61	6,661.86	6,546.27	6,546.27	6,546.30	6,546.30	6,546.12	6,546.37	6,546.19	6,546.15	6,546.16	6,546.16	6,546.69	6,546.56
TMW-87				89.82	89.89	89.89	89.85	89.88	89.81	89.83	89.85	89.88	89.88	89.78	89.85
TMW-87	150,200.92	325,789.12	6,660.60	6,570.78	6,570.71	6,570.71	6,570.75	6,570.72	6,570.79	6,570.77	6,570.75	6,570.72	6,570.72	6,570.82	6,570.75
TMW-89				114.39	114.39	114.36	114.27	114.51	114.30	114.43	114.46	114.48	114.48	114.09	114.19
TMW-89	150,809.67	326,137.13	6,660.75	6,546.36	6,546.36	6,546.39	6,546.48	6,546.24	6,546.45	6,546.32	6,546.29	6,546.27	6,546.27	6,546.66	6,546.56
TMW-90															
TMW-90	148,611.42	323,958.91	6,639.82												
TMW-91				103.82	103.57	103.85	103.56	103.78	103.75	103.74	103.67	103.98	103.72	103.48	103.36
TMW-91	148,518.42	323,956.85	6,639.61	6,540.57	6,540.82	6,540.54	6,540.83	6,540.61	6,540.64	6,540.65	6,540.72	6,540.41	6,540.67	6,540.91	6,541.03
TMW-92				104.21	103.91	104.22	103.93	104.17	104.11	104.11	104.12	104.43	103.75	103.80	103.63
TMW-92	148,504.47	323,951.33	6,640.15	6,540.50	6,540.80	6,540.49	6,540.78	6,540.54	6,540.60	6,540.60	6,540.59	6,540.28	6,540.96	6,540.91	6,541.08
TMW-93				100.03	100.09	100.09	100.02	100.17	100.04	100.05	99.99	100.39	99.99	99.62	99.77
TMW-93	148,399.92	324,099.96	6,641.02	6,540.99	6,540.93	6,540.93	6,541.00	6,540.85	6,540.98	6,540.97	6,541.03	6,540.63	6,541.03	6,541.40	6,541.25
TMW-94				100.21	100.34	100.34	100.21	100.39	100.21	100.21	100.17	100.61	100.05	99.72	99.90
TMW-94	148,400.13	324,000.02	6,640.53	6,540.32	6,540.19	6,540.19	6,540.32	6,540.14	6,540.32	6,540.32	6,540.36	6,539.92	6,540.48	6,540.81	6,540.63
TMW-95				100.60	100.75	100.75	100.59	100.67	100.58	100.58	100.56	100.85	100.27	100.06	100.21
TMW-95	148,399.94	323,900.08	6,640.57	6,539.97	6,539.82	6,539.82	6,539.98	6,539.90	6,539.99	6,539.99	6,540.01	6,539.72	6,540.30	6,540.51	6,540.36
TMW-96				105.65	105.17	104.68	104.68	104.15	103.61	103.36	104.12	104.24	99.19	102.20	101.84
TMW-96	148,500.01	323,820.25	6,640.36	6,534.71	6,535.19	6,535.68	6,535.68	6,536.21	6,536.75	6,537.00	6,536.24	6,536.12	6,541.17	6,538.16	6,538.52
TMW-97				105.03	104.40	104.64	104.64	104.62	104.02	104.09	104.07	104.15	100.37	101.81	100.23
TMW-97	148,599.86	323,805.93	6,641.54	6,536.51	6,537.14	6,536.90	6,536.90	6,536.92	6,537.52	6,537.45	6,537.47	6,537.39	6,541.17	6,539.73	6,541.31
TMW-98				100.20	99.95	100.24	100.15	100.12	100.13	100.09	100.15	100.45	99.89	99.85	99.75
TMW-98	148,699.84	323,822.69	6,643.60	6,543.40	6,543.65	6,543.36	6,543.45	6,543.48	6,543.47	6,543.51	6,542.50	6,542.20	6,542.76	6,542.80	6,542.90
TMW-99				99.75	99.46	99.80	98.68	99.67	99.75	99.72	99.68	99.95	99.49	99.52	99.35
TMW-99	148,707.32	323,908.85	6,643.84	6,544.09	6,544.38	6,544.04	6,545.16	6,544.17	6,544.09	6,544.12	6,541.16	6,543.89	6,544.35	6,544.32	6,544.49
TMW-100				101.92	101.59	100.81	100.81	102.00	101.89	101.96	102.07	102.09	102.09	101.91	101.65
TMW-100	148,799.77	324,016.92	6,639.85	6,541.28	6,541.61	6,542.39	6,542.39	6,541.20	6,541.31	6,541.24	6,541.13	6,541.11	6,541.11	6,541.29	6,541.55
TMW-101				102.79	102.41	102.69	102.79	102.95	102.79	102.84	102.94	102.99	102.99	102.34	102.55
TMW-101	148,800.10	324,100.06	6,641.64	6,543.71	6,544.09	6,543.81	6,543.71	6,543.55	6,543.71	6,543.66	6,540.92	6,540.87	6,540.87	6,541.52	6,541.31
TMW-102				107.15	106.47	107.66	108.41	107.09	106.84	105.75	105.24	106.63	106.10	105.45	107.13
TMW-102	148,600.02	323,968.63	6,639.74	6,537.39	6,538.07	6,536.88	6,536.13	6,537.45	6,537.70	6,538.79	6,538.99	6,537.60	6,538.13	6,538.78	6,537.10
TMW-103				100.81	100.74	101.02	101.02	101.00	100.89	100.93	100.87	100.85	100.85	100.45	101.05
TMW-103	149,144.44	323,576.50	6,642.87	6,542.06	6,542.13	6,541.85	6,541.85	6,541.87	6,541.98	6,541.94	6,542.00	6,542.02	6,542.02	6,542.42	6,541.82
TMW-104				102.66	102.35	102.61	102.61	102.75	102.70	102.75	102.74	102.86	102.63	102.21	102.41
TMW-104	148,508.55	324,122.60	6,639.71	6,541.28	6,541.59	6,541.33	6,541.33	6,541.19	6,541.24	6,541.19	6,541.20	6,541.08	6,541.31	6,541.73	6,541.53
TMW-105															
TMW-105	148,581.02	323,943.82	6,640.18												
TMW-106				100.39	100.26	100.55	100.55	100.58	100.39	100.48	100.42	100.28	100.28	100.90	100.51
TMW-106	149,120.61	323,577.45	6,642.25	6,541.86	6,541.99	6,541.70	6,541.70	6,541.67	6,541.86	6,541.77	6,541.83	6,541.97	6,541.97	6,541.35	6,541.74
TMW-107				97.81	98.02	98.02	97.88	97.91	97.87	97.88	97.93	97.97	97.97	97.69	97.66
TMW-107	148,109.87	323,621.68	6,638.80	6,540.99	6,540.78	6,540.78	6,540.92	6,540.89	6,540.93	6,540.92	6,540.87	6,540.83	6,540.83	6,541.11	6,541.14
TMW-108				100.51	100.32	100.63	100.63	100.66	100.47	100.52	100.54	100.32	100.32	100.24	100.33
TMW-108	148,581.99	323,650.69	6,641.43	6,540.92	6,541.11	6,540.80	6,540.80	6,540.77	6,540.96	6,540.91	6,540.89	6,541.11	6,541.11	6,541.19	6,541.10
TMW-109				100.04	99.98	100.30	100.30	100.29	100.15	100.19	100.11	100.05	100.05	99.95	100.09
TMW-109	148,563.38	323,651.83	6,641.21	6,541.17	6,541.23	6,540.91	6,540.91	6,540.92	6,541.06	6,541.02	6,541.10	6,541.16	6,541.16	6,541.26	6,541.12
TMW-110				97.68	97.86	97.86	97.75	97.75	97.72	97.74	97.77	97.87	97.54	97.55	97.53
TMW-110	148,088.65	323,625.57	6,638.71	6,541.03	6,540.85	6,540.85	6,540.96	6,540.96	6,540.99	6,540.97	6,540.94	6,540.84	6,541.17	6,541.16	6,541.18
TMW-111				102.69	102.31	102.60	102.59	102.84	102.78	102.85	102.09	102.95	102.95	102.67	102.50
TMW-111	148,800.06	324,188.03	6,643.95	6,541.70	6,542.08	6,541.79	6,541.80	6,541.55	6,541.61	6,541.54	6,542.30	6,541.44	6,541.44	6,541.72	6,541.89
TMW-112				103.98	103.65	103.85	103.85	104.16	104.02	104.09	104.13	104.17	104.17	103.70	103.77
TMW-112	148,700.09	324,188.95	6,643.24	6,541.60	6,541.93	6,541.73	6,541.73	6,541.42	6,541.56	6,541.49	6,541.45	6,541.41	6,541.41	6,541.88	6,541.81
TMW-113				102.98	102.62	102.87	102.87	103.18	103.02	103.07	103.07	103.17	103.17	102.65	102.74
TMW-113	148,600.06	324,192.45	6,643.51	6,541.39	6,541.75	6,541.50	6,541.50	6,541.19	6,541.35	6,541.30	6,541.30	6,541.20	6,541.20	6,541.72	6,541.63
TMW-115				101.45	101.14	101.40	101.39	101.66	101.51	101.42	101.49	101.65	101.65	101.15	101.24
TMW-115	148,499.96	324,199.79	6,642.92	6,541.12	6,541.43	6,541.17	6,541.18	6,540.91	6,541.06	6,541.15	6,541.08	6,540.92	6,540.92	6,541.42	6,541.33
M-1				147.09	146.98	147.04	147.04	147.05	146.92	147.09	147.09	147.05	147.05	146.89	147.05
M-1	159,190.56	323,580.63	6,711.30	6,564.21	6,564.32	6,564.26	6,564.26	6,564.25	6,564.38	6,564.21	6,564.21	6,564.25	6,564.25	6,564.41	6,564.25
M-2				65.91	65.79	65.82	65.82	65.84	65.81	65.87	65.94	65.95	65.95	70.31	65.94
M-2	145,731.13	317,919.02	6,607.29	6,541.38	6,541.50	6,541.47	6,541.47	6,541.45	6,541.48	6,541.42	6,541.35	6,541.34	6,541.34	6,536.98	6,541.35
PWW-1				100.19	99.99	100.09	100.09	100.24	99.97	100.17	113.12	100.32	100.32	100.22	99.99
PWW-1	149,023.15	323,779.27	6,643.08	6,542.89	6,543.09	6,542.99	6,542.99	6,542.84	6,543.11	6,542.91	6,529.96	6,542.76	6,542.76	6,542.86	6,543.09
PWW-2				104.42	104.15	104.32	104.32	104.52	104.15	104.39	105.73	104.56	104.51	104.18	104.23
PWW-2	148,877.54	324,180.69	6,646.85	6,542.43	6,542.70	6,542.53	6,542.53	6,542.33	6,542.70	6,542.46	6,541.12	6,542.29	6,542.34	6,542.67	6,542.62
					After restart								Well shut off		
				Some wells were buried uinder snow; therefore no readings were available.											

Appendix 1

Pumpback Water Spills – 2008

May 26, 2008 Spill of Pumpback Water

A strong windstorm at approximately 11:00 p.m. on the evening on Monday, May 26, 2008 blew a hose carrying pumpback water from TWM-59 out of the tailings impoundment and on to the embankment such that the pumpback water ran down the exterior of the impoundment's West side South of the access ramp. The following pertains to the incident:

Spill Description:

	Date:	**Time:**
Start:	26-May-08	23:00
Stop:	27-May-08	9:30
Duration:	630	minutes
Flow Rate of Well:	5.2	gallons per minute
Volume Released:	3276	Gallons

Radionuclides:

Table 2 Effluent	**Concentration (pCi/L)**	**Concentration (pCi/L)**	**Fractional Concentration**
Natural uranium:	300	13.1	0.0437
Radium-226	60	4.6	0.0767
Radium-228	60	9.0	0.1500
Thorium-230	100	0.0	0.0000
Sum of fractions:			0.2703

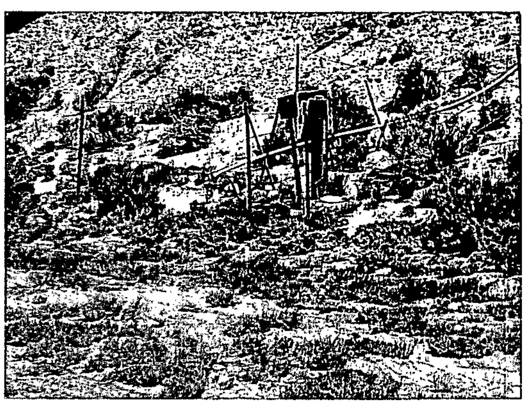
Notes: Water concentrations are based on a sample collected on 13-Jan-2008 from TMW-59. A small volume of spilled water was still on the ground in two (2) locations, near TMW-59 and on top of the impoundment embankment. The water on the ground was sampled. The total volume of water that had not soaked into the ground at the time of sampling did not exceed twenty (20) gallons. The concentrations of radionuclides in the water are below the limits in 10 CFR 20 Appendix B Table 2 - Effluent Concentrations.

Radionuclide concentrations were below the allowable Effluent Concentrations in Table 2 of Appendix B of 10 CFR Part 20 and the quantities involved do not exceed any Allowable Limits of Intake (ALIs). The residual water on the surface rapidly soaked into the ground and could not be effectively removed since the area became a muddy area as opposed to one with pooled water.

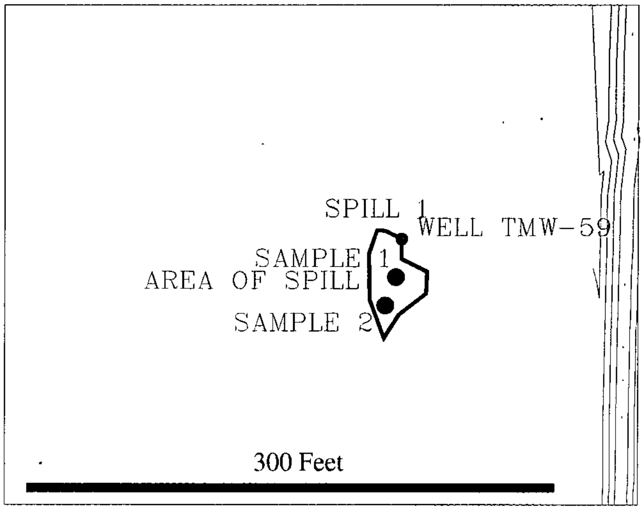
This spill:

- Occurred on private land
- Did not enter any drainages or waterways
- Soaked into the ground above the area of the tailings impoundment plume in the Battle Spring Aquifer and as such is within the capture area of the site's pumpback system, thus it did not have the potential to create any additional groundwater contamination.

A picture of the spill is included below:



A map of the area impacted by the spill is included below:



Four (4) soil samples were collected in the area of the spill, as shown on the map above. The results of those samples are included below:

Kennecott Uranium Project
Sweetwater Uranium Project
Spill #1

		Natural Uranium	Radium-226		Thorium-230	
			Result	Uncertainty	Result	Uncertainty
		(milligrams per kilogram)	(picoCuries per gram)	(picoCuries per gram)		(picoCuries per gram)
Sample #1	0 to 6 inches	3.24	5.60	1.00	0.60	0.07
	6 to 12 inches	6.59	6.20	1.10	7.00	0.10
Sample #2	0 to 6 inches	5.64	9.60	1.10	9.70	0.10
	6 to 12 inches	10.10	8.80	1.20	7.00	0.10

The area of the spill is also within the area of impact from windblown material from the tailings 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 this section. This spill was promptly reported to the Nuclear Regulatory Commission (NRC). A copy of the e-mail follows this section, as well. A gamma radiation survey was performed in the spill area. Gamma radiation levels were not significantly different from levels outside of the spill area.

From: Paulson, Oscar (RTEA)
Sent: Tuesday, May 27, 2008 2:45 PM
To: Stephen Cohen
Cc: Schutterle, Shelley (RTEA); Kelley, Harold (RTEA)
Subject: Spill of Pumpback Fluid

Stephen Cohen:

As described briefly to you in our telephone conversation at 1:50 p.m. this afternoon, a strong windstorm at approximately 11:00 p.m. on the evening on Monday, May 26, 2008 blew a hose carrying pumpback fluid from TWM-59 out of the tailings impoundment and on to the embankment such that the pumpback fluids ran down the exterior of the impoundment's West side South of the access ramp. The following pertains to the incident:

Spill Description

	Date:	**Time:**
Start:	26-May-08	23:00
Stop:	27-May-08	9:30
Duration:	630	Minutes
Flow Rate of Well:	5.2	gallons per minute
Volume Released:	3276	Gallons

Radionuclides:	**Table 2 Effluent Concentration (pCi/L)**	**Concentration (pCi/L)**	**Fractional Concentration**
Natural uranium:	300	13.1	0.0437
Radium-226	60	4.6	0.0767
Radium-228	60	9.0	0.1500
Thorium-230	100	0.0	0.0000
Sum of fractions:			0.2703

Notes: Fluid concentrations are based on a sample collected on 13-Jan-2008 from TMW-59
A small volume of spilled water was still on the ground in two (2) locations, near TMW-59 and on top of the impoundment embankment.
The fluid on the ground was sampled.
The total volume of fluid that had not soaked into the ground at the time of sampling did not exceed twenty (20) gallons.
The concentrations of radionuclides in the fluid are below the limits in 10 CFR 20 Appendix B Table 2 - Effluent Concentrations.

Radionuclide concentrations were below the allowable Effluent Concentrations in Table 2 of Appendix B of 10 CFR Part 20 and the quantities involved do not exceed any Allowable Limits of Intake (ALIs). The residual fluid on the surface rapidly soaked into the ground and could not be effectively removed since the area became a muddy area as opposed to one with pooled fluid.

Images of the spill as a Microsoft PowerPoint (*.ppt) file will be sent attached to a separate e-mail.

Oscar Paulson
Facility Supervisor
Kennecott Uranium Company
Sweetwater Uranium Project
P.O. Box 1500
42 Miles Northwest of Rawlins
Rawlins, Wyoming 82301-1500
E-mail: oscar.paulson@riotinto.com

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

LABORATORY ANALYTICAL REPORT

Client:	Kennecott Uranium	**Report Date:**	07/01/08
Project:	Sweetwater Uranium	**Collection Date:**	05/27/08 11:45
Lab ID:	C08051276-002	**DateReceived:**	05/30/08
Client Sample ID	Spill From TMW 59	**Matrix:**	Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Alkalinity, Total as CaCO3	215	mg/L		1		A2320 B	06/03/08 12:09 / ljl
Carbonate as CO3	ND	mg/L		1		A2320 B	06/03/08 12:09 / ljl
Bicarbonate as HCO3	262	mg/L		1		A2320 B	06/03/08 12:09 / ljl
Calcium	531	mg/L		0.5		E200.7	06/13/08 16:22 / cp
Chloride	88	mg/L		1		A4500-Cl B	06/06/08 14:32 / ljl
Fluoride	0.2	mg/L		0.1		A4500-F C	06/04/08 12:56 / ljl
Magnesium	71.0	mg/L		0.5		E200.7	06/13/08 16:22 / cp
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	06/10/08 10:47 / eli-b
Potassium	9.9	mg/L		0.5		E200.7	06/13/08 16:22 / cp
Silica	5	mg/L		1		E200.7	06/13/08 16:22 / cp
Sodium	104	mg/L	D	4		E200.7	06/13/08 16:22 / cp
Sulfate	1480	mg/L	D	30		A4500-SO4 E	06/03/08 15:53 / sp
NON-METALS							
Cyanide, Total	ND	mg/L		0.005		Kelada mod	06/02/08 11:55 / eli-b
PHYSICAL PROPERTIES							
Conductivity	2800	umhos/cm		1		A2510 B	05/30/08 14:38 / jh
pH	7.94	s.u.		0.01		A4500-H B	05/30/08 14:38 / jh
Solids, Total Dissolved TDS @ 180 C	2400	mg/L		10		A2540 C	06/02/08 09:15 / dd
METALS - DISSOLVED							
Aluminum	ND	mg/L		0.1		E200.7	06/13/08 16:22 / cp
Arsenic	ND	mg/L		0.001		E200.8	06/16/08 23:36 / ts
Barium	ND	mg/L		0.1		E200.7	06/13/08 16:22 / cp
Beryllium	ND	mg/L		0.01		E200.7	06/13/08 16:22 / cp
Boron	ND	mg/L		0.1		E200.7	06/13/08 16:22 / cp
Cadmium	ND	mg/L		0.005		E200.8	06/16/08 23:36 / ts
Chromium	ND	mg/L		0.01		E200.7	06/13/08 16:22 / cp
Cobalt	0.008	mg/L		0.001		E200.8	06/16/08 23:36 / ts
Copper	ND	mg/L		0.01		E200.8	06/16/08 23:36 / ts
Iron	ND	mg/L		0.05		E200.7	06/13/08 16:22 / cp
Lead	ND	mg/L		0.01		E200.8	06/16/08 23:36 / ts
Manganese	3.70	mg/L		0.01		E200.7	06/13/08 16:22 / cp
Mercury	ND	mg/L		0.0002		E200.8	06/16/08 23:36 / ts
Molybdenum	ND	mg/L		0.01		E200.8	06/16/08 23:36 / ts
Nickel	ND	mg/L		0.01		E200.8	06/16/08 23:36 / ts
Selenium	ND	mg/L		0.001		E200.8	06/16/08 23:36 / ts
Silver	ND	mg/L		0.01		E200.8	06/17/08 18:27 / ts
Thallium	ND	mg/L		0.01		E200.8	06/16/08 23:36 / ts
Vanadium	ND	mg/L		0.1		E200.7	06/13/08 16:22 / cp
Zinc	ND	mg/L		0.01		E200.8	06/16/08 23:36 / ts

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.
D - RL increased due to sample matrix interference.

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

LABORATORY ANALYTICAL REPORT

Client:	Kennecott Uranium	**Report Date:**	07/01/08
Project:	Sweetwater Uranium	**Collection Date:**	05/27/08 11:45
Lab ID:	C08051276-002	**DateReceived:**	05/30/08
Client Sample ID	Spill From TMW 59	**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	06/25/08 23:04 / crw
Gross Alpha minus Rn & U Precision (±)	0.9	pCi/L				E900.1	06/25/08 23:04 / crw
Gross Alpha minus Rn & U MDC	0.8	pCi/L				E900.1	06/25/08 23:04 / crw
Lead 210	-3	pCi/L	U			E909.0M	06/06/08 10:00 / dm
Lead 210 precision (±)	5.5	pCi/L				E909.0M	06/06/08 10:00 / dm
Lead 210 MDC	9.4	pCi/L				E909.0M	06/06/08 10:00 / dm
Radium 226	2.1	pCi/L				E903.0	06/17/08 16:43 / taj
Radium 226 precision (±)	0.3	pCi/L				E903.0	06/17/08 16:43 / taj
Radium 226 MDC	0.1	pCi/L				E903.0	06/17/08 16:43 / taj
Radium 228	9.6	pCi/L				RA-05	06/10/08 09:29 / plj
Radium 228 precision (±)	1.0	pCi/L				RA-05	06/10/08 09:29 / plj
Radium 228 MDC	1.2	pCi/L				RA-05	06/10/08 09:29 / plj
Thorium 230	0.0	pCi/L	U	0.2		E907.0	06/11/08 15:45 / dmf
Thorium 230 precision (±)	0.1	pCi/L				E907.0	06/11/08 15:45 / dmf
Uranium	0.0123	mg/L		0.0003		E200.8	06/16/08 23:36 / ts
Uranium, Activity	8.3	pCi/L		0.2		E200.8	06/16/08 23:36 / ts
DATA QUALITY							
A/C Balance (± 5)	-0.594	%				Calculation	06/19/08 18:48 / lab
Anions	37.6	meq/L				Calculation	06/19/08 18:48 / lab
Cations	37.1	meq/L				Calculation	06/19/08 18:48 / lab
Solids, Total Dissolved Calculated	2420	mg/L				Calculation	06/19/08 18:48 / lab
TDS Balance (0.80 - 1.20)	0.990					Calculation	06/19/08 18:48 / lab

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

August 18, 2008 Spill of Pumpback Water

A six (6) inch diameter polyethylene line into which pump back water from the following six wells, TMW-7, 18, 57, 58, 96 and 97 flowed became plugged and the water flowed out of the top of the line and down the outside of the western tailings impoundment embankment onto the ground on the North side of the impoundment ramp. The following pertains to the incident:

Spill Description

	Date:	**Time:**
Start:	18-Aug-08	0:00
Stop:	18-Aug-08	8:00
Estimated Duration:	480	minutes
Flow Rate of Well:	38.08	gallons per minute
Estimated Volume Released:	18278.4	gallons

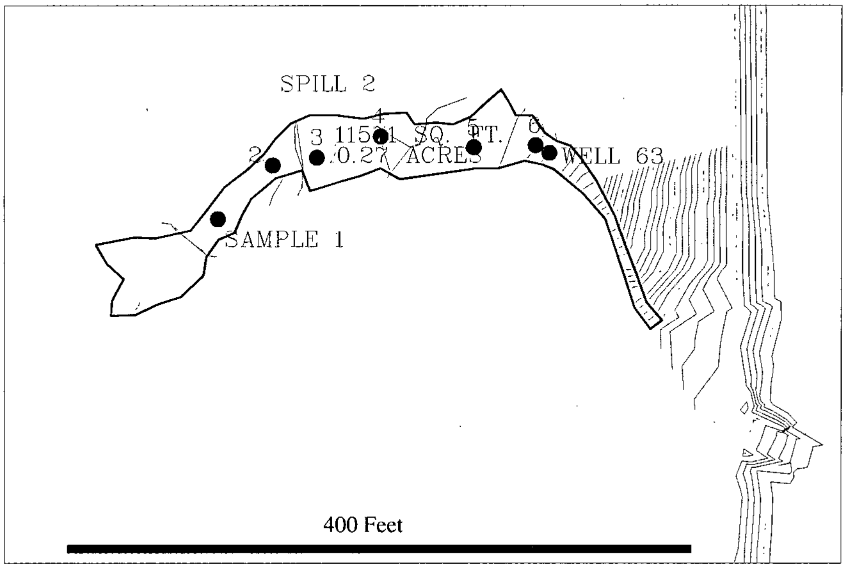
Radionuclides:	**Table 2 Effluent Concentration (pCi/L)**	**Concentration (pCi/L)**	**Fractional Concentration**
Natural uranium:	300	10.7	0.0355
Radium-226	60	2.1	0.0350
Radium-228	60	7.5	0.1243
Thorium-230	100	0.03	0.0003
Sum of fractions:			0.1952

Notes: Concentrations based on most recent samples collected from wells. A small volume of spilled water was still on the ground. As much as possible was pumped into a tank and hauled to the tailings impoundment. The total volume of water pumped from water pooled on the ground was 119 gallons (1,000 pounds of water). The water on the ground was sampled. The concentrations of radionuclides in the water are below the limits in 10 CFR 20 Appendix B Table 2 - Effluent Concentrations. The spill did not enter any drainages. The spill occurred entirely on private land. All spilled water either pooled on the ground surface or soaked into the soil. All spilled water accumulated above the plume in the underlying aquifer.

Radionuclide concentrations were below the allowable Effluent Concentrations in Table 2 of Appendix B of 10 CFR Part 20 and the quantities involved do not exceed any Allowable Limits of Intake (ALIs). The residual water on the surface rapidly soaked into the ground. Approximately 119 gallons were removed by pumping of accumulated/pooled water. This water was hauled to the tailings impoundment.

A picture of the spill is included below:

A map of the spill including soil sample locations is included below:



Twelve (12) soil samples were collected in the spill area. The sample results are included below:

Kennecott Uranium Project
Sweetwater Uranium Project
Spill #2

			Radium-226		Thorium-230	
		Natural Uranium (milligrams per kilogram)	Result (picoCuries per gram)	Uncertainty (picoCuries per gram)	Result (picoCuries per gram)	Uncertainty (picoCuries per gram)
Sample #1	0 to 6 inches	3.84	7.30	1.00	7.20	0.10
	6 to 12 inches	1.99	7.60	1.00	6.60	0.10
Sample #2	0 to 6 inches	1.47	5.70	0.90	3.40	0.08
	6 to 12 inches	3.05	11.60	1.10	9.90	0.10
Sample #3	0 to 6 inches	3.06	8.60	1.00	7.80	0.10
	6 to 12 inches	3.75	4.90	0.90	2.10	0.07
Sample #4	0 to 6 inches	5.32	7.90	1.10	13.00	0.10
	6 to 12 inches	3.48	6.10	1.20	3.10	0.08
Sample #5	0 to 6 inches	5.17	5.80	1.10	3.90	0.08
	6 to 12 inches	3.66	6.00	1.10	3.40	0.07
Sample #6	0 to 6 inches	5.43	9.00	1.10	7.80	0.10
	6 to 12 inches	3.54	5.40	1.10	6.10	0.10

The following table lists flow data for the spill:

Kennecott Uranium Company
Sweetwater Uranium Project
Spill Data

Date:	18-Aug-08					
Well Flows:						
	Date	**Time**	**Reading**	**Flow Rate**		**Fraction of Fluid**
TMW-97	8/14/2008	8:08	6115260			
	8/18/2008	10:01	6165430			
			50170	**8.54**	**GPM**	**0.224**
	Date	**Time**	**Reading**	**Rate**		
TMW-96	8/14/2008	8:06	4974360			
	8/18/2008	10:01	5009970			
			35610	**6.06**	**GPM**	**0.159**
	Date	**Time**	**Reading**	**Rate**		
TMW-7	8/14/2008	7:48	3859290			
	8/18/2008	9:53	3903150			
			43860	**7.45**	**GPM**	**0.196**
	Date	**Time**	**Reading**	**Rate**		
TMW-57	8/14/2008	7:49	2072440			
	8/18/2008	9:54	2101700			
			29260	**4.97**	**GPM**	**0.131**
	Date	**Time**	**Reading**	**Rate**		
TMW-18	8/14/2008	7:51	1730370			
	8/18/2008	9:56	1785510			
			55140	**9.37**	**GPM**	**0.246**
	Date	**Time**	**Reading**	**Rate**		
TMW-58	8/14/2008	7:52	332160			
	8/18/2008	9:57	342040			
			9880	**1.68**	**GPM**	**0.044**
Total:				**38.08**	**GPM**	**1.00**
Spill Duration:	**8**	**Hours**				
Spill Volume:	**18278.4**	**Gallons**				
Fluid Recovered:	**119**	**Gallons**				

The following table shows estimated concentrations of dissolved constituents in the spill:

KENNECOTT URANIUM COMPANY								
Weighting Factor Based on Flow		0.20	0.25	0.13	0.04	0.16	0.22	1.00
NORTHING: 148,500.01 EASTING: 323,807.75	Groundwater Protection							
ND = Non-detectable	Standard	**TMW-7**	**TMW-18**	**TMW-57**	**TMW-58**	**TMW-96**	**TMW 97**	**Weighted**
FIELD DATA mg/l:	(GPS)	**4/14/2008**	**4/14/2008**	**4/23/2008**	**4/23/2008**	**4/14/2008**	**5/20/2008**	**Average**
Temperature (C)	as of 5/26/05	14.8	12	14.6	13.2	11.8	12.6	13.04
pH (Std. Units)		7	6.6	7.4	7.1	7.8	7.6	7.22
Cond. (umho/cm)		1018	3010	755	1521	981	867	1456.24
TDS								
MAJOR IONS mg/l:								
Alk-CaCO3		162	449	109	182	116	97	204.68
Bicarbonate (HCO3)		198	578	133	222	142	118	257.21
Calcium (Ca)		167	611	124	296	195	152	277.42
Carbonate (CO3)		0	0	0	0	0	0	0.00
Chloride (Cl)		24	87	13	46	23	19	37.76
Fluoride (F)		0	0	0.1	0	0.1	0.1	0.05
Magnesium (Mg)		13.8	49.2	9.2	24.1	13.8	10.7	21.67
Nitrate-N (NO3)		0	0	0	0	0	0	0.00
Potassium (K)		3.7	6.4	3.3	4.8	3.9	3.3	4.30
Silica (SiO2)		8	11	8	7	7	8	8.53
Sodium (Na)		49	94	40.2	59	52	43.7	58.65
Sulfate (SO4)		383	1340	302	697	460	348	626.16
NON-METALS:								
Cyanide (CN)		0	0	0	0	0	0	0.00
PHYSICAL PROPERTIES:								
Cond (umho/cm)		1030	2880	768	1580	1080	885	1450.70
pH	GPS (6.8)	7.35	6.87	8.09	7.99	7.84	7.93	7.56
TDS @ 180° C.	GPS (500)	749	2520	523	1230	801	670	1167.04
METALS-DISSOLVED mg/l:								
Aluminum (Al)	GPS (1.8)	0	0	0	0	0	0	0.00
Arsenic (As)	GPS (.05)	0	0	0	0.001	0	0	0.00
Barium (Ba)		0	0	0	0	0	0	0.00
Beryllium (Be)	GPS (.01)	0	0	0	0	0	0	0.00
Boron (B)		0	0.3	0.3	0.1	0	0	0.12
Cadmium (Cd)	GPS (.01)	0	0	0	0	0	0	0.00
Chromium (Cr)	GPS (.05)	0	0	0	0	0	0	0.00
Cobalt (Co)		0	0.002	0.002	0.002	0	0	0.00
Copper (Cu)		0	0	0	0	0	0	0.00
Iron (Fe)	GPS (0.6)	0.14	8.56	0.06	0.023	0	0	2.14
Lead (Pb)		0	0	0	0	0	0	0.00
Manganese (Mn)	GPS (0.2)	0.34	1.4	0.1	0.26	0.12	0.1	0.48
Mercury (Hg)		0	0	0	0	0	0	0.00
Molybdenum (Mo)		0	0	0	0	0	0	0.00
Nickel (Ni)	GPS (.01)	0	0	0	0	0	0	0.00
Selenium (Se)	GPS (.01)	0	0	0	0.004	0.003	0	0.00
Silver (Ag)		0	0	0	0	0	0	0.00
Thallium (Tl)		0	0	0	0	0	0	0.00
Vanadium (V2O5)		0.1	0.1	0	0.2	0	0	0.05
Zinc (ZN)		0.02	0.02	0	0.02	0	0	0.01
RADIOMETRIC pCi/l:								
Uranium, natural	GPS (36)	5.4	1	3.7	18	25.4	18	10.66
Radium 226		1.4	2.5	2.1	3.5	2.4	1.8	2.10
Radium Precision +/-		0.22	0.31	0.19	0.36	0.28	0.3	0.27
Radium 228		4.3	11.9	5.3	9.6	7	6.5	7.46
Radium Precision +/-		0.8	1	1	0.9	0.9	0.9	0.92
Combined Ra226/228	GPS (5.8)	5.7	14.4	7.4	13.1	9.4	8.3	9.56
Thorium 230	GPS (7.0)	0.1	0	0.1	0	0	0	0.03
Thorium Precision +/-		0.1	0.1	0.1	0.1	0.2	0.1	0.12
Lead (Pb210)	GPS (8.9)	0	0.5	-1	-1.2	0.9	7.9	1.86
Lead Precision +/-		1.5	0.4	11.9	11.9	0.5	17.8	6.54
Gross Alpha	GPS (15)	5.5	12.1	3.1	7.2	6.9	3.7	6.70
Gross Alpha Precision +/-		1	1.5	0.6	1	1.1	0.6	1.00
QUALITY ASSURANCE DATA:								0.00
TDS A/C Balance (dec. %)		1	1.02	0.92	0.99	0.97	1.04	1.00

The area of the spill is also within the area of impact from windblown material from the tailings 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 this section. This spill was promptly reported to the Nuclear Regulatory Commission. A copy of the e-mail follows this section, as well. A gamma radiation survey was performed in the spill area. Gamma radiation levels were not significantly different from levels outside of the spill area.

From: Paulson, Oscar (RTEA)
Sent: Monday, August 18, 2008 4:41 PM
To: Stephen Cohen
Cc: Schutterle, Shelley (RTEA); Kelley, Harold (RTEA)
Subject: Spill of Pumpback Fluid

Stephen Cohen:

As described briefly to you in our telephone conversation today, a six (6) inch diameter polyethylene line into which pump back fluid from the following six wells, TMW-7, 18, 57, 58, 96 and 97 flowed became plugged and the fluid flowed out of the top of the line and down the outside of the western tailings impoundment embankment onto the ground on the North side of the impoundment ramp.

The following pertains to the incident:

Spill Description

	Date:	Time:
Start:	18-Aug-08	0:00
Stop:	18-Aug-08	8:00
Estimated Duration:	480	minutes
Flow Rate of Well:	38.08	gallons per minute
Estimated Volume Released:	18278.4	gallons

Radionuclides:	Table 2 Effluent Concentration (pCi/L)	Concentration (pCi/L)	Fractional Concentration
Natural uranium:	300	10.7	0.0355
Radium-226	60	2.1	0.0350
Radium-228	60	7.5	0.1243
Thorium-230	100	0.03	0.0003
Sum of fractions:			0.1952

Notes: Concentrations based on most recent samples collected from wells

A small volume of spilled fluid was still on the ground. As much as possible was pumped into a tank and hauled to the tailings impoundment. The total volume of fluid pumped from fluid pooled on the ground was 119 gallons (1,000 pounds of fluid).

The fluid on the ground was sampled.

The concentrations of radionuclides in the fluid are below the limits in 10 CFR 20 Appendix B Table 2 - Effluent Concentrations

The spill did not enter any drainages.

The spill occurred entirely on private land

All spilled fluid either pooled on the ground surface or soaked into the soil

All spilled fluid accumulated above the plume in the underlying aquifer.

Radionuclide concentrations were below the allowable Effluent Concentrations in Table 2 of Appendix B of 10 CFR Part 20 and the quantities involved do not exceed any Allowable Limits of Intake (ALIs). The residual fluid on the surface rapidly soaked into the ground. Approximately 119 gallons were removed by pumping of accumulated/pooled fluid.

An image of the spill as the Microsoft PowerPoint (*.ppt) file *spill_08_18_08.ppt* is attached as well as the Microsoft Excel (*.xls) file *Incident_spreadsheet.xls* that contains the most recent analysis data for the wells involved, a weighted average concentration for the spilled fluid based on these analysis results (Sheet: 08-18-08 SPILL), well flow rate calculations (Sheet: FLOW DATA) and other information (Sheet: FRACTIONAL CONC).

The border of the area impacted by the spill was marked with wooden lathes and will be surveyed so a permanent record of the impacted area will be made.

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

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

LABORATORY ANALYTICAL REPORT

Client:	Kennecott Uranium	**Report Date:**	10/12/08
Project:	Sweetwater Uranium	**Collection Date:**	08/18/08 09:15
Lab ID:	C08081025-007	**DateReceived:**	08/22/08
Client Sample ID:	Tail Cell Spill 8-18-08	**Matrix:**	Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Alkalinity, Total as CaCO3	190	mg/L		1		A2320 B	08/27/08 01:47 / ljl
Carbonate as CO3	ND	mg/L		1		A2320 B	08/27/08 01:47 / ljl
Bicarbonate as HCO3	232	mg/L		1		A2320 B	08/27/08 01:47 / ljl
Calcium	281	mg/L		0.5		E200.7	09/08/08 17:53 / cp
Chloride	38	mg/L		1		A4500-Cl B	09/03/08 10:59 / sp
Fluoride	0.1	mg/L		0.1		A4500-F C	09/03/08 10:33 / ljl
Magnesium	23.3	mg/L		0.5		E200.7	09/08/08 17:53 / cp
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	08/27/08 12:55 / eli-b
Potassium	4.6	mg/L		0.5		E200.7	09/08/08 17:53 / cp
Silica	20	mg/L		1		E200.7	09/08/08 17:53 / cp
Sodium	62	mg/L	D	2		E200.7	09/08/08 17:53 / cp
Sulfate	638	mg/L	D	10		A4500-SO4 E	08/29/08 15:25 / jal
NON-METALS							
Cyanide, Total	ND	mg/L		0.005		Kelada mod	08/26/08 12:48 / eli-b
PHYSICAL PROPERTIES							
Conductivity	1480	umhos/cm		1		A2510 B	08/25/08 19:02 / dd
pH	7.97	s.u.		0.01		A4500-H B	08/25/08 19:02 / dd
Solids, Total Dissolved TDS @ 180 C	1140	mg/L		10		A2540 C	08/25/08 16:32 / jah
METALS - DISSOLVED							
Aluminum	ND	mg/L		0.1		E200.7	09/08/08 17:53 / cp
Arsenic	ND	mg/L		0.001		E200.8	09/11/08 19:52 / ts
Barium	ND	mg/L		0.1		E200.7	09/08/08 17:53 / cp
Beryllium	ND	mg/L		0.01		E200.7	09/08/08 17:53 / cp
Boron	ND	mg/L		0.1		E200.7	09/08/08 17:53 / cp
Cadmium	ND	mg/L		0.005		E200.7	09/08/08 17:53 / cp
Chromium	ND	mg/L		0.01		E200.7	09/08/08 17:53 / cp
Cobalt	ND	mg/L		0.001		E200.8	09/11/08 19:52 / ts
Copper	ND	mg/L		0.01		E200.8	09/11/08 19:52 / ts
Iron	ND	mg/L		0.05		E200.7	09/08/08 17:53 / cp
Lead	ND	mg/L		0.01		E200.8	09/11/08 19:52 / ts
Manganese	0.41	mg/L		0.01		E200.7	09/08/08 17:53 / cp
Mercury	ND	mg/L		0.0002		E200.8	09/11/08 19:52 / ts
Molybdenum	ND	mg/L		0.01		E200.7	09/08/08 17:53 / cp
Nickel	ND	mg/L		0.01		E200.7	09/08/08 17:53 / cp
Selenium	ND	mg/L		0.001		E200.8	09/11/08 19:52 / ts
Silver	ND	mg/L		0.01		E200.8	09/11/08 19:52 / ts
Thallium	ND	mg/L		0.01		E200.8	09/11/08 19:52 / ts
Vanadium	ND	mg/L		0.1		E200.7	09/08/08 17:53 / cp
Zinc	ND	mg/L		0.01		E200.7	09/08/08 17:53 / cp

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.
D - RL increased due to sample matrix interference.

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

LABORATORY ANALYTICAL REPORT

Client:	Kennecott Uranium	**Report Date:**	10/12/08
Project:	Sweetwater Uranium	**Collection Date:**	08/18/08 09:15
Lab ID:	C08081025-007	**DateReceived:**	08/22/08
Client Sample ID:	Tail Cell Spill 8-18-08	**Matrix:**	Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - DISSOLVED							
Gross Alpha minus Rn & U	2.7	pCi/L				E900.1	09/15/08 17:18 / crw
Gross Alpha minus Rn & U Precision (±)	0.6	pCi/L				E900.1	09/15/08 17:18 / crw
Gross Alpha minus Rn & U MDC	0.4	pCi/L				E900.1	09/15/08 17:18 / crw
Lead 210	-2	pCi/L	U			E909.0M	09/10/08 09:18 / dm
Lead 210 precision (±)	8.8	pCi/L				E909.0M	09/10/08 09:18 / dm
Lead 210 MDC	14.9	pCi/L				E909.0M	09/10/08 09:18 / dm
Radium 226	2.3	pCi/L				E903.0	10/01/08 16:43 / plj
Radium 226 precision (±)	0.35	pCi/L				E903.0	10/01/08 16:43 / plj
Radium 226 MDC	0.23	pCi/L				E903.0	10/01/08 16:43 / plj
Radium 228	4.6	pCi/L				RA-05	09/19/08 14:08 / plj
Radium 228 precision (±)	1.4	pCi/L				RA-05	09/19/08 14:08 / plj
Radium 228 MDC	2.1	pCi/L				RA-05	09/19/08 14:08 / plj
Thorium 230	0.1	pCi/L	U	0.2		E907.0	09/20/08 12:26 / dmf
Thorium 230 precision (±)	0.1	pCi/L				E907.0	09/20/08 12:26 / dmf
Uranium	0.0139	mg/L		0.0003		E200.8	09/11/08 19:52 / ts
Uranium, Activity	9.4	pCi/L		0.2		E200.8	09/11/08 19:52 / ts
DATA QUALITY							
A/C Balance (± 5)	1.66	%				Calculation	09/15/08 17:24 / sdw
Anions	18.1	meq/L				Calculation	09/15/08 17:24 / sdw
Cations	18.8	meq/L				Calculation	09/15/08 17:24 / sdw
Solids, Total Dissolved Calculated	1170	mg/L				Calculation	09/15/08 17:24 / sdw
TDS Balance (0.80 - 1.20)	0.970					Calculation	09/15/08 17:24 / sdw
VOLATILE ORGANIC COMPOUNDS							
1,1,1,2-Tetrachloroethane	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
1,1,1-Trichloroethane	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
1,1,2,2-Tetrachloroethane	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
1,1,2-Trichloroethane	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
1,1-Dichloroethane	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
1,1-Dichloroethene	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
1,1-Dichloropropene	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
1,2,3-Trichlorobenzene	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
1,2,3-Trichloropropane	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
1,2,4-Trichlorobenzene	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
1,2,4-Trimethylbenzene	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
1,2-Dibromo-3-chloropropane	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
1,2-Dibromoethane	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
1,2-Dichlorobenzene	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
1,2-Dichloroethane	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
1,2-Dichloropropane	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
1,3,5-Trimethylbenzene	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
1,3-Dichlorobenzene	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr

Report Definitions:

RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
U - Not detected at minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
H - Analysis performed past recommended holding time.

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

LABORATORY ANALYTICAL REPORT

Client:	Kennecott Uranium		**Report Date:**	10/12/08
Project:	Sweetwater Uranium		**Collection Date:**	08/18/08 09:15
Lab ID:	C08081025-007		**DateReceived:**	08/22/08
Client Sample ID:	Tail Cell Spill 8-18-08		**Matrix:**	Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
1,3-Dichloropropane	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
1,4-Dichlorobenzene	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
2,2-Dichloropropane	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
2-Chloroethyl vinyl ether	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
2-Chlorotoluene	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
4-Chlorotoluene	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
Benzene	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
Bromobenzene	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
Bromochloromethane	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
Bromodichloromethane	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
Bromoform	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
Bromomethane	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
Carbon tetrachloride	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
Chlorobenzene	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
Chlorodibromomethane	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
Chloroethane	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
Chloroform	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
Chloromethane	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
cis-1,2-Dichloroethene	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
cis-1,3-Dichloropropene	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
Dibromomethane	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
Dichlorodifluoromethane	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
Ethylbenzene	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
Hexachlorobutadiene	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
Isopropylbenzene	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
m+p-Xylenes	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
Methyl ethyl ketone	ND	ug/L	H	20		SW8260B	09/03/08 05:07 / jlr
Methyl tert-butyl ether (MTBE)	ND	ug/L	H	2.0		SW8260B	09/03/08 05:07 / jlr
Methylene chloride	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
Naphthalene	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
n-Butylbenzene	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
n-Propylbenzene	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
o-Xylene	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
p-Isopropyltoluene	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
sec-Butylbenzene	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
Styrene	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
tert-Butylbenzene	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
Tetrachloroethene	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
Toluene	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
trans-1,2-Dichloroethene	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
trans-1,3-Dichloropropene	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
Trichloroethene	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
Trichlorofluoromethane	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
Vinyl chloride	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr

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.
H - Analysis performed past recommended holding time.

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

LABORATORY ANALYTICAL REPORT

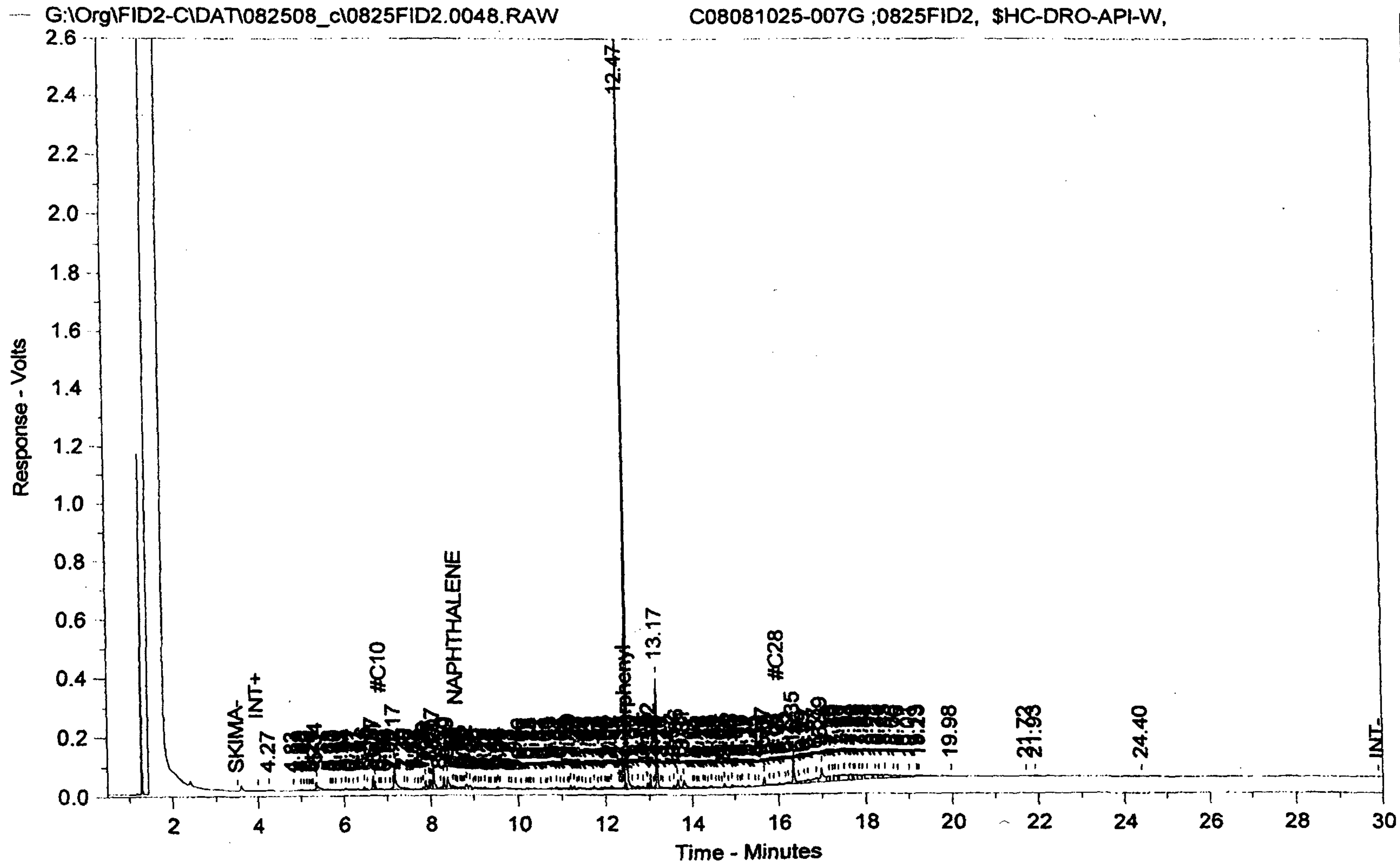
Client: Kennecott Uranium
Project: Sweetwater Uranium
Lab ID: C08081025-007
Client Sample ID: Tail Cell Spill 8-18-08

Report Date: 10/12/08
Collection Date: 08/18/08 09:15
DateReceived: 08/22/08
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
Xylenes, Total	ND	ug/L	H	1.0		SW8260B	09/03/08 05:07 / jlr
Surr: 1,2-Dichlorobenzene-d4	91.0	%REC	H	80-120		SW8260B	09/03/08 05:07 / jlr
Surr: Dibromofluoromethane	97.0	%REC	H	70-130		SW8260B	09/03/08 05:07 / jlr
Surr: p-Bromofluorobenzene	98.0	%REC	H	80-120		SW8260B	09/03/08 05:07 / jlr
Surr: Toluene-d8	100	%REC	H	80-120		SW8260B	09/03/08 05:07 / jlr
ORGANIC CHARACTERISTICS							
Diesel Range Organics (DRO)	ND	mg/L		1.0		SW8015M as	08/26/08 23:01 / bah
Surr: o-Terphenyl	78.0	%REC		60-120		SW8015M as	08/26/08 23:01 / bah
Gasoline Range Organics (GRO)	ND	mg/L		0.040		SW8015M as	08/29/08 03:36 / jlr
Surr: Trifluorotoluene	80.0	%REC		80-120		SW8015M as	08/29/08 03:36 / jlr

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.
H - Analysis performed past recommended holding time.

Batch ID: 19568



ENERGY LABORATORIES
ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

Appendix 2

2008 Inspection of Tailings Impoundment Liner and Embankment

QED Associates civil engineering consultants

May 30, 2008

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

RE: 2008 INSPECTION OF TAILINGS IMPOUNDMENT LINER AND EMBANKMENTS

Dear Oscar:

Introduction. On May 23, 2008 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."

Moreover, at the request of Rio Tinto Energy America, inspection of the embankments, both inside and outside the impoundment, were performed so that any conditions affecting performance of the embankments can be noted and rectified. Third, recent efforts involving tailings regrading are discussed as such efforts impact the functioning of the impoundment.

Recent Efforts. Over the last two years, two separate excavation tasks have altered the configuration of the surface of the tailings. First, 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 east central portion of the impoundment. Second, during the latter half of 2007 through the present, tailings as wells as the additional 11(e)2 soils have been regraded. In the tailings regrading effort, beach sands from the west half of the impoundment have been removed from the margins of the impoundment, lowering the surface of the tailings to below the bench throughout most of the impoundment, and shifting tailings to parts of the impoundment in which the tailings surface was lower. This effort has resulted in substantial progress toward the following tailings management objectives:

1) Regrading the tailings to achieve a more planar surface in anticipation of either reclamation or future tailings storage;
2) Adding a depth of primarily sandy tailings from the west half of the impoundment to tailings areas in the east half that are more fine-grained and less consolidated;
3) Combining and leveling the tailings to create a surface that is entirely below the bench, more sheltered from wind, and easier to keep moistened;
4) Creating stable, flat, bermed areas as evaporation cells for tailings dewatering; and
5) Creating a more uniform surface, above which the existing liner can be more readily maintained.

Photographs 1 through 6 depict the state of the tailings regrading effort as of May 23, 2008. The attached Figure 1 presents the design by Tetra Tech of nine evaporation cells across the surface of the regraded tailings, each of which is to be divided into two halves. Figure 2 provides the results of a May 2, 2008 survey, indicating the progress which has been made toward the regrading and evaporation cell creation effort. As of the date of the inspection, seven of the 18 evaporation cells were essentially completed (3W & 3E, 4E, 5W & 5E, and 6W & 6E), and an additional seven cells were close to completion (1W & 1E, 2W & 2E, 4W, and 8W & 8E). Evaporation cells 7W & 7E and 9W & 9E will be located in the southeast corner of the impoundment where the free water pool is located, and where additional regrading is required.

Tailings Inspection. The visual inspection was performed by driving slowly around the entire crest of the impoundment and by walking along the bench on the east and west sides. 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. The liner has been maintained below the bench close to the tailings surface, but large portions of the liner have been so damaged above the bench that it is no longer relevant to report on the functioning of the liner above the bench. The only location in which a functioning liner is important above the bench is in the west central portion of the impoundment where a ramp currently exists to allow access to the tailings surface.

Tailings/Fluid Surface to Bench. The liner has been damaged below the bench along the east embankment and the east half of the north embankment. However, the liner within five vertical feet of the tailings or tailings fluid surface has been maintained intact or repaired where necessary. The repairs consist of adhering a segment of used liner from the impoundment by cleaning and gluing per manufacturer's specifications (Photographs 7 and 8). The repairs are expected to be effective at limiting the potential for tailings fluid to escape through the liner. Where the liner may be damaged by the tailings regrading effort summarized above, repairs are being, or will be, made.

The liner remains, by observation, plyable. There is no evidence of exposed scrim by either physical or chemical means. Photograph 9 depicts the liner below the bench in the southeast corner of the impoundment, near the free water pool.

Bench to Crest. The bench is no longer covered by tailings except along the west central portion of the embankment where a ramp allows access to the impoundment's interior. The bench is observed to be functioning as designed along only the west halves of the south and north embankments, although even in these areas eroded soil from above the bench is accumulating below the liner at the bench putting additional strain on the bench seam. Elsewhere the key trench along the bench is non-functional due to tears of the liner or erosion of embankment soils that has billowed the liner at the bench.

Between the bench and the crest of the impoundment, the liner is functional only in the impoundment's northwest corner. Everywhere else the liner has been significantly torn and is in many places non-existent. 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.

Liner Conclusions/Recommendations. Above the bench, the liner is only intact and functional in the northwest corner of the impoundment. The liner along the bench and the seam at the bench is functional along the south embankment, and the west half of the north embankment. The liner remains, by observation, plyable. There is no evidence of exposed scrim by either physical or chemical means.

Liner repair and regrading of 11(e)2 soils and mill tailings within the tailings impoundment limit the potential for fluid to escape. The tailings regrading and evaporation cell creation effort should be effective at meeting several tailings management objectives, including liner maintenance, tailings dewatering, and preparation for either reclamation or resumed operations.

Fluid Levels. Fluid into the impoundment includes precipitation and ground water 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. The fluid level in September 2007 was at the same elevation as in September 2006, at 6,608.70 feet. During the five years from 1987 through 1992, fluid levels in the impoundment dropped about 14 feet. From 1992 through 1997, fluid levels dropped 5 feet. For the five years from 1997 through 2002, fluid levels dropped in additional 10 feet. However, it appears that since about 2002 the fluid surface has reached an annual stasis in which the rate of evaporation is approximately equal to the rate at which ground water is pumped and precipitation falls into the impoundment.

Embankments Observation. I observed the exterior of the four tailings embankments by driving slowly around its entire perimeter, and walking to those portions of the embankments that could not be reached by vehicle or that required closer observation. The tailings regrading effort has lowered tailings and tailings fluid levels. The elevations of fluids in the impoundment are now 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 2008 field visit. Some rilling of the exterior surface has occurred 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 10 through 13 were taken of the west, south, east and north embankments, respectively.

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
September 24, 2007	6608.70

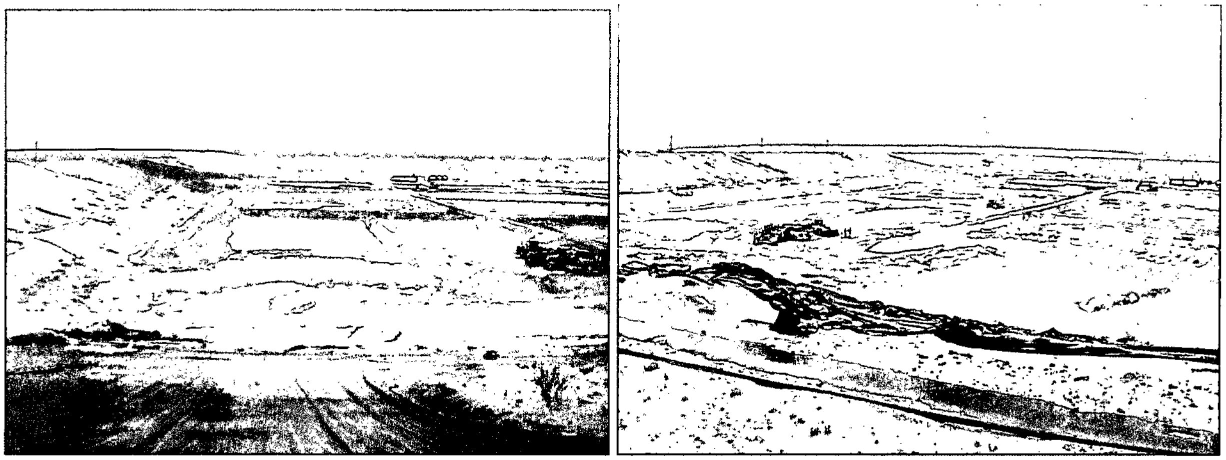
If you have any questions regarding this inspection and any observations or recommendations, please do not hesitate to contact me.

Best regards,

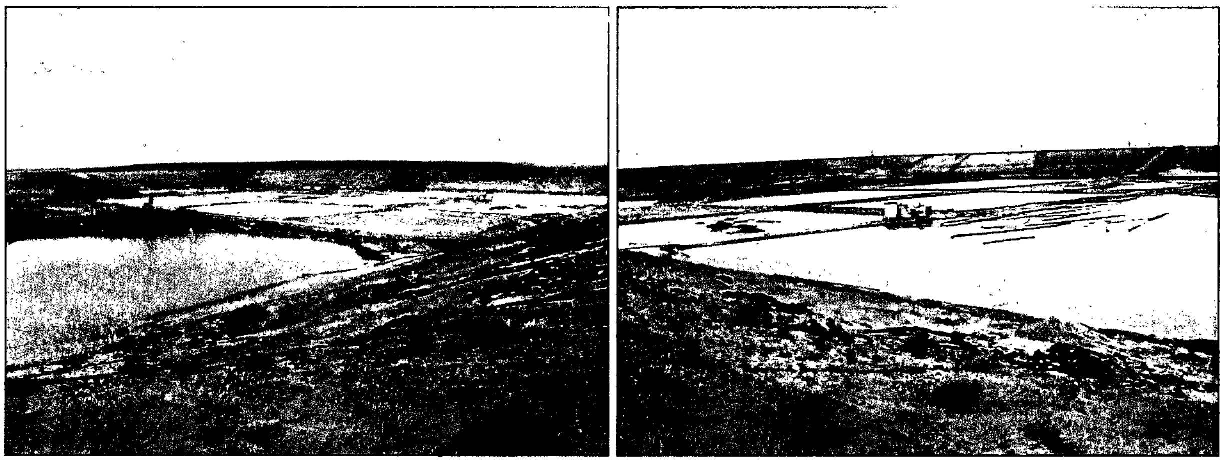
QED Associates

Kent Bruxvoort

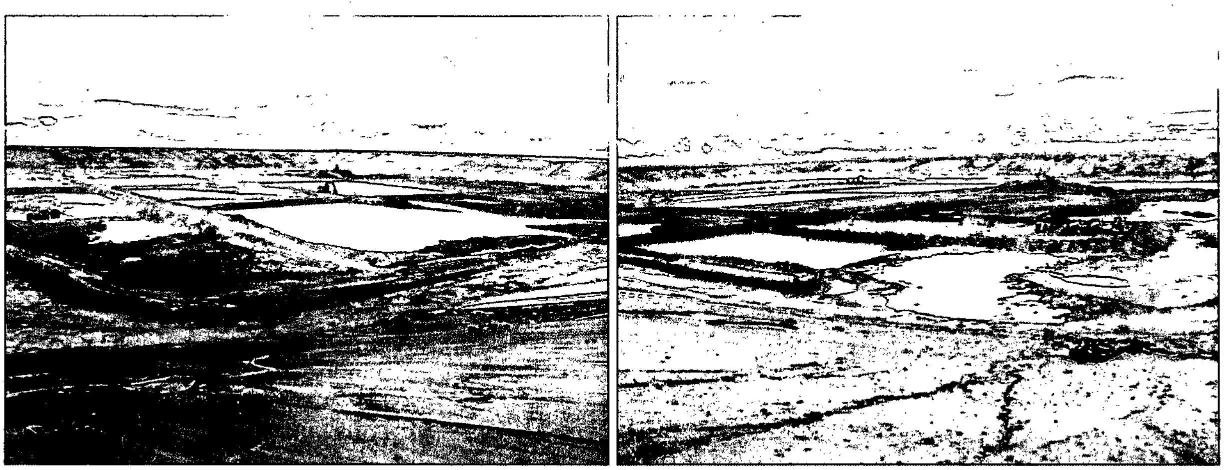
Kent Bruxvoort
Wyoming PE #6645



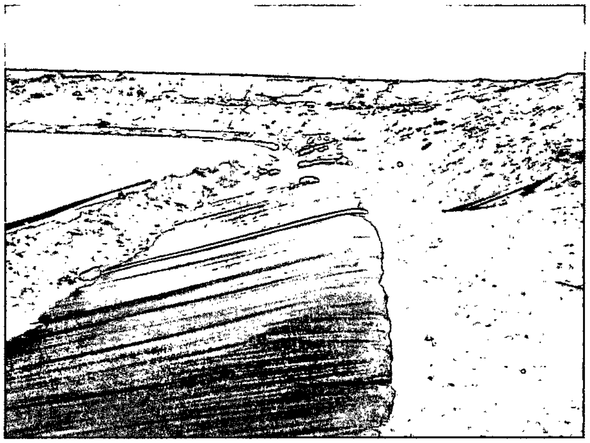
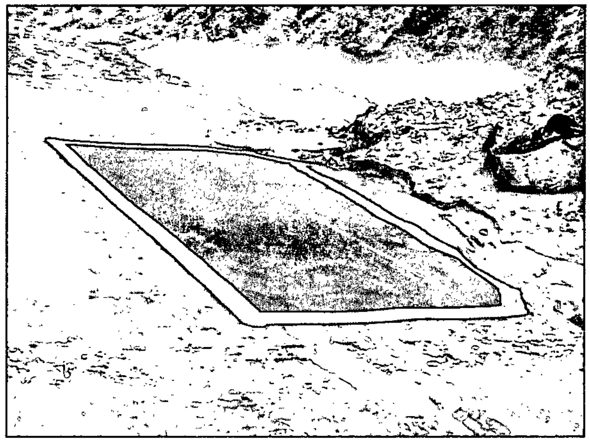
Photographs 1 and 2. Tailings surface from south embankment looking north.



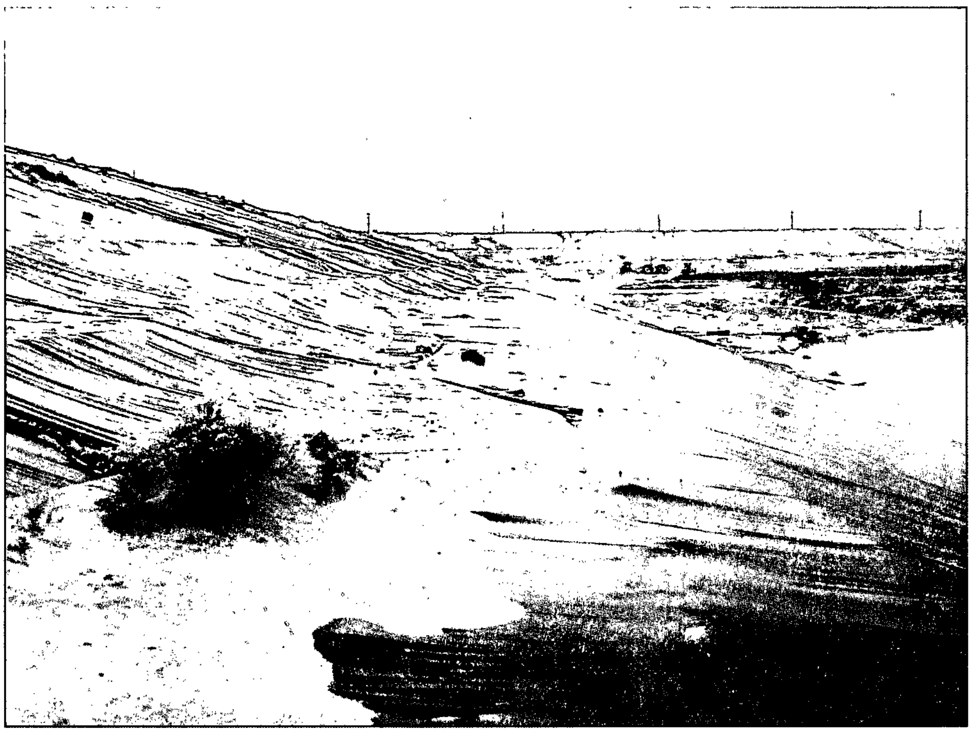
Photographs 3 and 4. Tailings surface from east embankment looking west.



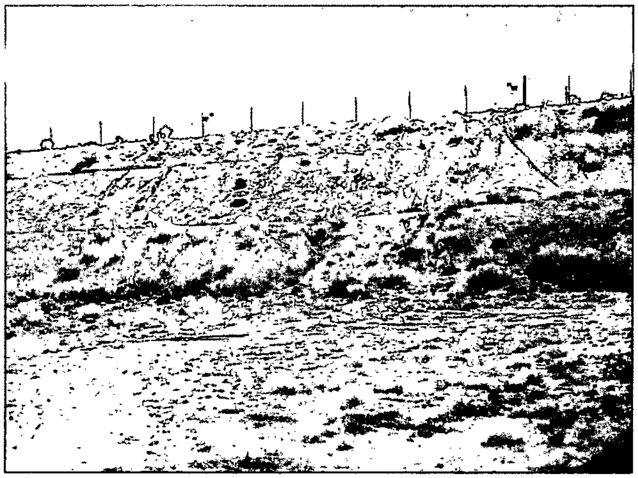
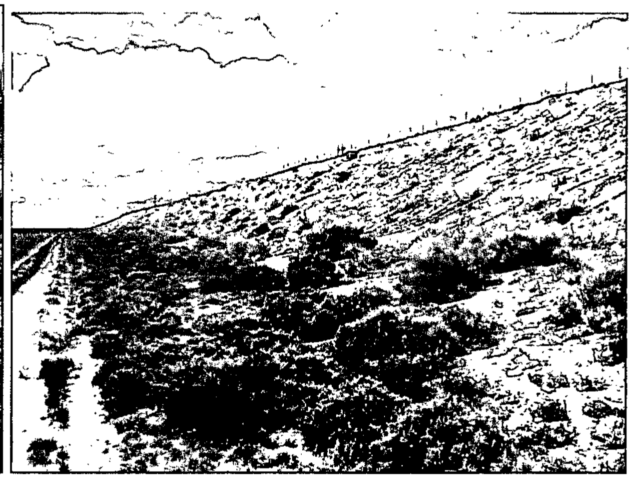
Photographs 5 and 6. Tailings surface from west embankment looking east.

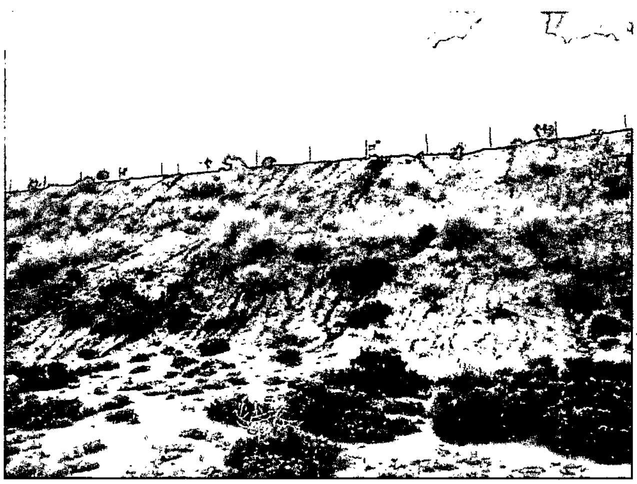
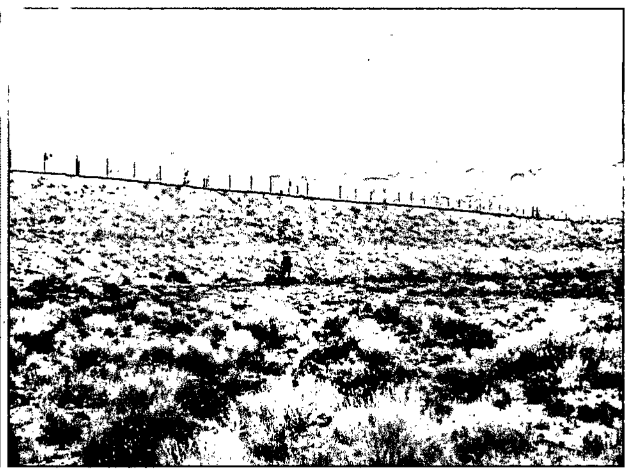
Photographs 7 and 8. Repairs along the lower edge of the east and west embankments.



Photograph 9. East half of south embankment; functional liner from bench to tailings.

Photographs 10 and 11. Exterior of west and south embankments.

Photographs 12 and 13. Exterior of east and north embankments.

Appendix 3

2008 Inspection of Diversion Channel

QED Associates civil engineering consultants

May 30, 2008

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

RE: 2008 INSPECTION OF DIVERSION CHANNEL

Dear Oscar:

Overview. On May 23, 2008, 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. On day previous to the inspection, approximately 10 mm (0.4 inches) of rain fell at the site.

In the attached Figure 1 Battle Spring Draw is visible in the upper right hand corner of the aerial photograph, and the diversion channel in the middle right portion of the photograph. The channel 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.

Reach 1. This most upstream reach is about 300 feet in length and is characterized by sand deposition (Photographs 1a and 1b) from the headcutting that has occurred at the entrance to the channel (see Photograph 2). Photograph 1a was taken in 2008, and Photograph 1b was taken at about the same location in 2007. The amount of headcutting appears to have increased somewhat over that observed in 2007, which would increase the amount of sand deposited on the bed. Erosion at the headcut banks from the previous day's precipitation was visible. However, the banks of the channel in this reach, with the exception of the entrance itself, are stable.

204 walnut street, suite c, fort collins, co 80524 • office: 970.416.0600 • fax: 970.416.0601

Reach 2. The next downstream reach, approximately 200 feet in length, 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 (Photographs 3a and 3b). The banks in this reach exhibit very little erosion. Little change in this reach was observed from 2007 to 2008.

Reach 3. This middle reach is about 500' long, has the greatest percentage of channel bed covered by vegetation, and has no low flow channel (see Photographs 4a and 4b). Little change in this reach was observed from 2007 to 2008. However, it is anticipated that at the two to three specific locations where storm water or snowmelt runoff enters the channel the process of rill erosion and local fan deposition of bank sediments has continued (see Photographs 7a and 7b).

Reach 4. Reach 4 is about 400 feet in length, and has less bed vegetation than Reach 3, with a shallow low flow channel (Photographs 5a and 5b). Little change in this reach was observed from 2007 to 2008.

Reach 5. This most downstream reach, about 400 feet in length, begins at the location of an isolated sandstone outcrop (see Photographs 6a and 6b). 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. As in the remainder of the channel, little change in this reach was observed from 2007 to 2008. Little change in the channel form was observed in the vicinity of the outcrop.

Conclusion. While some erosion of the channel banks and bed has occurred, it is minor in nature and localized. Yet, the dominant process affecting the channel is this slow process of bank erosion which is exhibited as rills along the face of the bank and fan deposits at the toe of the bank, and which occurs wherever concentrated overland flow enters the channel. However, larger scale erosion of the bank in the form of lateral migration has not occurred.

Little evidence of change in the channel's form has been observed from 2007 to 2008, either in terms of vertical adjustment of the channel bed (in either direction) or in terms of lateral movement of the channel's banks. Although minor localized bank erosion continues to occur, the overall impact on the diversion channel's capacity is minimal. The channel is expected to continue to operate as designed.

If you have any questions, please do not hesitate to contact me.

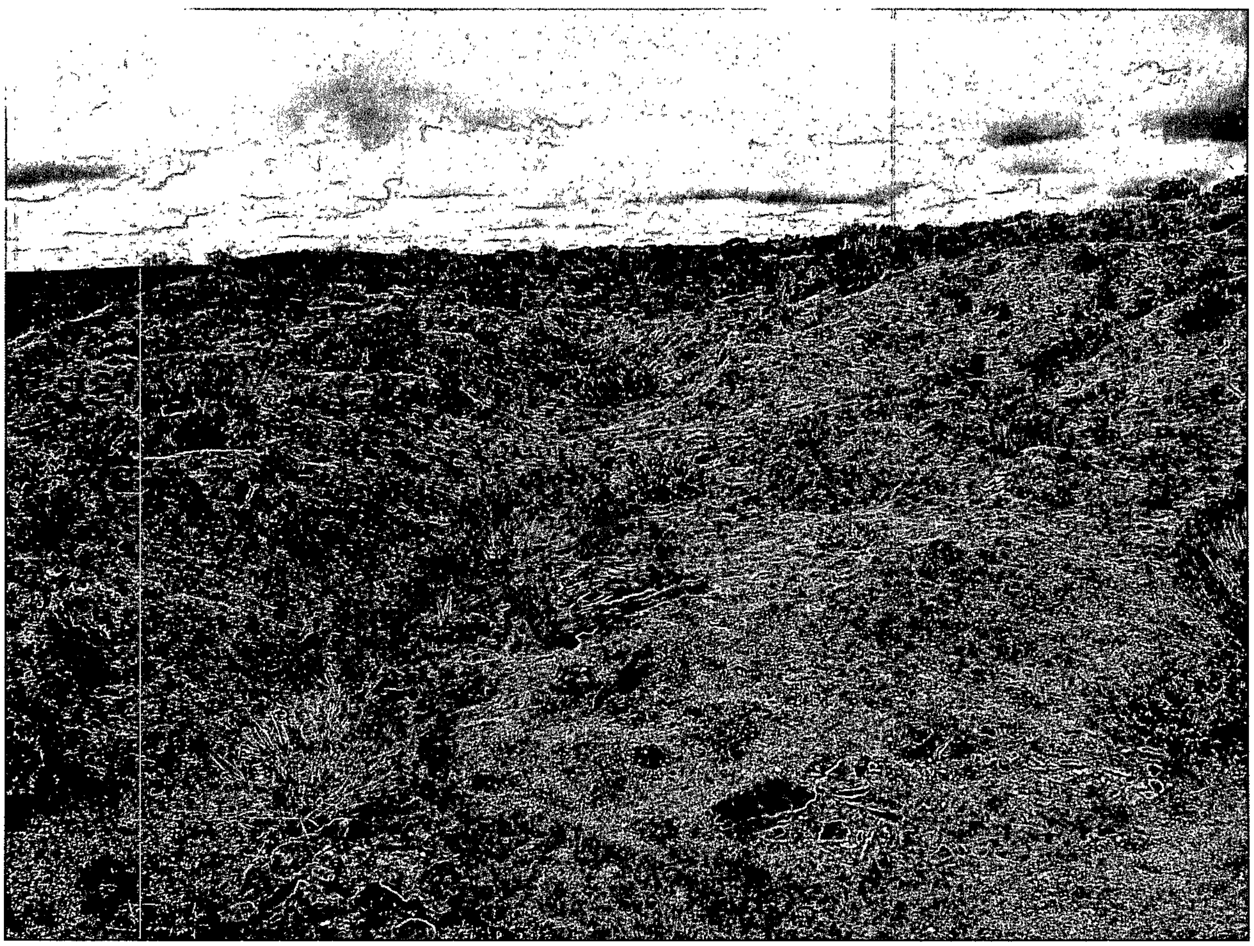
Best regards,

QED Associates

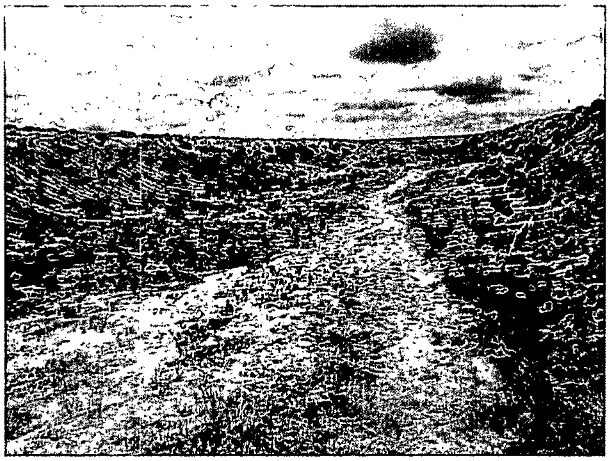
Kent Bruxvoort

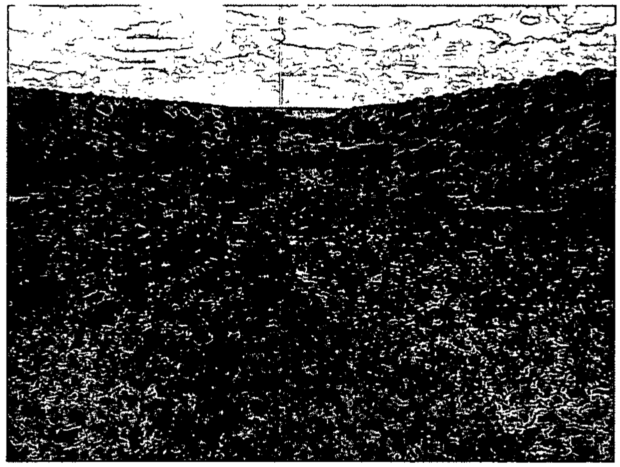
Kent Bruxvoort
Wyoming PE #6645

Photographs 1a & 1b. Depositional reach, Reach 1, looking south, 2008 on left, 2007 on right.

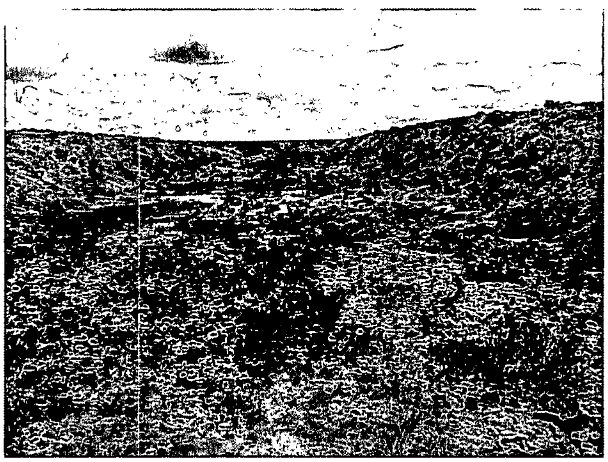


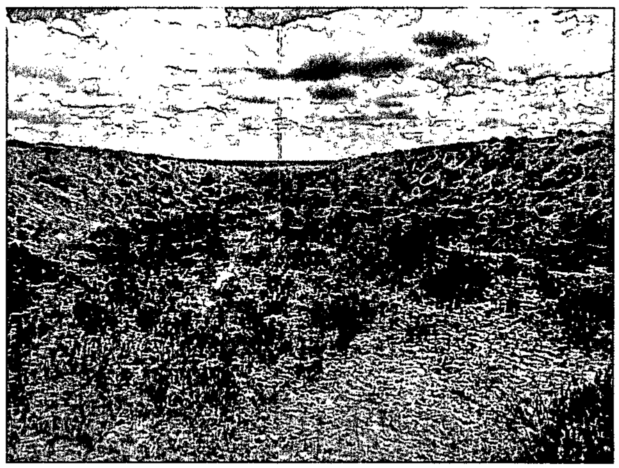
Photograph 2. Headward erosion at channel entrance, 2008, looking toward the north.



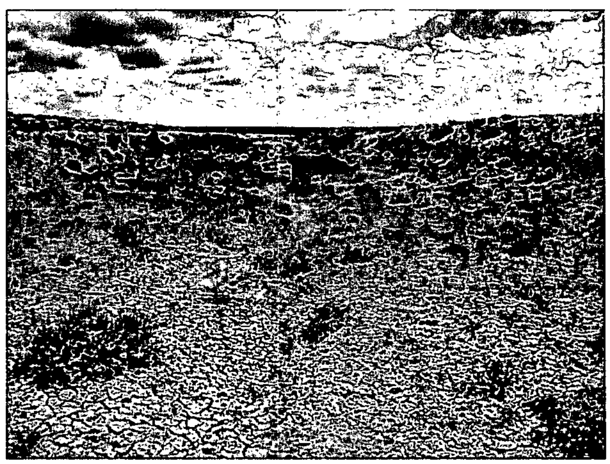


Photograph 3a & 3b. Reach 2, low-flow channel reach, looking south, 2008 on left, 2007 on right.

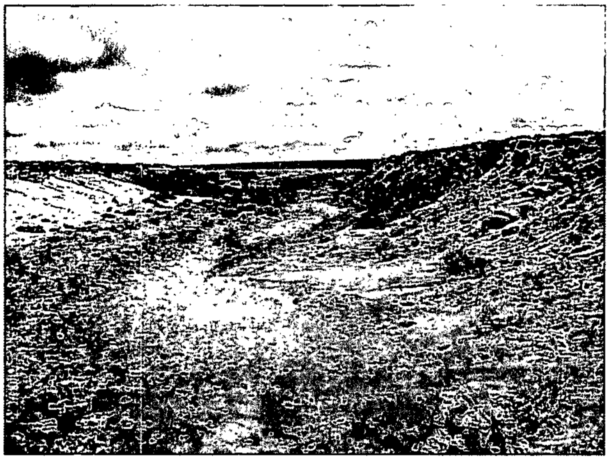
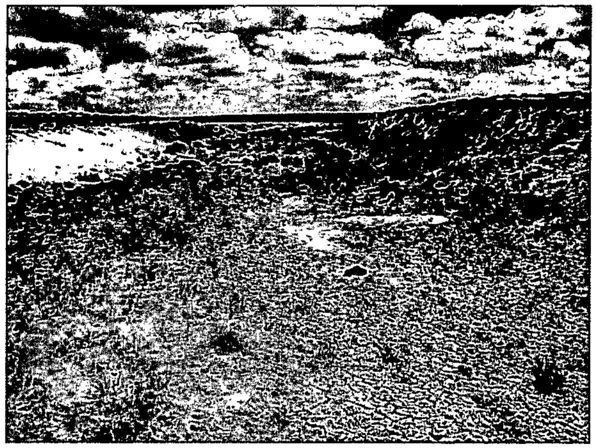




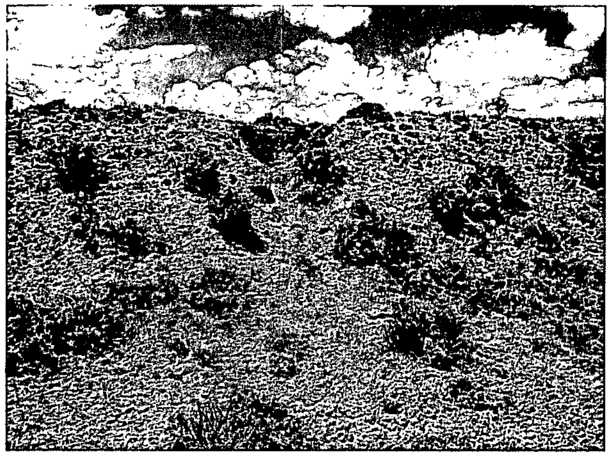
Photographs 4a & 4b. Reach 3, bed vegetation reach, looking south, 2008 on left, 2007 on right.



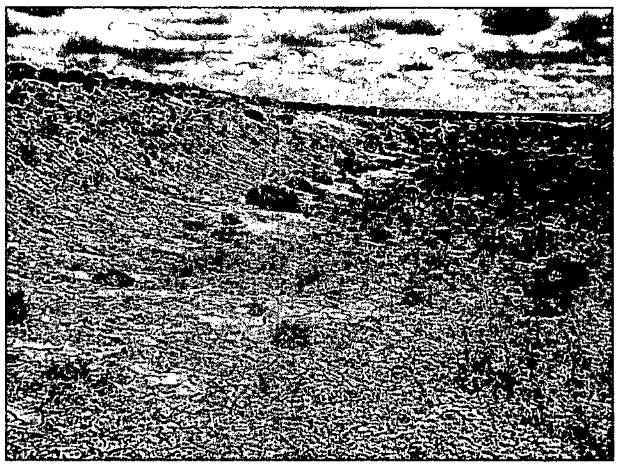
Photographs 5a & 5b. Reach 4, less vegetation and shallow low flow channel, looking south, 2008 on left, 2007 on right.

Photographs 6a & 6b. Downstream reach, Reach 5, end of low flow channel, sandstone outcrop, and vegetated channel bottom, looking south, 2008 on left, 2007 on right.

Photographs 7a & 7b. West channel bank, example of local bank erosion/rilling, 2008 on left, 2007 on right.

Photographs 8a & 8b. East channel bank, with local erosion caused by overland flow entering channel. Photographs taken in different locations in 2007 (right) and 2008 (left).

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**	
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	13,771,290.00
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	68,701,633.00
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	101,944,806.00
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	16,578,690.00
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	36,348,000.00
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	41,304,987.00
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	48,952,570.00
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	11,477,360.00
TMW 97	Aquifer			1,606,540.00	4,374,660.00	3,067,380.00	4,132,580.00	13,181,160.00
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**	375,550,391.20
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	

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, 2007

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	10772.69	27851.82	41867.83	210582.59	0.00	8332.94	28961.36	60893.95	0.00	34690.37	0.00	0.00	0.00	0.00	0.00	2.49	6143.36	6186.57	436,285.97
Calcium	9020.51	33391.21	34212.40	229599.22	0.00	8157.44	31967.60	86649.56	0.00	33087.96	0.00	0.00	0.00	0.00	0.00	6.33	8028.33	7840.97	481,961.53
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	0.00	0.00	576.92
Chloride	1354.22	5014.43	5714.09	35718.07	0.00	950.15	3748.82	12601.11	0.00	4804.82	0.00	0.00	0.00	0.00	0.00	1.01	1225.96	1069.05	72,201.73
Fluoride	2.74	2.42	32.39	6.59	0.00	9.73	13.71	17.17	0.00	26.02	0.00	0.00	0.00	0.00	0.00	0.00	4.93	7.76	123.46
Magnesium	666.17	2572.42	2141.94	15045.71	0.00	626.85	2450.82	10192.23	0.00	2565.24	0.00	0.00	0.00	0.00	0.00	0.49	576.36	599.18	37,437.41
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	0.78	378.53
Potassium	189.98	481.94	892.59	2563.06	0.00	214.09	590.78	1076.27	0.00	679.21	0.00	0.00	0.00	0.00	0.00	0.08	171.69	179.40	7,039.09
Silica	870.58	1430.36	3492.11	8657.82	0.00	843.05	2094.60	3076.37	0.00	2838.23	0.00	0.00	0.00	0.00	0.00	0.23	581.89	695.64	24,580.88
Sodium	2567.62	7454.19	11420.37	34112.63	0.00	2565.86	7357.68	13998.78	0.00	9399.23	0.00	0.00	0.00	0.00	0.00	1.28	2189.00	2287.62	93,354.26
Sulfate	19573.17	76973.64	78345.03	463094.43	281.43	19640.04	73993.69	220359.84	407.23	73244.06	2509.88	274.72	966.02	848.22	18.02	16.37	19962.67	18533.97	1,069,042.43
TDS	39893.83	148300.36	155819.23	928819.62	456.46	37447.76	140369.45	399943.82	673.46	149740.29	4529.50	531.92	1651.65	1423.79	33.85	28.12	36113.86	35336.55	2,081,113.52
TRACE METALS																			
Aluminum	0.00	1.04	0.00	59.53	0.00	0.20	0.00	1.48	0.00	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	62.69
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	3.34	0.00	0.25	0.25	5.70	0.00	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.00	12.31
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	0.50	0.22	2.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.20
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	42.12	51.35	23.08	2383.41	0.00	19.35	83.45	4815.83	0.00	27.41	0.00	0.00	0.00	0.00	0.00	0.00	1.47	5.15	7,452.62
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	13.72	35.54	20.32	392.02	0.00	9.21	26.58	547.03	0.00	22.13	0.00	0.00	0.00	0.00	0.00	0.00	4.82	5.87	1,077.24
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	2.58	0.00	0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.26
Selenium	0.00	0.06	0.11	0.42	0.07	0.01	0.12	0.16	0.18	0.12	0.41	0.03	0.25	0.22	0.00	0.00	0.21	0.00	2.37
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	0.16	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	0.00	28.22
RADIOMETRICS																			
Uranium (mg/l)	0.30	24.09	3.62	2.03	0.00	0.47	1.92	1.38	0.00	11.03	0.00	0.00	0.00	0.00	0.00	0.00	2.16	2.36	49.36

TMW-7												
CONTAMINANTS REMOVED												
(Started pumping 12/01/03)	**2008**											
DATE FS:	31-Jan-08			14-Apr-08			28-Jul-08			14-Oct-08		
		VOLUME 2008	CUMULATIVE		VOLUME 2008	CUMULATIVE		VOLUME 2008	CUMULATIVE		VOLUME 2008	CUMULATIVE
GALLONAGE		669,932.50	11,761,492.50		669,932.50	12,431,425.00		669,932.50	13,101,357.50		669,932.50	13,771,290.00
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	195.00	494.51	9225.74	198.00	502.12	9727.87	207.00	524.95	10252.81	205.00	519.87	10772.69
Calcium	153.00	388.00	7722.10	167.00	423.51	8145.60	167.00	423.51	8569.11	178.00	451.40	9020.51
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	22.00	55.79	1164.02	24.00	60.86	1224.88	23.00	58.33	1283.21	28.00	71.01	1354.22
Fluoride	0.10	0.25	2.74	0.00	0.00	2.74	0.00	0.00	2.74	0.00	0.00	2.74
Magnesium	10.70	27.13	562.19	13.80	35.00	597.19	10.80	27.39	624.58	16.40	41.59	666.17
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	8.88	166.65	3.70	9.38	176.03	1.90	4.82	180.85	3.60	9.13	189.98
Silica	17.00	43.11	781.32	8.00	20.29	801.60	8.00	20.29	821.89	19.20	48.69	870.58
Sodium	40.90	103.72	2192.30	49.00	124.26	2316.56	48.00	121.73	2438.29	51.00	129.33	2567.62
Sulfate	351.00	890.13	16631.45	383.00	971.28	17602.72	399.00	1011.85	18614.58	378.00	958.60	19573.17
TDS	694.00	1759.96	34078.85	749.00	1899.44	35978.29	755.00	1914.66	37892.95	789.00	2000.88	39893.83
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	1.09	2.76	34.66	0.14	0.36	35.02	0.74	1.88	36.89	2.06	5.22	42.12
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	0.25	0.63	10.63	0.34	0.86	11.49	0.40	1.01	12.51	0.48	1.22	13.72
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	0.00	0.10	0.25	0.25	0.00	0.00	0.25	0.00	0.00	0.25
Zn	0.00	0.00	0.08	0.02	0.05	0.13	0.00	0.00	0.13	0.01	0.03	0.16
RADIOMETRICS												
U mg/l	0.01	0.02	0.23	0.01	0.02	0.25	0.01	0.02	0.27	0.01	0.02	0.30

TMW-17												
BATTLE SPRING AQUIFER												
CONTAMINANTS REMOVED	**2008**											
DATE FS	13-Jan-08			14-Apr-08			28-Jul-08			14-Oct-08		
(Started pumping 7/1/86)		VOLUME 2008	CUMULATIVE		VOLUME 2008	CUMULATIVE		VOLUME 2008	CUMULATIVE		VOLUME 2008	CUMULATIVE
GALLONAGE		1,108,450.00	65,376,283.00		1,108,450.00	66,484,733.00		1,108,450.00	67,593,183.00		1,108,450.00	68,701,633.00
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	139.00	583.24	40,113.93	137.00	574.84	40,688.77	141.00	591.63	41,280.40	140.00	587.43	41,867.83
Calcium	83.70	351.20	33,046.35	97.00	407.01	33,453.35	85.90	360.43	33,813.78	95.00	398.61	34,212.40
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	33.57	5,613.39	8.00	33.57	5,646.96	7.00	29.37	5,676.33	9.00	37.76	5,714.09
Fluoride	0.20	0.84	31.14	0.10	0.42	31.56	0.10	0.42	31.98	0.10	0.42	32.39
Magnesium	4.80	20.14	2,076.06	6.00	25.18	2,101.23	3.80	15.94	2,117.18	5.90	24.76	2,141.94
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	3.20	13.43	858.61	3.00	12.59	871.19	2.20	9.23	880.42	2.90	12.17	892.59
Silica	17.00	71.33	3,343.15	9.00	37.76	3,380.91	8.00	33.57	3,414.48	18.50	77.62	3,492.11
Sodium	38.80	162.80	10,957.97	37.40	156.93	11,114.90	37.10	155.67	11,270.57	35.70	149.80	11,420.37
Sulfate	185.00	776.25	75,877.82	193.00	809.82	76,687.64	196.00	822.40	77,510.04	199.00	834.99	78,345.03
TDS	396.00	1661.59	150,561.72	408.00	1711.94	152,273.66	410.00	1720.34	153,994.00	435.00	1825.23	155,819.23
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	0.00	0.00	22.37	0.07	0.29	22.66	0.00	0.00	22.66	0.10	0.42	23.08
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	0.17	19.78	0.04	0.17	19.95	0.04	0.17	20.11	0.05	0.21	20.32
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	0.03	3.55	0.01	0.03	3.57	0.01	0.03	3.60	0.01	0.02	3.62

TMW-18												
BATTLE SPRING AQUIFER												
CONTAMINANTS REMOVED	**2008**											
DATE FS	13-Jan-08			14-Apr-08			28-Jul-08			14-Oct-08		
(Started pumping 10/8/86)		VOLUME 2008	CUMULATIVE		VOLUME 2008	CUMULATIVE		VOLUME 2008	CUMULATIVE		VOLUME 2008	CUMULATIVE
GALLONAGE		915,805.00	99,197,391.00		915,805.00	100,113,196.00		915,805.00	101,029,001.00		915,805.00	101,944,806.00
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	568.00	1969.09	204820.94	548.00	1899.75	206720.69	565.00	1958.68	208679.37	549.00	1903.22	210582.59
Calcium	569.00	1972.55	223272.50	611.00	2118.15	225390.65	624.00	2163.22	227553.87	590.00	2045.35	229599.22
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	90.00	312.00	34827.13	87.00	301.60	35128.73	82.00	284.27	35413.00	88.00	305.07	35718.07
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	44.80	155.31	14554.83	49.20	170.56	14725.39	43.40	150.45	14875.84	49.00	169.87	15045.71
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	7.30	25.31	2506.21	6.40	22.19	2528.40	3.20	11.09	2539.49	6.80	23.57	2563.06
Silica	24.00	83.20	8496.96	11.00	38.13	8535.10	11.00	38.13	8573.23	24.40	84.59	8657.82
Sodium	93.50	324.14	33086.49	94.00	325.87	33412.36	103.00	357.07	33769.43	99.00	343.20	34112.63
Sulfate	1320.00	4576.04	448984.97	1340.00	4645.38	453630.34	1380.00	4784.04	458414.39	1350.00	4680.04	463094.43
TDS	2600.00	9013.42	902750.05	2520.00	8736.08	911486.13	2490.00	8632.08	920118.21	2510.00	8701.41	928819.62
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	0.04	0.00	0.00	0.04	0.00	0.00	0.04	0.01	0.02	0.06
Barium	0.00	0.00	0.48	0.00	0.00	0.48	0.00	0.00	0.48	0.30	1.04	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	0.00	0.00	2.30	0.30	1.04	3.34	0.00	0.00	3.34	0.00	0.00	3.34
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	0.39	0.00	0.01	0.40	0.00	0.00	0.40	0.01	0.03	0.43
Copper	0.00	0.00	0.62	0.00	0.00	0.62	0.00	0.00	0.62	0.02	0.07	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	8.34	28.91	2294.91	8.56	29.67	2324.58	8.50	29.47	2354.05	8.47	29.36	2383.41
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	1.48	5.13	337.56	1.40	4.85	342.42	1.41	4.89	347.30	12.90	44.72	392.02
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	2.06	0.00	0.00	2.06	0.00	0.00	2.06	0.06	0.21	2.27
Selenium	0.00	0.00	0.41	0.00	0.00	0.41	0.00	0.00	0.41	0.00	0.00	0.42
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	7.42	0.00	0.00	7.42	0.00	0.00	7.42	0.04	0.14	7.56
RADIOMETRICS												
Uranium (mg/l)	0.00	0.01	1.96	0.00	0.01	1.97	0.00	0.01	1.97	0.02	0.06	2.03

TMW-57												
CONTAMINANTS REMOVED												
PERCHED AQUIFER WELL	**2008**											
DATE FS	1/13/08			4/23/08			7/28/08			10/14/08		
(Started pumping May 2001)		VOLUME 2008	CUMULATIVE		VOLUME 2008	CUMULATIVE		VOLUME 2008	CUMULATIVE		VOLUME 2008	CUMULATIVE
GALLONAGE		383207.50	15429067.50		383207.50	15812275.00		383207.50	16195482.50		383207.50	16578690.00
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	136.00	197.28	7749.80	133.00	192.93	7942.73	136.00	197.28	8140.01	133.00	192.93	8332.94
Calcium	116.00	168.27	7629.42	124.00	179.87	7809.29	115.00	166.82	7976.11	125.00	181.32	8157.44
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	14.00	20.31	895.03	13.00	18.86	913.89	13.00	18.86	932.75	12.00	17.41	950.15
Fluoride	0.10	0.15	9.29	0.10	0.15	9.44	0.10	0.15	9.58	0.10	0.15	9.73
Magnesium	9.00	13.06	591.45	9.20	13.35	604.80	6.50	9.43	614.23	8.70	12.62	626.85
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	3.40	4.93	201.03	3.30	4.79	205.82	2.50	3.63	209.44	3.20	4.64	214.09
Silica	16.00	23.21	795.62	8.00	11.60	807.22	7.00	10.15	817.38	17.70	25.68	843.05
Sodium	39.90	57.88	2392.80	40.20	58.31	2451.11	39.90	57.88	2508.99	39.20	56.86	2565.86
Sulfate	276.00	400.37	18383.83	302.00	438.08	18821.91	289.00	419.22	19241.13	275.00	398.91	19640.04
TDS	532.00	771.72	35105.05	523.00	758.66	35863.71	542.00	786.22	36649.93	550.00	797.83	37447.76
TRACE METALS												
Aluminum	0.00	0.00	0.20	0.00	0.00	0.20	0.00	0.00	0.20	0.00	0.00	0.20
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	0.49	0.00	0.00	0.50	0.00	0.00	0.50	0.00	0.00	0.50
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	0.06	0.09	19.26	0.06	0.09	19.35	0.00	0.00	19.35	0.00	0.00	19.35
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	0.13	8.80	0.10	0.15	8.95	0.09	0.13	9.08	0.09	0.13	9.21
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	0.01	0.44	0.01	0.01	0.45	0.01	0.01	0.46	0.01	0.01	0.47

TMW-58												
BATTLE SPRING AQUIFER												
CONTAMINANTS REMOVED	2008											
DATE FS	13-Jan-08			23-Apr-08			28-Jul-08			14-Oct-08		
(Started pumping 6/20/94)		VOLUME 2008	CUMULATIVE		VOLUME 2008	CUMULATIVE		VOLUME 2008	CUMULATIVE		VOLUME 2008	CUMULATIVE
GALLONAGE		127107.50	35966677.51		127107.50	36093785.01		127107.50	36220892.51		127107.50	36348000.01
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	236.00	113.55	28630.81	222.00	106.82	28737.62	234.00	112.59	28850.21	231.00	111.15	28961.36
Calcium	255.00	122.69	31558.62	296.00	142.42	31701.04	276.00	132.80	31833.84	278.00	133.76	31967.60
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	40.00	19.25	3691.57	46.00	22.13	3713.70	39.00	18.77	3732.47	34.00	16.36	3748.82
Fluoride	0.10	0.05	13.62	0.00	0.00	13.62	0.10	0.05	13.67	0.10	0.05	13.71
Magnesium	19.00	9.14	2419.78	24.10	11.60	2431.38	18.60	8.95	2440.33	21.80	10.49	2450.82
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	4.80	2.31	584.77	4.80	2.31	587.08	3.20	1.54	588.62	4.50	2.17	590.78
Silica	16.00	7.70	2079.63	7.00	3.37	2083.00	7.00	3.37	2086.37	17.10	8.23	2094.60
Sodium	55.20	26.56	7273.67	59.00	28.39	7302.05	58.60	28.20	7330.25	57.00	27.43	7357.68
Sulfate	642.00	308.90	73012.62	697.00	335.36	73347.98	673.00	323.82	73671.80	669.00	321.89	73993.69
TDS	1200.00	577.39	138646.92	1230.00	591.82	139238.74	1170.00	562.95	139801.69	1180.00	567.76	140369.45
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	0.21	0.10	0.05	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	0.22	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	0.00	0.22	0.00	0.00	0.22	0.00	0.00	0.22
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	0.60	0.29	53.45	0.23	0.11	53.56	0.12	0.06	53.62	62.00	29.83	83.45
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	0.13	26.22	0.26	0.13	26.35	0.25	0.12	26.47	0.24	0.12	26.58
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	0.12	0.00	0.00	0.12	0.00	0.00	0.12	0.00	0.00	0.12
Silver	0.00	0.00	0.00	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	0.20	0.10	0.10	0.00	0.00	0.10	0.00	0.00	0.10
Zinc	0.00	0.00	3.99	0.02	0.01	4.00	0.00	0.00	4.00	0.00	0.00	4.00
RADIOMETRICS												
Uranium (mg/l)	0.02	0.01	1.89	0.03	0.01	1.91	0.02	0.01	1.91	0.02	0.01	1.92

TMW-59												
CONTAMINANTS REMOVED	2008											
DATE FS	13-Jan-08			14-Apr-08			30-Jul-08			14-Oct-08		
(Started pumping 9/1/88)		VOLUME 2008	CUMULATIVE		VOLUME 2008	CUMULATIVE		VOLUME 2008	CUMULATIVE		VOLUME 2008	CUMULATIVE
GALLONAGE		644495.00	39371502.00		644495.00	40015997.00		644495.00	40660492.00		644495.00	41304987.00
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	354.00	863.65	58625.05	283.00	690.43	59315.48	342.00	834.37	60149.85	305.00	744.10	60893.95
Calcium	473.00	1153.97	82970.52	510.00	1244.24	84214.76	502.00	1224.72	85439.48	496.00	1210.08	86649.56
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	82.00	200.05	12000.95	90.00	219.57	12220.52	76.00	185.42	12405.94	80.00	195.17	12601.11
Fluoride	0.20	0.49	15.71	0.20	0.49	16.20	0.20	0.49	16.69	0.20	0.49	17.17
Magnesium	62.50	152.48	9670.63	70.70	172.49	9843.12	73.40	179.07	10022.19	69.70	170.05	10192.23
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	7.80	19.03	1019.42	6.70	16.35	1035.77	9.20	22.45	1058.22	7.40	18.05	1076.27
Silica	17.00	41.47	2982.93	9.00	21.96	3004.89	9.80	23.91	3028.79	19.50	47.57	3076.37
Sodium	87.10	212.50	13308.35	85.00	207.37	13515.72	105.00	256.17	13771.89	93.00	226.89	13998.78
Sulfate	1370.00	3342.36	209698.44	1440.00	3513.14	213211.58	1450.00	3537.53	216749.11	1480.00	3610.72	220359.84
TDS	2390.00	5830.83	382304.95	2460.00	6001.61	388306.56	2400.00	5855.23	394161.79	2370.00	5782.04	399943.82
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01
Barium	0.00	0.00	0.21	0.00	0.00	0.21	0.00	0.00	0.21	0.30	0.73	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	0.00	0.00	3.99	0.70	1.71	5.70	0.00	0.00	5.70	0.00	0.00	5.70
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	1.69	0.01	0.03	1.72	0.01	0.03	1.75	0.10	0.25	2.00
Copper	0.00	0.00	0.14	0.00	0.00	0.14	0.00	0.00	0.14	0.02	0.05	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	48.80	119.06	4435.24	52.50	128.08	4563.32	52.70	128.57	4691.89	50.80	123.94	4815.83
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	4.02	9.81	437.22	4.20	10.25	447.47	1.81	4.42	451.88	39.00	95.15	547.03
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	0.02	2.16	0.02	0.05	2.21	0.01	0.02	2.24	0.14	0.34	2.58
Selenium	0.00	0.00	0.15	0.00	0.00	0.15	0.00	0.00	0.15	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	0.01	0.02	2.70	0.00	0.00	2.70	0.00	0.00	2.70	0.05	0.12	2.82
RADIOMETRICS												
Uranium (mg/l)	0.01	0.02	1.07	0.01	0.03	1.09	0.01	0.02	1.12	0.11	0.26	1.38

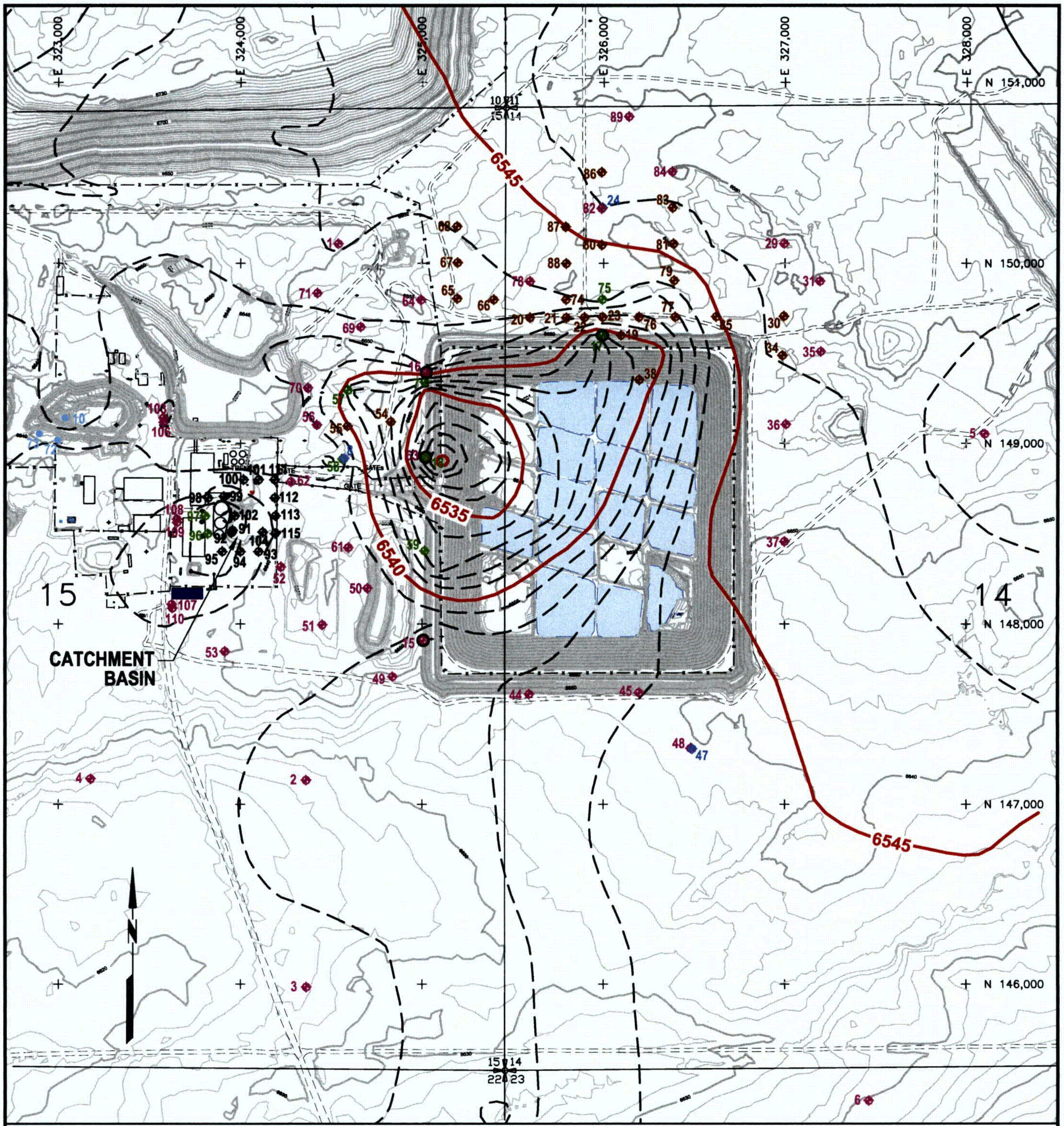
KENNECOTT URANIUM COMPANY

TMW-75												
CONTAMINANTS REM(	2008											
DATE FS	13-Jan-08			14-Apr-08			28-Jul-08			14-Oct-08		
(Started pumping 5/1/88)		VOLUME 2008	CUMULATIVE		VOLUME 2008	CUMULATIVE		VOLUME 2008	CUMULATIVE		VOLUME 2008	CUMULATIVE
GALLONAGE		399257.50	47754797.50		399257.50	48154055.00		399257.50	48553312.50		399257.50	48952570.00
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	152.00	229.73	34001.20	151.00	228.21	34229.41	153.00	231.24	34460.65	152.00	229.73	34690.37
Calcium	135.00	204.03	32412.38	174.00	262.98	32675.36	140.00	211.59	32886.95	133.00	201.01	33087.96
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	18.00	27.20	4730.76	18.00	27.20	4757.97	15.00	22.67	4780.64	16.00	24.18	4804.82
Fluoride	0.20	0.30	25.57	0.10	0.15	25.72	0.10	0.15	25.87	0.10	0.15	26.02
Magnesium	12.20	18.44	2515.82	13.20	19.95	2535.77	9.30	14.06	2549.83	10.20	15.42	2565.24
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	3.80	5.74	664.55	3.60	5.44	669.99	2.90	4.38	674.38	3.20	4.84	679.21
Silica	16.00	24.18	2789.12	9.00	13.60	2802.72	7.00	10.58	2813.30	16.50	24.94	2838.23
Sodium	46.70	70.58	9191.11	48.70	73.60	9264.72	46.00	69.52	9334.24	43.00	64.99	9399.23
Sulfate	369.00	557.69	71661.67	381.00	575.83	72237.50	355.00	536.53	72774.03	311.00	470.03	73244.06
TDS	669.00	1011.10	146781.06	686.00	1036.79	147817.85	650.00	982.38	148800.23	622.00	940.06	149740.29
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	27.00	0.18	0.27	27.27	0.00	0.00	27.27	0.09	0.14	27.41
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	0.15	21.63	0.12	0.18	21.81	0.10	0.15	21.96	0.11	0.17	22.13
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)	0.03	0.04	10.91	0.02	0.04	10.95	0.03	0.04	10.99	0.03	0.04	11.03

TMW-96												
CONTAMINANTS REMOVI	2008											
DATE FS	24-Feb-08			14-Apr-08			30-Jul-08			14-Oct-08		
Started pumping June 30, 2005		VOLUME 2008	CUMULATIVE		VOLUME 2008	CUMULATIVE		VOLUME 2008	CUMULATIVE		VOLUME 2008	CUMULATIVE
GALLONAGE		727105.00	9296045.00		727105.00	10023150.00		727105.00	10750255.00		727105.00	11477360.00
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	147.00	404.60	4957.08	142.00	390.84	5347.92	145.00	399.10	5747.02	144.00	396.34	6143.36
Calcium	173.00	476.16	6456.71	195.00	536.72	6993.43	184.00	506.44	7499.87	192.00	528.46	8028.33
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	24.00	66.06	1025.04	23.00	63.31	1088.34	23.00	63.31	1151.65	27.00	74.31	1225.96
Fluoride	0.10	0.28	4.11	0.10	0.28	4.38	0.10	0.28	4.66	0.10	0.28	4.93
Magnesium	11.50	31.65	469.02	13.80	37.98	507.00	12.10	33.30	540.30	13.10	36.06	576.36
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	4.00	11.01	138.94	3.90	10.73	149.67	4.10	11.28	160.96	3.90	10.73	171.69
Silica	14.00	38.53	491.34	7.00	19.27	510.61	10.10	27.80	538.41	15.80	43.49	581.89
Sodium	49.00	134.87	1756.59	52.00	143.12	1899.72	54.10	148.90	2048.62	51.00	140.37	2189.00
Sulfate	464.00	1277.11	15993.72	460.00	1266.10	17259.83	495.00	1362.43	18622.26	487.00	1340.41	19962.67
TDS	767.00	2111.08	29359.49	801.00	2204.67	31564.16	834.00	2295.49	33859.65	819.00	2254.21	36113.86
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	0.09	0.25	1.47	0.00	0.00	1.47	0.00	0.00	1.47	0.00	0.00	1.47
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	0.12	0.33	3.72	0.12	0.33	4.05	0.16	0.44	4.49	0.12	0.33	4.82
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	0.19	0.00	0.01	0.20	0.00	0.01	0.20	0.00	0.01	0.21
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)	0.04	0.10	1.90	0.04	0.10	2.00	0.03	0.08	2.08	0.03	0.08	2.16

TMW-97												
CONTAMINANTS REMO	**2008**											
DATE FS	18-Mar-08			20-May-08			30-Sep-08			10-Nov-08		
Started pumping September 6, 2005		VOLUME 2008	CUMULATIVE		VOLUME 2008	CUMULATIVE		VOLUME 2008	CUMULATIVE		VOLUME 2008	CUMULATIVE
GALLONAGE		1033145.00	10081725.00		1033145.00	11114870.00		1033145.00	12148015.00		1033145.00	13181160.00
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	127.00	496.68	4794.30	118.00	461.48	5255.78	118.00	461.48	5717.27	120.00	469.31	6186.57
Calcium	137.00	535.79	6069.34	152.00	594.45	6663.80	155.00	606.19	7269.98	146.00	570.99	7840.97
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	19.00	74.31	850.04	19.00	74.31	924.35	18.00	70.40	994.74	19.00	74.31	1069.05
Fluoride	0.20	0.78	6.20	0.10	0.39	6.59	0.10	0.39	6.98	0.20	0.78	7.76
Magnesium	10.10	39.50	475.21	10.70	41.85	517.05	10.80	42.24	559.29	10.20	39.89	599.18
Nitrate(NO3)	0.20	0.78	0.78	0.00	0.00	0.78	0.00	0.00	0.78	0.00	0.00	0.78
Potassium	3.10	12.12	140.68	3.30	12.91	153.59	3.40	13.30	166.88	3.20	12.51	179.40
Silica	14.00	54.75	531.39	8.00	31.29	562.67	17.50	68.44	631.11	16.50	64.53	695.64
Sodium	44.00	172.08	1768.65	43.70	170.91	1939.55	45.00	175.99	2115.54	44.00	172.08	2287.62
Sulfate	359.00	1404.01	14314.13	348.00	1360.99	15675.12	325.00	1271.04	16946.16	406.00	1587.82	18533.97
TDS	626.00	2448.21	27546.08	670.00	2620.29	30166.36	664.00	2596.82	32763.19	658.00	2573.36	35336.55
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	4.72	0.00	0.00	4.72	0.11	0.43	5.15	0.00	0.00	5.15
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	0.31	4.73	0.10	0.39	5.12	0.09	0.35	5.48	0.10	0.39	5.87
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	0.00	0.00
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RADIOMETRICS												
Uranium (mg/l)	0.03	0.11	2.03	0.03	0.10	2.14	0.03	0.12	2.26	0.03	0.11	2.36

Maps



SCALE IN FEET

0 800

TOPOGRAPHY UPDATED
DECEMBER 2008 BY ROBERT JACK
SMITH & ASSOC. INC. CONSULTING
LAND SURVEYORS
P.O. BOX 1104, 1015 HARSHMAN ST.
RAWLINS, WY 82301

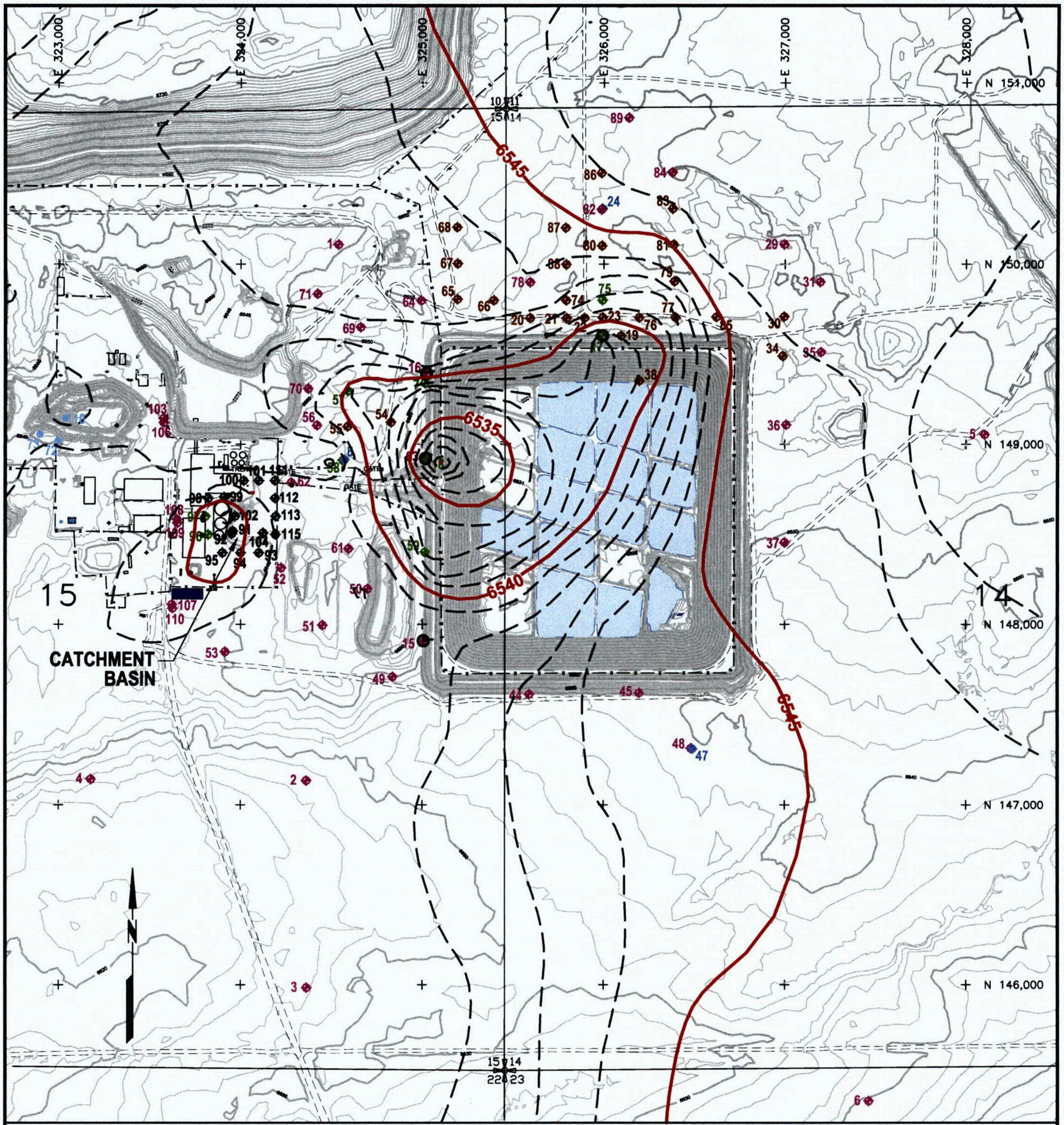
LEGEND

- 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
MAY 2008 PIEZOMETRIC CONTOUR MAP
2008 CORRECTIVE ACTION PROGRAM REVIEW

Date:	FEBRUARY 2009
Project:	06-442\REP2009\
File:	2009-GW-May-08.dwg



SCALE IN FEET
0 800

TOPOGRAPHY UPDATED DECEMBER 2008 BY ROBERT JACK SMITH & ASSOC. INC. CONSULTING LAND SURVEYORS P.O. BOX 1104, 1015 HARSHMAN ST. RAWLINS, WY 82301

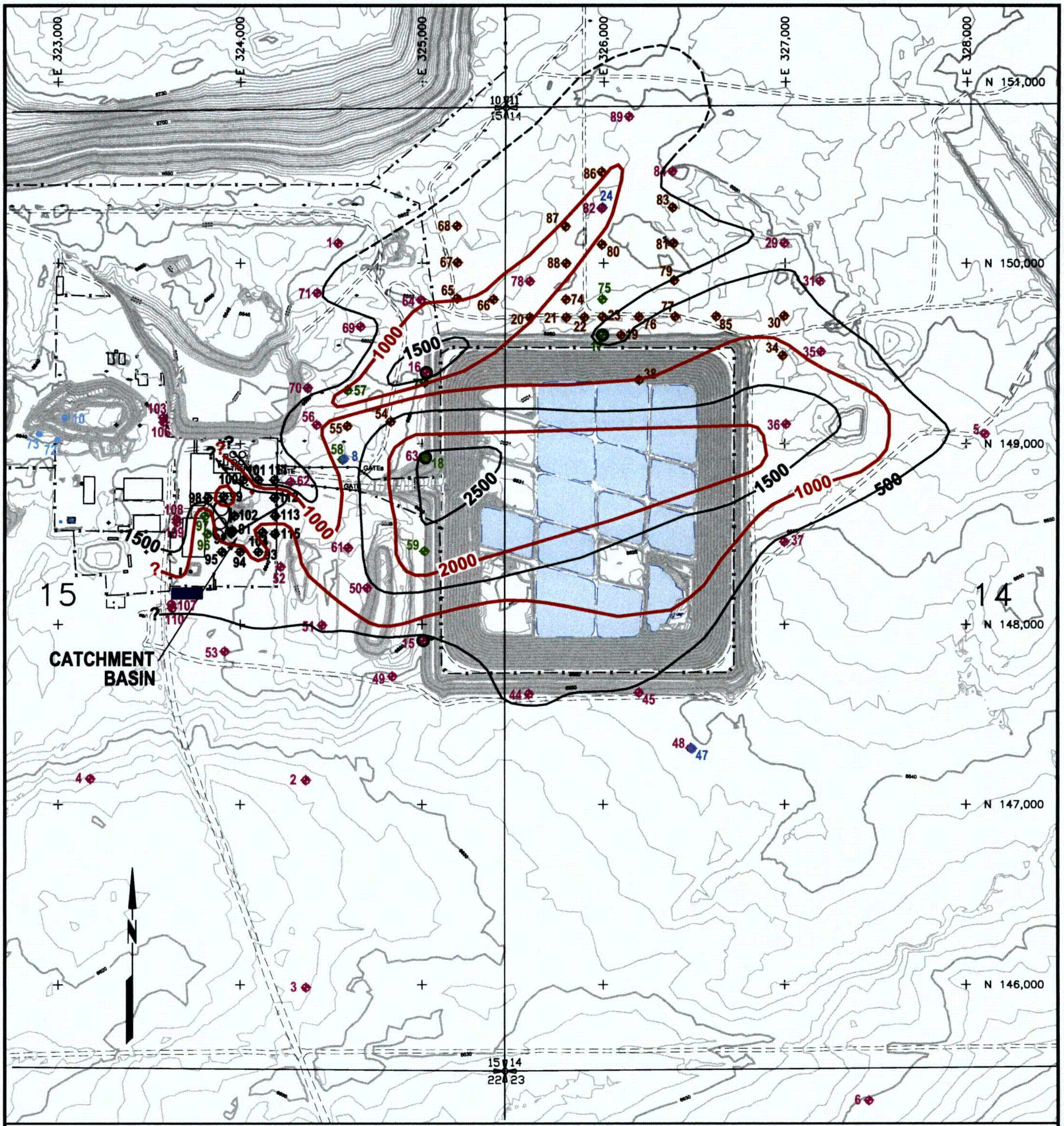
LEGEND

- 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
SEPTEMBER 2008 PIEZOMETRIC CONTOUR MAP
2008 CORRECTIVE ACTION PROGRAM REVIEW

Date:	FEBRUARY 2009
Project:	06-442\REP2009\
File:	2009-GW-Sep-08.dwg



SCALE IN FEET

0 800

TOPOGRAPHY UPDATED DECEMBER 2008 BY ROBERT JACK SMITH & ASSOC. INC. CONSULTING LAND SURVEYORS P.O. BOX 1104, 1015 HARSHMAN ST. RAWLINS, WY 82301

LEGEND

- 500 ppm TDS CONTOUR
- TOTAL DISSOLVED SOLIDS (TDS) CONTOURS BASED ON THE HIGHEST TOTAL DISSOLVED SOLIDS (TDS) RESULT FOR GIVEN WELL FOR 2008.

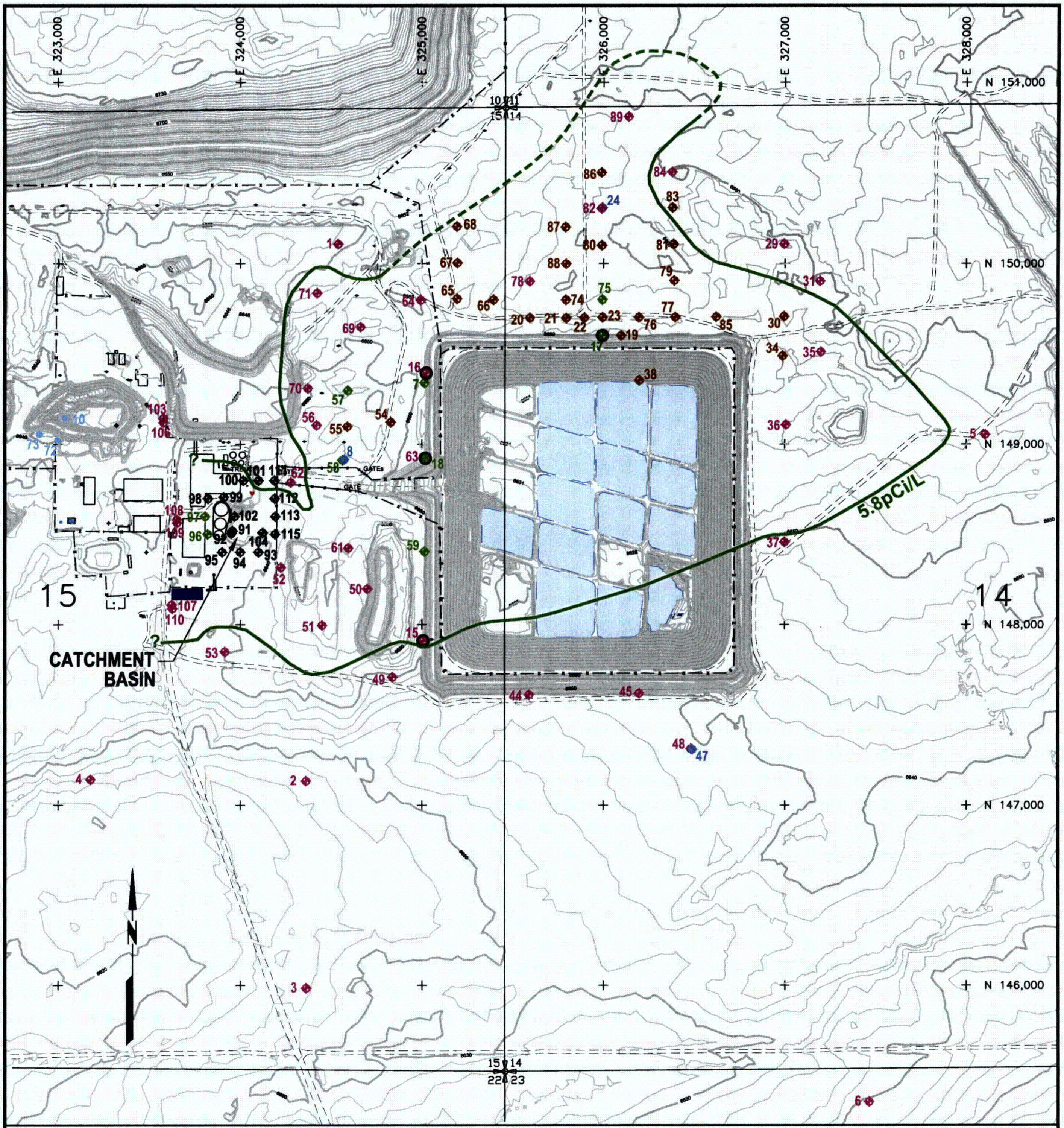
NOTE:
ALL WELLS HAVE A TMW PREFIX (TYP.)

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
2008 CORRECTIVE ACTION PROGRAM REVIEW

Date:	FEBRUARY 2009
Project:	06-442\REP2009\
File:	2009-TDS-FIG.dwg



SCALE IN FEET

0 800

TOPOGRAPHY UPDATED DECEMBER 2008 BY ROBERT JACK SMITH & ASSOC. INC. CONSULTING LAND SURVEYORS
P.O. BOX 1104, 1015 HARSHMAN ST.
RAWLINS, WY 82301

5.8 PCI/L COMBINED RADIUM-226/228 CONTOUR BASED ON HIGHEST COMBINED RADIUM-266/228 RESULT FOR GIVEN WELL FOR 2008.

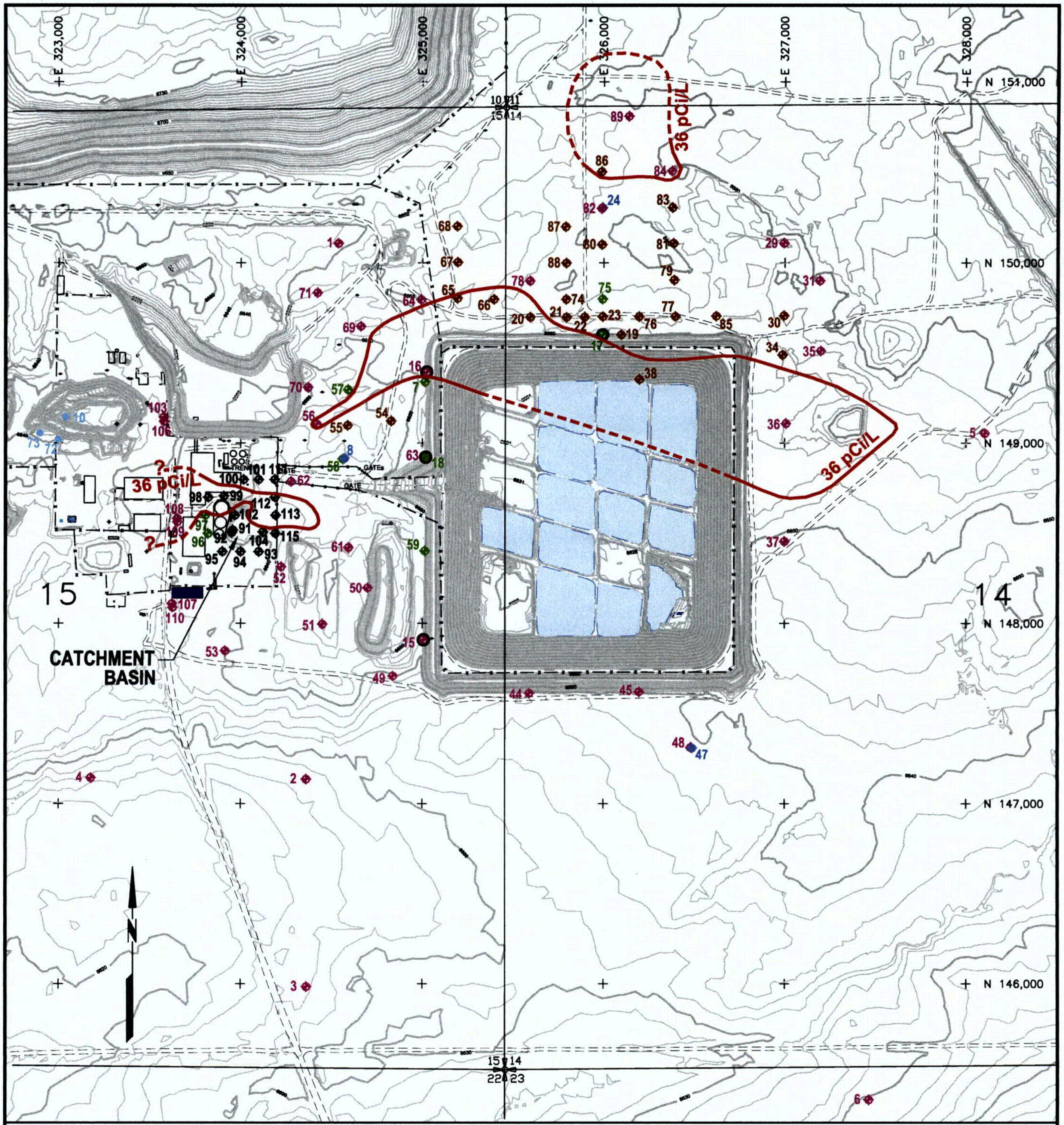
NOTE:
ALL WELLS HAVE A TMW PREFIX (TYP.)

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
2008 CORRECTIVE ACTION PROGRAM REVIEW

Date:	FEBRUARY 2009
Project:	06-442\REP2009\
File:	2009-RAD-FIG.dwg



SCALE IN FEET

0 800

TOPOGRAPHY UPDATED DECEMBER 2008 BY ROBERT JACK SMITH & ASSOC. INC. CONSULTING LAND SURVEYORS
P.O. BOX 1104, 1015 HARSHMAN ST.
RAWLINS, WY 82301

36 PCI/L URANIUM CONTOUR BASED ON HIGHEST NATURAL URANIUM RESULT FOR GIVEN WELL IN 2008.

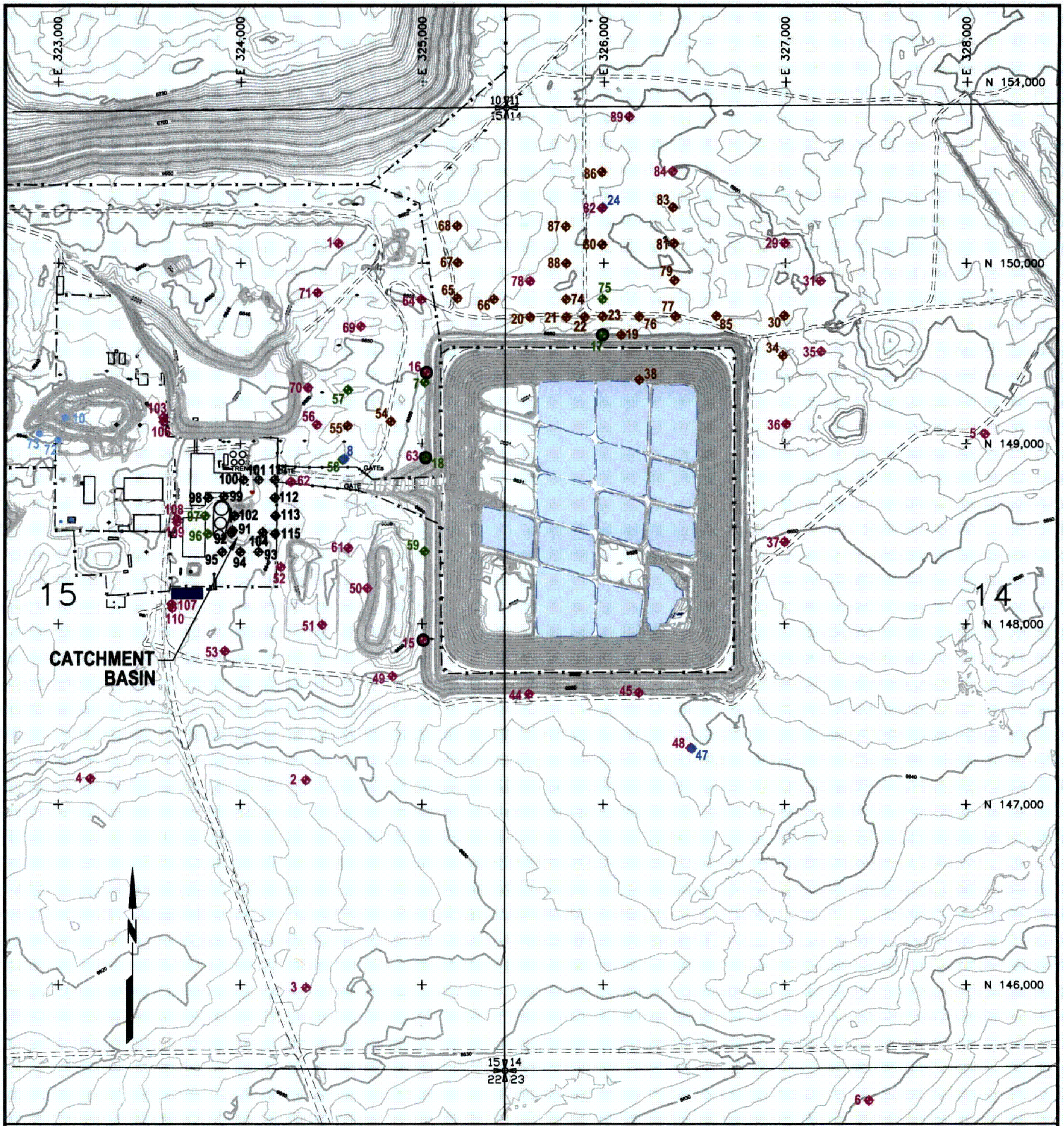
NOTE:
ALL WELLS HAVE A TMW PREFIX (TYP.)

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
2008 CORRECTIVE ACTION PROGRAM REVIEW

Date:	FEBRUARY 2009
Project:	06-442\REP2009\
File:	2009-UR-FIG.dwg



SCALE IN FEET

0 800

TOPOGRAPHY UPDATED
DECEMBER 2008 BY ROBERT JACK
SMITH & ASSOC. INC. CONSULTING
LAND SURVEYORS
P.O. BOX 1104, 1015 HARSHMAN ST.
RAWLINS, WY 82301

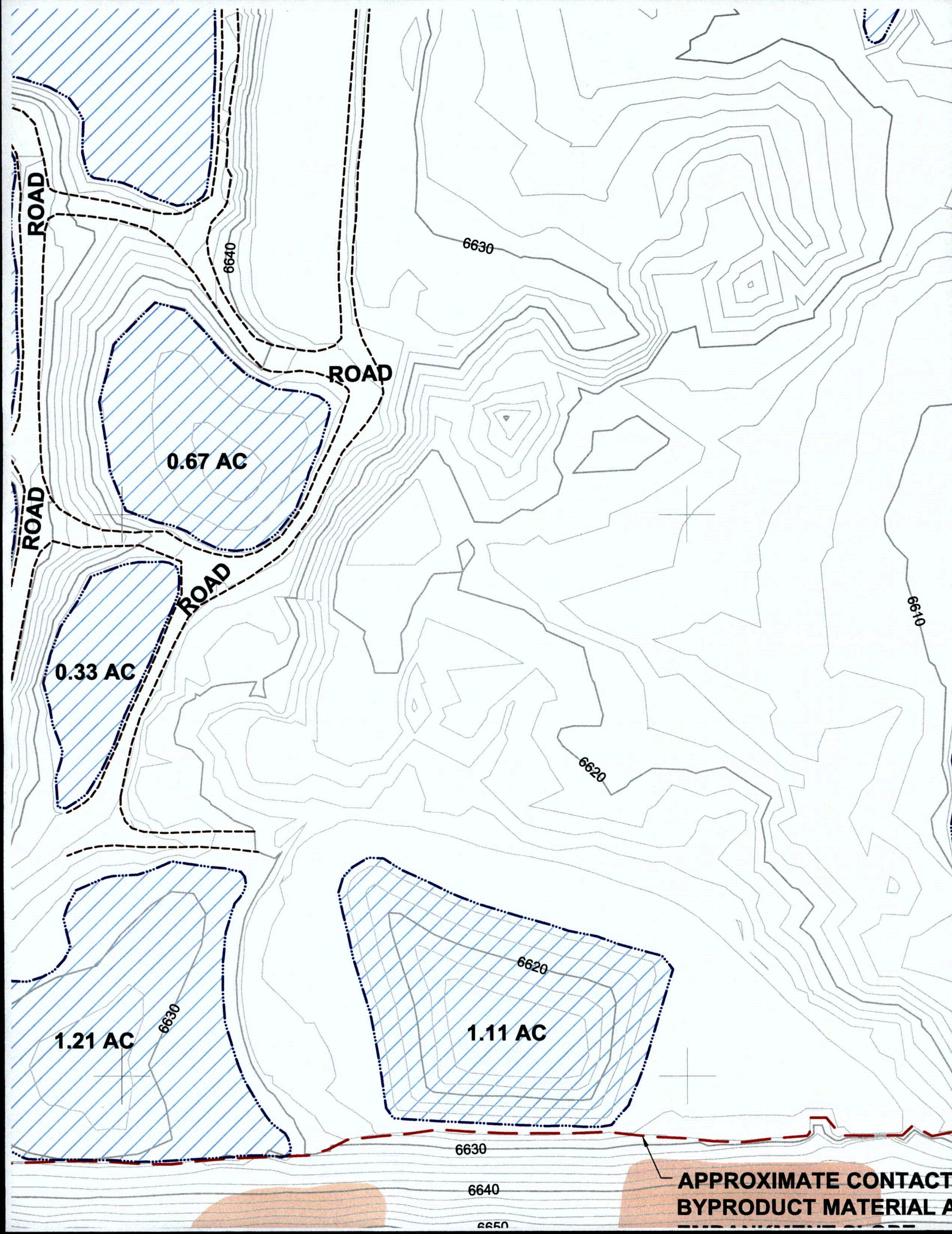
NOTE:
ALL WELLS HAVE A TMW PREFIX (TYP.)

LEGEND

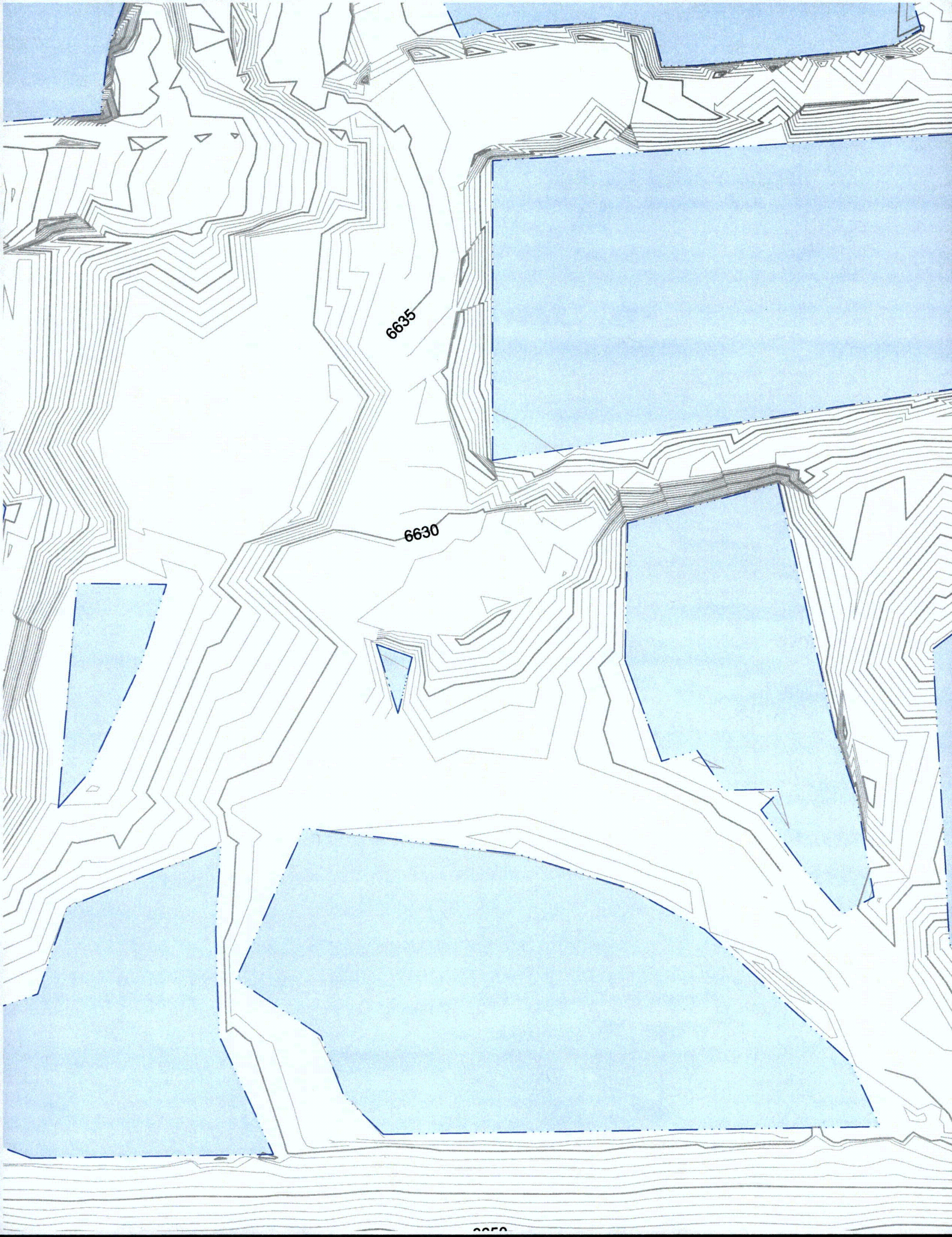
- SHALLOW WELLS (PERCHED)
- DEEP AQUIFER WELLS
- AQUIFER WELLS
- PUMPBACK WELLS, AQUIFER
- COMPLIANCE MONITORING WELLS
- POINT OF COMPLIANCE (POC) WELLS (TAILINGS IMPOUNDMENT)
- CONTAMINATED SOIL EXCAVATION MONITOR WELLS

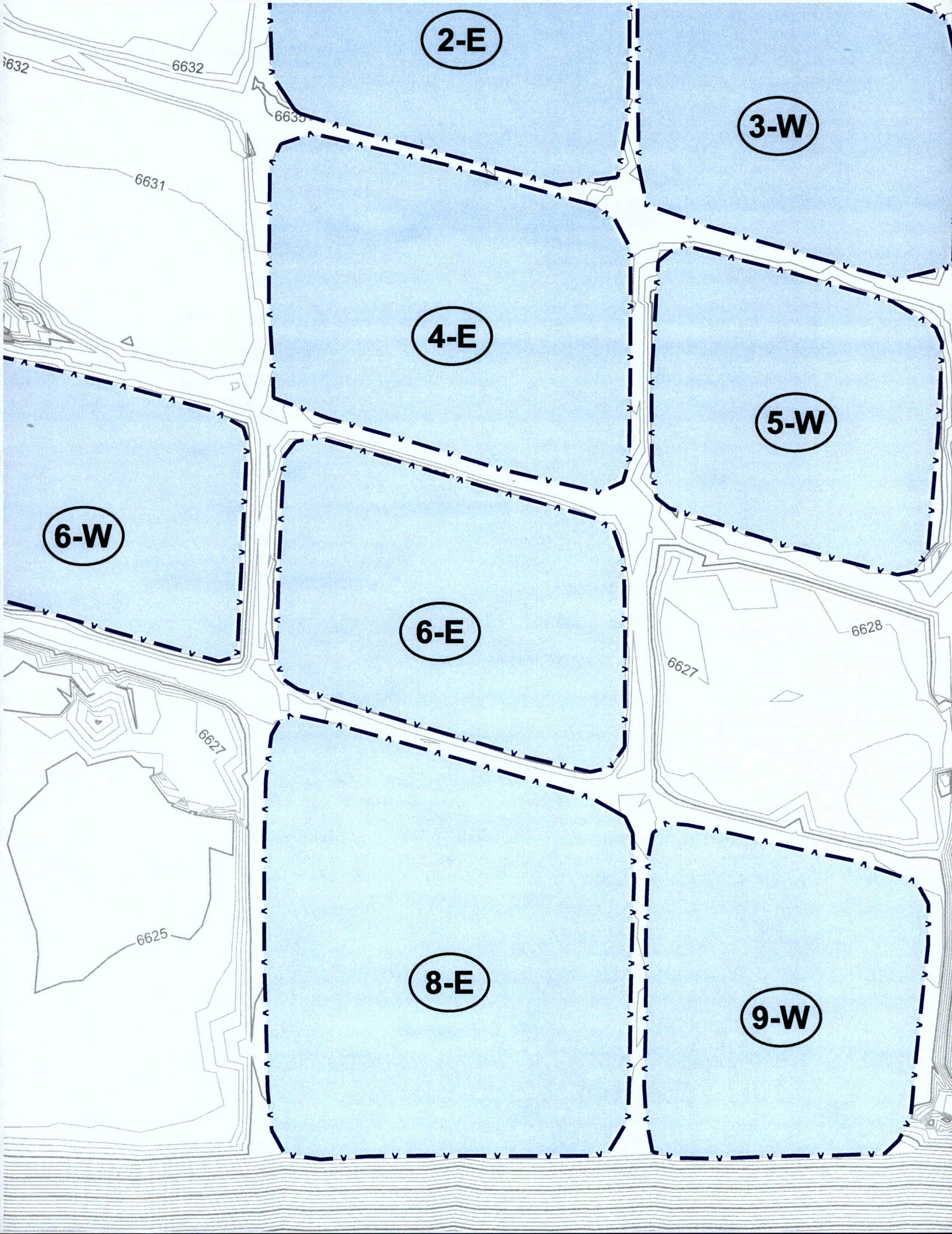
SWEETWATER URANIUM FACILITY
MONITOR WELL LOCATIONS
2008 CORRECTIVE ACTION PROGRAM REVIEW

Date:	FEBRUARY 2009
Project:	06-442\REP2009\
File:	2009-Wells.dwg



ROAD
ROAD
ROAD
ROAD
6640
6630
0.67 AC
0.33 AC
6620
6610
1.21 AC
6630
1.11 AC
6620
6630
6640
APPROXIMATE CONTACT
BYPRODUCT MATERIAL A

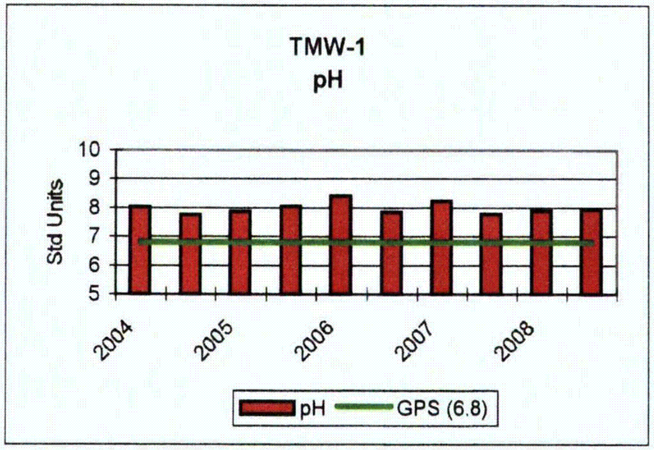

6635
6630

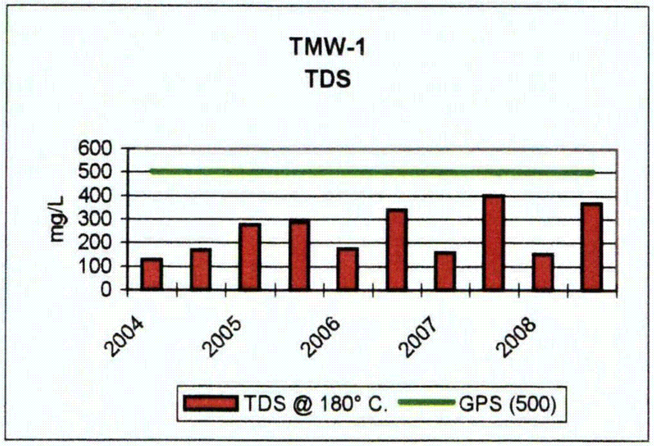


2-E
3-W
4-E
5-W
6-W
6-E
8-E
9-W
6632
6632
6635
6631
6628
6627
6627
6625

Tailings Monitor Well Data Analyses & Control Charts

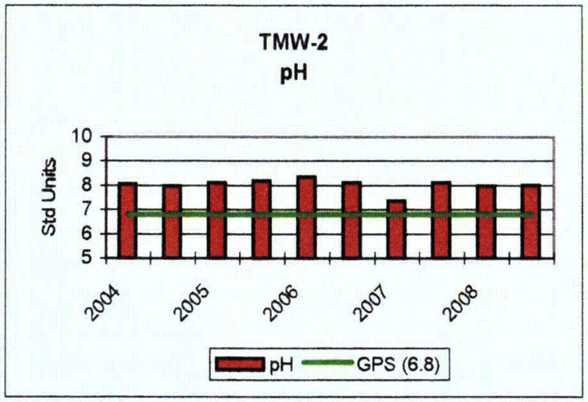
KENNECOTT URANIUM COMPANY											
TMW-1		2004		2005		2006		2007		2008	
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	1/6/2004	7/13/2004	1/4/2005	7/12/2005	1/11/2006	7/25/2006	1/10/2007	7/17/2007	02/13/08	7/15/2008
TDS A/C Balance *(dec. %)*		0.87	1	1.05	0.92	0.97	0.99	0.86	1.09	0.282	5.82
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
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
Alk-CaC03		81	82	99	108	90	110	85	116	87	114
Arsenic (As)	GPS (.05)	0.002	0.003	0.002	<0.001	0.001	<0.001	<0.002	<0.001	0.002	<0.001
Barium (Ba)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Boron (B)		<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
Calcium (Ca)		17	20	46.7	60.9	22.2	72.2	28.1	79.6	19	90
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chloride (Cl)		<1	4	2	2	2	4	3	4	1	3
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Carbonate (CO3)		<1	<1	<1	<1	2	<1	<1	<1	<1	<1
Cobalt (Co)		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cond *(umhos/cm)*		256	266	412	500	280	526	291	556	240	549
Cond-Field *(umhos/cm)*		240	200	400	280	230	500	270	515	223	489
Fluoride (F)		0.2	0.2	0.2	0.2	<0.1	0.1	0.2	0.1	0.2	0.1
Iron (Fe)	GPS (0.6)	<0.05	<0.05	<0.05	0.14	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Gross Alpha *(pCi/L)*	GPS (15)	<1	1.5	1.9	4	1.3	2.1	1.2	2.8	1.3	2.6
Bicarbonate (HCO3)		98.2	101	120	132	107	134	104	142	106	139
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0004	<0.0002	<0.0002	<0.0002
Potassium (K)		1	2	1.8	1.7	1	1.5	1.5	2.6	1.4	2.5
Magnesium (Mg)		<1	1	2.4	3.6	1.2	4.4	1.7	5.1	0.9	5.2
Manganese (Mn)	GPS (0.2)	<0.01	0.04	0.05	0.07	0.02	0.08	0.03	0.09	0.01	0.07
Molybdenum (Mo)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		36	35	39.4	36.8	36.5	34.4	33.6	34.3	35.2	34.4
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
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<2.7	<1		<1	<1	<1	<1	<1	1.7	0.8
Lead (Pb)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
pH *(Std. Units)*	**GPS (6.8)**	8.03	7.78	7.88	8.06	8.42	7.85	8.24	7.8	7.91	7.96
pH (Field) *(Std. Units)*		7.3	7.3	7.6	7.3	7.78	7.51	7.84	7.8	8.9	7.8
Radium 226 *(pCi/L)*		0.5	0.7	1.4	1.7	1	2.2	1.1	2.4	0.9	2.3
Combined Ra226/228 *(pCi/L)*	GPS (5.8)	0.5	0.7	1.4	1.7	1	3.4	1.1	5.2	2	4.4
Radium 228 *(pCi/L)*		<1	<1	<1	<1	<1	1.2	<1	2.8	1.1	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)		12	12	12	11	11	10	11	9	15	7
Sulfate (SO4)		45	47	102	134	53	153	56	164	38	163
TDS @ 180° C.	**GPS (500)**	130	170	279	290	176	340	160	402	154	369
Temperature *(C)*		8	13	10	12	9.8	14.4	9.4	12.6	9.6	11.9
Thorium 230 *(pCi/L:)*	GPS (7.0)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Thallium (Tl)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium, natural *(pCi/L)*	GPS (36)	2.4	6.2	7	13.7	4.2	21.3	8.9	20.8	4.6	17.3
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	0.02	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01

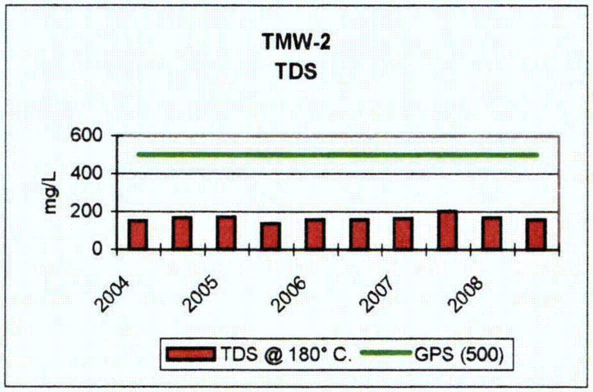

TMW-1
pH
Std Units
10
9
8
7
6
5
2004
2005
2006
2007
2008
pH
GPS (6.8)

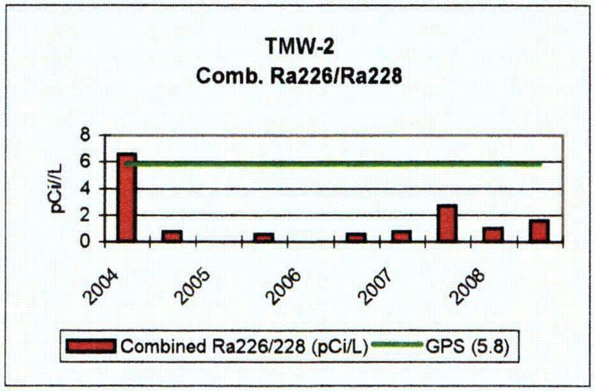

TMW-1
TDS
mg/L
600
500
400
300
200
100
0
2004
2005
2006
2007
2008
TDS @ 180° C.
GPS (500)

TMW-1

KENNECOTT URANIUM COMPANY											
TMW-2		2004		2005		2006		2007		2008	
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	1/6/2004	7/13/2004	1/4/2005	7/12/2005	1/16/2006	8/10/2006	2/11/2007	7/18/2007	1/8/2008	7/21/2008
TDS A/C Balance *(dec. %)*		0.94	1.01	1.07	0.82	0.94	0.88	0.85	1.16	0.124	0.87
Silver (Ag)		<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
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
Alk-CaC03		89	84	84	88	88	88	92	90	89	89
Arsenic (As)	GPS (.05)	0.001	0.001	0.002	0.002	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
Boron (B)		<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
Calcium (Ca)		26	22	18.7	21.3	24	26.8	29.9	24.8	26.8	27.9
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chloride (Cl)		1.2	4	2	2	3	6	3	2	3	2
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Carbonate (CO3)		<1	<1	<1	<1	1	<1	<1	<1	<1	<1
Cobalt (Co)		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cond *(umhos/cm)*		283	265	256	277	270	293	282	268	249	284
Cond-Field *(umhos/cm)*		280	200	260	180	230	252	255	248	231	248
Fluoride (F)		0.2	0.2	0.2	0.2	<0.1	0.2	0.2	0.2	0.2	0.2
Iron (Fe)	GPS (0.6)	<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)	1.7	<1	<1	1.6	<1	1.2	<1	1.3	1.4	1.2
Bicarbonate (HCO3)		108	103	103	107	104	107	112	110	108	109
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Potassium (K)		1.5	2	1.3	1.1	1.5	2	1.8	1.5	1.7	1.5
Magnesium (Mg)		1.3	1	0.9	0.9	1.3	1.4	1.6	1.3	1.3	1.5
Manganese (Mn)	GPS (0.2)	0.01	0.01	<0.01	<0.01	0.01	0.01	0.02	0.01	0.02	0.01
Molybdenum (Mo)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		32	33	35.6	34.2	31.6	32.6	35.4	34.4	31.4	31.5
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
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<2.7	<1	<1	<1	<1	<1	<1	<1	<1	2.3
Lead (Pb)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
pH *(Std. Units)*	**GPS (6.8)**	8.07	8	8.12	8.2	8.37	8.13	7.39	8.12	7.99	8.01
pH (Field) *(Std. Units)*		7.2	7.6	7.9	8.5	7.8	7.39	7.45	8.4	8.3	8.2
Radium 226 *(pCi/L)*		0.9	0.8	<0.2	0.6	<0.2	0.6	0.8	0.5	1	0.68
Combined Ra226/228 *(pCi/L)*	**GPS (5.8)**	6.6	0.8	0	0.6	0	0.6	0.8	2.7	1	1.58
Radium 228 *(pCi/L)*		5.7	<1	<1	<1	<1	<1	<1	2.2	<1	0.9
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)		13	12	13	12	13	13	14	13	15	18
Sulfate (SO4)		46	42	39	45	44	47	55	46	47	44
TDS @ 180° C.	**GPS (500)**	152	169	173	140	160	160	166	204	170	161
Temperature *(C)*		8	13	11	13	7.5	14.2	10	11	4.5	10.5
Thorium 230 *(pCi/L:)*	GPS (7.0)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Thallium (Tl)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium, natural *(pCi/L)*	GPS (36)	1	1.4	0.3	0.6	0.3	0.4	0.4	0.3	0.7	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

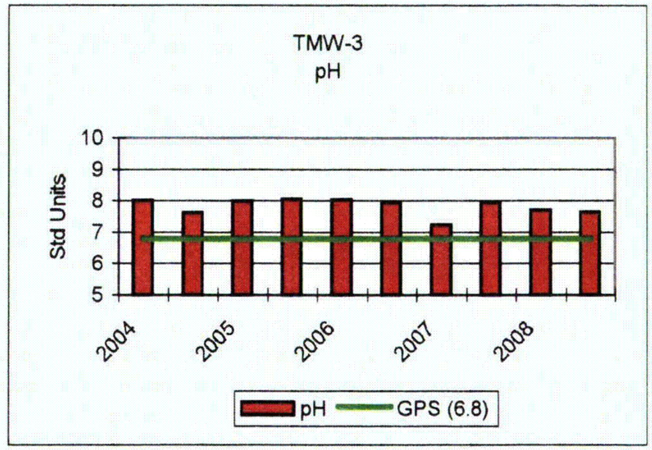

TMW-2
pH
Std Units
10
9
8
7
6
5
2004
2005
2006
2007
2008
pH
GPS (6.8)

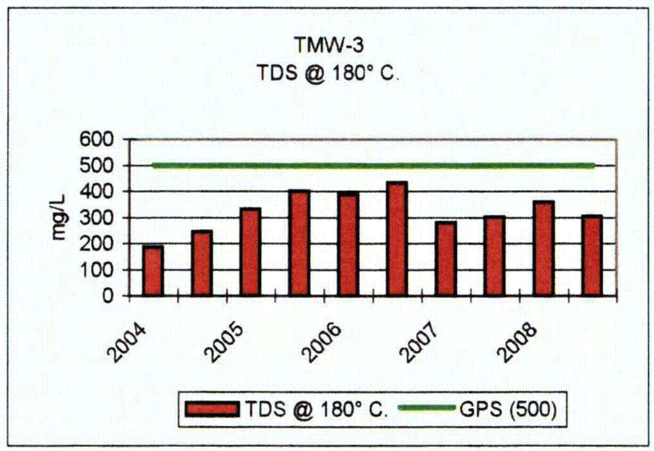

TMW-2
TDS
mg/L
600
400
200
0
2004
2005
2006
2007
2008
TDS @ 180° C.
GPS (500)


TMW-2
Comb. Ra226/Ra228
pCi/L
8
6
4
2
0
2004
2005
2006
2007
2008
Combined Ra226/228 (pCi/L)
GPS (5.8)

TMW-2

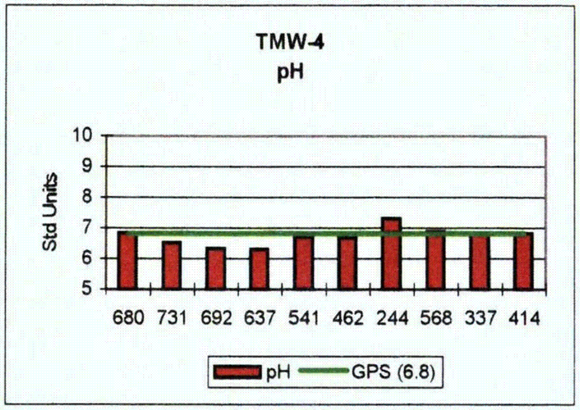
KENNECOTT URANIUM COMPANY											
TMW-3		2004		2005		2006		2007		2008	
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	1/6/2004	7/13/2004	1/4/2005	7/12/2005	1/12/2006	8/15/2006	2/11/2007	7/22/2007	1/15/2008	7/21/2008
TDS A/C Balance *(dec. %)*		0.99	0.99	1.07	0.94	0.98	0.96	0.88	0.89	0.54	3.04
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
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
Alk-CaC03		89	90	96	107	103	100	98	100	104	98
Arsenic (As)	GPS (.05)	0.002	0.001	0.001	0.001	0.001	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
Boron (B)		<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
Calcium (Ca)		32	41	57.2	85.5	77.7	91.3	57.6	62.7	84.3	63.3
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chloride (Cl)		<1	6	4	4	6	6	5	4	5	4
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Carbonate (CO3)		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt (Co)		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cond *(umhos/cm)*		332	384	481	657	593	690	445	493	620	479
Cond-Field *(umhos/cm)*		360	280	480	380	440	629	407	477	601	425
Fluoride (F)		0.2	0.2	0.2	0.2	<0.1	0.1	0.2	0.2	0.2	0.2
Iron (Fe)	GPS (0.6)	<0.05	0.06	0.06	0.24	<0.05	<0.05	<0.05	<0.05	0.12	0.1
Gross Alpha *(pCi/L)*	GPS (15)	2.6	1.7	<1	<1	2.4	1.5	<1	<1	3	1.6
Bicarbonate (HCO3)		108	110	117	130	125	122	120	120	127	119
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Potassium (K)		1.5	2	1.9	2	2.3	2.4	2.2	2.1	2.6	2
Magnesium (Mg)		1.9	3	4	7	6.8	7.6	4.1	5.3	6.9	5
Manganese (Mn)	GPS (0.2)	0.02	0.02	0.04	0.05	0.06	0.05	0.03	0.04	0.05	0.03
Molybdenum (Mo)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		34	36	38.2	41.6	38.6	42.1	41.9	39.8	38.4	36.1
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
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<2.7	<1	<1	<1	<1	<1	<1	<1	<1	4.9
Lead (Pb)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
pH *(Std. Units)*	**GPS (6.8)**	8.03	7.63	8	8.07	8.04	7.97	7.25	7.97	7.72	7.66
pH (Field) *(Std. Units)*		7.2	7.4	7.2	7.6	7.51	7.32	7.47	8	8.2	7.8
Radium 226 *(pCi/L)*		0.7	0.9	1	2.4	1.1	2.1	1.3	1.2	1.9	0.58
Combined Ra226/228 *(pCi/L)*	GPS (5.8)	0.7	0.9	2.9	2.4	1.1	3.6	3.8	1.2	1.9	1.68
Radium 228 *(pCi/L)*		<1	<1	1.9	<1	<1	1.5	2.5	<1	<1	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	12	13	13	14	15	14	12	14	17.6
Sulfate (SO4)		67	96	134	208	189	226	137	154	209	135
TDS @ 180° C.	**GPS (500)**	188	248	333	402	390	434	282	304	361	307
Temperature *(C)*		8	15	10	15	8.5	12.3	8.7	11	9.2	10.6
Thorium 230 *(pCi/L:)*	GPS (7.0)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Thallium (Tl)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium, natural *(pCi/L)*	GPS (36)	0.6	1.1	0.7	1.5	1.3	1.9	0.5	1	1.5	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	0.02	0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01

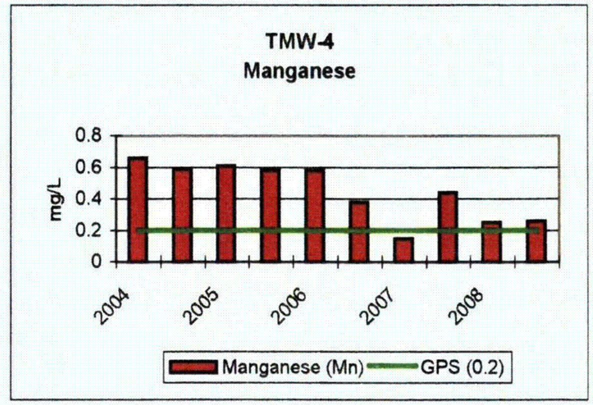

TMW-3
pH
Std Units
10
9
8
7
6
5
2004
2005
2006
2007
2008
pH
GPS (6.8)

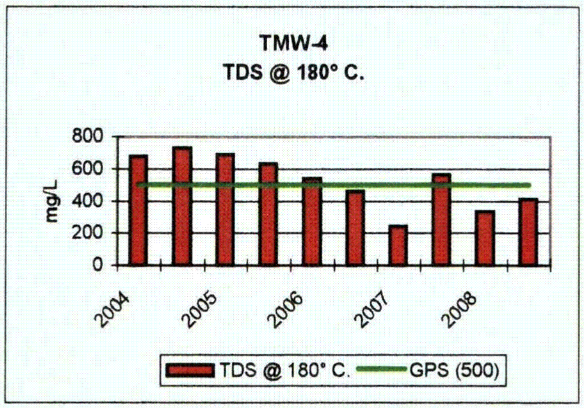

TMW-3
TDS @ 180° C.
mg/L
600
500
400
300
200
100
0
2004
2005
2006
2007
2008
TDS @ 180° C.
GPS (500)

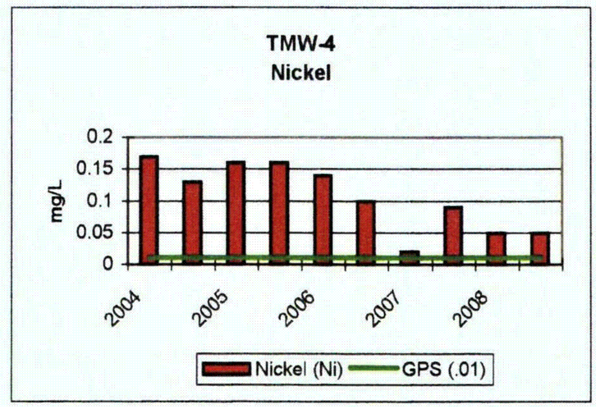
TMW-3

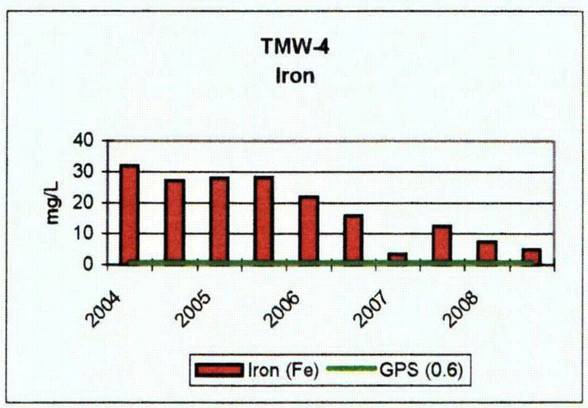
KENNECOTT URANIUM COMPANY											
TMW-4		2004		2005		2006		2007		2008	
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	1/6/2004	7/19/2004	1/4/2005	7/12/2005	1/12/2006	7/25/2006	2/11/2007	7/17/2007	1/15/2008	7/15/2008
TDS A/C Balance *(dec. %)*		1.05	1.2	1.1	0.98	0.95	0.97	0.84	1.07	0.87	1.02
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
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
Alk-CaC03		41	31	30	28	70	54	70	64	66	68
Arsenic (As)	GPS (.05)	0.002	0.002	0.003	0.002	0.001	0.002	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
Boron (B)		<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
Calcium (Ca)		117	103	105	106	90.6	74.9	39.8	88.5	55.3	74.3
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chloride (Cl)		1.9	7	6	4	5	4	5	5	4	3
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Carbonate (CO3)		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt (Co)		0.117	0.098	0.1	0.101	0.095	0.062	0.017	0.061	0.036	0.034
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cond *(umhos/cm)*		968	913	864	956	789	693	441	776	567	610
Cond-Field *(umhos/cm)*		800	560	880	500	590	613	419	718	549	559
Fluoride (F)		0.2	0.3	0.3	0.3	0.2	0.3	0.3	0.2	0.2	0.2
Iron (Fe)	**GPS (0.6)**	32	27.2	28.1	28.3	22	15.9	3.57	12.5	7.61	4.97
Gross Alpha *(pCi/L)*	GPS (15)	<1	4.6	3.1	5.6	2.3	<1	<1	2.1	3	1.8
Bicarbonate (HCO3)		49.4	37	36	35	85	66	85	78	81	83
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Potassium (K)		3	2.8	3.1	3	3	1.8	3	2.7	2.6	2.5
Magnesium (Mg)		26	22.8	24	25.9	21.8	16	6.7	18.3	9.4	12.1
Manganese (Mn)	**GPS (0.2)**	0.66	0.59	0.61	0.58	0.58	0.38	0.15	0.44	0.25	0.26
Molybdenum (Mo)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		42	41.8	43.7	44.8	41.9	42	41.6	47	41.3	45.1
Nickel (Ni)	**GPS (.01)**	0.17	0.13	0.16	0.16	0.14	0.1	0.02	0.09	0.05	0.05
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
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<2.7	<1	<1	<1	<1	<1	<1	<1	<1	-1.3
Lead (Pb)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
pH *(Std. Units)*	**GPS (6.8)**	6.86	6.53	6.34	6.32	6.73	6.71	7.31	6.89	6.82	6.82
pH (Field) *(Std. Units)*		8	6.5	6.2	6.7	6.65	6.73	6.65	7.2	7.1	6.9
Radium 226 *(pCi/L)*		2.2	1.8	1.2	3.2	1	1.2	<0.2	1.5	1.2	0.7
Combined Ra226/228 *(pCi/L)*	**GPS (5.8)**	5.9	1.8	4.6	5.8	2.8	7.5	1.3	3.8	1.2	3.2
Radium 228 *(pCi/L)*		3.7	<1	3.4	2.6	1.8	6.3	1.3	2.3	<1	2.5
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)		17	16	18	18	17	16	12	14	13	8
Sulfate (SO4)		434	388	410	435	347	287	140	318	213	227
TDS @ 180° C.	**GPS (500)**	680	731	692	637	541	462	244	568	337	414
Temperature *(C)*		8	12	10	14	8	18.8	9.9	12.1	9.5	10.9
Thorium 230 *(pCi/L:)*	GPS (7.0)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Thallium (Tl)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium, natural *(pCi/L)*	GPS (36)	2.5	3.5	2.9	4.5	4.9	5.5	2.9	5.2	4	3.3
Vanadium (V205)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Zinc (ZN)		0.09	0.07	0.11	0.08	0.08	0.06	0.01	0.05	0.03	<0.02

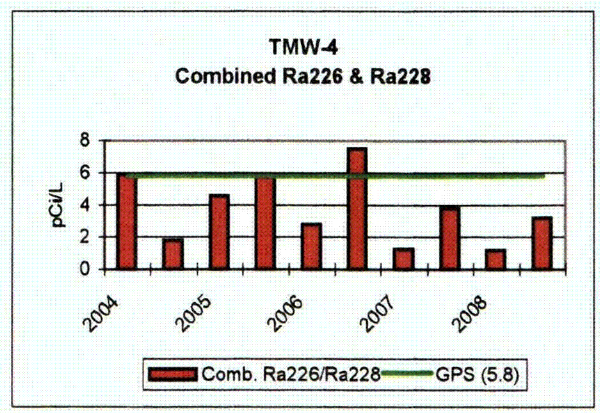

TMW-4
pH
Std Units
10
9
8
7
6
5
680 731 692 637 541 462 244 568 337 414
pH
GPS (6.8)


TMW-4
Manganese
mg/L
0.8
0.6
0.4
0.2
0
2004
2005
2006
2007
2008
Manganese (Mn)
GPS (0.2)


TMW-4
TDS @ 180° C.
mg/L
800
600
400
200
0
2004
2005
2006
2007
2008
TDS @ 180° C.
GPS (500)

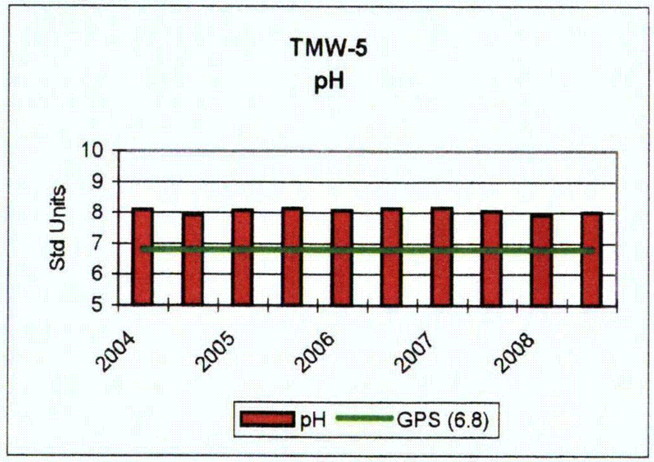

TMW-4
Nickel
mg/L
0.2
0.15
0.1
0.05
0
2004
2005
2006
2007
2008
Nickel (Ni)
GPS (.01)

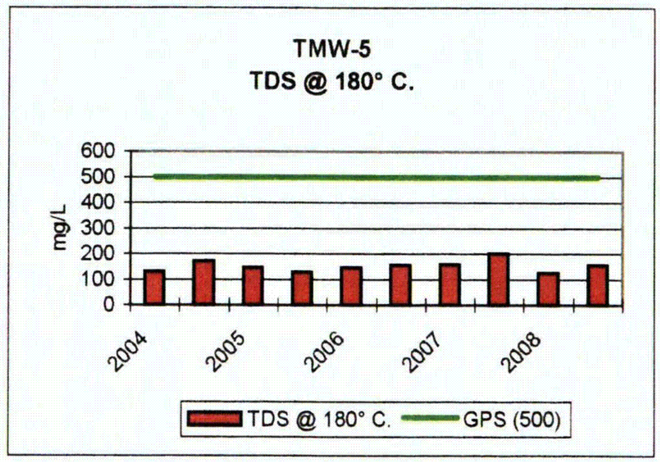

TMW-4
Iron
mg/L
40
30
20
10
0
2004
2005
2006
2007
2008
Iron (Fe)
GPS (0.6)


TMW-4
Combined Ra226 & Ra228
pCi/L
8
6
4
2
0
2004
2005
2006
2007
2008
Comb. Ra226/Ra228
GPS (5.8)

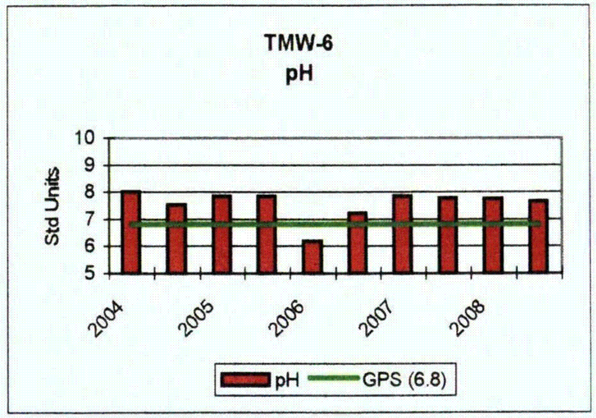
TMW-4

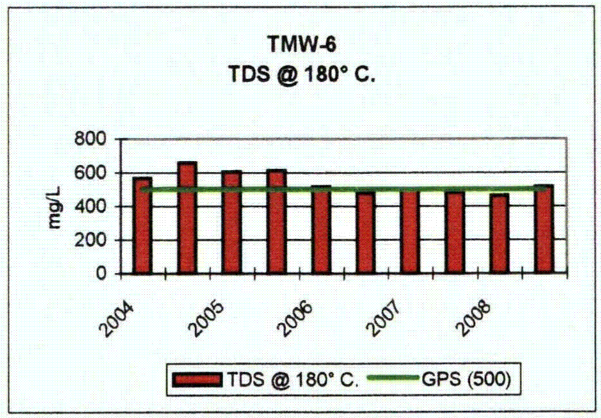
KENNECOTT URANIUM COMPANY											
TMW-5		2004		2005		2006		2007		2008	
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	1/6/2004	7/19/2004	1/10/2005	7/12/2005	1/16/2006	8/15/2006	2/11/2007	7/18/2007	1/15/2008	7/23/2008
TDS A/C Balance *(dec. %)*		0.91	1.13	0.91	0.88	0.88	0.93	0.94	1.13	0.857	2.5
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
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
Alk-CaC03		88	84	90	83	92	88	89	94	90	91
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
Boron (B)		<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
Calcium (Ca)		22	21.6	23.9	20.3	23.5	24.2	25	25.9	24.4	25.7
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chloride (Cl)		3.9	3	<1	<1	2	2	2	2	2	1
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Carbonate (CO3)		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt (Co)		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cond *(umhos/cm)*		251	263	256	247	264	283	262	270	238	266
Cond-Field *(umhos/cm)*		340	180	260	160	220	236	238	244	248	235
Fluoride (F)		0.2	0.2	0.2	0.2	<0.1	0.1	0.2	0.2	0.2	0.2
Iron (Fe)	GPS (0.6)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.05	<0.05
Gross Alpha *(pCi/L)*	GPS (15)	<1	<1	<1	<1	<1	1.4	1.3	1.3	2.3	1.8
Bicarbonate (HCO3)		107	103	109	101	113	107	109	115	110	111
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Potassium (K)		1.4	1.3	1.5	1.1	1.5	1.4	1.6	1.5	1.7	1.5
Magnesium (Mg)		1	1	1.2	1	1.2	1	1.2	1.3	1.1	1.3
Manganese (Mn)	GPS (0.2)	<0.01	0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.03
Molybdenum (Mo)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		30	31.3	31.4	31	29.8	32.2	32.5	33.9	30.2	31
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
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<2.7	<1	<1	<1	<1	<1	<1	<1	<1	1.6
Lead (Pb)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
pH *(Std. Units)*	**GPS (6.8)**	8.1	7.95	8.08	8.16	8.08	8.15	8.17	8.07	7.94	8.02
pH (Field) *(Std. Units)*		7.4	7.6	7.9	7.5	7.64	7.36	7.57	8.3	8.5	8
Radium 226 *(pCi/L)*		0.7	1	0.8	0.6	<0.2	1.1	1.3	0.5	0.9	0.88
Combined Ra226/228 *(pCi/L)*	GPS (5.8)	2.9	1	0.8	0.6	0	2.6	3.3	0.5	0.9	1.88
Radium 228 *(pCi/L)*		2.2	<1	<1	<1	<1	1.5	2	<1	<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)		14	13	13	13	14	15	13	13	15	18.3
Sulfate (SO4)		34	30	36	31	37	40	41	44	41	38
TDS @ 180° *C.*	**GPS (500)**	131	171	146	130	146	156	160	202	127	157
Temperature *(C)*		8	14	14	14	7.8	11.7	9.1	13	10	11
Thorium 230 *(pCi/L:)*	GPS (7.0)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0
Thallium (Tl)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium, natural *(pCi/L)*	GPS (36)	0.5	1.5	0.5	0.5	0.4	0.3	0.3	0.4	0.6	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	0.03

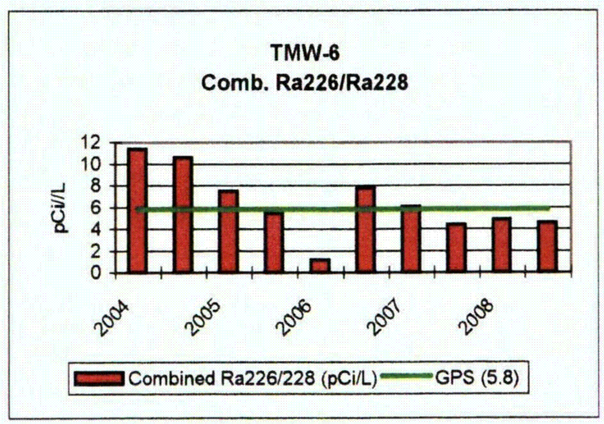

TMW-5
pH
10
9
8
7
6
5
Std Units
2004
2005
2006
2007
2008
pH
GPS (6.8)


TMW-5
TDS @ 180° C.
600
500
400
300
200
100
0
mg/L
2004
2005
2006
2007
2008
TDS @ 180° C.
GPS (500)

KENNECOTT URANIUM COMPANY											
TMW-6		2004		2005		2006		2007		2008	
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	1/6/2004	7/19/2004	1/10/2005	7/13/2005	1/12/2006	8/15/2006	2/11/2007	7/22/2007	1/15/2008	7/22/2008
TDS A/C Balance *(dec. %)*		0.97	1.11	1	1	0.97	0.9	0.94	0.89	0.704	5.95
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
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
Alk-CaC03		152	150	154	150	142	146	119	140	142	139
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
Boron (B)		<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
Calcium (Ca)		137	140	142	138	116	116	118	116	117	125
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chloride (Cl)		9.8	7	5	9	7	5	6	5	6	5
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Carbonate (CO3)		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt (Co)		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cond *(umhos/cm)*		852	907	861	848	757	783	783	750	780	758
Cond-Field *(umhos/cm)*		820	500	780	480	560	718	730	736	741	697
Fluoride (F)		0.2	0.2	0.2	0.1	<0.1	0.1	0.2	0.2	0.2	0.2
Iron (Fe)	GPS (0.6)	0.18	0.12	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.07	0.07
Gross Alpha *(pCi/L)*	GPS (15)	3.7	4.6	2.6	4.2	3	2.2	2.9	3.4	5.5	3.9
Bicarbonate (HCO3)		185	183	188	183	174	179	145	170	173	169
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Potassium (K)		3	3	3.4	2.5	2.9	2.8	3	3	3.3	2.9
Magnesium (Mg)		11	11.5	12.1	12	10.4	9.4	10.3	10.2	9.6	10.4
Manganese (Mn)	GPS (0.2)	0.09	0.09	0.09	0.09	0.08	0.07	0.08	0.07	0.08	0.08
Molybdenum (Mo)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		39	41.8	41.4	42	39.6	39.3	39.9	42.1	39.3	39.2
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
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<2.7	<1	<1	<1	7.1	<1	<1	<1	<1	4
Lead (Pb)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
pH *(Std. Units)*	**GPS (6.8)**	8.03	7.54	7.87	7.87	6.21	7.23	7.85	7.78	7.76	7.67
pH (Field) *(Std. Units)*		8.4	7.7	7.3	7.2	7.41	7.31	7.3	7.7	8	7.5
Radium 226 *(pCi/L)*		3.5	3.2	3.1	3.3	1.2	3.6	2.3	2.6	3.4	1.7
Combined Ra226/228 *(pCi/L)*	**GPS (5.8)**	11.4	10.6	7.5	5.5	1.2	7.8	6.1	4.4	4.9	4.6
Radium 228 *(pCi/L)*		7.9	7.4	4.4	2.2	<1	4.2	3.8	1.8	1.5	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	13	13	15	14	14	13	12	14	17.1
Sulfate (SO4)		294	289	300	305	256	258	265	268	265	239
TDS @ 180° *C.*	**GPS (500)**	568	663	608	616	518	480	496	484	464	518
Temperature *(C)*		8	13	11	13	8.6	14.7	9.7	13	9.3	10.4
Thorium 230 *(pCi/L:)*	GPS (7.0)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0
Thallium (Tl)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium, natural *(pCi/L)*	GPS (36)	2.4	3.3	3.7	3.3	2.8	2.4	2.5	2.5	2.3	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	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

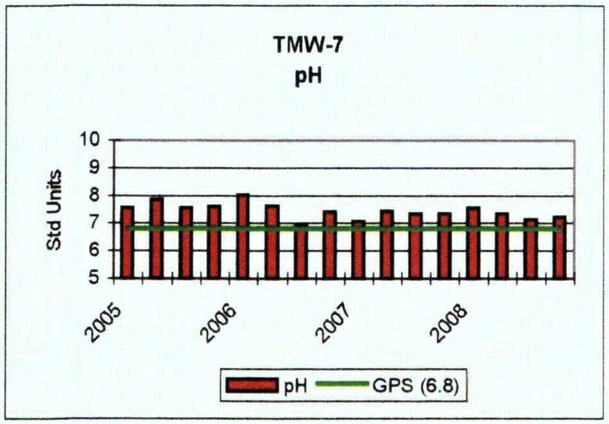

TMW-6
pH
10
9
8
7
6
5
Std Units
2004
2005
2006
2007
2008
pH
GPS (6.8)

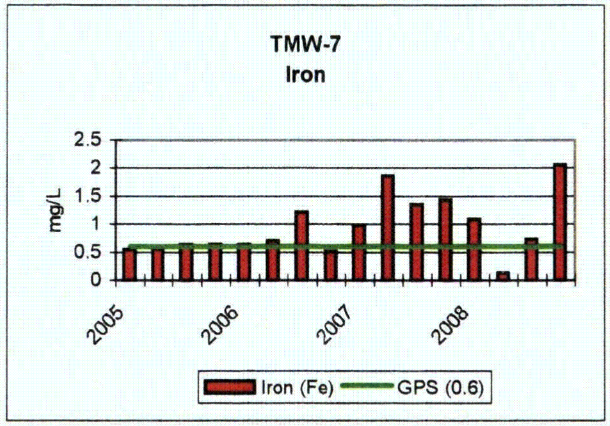

TMW-6
TDS @ 180° C.
800
600
400
200
0
mg/L
2004
2005
2006
2007
2008
TDS @ 180° C.
GPS (500)

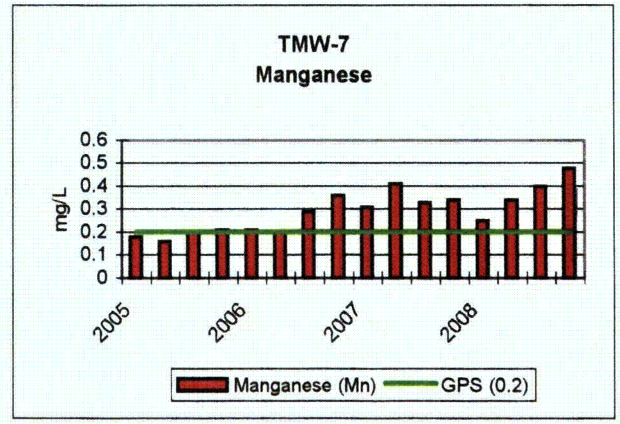

TMW-6
Comb. Ra226/Ra228
12
10
8
6
4
2
0
pCi/L
2004
2005
2006
2007
2008
Combined Ra226/228 (pCi/L)
GPS (5.8)

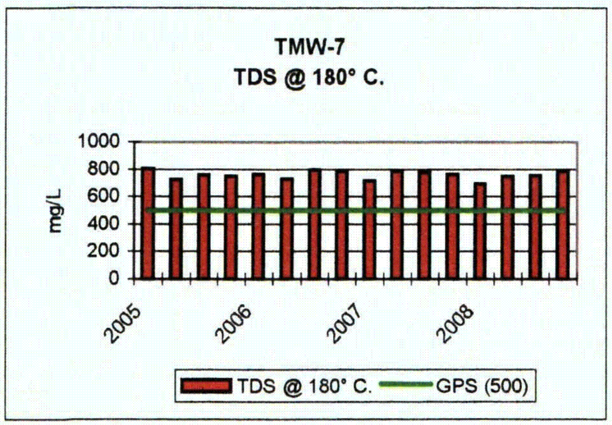
TMW-6

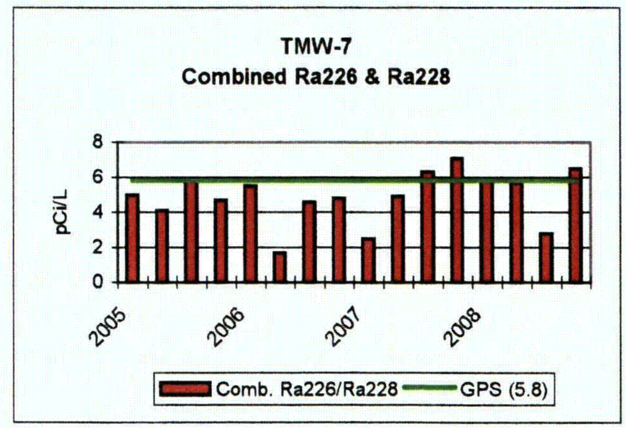
KENNECOTT URANIUM COMPANY																	
TMW-7		2005				2006				2007				2008			
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	1/5/2005	4/6/2005	7/11/2005	11/7/2005	1/11/2006	4/10/2006	7/3/2006	10/5/2006	1/10/2007	4/11/2007	7/22/2007	10/1/2007	1/13/2008	4/14/2008	7/28/2008	10/14/2008
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	2.21
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	<0.01
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	<0.1
Alk-CaC03		171	173	169	170	175	171	166	168	167	179	170	169	160	162	170	168
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	<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	<0.1
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	<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	<0.01
Calcium (Ca)		173	180	180	156	171	178	171	180	170	183	166	150	153	167	167	178
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	<0.005
Chloride (Cl)		21	23	22	22	22	24	32	27	26	30	24	27	22	24	23	28
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	<0.005
Carbonate (CO3)		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
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	<0.001
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	<0.01
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	<0.01
Cond *(umhos/cm)*		1050	1040	1100	1070	1040	1030	1110	1100	1040	1150	1090	1120	1010	1030	1090	1140
Cond-Field *(umhos/cm)*		1040	740	680	680	800	680	1021	1118	1089	1018	1012	952	938	1018	1022	1077
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	<0.1
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	2.06
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	2.4
Bicarbonate (HCO3)		208	211	206	207	214	209	203	205	204	218	210	206	195	198	207	205
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	<0.0002
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	3.6
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	16.4
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	0.48
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	<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	51
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	<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	<0.1
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<1	<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	<0.01
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	7.24
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	6.9
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	1.4
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	5.8	5.7	2.8	6.5
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	5.1
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	<0.001
Silica (SiO2)		18	18	18	17	17	18	18	16	18	17	15	17	17	8	8	19.2
Sulfate (SO4)		371	366	377	340	364	369	386	383	366	405	375	336	351	383	399	378
TDS @ 180° C.	**GPS (500)**	807	728	762	753	764	734	798	790	720	790	780	766	694	749	755	789
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	11.6
Thorium 230 *(pCi/L:)*	GPS (7.0)	<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	<0.2
Thallium (Tl)		<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	<0.01
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	6.4
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	<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	0.01


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

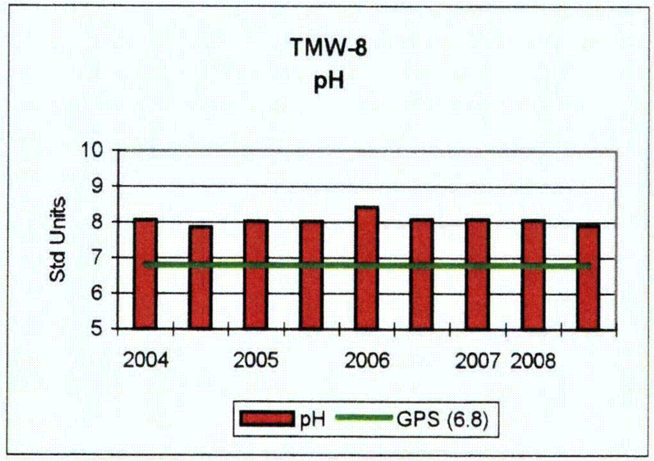

TMW-7
Iron
mg/L
2.5
2
1.5
1
0.5
0
2005
2006
2007
2008
Iron (Fe)
GPS (0.6)

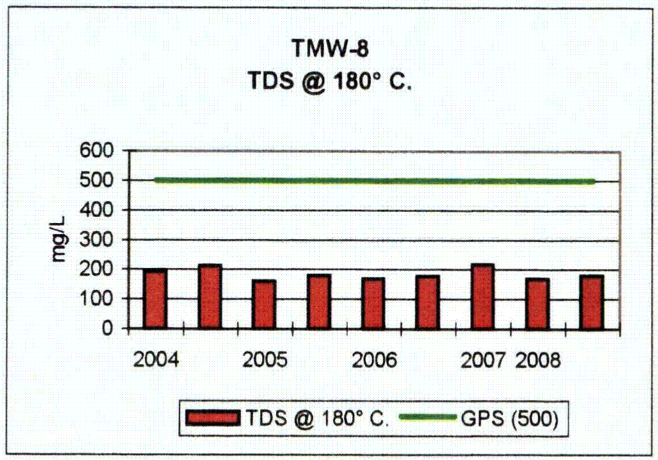

TMW-7
Manganese
mg/L
0.6
0.5
0.4
0.3
0.2
0.1
0
2005
2006
2007
2008
Manganese (Mn)
GPS (0.2)


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


TMW-7
Combined Ra226 & Ra228
pCi/L
8
6
4
2
0
2005
2006
2007
2008
Comb. Ra226/Ra228
GPS (5.8)

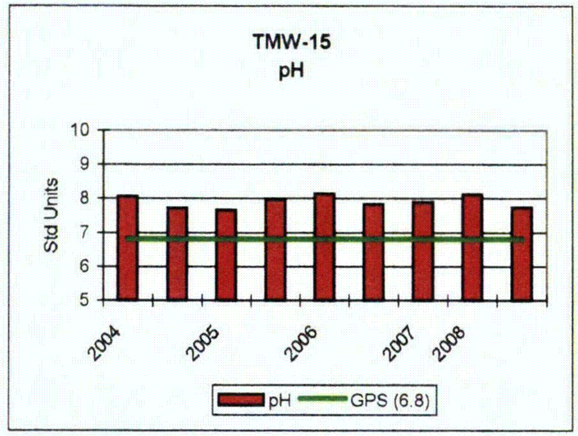
KENNECOTT URANIUM COMPANY										
TMW-8		2004		2005		2006		2007	2008	
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	1/13/2004	7/20/2004	1/10/2005	7/13/2005	1/17/2006	8/23/2006	7/18/2007	2/13/2008	7/23/2008
TDS A/C Balance *(dec. %)*		0.84	1.13	0.88	1.01	0.95	0.95	1.15	0.233	3.88
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aluminum (Al)	GPS (1.8)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alk-CaC03		86	84	84	83	85	84	86	89	85
Arsenic (As)	GPS (.05)	0.001	0.002	0.002	0.002	0.001	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
Boron (B)		<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
Calcium (Ca)		33.7	26.7	25.3	24.2	23.6	23.9	25	24.2	26.5
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chloride (Cl)		14.7	3	<1	4	3	3	2	2	<1
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Carbonate (CO3)		<1	<1	<1	<1	2	<1	<1	<1	<1
Cobalt (Co)		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cond *(umhos/cm)*		312	335	290	280	282	310	287	283	295
Cond-Field *(umhos/cm)*		280	240	260	180	250	270	274	265	263
Fluoride (F)		0.2	0.2	0.2	0.2	<0.1	0.2	0.2	0.2	0.2
Iron (Fe)	GPS (0.6)	<0.05	0.23	<0.05	<0.05	<0.05	<0.05	<0.05	0.05	0.06
Gross Alpha *(pCi/L)*	GPS (15)	<1	1.1	<1	<1	1.1	<1	<1	1.1	0.6
Bicarbonate (HCO3)		104	102	103	101	101	102	105	108	103
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Potassium (K)		6.3	1.4	1.6	0.8	1.5	1.3	1.5	1.7	1.5
Magnesium (Mg)		1.2	1	1	0.9	0.9	0.8	1	0.8	1
Manganese (Mn)	GPS (0.2)	<0.01	0.19	<0.01	<0.01	0.04	0.04	0.03	0.04	0.04
Molybdenum (Mo)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		42.2	37.5	36.5	36.3	35.1	35.1	38.7	38	35.9
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
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<2.7	<1	<1	<1	<1	<1	<1	<1	6.5
Lead (Pb)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
pH *(Std. Units)*	**GPS (6.8)**	8.08	7.88	8.03	8.04	8.43	8.1	8.09	8.07	7.92
pH (Field) *(Std. Units)*		8.8	7.2	7.1	7.5	7.81	7.7	8.2	8.6	8
Radium 226 *(pCi/L)*		0.6	0.6	<0.2	<0.2	<0.2	0.6	<0.2	0.4	0.41
Combined Ra226/228 *(pCi/L)*	GPS (5.8)	0.6	0.6	1.8	0	0	0.6	0	0.9	1.01
Radium 228 *(pCi/L)*		<1	<1	1.8	<1	<1	<1	<1	0.5	0.6
Selenium (Se)	GPS (.01)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silica (SiO2)		13.8	12	12	13	13	14	13	14	17.4
Sulfate (SO4)		81	56	53	52	51	56	57	54	52
TDS @ 180° *C.*	**GPS (500)**	194	213	161	182	170	180	218	170	181
Temperature *(C)*		8	14	13	14	7.9	13.6	12.4	9.3	11.7
Thorium 230 *(pCi/L:)*	GPS (7.0)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.1	0
Thallium (Tl)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium, natural *(pCi/L)*	GPS (36)	3.3	1	0.6	0.5	0.3	<0.2	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
Zinc (ZN)		<0.01	0.04	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01


TMW-8
pH
10
9
8
7
6
5
Std Units
2004
2005
2006
2007
2008
pH
GPS (6.8)

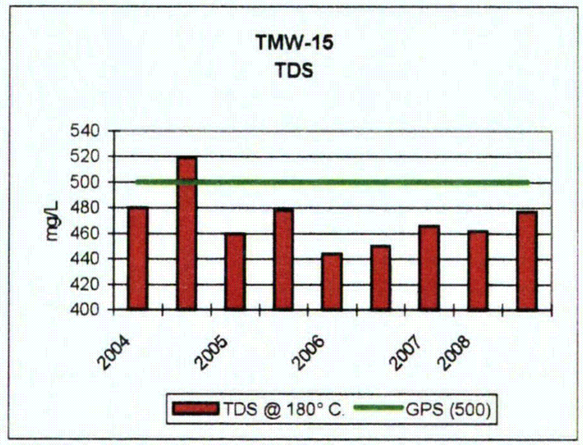

TMW-8
TDS @ 180° C.
600
500
400
300
200
100
0
mg/L
2004
2005
2006
2007
2008
TDS @ 180° C.
GPS (500)

TMW 8.xls

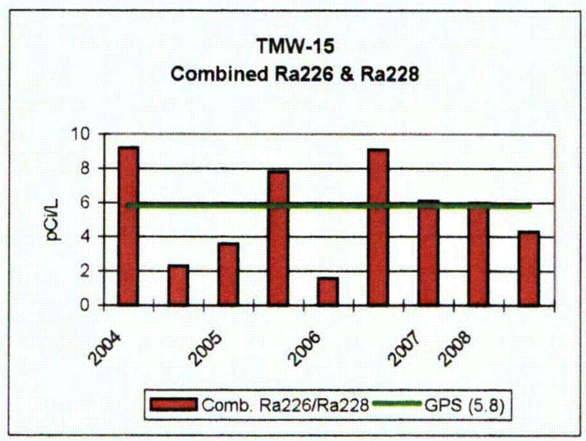
KENNECOTT URANIUM COMPANY ·										
TMW-15		2004		2005		2006		2007	2008	
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	1/12/2004	7/19/2004	1/11/2005	7/14/2005	1/16/2006	7/25/2006	7/22/2007	4/21/2008	7/22/2008
TDS A/C Balance *(dec. %)*		1.05	1.1	0.97	1	0.96	0.95	0.95	0.308	4.26
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aluminum (Al)	GPS (1.8)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alk-CaC03		123	121	121	123	128	122	120	123	125
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
Boron (B)		<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
Calcium (Ca)		104	108	106	105	98.8	102	104	108	109
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chloride (Cl)		7.1	9	12	9	8	8	9	8	7
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Carbonate (CO3)		<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt (Co)		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cond *(umhos/cm)*		711	733	689	684	679	696	690	684	698
Cond-Field *(umhos/cm)*		580	480	600	400	560	647	669	642	627
Fluoride (F)		0.2	0.2	0.2	0.2	<0.1	0.2	0.2	0.1	0.2
Iron (Fe)	GPS (0.6)	0.087	0.11	<0.05	0.09	<0.05	<0.05	<0.05	0.09	0.08
Gross Alpha *(pCi/L)*	GPS (15)	3.4	2.9	1.4	2.5	2.2	1.5	1.8	3.3	2.3
Bicarbonate (HCO3)		149	148	148	150	156	148	150	150	152
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Potassium (K)		3	3.2	3.4	2.3	3	2.2	3.1	3.1	3
Magnesium (Mg)		8.6	8.6	8.5	8.6	8.3	8.3	8.6	9.3	9
Manganese (Mn)	GPS (0.2)	0.08	0.08	0.07	0.07	0.07	0.08	0.07	0.09	0.07
Molybdenum (Mo)		0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		37.7	38.2	36	36.3	35	36.5	38.4	35.4	34
Nickel (Ni)	GPS (.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
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<2.7	<1	<1	<1	<1	<1	<1	0	5
Lead (Pb)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
pH *(Std. Units)*	**GPS (6.8)**	8.07	7.72	7.67	7.96	8.14	7.83	7.89	8.12	7.73
pH (Field) *(Std. Units)*		8.8	7.3	7.1	7.3	7.48	7.65	7.8	7.4	7.6
Radium 226 *(pCi/L)*		2.8	2.3	1.6	2.9	1.6	1.6	2.1	1.6	1.6
Combined Ra226/228 *(pCi/L)*	**GPS (5.8)**	9.2	2.3	3.6	7.8	1.6	9.1	6.1	6	4.3
Radium 228 *(pCi/L)*		6.4	<1	2	4.9	<1	7.5	3.6	4.4	2.7
Selenium (Se)	GPS (.01)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silica (SiO2)		15	15	14	16	15	15	13	8	9
Sulfate (SO4)		221	216	222	227	217	230	237	248	210
TDS @ 180° *C.*	**GPS (500)**	480	519	460	478	444	450	466	462	477
Temperature *(C)*		8	13	14	11	9.6	12.7	12	9.5	10.3
Thorium 230 *(pCi/L:)*	GPS (7.0)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0	0
Thallium (Tl)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium, natural *(pCi/L)*	GPS (36)	2.5	1.7	1.5	1.5	1.5	2	1.5	1.4	1.3
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
2004
2005
2006
2007
2008
pH
GPS (6.8)



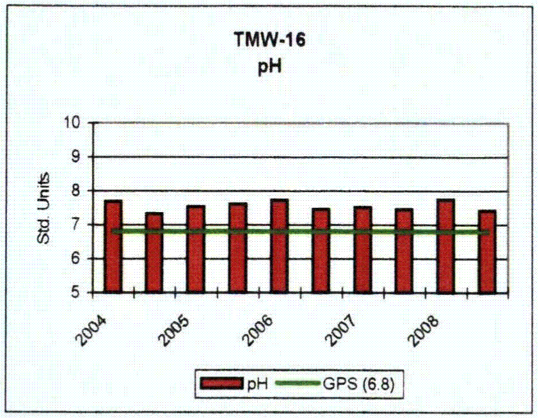
TMW-15
TDS
mg/L
540
520
500
480
460
440
420
400
2004
2005
2006
2007
2008
TDS @ 180° C.
GPS (500)

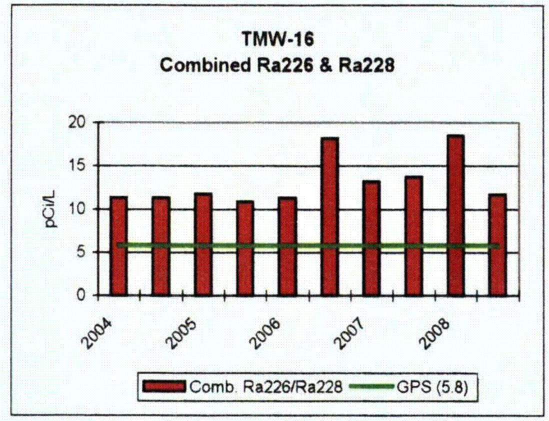


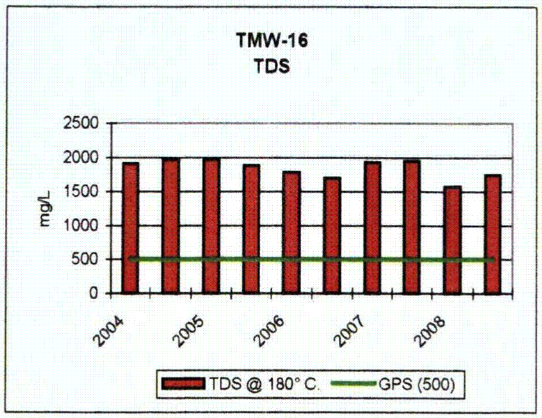
TMW-15
Combined Ra226 & Ra228
pCi/L
10
8
6
4
2
0
2004
2005
2006
2007
2008
Comb. Ra226/Ra228
GPS (5.8)

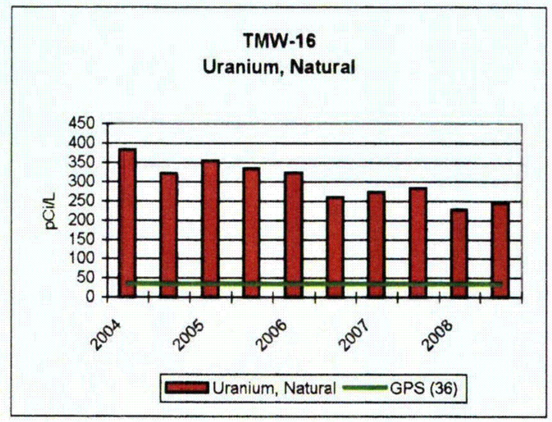
TMW 15.xls

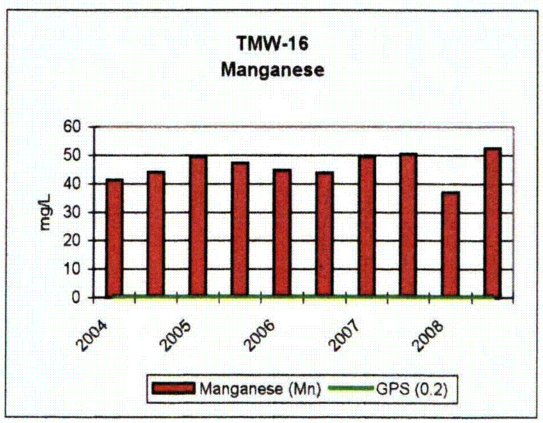
KENNECOTT URANIUM COMPANY											
TMW-16		2004		2005		2006		2007		2008	
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	1/12/2004	7/20/2004	1/11/2005	7/14/2005	1/17/2006	8/22/2006	1/10/2007	7/22/2007	3/12/2008	8/13/2008
TDS A/C Balance *(dec. %)*		1.16	1.09	1.06	1.06	1.07	0.98	1.05	1.02	1.44	1.91
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
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
Alk-CaC03		182	178	193	177	192	186	206	220	202	209
Arsenic (As)	GPS (.05)	<0.001	0.001	0.001	0.002	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
Boron (B)		<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
Calcium (Ca)		374	370	422	382	377	356	403	419	309	395
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chloride (Cl)		98.8	217	117	102	96	99	100	97	71	82
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Carbonate (CO3)		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt (Co)		0.004	0.002	0.002	0.002	0.002	0.001	0.001	<0.001	0.001	0.004
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cond *(umhos/cm)*		2330	2140	2320	2210	2160	2220	2320	2330	1860	2140
Cond-Field *(umhos/cm)*		1340	1120	1820	960	1400	1900	234	249	1705	1936
Fluoride (F)		<0.1	0.1	0.1	<0.1	<0.1	0.1	<0.1	<0.1	0.1	<0.1
Iron (Fe)	GPS (0.6)	0.434	0.39	<0.05	0.34	0.29	0.17	0.36	0.12	0.31	0.28
Gross Alpha *(pCi/L)*	GPS (15)	7.4	9.4	5.6	5.8	4	9.1	5.3	7.2	7	5.8
Bicarbonate (HCO3)		222	218	236	216	235	227	251	260	246	255
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Potassium (K)		5.8	5.5	6.6	5.2	5.8	5.7	6.2	6	1	5.9
Magnesium (Mg)		41.3	44	49.6	47.2	44.7	43.8	49.4	50.5	37	52.4
Manganese (Mn)	**GPS (0.2)**	0.59	0.3	0.34	0.28	0.27	0.28	0.32	0.28	0.2	0.28
Molybdenum (Mo)		<0.01	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.01	<0.01
Sodium (Na)		83.6	108	94.6	94.7	86.9	86	94	104	82	96
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
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<2.7	<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
pH *(Std. Units)*	**GPS (6.8)**	7.7	7.33	7.54	7.61	7.73	7.46	7.52	7.47	7.75	7.42
pH (Field) *(Std. Units)*		7.5	6.7	6.8	7.1	7.13	7.06	7.09	7.1	7.1	7
Radium 226 *(pCi/L)*		5.8	5.6	4.6	4.5	4.3	4.9	7.7	5.1	5.2	3.1
Combined Ra226/228 *(pCi/L)*	**GPS (5.8)**	11.3	11.3	11.8	10.9	11.3	18.2	13.2	13.7	18.5	11.7
Radium 228 *(pCi/L)*		5.5	5.7	7.2	6.4	7	13.3	5.5	8.6	13.3	8.6
Selenium (Se)	GPS (.01)	0.003	0.003	0.004	0.002	0.002	0.001	0.003	<0.001	<0.001	<0.001
Silica (SiO2)		10.3	11	11	11	11	12	12	10	11	13
Sulfate (SO4)		932	935	1040	1030	934	1010	1040	1100	800	1100
TDS @ 180° *C.*	**GPS (500)**	1910	1970	1970	1880	1790	1700	1930	1950	1580	1750
Temperature *(C)*		8	13	12	13	9.8	13.3	10.5	11.1	9.7	10.4
Thorium 230 *(pCi/L:)*	GPS (7.0)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0	0.6
Thallium (Tl)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium, natural *(pCi/L)*	**GPS (36)**	383	322	354	334	324	261	274	283	228	245
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	0.02	<0.01	<0.01


TMW-16
pH
Std. Units
10
9
8
7
6
5
2004
2005
2006
2007
2008
pH
GPS (6.8)

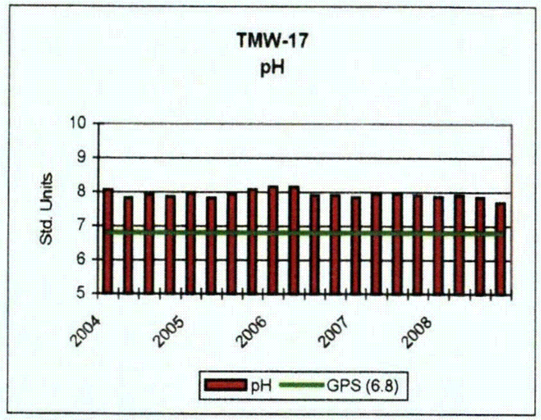

TMW-16
Combined Ra226 & Ra228
pCi/L
20
15
10
5
0
2004
2005
2006
2007
2008
Comb. Ra226/Ra228
GPS (5.8)


TMW-16
TDS
mg/L
2500
2000
1500
1000
500
0
2004
2005
2006
2007
2008
TDS @ 180° C.
GPS (500)

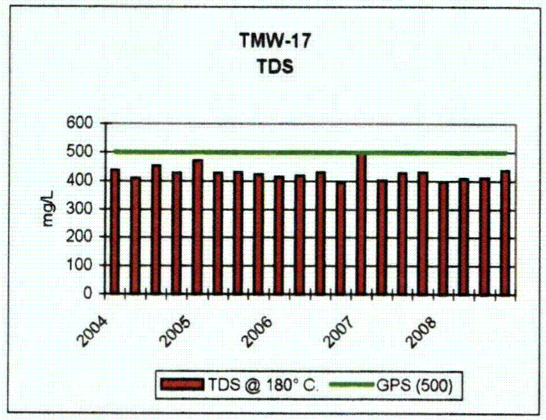

TMW-16
Uranium, Natural
pCi/L
450
400
350
300
250
200
150
100
50
0
2004
2005
2006
2007
2008
Uranium, Natural
GPS (36)


TMW-16
Manganese
mg/L
60
50
40
30
20
10
0
2004
2005
2006
2007
2008
Manganese (Mn)
GPS (0.2)

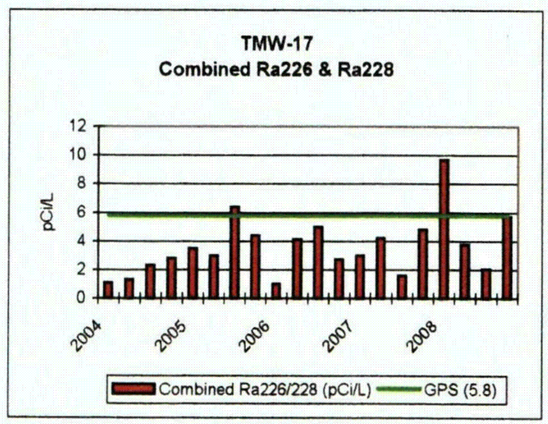
KENNECOTT URANIUM COMPANY																					
TMW-17		2004				2005				2006				2007				2008			
PARAMETER (mg/L unless noted)	Groundwater Protection Standard (GPS) as of 5/26/05	1/5/2004	4/5/2004	7/12/2004	10/7/2004	1/5/2005	4/6/2005	7/11/2005	11/7/2005	1/16/2006	4/10/2006	7/3/2006	10/5/2006	3/14/2007	4/11/2007	7/22/2007	10/3/2007	1/13/2008	4/14/2008	7/28/2008	10/14/2008
TDS A/C Balance *(dec. %)*		0.94	0.96	1.03	0.95	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	1.07
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	<0.01	<0.01	<0.01	<0.01	<0.01
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	<0.1	<0.1	<0.1	<0.1	<0.1
Alk-CaC03		113	115	114	111	115	117	114	110	112	116	110	120	130	110	120	119	114	112	116	115
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	<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	<0.1	<0.1	<0.1	<0.1	<0.1
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	<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	<0.01	<0.01	<0.01	<0.01	<0.01
Calcium (Ca)		104	95.6	93	98	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	95
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	<0.005	<0.005	<0.005	<0.005	<0.005
Chloride (Cl)		26	9.9	11	9	8	9	7	10	9	9	14	8	12	8	8	10	8	8	7	9
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	<0.005	<0.005	<0.005	<0.005	<0.005
Carbonate (CO3)		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
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	<0.001	<0.001	<0.001	<0.001	<0.001
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	<0.01	<0.01	<0.01	<0.01	<0.01
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	<0.01	<0.01	<0.01	<0.01	<0.01
Cond *(umhos/cm)*		665	651	630	620	641	645	657	639	627	617	626	616	74	632	613	604	597	607	627	628
Cond-Field *(umhos/cm)*		640	560	560	420	620	500	400	440	510	440	612	593	707	543	594	558	570	584	590	566
Fluoride (F)		0.2	0.1	0.2	0.2	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	0.1
Iron (Fe)	GPS (0.6)	0.13	0.111	0.14	<0.05	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	<0.05
Gross Alpha *(pCi/L)*	GPS (15)	3.2	2.4	1.1	1.3	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	1.6
Bicarbonate (HCO3)		138	141	138	136	141	142	139	134	137	142	134	146	159	134	140	145	139	137	141	140
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	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Potassium (K)		3.5	4.1	3	3	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	2.9
Magnesium (Mg)		6.8	6	6	6.2	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	5.9
Manganese (Mn)	GPS (0.2)	0.05	0.05	0.05	0.05	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	0.05
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	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		38	37.5	39	40.7	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	35.7
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	<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	<0.1	<0.1	<0.1	<0.1	<0.1
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<2.7	<1	<1	<1	<1	<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	<0.01	<0.01	<0.01	<0.01	<0.01
pH *(Std. Units)*	**GPS (6.8)**	8.06	7.82	7.92	7.86	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	7.7
pH (Field) *(Std. Units)*		6.8	7.3	7.4	7.9	6.5	7.1	7.3	7.75	7.51	7.91	7.56	7.7	7.47	7.76	7.8	7.6	8.1	7.7	7.6	7.4
Radium 226 *(pCi/L)*		1.1	1.3	2.3	0.9	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	1.9
Combined Ra226/228 *(pCi/L)*	**GPS (5.8)**	1.1	1.3	2.3	2.8	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	5.7
Radium 228 *(pCi/L)*		<1	<1	<1	1.9	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	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	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silica (SiO2)		16	14.5	15	16	15	15	15	15	16	16	17	15	14	15	14	15	17	9	8	18.5
Sulfate (SO4)		215	203	203	208	198	202	199	183	192	194	197	190	234	194	182	169	185	193	196	199
TDS @ 180° *C.*	**GPS (500)**	435	409	452	427	469	426	428	422	414	418	430	394	494	402	426	428	396	408	410	435
Temperature *(C)*		6	11	14	14	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	9.1
Thorium 230 *(pCi/L:)*	GPS (7.0)	<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	<0.2	<0.2	<0.2	<0.2	<0.2
Thallium (Tl)		<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	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium, natural *(pCi/L)*	GPS (36)	4.9	4.6	4.8	4.3	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	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	<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	<0.01	<0.01	<0.01	<0.01	<0.01



TMW-17
pH
Std. Units
10
9
8
7
6
5
2004
2005
2006
2007
2008
pH
GPS (6.8)



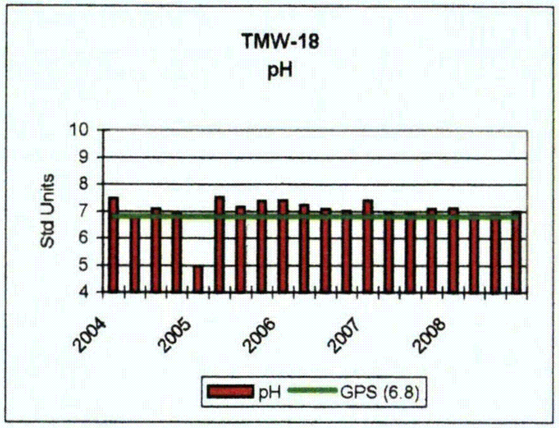
TMW-17
TDS
mg/L
600
500
400
300
200
100
0
2004
2005
2006
2007
2008
TDS @ 180° C.
GPS (500)

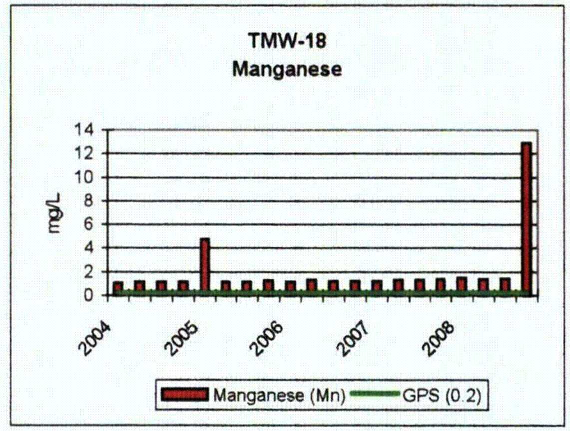


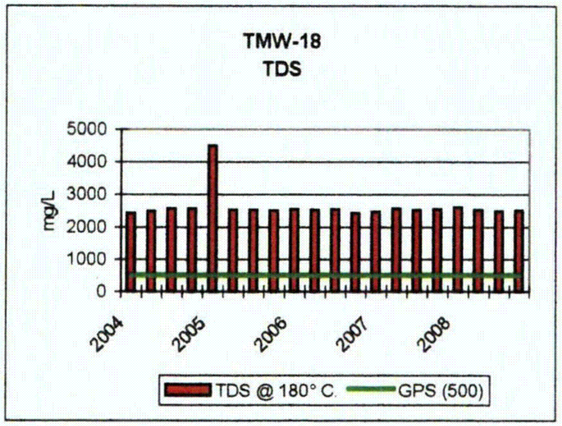
TMW-17
Combined Ra226 & Ra228
pCi/L
12
10
8
6
4
2
0
2004
2005
2006
2007
2008
Combined Ra226/228 (pCi/L)
GPS (5.8)

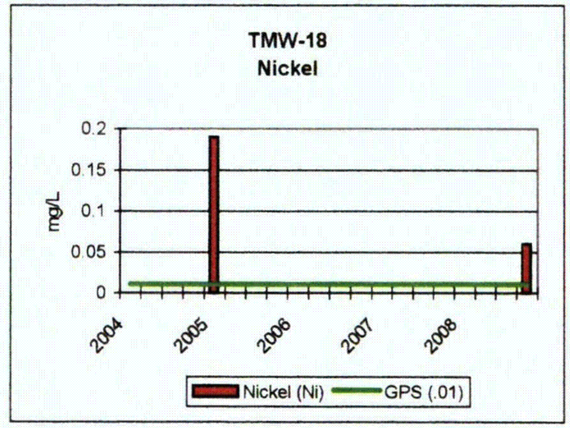
TMW 17.xls

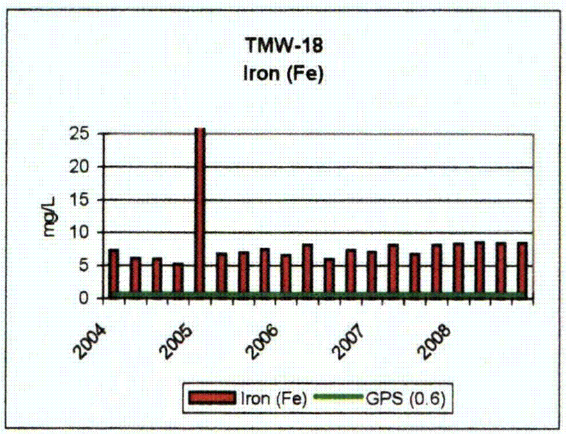
KENNECOTT URANIUM COMPANY																					
TMW-18		2004				2005				2006				2007				2008			
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	1/5/2004	4/5/2004	7/12/2004	10/7/2004	1/10/2005	4/6/2005	7/11/2005	11/8/2005	1/11/2006	4/10/2006	7/3/2006	10/5/2006	1/25/2007	4/4/2007	7/22/2007	10/1/2007	1/13/2008	4/14/2008	7/28/2008	10/14/2008
TDS A/C Balance *(dec. %)*		0.93	1.03	1.05	1.04	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	1.3	-2.19
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	<0.01	<0.01	<0.01	<0.01	<0.01
Aluminum (Al)	GPS (1.8)	<0.1	<0.1	<0.1	<0.1	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	<0.1	<0.1
Alk-CaC03		485	464	457	447	5	467	463	458	470	475	444	459	468	467	460	477	465	449	463	450
Arsenic (As)	GPS (.05)	<0.001	<0.001	<0.001	0.001	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	<0.001	0.005
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	<0.1	<0.1	<0.1	<0.1	0.3
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	<0.1	<0.1	0.3	<0.1	<0.1
Beryllium (Be)	GPS (.01)	<0.01	<0.01	<0.01	<0.01	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	<0.01	<0.01
Calcium (Ca)		693	651	639	637	1160	629	597	632	607	665	593	596	615	622	626	577	569	611	624	590
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	<0.005	<0.005	<0.005	<0.005	<0.005
Chloride (Cl)		114	88.2	863	82	1920	85	83	82	75	102	96	81	84	93	82	93	90	87	82	88
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	<0.005	<0.005	<0.005	<0.005	<0.005
Carbonate (CO3)		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt (Co)		0.001	0.001	0.001	<0.001	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	<0.001	0.008
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	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	<0.01	<0.01
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	<0.01	<0.01	<0.01	<0.01	0.02
Cond *(umhos/cm)*		2980	2920	2800	3360	6950	2860	2880	2900	2900	2900	2960	2950	2910	3000	2920	3090	2990	2880	2950	2980
Cond-Field *(umhos/cm)*		1680	1420	2500	1400	4800	1600	1420	1470	1750	1580	304	300	303	304	310	297	3040	3010	3040	2890
Fluoride (F)		<0.1	<0.1	<0.1	<0.1	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	<0.1	<0.1
Iron (Fe)	**GPS (0.6)**	7.3	6.15	6.04	5.17	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	8.5	8.47
Gross Alpha *(pCi/L)*	GPS (15)	10.6	7	6.9	2.9	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	3.4	4.3
Bicarbonate (HCO3)		591	566	558	545	6	569	565	558	573	580	541	560	571	570	570	582	568	548	565	549
Mercury (Hg)		<0.0004	<0.0004	<0.0004	<0.0002	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	<0.0002	<0.0002
Potassium (K)		7.7	8.3	7	6.9	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	3.2	6.8
Magnesium (Mg)		56	45.1	46	47.9	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	43.4	49
Manganese (Mn)	**GPS (0.2)**	1.04	1.14	1.14	1.18	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	1.41	12.9
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	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		96	97.3	104	107	100	104	100	101	94.2	92.2	94	101	96.6	99.2	100	102	93.5	94	103	99
Nickel (Ni)	**GPS (.01)**	<0.01	<0.01	<0.01	<0.01	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	<0.01	0.06
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	<0.1	<0.1	<0.1	<0.1	<0.1
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<2.7	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	2.1	<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	<0.01	<0.01	<0.01	<0.01	<0.01
pH *(Std. Units)*	**GPS (6.8)**	7.48	6.84	7.08	6.89	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	6.86	6.99
pH (Field) *(Std. Units)*		6.8	6.5	6.3	6.1	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	6.6	6.5
Radium 226 *(pCi/L)*		3	2.5	3.2	2.3	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	2.9	5.3
Combined Ra226/228 *(pCi/L)*	**GPS (5.8)**	15.3	22.6	12.4	14.7	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	6	26.8
Radium 228 *(pCi/L)*		12.3	20.1	9.2	12.4	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	3.1	21.5
Selenium (Se)	GPS (.01)	<0.002	0.002	<0.006	0.004	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	0.001	0.001
Silica (SiO2)		26	22.4	23	24	61	23	24	24	21	25	25	22	22	24	20	24	24	11	11	24.4
Sulfate (SO4)		1350	1240	1260	1280	1240	1260	1260	1240	1120	1340	1280	1240	1240	1260	1300	1240	1320	1340	1380	1350
TDS @ 180° *C.*	**GPS (500)**	2440	2490	2570	2560	4510	2530	2520	2510	2540	2530	2540	2430	2470	2570	2520	2540	2600	2520	2490	2510
Temperature *(C)*		6	10	15	10	13	11	14	8.7	8.7	9.5	13.3	10.9	6.6	9.5	13.1	12	9.7	12	11.9	9.9
Thorium 230 *(pCi/L:)*	GPS (7.0)	<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	<0.2	<0.2	<0.2	<0.2	<0.2
Thallium (Tl)		<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	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium, natural *(pCi/L)*	GPS (36)	1	0.9	1	1.1	3.4	0.9	1	1.1	1	0.9	0.9	1	0.9	1	1	1.2	1	1	1.1	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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Zinc (ZN)		<0.01	<0.01	0.02	<0.01	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	<0.01	0.04

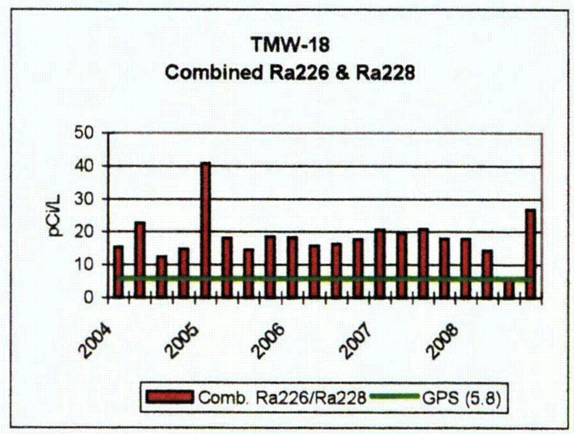

TMW-18
pH
Std Units
pH
GPS (6.8)


TMW-18
Manganese
mg/L
Manganese (Mn)
GPS (0.2)

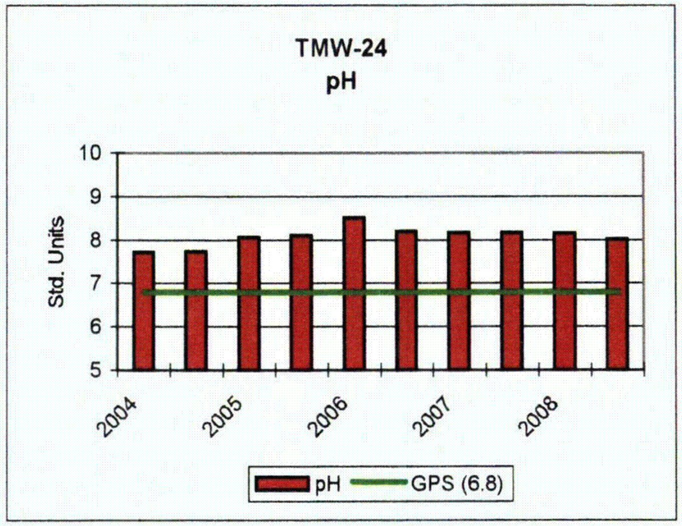

TMW-18
TDS
mg/L
TDS @ 180° C.
GPS (500)


TMW-18
Nickel
mg/L
Nickel (Ni)
GPS (.01)

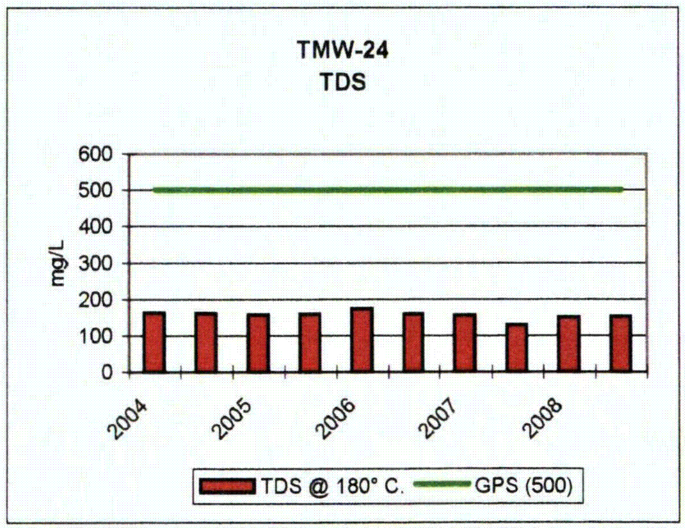

TMW-18
Iron (Fe)
mg/L
Iron (Fe)
GPS (0.6)


TMW-18
Combined Ra226 & Ra228
pCi/L
Comb. Ra226/Ra228
GPS (5.8)

KENNECOTT URANIUM COMPANY											
TMW-24		2004		2005		2006		2007		2008	
PARAMETER *(mg/L unless noted)*	*Groundwater* Protection Standard (GPS) as of 5/26/05	2/3/2004	8/2/2004	2/1/2005	8/3/2005	2/8/2006	8/22/2006	2/15/2007	8/17/2007	3/12/2008	8/26/2008
TDS A/C Balance *(dec. %)*		1.12	1.11	1.03	1.07	1.12	1.03	0.99	0.8	0.331	1.07
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
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
Alk-CaC03		85.6	83	82	85	88	86	80	90	90	86
Arsenic (As)	GPS (.05)	0.001	0.001	0.002	0.002	<0.001	0.001	0.001	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	<0.1
Boron (B)		<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
Calcium (Ca)		23.2	20.7	22.1	20.6	22.6	21	22.4	23.4	22	22.8
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chloride (Cl)		<1	<1	3	2	2	3	2	2	2	<1
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Carbonate (CO3)		<1	<1	<1	<1	2	<1	<1	<1	<1	<1
Cobalt (Co)		<0.001	<0.01	<0.001	<0.01	<0.001	<0.01	<0.001	<0.01	<0.001	<0.001
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cond *(umhos/cm)*		253	240	245	245	243	266	242	220	247	217
Cond-Field *(umhos/cm)*		220	200	240	180	195	226	218	218	227	221
Fluoride (F)		0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2
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
Gross Alpha *(pCi/L)*	GPS (15)	<1	1.5	1	<1	<1	1.3	<1	1.1	0.9	1.7
Bicarbonate (HCO3)		104	101	100	103	104	105	98	110	110	104
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Potassium (K)		1.8	1.1	1.5	1.1	1.6	1.3	1.6	1.5	3.2	1.5
Magnesium (Mg)		1.1	1	1	1	1.1	0.9	1.1	1.1	0.9	1
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
Molybdenum (Mo)		<0.01	<0.08	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		30.5	29.2	30.2	29.2	30.4	28.5	30.6	31	30.6	29.6
Nickel (Ni)	GPS (.01)	<0.01	<0.05	<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
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<2.7	<1	<1	<1	<1	<1	<1	<1	-0.3	-4
Lead (Pb)		<0.01	<0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
pH *(Std. Units)*	**GPS (6.8)**	7.73	7.74	8.07	8.12	8.52	8.2	8.18	8.18	8.16	8.02
pH (Field) *(Std. Units)*		8.3	7.5	7.3	8.2	8.2	7.68	7.24	7.8	7.9	7.9
Radium 226 *(pCi/L)*		<0.2	0.9	<0.2	0.8	0.6	0.9	1.3	0.9	0.5	0.34
Combined Ra226/228 *(pCi/L)*	GPS (5.8)	0	0.9	0	0.8	0.6	3.5	1.3	0.9	0.9	1.54
Radium 228 *(pCi/L)*		<1	<1	<1	<1	<1	2.6	<1	<1	0.4	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
Silica (SiO2)		14	13	13	13	14	14	13	14	14	8
Sulfate (SO4)		38.2	31	33	33	32	37	37	36	36	36
TDS @ 180° *C.*	**GPS (500)**	163	162	158	160	174	160	156	130	151	154
Temperature *(C)*		8	13	12	11	10.7	12.9	9.7	9	10.1	11
Thorium 230 *(pCi/L:)*	GPS (7.0)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.1	0
Thallium (Tl)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium, natural *(pCi/L)*	GPS (36)	2.3	2.1	2.7	2.2	1.2	0.4	0.5	0.3	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



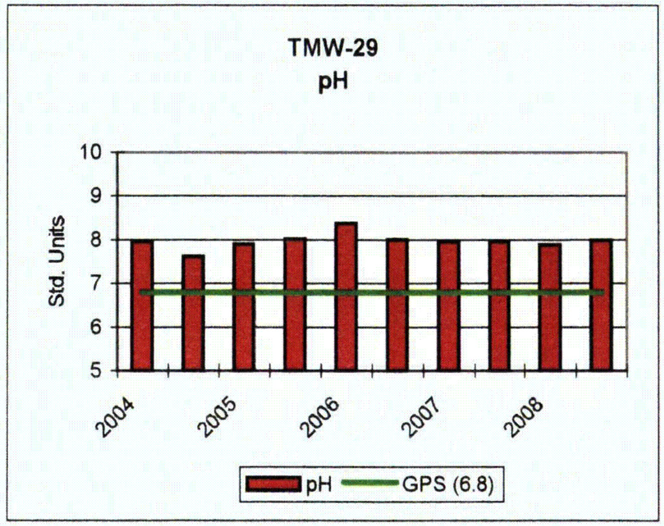
TMW-24
pH
Std. Units
10
9
8
7
6
5
2004
2005
2006
2007
2008
pH
GPS (6.8)



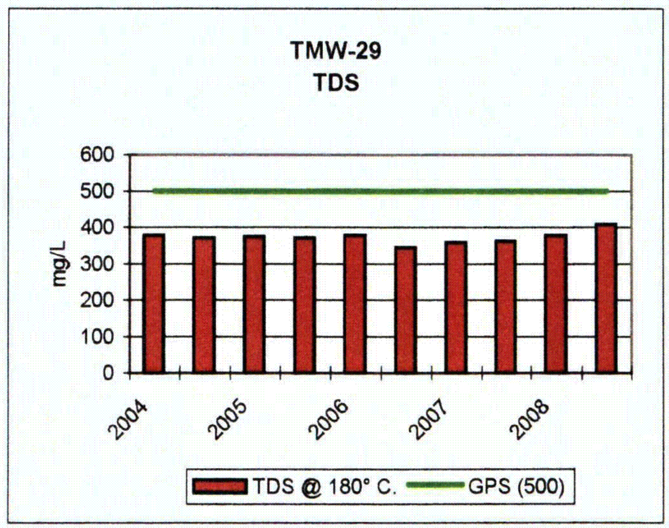
TMW-24
TDS
mg/L
600
500
400
300
200
100
0
2004
2005
2006
2007
2008
TDS @ 180° C.
GPS (500)

TMW 24.xls

KENNECOTT URANIUM COMPANY											
TMW-29		2004		2005		2006		2007		2008	
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	2/3/2004	8/2/2004	2/1/2005	8/3/2005	2/8/2006	8/16/2006	2/15/2007	8/16/2007	3/9/2008	8/17/2008
TDS A/C Balance *(dec. %)*		1.02	1.09	1.02	1.07	1.05	0.94	0.96	0.95	1.99	4.09
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
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
Alk-CaC03		115	110	112	114	115	114	113	120	118	111
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
Boron (B)		<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
Calcium (Ca)		83.3	73.5	79.6	72.8	79	76.7	78.6	82.3	79	101
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chloride (Cl)		5.6	5	6	6	7	7	7	6	6	7
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Carbonate (CO3)		<1	<1	<1	<1	2	<1	<1	<1	<1	<1
Cobalt (Co)		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cond *(umhos/cm)*		568	550	554	553	545	583	553	550	566	588
Cond-Field *(umhos/cm)*		460	400	520	340	430	519	525	509	525	562
Fluoride (F)		0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2
Iron (Fe)	GPS (0.6)	<0.1	<0.05	<0.1	<0.05	<0.1	<0.05	<0.1	<0.05	<0.05	<0.05
Gross Alpha *(pCi/L)*	GPS (15)	2	4.2	3.8	1.5	2.5	<1	1.3	1.9	2.9	1.7
Bicarbonate (HCO3)		140	134	137	140	137	139	138	146	144	136
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Potassium (K)		3.1	2.5	2.6	2.3	2.9	2.8	2.9	2.8	3.1	3.2
Magnesium (Mg)		5.5	5	5.2	4.9	5.2	4.8	5.3	5.4	4.8	6.5
Manganese (Mn)	GPS (0.2)	0.03	0.02	0.03	0.04	0.05	0.06	0.06	0.06	0.05	0.06
Molybdenum (Mo)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		36.8	34.7	36.2	33.8	34.5	34.9	35.1	35.4	32	37.2
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
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	<0.01
pH *(Std. Units)*	**GPS (6.8)**	7.97	7.63	7.91	8.02	8.38	8.01	7.97	7.97	7.89	8
pH (Field) *(Std. Units)*		8.9	7.4	7.5	7.8	7.56	7.41	7.12	7.6	7.6	7.7
Radium 226 *(pCi/L)*		1.4	0.7	1.4	0.9	1.3	1.3	1.2	0.7	1.2	1
Combined Ra226/228 *(pCi/L)*	GPS (5.8)	1.4	2.3	3.8	0.9	3.6	3.2	1.2	0.7	4.1	4.7
Radium 228 *(pCi/L)*		<1	1.6	2.4	<1	2.3	1.9	<1	<1	2.9	3.7
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)		15.3	14	14	14	14	15	14	14	14	19
Sulfate (SO4)		167	140	156	145	148	159	165	165	169	205
TDS @ 180° *C.*	**GPS (500)**	378	372	376	372	378	346	360	362	378	408
Temperature *(C)*		8	13	11	13	9.7	13.1	9.4	9.9	9.4	10.2
Thorium 230 *(pCi/L:)*	GPS (7.0)	<0.2	<0.2	<0.2		<0.2	<0.02	<0.2	<0.2	<0.2	<0.2
Thallium (Tl)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium, natural *(pCi/L)*	GPS (36)	5.5	5.8	5.6	6	6.7	6.1	5.4	6.7	7	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

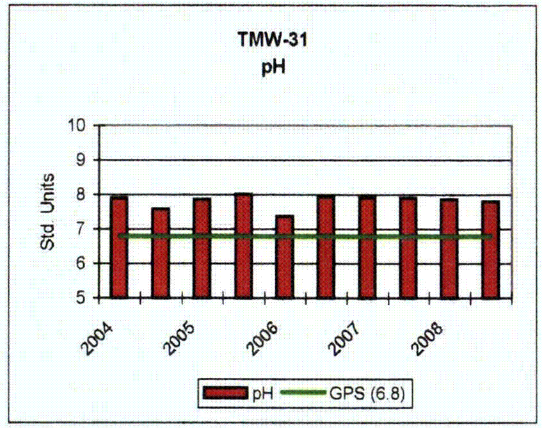


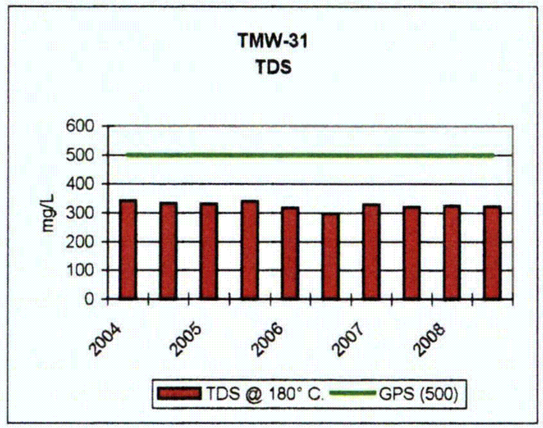
TMW-29
pH
Std. Units
10
9
8
7
6
5
2004
2005
2006
2007
2008
pH
GPS (6.8)

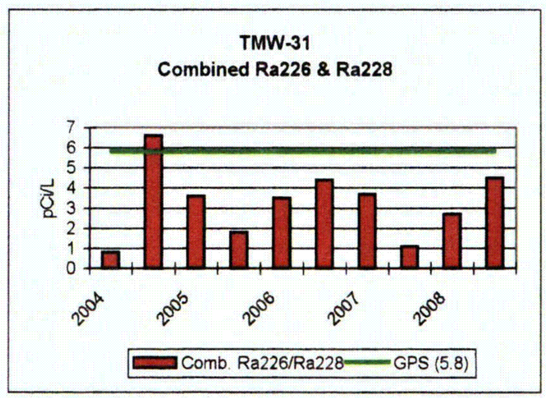


TMW-29
TDS
mg/L
600
500
400
300
200
100
0
2004
2005
2006
2007
2008
TDS @ 180° C.
GPS (500)

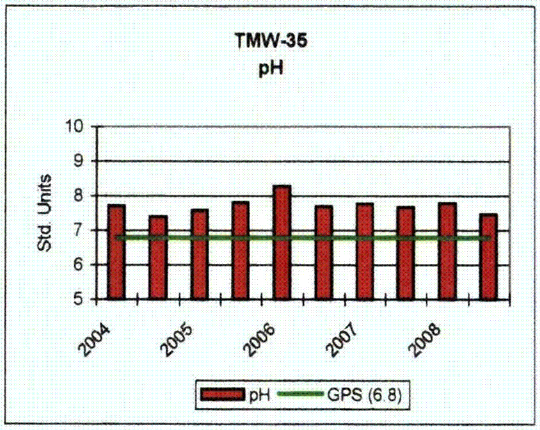
KENNECOTT URANIUM COMPANY											
TMW-31		2004		2005		2006		2007		2008	
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	2/3/2004	8/2/2004	2/1/2005	8/3/2005	2/7/2006	8/16/2006	2/15/2007	8/16/2007	3/9/2008	8/17/2008
TDS A/C Balance *(dec. %)*		1.02	1.07	1.02	1.06	0.98	0.9	0.98	0.94	1.76	2.52
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
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
Alk-CaC03		113	109	110	112	112	110	109	119	116	110
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
Boron (B)		<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
Calcium (Ca)		77.1	67.8	71.4	67.7	71.4	68.2	70.9	73.3	73.7	77.7
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chloride (Cl)		5	5	7	7	5	7	7	5	6	5
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Carbonate (CO3)		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt (Co)		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cond *(umhos/cm)*		519	507	501	509	495	528	504	489	501	484
Cond-Field *(umhos/cm)*		460	360	480	280	400	443	479	457	480	468
Fluoride (F)		0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2
Iron (Fe)	GPS (0.6)	<0.1	<0.05	<0.05	0.07	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Gross Alpha *(pCi/L)*	GPS (15)	1.4	8.1	3	1.2	2.1	1.1	1.5	2.4	2.3	1.8
Bicarbonate (HCO3)		138	133	134	137	137	134	133	145	141	134
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Potassium (K)		2.9	2.4	2.5	2.1	2.4	2.8	2.8	2.5	2.8	2.7
Magnesium (Mg)		6	5.4	5.5	5.3	5.6	5.2	5.6	5.6	5.4	5.7
Manganese (Mn)	GPS (0.2)	0.03	0.11	0.09	0.08	0.07	0.14	0.14	0.12	0.12	0.14
Molybdenum (Mo)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		30.8	29.1	29.9	29	30.3	30.2	29.9	29.9	28.9	29.6
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
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<1	<1	<1	<1	<1	<1	<1	<1	3.5	-3
Lead (Pb)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
pH *(Std. Units)*	**GPS (6.8)**	7.91	7.59	7.87	8.01	7.38	7.95	7.92	7.9	7.86	7.82
pH (Field) *(Std. Units)*		8.6	7.2	7.3	7.8	7.62	7.31	7.01	7.6	7.6	7.6
Radium 226 *(pCi/L)*		0.8	1	1.6	1.8	1	1.5	1.6	1.1	1.1	1
Combined Ra226/228 *(pCi/L)*	**GPS (5.8)**	0.8	6.6	3.6	1.8	3.5	4.4	3.7	1.1	2.7	4.5
Radium 228 *(pCi/L)*		<1	5.6	2	<1	2.5	2.9	2.1	<1	1.6	3.5
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)		15	14	14	14	15	15	14	14	16	18.2
Sulfate (SO4)		145	121	131	128	126	136	142	137	134	148
TDS @ 180° *C.*	**GPS (500)**	343	333	332	340	318	298	330	320	324	322
Temperature *(C)*		8	13	12	13	8.8	12.3	9.4	10.1	9.4	10.8
Thorium 230 *(pCi/L:)*	GPS (7.0)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0	0.1
Thallium (Tl)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium, natural *(pCi/L)*	GPS (36)	1.9	2.1	1.9	1.9	2.1	1.8	2.1	1.8	1.4	1.6
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	0.02	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

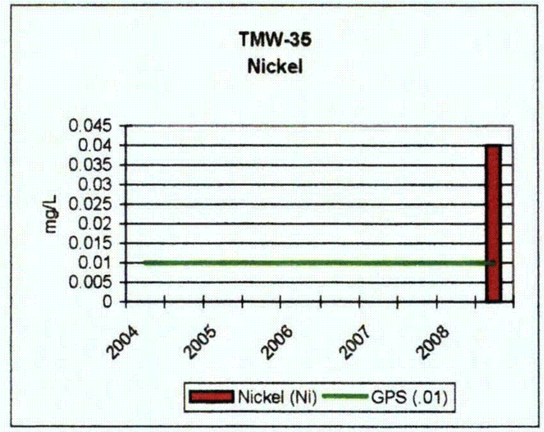

TMW-31
pH
Std. Units
10
9
8
7
6
5
2004
2005
2006
2007
2008
pH
GPS (6.8)

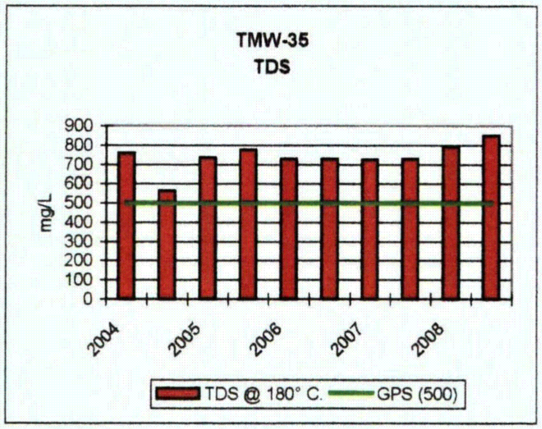

TMW-31
TDS
mg/L
600
500
400
300
200
100
0
2004
2005
2006
2007
2008
TDS @ 180° C.
GPS (500)

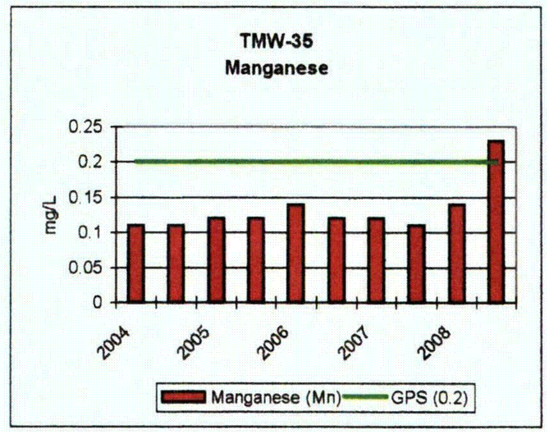

TMW-31
Combined Ra226 & Ra228
pCi/L
7
6
5
4
3
2
1
0
2004
2005
2006
2007
2008
Comb. Ra226/Ra228
GPS (5.8)

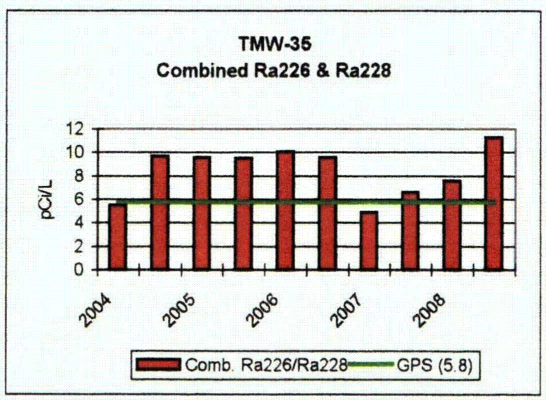
KENNECOTT URANIUM COMPANY											
TMW-35		2004		2005		2006		2007		2008	
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	2/3/2004	8/3/2004	2/1/2005	8/3/2005	2/6/2006	8/16/2006	2/12/2007	8/16/2007	3/6/2008	8/17/2008
TDS A/C Balance *(dec. %)*		0.99	0.82	1.02	1.09	1.03	0.94	0.96	0.96	1.79	0.857
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
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
Alk-CaC03		147	143	144	146	148	146	146	150	148	135
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
Boron (B)		<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
Calcium (Ca)		182	159	168	162	162	175	166	175	161	194
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chloride (Cl)		6	5	6	8	8	8	7	7	6	5
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Carbonate (CO3)		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt (Co)		0.002	<0.01	0.001	0.002	0.002	0.002	0.001	0.001	0.003	0.012
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cond *(umhos/cm)*		1030	607	998	1020	1000	1090	1030	1020	1050	1110
Cond-Field *(umhos/cm)*		700	580	900	540	760	980	1003	861	959	1021
Fluoride (F)		0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.1
Iron (Fe)	GPS (0.6)	0.44	0.31	0.3	0.43	0.21	0.45	0.26	0.08	<0.05	<0.05
Gross Alpha *(pCi/L)*	GPS (15)	3	5.3	7.2	4.6	5.4	2.3	2.7	4.8	5	2.9
Bicarbonate (HCO3)		179	175	176	178	180	178	178	183	181	164
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Potassium (K)		4.1	3.1	3.6	3.2	3.5	3.7	3.8	3.6	3.9	3.9
Magnesium (Mg)		20.8	18.5	19	18.6	18.9	19.8	19	19.8	18.6	26.3
Manganese (Mn)	**GPS (0.2)**	0.11	0.11	0.12	0.12	0.14	0.12	0.12	0.11	0.14	0.23
Molybdenum (Mo)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		39.9	38.2	38.3	36.7	35.1	37.6	38.3	38.3	35.4	37
Nickel (Ni)	**GPS (.01)**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.04
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
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<1	<1	<1	<1	<1	<1	<1	<1	<1	1.7
Lead (Pb)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
pH *(Std. Units)*	**GPS (6.8)**	7.72	7.39	7.58	7.82	8.29	7.69	7.78	7.67	7.8	7.48
pH (Field) *(Std. Units)*		8.1	7.1	7.2	7.4	7.36	7.1	7.52	7.3	7.4	7.2
Radium 226 *(pCi/L)*		2	3.1	2	3	2.2	3.5	1.2	2.1	1.6	1.6
Combined Ra226/228 *(pCi/L)*	**GPS (5.8)**	5.5	9.7	9.6	9.5	10.1	9.6	4.9	6.6	7.6	11.3
Radium 228 *(pCi/L)*		3.5	6.6	7.6	6.5	7.9	6.1	3.7	4.5	6	9.7
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)		15.8	15	15	15	14	16	14	15	15	19
Sulfate (SO4)		427	360	388	384	376	431	414	409	407	527
TDS @ 180° *C.*	**GPS (500)**	760	565	737	776	730	730	724	728	794	848
Temperature *(C)*		8	12	12	16	9	12.9	10.1	10.5	9.3	10.6
Thorium 230 *(pCi/L:)*	GPS (7.0)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Thallium (Tl)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium, natural *(pCi/L)*	GPS (36)	7.5	6.5	6.2	6.6	6.2	7	6.2	6.4	6.2	6.7
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	0.04	<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
2004
2005
2006
2007
2008
pH
GPS (6.8)

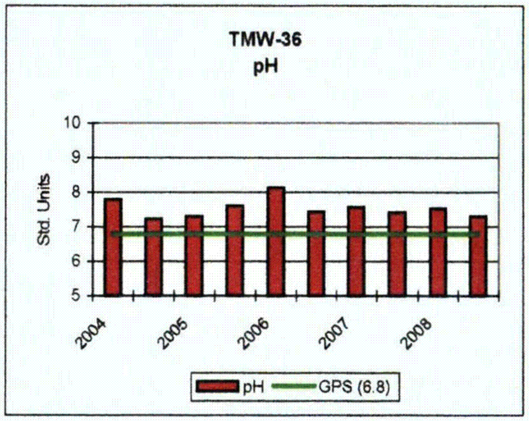

TMW-35
Nickel
mg/L
0.045
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
2004
2005
2006
2007
2008
Nickel (Ni)
GPS (.01)

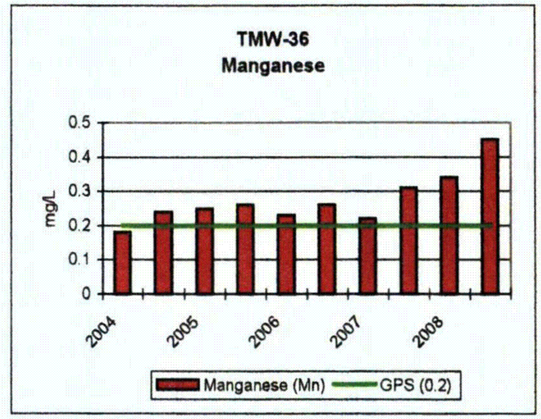

TMW-35
TDS
mg/L
900
800
700
600
500
400
300
200
100
0
2004
2005
2006
2007
2008
TDS @ 180° C.
GPS (500)

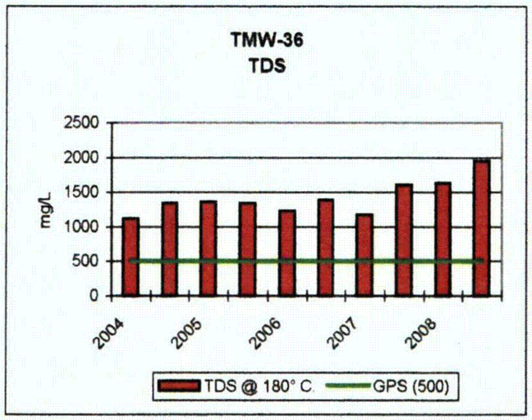

TMW-35
Manganese
mg/L
0.25
0.2
0.15
0.1
0.05
0
2004
2005
2006
2007
2008
Manganese (Mn)
GPS (0.2)

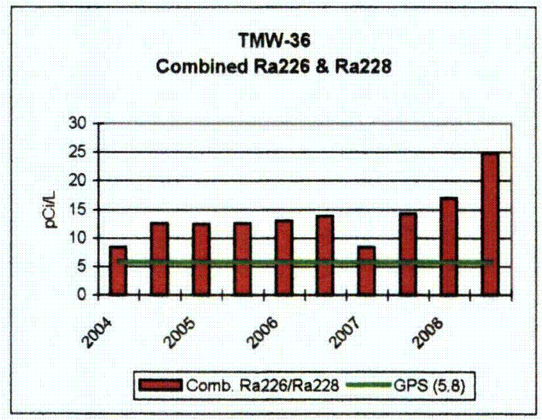

TMW-35
Combined Ra226 & Ra228
pCi/L
12
10
8
6
4
2
0
2004
2005
2006
2007
2008
Comb. Ra226/Ra228
GPS (5.8)

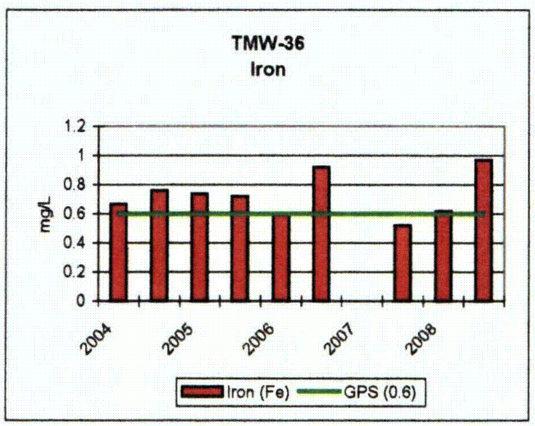
KENNECOTT URANIUM COMPANY											
TMW-36		2004		2005		2006		2007		2008	
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	2/3/2004	8/2/2004	2/1/2005	8/3/2005	2/6/2006	8/16/2006	2/12/2007	8/16/2007	3/6/2008	8/17/2008
TDS A/C Balance *(dec. %)*		0.98	1.16	1.04	1.1	1.05	0.98	0.99	1.01	4.44	0.573
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
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
Alk-CaC03		156	161	167	166	160	172	160	185	188	186
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
Boron (B)		<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
Calcium (Ca)		260	271	303	277	268	321	262	376	335	469
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chloride (Cl)		10.5	9	12	10	12	14	12	11	11	10
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Carbonate (CO3)		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt (Co)		<0.001	0.001	<0.001	0.001	<0.001	0.001	0.001	0.001	0.002	0.002
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cond *(umhos/cm)*		1420	1210	1630	1600	1510	1790	1510	1940	2050	2190
Cond-Field *(umhos/cm)*		940	880	1360	740	1080	1660	1427	1671	1821	1951
Fluoride (F)		0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1
Iron (Fe)	**GPS (0.6)**	0.665	0.76	0.74	0.72	0.6	0.92	<0.05	0.52	0.62	0.97
Gross Alpha *(pCi/L)*	GPS (15)	3.9	9.6	7.5	6.3	4.3	5.3	3.2	8.3	7.5	7.1
Bicarbonate (HCO3)		190	196	204	202	195	210	195	226	229	227
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Potassium (K)		4.5	4.2	4.7	4.2	4.4	5.1	4.9	5.1	5.9	6.3
Magnesium (Mg)		36.9	39.4	42.9	41.1	40	46	38.3	53	48.2	69.7
Manganese (Mn)	**GPS (0.2)**	0.18	0.24	0.25	0.26	0.23	0.26	0.22	0.31	0.34	0.45
Molybdenum (Mo)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		42.9	44.5	45.6	42.5	40.6	44.1	43.3	47.1	44	49
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
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<1	<1	<1	<1	<1	<1	<1	<1	0	-1
Lead (Pb)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
pH *(Std. Units)*	**GPS (6.8)**	7.79	7.22	7.31	7.6	8.13	7.43	7.57	7.41	7.52	7.31
pH (Field) *(Std. Units)*		8	6.9	6.8	7.2	7.15	6.92	7.13	6.9	6.9	7
Radium 226 *(pCi/L)*		4	4.7	4.2	4.1	2.7	4.8	2.6	3.4	4	5.3
Combined Ra226/228 *(pCi/L)*	**GPS (5.8)**	8.4	12.6	12.4	12.6	13	13.8	8.4	14.3	17	24.8
Radium 228 *(pCi/L)*		4.4	7.9	8.2	8.5	10.3	9	5.8	10.9	13	19.5
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)		13.8	13	12	13	12	13	13	12	11	13
Sulfate (SO4)		689	684	784	735	693	878	723	962	1000	1300
TDS @ 180° *C.*	**GPS (500)**	1120	1340	1360	1340	1230	1390	1180	1600	1630	1950
Temperature *(C)*		8	16	12	17	9.9	13.3	21.7	9.9	9.2	10.4
Thorium 230 *(pCi/L:)*	GPS (7.0)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0	0
Thallium (Tl)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium, natural *(pCi/L)*	**GPS (36)**	46.9	47.4	50.3	52.8	51	65.9	50.5	72.5	75.9	89.9
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	0.02	<0.01

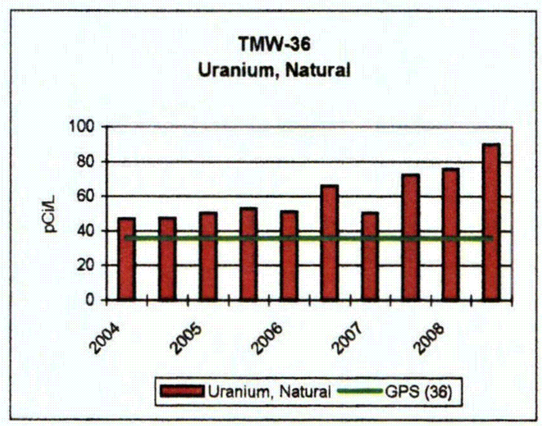

TMW-36
pH
Std. Units
pH
GPS (6.8)


TMW-36
Manganese
mg/L
Manganese (Mn)
GPS (0.2)


TMW-36
TDS
mg/L
TDS @ 180° C.
GPS (500)

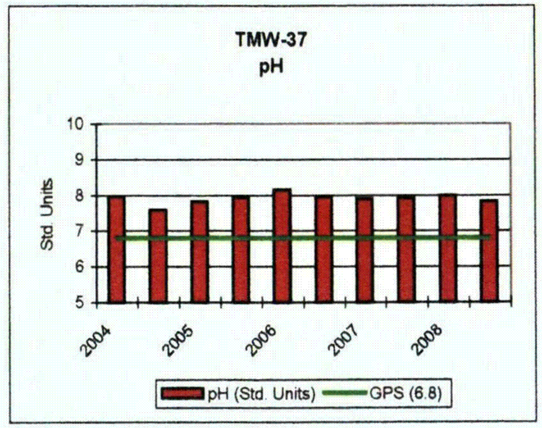

TMW-36
Combined Ra226 & Ra228
pCi/L
Comb. Ra226/Ra228
GPS (5.8)

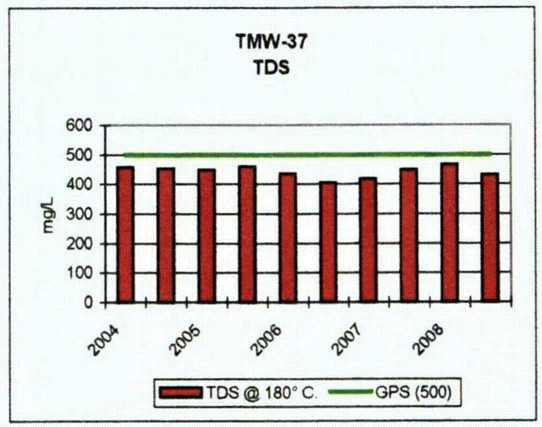

TMW-36
Iron
mg/L
Iron (Fe)
GPS (0.6)

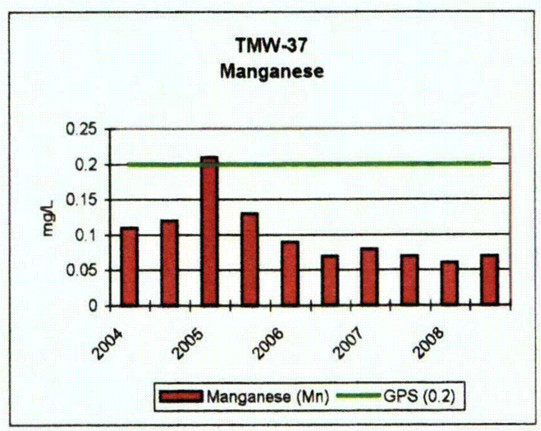

TMW-36
Uranium, Natural
pCi/L
Uranium, Natural
GPS (36)

TMW 36.xls

KENNECOTT URANIUM COMPANY											
TMW-37		2004		2005		2006		2007		2008	
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	2/4/2004	8/2/2004	2/1/2005	8/3/2005	2/2/2006	8/16/2006	2/12/2007	8/16/2007	3/6/2008	8/17/2008
TDS A/C Balance *(dec. %)*		0.99	1.06	1	1.06	1	0.93	0.9	0.99	3.1	3.72
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
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
Alk-CaC03		126	126	122	130	130	124	132	134	130	123
Arsenic (As)	GPS (.05)	0.039	0.042	0.036	0.043	0.038	0.039	0.04	0.043	0.04	0.039
Barium (Ba)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Boron (B)		<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
Calcium (Ca)		107	96	97.3	95.8	95.9	94.1	102	99.9	88.8	106
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chloride (Cl)		7.1	6	7	8	8	8	7	6	6	5
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Carbonate (CO3)		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt (Co)		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002
Chromium (Cr)	GPS (.05)	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cond *(umhos/cm)*		681	666	645	670	650	682	674	654	625	631
Cond-Field *(umhos/cm)*		500	460	600	700	500	609	658	616	612	604
Fluoride (F)		0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2
Iron (Fe)	GPS (0.6)	<0.1	<0.05	<0.1	0.11	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Gross Alpha *(pCi/L)*	GPS (15)	1.9	5.8	3.3	2	2.4	1.5	2.1	2.9	2.8	3.1
Bicarbonate (HCO3)		154	154	149	159	159	151	160	163	159	150
Mercury (Hg)		0.0003	0.0006	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Potassium (K)		3.9	3	3.4	3	3.3	3.4	3.6	3.3	3.7	3.5
Magnesium (Mg)		9.3	8.4	8.4	8.3	8.4	7.7	8.8	8.6	7.3	8.7
Manganese (Mn)	**GPS (0.2)**	0.11	0.12	0.21	0.13	0.09	0.07	0.08	0.07	0.06	0.07
Molybdenum (Mo)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		36.6	35.6	36.5	34.3	34.4	35.2	36.8	35.8	32.3	35.2
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
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
pH *(Std. Units)*	**GPS (6.8)**	7.98	7.59	7.83	7.94	8.16	7.95	7.91	7.92	7.99	7.82
pH (Field) *(Std. Units)*		7.6	7.3	7.3	7.5	7.57	7.21	7.6	7.2	7.2	7.6
Radium 226 *(pCi/L)*		1.6	1.5	1.9	1.4	0.9	1.8	1.4	4.5	1.3	2.6
Combined Ra226/228 *(pCi/L)*	GPS (5.8)	1.6	3.9	3.7	1.4	0.9	3.1	4.6	4.5	3.6	5.3
Radium 228 *(pCi/L)*		<1	2.4	1.8	<1	<1	1.3	3.2	<1	2.3	2.7
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)		9.5	10	9	10	10	11	10	10	11	13.6
Sulfate (SO4)		223	192	195	195	198	203	219	207	200	215
TDS @ 180° *C.*	**GPS (500)**	458	454	450	459	436	406	418	448	466	432
Temperature *(C)*		8	13	13	15	8.4	12.9	17.9	9.9	9.2	10
Thorium 230 *(pCi/L:)*	GPS (7.0)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Thallium (Tl)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium, natural *(pCi/L)*	GPS (36)	10.3	6.5	7.8	5.6	6.2	6	6	5.6	4.9	4.7
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

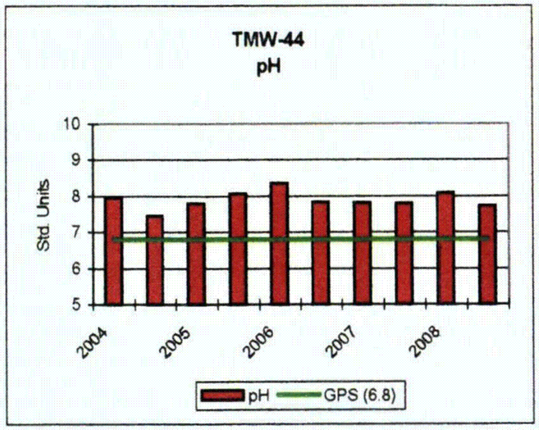

TMW-37
pH
Std. Units
10
9
8
7
6
5
2004
2005
2006
2007
2008
pH (Std. Units)
GPS (6.8)

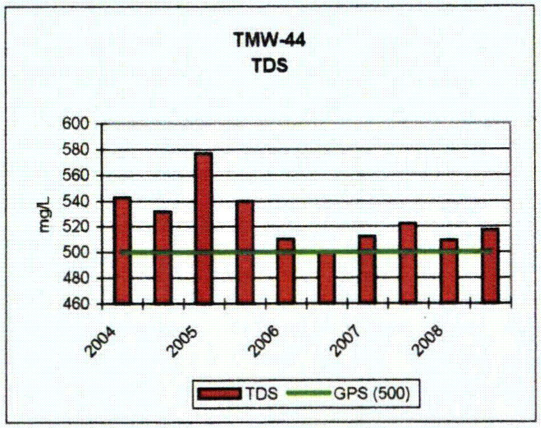

TMW-37
TDS
mg/L
600
500
400
300
200
100
0
2004
2005
2006
2007
2008
TDS @ 180° C.
GPS (500)

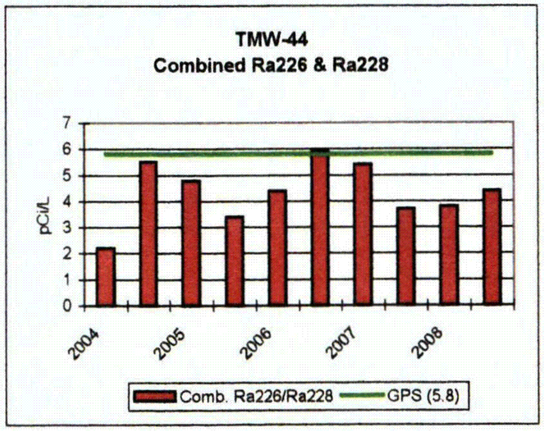

TMW-37
Manganese
mg/L
0.25
0.2
0.15
0.1
0.05
0
2004
2005
2006
2007
2008
Manganese (Mn)
GPS (0.2)

TMW 37.xls

KENNECOTT URANIUM COMPANY											
TMW-44		2004		2005		2006		2007		2008	
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	2/4/2004	8/3/2004	2/2/2005	8/4/2005	2/6/2006	8/23/2006	2/20/2007	8/16/2007	4/21/2008	8/13/2008
TDS A/C Balance *(dec. %)*		1.02	1.09	1.1	1.04	0.99	0.94	0.93	1	1.73	0.532
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
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
Alk-CaC03		126	125	122	120	128	124	122	132	126	126
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
Boron (B)		<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
Calcium (Ca)		119	109	119	117	113	112	117	113	118	116
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chloride (Cl)		6.5	6	9	9	10	9	9	8	8	8
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Carbonate (CO3)		<1	<1	<1	<1	2	<1	<1	<1	<1	<1
Cobalt (Co)		<0.001	<0.01	<0.001	<0.01	<0.001	<0.01	<0.001	<0.01	<0.001	0.003
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cond *(umhos/cm)*		761	736	765	779	747	790	755	756	755	757
Cond-Field *(umhos/cm)*		620	500	600	440	600	730	714	707	699	704
Fluoride (F)		0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2
Iron (Fe)	GPS (0.6)	0.144	0.1	0.14	0.13	<0.05	<0.05	<0.05	<0.05	0.07	<0.05
Gross Alpha *(pCi/L)*	GPS (15)	1.8	3.3	5.4	2.8	2.7	2.3	2.4	2.8	3	2.3
Bicarbonate (HCO3)		154	152	149	146	152	152	149	161	153	153
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Potassium (K)		3.4	2.6	3.3	3	2.9	2.9	3.4	2.9	3.2	3
Magnesium (Mg)		10.5	9.8	10.3	10.2	10.3	9.8	10.5	9.9	11.4	10
Manganese (Mn)	GPS (0.2)	0.07	0.07	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
Molybdenum (Mo)		<0.01	<0.08	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01
Sodium (Na)		38.9	38.4	41.3	38	37.8	36.4	40.4	38.6	38.4	38
Nickel (Ni)	GPS (.01)	<0.01	<0.05	<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
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<1	<1	<1	<1	<1	<1	<1	<1	<1	3.4
Lead (Pb)		<0.01	<0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
pH *(Std. Units)*	**GPS (6.8)**	7.96	7.45	7.8	8.06	8.35	7.83	7.81	7.8	8.08	7.73
pH (Field) *(Std. Units)*		8	7.1	6.9	8	7.35	7.31	7.09	7.5	7.5	7.4
Radium 226 *(pCi/L)*		2.2	2.1	1.6	2	2.1	2.2	1.6	1.3	1.2	2
Combined Ra226/228 *(pCi/L)*	**GPS (5.8)**	2.2	5.5	4.8	3.4	4.4	5.9	5.4	3.7	3.8	4.4
Radium 228 *(pCi/L)*		<1	3.4	3.2	1.4	2.3	3.7	3.8	2.4	2.6	2.4
Selenium (Se)	GPS (.01)	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silica (SiO2)		15.6	14	15	15	15	16	14	15	8	20
Sulfate (SO4)		277	233	255	252	252	272	280	254	295	272
TDS @ 180° *C.*	**GPS (500)**	543	532	577	540	510	500	512	522	509	517
Temperature *(C)*		8	14	14	12	8.7	11.1	10.2	10.2	9.4	10.1
Thorium 230 *(pCi/L:)*	GPS (7.0)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.1	0.1
Thallium (Tl)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium, natural *(pCi/L)*	GPS (36)	1.8	2	1.5	1.5	1.7	1.7	2.1	1.8	2.2	1.7
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

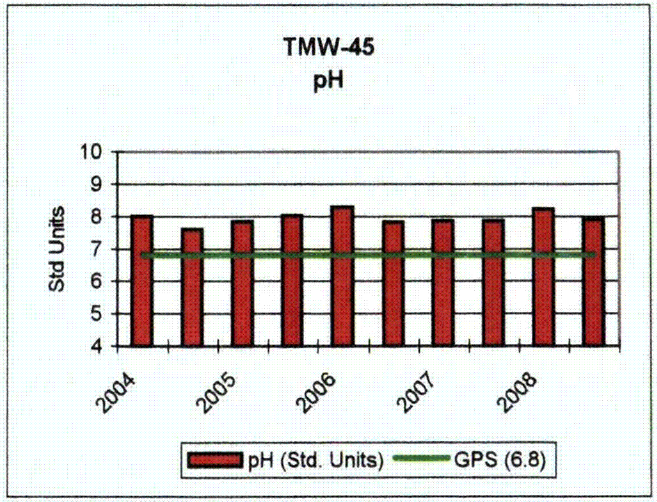

TMW-44
pH
Std. Units
10
9
8
7
6
5
2004
2005
2006
2007
2008
pH
GPS (6.8)

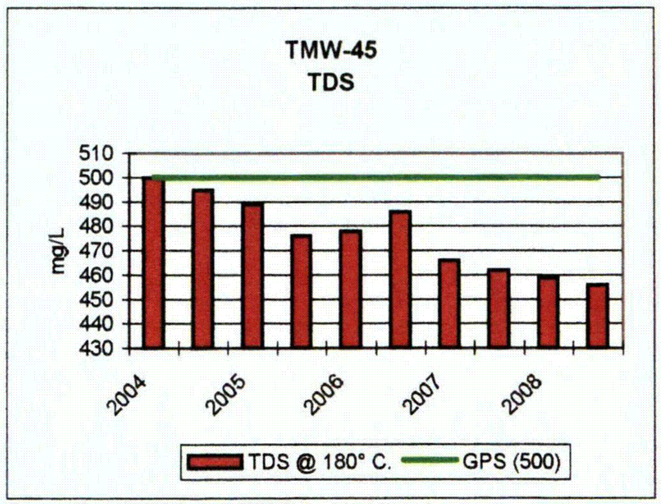

TMW-44
TDS
mg/L
600
580
560
540
520
500
480
460
2004
2005
2006
2007
2008
TDS
GPS (500)


TMW-44
Combined Ra226 & Ra228
pCi/L
7
6
5
4
3
2
1
0
2004
2005
2006
2007
2008
Comb. Ra226/Ra228
GPS (5.8)

TMW 44.xls

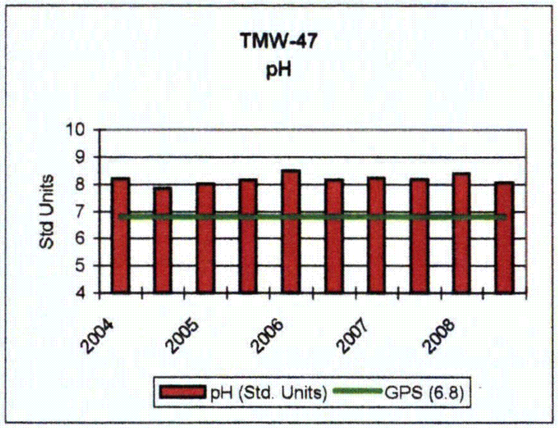
KENNECOTT URANIUM COMPANY											
TMW-45		2004		2005		2006		2007		2008	
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	2/4/2004	8/3/2004	2/2/2005	8/4/2005	2/2/2006	8/10/2006	2/20/2007	8/16/2007	4/21/2008	8/13/2008
TDS A/C Balance *(dec. %)*		1	1.1	1	1.03	1	1	0.91	0.95	1.6	1.06
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
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
Alk-CaC03		137	133	131	129	140	136	138	143	133	132
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
Boron (B)		<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
Calcium (Ca)		114	102	106	107	104	105	113	108	106	119
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chloride (Cl)		6.7	5	7	7	7	8	7	6	6	6
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Carbonate (CO3)		<1	<1	<1	<1	2	<1	<1	<1	<1	<1
Cobalt (Co)		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.002
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cond *(umhos/cm)*		723	671	694	707	693	729	705	689	695	679
Cond-Field *(umhos/cm)*		640	480	640	380	500	650	667	634	637	620
Fluoride (F)		0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2
Iron (Fe)	GPS (0.6)	0.125	<0.05	0.15	0.14	<0.05	<0.05	<0.05	<0.05	0.06	<0.05
Gross Alpha *(pCi/L)*	GPS (15)	2.4	1.8	2.4	3.4	3.8	2.4	1.5	3.4	2.4	2
Bicarbonate (HCO3)		167	163	160	158	168	166	168	174	163	161
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Potassium (K)		3.5	2.6	3.2	3	2.9	3.2	2.8	3	3.2	3.2
Magnesium (Mg)		8.8	7.9	7.9	8.2	8.2	8.2	8.7	8.3	8.5	8.8
Manganese (Mn)	GPS (0.2)	0.09	0.1	0.1	0.09	0.09	0.09	0.09	0.09	0.09	0.1
Molybdenum (Mo)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		37.9	37.3	38.9	36.4	38	37.4	40.3	37.9	37.4	38.3
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
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<1	<1	<1	<1	<1	<1	<1	<1	0	3.5
Lead (Pb)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
pH *(Std. Units)*	**GPS (6.8)**	8.02	7.61	7.85	8.03	8.3	7.84	7.87	7.87	8.23	7.91
pH (Field) *(Std. Units)*		7.5	6.9	7.2	8.2	7.62	7.28	7.28	7.5	7.5	7.5
Radium 226 *(pCi/L)*		1.7	2.1	1.3	1.5	2.4	1.3	1.4	1.7	1.1	1.3
Combined Ra226/228 *(pCi/L)*	GPS (5.8)	1.7	6.1	3.7	1.5	4.1	2.4	3.4	1.7	3.2	2.9
Radium 228 *(pCi/L)*		<1	4	2.4	<1	1.7	1.1	2	<1	2.1	1.6
Selenium (Se)	GPS (.01)	<0.001	<0.001	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001
Silica (SiO2)		16.3	15	15	15	16	16	18	16	9	21
Sulfate (SO4)		246	198	213	210	216	225	241	223	246	261
TDS @ 180° *C.*	**GPS (500)**	500	495	489	476	478	486	466	462	459	456
Temperature *(C)*		8	13	11	14	7.7	15.7	10.5	10	9.4	10.2
Thorium 230 *(pCi/L:)*	GPS (7.0)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0	0
Thallium (Tl)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium, natural *(pCi/L)*	GPS (36)	1.6	1.3	1.4	1.3	2.5	1.3	1.4	1.4	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
Zinc (ZN)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

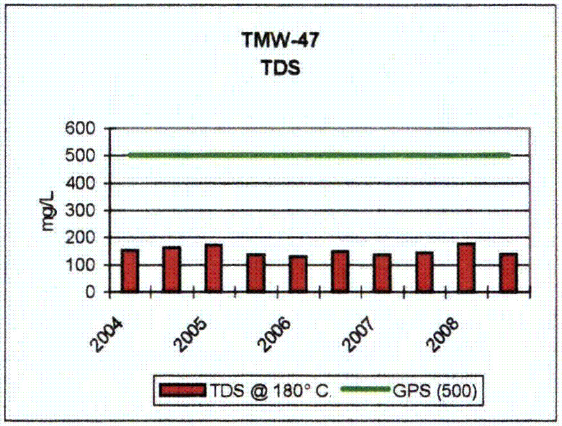

TMW-45
pH
10
9
8
7
6
5
4
Std Units
2004
2005
2006
2007
2008
pH (Std. Units)
GPS (6.8)

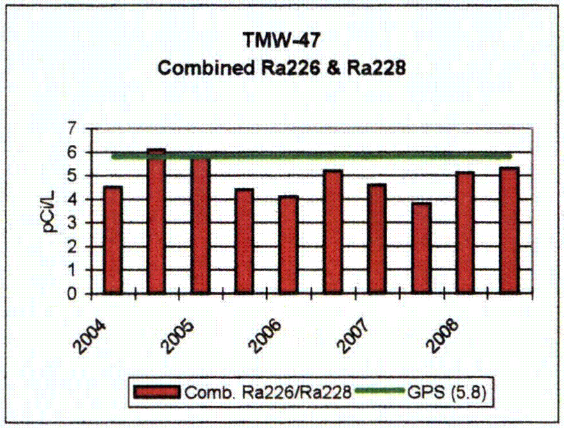

TMW-45
TDS
510
500
490
480
470
460
450
440
430
mg/L
2004
2005
2006
2007
2008
TDS @ 180° C.
GPS (500)

TMW 45.xls

KENNECOTT URANIUM COMPANY											
TMW-47											
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	2/10/2004	8/3/2004	2/2/2005	8/4/2005	2/2/2006	8/22/2006	2/20/2007	8/17/2007	3/6/2008	8/17/2008
TDS A/C Balance *(dec. %)*		1.05	1.07	1.1	0.85	0.83	0.95	0.85	0.88	1.18	3.63
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
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
Alk-CaC03		86.7	83	84	81	85	85	80	89	89	83
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
Boron (B)		<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
Calcium (Ca)		21.8	20.5	22	22.7	20.2	20	21.3	21.7	19.6	21.7
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chloride (Cl)		<1	<1	2	3	3	2	2	2	2	<1
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Carbonate (CO3)		<1	<1	<1	<1	2	<1	<1	<1	<1	<1
Cobalt (Co)		<0.001	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cond *(umhos/cm)*		259	251	254	254	243	265	246	223	159	218
Cond-Field *(umhos/cm)*		260	200	260	160	194	200	219	219	221	217
Fluoride (F)		0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2
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
Gross Alpha *(pCi/L)*	GPS (15)	6.7	6.6	5.6	7	5.3	4.7	3.7	7.3	5.3	5
Bicarbonate (HCO3)		106	101	103	99	101	104	98	108	108	101
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Potassium (K)		1.8	1	1.5	1.8	1.4	1.2	1.1	1.3	1.6	1.4
Magnesium (Mg)		<1	0.9	0.9	0.9	0.9	0.7	0.9	0.9	0.7	0.9
Manganese (Mn)	GPS (0.2)	0.02	0.04	0.02	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01
Molybdenum (Mo)		<0.01	<0.08	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		32.2	32.7	35.1	31.4	32	30.9	35.1	33.3	32.8	33
Nickel (Ni)	GPS (.01)	<0.01	<0.05	<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
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<1	<1	<1	<1	<1	<1	<1	<1	<1	4.3
Lead (Pb)		<0.01	<0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
pH *(Std. Units)*	**GPS (6.8)**	8.21	7.85	8.02	8.15	8.5	8.16	8.23	8.19	8.4	8.07
pH (Field) *(Std. Units)*		8.7	7.7	7.2	7.9	8.01	7.78	7.48	7.8	8.1	7.9
Radium 226 *(pCi/L)*		4.5	6.1	2.5	4.4	4.1	5.2	4.6	3.8	4.4	5
Combined Ra226/228 *(pCi/L)*	**GPS (5.8)**	4.5	6.1	5.8	4.4	4.1	5.2	4.6	3.8	5.11	5.3
Radium 228 *(pCi/L)*		<1	<1	3.3	<1	<1	<1	<1	<1	0.71	0.3
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)		13.9	13	13	14	13	15	15	14	14	18
Sulfate (SO4)		36.7	33	37	38	34	37	39	37	35	36
TDS @ 180° *C.*	**GPS (500)**	154	164	172	136	130	150	138	144	176	139
Temperature *(C)*		8	14	11	12	8.5	13.3	11.6	9	10.6	10.2
Thorium 230 *(pCi/L:)*	GPS (7.0)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0	0.1
Thallium (Tl)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium, natural *(pCi/L)*	GPS (36)	0.6	0.3	0.3	0.5	0.9	0.3	0.4	0.3	0.2	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

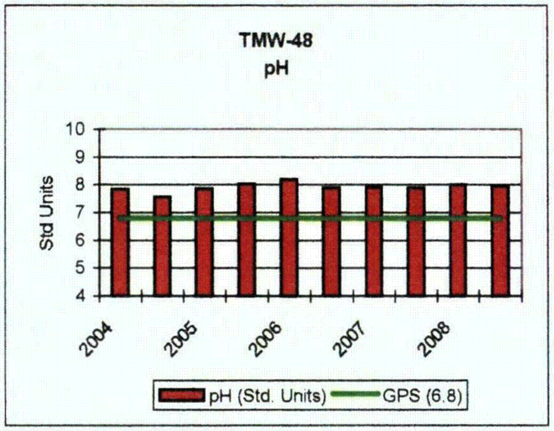

TMW-47
pH
Std Units
10
9
8
7
6
5
4
2004
2005
2006
2007
2008
pH (Std. Units)
GPS (6.8)

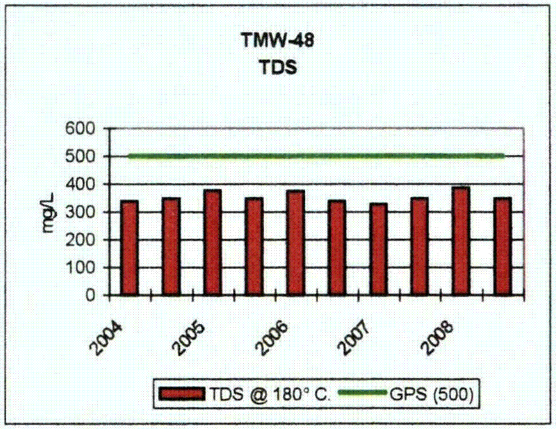

TMW-47
TDS
mg/L
600
500
400
300
200
100
0
2004
2005
2006
2007
2008
TDS @ 180° C.
GPS (500)

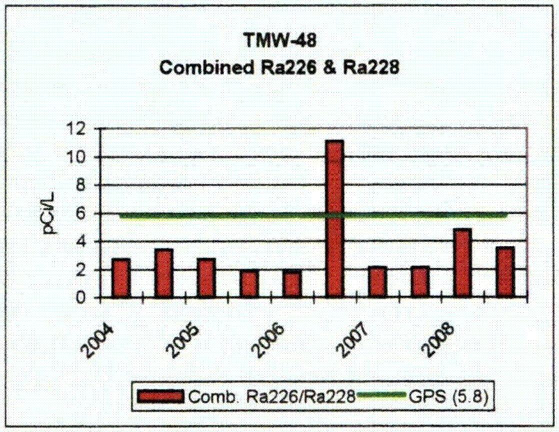

TMW-47
Combined Ra226 & Ra228
pCi/L
7
6
5
4
3
2
1
0
2004
2005
2006
2007
2008
Comb. Ra226/Ra228
GPS (5.8)

TMW 47.xls

KENNECOTT URANIUM COMPANY											
TMW-48		2004		2005		2006		2007		2008	
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	2/10/2004	8/3/2004	2/2/2005	8/4/2005	2/2/2006	8/22/2006	2/21/2007	8/16/2007	3/6/2008	8/13/2008
TDS A/C Balance *(dec. %)*		1.01	1.06	1.1	1.04	0.98	0.93	0.87	0.94	1.95	0.593
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
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
Alk-CaC03		111	108	109	106	115	112	110	117	115	110
Arsenic (As)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<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
Boron (B)		<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
Calcium (Ca)		75.8	71.8	78.1	75	83.6	77.7	81	80.4	76.5	88.6
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chloride (Cl)		6.9	3	5	5	6	8	5	5	4	5
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Carbonate (CO3)		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt (Co)		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cond *(umhos/cm)*		540	508	529	534	570	561	539	526	486	532
Cond-Field *(umhos/cm)*		480	380	500	300	420	500	513	492	495	495
Fluoride (F)		0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2
Iron (Fe)	GPS (0.6)	0.093	0.1	0.13	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	0.06
Gross Alpha *(pCi/L)*	GPS (15)	5.1	4.1	4.8	2.9	2.4	2.1	2.9	2.3	3.3	2.5
Bicarbonate (HCO3)		135	132	133	129	140	136	134	142	140	135
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Potassium (K)		2.7	2.2	2.7	2.4	2.6	2.4	2.4	2.6	3	2.8
Magnesium (Mg)		4.8	4.7	5	4.8	5.5	4.6	5.3	5.2	4.5	5.4
Manganese (Mn)	GPS (0.2)	0.04	0.04	0.07	0.05	0.05	0.04	0.04	0.05	0.04	0.05
Molybdenum (Mo)		<0.01	<0.08	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		30.9	31.5	33.5	30.9	32.3	29.6	34.1	32.8	34.1	33.1
Nickel (Ni)	GPS (.01)	<0.01	<0.05	<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
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<1	<1	<1	<1	<1	2.8	<1	<1	<1	1.8
Lead (Pb)		<0.01	<0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
pH *(Std. Units)*	**GPS (6.8)**	7.84	7.56	7.87	8.03	8.19	7.88	7.92	7.9	8	7.95
pH (Field) *(Std. Units)*		8.2	7.6	7.1	7.3	7.64	7.41	7.14	7.5	7.7	7.5
Radium 226 *(pCi/L)*		2.7	1.8	4.9	1.9	1.8	2.4	2.1	2.1	2.5	1.9
Combined Ra226/228 *(pCi/L)*	**GPS (5.8)**	2.7	3.4	2.7	1.9	1.8	11.1	2.1	2.1	4.8	3.5
Radium 228 *(pCi/L)*		<1	1.6	1.5	<1	<1	8.7	<1	<1	2.3	1.6
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)		14.9	15	15	15	15	16	17	15	16	20
Sulfate (SO4)		150	136	147	141	169	160	166	162	150	190
TDS @ 180° *C.*	**GPS (500)**	340	348	377	350	374	340	328	350	386	348
Temperature *(C)*		8	13	11	11	8.6	12.4	10.1	9.9	9.8	9.9
Thorium 230 *(pCi/L:)*	GPS (7.0)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Thallium (Tl)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium, natural *(pCi/L)*	GPS (36)	0.3	0.3	0.4	0.5	0.7	0.3	0.4	0.3	0.2	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

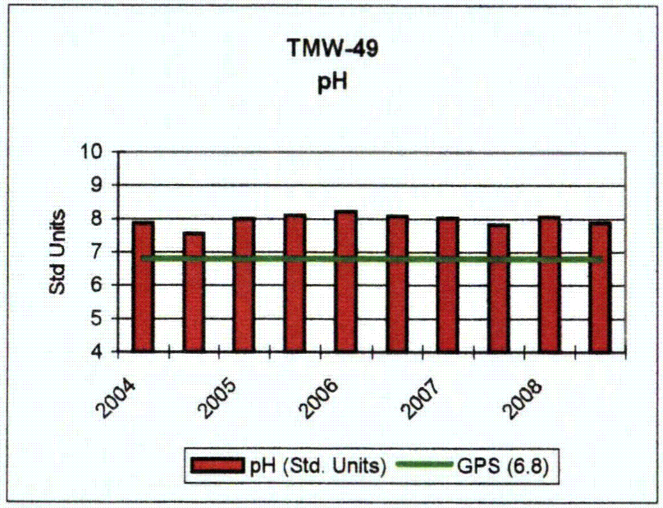

TMW-48
pH
Std Units
10
9
8
7
6
5
4
2004
2005
2006
2007
2008
pH (Std. Units)
GPS (6.8)


TMW-48
TDS
mg/L
600
500
400
300
200
100
0
2004
2005
2006
2007
2008
TDS @ 180° C.
GPS (500)

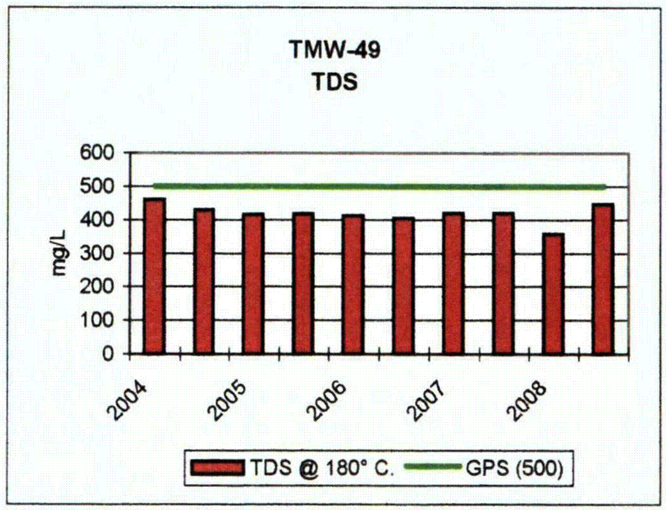

TMW-48
Combined Ra226 & Ra228
pCi/L
12
10
8
6
4
2
0
2004
2005
2006
2007
2008
Comb. Ra226/Ra228
GPS (5.8)

TMW 48.xls

KENNECOTT URANIUM COMPANY											
TMW-49		2004		2005		2006		2007		2008	
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	3/9/2004	9/15/2004	3/1/2005	12/17/2005	3/2/2006	9/5/2006	2/27/2007	9/17/2007	3/18/2008	9/29/2008
TDS A/C Balance *(dec. %)*		1.1	1.1	0.98	0.96	0.98	0.95	0.98	0.94	1.9	6.46
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
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
Alk-CaC03		110	108	107	108	118	115	107	112	112	105
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
Boron (B)		<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
Calcium (Ca)		92.9	93.1	92.7	95.3	89.4	90.7	92.9	89.7	85.2	101
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chloride (Cl)		9.8	7	8	7	6	5	9	7	6	6
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Carbonate (CO3)		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt (Co)		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cond *(umhos/cm)*		637	613	649	635	620	669	639	630	613	628
Cond-Field *(umhos/cm)*		460	420	440	440	450	572	597	586	596	565
Fluoride (F)		0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2
Iron (Fe)	GPS (0.6)	0.057	0.057	0.08	<0.05	<0.05	<0.05	<0.05	<0.05	0.05	0.08
Gross Alpha *(pCi/L)*	GPS (15)	1.3	1.3	2.5	<1	1	1.1	1.3	1.9	2.4	2
Bicarbonate (HCO3)		134	132	131	131	143	140	131	136	137	128
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Potassium (K)		2.9	2.7	2.9	2.9	2.6	2.8	3.3	2.9	3.3	3
Magnesium (Mg)		4.9	4.9	4.8	5.2	4.8	4.4	4.9	4.9	4.1	5
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
Molybdenum (Mo)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		40	39.4	38.7	37.4	38.7	38.9	40.5	38.4	38	40.2
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
Lead (Pb210) *(pCi/L)*	GPS (8.9)	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.6
Lead (Pb)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
pH *(Std. Units)*	**GPS (6.8)**	7.87	7.56	8.01	8.12	8.23	8.09	8.04	7.84	8.07	7.9
pH (Field) *(Std. Units)*		8.8	7.6	7.5	7.39	7.74	7.44	8.13	7.1	7.7	7.3
Radium 226 *(pCi/L)*		1.6	1.6	1.9	0.8	1.6	1.2	1.6	1	1.3	0.97
Combined Ra226/228 *(pCi/L)*	GPS (5.8)	1.6	1.6	1.9	0.8	1.6	1.2	3.3	3.5	4.03	2.522
Radium 228 *(pCi/L)*		<1	<1	<1	<1	<1	<1	1.7	2.5	3.1	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)		15.3	14	14	16	15	15	16	14	16	20
Sulfate (SO4)		204	203	198	207	194	200	215	221	200	197
TDS @ 180° C.	**GPS (500)**	461	431	417	419	412	406	420	420	359	448
Temperature *(C)*		8	13	13	8	12.2	13.9	8.8	10	9.8	10.7
Thorium 230 *(pCi/L:)*	GPS (7.0)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.1
Thallium (Tl)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium, natural *(pCi/L)*	GPS (36)	1.7	1.7	2.1	0.5	0.5	0.7	0.4	0.5	0.4	3.3
Vanadium (V205)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	ND
Zinc (ZN)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	ND

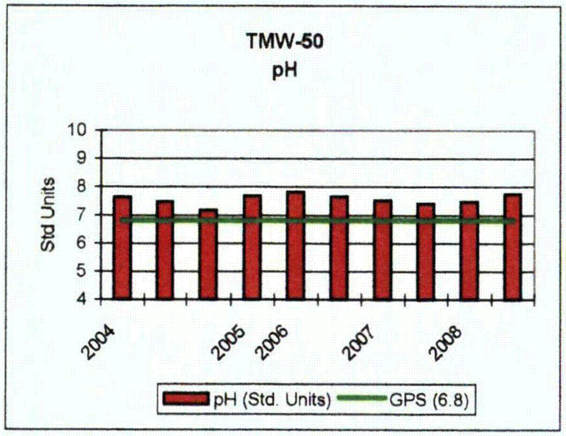


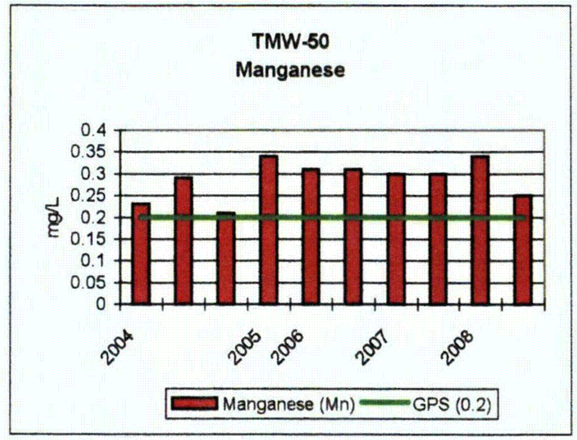
TMW-49
pH
10
9
8
7
6
5
4
Std Units
2004
2005
2006
2007
2008
pH (Std. Units)
GPS (6.8)

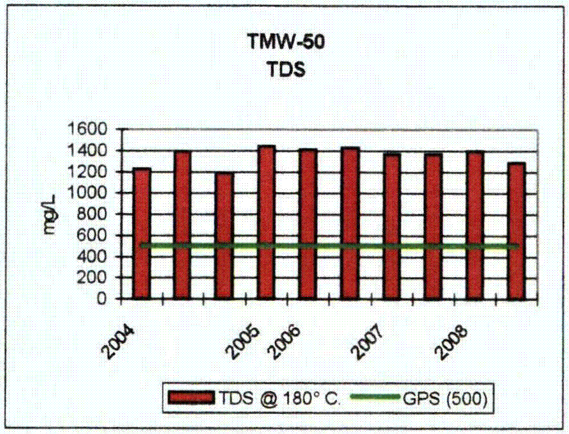


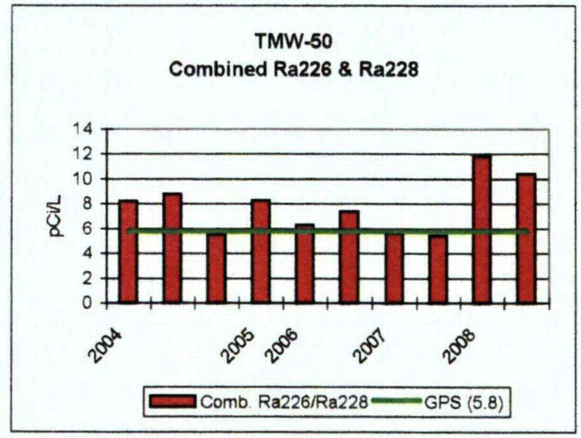
TMW-49
TDS
600
500
400
300
200
100
0
mg/L
2004
2005
2006
2007
2008
TDS @ 180° C.
GPS (500)

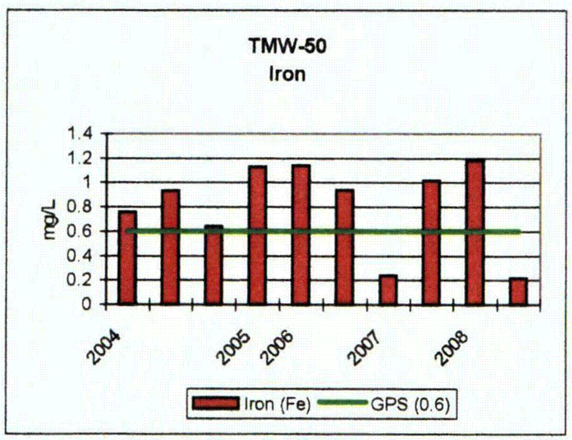
KENNECOTT URANIUM COMPANY											
TMW-50		2004			2005	2006		2007		2008	
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	3/1/2004	3/9/2004	9/15/2004	12/16/2005	3/2/2006	9/5/2006	2/27/2007	9/12/2007	3/31/2008	9/23/2008
TDS A/C Balance *(dec. %)*		1.03	1.06	1.04	1	1.01	1.01	0.99	0.96	2.37	-0.752
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
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
Alk-CaC03		195	217	188	232	235	230	210	216	226	197
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
Boron (B)		<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
Calcium (Ca)		292	311	282	354	330	325	326	326	348	298
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chloride (Cl)		36	43.1	30	32	36	36	38	36	30	35
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Carbonate (CO3)		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt (Co)		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cond *(umhos/cm)*		1620	1690	1420	1800	1740	1810	1710	1800	1770	1620
Cond-Field *(umhos/cm)*		900	1020	820	1040	1140	1580	1579	1563	1617	1433
Fluoride (F)		0.1	<0.1	0.2	0.1	0.1	<0.1	0.1	0.1	<0.1	<0.1
Iron (Fe)	**GPS (0.6)**	0.76	0.932	0.64	1.13	1.14	0.94	0.24	1.02	1.18	0.22
Gross Alpha *(pCi/L)*	GPS (15)	8.7	4.1	4.3	3	2.4	2.2	3.1	6.3	3.5	3.7
Bicarbonate (HCO3)		238	265	229	284	287	281	256	263	276	241
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Potassium (K)		4.8	5	4.3	4.9	4.8	4.8	5.7	5	5	4.3
Magnesium (Mg)		22.1	27.1	20	31.8	29.9	27.5	27	29.1	31	25.3
Manganese (Mn)	**GPS (0.2)**	0.23	0.29	0.21	0.34	0.31	0.31	0.3	0.3	0.34	0.25
Molybdenum (Mo)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium (Na)		59.1	60.6	58.6	63.6	64.2	60.6	66.4	66.1	71.1	55
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
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
pH *(Std. Units)*	**GPS (6.8)**	7.63	7.48	7.17	7.69	7.82	7.66	7.51	7.41	7.47	7.75
pH (Field) *(Std. Units)*		7.1	7.6	7.4	7.09	7.17	7.04	7.53	7.1	7.1	7.2
Radium 226 *(pCi/L)*		4	4.1	2.2	2.4	3.7	2.2	3.1	2.5	4.2	1.9
Combined Ra226/228 *(pCi/L)*	**GPS (5.8)**	8.2	8.8	5.5	8.3	6.3	7.4	5.6	5.4	11.8	10.4
Radium 228 *(pCi/L)*		4.2	4.7	3.3	5.9	2.6	5.2	2.5	2.9	7.6	8.5
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)		16	19	17	19	19	18	19	18	19	20.1
Sulfate (SO4)		645	728	616	798	761	802	775	808	804	712
TDS @ 180° *C.*	**GPS (500)**	1230	1390	1190	1440	1410	1430	1370	1370	1400	1290
Temperature *(C)*		14	8	13	9.2	9.3	12.8	9.5	10.6	9	9.8
Thorium 230 *(pCi/L:)*	GPS (7.0)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.04	0
Thallium (Tl)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium, natural *(pCi/L)*	GPS (36)	2.7	3.3	2.5	2.8	3.4	3.4	2.2	3.2	2.7	15.4
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	0.02	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01


TMW-50
pH
10
9
8
7
6
5
4
Std Units
2004
2005
2006
2007
2008
pH (Std. Units)
GPS (6.8)

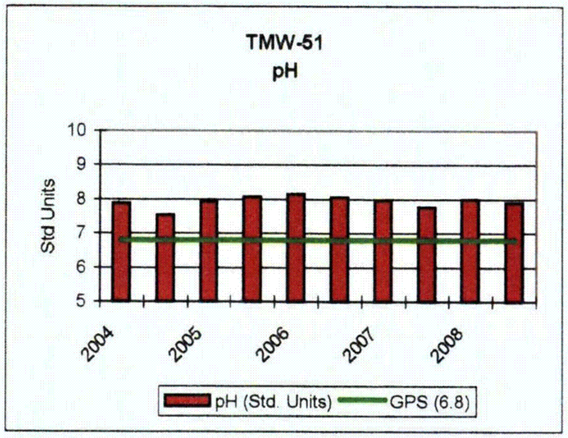

TMW-50
Manganese
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
mg/L
2004
2005
2006
2007
2008
Manganese (Mn)
GPS (0.2)


TMW-50
TDS
1600
1400
1200
1000
800
600
400
200
0
mg/L
2004
2005
2006
2007
2008
TDS @ 180° C.
GPS (500)

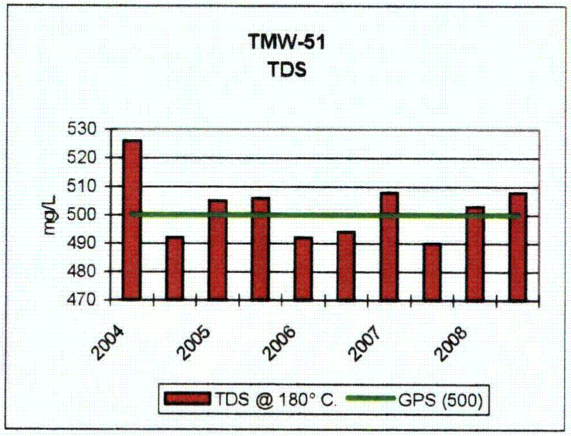

TMW-50
Combined Ra226 & Ra228
14
12
10
8
6
4
2
0
pCi/L
2004
2005
2006
2007
2008
Comb. Ra226/Ra228
GPS (5.8)


TMW-50
Iron
1.4
1.2
1
0.8
0.6
0.4
0.2
0
mg/L
2004
2005
2006
2007
2008
Iron (Fe)
GPS (0.6)

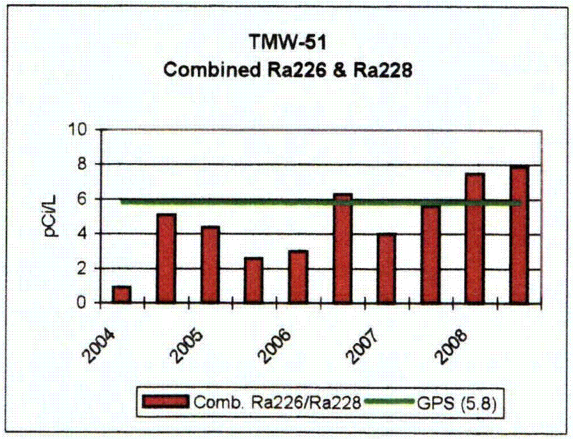
KENNECOTT URANIUM COMPANY											
TMW-51		2004		2005		2006		2007		2008	
PARAMETER *(mg/L unless noted)*	Groundwater Protection Standard (GPS) as of 5/26/05	3/11/2004	9/14/2004	3/2/2005	12/16/2005	3/2/2006	9/6/2006	2/28/2007	9/5/2007	3/17/2008	9/23/2008
TDS A/C Balance *(dec. %)*		1.05	0.96	0.99	0.98	0.96	0.94	1.05	0.93	2.48	0.718
Silver (Ag)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
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
Alk-CaC03		125	125	125	125	130	135	150	129	131	124
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
Boron (B)		<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
Calcium (Ca)		113	114	114	116	114	113	116	120	103	112
Cadmium (Cd)	GPS (.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chloride (Cl)		12.3	8	9	6	11	10	8	9	7	8
Cyanide (CN)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Carbonate (CO3)		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt (Co)		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium (Cr)	GPS (.05)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Copper (Cu)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cond *(umhos/cm)*		746	714	767	740	731	777	752	728	711	728
Cond-Field *(umhos/cm)*		560	500	500	510	540	700	719	685	683	664
Fluoride (F)		0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.1
Iron (Fe)	GPS (0.6)	0.134	0.15	0.1	<0.05	<0.05	<0.05	<0.05	0.11	0.08	0.05
Gross Alpha *(pCi/L)*	GPS (15)	2.1	1.9	4.1	1.2	1.9	1.4	1.4	1.1	3.4	2.1
Bicarbonate (HCO3)		153	152	152	152	159	165	182	157	159	151
Mercury (Hg)		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Potassium (K)		3.8	2.9	3.4	3.1	3	3	2.7	3.1	3.5	2.9
Magnesium (Mg)		8.5	8.4	8.4	9	8.6	8.3	7.3	8.8	7.2	8.4
Manganese (Mn)	GPS (0.2)	0.07	0.07	0.07	0.07	0.07	0.07	0.06	0.07	0.07	0.07
Molybdenum (Mo)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01
Sodium (Na)		40.9	40	39.9	38.1	39.2	37.8	32.3	39.2	39	35
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
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
pH *(Std. Units)*	**GPS (6.8)**	7.88	7.53	7.94	8.08	8.15	8.06	7.98	7.76	8	7.91
pH (Field) *(Std. Units)*		7.5	7.3	7.1	7.53	7.56	7.35	7.62	7.7	7.7	7.6
Radium 226 *(pCi/L)*		0.9	1.8	2.4	1.3	1.6	2	1.6	1.5	1.6	1.5
Combined Ra226/228 *(pCi/L)*	**GPS (5.8)**	0.9	5.1	4.4	2.6	3	6.3	4	5.6	7.5	7.9
Radium 228 *(pCi/L)*		<1	3.3	2	1.3	1.4	4.3	2.4	4.1	5.9	6.4
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)		14.5	14	15	16	16	16	13	15	15	18.1
Sulfate (SO4)		246	248	246	250	241	259	215	257	244	243
TDS @ 180° *C.*	**GPS (500)**	526	492	505	506	492	494	508	490	503	508
Temperature *(C)*		8	14	14	9.8	10.6	12.1	9.8	10.1	9.3	10
Thorium 230 *(pCi/L:)*	GPS (7.0)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Thallium (Tl)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium, natural *(pCi/L)*	GPS (36)	1.8	2.3	2.2	1.8	2	2	1.3	1.8	1.6	13
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
2004
2005
2006
2007
2008
pH (Std. Units)
GPS (6.8)



TMW-51
TDS
mg/L
530
520
510
500
490
480
470
2004
2005
2006
2007
2008
TDS @ 180° C.
GPS (500)



TMW-51
Combined Ra226 & Ra228
pCi/L
10
8
6
4
2
0
2004
2005
2006
2007
2008
Comb. Ra226/Ra228
GPS (5.8)

tmw 51.xls