RIO TINTO
ENERGY AMERICA

Rio Tinto Energy America
Kennecott Uranium Company
Post Office Box 1500
Rawlins, WY 82301-1500
T: 307-328-1476, 307-324-4924
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20 February 2008

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

Dear Mr. McConnell:

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

Enclosed is Kennecott Uranium Company's Semiannual 10 CFR 40.65 Report for the second half of 2007 for airborne effluents. This report addresses the requirements of License Condition 11.5 of SML #SUA-1350, as well as the requirements of 10 CFR 40.65(a)(1).

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

Kennecott Uranium Company has examined the data included in this report, calculated the dose to the nearest resident in millirems per year for the second half of 2007 from the licensed activities and concluded that the dose does not exceed the 100 mrem per year dose limit. A copy of the calculation sheet as well as an explanation of the calculation method is included. This is being done at the request of Elaine Brummett, previously of your staff, in an email dated September 7, 2001.

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

Sincerely yours,

Oscar A Paulson

Oscar Paulson
Facility Supervisor

cc: Stephen J. Cohen, Project Manager
Director - USNRC DMSS, Region IV (w/o enc.)
John Lucas - RTEA

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

2007
RadTrak Radon Monitor
(pCi/L)

DATE	LOCATION	RADIONUCLIDE	CONCENTRATION	STD DEVIATION/ STD COUNTING ERROR	LOWER LIMIT OF DETECTION (LLD)	
				%	pCi/L-Days	pCi/L
1/2/07 – 4/2/07	Downwind - Air 4A	Radon	2.0 pCi/L	5.5	6.0	0.06
1/2/07 – 4/2/07	Upwind - Air 2	Radon	16.9 pCi/L [1]	2.1	6.0	0.06
4/2/07 – 7/3/07	Downwind - Air 4A	Radon	2.9 pCi/L	4.7	6.0	0.06
4/2/07 – 7/3/07	Upwind - Air 2	Radon	--- pCi/L Damaged [1]	N/A	6.0	0.06
7/3/07 – 10/3/07	Downwind - Air 4A	Radon	3.7 pCi/L	4.2	6.0	0.06
7/3/07 – 10/3/07	Upwind - Air 2	Radon	3.9 pCi/L	4.1	6.0	0.06
10/3/07 – 1/2/08	Downwind - Air 4A	Radon	3.2 pCi/L	4.4	6.0	0.06
10/3/07 – 1/2/08	Upwind - Air 2	Radon	3.4 pCi/L	4.2	6.0	0.06

[1] Please see attached information entitled "Upwind RadTrak Radon Monitoring".

Upwind Radtrak Radon Monitoring Station

April 2, 2007

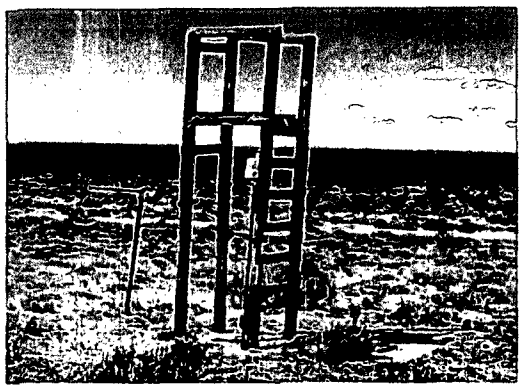
On April 2, 2007 when retrieving the first quarter upwind RadTrak radon monitor at the upwind air monitoring station (Air 2) it was discovered that the steel fence post on which the radon detector was mounted was knocked down. The detector was intact and sent to Landauer, Inc. for reading. The first quarter 2007 detector yielded a high reading of 16.9 picoCuries per liter. This high reading was due to the fact that the detector was lying on the ground. Horse hair was found on the detector post indicating that the unit had been knocked down by a feral horse. The post and detector were reinstalled. The situation was documented in an e-mail to Stephen Cohen of the Nuclear Regulatory Commission (NRC). The e-mail is attached.

July 3, 2007

On July 3, 2007 when the second quarter RadTrak detectors were gathered for shipment to Landauer, Inc. the second quarter upwind (Air 2) detector and post were again found on the ground and horse hair found at the scene. The post bearing the detector was then attached to the wooden monitoring stand at the location to prevent further problems. This incident was documented in an e-mail to Stephen Cohen of the Nuclear Regulatory Commission (NRC) dated July 3, 2007. A reply (also attached) was received on July 5, 2007.

Landauer, Inc. returned no result for the second quarter 2007 detector stating that it was Returned Damaged. They were contacted via e-mail about the result and stated that the chip had a lot of static and tracks were clumped together. (Please see attached e-mail.)

The images below show how the fence post supporting the detector is now attached to the wooden monitoring stand.



These images were taken on Sunday, August 12, 2007.

This monitoring area was inspected by Stephen Cohen, Robert Evans, Jason Razo and Douglas Mandeville of the Nuclear Regulatory Commission (NRC) on Tuesday, July 10, 2007. Horse hair was still visible in the area.

Since accurate upwind radon monitoring data is not available for the first and second quarters of 2007, an average of the first and second quarter radon concentrations at the upwind location from January 1992 to December 2006 measured with RadTrak units is being used in place of first and second quarter 2007 upwind data respectively, for the purposes of assessment of dose to the general public.

The RadTrak radon monitoring results used to create the above described first and second quarter averages are included in a spreadsheet entitled "Upwind Radon Data – RadTrak Data Only - Air 2 Monitoring Station".

Paulson, Oscar (RTEA)

From: Oscar Paulson [paulson@tribcsp.com]
Sent: Thursday, April 19, 2007 9:38 AM
To: Stephen Cohen
Cc: shelley@tribcsp.com
Subject: SUA-1350/Sweetwater Uranium Project - Upwind Air Radon Monitoring/RadTrak Results

Stephen Cohen:

When the upwind air RadTrak/radon monitoring unit was exchanged on April 2, 2007, the plastic holder containing the unit was found on the ground. Horse hair on the support post indicated that a horse had been rubbing on the post loosening it and the holder for the RadTrak device, knocking the holder with the device to the ground. The device holder was found lying on its side on the ground. Results for that RadTrak detector arrived today. The detector returned an average radon concentration (for upwind air) of 16.9 picoCuries per liter. This anomalously high result is due the fact that the holder with the detector was lying in close proximity to the ground. The support post and holder have been subsequently reinstalled and to date are in good condition.

Oscar Paulson
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Cellular: (307)-320-8758

E-mail: paulson@tribcsp.com

Paulson, Oscar (RTEA)

From: Paulson, Oscar (RTEA)
Sent: Tuesday, July 03, 2007 5:58 PM
To: (SJC7@nrc.gov)
Cc: Schutterle, Shelley (RTEA)
Subject: Upwind RadTrak Detector

Stephen Cohen:

A feral horse again knocked down the post upon which the upwind RadTrak monitor was mounted. The post was found on the ground. This may cause the detector result to be elevated. This is the second time that this has happened. There have been no previous problems since 1990 with the mounting post and now it gets knocked down in two (2) sequential quarters. I believe that this is the work of a single animal. As a result, the post is now attached to a wooden frame/tower on the site. I doubt that the animal can knock down the tower.

I wanted to inform you about this problem.

Oscar Paulson

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E-mail: oscar.paulson@riotinto.com

Paulson, Oscar (RTEA)

From: Stephen Cohen [SJC7@nrc.gov]
Sent: Thursday, July 05, 2007 4:59 AM
To: Paulson, Oscar (RTEA)
Cc: Betty Garrett
Subject: Re: Upwind RadTrak Detector

Oscar:

If there is a problem with the readings from this monitor, explain it in the report.

Steve

>>> "Paulson, Oscar (RTEA)" <Oscar.Paulson@riotinto.com> 07/03/2007 7:57 PM >>>
Stephen Cohen:

A feral horse again knocked down the post upon which the upwind RadTrak monitor was mounted. The post was found on the ground. This may cause the detector result to be elevated. This is the second time that this has happened. There have been no previous problems since 1990 with the mounting post and now it gets knocked down in two (2) sequential quarters. I believe that this is the work of a single animal. As a result, the post is now attached to a wooden frame/tower on the site. I doubt that the animal can knock down the tower.

I wanted to inform you about this problem.

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E-mail: oscar.paulson@riotinto.com

Paulson, Oscar (RTEA)

From: Paulson, Oscar (RTEA)
Sent: Monday, July 30, 2007 11:50 AM
To: (relza@landauerinc.com)
Cc: Schutterle, Shelley (RTEA)
Subject: Account # 0406193 - Detector Number: 4701596 - Air 2 - Upwind

Rose:

The detector results were checked today. Detector Number: 4701596 was listed on the sheet as Monitor Returned Damaged. When I collected the detector, there was no visible external physical damage. The unit was in the field in a holder mounted to a fence post that was knocked over by a horse. While the post was knocked over the RadTrak detector was in the holder and appeared undamaged. Why is there no reading?

Thanks!

Oscar

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Paulson, Oscar (RTEA)

From: Rose Elza [relza@landauerinc.com]
Sent: Monday, July 30, 2007 11:57 AM
To: Paulson, Oscar (RTEA)
Subject: RE: Account # 0406193 - Detector Number: 4701596 - Air 2 - Upwind

Oscar,

I just pulled the report- indicates that chip had a lot of static and some of the tracks were clumped together-unable to read correctly.

Please note our extensions and direct dial phone numbers have changed!

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, July 30, 2007 12:50 PM
To: Rose Elza
Cc: Schutterle, Shelley (RTEA)
Subject: Account # 0406193 - Detector Number: 4701596 - Air 2 - Upwind

Rose:

The detector results were checked today. Detector Number: 4701596 was listed on the sheet as Monitor Returned Damaged. When I collected the detector, there was no visible external physical damage. The unit was in the field in a holder mounted to a fence post that was knocked over by a horse. While the post was knocked over the RadTrak detector was in the holder and appeared undamaged. Why is there no reading?

Thanks!

Oscar

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7/30/2007

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 Averages - For First Quarters pCi/L	AIR 2 Averages - For Second Quarters pCi/L
	01-Jul-91	01-Aug-91	TRACKETCH	4.20			
	01-Aug-91	01-Sep-91	TRACKETCH	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		
	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		
	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			

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 Averages - For First Quarters pCi/L	AIR 2 Averages - For Second Quarters pCi/L
	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		
	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			
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		
	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		
	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			

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 Averages - For First Quarters pCi/L	AIR 2 Averages - For Second Quarters pCi/L
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		
	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		
	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			
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		
	04-Sep-99	03-Oct-99	TRACKETCH	3.90			

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 Averages - For First Quarters pCi/L	AIR 2 Averages - For Second Quarters pCi/L
	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		
	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		
	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			

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 Averages - For First Quarters pCi/L	AIR 2 Averages - For Second Quarters pCi/L
	01-Jul-02	01-Aug-02	TRACKETCH	3.40			
	01-Aug-02	01-Sep-02	TRACKETCH	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			
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		
	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			

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 Averages - For First Quarters pCi/L	AIR 2 Averages - For Second Quarters pCi/L
	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		
	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		
	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			
2007	02-Jan-07	02-Feb-07	TRACKETCH	16.90			
	02-Feb-07	02-Mar-07	TRACKETCH	16.90	Erroneous data	Found on the 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				
				Averages	3.14	3.05	2.94

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 THEN THE DETECTOR WAS PLACED FOR THE ENTIRE QUARTER AND THE INDIVIDUAL MONTHLY READINGS ARE THE SINGLE QUARTERLY READING REPEATED FOR EACH MONTH

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

2007
DIRECT RADIATION MEASUREMENTS
(TLD)

Location	Date	Exposure Rate (mr/Qtr)	Error Estimated	Lower Limit of Detection (LLD) Millirems
TLD				
0000 - Control	1/2/07 – 4/2/07	25	0.8 mr	10[1]
0004 - Air 4A	1/2/07 – 4/2/07	34	1.1 mr	10[1]
TLD				
0000 - Control	4/2/07 – 7/2/07	22	1.8 mr	10[1]
0004 - Air 4A	4/2/07 – 7/2/07	34	1.7 mr	10[1]
TLD				
0000 - Control	7/2/07 – 10/3/07	23	1.0 mr	10[1]
0004 - Air 4A	7/2/07 – 10/3/07	32	2.3 mr	10[1]
TLD				
0000 - Control	10/3/07 – 1/2/08	30	2.4 mr	10[1]
0004 - Air 4A	10/3/07 – 1/2/08	42	0.9 mr	10[1]

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

Thermo NUtech
5635 Jefferson Street NE
Albuquerque, NM 87109
(505) 345-8831 • FAX (505) 761-6410

Lower Limits of Detection (LLDs)

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

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

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

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

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

CONTINUOUS LOW-VOLUME AIR PARTICULATE ANALYSIS

STATION 4A – 2007

Quarter/Date Sampled Air Volume	Radionuclide	Concentration µCi/ml	Error Estimate µCi/ml	LLD µCi/ml	Effluent Conc.* pCi/ml	% Effluent Concentration
1st Quarter	U-nat	<1.00 E-16	N/A	1.00 E-16	9.00 E-14	<1.11 E-01
1/2/07 – 4/2/07	Th-230	<1.00 E-16	N/A	1.00 E-16	3.00 E-14	<3.33 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
3.56 E+10	Pb-210	1.81 E-14	3.31 E-16	2.00 E-15	6.00 E-13	3.01 E+00
2nd Quarter	U-nat	<1.00 E-16	N/A	1.00 E-16	9.00 E-14	<1.11 E-01
4/2/07–7/2/07	Th-230	<1.00 E-16	N/A	1.00 E-16	3.00 E-14	<3.33 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
4.21 E+10	Pb-210	2.29 E-14	5.39 E-16	2.00 E-15	6.00 E-13	3.81 E+00
3rd Quarter	U-nat	<1.00 E-16	N/A	1.00 E-16	9.00 E-14	<1.11 E-01
7/2/07 – 10/1/07	Th-230	<1.00 E-16	N/A	1.00 E-16	3.00 E-14	<3.33 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
4.94 E+10	Pb-210	1.59 E-14	4.03 E-16	2.00 E-15	6.00 E-13	2.65 E+00
4th Quarter	U-nat	<1.00 E-16	N/A	1.00 E-16	9.00 E-14	<1.11 E-01
0/1/07 – 1/2/08	Th-230	1.03 E-16	3.21 E-17	1.00 E-16	3.00 E-14	3.42 E-01
ir Vol in mLs	Ra-226	<1.00 E-16	N/A	1.00 E-16	9.00 E-13	<1.11 E-02
4.68 E+10	Pb-210	2.07 E-14	5.65 E-16	2.00 E-15	6.00 E-13	3.44 E+00

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

RIO TINTO
ENERGY AMERICA

Memorandum

Oscar Paulson
Facility Supervisor
Kennecott Uranium Company

14 August 2007

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 2007

The following is a dose calculation for the nearest resident (the contract security guard) for the second half of 2007.

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.
2. Radon concentrations are measured in the Security Trailer with Radtrak detectors placed in the kitchen and bedroom and changed quarterly. The results from these detectors are averaged to derive a semiannual radon concentration in Pico curies per liter for the Security Trailer.
3. Radon exposures in working levels are measured semiannually in the Security Trailer using a calibrated Buck Basic 12, Bendix BDX-44, MSA or Sensidyne GilAir II air pump and filter. The filter is read by the modified Kusnetz Method.
4. The radon concentration and exposure are used to calculate the equilibrium factor. The equilibrium factors calculated semiannually are averaged to derive a site equilibrium factor.
5. This equilibrium factor is applied to the upwind radon concentrations to derive a background radon dose and to the average semiannual radon concentration in the Security Trailer to derive a radon dose to the nearest resident. An equilibrium factor table is attached.
6. The dose from the semiannual downwind airborne particulate concentrations of natural uranium, radium-226 and thorium-230 are used to calculate the dose from airborne particulates in the Security Trailer in spite of the fact that the Security Trailer is not downwind of the facility.
7. The gamma dose from the downwind gamma radiation monitor (environmental thermo-luminescent dosimeter) is used to calculate the gamma radiation dose in the Security Trailer.
8. The doses from radon-222, airborne particulate radionuclides and gamma radiation are summed to produce a dose to the nearest resident (the Security Trailer).
9. The radon concentrations measured at the upwind air monitoring stations during the two (2) quarters for a given semiannual period are averaged, corrected for the site equilibrium factor and converted to a background radon dose for the facility, with the exception of this report, in which averages of first and second quarter RadTrak determined radon concentrations from July 1, 1991

to December 31, 2006 were used, since valid background radon data for the first and second quarters of 2007 was not available.

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	316.4
Total			**518.3**

Notes:

1. An equilibrium factor of 0.197 was used for radon based on twenty-two (22) comparisons of radon-222 and radon-222 daughter concentrations over 14 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. Calculation: Radon concentration (pCi/l))*(Equilibrium factor)*(0.44 rems/pCi/l) = Dose (rems)

SECURITY TRAILER

		Average Concentration	Dose (mrem)
Gamma Exposure:			148.00
Airborne Particulates:			
	U nat	1.00 E-16 µCi/ml	0.06
	Ra-226	1.00 E-16 µCi/ml	0.01
	Th-230	1.02 E-16 µCi/ml	0.17
Gases:			
	Radon-222	2.10 pCi/l	182.0
Total			**330.2**

Notes:

1. An equilibrium factor of 0.197 was used for radon based on twenty-two (22) comparisons of radon-222 and radon-222 daughter concentrations over 14 years.
2. Downwind airborne particulate concentrations and gamma doses for the third and fourth quarters of 2007 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 first, second, third and

fourth quarters of 2007 and is based on an average of RadTrak units located in two (2) locations; the kitchen and the bedroom. Radon concentrations in the Security Trailer for the fourth quarter of 2007 are based on a unit located in a single location (the bedroom). The unit placed in the kitchen for the fourth quarter of 2007 was lost.

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

The net (dose to the nearest resident minus background dose) annual TEDE from the licensed operations for the first half of 2007 is **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	0.017
1/1/05 – 6/30/05	2.55	0.0013	0.051
7/1/05 – 12/31/05	3.22	0.0035	0.109
1/1/06 – 6/30/06	2.40	0.0	0.0
7/1/06 – 12/31/06	2.13	0.014	0.66
1/1/07 – 6/30/07	1.65	0.0	0.0
6/30/07 – 12/31/07	2.10[4]	0.0001	0.005
Average			**0.197**

[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, unless otherwise noted.

2. Radon exposures (radon daughters concentrations measured in Working Levels) are taken semiannually in the trailer in two (2) locations (kitchen and bedroom) using a Buck Basic 12, Bendix BDX-44, MSA or Sensidyne GilAir II air pump and a filter. The filter is evaluated using the modified Kusnetz Method.
3. The equilibrium factor is calculated.

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

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

RIO TINTO
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

25 February 2008

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: Stephen J. Cohen, Project Manager (NRC) (2)
Director, DNMS (NRC) - Arlington, TX (w/o attachments)
John Lucas – Rio Tinto Energy America

RIO TINTO
ENERGY AMERICA

Memorandum

Oscar Paulson
Facility Supervisor
Kennecott Uranium Company

18 February 2008

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 **A**s **L**ow **A**s **R**easonably **A**chievable (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 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. 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 9, 2007. Annual MSHA Refresher Training was conducted on January 4, 2007. In addition, driver training was conducted on January 3, 2007. Also, a CPR/AED class was provided on site on March 6, 2007. Radiation training of individual contract employees (contractor new hires) was conducted on an as-needed basis.

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 2007, as documented in the memorandum entitled "Annual Review of Standard Operating Procedures (SOPs)", dated 27 December 2007.

9. Radiation Work Permits:
A single Radiation Work Permit (RWP) was issued in 2007. 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 May 23 and December 13, 2007. 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):
No Safety and Environmental Evaluations (SEEs) were issued by the Safety and Environmental Review Panel in 2007.

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 4 and June 26, 2007. Annual fit testing and respirator training was conducted on November 20, 2007.

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 0.028 WL in June 2007 and 0.020 WL in December 2007.

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. Sprays and 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 2007. 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 is also being used by tailings impoundment workers.

Backfilling of the Catchment Basin excavation was completed in 2007. Work was performed in the tailings impoundment including liner repair and tailings regrading, which has reduced the risk of wind induced liner failure and will ultimately enhance control of blowing tailings.

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 2008

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) - 2007
- Respiratory Protection – 2007
- Releases for Unrestricted Use – 2007
- Review of Standard Operating Procedures – 2007
- Radiation Work Permits – 2007
- Dose Assessment/Determination of No Requirement for Individual Monitoring or Dose Calculation at the Sweetwater Uranium Project for 2007

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 0.014 WL to 0.030 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 2007 were property security, preservation, maintenance, operation of the tailings impoundment and Catchment Basin pumpback system and tailings impoundment spray system, environmental monitoring, storage of equipment and used ion exchange resin, backfilling of the Catchment Basin excavation, liner repair and regrading of tailings in the tailings impoundment 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 0.014 WL to 0.030 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 May 23 and December 13, 2007. 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 and eastern embankments were completed in 2007 as per Safety and Environmental Evaluation (SEE) #14 and SEE-14 Amended. 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 sprays and lagoons constructed on the tailings and operated during non-freezing weather serves to minimize dusting, reduce radon emanation and evaporate fluids. 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 0.5% of the allowable effluent concentrations during 2007, 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 2007.

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. 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. 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 will be provided in a completion report that will be submitted shortly. 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

4 February 2008

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 monthly (plus thirteen (13) additional) Radiation Safety meetings held in 2007:

2007	TOPIC	ATTENDEES
1/18	Radon measurements	KUC
1/22	Bioassay results, external doses, mill alpha smear results, Kminus3 grid sampling results	ACI, KUC
2/19	Bioassay results, external doses, instrument calibrations, Lower Limits of Detection (LLDs)	ACI, KUC
2/22	Alpha monitoring	AEQ
2/28	Buck Basic 12 air sampler calibration demonstration	ACI, KUC
3/19	Bioassay results, Lo Volume air sampling with new F & J sampler	ACI, KUC
4/16	Bioassay results, external exposure results, Kminus3 grid	ACI, KUC
5/21	Bioassay results, external exposure results, high volume air sampling in the tailings impoundment	ACI, KUC
6/11	External exposure results personnel dosimetry, breathing sampler settings	ACI, KUC
6/18	Radioactive contamination versus Naturally Occurring Radioactive Material (NORM), review of report on material from the Kminus3 grid area, reviewed SOW HP-38 on consumption of water in restricted areas	ACI, KUC
7/9	Reviewed tailings impoundment breathing zone and high volume air sample results	ACI, KUC
7/16	Discussed Project Orion (nuclear powered rocket) and radiation safety related to geophysical logging units	ACI, KUC
8/20	Reviewed bioassay and breathing zone and high volume air sample results. Discussed Method 115 radon flux testing	ACI, KUC
9/17	Discussed bioassay and breathing zone sample results. Discussed scheduled mill inspection by Lyntek, Inc.	ACI, KUC
9/24	Discussed Colorado Medical Society resolution regarding uranium mining in Colorado; reviewed Radiation Work Permit for mill inspection with Lyntek, Inc personnel	ACI, KUC, LTI
9/25	Discussed Ludlum Model 2350-1 rate meter. Opened unit to show circuitry	ACI, KUC
10/18	Discussed Radiation Work Permits and Standard Operating Procedures; discussed impending work by Lyntek, Inc.; discussed bioassay, breathing zone and dosimetry results	ACI, KUC
10/29	Discussed high volume air sampling and radon testing results	ACI, KUC
11/1	Discussed counting procedures with SACR-5 and MS-2 Scaler of breathing zone sample filters	ACI, KUC
11/20	Discussed bioassay results, yellowcake drum reactions (TDRs), respiratory protection and demonstrated qualitative fit tests.	ACI, KUC
11/26	Discussed HP-38 regarding consumption of water in restricted areas	ACI, KUC
12/10	Reviewed procedures for inspection of Solvent Extraction (SX) tanks	LTI
12/17	Discussed breathing zone, bioassay and external exposure monitoring results; discussed Modified Kusnetz radon daughter monitoring	ACI, KUC
12/26	Discussed consumption of fluids in restricted areas	ACI, KUC

Initial key: **ACI** = Archer Construction, Inc., **AEQ** = American Equipment Company, **KUC** = Kennecott Uranium Company, **LTI** = Lyntek, Inc.

Oscar A Paulson

Oscar Paulson
Facility Supervisor

RIO TINTO
ENERGY AMERICA

Memorandum

Oscar Paulson
Facility Supervisor
Kennecott Uranium Company

4 February 2008

To: NRC File

Subject: Annual Radiation Refresher Training

Annual radiation safety training for uranium mill workers was conducted by Dr. Jan Johnson of MFG Inc. on January 15, 2007, 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:

Judi Boyce – Adecco	July 18, 2007
Alfred Knowles – Archer Construction, Inc.	May 2, 2007
Mark Cress – Archer Construction, Inc.	May 2, 2007
Thomas Duffy – Archer Construction, Inc.	May 2, 2007
Lance Smith – Archer Construction, Inc.	May 2, 2007
James Ashley – Archer Construction, Inc.	July 18, 2007
Jeremy LaVine – Archer Construction, Inc.	July 18, 2007
Lehman English – Archer Construction, Inc.	July 18, 2007
Eric Hall – Archer Construction, Inc.	July 18, 2007
Tony Jackson – Archer Construction, Inc.	July 18, 2007
Jed Goodman – Archer Construction, Inc.	October 9, 2007
Ryan Munks – Wyoming Machinery	October 9, 2007
Nick Lynn – Lyntek, Inc.	September 24, 2007
Michelle Umbaugh – Lyntek, Inc.	September 24, 2007
Fred Barbis – Lyntek, Inc.	September 24, 2007
Davis Tilton – Lyntek, Inc.	September 24, 2007
Galen Archer – Lyntek, Inc.	September 24, 2007
Don Tirone – Lyntek, Inc.	September 24, 2007

All individuals who worked within a restricted area during 2007 received radiation worker training.

Oscar A Paulson

Oscar Paulson
Facility Supervisor

consulting
scientists and
engineers

MFG PROJECT: 180903

January 15, 2007

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

RE: Worker Radiation Protection Training

Dear Mr. Paulson:

The following individuals successfully completed a four-hour Worker Radiation Protection Training class presented in Rawlins on January 9, 2007:

Randy Archer	Phil Lavoie
Kenneth Aurell	Harry Lovato
Jacob Bolte	Mike Mariner
Richard Durazo	James McMacken
Sam Finley	Mike Mitchell
Tom Faust	Anita Morris
Roger Hannula	George Palochak
Kathryn Harrison	Mike Pattyn
Gary Hostetler	Oscar Paulson
Tony Johnston	Vaughn Pickett
Harold Kelley	Chad Powell
	Bert Taylor

The class included a review of basic radiation protection principles, specific radiation protection issues related to uranium recovery facilities in general and the Sweetwater Uranium Facility in particular, regulatory requirements, and worker rights and responsibilities. The test scores are summarized in the attached table. The enclosed original tests should be retained in your files.

As always, it was a pleasure working with your group.

Sincerely yours,

MFG/SHEPHERD MILLER

Janet A. Johnson

Janet A. Johnson, PhD, CHP
Senior Technical Advisor

cc Clint Strachan, MFG, Inc.

Attachment

Enclosure

Attachment 1

Kennecott Energy Company Sweetwater Uranium Facility
Annual Radiation Worker Refresher Training
January 9, 2007
Test Scores

Name	**Score (based on a total of 100 points)**
Randy Archer	92
Kenneth Aurell	91
Jacob Bolte	94
Richard Durazo	89
Sam Finley	79
Tom Faust	92
Roger Hannula	91
Kathryn Harrison	92
Gary Hostetler	96
Tony Johnston	87
Harold Kelley	98
Phil Lavoie	100
Harry Lovato	94
Mike Mariner	87
James McMacken	92
Mike Mitchell	87
Anita Morris	96
George Palochak	98
Mike Pattyn	95
Oscar Paulson	98
Vaughn Pickett	87
Chad Powell	94
Bert Taylor	81

RIO TINTO
ENERGY AMERICA

Memorandum

Oscar Paulson
Facility Supervisor
Kennecott Uranium Company

13 February 2008

To: Total and Removable Alpha Monitoring File

Subject: Total and Removable Alpha Monitoring Assessment

In 2007 removable alpha monitoring was performed in the Mill and Solvent Extraction Buildings and in the Ion Exchange area on June 19 and December 17, 2007. Total alpha monitoring was performed in the Mill and Solvent Extraction Buildings and in the Ion Exchange area on June 27 and December 17, 2007.

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 37.3 and 69,413 dpm/100 cm^2. The single high reading was taken at a location on the centrifuge support frame in the Yellowcake Area of the Mill Building. This area is part of the restricted area. Removable alpha contamination in the Mill Building ranged from 0.9 to 1884 dpm/100 cm^2. The desk in the yellowcake operator's office had the high removable alpha reading of 227.4 dpm/100 cm^2 on June 19, 2007. This desk is in the restricted area. It was cleaned. A subsequent (December 17, 2007) removable alpha reading was 2.5 dpm/100 cm^2. 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 219.2 to 247.1 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 48.7 to 540 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 1.6 to 21.5 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 19 and December 17, 2007. Removable alpha monitoring of the stored equipment was performed on June 19 and December 17, 2007, as well. Total alpha readings for the exteriors of stored equipment ranged from 38.2 to 4,187 dpm/100 cm^2. Removable alpha readings for the stored equipment ranged from ND to 469.4 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 the same fiberglass tank.

Oscar A Paulson
Oscar Paulson

RIO TINTO
ENERGY AMERICA

Memorandum

Oscar Paulson
Facility Supervisor
Kennecott Uranium Company

18 February 2008

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 2007. 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 largest dose.

Airborne Particulate Air Sampling Results

The results of this sampling are attached as the spreadsheet "Airborne Sampling Results". Quarterly breathing zone samples and semiannual high volume air samples in the Grinding and Precipitation Areas of the Mill Building and high volume air samples of the tailings impoundment were collected.

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

The Mill Foreman spent a total of 230 hours (23 days) in the Sweetwater Mill and 1230 hours (123 days) in the tailings impoundment during calendar year 2007. This is a maximum estimate of time and is based upon the assumption that for each day the Mill Foreman was in the Restricted Area he spent the entire ten (10) hour day there, even though on many occasions a visit to the mill or tailings impoundment in a given day constituted only a few hours inside the building or inside the impoundment. The days he spent in each area are based on his comments in the Alpha Monitor Record, which he signed upon completion of monitoring after leaving a Restricted Area. A single high volume air sample was collected in the Catchment Basin excavation area from April 19 to May 3, 2007; however it was determined that licensed material was not being excavated, so the data is not being used. However the results are included for completeness.

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:

- The highest airborne concentration measured (from a single breathing zone sample) in the year (September 27, 2007 – 2.71 E-13 µCi/ml) was used for an airborne uranium concentration in the Mill Building.
- An assumption of ten (10) hours occupancy (a full working day) in either the Mill Building, tailings impoundment or Catchment Basin excavation 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 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 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 highest 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;
    - The highest breathing zone sample results for natural uranium, thorium-230 and radium-226 for the mill and tailings impoundment exceed the averages of the high volume air sample results for the above radionuclides in these areas. Thus, their use is inherently conservative.

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

- Mill High Volume Air Samples
- Tailings Impoundment High Volume Air Samples
- Catchment Basin Excavation High Volume Air Samples (a single sample)
- Tailings Impoundment Breathing Zone Samples (with Non-Detect results shown as ND)
- Tailings Impoundment Breathing Zone Samples (with Non-detect results reported as the Lower Limit of Detection (LLD))
- Mill Breathing Zone Samples
- Mill Foreman Breathing Zone Samples

Dose Calculation Results

An internal dose of 5.54 E+01 millirems (55.4 millirems) was calculated for the maximally exposed individual (the Mill Foreman) on site for normal duties.

The calculated dose of 55.4 millirems is less than 15% of the limit of 500 millirems, above which individual monitoring is required as per 10 CFR 20.1502(b)(1). Thus, the maximally exposed individual received less than 5% 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							
Date	Location	Concentration			Percent of DAC		
		(Natural Uranium Only)	Radium-226	Thorium-230	Natural Uranium	Radium-226	Thorium-230
		(microCuries/ml)	(microCuries/ml)	(microCuries/ml)			
27-Mar-07	Mill	3.41E-14	3.41E-14	3.41E-14	0.171	0.011	0.568
28-Jun-07	Mill	6.08E-14	3.04E-14	3.04E-14	0.304	0.010	0.507
27-Sep-07	Mill	2.71E-13	2.10E-13	3.81E-14	1.355	0.070	0.635
28-Dec-07	Mill	2.88E-14	1.83E-13	1.92E-14	0.144	0.061	0.320
	Average:	9.87E-14	1.14E-13	3.05E-14	4.93E-01	3.81E-02	5.08E-01
Average- Forty-six (46) samples	Tailings Impoundment	1.01E-14	4.44E-14	9.74E-15	0.051	0.015	0.157
Taken from March 14 to December 27, 2007							
Please see attached spreadsheets							
Lower Limit of Detection (LLD) value used in average if result was non-detect to produce conservative result.							

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)			
29-May-07	Mill Grinding Area	1.10E-15	6.70E-16	5.62E-16	5.50E-03	2.23E-04	9.37E-03
31-May-07	Mill Precipitation Area	2.36E-15	7.25E-16	4.40E-16	1.18E-02	2.42E-04	7.33E-03
27-Sep-07	Mill Precipitation Area	9.05E-15	2.83E-16	3.95E-16	4.53E-02	9.43E-05	6.58E-03
27-Sep-07	Mill Grinding Area	6.58E-15	1.67E-15	1.29E-15	3.29E-02	5.57E-04	2.15E-02
	Average:	4.77E-15	8.37E-16	1.00E-16	2.39E-02	2.79E-04	1.67E-03
Average- twenty-seven (27) samples	Tailings Impoundment	9.15E-15	1.39E-14	1.93E-14	4.58E-02	4.63E-03	3.22E-01
Taken from May 27 to December 20, 2007							
Please see attached spreadsheets							

Maximum Measured Concentrations							
		Concentration			Percent of DAC		
		Natural Uranium	Radium-226	Thorium-230	Natural Uranium	Radium-226	Thorium-230
		(microCuries/ml)	(microCuries/ml)	(microCuries/ml)			
	Mill	2.71E-13	2.10E-13	3.81E-14	1.36E+00	7.00E-02	6.35E-01
	Tailings	8.14E-14	6.38E-14	5.92E-14	4.07E-01	2.13E-02	9.87E-01

Exposure Calculations				
Hours Worked During 2007				
	Mill	230		
	Tailings Impoundment	1230		
Exposure		Natural Uranium	Radium-226	Thorium-230	Total
		(millirems)	(millirems)	(millirems)	(millirems)
	Mill	7.79E+00	4.03E-01	3.65E+00	
	Tailings	1.25E+01	6.54E-01	3.03E+01	
	Total	2.03E+01	1.06E+00	3.40E+01	5.54E+01

Notes:

Maximum airborne concentrations for uranium, radium-226 and thorium-230 were used in the calculation for each area (mill, and tailings impoundment)

In the case of the mill, the maximum uranium concentration on a breathing zone sample was used to calculate exposure for the entire year.

For this year the highest concentration value was on the first quarter breathing zone sample in which the value was 2.71E-13uCi/ml.

2.71E-13 uCi/ml was used as the highest airborne uranium concentration.

No air sample collected exceeded 10% of the Derived Air Concentration (DAC). The highest airborne natural uranium concentration detected was 1.36% of the DAC, the highest Radium-226 concentration detected was 7.00E-02 % of the DAC and the highest Thorium-230 concentration detected was .987 % of the DAC.

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
Mill Building
High Volume Air Samples

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	Natural Uranium % of DAC (Percent)	Thorium-230 % of DAC (Percent)	Radium-226 % of DAC (Percent)
1	27-May-07	29-May-07	Mill Grinding Area	4.63E+09	1.00E-16	1.10E-15	5.62E-16	6.70E-16	0.0055	0.0094	0.0002
2	30-May-07	31-May-07	Mill Precipitation Area	3.86E+09	1.00E-16	2.36E-15	4.40E-16	7.25E-16	0.0118	0.0073	0.0002
3	23-Sep-07	27-Sep-07	Mill Precipitation Area	9.88E+09	1.00E-16	9.05E-15	3.95E-16	2.83E-16	0.0453	0.0066	0.0001
4	23-Sep-07	27-Sep-07	Mill Grinding Area	1.05E+10	1.00E-16	6.58E-15	1.29E-15	1.67E-15	0.0329	0.0215	0.0006
Average:				7.22E+09	1.00E-16	4.77E-15	6.72E-16	8.37E-16	2.39E-02	1.12E-02	2.75E-04

Derived Air Concentrations Used	microCurie per milliliter		Environmental Air Concentrations Used	microCurie per milliliter	
Natural Ura	2.00E-11	Year	Natural Uranium	9.00E-14	Year
Radium-22	3.00E-10	Week	Radium-226	9.00E-13	Week
Thorium-23	6.00E-12	Year	Thorium-230	3.00E-14	Year

Kennecott Uranium Company
Sweetwater Uranium Project
Tailings Impoundment
High Volume Air Samples

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	27-May-07	29-May-07	4.14E+09	1.00E-16	4.44E-15	1.26E-14	5.56E-15	0.0222	0.2100	0.0019
2	5-Jun-07	12-Jun-07	2.94E+09	3.40E-18	1.32E-15	4.86E-15	1.99E-15	0.0066	0.0810	0.0007
3	13-Jun-07	19-Jun-07	3.19E+09	1.00E-16	2.13E-15	1.13E-15	2.54E-15	0.0107	0.0188	0.0008
4	20-Jun-07	25-Jun-07	2.07E+09	1.00E-16	4.93E-15	3.00E-15	1.40E-15	0.0247	0.0500	0.0005
5	26-Jun-07	3-Jul-07	3.67E+09	1.00E-16	3.74E-15	1.77E-15	1.47E-15	0.0187	0.0295	0.0005
6	9-Jul-07	12-Jul-07	3.59E+09	1.00E-16	7.80E-16	4.29E-15	2.26E-15	0.0039	0.0715	0.0008
7	23-Jul-07	26-Jul-07	3.05E+09	1.00E-16	3.61E-15	1.03E-14	5.64E-15	0.0181	0.1717	0.0019
8	30-Jul-07	7-Aug-07	3.94E+09	1.00E-16	5.59E-16	1.83E-15	9.65E-16	0.0028	0.0305	0.0003
9	8-Aug-07	16-Aug-07	4.88E+09	1.00E-16	2.66E-15	3.75E-15	1.82E-15	0.0133	0.0625	0.0006
10	20-Aug-07	21-Aug-07	1.65E+09	1.00E-16	1.28E-14	6.61E-14	5.24E-14	0.0640	1.1017	0.0175
11	22-Aug-07	29-Aug-07	3.24E+09	1.00E-16	1.67E-15	3.83E-15	2.69E-15	0.0084	0.0638	0.0009
12	30-Aug-07	4-Sep-07	3.32E+09	1.00E-16	2.80E-15	1.13E-14	2.50E-15	0.0140	0.1883	0.0008
13	12-Sep-07	18-Sep-07	3.70E+09	1.00E-16	5.49E-15	7.11E-15	7.03E-15	0.0275	0.1185	0.0023
14	19-Sep-07	24-Sep-07	2.24E+09	1.00E-16	6.47E-15	1.74E-14	1.23E-14	0.0324	0.2900	0.0041
15	25-Sep-07	1-Oct-07	3.52E+09	1.00E-16	8.32E-14	7.95E-15	5.43E-15	0.4160	0.1325	0.0018
16	2-Oct-07	4-Oct-07	3.01E+09	1.00E-16	4.52E-15	1.60E-14	1.29E-14	0.0226	0.2667	0.0043
17	8-Oct-07	11-Oct-07	3.60E+09	1.00E-16	2.94E-15	7.36E-15	5.69E-15	0.0147	0.1227	0.0019
18	15-Oct-07	18-Oct-07	3.51E+09	1.00E-16	1.26E-14	1.64E-14	1.14E-14	0.0630	0.2733	0.0038
19	22-Oct-07	25-Oct-07	3.41E+09	1.00E-16	5.13E-15	2.05E-14	1.59E-14	0.0257	0.3417	0.0053
20	29-Oct-07	1-Nov-07	3.24E+09	1.00E-16	1.26E-14	3.09E-14	2.11E-14	0.0630	0.5150	0.0070
21	5-Nov-07	8-Nov-07	3.64E+09	1.00E-16	1.06E-14	2.21E-14	1.44E-14	0.0530	0.3683	0.0048
22	12-Nov-07	15-Nov-07	2.89E+09	1.00E-16	1.85E-14	9.69E-14	5.92E-14	0.0925	1.6150	0.0197
23	19-Nov-07	21-Nov-07	2.50E+09	1.00E-16	1.57E-14	5.60E-14	3.47E-14	0.0785	0.9333	0.0116
24	26-Nov-07	29-Nov-07	3.27E+09	1.00E-16	2.32E-14	7.74E-14	7.68E-14	0.1160	1.2900	0.0256
25	3-Dec-07	6-Dec-07	3.29E+09	1.00E-16	1.49E-15	4.59E-15	3.65E-15	0.0075	0.0765	0.0012
26	10-Dec-07	13-Dec-07	2.37E+09	1.00E-16	2.15E-15	1.23E-14	9.66E-15	0.0108	0.2050	0.0032
27	17-Dec-07	20-Dec-07	3.16E+09	1.00E-16	1.08E-15	4.05E-15	3.23E-15	0.0054	0.0675	0.0011
Average:			3.22E+09		9.15E-15	1.93E-14	1.39E-14	4.58E-02	3.22E-01	4.63E-03

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

Notes:
Air samples were only collected when equipment was actually operating in the impoundment except for the November 25 to 26, 2006 sample.
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.
No sample exceeded effluent limits for natural uranium, radium-226 or thorium-230 in spite of the fact that they were collected inside of the impoundment.

Kennecott Uranium Company
Sweetwater Uranium Project
Catchment Basin Excavation
High Volume Air Samples

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	19-Apr-07	3-May-07	6.18E+09	1.00E-16	5.81E-15	2.69E-15	4.21E-15	0.0291	0.0448	0.0014
Average:			6.18E+09		5.81E-15	2.69E-15	4.21E-15	2.91E-02	4.48E-02	1.40E-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-230	6.00E-12	Year	**Thorium-230**	3.00E-14	Year

Notes:
Air samples were only collected when equipment was actually operating.
Air sampler was located near TMW-58 at the northern edge of the excavation restricted area.
Air sampler was pointed southwest into the prevailing wind to maximize radionuclide concentrations.
No sample exceeded effluent limits for natural uranium, radium-226 or thorium-230 during the entire course of the work.
If a concentration was listed as Non-Detect the Lower Limit of Detection (LLD) was used as a value to remain conservative.
These values are shown in red text.

Kennecott Uranium Company
Sweetwater Uranium Project
Tailings Impoundment
Breathing Zone Samples

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)
14-Mar-07	Operator	1.27E+06	7.87E-15	ND	ND	ND	ND	ND	ND
20-Mar-07	Dozer Operator	3.24E+06	3.09E-15	ND	ND	ND	ND	ND	ND
22-Mar-07	Dozer Operator	6.50E+05	1.54E-14	ND	ND	ND	ND	ND	ND
23-Apr-07	Trackhoe Operator	6.77E+05	1.48E-14	ND	ND	ND	ND	ND	ND
25-Apr-07	Loader Operator	2.03E+05	4.93E-14	ND	ND	ND	ND	ND	ND
26-Apr-07	Trackhoe Operator	1.39E+06	7.19E-15	ND	ND	5.76E-14	ND	ND	0.019
30-Apr-07	Loader Operator	1.24E+06	8.06E-15	ND	ND	1.16E-14	ND	ND	0.004
10-May-07	Loader Operator	1.42E+06	7.04E-15	ND	ND	ND	ND	ND	ND
4-Jun-07	Truck Driver	4.02E+06	2.49E-15	ND	ND	ND	ND	ND	ND
5-Jun-07	Truck Driver	4.26E+06	2.35E-15	ND	ND	ND	ND	ND	ND
11-Jun-07	Truck Driver	4.08E+06	2.45E-15	ND	ND	ND	ND	ND	ND
12-Jun-08	Truck Driver	3.76E+06	2.66E-15	ND	1.06E-14	ND	ND	0.177	ND
14-Jun-07	Truck Driver	3.88E+06	2.58E-15	ND	ND	ND	ND	ND	ND
18-Jun-07	Loader Operator	1.64E+06	6.10E-15	ND	ND	ND	ND	ND	ND
21-Jun-07	Tailings Labor	3.00E+06	3.33E-15	ND	ND	ND	ND	ND	ND
26-Jun-07	Tailings Labor	3.16E+06	3.16E-15	6.33E-15	1.90E-14	ND	0.032	0.317	ND
28-Jun-07	Tailings Labor	2.09E+06	4.78E-15	1.20E-14	ND	ND	0.060	ND	ND
25-Jul-07	Trackhoe Operator	1.69E+06	5.92E-15	1.18E-14	5.92E-14	ND	0.059	0.987	ND
19-Sep-07	Trackhoe Operator	3.53E+06	2.83E-15	5.67E-15	ND	ND	0.028	ND	ND
20-Sep-07	Loader Operator	3.87E+06	2.58E-15	3.88E-15	ND	6.46E-15	0.019	ND	0.002
2-Oct-07	Truck Driver	1.41E+06	7.09E-15	1.06E-14	ND	6.38E-14	0.053	ND	0.021
3-Oct-07	Trackhoe Operator	1.01E+06	9.90E-15	2.18E-14	ND	3.47E-14	0.109	ND	0.012
4-Oct-07	Truck Driver	2.93E+06	3.41E-15	ND	ND	ND	ND	ND	ND
8-Oct-07	Truck Driver	3.63E+06	2.75E-15	1.79E-14	ND	ND	0.090	ND	ND
9-Oct-07	Trackhoe Operator	2.58E+06	3.88E-15	8.14E-14	ND	1.36E-14	0.407	ND	0.005
10-Oct-07	Truck Driver	3.03E+06	3.30E-15	3.63E-14	3.47E-14	4.95E-15	0.182	0.578	0.002
11-Oct-07	Truck Driver	2.35E+06	4.26E-15	ND	ND	ND	ND	ND	ND
22-Oct-07	Trackhoe Operator	2.92E+06	3.42E-15	ND	ND	ND	ND	ND	ND
23-Oct-07	Loader Operator	1.21E+06	8.26E-15	ND	ND	ND	ND	ND	ND
25-Oct-07	Truck Driver	3.23E+06	3.10E-15	ND	ND	1.55E-12	ND	ND	0.517
30-Oct-07	Haul Truck Operator	3.72E+06	2.69E-15	2.15E-14	2.28E-14	2.55E-14	0.108	0.380	0.009
31-Oct-07	Loader Operator	2.96E+06	3.38E-15	ND	ND	ND	ND	ND	ND
1-Nov-07	Trackhoe Operator	2.89E+06	3.46E-15	6.92E-15	ND	ND	0.035	ND	ND
5-Nov-07	Blade Operato	2.47E+06	4.05E-15	8.10E-15	ND	1.21E-14	0.041	ND	0.004
6-Nov-07	Trackhoe Operator	3.93E+06	2.54E-15	2.54E-15	ND	ND	0.013	ND	ND
8-Nov-07	Haul Truck Operator	3.19E+06	3.13E-15	ND	ND	9.40E-15	ND	ND	0.003
12-Nov-07	Trackhoe Operator	2.59E+06	3.86E-15	ND	ND	ND	ND	ND	ND
14-Nov-07	Blade Operator	3.24E+06	3.09E-15	1.54E-14	ND	ND	0.077	ND	ND
21-Nov-07	Truck Driver	9.35E+05	1.07E-14	ND	ND	ND	ND	ND	ND
3-Dec-07	Haul Truck Operator	2.85E+06	3.51E-15	ND	ND	1.40E-14	ND	ND	0.005
4-Dec-07	Trackhoe Operator	3.17E+06	3.15E-15	4.73E-15	ND	ND	0.024	ND	ND
4-Dec-07	Trackhoe Operator	3.66E+06	2.73E-15	1.09E-14	5.46E-14	ND	0.055	0.910	ND
5-Dec-07	Loader Operator	3.09E+06	3.24E-15	1.13E-14	ND	ND	0.057	ND	ND
6-Dec-07	Haul Truck Operator	2.76E+06	3.62E-15	5.43E-15	ND	ND	0.027	ND	ND
7-Dec-07	Haul Truck Operator	1.70E+06	5.88E-15	ND	ND	ND	ND	ND	ND
27-Dec-07	Haul Truck Operator	3.29E+06	3.04E-15	4.56E-15	ND	ND	0.023	ND	ND
Average:		2.60E+06	5.77E-15	1.50E-14	3.35E-14	1.50E-13	7.48E-02	5.58E-01	5.01E-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 excavation workers are unlikely to receive in excess of 10% of the applicable ALI thus individual monitoring of of intakes is not required.
Employees listed by title to preserve confidentiality

Derived Air Concentrations Used

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

OAP:5/3/06
BZS_LLDs_2-1-07.xls

Kennecott Uranium Company
Sweetwater Uranium Project
Tailings Impoundment
Breathing Zone Samples

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)
14-Mar-07	Operator	1.27E+06	7.87E-15	7.87E-15	7.87E-15	7.87E-15	0.039	0.131	0.003
20-Mar-07	Dozer Operator	3.24E+06	3.09E-15	3.09E-15	3.09E-15	3.09E-15	0.015	0.052	0.001
22-Mar-07	Dozer Operator	6.50E+05	1.54E-14	1.54E-14	1.54E-14	1.54E-14	0.077	0.257	0.005
23-Apr-07	Trackhoe Operator	6.77E+05	1.48E-14	1.48E-14	1.48E-14	1.48E-14	0.074	0.005	0.005
25-Apr-07	Loader Operator	2.03E+05	4.93E-14	4.93E-14	4.93E-14	4.93E-14	0.247	0.822	0.016
26-Apr-07	Trackhoe Operator	1.39E+06	5.76E-14	7.19E-15	7.19E-15	7.19E-15	0.036	0.120	0.002
30-Apr-07	Loader Operator	1.24E+06	8.06E-15	8.06E-15	8.06E-15	1.16E-14	0.040	0.134	0.004
10-May-07	Loader Operator	1.42E+06	7.04E-15	7.04E-15	7.04E-15	7.04E-15	0.035	0.117	0.002
4-Jun-07	Truck Driver	4.02E+06	2.49E-15	2.49E-15	2.49E-15	2.49E-15	0.012	0.042	0.001
5-Jun-07	Truck Driver	4.26E+06	2.35E-15	2.35E-15	2.35E-15	2.35E-15	0.012	0.039	0.001
11-Jun-07	Truck Driver	4.08E+06	2.45E-15	2.45E-15	2.45E-15	2.45E-15	0.012	0.041	0.001
12-Jun-08	Truck Driver	3.76E+06	2.66E-15	2.66E-15	1.06E-14	2.66E-15	0.013	0.177	0.001
14-Jun-07	Truck Driver	3.88E+06	2.58E-15	2.58E-15	2.58E-15	2.58E-15	0.013	0.043	0.001
18-Jun-07	Loader Operator	1.64E+06	6.10E-15	6.10E-15	6.10E-15	6.10E-15	0.031	0.102	0.002
21-Jun-07	Tailings Labor	3.00E+06	3.33E-15	3.33E-15	3.33E-15	3.33E-15	0.017	0.056	0.001
26-Jun-07	Tailings Labor	3.16E+06	3.16E-15	6.33E-15	1.90E-14	3.16E-15	0.032	0.317	0.001
28-Jun-07	Tailings Labor	2.09E+06	4.78E-15	1.20E-14	4.78E-15	4.78E-15	0.060	0.080	0.002
25-Jul-07	Trackhoe Operator	1.69E+06	5.92E-15	1.18E-14	5.92E-14	5.92E-15	0.059	0.987	0.002
19-Sep-07	Trackhoe Operator	3.53E+06	2.83E-15	5.67E-15	2.83E-15	2.83E-15	0.028	0.047	0.001
20-Sep-07	Loader Operator	3.87E+06	2.58E-15	3.88E-15	2.58E-15	6.46E-15	0.019	0.043	0.002
2-Oct-07	Truck Driver	1.41E+06	7.09E-15	1.06E-14	7.09E-15	6.38E-14	0.053	0.118	0.021
3-Oct-07	Trackhoe Operator	1.01E+06	9.90E-15	2.18E-14	9.90E-16	3.47E-14	0.109	0.017	0.012
4-Oct-07	Truck Driver	2.93E+06	3.41E-15	3.41E-15	3.41E-15	3.41E-15	0.017	0.057	0.001
8-Oct-07	Truck Driver	3.63E+06	2.75E-15	1.79E-14	2.75E-15	2.75E-15	0.090	0.046	0.001
9-Oct-07	Trackhoe Operator	2.58E+06	3.88E-15	8.14E-14	3.88E-15	1.36E-14	0.407	0.065	0.005
10-Oct-07	Truck Driver	3.03E+06	3.30E-15	3.63E-15	3.47E-14	4.95E-15	0.018	0.578	0.002
11-Oct-07	Truck Driver	2.35E+06	4.26E-15	4.26E-15	4.26E-15	4.26E-15	0.021	0.071	0.001
22-Oct-07	Trackhoe Operator	2.92E+06	4.42E-15	3.42E-15	3.42E-15	3.42E-15	0.017	0.057	0.001
23-Oct-07	Loader Operator	1.21E+06	8.26E-15	8.26E-15	8.26E-15	8.26E-15	0.041	0.138	0.003
25-Oct-07	Truck Driver	3.23E+06	3.10E-15	3.10E-15	3.10E-15	1.55E-12	0.016	0.052	0.517
30-Oct-07	Haul Truck Operator	3.72E+06	2.69E-15	2.15E-14	2.28E-14	2.55E-14	0.108	0.380	0.009
31-Oct-07	Loader Operator	2.96E+06	2.28E-15	3.83E-15	3.83E-15	3.83E-15	0.019	0.064	0.001
1-Nov-07	Trackhoe Operator	2.89E+06	3.46E-15	6.92E-15	3.46E-15	3.46E-15	0.035	0.058	0.001
5-Nov-07	Blade Operato	2.47E+06	4.05E-15	8.10E-15	4.05E-15	1.21E-14	0.041	0.068	0.004
6-Nov-07	Trackhoe Operator	3.93E+06	2.54E-15	2.54E-15	2.54E-15	2.54E-15	0.013	0.042	0.001
8-Nov-07	Haul Truck Operator	3.19E+06	3.13E-15	3.13E-15	3.13E-15	9.40E-15	0.016	0.052	0.003
12-Nov-07	Trackhoe Operator	2.59E+06	3.86E-15	3.86E-15	3.86E-15	3.86E-15	0.019	0.064	0.001
14-Nov-07	Blade Operator	3.24E+06	3.09E-15	1.54E-14	3.09E-15	3.09E-15	0.077	0.052	0.001
21-Nov-07	Truck Driver	9.35E+05	1.07E-14	1.07E-14	1.07E-14	1.07E-14	0.054	0.178	0.004
3-Dec-07	Haul Truck Operator	2.85E+06	3.51E-15	3.51E-15	3.51E-15	1.40E-14	0.018	0.059	0.005
4-Dec-07	Trackhoe Operator	3.17E+06	3.15E-15	4.73E-15	3.15E-15	3.15E-15	0.024	0.053	0.001
4-Dec-07	Trackhoe Operator	3.66E+06	2.73E-15	1.09E-14	5.46E-14	2.73E-15	0.055	0.910	0.001
5-Dec-07	Loader Operator	3.09E+06	3.24E-15	1.13E-14	3.24E-15	3.24E-15	0.057	0.054	0.001
6-Dec-07	Haul Truck Operator	2.76E+06	3.62E-15	5.43E-15	3.62E-15	3.62E-15	0.027	0.060	0.001
7-Dec-07	Haul Truck Operator	1.70E+06	5.88E-15	5.88E-15	5.88E-15	5.88E-15	0.029	0.098	0.002
27-Dec-07	Haul Truck Operator	3.29E+06	3.04E-15	4.56E-15	3.04E-15	3.04E-15	0.023	0.051	0.001
Average:		2.60E+06	6.86E-15	9.88E-15	9.51E-15	4.26E-14	4.94E-02	1.53E-01	1.42E-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 excavation workers are unlikely to receive in excess of 10% of the applicable ALI thus individual monitoring of of intakes is not required.
Employees listed by title to preserve confidentiality

Derived Air Concentrations Used

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

OAP:5/3/06
BZS LLDs 2-1-07.xls

Kennecott Uranium Company
Sweetwater Uranium Project
Mill
Breathing Zone Samples

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)
27-Mar-07	Mill Foreman	2.93E+05	3.41E-14	3.41E-14	3.41E-14	3.41E-14	0.171	0.568	0.011
28-Jun-07	Mill Foreman	3.29E+05	3.04E-14	6.08E-14	3.04E-14	3.04E-14	0.304	0.507	0.010
26-Sep-07	Precipitation - LynTek, Inc.	1.73E+06	5.78E-15	9.25E-14	8.09E-14	2.31E-14	0.463	1.348	0.008
9/26/2007	Solvent Extraction (SX) - LynTek, Inc.	1.59E+06	6.29E-15	6.60E-14	4.09E-14	6.29E-15	0.330	0.682	0.002
27-Sep-07	Mill Foreman	1.05E+06	9.52E-15	2.71E-13	2.10E-13	3.81E-14	1.355	3.500	0.013
10-Dec-07	Solvent Extraction (SX) - LynTek, Inc.	3.79E+05	2.64E-14	1.45E-13	2.64E-14	2.64E-14	0.725	0.440	0.009
28-Dec-07	Mill Foreman	5.20E+05	1.95E-14	2.88E-14	1.83E-13	1.92E-14	0.144	3.050	0.006
Average:		8.42E+05	1.89E-14	9.97E-14	8.65E-14	2.54E-14	4.99E-01	1.44E+00	8.46E-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 excavation workers are unlikely to receive in excess of 10% of the applicable ALI thus individual monitoring of of intakes is not required.
Employees listed by title to preserve confidentiality

Derived Air Concentrations Used

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

OAP:5/3/06

BZS_LLDs_2-1-07.xls

Kennecott Uranium Company
Sweetwater Uranium Project
Mill Foreman
Breathing Zone Samples

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)
27-Mar-07	Mill Foreman	2.93E+05	3.41E-14	3.41E-14	3.41E-14	3.41E-14	0.171	0.568	0.011
28-Jun-07	Mill Foreman	3.29E+05	3.04E-14	6.08E-14	3.04E-14	3.04E-14	0.304	0.507	0.010
27-Sep-07	Mill Foreman	1.05E+06	9.52E-15	2.71E-13	2.10E-13	3.81E-14	1.355	3.500	0.013
28-Dec-07	Mill Foreman	5.20E+05	1.95E-14	2.88E-14	1.83E-13	1.92E-14	0.144	3.050	0.006
Average:		5.57E+05	2.47E-14	1.22E-13	9.15E-14	3.42E-14	6.10E-01	1.53E+00	1.14E-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 excavation workers are unlikely to receive in excess of 10% of the applicable ALI thus individual monitoring of of intakes is not required.
Employee listed by title to preserve confidentiality

Derived Air Concentrations Used

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

RIO TINTO
ENERGY AMERICA

Memorandum

Oscar Paulson
Facility Supervisor
Kennecott Uranium Company

13 February 2008

To: NRC File

Subject: Summary of Radiation Instrument Calibrations – 2007

Instrument		Date(s) Calibrated
Calibration Orifices (Annual calibration required)		
	Lo Vol-40A S/N M100	2/13/07
	Hi Vol-25A S/N 8080978	2/13/07
	Sierra Instruments TE-5025A	2/13/07
Calibrators (Annual calibration required)		
	CD-530-1 Digital Venturi Calibrator S/N 3039	2/2/07
Alpha Detectors		
	43-5 S/N P-2425	6/29/07 & 1/2/08
	43-5 S/N P-2426	6/28/07 & 1/2/08
	43-5 S/N P-2427	5/25/07 & 12/5/07
	43-5 S/N P-2428	6/28/07 & 1/2/08
	43-5 S/N P-2429	5/25/07 & 12/12/07
	43-90 S/N PR-138872	5/25/07 & 11/30/07
	43-90 S/N PR-138874	12/6/06, 6/29/07 & sent in 2/6/08
	43-90 S/N 232499	2/4/07 & 11/15/07
	43-1 S/N PR-206925	6/29/07 & 1/3/08
	AC3-5 S/N 3793	5/21/07 & 12/12/07
Gamma Meters/Detectors		
	12S S/N 11816	5/21/07 & 12/5/07
	5 S/N 8170	5/21/07 & 12/11/07
	44-10 S/N 206932	6/29/07 & 1/3/08
	44-10 S/N 233869	5/20/07 & 12/21/07
	19 S/N 16938	5/25/07 & 12/12/07
	44-10 S/N 252103 (new instrument)	7/13/07 & 1/11/08
	44-10 S/N 252068 (new instrument)	5/24/07 & 11/15/07
Rate Meters		
	177 S/N 14390	12/6/06, 6/28/07 & sent in 2/6/08
	177 S/N 14407	5/25/07 & 11/28/07
	2350-1 S/N 192613	2/4/07 & 11/15/07 (unit at calibrator a long time)
	2350-1 S/N 216182	5/20/07 & 12/21/07
	2350-1 S/N 235547 (new instrument)	5/24/07 & 11/15/07
	2350-1 S/N 235565 (new instrument)	7/13/07 & 1/2/08

	Model 3 S/N 157539	5/25/07 & 11/28/07
	Model 12 S/N 12280	5/21/07 & 12/20/07
	PRS-1 S/N 330/3793	5/21/07 & 12/20/07
SAC R4		
	S/N 383	12/20/06 & 11/16/07 (unit at calibrator a long time)
SAC R5		
	S/N 614	5/21/07 & 12/7/07
	S/N 965	12/20/06 & 11/16/07 (unit at calibrator a long time)
	S/N 602548	12/20/06 & 11/16/07
Scaler		
	MS-2 S/N 738	12/20/06 & 11/16/07 (unit at calibrator a long time)
	MS-2 S/N 994	5/21/07 & 12/7/07
Beta Gamma Detector		
	Model 44-1 S/N PR-156890	5/21/07 & 12/20/07
	Model 44-9 S/N PR-093335	5/25/07 & 12/5/07
Air Pumps Two new Buck Basic 12 personal air samplers and DF-604 low volume environmental air sampler were placed in service at the facility in 2007.		
	Bendix BDX-44 S/N 11-79-170	Used for personal breathing zone sampling for tailings impoundment work. Please see attached sheet
	Sensidyne GilAir II S/N 902331	
	MSA #1	
	MSA #5	
	Buck Basic 12 S/N 12486	
	Buck Basic 12 S/N 12494	
Scintillation Detector		
	Model SPA-1 S/N 704727	12/20/06 & 11/16/07 (unit at calibrator a long time)
Hi Vol Air Sampler		
	S/N 17625	3/27/07, 4/19/07, 9/16/07 & 10/30/07
	S/N 2	3/15/07, 5/27/07, 9/16/07 & 10/29/07
	S/N 3	3/27/07, 5/27/07, 8/12/07 & 10/8/07
	S/N 4	3/27/07, 5/27/07, 9/10/07 & 10/29/07
Lo Vol Air Sampler (Graseby)		
	Unit #2	1/9/07, 2/5/07, 3/5/07, 4/15/07, 5/27/07, 6/28/07; Unit taken out of service 3/26/07 and replaced with F&J Specialties DF-604. Unit retained on site as spare in the event the F&J Specialties unit failed and for when flow controller from F&J Specialties unit had to be sent to the factory for annual calibration. Should the unit be required in the field it would be calibrated immediately prior to use. Calibration was continued on unit until June 2007 in the event the F&J unit proved unsatisfactory.
Lo Vol Air Sampler (F & J Specialties)		
	DF-604 S/N 8240	2/9/07 (annual factory calibration – other calibrations performed in field with CD-530-1 Digital Venturi Calibrator), 3/26/07, 4/11/0/, 4/26/07, 5/22/07, 6/14/07, 7/16/07, 8/13/07, 9/10/07, 10/8/07, 11/5/07 & 12/3/07.

Lo Vol Air Sampler In-Service Dates:
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 March 26 to December 31, 2007. The Graseby Unit #2 was used at that location from January 1 to March 26, 2007. Units were calibrated monthly when in actual use.

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
3/11/07	18:04
3/14/07	17:44
4/17/07	14:25
4/25/07	17:21
4/30/07	17:42
5/21/07	15:21
9/16/07	16:22
10/3/07	12:46

Sensidyne GilAir II S/N 902331

Date	Time
3/14/07	16:31
3/27/07	11:33
4/25/07	7:59
4/25/07	17:21
4/30/07	8:15
4/30/07	17:42
5/22/07	15:08
9/10/07	12:59

The unit failed on September 17, 2007 and was discarded.

MSA #1 – S/N RN06031001

Date	Time
3/27/07	11:57
5/22/07	15:08
9/16/07	16:22

The unit was discarded. Showed degrading performance on September 16, 2007 calibration.

MSA #5 – S/N RN06031002

Date	Time
3/27/07	11:48
5/21/07	15:21
9/16/07	16:22

The unit was discarded. Showed degrading performance on September 16, 2007 calibration.

Buck Basic 12 – S/N B12486 (New unit – Acquired February 2007)

Date	Time	Date	Time	Date	Time	Date	Time	Date	Time	Date	Time
2/12/07		6/7/07	7:09	6/25/07	17:41	10/9/07	17:15	11/11/07	14:15	12/30/07	14:34
2/28/07	6:57	6/7/07	7:09	6/26/07	17:38	10/14/07	15:14	11/18/07	17:38		
3/27/07	11:28	6/11/07	17:30	7/19/07	17:38	10/31/07	7:09	12/3/07	17:37		
4/23/07	10:25	6/14/07	7:15	9/2/07	18:05	10/31/07	17:19	12/5/07	17:38		
5/21/07	15:21	6/18/07	12:29	10/3/07	12:46	11/4/07	16:31	12/9/07	16:33		
6/5/07	7:07	6/19/07	10:35	10/7/07	15:45	11/5/07	9:17	12/10/07	17:32		

Buck Basic 12 – S/N B12494 (New unit – Acquired June 2007)

Date	Time	Date	Time	Date	Time	Date	Time	Date	Time
6/21/07	10:35	10/3/07	12:02	10/31/07	10:45	12/9/07	16:33	12/30/07	14:34
6/25/07	17:41	10/7/07	15:45	11/11/07	14:15	12/10/07	17:52		
9/16/07	16:22	10/9/07	15:17	11/18/07	17:38	12/12/07	12:06		
9/19/07	17:41	10/14/07	15:14	11/21/07	17:19	12/13/07	20:37		
9/20/07	17:23	10/25/07	7:15	12/2/07	17:00	12/17/07	17:18		
9/25/07	10:39	10/25/07	17:38	12/5/07	17:38	12/23/07	15:37		

Oscar A Paulson

Oscar Paulson
Facility Supervisor

RIO TINTO
ENERGY AMERICA

Memorandum

Oscar Paulson
Facility Supervisor
Kennecott Uranium Company

13 February 2008

Gamma Radiation Monitoring File

Subject: External Gamma Radiation Survey Assessment

In 2007, gamma surveys of the mill and ion exchange areas were conducted on June 26 and December 13, 2007. A gamma survey of the disposal area in the tailings impoundment was conducted on June 27 and December 17, 2007.

Twenty-eight (28) locations throughout the mill and solvent extraction buildings and seventeen (17) locations associated with the IX in June 2007 and eighteen (18) locations associated with the IX in December 2007 that were monitored for gamma radiation.

Gamma readings ranged from 34.1 to 714 µR/hour (243-µR/hr average for the year) for the Ion Exchange related equipment, to 11.4 to 875 µR/hour (69.5 µR/hr average for the year) in the Mill and Solvent Extraction (SX) Buildings.

The stored equipment was monitored as well on 6/14/07 and 12/13/07. The stored equipment ranged from 14.6 to 2500 µR/hr at thirty (30) centimeters from the equipment surface, averaging 597.6 µR/hr at thirty (30) centimeters from the equipment surface. The stored equipment exhibited a higher average reading 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 2.5 millirems/hour (.0025 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 106.8 µR/hr. (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 dose above background received by any individual as measured by Luxel dosimeters was 11 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

Stored Resin Gamma Radiation Monitoring Results			
Date	**Gamma**		
	Top	**Bottom**	
	(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	
6/26/07	25.1	111	
12/13/07	24.9	133	
Average	36.9	102.8	
Standard Deviation:	18.7	49.3	
OAP:2007			
resin0001.xls			

Kennecott Uranium Company			
Sweetwater Uranium Project			
Tailings Impoundment Gamma Radiation Survey			
Date:	27-Jun-07	**Rate meter:**	Ludlum Model 2350-1
Time:	01:00 PM	**Serial Number:**	216182
		Calibration Date:	21-May-07
Check Source:	Cs-137	**Probe:**	Ludlum Model: 44-10
		Serial Number:	PR-233869
Serial Number:	2304	**Calibration Date:**	21-May-07
Counts:	283 microR/hour	**Background:**	21.6 microR/hour
Location		**Reading**	
Ramp Area	Ramp Top	95.8	microR/hour
	Ramp Middle	88.9	microR/hour
	Ramp Middle	95.7	microR/hour
	Ramp Middle	102.0	microR/hour
	Ramp Middle	100.0	microR/hour
	Ramp Middle	102.0	microR/hour
	Ramp Middle	99.6	microR/hour
	Ramp Middle	98.2	microR/hour
	Ramp Middle	77.4	microR/hour
	Ramp Middle	68.3	microR/hour
	Ramp Bottom	107.0	microR/hour
Storage Area		89.1	microR/hour
		85.3	microR/hour
		72.3	microR/hour
		82.8	microR/hour
		70.8	microR/hour
		75.0	microR/hour
Road	West end	79.0	microR/hour
	Middle	77.9	microR/hour
	Middle	80.9	microR/hour
	Middle	104.0	microR/hour
	Middle	95.8	microR/hour
	Middle	80.2	microR/hour
	Middle	78.6	microR/hour
	Middle	80.1	microR/hour
	Middle	73.2	microR/hour
	Middle	74.2	microR/hour
	Middle	72.5	microR/hour
	Middle	73.2	microR/hour
	Middle	65.1	microR/hour
	Middle	64.3	microR/hour
	Middle	70.8	microR/hour
	East End	70.3	microR/hour
Dump Area	Dump Area	77.2	microR/hour
	Dump Area	63.9	microR/hour
	Dump Area	57.3	microR/hour
	Dump Area	73.3	microR/hour
	Dump Area	58.5	microR/hour
	Dump Area	81.8	microR/hour

	Dump Area	102.0	microR/hour
Road to East Embankment	West Side	111.0	microR/hour
		110.0	microR/hour
		116.0	microR/hour
		121.0	microR/hour
		124.0	microR/hour
		123.0	microR/hour
		119.0	microR/hour
		121.0	microR/hour
		124.0	microR/hour
		126.0	microR/hour
		132.0	microR/hour
		131.0	microR/hour
		136.0	microR/hour
		134.0	microR/hour
		123.0	microR/hour
		127.0	microR/hour
		122.0	microR/hour
		124.0	microR/hour
		134.0	microR/hour
		113.0	microR/hour
East Embankment Work Area		73.6	microR/hour
		68.2	microR/hour
		69.4	microR/hour
		68.6	microR/hour
		63.7	microR/hour
		71.8	microR/hour
		73.6	microR/hour
		76.3	microR/hour
		102.0	microR/hour
		71.7	microR/hour
		61.9	microR/hour
		76.3	microR/hour
		73.3	microR/hour
		68.8	microR/hour
		75.8	microR/hour
		94.4	microR/hour
		72.3	microR/hour
		69.1	microR/hour
		88.2	microR/hour
		119.0	microR/hour
		123.0	microR/hour
		131.0	microR/hour
		148.0	microR/hour
		126.0	microR/hour
		125.0	microR/hour
		122.0	microR/hour
Road East of Pond		56.3	microR/hour
		56.2	microR/hour
		47.8	microR/hour
		45.2	microR/hour
		47.1	microR/hour
Road South of Pond		51.7	microR/hour
		45.0	microR/hour
		42.0	microR/hour
		45.1	microR/hour

		43.3	microR/hour
		46.7	microR/hour
		43.3	microR/hour
		47.9	microR/hour
		47.2	microR/hour
		49.2	microR/hour
		53.3	microR/hour
		60.2	microR/hour
Road West of Pond		65.1	microR/hour
		63.7	microR/hour
		66.9	microR/hour
		65.7	microR/hour
		57.4	microR/hour
		54.1	microR/hour
		67.7	microR/hour
Main Ramp	Bottom	57.3	microR/hour
		48.5	microR/hour
		47.7	microR/hour
		54.8	microR/hour
		55.0	microR/hour
		52.1	microR/hour
		52.1	microR/hour
		54.7	microR/hour
		52.2	microR/hour
		53.4	microR/hour
		54.2	microR/hour
		56.7	microR/hour
		56.5	microR/hour
		52.6	microR/hour
		47.0	microR/hour
		51.8	microR/hour
		45.5	microR/hour
		43.7	microR/hour
		46.6	microR/hour
	Top	45.6	microR/hour
	Average:	79.6	
	Standard Deviation:	27.9	
	Median:	72.9	
	Maximum:	148.0	
	Minimum:	42.0	
OAP:2/13/08			
TAILSGM9.XLS			

Kennecott Uranium Company			
Sweetwater Uranium Project			
Tailings Impoundment Gamma Radiation Survey			
Date:	17-Dec-07	**Rate meter:**	Ludlum Model 2350-1
Time:		**Serial Number:**	235547
		Calibration Date:	15-Nov-07
Check Source:	Cs-137	**Probe:**	Ludlum Model: 44-10
		Serial Number:	252068
Serial Number:	2304	**Calibration Date:**	08-Dec-06
Counts:	257 microR/hour	**Background:**	244 microR/hour
Location		**Reading**	
Road at Base Old Ramp (West to East)			
	West End	149.0	microR/hour
		130.0	microR/hour
		119.0	microR/hour
		126.0	microR/hour
		130.0	microR/hour
		92.1	microR/hour
	East End	91.1	microR/hour
Storage Area			
	West End	87.0	microR/hour
		79.9	microR/hour
		79.8	microR/hour
		85.5	microR/hour
		68.5	microR/hour
	East End	78.7	microR/hour
Road South			
	North End	81.2	microR/hour
		103.0	microR/hour
		130.0	microR/hour
		127.0	microR/hour
		136.0	microR/hour
		145.0	microR/hour
		155.0	microR/hour
		157.0	microR/hour
	South End	137.0	microR/hour
South Berm Pond #1			
	West End	133.0	microR/hour
		137.0	microR/hour
		141.0	microR/hour
		134.0	microR/hour
		140.0	microR/hour
		127.0	microR/hour
		136.0	microR/hour
		132.0	microR/hour
		134.0	microR/hour
		136.0	microR/hour
		132.0	microR/hour
		132.0	microR/hour
		130.0	microR/hour
		136.0	microR/hour
		142.0	microR/hour
		138.0	microR/hour
		134.0	microR/hour
		137.0	microR/hour
		134.0	microR/hour
	East End	137.0	microR/hour

Pond #3 Interior			
		142.0	microR/hour
		133.0	microR/hour
		137.0	microR/hour
		139.0	microR/hour
		153.0	microR/hour
		154.0	microR/hour
		140.0	microR/hour
		129.0	microR/hour
		124.0	microR/hour
		128.0	microR/hour
		119.0	microR/hour
		131.0	microR/hour
		97.6	microR/hour
West Berm Pond #3			
	North End	81.4	microR/hour
		81.0	microR/hour
		117.0	microR/hour
	South End	133.0	microR/hour
South Berm Pond #3			
	West End	146.0	microR/hour
		147.0	microR/hour
		140.0	microR/hour
		127.0	microR/hour
		126.0	microR/hour
		129.0	microR/hour
		125.0	microR/hour
		135.0	microR/hour
		132.0	microR/hour
		152.0	microR/hour
		148.0	microR/hour
	East End	146.0	microR/hour
Pond #5 Interior			
	East End	150.0	microR/hour
		200.0	microR/hour
		216.0	microR/hour
		205.0	microR/hour
		174.0	microR/hour
		153.0	microR/hour
		167.0	microR/hour
		145.0	microR/hour
		91.1	microR/hour
		90.4	microR/hour
	West End	80.4	microR/hour
Excavation Area South of Main Road			
		104.0	microR/hour
		177.0	microR/hour
		175.0	microR/hour
		169.0	microR/hour
		182.0	microR/hour
		160.0	microR/hour
		163.0	microR/hour
		170.0	microR/hour
		160.0	microR/hour
		170.0	microR/hour

Southwest Corner			
		120.0	microR/hour
		112.0	microR/hour
		166.0	microR/hour
		170.0	microR/hour
		180.0	microR/hour
		131.0	microR/hour
		100.0	microR/hour
	Average:	134.0	
	Standard Deviation:	28.8	
	Median:	134.0	
	Maximum:	216.0	
	Minimum:	68.5	
ss:1/24/08			
TAILSGM11.xls			

KENNECOTT URANIUM COMPANY

RADIATION DOSIMETRY RESULTS

DEEP DOSE

2007

EMPLOYEE TITLE		Dosimeter Number	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 FOREMAN	MF	26	KENNECOTT URANIUM COMPANY	M	M	lost	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	2	M	M	2
ADMINISTRATIVE COORDINATOR	AC	25	KENNECOTT URANIUM COMPANY	M	M	M	M	M	M	M	M	M	M	M	M	0
DATA ENTRY	DATA - 2	63	ADECCO							M	M	M	M	M	M	0
DATA ENTRY	DATA - 1	53	ADECCO				M	M	M	M						0
CONTRACT EMPLOYEE																
TITLE			**EMPLOYER**													
Project Manager	PM #1	29	ARCHER CONSTRUCTION, INC.	M	M	28	M	M	M	3	M	M	4	M	M	35
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	M	1	M	M	1
Equipment Operator	EO# 1	30	ARCHER CONSTRUCTION, INC.	M	M	M	M	M	M	M	M	1	4			5
Equipment Operator	EO# 2	32	ARCHER CONSTRUCTION, INC.	M	M	M	M	M								0
Equipment Operator	EO# 3	38	ARCHER CONSTRUCTION, INC.	M	M	M	M	M	M	3	2	M	6	M	M	11
Equipment Operator	EO# 4	37	ARCHER CONSTRUCTION, INC.	M	M	32	M	M								32
Equipment Operator	EO# 5	40	ARCHER CONSTRUCTION, INC.	M	M	M	M	M	M	M	M	M	5			5
Equipment Operator	EO# 6	39	ARCHER CONSTRUCTION, INC.	M	M	M	M	M	M	M	M	M	8	M	M	8
Equipment Operator	EO# 7	41	ARCHER CONSTRUCTION, INC.	M	M											0
Equipment Operator	EO# 8	43	ARCHER CONSTRUCTION, INC.	M	M											0
Equipment Operator	EO# 9	44	ARCHER CONSTRUCTION, INC.	M	M	M	M	3	M	M	M	2	4	M	M	9
Equipment Operator	EO# 10	45	ARCHER CONSTRUCTION, INC.	visitor # 1	M	2	M	M								2
Equipment Operator	EO# 11	46	ARCHER CONSTRUCTION, INC.	visitor	M	M	M	M	M							0
Equipment Operator	EO# 13	52	ARCHER CONSTRUCTION, INC.		visitor # 1	M	M	M								0
Equipment Operator	EO# 14	48	ARCHER CONSTRUCTION, INC.		M	M	M	M	M	2	M	M	3	M	1	6
Equipment Operator	EO# 15	54	ARCHER CONSTRUCTION, INC.			M	M	M	M	1	M	M	7	M	M	8
Equipment Operator	EO# 16	57	ARCHER CONSTRUCTION, INC.				visitor # 1	M								0
Equipment Operator	EO# 18	58	ARCHER CONSTRUCTION, INC.					1	M	M	M					1
Equipment Operator	EO# 19	60	ARCHER CONSTRUCTION, INC.					visitor # 1	M	2	M	M	4		2	8
Equipment Operator	EO# 20	59	ARCHER CONSTRUCTION, INC.						M	M	M	M				0
Equipment Operator	EO# 21	61	ARCHER CONSTRUCTION, INC.						M	3	M	M	3	M	M	6
Equipment Operator	EO# 22	62	ARCHER CONSTRUCTION, INC.						M	M	M	M	M	M	M	0
Equipment Operator	EO# 23	64	ARCHER CONSTRUCTION, INC.							visitor # 3	M	M	5	M	M	5
Equipment Operator	EO# 25	73	ARCHER CONSTRUCTION, INC.										M	M	1	1
Equipment Operator	EO# 26	65	ARCHER CONSTRUCTION, INC.							visitor # 1	M	1	5	M	2	8
Mechanic	MEC #1	74	ARCHER CONSTRUCTION, INC.											M	M	0
Equipment Operator	EO# 27	Not yet issued	ARCHER CONSTRUCTION, INC.													0
Equipment Operator	EO# 28	Not yet issued	ARCHER CONSTRUCTION, INC.													0

VISITOR		35			M	M	M	M	M	M	3	M	M	M	M	1		4
VISITOR # 1		36			M	M	M	M	M	M	2	M	M	M	M	lost		2
VISITOR # 3		33			M	M	M	1	M	M	M	M	M	8	M	M		9
Consultant	CON #1	66	*5	LYNTEK, INC.									M	M				0
Consultant	CON #2	68	*5	LYNTEK, INC.									M	M				0
Consultant	CON #3	67	*5	LYNTEK, INC.									M	M				0
Consultant	CON #4	71	*5	LYNTEK, INC.									M	M				0
Consultant	CON #5	72	*5	LYNTEK, INC.									M	M				0
Consultant	CON #6	70	*5	LYNTEK, INC.									M	M				0
Consultant	CON #7	69	*5	LYNTEK, INC.									M	M				0
	CON #8			LYNTEK, INC. ****												Visitor		
	CON #9			LYNTEK, INC. ****												Visitor #3		
Surveyor	SURV	28		ROBERT JACK SMITH AND ASSOCIATES**	M	M	M	M	M	M	M	M	M	7	M	M		7
Security	SEC #1	49		SECURITAS	M	M	M	M	M	M	25	M	M	M	M	M		25
Security	SEC #2	50		SECURITAS	M	M	M	M	M	M	40	M	M	M	M	M		40

Notes: M = Minimal repoting service of 1 MREM

	No longer employed by contractor
	Not on site during month
	Not yet hired
	Lost dosimeter
*5	Worked onsite from September 24 to September 30, 2007. Issued dosimeters for the month of October, 2007.
	October 2007 dosimeters for LynTek, Inc. personnel arrived prior to September 24, 2007 and were used for work done in September, 2007
EO# 16	Worked on site less than one (1) day - April 24, 2007
	Did not work in restricted area
	Dosimeter lost/Dose estimated by Landauer, Inc.
	Archer Construction, Inc. employee EO#17 did not work in the restricted area hence is not listed.
	Archer Construction, Inc. employee EO#27 did not work in the restricted area hence were not yet issued a dosimeter.
	Archer Construction, Inc. employee EO#28 did not work in the restricted area hence were not yet issued a dosimeter.
	Employees listed by number to preserve confidentiality

Note: PM # 1 (March 2007), EO # 4 (March 2007), SEC # 1 (July 2007) and SEC # 2 (July 2007) lost their dosimeters.
The dosimeters were later found and sent without controls so the background dose was not subtracted, thus the deep dose includes background which is why it is elevated.
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

OAP
B:\dosimetry 2007.xls

RIO TINTO
ENERGY AMERICA

Memorandum

Oscar Paulson
Facility Supervisor
Kennecott Uranium Company

17 February 2008

Radon Monitoring File

Subject: **Radon Daughter Monitoring Assessment**

In 2007 radon daughter monitoring was conducted on June 24 to 25 and December 5 to 12, 2007.

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. Radon daughter concentrations (in working levels) were at low levels, ranging from ND to 0.008 WL in the Ion Exchange area (average: 0.004) and 0.004 to 0.027 WL in the Mill Building (average: 0.012). The ventilation fan operated continuously in the Solvent Extraction (SX) Building. Radon levels varied in the SX building from 0.014 to 0.03 WL, averaging 0.028 WL in June 2007 and 0.020 WL in December 2007. 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 2007 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 2007 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 1.2 to 3.1 pCi/L. Radon concentrations on top of the tank varied from 2.1 to 3.8 pCi/L. These values are at background levels since upwind radon concentrations for the facility varied from 3.4 to 3.9 pCi/L during the second half of 2007, 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	2.7	3.8	16.9 [1]
2nd	1.2	2.1	No data [1]
3rd	4.2	2.8	3.9
4th	3.1	2.6	3.4
Average	2.8	2.8	3.7

[1] Horse damaged Upwind RadTrak monitor – data not used in average. Please see First Half 2007 40.65 Report.

Notes: 1. Radon daughter concentrations at the top and bottom of CCD#1 were low, ranging from 0.005 to 0.021 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 Radon Monitoring Results		
	Radon	
	Top	**Bottom**
Date	**(WL)**	**(WL)**
24-Nov-98	0.028	0.023
19-May-99	0.037	0.020
12-Oct-99	0.040	0.057
26-Apr-00	0.008	0.005
21-Nov-00	0.030	0.023
15-May-01	0.027	0.027
10-Dec-01	0.024	0.023
16-Jun-02	0.013	0.012
25-Nov-02	0.027	0.028
2-Jun-03	0.013	0.011
30-Nov-03	0.012	0.007
30-Jun-04	0.010	0.013
2-Dec-04	0.011	0.027
21-Jun-05	0.028	0.016
1-Dec-05	0.022	0.025
12-Jun-06	0.002	0.000
19-Dec-06	0.043	0.043
24-Jun-07	0.005	0.012
10-Dec-07	0.021	0.012
Average:	0.021	0.020
Standard Deviation:	0.012	0.013
OAP:		
resin0001.xls		

Kennecott Uranium Company
Sweetwater Uranium Project
Stored Resin

Stored Resin RadTrak Monitoring Results

Date	RadTrak Results	
	Top	Bottom
	(pCi/l)	(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	4.2
4th Quarter 2007	2.6	3.1
Average	2.6	3.0
Standard Deviation:	0.8	0.9

POTABLE WATER QUALITY SUMMARY

2007

Coliform Count Summary

Date	Drake # 1 (Well Head)	Administration Building Water Supply (PWW-1 or PWW-2)	Change/Shower/Monitoring Trailer
01/08/07	Good	Good	Good
02/05/07	Good	Good	Good
03/05/07	Good	Good	Good
04/12/07	Good	Good	Good
05/07/07	Good	Good	Good
06/04/07	Good	Good	Good
07/16/07	Good	Good	Good
08/06/07	Good	Good	Unsatisfactory
08/13/07			Retest - Satisfactory
09/04/07	Good	Good	Good
10/08/07	Good	Good	Good
11/05/07	Good	Good	Bottle Leaked
12/03/07	Good	Good	Good
12/04/07			Repeat-Good November Sample

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.

KENNECOTT URANIUM COMPANY					
POTABLE WATER QUALITY SUMMARY					
2007					
DRAKE #1					
CHEMICAL ANALYSIS SUMMARY:					
Use Suitability	Domestic *	DRAKE #1	DRAKE #1	DRAKE #1	DRAKE #1
Parameter	Concentration **	01/29/07	04/18/07	07/30/07	10/22/07
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	2	3	3	3
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	1.3	0.1
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)
Nitrate (NO3-N)	10	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	N/A	N/A	N/A	N/A
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	50	58	53	49
Total Dissolved Solids (TDS)	500	160	206	202	154
Zinc (Zn)	5	0.02	0.05	0.02	0.02
pH (Standard Units)	6.5 - 8.5	8.21	8.12	8.07	8.06
Combined Ra226/Ra228	5.0 pCi/l	1.2 pCi/L	1.1 pCi/L	2.6 pCi/L	0.6 pCi/L
Natural Uranium	pCi/L	0.3	0.2	0.3	0.3
Uranium - Suspended	mg/L	ND (0.0003)	ND (0.0003)	ND (0.0003)	ND (0.0003)
Uranium - Total	mg/L	0.0004	0.0004	0.0004	0.0004
Pb-210	pCi/L	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Total Strontium 90	8.0 pCi/l	-	-	-	-
Gross Alpha Radioactivity ***	15.0 pCi/l	1.1 +/- 0.5	1.0 +/- 0.3	1.0 +/- 0.4	1.0 +/- 0.4
* This list does not include all constituents in the national drinking water standards.					
** mg/L, unless otherwise indicated					
*** Including Radium 226 but excluding Radon and Uranium					

KENNECOTT URANIUM COMPANY					
POTABLE WATER QUALITY SUMMARY					
2007					
PWW-1					
CHEMICAL ANALYSIS SUMMARY:					
Use Suitability	Domestic *	PWW-1	PWW-1	PWW-1	PWW-1
Parameter	Concentration **	01/29/07	04/18/07	07/30/07	11/12/07
Ammonia (NH3-N)	0.5	-	-	-	-
Arsenic (As)	0.05	ND (0.001)	0.001	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	4	4	3	3
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	0.05	ND (0.05)	0.11	0.2
Lead (Pb)	0.015	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)
Manganese (Mn)	0.05	0.03	0.02	0.01	0.02
Mercury (Hg)	0.002	ND (0.0002)	ND (0.0002)	ND (0.0002)	ND (0.0002)
Nitrate (NO3-N)	10	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	57	70	57	51
Total Dissolved Solids (TDS)	500	164	194	190	158
Zinc (Zn)	5	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)
pH (Standard Units)	6.5 - 8.5	8.01	8.14	8.06	8.19
Combined Ra226/Ra228	5.0 pCi/l	0.8 pCi/L	ND	3.7 pCi/L.[2]	[1]
Natural Uranium	pCi/L	0.9	3.1	1	1
Uranium - Suspended	mg/L	0.0012	0.0006	ND (0.0003)	ND (0.0003)
Uranium - Total	mg/L		0.0052	0.0014	0.0016
Lead 210	pCi/L	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Total Strontium 90	8.0 pCi/l	N/A	N/A	N/A	N/A
Gross Alpha Radioactivity ***	15.0 pCi/l	ND (1.0)	ND (1.0)	7.4 +/- 0.8	ND (1.0)
* 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					
[1] Initial sample result was anomalously high in Radium-228. The sample is being retested for Radium-228.					
[2] This sample is being retested for Radium-228 as well.					

KENNECOTT URANIUM COMPANY					
POTABLE WATER QUALITY SUMMARY					
2007					
PWW-2					
CHEMICAL ANALYSIS SUMMARY:					
Use Suitability	Domestic *	PWW-2	PWW-2	PWW-2	PWW-2
Parameter	Concentration **	01/25/07	04/04/07	07/31/07	12/18/2007
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	4	4	3	3
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)	0.05	0.04
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)
Nitrate (NO3-N)	10	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	43	42	45	41
Total Dissolved Solids (TDS)	500	156	172	166	136
Zinc (Zn)	5	ND (0.01)	ND (0.01)	0.01	ND (0.01)
Natural Uranium	pCi/L	1.9	2	2	2
Uranium - Suspended	mg/L	0.0004	ND (0.0003)	ND (0.0003)	ND (0.0003)
Uranium - Total	mg/L		0.0031	0.0032	0.0028
Pb-210	pCi/L	ND (1)	ND (1)	ND (1)	ND (1)
pH (Standard Units)	6.5 - 8.5	8.25	8.5	8.24	8.24
Combined Ra226/Ra228	5.0 pCi/l	ND	0.7 pCi/L	0.5 pCi/L	0.5 pCi/L
Total Strontium 90	8.0 pCi/l	N/A	N/A	N/A	N/A
Gross Alpha Radioactivity ***	15.0 pCi/l	ND (1)	ND (1)	ND (1)	ND (1)
* 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

17 February 2008

To: Distribution

Subject: Safety and Environmental Review Panel (SERP) – 2007

During the calendar year 2007 the licensee has not:

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

No Safety and Environmental Review Panel (SERP) actions were taken in 2007.

Oscar A Paulson

Oscar Paulson

Distribution: George Palochak
Roger Strid

RIO TINTO
ENERGY AMERICA

Memorandum

Oscar Paulson
Facility Supervisor
Kennecott Uranium Company

4 February 2008

To: Respiratory Protection File

Subject: Respiratory Protection – 2007

The Mill Foreman and Senior Facility Technician are the two (2) employees on site that are part of the facility's respirator program. They received their respirator physicals on June 26 and June 4, 2007, respectively.

Annual fit tests with stannic chloride irritant smoke and annual instruction on respirator use were conducted on November 20, 2007.

Oscar A Paulson

Oscar Paulson
Facility Supervisor

RIO TINTO
ENERGY AMERICA

Memorandum

Oscar Paulson
Facility Supervisor
Kennecott Uranium Company

17 February 2008

File

Subject: **Releases for Unrestricted Use – 2007**

Releases for unrestricted use issued in 2007 were primarily related to the release of equipment used to move tailings in the tailings impoundment. 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 98.6 dpm/100cm^2, less than 10% of the 1000 dpm/100cm^2 release limit.

Oscar A Paulson
Oscar Paulson

RIO TINTO
ENERGY AMERICA

Memorandum

Oscar Paulson
Facility Supervisor
Kennecott Uranium Company

27 December 2007

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 2007. 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 27, 2007 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 December 10, 2007 to reflect the presence of Archer Construction, Inc. on site during the winter of 2007-2008.
- Safety SOP C3 Operating Standards – *Vehicles and Driving* was revised on December 26, 2007.

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

The following radiologic procedures were added by December 27, 2007:

- HP-39 – *Requirements for Reporting of Individual Doses*
- HP-40 – *Sealed Source Inventory Procedure*
- 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* – July 2, 2007
- EP-23 – *Low Volume Airborne Particulate Sampling for Operations using the F&J Specialty Products, Inc. Digital Air monitoring System F&J Model DF-604* – July 2, 2007
- EP-24 – *Monthly Flow Verification Procedure for F&J Specialty Products, Inc. Digital Air Monitoring System F&J Model DF-604* – July 2007
- EP-25 – *Land Use Survey Procedure* – August 2007

The following radiologic procedures were modified:

- HP-4 – *Radon Daughter Survey* – July 2, 2007

- HP-7 – *Personnel Alpha Monitoring and Decontamination* – December 26, 2007
- HP-8 – *Removable Alpha Radiation Sampling* – July 4, 2007
- HP-9 – *Management Control, Bioassay Urine and In Vivo Programs* – June 28, 2007
- HP-11 – *Personnel Air Sampling* – June 20, 2007 & December 26, 2007
- HP-12 – *In-Plant High Volume Particulate Sampling* – December 26, 2007
- HP-13 – *Area Composite High Volume Particulate Sampling* – December 26, 2007
- HP-14 – *Calibration of Equipment* – December 6, 2006
- HP-18 – *Release of Equipment to Unrestricted Areas* – June 20, 2007 & December 26, 2007
- HP-25 – *Areas Requiring Personnel Monitoring During Suspended Operations* – December 26, 2007
- HP-29 – *Training, Reporting and Qualifications of Facility Staff* – July 4, 2007
- HP-32 – *Sealed Source Leak Test Procedure* – June 28, 2007
- HP-34 – *Personnel Dosimetry for External Exposure* – June 28, 2007
- HP-38 – *Consumption of Drinking Water within the Restricted Area* – June 26, 2007 & December 27, 2007

- EP-1 – *Low Volume Airborne Particulate Sampling for Suspended Operations using the AccuVol* – December 26, 2007
- EP-2 – *Low Volume Airborne Particulate Sampling* – December 26, 2007
- EP-3 – *Low Volume Airborne Particulate Sampling for Operations using the Accu-Vol* – December 26, 2007
- EP-4 – *Low Volume Airborne Particulate Sampling for Operations using Direct 115 VAC Connection* – December 26, 2007
- EP-5 – *Calibration Procedure for Lo-Volume Air Sampling Units with AccuVol Flow Controllers* – July 2, 2007 & December 26, 2007
- EP-6 – *Calibration Procedure for Lo-Volume Air Sampling Units Directly Connected to Line Voltage – July 3, 2007* & December 26, 2007
- EP-10 – *Radon-222 Sampling* – July 3, 2007 & December 26, 2007
- EP-11 – *Thermoluminescent Dosimeter (TLD) Air Monitors* – July 3, 2007 & December 26, 2007
- EP-12 – *General Surface Water Sampling and Sample Preparation Procedure* – July 2, 2007
- EP-12b – *General Surface Water Sampling, Sample Preparation and Water Level Measurement Procedures* – July 3, 2007 & December 26, 2007
- EP-13 - *General Groundwater Sampling and Sample preparation* – July 3, 2007 & December 26, 2007
- EP-13b – *General Ground Water Sampling, Sample Preparation and Water Level Measurement procedures* – July 2, 2007 & December 26, 2007
- EP-14 – *Non-Operational and Operational Surface and Ground Water Sampling and Level Measurement Locations and Frequencies* - July 2007 & December 26, 2007
- EP-18 – *Meteorological Monitoring* – June 27, 2007 & December 26, 2007

- TOP-1 – *General Tailings and Evaporation Impoundment procedures* – July 2, 2007 & December 26, 2007
- TOP-6 – *Tailings Area Stabilization* – July 2, 2007 & December 26, 2007

C. Other Procedures

- The *Suspended Operations Procedure* was revised on December 27, 2007.

Oscar Paulson
AnnualReviewSOPs.doc

RIO TINTO
ENERGY AMERICA

Memorandum

Oscar Paulson
Facility Supervisor
Kennecott Uranium Company

19 February 2008

To: Radiation Work Permit File

Subject **Radiation Work Permits**

A single radiation work permit (Radiation Work Permit 2007-1) was issued in 2007. The following pertains:

Type of Work:	Assessment of equipment in Mill.
Reason for Work:	Assess condition of mill equipment for restart.
Reason for Issuance of Permit:	No Standard Operating Procedure existed for an assessment of the Mill for restart so work was performed under a Radiation Work Permit.
Conditions of Work:	No areas requiring respirator use were entered. No entry was made into the Dryer or Roller Rooms.
Results of Monitoring:	
Bioassays:	All were non-detect.
Dosimetry:	A single dosimeter used by one (1) worker had a reading of 1 millirem. The remainder were non-detect.
High Volume Air Sampling:	High volume air sampling was conducted in the Grinding and Precipitation areas of the Mill building throughout the work period. All results were under 0.1% of the Derived Air Concentration (DAC).
Breathing Zone Samples:	Three (3) breathing zone samples were collected. All results were under 2% of the Derived Air Concentration (DAC).
Radon Decay Products:	A pre-entry sample was taken in Leach Tank #2. It was 0.007 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
Sweetwater Uran

Radiation Work Permit Summary

Radiation Work Permit: 2007-1

Type of Work: Mill Assessment

Duration of Work: One (1) week

Bioassay Results

EMPLOYEE TITLE		EMPLOYER	January	February	March	April	May	June	July	August	September	October	November	December	LLD
Consultant	CON #1	LYNTEK, INC.									<5.0				5.0
Consultant	CON #2	LYNTEK, INC.									<5.0	<5.0		<5.0	5.0
Consultant	CON #3	LYNTEK, INC.									<5.0				5.0
Consultant	CON #4	LYNTEK, INC.									<5.0				5.0
Consultant	CON #5	LYNTEK, INC.									<5.0				5.0
Consultant	CON #6	LYNTEK, INC.									<5.0				5.0
Consultant	CON #7	LYNTEK, INC.									<5.0				5.0
Consultant	CON #8	LYNTEK, INC.												<5.0	5.0
Consultant	CON #9	LYNTEK, INC.												<5.0	5.0

Not on site during month

Mill Restart Evaluation

Pre-work bioassays were collected

End of job bioassays were collected

Dosimetry Results

Consultant	CON #1	LYNTEK, INC.										M	M		
Consultant	CON #2	LYNTEK, INC.										M	M		
Consultant	CON #3	LYNTEK, INC.										M	M		
Consultant	CON #4	LYNTEK, INC.										M	M		
Consultant	CON #5	LYNTEK, INC.										M	M		
Consultant	CON #6	LYNTEK, INC.										M	M		
Consultant	CON #7	LYNTEK, INC.										M	M		
Consultant	CON #8	LYNTEK, INC.												Visitor - 1	
Consultant	CON #9	LYNTEK, INC.												Visitor #3 - M	

Note: CON #2 did not enter restricted area in December 2007

Not in restricted area

High Volume Air Sampling Results

Sample Number	Date Start		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)
3	23-Sep-07	Mill Precipitation Area	9.88E+09	1.00E-16	9.05E-15	3.95E-16	2.83E-16	0.0453	0.0066	0.0001
4	23-Sep-07	Mill Grinding Area	1.05E+10	1.00E-16	6.58E-15	1.29E-15	1.67E-15	0.0329	0.0215	0.0006
Average:			1.02E+10	1.00E-16	7.82E-15	8.43E-16	9.77E-16	3.91E-02	1.41E-02	3.50E-04

Derived Air Concentrations Used

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

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)
26-Sep-07	Precipitation	1.73E+06	5.78E-15	9.25E-14	8.09E-14	2.31E-14	0.463	1.348	0.008
9/26/2007	Solvent Extraction (SX)	1.59E+06	6.29E-15	6.60E-14	4.09E-14	6.29E-15	0.330	0.682	0.002
10-Dec-07	Solvent Extraction (SX)	3.79E+05	2.64E-14	1.45E-13	2.64E-14	2.64E-14	0.725	0.440	0.009
Average:		1.23E+06	1.28E-14	1.01E-13	4.94E-14	1.86E-14	0.506	0.823	0.006

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 excavation workers are unlikely to receive in excess of 10% of the applicable ALI thus individual monitoring of of intakes is not required.
All exposures were under 2% of the Derived Air Concentration (DAC)
Employees listed by title to preserve confidentiality

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)
25-Sep-07	Leach Tank #2	0.007

OAP:2/19/08
Radiation_Work_Permit_2007_1

RIO TINTO
ENERGY AMERICA

Memorandum

Oscar Paulson
Facility Supervisor
Kennecott Uranium Company

18 February 2008

Memo to File

SUBJECT: Dose Assessment/Determination of No Requirement for Individual Monitoring or Dose Calculation at the Sweetwater Uranium Project for 2007

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 2007.

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 2007 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	3.65 pCi/l	316.38 mrem/yr

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

Radon-222 concentration based on average of third and fourth quarter 2007 concentrations. First and second quarter RadTrak units destroyed/damaged by horse.

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

(3.65 pCi/l) / (1E3 ml/l) / (1E6 pCi/uCi) = 3.65 E-9 uCi/ml
0.33 WL = 3E-8 uCi/ml (with all daughters present)
[(3.65E-9 uCi/ml) / (3E-8 uCi/ml)] * (0.33 WL) = 0.040 WL for background

The calculated equilibrium factor for the facility (1993 to 2007) average is 0.197. Given that all daughters are not present and the equilibrium factor is 0.197, the actual background radon daughter concentration is:

(0.197) * (0.040 WL) = 0.008 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	243.0 uR/hr	22.9 uR/hr	220.1 uR/hr
Mill	69.5 uR/hr	22.9 uR/hr	46.6 uR/hr
Tailings	106.8 uR/hr	22.9 uR/hr	83.9 uR/hr

Approximately 230 hours (twenty-three 10-hour working days) are estimated to have been spent in the mill and 1,230 hours (one hundred twenty-three 10 hour working days) are estimated to have been spent in the tailings impoundment by the Mill Foreman in 2007. This estimate is based on the number of entries in the restricted area alpha survey record for 2007, and assuming that each entry constitutes a full ten (10) hour day in either the mill or tailings impoundment, as indicated. If both the mill and tailings impoundment were entered in a single day, then it was assumed that five hours were spent in each area. This assumption is very conservative since many entries in the alpha survey record are the result of a brief (1 - 2 hour) period in either the mill or tailings impoundment.

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

Area	Time	Occupational Dose Rate	Total Dose
Mill	230 hours	46.6 μR/hr	10.7 mrem
Tailings	1230 hours	83.9 μR/hr	103.2 mrem
Total			**113.9 mrem**

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 2007 even though their use was not required, in part, to confirm these calculations. The highest external dose received for the calendar year was 11 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 2007. The results are as follows:

Radon Sampling Results

Area	Concentration	Background	Occupational Dose
IX Area	0.004 WL	0.008 WL	0.000 WL
Mill Area	0.012 WL	0.008 WL	0.004 WL

The average occupational radon dose for facility personnel is:

{[(0.004 WL) / (0.33 WL/DAC)] * 230 hours} / (2000 DAC hours/ALI) = 0.0014 ALI
(0.0014 ALI) * (5000 millirems/ALI) = 7.00 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 2007 and four (4) breathing zone samples taken of the Mill Foreman when working in the Mill Building and forty-six (46) breathing zone samples collected from workers in the tailings impoundment.

The spreadsheet entitled Airborne Sampling Results attached to the Internal Occupational Exposure Assessment – Suspended Operations, details the airborne particulate (natural uranium, radium-226 and thorium-230) concentrations. It yields a total dose from exposure to natural uranium, radium-226 and thorium-230 of 55.4 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 The *Internal Occupational Exposure Assessment – Suspended Operations* document calculates a total dose from natural uranium, radium-226 and thorium-230 of 55.4 millirems.

This maximum possible exposure of 20.3 millirems to natural uranium from the Mill and tailings is 0.004 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:

(0.004 ALI/yr) * (5E-2 uCi/ALI) = 2.03 E-4 uCi/yr
(2.03 E-4 uCi/yr) * (1 E-6 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 (230 hours), the tailings impoundment (1230 hours) 4 hours) by the Mill Foreman in 2007, 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 55.4 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 0.759 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:	0.114 rem/yr.
b)	Estimated internal dose (particulates)	0.055 rem/yr.
c)	Estimated internal dose (radon-222)	0.007 rem/yr.
	Total:	0.176 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 2007 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 eleven (11) millirems. This proves that the external dose estimate based upon surveys is conservative.

Oscar A Paulson
Oscar A. Paulson

RIO TINTO
ENERGY AMERICA

Memorandum

Oscar Paulson
Facility Supervisor
Kennecott Uranium Company

13 February 2008

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 2007 shows that all results are well below the first action level of 15 µg/L. In fact, all urinalysis results for the year 2007 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.

Please see attached summary of 2007 urinalysis data.

Oscar A Paulson

Oscar A. Paulson
Facility Supervisor

KENNECOTT URANIUM COMPANY

URINANALYSIS RESULTS: **2007**

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
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
CONTRACT EMPLOYEE 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
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
Equipment Operator	EO# 1	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# 2	ARCHER CONSTRUCTION, INC. *	<5.0	<5.0	<5.0	<5.0									5.0
Equipment Operator	EO# 3	ARCHER CONSTRUCTION, INC. *	<5.0	<5.0	<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# 4	ARCHER CONSTRUCTION, INC. *	<5.0	<5.0	<5.0	<5.0	<5.0								5.0
Equipment Operator	EO# 5	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
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# 7	ARCHER CONSTRUCTION, INC. *	<5.0	<5.0											5.0
Equipment Operator	EO# 8	ARCHER CONSTRUCTION, INC. *	<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	<5.0	<5.0	<5.0	<5.0	5.0
Equipment Operator	EO# 10	ARCHER CONSTRUCTION, INC. *	<5.0	IN ARIZONA		<5.0	<5.0								5.0
Equipment Operator	EO# 11	ARCHER CONSTRUCTION, INC. *	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0							5.0
Equipment Operator	EO# 13	ARCHER CONSTRUCTION, INC. *		<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	<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
Equipment Operator	EO# 16	ARCHER CONSTRUCTION, INC. *				<5.0									5.0
Equipment Operator	EO# 18	ARCHER CONSTRUCTION, INC. *					<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
Equipment Operator	EO# 20	ARCHER CONSTRUCTION, INC. *						<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
Equipment Operator	EO# 22	ARCHER CONSTRUCTION, INC. *						<5.0	<5.0	<5.0	<5.0	<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
Equipment Operator	EO# 25	ARCHER CONSTRUCTION, INC. *										<5.0	<5.0	<5.0	5.0
Equipment Operator	EO# 26	ARCHER CONSTRUCTION, INC. *							<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5.0
Mechanic	MEC #1	ARCHER CONSTRUCTION, INC. *											<5.0	<5.0	5.0
Equipment Operator	EO# 27	ARCHER CONSTRUCTION, INC. *												<5.0	5.0
Equipment Operator	EO# 28	ARCHER CONSTRUCTION, INC. *												<5.0	5.0

KENNECOTT URANIUM COMPANY

URINANALYSIS RESULTS: **2007**

EMPLOYEE TITLE		EMPLOYER	January	February	March	April	May	June	July	August	September	October	November	December	LLD
Consultant	CON #1	LYNTEK, INC. ****									<5.0				5.0
Consultant	CON #2	LYNTEK, INC. ****									<5.0	<5.0		<5.0	5.0
Consultant	CON #3	LYNTEK, INC. ****									<5.0				5.0
Consultant	CON #4	LYNTEK, INC. ****									<5.0				5.0
Consultant	CON #5	LYNTEK, INC. ****									<5.0				5.0
Consultant	CON #6	LYNTEK, INC. ****									<5.0				5.0
Consultant	CON #7	LYNTEK, INC. ****									<5.0				5.0
Consultant	CON #8	LYNTEK, INC. ****												<5.0	5.0
Consultant	CON #9	LYNTEK, INC. ****												<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	5.0
DATA ENTRY	DATA - 2	ADECCO							<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5.0
DATA ENTRY	DATA - 1	ADECCO		<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	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<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.

No longer employed by contractor.

Not on site during month

Not yet hired

Did pre-job bioassay/Worked less than one day.

Reporting not yet started/works solely in office

Did not work in restricted area.

Archer Construction, Inc employee EO#17 did not work in the restricted area, hence is not listed.

Employees listed by number to preserve confidentiality

*Tailings

** Surveying

*** Security

****Mill Restart Evaluation

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

OAP
B:\URINE007.xls

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

25 February 2008

Mr. Mark Thiesse
GPC West District
Wyoming Department of Environmental Quality
Water Quality Division
250 Lincoln Street
Lander, Wyoming 82520-2848

Dear Mr. Thiesse:

SUBJECT: Wyoming DEQ Permit to Mine #481
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 2007.

The report summarizes all monitoring and mitigation efforts in the area of the tailings cell under the ground water corrective action program as defined in License Condition 11.3 of USNRC Source Materials License SUA-1350 and 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 Moxley, DEQ/LQD (w/o enclosure)
Keith McConnell, Deputy Director, USNRC
Stephen J. Cohen (2), Project Manager, USNRC
Director - NRC DRSS - Region IV (w/o enclosure)
John Lucas – RTEA, Gillette, WY

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

25 February 2008

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 2007.

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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
Stephen J. Cohen (2), Project Manager, USNRC
Director – NRC DRSS – Region IV (w/o enclosure)
John Lucas – RTEA, Gillette, WY

KENNECOTT URANIUM COMPANY
ANNUAL CORRECTIVE ACTION PROGRAM REVIEW

January 2007 through December 2007

EXCURSION PUMPBACK SYSTEM

Perched Wells

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

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

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

The use of these wells to recover these fluids was authorized by the site's Safety and Environmental Review Panel (SERP) under Safety and Environmental Evaluation (SEE) #6, approved on September 9, 2003, and an amendment to that document approved on March 26, 2004. These documents were inspected by the Nuclear Regulatory Commission (NRC) during an inspection on July 21, 2004. The inspector concluded that:

> "The SEEs were found to be technically adequate. The SERP had made decisions in accordance with the conditions of the performance based license."

The table below summarizes the performance of these wells:

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

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

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

Removal of these wells was discussed in the Response to Request for Additional Information dated October 28, 2004, submitted on December 15, 2004.

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 cell during 2007 at the following annualized rates:

WELL #	PUMP HORSEPOWER	ANNUAL AVG. RATE
TMW-7	½ HP	5.3 GPM
TMW-17	1/3 HP	6.3 GPM
TMW-18	¾ HP	9.0 GPM
TMW-57	½ HP	7.4 GPM
TMW-58	¾ HP	1.7 GPM
TMW-59	1/3 HP	5.4 GPM
TMW-75	½ HP	2.3 GPM
TMW-96		7.5 GPM
TMW-97		8.3 GPM
TOTAL		**53.2 GPM**

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

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

TMW-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 832 mg/L (10/2/07) and a uranium concentration of 760 pCi/L (9/20/04) to 26 pCi/L (10/2/07). TMW-97 has gone from a TDS concentration of 2210 mg/L (3/7/05) to 644 mg/L (11/7/07) and a uranium concentration of 548 pCi/L (3/7/05) to 29 pCi/L (11/7/07). Kennecott Uranium Company believes that these declines indicate that the plume associated with the Catchment Basin is of limited extent.

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 5.3 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 an excellent rate, 4.6 gallons per minute, in 2006. 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 6.4 gallons per minute.

The observed TDS values in TMW-63 and TMW-18 are close, 2610 versus 2570 milligrams per liter, respectively. (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.

COMPARISON OF TMW-18 AND TMW-63

MAJOR IONS mg/l:	TMW-18 4/4/07	TMW-63 5/23/07	Reporting Limit (4/4/07)
Ca	622	619	1.0
Mg	46.8	44.8	0.5
Na	99.2	93.5	0.8
K	7.7	7.3	0.5
CO3	<1	<1	1.0
HCO3	570	537	1.0
SO4	1260	1230	2.0
Cl	93	87	1.0
NO3	<0.1	<0.1	0.10
F	<0.1	1.2	0.10
SiO2	24	23	1.0
TDS @ 180□ C.	2570	2610	10
Cond (umho/cm)	3000	3010	1.0
Alk-CaCO3	467	440	1.0
pH (units)	6.92	6.84	0.01
TRACE METALS mg/l:			
Al	<0.10	<0.10	0.10
As	<0.001	<0.001	0.001
Ba	<0.10	<0.10	0.10
Be	<0.01	<0.01	0.01
B	<0.10	<0.10	0.10
Cd	<0.005	<0.005	0.005
Cr	<0.01	<0.01	0.01
Co	<0.001	<0.001	0.001
Cu	<0.01	<0.01	0.01
CN	<0.005	<0.005	0.005
Fe	8.13	2.36	0.05
Pb	<0.01	<0.01	0.01
Mn	1.30	0.70	0.01
Hg	<0.0002	<0.0002	0.0002
Mo	<0.01	<0.01	0.01
Ni	<0.01	<0.01	0.01
Se	0.002	0.003	0.001
Ag	<0.01	<0.01	0.01
Tl	<0.010	<0.010	0.010
V2O5	<0.10	<0.10	0.10
Zn	<0.01	0.01	0.01
RADIOMETRIC pCi/L:			
U	1.0	2.4	0.2
Ra226	3.6 ± 0.6	5.3 ± 0.7	0.2
Ra228	15.9 ± 1.1	13.0 ± 1.1	1.0
Th230	<0.2	<0.2	0.2
Pb210	<1.0	<1.0	1.0
Gross Alpha	5.4 ± 0.9	17.0 ± 1.7	1.0
Q.A. DATA:			
Anion/Cation Bal:	2.19	2.72	

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 2004 are all below 250 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.

LOWER SATURATED SAND MONITOR WELL SAMPLING RESULTS

MAJOR IONS mg/l:	TMW-8 7/18/07	TMW-24 8/17/07	TMW-47 8/17/07	Reporting Limit (7/18/07)
Ca	25.0	23.4	21.7	0.5
Mg	1.0	1.1	0.9	0.5
Na	38.7	31.0	33.3	0.5
K	1.5	1.5	1.3	0.5
CO3	<1	<0.1	<1	1.0
HCO3	105	110	108	1.0
SO4	57	36	37	1.0
Cl	2	2	2	1.0
NO3	<0.1	<0.1	<0.1	0.10
F	1.0	0.3	0.3	0.10
SiO2	13	14	14	1.0
TDS @ 180□ C.	218	130	144	10
Cond (umho/cm)	287	220	223	1.0
Alk-CaCO3	86	90	89	1.0
pH (units)	8.09	8.18	8.19	0.01
TRACE METALS, mg/l:				
Al	<0.1	<0.1	<0.1	0.10
As	0.002	0.001	0.001	0.001
Ba	<0.1	<0.1	<0.1	0.10
Be	<0.01	<0.01	<0.01	0.01
B	<0.1	<0.1	<0.1	0.10
Cd	<0.005	<0.005	<0.005	0.005
Cr	<0.01	<0.01	<0.01	0.01
Co	<0.001	<0.001	<0.001	0.001
Cu	<0.01	<0.01	<0.01	0.01
CN	<0.005	<0.005	<0.005	0.005
Fe	<0.05	<0.05	<0.05	0.05
Pb	<0.01	<0.01	<0.01	0.01
Mn	0.03	0.01	<0.01	0.01
Hg	<0.0002	<0.0002	<0.0002	0.0002
Mo	<0.01	<0.01	<0.01	0.01
Ni	<0.01	<0.01	<0.01	0.01
Se	<0.001	<0.001	<0.001	0.001
Ag	<0.01	<0.01	<0.01	0.01
Tl	<0.010	<0.01	<0.01	0.010
V2O5	<0.1	<0.1	<0.1	0.10
Zn	<0.01	<0.01	<0.01	0.01
RADIOMETRIC pCi/L:				
U	0.3	0.3	0.3	0.2
Ra226	<0.2	0.9 ± 0.4	3.8 ± 0.7	0.2
Ra228	<1	<1	<1	1.0
Th230	<0.2	<0.2	<0.2	0.2
Pb210	<1.0	<1.0	<1.0	1.0
Gross Alpha	<1.0	1.1 ± 0.6	7.3 ± 1.1	1.0
Q.A. DATA:				
A/C Balance	1.29	0.54	0.544	

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.

Water levels of the monitor wells are not collected when either PWW-1 and/or PWW-2 are in operation, or within one week of pumping.

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. The plume is dashed in its vicinity.

The April 2007 data was used for TMWs 96 and 97 since those samples were collected after the pumps in those wells were returned to service. The pumps had been shut down since the lines froze.

First half 2007 samples for TMW-8 and 15 were mistakenly not collected in 2007. Steps have been taken to insure that samples are not overlooked in 2008. TMW-8 is a monitor well for sands beneath the sands bearing the plume and data from it does not impact the definition of the plume. TMW-15 has been very stable (TDS varying from 444 to 478 parts per million) meaning that the missing sample did not impact any conclusions drawn from the data in this report.

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

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

The purpose of these wells was to sample the top of the aquifer for hydrocarbons that may float on top of the aquifer surface. Since these wells were completed solely for monitoring of organics, the sampling/analysis instructions for these wells included only sampling and analyzing for organics. In several instances, however, the wells were sampled and analyzed for inorganics (Guideline 8 plus radiometrics), but since the wells were completed for hydrocarbon monitoring, the inorganic results were never checked and were filed separately from the organic results that were checked. During a review of water sample data these inorganic results were discovered and are presented in the Section entitled Diesel Excavation Monitor Wells. TMW-72, the easternmost well, exhibited elevated, but declining uranium concentrations. The current concentration (4/3/07) is 255 pCi/L (0.377 ppm). TMW-73, the westernmost well, currently exhibits a concentration (4/3/07) of 5140 pCi/l (7.60 ppm).

Upon discovery of this information, the following was done:

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

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

These results are puzzling for the following reasons:

- TMW-72 and 73 are approximately 106 feet apart and completed to the same depths.
- The wells exhibit vastly different uranium concentrations (255 pCi/L – TMW 72 and 5140 pCi/L – TMW 73).

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

In 2007 the following was done:

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

The following table details the 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	1680	26.1
TMW-72	Shallow	255	5.9
TMW-73	Shallow	5140	24
TMW-103	Shallow	8.8	16.4
TMW-106	Deep	9.3	17.4
TMW-107	Shallow	10.4	3.8
TMW-108	Deep	1340	13.2
TMW-109	Shallow	1640	16
TMW-110	Deep	9.2	4.2

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 is evaluating these results and is considering preparation of a detailed groundwater model for the site to attempt to determine the source of the elevated uranium and combined radium 226/228 values for TMWs 10, 103, 106, 108, 109, 72 and 73. In the interim Kennecott Uranium Company has evaluated the following potential sources for the elevated uranium and combined radium 226/228 results and provides the following discussion of potential sources:

Tailings Impoundment

It is extremely unlikely (almost impossible) that the uranium is derived from the tailings impoundment leak. TMW 63 is completed in the upper portion (110-1300 feet below surface) of the Battle Spring Aquifer immediately adjacent to TMW 18 and does not show the levels of uranium observed in TMW 73. In addition, uranium levels drop as one moves west of the impoundment, so the high levels of uranium observed in TMW 73 are inconsistent with this westerly drop in uranium concentrations. TMW 73 is 2126 feet west of TMW 18, which is against the western impoundment embankment. The fact that uranium concentrations vary markedly between TMW 72 and 73, which are close together, points to a localized source and not a distant one, since if the source was as distant as the tailings impoundment the wells should exhibit similar uranium concentrations since at that distance the uranium should be fairly uniformly distributed in the aquifer.

The actual tailings impoundment fluids when the leak occurred (1984) only contained 3047 pCi/L of natural uranium, which is below the current concentration of 5140 pCi/L in TMW 73 on 4/3/07. Please see the tailings impoundment fluid analysis results included in the Diesel Excavation Monitor Wells section.

In addition, no monitor wells in the upper portion of the Battle Spring Aquifer around the tailings impoundment, specifically TMWs 15, 16, 18 and 59, which are immediately against the west embankment of the impoundment, ever exhibited uranium concentrations in excess of 1286.3 pCi/L (TMW 18 on July 12, 1984).

Given the above, it is extremely unlikely that the uranium observed in TMW 73 is derived from the tailings impoundment.

Catchment Basin

It is unlikely that the elevated uranium present in TMW 73 is derived from the Catchment Basin since it is 1188 feet from TMW 91, which was completed into the upper portion of the Battle Spring Aquifer (90-110 feet below surface) immediately west of the Catchment Basin (contaminant source). TMW 91 does not exhibit the elevated levels of uranium observed in TMW 73. TMW 91 had a maximum uranium concentration of 110 pCi/L (8/26/03). Clearly if TMW 91 never had high uranium concentrations and was immediately adjacent to the west side of the Catchment Basin, the Catchment Basin plume could not be the source of the uranium in TMW 73.

Also, the extremely rapid reduction of uranium contamination in TMWs 96 and 97 indicates contamination of limited areal extent. The fact that contaminant levels vary markedly between TMW 72 and 73 which are close together, points to a localized source and not a distant one. If the source was distant, the wells should exhibit similar uranium levels since at that distance the uranium should be fairly uniformly distributed in the aquifer.

The concentrations of uranium present in TMWs 108 and 109 are probably related to the Catchment Basin, given the wells' proximity to TMWs 96 and 97, and to the now removed Catchment Basin.

Sweetwater Pit

While the pit was being excavated the dewatering system made it a hydrologic sink, so the pit could not have been a source at that distance. Following cessation of dewatering the pit began to fill and the water contained significant concentrations of uranium, a high of 9478 pCi/L on April 3, 1987. This uranium was dissolved out of the backfill in the C-1 pit by the infiltrating ground water. The water level in the pit only attained steady state by 1997 or 1998 at which point it became an evaporative sink, so it could not have been a source of uranium. Groundwater contour mapping of the pit and its environs based on the dewatering wells as well as modeling performed by Shepherd Miller, Inc. in 1999 as part of the reclamation plan revision clearly demonstrate that the pit is a continuing evaporative sink. During its life the pit was either dewatered, recharging, or of late, an evaporative sink, so it could not be a source of groundwater contamination. This eliminates the pit as a source of the uranium.

Barium Chloride Discharge Area

The barium chloride ponds were treatment ponds where mine discharge water was treated with barium chloride to precipitate radium and discharged into Battle Spring Draw. The discharge created (by seepage of clean discharged water through uraniferous and seleniferous overlying soils) a groundwater mound in the Battle Spring Aquifer beneath the discharge point containing uranium and selenium. This is documented in the following two reports that were submitted to the State of Wyoming Department of Environmental Quaity to explain elevated uranium and selenium concentrations in North Camp Well:

- Interim Report – Groundwater Investigation in the Vicinity of the Barium Chloride Treatment Ponds – February 1983
- Groundwater Investigation in the Vicinity of the Barium Chloride Treatment Ponds – July 1984

Natural uranium persists in the North Camp Well (NCW) to this day (963 pCi/L – June 6, 2007). Some of this fluid could have migrated toward the diesel contaminated soil excavation when the dewatering and discharge system was operating and a sharp cone of depression was present around the pit due to the action of the dewatering wells as well as a discharge/injection water mound beneath the barium chloride ponds. This is, however, highly unlikely since TMWs 72 and 73 are not in direct line between the barium chloride ponds and the pit dewatering wells. The distance between the barium chloride ponds and TMWs 72 and 73 is 1½ miles and the uranium and selenium bearing water should distribute uniformly; both wells would show approximately the same uranium and selenium concentrations, which they do not. The westernmost well (TMW 73) has the highest uranium and selenium concentrations and is closest (but by only 106 feet) to any hypothetical line between the barium chloride ponds and a dewatering well. The great distance from the barium chloride ponds to these two wells (1½ miles) makes the barium chloride ponds as a uranium source unlikely.

Ore Pad

Downward migration of uranium from the Ore Pad, now clean, but containing stockpiles of uranium ore during operation, was considered. The low uranium concentrations in TMW-103 and 106 (8.8 and 9.3 picoCuries per liter) when compared to the concentration in TMW-73, make this highly unlikely. TMW-103 and 106 are completed by the Ore Pad's southwest corner and if the uranium were coming from it during operations it should show the highest concentrations.

Localized Naturally Occurring Uranium and Radium in Soils Leaching into Groundwater

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

A test pit was excavated by Union Oil Company of California prior to the start of operations near the southeast corner of Section 16, Township 24 North, Range 93 West, that was 68 feet deep (bottom elevation was approximately 6540 feet above mean sea level). It was excavated to obtain samples of uranium mineralization above the water table. A bulk sample of mineralized sand above the water table was removed that contained 0.011% U_3O_8 and a bulk sample from below the water table was also removed that contained 0.033% U_3O_8. (Recovery of Uranium from Red Desert Sandstone Ore by H_2SO_4 Leach and Solvent Extraction – Hazen Research, Inc. February 18, 1976) This test pit was approximately 0.9 miles southwest of TMW 73. Some soil samples were collected in the diesel contaminated soil excavation along the south wall closest to TMWs 72 and 73. One sample contained 43.3 milligrams per kilogram uranium. It was collected from a depth of approximately 35 feet below ground surface. Background

for uranium in surface soils around
the project is 2.44 milligrams per kilogram. The concentrations discovered in the above described sample are substantially above background and represent mineralized sands. Localized bodies of mineralized sands could be the source of the elevated uranium in TMWs 72 and 73. A map entitled Background Radionuclide Sample Locations – West End Diesel Contaminated Soil Excavation, showing the locations of four soil samples collected in the excavation as well as the analytical results are included in the section entitled Diesel Excavation Monitor Wells.

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

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

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

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

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

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

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

The *Uranium (U-nat) Contour Map* (see Maps) shows the 36.0 pCi/L uranium contour in red, based on the 36.0 pCi/L uranium GPS, based on samples taken in 2007 for the tailings and Catchment Basin monitor wells. The highest uranium concentration for 2007 for each well was used to prepare this map, with the exception of TMWs 96 and 97, for which the April 2007 results were used since the samples were collected after pumping was restored, resulting in a more representative sample of groundwater. The area encompassed by the 36.0 pCi/L uranium contour on the 2007 map is 39.2 acres. This is almost identical to the 39.6 acres estimated for the end of 2006. This acreage estimate depends 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 2007. The plume as drawn encompasses a total area of 150.05 acres on the 2007 map. This is similar to the 148.6 acres estimated for the end of 2006. 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 2007. The area encompassed by the 500 parts per million contour is 178.9 acres on the 2007 map. This is close to the estimated 170.2 acre area calculated for 2006.

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

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

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, 2007 a total of 23,596,880 gallons of Battle Spring Aquifer water had been pumped back into the tails cell since the beginning of the year. This represents a 3.1% decrease from the 2006 volume. This decrease in volume is largely due to freezing of wells due to extreme cold in January 2007.

As part of the process of obtaining an operating performance based license for the facility, which was granted on August 18, 1999, Elaine Brummett requested in a telephone conversation on July 7, 1999 that a Standard Operating Procedure (SOP) be prepared limiting annual pumpback to no more than 25 million gallons per year and to an annual amount that would cause no net rise in the fluid level in the tailings impoundment, minor seasonal fluctuations excepted. This SOP would extend the 25 million gallon per year pumpback limit that was a pre-existing requirement in License Condition 10.7A of the old license. This language is included in the Standard Operating Procedure entitled "TOP-1 - General Tailings and Evaporation Impoundment Procedures". *Table 1 – Gallons Pumped to Tailings Impoundment* (see Tables) lists the wells pumped, the volumes pumped and the cumulative gallons pumped for years 1986 - 2006. The flow from some wells was reduced and some shut down near the end of the year to keep the total pumped volume below 25 million gallons. It is planned for 2008 to operate the pumpback wells at the following approximate flow rates:

WELL #	Gallons per Minute
TMW-96	5
TMW-97	5
TMW-59	4
TMW-75	5
TMW-17	4
TMW-7	5
TMW-57	4
TMW-18	8
TMW-58	4
Total:	**44**

TMWs 59, 18 and 58 have the highest Total Dissolved Solids concentrations (2450 ppm, 2540 ppm and 1250 ppm) so they will be operated at the highest flow rates with the other less contaminated wells pumped at lower rates so that the total pumped volume does not exceed 45 gallons per minute.

Problems with iron bacteria growth continued in 2007; however, a chlorination program, instituted in 1996, has helped control the bacteria. With the replacement of TMW-16 with TMW-7, less repair/maintenance/cleaning was required to operate the pumpback system. The Well Repair Table has been eliminated since most of the references in it were devoted to TMW-16. Chlorination, acidization and pump cleaning were performed as required. TMW-58 has experienced the greatest reduction in flow over time and will probably be pulled in Spring 2008 for cleaning.

The following groundwater contour maps are included with this report:

- *March 2007 Piezometric Contour Map* shows the groundwater contours around the tailings impoundment and Catchment Basin in March of 2007.
- *September 2007 Piezometric Contour Map* shows the groundwater contours around the tailings impoundment and Catchment Basin in September of 2007.

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

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

Salts/Contaminants Removed from the Battle Springs Aquifer

Table 2 – Mass of Salts and Other Constituents Removed from the Perched and Battle Springs Aquifers and Pumped Back into the Tailings Cell lists the cumulative quantities of salts (contaminants) pumped back from the Battle Springs Aquifer into the tailings cell via the pumpback system. Charts showing the quantities of salts returned to the tailings cell are also included for each of the wells pumped back into the cell in 2007.

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 2007.

TAILINGS CELL WATER EVAPORATION SYSTEM

The tails cell delta spray and evaporation systems were returned to service by March 13, 2007. The systems were shut down for winter on December 22, 2007. Four (4) artificial, bermed lagoons created on the surface of the exposed beach against the western side of the cell, as well as other lagoons, were in operation in 2007. These lagoons serve to hasten evaporation from the cell and reduce dusting. . The lagoons, as they were in August 2007, are shown in blue on the maps.

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. This situation was examined by the Safety and Environmental Review Panel (SERP) and a Safety and Environmental Evaluation (SEE) regarding this situation was prepared. The Safety and Environmental Evaluation (SEE) concluded that operation of the evaporative drip system should be suspended until the liner damage is repaired or remain suspended and then be permanently terminated if extra (replacement) evaporative capacity on the exposed tailings in the amount of 1.87 acres is constructed. Liner damage along the western embankment was not repaired in 20075. Additional lagoon area was maintained to provide replacement evaporation.

TAILINGS IMPOUNDMENT FLUID LEVEL

The fluid level on September 24, 2007 was 6608.7 feet above MSL. This is unchanged from the level of 6608.7 feet above MSL on September 19, 2006. This elevation is taken in the deepest pool in the impoundment's southeast corner. This fluid level was subject to rapid fluctuation during 2007 due to the addition of additional material from the Catchment Basin excavation. This material filled some pool areas along the impoundment's eastern embankment driving fluid levels higher in the southeastern pool.

A certain portion of evaporation is due to the spray system, which sprays pool water onto the sand beaches, saturating them. Some of the pool water becomes tied up in the sands causing a drop in the pool level not due to evaporation when the sprays are

operating. Current saturated area (pool area plus lagoons) is estimated to be approximately 511,830 square feet (2007 Method 115 Report). The saturated area has increased from the 2006 area (510,958.5 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 August 13 to 14, 2007.

Fluid levels drop during the spring and summer months due to evaporation from the free standing pool, the sprays and the drips. While they rise slightly during the winter months because the sprays and drips are not operating, the freestanding pool is frozen and fluids continue to be added to the impoundment from the pumpback wells. This accounts for the "sawtooth" appearance of the tailings impoundment fluid levels graph.

Substantial repairs have been made to the tailings impoundment liner along the interior of the northern and eastern embankments dueing 2007. These repairs were inspected during the Nuclear Regulatory Commission inspection on July 10 and 11, 2007. In addition substantial regrading of the tailings and material excavated from the Catchment Basin area was performed in 2007 resulting in a more organized and manageable impoundment.

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 6538.39 feet above MSL on October 15, 2007, a rise of 0.11 feet from a level of 6538.28 feet above MSL on November 20, 2006. Please see attached chart entitled *Sweetwater Pit Water Levels.* Kennecott Uranium Company believes that water levels in the pit have reached "steady state". This 0.11 foot rise in pit lake surface elevation observed during 2007 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 TMWs 96 and 97. This is logical since TMW-97 yields the highest pumpback rate, 9.2 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

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 2007. The piezometric contour maps show the potentiometric surface of the Battle Springs Aquifer around the tailings impoundment and Catchment Basin in March and September 2007. The cone of depression created by the pumpback wells encompasses the existing plume. The groundwater contour maps for March and September 2007 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.

PROGRESS TOWARD ATTAINING GROUNDWATER PROTECTION STANDARDS

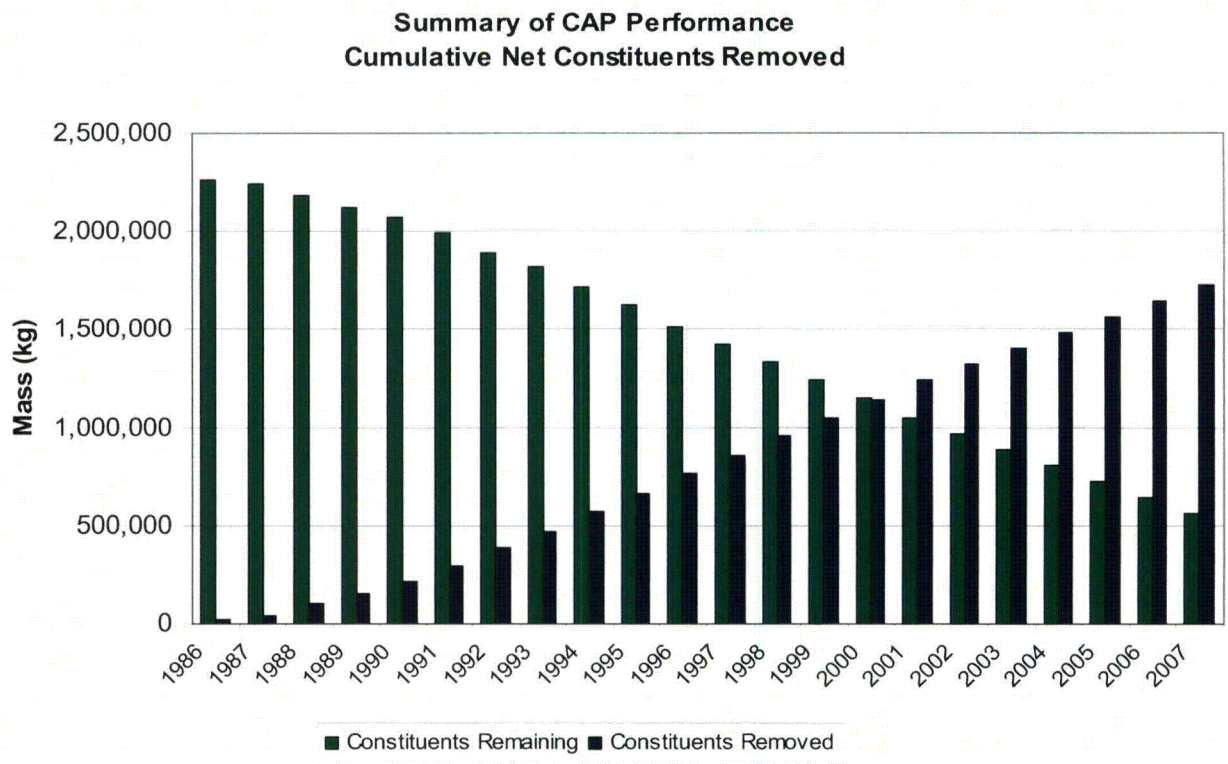
The pumping of aquifer wells TMW-7, 17, 18, 58, 59 and 75 at the toe, north and west of the tails cell, will continue to intercept any contaminated water coming through. The capture of contaminated water at the toe of the tails cell will prevent any hazardous constituents that may be present from migrating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

The major portion of the excursion lies beneath the tailings impoundment, as seen on the respective contour maps. This makes sense given the fact that the fluids leaked from the impoundment's northeast corner and flowed to the west under the impoundment to the sink created by the then mostly dewatered Sweetwater Pit. The impacted fluids beneath the tailings impoundment can only be collected from wells at or near the edge of the impoundment since wells cannot be drilled through the bottom of the lined impoundment. This limitation greatly hinders removal of impacted fluids from the aquifer. The most impacted fluids lie beneath the impoundment as shown on the TDS Contour Maps. The pumpback well with the highest TDS (2570 ppm – April 4, 2007), 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 an internal 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 2007 data and is shown below. The mass of salts recovered for 2007 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.



AREAL EXTENT AND CONCENTRATION OF HAZARDOUS CONSTITUENTS

The areal extent of the excursion at this time is shown by the Uranium, Combined Radium and TDS Contour Maps. All hazardous constituents (except for Uranium, Combined Ra226/228 and Gross Alpha) have stabilized below groundwater protection standards in the majority of aquifer wells. TDS values of over 500 ppm, Natural Uranium values of over 36.0 pCi/L and Radium 226/228 values 5.8 pCi/L show a plume north, northeast and west of the tails cell and around the Catchment Basin. The surface area underlain by the plume varies depending upon the constituent in question. The Combined Radium 226/228 plume covers approximately 150.05 acres, as drawn. The 500 ppm TDS contour shown defines an area of approximately 178.9 acres. The 36 pCi/L Uranium plume covers an area of 39.2 acres. These areas are from the 2007 maps.

VERTICAL EXTENT OF CONTAMINATION

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

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

ESTIMATE OF TIME NEEDED TO OBTAIN COMPLIANCE

For the purposes of generating a surety estimate for the site, an estimate of ten (10) years (from July 1999) to terminate the Corrective Action Program (CAP) for the plume around the tailings impoundment was made. This was discussed in a letter to the NRC dated July 29, 1999, which 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 2006. 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, of course, 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.

AQUIFER WATER QUALITY

Water quality (as judged by a decreasing trend in TDS values) in aquifer monitor wells TMWs 4, 56, 70, 89 and 102 is improving. An increasing trend in TDS values is observed in TMWs 1, 36, 61, 75, 78, 84, 92, 95, 98, 100, 104 and 112. TMW-4 has shown anomalous total dissolved solids (TDS) concentrations, manganese, iron and nickel values in the 2007 samples, as well as a depressed pH. In the most recent sample (July 17, 2007) the TDS was 568 mg/l but the February 11, 2007 sample was 244 mg/L, well below the 500 mg/l threshold. The increased 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. TMW-4 was sampled five (5) times instead of two in 2003 in an effort to better understand this problem. (Please see Control Charts.) The anomalous total dissolved solids values observed in TMW 6 in 2005 have declined to below the Groundwater Protection Standard (GPS). The July 22, 2007 concentration was 484 milligrams per liter. 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.

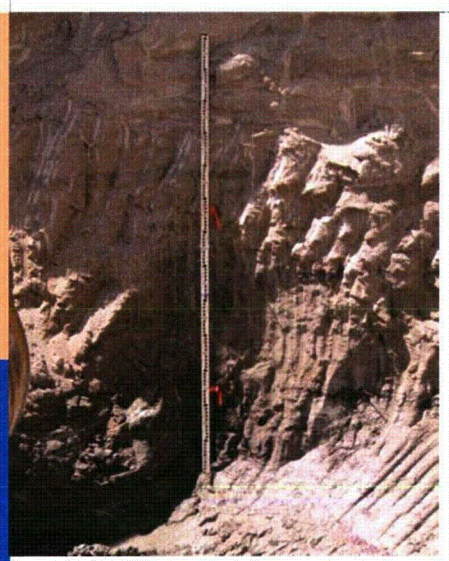
TMW 4 still exhibits nickel values that exceed the Groundwater Protection Standard (GPS) as seen in the July 17, 2007 sample. TMWs 99 and 112 exhibited nickel values that exceed the GPS in 2007. TMWs 99 and 112 are in the immediate vicinity of the Catchment Basin. The groundwater plume is primarily a Total Dissolved Solids, Natural Uranium and Combined Radium-226/228 plume, with some localized exceedances of other metals, primarily nickel.

Kennecott Uranium Company believes that an increase in TDS followed by a decrease in pH is the first sign of seepage in a monitor well. An increase in TDS appears first because the native soils are alkaline and neutralize the low pH tails cell water. Most metals will not migrate through these soils until the buffering capacity of the soil has been exhausted. This is clearly shown in the Uranium Contour Map, which shows the limited areal extent of the Uranium plume when compared to the areal extent of groundwater with TDS in excess of 500 ppm shown in the TDS Contour Map. The Combined Radium 226/228 plume appears to mimic the shape and size of the TDS plume.

The Battle Spring Aquifer pumpback wells around the Catchment Basin exhibit anomalous TDS, radium, uranium, iron and manganese values, with two (2) wells (TMWs 99 and 112) currently exhibiting anomalous nickel values. Several of the Catchment Basin wells showed traces of organic contamination in 2007. The following wells yielded results for the following organics: TMW-91 (Diesel Range Organics); TMW-99 (1,1,dichloroethane); TMW-102 (1,1,1 trichloroethane); TMW-113 (Gasoline Range Organics) and TMW-115 (Diesel Range Organics).

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

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



Coordinates:

	Northing	Easting	Elevation
Nail at 7.5 Feet	149142.0	323018.63	6556.2
Nail at Water Table	149144.1	323019.84	6552.41

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

Bulk Sample Identification	Chemical Uranium Concentration as U	Chemical Uranium Concentration as U	Chemical Uranium Concentration as U3O8	Chemical Uranium Concentration as U3O8	Radium-226	Gamma Equivalent Uranium Concentration as U	Gamma Equivalent Uranium Concentration as U	Gamma Equivalent Uranium Concentration as U3O8	Gamma Equivalent Uranium Concentration as U3O8	Equilibrium ratio
	(miligrams per kilogram)	(Percent)	(miligrams per kilogram)	(Percent)	(picocuries per gram)	(miligrams per kilogram)	(Percent)	(miligrams per kilogram)	(Percent)	Chemical uranium divided by gamma equivalent uranium
Above Water Table - Barrel #1	23.9	0.002	28.2	0.003	225	679	0.068	800	0.080	0.04
Above Water Table - Barrel #2	35.2	0.004	41.4	0.004	277	838	0.084	988	0.099	0.04
At Water Table	24.7	0.002	29.1	0.003	226	681	0.068	803	0.080	0.04
Below Water Table	20	0.002	23.6	0.002	77.4	234	0.023	276	0.028	0.09

bulk_sampling_bottom.xls
Oap:9/30/2007

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June 13, 2007

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

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

Dear Mr. Dobos,

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

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

Thank you.

Sincerely,

Gareth Mitchell

Enclosure: Report

Final Report

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

Request

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

Procedures

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

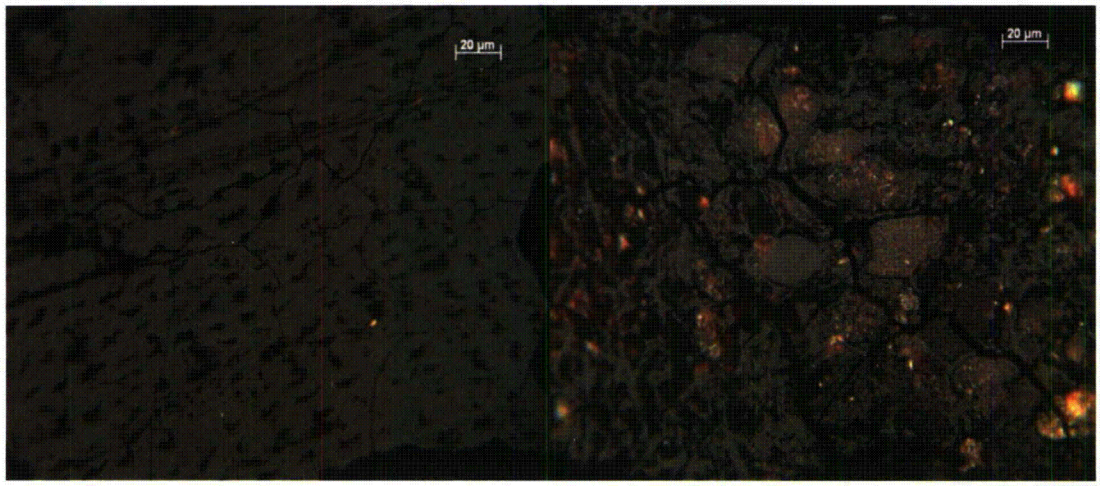
Remnants of the large particle were glued fast to the bottom of a 28 mm sample mold and embedded under vacuum with a cold-setting epoxy (EL01). The particulate sample (EL02) was vacuum impregnated in epoxy resin and placed in a centrifuge to establish a density/particle-size gradient. After hardening,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

component identified in EL01. A Leitz MPV2 reflectance photometer system at 625 X magnification in oil immersion and polarized white-light was used to collect maximum reflectance values from 11 different areas and the mean value is provided below. Mean reflectance values are an acceptable procedure for determination of organic maturity.

Results

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

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



EL01 **EL02**

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

The photograph of the dominant organic matter in specimen EL02 shows many rounded bodies which in brown coal terminology are referred to as gelinite. As the name implies the

humic matter from which they were derived were once gelatinous and have since formed into these amorphous bodies surrounded by the remnants of cell walls. In addition to organic matter, specimen EL02 contained mostly angular fragments of minerals and rocks composed of quartz, other silicates and carbonate. Furthermore, some of the organic material had been infilled and was in the early stage of being replaced by silica.

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

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

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

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

DATE	ELAPSED TIME DAYS	WATER ELEVATION	WATER LEVEL CHANGE
10/03/95	4544	6538.24	113.24
11/02/95	4574	6538.21	113.21
05/13/96	4767	6539.40	114.40
08/09/96	4855	6538.90	113.90
09/03/96	4880	6538.70	113.70
10/03/96	4910	6538.50	113.50
10/08/96	4915	6538.6	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	6539.7	114.70
07/28/97	5208	6539.3	114.30
09/01/97	5243	6539.2	114.20
09/22/97	5264	6539.16	114.16
10/15/97	5287	6539.01	114.01
11/25/97	5328	6539	114.00
12/03/97	5336	6538.99	113.99
05/04/98	5488	6540.25	115.25
05/18/98	5502	6540.4	115.40
06/11/98	5526	6540.38	115.38
07/01/98	5546	6540.4	115.40
07/29/98	5574	6540.26	115.26
08/20/98	5596	6540.1	115.10
09/29/98	5636	6539.92	114.92
10/06/98	5643	6539.84	114.84
11/05/98	5673	6539.8	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	6540.4	115.40
04/28/99	5847	6540.56	115.56
05/22/99	5871	6540.7	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	6539.8	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

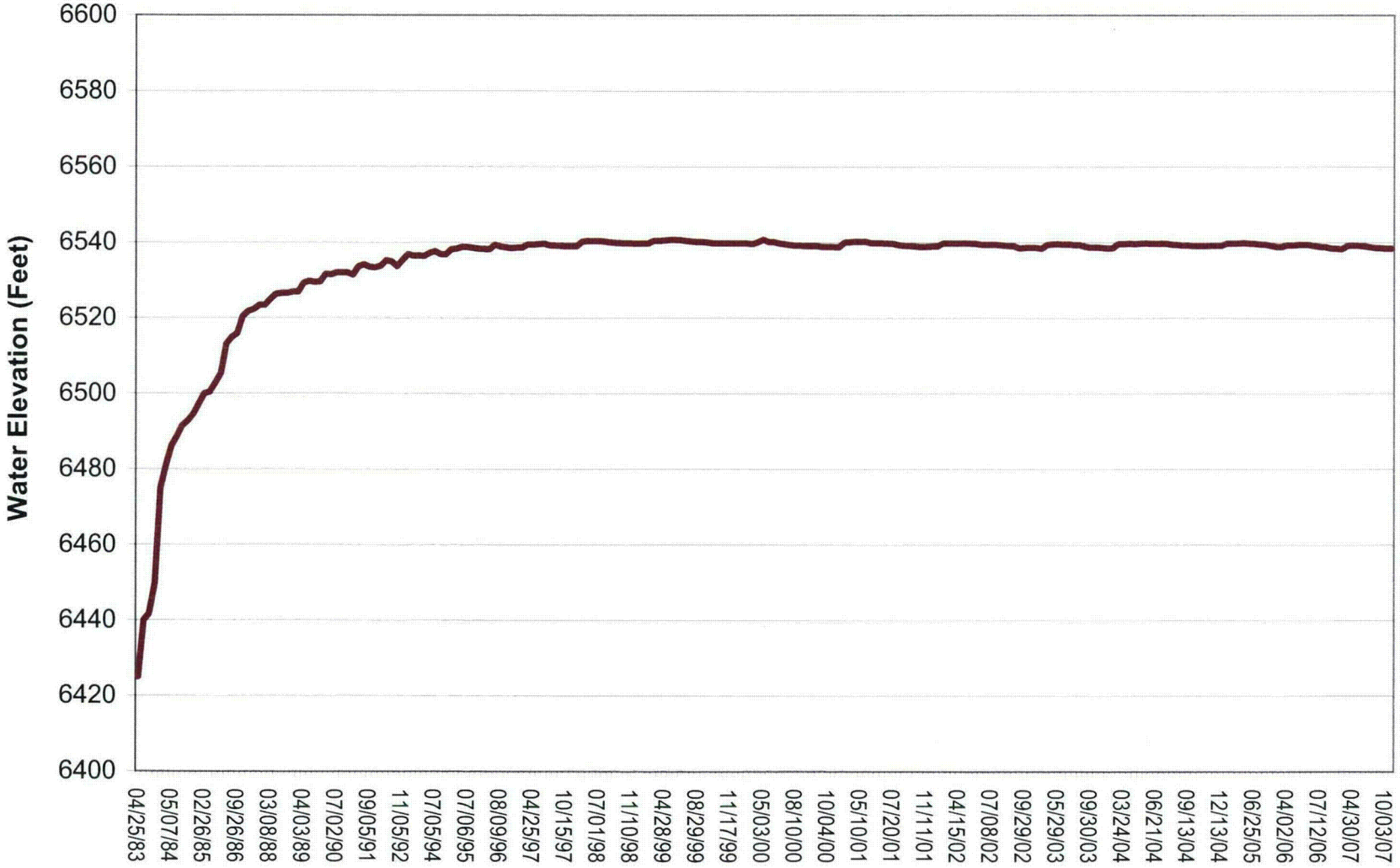
KENNECOTT URANIUM COMPANY
Sweetwater Pit Water Levels
Recovery of water level after suspension of dewatering activities in May, 1983

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	6540.3	115.30
05/10/01	6590	6540.22	115.22
05/16/01	6596	6540.2	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	6538.9	113.9
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	6539.4	114.4
07/09/02	7015	6539.4	114.4
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	6539.8	114.8
05/20/04	7696	6539.84	114.84
06/15/04	7722	6539.7	114.7
06/21/04	7728	6539.73	114.73
07/04/04	7741	6539.76	114.76
07/07/04	7744	6539.7	114.7

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	6539.4	114.4
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	6539.2	114.2
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	6539.7	114.7
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	6538.9	113.9
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	6539.4	114.4
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	6538.5	113.5
09/13/06	8542	6538.4	113.4
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	6539.2	114.2
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

KENNECOTT URANIUM COMPANY
Sweetwater Pit Water Levels
April 25, 1983 through October 15, 2007



KENNECOTT U[illegible]IUM COMPANY

Groundw[illegible]levations

Well No.	Northing	Easting	*Revised Measuring Point Elev.	2007 Jan-07	Feb-07	Mar-07 (= Resurveyed)	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07
TMW-1				105.11	104.88	105.64	105.39	105.77	105.33	105.37	105.44	105.29	105.32	105.50	105.66
TMW-1	150,107.66	324,536.42	6648.22	6,544.50	6,544.73	6,543.97	6,544.22	6,543.84	6,544.28	6,544.24	6,544.17	6,544.32	6,544.29	6,544.11	6,543.95
TMW-2				84.87	84.52	84.64	84.91	85.08	88.25	84.80	84.88	84.75	84.78	84.86	88.88
TMW-2	147,133.96	324,360.13	6627.09	6,542.22	6,542.57	6,542.45	6,542.18	6,542.01	6,538.84	6,542.29	6,542.21	6,542.34	6,542.31	6,542.23	6,538.21
TMW-3				84.31	84.08	84.09	84.21	84.45	84.25	84.19	84.31	84.22	84.21	84.32	84.32
TMW-3	145,984.03	324,361.03	6626.27	6,541.96	6,542.19	6,542.18	6,542.06	6,541.82	6,542.02	6,542.08	6,541.96	6,542.05	6,542.06	6,541.95	6,541.95
TMW-4				85.39	85.06	85.19	85.14	85.35	85.25	85.31	85.39	85.40	85.37	85.33	85.49
TMW-4	147,141.81	323,176.55	6626.89	6,541.50	6,541.83	6,541.70	6,541.75	6,541.54	6,541.64	6,541.58	6,541.50	6,541.49	6,541.52	6,541.56	6,541.40
TMW-5				111.33	110.84	111.07	111.02	111.19	111.18	111.15	95.18	111.15	111.17	111.22	111.21
TMW-5	149,053.50	328,102.80	6658.59	6,547.26	6,547.75	6,547.52	6,547.57	6,547.40	6,547.41	6,547.44	6,563.41	6,547.44	6,547.42	6,547.37	6,547.38
TMW-6				97.19	95.85	96.95	96.98	97.13	97.06	97.02	97.05	97.05	97.11	97.07	97.18
TMW-6	145,356.25	327,464.50	6641.66	6,544.47	6,545.81	6,544.71	6,544.68	6,544.53	6,544.60	6,544.64	6,544.61	6,544.61	6,544.55	6,544.59	6,544.48
TMW-7				114.65	116.09	116.71	116.76	116.91	116.94	117.11	116.61	116.88	121.79	119.78	119.25
TMW-7	149,339.65	325,014.01	6654.40	6,540.04	6,538.60	6,537.98	6,537.93	6,537.78	6,537.75	6,537.58	6,538.08	6,537.81	6,532.90	6,534.91	6,535.44
TMW-8				102.86	102.45	103.49	102.97	103.56	102.93	102.92	102.99	103.05	102.90	102.95	103.15
TMW-8	148,912.15	324,561.80	6646.47	6,543.61	6,544.02	6,542.98	6,543.50	6,542.91	6,543.54	6,543.55	6,543.48	6,543.42	6,543.57	6,543.52	6,543.32
TMW-10												12.65	13.36	13.18	13.26
TMW-10	149,145.59	323,037.81	6556.92									6,544.27	6,543.56	6,543.74	6,543.66
TMW-15				100.68	100.19	100.46	100.58	100.78	100.82	100.99	100.88	100.90	100.93	100.95	101.03
TMW-15	147,910.39	325,006.29	6643.26	6,542.58	6,543.07	6,542.80	6,542.68	6,542.48	6,542.44	6,542.27	6,542.38	6,542.36	6,542.33	6,542.31	6,542.23
TMW-16				111.88	111.94	112.45	112.46	112.62	112.62	112.72	112.65	112.85	112.98	112.81	113.02
TMW-16	149,397.99	325,023.08	6655.62	6,543.74	6,543.68	6,543.17	6,543.16	6,543.00	6,543.00	6,542.90	6,542.97	6,542.77	6,542.64	6,542.81	6,542.60
TMW-17				115.91	115.09	115.52	118.85	119.48	119.06	118.59	118.39	117.48	122.92	122.99	123.32
TMW-17	149,602.14	325,994.00	6660.87	6,544.96	6,545.78	6,545.35	6,542.02	6,541.39	6,541.81	6,542.28	6,542.48	6,543.39	6,537.95	6,537.88	6,537.55
TMW-18				126.08	125.92	126.41	126.32	126.31	126.53	126.31	126.55	126.64	126.52	126.51	126.61
TMW-18	148,922.42	325,018.57	6655.98	6,529.90	6,530.06	6,529.57	6,529.66	6,529.67	6,529.45	6,529.67	6,529.43	6,529.34	6,529.46	6,529.47	6,529.37
TMW-24				114.77	114.51	114.55	114.59	115.02	114.75	114.76	114.69	114.71	114.77	114.94	114.80
TMW-24	150,307.90	325,992.24	6661.21	6,546.44	6,546.70	6,546.66	6,546.62	6,546.19	6,546.46	6,546.45	6,546.52	6,546.50	6,546.44	6,546.27	6,546.41
TMW-29				110.24	109.88	109.78	109.81	110.23	110.11	110.09	110.12	110.03	110.23	110.30	110.34
TMW-29	150,108.27	326,786.49	6656.64	6,546.40	6,546.76	6,546.86	6,546.83	6,546.41	6,546.53	6,546.55	6,546.52	6,546.61	6,546.41	6,546.34	6,546.30
TMW-31				114.54	114.18	114.14	114.05	114.45	114.32	114.31	114.35	114.28	114.41	114.48	114.56
TMW-31	149,901.61	327,194.15	6661.09	6,546.55	6,546.91	6,546.95	6,547.04	6,546.64	6,546.77	6,546.78	6,546.74	6,546.81	6,546.68	6,546.61	6,546.53
TMW-35				111.52	111.06	111.05	111.06	111.41	111.30	111.32	113.34	111.28	111.41	111.49	111.54
TMW-35	149,509.35	327,198.92	6657.75	6,546.23	6,546.69	6,546.70	6,546.69	6,546.34	6,546.45	6,546.43	6,544.41	6,546.47	6,546.34	6,546.26	6,546.21
TMW-36				112.10	111.59	111.60	111.65	112.04	111.91	111.93	111.99	111.88	112.04	112.08	112.21
TMW-36	149,108.62	327,007.02	6657.75	6,545.65	6,546.16	6,546.15	6,546.10	6,545.71	6,545.84	6,545.82	6,545.76	6,545.87	6,545.71	6,545.67	6,545.54
TMW-37				105.29	104.75	104.72	104.79	105.05	105.05	105.03	105.09	104.99	105.11	105.12	105.21
TMW-37	148,455.68	326,999.77	6650.73	6,545.44	6,545.98	6,546.01	6,545.94	6,545.68	6,545.68	6,545.70	6,545.64	6,545.74	6,545.62	6,545.61	6,545.52
TMW-44				94.22	93.92	93.89	93.88	94.14	94.15	94.11	94.26	94.16	94.27	94.26	94.33
TMW-44	147,612.17	325,588.96	6637.52	6,543.30	6,543.60	6,543.63	6,543.64	6,543.38	6,543.37	6,543.41	6,543.26	6,543.36	6,543.25	6,543.26	6,543.19
TMW-45				96.76	96.63	96.59	96.61	96.84	96.86	96.75	96.92	96.82	96.94	96.92	96.99
TMW-45	147,619.66	326,196.14	6641.00	6,544.24	6,544.37	6,544.41	6,544.39	6,544.16	6,544.14	6,544.25	6,544.08	6,544.18	6,544.06	6,544.08	6,544.01
TMW-47				95.37	95.14	95.26	95.26	95.35	95.39	95.31	95.35	95.35	95.32	95.45	95.36
TMW-47	147,310.10	326,491.24	6640.35	6,544.98	6,545.21	6,545.09	6,545.09	6,545.00	6,544.96	6,545.04	6,545.00	6,545.00	6,545.03	6,544.90	6,544.99
TMW-48				95.14	95.04	94.96	95.02	95.18	95.20	95.14	95.14	95.17	95.28	95.24	95.27
TMW-48	147,312.58	326,482.99	6639.72	6,544.58	6,544.68	6,544.76	6,544.70	6,544.54	6,544.52	6,544.58	6,544.58	6,544.55	6,544.44	6,544.48	6,544.45
TMW-49				97.68	97.09	97.38	97.52	97.72	97.76	97.76	97.76	97.79	97.86	97.86	97.95
TMW-49	147,708.93	324,836.10	6640.19	6,542.51	6,543.10	6,542.81	6,542.67	6,542.47	6,542.43	6,542.43	6,542.43	6,542.40	6,542.33	6,542.33	6,542.24
TMW-50				105.48	104.95	105.28	105.46	105.71	105.78	105.77	105.82	105.79	105.89	105.89	105.99
TMW-50	148,198.81	324,697.71	6647.80	6,542.32	6,542.85	6,542.52	6,542.34	6,542.09	6,542.02	6,542.03	6,541.98	6,542.01	6,541.91	6,541.91	6,541.81
TMW-51				107.78	107.15	107.49	107.66	107.94	108.04	108.04	108.05	108.03	108.10	108.12	108.21
TMW-51	147,995.26	324,449.18	6650.00	6,542.22	6,542.85	6,542.51	6,542.34	6,542.06	6,541.96	6,541.96	6,541.95	6,541.97	6,541.90	6,541.88	6,541.79
TMW-52				102.57	101.96	102.30	102.72	103.06	103.17	103.15	103.14	103.06	103.21	103.27	103.32
TMW-52	148,316.56	324,221.64	6644.70	6,542.13	6,542.74	6,542.40	6,541.98	6,541.64	6,541.53	6,541.55	6,541.56	6,541.64	6,541.49	6,541.43	6,541.38
TMW-53				99.52	98.86	99.18	99.39	99.65	99.73	99.72	99.75	99.68	99.81	99.81	99.89

KENNECOTT U[illegible]IUM COMPANY

Ground[illegible]levations

Well No.	Northing	Easting	*Revised Measuring Point Elev.	2007 Jan-07	Feb-07	= Resurveyed Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07
TMW-53	147,849.28	323,913.72	6641.47	6,541.95	6,542.61	6,542.29	6,542.08	6,541.82	6,541.74	6,541.75	6,541.72	6,541.79	6,541.66	6,541.66	6,541.58
TMW-54				55.61	55.36	55.71	55.82	56.02	56.12	56.29	55.26	55.56	55.05	54.81	54.81
TMW-54	149,122.85	324,827.05	6,652.06	6,596.45	6,596.70	6,596.35	6,596.24	6,596.04	6,595.94	6,595.77	6,596.80	6,596.50	6,597.01	6,597.25	6,597.25
TMW-55				54.55	54.22	54.57	54.62	54.78	54.83	55.00	54.98	54.49	54.03	53.89	53.76
TMW-55	149,098.35	324,587.76	6,649.48	6,594.93	6,595.26	6,594.91	6,594.86	6,594.70	6,594.65	6,594.48	6,594.50	6,594.99	6,595.45	6,595.59	6,595.72
TMW-56				104.95	104.89	105.45	105.48	105.71	105.71	105.62	105.66	105.52	105.78	105.82	105.89
TMW-56	149,105.02	324,418.67	6,647.72	6,542.77	6,542.83	6,542.27	6,542.24	6,542.01	6,542.01	6,542.10	6,542.06	6,542.20	6,541.94	6,541.90	6,541.83
TMW-57				105.36	113.07	113.64	113.51	113.60	113.33	113.21	113.00	113.11	112.92	112.98	113.02
TMW-57	149,296.82	324,590.47	6,649.86	6,544.50	6,536.79	6,536.22	6,536.35	6,536.26	6,536.53	6,536.65	6,536.86	6,536.75	6,536.94	6,536.88	6,536.84
TMW-58				104.45	105.90	106.41	106.06	106.21	106.11	106.11	106.15	106.35	106.15	106.12	106.37
TMW-58	148,915.74	324,570.92	6,646.96	6,542.51	6,541.06	6,540.55	6,540.90	6,540.75	6,540.85	6,540.85	6,540.81	6,540.61	6,540.81	6,540.84	6,540.59
TMW-59				111.04	110.80	111.15	111.34	111.54	111.51	111.38	111.37	111.36	111.41	111.40	111.66
TMW-59	148,403.85	325,013.86	6,648.15	6,537.11	6,537.35	6,537.00	6,536.81	6,536.61	6,536.64	6,536.77	6,536.78	6,536.79	6,536.74	6,536.75	6,536.49
TMW-61				107.05	106.61	106.98	107.18	107.43	107.51	107.49	107.55	107.51	107.59	107.65	107.75
TMW-61	148,422.32	324,592.68	6,649.36	6,542.31	6,542.75	6,542.38	6,542.18	6,541.93	6,541.85	6,541.87	6,541.81	6,541.85	6,541.77	6,541.71	6,541.61
TMW-62				81.65	92.00	101.81	101.41	104.67	104.76	104.80	104.61	104.96	broke off	105.71	105.34
TMW-62	148,789.00	324,277.11	6,646.13	6,542.70	6,542.00	6,542.29	6,542.69	6,541.61	6,541.52	6,541.48	6,541.67	6,541.32	#VALUE!	6,540.57	6,540.94
TMW-63				117.46	117.25	117.83	117.76	117.90	117.99	117.91	118.00	118.18	118.09	118.02	118.22
TMW-63	148,924.39	325,009.90	6,654.77	6,537.31	6,537.52	6,536.94	6,537.01	6,536.87	6,536.78	6,536.86	6,536.77	6,536.59	6,536.68	6,536.75	6,536.55
TMW-64				108.11	107.72	108.22	108.20	108.38	108.36	108.32	108.28	108.22	108.44	108.51	108.59
TMW-64	149,797.71	324,991.71	6,652.25	6,544.11	6,544.50	6,544.00	6,544.02	6,543.84	6,543.86	6,543.90	6,543.94	6,544.00	6,543.78	6,543.71	6,543.63
TMW-67				71.97	71.84	71.97	71.84	72.01	71.97	72.10	72.11	72.14	72.05	72.12	72.03
TMW-67	150,003.26	325,192.80	6,656.63	6,584.66	6,584.79	6,584.66	6,584.79	6,584.62	6,584.66	6,584.53	6,584.52	6,584.49	6,584.58	6,584.51	6,584.60
TMW-69				110.79	110.41	111.04	111.04	110.95	111.13	111.11	111.06	111.04	111.22	111.29	111.31
TMW-69	149,649.27	324,659.43	6,654.47	6,543.68	6,544.06	6,543.43	6,543.43	6,543.52	6,543.34	6,543.36	6,543.41	6,543.43	6,543.25	6,543.18	6,543.16
TMW-70				108.09	107.91	108.59	108.55	108.57	108.73	108.75	108.66	108.61	108.79	108.84	108.91
TMW-70	149,309.09	324,369.82	6,651.06	6,542.97	6,543.15	6,542.47	6,542.51	6,542.49	6,542.33	6,542.31	6,542.40	6,542.45	6,542.27	6,542.22	6,542.15
TMW-71				110.75	110.29	110.90	110.86	110.79	110.94	110.92	110.89	110.88	111.00	111.09	111.13
TMW-71	149,835.18	324,420.67	6,654.52	6,543.77	6,544.23	6,543.62	6,543.66	6,543.73	6,543.58	6,543.60	6,543.63	6,543.64	6,543.52	6,543.43	6,543.39
TMW-72				98.46	98.50	98.87	98.65	98.68	98.91	98.91	98.94	98.75	98.85	98.94	98.87
TMW-72	149,020.47	322,997.15	6,640.35	6,541.89	6,541.85	6,541.48	6,541.70	6,541.67	6,541.44	6,541.44	6,541.41	6,541.60	6,541.50	6,541.41	6,541.48
TMW-73				101.10	101.15	101.51	101.32	101.19	101.39	101.31	101.39	101.09	101.17	101.18	101.21
TMW-73	149,055.70	322,896.82	6,643.31	6,542.21	6,542.16	6,541.80	6,541.99	6,542.12	6,541.92	6,542.00	6,541.92	6,542.22	6,542.14	6,542.13	6,542.10
TMW-75				115.09	114.27	114.66	115.70	116.13	116.05	116.12	116.06	116.19	116.54	116.45	116.80
TMW-75	149,801.01	325,992.80	6,660.18	6,545.09	6,545.91	6,545.52	6,544.48	6,544.05	6,544.13	6,544.06	6,544.12	6,543.99	6,543.64	6,543.73	6,543.38
TMW-78				113.58	112.90	113.25	113.46	113.91	113.75	113.69	113.74	113.74	114.11	114.26	114.22
TMW-78	149,900.26	325,592.38	6,658.50	6,544.92	6,545.60	6,545.25	6,545.04	6,544.59	6,544.75	6,544.81	6,544.76	6,544.76	6,544.39	6,544.24	6,544.28
TMW-82				114.88	114.04	114.41	114.33	114.78	114.67	114.57	114.63	114.52	114.69	114.82	114.81
TMW-82	150,302.15	325,987.47	6,660.64	6,545.76	6,546.60	6,546.23	6,546.31	6,545.86	6,545.97	6,546.07	6,546.01	6,546.12	6,545.95	6,545.82	6,545.83
TMW-83				63.99	63.85	63.89	63.90	63.95	63.93	115.31	63.96	63.98	63.97	63.98	64.00
TMW-83	150,307.20	326,379.40	6,658.87	6,594.88	6,595.02	6,594.98	6,594.97	6,594.92	6,594.94	6,543.56	6,594.91	6,594.89	6,594.90	6,594.89	6,594.87
TMW-84				115.45	114.50	115.03	115.02	115.45	115.36	63.98	115.26	115.23	115.42	115.50	115.53
TMW-84	150,506.27	326,376.61	6,661.86	6,546.41	6,547.36	6,546.83	6,546.84	6,546.41	6,546.50	6,597.88	6,546.60	6,546.63	6,546.44	6,546.36	6,546.33
TMW-87				89.91	89.81	89.87	89.81	89.85	89.85	89.82	89.81	89.85	89.85	89.87	89.83
TMW-87	150,200.92	325,789.12	6,660.60	6,570.69	6,570.79	6,570.73	6,570.79	6,570.75	6,570.75	6,570.78	6,570.79	6,570.75	6,570.75	6,570.73	6,570.77
TMW-89				114.33	113.57	113.91	113.86	114.28	113.54	114.14	114.10	114.11	114.20	114.29	114.35
TMW-89	150,809.67	326,137.13	6,660.75	6,546.42	6,547.18	6,546.84	6,546.89	6,546.47	6,547.21	6,546.61	6,546.65	6,546.64	6,546.55	6,546.46	6,546.40
TMW-90															
TMW-90	148,611.42	323,958.91	6,639.82												
TMW-91				85.00	84.94	96.79	97.05	103.95	104.04	103.99	103.64	103.64	103.88	103.85	103.92
TMW-91	148,518.42	323,956.85	6,639.61	6,541.82	6,541.86	6,542.01	6,541.75	6,540.44	6,540.35	6,540.40	6,540.75	6,540.75	6,540.51	6,540.54	6,540.47
TMW-92				85.88	85.52	97.26	96.65	104.67	104.64	104.46	104.06	104.06	104.34	104.29	104.40
TMW-92	148,504.47	323,951.33	6,640.15	6,541.73	6,542.08	6,542.14	6,542.25	6,540.04	6,540.07	6,540.25	6,540.65	6,540.65	6,540.37	6,540.42	6,540.31
TMW-93				98.99	98.57	99.22	99.58	100.06	100.11	100.06	99.89	99.89	100.03	100.04	100.18
TMW-93	148,399.92	324,099.96	6,641.02	6,542.03	6,542.45	6,541.80	6,541.44	6,540.96	6,540.91	6,540.96	6,541.13	6,541.13	6,540.99	6,540.98	6,540.84

KENNECOTT U[illegible]IUM COMPANY
Ground[illegible] Elevations

Well No.	Northing	Easting	*Revised Measuring Point Elev.	2007 Jan-07	Feb-07	= Resurveyed Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07
TMW-94				99.05	98.61	99.30	99.83	100.31	100.34	100.30	100.06	100.06	100.25	100.23	100.36
TMW-94	148,400.13	324,000.02	6,640.53	6,541.48	6,541.92	6,541.23	6,540.70	6,540.22	6,540.19	6,540.23	6,540.47	6,540.47	6,540.28	6,540.30	6,540.17
TMW-95				99.28	98.82	99.54	100.41	100.77	100.78	100.71	100.44	100.44	100.65	100.65	100.78
TMW-95	148,399.94	323,900.08	6,640.57	6,541.29	6,541.75	6,541.03	6,540.16	6,539.80	6,539.79	6,539.86	6,540.13	6,540.13	6,539.92	6,539.92	6,539.79
TMW-96				106.50	97.66	97.98	97.98	107.72	107.76	108.89	107.68	107.81	106.70	106.37	106.26
TMW-96	148,500.01	323,820.25	6,640.36	6,533.86	6,542.70	6,542.38	6,542.38	6,532.64	6,532.60	6,531.47	6,532.68	6,532.55	6,533.66	6,533.99	6,534.10
TMW-97				104.42	98.89	99.22	99.22	105.32	105.21	104.32	102.01	101.95	105.50	105.41	105.58
TMW-97	148,599.86	323,805.93	6,641.54	6,537.12	6,542.65	6,542.32	6,542.32	6,536.22	6,536.33	6,537.22	6,539.53	6,539.59	6,536.04	6,536.13	6,535.96
TMW-98				99.42	98.49	99.04	99.93	100.24	100.25	100.21	99.90	99.90	100.20	100.22	100.35
TMW-98	148,699.84	323,822.69	6,643.60	6,544.18	6,545.11	6,544.56	6,543.67	6,543.36	6,543.35	6,543.39	6,543.70	6,543.70	6,543.40	6,543.38	6,543.25
TMW-99				98.99	98.02	98.58	99.71	99.72	99.75	99.75	99.45	99.45	99.72	99.75	99.91
TMW-99	148,707.32	323,908.85	6,643.84	6,544.85	6,545.82	6,545.26	6,544.13	6,544.12	6,544.09	6,544.09	6,544.39	6,544.39	6,544.12	6,544.09	6,543.93
TMW-100					101.04	101.16	100.88	101.77	101.98	101.98	101.77	101.77	101.88	101.94	102.15
TMW-100	148,799.77	324,016.92	6,639.85	6,634.27	6,542.26	6,542.04	6,542.32	6,541.43	6,541.22	6,541.22	6,541.43	6,541.43	6,541.32	6,541.26	6,541.05
TMW-101				85.91	96.06	105.04	104.68	102.87	102.95	102.91	102.71	102.71	102.85	102.88	113.12
TMW-101	148,800.10	324,100.06	6,641.64	6,542.54	6,542.04	6,541.46	6,541.82	6,543.63	6,543.55	6,543.59	6,543.79	6,543.79	6,543.65	6,543.62	6,533.38
TMW-102				92.27	89.47	106.25	104.51	113.39	109.99	107.05	117.59	117.59	111.30	109.73	108.39
TMW-102	148,600.02	323,968.63	6,639.74	6,533.79	6,536.63	6,531.65	6,533.39	6,531.15	6,534.55	6,537.49	6,526.95	6,526.95	6,533.24	6,534.81	6,536.15
TMW-103									100.85	100.72	100.75	100.75	100.81	100.86	100.89
TMW-103	149,144.44	323,576.50	6,642.87						6,542.02	6,542.15	6,542.12	6,542.12	6,542.06	6,542.01	6,541.98
TMW-104				87.11	87.18	96.29	102.56	102.86	102.99	102.89	101.78	102.65	102.79	102.74	102.86
TMW-104	148,508.55	324,122.60	6,639.71	6,542.36	6,542.32	6,541.91	6,535.64	6,541.08	6,540.95	6,541.05	6,542.16	6,541.29	6,541.15	6,541.20	6,541.08
TMW-105															
TMW-105	148,581.02	323,943.82	6,640.18												
TMW-106									100.42	100.35	100.33	100.33	100.42	100.48	100.50
TMW-106	149,120.61	323,577.45	6,642.25						6,541.83	6,541.90	6,541.92	6,541.92	6,541.83	6,541.77	6,541.75
TMW-107									97.06	97.78	97.81	97.43	97.85	97.75	97.82
TMW-107	148,109.87	323,621.68	6,638.80						6,541.74	6,541.02	6,540.99	6,541.37	6,540.95	6,541.05	6,540.98
TMW-108									100.44	100.49	100.32	100.32	100.51	100.51	100.56
TMW-108	148,581.99	323,650.69	6,641.43						6,540.99	6,540.94	6,541.11	6,541.11	6,540.92	6,540.92	6,540.87
TMW-109									100.01	100.10	100.04	100.04	100.13	100.09	100.21
TMW-109	148,563.38	323,651.83	6,641.21						6,541.20	6,541.11	6,541.17	6,541.17	6,541.08	6,541.12	6,541.00
TMW-110									97.42	97.65	97.68	97.59	97.72	97.66	97.70
TMW-110	148,088.65	323,625.57	6,638.71						6,541.29	6,541.06	6,541.03	6,541.12	6,540.99	6,541.05	6,541.01
TMW-111				86.65	95.24	102.47	102.15	102.76	102.82	102.79	102.68	102.68	102.75	102.80	103.04
TMW-111	148,800.06	324,188.03	6,643.95	6,542.75	6,542.66	6,544.13	6,544.45	6,541.63	6,541.57	6,541.60	6,541.71	6,541.71	6,541.64	6,541.59	6,541.35
TMW-112				87.37	87.51	100.21	100.21	104.15	104.26	104.17	104.02	104.02	104.02	104.04	104.18
TMW-112	148,700.09	324,188.95	6,643.24	6,542.16	6,541.99	6,538.59	6,542.39	6,541.43	6,541.32	6,541.41	6,541.56	6,541.56	6,541.56	6,541.54	6,541.40
TMW-113				84.60	84.75	94.55	103.68	103.11	103.24	103.18	102.99	102.99	102.98	103.04	103.18
TMW-113	148,600.06	324,192.45	6,643.51	6,542.43	6,542.25	6,542.15	6,541.92	6,541.26	6,541.13	6,541.19	6,541.38	6,541.38	6,541.39	6,541.33	6,541.19
TMW-115				100.46	110.07	100.68	100.46	101.48	101.52	101.61	101.33	101.33	101.49	101.48	101.63
TMW-115	148,499.96	324,199.79	6,642.92	6,542.46	6,532.85	6,542.24	6,542.46	6,541.09	6,541.05	6,540.96	6,541.24	6,541.24	6,541.08	6,541.09	6,540.94
M-1				147.14	146.74	147.02	146.86	147.42	147.03	146.99	147.05	146.98	147.02	147.12	147.19
M-1	159,190.56	323,580.63	6,711.30	6,564.16	6,564.56	6,564.28	6,564.44	6,563.88	6,564.27	6,564.31	6,564.25	6,564.32	6,564.28	6,564.18	6,564.11
M-2				65.92	65.61	65.79	65.72	65.85	65.74	65.88	65.85	65.86	65.85	65.90	65.92
M-2	145,731.13	317,919.02	6,607.29	6,541.37	6,541.68	6,541.50	6,541.57	6,541.44	6,541.55	6,541.41	6,541.44	6,541.43	6,541.44	6,541.39	6,541.37
PWW-1				100.07	99.58	112.65	100.09	100.80	100.21	108.42	100.14	100.28	100.11	100.13	100.39
PWW-1	149,023.15	323,779.27	6,643.08	6,543.01	6,543.50	6,530.43	6,542.99	6,542.28	6,542.87	6,534.66	6,542.94	6,542.80	6,542.97	6,542.95	6,542.69
PWW-2				105.70	103.70	105.34	104.25	104.88	104.43	105.31	104.38	104.48	104.36	104.41	104.62
PWW-2	148,877.54	324,180.69	6,646.85	6,541.15	6,543.15	6,541.51	6,542.60	6,541.97	6,542.42	6,541.54	6,542.47	6,542.37	6,542.49	6,542.44	6,542.23
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KENNEC[illegible]RANIUM COMPANY			CGL = Chemical & Geological Laboratories			EU[illegible] Laboratories, Inc.								
SWEETW[illegible]R TAILINGS CELL			CLI = Core Laboratories, Inc.			MEC [illegible]erals 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)														

KENNEC[illegible]RANIUM COMPANY			*Revised*											
SWEETW[illegible]R 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
	Std	6/5/01	6/12/02	6/4/03	6/15/04	6/7/05	6/6/06	6/4/07
FIELD DATA mg/l:								
Temperature (C)		10	12	14	16	14		4
pH (Std. Units)		2.8	2.8	2.8	16.2	2.1		3.34
Cond (umho/cm)		1200	9600	10400	9000	8000		10140
TDS								
MAJOR IONS mg/l:								
Alk-CaC03		-1	-1	-1	-1	-1	-1	-1
Bicarbonate (HCO3)		-1	-1	-1	-1	-1	-1	-1
Calcium (Ca)		469	410	459	470	436	501	549
Carbonate (CO3)		-1	-1	-1	-1	-1	-1	-1
Chloride (Cl)	2000	610	680	678	820	651	683	649
Fluoride (F)		36.5	42.4	43.7	38.4	16	44.9	13.5
Magnesium (Mg)		1130	992	1130	1300	1140	1290	1110
Nitrate-N (NO2)	10	0.67	0.4	2.4	0.17	-0.1	0.3	0.5
Potassium (K)		0.7	-1	1.5	1	-0.5	1.4	5.3
Silica (SiO2)		175	151	138	130	119	117	105
Sodium (Na)		733	724	801	810	726	725	743
Sulfate (SO4)	3000	13100	12500	13400	14000	12500	13500	10300
NON-METALS:								
Cyanide (CN)		-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
pH (units)	-2	2.81	2.83	2.88	2.95	2.94	3.09	3.37
TDS @ 180°	5000	19400	20400	20100	21000	19100	18100	13600
TRACE METALS mg/l:								
Aluminum (Al)	5	1220	1150	1250	1300	1230	1060	554
Arsenic (As)	0.2	0.039	0.036	0.023	0.06	0.027	0.019	0.012
Barium (Ba)		-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
Boron (B)	5	0.5	0.63	-0.22	-0.1	0.3	0.4	0.4
Cadmium (Cd)	0.05	0.019	0.034	0.02	0.03	0.019	0.017	0.014
Chromium (Cr)	0.05	1.83	2.47	1.31	2	1.7	1.44	0.55
Cobalt (Co)	1	1.95	2.78	1.87	3	2.63	2.96	2.09
Copper (Cu)	0.5	1.54	2.04	1.76	1.9	1.64	1.54	0.58
Iron (Fe)		313	250	232	230	139	115	59.5
Lead (Pb)	0.1	-0.01	-0.01	0.02	-0.01	-0.01	-0.01	0.02
Manganese (Mn)		61.7	94	70.4	110	84.4	94.4	67.4
Mercury (Hg)	0.005	-0.0002	0.0005	-0.0004	0.0005	-0.0002	-0.0002	-0.0002
Molybdenum (Mo)		-0.01	-0.01	-0.01	-0.01	0.04	-0.01	-0.01
Nickel (Ni)		4.6	7.01	5.79	7.2	6.8	6.92	4.39
Selenium (Se)	0.05	0.591	0.618	0.579	0.24	0.534	0.461	0.414
Silver (Ag)		-0.01	0.05	-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
Vanadium (V205)	0.1	0.4	0.5	0.3	0.2	0.2	0.2	-0.1
Zinc (ZN)	25	5.8	9.19	11.6	9.5	8.25	7.48	5.72
RADIOMETRIC pCi/l:								
Uranium, natural	3385	12300	12321.4	12000	11000	10300	11100	8530
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
Radium 228		1.9 +/- 1.0	-1	-1	-1	-1	8.9+/-1.1	-1
Combined Ra226/228	5	61.7	55.9	69.8	46.2	23.8	10.4	20.2
Thorium 230		9440 +/- 78	3250 +/- 30.3	1890+/-19.7	2110 +/- 34.9	1650+/-24.3	1620+/-113	671+/-58.2
Lead (Pb210)		-1	-2.7	-2.7	-1	-1	-1	-1
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
QUALITY ASSURANCE DATA:								
A/C Balance		1.17	1.19	1.09	1.17	1.22	1.07	1.01
(Energy Labs Inc unless noted)								

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
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
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
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
TMW 55	Perch				**101,875.00**				
TMW 57	Aquifer								
TMW 58	Aquifer								
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
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
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
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

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

TABLE 1

GALLONS PUMPED TO TAILINGS IMPOUNDMENT

WELL:	TYPE:	December 31, 1993 to December 31, 1994	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
TMW 7	Aquifer								
TMW 16	Aquifer	976,840.00	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
TMW 17	Aquifer	4,387,290.00	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
TMW 18	Aquifer	5,307,990.00	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
TMW 55	Perch								
TMW 57	Aquifer								1,958,380.00
TMW 58	Aquifer	2,713,490.00	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
TMW 59	Aquifer	2,356,260.00	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
TMW 65	Perch								
TMW 75	Aquifer	2,761,170.00	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
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:		18,503,040.00	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
Cumulative Gallons Pump		112,743,589.20	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

TABLE 1

GALLONS PUMPED TO TAILINGS IMPOUNDMENT

WELL:	TYPE:	December 31, 2001 to December 31, 2002	December 31, 2002 to December 31, 2003	December 31, 2003 to December 31, 2004	December 31, 2004 to December 31, 2005	January 1, 2006 to December 31, 2006	January 1, 2007 to December 31, 2007	
TMW 7	Aquifer		262,880.00	3,371,090.00	2,638,080.00	2,011,900.00	2,807,610.00	11,091,560.00
TMW 16	Aquifer	955,970.00	1,008,140.00					22,170,405.00
TMW 17	Aquifer	991,590.00	1,440,200.00	2,196,440.00	2,121,860.00	1,475,180.00	2,602,950.00	64,267,833.00
TMW 18	Aquifer	6,099,470.00	5,356,710.00	4,085,050.00	4,150,670.00	4,326,090.00	4,450,800.00	98,281,586.00
TMW 55	Perch							101,875.00
TMW 57	Aquifer	2,165,880.00	1,364,700.00	1,907,680.00	2,066,070.00	2,619,800.00	2,963,350.00	15,045,860.00
TMW 58	Aquifer	1,738,740.00	2,122,770.00	2,705,370.00	1,912,700.00	2,170,120.00	821,270.00	35,975,560.00
TMW 59	Aquifer	1,654,000.00	1,754,410.00	1,741,170.00	2,233,710.00	2,312,760.00	2,829,940.00	38,727,007.00
TMW 65	Perch							-
TMW 75	Aquifer	2,551,680.00	2,249,480.00	2,175,390.00	2,351,240.00	1,088,240.00	945,160.00	47,355,540.00
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	8,568,940.00
TMW 97	Aquifer				1,606,540.00	4,374,660.00	3,067,380.00	9,048,580.00
Bison Basin	Disposal							561,120.00
GMIX	Disposal							15,000.00
Subtotal:		16,157,330.00	15,559,290.00	18,182,190.00	20,576,192.00	24,348,650.00	23,596,880.00	351,652,361.20
Cumulative Gallons Pump		249,389,159.20	264,948,449.20	283,130,639.20	303,706,831.20	328,055,481.20	**351,652,361.20**	

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	8731.23	27851.82	39530.69	202851.85	0.00	7552.52	28517.25	57761.40	0.00	33771.47	0.00	0.00	0.00	0.00	0.00	2.49	4552.48	4297.62	415,420.82
Calcium	7334.09	33391.21	32695.15	221299.94	0.00	7461.15	31435.93	81816.55	0.00	32208.35	0.00	0.00	0.00	0.00	0.00	6.33	5980.55	5533.55	459,162.80
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	1108.23	5014.43	5579.82	34515.12	0.00	874.72	3672.32	11800.90	0.00	4703.56	0.00	0.00	0.00	0.00	0.00	1.01	958.98	775.73	69,004.82
Fluoride	2.49	2.42	30.30	6.59	0.00	9.15	13.57	15.22	0.00	25.26	0.00	0.00	0.00	0.00	0.00	0.00	3.83	5.41	114.24
Magnesium	535.06	2572.42	2055.92	14399.52	0.00	578.40	2410.64	9518.15	0.00	2497.38	0.00	0.00	0.00	0.00	0.00	0.49	437.36	435.71	35,441.05
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	0.00	377.75
Potassium	157.77	481.94	845.18	2480.90	0.00	196.10	582.46	1000.39	0.00	658.81	0.00	0.00	0.00	0.00	0.00	0.08	127.93	128.56	6,660.12
Silica	738.21	1430.36	3271.82	8413.76	0.00	772.41	2071.93	2941.45	0.00	2764.93	0.00	0.00	0.00	0.00	0.00	0.23	452.81	476.63	23,334.54
Sodium	2088.58	7454.19	10795.17	32762.35	0.00	2334.92	7247.11	13095.85	0.00	9120.53	0.00	0.00	0.00	0.00	0.00	1.28	1621.73	1596.57	88,118.28
Sulfate	15741.32	76973.64	75101.57	444408.92	281.43	17983.46	72703.72	206356.08	407.23	71103.99	2509.88	274.72	966.02	848.22	18.02	16.37	14716.62	12910.13	1,013,321.34
TDS	32318.88	148300.36	148900.13	893736.63	456.46	34333.33	138069.54	376474.11	673.46	145769.97	4529.50	531.92	1651.65	1423.79	33.85	28.12	27248.41	25097.86	1,979,577.97
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	0.04	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.16
Barium	0.00	0.22	1.53	0.48	0.00	0.00	0.00	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.44
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	2.30	0.00	0.25	0.21	3.99	0.00	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.00	9.52
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	0.39	0.00	0.49	0.22	1.66	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.81
Copper	0.00	0.22	0.70	0.62	0.00	0.00	0.00	0.14	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.76
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	31.90	51.35	22.37	2266.00	0.00	19.17	53.16	4316.18	0.00	27.00	0.00	0.00	0.00	0.00	0.00	0.00	1.22	4.72	6,793.07
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	10.00	35.54	19.61	332.43	0.00	8.67	26.10	427.41	0.00	21.48	0.00	0.00	0.00	0.00	0.00	0.00	3.39	4.42	889.05
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	2.06	0.00	0.57	0.26	2.14	0.00	0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.61
Selenium	0.00	0.06	0.11	0.41	0.07	0.01	0.12	0.15	0.18	0.12	0.41	0.03	0.25	0.22	0.00	0.00	0.18	0.00	2.32
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	0.00	0.00	0.55	2.36	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.94
Zinc	0.08	2.94	7.32	7.42	0.00	0.80	3.99	2.67	0.00	2.58	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	27.84
RADIOMETRICS																			
Uranium (mg/l)	0.22	24.09	3.52	1.96	0.00	0.44	1.88	1.04	0.00	10.88	0.00	0.00	0.00	0.00	0.00	0.00	1.80	1.92	47.75

KENNECOTT URANIUM COMPANY

TMW-7												
CONTAMINANTS REMOVED												
(Started pumping 12/01/03)	**2007**											
DATE FS:	10-Jan-07			11-Apr-07			22-Jul-07			01-Oct-07		
		VOLUME 2007	CUMULATIVE		VOLUME 2007	CUMULATIVE		VOLUME 2007	CUMULATIVE		VOLUME 2007	CUMULATIVE
GALLONAGE		701,902.50	8,985,852.50		701,902.50	9,687,755.00		701,902.50	10,389,657.50		701,902.50	11,091,560.00
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	204.00	542.03	7046.70	218.00	579.22	7625.92	210.00	557.97	8183.89	206.00	547.34	8731.23
Calcium	170.00	451.69	6008.26	183.00	486.23	6494.49	166.00	441.06	6935.55	150.00	398.55	7334.09
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	26.00	69.08	893.01	30.00	79.71	972.72	24.00	63.77	1036.49	27.00	71.74	1108.23
Fluoride	0.10	0.27	1.69	0.20	0.53	2.22	0.00	0.00	2.22	0.10	0.27	2.49
Magnesium	13.90	36.93	424.53	16.20	43.04	467.57	13.60	36.14	503.70	11.80	31.35	535.06
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	3.70	9.83	126.95	3.90	10.36	137.31	3.70	9.83	147.14	4.00	10.63	157.77
Silica	18.00	47.83	608.01	17.00	45.17	653.18	15.00	39.85	693.04	17.00	45.17	738.21
Sodium	50.90	135.24	1697.73	49.80	132.32	1830.05	49.80	132.32	1962.37	47.50	126.21	2088.58
Sulfate	366.00	972.46	12776.12	405.00	1076.08	13852.20	375.00	996.37	14848.57	336.00	892.75	15741.32
TDS	720.00	1913.03	26112.16	790.00	2099.02	28211.18	780.00	2072.45	30283.63	766.00	2035.25	32318.88
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	0.99	2.63	19.49	1.87	4.97	24.46	1.36	3.61	28.07	1.44	3.83	31.90
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	0.31	0.82	7.13	0.41	1.09	8.22	0.33	0.88	9.09	0.34	0.90	10.00
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Zn	0.00	0.00	0.08	0.00	0.00	0.08	0.00	0.00	0.08	0.00	0.00	0.08
RADIOMETRICS												
U mg/l	0.01	0.01	0.16	0.01	0.02	0.17	0.01	0.02	0.19	0.01	0.02	0.22

TMW-17												
BATTLE SPRING AQUIFER												
CONTAMINANTS REMOVED	**2007**											
DATE FS	14-Mar-07			11-Apr-07			22-Jul-07			03-Oct-07		
(Started pumping 7/1/86)		VOLUME 2007	CUMULATIVE		VOLUME 2007	CUMULATIVE		VOLUME 2007	CUMULATIVE		VOLUME 2007	CUMULATIVE
GALLONAGE		650,737.50	62,315,620.50		650,737.50	62,966,358.00		650,737.50	63,617,095.50		650,737.50	64,267,833.00
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	159.00	391.67	38,498.57	134.00	330.08	38,828.65	140.00	344.86	39,173.51	145.00	357.18	39,530.69
Calcium	103.00	253.72	32,082.77	88.40	217.76	32,300.52	84.60	208.40	32,508.92	75.60	186.23	32,695.15
Carbonate	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chloride	12.00	29.56	5,515.78	8.00	19.71	5,535.48	8.00	19.71	5,555.19	10.00	24.63	5,579.82
Fluoride	0.20	0.49	29.31	0.20	0.49	29.80	0.10	0.25	30.05	0.10	0.25	30.30
Magnesium	10.30	25.37	2,017.49	5.70	14.04	2,031.53	5.40	13.30	2,044.83	4.50	11.08	2,055.92
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	3.00	7.39	822.76	3.00	7.39	830.15	2.90	7.14	837.30	3.20	7.88	845.18
Silica	14.00	34.49	3,163.43	15.00	36.95	3,200.38	14.00	34.49	3,234.87	15.00	36.95	3,271.82
Sodium	41.80	102.97	10,525.19	37.60	92.62	10,617.81	38.00	93.61	10,711.42	34.00	83.75	10,795.17
Sulfate	234.00	576.41	73,759.07	194.00	477.88	74,236.95	182.00	448.32	74,685.27	169.00	416.30	75,101.57
TDS	494.00	1216.87	145,806.21	402.00	990.25	146,796.46	426.00	1049.37	147,845.83	428.00	1054.30	148,900.13
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	0.25	0.62	21.78	0.09	0.22	22.00	0.05	0.12	22.12	0.10	0.25	22.37
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	0.13	0.32	19.32	0.04	0.10	19.41	0.04	0.10	19.51	0.04	0.10	19.61
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)	0.03	0.08	3.47	0.01	0.02	3.48	0.01	0.02	3.50	0.01	0.02	3.52

TMW-18												
BATTLE SPRING AQUIFER												
CONTAMINANTS REMOVED	**2007**											
DATE FS	25-Jan-07			04-Apr-07			22-Jul-07			01-Oct-07		
(Started pumping 10/8/86)		VOLUME 2007	CUMULATIVE		VOLUME 2007	CUMULATIVE		VOLUME 2007	CUMULATIVE		VOLUME 2007	CUMULATIVE
GALLONAGE		1,112,700.00	94,943,486.00		1,112,700.00	96,056,186.00		1,112,700.00	97,168,886.00		1,112,700.00	98,281,586.00
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	571.00	2405.07	195775.65	560.00	2358.74	198134.38	560.00	2358.74	200493.12	560.00	2358.74	202851.85
Calcium	615.00	2590.40	213768.84	596.00	2510.37	216279.21	596.00	2510.37	218789.57	596.00	2510.37	221299.94
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	84.00	353.81	33491.60	81.00	341.17	33832.78	81.00	341.17	34173.95	81.00	341.17	34515.12
Fluoride	0.10	0.42	6.59	0.00	0.00	6.59	0.00	0.00	6.59	0.00	0.00	6.59
Magnesium	47.30	199.23	13791.72	48.10	202.60	13994.32	48.10	202.60	14196.92	48.10	202.60	14399.52
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	30.75	2393.71	6.90	29.06	2422.78	6.90	29.06	2451.84	6.90	29.06	2480.90
Silica	22.00	92.66	8135.77	22.00	92.66	8228.43	22.00	92.66	8321.10	22.00	92.66	8413.76
Sodium	96.60	406.88	31486.11	101.00	425.41	31911.52	101.00	425.41	32336.94	101.00	425.41	32762.35
Sulfate	1240.00	5222.91	428740.18	1240.00	5222.91	433963.09	1240.00	5222.91	439186.01	1240.00	5222.91	444408.92
TDS	2470.00	10403.71	863030.95	2430.00	10235.23	873266.17	2430.00	10235.23	883501.40	2430.00	10235.23	893736.63
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	0.00	0.00	0.04
Barium	0.00	0.00	0.48	0.00	0.00	0.48	0.00	0.00	0.48	0.00	0.00	0.48
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	0.00	0.00	2.30	0.00	0.00	2.30	0.00	0.00	2.30
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	0.00	0.39	0.00	0.00	0.39	0.00	0.00	0.39
Copper	0.00	0.00	0.62	0.00	0.00	0.62	0.00	0.00	0.62	0.00	0.00	0.62
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	7.09	29.86	2168.45	8.13	34.24	2202.69	6.84	28.81	2231.50	8.19	34.50	2266.00
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	1.24	5.22	315.50	1.30	5.48	320.97	1.32	5.56	326.53	1.40	5.90	332.43
Mercury	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Molybdenum	0.00	0.00	0.06	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	0.00	0.00	2.06
Selenium	0.00	0.01	0.39	0.00	0.01	0.39	0.00	0.01	0.40	0.00	0.01	0.41
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	7.38	0.00	0.00	7.38	0.00	0.00	7.38	0.01	0.04	7.42
RADIOMETRICS												
Uranium (mg/l)	0.00	0.01	1.94	0.00	0.01	1.94	0.00	0.01	1.95	0.00	0.01	1.96

TMW-57												
CONTAMINANTS REMOVED												
PERCHED AQUIFER WEI	2007											
DATE FS	2/12/07			4/4/07			7/22/07			10/1/07		
(Started pumping May 2001)		VOLUME 2007	CUMULATIVE		VOLUME 2007	CUMULATIVE		VOLUME 2007	CUMULATIVE		VOLUME 2007	CUMULATIVE
GALLONAGE		740837.50	12823347.50		740837.50	13564185.00		740837.50	14305022.50		740837.50	15045860.00
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	137.00	384.20	6385.90	135.00	378.59	6764.49	140.00	392.61	7157.10	141.00	395.42	7552.52
Calcium	120.00	336.53	6468.40	122.00	342.13	6810.54	121.00	339.33	7149.87	111.00	311.29	7461.15
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	39.26	748.53	14.00	39.26	787.79	14.00	39.26	827.05	17.00	47.67	874.72
Fluoride	0.20	0.56	8.02	0.20	0.56	8.59	0.10	0.28	8.87	0.10	0.28	9.15
Magnesium	8.60	24.12	510.25	8.00	22.44	532.69	8.80	24.68	557.37	7.50	21.03	578.40
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	9.53	166.93	3.50	9.82	176.75	3.30	9.25	186.00	3.60	10.10	196.10
Silica	14.00	39.26	649.02	16.00	44.87	693.89	13.00	36.46	730.34	15.00	42.07	772.41
Sodium	41.40	116.10	1994.75	39.80	111.61	2106.36	42.20	118.34	2224.71	39.30	110.21	2334.92
Sulfate	285.00	799.25	15639.00	274.00	768.40	16407.40	297.00	832.90	17240.30	265.00	743.16	17983.46
TDS	522.00	1463.88	29700.50	544.00	1525.58	31226.08	542.00	1519.97	32746.05	566.00	1587.28	34333.33
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	0.01	0.48	0.00	0.01	0.48	0.00	0.01	0.49	0.00	0.01	0.49
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	18.92	0.09	0.25	19.17	0.00	0.00	19.17	0.00	0.00	19.17
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	0.25	7.91	0.09	0.25	8.17	0.09	0.25	8.42	0.09	0.25	8.67
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	0.02	0.39	0.01	0.02	0.41	0.01	0.02	0.42	0.01	0.01	0.44

TMW-58												
BATTLE SPRING AQUIFER												
CONTAMINANTS REMOV	2007											
DATE FS	12-Feb-07			04-Apr-07			22-Jul-07			01-Oct-07		
(Started pumping 6/20/94)		VOLUME 2007	CUMULATIVE		VOLUME 2007	CUMULATIVE		VOLUME 2007	CUMULATIVE		VOLUME 2007	CUMULATIVE
GALLONAGE		205317.50	35223617.51		205317.50	35428935.01		205317.50	35634252.51		205317.50	35839570.01
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	237.00	184.20	27951.44	242.00	188.09	28139.53	240.00	186.53	28326.06	246.00	191.19	28517.25
Calcium	290.00	225.39	30811.05	268.00	208.29	31019.34	281.00	218.40	31237.74	255.00	198.19	31435.93
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	44.00	34.20	3579.06	39.00	30.31	3609.37	40.00	31.09	3640.46	41.00	31.87	3672.32
Fluoride	0.10	0.08	13.26	0.20	0.16	13.42	0.10	0.08	13.49	0.10	0.08	13.57
Magnesium	24.00	18.65	2360.28	22.10	17.18	2377.45	22.80	17.72	2395.17	19.90	15.47	2410.64
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	5.00	3.89	571.27	4.50	3.50	574.77	4.70	3.65	578.42	5.20	4.04	582.46
Silica	15.00	11.66	2036.96	15.00	11.66	2048.62	14.00	10.88	2059.50	16.00	12.44	2071.93
Sodium	61.20	47.57	7110.32	56.10	43.60	7153.92	61.00	47.41	7201.33	58.90	45.78	7247.11
Sulfate	685.00	532.39	71230.90	614.00	477.21	71708.11	673.00	523.06	72231.17	608.00	472.54	72703.72
TDS	1220.00	948.20	135224.94	1220.00	948.20	136173.14	1190.00	924.88	137098.02	1250.00	971.51	138069.54
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	0.00	0.00	0.21	0.00	0.00	0.21	0.00	0.00	0.21
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	0.21	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	0.00	0.00	51.92	0.62	0.48	52.40	0.52	0.40	52.81	0.46	0.36	53.16
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	0.28	0.22	25.48	0.27	0.21	25.69	0.26	0.20	25.89	0.27	0.21	26.10
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Zinc	0.00	0.00	3.97	0.00	0.00	3.97	0.00	0.00	3.97	0.02	0.02	3.99
RADIOMETRICS												
Uranium (mg/l)	0.03	0.02	1.84	0.02	0.02	1.85	0.02	0.02	1.87	0.02	0.02	1.88

TMW-59												
CONTAMINANTS REM	2007											
DATE FS	25-Jan-07			11-Apr-07			22-Jul-07			1-Oct-07		
(Started pumping 9/1/88)		VOLUME 2007	CUMULATIVE		VOLUME 2007	CUMULATIVE		VOLUME 2007	CUMULATIVE		VOLUME 2007	CUMULATIVE
GALLONAGE		707485.00	36604552.00		707485.00	37312037.00		707485.00	38019522.00		707485.00	38727007.00
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	388.00	1039.11	55002.94	368.00	985.55	55988.49	350.00	937.34	56925.83	312.00	835.57	57761.40
Calcium	532.00	1424.76	77775.27	531.00	1422.08	79197.35	497.00	1331.03	80528.38	481.00	1288.18	81816.55
Carbonate	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chloride	88.00	235.67	11093.87	90.00	241.03	11334.90	87.00	233.00	11567.90	87.00	233.00	11800.90
Fluoride	0.20	0.54	13.35	0.30	0.80	14.15	0.20	0.54	14.69	0.20	0.54	15.22
Magnesium	68.40	183.18	8984.67	67.90	181.84	9166.51	67.30	180.24	9346.75	64.00	171.40	9518.15
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	8.00	21.42	939.07	7.60	20.35	959.42	7.20	19.28	978.70	8.10	21.69	1000.39
Silica	18.00	48.21	2799.51	18.00	48.21	2847.72	17.00	45.53	2893.25	18.00	48.21	2941.45
Sodium	94.40	252.81	12341.16	91.40	244.78	12585.94	95.90	256.83	12842.77	94.50	253.08	13095.85
Sulfate	1340.00	3588.68	195777.50	1340.00	3588.68	199366.18	1320.00	3535.12	202901.30	1290.00	3454.78	206356.08
TDS	2420.00	6481.06	356682.79	2470.00	6614.96	363297.75	2470.00	6614.96	369912.71	2450.00	6561.40	376474.11
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	0.00	0.00
Barium	0.00	0.00	0.21	0.00	0.00	0.21	0.00	0.00	0.21	0.00	0.00	0.21
Beryllium	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Boron	0.10	0.27	3.46	0.10	0.27	3.72	0.10	0.27	3.99	0.00	0.00	3.99
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	1.55	0.01	0.03	1.59	0.01	0.03	1.62	0.01	0.03	1.66
Copper	0.00	0.00	0.14	0.00	0.00	0.14	0.00	0.00	0.14	0.00	0.00	0.14
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	45.80	122.66	3928.39	46.60	124.80	4053.19	46.00	123.19	4176.38	52.20	139.80	4316.18
Lead	0.00	0.00	0.12	0.00	0.00	0.12	0.00	0.00	0.12	0.00	0.00	0.12
Manganese	3.97	10.63	395.03	3.83	10.26	405.29	4.12	11.03	416.33	4.14	11.09	427.41
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	0.02	0.05	2.06	0.01	0.03	2.09	0.01	0.03	2.11	0.01	0.03	2.14
Selenium	0.00	0.01	0.14	0.00	0.00	0.15	0.00	0.00	0.15	0.00	0.00	0.15
Silver	0.00	0.00	0.06	0.00	0.00	0.06	0.00	0.00	0.06	0.00	0.00	0.06
Thallium	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vanadium	0.00	0.00	0.03	0.00	0.00	0.03	0.00	0.00	0.03	0.00	0.00	0.03
Zinc	0.00	0.00	2.62	0.00	0.00	2.62	0.00	0.00	2.62	0.02	0.05	2.67
RADIOMETRICS												
Uranium (mg/l)	0.01	0.02	0.96	0.01	0.02	0.99	0.01	0.03	1.01	0.01	0.03	1.04

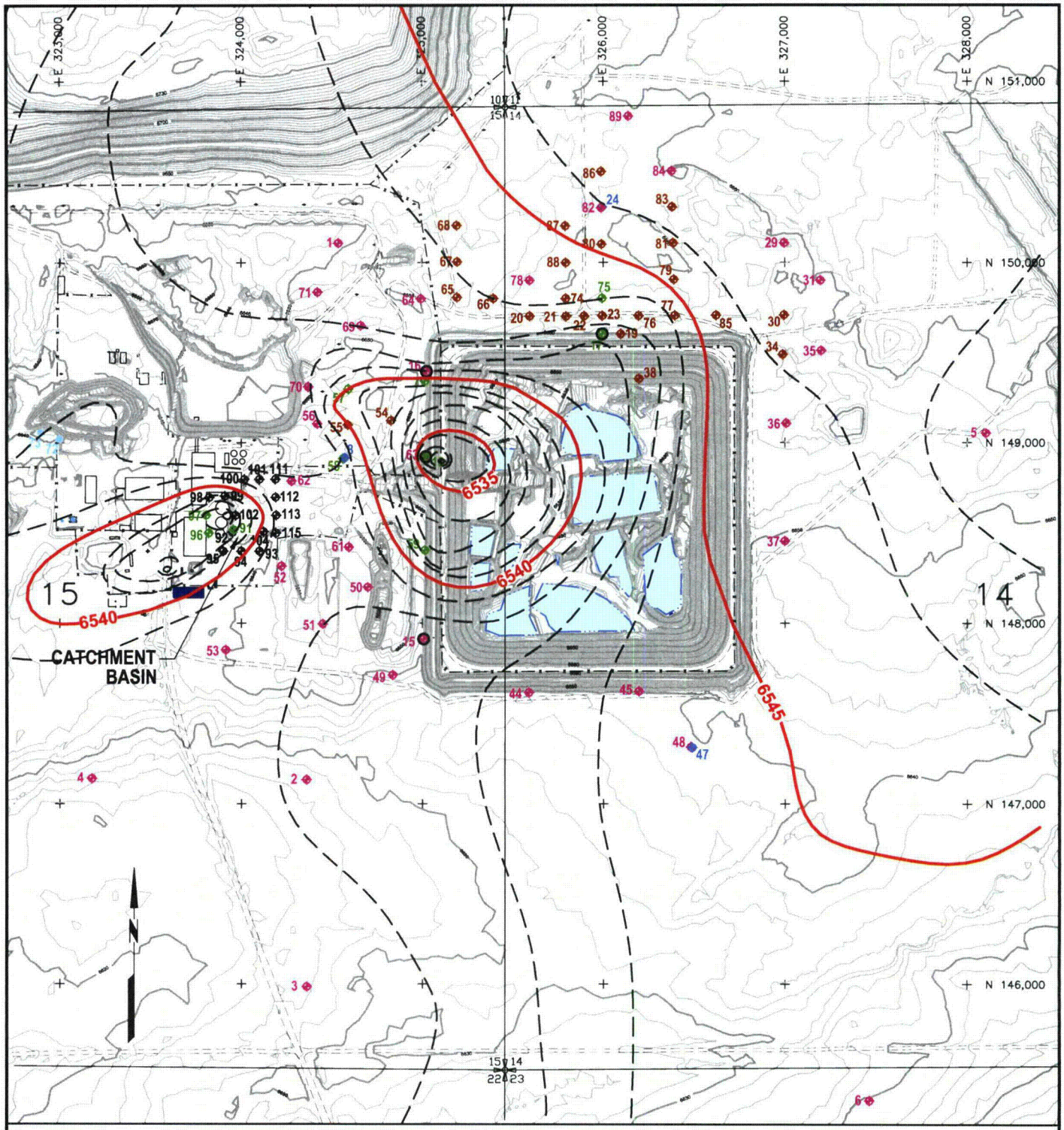
TMW-75												
CONTAMINANTS REMC	2007											
DATE FS	14-Mar-07			11-Apr-07			22-Jul-07			3-Oct-07		
(Started pumping 5/1/88)		VOLUME 2007	CUMULATIVE		VOLUME 2007	CUMULATIVE		VOLUME 2007	CUMULATIVE		VOLUME 2007	CUMULATIVE
GALLONAGE		236290.00	46646670.00		236290.00	46882960.00		236290.00	47119250.00		236290.00	47355540.00
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	131.00	117.17	33366.28	144.00	128.80	33495.08	150.00	134.17	33629.25	159.00	142.22	33771.47
Calcium	76.90	68.78	31859.51	127.00	113.60	31973.11	129.00	115.38	32088.49	134.00	119.86	32208.35
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	7.00	6.26	4657.05	15.00	13.42	4670.46	16.00	14.31	4684.77	21.00	18.78	4703.56
Fluoride	0.20	0.18	24.91	0.20	0.18	25.08	0.10	0.09	25.17	0.10	0.09	25.26
Magnesium	4.80	4.29	2471.62	9.20	8.23	2479.85	9.80	8.77	2488.62	9.80	8.77	2497.38
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	2.60	2.33	649.33	3.40	3.04	652.37	3.30	2.95	655.32	3.90	3.49	658.81
Silica	13.00	11.63	2726.47	14.00	12.52	2738.99	14.00	12.52	2751.52	15.00	13.42	2764.93
Sodium	36.50	32.65	9002.11	44.00	39.36	9041.46	44.60	39.89	9081.36	43.80	39.18	9120.53
Sulfate	168.00	150.27	70264.99	297.00	265.65	70530.64	302.00	270.13	70800.77	339.00	303.22	71103.99
TDS	382.00	341.68	144074.08	558.00	499.11	144573.18	626.00	559.93	145133.11	712.00	636.85	145769.97
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	26.73	0.10	0.09	26.82	0.11	0.10	26.92	0.09	0.08	27.00
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	0.03	0.03	21.24	0.07	0.06	21.30	0.09	0.08	21.38	0.11	0.10	21.48
Mercury	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Molybdenum	0.00	0.00	0.26	0.00	0.00	0.26	0.00	0.00	0.26	0.00	0.00	0.26
Nickel	0.00	0.00	0.45	0.00	0.00	0.45	0.00	0.00	0.45	0.00	0.00	0.45
Selenium	0.00	0.00	0.12	0.00	0.00	0.12	0.00	0.00	0.12	0.00	0.00	0.12
Silver	0.00	0.00	0.02	0.00	0.00	0.02	0.00	0.00	0.02	0.00	0.00	0.02
Thallium	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vanadium	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Zinc	0.00	0.00	2.58	0.00	0.00	2.58	0.00	0.00	2.58	0.00	0.00	2.58
RADIOMETRICS												
Uranium (mg/l)	0.01	0.01	10.82	0.01	0.01	10.83	0.02	0.02	10.85	0.03	0.02	10.88

TMW-96												
CONTAMINANTS REMOVE	**2007**											
DATE FS	7-Mar-07			24-Apr-07			25-Jul-07			2-Oct-07		
Started pumping June 30, 2005		VOLUME 2007	CUMULATIVE		VOLUME 2007	CUMULATIVE		VOLUME 2007	CUMULATIVE		VOLUME 2007	CUMULATIVE
GALLONAGE		777105.00	6237625.00		777105.00	7014730.00		777105.00	7791835.00		777105.00	8568940.00
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	143.00	420.66	3258.15	144.00	423.60	3681.75	149.00	438.31	4120.06	147.00	432.42	4552.48
Calcium	274.00	806.02	4533.25	182.00	535.38	5068.63	143.00	420.66	5489.29	167.00	491.26	5980.55
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	52.00	152.97	714.82	26.00	76.48	791.31	27.00	79.42	870.73	30.00	88.25	958.98
Fluoride	0.20	0.59	2.66	0.20	0.59	3.24	0.10	0.29	3.54	0.10	0.29	3.83
Magnesium	25.90	76.19	336.17	13.40	39.42	375.59	9.50	27.95	403.54	11.50	33.83	437.36
Nitrate(NO3)	0.50	1.47	1.47	0.00	0.00	1.47	0.00	0.00	1.47	0.00	0.00	1.47
Potassium	6.80	20.00	94.98	4.00	11.77	106.75	3.00	8.82	115.57	4.20	12.35	127.93
Silica	12.00	35.30	332.20	14.00	41.18	373.38	12.00	35.30	408.68	15.00	44.12	452.81
Sodium	66.90	196.80	1210.48	51.40	151.20	1361.68	38.80	114.14	1475.82	49.60	145.91	1621.73
Sulfate	718.00	2112.11	11133.67	445.00	1309.04	12442.71	343.00	1008.99	13451.70	430.00	1264.91	14716.62
TDS	1230.00	3618.24	20094.29	820.00	2412.16	22506.45	780.00	2294.50	24800.95	832.00	2447.46	27248.41
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	0.08	0.24	0.96	0.00	0.00	0.96	0.09	0.26	1.22	0.00	0.00	1.22
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	0.11	0.32	2.48	0.10	0.29	2.77	0.09	0.26	3.03	0.12	0.35	3.39
Mercury	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Molybdenum	0.00	0.00	0.00	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	0.05	0.15	0.17	0.00	0.01	0.17	0.00	0.00	0.18	0.00	0.01	0.18
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)	0.28	0.81	1.46	0.05	0.15	1.61	0.02	0.07	1.68	0.04	0.11	1.80

KENNECOTT URANIUM COMPANY

TMW-97												
CONTAMINANTS REMOV	2007											
DATE FS	28-Mar-07			24-Apr-07			12-Sep-07			7-Nov-07		
Started pumping September 6, 2005		VOLUME 2007	CUMULATIVE		VOLUME 2007	CUMULATIVE		VOLUME 2007	CUMULATIVE		VOLUME 2007	CUMULATIVE
GALLONAGE		766845.00	6748045.00		766845.00	7514890.00		766845.00	8281735.00		766845.00	9048580.00
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	146.00	423.81	3220.67	122.00	354.14	3574.81	125.00	362.85	3937.67	124.00	359.95	4297.62
Calcium	257.00	746.03	4238.89	145.00	420.91	4659.80	151.00	438.33	5098.13	150.00	435.42	5533.55
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	37.00	107.40	598.66	20.00	58.06	656.72	21.00	60.96	717.68	20.00	58.06	775.73
Fluoride	0.20	0.58	3.67	0.30	0.87	4.54	0.20	0.58	5.12	0.10	0.29	5.41
Magnesium	27.40	79.54	337.01	11.60	33.67	370.68	11.20	32.51	403.19	11.20	32.51	435.71
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	7.80	22.64	98.66	3.40	9.87	108.53	3.40	9.87	118.40	3.50	10.16	128.56
Silica	13.00	37.74	354.71	14.00	40.64	395.35	14.00	40.64	435.99	14.00	40.64	476.63
Sodium	60.40	175.33	1197.14	45.00	130.63	1327.77	45.50	132.08	1459.85	47.10	136.72	1596.57
Sulfate	705.00	2046.49	9693.80	361.00	1047.92	10741.72	375.00	1088.56	11830.28	372.00	1079.85	12910.13
TDS	1210.00	3512.42	19385.11	670.00	1944.89	21330.00	654.00	1898.45	23228.45	644.00	1869.42	25097.86
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	0.00	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	1.07	3.11	4.40	0.00	0.00	4.40	0.06	0.17	4.57	0.05	0.15	4.72
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	0.45	1.31	3.58	0.10	0.29	3.87	0.10	0.29	4.16	0.09	0.26	4.42
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)	0.32	0.93	1.55	0.06	0.16	1.71	0.03	0.09	1.80	0.04	0.12	1.92

Maps



SCALE IN FEET

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TOPOGRAPHY UPDATED OCTOBER 2007 BY ROBERT JACK SMITH & ASSOC. INC. CONSULTING LAND SURVEYORS
P.O. BOX 1104, 1015 HARSHMAN ST.
RAWLINS, WY 82301

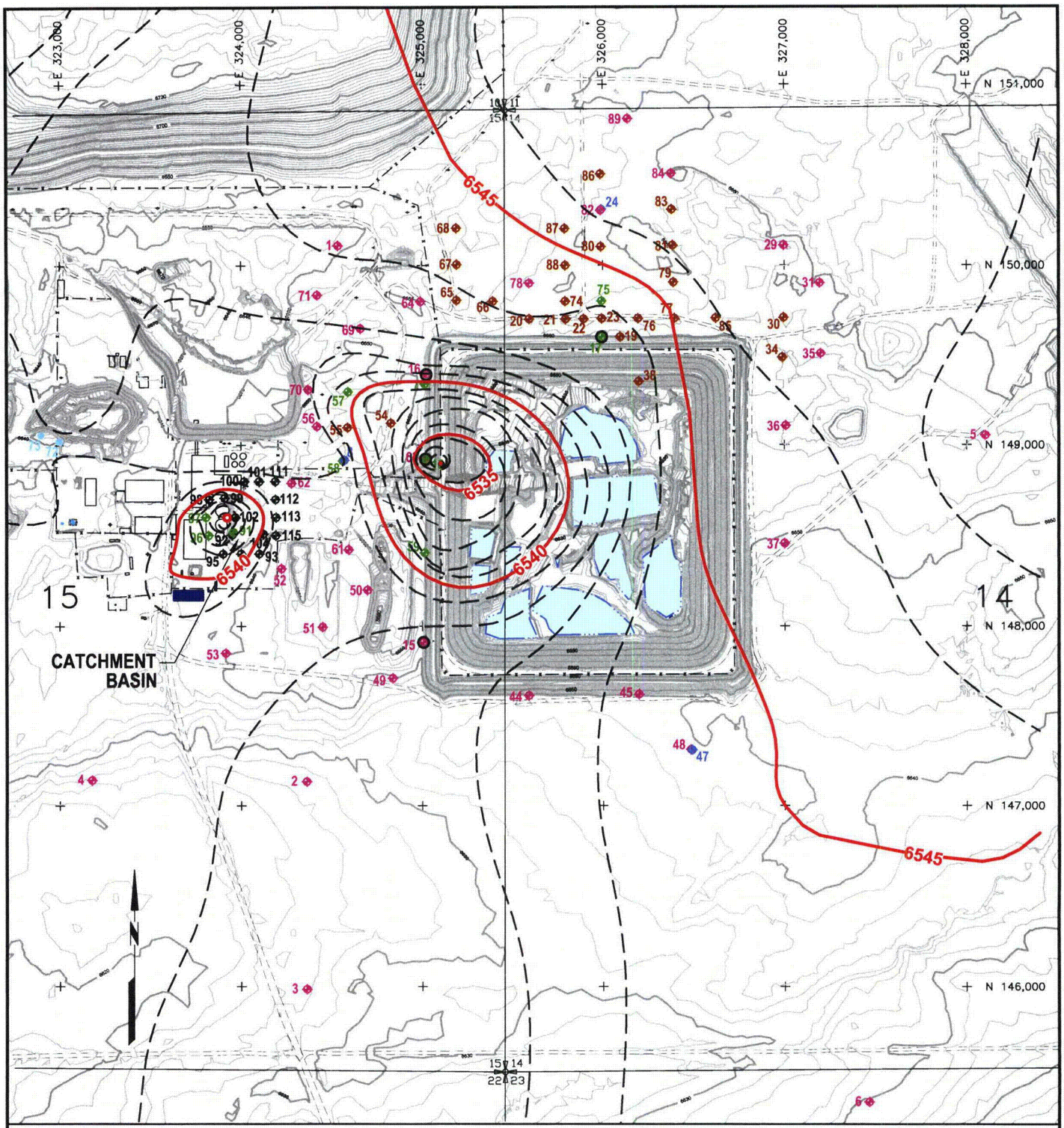
LEGEND

- 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
MARCH 2007 PIEZOMETRIC CONTOUR MAP
2007 CORRECTIVE ACTION PROGRAM REVIEW

Date:	FEBRUARY 2008
Project:	06-442\REP2008\
File:	2008-GW-FIG.dwg



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

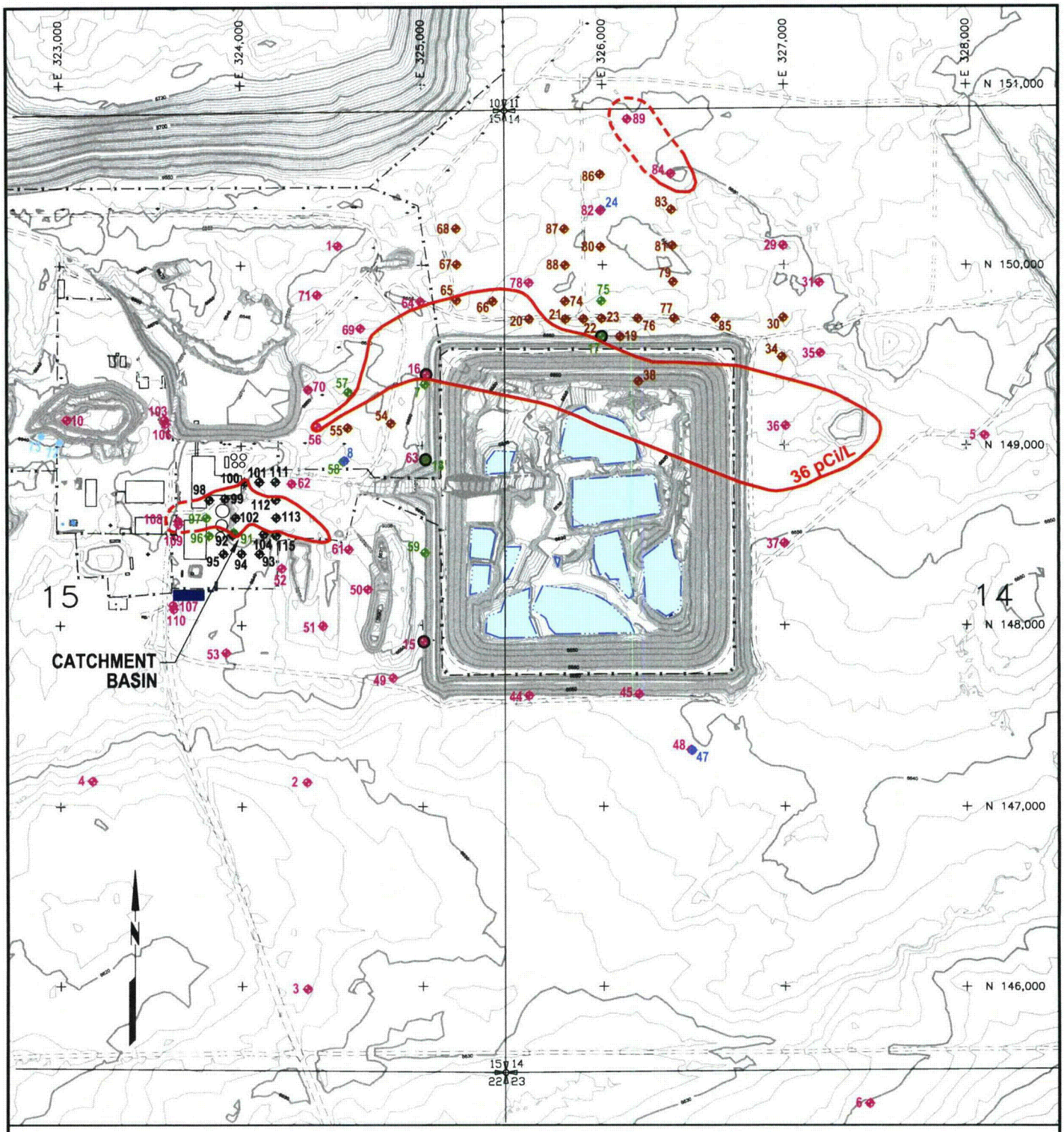
LEGEND

- 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 2007 PIEZOMETRIC CONTOUR MAP
2007 CORRECTIVE ACTION PROGRAM REVIEW

Date:	FEBRUARY 2008
Project:	06-442\REP2008\
File:	2008-GW-FIG.dwg



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

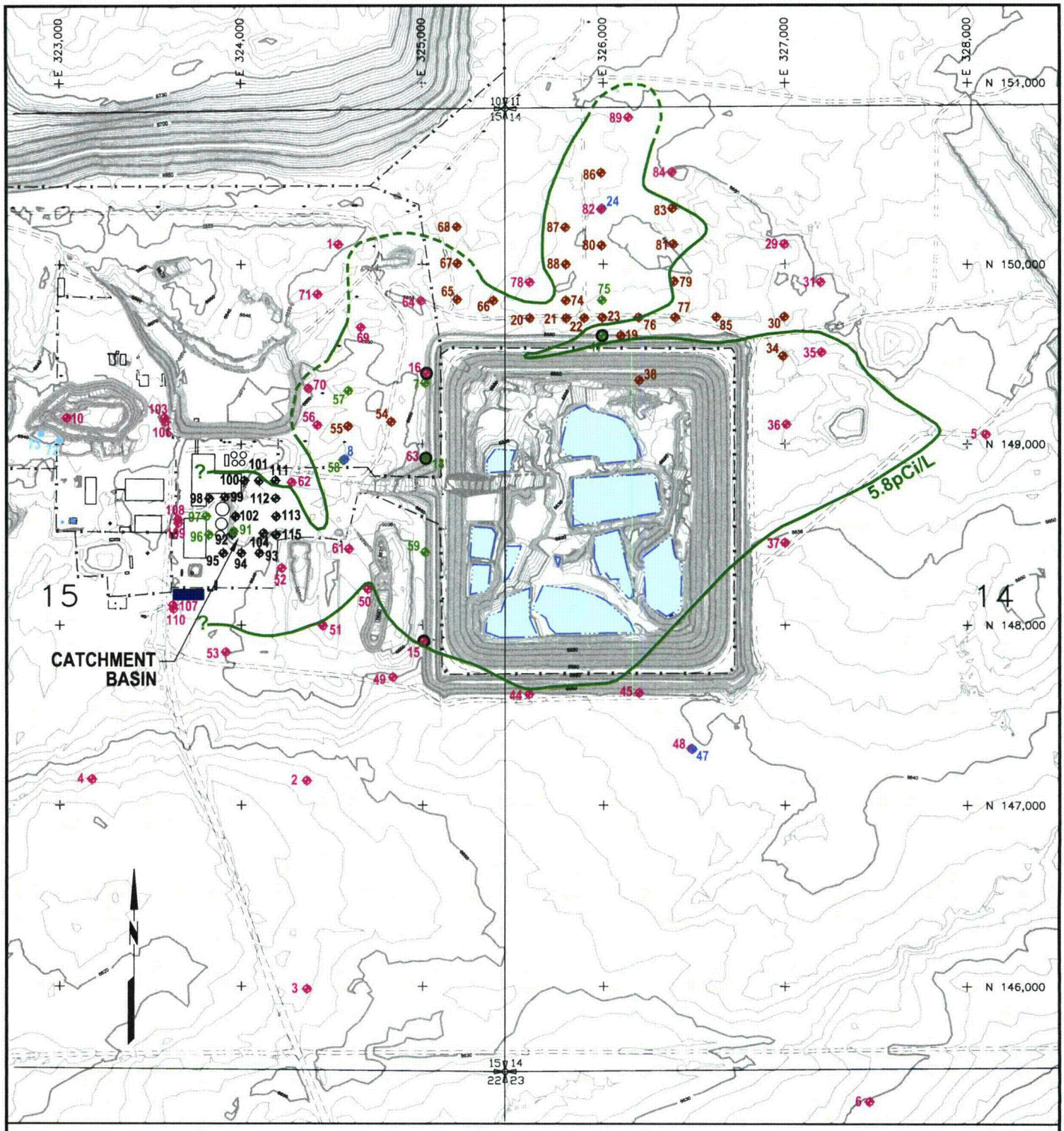
LEGEND

- 36 PCI/L URANIUM CONTOUR BASED ON HIGHEST NATURAL URANIUM RESULT FOR GIVEN WELL IN 2007.
- 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
URANIUM (U-nat) CONTOUR MAP
2007 CORRECTIVE ACTION PROGRAM REVIEW

Date:	FEBRUARY 2008
Project:	06-442\REP2008\
File:	2008-UR-FIG.dwg



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

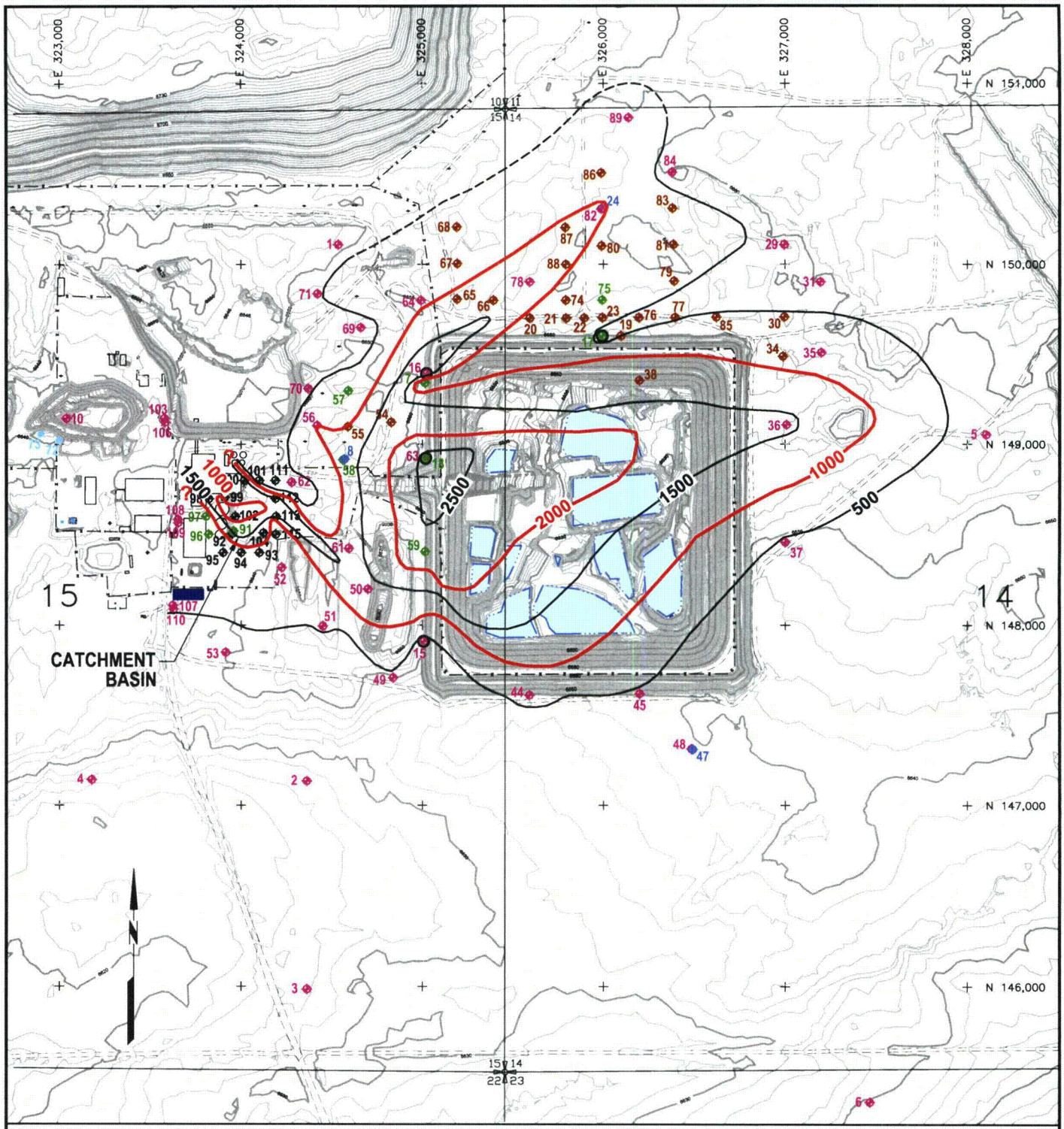
LEGEND

- 5.8 PCI/L COMBINED RADIUM-226/228 CONTOUR BASED ON HIGHEST COMBINED RADIUM-266/228 RESULT FOR GIVEN WELL FOR 2007.
- 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
COMBINE RADIUM-226/228 CONTOUR MAP
2007 CORRECTIVE ACTION PROGRAM REVIEW

Date:	FEBRUARY 2008
Project:	06-442\REP2008\
File:	2008-RAD-FIG.dwg



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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 2007.

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

- 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
2007 CORRECTIVE ACTION PROGRAM REVIEW

Date:	FEBRUARY 2008
Project:	06-442\REP2008\
File:	2008-TDS-FIG.dwg