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

26 February 2007

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 20852-2738

Dear Mr. McConnell:

SUBJECT: Sweetwater Uranium Project – Docket Number 40-8584 – Source Material License #SUA-1350 License Condition 12.3 – Required Reporting – Semiannual 10 CFR 40.65 Report

Enclosed is one CD-ROM containing the following reports pertaining to Kennecott Uranium Company's Source Material License #SUA-1350:

- Semiannual 10 CFR 40.65 Report (Airborne Effluents) – summarizes the results of air and ambient gamma monitoring for the site;
- Annual ALARA Audit – summarizes the results of the annual ALARA audit for the facility, contains data pertinent to the facility's radiation safety program and includes the Annual Safety and Environmental Review Panel (SERP) Report;
- Annual Corrective Action Program Review – summarizes all monitoring and mitigation efforts in the area of the tailings cell under the groundwater corrective action program and contains the Groundwater Monitoring Report required annually as per License Condition 12.3;
- Annual Land Use Survey – summarizes land use in the vicinity of the Sweetwater Uranium Project.

All of these reports are being submitted together as originally requested by Louis Carson during his inspection of the facility in 1995. It was later discussed with Charlotte Abrams of your staff in a telephone conversation on January 30, 1997 and February 5, 1998. She stated that these reports could all be submitted together within the sixty-day time period following January 1 of each year allowed for the 40.65 report. This single submittal procedure was incorporated into the facility's new performance based operating license in License Condition 12.3. In addition, only the most recent sample results for the tailings impoundment monitor wells are being submitted, as per a request made by Bob Evans during his inspection on July 8, 1997.

Kennecott Uranium Company has examined the data included in the 40.65 report containing the air and ambient gamma monitoring data for the site and has 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 of your staff in an email dated September 7, 2001. Should 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: Stephen J. Cohen – (2)
Director – NRC DRSS – Region IV (w/o enc.)
John Lucas – Rio Tinto Energy America

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Kennecott Uranium Company
PO Box 1500, 42 Miles NW of Rawlins
Rawlins, Wyoming 82301-1500
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22 February 2007

Mr. Keith 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
Rockville, MD 20852-2738

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 2006 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 2006 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 DRSS, Region IV (w/o enc.)
John Lucas – Rio Tinto Energy America

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

2006
RadTrak Radon Monitor
(pCi/L)

DATE	LOCATION	RADIONUCLIDE	CONCENTRATION	STD DEVIATION/ STD COUNTING ERROR	LOWER LIMIT OF DETECTION (LLD)	
				%	pCi/L-Days	pCi/L
1/1/06 – 4/3/06	Downwind - Air 4A	Radon	2.4 pCi/L	4.9	6.0	0.06
1/1/06 – 4/3/06	Upwind - Air 2	Radon	2.6 pCi/L	4.7	6.0	0.06
4/3/06 – 7/5/06	Downwind - Air 4A	Radon	2.5 pCi/L	4.6	6.0	0.06
4/3/06 – 7/5/06	Upwind - Air 2	Radon	4.6 pCi/L	3.6	6.0	0.06
7/5/06 – 10/2/06	Downwind - Air 4A	Radon	3.1 pCi/L	4.5	6.0	0.06
7/5/06 – 10/2/06	Upwind - Air 2	Radon	3.6 pCi/L	4.2	6.0	0.06
10/2/06 – 1/2/07	Downwind - Air 4A	Radon	2.6 pCi/L	4.7	6.0	0.06
10/2/06 – 1/2/07	Upwind - Air 2	Radon	3.5 pCi/L	4.1	6.0	0.06

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

2006
DIRECT RADIATION MEASUREMENTS
(TLD)

Location	Date	Exposure Rate (mr/Qtr)	Error Estimated	Lower Limit of Detection (LLD) Millirems
TLD				
0000 - Control	1/1/06 – 4/2/06	28	0.7 mr	10^{1}
0004 - Air 4A	1/1/06 – 4/2/06	40	2.3 mr	10^{1}
TLD				
0000 - Control	4/2/06 – 7/2/06	32	1.6 mr	10^{1}
0004 - Air 4A	4/2/06 – 7/2/06	42	1.1 mr	10^{1}
TLD				
0000 - Control	7/2/06 – 10/8/06	37	1.6 mr	10^{1}
0004 - Air 4A	7/2/06 – 10/8/06	47	0.8 mr	10^{1}
TLD				
0000 - Control	10/8/06 – 1/2/07	22	0.8 mr	10^{1}
0004 - Air 4A	10/8/06 – 1/2/07	34	2.4 mr	10^{1}

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

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

Lower Limits of Detection (LLDs)

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

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

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

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

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

CONTINUOUS LOW-VOLUME AIR PARTICULATE ANALYSIS

STATION 4A – 2006

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
1/1/06 – 4/3/06	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
5.16 E+10	Pb-210	1.41 E-14	3.24 E-16	2.00 E-15	6.00 E-13	2.34 E+00
2nd Quarter	U-nat	1.37 E-16	N/A	1.00 E-16	9.00 E-14	1.53 E-01
4/3/06–7/2/06	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
4.59 E+10	Pb-210	1.33 E-14	4.53 E-16	2.00 E-15	6.00 E-13	2.21 E+00
3rd Quarter	U-nat	1.14 E-16	N/A	1.00 E-16	9.00 E-14	1.26 E-01
7/2/06 – 10/2/06	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
4.40 E+10	Pb-210	2.41 E-14	4.09 E-16	2.00 E-15	6.00 E-13	4.02 E+00
4th Quarter	U-nat	1.70 E-16	N/A	1.00 E-16	9.00 E-14	1.89 E-01
10/2/06 – 1/2/07	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
3.35 E+10	Pb-210	2.30 E-14	6.66 E-16	2.00 E-15	6.00 E-13	3.83 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

22 February 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 2006

The following is a dose calculation for the nearest resident (the contract security guard) for the second half of 2006.

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 Bendix BDX-44, MSA or Sensidyne GilAir II air pump and filter. The filter is read by the modified Kusnetz Method.
4. The radon concentration and exposure are used to calculate the equilibrium factor. The equilibrium factors calculated semiannually are averaged to derive a site equilibrium factor.
5. This equilibrium factor is applied to the upwind radon concentrations to derive a background radon dose and to the average semiannual radon concentration in the Security Trailer to derive a radon dose to the nearest resident. An equilibrium factor table is attached.
6. The dose from the semiannual downwind airborne particulate concentrations of natural uranium, radium-226 and thorium-230 are used to calculate the dose from airborne particulates in the Security Trailer in spite of the fact that the Security Trailer is not downwind of the facility.
7. The gamma dose from the downwind gamma radiation monitor (environmental thermo- luminescent dosimeter) is used to calculate the gamma radiation dose in the Security Trailer.
8. The doses from radon-222, airborne particulate radionuclides and gamma radiation are summed to produce a dose to the nearest resident (the Security Trailer).
9. The radon concentrations measured at the upwind air monitoring stations during the two (2) quarters for a given semiannual period are averaged, corrected for the site equilibrium factor and converted to a background radon dose for the facility.
10. This background radon dose is summed with the background gamma radiation dose (from the revised Environmental Report – dated August 1994) and the doses derived from the background airborne particulate concentrations (natural uranium, radium-226 and thorium-230 as described in the revised Environmental Report dated August 1994) to yield a background radiation dose for the facility for the given semiannual period.
11. The background dose is subtracted from the calculated dose to the nearest resident (Security Trailer) to derive a dose to the nearest resident 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	3.6 pCi/l	342.1
Total		**544.01**

Notes:
1. An equilibrium factor of 0.216 was used for radon based on twenty (20) 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. The background radon concentration at the upwind air station (Air 2) for the period was used to calculate background radon dose.
4. Calculation: (Radon concentration (pCi/l))*(Equilibrium factor)*(0.44 rems/pCi/l) = Dose (rems)

SECURITY TRAILER

	Average Concentration	Dose (mrem)
Gamma Exposure:		162.00
Airborne Particulates:		
U nat	1.42 E-16 µCi/ml	0.08
Ra-226	1.00 E-16 µCi/ml	0.01
Th-230	1.00 E-16 µCi/ml	0.17
Gases:		
Radon-222	2.13 pCi/l	202.4
Total		**364.66**

Notes:
1. An equilibrium factor of 0.216 was used for radon based on twenty (20) 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 2006 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 and second quarters of 2006 and is based on an average of RadTrak units located in two (2) locations; the kitchen and the bedroom.
4. The gamma dose rate is based upon the TLD dosimeters for the third and fourth quarters of 2006, converted to an annual dose rate.

The net (dose to the nearest resident minus background dose) annual TEDE from the licensed operations for the second half of 2006 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
Average			**0.216**

[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.

Calculation Parameters

1. Radon concentrations in the Security Trailer are calculated based upon the results of two (2) RadTrak detectors (one in the kitchen and one in the bedroom) that are changed quarterly. The radon concentration for a given semiannual period is an average of the results of four (4) RadTrak detections, one in the kitchen and one in the bedroom, changed quarterly.
2. Radon exposures (radon daughters concentrations measured in Working Levels) are taken semiannually in the trailer in two (2) locations (kitchen and bedroom) using a 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
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22 February 2007

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
Facility Supervisor

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

RIO TINTO
ENERGY AMERICA

Memorandum

Oscar Paulson
Facility Supervisor
Kennecott Uranium Company

20 February 2007

NRC File

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

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

1. Employee exposure records:
Individual monitoring 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.

2. Quarterly 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.

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 3, 2006. Annual MSHA Refresher Training was conducted on January 5, 2006. In addition, driver training was conducted on January 4, 2006. Also, an eight-hour first aid class was provided on site on March 6, 2006.

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 is not required.

7. Reports of overexposure of workers:
No overexposures have occurred.

8. Standard Operating Procedures (SOPs):
Standard Operating Procedures (SOPs) were reviewed during 2006, as documented in the memorandum entitled "Annual Review of Standard Operating Procedures (SOPs)", dated 3 January 2007.

9. Radiation Work Permits:
No radiation work permits were issued in 2006. All work was conducted under Standard Operating Procedures.

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 6/21 and 12/14/06. All nuclear density gauges in the mill were leak tested on May 16, 1997. 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):
License Condition 9.3 of the facility's performance based operating license approved on August 18, 1999 addresses the Safety and Environmental Review Panel (SERP) and requires that an annual report of its activities be included in the facility's annual ALARA audit. The Safety and Environmental Review Panel issued four (4) Safety and Environmental Evaluations (SEE) during 2006. These actions are reflected in the memorandum entitled "Safety and Environmental Review Panel (SERP) - 2006", included in this report.

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

13. Respiratory Protection:
Members of the site's respirator program were qualified for respirator use by a physician on June 12 and July 26, 2006. Annual fit testing and respirator training was conducted on November 20, 2006.

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 0.015 WL in June 2006 and 0.07 WL in December 2006.

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 2006. These soils were spread on top of tailings in the tailings impoundment. These soils, since they were lower in radium-226 than the underlying tailings, reduced gamma exposures in the tailings impoundment by acting as shielding. The excavation area and haul roads to, and in, the tailings impoundment were wetted to control dusting. Magnesium chloride was applied to the roads to further control dusting. The dust control measures were effective as evidenced by the low airborne radionuclide concentrations in the air samples.

A discrete Shower/Change/Monitoring trailer was installed in the fence south of the Catchment Basin excavation 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.

Following completion of the excavation of the contaminated soils, the surface of the area around the excavation was scraped to a minimum depth of six (6) inches and the scraped soils placed in the tailings impoundment to insure all surface contamination was removed.

The excavation restricted area was clearly defined and marked to prevent inadvertent off site contamination.

Two (2) perforated drains were installed in the bottom of the Catchment Basin excavation prior to backfilling along the west wall to collect seepage before it migrates to the Battle Spring Aquifer.

Plastic liner was installed along the west highwall of the excavation to isolate contaminated soils beneath the Mill Building and tank slabs from clean fill being placed in the excavation.

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

20 February 2007

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) - 2006
- Respiratory Protection – 2006
- Releases for Unrestricted Use – 2006
- Review of Standard Operating Procedures – 2006
- Radiation Work Permits – 2006
- Dose Assessment/Determination of No Requirement for Individual Monitoring or Dose Calculation at the Sweetwater Uranium Project for 2006

Review of the Programs

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

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

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

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

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

The stored equipment may have been responsible for previously elevated radon daughter concentrations measured in the Solvent Extraction (SX) Building. This situation has been corrected by operating an exhaust fan to remove accumulated radon and radon daughters. Radon daughter monitoring using the modified Kusnetz method has been performed semiannually in this area. The monitoring shows radon daughter concentrations ranging from 0.012 WL to 0.079 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 2006 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, excavation of approximately 220,000 cubic yards of contaminated soils in the Catchment Basin area and land farming of petroleum contaminated soils.

Storage of some of the equipment, notably some steel pressure vessels in the mill, has caused gamma radiation levels to increase slightly in the area within the mill in which they are stored. An exhaust fan is operated in the SX building continuously to vent any accumulated radon and radon progeny. Radon daughter concentrations in this area varied between 0.012 WL to 0.079 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 6/21 and 12/14/06. The gauges were leak tested on May 16, 1997. 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 eastern embankment were completed in 2006 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 2006, documenting the effectiveness of the lagoons and spray system in controlling dusting on the tailings impoundment and the effectiveness of the dust control measures used in the Catchment Basin excavation. 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 essentially pumped dry. Additional information about these wells may be found in the Corrective Action Program (CAP) Review. In addition, TMW-96 and TMW-97 were pumped during 2006.

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 219,265 cubic yards of contaminated soils were excavated around the Catchment Basin. The excavation area was gridded and sampled. It is now being 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. 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

1 February 2007

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 eleven (11) additional) Radiation Safety meetings held in 2006:

2006	TOPIC	ATTENDEES
1/19	Bioassays / airborne particulates.	KUC
1/23	Review of dosimeters results.	KUC
1/30	Ludlum meter / 2350-1 data logger.	KUC
2/6	Radon report corrections.	KUC
2/13	Restricted area definition.	ACI, KUC
2/20	Monitoring / scanning, bioassays.	ACI, KUC
2/27	Decontamination trailer / bioassays / tailings impoundment.	ACI, KUC
2/28	Restricted areas.	KUC, RJS
3/16	Release of tanks, dust control, breathing zone samples.	ACI, KUC
3/23	Luxel dosimetry results, high volume air sampling.	KUC
3/27	Bioassays, dosimeters, dust control, Chernobyl.	ACI, KUC
4/24	Alpha meters, bioassays, breathing zone sample results, Luxel results.	ACI, KUC
5/31	Dosimetry, breathing zone sample results, standard operating procedures.	ACI, KUC
6/22	40.36 File.	KUC
6/26	Dosimetry results, breathing zone samples, high volume air samples, bioassays, excavation sampling.	ACI, KUC
7/27	Bioassay results, breathing zone sample results, soil gamma measurements.	ACI, KUC
8/28	Breathing zone samples, dosimetry results, bioassays.	ACI, KUC
9/11	Method 115 Test results	ACI, KUC
9/26	External dosimetry methods, autoradiography, breathing zone sample results.	ACI, KUC
10/4	Equipment decontamination.	ACI, KUC
10/30	Reviewed Cogema presentation on nuclear power, bioassay results, dosimetry results, release of equipment.	ACI, KUC
11/20	Dosimetry, bioassay and breathing zone sample results, respiratory protection, fit testing.	ACI, KUC
12/19	Litvenenko case / Polonium-210.	ACI, KUC

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

Oscar A Paulson

Oscar Paulson
Facility Supervisor

RIO TINTO
ENERGY AMERICA

Memorandum

Oscar Paulson
Facility Supervisor
Kennecott Uranium Company

1 February 2007

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 3, 2006, 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:

Kathryn Harrison – Securitas	November 19, 2006
Sam Finley – Archer Construction, Inc.	June 21, 2006
Charlie Roberts – Archer Construction, Inc.	May 15, 2006
Mike Mariner – Archer Construction, Inc.	May 15, 2006
Jacob Bolte – Archer Construction, Inc	August 6, 2006
Mike Mitchell – Archer Construction, Inc.	August 6, 2006
Richard Durazo – Archer Construction, Inc.	August 6, 2006

All individuals who worked within a restricted area during 2006 received radiation worker training.

Oscar A Paulson

Oscar Paulson
Facility Supervisor

consulting
scientists and
engineers

MFG PROJECT: 180903

January 9, 2006

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 at the site on January 3, 2006:

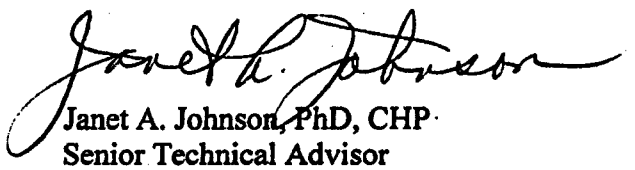
Randy Archer, Archer Construction
Gene English, Archer Construction
Tom Faust, Archer Construction
Gary Hostetler, Archer Construction
Stacey Lawson, Archer Construction
Mike Pattyn, Archer Construction
Terry Romero, Archer Construction
James Tharpe, Archer Construction
Harry Lovato, L&L Electric
Anita Morris, Robert Jack Smith and Assoc.
Roger Hannula, RFES
Ray Grate, Securitas
Jim McMacken, Securitas
Oscar Paulson, Kennecott
George Palochak, Kennecott
Harold Kelley, Kennecott

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.

Sincerely yours,

MFG/SHEPHERD MILLER



Janet A. Johnson, PhD, CHP
Senior Technical Advisor

cc Clint Strachan, MFG, Inc.

RIO TINTO
ENERGY AMERICA

Memorandum

Oscar Paulson
Facility Supervisor
Kennecott Uranium Company

21 February 2007

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, tailings impoundment and Catchment Basin excavation during 2006. 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, high volume air samples of the tailings impoundment and high volume and breathing zone samples in the Catchment Basin excavation were collected.

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

The Mill Foreman spent a total of 263 hours (26.3 days) in the Sweetwater Mill, 753 hours (75.3 days) in the tailings impoundment and 214 hours (21.4 days) during calendar year 2006. 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, tailings impoundment or Catchment Basin excavation in a given day constituted only a few hours inside the building, inside the impoundment or inside the excavation area. The days he spent in each area are based on his comments in the Alpha Monitor Record, which he signed upon completion of monitoring after leaving a Restricted Area.

Dose Calculation Method

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

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

- The highest airborne concentration measured (from a single breathing zone sample) in the year (June 29, 2006 – 6.22 E-14 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, based on high volume air samples, 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 high volume air samples were used to calculate the doses for natural uranium, thorium-230 and radium-226 for time spent in the tailings impoundment.

- The maximum airborne concentrations for natural uranium and thorium-230 based on breathing zone samples and the airborne maximum concentration for radium-226 based on high volume air sampling were used for the Catchment Basin excavation.

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

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

Dose Calculation Results

An internal dose of 3.53 E+01 millirems (35.3 millirems) was calculated for the maximally exposed individual (the Mill Foreman) on site for normal duties.

The calculated dose of 35.3 millirems is less than 10% 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 1% of the ALI for natural uranium, radium-226 and thorium-230 when working in the Mill Building, tailings impoundment and Catchment Basin excavation. The highest single air sample collected on site was 2.895% of the Derived Air Concentration (DAC) 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)**			
30-Mar-06	Mill	<3.484E-14			<1.74E-01		
29-Jun-06	Mill	6.22E-14	<4.15E-14	<4.15E-14	3.11E-01	<1.38E-02	<6.92E-01
28-Sep-06	Mill	<6.10E-14			<3.05E-01		
26-Dec-06	Mill	<6.33E-14	<6.33E-14	<6.33E-14	<3.16E-01	<2.11E-02	<1.05E+00
Average- Ninety-six (96) samples	Catchment Basin Excavation	2.71E-14	3.08E-14	3.43E-14	1.72E-01	9.13E-03	5.13E-01
Taken from March 1 to September 21, 2006							
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)**			
7-May-06	Mill-Precipitation	5.36E-16	<1.00E-16	<1.00E-16	2.68E-03	<3.33E-05	<1.67E-3
4-May-06	Mill - Grinding	5.42E-16	<1.00E-16	<1.00E-16	2.71E-03	<3.33E-05	<1.67E-3
25-Nov-06	Mill-Precipitation	2.40E-15	7.35E-16	<1.00E-16	1.20E-02	2.45E-04	<1.67E-3
25-Nov-06	Mill - Grinding	1.78E-15	6.67E-16	<1.00E-16	8.90E-03	2.22E-04	<1.67E-3
Average- Thirty-three (33) samples	Tailings Impoundment	4.51E-15	3.41E-15	5.51E-15	2.26E-02	1.14E-03	9.18E-02
Taken from May 30 to November 25, 2006							
Please see attached spreadsheets							
Average- Twenty-one (21) samples	Catchment Basin	5.29E-15	7.78E-15	2.12E-15	2.65E-02	2.59E-03	3.53E-02
Taken from March 8 to October 2, 2006							
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	6.22E-14	7.35E-16	1.00E-16	3.11E-01	2.45E-04	1.67E-03
	Tailings	1.66E-14	1.00E-14	1.48E-14	8.30E-02	3.33E-03	2.47E-01
	Catchment Basin	5.79E-13	5.24E-14	1.28E-13	2.90E+00	1.75E-02	2.13E+00
Exposure Calculations							
Hours Worked During 2006							
	Mill	263					
	Tailings Impoundment	753					
	Catchment Basin	214					
Exposure		**Natural Uranium**	**Radium-226**	**Thorium-230**	**Total**		
		(millirems)	**(millirems)**	**(millirems)**	**(millirems)**		
	Mill	2.04E+00	1.61E-03	1.10E-02			
	Tailings	1.56E+00	6.28E-02	4.64E+00			
	Catchment Basin	1.55E+01	9.34E-02	1.14E+01			
	Total	1.91E+01	1.58E-01	1.61E+01	3.53E+01		
Notes:	Maximum airborne concentrations for uranium, radium-226 and thorium-230 were used in the calculation for each area (mill, tailings impoundment and Catchment Ba						
	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 6.22E-14uCi/ml.						
	6.22E-14 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 2.90% of the DAC, the highest Radium-226 concentration detected was 1.75E-02 % of the DAC and the highest Thorium-230 concentration detected was 2.13 % 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
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)
Background	9-Feb-06	10-Feb-06	2.36E+09	1.00E-16	1.00E-16	4.03E-16	1.00E-16	0.0005	0.0067	0.0000
1	8-Mar-06	13-Mar-06	3.37E+09	1.00E-16	3.15E-15	1.35E-15	1.96E-15	0.0158	0.0225	0.0007
2	14-Mar-06	16-Mar-06	3.04E+09	1.00E-16	3.71E-15	1.53E-15	2.10E-15	0.0186	0.0255	0.0007
3	20-Mar-06	22-Mar-06	3.21E+09	1.00E-16	3.16E-16	1.00E-16	3.72E-16	0.0016	0.0017	0.0001
4	23-Mar-06	27-Mar-06	2.10E+09	1.00E-16	5.38E-15	3.62E-15	5.24E-14	0.0269	0.0603	0.0175
5	28-Mar-06	30-Mar-06	2.15E+09	1.00E-16	8.51E-15	2.84E-15	1.01E-13	0.0426	0.0473	0.0337
6	2-Apr-06	3-Apr-06	2.24E+09	1.00E-16	2.81E-15	1.03E-15	1.70E-15	0.0141	0.0172	0.0006
7	10-Apr-06	12-Apr-06	2.12E+09	1.00E-16	3.02E-15	9.91E-16	1.13E-14	0.0151	0.0165	0.0038
8	17-Apr-06	19-Apr-06	1.99E+09	1.00E-16	6.13E-15	1.96E-15	1.96E-15	0.0307	0.0327	0.0007
9	20-Apr-06	25-Apr-06	2.46E+09	1.00E-16	9.35E-16	3.66E-16	1.00E-16	0.0047	0.0061	0.0000
10	26-Apr-06	2-May-06	2.91E+09	1.00E-16	1.35E-14	4.26E-15	5.50E-15	0.0675	0.0710	0.0018
11	3-May-06	9-May-06	2.25E+09	1.00E-16	5.11E-15	2.67E-15	2.53E-15	0.0256	0.0445	0.0008
12	10-May-06	15-May-06	2.62E+09	1.00E-16	3.51E-15	1.00E-16	1.00E-16	0.0176	0.0017	0.0000
13	16-May-06	18-May-06	2.54E+09	1.00E-16	3.03E-15	1.46E-15	1.97E-15	0.0152	0.0243	0.0007
14	22-May-06	24-May-06	2.45E+09	1.00E-16	8.57E-15	3.76E-15	4.08E-15	0.0429	0.0627	0.0014
15	25-May-06	1-Jun-06	3.35E+09	1.00E-16	4.07E-15	2.24E-15	3.01E-15	0.0204	0.0373	0.0010
16	5-Jun-06	7-Jun-06	2.53E+09	1.00E-16	2.89E-15	1.34E-15	1.98E-15	0.0145	0.0223	0.0007
17	8-Jun-06	13-Jun-06	2.47E+09	1.00E-16	8.66E-15	2.23E-15	3.08E-15	0.0433	0.0372	0.0010
18	14-Jun-06	19-Jun-06	2.40E+09	1.00E-16	2.58E-15	1.25E-15	1.71E-15	0.0129	0.0208	0.0006
19	20-Jun-06	22-Jun-06	2.38E+09	1.00E-16	5.13E-15	9.24E-16	1.72E-15	0.0257	0.0154	0.0006
20	26-Jun-06	29-Jun-06	3.33E+09	1.00E-16	2.76E-15	1.47E-15	1.95E-15	0.0138	0.0245	0.0007
21	5-Jul-06	10-Jul-06	3.33E+09	1.00E-16	1.38E-14	6.31E-16	2.28E-15	0.0690	0.0105	0.0008
22	11-Jul-06	13-Jul-06	2.36E+09	1.00E-16	3.01E-15	7.63E-16	2.20E-15	0.0151	0.0127	0.0007
23	17-Jul-06	20-Jul-06	2.66E+09	1.00E-16	3.57E-15	5.26E-16	1.43E-15	0.0179	0.0088	0.0005
24	24-Jul-06	26-Jul-06	2.88E+09	1.00E-16	2.29E-15	8.33E-16	1.18E-15	0.0115	0.0139	0.0004
25	27-Jul-06	2-Aug-06	2.36E+09	1.00E-16	8.35E-15	3.05E-15	3.22E-15	0.0418	0.0508	0.0011
26	3-Aug-06	8-Aug-06	2.86E+09	1.00E-16	6.43E-15	2.90E-15	3.36E-15	0.0322	0.0483	0.0011
27	9-Aug-06	14-Aug-06	2.75E+09	1.00E-16	1.01E-14	3.13E-15	6.55E-15	0.0505	0.0522	0.0022
28	23-Aug-06	28-Aug-06	2.74E+09	1.00E-16	5.95E-15	4.45E-15	1.02E-14	0.0298	0.0742	0.0034
29	29-Aug-06	31-Aug-06	2.91E+09	1.00E-16	3.78E-15	2.44E-15	5.15E-15	0.0189	0.0407	0.0017
30	12-Sep-06	14-Sep-06	3.05E+09	1.00E-16	4.13E-15	2.20E-15	3.61E-15	0.0207	0.0367	0.0012
31	18-Sep-06	20-Sep-06	2.87E+09	1.00E-16	4.91E-15	1.85E-15	3.21E-15	0.0246	0.0308	0.0011
32	21-Sep-06	28-Sep-06	3.56E+09	1.00E-16	4.07E-15	4.61E-15	3.09E-15	0.0204	0.0768	0.0010
33	2-Oct-06	2-Oct-06	7.52E+08	1.00E-16	1.04E-14	7.18E-15	1.08E-14	0.0520	0.1197	0.0036
Average:			2.64E+09		5.29E-15	2.12E-15	7.78E-15	2.64E-02	3.54E-02	2.59E-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
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	30-May-06	31-May-06	2.35E+09	1.00E-16	1.47E-15	8.90E-16	5.44E-16	0.0132	0.0503	0.0006
2	5-Jun-06	7-Jun-06	3.08E+09	1.00E-16	2.63E-15	3.02E-15	1.75E-15	0.0132	0.0503	0.0006
3	8-Jun-06	13-Jun-06	2.95E+09	1.00E-16	3.73E-15	5.12E-15	2.34E-15	0.0187	0.0853	0.0008
4	14-Jun-06	19-Jun-06	2.79E+09	1.00E-16	6.02E-15	1.48E-14	5.73E-15	0.0301	0.2467	0.0019
5	20-Jun-06	22-Jun-06	2.75E+09	1.00E-16	2.62E-15	3.31E-15	1.27E-15	0.0131	0.0552	0.0004
6	26-Jun-06	29-Jun-06	2.14E+09	1.00E-16	4.95E-15	9.81E-15	5.14E-15	0.0248	0.1635	0.0017
7	5-Jul-06	10-Jul-06	2.84E+09	1.00E-16	1.69E-15	2.92E-15	1.34E-15	0.0085	0.0487	0.0004
8	11-Jul-06	13-Jul-06	3.08E+09	1.00E-16	3.44E-15	3.90E-15	3.25E-15	0.0172	0.0650	0.0011
9	17-Jul-06	20-Jul-06	2.87E+09	1.00E-16	4.11E-15	5.78E-15	3.38E-15	0.0206	0.0963	0.0011
10	24-Jul-06	26-Jul-06	3.14E+09	1.00E-16	1.82E-15	7.29E-15	2.17E-15	0.0091	0.1215	0.0007
11	27-Jul-06	2-Aug-06	2.36E+09	1.00E-16	5.76E-15	2.63E-15	2.54E-15	0.0288	0.0438	0.0008
12	3-Aug-06	8-Aug-06	3.18E+09	1.00E-16	5.60E-15	5.53E-15	2.70E-15	0.0280	0.0922	0.0009
13	9-Aug-06	14-Aug-06	3.01E+09	1.00E-16	3.59E-15	7.97E-16	1.89E-15	0.0180	0.0133	0.0006
14	23-Aug-06	28-Aug-06	2.84E+09	1.00E-16	5.56E-15	3.45E-15	3.52E-15	0.0278	0.0575	0.0012
15	29-Aug-06	31-Aug-06	3.09E+09	1.00E-16	3.85E-15	9.45E-15	1.00E-14	0.0193	0.1575	0.0033
16	5-Sep-06	11-Sep-06	2.95E+09	1.00E-16	3.93E-15	1.35E-14	6.78E-15	0.0197	0.2250	0.0023
17	12-Sep-06	14-Sep-06	3.11E+09	1.00E-16	3.44E-15	5.95E-15	3.22E-15	0.0172	0.0992	0.0011
18	18-Sep-06	20-Sep-06	2.94E+09	1.00E-16	8.44E-15	3.33E-15	1.84E-15	0.0422	0.0555	0.0006
19	21-Sep-06	28-Sep-06	3.59E+09	1.00E-16	4.40E-15	2.14E-15	4.46E-15	0.0220	0.0357	0.0015
20	2-Oct-06	2-Oct-06	7.60E+08	1.00E-16	1.66E-14	1.12E-14	7.11E-15	0.0830	0.1867	0.0024
21	25-Nov-06	26-Nov-06	2.63E+09	1.00E-16	1.14E-15	7.98E-16	6.46E-16	0.0057	0.0133	0.0002
Average:			2.81E+09		4.85E-15	6.00E-15	3.71E-15	2.28E-02	9.34E-02	1.10E-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 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										
Breathing Zone Samples										
Date	Task	Individual	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-Mar-06	Truck Driver	Gene English	1.22E+06	8.20E-15	ND	5.74E-14	ND	ND	0.957	ND
8-Mar-06	Loader Operator	Mike Pattyn	9.33E+05	1.09E-14	5.79E-13	ND	ND	2.895	ND	ND
9-Mar-06	Truck Driver	Terry Romero	6.27E+05	1.62E-14	7.17E-14	ND	ND	0.359	ND	ND
15-Mar-06	Truck Driver	Gene English	8.01E+05	1.27E-14	2.50E-14	ND	ND	0.125	ND	ND
16-Mar-06	Truck Driver	Gary Hostetter	1.35E+06	7.51E-15	1.85E-14	ND	ND	0.093	ND	ND
20-Mar-06	Loader Operator	Mike Pattyn	1.52E+06	6.69E-15	1.32E-14	ND	ND	0.066	ND	ND
21-Mar-06	Truck Driver	Terry Romero	1.42E+06	7.13E-15	1.05E-14	ND	ND	0.053	ND	ND
22-Mar-06	Trackhoe Operator	Randy Archer	1.27E+06	7.97E-15	1.18E-14	ND	ND	0.059	ND	ND
27-Mar-06	Truck Driver	Gene English	1.26E+06	7.94E-15	ND	ND	ND	ND	ND	ND
27-Mar-06	Loader Operator	Mike Pattyn	1.38E+06	7.25E-15	ND	2.90E-14	ND	ND	0.483	ND
29-Mar-06	Truck Driver	Terry Romero	5.99E+05	1.67E-14	ND	ND	ND	ND	ND	ND
30-Mar-06	Loader Operator	Randy Archer	1.18E+06	8.47E-15	ND	3.39E-14	ND	ND	0.565	ND
3-Apr-06	Truck Driver	Terry Romero	1.29E+06	7.75E-15	ND	ND	ND	ND	ND	ND
5-Apr-06	Loader Operator	Mike Pattyn	1.08E+06	9.26E-15	ND	ND	ND	ND	ND	ND
6-Apr-06	Truck Driver	Terry Romero	1.19E+08	8.40E-15	ND	ND	ND	ND	ND	ND
10-Apr-06	Water Truck Operator	Mike Pattyn	1.20E+06	8.33E-15	ND	3.33E-14	ND	ND	0.555	ND
12-Apr-06	Trackhoe Operator	Tom Foust	1.29E+06	7.75E-15	ND	ND	ND	ND	ND	ND
17-Apr-06	Trackhoe Operator	Tom Foust	6.41E+05	1.56E-14	ND	ND	ND	ND	ND	ND
17-Apr-06	Truck Driver	Randy Archer	7.54E+05	1.33E-14	ND	6.63E-14	ND	ND	1.105	ND
19-Apr-06	Truck Driver	Gene English	1.50E+06	6.67E-15	ND	ND	ND	ND	ND	ND
19-Apr-06	Backhoe Operator	Tom Foust	1.09E+06	9.17E-15	ND	1.28E-13	ND	ND	2.133	ND
20-Apr-06	Truck Driver	Gary Hostetter	1.23E+06	8.13E-15	1.63E-14	ND	ND	0.082	ND	ND
20-Apr-06	Loader Operator	Mike Pattyn	8.97E+05	1.11E-14	ND	ND	ND	ND	ND	ND
24-Apr-06	Truck Driver	Randy Archer	1.27E+06	7.87E-15	3.45E-14	ND	ND	0.173	ND	ND
24-Apr-06	Loader Operator	Mike Pattyn	1.12E+06	8.93E-15	ND	ND	ND	ND	ND	ND
25-Apr-06	Truck Driver	Gene English	1.38E+06	7.25E-15	ND	3.26E-14	ND	ND	0.543	ND
25-Apr-06	Trackhoe Operator	Tom Foust	1.22E+06	8.20E-15	ND	ND	ND	ND	ND	ND
26-Apr-06	Trackhoe Operator	Tom Foust	1.31E+06	7.63E-15	ND	ND	ND	ND	ND	ND
26-Apr-06	Truck Driver	Gary Hostetter	1.08E+06	9.26E-15	ND	ND	ND	ND	ND	ND
1-May-06	Loader Operator	Mike Pattyn	1.47E+06	6.80E-15	ND	ND	ND	ND	ND	ND
1-May-06	Truck Driver	Gary Hostetter	1.39E+06	7.19E-15	ND	1.80E-14	ND	ND	0.300	ND
2-May-06	Truck Driver	Gene English	1.24E+06	8.06E-15	ND	1.61E-14	ND	ND	0.268	ND
2-May-06	Truckhoe Operator	Randy Archer	1.50E+06	6.68E-15	ND	ND	ND	ND	ND	ND
3-May-06	Truckhoe Operator	Randy Archer	1.53E+06	6.54E-15	ND	ND	ND	ND	ND	ND
3-May-06	Truck Driver	Gary Hostetter	1.25E+06	8.01E-15	ND	2.40E-14	ND	ND	0.400	ND
8-May-06	Truck Driver	Mike Mariner	1.55E+06	6.45E-15	ND	ND	ND	ND	ND	ND
8-May-06	Truck Driver	Gary Hostetter	1.45E+06	6.90E-15	ND	ND	ND	ND	ND	ND
9-May-06	Truck Driver	Gary Hostetter	8.32E+05	1.20E-14	ND	ND	ND	ND	ND	ND
10-May-06	Truck Driver	Gene English	1.35E+06	7.41E-15	ND	ND	ND	ND	ND	ND
11-May-06	Loader Operator	Mike Pattyn	1.51E+06	6.62E-15	ND	ND	ND	ND	ND	ND
15-May-06	Truckhoe Operator	Randy Archer	1.50E+06	6.67E-15	ND	ND	ND	ND	ND	ND
16-May-06	Truck Driver	Gene English	1.41E+06	1.35E-13	ND	ND	ND	ND	ND	ND
17-May-06	Truckhoe Operator	Tom Foust	1.42E+06	1.34E-13	ND	ND	ND	ND	ND	ND
18-May-06	Loader Operator	Mike Pattyn	1.13E+06	1.68E-13	ND	ND	ND	ND	ND	ND
22-May-06	Truck Driver	Mike Mariner	7.63E+05	2.49E-13	ND	ND	ND	ND	ND	ND
22-May-06	Truck Driver	Gary Hostetter	1.15E+06	1.65E-13	ND	ND	ND	ND	ND	ND
23-May-06	Loader Operator	Mike Pattyn	1.48E+06	1.28E-13	ND	ND	ND	ND	ND	ND
24-May-06	Truck Driver	Charlie Roberts	1.41E+06	1.35E-13	ND	ND	ND	ND	ND	ND
30-May-06	Truck Driver	Gene English	1.20E+06	1.67E-13	ND	ND	ND	ND	ND	ND
30-May-06	Truck Driver	Gary Hostetter	1.20E+06	1.67E-13	ND	ND	ND	ND	ND	ND
31-May-06	Truck Driver	Gary Hostetter	1.36E+06	1.40E-13	ND	ND	ND	ND	ND	ND
7-Jun-06	Truck Driver	Mike Mariner	1.29E+06	7.75E-15	ND	ND	ND	ND	ND	ND
12-Jun-06	Truckhoe Operator	Tom Foust	1.26E+06	7.94E-15	ND	ND	ND	ND	ND	ND
13-Jun-06	Truck Driver	Gene English	1.23E+06	8.13E-15	ND	ND	ND	ND	ND	ND
13-Jun-06	Loader Operator	Mike Pattyn	1.25E+06	1.52E-13	ND	ND	ND	ND	ND	ND
19-Jun-06	Loader Operator	Mike Pattyn	1.29E+06	7.75E-15	ND	ND	ND	ND	ND	ND
20-Jun-06	Truck Driver	Gene English	1.14E+06	8.77E-15	ND	ND	ND	ND	ND	ND
21-Jun-06	Truckhoe Operator	Gary Hostetter	1.19E+06	8.40E-15	ND	ND	ND	ND	ND	ND
22-Jun-06	Truck Driver	Sam Finley	1.45E+06	6.90E-15	ND	ND	ND	ND	ND	ND
27-Jun-06	Truckhoe Operator	Randy Archer	1.46E+06	6.85E-15	ND	ND	2.40E-14	ND	ND	0.008
28-Jun-06	Truckhoe/Loader Op	Randy Archer	1.08E+06	9.26E-15	ND	ND	ND	ND	ND	ND
10-Jul-06	Truck Driver	Sam Finley	1.37E+06	7.30E-15	ND	ND	1.82E-14	ND	ND	0.006
11-Jul-06	Truck Driver	Gene English/C	1.57E+06	6.37E-15	ND	ND	ND	ND	ND	ND
12-Jul-06	Truck Driver	Mike Mariner	1.30E+06	7.69E-15	ND	ND	ND	ND	ND	ND
13-Jul-06	Truck Driver	Charlie Roberts	1.37E+06	7.30E-15	ND	ND	ND	ND	ND	ND
17-Jul-06	Truck Driver	Gene English	1.15E+06	1.66E-13	ND	ND	ND	ND	ND	ND
17-Jul-06	truck	Mike Mariner	1.44E+06	6.94E-15	ND	ND	ND	ND	ND	ND
18-Jul-06	Truck Driver	Sam Finley	1.29E+06	7.75E-15	ND	ND	ND	ND	ND	ND
19-Jul-06	Loader Operator	Gary Hostetter	1.23E+06	8.13E-15	ND	ND	ND	ND	ND	ND
20-Jul-06	Truck Driver	Mike Mariner	1.42E+06	7.04E-15	ND	ND	ND	ND	ND	ND

Date	Task	Individual	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)
24-Jul-06	Trackhoe Operator	Mike Pattyn	1.50E+06	6.67E-15	ND	ND	ND	ND	ND	ND
25-Jul-06	Truck Driver	Mike Mariner	1.28E+06	7.81E-15	ND	ND	ND	ND	ND	ND
27-Jul-06	Truck Driver	Gary Hostetter	1.04E+06	9.62E-15	ND	ND	ND	ND	ND	ND
27-Jul-06	Trackhoe Operator	Tom Foust	1.53E+06	6.54E-15	ND	ND	ND	ND	ND	ND
28-Jul-06	Loader Operator	Mike Pattyn	1.26E+06	7.94E-15	ND	ND	ND	ND	ND	ND
1-Aug-06	Trackhoe Operator	Tom Foust	1.74E+06	5.75E-15	ND	ND	ND	ND	ND	ND
2-Aug-06	Truck Driver	Sam Finley	1.11E+06	9.01E-15	ND	ND	ND	ND	ND	ND
3-Aug-06	Truck Driver	Sam Finley	1.14E+06	8.77E-15	ND	ND	ND	ND	ND	ND
7-Aug-06	Trackhoe Operator	Randy Archer	1.37E+06	7.30E-15	ND	ND	ND	ND	ND	ND
10-Aug-06	Truck Driver	Mike Mitchell	1.57E+06	6.37E-15	ND	ND	ND	ND	ND	ND
14-Aug-06	Truck Driver	Richard Durazo	5.53E+05	1.81E-14	ND	ND	ND	ND	ND	ND
29-Aug-06	Loader Operator	Sam Finley	1.38E+06	7.25E-15	ND	ND	ND	ND	ND	ND
30-Aug-06	Truck Driver	Mike Mitchell	1.51E+06	6.62E-15	ND	ND	ND	ND	ND	ND
31-Aug-06	Trackhoe Operator	Gary Hostetter	1.40E+06	7.14E-15	ND	ND	ND	ND	ND	ND
5-Sep-06	Truck Driver	Jake Bolte	1.51E+06	6.62E-15	ND	ND	ND	ND	ND	ND
6-Sep-06	Truck Driver	Mike Mitchell	1.13E+06	8.85E-15	ND	ND	ND	ND	ND	ND
7-Sep-06	Truck Driver	Gary Hostetter	1.01E+06	9.90E-15	ND	ND	ND	ND	ND	ND
11-Sep-06	Truck Driver	Richard Durazo	1.51E+06	6.62E-15	ND	ND	ND	ND	ND	ND
11-Sep-06	Truck Driver	Mike Mitchell	1.33E+06	7.52E-16	ND	ND	ND	ND	ND	ND
12-Sep-06	Trackhoe Operator	Tom Foust	1.54E+06	6.49E-15	ND	ND	ND	ND	ND	ND
13-Sep-06	Truck Driver	Mike Mariner	1.06E+06	9.43E-15	ND	ND	ND	ND	ND	ND
14-Sep-06	Dozer Operator	Mike Pattyn	1.43E+06	6.99E-15	ND	ND	ND	ND	ND	ND
18-Sep-06	Truck Driver	Jake Bolte	1.42E+06	7.04E-15	ND	ND	ND	ND	ND	ND
19-Sep-06	Truck Driver	Gary Hostetter	9.22E+05	1.08E-14	ND	ND	ND	ND	ND	ND
20-Sep-06	Trackhoe Operator	Randy Archer	1.23E+06	8.13E-15	ND	ND	ND	ND	ND	ND
21-Sep-06	Trackhoe Operator	Randy Archer	1.47E+06	6.80E-15	ND	ND	ND	ND	ND	ND
Average:			2.49E+06	2.71E-14	8.67E-14	4.39E-14	2.11E-14	4.34E-01	7.31E-01	7.03E-03
Notes:	All results listed on the laboratory reports as being less than the specific sample's Lower Limit of Detection (LLD) are listed on this sheet as ND (non-detect).									
	The averages are conservative in that non-detect readings were not included in the averages.									
	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 intakes is not required.									

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

Kennecott Uranium Company										
Sweetwater Uranium Project										
Catchment Basin Excavation										
Breathing Zone Samples										
Date	Task	Individual	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-Mar-06	Truck Driver	Gene English	1.22E+06	8.20E-15	8.20E-15	5.74E-14	8.20E-15	0.041	0.957	0.003
8-Mar-06	Loader Operator	Mike Pattyn	9.33E+05	1.09E-14	5.79E-13	1.09E-14	1.09E-14	2.895	0.182	0.004
9-Mar-06	Truck Driver	Terry Romero	6.27E+05	1.62E-14	7.17E-14	1.62E-14	1.62E-14	0.359	0.270	0.005
15-Mar-06	Truck Driver	Gene English	8.01E+05	1.27E-14	2.50E-14	1.27E-14	1.27E-14	0.125	0.212	0.004
16-Mar-06	Truck Driver	Gary Hostetter	1.35E+06	7.51E-15	1.85E-14	7.51E-15	7.51E-15	0.093	0.125	0.003
20-Mar-06	Loader Operator	Mike Pattyn	1.52E+06	6.69E-15	1.32E-14	6.69E-15	6.69E-15	0.066	0.112	0.002
21-Mar-06	Truck Driver	Terry Romero	1.42E+06	7.13E-15	1.05E-14	7.13E-15	7.13E-15	0.053	0.119	0.002
22-Mar-06	Trackhoe Operator	Randy Archer	1.27E+06	7.97E-15	1.18E-14	7.97E-15	7.97E-15	0.059	0.133	0.003
27-Mar-06	Truck Driver	Gene English	1.26E+06	7.94E-15	7.94E-15	7.94E-15	7.94E-15	0.040	0.132	0.003
27-Mar-06	Loader Operator	Mike Pattyn	1.38E+06	7.25E-15	7.25E-15	2.90E-14	7.25E-15	0.036	0.483	0.002
29-Mar-06	Truck Driver	Terry Romero	5.99E+05	1.67E-14	1.67E-14	1.67E-14	1.67E-14	0.084	0.278	0.006
30-Mar-06	Loader Operator	Randy Archer	1.18E+06	8.47E-15	8.47E-15	3.39E-14	8.47E-15	0.042	0.565	0.003
3-Apr-06	Truck Driver	Terry Romero	1.29E+06	7.75E-15	7.75E-15	7.75E-15	7.75E-15	0.039	0.129	0.003
5-Apr-06	Loader Operator	Mike Pattyn	1.08E+06	9.26E-15	9.26E-15	9.26E-15	9.26E-15	0.046	0.154	0.003
6-Apr-06	Truck Driver	Terry Romero	1.19E+08	8.40E-15	8.40E-15	8.40E-15	8.40E-15	0.042	0.140	0.003
10-Apr-06	Water Truck Operator	Mike Pattyn	1.20E+06	8.33E-15	8.33E-15	3.33E-14	8.33E-15	0.042	0.555	0.003
12-Apr-06	Trackhoe Operator	Tom Foust	1.29E+06	7.75E-15	7.75E-15	7.75E-15	7.75E-15	0.039	0.129	0.003
17-Apr-06	Trackhoe Operator	Tom Foust	6.41E+05	1.56E-14	1.56E-14	1.56E-14	1.56E-14	0.078	0.260	0.005
17-Apr-06	Truck Driver	Randy Archer	7.54E+05	1.33E-14	1.33E-14	6.63E-14	1.33E-14	0.067	1.105	0.004
19-Apr-06	Truck Driver	Gene English	1.50E+06	6.67E-15	6.67E-15	6.67E-15	6.67E-15	0.033	0.111	0.002
19-Apr-06	Backhoe Operator	Tom Foust	1.09E+06	9.17E-15	9.17E-15	1.28E-13	9.17E-15	0.046	2.133	0.003
20-Apr-06	Truck Driver	Gary Hostetter	1.23E+06	8.13E-15	1.63E-14	8.13E-15	8.13E-15	0.082	0.136	0.003
20-Apr-06	Loader Operator	Mike Pattyn	8.97E+05	1.11E-14	1.11E-14	1.11E-14	1.11E-14	0.056	0.185	0.004
24-Apr-06	Truck Driver	Randy Archer	1.27E+06	7.87E-15	3.45E-14	7.87E-15	7.87E-15	0.173	0.131	0.003
24-Apr-06	Loader Operator	Mike Pattyn	1.12E+06	8.93E-15	8.93E-15	8.93E-15	8.93E-15	0.045	0.149	0.003
25-Apr-06	Truck Driver	Gene English	1.38E+06	7.25E-15	7.25E-15	3.26E-14	7.25E-15	0.036	0.543	0.002
25-Apr-06	Trackhoe Operator	Tom Foust	1.22E+06	8.20E-15	8.20E-15	8.20E-15	8.20E-15	0.041	0.137	0.003
26-Apr-06	Trackhoe Operator	Tom Foust	1.31E+06	7.63E-15	7.63E-15	7.63E-15	7.63E-15	0.038	0.127	0.003
26-Apr-06	Truck Driver	Gary Hostetter	1.08E+06	9.26E-15	9.26E-15	9.26E-15	9.26E-15	0.046	0.154	0.003
1-May-06	Loader Operator	Mike Pattyn	1.47E+06	6.80E-15	6.80E-15	6.80E-15	6.80E-15	0.034	0.113	0.002
1-May-06	Truck Driver	Gary Hostetter	1.39E+06	7.19E-15	7.19E-15	1.80E-14	7.19E-15	0.036	0.300	0.002
2-May-06	Truck Driver	Gene English	1.24E+06	8.06E-15	8.06E-15	1.61E-14	8.06E-15	0.040	0.268	0.003
2-May-06	Truckhoe Operator	Randy Archer	1.50E+06	6.68E-15	6.68E-15	6.68E-15	6.68E-15	0.033	0.111	0.002
3-May-06	Truckhoe Operator	Randy Archer	1.53E+06	6.54E-15	6.54E-15	6.54E-15	6.54E-15	0.033	0.109	0.002
3-May-06	Truck Driver	Gary Hostetter	1.25E+06	8.01E-15	8.01E-15	2.40E-14	8.01E-15	0.040	0.400	0.003
8-May-06	Truck Driver	Mike Mariner	1.55E+06	6.45E-15	6.45E-15	6.45E-15	6.45E-15	0.032	0.108	0.002
8-May-06	Truck Driver	Gary Hostetter	1.45E+06	6.90E-15	6.90E-15	6.90E-15	6.90E-15	0.035	0.115	0.002
9-May-06	Truck Driver	Gary Hostetter	8.32E+05	1.20E-14	1.20E-14	1.20E-14	1.20E-14	0.060	0.200	0.004
10-May-06	Truck Driver	Gene English	1.35E+06	7.41E-15	7.41E-15	7.41E-15	7.41E-15	0.037	0.124	0.002
11-May-06	Loader Operator	Mike Pattyn	1.51E+06	6.62E-15	6.62E-15	6.62E-15	6.62E-15	0.033	0.110	0.002
15-May-06	Truckhoe Operator	Randy Archer	1.50E+06	6.67E-15	6.67E-15	6.67E-15	6.67E-15	0.033	0.111	0.002
16-May-06	Truck Driver	Gene English	1.41E+06	1.35E-13	1.35E-13	1.35E-13	1.35E-13	0.675	2.250	0.045
17-May-06	Truckhoe Operator	Tom Foust	1.42E+06	1.34E-13	1.34E-13	1.34E-13	1.34E-13	0.670	2.233	0.045
18-May-06	Loader Operator	Mike Pattyn	1.13E+06	1.68E-13	1.68E-13	1.68E-13	1.68E-13	0.840	2.800	0.056
22-May-06	Truck Driver	Mike Mariner	7.63E+05	2.49E-13	2.49E-13	2.49E-13	2.49E-13	1.245	4.150	0.083
22-May-06	Truck Driver	Gary Hostetter	1.15E+06	1.65E-13	1.65E-13	1.65E-13	1.65E-13	0.825	2.750	0.055
23-May-06	Loader Operator	Mike Pattyn	1.48E+06	1.28E-13	1.28E-13	1.28E-13	1.28E-13	0.640	2.133	0.043
24-May-06	Truck Driver	Charlie Roberts	1.41E+06	1.35E-13	1.35E-13	1.35E-13	1.35E-13	0.675	2.250	0.045
30-May-06	Truck Driver	Gene English	1.20E+06	1.67E-13	1.67E-13	1.67E-13	1.67E-13	0.835	2.783	0.056
30-May-06	Truck Driver	Gary Hostetter	1.20E+06	1.67E-13	1.67E-13	1.67E-13	1.67E-13	0.835	2.783	0.056
31-May-06	Truck Driver	Gary Hostetter	1.36E+06	1.40E-13	1.40E-13	1.40E-13	1.40E-13	0.700	2.333	0.047
7-Jun-06	Truck Driver	Mike Mariner	1.29E+06	7.75E-15	7.75E-15	7.75E-15	7.75E-15	0.039	0.129	0.003
12-Jun-06	Truckhoe Operator	Tom Foust	1.26E+06	7.94E-15	7.94E-15	7.94E-15	7.94E-15	0.040	0.132	0.003
13-Jun-06	Truck Driver	Gene English	1.23E+06	8.13E-15	8.13E-15	8.13E-15	8.13E-15	0.041	0.136	0.003
13-Jun-06	Loader Operator	Mike Pattyn	1.25E+06	1.52E-13	1.52E-13	1.52E-13	1.52E-13	0.760	2.533	0.051
19-Jun-06	Loader Operator	Mike Pattyn	1.29E+06	7.75E-15	7.75E-15	7.75E-15	7.75E-15	0.039	0.129	0.003
20-Jun-06	Truck Driver	Gene English	1.14E+06	8.77E-15	8.77E-15	8.77E-15	8.77E-15	0.044	0.146	0.003
21-Jun-06	Truckhoe Operator	Gary Hostetter	1.19E+06	8.40E-15	8.40E-15	8.40E-15	8.40E-15	0.042	0.140	0.003
22-Jun-06	Truck Driver	Sam Finley	1.45E+06	6.90E-15	6.90E-15	6.90E-15	6.90E-15	0.035	0.115	0.002
27-Jun-06	Truckhoe Operator	Randy Archer	1.46E+06	6.85E-15	6.85E-15	6.85E-15	2.40E-14	0.034	0.114	0.008
28-Jun-06	Truckhoe/Loader Op	Randy Archer	1.08E+06	9.26E-15	9.26E-15	9.26E-15	9.26E-15	0.046	0.154	0.003
10-Jul-06	Truck Driver	Sam Finley	1.37E+06	7.30E-15	7.30E-15	7.30E-15	1.82E-14	0.037	0.122	0.006
11-Jul-06	Truck Driver	Gene English/Charl	1.57E+06	6.37E-15	6.37E-15	6.37E-15	6.37E-15	0.032	0.106	0.002
12-Jul-06	Truck Driver	Mike Mariner	1.30E+06	7.69E-15	7.69E-15	7.69E-15	7.69E-15	0.038	0.128	0.003
13-Jul-06	Truck Driver	Charlie Roberts	1.37E+06	7.30E-15	7.30E-15	7.30E-15	7.30E-15	0.037	0.122	0.002
17-Jul-06	Truck Driver	Gene English	1.15E+06	1.66E-13	1.66E-13	1.66E-13	1.66E-13	0.830	2.767	0.055
17-Jul-06	truck	Mike Mariner	1.44E+06	6.94E-15	6.94E-15	6.94E-15	6.94E-15	0.035	0.116	0.002
18-Jul-06	Truck Driver	Sam Finley	1.29E+06	7.75E-15	7.75E-15	7.75E-15	7.75E-15	0.039	0.129	0.003
19-Jul-06	Loader Operator	Gary Hostetter	1.23E+06	8.13E-15	8.13E-15	8.13E-15	8.13E-15	0.041	0.136	0.003
20-Jul-06	Truck Driver	Mike Mariner	1.42E+06	7.04E-15	7.04E-15	7.04E-15	7.04E-15	0.035	0.117	0.002

Date	Task	Individual	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)
24-Jul-06	Trackhoe Operator	Mike Pattyn	1.50E+06	6.67E-15	6.67E-15	6.67E-15	6.67E-15	0.033	0.111	0.002
25-Jul-06	Truck Driver	Mike Mariner	1.28E+06	7.81E-15	7.81E-15	7.81E-15	7.81E-15	0.039	0.130	0.003
27-Jul-06	Truck Driver	Gary Hostetter	1.04E+06	9.62E-15	9.62E-15	9.62E-15	9.62E-15	0.048	0.160	0.003
27-Jul-06	Trackhoe Operator	Tom Foust	1.53E+06	6.54E-15	6.54E-15	6.54E-15	6.54E-15	0.033	0.109	0.002
28-Jul-06	Loader Operator	Mike Pattyn	1.26E+06	7.94E-15	7.94E-15	7.94E-15	7.94E-15	0.040	0.132	0.003
1-Aug-06	Trackhoe Operator	Tom Foust	1.74E+06	5.75E-15	5.75E-15	5.75E-15	5.75E-15	0.029	0.096	0.002
2-Aug-06	Truck Driver	Sam Finley	1.11E+06	9.01E-15	9.01E-15	9.01E-15	9.01E-15	0.045	0.150	0.003
3-Aug-06	Truck Driver	Sam Finley	1.14E+06	8.77E-15	8.77E-15	8.77E-15	8.77E-15	0.044	0.146	0.003
7-Aug-06	Trackhoe Operator	Randy Archer	1.37E+06	7.30E-15	7.30E-15	7.30E-15	7.30E-15	0.037	0.122	0.002
10-Aug-06	Truck Driver	Mike Mitchell	1.57E+06	6.37E-15	6.37E-15	6.37E-15	6.37E-15	0.032	0.106	0.002
14-Aug-06	Truck Driver	Richard Durazo	5.53E+05	1.81E-14	1.81E-14	1.81E-14	1.81E-14	0.091	0.302	0.006
29-Aug-06	Loader Operator	Sam Finley	1.38E+06	7.25E-15	7.25E-15	7.25E-15	7.25E-15	0.036	0.121	0.002
30-Aug-06	Truck Driver	Mike Mitchell	1.51E+06	6.62E-15	6.62E-15	6.62E-15	6.62E-15	0.033	0.110	0.002
31-Aug-06	Trackhoe Operator	Gary Hostetter	1.40E+06	7.14E-15	7.14E-15	7.14E-15	7.14E-15	0.036	0.119	0.002
5-Sep-06	Truck Driver	Jake Bolte	1.51E+06	6.62E-15	6.62E-15	6.62E-15	6.62E-15	0.033	0.110	0.002
6-Sep-06	Truck Driver	Mike Mitchell	1.13E+06	8.85E-15	8.85E-15	8.85E-15	8.85E-15	0.044	0.148	0.003
7-Sep-06	Truck Driver	Gary Hostetter	1.01E+06	9.90E-15	9.90E-15	9.90E-15	9.90E-15	0.050	0.165	0.003
11-Sep-06	Truck Driver	Richard Durazo	1.51E+06	6.62E-15	6.62E-15	6.62E-15	6.62E-15	0.033	0.110	0.002
11-Sep-06	Truck Driver	Mike Mitchell	1.33E+06	7.52E-16	7.52E-16	7.52E-16	7.52E-16	0.004	0.013	0.000
12-Sep-06	Trackhoe Operator	Tom Foust	1.54E+06	6.49E-15	6.49E-15	6.49E-15	6.49E-15	0.032	0.108	0.002
13-Sep-06	Truck Driver	Mike Mariner	1.06E+06	9.43E-15	9.43E-15	9.43E-15	9.43E-15	0.047	0.157	0.003
14-Sep-06	Dozer Operator	Mike Pattyn	1.43E+06	6.99E-15	6.99E-15	6.99E-15	6.99E-15	0.035	0.117	0.002
18-Sep-06	Truck Driver	Jake Bolte	1.42E+06	7.04E-15	7.04E-15	7.04E-15	7.04E-15	0.035	0.117	0.002
19-Sep-06	Truck Driver	Gary Hostetter	9.22E+05	1.08E-14	1.08E-14	1.08E-14	1.08E-14	0.054	0.180	0.004
20-Sep-06	Trackhoe Operator	Randy Archer	1.23E+06	8.13E-15	8.13E-15	8.13E-15	8.13E-15	0.041	0.136	0.003
21-Sep-06	Trackhoe Operator	Randy Archer	1.47E+06	6.80E-15	6.80E-15	6.80E-15	6.80E-15	0.034	0.113	0.002
Average:			2.49E+06	2.71E-14	3.43E-14	3.08E-14	2.74E-14	1.72E-01	5.13E-01	9.13E-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 intakes is not required.

Derived Air Concentrations Used

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

RIO TINTO
ENERGY AMERICA

Memorandum

Oscar Paulson
Facility Supervisor
Kennecott Uranium Company

21 February 2007

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 2006 shows that all results are well below the first action level of 15 µg/L. In fact, all urinalysis results for the year 2006 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.

Please see attached summary of 2006 urinalysis data.

Oscar A Paulson

Oscar A. Paulson
Facility Supervisor

KENNECOTT URANIUM COMPANY															
URINANALYSIS RESULTS :	**2006**														
EMPLOYEE TITLE	**EMPLOYER**		January	February	March	April	May	June	July	August	September	October	November	December	LLD
FACILITY SUPERVISOR	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	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	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
CONTRACT EMPLOYEE NAME															
Randy Archer	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
Tom Foust	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
Mike Pattyn	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
Gary Hostetter	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
Gene English	ARCHER CONSTRUCTION, INC. *		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0						5.0
Terry Romero	ARCHER CONSTRUCTION, INC. *		<5.0	<5.0	<5.0	<5.0									5.0
Stacy Lawson	ARCHER CONSTRUCTION, INC. *		<5.0	<5.0	<5.0	<5.0									5.0
Mike Mariner	ARCHER CONSTRUCTION, INC. *					<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5.0
Charlie Roberts	ARCHER CONSTRUCTION, INC. *						<5.0	<5.0	<5.0	<5.0	<5.0				5.0
Sam Finley	ARCHER CONSTRUCTION, INC. *							<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5.0
Mike Mitchell	ARCHER CONSTRUCTION, INC. *									<5.0	<5.0	<5.0	<5.0	<5.0	5.0
Richard Durazo	ARCHER CONSTRUCTION, INC. *									<5.0	<5.0	<5.0	<5.0	<5.0	5.0
Jake Bolte	ARCHER CONSTRUCTION, INC. *									<5.0	<5.0	<5.0	<5.0	<5.0	5.0
Edwin Erickson	ARCHER CONSTRUCTION, INC. *		<5.0												5.0
Gary Schuler	ARCHER CONSTRUCTION, INC. *											<5.0	<5.0		5.0
Tony Johnston	ARCHER CONSTRUCTION, INC. *											<5.0	<5.0	<5.0	5.0
Kenneth Aurell	ARCHER CONSTRUCTION, INC. *													<5.0	5.0
Phil LaVoie	ARCHER CONSTRUCTION, INC. *													<5.0	5.0
Anita Morris	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
Jim McMacken	SECURITAS ***			<5.0	<5.0		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5.0
Ray Grate	SECURITAS ***					<5.0		<5.0							5.0
Kathryn Harrison	SECURITAS ***										<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/Never started work
- Off work due to surgery.

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

*Catchment Basin Excavation
** Surveying
*** Security

RIO TINTO
ENERGY AMERICA

Memorandum

Oscar Paulson
Facility Supervisor
Kennecott Uranium Company

7 February 2007

Gamma Radiation Monitoring File

Subject: External Gamma Radiation Survey Assessment

In 2006, gamma surveys of the mill and ion exchange areas were conducted on June 14 and December 21, 2006. A gamma survey of the disposal area in the tailings impoundment was conducted on June 21 and December 21, 2006.

There were twenty-six (26) locations throughout the mill and solvent extraction buildings and fourteen (14) locations associated with the IX in June 2006 and eighteen (18) locations associated with the IX in December 2006 that were monitored for gamma radiation.

Gamma readings ranged from 51.4 to 679 µR/hour (233-µR/hr average for the year) for the Ion Exchange related equipment, to 12.7 to 875 µR/hour (73 µR/hr average for the year) in the Mill and Solvent Extraction (SX) Buildings.

The stored equipment was monitored as well on 6/14/06 and 12/21/06. The stored equipment ranged from 14.5 to 2780 µR/hr at thirty (30) centimeters from the equipment surface, averaging 563.8 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 2.78 millirems/hour (.0028 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 21 and December 21, 2006. This area averaged 68.8 µR/hr. (Please see attached table.) This is a substantial decrease from the average of 102.3 µR/hr in 2005. This is due to the shielding effect of the material excavated from the Catchment Basin area, which has a lower radium concentration than the tailings being placed over them. These materials effectively shield gamma radiation from the tailings.

Gamma surveys were also performed in the Catchment Basin excavation on April 20, May 16 and June 6, 2006. They averaged 68.1 µR/hr for 253 total readings. This average is inclusive of natural background.

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 siste and contract personnel. The maximum annual external dose above background received by any individual as measured by Luxel dosimeters was 7 millirems.

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	
Average	38.2	100.7	
Standard Deviation:	19.2	51.5	
OAP:2006			
resin0001.xls			

Kennecott Uranium Company

Sweetwater Uranium Project

Tailings Impoundment Gamma Radiation Survey

Date:	21-Jun-06	Rate meter:	Ludlum Model 2350-1
Time:	01:00 PM	Serial Number:	192613
		Calibration Date:	13-Feb-06
Check Source:	Cs-137	Probe:	Ludlum Model: 44-10
		Serial Number:	PR206932
Serial Number:	2304	Calibration Date:	12-Feb-06
Counts:	266 microR/hour	Background:	28.6 microR/hour

Location		***Reading***	
Ramp Area	Ramp Top	96.0	microR/hour
Ramp Area	Ramp Middle	101.0	microR/hour
Ramp Area	Ramp Middle	109.0	microR/hour
Ramp Area	Ramp Middle	99.4	microR/hour
Ramp Area	Ramp Middle	84.7	microR/hour
Ramp Area	Ramp Bottom	73.8	microR/hour
Road by Equipment	Road by Equipment	78.4	microR/hour
Road by Equipment	Road by Equipment	77.9	microR/hour
Road by Equipment	Road by Equipment	106.0	microR/hour
Road by Equipment	Road by Equipment	102.0	microR/hour
Road by Equipment	Road by Equipment	84.8	microR/hour
Road by Equipment	Road by Equipment	71.8	microR/hour
Road by Equipment	Road by Equipment	65.6	microR/hour
Road by Equipment	Road by Equipment	73.3	microR/hour
Road by Equipment	Road by Equipment	49.0	microR/hour
South to Main Ramp	Road by Equipment	54.4	microR/hour
Storage Area	Storage Area	80.8	microR/hour
Storage Area	Storage Area	52.6	microR/hour
Storage Area	Storage Area	45.6	microR/hour
Storage Area	Storage Area	42.7	microR/hour
Storage Area	Storage Area	49.9	microR/hour
Storage Area	Storage Area	63.6	microR/hour
Storage Area	Storage Area	102.0	microR/hour
Main Ramp	Main Ramp	67.1	microR/hour
Main Ramp	Main Ramp	62.0	microR/hour
Main Ramp	Main Ramp	57.5	microR/hour
Main Ramp	Main Ramp	60.0	microR/hour
Main Ramp	Main Ramp	58.8	microR/hour
Main Ramp	Main Ramp	77.6	microR/hour
Main Ramp	Main Ramp	184.0	microR/hour
Main Ramp	By East Embankment	171.0	microR/hour
Along East Embankment	South	142.0	microR/hour
Along East Embankment	Middle	96.7	microR/hour
Along East Embankment	Middle	63.6	microR/hour
Along East Embankment	Middle	73.6	microR/hour
Along East Embankment	Middle	71.0	microR/hour
Along East Embankment	Middle	90.5	microR/hour
Along East Embankment	Middle	174.0	microR/hour
Along East Embankment	North	150.0	microR/hour
Main Road South of Pad	Main Road South of Pad	150.0	microR/hour
Main Road South of Pad	Main Road South of Pad	159.0	microR/hour
Main Road South of Pad	Main Road South of Pad	106.0	microR/hour
Main Road South of Pad	Main Road South of Pad	130.0	microR/hour
Main Road South of Pad	Main Road South of Pad	125.0	microR/hour
Main Road South of Pad	Main Road South of Pad	111.0	microR/hour
Main Road South of Pad	Main Road South of Pad	122.0	microR/hour
Main Road South of Pad	Main Road South of Pad	119.0	microR/hour
Main Pad	Main Pad	56.8	microR/hour

Location			Reading	
Main Pad	Main Pad		55.1	microR/hour
Main Pad	Main Pad		43.8	microR/hour
Main Pad	Main Pad		41.7	microR/hour
Main Pad	Main Pad		49.9	microR/hour
Main Pad	Main Pad		43.7	microR/hour
Main Pad	Main Pad		54.7	microR/hour
Main Pad	Main Pad		39.5	microR/hour
Main Pad	Main Pad		48.5	microR/hour
Main Pad	Main Pad		46.0	microR/hour
Main Pad	Main Pad		44.7	microR/hour
Main Pad	Main Pad		48.7	microR/hour
Main Pad	Main Pad		42.8	microR/hour
Main Pad	Main Pad		44.5	microR/hour
Main Pad	Main Pad		55.4	microR/hour
Main Pad	Main Pad		53.0	microR/hour
Main Pad	Main Pad		52.9	microR/hour
Main Pad	Main Pad		45.2	microR/hour
Main Pad	Main Pad		47.9	microR/hour
Main Pad	Main Pad		45.7	microR/hour
Main Pad	Main Pad		51.5	microR/hour
Main Pad	Main Pad		41.5	microR/hour
Main Pad	Main Pad		46.2	microR/hour
Main Pad	Main Pad		54.2	microR/hour
Main Pad	Main Pad		61.7	microR/hour
Main Pad	Main Pad		61.0	microR/hour
Main Pad	Main Pad		60.4	microR/hour
Main Pad	Main Pad		57.2	microR/hour
Main Ramp	Bottom		51.4	microR/hour
Main Ramp	Middle		57.5	microR/hour
Main Ramp	Middle		52.8	microR/hour
Main Ramp	Middle		53.9	microR/hour
Main Ramp	Middle		54.1	microR/hour
Main Ramp	Middle		48.9	microR/hour
Main Ramp	Middle		49.9	microR/hour
Main Ramp	Middle		53.5	microR/hour
Main Ramp	Middle		54.2	microR/hour
Main Ramp	Middle		49.7	microR/hour
Main Ramp	Middle		48.5	microR/hour
Main Ramp	Middle		47.5	microR/hour
Main Ramp	Middle		45.3	microR/hour
Main Ramp	Middle		44.5	microR/hour
Main Ramp	Middle		43.0	microR/hour
Main Ramp	Middle		42.6	microR/hour
Main Ramp	Middle		41.6	microR/hour
Main Ramp	Top		41.8	microR/hour
	Average:		75.3	
	Standard Deviation:		35.0	
	Median:		81.4	
	Maximum:		184.0	
	Minimum:		39.5	

Kennecott Uranium Company
Sweetwater Uranium Project

Tailings Impoundment Gamma Radiation Survey

Date:	21-Dec-06	Rate meter:	Ludlum Model 2350-1
Time:	01:00 PM	Serial Number:	192613
		Calibration Date:	08-Dec-06
Check Source:	Cs-137	Probe:	Ludlum Model: 44-10
		Serial Number:	PR206932
Serial Number:	2304	Calibration Date:	08-Dec-06
Counts:	267 microR/hour	Background:	20.3 microR/hour

Location		Reading	
Ramp Area	Ramp Top	101.0	microR/hour
Ramp Area	Ramp Middle	102.0	microR/hour
Ramp Area	Ramp Middle	106.0	microR/hour
Ramp Area	Ramp Middle	112.0	microR/hour
Ramp Area	Ramp Middle	100.0	microR/hour
Ramp Area	Ramp Middle	98.1	microR/hour
Ramp Area	Ramp Middle	89.0	microR/hour
Ramp Area	Ramp Middle	73.6	microR/hour
Ramp Area	Ramp Bottom	76.8	microR/hour
Road	West End	76.3	microR/hour
Road	Middle	70.0	microR/hour
Road	Middle	79.4	microR/hour
Road	Middle	78.9	microR/hour
Road	Middle	108.0	microR/hour
Road	Middle	109.0	microR/hour
Road	Middle	82.0	microR/hour
Road	Middle	80.8	microR/hour
Road	Middle	74.8	microR/hour
Road	Middle	74.2	microR/hour
Road	East End	67.4	microR/hour
Storage Area	Storage Area	66.3	microR/hour
Storage Area	Storage Area	70.5	microR/hour
Storage Area	Storage Area	77.3	microR/hour
Storage Area	Storage Area	57.4	microR/hour
Storage Area	Storage Area	49.4	microR/hour
Storage Area	Storage Area	53.3	microR/hour
Storage Area	Storage Area	54.5	microR/hour
Northeast Fill Area	West Side	71.1	microR/hour
Northeast Fill Area		60.7	microR/hour
Northeast Fill Area		58.2	microR/hour
Northeast Fill Area		57.8	microR/hour
Northeast Fill Area		55.7	microR/hour
Northeast Fill Area		54.7	microR/hour
Northeast Fill Area		50.5	microR/hour
Northeast Fill Area		56.5	microR/hour
Northeast Fill Area		59.4	microR/hour
Northeast Fill Area		54.9	microR/hour
Northeast Fill Area		51.8	microR/hour
Northeast Fill Area		48.7	microR/hour
Northeast Fill Area		46.1	microR/hour
Northeast Fill Area		56.6	microR/hour
Northeast Fill Area		50.0	microR/hour
Northeast Fill Area		51.5	microR/hour
Northeast Fill Area		42.2	microR/hour
Northeast Fill Area		50.4	microR/hour
Northeast Fill Area		63.0	microR/hour
Northeast Fill Area		55.7	microR/hour
Northeast Fill Area		56.5	microR/hour
Northeast Fill Area	South End	72.4	microR/hour
Main Road		55.6	microR/hour
Main Road		56.2	microR/hour
Main Road		57.1	microR/hour
Main Road		54.9	microR/hour

Location			Reading	
Main Road			58.3	microR/hour
Main Road	East End		105.0	microR/hour
Main Pad	Main Pad		56.4	microR/hour
Main Pad	Main Pad		57.6	microR/hour
Main Pad	Main Pad		45.6	microR/hour
Main Pad	Main Pad		44.9	microR/hour
Main Pad	Main Pad		49.9	microR/hour
Main Pad	Main Pad		54.4	microR/hour
Main Pad	Main Pad		58.4	microR/hour
Main Pad	Main Pad		56.6	microR/hour
Main Pad	Main Pad		47.8	microR/hour
Main Pad	Main Pad		38.4	microR/hour
Main Pad	Main Pad		51.3	microR/hour
Road South of Pad	North End		47.2	microR/hour
Road South of Pad			43.2	microR/hour
Road South of Pad			44.4	microR/hour
Road South of Pad			49.6	microR/hour
Road South of Pad			45.2	microR/hour
Road South of Pad			46.8	microR/hour
Road South of Pad			48.5	microR/hour
Road South of Pad			50.8	microR/hour
Road South of Pad	South End		67.8	microR/hour
Main Pad			43.6	microR/hour
Main Pad			48.6	microR/hour
Main Pad			47.8	microR/hour
Main Pad			45.3	microR/hour
Main Pad			48.7	microR/hour
Main Pad			53.1	microR/hour
Main Pad			51.9	microR/hour
Main Pad			48.9	microR/hour
Main Pad			53.1	microR/hour
Main Pad			51.0	microR/hour
Main Pad			49.6	microR/hour
Main Pad			60.4	microR/hour
Main Pad			48.2	microR/hour
Main Pad			48.8	microR/hour
Main Pad			50.1	microR/hour
Main Pad			52.0	microR/hour
Main Pad			52.4	microR/hour
Main Pad			64.0	microR/hour
Main Pad			64.2	microR/hour
Main Pad			64.9	microR/hour
Main Pad	West End		50.6	microR/hour
Main Ramp	Bottom		41.8	microR/hour
Main Ramp			62.0	microR/hour
Main Ramp			60.3	microR/hour
Main Ramp			54.8	microR/hour
Main Ramp			57.3	microR/hour
Main Ramp			61.4	microR/hour
Main Ramp			56.1	microR/hour
Main Ramp			56.6	microR/hour
Main Ramp			54.6	microR/hour
Main Ramp			54.6	microR/hour
Main Ramp			48.7	microR/hour
Main Ramp			47.9	microR/hour
Main Ramp			48.6	microR/hour
Main Ramp			44.2	microR/hour
Main Ramp			47.4	microR/hour
Main Ramp	Top		48.8	microR/hour
	Average:		62.3	
	Standard Deviation:		18.0	
	Median:		81.4	
	Maximum:		112.0	
	Minimum:		38.4	

RIO TINTO
ENERGY AMERICA

Memorandum

Oscar Paulson
Facility Supervisor
Kennecott Uranium Company

7 February 2007

Radon Monitoring File

Subject: Radon Daughter Monitoring Assessment

In 2006 radon daughter monitoring was conducted on June 12 and December 17-19, 2006.

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 0.001 to 0.005 WL in the Ion Exchange area (average: 0.0081) and 0.002 to 0.051 WL in the Mill Building (average: 0.03). The ventilation fan operated continuously in the Solvent Extraction (SX) Building. Radon levels varied in the SX building from 0.012 to 0.079 WL, averaging 0.015 WL in June 2006 and 0.07 WL in December 2006. 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 2006 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 2006 to monitor radon levels associated with the used ion exchange resin stored in the Number 1 CCD tank. Radon concentrations below the tank varied from 2.7 to 3.7 pCi/L. Radon concentrations on top of the tank varied from 2.0 to 3.5 pCi/L. These values are at background levels since upwind radon concentrations for the facility varied from 2.6 to 4.6 pCi/L during 2006, as shown in the table below:

2006 Radon Concentrations

Quarter	Bottom of CCD#1 (pCi/L)	Top of CCD#1 (pCi/L)	Upwind (Background) (pCi/L)
1st	3.0	3.0	2.6
2nd	2.7	2.0	4.6
3rd	2.7	2.4	3.6
4th	3.7	3.5	3.5
Average	3.02	2.73	3.58

Notes: 1. Radon daughter concentrations at the top and bottom of CCD#1 were low, ranging from ND to 0.043 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	
Date	**Top**	**Bottom**
	(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
Average	0.022	0.021
Standard Deviation:	0.012	0.014

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
Average	2.6	3.1
Standard Deviation:	0.8	0.8

RIO TINTO
ENERGY AMERICA

Memorandum

Oscar Paulson
Facility Supervisor
Kennecott Uranium Company

21 February 2007

To: Total and Removable Alpha Monitoring File

Subject: Total and Removable Alpha Monitoring Assessment

In 2006 removable alpha monitoring was performed in the Mill and Solvent Extraction Buildings and in the Ion Exchange area on 6/20 and 12/20/06. Total alpha monitoring was performed in the Mill and Solvent Extraction Buildings and in the Ion Exchange area on 6/15 and 12/27/06.

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 195 and 83,511 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 3.3 to 1243 dpm/100 cm^2. The desk in the yellowcake operator's office had the high removable alpha reading of 1243 dpm/100 cm^2. This desk is in the restricted area. Most of the alpha contamination on the support frame is fixed in place and non-mobile. The removable contamination on the support frame varied from 187.5 – 187.9 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 18.7 to 692 dpm/100 cm^2. This single high reading was on the skid of the elution pump. The Ion Exchange area is a restricted area. Removable alpha contamination levels in the Ion Exchange area ranged from 2.0 to 38.1 dpm/100 cm^2. The reading of 38.1 dpm/100 cm^2 of removable alpha contamination was obtained on the skid of the elution pump. Clearly, little of the alpha contamination on the elution pump skid is removable. 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 readings for the exteriors of stored equipment ranged from 57.3 to 13,934 dpm/100 cm^2. Removable alpha readings for the stored equipment ranged from 1.9 to 353.5 dpm/100 cm^2. The high removable reading was from the interior of a steel pressure vessel stored in the tailings impoundment. The high total alpha reading was from a valve stored on a pallet in the Mill Building, a restricted area.

Oscar A Paulson
Oscar Paulson

KENNECOTT URANIUM COMPANY					
POTABLE WATER QUALITY SUMMARY					
2006					
DRAKE #1					
CHEMICAL ANALYSIS SUMMARY:					
Use Suitability	Domestic *	**DRAKE #1**	**DRAKE #1**	**DRAKE #1**	**DRAKE #1**
Parameter	Concentration **	01/19/06	04/20/06	07/05/06	10/07/06
Ammonia (NH3-N)	0.5	-	-	-	-
Arsenic (As)	0.05	0.002	0.002	0.002	0.002
Barium (Ba)	2	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)
Boron (B)	0.75	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)
Cadmium (Cd)	0.005	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)
Chloride (Cl)	250	3	4	2	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	ND (0.1)	0.2	0.2	0.2
Hydrogen Sulfide (H2S)	0.05	-	-	-	-
Iron (Fe)	0.3	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)
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	46	45	52	50
Total Dissolved Solids (TDS)	500	166	172	192	162
Zinc (Zn)	5	0.02	0.02	0.02	0.03
pH (Standard Units)	6.5 - 8.5	8.52	8.21	8.16	8.22
Combined Ra226/Ra228	5.0 pCi/l	0.7 pCi/L	1.0 pCi/L	1.4 pCi/L	3.3 pCi/L
Natural Uranium	pCi/L	0.4	0.2	0.2	0.8
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	ND (1.0)	ND (1.0)	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					

KENNECOTT URANIUM COMPANY					
POTABLE WATER QUALITY SUMMARY					
2006					
PWW-1					
CHEMICAL ANALYSIS SUMMARY:					
Use Suitability	Domestic *	**PWW-1**	**PWW-1**	**PWW-1**	**PWW-1**
Parameter	Concentration **	01/19/06	04/26/06	07/05/06	10/07/06
Ammonia (NH3-N)	0.5	-	-	-	-
Arsenic (As)	0.05	.001	0.002	0.002	0.001
Barium (Ba)	2	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)
Boron (B)	0.75	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)
Cadmium (Cd)	0.005	ND (0.005)	ND (0.005)	ND (0.005)	ND (0.005)
Chloride (Cl)	250	3	6	5	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	ND (0.1)	0.2	0.2	0.1
Hydrogen Sulfide (H2S)	0.05	-	-	-	-
Iron (Fe)	0.3	ND (.05)	0.09	0.09	ND (.05)
Lead (Pb)	0.015	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)
Manganese (Mn)	0.05	0.02	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	47	56	58	56
Total Dissolved Solids (TDS)	500	162	186	200	174
Zinc (Zn)	5	1.1	ND (0.01)	ND (0.01)	0.01
pH (Standard Units)	6.5 - 8.5	8.08	8.37	8.19	8.25
Combined Ra226/Ra228	5.0 pCi/l	1.3 pCi/L	4.0 pCi/L	ND (1.0)	2.7 pCi/L
Natural Uranium	pCi/L	0.6	3.3	1.3	1.4
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	1.1	ND (1.0)	ND (1.0)	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					

KENNECOTT URANIUM COMPANY					
POTABLE WATER QUALITY SUMMARY					
2006					
PWW-2					
CHEMICAL ANALYSIS SUMMARY:					
Use Suitability	Domestic *	**PWW-2**	**PWW-2**	**PWW-2**	**PWW-2**
Parameter	Concentration **	01/19/06	06/28/06	07/31/06	
Ammonia (NH3-N)	0.5	-	-	-	Not
Arsenic (As)	0.05	.002	0.002	0.002	sampled.
Barium (Ba)	2	ND (0.1)	ND (0.1)	ND (0.1)	Not
Boron (B)	0.75	ND (0.1)	ND (0.1)	ND (0.1)	accessible
Cadmium (Cd)	0.005	ND (0.005)	ND (0.005)	ND (0.005)	due to the
Chloride (Cl)	250	3	5	4	excavation.
Chromium (Cr)	0.1	ND (0.01)	ND (0.01)	ND (0.01)	
Copper (Cu)	1	ND (0.01)	ND (0.01)	ND (0.01)	
Cyanide (CN)	0.2	ND (0.005)	ND (0.005)	ND (0.005)	
Fluoride (F)	4	ND (0.1)	0.2	0.2	
Hydrogen Sulfide (H2S)	0.05	-	-	-	
Iron (Fe)	0.3	0.05	0.15	0.08	
Lead (Pb)	0.015	ND (0.01)	ND (0.01)	ND (0.01)	
Manganese (Mn)	0.05	0.02	0.02	0.01	
Mercury (Hg)	0.002	ND (0.0002)	ND (0.0002)	ND (0.0002)	
Nitrate (NO3-N)	10	ND (0.1)	ND (0.1)	ND (0.1)	
Nitrite (NO2-N)	1	-	-	-	
Oil and Grease	Virtually Free	ND (5)	ND (5)	ND (5)	
Phenol	0.001	-	-	-	
Selenium (Se)	0.05	ND (0.001)	0.003	ND (0.001)	
Silver (Ag)	0.1	ND (0.01)	ND (0.01)	ND (0.01)	
Sulfate (SO4)	250	40	45	41	
Total Dissolved Solids (TDS)	500	148	160	152	
Natural Uranium	pCi/L	2.4	2.3	2.6	
Pb-210	pCi/L	ND (1)	ND (1)	ND (1)	
Zinc (Zn)	5	ND (0.01)	ND (0.01)	ND (0.01)	
pH (Standard Units)	6.5 - 8.5	8.11	8.15	7.99	
Combined Ra226/Ra228	5.0 pCi/l	0.6	0.4	ND	
Total Strontium 90	8.0 pCi/l	N/A	N/A	N/A	
Gross Alpha Radioactivity ***	15.0 pCi/l	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					

POTABLE WATER QUALITY SUMMARY

2006

Coliform Count Summary

Date	Drake #1 (Well head)	Administration Building Water Supply (PWW-1 or PWW-2)	Change/Shower/Monitoring Trailer
01/03/06	Good	Good	---
02/06/06	Good	Good	---
03/06/06	Good	Good	Good
04/03/06	Good	Good	Good (4/17/06)
05/01/06	Good	Good	Good
06/05/06	Good	Good	Good
07/10/06	Good	Good	Good
08/07/06	Good	Good	Good
09/05/06	Good	Good	Good
10/02/06	Good	Good	Good
11/6/06	Good	Good	Good
12/4/06	Good	Good	Good

The Administration Building can be supplied by either PWW-1 or PWW-2. The water is tested monthly at the point of use and the results apply to whichever well is supplying the building at that time.

A Change/Shower/Monitoring Trailer was placed into service in late winter of 2006 for use by contract excavation employees. The water in this trailer was tested as well. It is supplied by PWW-1 and PWW-2.

RIO TINTO
ENERGY AMERICA

Memorandum

Oscar Paulson
Facility Supervisor
Kennecott Uranium Company

8 February 2007

To: Distribution

Subject: Safety and Environmental Review Panel (SERP) – 2006

During the calendar year 2006 the licensee has not:
- Made changes in the facility as described in the license application (as updated);
- Conducted tests or experiments not presented in the license application (as updated).

During calendar year 2006 the licensee has:
- Changed reporting titles/updated the organization chart.
- Revised procedures for repair of damaged sections of the tailings impoundment liner and the repair of the impoundment's embankment interior.

Change #13:
This change is covered by SEE #10 entitled "Change in Reporting Titles – Updated Organization Chart". This change was an administrative change. It changed the name and title of the individual to whom the Facility Supervisor reports, from Roger Strid, Manager of Engineering Projects to Martin Steams, Environmental Project Manager.

Change #14:
This change is covered by SEE #14 entitled "Procedures for the Repair of the Tailings Impoundment's Interior Side Slopes and Repair of Damaged Sections of Hypalon Liner on Repaired Side Slopes". This change approved new methods using new materials to effect repairs to the liner in the existing tailings impoundment. These new methods and materials are being used successfully. Page changes to TOP-1 (Tailings Operating Procedures – 1) referencing SEE-14 are attached. This document was amended by SEE-14-Amended.

Change #15:
This change is covered by SEE #15 entitled "Change in Reporting Titles – Updated Organization Chart". This change was an administrative change. It changed the name and title of the individual to whom the Environmental Project Manager reports, from Bob Green, Acting Manager of Environmental and Regulatory Affairs, to John Lucas, Manager of Environmental and Regulatory Affairs.

Change #16:
This change is covered by SEE #16 entitled "Change in Reporting Titles – Updated Organization Chart". This change was an administrative change. It changed the name and title of the individual to whom the Facility Supervisor reports, from Martin Steams, Environmental Project Manager, to John Lucas, Manager of Environmental and Regulatory Affairs.

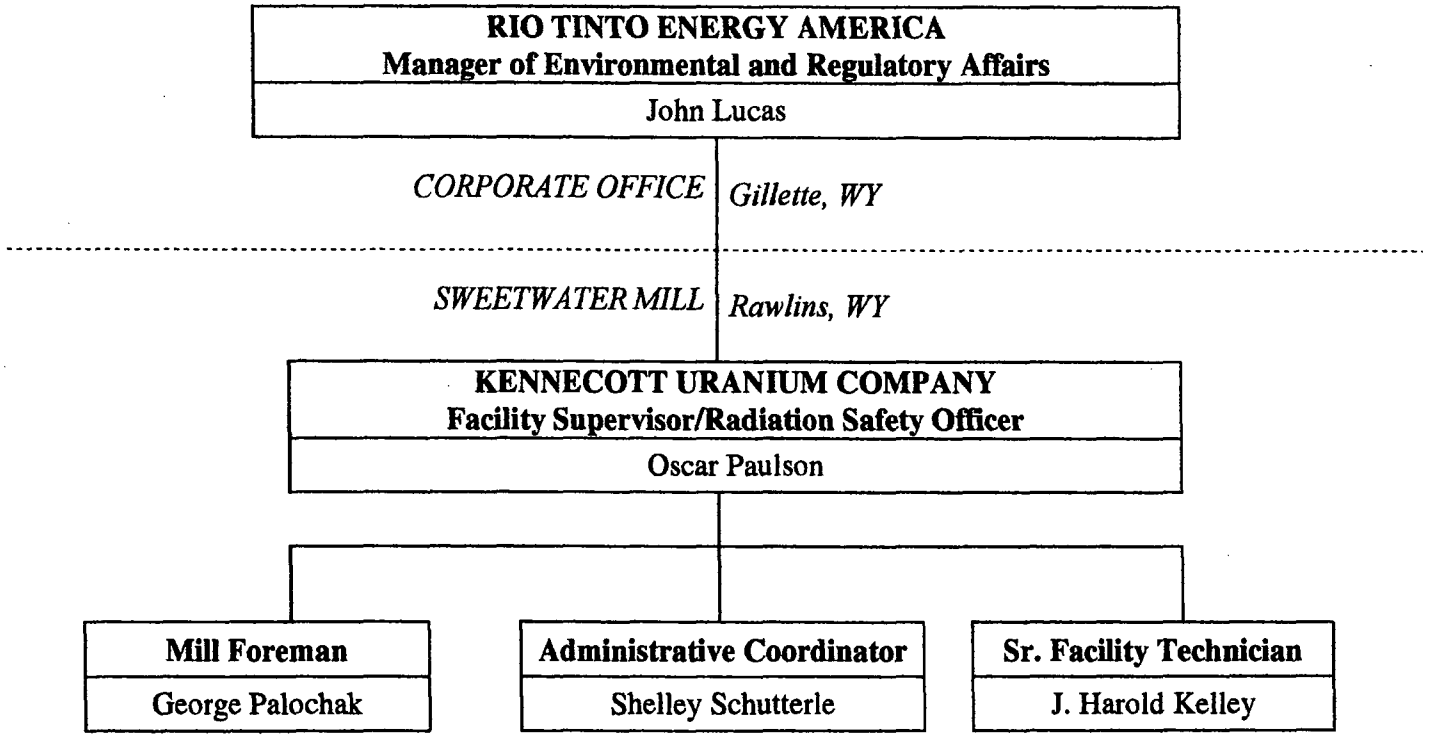
Other Issues Pertaining to the Safety and Environmental Review Panel (SERP)
The Radiation Safety Officer (RSO) is designated as the chairman of the panel, coordinates the activities of the panel and the preparation of the Safety and Environmental Evaluations (SEEs).

Oscar A Paulson
Oscar Paulson

Distribution: George Palochak
Roger Strid

KENNECOTT URANIUM COMPANY
SWEETWATER URANIUM PROJECT

ORGANIZATION



2.2.3 The tailings cell liner shall be maintained in an operable condition within 5 feet of the solution surface.

2.2.4 Though not required by the license or any submittal, one goal in the operation of the tailings impoundment shall be to maintain fluid filled lagoons inside of the impoundment, primarily along the inside of the west embankment, to enhance evaporation and minimize blowing tailings during non-freezing months and encourage the formation of ice armor during freezing months.

2.3 The licensee shall maintain the liner system for the existing tailings impoundment in accordance with the specifications, representations, recommendations and commitments in the following:

2.3.1 "Proposed Subsurface Tailings Disposal", transmitted by letter dated July 10, 1978, from Manager of Operations, Minerals Exploration Company (MEC), to Chief, Fuel Processing and Fabrication Branch, NRC and supplements to this report dated August 1, 22 and 28, 1978.

2.3.2 Quality Control - PVC/Hypalon Bond, pages 5-7 of the October 23, 1978 letter from D'Appolonia Consulting Engineers, Inc. to MEC, transmitted by letter dated November 3, 1978, from General Manager, MEC, to Chief, Fuel Processing and Fabrication Branch, NRC.

2.3.3 Items 7 and 8 of the Enclosure to the October 11, 1978 letter from the General Manager, MEC, to Chief, Fuel Processing and Fabrication Branch, NRC.

2.3.4 Recommended Changes, Uranium Pond Liner System, Sweetwater Project, Sweetwater County, Wyoming, for MEC, by D'Appolonia Consulting Engineers, Inc., July 13, 1979. This report contains the requirement for the annual inspection by a registered professional engineer of the tailings impoundment embankment and biennial testing (even numbered years) of a sample of the Hypalon liner.

2.3.5 SEE #14 – Procedures for the Repair of the Tailings Impoundment's Interior Side Slopes and Repair of Damaged Sections of Hypalon Liner on Repaired Side Slopes, as amended by SEE-14 Amended – Amendment to Procedures for the Repair of the Tailings Impoundment's Interior Side Slopes and Repair of Damaged Sections of Hypalon Liner on Repaired Side Slopes.

2.4 Maintenance, operation and reclamation of the existing tailings impoundment shall be in accordance with the specifications, representations and commitments in the following:

2.4.1 Application for Amendment to NRC Source Material License No. SUA-1350, Volumes 1-4, dated September, 1982.

RIO TINTO
ENERGY AMERICA

Memorandum

Oscar Paulson
Facility Supervisor
Kennecott Uranium Company

20 February 2007

To: NRC File

Subject: Summary of Radiation Instrument Calibrations – 2006

Instrument		Date(s) Calibrated
Calibration Orifices		
	Lo Vol-40A S/N M100	2/8/06
	Hi Vol-25A S/N 8080978	2/8/06
	Sierra Instruments TE-5025A	2/8/06
Alpha Detectors		
	43-5 S/N P-2425	4/11/06 & 12/6/06
	43-5 S/N P-2426	2/12/06 & 12/6/06
	43-5 S/N P-2427	2/13/06 & 11/30/06
	43-5 S/N P-2428	2/12/06 & 12/6/06
	43-5 S/N P-2429	2/13/06 & 11/30/06
	43-90 S/N PR-138872	2/13/06 & 11/30/06
	43-90 S/N PR-138874	4/11/06 & 12/6/06
	43-90 S/N 232499 (new instrument)	1/6/06 & 8/9/06 – sent for repair 12/27/06
	43-1 S/N PR-206925	1/6/06 & 8/9/06
	AC3-5 S/N 3793	6/14/06 & sent on 8/9/06
Gamma Meters/Detectors		
	12S S/N 11816	6/30/06 & sent on 12/26/06
	5 S/N 8170	6/30/06 & sent on 12/26/06
	44-10 S/N 206932	2/12/06 & 12/8/06
	44-10 S/N 233869 (new instrument)	1/6/06 & 8/9/06
	TNN2652 S/N B275	Removed from service – not repairable
	19 S/N 16938	11/30/06
Rate Meters		
	177 S/N 14390	12/6/05 & 4/11/06
	177 S/N 14407	2/16/06 & 11/30/06
	2350-1 S/N 192613	2/13/06 & 12/8/06 – sent for repair 12/27/06
	2350-1 S/N 216182 (new instrument)	1/6/06 & 8/9/06
	Model 3 S/N 157539	2/13/06 & 11/29/06
	Model 12 S/N 12280	2/10/06 & 10/4/06
	PRS-1 S/N 330/3793	6/14/06 & sent on 8/9/06
SAC R4		
	S/N 383	5/3/06 & 12/20/06

SAC R5		
	S/N 614	6/30/06 & sent on 12/26/06
	S/N 965	5/3/06 & 12/20/06
	S/N 602548	5/2/06 & 12/20/06
Scaler		
	MS-2 S/N 738	5/2/06 & 12/20/06
	MS-2 S/N 994	6/30/06 & sent on 12/26/06
Beta Gamma Detector		
	Model 44-1 S/N PR-156890	2/10/06 & 10/14/06
	Model 44-9 S/N PR-093335	2/13/06 & 11/30/06
Air Pumps (A new Buck Basic 12 personal air sampler and DF-604 low volume environmental air sampler have been ordered for the facility)		
	Bendix BDX-44 S/N 11-79-170	Used for personal breathing zone sampling for Catchment Basin Excavation. Please see attached sheet
	Sensidyne GilAir II S/N 902331	Used for personal breathing zone sampling for Catchment Basin Excavation. Please see attached sheet
	MSA #1	Used for personal breathing zone sampling for Catchment Basin Excavation. Please see attached sheet
	MSA #5	Used for personal breathing zone sampling for Catchment Basin Excavation. Please see attached sheet
Scintillation Detector		
	Model SPA-1 S/N 704727	5/6/06 & 12/20/06
Hi Vol Air Sampler		
	S/N 17625	2/7, 3/8, 5/3, 7/23 & 11/25/06
	S/N 2	Placed in service/built from parts 5/30/06. 5/30, 7/23 & 11/25/06
	S/N 3	Placed in service/built from parts 11/25/06. 11/25/06
	S/N 4	A fourth unit is being constructed, is not complete and has not been placed in service.
Lo Vol Air Sampler		
	Unit #1	1/9, 2/1, 2/7, 3/14, 4/3, 5/4, 5/22, 6/6, 6/26, 7/9, 8/6, 9/3, 10/8, 10/15, 10/18, 11/6, 12/4 and 12/18/06
	Unit #2	1/5/06 motor calibrated only. AccuVol electronic flow controller failed. Unit taken out of service. Flow controller and motor sent to Energy Laboratories, Inc. for repair. Replacement low volume air sampler ordered from F & J Specialties, Ocala, Florida.

Unit #1 In-Service Dates:
One unit is required to be operating at the single required downwind air monitoring station during non-operating periods. Unit #1 was operated at that location. When the motor on that unit failed, it was replaced in the field and the unit was recalibrated in the field due to the failure of the backup unit, Unit #2.

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.

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 promptly following six (6) months of last calibration. The off-site calibrator experienced severe delays (in some cases, over three (3) months) in calibrating and returning instruments to the site.

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

To insure a high level of accuracy of breathing zone sample volumes, this unit was calibrated before and after each sample event. It was calibrated on the following dates/times:

Date	Time	Date	Time	Date	Time	Date	Time	Date	Time
1/4/06	10:24	4/16/06	16:48	5/14/06	17:11	7/23/06	15:39	9/20/06	17:30
3/9/06	18:37	4/17/06	17:13	5/15/06	17:20	7/25/06	13:14	9/24/06	17:06
3/15/06	17:25	4/19/06	17:35	5/22/06	8:41	7/27/06	12:49	12/11/06	12:40
3/16/06	17:24	4/23/06	16:27	5/22/06	17:29	8/6/06	16:36	12/17/06	16:33
3/20/06	17:23	4/24/06	18:00	5/24/06	14:12	8/8/06	11:20	12/18/06	14:36
3/21/06	18:03	4/25/06	17:15	5/30/06	12:15	8/16/06	16:42	12/18/06	17:08
3/22/06	17:36	4/26/06	16:21	6/4/06	16:20	8/23/06	7:27	12/19/06	10:49
3/23/06	17:22	5/1/06	17:44	6/26/06	9:53	8/28/06	16:34	12/19/06	17:45
3/27/06	17:02	5/2/06	17:16	7/9/06	14:31	8/30/06	17:18		
4/4/06	17:22	5/3/06	17:22	7/10/06	17:56	9/10/06	15:48		
4/5/06	17:15	5/4/06	13:48	7/16/06	16:26	9/13/06	11:05		
4/6/06	17:44	5/9/06	11:26	7/19/06	11:26	9/19/06	16:58		

Sensidyne GilAir II S/N 902331

To insure a high level of accuracy of breathing zone sample volumes, this unit was calibrated before and after each sample event. It was calibrated on the following dates/times:

Date	Time	Date	Time	Date	Time	Date	Time	Date	Time
3/1/06	17:23	5/4/06	13:48	6/4/06	16:21	8/12/06	17:15	9/18/06	8:05
3/8/06	11:13	5/9/06	11:26	6/12/06	15:18	8/30/06	7:22	9/19/06	16:58
3/9/06	9:56	5/11/06	10:02	6/13/06	17:48	9/3/06	17:22	9/24/06	17:06
3/15/06	12:42	5/24/06	8:45	6/16/06	13:13	9/10/06	15:48	12/11/06	11:49
3/22/06	14:43	5/25/06	9:47	8/1/06	7:57	9/12/06	15:16	12/26/06	17:20
4/4/06	9:37	5/30/06	7:43	8/11/06	8:06	9/13/06	11:05		

MSA Model S – S/N RN06031002

To insure a high level of accuracy of breathing zone sample volumes, this unit was calibrated before and after each sample event. It was calibrated on the following dates/times:

Date	Time	Date	Time	Date	Time	Date	Time	Date	Time
3/10/06	18:01	5/4/06	13:12	6/11/06	17:06	6/20/06	17:33	7/27/06	8:34
3/27/06	16:42	5/22/06	8:41	6/12/06	7:06	6/21/06	18:45	7/30/06	17:42
4/4/06	9:37	5/22/06	17:29	6/12/06	17:29	6/26/06	9:53	8/2/06	8:35
4/23/06	16:39	5/30/06	7:43	6/13/06	7:00	7/9/06	14:31	8/8/06	11:20
4/20/06	9:36	6/4/06	16:21	6/13/06	17:48	7/12/06	7:20	9/6/06	8:28
4/24/06	18:00	6/5/06	7:28	6/14/06	7:10	7/16/06	16:26	9/10/06	15:48
4/25/06	17:15	6/6/06	13:15	6/16/06	13:13	7/18/06	7:23	9/13/06	7:47
4/26/06	16:21	6/7/06	7:02	6/19/06	7:45	7/19/06	11:26	9/19/06	16:58
5/1/06	17:44	6/7/06	17:47	6/19/06	17:31	7/25/06	7:12	12/11/06	12:40
5/2/06	7:17	6/8/06	7:40	6/20/06	8:17	7/25/06	17:06		

MSA Model G – S/N RN06031001

To insure a high level of accuracy of breathing zone sample volumes, this unit was calibrated before and after each sample event. It was calibrated on the following dates/times:

Date	Time	Date	Time	Date	Time	Date	Time	Date	Time
3/10/06	16:45	4/23/06	16:48	5/9/06	9:47	7/19/06	7:41	9/19/06	9:08
3/27/06	16:42	4/25/06	18:00	5/10/06	14:22	7/25/06	15:39	9/19/06	16:58
4/4/06	9:37	4/26/06	7:12	6/30/06	2:53	8/3/06	7:36	12/11/06	12:40
4/16/06	16:48	5/1/06	12:50	7/9/06	14:31	8/8/06	11:20		
4/17/06	17:13	5/2/06	17:16	7/13/06	7:57	9/7/06	8:11		
4/20/06	13:43	5/4/06	13:12	7/16/06	16:26	9/10/06	15:48		

Oscar A Paulson

Oscar Paulson
Facility Supervisor

RIO TINTO
ENERGY AMERICA

Memorandum

Oscar Paulson
Facility Supervisor
Kennecott Uranium Company

3 January 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 2006. 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 28, 2006 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 12, 2006 to reflect the presence of Archer Construction, Inc. on site during the winter of 2006-2007 and to add additional contact information.
- *Instructions for All Security Personnel* was revised on September 19, 2006.
- *Solitary Work Assignment* was revised on December 28, 2006.
- *Groundwater Sampling (Jackpot and Big Eagle Mines)* was revised on December 28, 2006.
- *Depth to Water Measurements (Jackpot and Big Eagle Mines)* was revised on December 28, 2006.
- *Surface Water Sampling (Jackpot and Big Eagle Mines)* was revised on December 28, 2006.
- *Erosion Transect Sampling (Jackpot Mine)* was revised on December 28, 2006.

B. Radiological (NRC License) Related SOPs (HP, EP, TOP, SERP-OP and MOP)
The following radiologic procedure was added by May 15, 2006:

- HP-38 – *Consumption of Drinking Water within the Restricted Area*

The following radiologic procedures were modified:

- *Contractor Radiation Safety* form – May 15, 2006
- HP-4 – *Radon Daughter Survey* – December 28, 2006
- HP-7 – *Personnel Alpha Monitoring and Decontamination* – April 25, 2006
- HP-11 – *Personnel Air Sampling* – December 1, 2006
- HP-12 – *In-Plant High Volume Particulate Sampling* – December 1, 2006
- HP-14 – *Calibration of Equipment* – December 6, 2006
- HP-18 – *Release of Equipment to Unrestricted Areas* – December 1, 2006
- HP-21 – *Respiratory Protection* – December 8, 2006
- HP-25 – *Areas Requiring Personnel Monitoring During Suspended Operations* – December 9, 2006

- MOP-15 – *Contaminated Soil Excavation – Catchment Basin Pre-excavation, Excavation, Sampling, Waste Placement Backfilling, Topsoiling and Seeding Procedures* – December 5, 2006
- MOP-17 – *Contaminated Soil Excavation – Catchment Basin Environmental Monitoring Procedures* – April 25, 2006
- EP-5 – *Calibration Procedure for Lo-Volume Air Sampling Units with AccuVol Flow Controllers* – December 6, 2006
- EP-6 – *Calibration Procedure for Lo-Volume Air Sampling Units Directly Connected to Line Voltage* – December 6, 2006
- EP-10 – *Radon-222 Sampling* – December 6, 2006
- EP-12b – *General Surface Water Sampling, Sample Preparation and Water Level Measurement Procedures* – December 6, 2006
- EP-14 – *Non-Operational and Operational Surface and Ground Water Sampling and Level Measurement Locations and Frequencies* - December 6, 2006
- EP-21 – *Water Sampling for Fecal Coliform Analysis* – December 28, 2006

C. Other Procedures

- The *Suspended Operations Procedure* was revised on December 28, 2006.

Oscar Paulson
AnnualReviewSOPs.doc

RIO TINTO
ENERGY AMERICA

Memorandum

Oscar Paulson
Facility Supervisor
Kennecott Uranium Company

1 February 2007

To: Respiratory Protection File

Subject: Respiratory Protection – 2006

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 July 26 and June 12, 2006, respectively.

Annual fit tests with stannic chloride irritant smoke and annual instruction on respirator use were conducted on November 20, 2006.

Oscar A Paulson

Oscar Paulson
Facility Supervisor

RIO TINTO
ENERGY AMERICA

Memorandum

Oscar Paulson
Facility Supervisor
Kennecott Uranium Company

27 February 2007

File

Subject: **Releases for Unrestricted Use – 2006**

Releases for unrestricted use issued in 2006 were primarily related to the release of equipment used to excavate the Catchment Basin contamination. 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 28.5 dpm/100cm^2, well below the 1000 dpm/100cm^2 release limit.

Oscar A Paulson
Oscar Paulson

RIO TINTO
ENERGY AMERICA

Memorandum

Oscar Paulson
Facility Supervisor
Kennecott Uranium Company

30 January 2007

To: Radiation Work Permit File

Subject **Radiation Work Permits**

No radiation work permits were issued in 2006.

Oscar A Paulson
Oscar Paulson

RIO TINTO
ENERGY AMERICA

Memorandum

Oscar Paulson
Facility Supervisor
Kennecott Uranium Company

20 February 2007

Memo to File

SUBJECT: Dose Assessment/Determination of No Requirement for Individual Monitoring or Dose Calculation at the Sweetwater Uranium Project for 2006

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 2006.

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 2006 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	3.58 pCi/l	340.24 mrem/yr

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

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

(3.58 pCi/l) / (1E3 ml/l) / (1E6 pCi/uCi) = 3.58 E-9 uCi/ml
0.33 WL = 3E-8 uCi/ml (with all daughters present)
[(3.58E-9 uCi/ml) / (3E-8 uCi/ml)] * (0.33 WL) = 0.039 WL for background

The calculated equilibrium factor for the facility (1993 to 2006) average is 0.216. Given that all daughters are not present and the equilibrium factor is 0.216, the actual background radon daughter concentration is:

(0.216) * (0.039 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	233.0 uR/hr	22.9 uR/hr	210.1 uR/hr
Mill	73.0 uR/hr	22.9 uR/hr	50.1 uR/hr
Tailings	68.8 uR/hr	22.9 uR/hr	45.9 uR/hr
Catchment Basin Excavation	68.1 uR/hr	22.9 uR/hr	45.2 uR/hr

Approximately 263 hours (twenty-six and one-third 10-hour working days) are estimated to have been spent in the mill and 753 hours (seventy-five and one-third 10 hour working days) are estimated to have been spent in the tailings impoundment by the Mill Foreman in 2006. This estimate is based on the number of entries in the restricted area alpha survey record for 2006, 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	263 hours	50.1 μR/hr	13.2 mrem
Tailings	753 hours	45.9 μR/hr	34.6 mrem
Catch.Basin	214 hours	45.2 μR/hr	9.7 mrem
Total			**57.5 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 2006 even though their use was not required, in part, to confirm these calculations. The highest external dose received for the calendar year was 7 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 2004. The results are as follows:

Radon Sampling Results

Area	Concentration	Background	Occupational Dose
IX Area	0.008 WL	0.007 WL	0.001 WL
Mill Area	0.030 WL	0.007 WL	0.023 WL

The average occupational radon dose for facility personnel is:

{[(0.023 WL) / (0.33 WL/DAC)] * 263 hours} / (2000 DAC hours/ALI) = 0.0092 ALI
(0.0092 ALI) * (5000 millirems/ALI) = 45.8 millirems

3) **Airborne Particulate Radionuclides (Uranium)**

The average airborne particulate natural uranium dose at the facility is based on high volume air samples taken in the grinding and yellowcake areas of the mill, the tailings impoundment and the Catchment Basin excavation in 2006 and four (4) breathing zone samples taken of the Mill Foreman when working in the Mill Building and ninety-six (96) breathing zone samples collected from workers in the Catchment Basin excavation. The results are as follows:

High Volume Air Sampling Results

Area	Concentration	Background	Occupational Conc.
Grinding	1.16 E-15 uCi/ml	6.2 E-16	5.41 E-16 uCi/ml
Precipitation	1.47 E-15 uCi/ml	6.2 E-16	8.48 E-16 uCi/ml
Tails Impound.	4.51 E-15 uCi/ml	6.2 E-16	3.89 E-15 uCi/ml
Catch Basin Excav.	5.29 E-15 uCi/ml	6.2 E-16	4.67 E-15 uCi/ml
Average			**2.49 E-15 uCi/ml**

Breathing Zone Samples

Date	Concentration	Percent of DAC
03/30/06	<3.84 E-14 uCi/ml	<0.174%
06/29/06	6.22 E-14 uCi/ml	0.311%
09/28/06	<6.10 E-14 uCi/ml	<0.305%
12/26/06	<6.33 E-14 uCi/ml	<0.316%

A breathing zone sample collected from a truck driver in the Catchment Basin excavation had the highest breathing zone sample value of 7.17 E-14 uCi/ml of natural uranium. Using the value of 7.17 E-14 uCi/ml (the highest measured airborne uranium concentration) coupled with a working time spent in the mill of 263 hours, the tailings impoundment of 753 hours and the Catchment Basin excavation of 214 hours in 2006 would yield the following exposure:

(7.17 E-14 uCi/ml) / (2E-11 uCi/ml/DAC) * (263+753+214 hours) = 4.41 DAC-hrs
(4.41 DAC-hrs) / (2000 DAC-hrs/ALI) = 0.002 ALI = 0.22% ALI

A dose of 4.41 DAC-hrs represents the maximum possible internal dose to natural uranium at the facility and is 0.22% of the ALI, which is below the 10% threshold that triggers monitoring and dose calculation.

This is an extremely conservative dose estimate since it applies the highest uranium concentration to all work within the restricted areas (Mill Building and tailings impoundment) at the facility. This estimate equates to an internal exposure of 11.0 millirems. The *Internal Occupational Exposure Assessment – Suspended Operations* document calculates a total dose from natural uranium, radium-226 and thorium-230 of 35.3 millirems.

This maximum possible exposure of 0.002 ALI 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:

(0.002 ALI/yr) * (5E-2 uCi/ALI) = 1.00 E-4 uCi/yr
(1.00 E-4 uCi/yr) * (1 E-6 pCi/uCi) / (677 pCi/mg) = 0.148 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, the levels of natural uranium, radium-226 and thorium-230 exhibited in the high volume and breathing zone samples collected in the Catchment Basin excavation 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 (263 hours), the tailings impoundment (753 hours) and Catchment Basin excavation (214 hours) by the Mill Foreman in 2006, 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 35.3 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 0.046 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:	0.058 rem/yr.
b)	Estimated internal dose (particulates)	0.035 rem/yr.
c)	Estimated internal dose (radon-222)	0.046 rem/yr.
	Total:	0.139 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 2006 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 seven (7) 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

7 February 2007

To: NRC File

Subject: Compliance with 10 Mrem Constraint Limit for 2006

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

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

The following applies to these particulate emissions:

1. These emissions are monitored at Station 4A by a continuous lo-vol system.

2. The radionuclide concentrations and doses encountered at this location are as follows:

U - nat: 1.30 E-16 uCi/L	0.072 mrem/yr
Ra-226: 1.00 E -16 uCi/L	0.006 mrem/yr
Th-230: 1.00 E -16 uCi/L	0.167 mrem/yr
Total:	**0.245 mrem/yr**

3. Background levels for the site are as follows:

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

Conclusions:

- The 2006 dose from airborne particulate radionuclides was at background levels. The 10 mrem per year constraint limit was not exceeded.

Oscar A Paulson

Oscar Paulson