Kennecott Energy

Kennecott Uranium Company
Sweetwater Uranium Project
Source Material License SUA-1350

Response to
Request for Additional Information
Dated October 28, 2004

15 December 2004

NMSS01

Kennecott Energy

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Sweetwater Uranium Project
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December 15, 2004

Mr. Gary Janosko, Chief
Fuel Cycle Facilities Branch
Division of Fuel Cycle Safety and Safeguards
Office of Nuclear Material Safety and Safeguards
Mail Stop T-8A33
11545 Rockville Pike
Rockville, Maryland 20852-2738

Dear Mr. Janosko:

Subject: Sweetwater Uranium Project – Docket Number 40-8584
Source Material License #SUA-1350
Response to Request for Additional Information Dated October 28, 2004

Enclosed please find Kennecott Uranium Company's response to the Request for Additional Information (RAI) dated October 28, 2004. The content of this response was discussed in a conference call on Wednesday, November 10, 2004 with Elaine Brummett and Steve Cohen of your staff.

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

Sincerely yours,

Oscar Paulson
Facility Supervisor

cc: Elaine Brummett (2)
Rich Atkinson
Director – NRC DRSS – Region IV (w/o enclosures)

shown on the cross sections. This was discussed in the telephone conversation on Wednesday, November 10, 2004.

No perched aquifer exists in the vicinity of the Catchment Basin. The shallow wells (TMW-90 and 105) located west of the Catchment Basin used to recover spilled fluids are described in the amendment request document as being used to "recover perched spilled fluids." There is no perched aquifer present in the vicinity of the Catchment Basin, just spilled fluids from the Catchment Basin.

A large (approximately 350,000 cubic yard open volume) excavation is located approximately 750 feet northwest of the northwest corner of the Catchment Basin. The excavation is deep, with an elevation at the deepest point being 6553.7 feet above mean sea level (Robert Jack Smith and Associates – January 6, 2003). This is approximately ninety (90) feet below normal ground surface. The bulk of the excavation floor is approximately 6566.0 above mean sea level, which is 76 feet below ground surface. The two (2) perched fluid recovery wells, TMW-90 and 105 are cased to 55 and 40 feet below ground surface, respectively. The pit bottom shown in the image below is at approximately 76 feet below normal ground level and is at least twenty (20) feet below the bottom of the deepest of the two wells (TMW-90). The pit bottom is dry and no fluid is seen seeping from the southern pit wall. The image was taken from the pit's north wall. This excavation has been open to the existing level since January 2003 with no signs of water.

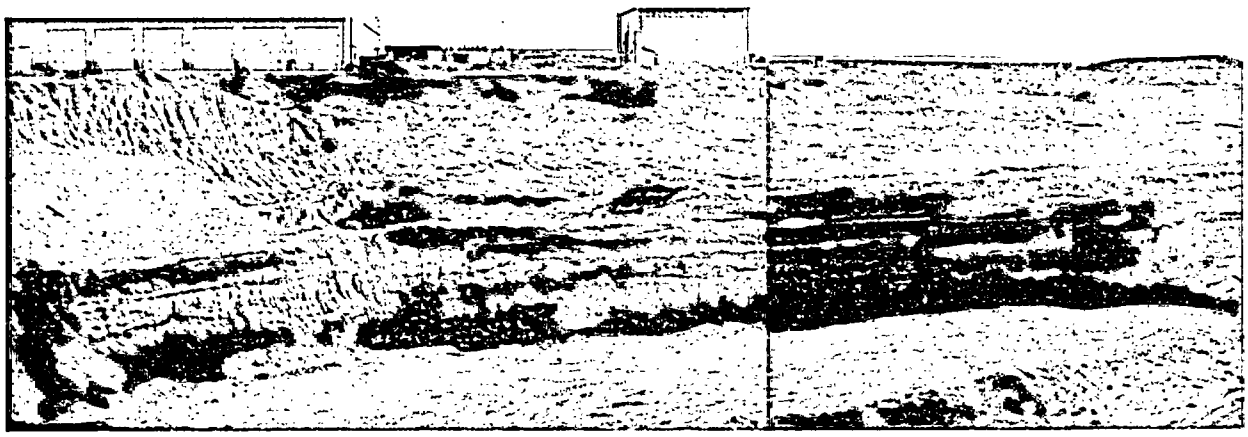


Figure 1. South wall diesel contaminated soil excavation – November 23, 2004

A contour map of the excavation is shown in Appendix 2. There is no perched aquifer present in the vicinity of the diesel contaminated soil excavation. If there were, fluids would seep from the pit wall and the pit floor would be wet. The perched fluids in the vicinity of the Catchment Basin are of very limited areal extent, as they are limited to the extent of the clay that supports them. These fluids were only found along the west side of the basin, between it and the concrete slab beneath the Clarifier Tank. These perched fluids were not even found in boreholes drilled east and south of the Catchment Basin, such as CB-4 and CB-10. This is due to the fact that the underlying Battle Spring Formation contains numerous highly discontinuous clay layers, as shown on the subsequent images.

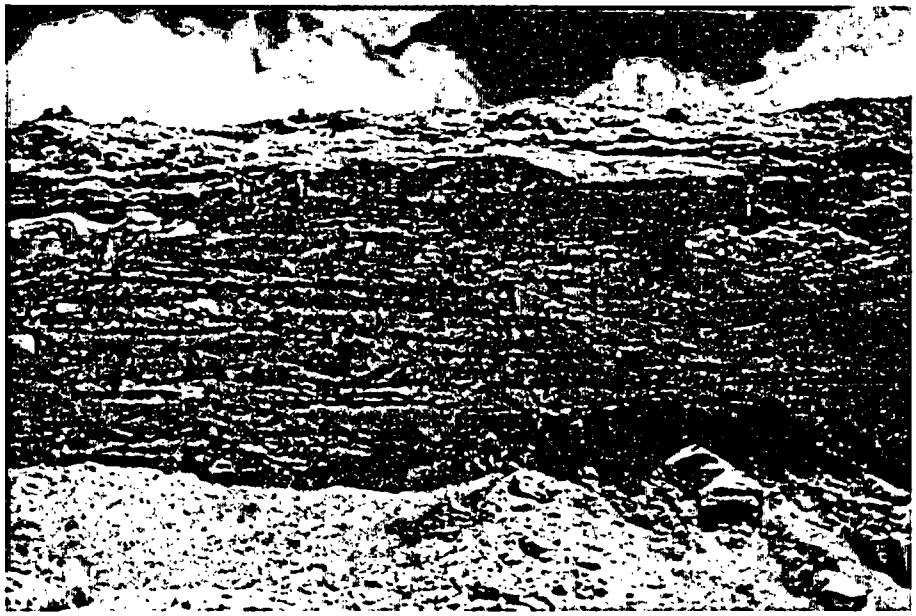


Figure 2. Discontinuous clay layers visible in the walls of the Sweetwater Pit.

Figure 3. Truncated clay layer in ramp leading to old open pit.

The negligible volume of fluid pumped from the two shallow wells (TMW-90 and 105) also shows that there is no perched aquifer present in the area, only small volumes of fluids accumulated on a clay layer of limited extent. Since there is no perched aquifer, there is no potentiometric surface to show. The flow information for TMW-90 and 105 is included in Appendix 3 to show the very limited volumes of fluid present. On November 21, 2004 the flow rate from TMW-90 was 0.17 liters per minute and the rate from TMW-105 was 0.34 liters per minute. These minimal rates are not representative of an aquifer, but rather of small quantities of accumulated fluid.

4. Response to Comments No. 1D

The contamination shown along the western excavation boundary is shown to extend beneath the concrete slab supporting the clarifier and associated tanks. The excavation plan on Sheet 4 of 24 shows the excavation extending up to the eastern edge of the slab. A bore hole (CB-12) was drilled along the eastern edge of the slab and showed soil contamination in excess of 2300 milligrams per kilogram at 30 to 35 feet below ground surface. It is the intent of KUC to leave any contamination beneath concrete slabs in place until final decommissioning of the facility, at which time such contamination will be removed upon removal of the overlying slab. KUC commits to remove such contamination beneath such slabs at final decommissioning.

5. Response to Comment No. 1E

Sheet 7 of 24 contained an error. A replacement figure showing the excavation as designed, including the contamination, is included in Appendix 4. The excavation contour map included in Sheet 4 of 24 shows the excavation as including the contamination in bore hole CB-4, so it is correct. The excavation volumes were calculated based on the contour map, so they are correct. Only the cross section (Sheet 7 of 24) was in error and it is being replaced with a corrected sheet.

6. Response to Comment No. 2A

KUC commits to sample the Battle Spring Aquifer monitor wells in the vicinity of the Catchment Basin on a quarterly basis for diesel range organics (DRO – Method SW8015M as D), gasoline range organics (GRO – Method SW8015M as G) and volatile organic compounds (VOCs – Method SW8260B). These wells are; TMWs- 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 104, 111, 112, 113, 115. When KUC believes that such sampling is no longer necessary for all or any of the wells, KUC will submit a license amendment request to terminate such sampling for any given well or wells. The sampling results will be documented and submitted as part of the Annual Corrective Action Program (CAP) Review required by License Condition 12.3. Sampling data related to the soils and water around the Catchment Basin was submitted in the 2003 Annual Report. KUC plans to continue such reporting.

7. Response to Comment No. 2B

KUC recognizes that all wells in the monitoring network around the Catchment Basin are compliance monitoring wells for the Battle Spring Aquifer except for the two (2) shallow perched fluid recovery wells (TMW-90 and 105) which are recovering fluid perched upon a clay layer that will be destroyed during excavation, eliminating the need for these wells. The Battle Spring Aquifer monitoring wells (TMWs- 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 104, 111, 112, 113, 115) will be identified on maps in future submittals as compliance monitoring wells.

8. Response to Comment No. 2C

KUC agrees with the Groundwater Protection Standards for organic constituents as proposed in Table 1 – Groundwater Protection Standards with the exception of the standard for methyl ethyl ketone (MEK). KUC believes that MEK was introduced into some wells because it is a constituent of the glue and primer used to assemble PVC pipe in some cases. During the initial drilling campaign in August 2003, two (2) wells were completed (TMW-90 and 91) using pipe that was primed and glued with materials containing methyl ethyl ketone. The issue of methyl ethyl ketone contamination is discussed in detail in the July 22, 2004 submittal and was discussed in the telephone conversation on November 10, 2004. In addition, analysis results for PVC glue and primer are provided in Appendix 1 of that submittal. Wells in the vicinity of the Catchment Basin with histories of contamination by organic compounds are being

sampled and tested for volatile organic compounds (VOCs) by Method SW8260B. No wells so tested are currently showing any methyl ethyl ketone contamination. Please see the control charts in Appendix 5. The well to most recently show MEK was TMW-105 (a perched fluid collection well, not a Battle Spring Aquifer monitoring well), which showed 27 micrograms per liter on September 20, 2004. The subsequent sample was non-detect. The clay layer upon which the fluid resides that this well collects will be destroyed during the excavation. The other wells that showed MEK (TMWs-91, 92 and 102) have not showed it since May 11, 2004 at the latest. As such, KUC believes that establishing a groundwater protection standard (GPS) for MEK is unnecessary.

The only wells to exhibit 1,2,4 trimethylbenzene and 1,3,5 trimethylbenzene have been TMWs-90 and 105. The clay layer upon which the collection fluid resides will be destroyed during the excavation. No Battle Spring Aquifer wells have shown these contaminants. It is probable that KUC will request a license amendment to remove these constituents from the list of groundwater protection standards following completion of the excavation, removal of these perched fluid collection wells and further sampling information showing continued undetectability of these constituents in any remaining Battle Spring Aquifer compliance monitoring wells.

As regarding the proposed standards for diesel range organics (DRO), 1,1, dichloroethane, 1,1, dichloroethene, naphthalene, toluene, 1,1,1 trichloroethane, and m+p xylenes, the standards in the table are the ones proposed by KUC in either the amendment request dated May 12, 2004 or the Response to Comments submitted on July 22, 2004.

The table below is the one KUC believes is appropriate to address the contamination related to the Catchment Basin. This is the proposed table included in the October 28, 2004 letter with methyl ethyl ketone removed.

Table 1
Groundwater Protection Standards

Parameter	Groundwater Protection Standard (mg/l)
1,1-Dichloroethane	3.0 (2)
1,1-Dichloroethene	0.007 (1)
DRO	10 (3)
GRO	10 (3)
Naphthalene	1.3 (2)
Toluene	1 (1)
1,1,1-Trichloroethane	0.20 (1)
1,2,4-Trimethylbenzene	0.012 (4)
1,3,5-Trimethylbenzene	0.012 (4)
m+p Xylenes	10 (1)

(1) - EPA MCL
(2) - Wyoming Drinking Water Equivalent Level
(3) - Wyoming VRP, Fact Sheet 12
(4) - EPA RBC - Tap Water

Examination of the control charts included in Appendix 5 shows that samples from only two (2) wells exceed these standards for a single constituent, that being DRO. These standards are exceeded by samples of fluids extracted from TMW-90 and 105, which do not sample the Battle Spring Aquifer for which the above listed standards are designed, but rather sample fluids that have collected on a clay layer of limited extent immediately west of the Catchment Basin.

9. Response to Comment No. 2D

The comment discusses aluminum, cadmium, iron, lead, manganese and nickel as equal to or exceeding applicable Environmental Protection Agency (EPA) Maximum Concentration Limits (MCL), or State of Wyoming Drinking Water Equivalent Levels (DWEL). The following pertains to these constituents and the establishment of Groundwater Protection Standards for them:

9.1 General Approach

In January 1996 KUC submitted to the Nuclear Regulatory Commission (NRC) a document entitled *Addendum to the Revised Environmental Report – Background Ground Water Quality and Detection Standards*. This study examined background groundwater data (approximately 19,000 values) from 1,082 water samples collected from 65 wells (15 site wells, 44 local ENQ wells and six (6) regional wells) over a period of up to twenty (20) years. This study was used to calculate and propose groundwater protection standards for the site. The groundwater protection standards were proposed based on the arithmetic mean of the background values for a given constituent plus two (2) standard deviations. This approach and the ground water protection standards so calculated, were approved by the Commission in a letter dated May 28, 1998, which stated:

The NRC staff has concluded that resetting the compliance limit to the mean plus two (2) standard deviations of the background data is an acceptable approach. Further, setting the background at the mean plus two standard deviations captures approximately 95 percent of a normally distributed population and reduces the chance for false positives. Therefore, the staff considers the revised groundwater standards proposed by the licensee to be acceptable.

9.2 Tailings Fluid

A spreadsheet is included in Appendix 6 that contains the annual sampling data for the tailings impoundment fluid. The sampled tailings fluid contains elevated concentrations (June 15, 2004 sampling) of aluminum (1300 milligrams per liter), cadmium (0.03 milligrams per liter), iron (230 milligrams per liter), manganese (110 milligrams per liter) and nickel (7.2 milligrams per liter). The lead concentration at the most recent sampling (June 15, 2004) is below the lower limit of detection of 0.01 milligrams per liter. The pH of the fluid is 2.95 standard units. This represents an increase over time from pH readings below 2.0 in 1983 to 1986.

9.3 Existing Groundwater Protection Standards

Groundwater Protection Standards already exist in the license for nickel (0.01 milligrams per liter) and cadmium (0.01 milligrams per liter). These existing standards apply to the monitor wells around the Catchment Basin completed in the Battle Springs Aquifer in the same fashion as they do to the Battle Spring Aquifer monitor wells completed around the tailings impoundment. Thus, concentrations of cadmium and nickel are already addressed by the groundwater protection standards proposed in the January 1996 document entitled *Addendum to the Revised*

Environmental Report – Background Ground Water Quality and Detection Standards. These standards have already been approved by the agency by letter dated May 28, 1998.

9.4 Proposed Additional Groundwater Protection Standards

Since additional constituents which are present in the tailings impoundment fluid and which, by extension, are present in process fluids which entered the Catchment Basin, the following additional proposals are made with regard to aluminum, iron, lead and manganese:

9.4.1 Aluminum

Aluminum exists in elevated concentrations in the tailings fluid and by extension also existed in elevated concentrations in the process fluid that entered the Catchment Basin. The sample spreadsheet used to generate the previously submitted Groundwater Protection Standards was consulted regarding aluminum. There were 1077 aluminum values in the data set with an arithmetic mean of 0.09 and a standard deviation of 0.90 milligrams per liter. Using the previously accepted method of calculation of groundwater protection standards this would generate a value of 1.89 milligrams per liter, which would round down to 1.8 milligrams per liter.

Detectable aluminum has been observed in five (5) wells around the Catchment Basin. The highest levels, 2.2 and 2.9 milligrams per liter, have been observed in TMW-90 and TMW-105, respectively, wells that are recovering spilled process fluids perched on a clay layer. This clay layer retaining these fluids will be removed by the excavation. The levels of aluminum contamination in these two wells do not represent contamination of the Battle Spring Aquifer itself. Aluminum concentrations of 0.2, 0.1 and 0.1 milligrams per liter have been observed in TMW-95, -104 and –111, respectively, which are completed in the Battle Spring Aquifer. These concentrations fall within the range of the standards in the National Secondary Drinking Water Regulations.

9.4.2 Iron

Iron exists in elevated concentrations in the tailings fluid (230 milligrams per liter – June 15, 2004) and by extension also existed in elevated concentrations in the process fluid that entered the Catchment Basin. A groundwater protection standard value for iron (the arithmetic mean plus two (2) standard deviations) was calculated for iron in the January 1996 document submitted to the agency. It was calculated in Summary Table A of the document but not proposed as a standard, since iron was not a problem in the Battle Spring Aquifer monitoring wells around the tailings impoundment. It was based upon 575 values with 52% being below the lower limit of detection. The calculated value (mean plus two (2) standard deviations) was 0.63 milligrams per liter. A groundwater protection standard for iron of 0.6 milligrams per liter is proposed.

Detectable iron at various concentrations has been found in ten (10) of the Battle Spring Aquifer wells around the Catchment Basin at levels up to 10.2 milligrams per liter (TMW-112, April 12, 2004). It has also been detected at levels of up to 49 and 50.5 milligrams per liter in TMW-90 and –105 respectively, however, these wells are recovering process fluids perched on a clay layer that will be destroyed by the excavation. The levels of iron in these two wells do not represent contamination of the Battle Spring Aquifer.

9.4.3 Lead

Lead was never present in the tailings fluid in concentrations exceeding 0.75 milligrams per liter (July 16, 1982 – During Operations) and has only been present once in a detectable quantity (0.02 milligrams per liter – June 4, 2003) since March 24, 1994. Agency staff removed lead from the list of Groundwater Protection Standards in the May 28, 1998 letter. Staff noted in this letter that lead was among several constituents that become considerably less soluble with increasing pH, stating, "...samples taken at or above pH 2.2 do not contain any of the previously mentioned contaminants (including lead) at or above state livestock standards." The state livestock standard for lead is 0.1 milligrams per liter.

It is also noted that lead has only been detected in three (3) wells. Two of those wells are TMW-90 and 105, which are recovering perched process fluids. Upon completion of excavation the clay layer perching these fluids will be destroyed and fluids from this depth will no longer be present to be recovered. The other well exhibiting lead values in TMW-102, which had lead concentrations of 0.02, 0.16 and 0.02 milligrams per liter on December 10, 2003, January 14, and September 21, 2004, respectively. The concentration is declining and the lead could be from materials used during drilling. As such, no Ground Water Protection Standard is proposed for lead. Lead concentrations in samples along with those of other constituents will be examined in the preparation of the Groundwater Corrective Action Program (CAP) Review and should problems be observed an amendment request for a standard will be submitted.

9.4.4 Manganese

Manganese exists in elevated concentrations in the tailings fluid (110 milligrams per liter – June 15, 2004) and by extension also existed in elevated concentrations in the process fluid that entered the Catchment Basin. The sample spreadsheet used to generate the previously submitted Groundwater Protection Standards was consulted regarding manganese. There were 1077 manganese values in the data set with an arithmetic mean of 0.03 and a standard deviation of 0.09 milligrams per liter. Using the previously accepted method of calculation of groundwater protection standards this would generate a value of 0.21 milligrams per liter, which would round down to 0.20 milligrams per liter. A groundwater protection standard for manganese of 0.2 milligrams per liter is proposed.

Detectable manganese has been observed in fourteen (14) Battle Spring Aquifer wells around the Catchment Basin in concentrations of up to 0.71 milligrams per liter (TMW-112, April 12, 2004). It has also been observed in both perched fluid recovery wells (TMW-90 and – 105) in concentrations as high as 1.49 and 2.50 milligrams per liter, respectively. The clay layer upon which these fluids are perched will be destroyed by the excavation. The levels of manganese contamination in these two wells do not represent contamination of the Battle Spring Aquifer.

9.5 Comparison of Proposed Standards to Existing Standards

The following table compares these proposed standards based on background sampling data with existing standards:

Constituent	Proposed Standard	Maximum Contaminant Level	National Secondary Drinking Water Standard	Drinking Water Equivalent Level	DEQ I (Domestic) Groundwater Standard	DEQ II (Agriculture) Groundwater Standard	DEQ III (Livestock) Groundwater Standard
	milligrams per liter	milligrams per liter	milligrams per liter	milligrams per liter	milligrams per liter	milligrams per liter	milligrams per liter
Aluminum	1.8		0.05 – 0.2	94 (1)	--	5.0	5.0
Iron	0.6		0.3		0.3	5.0	--
Manganese	0.20		0.05		0.05	0.2	--

(1)Water Quality Rules and Regulations Chapter 17 - Appendix I - UST/LUST Program Groundwater Standards

10. Response to Comment No. 3.0

This comment discusses the hydrogeologic conceptual model for the site. As discussed in the response to Comment 1C and as shown in the images in that response there is no perched aquifer at the site. If there were a perched aquifer of any significance then water would be seeping out of the south wall of the excavation depicted in the response to that comment. The comments also discuss the statement in a submittal dated April 1995, "...no fractures, joint patterns or faults .." have been observed in the area of the impoundment. This remains true. Fractures, faults or joints are not visible in the excavation west of the Mill Building as shown in the image in the response to Comment No. 1C. In addition, the highwall of the reclaimed Sweetwater Pit has been extensively photographed. Joints, faults or fractures are not visible in it, either, as shown in the image below:

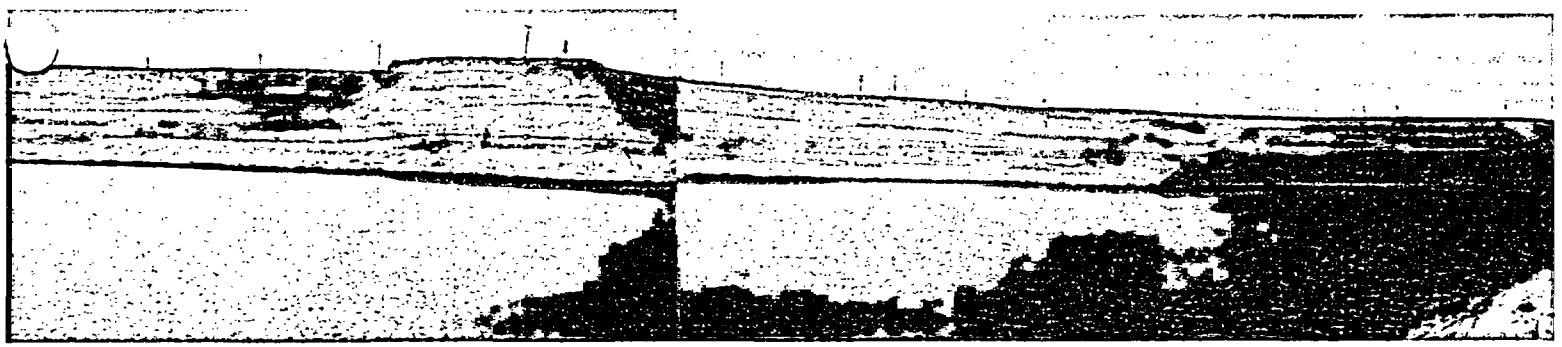


Figure 4. Reclaimed Sweetwater Pit Highwall

In this image, the highwall in the vicinity of the power poles left of the image's center is approximately 124 feet high. The surface elevation around the power poles is approximately 6664 feet above mean sea level while the elevation of the pit lake surface is approximately 6539 feet above mean sea level and represents the top of the main Battle Spring Aquifer. No joints, faults or fractures are visible in the pit highwall. The only evidence of faulting in the area is based on ground water level data and log correlation work, which "...indicate the possibility of two minor faults occurring approximately 2 to 3 miles north of the pit." (Revised Environmental Report – August 5, 1994) These possible faults are a considerable distance from the tailings impoundment or the Catchment Basin and their existence is only inferred. Based upon observations of the pit highwall and the highwall of the diesel contaminated soil excavation, plus examination of cross sections made from bore hole logs in the vicinity of the tailings impoundment (Please see **Addendum to the Revised Environmental Report – Geologic Cross Sections and Aquifer Information** – July 1995), it is safe to assume that the tailings impoundment area

is free of fractures, faults and joints. No secondary porosity or secondary permeability is present due to joints, fractures or faults.

The Battle Spring Aquifer near the top of the saturated zone behaves like an unconfined aquifer since the clay layers in the Battle Spring Formation do not form a continuous aquitard. The lack of continuity of these clays is clearly visible in the images in the response to comment 1C as well as in the cross sections in the **Addendum to the Revised Environmental Report – Geologic Cross Sections and Aquifer Information** – July 1995. It is clear from a review of the pump test analysis curves in the Aquifer Test Report (Appendix E of the Final Design Volume II – Data Report) that the upper saturated sands of the Battle Spring Aquifer in the vicinity of the facility behave as an unconfined aquifer.

There is no secondary porosity caused by faults, fractures or joints. The true vertical groundwater velocity is quite low in the area due to low velocities/low permeabilities of the discontinuous clay layers encountered as one moves down through the depositional column. Surface seepage, however, does not flow vertically. The mechanism by which surface seepage can migrate rapidly down in the Battle Springs Formation involves one of downward seepage until an impermeable clay layer is intersected. The fluid then flows along the layer until it literally pours off the edge of the layer down through the sand until its downward migration is halted by another clay layer, where upon the process repeats. This phenomenon has been observed in the field in the diesel contaminated soils excavation. Distinct areas where spilled diesel had seeped down to and pooled on clay layers were observed. When the excavation wall intersected one of these layers, diesel on top of the clay layer would seep out of the wall. It was clear, based on observations in the diesel contaminated soil excavation, that the diesel was running along clay layers until it was able to pour off of an edge and migrate further down through sand until another clay layer was intersected and the process would repeat. This is how the fluids from the Catchment Basin were able to travel as far down into the formation as rapidly as they did.

APPENDIX 1

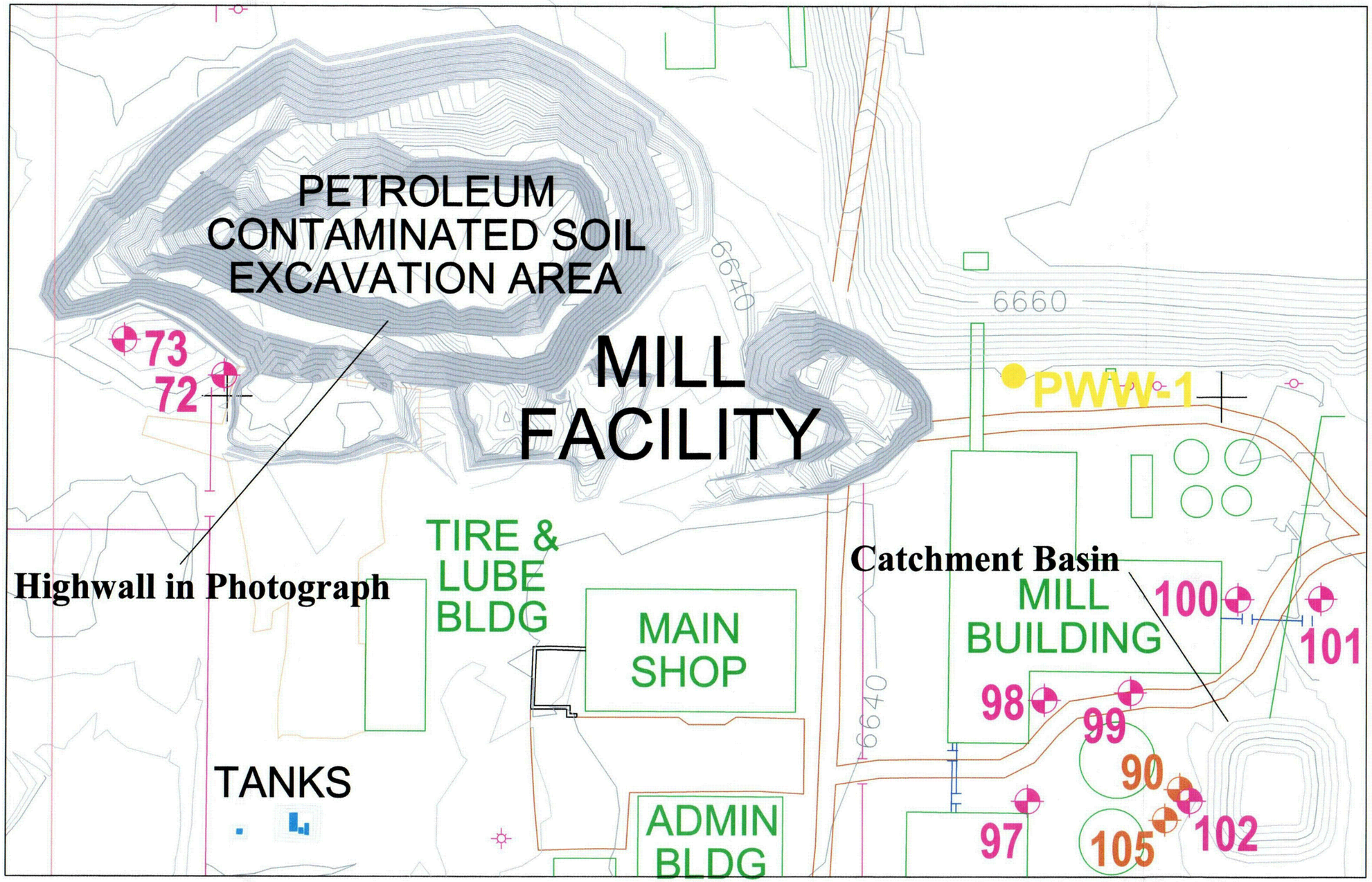
CATCHMENT BASIN SOIL SAMPLES

Volatile Organic Compounds and Other Sampling Results

Sample ID	C03010244-001	C03080744-007	C03080744-008	C03080744-021	C03080744-043	C03080744-044	C03080744-061	C03080744-062	C03080744-064	C03080761-004	C03080761-019	C03080761-035	C03080761-067	C03080761-068	C03080761-069
Client Sample ID	Catchment Basin Soil 9' below bottom	CB-1 30-35'	CB-1 35-40'	CB-2 20-25'	CB-3 30-35'	CB-3 35-40'	CB-4 20-25'	CB-4 25-30'	CB-4 35-40'	CB-6 5-10'	CB-6 80-85'	CB-7 60-65'	TMW-90 20-25'	TMW-90 25-30'	TMW-90 30-35'
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Collection Date	1/6/02 10 00	8/18/03 0 00	8/18/03 0 00	8/18/03 0:00	8/19/03 0 00	8/19/03 0 00	8/19/03 0:00	8/19/03 0:00	8/19/03 0 00	8/19/03 0:00	8/19/03 0:00	8/19/03 0 00	8/20/03 0:00	8/20/03 0 00	8/20/03 0:00
As, mg/L	<0.5	<0 5		<0 5	<0.5										
Ba, mg/L	<10	<10		<10	<10										
Cd, mg/L	<0.1	<0.1		<0.1	<0.1										
Cr, mg/L	<0.5	<0 5		<0.5	<0.5										
Pb, mg/L	<0.5	<0 5		<0.5	<0.5										
Hg, mg/L	<0.02	<0.001		<0.001	<0 001										
Se, mg/L	<0.1	<0.1		<0.1	<0.1										
Ag, mg/L	<0.5	<0 5		<0.5	<0.5										
Ra226, pCi/g-dry	3.1	4 5	3.5	11	4 0	4.2	1.6	1.2	0 8	2.6	1.5	2.2	83	28	14
Radium 228, pCi/g-dry	1.0														
Thorium 230, pCi/g-dry	3 6	9 8	10	19	6.8	3 5	1.3	1.4	0 5	2.3	1.2	1.1	76	35	28
U, mg/kg-dry	39.2	21.1	36.6	39.9	18.0	18.6	14.3	16.4	5.34	23.4	3 48	7.13	36 6	25.5	52.1
U, pCi/g-dry															
1,1,1,2-Tetrachloroethane, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1,1-Trichloroethane, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1,2,2-Tetrachloroethane, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1,2-Trichloroethane, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1-Dichloroethane, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1-Dichloroethene, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1-Dichloropropene, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,2,3-Trichlorobenzene, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,2,3-Trichloropropane, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,2,4-Trichlorobenzene, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,2,4-Trimethylbenzene, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dibromo-3-chloropropane, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dibromoethane, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichlorobenzene, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichloroethane, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichloropropane, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,3,5-Trimethylbenzene, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,3-Dichlorobenzene, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,3-Dichloropropane, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,4-Dichlorobenzene, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
2,2-Dichloropropane, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
2-Chlorotoluene, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
4-Chlorotoluene, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Benzene, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Bromobenzene, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Bromochloromethane, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Bromodichloromethane, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Bromoform, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Bromomethane, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Carbon tetrachloride, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chlorobenzene, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chlorodibromomethane, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chloroethane, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chloroform, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chloromethane, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
cis-1,2-Dichloroethene, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
cis-1,3-Dichloropropene, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dibromomethane, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dichlorodifluoromethane, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Ethylbenzene, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Hexachlorobutadiene, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Isopropylbenzene, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
m+p-Xylenes, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Methyl ethyl ketone, mg/kg	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4 0	<4 0	<4.0	<4 0	<4 0	<4.0	<4.0	<4.0
Methylene chloride, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Naphthalene, mg/kg	0.26	0 98	0 62	<0.20	0.51	0.31	0.42	0.75	0.50	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
n-Butylbenzene, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
n-Propylbenzene, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
o-Xylene, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
p-Isopropyltoluene, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
sec-Butylbenzene, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Styrene, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
tert-Butylbenzene, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Tetrachloroethene, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Toluene, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
trans-1,2-Dichloroethene, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
trans-1,3-Dichloropropene, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethene, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichlorofluoromethane, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Vinyl chloride, mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Diesel Range Organics (DRO), mg/kg	2720	3680	2100	1170	2560	1060	1120	2420	1430	180	67.0	1890	854	289	1190
Oil Range Hydrocarbons (C28-C40+), mg/kg		<200	<200	1440	<200	<100	<100	<200	<200	319	130	<200	<100	<10.0	<100
Total Extractable Hydrocarbons, mg/kg		3690	2130	2520	2600	1070	1150	2460	1480	474	190	2040	908	295	1210
Gasoline Range Organics (GRO), mg/kg	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Acenaphthene, mg/kg		<0.333		<0.333	<0.333										
Acenaphthylene, mg/kg		<0.333		<0.333	<0.333										
Anthracene, mg/kg		<0.333		<0.333	<0.333										
Benzo(a)anthracene, mg/kg		<0.333		<0.333	<0.333										
Benzo(a)pyrene, mg/kg		<0.333		<0.333	<0.333										
Benzo(b)fluoranthene, mg/kg		<0.333		<0.333	<0.333										
Benzo(g,h,i)perylene, mg/kg		<0.333		<0.333	<0.333										
Benzo(k)fluoranthene, mg/kg		<0 333		<0.333	<0.333										
Chrysene, mg/kg		<0.333		<0.333	<0 333										
Decyl Alcohol, mg/kg		<0.333		<0.333	<0.333										
Dibenzo(a,h) anthracene, mg/kg		<0.333		<0.333	<0.333										
Fluoranthene, mg/kg		<0 333		<0.333	<0.333										
Fluorene, mg/kg		<0.333		<0.333	<0.333										
Indeno(1,2,3-cd) pyrene, mg/kg		<0.333		<0.333	<0.333										
Naphthalene, mg/kg		0 847		<0.333	0 607										
Phenanthrene, mg/kg		<0.333		<0.333	<0.333										
Pyrene, mg/kg		<0 333		<0 333	<0 333										

Sample ID	C03080761-070	C03080789-005	C03080933-004	C03080933-007	C03080933-008	C03080933-009	C03080933-014	C03080933-027	C03080933-028	C03080933-029	C03080933-037	C03080933-038	C03080933-039	C03080933-040
Client Sample ID	TMW-90 35-40'	TMW-91 20-25'	CB-12 15-20'	CB-12 30-35'	CB-12 35-40'	CB-12 40-45'	CB-12 65-70'	CB-10 30-35'	CB-10 35-40'	CB-10 40-45'	CB-10 80-85'	CB-10 85-90'	CB-10 90-95'	CB-10 95-100'
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Collection Date	8/20/03 0 00	8/21/03 0:00	8/22/03 0:00	8/22/03 0:00	8/22/03 0:00	8/22/03 0:00	8/22/03 0 00	8/22/03 0:00	8/22/03 0:00	8/22/03 0:00	8/22/03 0 00	8/22/03 0:00	8/22/03 0:00	8/22/03 0:00
As, mg/L		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0 5	<0 5	<0.5	<0.5	<0 5
Ba, mg/L		<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Cd, mg/L		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cr, mg/L		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0 5	<0 5	<0.5	<0 5	<0.5	<0.5	<0.5
Pb, mg/L		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0 5	<0.5	<0.5	<0.5	<0.5
Hg, mg/L		<0 001	<0 001	<0.001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0 001	<0 02	<0 02	<0.02
Se, mg/L		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ag, mg/L		<0 5	<0.5	<0.5	<0.5	<0.5	<0.5	<0 5	<0.5	<0.5	<0.5	<0.5	<0.5	<0 5
Ra226, pCi/g-dry	3 4	2.4	46	3.0	2.0	4.2	5.0	6.2	4.7	1.7	1.6	1.2	1.3	1.4
Radium 228, pCi/g-dry														
Thorium 230, pCi/g-dry	8 6	2.5	78	13	3.0	3 9	5.2	5.5	9.1	1.6	0.6	1.0	0.9	0 8
U, mg/kg-dry	17.0	19.3	58.7	11 6	27.4	19 8	12 4	29 0	24.1	44.7	4.19	3.00	3.13	3 04
U, pCi/g-dry														
1,1,1,2-Tetrachloroethane, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,1-Trichloroethane, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2,2-Tetrachloroethane, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethane, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethene, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloropropene, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2,3-Trichlorobenzene, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2,3-Trichloropropane, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2,4-Trichlorobenzene, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2,4-Trimethylbenzene, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dibromo-3-chloropropane, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dibromoethane, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichlorobenzene, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichloroethane, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichloropropane, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,3,5-Trimethylbenzene, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,3-Dichlorobenzene, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,3-Dichloropropane, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,4-Dichlorobenzene, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2,2-Dichloropropane, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2-Chlorotoluene, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
4-Chlorotoluene, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Benzene, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bromobenzene, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bromochloromethane, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bromodichloromethane, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bromoform, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bromomethane, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Carbon tetrachloride, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chlorobenzene, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chlorodibromomethane, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chloroethane, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chloroform, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chloromethane, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,3-Dichloropropene, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dibromomethane, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dichlorodifluoromethane, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ethylbenzene, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Hexachlorobutadiene, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Isopropylbenzene, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
m+p-Xylenes, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methyl ethyl ketone, mg/kg	<4.0	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
Methylene chloride, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Naphthalene, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
n-Butylbenzene, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
n-Propylbenzene, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
o-Xylene, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
p-Isopropyltoluene, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
sec-Butylbenzene, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Styrene, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
tert-Butylbenzene, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Tetrachloroethene, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
trans-1,2-Dichloroethene, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
trans-1,3-Dichloropropene, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethene, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichlorofluoromethane, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Vinyl chloride, mg/kg	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Diesel Range Organics (DRO), mg/kg	681	315	300	4870	497	412	170	579	1410	491	377	1470	1200	1300
Oil Range Hydrocarbons (C28-C40+), mg/kg	<100	24 0	<10 0	<500	<10.0	24 0	50 0	<10.0	<100	13.0	55.0	<100	<100	<100
Total Extractable Hydrocarbons, mg/kg	710	338	305	4870	502	433	217	585	1430	503	429	1490	1220	1320
Gasoline Range Organics (GRO), mg/kg	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Acenaphthene, mg/kg														
Acenaphthylene, mg/kg														
Anthracene, mg/kg														
Benzo(a)anthracene, mg/kg														
Benzo(a)pyrene, mg/kg														
Benzo(b)fluoranthene, mg/kg														
Benzo(g,h,i)perylene, mg/kg														
Benzo(k)fluoranthene, mg/kg														
Chrysene, mg/kg														
Decyl Alcohol, mg/kg														
Dibenzo(a,h) anthracene, mg/kg														
Fluoranthene, mg/kg														
Fluorene, mg/kg														
Indeno(1,2,3-cd) pyrene, mg/kg														
Naphthalene, mg/kg														
Phenanthrene, mg/kg														
Pyrene, mg/kg														

APPENDIX 2



0 250 500

Scale in Feet

Contour Interval Excavation Area: 1 Foot

All Other Areas: 2 Foot

N

Kennecott Uranium Company
Sweetwater Uranium Project
Map of Excavation and Catchment Basin

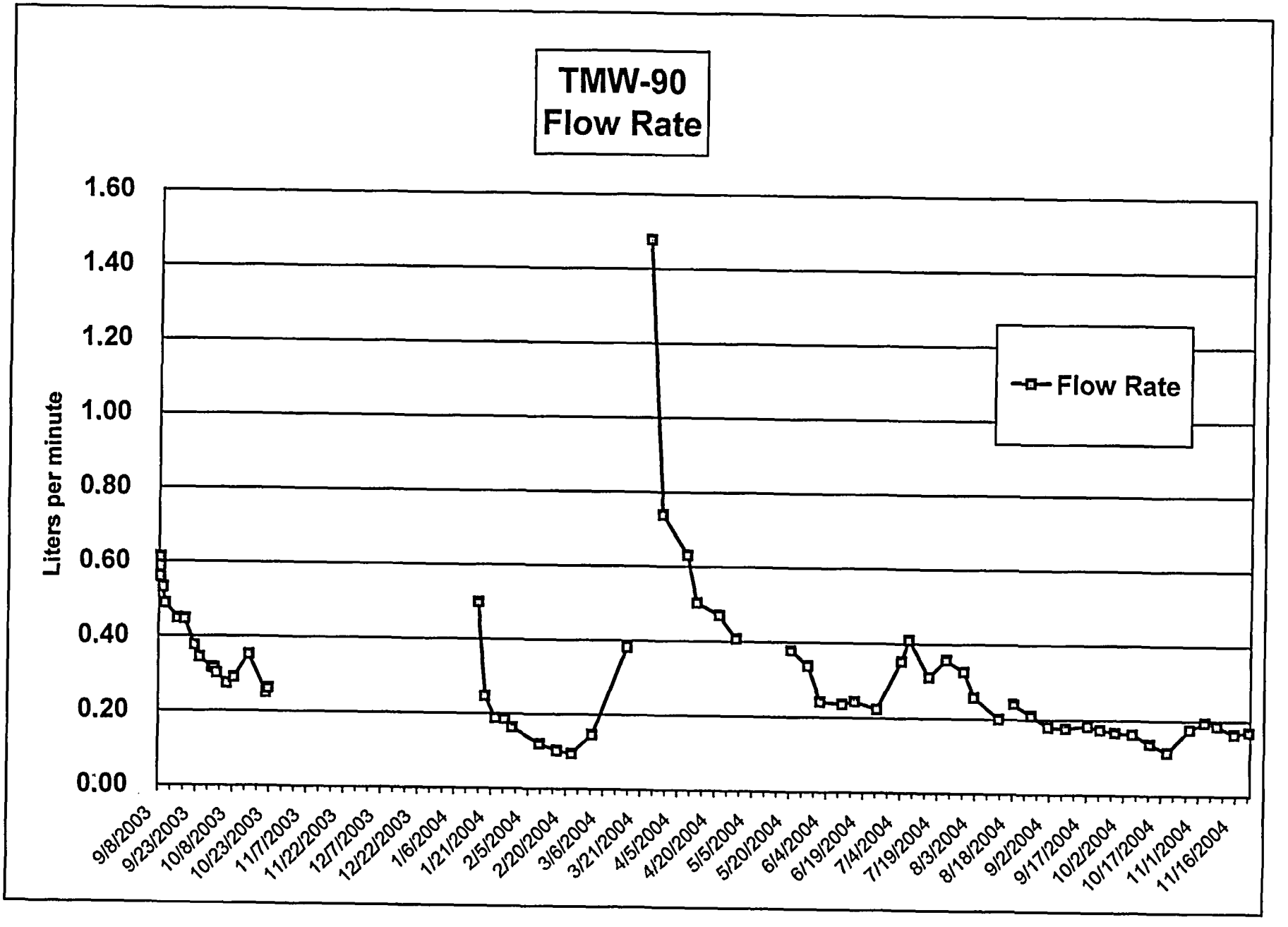
November 30, 2004

C01

APPENDIX 3

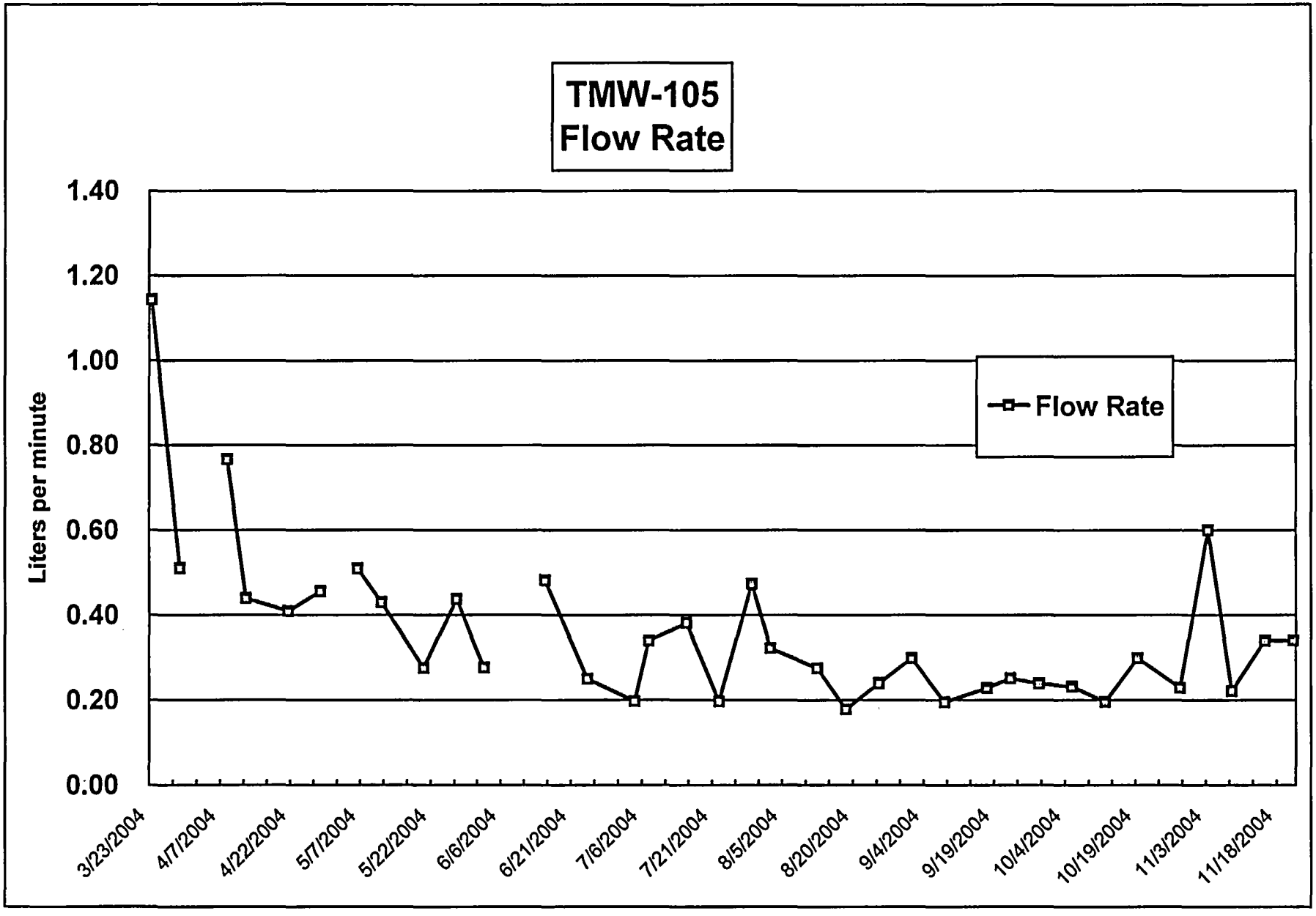
TMW-90 - Flow Rates and Volume Pumped

	Date	Time	Volumes Pumped			Sampler Volume (Liters)	Sample Time (Minutes)	Flow Rate Liters per minute	Status	Volume Pumped as of Date/Time (Liters)	Cumulative Gallons Pumped (Liters)	
Start	09/04/03	03:37 PM	37868.00	0.65	37868.65							
	09/08/03	09:45	37872.00	0.41	37872.41	4.0	6.83	0.59	Pumping	3169.0	3169.0	
	09/08/03	10:02	37872.00	0.42	37872.42	4.0	6.53	0.61	Pumping	10.2	3179.2	
	09/08/03	14:00	37872.00	0.58	37872.58	4.0	7.17	0.56	Pumping	139.3	3318.4	
	09/09/03	07:41	37873.00	0.32	37873.32	4.0	7.50	0.53	Pumping	578.8	3897.2	
	09/09/03	13:12	37873.00	0.55	37873.55	4.0	7.54	0.53	Pumping	176.1	4073.3	
	09/10/03	18:45	37874.00	0.78	37874.78	4.0	8.19	0.49	Pumping	903.5	4976.8	
	09/15/03	13:15	37879.00	0.55	37879.55	4.0	8.92	0.45	Pumping	3219.0	8195.8	
	09/18/03	12:05	37882.00	0.50	37882.50	4.0	8.97	0.45	Pumping	1900.9	10096.7	
	09/22/03	15:42	37886.00	0.65	37886.65	4.0	10.63	0.38	Pumping	2457.0	12553.7	
	09/24/03	17:06	37888.00	0.71	37888.71	4.0	11.62	0.34	Pumping	1067.7	13621.4	
	09/29/03	11:49	37893.00	0.49	37893.49	4.0	12.61	0.32	Pumping	2276.0	15897.4	
	09/30/03	11:49	37894.00	0.49	37894.49	4.0	12.72	0.31	Pumping	454.8	16352.2	
	10/01/03	18:10	37895.00	0.76	37895.76	4.0	13.25	0.30	Pumping	561.2	16913.3	
	10/05/03	18:15	37899.00	0.76	37899.76	4.0	14.60	0.27	Pumping	1659.9	18573.2	
	10/08/03	11:20	37902.00	0.47	37902.47	4.0	13.77	0.29	Pumping	1102.1	19675.3	
	10/14/03	09:20	37908.00	0.39	37908.39	4.0	11.35	0.35	Pumping	2738.0	22413.3	
	10/21/03	15:15	37915.00	0.64	37915.64	4.0	15.95	0.25	Pumping	3146.7	25560.1	
	10/22/03	15:20	37916.00	0.64	37916.64	4.0	15.24	0.26	Pumping	370.8	25930.9	
	10/30/03	05:00	37924.00	0.21	37924.21				Froze	2860.9	28791.8	7,606.0
	01/15/04	13:36	38001.00	0.57	38001.57				Restarted			Gal. (2003)
	01/15/04	14:20	38001.00	0.60	38001.60	4.0	8.02	0.50	Pumping	22.0	28813.8	
	01/18/04	14:43	38004.00	0.61	38004.61	4.0	16.24	0.25	Pumping	1069.7	29883.5	
	01/22/04	17:11	38008.00	0.72	38008.72	4.0	21.23	0.19	Pumping	1113.2	30996.7	
	01/26/04	15:53	38012.00	0.66	38012.66	4.0	21.41	0.19	Pumping	1061.8	32058.5	
	01/29/04	16:24	38015.00	0.68	38015.68	4.0	24.47	0.16	Pumping	711.2	32769.7	
	02/09/04	09:43	38026.00	0.40	38026.40	0.5	4.17	0.12	Pumping	1850.3	34620.0	
	02/16/04	09:06	38033.00	0.38	38033.38	0.5	4.89	0.10	Pumping	1027.5	35647.5	
	02/22/04	16:52	38039.00	0.70	38039.70	0.5	5.27	0.09	Pumping	864.8	36512.3	
	03/01/04	13:50	38047.00	0.58	38047.58	0.5	3.41	0.15	Pumping	1660.8	38173.1	
	03/15/04	09:54	38061.00	0.41	38061.41	0.5	1.31	0.38	Pumping	7611.6	45784.6	
	03/18/04	15:00	38064.00	0.63	38064.63				Shut Down	1767.3	47551.9	
	03/22/04	12:00	38068.00	0.50	38068.50				Restarted			
	03/23/04	15:59	38069.00	0.67	38069.67	0.4	0.27	1.48	Pumping	2482.0	50033.9	
	03/29/04	07:50	38075.00	0.33	38075.33	0.4	0.54	0.74	Pumping	11393.7	61427.6	
	04/08/04	07:19	38085.00	0.30	38085.30	0.4	0.63	0.63	Pumping	18793.9	80221.6	
	04/12/04	09:36	38089.00	0.40	38089.40	0.4	0.79	0.50	Pumping	15156.0	95377.6	
	04/21/04	17:23	38098.00	0.72	38098.72	0.4	0.85	0.47	Pumping	19668.2	115045.7	
	04/28/04	12:25	38105.00	0.52	38105.52	0.4	0.98	0.41	Pumping	17708.8	132754.5	
	04/30/04	04:00	38107.00	0.17	38107.17				Stopped	967.4	133721.9	
	05/18/04	14:30	38125.00	0.60	38125.60				Restarted	0.0	133721.9	
	05/20/04	11:32	38127.00	0.48	38127.48	0.4	1.06	0.38	Pumping	1023.2	134745.1	
	05/27/04	16:39	38134.00	0.69	38134.69	0.4	1.18	0.34	Pumping	3511.1	137233.0	
	06/01/04	16:56	38139.00	0.71	38139.71	0.4	1.65	0.24	Pumping	1749.6	136494.7	
	06/10/04	17:28	38148.00	0.73	38148.73	0.4	1.69	0.24	Pumping	3067.8	140300.8	
	06/15/04	07:52	38153.00	0.33	38153.33	0.4	1.64	0.24	Pumping	1616.9	138111.6	
	06/24/04	11:41	38162.00	0.49	38162.49	0.4	1.79	0.22	Pumping	2948.1	143248.9	
	07/04/04	15:14	38172.00	0.63	38172.63	0.4	1.13	0.35	Pumping	5159.8	143271.4	
	07/07/04	15:48	38175.00	0.66	38175.66	0.4	0.98	0.41	Pumping	1786.3	145035.1	
	07/15/04	07:38	38183.00	0.32	38183.32	0.4	1.29	0.31	Pumping	3430.8	146702.2	
	07/22/04	10:10	38190.00	0.42	38190.42	0.4	1.12	0.36	Pumping	3654.3	148689.4	
	07/29/04	09:36	38197.00	0.40	38197.40	0.4	1.23	0.33	Pumping	3275.9	149978.1	
	08/02/04	17:11	38201.00	0.72	38201.72	0.4	1.55	0.26	Pumping	1601.3	150290.7	
	08/12/04	13:14	38211.00	0.55	38211.55	0.4	1.99	0.20	Pumping	2843.7	152821.8	
	08/13/04	12:30	38212.00	0.52	38212.52				Stopped	280.3	153102.1	
	08/16/04	10:00	38215.00	0.42	38215.42				Restarted			
	08/18/04	16:36	38217.00	0.69	38217.69	0.4	1.66	0.24	Pumping	790.9	153893.0	
	08/25/04	13:18	38224.00	0.55	38224.55	0.4	1.90	0.21	Pumping	2082.8	155975.8	
	09/01/04	17:07	38231.00	0.71	38231.71	0.4	2.22	0.18	Pumping	1856.1	157831.9	
	09/08/04	11:30	38238.00	0.48	38238.48	0.4	2.26	0.18	Pumping	1726.8	159558.7	
	09/17/04	16:22	38247.00	0.68	38247.68	0.4	2.18	0.18	Pumping	2433.8	161992.5	
	09/22/04	10:17	38252.00	0.43	38252.43	0.4	2.29	0.17	Pumping	1193.8	163186.3	
	09/28/04	16:53	38258.00	0.70	38258.70	0.4	2.39	0.17	Pumping	1510.2	164696.5	
	10/05/04	07:50	38265.00	0.33	38265.33	0.4	2.44	0.16	Pumping	1560.4	166256.9	
	10/12/04	11:20	38272.00	0.47	38272.47	0.4	2.90	0.14	Pumping	1417.3	167674.1	
	10/19/04	10:30	38279.00	0.44	38279.44	0.4	3.47	0.12	Pumping	1155.5	168829.7	
	10/28/04	12:51	38288.00	0.54	38288.54	0.4	2.26	0.18	Pumping	2322.7	171152.4	
	11/03/04	12:50	38294.00	0.53	38294.53	0.4	2.05	0.20	Pumping	1688.3	172840.6	
	11/08/04	07:06	38299.00	0.30	38299.30	0.4	2.14	0.19	Pumping	1279.6	174120.2	
	11/15/04	10:56	38306.00	0.46	38306.46	0.4	2.42	0.17	Pumping	1705.4	175825.7	
	11/21/04	16:15	38312.00	0.68	38312.68			0.17	Shut Down	1523.0	177348.7	
			Total Gallons Pumped:							193917.5	51,227.739	

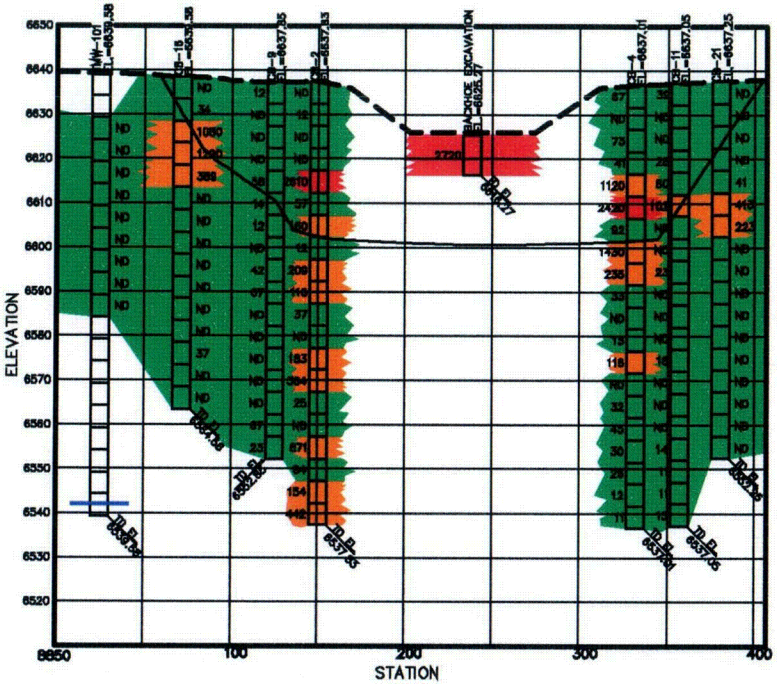

TMW-90
Flow Rate
Liters per minute
1.60
1.40
1.20
1.00
0.80
0.60
0.40
0.20
0.00
Flow Rate
9/8/2003
9/23/2003
10/8/2003
10/23/2003
11/7/2003
11/22/2003
12/7/2003
12/22/2003
1/6/2004
1/21/2004
2/5/2004
2/20/2004
3/6/2004
3/21/2004
4/5/2004
4/20/2004
5/5/2004
5/20/2004
6/4/2004
6/19/2004
7/4/2004
7/19/2004
8/3/2004
8/18/2004
9/2/2004
9/17/2004
10/2/2004
10/17/2004
11/1/2004
11/16/2004

TMW-105 Flow Rates and Volume Pumped

Date	Time	Volumes Pumped			Sampler Volume (Liters)	Sample Time (Minutes)	Flow Rate Liters per minute	Status	Volume Pumped as of Date/Time (Liters)	Cumulative Gallons Pumped (Liters)
03/23/04	12:00	38069.00	0.50	38069.50				Started		
03/23/04	15:59	38069.00	0.67	38069.67	0.4	0.35	1.14	Pumping	273.3	273.3
03/29/04	08:03	38075.00	0.34	38075.34	0.4	0.78	0.51	Pumping	4165.3	4438.6
04/01/04	16:30	38078.00	0.69	38078.69				Shut Down	2462.8	6901.4
04/05/04	10:00	38082.00	0.42	38082.42				Restarted	0.0	6901.4
04/08/04	07:17	38085.00	0.30	38085.30	0.4	0.52	0.77	Pumping	3188.5	10089.9
04/12/04	09:34	38089.00	0.40	38089.40	0.4	0.91	0.44	Pumping	2592.1	12682.0
04/21/04	17:21	38098.00	0.72	38098.72	0.4	0.98	0.41	Pumping	5491.6	18173.6
04/28/04	12:23	38105.00	0.52	38105.52	0.4	0.88	0.46	Pumping	4456.5	22630.1
04/30/04	04:00	38107.00	0.17	38107.17				Stopped	1082.9	23713.0
05/03/04	12:00	38110.00	0.50	38110.50				Restarted	0.0	23713.0
05/06/04	17:06	38113.00	0.71	38113.71	0.4	0.79	0.51	Pumping	2357.2	26070.2
05/11/04	17:08	38118.00	0.71	38118.71	0.4	0.93	0.43	Pumping	3097.6	29167.8
05/20/04	11:29	38127.00	0.48	38127.48	0.4	1.45	0.28	Pumping	3472.9	32640.7
05/27/04	16:38	38134.00	0.69	38134.69	0.4	0.91	0.44	Pumping	4549.1	37189.8
06/02/04	16:54	38140.00	0.70	38140.70	0.4	1.45	0.28	Pumping	2389.5	39579.3
06/10/04	08:00	38148.00	0.33	38148.33				Stopped	3032.7	42612.0
06/14/04	12:00	38152.00	0.50	38152.50				Restarted	0.0	42612.0
06/15/04	07:52	38153.00	0.33	38153.33	0.4	0.83	0.48	Pumping	574.7	43186.7
06/24/04	11:37	38162.00	0.48	38162.48	0.4	1.60	0.25	Pumping	3297.3	46484.0
07/04/04	15:15	38172.00	0.64	38172.64	0.4	2.03	0.20	Pumping	2881.6	49365.6
07/07/04	15:50	38175.00	0.66	38175.66	0.4	1.18	0.34	Pumping	1477.3	50842.9
07/15/04	07:42	38183.00	0.32	38183.32	0.4	1.05	0.38	Pumping	4213.4	55056.3
07/22/04	10:08	38190.00	0.42	38190.42	0.4	2.03	0.20	Pumping	2010.2	57066.5
07/29/04	09:35	38197.00	0.40	38197.40	0.4	0.84	0.47	Pumping	4758.8	61825.3
08/02/04	17:09	38201.00	0.71	38201.71	0.4	1.24	0.32	Pumping	1997.0	63822.3
08/12/04	13:11	38211.00	0.55	38211.55	0.4	1.46	0.27	Pumping	3892.4	67714.7
08/18/04	16:34	38217.00	0.69	38217.69	0.4	2.25	0.18	Pumping	1575.0	69289.7
08/25/04	13:15	38224.00	0.55	38224.55	0.4	1.67	0.24	Pumping	2366.9	71656.7
09/01/04	17:10	38231.00	0.72	38231.72	0.4	1.34	0.30	Pumping	3076.4	74733.1
09/08/04	11:28	38238.00	0.48	38238.48	0.4	2.06	0.19	Pumping	1894.4	76627.5
09/17/04	16:20	38247.00	0.68	38247.68	0.4	1.75	0.23	Pumping	3023.3	79650.8
09/22/04	10:15	38252.00	0.43	38252.43	0.4	1.59	0.25	Pumping	1714.8	81365.6
09/28/04	16:51	38258.00	0.70	38258.70	0.4	1.68	0.24	Pumping	2155.9	83521.5
10/05/04	07:48	38265.00	0.33	38265.33	0.4	1.73	0.23	Pumping	2205.5	85727.0
10/12/04	11:17	38272.00	0.47	38272.47	0.4	2.05	0.20	Pumping	2010.1	87737.1
10/19/04	10:29	38279.00	0.44	38279.44	0.4	1.34	0.30	Pumping	2994.6	90731.7
10/28/04	12:49	38288.00	0.53	38288.53	0.4	1.75	0.23	Pumping	2992.6	93724.3
11/03/04	11:48	38294.00	0.49	38294.49	0.4	0.67	0.60	Pumping	5147.4	98871.7
11/08/04	07:04	38299.00	0.29	38299.29	0.4	1.81	0.22	Pumping	1526.7	100398.4
11/15/04	10:59	38306.00	0.46	38306.46	0.4	1.18	0.34	Pumping	3503.5	103901.9
11/21/04	16:15	38312.00	0.68	38312.68			0.34	Shut Down	3046.5	106948.4
		Total Gallons Pumped:							106948.4	28,252.867


TMW-105
Flow Rate
Liters per minute
1.40
1.20
1.00
0.80
0.60
0.40
0.20
0.00
Flow Rate
3/23/2004
4/7/2004
4/22/2004
5/7/2004
5/22/2004
6/6/2004
6/21/2004
7/6/2004
7/21/2004
8/5/2004
8/20/2004
9/4/2004
9/19/2004
10/4/2004
10/19/2004
11/3/2004
11/18/2004

APPENDIX 4

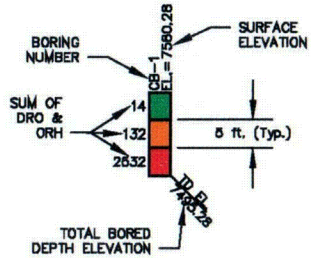


SOIL PROFILE B–B'

SCALE: VERT 1"=40'
HORIZ 1"=100'

LEGEND

- SUM OF DRO & ORH GREATER THAN 2300 mg/kg
- SUM OF DRO & ORH GREATER THAN 100 mg/kg & LESS THAN 2300 mg/kg
- SUM OF DRO & ORH LESS THAN 100 mg/kg
- SURFACE TAKEN FROM TOPOGRAPHIC MAP
- PIEZOMETRIC SURFACE
- TOTAL SOIL EXCAVATION
- ND — NOT DETECTED ABOVE METHOD DETECTION LIMITS



Any use, reuse, or Cadd adaptation of this drawing other than for the specific purpose intended, by anyone, without the written authorization from the engineer, will be at the Client's risk and full legal responsibility.

INBERG–MILLER ENGINEERS
307–856–8136 124 EAST MAIN STREET RIVERTON, WYOMING 82501–4397

SWEETWATER MILL
CATCHMENT BASIN
CONTAMINATION PROFILE B–B'
Sec. 15, T.24 N., R.93 W., 6TH P.M.

KENNECOTT ENERGY

REVISIONS		
1	UPDATE CROSS SECTIONS	7/07/03 BES
2	UPDATE CROSS SECTIONS	7/08/03 BES
3	UPDATE CROSS SECTIONS	1/06/04 BES

SCALE	JOB 9814–RE	DRN. BES	SHEET
HOR. 1"=100'	BK. PG.	CKD.	7 OF 24
VER. 1"=40'	DATE:04/20/04	FILE:9814SheetXsec	

C02

APPENDIX 5

KENNECOTT URANIUM COMPANY			CGL = Chemical & Geological Laboratories			ELI = Energy Laboratories, Inc.										
SWEETWATER TAILINGS CELL			CLI = Core Laboratories, Inc.			MEC = Minerals Exploration Company										
Surface Water Analysis																*Revised*
WYDEQ III Livestock Standard		1980	1981	1982	1983	1984	1985	1986		1987	1988	1989	1990	1991	1992	*08/22/97*
	Std	12/30/80	12/17/81	7/16/82	8/16/83	6/4/84	8/1/85	4/11/86	7/10/86	7/6/87	7/12/88	3/29/89	6/12/90	10/31/91	4/14/92	8/11/92
FIELD DATA mg/l:		(CGL)	(MEC)	(MEC)	(CGL)	(CLI)	(CLI)	(CLI)	(CLI)	(CLI)	(CLI)					
Temperature (C)			5	14					16.8	18.6	18.5	6.2	13.8			
pH (Std. Units)			0.9	1.99					1.76	1.72	2.16	2.18	2.19			
Cond (umho/cm)			15800	16100					11300	9200	8009	3560	5290			
TDS									1000+	1000+	1000+	1000+	1000+			
MAJOR IONS mg/l:																
Alk-CaC03		0	50	ND	0	-5	0	-1	0	1	-1	0	0	0	0	0
Bicarbonate (HCO3)		0		0	0	-1	0	0	0			0	0	0	0	0
Calcium (Ca)		158	126.7	61.2	370	420	472	519	502	497	510	320	478	580	588	726
Carbonate (CO3)		0		0	0	-1	0	0	0			0	0	0	0	0
Chloride (Cl)	2000	28	39.5	100	160	200	140	215	183	200	244	139	479	551	538	49.4
Fluoride (F)		0.45	0.5	1.6	0.09	0.22	8	5.4	0.3	14.5	11.9	-0.1	-0.1	0.1	84.7	-0.1
Magnesium (Mg)		10		124	164	192	230	125	310	350	220	220	513	566	580	632
Nitrate-N (NO2)	10	0.11	ND	ND	23.33	17.5	29.3	11.6	25	24	0.5	1.12	5.09	-0.01	146	97.1
Potassium (K)		3	1.4	610	42	44	45	96	53	61	63	29	41.2	10.8	14.3	9.17
Silica (SiO2)		18.6	186.4	280.9	496	556	527	523	435	43	79	364	618	681	745	393
Sodium (Na)		337	99.8	109.2	166	184	225	232	283	258	302	180	596	680	683	777
Sulfate (SO4)	3000	1090	9529	9311.7	7400	6200	9200	8880	10400	10400	12600	5743	12760	14084	13850	13300
NON-METALS:																
Cyanide (CN)												-0.005	-0.005	-0.005	-0.005	-0.005
PHYSICAL PROPERTIES:																
Cond (umho/cm)		3075	15800	17455	11000	10870	10830	11360	11800			7872	13611	13752	1420	12449
pH (units)	-2	2.3	0.9	2	1.4	1.8	1.7	1.82	1.9			2.3	1.97	2.57	2.23	2.24
TDS @ 180°	5000	1322	12958	13646	9640	10580	14178	13990	14100	14700	16600	8464	19352	20408	21061	19300
TRACE METALS mg/l:																
Aluminum (Al)	5	15.7	151.4	180.3	312	360	375	378		423	567	320	485	818	874	979
Arsenic (As)	0.2	-0.01	0.288	0.425	0.78	0.326	0.18	0.23	0.36	0.126	0.447	0.223	0.41	0.26	0.46	0.4
Barium (Ba)						0.052	0.01	0.01				-0.1	-0.1	-0.1	-0.1	0.37
Beryllium (Be)												0.16	0.24	0.23	0.23	-0.01
Boron (B)	5	-1	0	-4.5	0.19	0.13	0.15	-0.1	-0.1	3	0.75	-0.1	0.1	0.13	-0.1	0.15
Cadmium (Cd)	0.05	-0.01	-0.005	-0.005	0.02	-0.01	0.23	-0.01	0.03	0.05		-0.005	0.024	0.093	-0.005	0.021
Chromium (Cr)	0.05	0.06	1.7	1.95	3.59	-0.05	1.7	3.1	0.56	2.48	35	1.5	2.45	3.65	2.86	3.79
Cobalt (Co)	1															2.085
Copper (Cu)	0.5	0.04	0.9	1	1.09	0.88	1.1	1.1	1.2	1.5	1.46	0.76	1.31	2.11	2.28	2.79
Iron (Fe)		32.5		1350	898	836	815	830	750	1290	1550		1297	1676	1703	638
Lead (Pb)	0.1	-0.05	0.8	0.75	0.66	0.48	0.33	0.49	0.42	-0.05	0.4	0.05	0.11	0.39	-0.01	-0.01
Manganese (Mn)		0.82	23.2	22.5	19	26.9	26	26.6	27.7	30	48.7	22	46.2	74.87	62.9	83.9
Mercury (Hg)	0.005	-0.001	-0.005	-0.005	-0.0004	-0.0004	0.0004	0.0043	-0.0004	-0.0004	-0.0004	-0.001	-0.001	-0.002	-0.0002	-0.0002
Molybdenum (Mo)		-0.1	0.1	-0.1	-0.1	-0.1	-0.02	-0.02	-0.02	0.3	-0.5	-0.01	0.01	0.04	0.11	0.33
Nickel (Ni)		0.07	1.3	1.3	1.91	0.93	1.1	1.2	1.2	1.8	2.33	1.1	2.68	3.93	3.69	5.08
Selenium (Se)	0.05	-0.01	0.032	-0.005	0.02	0.012	0.009	0.029	0.023	0.002	0.424	0.262	0.531	0.44	0.614	0.426
Silver (Ag)							-0.02	-0.02				-0.01	0.01	0.02	2.05	-0.01
Thallium (Tl)												-0.015	0.49	-0.015	-0.015	-0.015
Vanadium (V205)	0.1	0.41	2.8	3.2	2.91	2.72	3.1	4.3	4.7	7.6	9.64	2.5	2.04	2.06	2.05	2.38
Zinc (ZN)	25	1.11	31	1.64	1.7	1.72	3.1	2.1	2.2	3	4	1.9	4.03	6.02	5.72	7.02
RADIOMETRIC pCi/l:																
Uranium, natural	3385	3012.7	3100.1	2.66 E-6	3046.5	3047	44	2006	2832	5416	4690 (0.2)	2269	8023	7777 (0.2)	7212	8480
Radium 226		114 +/- 3	99.14 +/- 2.09	47.47 E-9 +/- 0.89 E-9	102 +/- 12	59 +/- 2	11.2 +/- 0.5	41.9 +/- 9	25 +/- 5.1	13 +/- 0.8	12.7 +/- 1	303 +/- 8.3	439 +/- 9.6	126 +/- 4.4	70.1 +/- 2.9	74.4 +/- 7.6
Radium 228												15.1 +/- 2.0	-1	15.8 +/- 2.1	1.8 +/- 0.7	4.2 +/- 0.9
Combined Ra226/228	5											318.1	439	141.8	71.9	78.6
Thorium 230		1-24 +/- 68	3035 +/- 6.93	8.64 E-6 +/- 1.47 E-7	864 +/- 1195	23567 +/- 1717	6857 +/- 68	18461	39334 +/- 337	11000 +/- 77	15200 +/- 105	11521 +/- 195	2831 +/- 45.1	2820 +/- 14	19310 +/- 105	18700 +/- 119
Lead (Pb210)		394 +/- 20	1541 +/- 37	625 +/- 4.21 E-1	513 +/- 5	2850 +/- 52	2598.6 +/- 160	2134 +/- 8	1890 +/- 124	1440 +/- 89	2.0 +/- 1.1	76 9 +/- 5.3	90.9 +/- 8.7	-1	6.3 +/- 0.8	5.4 +/- 3.8
Polonium (Po210)		64 +/- 11	361 +/- 25	2.89 E-8 +/- 1.02 E-8	640 +/- 7	1581 +/- 40	476 +/- 8	176 +/- 14	782 +/- 29	1.8 +/- 0 6	17.5 +/- 1.1					
Gross Alpha	15											14093 +/- 119	3325 +/- 58	3000 +/- 55	20000 +/- 400	27300 +/- 165
QUALITY ASSURANCE DATA:																
A/C Balance					51.4	49.1	57.86	12.69					1.115	0.964	1.033	1.13

KENNECOTT URANIUM COMPANY																
SWEETWATER TAILINGS CELL																
Surface Water Analysis																
WYDEQ III Livestock Standard			1993		1994		1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
	Std	10/22/92	7/1/93	9/23/93	3/24/94	7/28/94	3/31/95	6/22/96	6/3/97	6/2/98	6/2/99	6/6/00	6/5/01	6/12/02	6/4/03	6/15/04
FIELD DATA mg/l:																
Temperature (C)		11.3	18.6	15.8	3.2	21.3	2	17.1	18	14	14	16	10	12	14	16
pH (Std. Units)		2.4	2.2	2.1	3	2.4	2.33	2.53		2.8	2.8	2.7	2.8	2.8	2.8	16.2
Cond (umho/cm)		13930	12450	13140	14700	12510	11310	13400	11200	11600	13000	9000	1200	9600	10400	9000
TDS		6980	6180	6590	8010	6210	5650	6690								
MAJOR IONS mg/l:																
Alk-CaC03		0	0	0	0	0	0	0	0	-1	-1	-1	-1	-1	-1	-1
Bicarbonate (HCO3)		0	0	0	0	0	0	0	0	-0.1	-0.1	-0.1	-1	-1	-1	-1
Calcium (Ca)		529	445	449	423	421	348	707	389	378	431	410	469	410	459	470
Carbonate (CO3)		0	0	0	0	0	0	0	0	-0.1	-0.1	-0.1	-1	-1	-1	-1
Chloride (Cl)	2000	532	460	558	661	579	445	628	502	503	574	607	610	680	678	820
Fluoride (F)		0.18	-0.1	0.11	0.13	0.1	0.12	26.5	24	24.1	25.1	30.4	36.5	42.4	43.7	38.4
Magnesium (Mg)		699	548	729	578	810	761	1010	880	830	880	931	1130	992	1130	1300
Nitrate-N (NO2)	10	-0.1	-0.1	0.2	2.7	0.14	0.27	0.3	1.86	0.14	1.1	0.83	0.67	0.4	2.4	0.17
Potassium (K)		5	2.9	0.9	1	1.1	0.87	0.7	1.03	1	1.9	0.5	0.7	-1	1.5	1
Silica (SiO2)		631	554	615	476	495	338	364	252	237	232	188	175	151	138	130
Sodium (Na)		669	465	663	682	627	541	870	606	607	651	657	733	724	801	810
Sulfate (SO4)	3000	14793	10701	12976	12145	13539	11000	14281	13120	12300	12200	11500	13100	12500	13400	14000
NON-METALS:																
Cyanide (CN)		-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005
PHYSICAL PROPERTIES:																
Cond (umho/cm)		13115	12560	13928	14313	13085	11823	12495	11800	12600	12900	14300	14000	14200	14100	14100
pH (units)	-2	2.34	2.58	2.46	2.43	2.48	2.7	2.55	2.61	2.82	2.81	2.83	2.81	2.83	2.88	2.95
TDS @ 180°	5000	21140	15441	17532	16887	17665	14566	19167	15900	18700	18600	19900	19400	20400	20100	21000
TRACE METALS mg/l:																
Aluminum (Al)	5	906	676	654	863	912	800	920	974	1000	1150	916	1220	1150	1250	1300
Arsenic (As)	0.2	0.02	0.14	0.16	0.12	0.114	0.099	0.097	0.068	0.081	0.073	0.078	0.039	0.036	0.023	0.06
Barium (Ba)		-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0.89	-0.1	-0.1	-0.1	-0.1
Beryllium (Be)		0.26	0.23	-0.01	0.31	0.22	0.19	0.3	0.24	0.24	0.26	0.27	0.2	0.32	0.18	0.25
Boron (B)	5	-0.1	3.98	4.5	3.08	1.9	0.78	-0.1	0.56	-0.1	0.75	-0.1	0.5	0.63	-0.22	-0.1
Cadmium (Cd)	0.05	-0.005	-0.005	-0.005	-0.005	-0.01	0.07	0.11	0.028	0.022	0.02	0.038	0.019	0.034	0.02	0.03
Chromium (Cr)	0.05	3.36	3.75	3.3	3.08	2.25	2.52	3.21	2.38	2.12	2.23	2.35	1.83	2.47	1.31	2
Cobalt (Co)	1	1.78	2.55	6.65	2.45	-	1.47	2.19	1.83	2.47	1.69	2.07	1.95	2.78	1.87	3
Copper (Cu)	0.5	2.41	2.48	2.82	1.73	1.83	1.88	2.55	2	1.93	1.8	2.03	1.54	2.04	1.76	1.9
Iron (Fe)		1540	1256	1478	1125	991	840	874	722	573	418	348	313	250	232	230
Lead (Pb)	0.1	-0.01	-0.01	0.41	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.02	-0.01
Manganese (Mn)		72.2	66.7	76	65.4	63.1	62.2	82.4	80	76	78.6	79.5	61.7	94	70.4	110
Mercury (Hg)	0.005	-0.0002	-0.0002	-0.0002	-0.0002	-0.0002	-0.0002	-0.0002	-0.0002	-0.0002	-0.0002	0.0006	-0.0002	0.0005	-0.0004	0.0005
Molybdenum (Mo)		-0.01	-0.01	-0.01	-0.01	-0.1	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Nickel (Ni)		4.14	4.95	5.73	4.35	4.06	3.6	5.37	4.3	5.7	4	6.16	4.6	7.01	5.79	7.2
Selenium (Se)	0.05	0.62	0.608	0.618	0.385	0.847	0.349	0.608	0.888	0.655	0.641	0.706	0.591	0.618	0.579	0.24
Silver (Ag)		0.12	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.05	-0.01	-0.01
Thallium (Tl)		-0.015	-0.015	-0.015	-0.015	-0.015	-0.015	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.16
Vanadium (V205)	0.1	1.93	2.1	1.89	1.5	1.2	1.14	1.37	1.4	0.87	0.75	0.57	0.4	0.5	0.3	0.2
Zinc (ZN)	25	6.45	6.38	7.71	6.67	5.95	5.9	0.79	6.68	7.48	6.99	7.65	5.8	9.19	11.6	9.5
RADIOMETRIC pCi/l:																
Uranium, natural	3385	6177	9030	10507	9864	10311	9242	6973	6400	10600	11200	12000	12300	12321.4	12000	11000
Radium 226		54.7 +/- 2.5	38.1 +/- 3.1	40.4 +/- 1.8	53 9 +/- 3.3	112 +/- 6	25.7 +/- 2.1	55.3 +/- 1.9	60.6 +/- 2.6	45 8 +/- 2.0	567 +/- 2.3	83.1 +/- 3.0	59.8 +/- 2.3	55.9 +/- 2.3	69 8+/-2.5	46.2 +/- 2.2
Radium 228		5.8 +/- 0.7	9.0 +/- 2.9	3.5 +/- 0.9	9 6 +/- 9.4	7.6 +/- 5.4	-1	6.7 +/- 0.5	-1	1.9 +/- 1.1	2.9 +/- 0.5	3.6 +/- 0.2	1.9 +/- 1.0	-1	-1	-1
Combined Ra226/228	5	60.5	47.1	43.9	63.5	119.6	25.7	62	60.6	47.7	569.9	86.7	61.7	55.9	69.8	46.2
Thorium 230		5487 +/- 44	9880 +/- 104	3266 +/- 54	650 +/- 403	4136 +/- 371	28217 +/- 623	7550 +/- 160	4526 +/- 86	6360 +/- 108	2340 +/- 44.1	11500 +/- 212	9440 +/- 78	3250 +/- 30.3	1890+/-19.7	2110 +/- 34.9
Lead (Pb210)		5 +/- 0.7	-1	-1	3.5 +/- 2.1	9.0 +/- 8.1	1.8 +/- 1.1	7.9 +/- 0.9	6 6 +/- 2.3	-1	5.0 +/- 1.8	-1	-1	-2.7	-2.7	-1
Polonium (Po210)																
Gross Alpha	15	5541 +/- 74.4	9919+/-99	3312 +/- 58	718 +/- 26.8	4276 +/- 22	28244 +/- 168	16600 +/- 130	274 +/- 9.4	300 +/- 10.7	261 +/- 9.9	162 +/- 6.0	149 +/- 6.4	124 +/- 5.0	212+/-7.2	222 +/- 10.9
QUALITY ASSURANCE DATA:																
A/C Balance		1.037	1.064	0.999	1.044	1	1.02	1.02	0.96	1.2	1.2	1.35	1.17	1.19	1.09	1.17

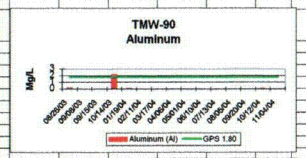
APPENDIX 6

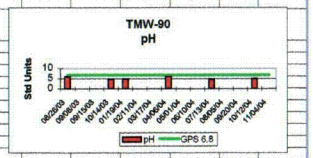
KENNECOTT URANIUM COMPANY

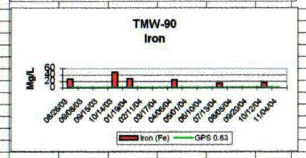
TMW-90

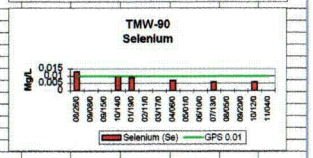
NORTHING: 148,611.42 EASTING: 323,958.91	Groundwater Protection	2003				2004										Pump was down; re-started
ND = Non-detectable	Standard	08/26/03	09/08/03	09/15/03	10/14/03	01/19/04	02/11/04	03/17/04	04/06/04	05/01/04	06/10/04	07/13/04	08/05/04	09/20/04	10/12/04	11/04/04
FIELD DATA mg/l:	(GPS)															
Temperature (C)	*as of 5/26/98	8	8	8	8	18	12	10	21		23	33	27	26	27	14
pH (Std. Units)		5.6	5.8	5.8	4.8	6.1	5.8	4.3	5.4		5	5.1	4.9	4.8	4.8	5.9
Cond. (umho/cm)		940	1080	1080	1000	880	1220	780	840		1000	580	700	700	680	840
TDS										Pump down; pipe in hole.						
MAJOR IONS mg/l:																
Alk-CaCO3		40			2	3			6.2			3			3	
Bicarbonate (HCO3)		48.8			2.4	3.7			7.6			4			4	
Calcium (Ca)		196			207	195			179			118			150	
Carbonate (CO3)		-1			-1	-1			-1			-1			-1	
Chloride (Cl)		33.14			47.5	45.1			36.3			26			30	
Fluoride (F)		0.2			0.4	0.3			0.2			0.2			0.2	
Magnesium (Mg)		28			33.9	32.4			29			20			25.2	
Nitrate-N (NO3)		6.8			-0.1	-0.1			-0.1			-0.1			-0.1	
Potassium (K)		49.8			5.1	5.7			5.5			4			5.9	
Silica (SiO2)		55.6			54.8	45.6			44.9			43			44	
Sodium (Na)		733			52.2	52.3			48.4			40			43	
Sulfate (SO4)		-0.1			861	767			662			476			522	
NON-METALS:																
Cyanide (CN)		-0.005			-0.005	-0.005			-0.005			-0.005			-0.005	
PHYSICAL PROPERTIES:																
Cond (umho/cm)		1400			1670	1510			1320			950			1180	
pH	GPS 6.8	6.04			4.69	4.96			6.22			4.82			5.14	
TDS @ 180° C.	GPS 500	1140			1350	1190			996			609			887	
METALS-DISSOLVED mg/l:																
Aluminum (Al)	GPS 1.80	0.2			2.2	0.1			-0.1			-0.1			0.1	
Arsenic (As)	GPS 0.05	-0.001	-0.5		-0.002	-0.001			0.001			-0.001			-0.001	
Barium (Ba)		-0.1	-10		-0.1	-0.1			-0.1			-0.1			-0.1	
Beryllium (Be)	GPS 0.01	-0.01			-0.01	-0.01			-0.01			-0.01			-0.01	
Boron (B)		0.16			0.15	0.12			0.11			0.1			0.1	
Cadmium (Cd)	GPS 0.01	-0.005	-0.1		0.006	-0.005			-0.005			-0.005			-0.005	
Chromium (Cr)	GPS 0.05	-0.01	-0.5		-0.01	-0.01			-0.01			-0.01			-0.01	
Cobalt (Co)		0.06			0.087	0.071			0.059			0.04			0.005	
Copper (Cu)		-0.01			0.03	0.03			-0.01			-0.01			-0.01	
Iron (Fe)	GPS 0.63	28.4			49	29.1			25.1			15.1			17.4	
Lead (Pb)		-0.01	-0.5		0.02	-0.01			-0.01			-0.03			-0.01	
Manganese (Mn)	GPS 0.2	1.33			1.49	1.2			1.17			0.83			1	
Mercury (Hg)		-0.0002	-0.02		-0.0004	-0.0002			-0.0002			-0.0002			-0.0002	
Molybdenum (Mo)		-0.01			-0.01	-0.01			-0.01			-0.08			-0.01	
Nickel (Ni)	GPS 0.01	0.07			0.12	0.09			0.09			0.05			0.07	
Selenium (Se)	GPS 0.01	0.013	-0.1		0.01	0.009			0.007			0.006			0.006	
Silver (Ag)		-0.01	-0.5		-0.01	-0.01			-0.01			-0.01			-0.01	
Thallium (Tl)		-0.01			-0.01	-0.01			-0.01			-0.01			-0.01	
Vanadium (V2O5)		-0.1			-0.1	-0.1			-0.1			-0.1			-0.1	
Zinc (Zn)		0.65			0.67	0.66			0.26			0.27			0.34	
RADIOMETRIC pCi/l:																
Uranium, natural	GPS 36*	162			240	126			27.8			40.4			42.2	
Radium 226		23			10.8	15.2			13.7			11.5			9.4	
Radium Precision +/-		1.6			0.7	1.3			1.2			0.6			1	
Radium 228		5.6			11.3	3.4			15.6			7.5			8.9	
Radium Precision +/-		1.7			2.1	1.5			1.8			1.1			1.5	
Comb. Ra226/228	GPS 5.8*	28.6			22.1	16.6			29.3			19			18.3	
Thorium 230	GPS 7.0*	-0.2			-0.2	-0.2			-0.2			-0.2			-0.2	
Thorium Precision +/-																
Lead (Pb210)	GPS 8.9*	-2.7			-2.7	-2.7			-1			-1			-1	
Lead Precision +/-																
Gross Alpha	GPS 15*	22.1			12.1	22.2			14.8			10.4			10.8	
Gross Alpha Precision +/-		2.2			1.1	1.5			1.1			1			1	
QUALITY ASSURANCE DATA:																
TDS A/C Balance (dec. %)		0.98			1.12	1.08			1.03			1.11			1.08	
ORGANICS mg/L:																
Diesel Range Organics (DRO)	GPS 10 (3)		11	13	45	1500	13	11	94		320	43	13	9	12	12
Gasoline Range Organics (GRO)	GPS 10 (3)		0.132	0.117	0.105	0.093	105	0.058	0.129		0.056	0.08	0.036	0.05	ND	ND
VOLATILE ORGANIC COMPOUNDS mg/L:																
1,1-Dichloroethane	GPS 3 (2)															
1,1-Dichloroethene	GPS 0.007 (1)															
Naphthalene	GPS 1.3 (2)		0.021	0.025	0.035	0.067	0.028	0.0026	0.034		0.0019	0.0028	ND	ND	ND	ND
Toluene	GPS 1 (1)		ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	GPS 0.20 (1)		ND	ND	0.0028	ND	ND	0.0025	0.0055		0.0011	0.0016	ND	ND	ND	0.0018
1,2,4-Trimethylbenzene	GPS 0.012 (4)		ND	ND	ND	ND	ND	ND	0.0037		ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	GPS 0.012 (4)		ND	ND	ND	ND	ND	ND	0.0011		ND	ND	ND	ND	ND	ND
m+p Xylenes	GPS 10 (1)		ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND

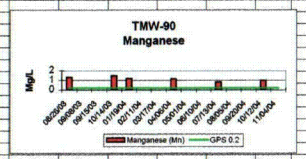
(1) - EPA MCL
(2) - WY Drinking Water Equivalent Level
(3) - WY VRP, Fact Sheet 12
(4) - EPA RBC - Tap Water
(LAB: Energy Labs Inc. unless noted.)

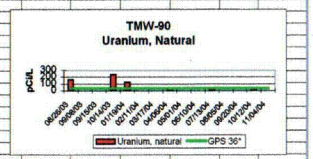


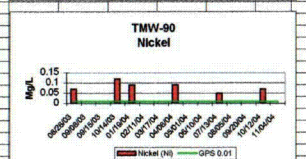


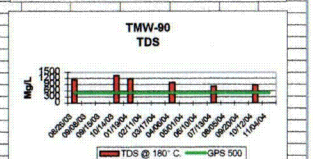


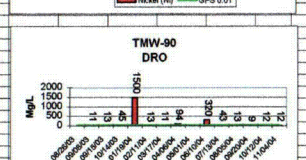


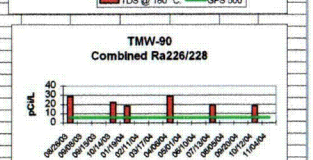


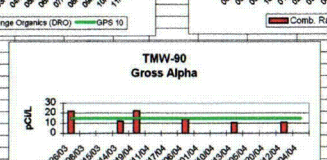












C03

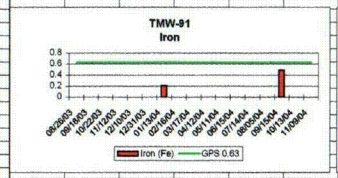
KENNECOTT URANIUM COMPANY

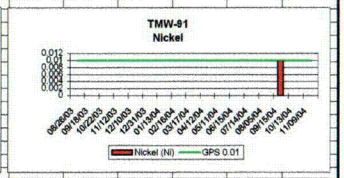
TMW-91

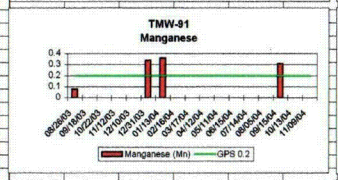
NORTHING: 148,518.38
EASTING: 323,956.86

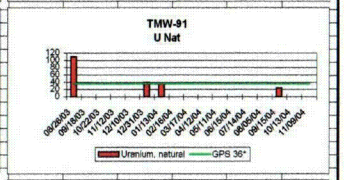
ND = Non-detectable	Groundwater Protection Standard	2003 08/26/03	09/18/03	10/22/03	11/12/03	12/10/03	12/31/03	2004 01/13/04	02/16/04	03/17/04	04/12/04	05/11/04	06/15/04	07/14/04	08/05/04	09/15/04	10/13/04	11/09/04
FIELD DATA mg/l:	(GPS)																	
Temperature (C)	*as of 5/28/96	8	8	8	8	8	8	8	8	8	9	10	12	15	11	11	10	10
pH (Std. Units)		6.3	6.8	6.8	6.7	7.2	7.3	7.9	7.2	7.1	6.8	7.8	7.2	7.1	7.1	6.9	7.2	7.6
Cond. (umho/cm)		520	860	980	900	1100	1080	1240	1100	1240	960	1000	1280	960	920	1020	920	820
TDS																		
MAJOR IONS mg/l:																		
Alk-CaCO3		85					121	118								115		
Bicarbonate (HCO3)		103					148	143								140		
Calcium (Ca)		65.9					355	320								370		
Carbonate (CO3)		-1					-1	-1								-1		
Chloride (Cl)		17.6					67	43.6								47		
Fluoride (F)		0.3					-1	0.1								0.2		
Magnesium (Mg)		7.3					33	26.4								27.7		
Nitrate-N (NO3)		-0.1					-0.1	-0.1								-0.1		
Potassium (K)		5.2					6.3	5.6								5.3		
Silica (SiO2)		8.5					13	11.1								12		
Sodium (Na)		87.8					72	69.5								71.4		
Sulfate (SO4)		303					906	839								912		
NON-METALS:																		
Cyanide (CN)		-0.005					-0.005	-0.005								-0.005		
PHYSICAL PROPERTIES:																		
Cond (umho/cm)		801					1800	1920								1790		
pH	GPS 6.8	7.76					7.89	7.86								7.34		
TDS @ 180° C.	GPS 500	534					1440	1570								1620		
METALS-DISSOLVED mg/l:																		
Aluminum (Al)	GPS 1.80	-0.1					-0.1	-0.1								-0.1		
Arsenic (As)	GPS 0.05	0.002					0.002	-0.001								-0.001		
Barium (Ba)		-0.1					-0.1	-0.1								-0.1		
Beryllium (Be)	GPS 0.01	-0.01					-0.01	-0.01								-0.01		
Boron (B)		-0.1					-0.1	-0.1								-0.1		
Cadmium (Cd)	GPS 0.01	-0.005					-0.005	-0.005								-0.0005		
Chromium (Cr)	GPS 0.05	-0.01					-0.01	-0.01								-0.01		
Cobalt (Co)		0.003					0.003	0.002								0.001		
Copper (Cu)		-0.01					-0.01	-0.01								-0.01		
Iron (Fe)	GPS 0.63	-0.05					-0.05	0.209								0.49		
Lead (Pb)		-0.01					-0.01	-0.01								-0.01		
Manganese (Mn)	GPS 0.2	0.08					0.34	0.36								0.31		
Mercury (Hg)		0.0005					-0.0002	-0.0002								0.0003		
Molybdenum (Mo)		-0.01					-0.01	-0.01								-0.08		
Nickel (Ni)	GPS 0.01	-0.01					-0.01	-0.01								0.01		
Selenium (Se)	GPS 0.01	0.003					-0.001	-0.001								-0.001		
Silver (Ag)		-0.01					-0.01	-0.01								-0.01		
Thallium (Tl)		-0.01					-0.01	-0.01								-0.01		
Vanadium (V2O5)		-0.1					-0.1	-0.1								-0.1		
Zinc (ZN)		0.04					0.27	0.03								0.07		
RADIOMETRIC pCi/l:																		
Uranium, natural	GPS 36*	110					39.8	37.9								24.4		
Radium 226		1.6					2.5	3.1								2.5		
Radium Precision +/-		0.3					0.3	0.6								0.7		
Radium 228		-1					3.3	3.5								2.7		
Radium Precision +/-							1.2	0.9								1.6		
Combined Ra226/228	GPS 5.8*	1.6					5.8	6.6								5.2		
Thorium 230	GPS 7.0*	-0.2					-0.2	-0.2								-0.2		
Thorium Precision +/-																		
Lead (Pb210)	GPS 8.9*	-2.7					-2.7	-2.7								-1		
Lead Precision +/-																		
Gross Alpha	GPS 15*	2.5					3.6	4								4.7		
Gross Alpha Precision +/-		1					1.2	1.4								1.3		
QUALITY ASSURANCE DATA:																		
TDS A/C Balance (dec. %)								1.14								1.07		
ORGANICS mg/L:																		
Diesel Range Organics (DRO)	GPS 10 (3)	130	40	52	6.2	35	130	16	21	6.7	5.7	21	3.1	1.9	2.6	2.7	1.1	2.4
Gasoline Range Organics (GRO)	GPS 10 (3)	1.9	1.5	0.749	0.182		1.9	0.046		ND		ND	ND	ND	ND	ND	ND	ND
VOLATILE ORGANIC COMPOUNDS mg/L:																		
1,1-Dichloroethane	GPS 3 (2)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	GPS 0.007 (1)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	GPS 1.3 (2)	0.056	0.03	0.017	0.0046	0.0027	0.056	ND	0.0014	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	GPS 1 (1)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0026	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	GPS 0.20 (1)	0.015	ND	ND	ND	ND	0.015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	GPS 0.012 (4)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	GPS 0.012 (4)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
m+p Xylenes	GPS 10 (1)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

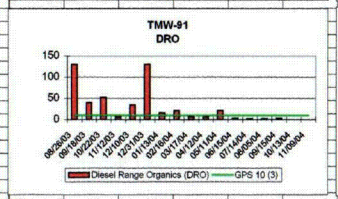
(1) - EPA MCL
(2) - WY Drinking Water Equivalent Level
(3) - WY VRP, Fact Sheet 12
(4) - EPA RBC - Tap Water
(LAB: Energy Labs Inc. unless noted.)

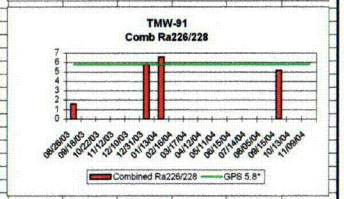


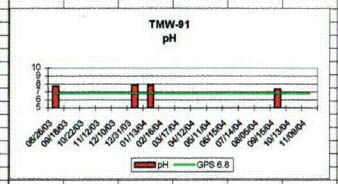


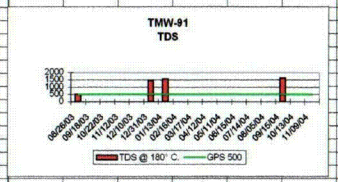






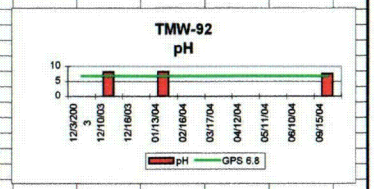


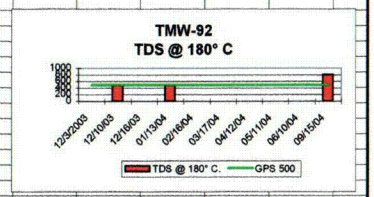


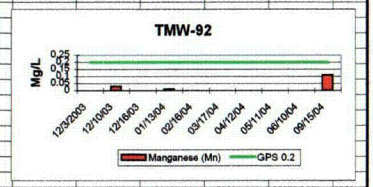


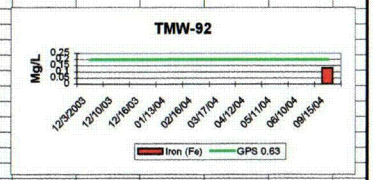
C04

KENNECOTT URANIUM COMPANY											
TMW-92											
NORTHING: 148,504.47	Groundwater	2003			2004						
EASTING: 323,951.33	Protection										
ND = Non-detectable	Standard	12/3/2003	12/10/03	12/16/03	01/13/04	02/16/04	03/17/04	04/12/04	05/11/04	06/10/04	09/15/04
FIELD DATA mg/l:	**(GPS)**										
Temperature (C)	*as of 5/28/98		8		8	8	8	9	10	10	10
pH (Std. Units)			7.5		8.6	7.8	7.3	7.4	7.8	7.1	7.1
Cond. (umho/cm)			640		640	640	600	660	900	860	720
TDS											
MAJOR IONS mg/l:											
Alk-CaCO3			87		68						103
Bicarbonate (HCO3)			106		83						126
Calcium (Ca)			99.3		65.3						176
Carbonate (CO3)			-1		-1						-1
Chloride (Cl)			9.3		15						22
Fluoride (F)			0.2		0.2						0.2
Magnesium (Mg)			8		6.9						12.4
Nitrate-N (NO3)			-0.1		0.14						-0.1
Potassium (K)			13.7		15.4						4
Silica (SiO2)			13.1		10.8						12
Sodium (Na)			49.1		65.5						49.1
Sulfate (SO4)			275		252						434
NON-METALS:											
Cyanide (CN)			-0.005		-0.005						-0.005
PHYSICAL PROPERTIES:											
Cond (umho/cm)			736		738						1020
pH	GPS 6.8		8.06		8.16						7.53
TDS @ 180° C.	GPS 500		493		491						805
METALS-DISSOLVED mg/l:											
Aluminum (Al)	GPS 1.80		-0.1		-0.1						-0.1
Arsenic (As)	GPS 0.05		-0.001		0.001						-0.001
Barium (Ba)			-0.1		-0.1						-0.1
Beryllium (Be)	GPS 0.01		-0.01		-0.01						-0.01
Boron (B)			-0.1		-0.1						-0.1
Cadmium (Cd)	GPS 0.01		-0.005		-0.005						-0.005
Chromium (Cr)	GPS 0.05		0.01		0.02						-0.01
Cobalt (Co)			-0.001		-0.001						-0.001
Copper (Cu)			-0.01		-0.01						-0.01
Iron (Fe)	GPS 0.63		-0.05		-0.05						0.13
Lead (Pb)			-0.01		-0.01						-0.01
Manganese (Mn)	GPS 0.2		0.03		0.01						0.11
Mercury (Hg)			-0.0002		0.001						0.0003
Molybdenum (Mo)			-0.01		-0.01						-0.01
Nickel (Ni)	GPS 0.01		-0.01		-0.01						-0.01
Selenium (Se)	GPS 0.01		0.002		-0.001						-0.001
Silver (Ag)			-0.01		-0.01						-0.01
Thallium (Tl)			-0.01		-0.01						-0.01
Vanadium (V2O5)			-0.1		-0.1						-0.1
Zinc (ZN)			-0.01		0.01						0.01
RADIOMETRIC pCi/l:											
Uranium, natural	GPS 36*		9.9		32.5						7.1
Radium 226			0.9		1.6						2
Radium Precision +/-			0.3		0.5						0.7
Radium 228			-1		-1						-1
Radium Precision +/-											
Combined Ra226/228	GPS 5.8*		0.9		1.6						2
Thorium 230	GPS 7.0*		-0.2		-0.2						-0.2
Thorium Precision +/-											
Lead (Pb210)	GPS 8.9*		-2.7		-2.7						-1
Lead Precision +/-											
Gross Alpha	GPS 15*		1.5		-1						3.8
Gross Alpha Precision +/-			1								1.2
QUALITY ASSURANCE DATA:											
TDS A/C Balance (dec. %)			0.98		1.06						1.04
ORGANICS mg/L:											
Diesel Range Organics (DRO)	GPS 10 (3)	3.8	ND	ND	ND	1.3	ND	ND	ND	ND	
Gasoline Range Organics (GRO)	GPS 10 (3)	ND	ND	ND	ND		ND		ND	ND	
VOLATILE ORGANIC COMPOUNDS mg/L:											
1,1-Dichloroethane	GPS 3 (2)	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,1-Dichloroethene	GPS 0.007 (1)	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Naphthalene	GPS 1.3 (2)	0.0035	ND	ND	ND	ND	ND	ND	ND	ND	
Toluene	GPS 1 (1)	ND	0.0014	ND	ND	ND	ND	ND	ND	ND	
1,1,1-Trichloroethane	GPS 0.20 (1)	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,2,4-Trimethylbenzene	GPS 0.012 (4)	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,3,5-Trimethylbenzene	GPS 0.012 (4)	ND	ND	ND	ND	ND	ND	ND	ND	ND	
m+p-Xylenes	GPS 10 (1)	ND	0.0012	ND	ND	ND	ND	ND	ND	ND	
(1) - EPA MCL											
(2) - WY Drinking Water Equivalent Level											
(3) - WY VRP, Fact Sheet 12											
(4) - EPA RBC - Tap Water											
(LAB: Energy Labs Inc. unless noted.)											



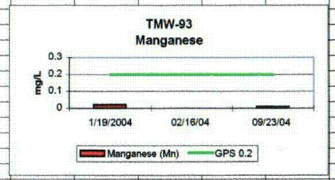


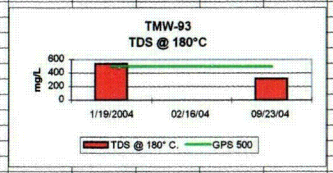


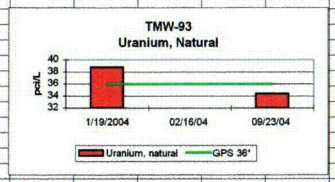


C05

KENNECOTT URANIUM COMPANY				
TMW-93				
NORTHING: 148,399.92 EASTING: 324,099.96	Groundwater Protection	2004		
ND = Non-detectable	Standard	1/19/2004	02/16/04	09/23/04
FIELD DATA mg/l:	**(GPS)**			
Temperature (C)	*as of 5/28/96	8	8	9
pH (Std. Units)		9.3	8.4	7.3
Cond. (umho/cm)		700	400	440
TDS				
MAJOR IONS mg/l:				
Alk-CaCO3		69		97
Bicarbonate (HCO3)		84.2		119
Calcium (Ca)		73.6		52.1
Carbonate (CO3)		-1		-1
Chloride (Cl)		23.2		6
Fluoride (F)		0.3		0.2
Magnesium (Mg)		7.6		5.1
Nitrate-N (NO3)		-0.1		-0.1
Potassium (K)		7.7		3.5
Silica (SiO2)		11		10
Sodium (Na)		84.1		49.3
Sulfate (SO4)		325		137
NON-METALS:				
Cyanide (CN)		-0.005		-0.005
PHYSICAL PROPERTIES:				
Cond (umho/cm)		798		498
pH	GPS 6.8	8.27		7.4
TDS @ 180° C.	GPS 500	537		321
METALS-DISSOLVED mg/l:				
Aluminum (Al)	GPS 1.80	-0.1		-0.1
Arsenic (As)	GPS 0.05	0.006		0.005
Barium (Ba)		-0.1		-0.1
Beryllium (Be)	GPS 0.01	-0.01		-0.01
Boron (B)		-0.1		-0.1
Cadmium (Cd)	GPS 0.01	-0.005		-0.005
Chromium (Cr)	GPS 0.05	-0.01		-0.01
Cobalt (Co)		-0.001		-0.001
Copper (Cu)		-0.01		-0.01
Iron (Fe)	GPS 0.63	-0.05		-0.05
Lead (Pb)		-0.01		-0.01
Manganese (Mn)	GPS 0.2	0.02		0.01
Mercury (Hg)		0.0015		0.0009
Molybdenum (Mo)		0.01		-0.01
Nickel (Ni)	GPS 0.01	-0.01		-0.01
Selenium (Se)	GPS 0.01	0.004		-0.001
Silver (Ag)		-0.01		-0.01
Thallium (Tl)		-0.01		-0.01
Vanadium (V2O5)		-0.1		-0.1
Zinc (ZN)		-0.01		0.03
RADIOMETRIC pCi/l:				
Uranium, natural	GPS 36*	38.8		34.4
Radium 226		1.6		-0.2
Radium Precision +/-		0.5		
Radium 228		-1		-1
Radium Precision +/-				
Comb. Ra226/228	GPS 5.8*	1.6		0
Thorium 230	GPS 7.0*	-0.2		-0.2
Thorium Precision +/-				
Lead (Pb210)	GPS 8.9*	-1		-1
Lead Precision +/-				
Gross Alpha	GPS 15*	2.5		-1
Gross Alpha Precision +/-		1		
QUALITY ASSURANCE DATA:				
TDS A/C Balance (dec. %)		0.95		1
ORGANICS mg/L:				
Diesel Range Organics (DRO)	GPS 10 (3)	ND	ND	
Gasoline Range Organics (GRO)	GPS 10 (3)	ND		
VOLATILE ORGANIC COMPOUNDS mg/L:				
1,1-Dichloroethane	GPS 3 (2)	ND	ND	
1,1-Dichloroethene	GPS 0.007 (1)	ND	ND	
Naphthalene	GPS 1.3 (2)	ND	ND	
Toluene	GPS 1 (1)	ND	ND	
1,1,1-Trichloroethane	GPS 0.20 (1)	ND	ND	
1,2,4-Trimethylbenzene	GPS 0.012 (4)	ND	ND	
1,3,5-Trimethylbenzene	GPS 0.012 (4)	ND	ND	
m+p Xylenes	GPS 10 (1)	ND	ND	
(1) - EPA MCL				
(2) - WY Drinking Water Equivalent Level				
(3) - WY VRP, Fact Sheet 12				
(4) - EPA RBC - Tap Water				
(LAB: Energy Labs Inc. unless noted.)				

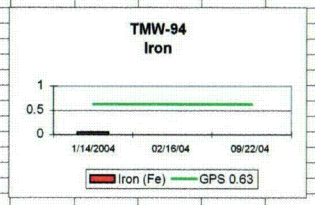


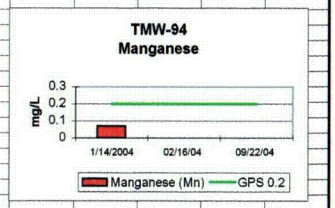


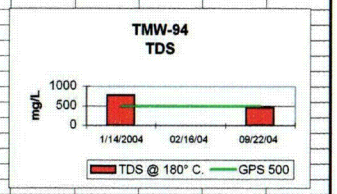


COG

KENNECOTT URANIUM COMPANY				
TMW-94				
NORTHING: 148,400.13	Groundwater	2004		
EASTING: 324,000.02	Protection			
ND = Non-detectable	Standard	1/14/2004	02/16/04	09/22/04
FIELD DATA mg/l:	**(GPS)**			
Temperature (C)	*as of 5/28/98	8	8	10
pH (Std. Units)		8.5	8	7.3
Cond. (umho/cm)		960	520	460
TDS				
MAJOR IONS mg/l:				
Alk-CaCO3		98		113
Bicarbonate (HCO3)		120		138
Calcium (Ca)		132		48
Carbonate (CO3)		-1		-1
Chloride (Cl)		17.6		10
Fluoride (F)		0.2		0.3
Magnesium (Mg)		10.2		5.9
Nitrate-N (NO3)		-0.1		-0.1
Potassium (K)		5.8		4.2
Silica (SiO2)		10.2		11
Sodium (Na)		85.9		93.9
Sulfate (SO4)		444		202
NON-METALS:				
Cyanide (CN)		-0.005		-0.005
PHYSICAL PROPERTIES:				
Cond (umho/cm)		789		668
pH	GPS 6.8	8.09		7.34
TDS @ 180° C.	GPS 500	774		459
METALS-DISSOLVED mg/l:				
Aluminum (Al)	GPS 1.80	-0.1		-0.1
Arsenic (As)	GPS 0.05	0.006		0.002
Barium (Ba)		-0.1		-0.1
Beryllium (Be)	GPS 0.01	-0.01		-0.01
Boron (B)		-0.1		-0.1
Cadmium (Cd)	GPS 0.01	-0.005		-0.005
Chromium (Cr)	GPS 0.05	-0.01		-0.01
Cobalt (Co)		0.003		-0.001
Copper (Cu)		-0.01		-0.01
Iron (Fe)	GPS 0.63	0.052		-0.05
Lead (Pb)		-0.01		-0.01
Manganese (Mn)	GPS 0.2	0.07		-0.01
Mercury (Hg)		0.0019		0.0014
Molybdenum (Mo)		0.02		0.03
Nickel (Ni)	GPS 0.01	-0.01		-0.01
Selenium (Se)	GPS 0.01	-0.001		-0.001
Silver (Ag)		-0.01		-0.01
Thallium (Tl)		-0.01		-0.01
Vanadium (V2O5)		-0.1		-0.1
Zinc (ZN)		-0.01		0.04
RADIOMETRIC pCi/l:				
Uranium, natural	GPS 36*	27.8		18.2
Radium 226		1		0.6
Radium Precision +/-		0.7		0.3
Radium 228		-1		-1
Radium Precision +/-				
Comb. Ra226/228	GPS 5.8*	1		0.6
Thorium 230	GPS 7.0*	-0.2		-0.2
Thorium Precision +/-				
Lead (Pb210)	GPS 8.9*	-2.7		-1
Lead Precision +/-				
Gross Alpha	GPS 15*	7		-1
Gross Alpha Precision +/-		1		
QUALITY ASSURANCE DATA:				
TDS A/C Balance (dec. %)		1.02		1.04
ORGANICS m/L:				
Diesel Range Organics (DRO)	GPS 10 (3)	ND	ND	
Gasoline Range Organics (GRO)	GPS 10 (3)	ND		
VOLATILE ORGANIC COMPOUNDS mg/L:				
1,1-Dichloroethane	GPS 3 (2)	ND	ND	
1,1-Dichloroethene	GPS 0.007 (1)	ND	ND	
Naphthalene	GPS 1.3 (2)	ND	ND	
Toluene	GPS 1 (1)	ND	ND	
1,1,1-Trichloroethane	GPS 0.20 (1)	ND	ND	
1,2,4-Trimethylbenzene	GPS 0.012 (4)	ND	ND	
1,3,5-Trimethylbenzene	GPS 0.012 (4)	ND	ND	
m+p Xylenes	GPS 10 (1)	ND	ND	
(1) - EPA MCL				
(2) - WY Drinking Water Equivalent Level				
(3) - WY VRP, Fact Sheet 12				
(4) - EPA RBC - Tap Water				
(LAB: Energy Labs Inc. unless noted.)				

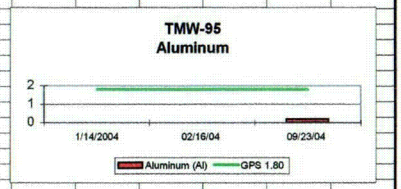


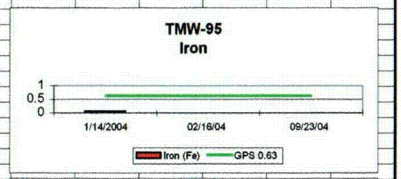


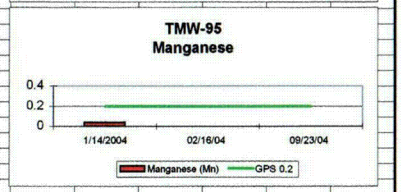


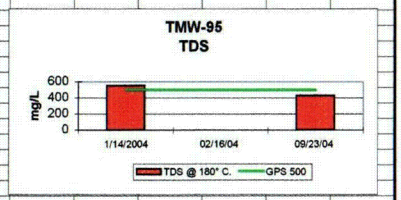
C07

KENNECOTT URANIUM COMPANY				
TMW-95				
NORTHING: 148,399.94	Groundwater	2004		
EASTING: 323,900.08	Protection			
ND = Non-detectable	Standard	1/14/2004	02/16/04	09/23/04
FIELD DATA mg/l:	**(GPS)**			
Temperature (C)	*as of 5/28/98	8	8	8
pH (Std. Units)		8.8	8	7.3
Cond. (umho/cm)		760	580	460
TDS				
MAJOR IONS mg/l:				
Alk-CaCO3		149		109
Bicarbonate (HCO3)		182		133
Calcium (Ca)		99.4		66.1
Carbonate (CO3)		-1		-1
Chloride (Cl)		10.1		11
Fluoride (F)		0.2		0.2
Magnesium (Mg)		7.1		6.6
Nitrate-N (NO3)		0.14		-0.1
Potassium (K)		5.3		3.6
Silica (SiO2)		15.2		14
Sodium (Na)		59.7		69.4
Sulfate (SO4)		278		200
NON-METALS:				
Cyanide (CN)		-0.005		-0.005
PHYSICAL PROPERTIES:				
Cond (umho/cm)		1080		635
pH	GPS 6.8	8.09		7.36
TDS @ 180° C.	GPS 500	552		428
METALS-DISSOLVED mg/l:				
Aluminum (Al)	GPS 1.80	-0.1		0.2
Arsenic (As)	GPS 0.05	0.001		0.002
Barium (Ba)		-0.1		-0.1
Beryllium (Be)	GPS 0.01	-0.01		-0.01
Boron (B)		-0.1		-0.1
Cadmium (Cd)	GPS 0.01	-0.005		-0.005
Chromium (Cr)	GPS 0.05	-0.01		-0.01
Cobalt (Co)		-0.001		-0.001
Copper (Cu)		-0.01		-0.01
Iron (Fe)	GPS 0.63	0.056		-0.05
Lead (Pb)		-0.01		-0.01
Manganese (Mn)	GPS 0.2	0.04		-0.01
Mercury (Hg)		0.0008		0.0005
Molybdenum (Mo)		-0.01		0.01
Nickel (Ni)	GPS 0.01	-0.01		-0.01
Selenium (Se)	GPS 0.01	-0.001		-0.001
Silver (Ag)		-0.01		-0.01
Thallium (Tl)		-0.01		-0.01
Vanadium (V2O5)		-0.1		-0.1
Zinc (ZN)		-0.01		0.01
RADIOMETRIC pCi/l:				
Uranium, natural	GPS 36*	6		10.8
Radium 226		1.4		-0.2
Radium Precision +/-		0.5		
Radium 228		3.9		-1
Radium Precision +/-		1.2		
Comb. Ra226/228	GPS 5.8*	5.3		0
Thorium 230	GPS 7.0*	-0.2		-0.2
Thorium Precision +/-				
Lead (Pb210)	GPS 8.9*	-2.7		-1
Lead Precision +/-				
Gross Alpha	GPS 15*	1.5		1
Gross Alpha Precision +/-		1		1
QUALITY ASSURANCE DATA:				
TDS A/C Balance (dec. %)		1.01		0.98
ORGANICS mg/L:				
Diesel Range Organics (DRO)	GPS 10 (3)	ND	ND	
Gasoline Range Organics (GRO)	GPS 10 (3)	ND		
VOLATILE ORGANIC COMPOUNDS mg/L:				
1,1-Dichloroethane	GPS 3 (2)	ND	ND	
1,1-Dichloroethene	GPS 0.007 (1)	ND	ND	
Naphthalene	GPS 1.3 (2)	ND	ND	
Toluene	GPS 1 (1)	ND	ND	
1,1,1-Trichloroethane	GPS 0.20 (1)	ND	ND	
1,2,4-Trimethylbenzene	GPS 0.012 (4)	ND	ND	
1,3,5-Trimethylbenzene	GPS 0.012 (4)	ND	ND	
m+p Xylenes	GPS 10 (1)	ND	ND	
(1) - EPA MCL				
(2) - WY Drinking Water Equivalent Level				
(3) - WY VRP, Fact Sheet 12				
(4) - EPA RBC - Tap Water				
(LAB: Energy Labs Inc. unless noted.)				









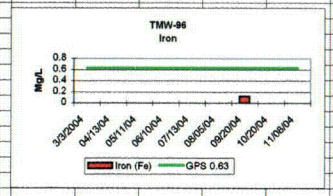
KENNECOTT URANIUM COMPANY

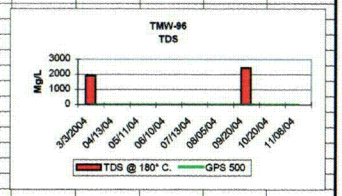
TMW-96

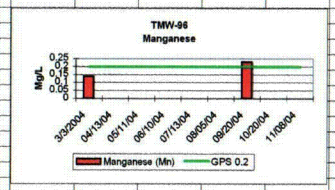
NORTHING: 148,500.01
EASTING: 323,807.75

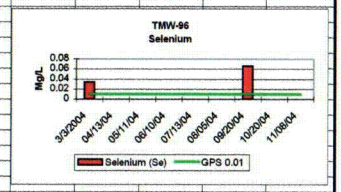
ND = Non-detectable	Groundwater Protection Standard (GPS)	2004 3/3/2004	04/13/04	05/11/04	06/10/04	07/13/04	08/05/04	09/20/04	10/20/04	11/08/04
FIELD DATA mg/l:										
Temperature (C)	*as of 5/28/98	8	10	12	10	14	12	10	10	11
pH (Std. Units)		7.6	6.6	7.5	6.8	7.3	6.8	7.1	6.7	7.4
Cond. (umho/cm)		1360	1440	1800	1400	1020	1280	1140	1180	980
TDS										
MAJOR IONS mg/l:										
Alk-CaCO3		144						151		
Bicarbonate (HCO3)		176						184		
Calcium (Ca)		374						485		
Carbonate (CO3)		-1						ND		
Chloride (Cl)		95						167		
Fluoride (F)		0.1						0.1		
Magnesium (Mg)		65.4						72.5		
Nitrate-N (NO3)		1.77						1.27		
Potassium (K)		5.4						7.5		
Silica (SiO2)		8.2						11		
Sodium (Na)		103						118		
Sulfate (SO4)		1060						1340		
NON-METALS:										
Cyanide (CN)		-0.005						ND		
PHYSICAL PROPERTIES:										
Cond (umho/cm)		2330						2850		
pH	GPS 6.8	7.68						7.17		
TDS @ 180° C.	GPS 500	1910						2430		
METALS-DISSOLVED mg/l:										
Aluminum (Al)	GPS 1.80	-0.1						ND		
Arsenic (As)	GPS 0.05	0.002						0.002		
Barium (Ba)		-0.1						ND		
Beryllium (Be)	GPS 0.01	-0.01						ND		
Boron (B)		-0.1						ND		
Cadmium (Cd)	GPS 0.01	-0.005						ND		
Chromium (Cr)	GPS 0.05	-0.01						ND		
Cobalt (Co)		0.007						0.002		
Copper (Cu)		-0.01						ND		
Iron (Fe)	GPS 0.63	-0.05						0.12		
Lead (Pb)		-0.01						ND		
Manganese (Mn)	GPS 0.2	0.14						0.23		
Mercury (Hg)		-0.0002						ND		
Molybdenum (Mo)		-0.01						ND		
Nickel (Ni)	GPS 0.01	0.01						ND		
Selenium (Se)	GPS 0.01	0.034						0.066		
Silver (Ag)		-0.01						ND		
Thallium (Tl)		-0.01						ND		
Vanadium (V2O5)		-0.1						ND		
Zinc (ZN)		0.01						0.01		
RADIOMETRIC pCi/l:										
Uranium, natural	GPS 36*	572						760		
Radium 226		5.5						6.6		
Radium Precision +/-		0.8						0.8		
Radium 228		-1						9.4		
Radium Precision +/-								1.6		
Combined Ra226/228	GPS 5.8*	5.5						16		
Thorium 230	GPS 7.0*	-0.2						ND		
Thorium Precision +/-										
Lead (Pb210)	GPS 8.9*	-1						ND		
Lead Precision +/-										
Gross Alpha	GPS 15*	8.1						4.9		
Gross Alpha Precision +/-		1.3						1.3		
QUALITY ASSURANCE DATA:										
TDS A/C Balance (dec. %)		1.07						1.06		
ORGANICS mg/L:										
Diesel Range Organics (DRO)	GPS 10 (3)	ND	ND	ND	ND	ND	ND	ND	ND	ND
Gasoline Range Organics (GRO)	GPS 10 (3)	ND	--	ND	ND	ND	ND	ND	ND	ND
VOLATILE ORGANIC COMPOUNDS mg/L:										
1,1-Dichloroethane	GPS 3 (2)	ND	0.0022	0.0021	0.0011	0.0016	0.0016	0.0019	0.0015	0.0015
1,1-Dichloroethene	GPS 0.007 (1)	ND	0.001	0.0011	ND	ND	ND	ND	ND	ND
Naphthalene	GPS 1.3 (2)	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	GPS 1 (1)	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	GPS 0.20 (1)	0.006	0.014	0.015	0.0046	0.0063	0.0072	0.0058	0.0063	0.0066
1,2,4-Trimethylbenzene	GPS 0.012 (4)	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	GPS 0.012 (4)	ND	ND	ND	ND	ND	ND	ND	ND	ND
m+p Xylenes	GPS 10 (1)	ND	ND	ND	ND	ND	ND	ND	ND	ND

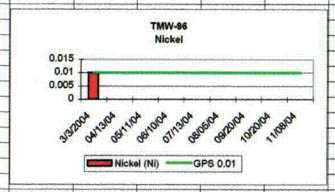
(1) - EPA MCL
(2) - WY Drinking Water Equivalent Level
(3) - WY VRP, Fact Sheet 12
(4) - EPA RBC - Tap Water
(LAB: Energy Labs Inc. unless noted.)

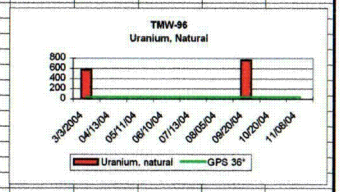


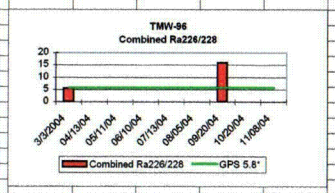






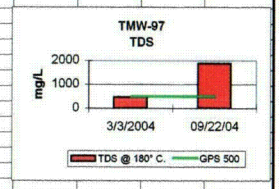


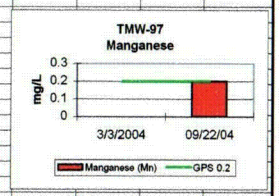


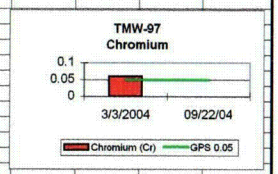


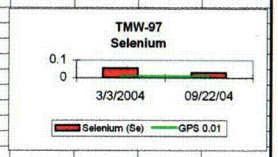
C09

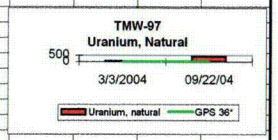
KENNECOTT URANIUM COMPANY			
TMW-97			
NORTHING: 148,599.86	Groundwater	2004	
EASTING: 323,799.93	Protection		
ND = Non-detectable	Standard	3/3/2004	09/22/04
FIELD DATA mg/l:	**(GPS)**		
Temperature (C)	*as of 5/28/98	8	9
pH (Std. Units)		11.7	6.9
Cond. (umho/cm)		660	1000
TDS			
MAJOR IONS mg/l:			
Alk-CaCO3		50.7	141
Bicarbonate (HCO3)		3.3	172
Calcium (Ca)		65.6	386
Carbonate (CO3)		35.1	-1
Chloride (Cl)		10.2	63
Fluoride (F)		0.2	0.1
Magnesium (Mg)		7.4	59.3
Nitrate-N (NO3)		2.42	0.76
Potassium (K)		27	6.8
Silica (SiO2)		7.4	11
Sodium (Na)		62.4	95.9
Sulfate (SO4)		246	1100
NON-METALS:			
Cyanide (CN)		-0.005	-0.005
PHYSICAL PROPERTIES:			
Cond (umho/cm)		848	1640
pH	GPS 6.8	11.3	7
TDS @ 180° C.	GPS 500	470	1880
METALS-DISSOLVED mg/l:			
Aluminum (Al)	GPS 1.80	-0.1	-0.1
Arsenic (As)	GPS 0.05	0.002	0.001
Barium (Ba)		-0.1	-0.1
Beryllium (Be)	GPS 0.01	-0.01	-0.01
Boron (B)		-0.1	-0.1
Cadmium (Cd)	GPS 0.01	-0.005	-0.005
Chromium (Cr)	GPS 0.05	0.06	-0.01
Cobalt (Co)		-0.001	0.001
Copper (Cu)		-0.01	-0.01
Iron (Fe)	GPS 0.63	-0.05	-0.05
Lead (Pb)		-0.01	-0.01
Manganese (Mn)	GPS 0.2	-0.01	0.2
Mercury (Hg)		0.0006	-0.0002
Molybdenum (Mo)		0.01	-0.01
Nickel (Ni)	GPS 0.01	-0.01	-0.01
Selenium (Se)	GPS 0.01	0.055	0.03
Silver (Ag)		-0.01	-0.01
Thallium (Tl)		-0.01	-0.01
Vanadium (V2O5)		-0.1	-0.1
Zinc (ZN)		-0.01	-0.01
RADIOMETRIC pCi/l:			
Uranium, natural	GPS 36*	66.3	398
Radium 226		0.9	5.7
Radium Precision +/-		0.4	0.8
Radium 228		-1	8.4
Radium Precision +/-			1.5
Comb. Ra226/228	GPS 5.8*	0.9	14.1
Thorium 230	GPS 7.0*	-0.2	-0.2
Thorium Precision +/-			
Lead (Pb210)	GPS 8.9*	37	-1
Lead Precision +/-		5.7	
Gross Alpha	GPS 15*	1.1	4.3
Gross Alpha Precision +/-		1	1.2
QUALITY ASSURANCE DATA:			
TDS A/C Balance (dec. %)		1.02	1.04
ORGANICS mg/L:			
Diesel Range Organics (DRO)	GPS 10 (3)	ND	
Gasoline Range Organics (GRO)	GPS 10 (3)	ND	
VOLATILE ORGANIC COMPOUNDS mg/L:			
1,1-Dichloroethane	GPS 3 (2)	ND	
1,1-Dichloroethene	GPS 0.007 (1)	ND	
Naphthalene	GPS 1.3 (2)	ND	
Toluene	GPS 1 (1)	ND	
1,1,1-Trichloroethane	GPS 0.20 (1)	ND	
1,2,4-Trimethylbenzene	GPS 0.012 (4)	ND	
1,3,5-Trimethylbenzene	GPS 0.012 (4)	ND	
m+p Xylenes	GPS 10 (1)	ND	
(1) - EPA MCL			
(2) - WY Drinking Water Equivalent Level			
(3) - WY VRP, Fact Sheet 12			
(4) - EPA RBC - Tap Water			
(LAB: Energy Labs Inc. unless noted.)			

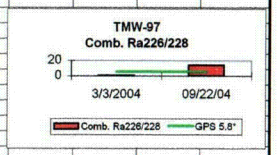


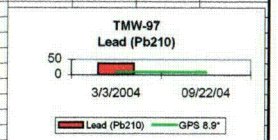






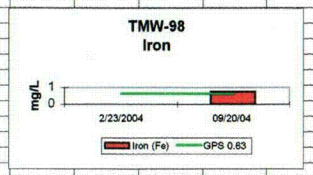


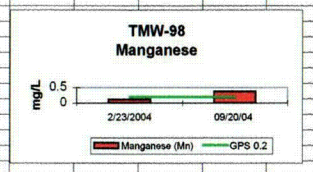


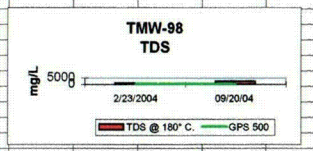


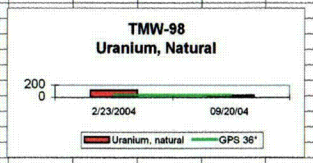
C10

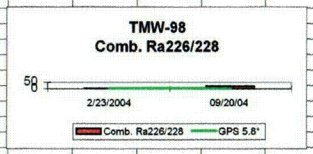
KENNECOTT URANIUM COMPANY			
TMW-98			
NORTHING: 148699.84 EASTING: 323810.19	Groundwater Protection	2004	
ND = Non-detectable	Standard	2/23/2004	09/20/04
FIELD DATA mg/l:	**(GPS)**		
Temperature (C)	*as of 5/28/98	8	10
pH (Std. Units)		7.9	6.7
Cond. (umho/cm)		560	1160
TDS			
MAJOR IONS mg/l:			
Alk-CaCO3		108	141
Bicarbonate (HCO3)		132	172
Calcium (Ca)		189	546
Carbonate (CO3)		-1	-1
Chloride (Cl)		36	107
Fluoride (F)		0.2	-0.1
Magnesium (Mg)		16.2	45.1
Nitrate-N (NO3)		-0.1	-0.1
Potassium (K)		4.9	8.3
Silica (SiO2)		10.7	14
Sodium (Na)		56.3	89.6
Sulfate (SO4)		508	1410
NON-METALS:			
Cyanide (CN)		-0.005	-0.005
PHYSICAL PROPERTIES:			
Cond (umho/cm)		1220	2520
pH	GPS 6.8	7.8	7.17
TDS @ 180° C.	GPS 500	905	2400
METALS-DISSOLVED mg/l:			
Aluminum (Al)	GPS 1.80	-0.1	-0.1
Arsenic (As)	GPS 0.05	0.002	0.002
Barium (Ba)		-0.1	-0.1
Beryllium (Be)	GPS 0.01	-0.01	-0.01
Boron (B)		-0.1	-0.1
Cadmium (Cd)	GPS 0.01	-0.005	-0.005
Chromium (Cr)	GPS 0.05	-0.01	-0.01
Cobalt (Co)		0.002	0.001
Copper (Cu)		-0.01	-0.01
Iron (Fe)	GPS 0.63	-0.05	0.75
Lead (Pb)		-0.01	-0.01
Manganese (Mn)	GPS 0.2	0.11	0.38
Mercury (Hg)		-0.0002	-0.0002
Molybdenum (Mo)		-0.01	-0.01
Nickel (Ni)	GPS 0.01	-0.01	-0.01
Selenium (Se)	GPS 0.01	0.003	0.003
Silver (Ag)		-0.01	-0.01
Thallium (Tl)		-0.01	-0.01
Vanadium (V2O5)		-0.1	-0.1
Zinc (ZN)		-0.01	0.01
RADIOMETRIC pCi/l:			
Uranium, natural	GPS 36*	118	35.4
Radium 226		2.6	8.1
Radium Precision +/-		0.5	0.9
Radium 228		-1	11.7
Radium Precision +/-			1.7
Comb. Ra226/228	GPS 5.8*	2.6	19.8
Thorium 230	GPS 7.0*	-0.2	-0.2
Thorium Precision +/-			
Lead (Pb210)	GPS 8.9*	-1	-1
Lead Precision +/-			
Gross Alpha	GPS 15*	2.9	5.3
Gross Alpha Precision +/-		1.2	1.3
QUALITY ASSURANCE DATA:			
TDS A/C Balance (dec. %)		1.03	1.04
ORGANICS mg/L:			
Diesel Range Organics (DRO)	GPS 10 (3)	ND	
Gasoline Range Organics (GRO)	GPS 10 (3)	ND	
VOLATILE ORGANIC COMPOUNDS mg/L:			
1,1-Dichloroethane	GPS 3 (2)	ND	
1,1-Dichloroethene	GPS 0.007 (1)	ND	
Naphthalene	GPS 1.3 (2)	ND	
Toluene	GPS 1 (1)	ND	
1,1,1-Trichloroethane	GPS 0.20 (1)	ND	
1,2,4-Trimethylbenzene	GPS 0.012 (4)	ND	
1,3,5-Trimethylbenzene	GPS 0.012 (4)	ND	
m+p Xylenes	GPS 10 (1)	ND	
(1) - EPA MCL			
(2) - WY Drinking Water Equivalent Level			
(3) - WY VRP, Fact Sheet 12			
(4) - EPA RBC - Tap Water			
(LAB: Energy Labs Inc. unless noted.)			





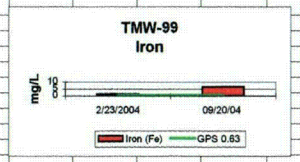


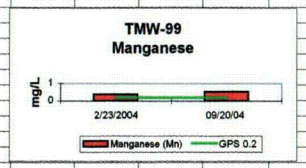


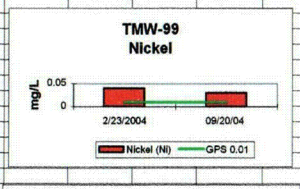


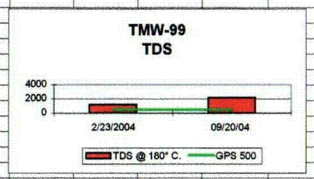
C11

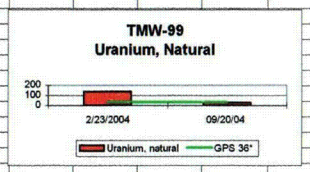
KENNECOTT URANIUM COMPANY			
TMW-99			
NORTHING: 148707.32 EASTING: 323898.85	Groundwater Protection	2004	
ND = Non-detectable	Standard	2/23/2004	09/20/04
FIELD DATA mg/l:	**(GPS)**		
Temperature (C)	*as of 5/28/98	8	13
pH (Std. Units)		7.5	6.8
Cond. (umho/cm)		960	1100
TDS			
MAJOR IONS mg/l:			
Alk-CaCO3		111	139
Bicarbonate (HCO3)		135	169
Calcium (Ca)		230	486
Carbonate (CO3)		-1	-1
Chloride (Cl)		17.6	60
Fluoride (F)		0.2	0.1
Magnesium (Mg)		27.7	43.7
Nitrate-N (NO3)		0.1	-0.1
Potassium (K)		10.2	6.9
Silica (SiO2)		9.9	15
Sodium (Na)		78.6	85.8
Sulfate (SO4)		732	1240
NON-METALS:			
Cyanide (CN)		-0.005	-0.005
PHYSICAL PROPERTIES:			
Cond (umho/cm)		1580	2390
pH	GPS 6.8	7.55	6.92
TDS @ 180° C.	GPS 500	1190	2180
METALS-DISSOLVED mg/l:			
Aluminum (Al)	GPS 1.80	-0.1	-0.1
Arsenic (As)	GPS 0.05	-0.001	0.004
Barium (Ba)		-0.1	-0.1
Beryllium (Be)	GPS 0.01	-0.01	-0.01
Boron (B)		-0.1	-0.1
Cadmium (Cd)	GPS 0.01	-0.005	-0.005
Chromium (Cr)	GPS 0.05	-0.01	-0.01
Cobalt (Co)		0.024	0.028
Copper (Cu)		-0.01	-0.01
Iron (Fe)	GPS 0.63	1.43	6.56
Lead (Pb)		-0.01	-0.01
Manganese (Mn)	GPS 0.2	0.38	0.54
Mercury (Hg)		-0.0002	-0.0002
Molybdenum (Mo)		-0.01	-0.01
Nickel (Ni)	GPS 0.01	0.04	0.03
Selenium (Se)	GPS 0.01	0.001	0.002
Silver (Ag)		-0.01	-0.01
Thallium (Tl)		-0.01	-0.01
Vanadium (V2O5)		-0.1	-0.1
Zinc (ZN)		0.01	0.02
RADIOMETRIC pCi/l:			
Uranium, natural	GPS 36*	138	28.6
Radium 226		3.8	7.3
Radium Precision +/-		0.6	0.8
Radium 228		-1	11.1
Radium Precision +/-			1.7
Comb. Ra226/228	GPS 5.8*	3.8	18.4
Thorium 230	GPS 7.0*	-0.2	-0.2
Thorium Precision +/-			
Lead (Pb210)	GPS 8.9*	-1	-1
Lead Precision +/-			
Gross Alpha	GPS 15*	8.1	5.4
Gross Alpha Precision +/-		1.4	1.3
QUALITY ASSURANCE DATA:			
TDS A/C Balance (dec. %)		1.03	1.07
ORGANICS mg/L:			
Diesel Range Organics (DRO)	GPS 10 (3)	ND	
Gasoline Range Organics (GRO)	GPS 10 (3)	ND	
VOLATILE ORGANIC COMPOUNDS mg/L:			
1,1-Dichloroethane	GPS 3 (2)	ND	
1,1-Dichloroethene	GPS 0.007 (1)	ND	
Naphthalene	GPS 1.3 (2)	ND	
Toluene	GPS 1 (1)	ND	
1,1,1-Trichloroethane	GPS 0.20 (1)	ND	
1,2,4-Trimethylbenzene	GPS 0.012 (4)	ND	
1,3,5-Trimethylbenzene	GPS 0.012 (4)	ND	
m+p Xylenes	GPS 10 (1)	ND	
(1) - EPA MCL			
(2) - WY Drinking Water Equivalent Level			
(3) - WY VRP, Fact Sheet 12			
(4) - EPA RBC - Tap Water			
(LAB: Energy Labs Inc. unless noted.)			

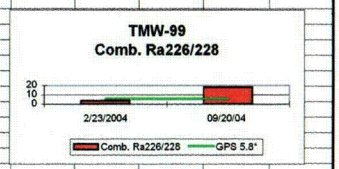






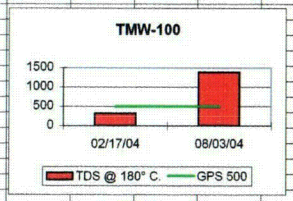


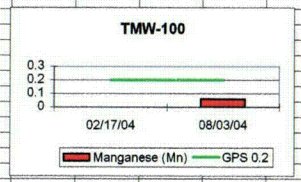


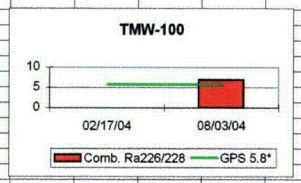


C12

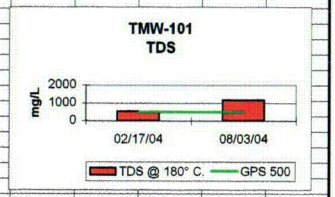
KENNECOTT URANIUM COMPANY			
TMW-100			
NORTHING: 148799.77 EASTING: 324004.42	Groundwater Protection		
ND = Non-detectable	Standard	02/17/04	08/03/04
FIELD DATA mg/l:	**(GPS)**		
Temperature (C)	*as of 5/28/98	8	13
pH (Std. Units)		7.8	8.8
Cond. (umho/cm)		400	800
TDS			
MAJOR IONS mg/l:			
Alk-CaCO3		19.8	45
Bicarbonate (HCO3)		21.5	55
Calcium (Ca)		45.1	274
Carbonate (CO3)		1.6	ND
Chloride (Cl)		6.4	32
Fluoride (F)		0.2	0.1
Magnesium (Mg)		4.9	24.8
Nitrate-N (NO3)		-0.1	ND
Potassium (K)		4.2	5.5
Silica (SiO2)		10.9	8
Sodium (Na)		47.2	64.9
Sulfate (SO4)		197	745
NON-METALS:			
Cyanide (CN)		-0.005	ND
PHYSICAL PROPERTIES:			
Cond (umho/cm)		520	1520
pH	GPS 6.8	9.12	7.67
TDS @ 180° C.	GPS 500	313	1380
METALS-DISSOLVED mg/l:			
Aluminum (Al)	GPS 1.80	-0.1	ND
Arsenic (As)	GPS 0.05	0.002	0.003
Barium (Ba)		-0.1	ND
Beryllium (Be)	GPS 0.01	-0.01	ND
Boron (B)		-0.1	ND
Cadmium (Cd)	GPS 0.01	-0.005	ND
Chromium (Cr)	GPS 0.05	-0.01	ND
Cobalt (Co)		-0.001	ND
Copper (Cu)		-0.01	ND
Iron (Fe)	GPS 0.63	-0.05	ND
Lead (Pb)		-0.01	ND
Manganese (Mn)	GPS 0.2	-0.01	0.06
Mercury (Hg)		0.0015	0.0016
Molybdenum (Mo)		0.01	ND
Nickel (Ni)	GPS 0.01	-0.01	ND
Selenium (Se)	GPS 0.01	0.002	0.002
Silver (Ag)		-0.01	ND
Thallium (Tl)		-0.01	ND
Vanadium (V2O5)		-0.1	ND
Zinc (ZN)		-0.01	0.31
RADIOMETRIC pCi/l:			
Uranium, natural	GPS 36*	19.2	35
Radium 226		-0.2	4.2
Radium Precision +/-			0.7
Radium 228		-1	2.7
Radium Precision +/-			1
Comb. Ra226/228	GPS 5.8*	0	6.9
Thorium 230	GPS 7.0*	-0.2	ND
Thorium Precision +/-			
Lead (Pb210)	GPS 8.9*	-1	ND
Lead Precision +/-			
Gross Alpha	GPS 15*	-1	5.7
Gross Alpha Precision +/-			1.5
QUALITY ASSURANCE DATA:			
TDS A/C Balance (dec. %)		0.99	
ORGANICS mg/L:			
Diesel Range Organics (DRO)	GPS 10 (3)	ND	
Gasoline Range Organics (GRO)	GPS 10 (3)	ND	
VOLATILE ORGANIC COMPOUNDS mg/L:			
1,1-Dichloroethane	GPS 3 (2)	ND	
1,1-Dichloroethene	GPS 0.007 (1)	ND	
Naphthalene	GPS 1.3 (2)	ND	
Toluene	GPS 1 (1)	ND	
1,1,1-Trichloroethane	GPS 0.20 (1)	ND	
1,2,4-Trimethylbenzene	GPS 0.012 (4)	ND	
1,3,5-Trimethylbenzene	GPS 0.012 (4)	ND	
m+p Xylenes	GPS 10 (1)	ND	
(1) - EPA MCL			
(2) - WY Drinking Water Equivalent Level			
(3) - WY VRP, Fact Sheet 12			
(4) - EPA RBC - Tap Water			
(LAB: Energy Labs Inc. unless noted.)			

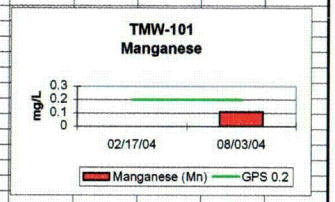






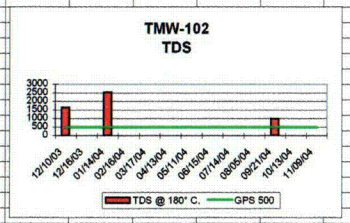
KENNECOTT URANIUM COMPANY			
TMW-101			
NORTHING: 148,800.10	Groundwater	2004	
EASTING: 324,100.06	Protection		
ND = Non-detectable	Standard	02/17/04	08/03/04
FIELD DATA mg/l:	**(GPS)**		
Temperature (C)	*as of 5/28/98	8	13
pH (Std. Units)		9.8	7.4
Cond. (umho/cm)		640	840
TDS			
MAJOR IONS mg/l:			
Alk-CaCO3		20.2	81
Bicarbonate (HCO3)		17.1	99
Calcium (Ca)		73.9	232
Carbonate (CO3)		4.5	ND
Chloride (Cl)		9.4	27
Fluoride (F)		0.5	0.2
Magnesium (Mg)		2.5	20.5
Nitrate-N (NO3)		-0.1	ND
Potassium (K)		7	4.4
Silica (SiO2)		20.3	13
Sodium (Na)		93.7	57.2
Sulfate (SO4)		355	602
NON-METALS:			
Cyanide (CN)		-0.005	ND
PHYSICAL PROPERTIES:			
Cond (umho/cm)		820	1310
pH	GPS 6.8	9.67	7.54
TDS @ 180° C.	GPS 500	533	1170
METALS-DISSOLVED mg/l:			
Aluminum (Al)	GPS 1.80	-0.1	ND
Arsenic (As)	GPS 0.05	0.007	ND
Barium (Ba)		-0.1	ND
Beryllium (Be)	GPS 0.01	-0.01	ND
Boron (B)		-0.1	ND
Cadmium (Cd)	GPS 0.01	-0.005	ND
Chromium (Cr)	GPS 0.05	-0.01	ND
Cobalt (Co)		-0.001	ND
Copper (Cu)		-0.01	ND
Iron (Fe)	GPS 0.63	-0.05	ND
Lead (Pb)		-0.01	ND
Manganese (Mn)	GPS 0.2	-0.01	0.11
Mercury (Hg)		0.004	0.001
Molybdenum (Mo)		0.01	ND
Nickel (Ni)	GPS 0.01	-0.01	ND
Selenium (Se)	GPS 0.01	0.006	0.002
Silver (Ag)		-0.01	ND
Thallium (Tl)		-0.01	ND
Vanadium (V2O5)		-0.1	ND
Zinc (ZN)		-0.01	0.01
RADIOMETRIC pCi/l:			
Uranium, natural	GPS 36*	27.1	18.4
Radium 226		0.8	2.6
Radium Precision +/-		0.5	0.6
Radium 228		-1	3
Radium Precision +/-			1
Comb. Ra226/228	GPS 5.8*	0.8	5.6
Thorium 230	GPS 7.0*	-0.2	ND
Thorium Precision +/-			
Lead (Pb210)	GPS 8.9*	-1	ND
Lead Precision +/-			
Gross Alpha	GPS 15*	-1	2.7
Gross Alpha Precision +/-			1.1
QUALITY ASSURANCE DATA:			
TDS A/C Balance (dec. %)		0.96	1.17
ORGANICS mg/L:			
Diesel Range Organics (DRO)	GPS 10 (3)	ND	
Gasoline Range Organics (GRO)	GPS 10 (3)	ND	
VOLATILE ORGANIC COMPOUNDS mg/L:			
1,1-Dichloroethane	GPS 3 (2)	ND	
1,1-Dichloroethene	GPS 0.007 (1)	ND	
Naphthalene	GPS 1.3 (2)	ND	
Toluene	GPS 1 (1)	ND	
1,1,1-Trichloroethane	GPS 0.20 (1)	ND	
1,2,4-Trimethylbenzene	GPS 0.012 (4)	ND	
1,3,5-Trimethylbenzene	GPS 0.012 (4)	ND	
m+p Xylenes	GPS 10 (1)	ND	
(1) - EPA MCL			
(2) - WY Drinking Water Equivalent Level			
(3) - WY VRP, Fact Sheet 12			
(4) - EPA RBC - Tap Water			
(LAB: Energy Labs Inc. unless noted.)			

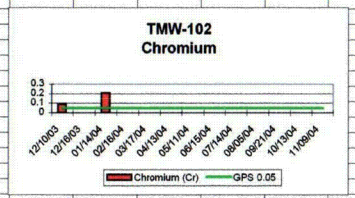


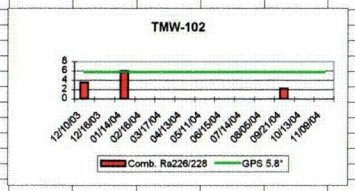


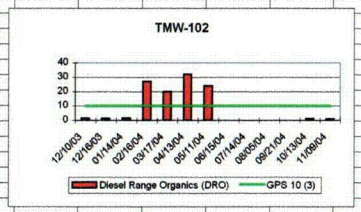
KENNECOTT URANIUM COMPANY														
TMW-102														
NORTHING: 148,600.02	Groundwater	2003		2004										
EASTING: 323,968.63	Protection													
ND = Non-detectable	Standard	12/10/03	12/16/03	01/14/04	02/16/04	03/17/04	04/13/04	05/11/04	06/15/04	07/14/04	08/05/04	09/21/04	10/13/04	11/09/04
FIELD DATA mg/l:	**(GPS)**													
Temperature (C)	*as of 5/28/98	8		8	8	8	10	11	12	12	12	9	10	9
pH (Std. Units)		11.7		13.3	13.4	12.8	12.7	12.5	13.2	12.3	12.1	12.3	12.4	12.4
Cond. (umho/cm)		3800		5800	4400	4600	3400	3400	5200	3400	2600	3800	2800	2800
TDS														
MAJOR IONS mg/l:														
Alk-CaCO3		1080		1900								862		
Bicarbonate (HCO3)		2.4		7.8								56		
Calcium (Ca)		470		758								301		
Carbonate (CO3)		212		1380								598		
Chloride (Cl)		5.1		6.4								7		
Fluoride (F)		0.2		0.2								0.2		
Magnesium (Mg)		-1		-1								ND		
Nitrate-N (NO3)		-0.1		-0.1								ND		
Potassium (K)		95.5		217								41.6		
Silica (SiO2)		3.9		-1								1		
Sodium (Na)		63.5		111								70.3		
Sulfate (SO4)		407		370								105		
NON-METALS:														
Cyanide (CN)		-0.005		-0.005								ND		
PHYSICAL PROPERTIES:														
Cond (umho/cm)		5420		8780								3910		
pH	GPS 6.8	12.2		12.5								11.3		
TDS @ 180° C.	GPS 500	1640		2530								980		
METALS-DISSOLVED mg/l:														
Aluminum (Al)	GPS 1.80	-0.1		-0.1								ND		
Arsenic (As)	GPS 0.05	-0.001		-0.001								ND		
Barium (Ba)		0.2		0.3								0.3		
Beryllium (Be)	GPS 0.01	-0.01		-0.01								ND		
Boron (B)		-0.1		-0.1								ND		
Cadmium (Cd)	GPS 0.01	-0.005		-0.005								ND		
Chromium (Cr)	GPS 0.05	0.09		0.21								ND		
Cobalt (Co)		-0.001		0.001								ND		
Copper (Cu)		-0.01		-0.01								ND		
Iron (Fe)	GPS 0.63	-0.05		-0.05								ND		
Lead (Pb)		0.02		0.16								0.02		
Manganese (Mn)	GPS 0.2	-0.01		-0.01								ND		
Mercury (Hg)		-0.0002		-0.0002								ND		
Molybdenum (Mo)		0.03		0.04								ND		
Nickel (Ni)	GPS 0.01	-0.01		-0.01								ND		
Selenium (Se)	GPS 0.01	0.003		0.007								ND		
Silver (Ag)		-0.01		-0.01								0.09		
Thallium (Tl)		-0.01		-0.01								ND		
Vanadium (V2O5)		-0.1		-0.1								ND		
Zinc (ZN)		-0.01		-0.01								ND		
RADIOMETRIC pCi/l:														
Uranium, natural	GPS 36*	-0.2		-0.2								ND		
Radium 226		3.5		2.4								2.2		
Radium Precision +/-		0.6		0.9								0.5		
Radium 228		-1		3.6								ND		
Radium Precision +/-				2										
Comb. Ra226/228	GPS 5.8*	3.5		6								2.2		
Thorium 230	GPS 7.0*	-0.2		0.2								ND		
Thorium Precision +/-				0.3										
Lead (Pb210)	GPS 8.9*	-2.7		-2.7								ND		
Lead Precision +/-														
Gross Alpha	GPS 15*	3.6		2.2								1.9		
Gross Alpha Precision +/-		1.1		1								1		
QUALITY ASSURANCE DATA:														
TDS A/C Balance (dec. %)		0.97		0.97								0.94		
ORGANICS mg/L:														
Diesel Range Organics (DRO)	GPS 10 (3)	1.5	1.3	1.6	27	20	32	24	ND	ND	ND	ND	1.2	1
Gasoline Range Organics (GRO)	GPS 10 (3)	ND	ND	0.041		0.088		0.099	ND	ND	ND	ND	ND	ND
VOLATILE ORGANIC COMPOUNDS mg/L:														
1,1-Dichloroethane	GPS 3 (2)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	GPS 0.007 (1)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	GPS 1.3 (2)	0.003	0.012	0.016	0.021	0.012	0.016	0.02	0.0011	ND	ND	ND	ND	ND
Toluene	GPS 1 (1)	ND	ND	ND	ND	ND	ND	ND	0.0054	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	GPS 0.20 (1)	ND	ND	ND	ND	0.001	0.0011	0.0013	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	GPS 0.012 (4)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	GPS 0.012 (4)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
m+p Xylenes	GPS 10 (1)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

(1) - EPA MCL
(2) - WY Drinking Water Equivalent Level
(3) - WY VRP, Fact Sheet 12
(4) - EPA RBC - Tap Water
(LAB: Energy Labs Inc. unless noted.)



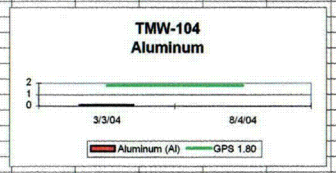


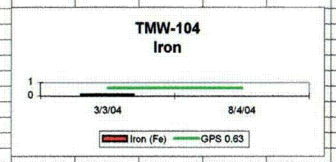


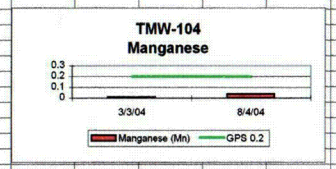


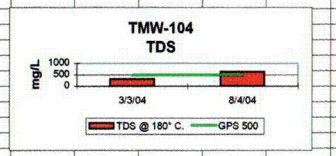
C15

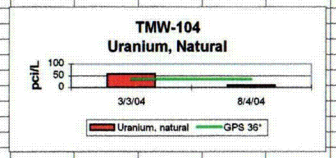
KENNECOTT URANIUM COMPANY			
TMW-104			
NORTHING: 148,508.55	Groundwater	2004	
EASTING: 324,122.60	Protection		
ND = Non-detectable	Standard	3/3/04	8/4/04
FIELD DATA mg/l:	**(GPS)**		
Temperature (C)	*as of 5/28/98	8	15
pH (Std. Units)		8.9	7.2
Cond. (umho/cm)		380	580
TDS			
MAJOR IONS mg/l:			
Alk-CaCO3		90.2	119
Bicarbonate (HCO3)		107	145
Calcium (Ca)		39.9	123
Carbonate (CO3)		1.9	ND
Chloride (Cl)		4.2	12
Fluoride (F)		0.2	0.2
Magnesium (Mg)		4.3	11.7
Nitrate-N (NO3)		0.27	ND
Potassium (K)		3.5	2.8
Silica (SiO2)		9.4	11
Sodium (Na)		54	49.5
Sulfate (SO4)		131	286
NON-METALS:			
Cyanide (CN)		-0.005	ND
PHYSICAL PROPERTIES:			
Cond (umho/cm)		490	838
pH	GPS 6.8	8.49	7.69
TDS @ 180° C.	GPS 500	306	636
METALS-DISSOLVED mg/l:			
Aluminum (Al)	GPS 1.80	0.1	ND
Arsenic (As)	GPS 0.05	0.005	ND
Barium (Ba)		-0.1	ND
Beryllium (Be)	GPS 0.01	-0.01	ND
Boron (B)		-0.1	ND
Cadmium (Cd)	GPS 0.01	-0.005	ND
Chromium (Cr)	GPS 0.05	-0.01	ND
Cobalt (Co)		-0.001	ND
Copper (Cu)		-0.01	ND
Iron (Fe)	GPS 0.63	0.135	ND
Lead (Pb)		-0.01	ND
Manganese (Mn)	GPS 0.2	0.01	0.04
Mercury (Hg)		0.0004	ND
Molybdenum (Mo)		-0.01	ND
Nickel (Ni)	GPS 0.01	-0.01	ND
Selenium (Se)	GPS 0.01	-0.001	ND
Silver (Ag)		-0.01	ND
Thallium (Tl)		-0.01	ND
Vanadium (V2O5)		-0.1	ND
Zinc (ZN)		-0.01	ND
RADIOMETRIC pCi/l:			
Uranium, natural	GPS 36*	57.1	9.2
Radium 226		-0.2	1.5
Radium Precision +/-			0.5
Radium 228		-1	3.3
Radium Precision +/-			1.4
Comb. Ra226/228	GPS 5.8*	0	4.8
Thorium 230	GPS 7.0*	0.2	ND
Thorium Precision +/-		0.2	
Lead (Pb210)	GPS 8.9*	-1	ND
Lead Precision +/-			
Gross Alpha	GPS 15*	-1	1.7
Gross Alpha Precision +/-			1.1
QUALITY ASSURANCE DATA:			
TDS A/C Balance (dec. %)		1.04	1.12
ORGANICS mg/L:			
Diesel Range Organics (DRO)	GPS 10 (3)	ND	
Gasoline Range Organics (GRO)	GPS 10 (3)	ND	
VOLATILE ORGANIC COMPOUNDS mg/L:			
1,1-Dichloroethane	GPS 3 (2)	ND	
1,1-Dichloroethene	GPS 0.007 (1)	ND	
Naphthalene	GPS 1.3 (2)	ND	
Toluene	GPS 1 (1)	ND	
1,1,1-Trichloroethane	GPS 0.20 (1)	ND	
1,2,4-Trimethylbenzene	GPS 0.012 (4)	ND	
1,3,5-Trimethylbenzene	GPS 0.012 (4)	ND	
m+p Xylenes	GPS 10 (1)	ND	
(1) - EPA MCL			
(2) - WY Drinking Water Equivalent Level			
(3) - WY VRP, Fact Sheet 12			
(4) - EPA RBC - Tap Water			
(LAB: Energy Labs Inc. unless noted.)			











C/C

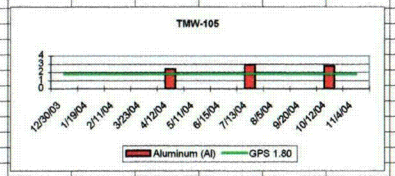
KENNECOTT URANIUM COMPANY

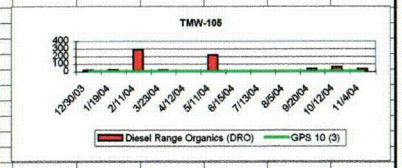
TMW-105

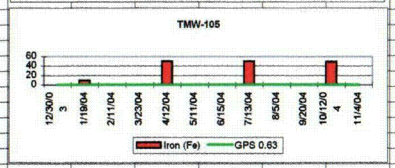
NORTHING: 148,581.02
EASTING: 323,943.82

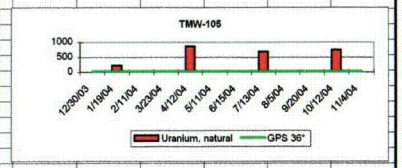
ND = Non-detectable	Groundwater Protection Standard (GPS)	2003 12/30/03	2004 1/19/04	2/11/04	3/23/04	4/12/04	5/11/04	6/15/04	7/13/04	8/5/04	9/20/04	10/12/04	11/4/04
FIELD DATA mg/l:													
Temperature (C)	*as of 5/28/98		8	8	6	19	21	28	40	24	21	27	11
pH (Std. Units)			6.8	5	5.11	3.6	3.9	3.5	51	3.8	4	3.7	4
Cond. (umho/cm)			800	1420	1100	1120	1380	1400	580	1100	1080	1140	920
TDS													
MAJOR IONS mg/l:													
Alk-CaCO3			39.5			1.6			-1			-1	
Bicarbonate (HCO3)			48.2			1.9			-1			-1	
Calcium (Ca)			168			303			334			328	
Carbonate (CO3)			-1			-1			-1			-1	
Chloride (Cl)			23			67.3			56			66	
Fluoride (F)			0.2			0.4			0.4			0.4	
Magnesium (Mg)			24.8			51.4			62.9			49.6	
Nitrate-N (NO3)			-0.1			-0.1			-0.1			-0.1	
Potassium (K)			5.8			6.5			6			6.9	
Silica (SiO2)			28			53.1			51			53	
Sodium (Na)			60.5			73			92			70	
Sulfate (SO4)			637			1160			1290			1060	
NON-METALS:													
Cyanide (CN)			-0.005			-0.005			-0.005			-0.005	
PHYSICAL PROPERTIES:													
Cond (umho/cm)			1300			2180			5840			2380	
pH	GPS 6.8		6.54			4.7			2.01			4.66	
TDS @ 180° C.	GPS 500		964			1880			2330			1850	
METALS-DISSOLVED mg/l:													
Aluminum (Al)	GPS 1.80		-0.1			2.4			2.9			2.8	
Arsenic (As)	GPS 0.05		-0.001			-0.001			0.002			0.001	
Barium (Ba)			-0.1			-0.1			-0.1			-0.1	
Beryllium (Be)	GPS 0.01		-0.01			-0.01			-0.01			-0.01	
Boron (B)			-0.1			0.16			0.2			0.2	
Cadmium (Cd)	GPS 0.01		-0.005			-0.005			-0.005			-0.005	
Chromium (Cr)	GPS 0.05		-0.01			-0.01			0.01			-0.01	
Cobalt (Co)			0.067			0.136			0.16			0.153	
Copper (Cu)			-0.01			0.01			0.03			0.02	
Iron (Fe)	GPS 0.63		9.41			50.5			50			49.1	
Lead (Pb)			-0.01			0.04			-0.03			0.04	
Manganese (Mn)	GPS 0.2		1.09			2.26			2.54			2.58	
Mercury (Hg)			-0.0002			-0.0002			-0.0002			-0.0002	
Molybdenum (Mo)			-0.01			-0.01			-0.08			-0.01	
Nickel (Ni)	GPS 0.01		0.08			0.13			0.15			0.17	
Selenium (Se)	GPS 0.01		0.01			0.013			0.018			0.021	
Silver (Ag)			-0.01			-0.01			-0.01			-0.01	
Thallium (Tl)			-0.01			-0.01			-0.01			-0.01	
Vanadium (V2O5)			-0.1			-0.1			-0.1			-0.1	
Zinc (ZN)			0.17			0.43			0.77			0.74	
RADIOMETRIC pCi/l:													
Uranium, natural	GPS 36*		228			858			692			741	
Radium 226			18.7			10.7			14.1			12	
Radium Precision +/-			1.5			1.1			1.3			1.1	
Radium 228			3.7			25.8			13.1			13	
Radium Precision +/-			1.5			2.4			1.2			1.6	
Comb. Ra226/228	GPS 5.8*		22.4			36.5			27.2			25	
Thorium 230	GPS 7.0*		-0.2			-0.2			-0.2			-0.2	
Thorium Precision +/-													
Lead (Pb210)	GPS 8.9*		-1			-1			-1			-1	
Lead Precision +/-													
Gross Alpha	GPS 15*		19.1			22.4			23.6			14.9	
Gross Alpha Precision +/-			1.4			1.3			1.5			1.1	
QUALITY ASSURANCE DATA:													
TDS A/C Balance (dec. %)			1.02			1.13			1.23			1.13	
ORGANICS mg/L:													
Diesel Range Organics (DRO)	GPS 10 (3)	22	25	290	20	15	220	14	5.2	15	40	57	32
Gasoline Range Organics (GRO)	GPS 10 (3)	ND	0.073		0.134	0.125	0.083	0.092	0.06	0.063	0.102	ND	ND
VOLATILE ORGANIC COMPOUNDS mg/L:													
1,1-Dichloroethane	GPS 3 (2)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	GPS 0.007 (1)	ND	ND	0.0026	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	GPS 1.3 (2)	ND	ND	0.12	0.048	0.041	0.054	0.023	0.0094	ND	ND	0.036	0.036
Toluene	GPS 1 (1)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	GPS 0.20 (1)	ND	0.013	0.02	ND	ND	ND	ND	ND	ND	ND	ND	0.0013
1,2,4-Trimethylbenzene	GPS 0.012 (4)	ND	ND	0.0062	ND	ND	ND	ND	ND	ND	0.0013	0.001	0.0015
1,3,5-Trimethylbenzene	GPS 0.012 (4)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
m+p Xylenes	GPS 10 (1)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

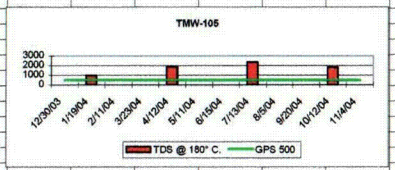
(1) - EPA MCL
(2) - WY Drinking Water Equivalent Level
(3) - WY VRP, Fact Sheet 12
(4) - EPA RBC - Tap Water
(LAB: Energy Labs Inc. unless noted.)

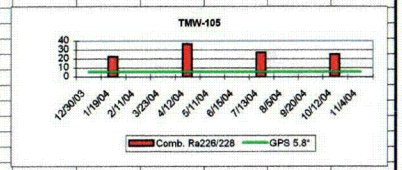


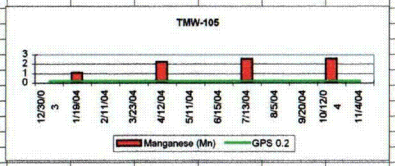


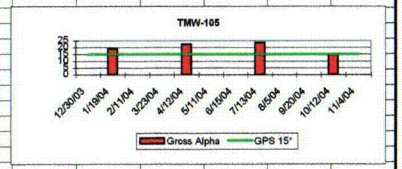


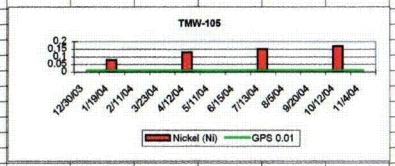


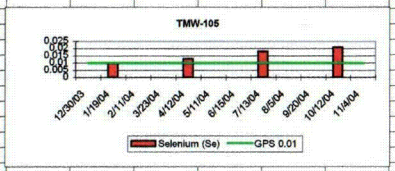






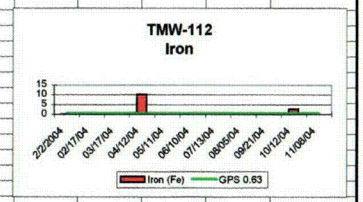


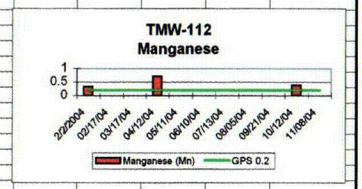


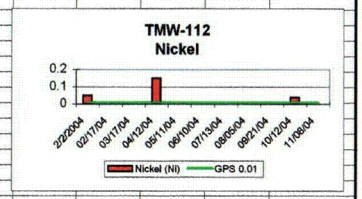


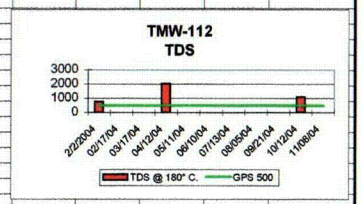
KENNECOTT URANIUM COMPANY						
TMW-111						
NORTHING: 148,800 06	Groundwater	2004				
EASTING: 324,200 03	Protection					
ND = Non-detectable	Standard	2/2/2004	02/11/04	08/04/04		
FIELD DATA mg/l:	(GPS)					
Temperature (C)	*as of 5/26/98	8	8	13		
pH (Std. Units)		12.2	11 3	8 6		
Cond. (umho/cm)		1400	820	240		
TDS						
MAJOR IONS mg/l:						
Alk-CaCO3		164		56		
Bicarbonate (HCO3)		18 5		69		
Calcium (Ca)		69 1		14.1		
Carbonate (CO3)		109		-1		
Chloride (Cl)		7.1		3		
Fluoride (F)		0 3		0 2		
Magnesium (Mg)		-1		1 3		
Nitrate-N (NO3)		-0.1		-0 1		
Potassium (K)		24 5		2 6		
Silica (SiO2)		15 1		11		
Sodium (Na)		55 5		41 7		
Sulfate (SO4)		95.1		63		
NON-METALS:						
Cyanide (CN)		-0 005		-0 005		
PHYSICAL PROPERTIES:						
Cond (umho/cm)		1100		285		
pH	GPS 6 5	11		7 92		
TDS @ 180° C.	GPS 500	364		199		
METALS-DISSOLVED mg/l:						
Aluminum (Al)	GPS 1 60	0.1		-0 1		
Arsenic (As)	GPS 0 05	0 004		0 002		
Barium (Ba)		-0.1		-0.1		
Beryllium (Be)	GPS 0 01	-0 01		-0 01		
Boron (B)		-0.1		-0.1		
Cadmium (Cd)	GPS 0 01	-0 005		-0 005		
Chromium (Cr)	GPS 0 05	0 01		-0 01		
Cobalt (Co)		-0 001		-0 001		
Copper (Cu)		-0 01		-0 01		
Iron (Fe)	GPS 0 63	-0 05		-0 05		
Lead (Pb)		-0 01		-0 01		
Manganese (Mn)	GPS 0 2	-0 01		-0 01		
Mercury (Hg)		0 0018		0 0006		
Molybdenum (Mo)		0 01		-0 01		
Nickel (Ni)	GPS 0 01	-0 01		-0 01		
Selenium (Se)	GPS 0 01	-0 001		-0 001		
Silver (Ag)		-0 01		-0 01		
Thallium (Tl)		-0 01		-0 01		
Vanadium (V2O5)		-0 1		-0.1		
Zinc (ZN)		-0 01		0.17		
RADIOMETRIC pCi/l:						
Uranium, natural	GPS 36*	-0 2		3 9		
Radium 226		0 6		0 4		
Radium Precision +/-		0.3		0 4		
Radium 228		-1		-1		
Radium Precision +/-						
Comb. Ra226/228	GPS 5 8*	0 5		0 4		
Thorium 230	GPS 7 0*	-0 2		-0 2		
Thorium Precision +/-						
Lead (Pb210)	GPS 8 9*	-1		-1		
Lead Precision +/-						
Gross Alpha	GPS 15*	1 6		-1		
Gross Alpha Precision +/-		1				
QUALITY ASSURANCE DATA:						
TDS A/C Balance (dec. %)		1 04		1 17		
ORGANICS:						
Diesel Range Organics (DRO)	GPS 10 (3)	ND	ND			
Gasoline Range Organics (GRO)	GPS 10 (3)					
VOLATILE ORGANIC COMPOUNDS mg/L:						
1,1-Dichloroethane	GPS 3 (2)	ND	ND			
1,1-Dichloroethene	GPS 0 007 (1)	ND	ND			
Naphthalene	GPS 1 3 (2)	ND	ND			
Toluene	GPS 1 (1)	ND	ND			
1,1,1-Trichloroethane	GPS 0 20 (1)	ND	ND			
1,2,4-Trimethylbenzene	GPS 0 012 (4)	ND	ND			
1,3,5-Trimethylbenzene	GPS 0 012 (4)	ND	ND			
m+p Xylenes	GPS 10 (1)	ND	ND			
(1) - EPA MCL						
(2) - WY Drinking Water Equivalent Level						
(3) - WY VRP, Fact Sheet 12						
(4) - EPA RBC - Tap Water						
(LAB: Energy Labs Inc. unless noted)						

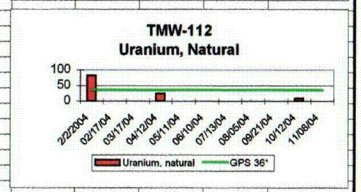
KENNECOTT URANIUM COMPANY												
TMW-112												
NORTHING: 148,700.09 EASTING: 324,199.95	Groundwater Protection	2004										
ND = Non-detectable	Standard	2/2/2004	02/17/04	03/17/04	04/12/04	05/11/04	06/10/04	07/13/04	08/05/04	09/21/04	10/12/04	11/08/04
FIELD DATA mg/l:	**(GPS)**											
Temperature (C)	*as of 5/28/98	8	8	8	10	10	12	15	15	13	13	12.8
pH (Std. Units)		8.4	6.1	5.8	5.8	6.8	6.7	7.6	6.7	7.1	6.8	7.1
Cond. (umho/cm)		1000	1400	1800	1200	1200	1020	760	920	780	760	800
TDS												
MAJOR IONS mg/l:												
Alk-CaCO3		88.8			37.5						92	
Bicarbonate (HCO3)		108			45.8						112	
Calcium (Ca)		153			396						227	
Carbonate (CO3)		-1			-1						-1	
Chloride (Cl)		11.4			37.5						19	
Fluoride (F)		0.2			0.2						0.2	
Magnesium (Mg)		20.2			47.5						24.6	
Nitrate-N (NO3)		-0.1			0.24						-0.1	
Potassium (K)		6.1			7.9						5	
Silica (SiO2)		10.3			14.1						13	
Sodium (Na)		67.4			81.7						57.5	
Sulfate (SO4)		474			1160						592	
NON-METALS:												
Cyanide (CN)		-0.005			-0.005						-0.005	
PHYSICAL PROPERTIES:												
Cond (umho/cm)		1090			2280						1420	
pH	GPS 6.8	8.09			6.33						7.44	
TDS @ 180° C.	GPS 500	771			2040						1100	
METALS-DISSOLVED mg/l:												
Aluminum (Al)	GPS 1.80	-0.1			-0.1						-0.1	
Arsenic (As)	GPS 0.05	-0.001			0.002						0.002	
Barium (Ba)		-0.1			-0.1						-0.1	
Beryllium (Be)	GPS 0.01	-0.01			-0.01						-0.01	
Boron (B)		-0.1			-0.1						-0.1	
Cadmium (Cd)	GPS 0.01	-0.005			-0.005						-0.005	
Chromium (Cr)	GPS 0.05	-0.01			-0.01						-0.01	
Cobalt (Co)		0.027			0.112						0.028	
Copper (Cu)		-0.01			-0.01						-0.01	
Iron (Fe)	GPS 0.63	0.164			10.2						2.62	
Lead (Pb)		-0.01			-0.01						-0.01	
Manganese (Mn)	GPS 0.2	0.33			0.71						0.38	
Mercury (Hg)		0.0004			-0.0002						-0.0002	
Molybdenum (Mo)		-0.01			-0.01						-0.01	
Nickel (Ni)	GPS 0.01	0.05			0.15						0.04	
Selenium (Se)	GPS 0.01	0.003			0.003						0.002	
Silver (Ag)		-0.01			-0.01						-0.01	
Thallium (Tl)		-0.01			-0.01						-0.01	
Vanadium (V2O5)		-0.1			-0.1						-0.1	
Zinc (ZN)		0.02			0.08						0.02	
RADIOMETRIC pCi/l:												
Uranium, natural	GPS 36*	82.6			25.1						9.4	
Radium 226		1.9			5.7						3.5	
Radium Precision +/-		0.5			0.8						0.6	
Radium 228		-1			19.8						4.4	
Radium Precision +/-					1.5						1.4	
Comb. Ra226/228	GPS 5.8*	1.9			25.5						7.9	
Thorium 230	GPS 7.0*	-0.2			-0.2						-0.2	
Thorium Precision +/-												
Lead (Pb210)	GPS 8.9*	-1			-1						-1	
Lead Precision +/-												
Gross Alpha	GPS 15*	2.6			2.5						3.8	
Gross Alpha Precision +/-		1			1						1.2	
QUALITY ASSURANCE DATA:												
TDS A/C Balance (dec. %)		0.98			1.16						1.11	
ORGANICS mg/L:												
Diesel Range Organics (DRO)	GPS 10 (3)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Gasoline Range Organics (GRO)	GPS 10 (3)		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VOLATILE ORGANIC COMPOUNDS mg/L:												
1,1-Dichloroethane	GPS 3 (2)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	GPS 0.007 (1)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	GPS 1.3 (2)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	GPS 1 (1)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	GPS 0.20 (1)	ND	0.0023	0.0019	0.0023	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	GPS 0.012 (4)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	GPS 0.012 (4)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
m+p Xylenes	GPS 10 (1)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
(1) - EPA MCL												
(2) - WY Drinking Water Equivalent Level												
(3) - WY VRP, Fact Sheet 12												
(4) - EPA RBC - Tap Water												
(LAB: Energy Labs Inc. unless noted.)												

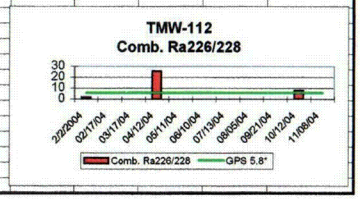












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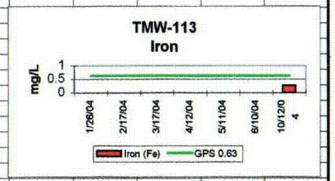
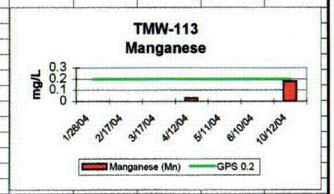
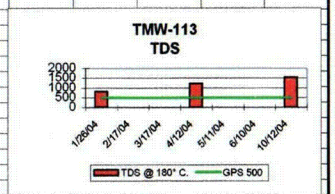
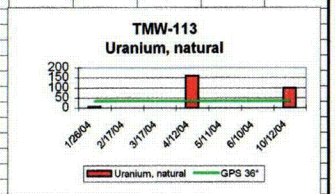
KENNECOTT URANIUM COMPANY								
TMW-113								
NORTHING: 148,600.06	Groundwater	2004						
EASTING: 324,199.95	Protection							
ND = Non-detectable	Standard	1/26/04	2/17/04	3/17/04	4/12/04	5/11/04	6/10/04	10/12/04
FIELD DATA mg/l:	**(GPS)**							
Temperature (C)	*as of 5/28/98	8	8	8	10	10	14	12
pH (Std. Units)		12.3	11.4	10.8	10.9	8.9	7.2	7.6
Cond. (umho/cm)		2400	1140	1800	780	1000	1200	900
TDS								
MAJOR IONS mg/l:								
Alk-CaCO3		260			22.8			98
Bicarbonate (HCO3)		8			26.8			120
Calcium (Ca)		178			236			335
Carbonate (CO3)		104			-1			-1
Chloride (Cl)		14.3			36.3			34
Fluoride (F)		0.4			0.2			0.1
Magnesium (Mg)		-1			21.6			28.5
Nitrate-N (NO3)		-0.1			-0.1			-0.1
Potassium (K)		14.8			9.1			5.4
Silica (SiO2)		8.1			7.6			12
Sodium (Na)		83.7			90.7			73.4
Sulfate (SO4)		391			752			838
NON-METALS:								
Cyanide (CN)		-0.005			-0.005			-0.005
PHYSICAL PROPERTIES:								
Cond (umho/cm)		1730			1560			1960
pH	GPS 6.8	11.4			8.56			7.76
TDS @ 180° C.	GPS 500	804			1230			1530
METALS-DISSOLVED mg/l:								
Aluminum (Al)	GPS 1.80	-0.1			-0.1			-0.1
Arsenic (As)	GPS 0.05	0.001			0.006			0.005
Barium (Ba)		-0.1			-0.1			-0.1
Beryllium (Be)	GPS 0.01	-0.01			-0.01			-0.01
Boron (B)		-0.1			-0.1			-0.1
Cadmium (Cd)	GPS 0.01	-0.005			-0.005			-0.005
Chromium (Cr)	GPS 0.05	-0.01			-0.01			-0.01
Cobalt (Co)		-0.001			-0.001			0.001
Copper (Cu)		-0.01			-0.01			-0.01
Iron (Fe)	GPS 0.63	-0.05			-0.05			0.27
Lead (Pb)		-0.01			-0.01			-0.01
Manganese (Mn)	GPS 0.2	-0.01			0.03			0.18
Mercury (Hg)		0.0007			0.0013			-0.0002
Molybdenum (Mo)		0.01			-0.01			-0.01
Nickel (Ni)	GPS 0.01	-0.01			-0.01			-0.01
Selenium (Se)	GPS 0.01	0.009			0.003			0.002
Silver (Ag)		-0.01			-0.01			-0.01
Thallium (Tl)		-0.01			-0.01			-0.01
Vanadium (V2O5)		-0.1			-0.1			-0.1
Zinc (ZN)		-0.01			-0.01			0.02
RADIOMETRIC pCi/l:								
Uranium, natural	GPS 36*	6.2			160			100
Radium 226		1.1			1.6			2.8
Radium Precision +/-		0.4			0.6			0.6
Radium 228		-1			3.8			8.2
Radium Precision +/-					1.1			1.5
Comb. Ra226/228	GPS 5.8*	1.1			5.4			11
Thorium 230	GPS 7.0*	-0.2			-0.2			-0.2
Thorium Precision +/-								
Lead (Pb210)	GPS 8.9*	-1			-1			-1
Lead Precision +/-								
Gross Alpha	GPS 15*	1.6			9.6			2.9
Gross Alpha Precision +/-		1			1.6			1.1
QUALITY ASSURANCE DATA:								
TDS A/C Balance (dec. %)		0.96			1.06			1.1
ORGANICS mg/L:								
Diesel Range Organics (DRO)	GPS 10 (3)	ND	ND	ND	ND	ND	ND	
Gasoline Range Organics (GRO)	GPS 10 (3)	ND	ND	ND	ND	ND	ND	
VOLATILE ORGANIC COMPOUNDS mg/L:								
1,1-Dichloroethane	GPS 3 (2)	ND	ND	ND	ND	ND	ND	
1,1-Dichloroethene	GPS 0.007 (1)	ND	ND	ND	ND	ND	ND	
Naphthalene	GPS 1.3 (2)	0.0022	0.0018	0.0014	ND	ND	ND	
Toluene	GPS 1 (1)	ND	ND	ND	ND	ND	ND	
1,1,1-Trichloroethane	GPS 0.20 (1)	ND	ND	ND	ND	ND	ND	
1,2,4-Trimethylbenzene	GPS 0.012 (4)	ND	ND	ND	ND	ND	ND	
1,3,5-Trimethylbenzene	GPS 0.012 (4)	ND	ND	ND	ND	ND	ND	
m+p Xylenes	GPS 10 (1)	ND	ND	ND	ND	ND	ND	
(1) - EPA MCL								
(2) - WY Drinking Water Equivalent Level								
(3) - WY VRP, Fact Sheet 12								
(4) - EPA RBC - Tap Water								
(LAB: Energy Labs Inc. unless noted.)								









C19

KENNECOTT URANIUM COMPANY

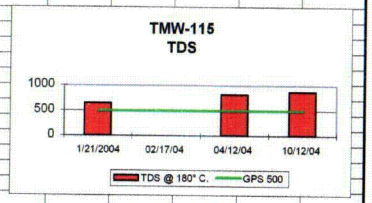
TMW-115

NORTHING: 148,499.96
EASTING: 324,199.79

ND = Non-detectable

	Groundwater Protection Standard (GPS)	2004 1/21/2004	02/17/04	04/12/04	10/12/04
FIELD DATA mg/l:					
Temperature (C)	*as of 5/28/98	8	8	11	11
pH (Std. Units)		12.5	12.3	12.1	11.2
Cond. (umho/cm)		1100	1360	1280	780
TDS					
MAJOR IONS mg/l:					
Alk-CaCO3		113		266	29
Bicarbonate (HCO3)		13.5		6	7
Calcium (Ca)		129		187	192
Carbonate (CO3)		74.5		191	17
Chloride (Cl)		9.7		8.9	16
Fluoride (F)		0.3		0.3	0.1
Hydroxide as OH		16.6		-1	
Magnesium (Mg)		1.2		-0.1	3.7
Nitrate-N (NO3)		-0.1		14.6	-0.1
Potassium (K)		13.5		14.6	10
Silica (SiO2)		15.1		8.8	4
Sodium (Na)		70.9		79.3	66.5
Sulfate (SO4)		308		353	557
NON-METALS:					
Cyanide (CN)		-0.005		-0.005	-0.005
PHYSICAL PROPERTIES:					
Cond (umho/cm)		1290		1860	1250
pH	GPS 6.8	11		11.8	10.6
TDS @ 180° C.	GPS 500	641		814	875
METALS-DISSOLVED mg/l:					
Aluminum (Al)	GPS 1.80	-0.1		-0.1	-0.1
Arsenic (As)	GPS 0.05	0.002		0.003	-0.001
Barium (Ba)		-0.1		-0.1	-0.1
Beryllium (Be)	GPS 0.01	-0.01		-0.01	-0.01
Boron (B)		-0.1		-0.1	-0.1
Cadmium (Cd)	GPS 0.01	-0.005		-0.005	-0.005
Chromium (Cr)	GPS 0.05	-0.01		-0.01	-0.01
Cobalt (Co)		-0.001		-0.001	-0.001
Copper (Cu)		-0.01		-0.01	-0.01
Iron (Fe)	GPS 0.63	-0.05		-0.05	-0.05
Lead (Pb)		-0.01		-0.01	-0.01
Manganese (Mn)	GPS 0.2	-0.01		-0.01	-0.01
Mercury (Hg)		0.0011		0.006	-0.0002
Molybdenum (Mo)		0.02		0.02	-0.01
Nickel (Ni)	GPS 0.01	-0.01		-0.01	-0.01
Selenium (Se)	GPS 0.01	0.007		0.002	0.002
Silver (Ag)		-0.01		-0.01	-0.01
Thallium (Tl)		-0.01		-0.01	-0.01
Vanadium (V2O5)		-0.1		-0.1	-0.1
Zinc (ZN)		-0.01		-0.01	-0.01
RADIOMETRIC pCi/l:					
Uranium, natural	GPS 36*	-0.2		0.4	0.4
Radium 226		1		1	1.2
Radium Precision +/-		0.4		0.5	0.4
Radium 228		-1		-1	-1
Radium Precision +/-					
Comb. Ra226/228	GPS 5.8*	1		1	1.2
Thorium 230	GPS 7.0*	-0.2		-0.2	-0.2
Thorium Precision +/-					
Lead (Pb210)	GPS 8.9*	-1		-1	-1
Lead Precision +/-					
Gross Alpha	GPS 15*	3.1		-1	1.1
Gross Alpha Precision +/-		1.1			1
QUALITY ASSURANCE DATA:					
TDS A/C Balance (dec. %)		1.07		1.01	1.01
ORGANICS mg/L:					
Diesel Range Organics (DRO)	GPS 10 (3)	ND	ND	ND	
Gasoline Range Organics (GRO)	GPS 10 (3)	ND	ND	ND	
VOLATILE ORGANIC COMPOUNDS mg/L:					
1,1-Dichloroethane	GPS 3 (2)	ND	ND	ND	
1,1-Dichloroethene	GPS 0.007 (1)	ND	ND	ND	
Naphthalene	GPS 1.3 (2)	ND	ND	ND	
Toluene	GPS 1 (1)	ND	ND	ND	
1,1,1-Trichloroethane	GPS 0.20 (1)	ND	ND	ND	
1,2,4-Trimethylbenzene	GPS 0.012 (4)	ND	ND	ND	
1,3,5-Trimethylbenzene	GPS 0.012 (4)	ND	ND	ND	
m+p Xylenes	GPS 10 (1)	ND	ND	ND	

(1) - EPA MCL
(2) - WY Drinking Water Equivalent Level
(3) - WY VRP, Fact Sheet 12
(4) - EPA RBC - Tap Water
(LAB: Energy Labs Inc. unless noted.)



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TMW-115