William Von Till
WM-60
Please docket

Department of Energy
Office of Legacy Management

NOV 17 2004

Mr. Don Aragon, Director
Wind River Environmental Quality Commission
Shoshone-Arapaho Tribes
P.O. Box 217
Ft. Washakie, WY 82514

Subject: Data Validation Package for Riverton, Wyoming Processing Site

Dear Mr. Aragon:

Enclosed is a copy of the Data Validation Package (DVP) for the Riverton, Wyoming, processing site. This DVP represents analyses of ground water and surface water samples that were collected in May 2004.

Ground water and surface water sampling results indicate that the natural flushing of the surficial aquifer is progressing. Samples collected from the hydrant locations within the alternate water supply system confirmed elevated radionuclide concentrations in the system; however, samples collected from tap locations at residences and from the water supply well for the system confirmed low concentrations of radionuclides indicating minimal impacts to human health from drinking water.

Should you have any questions, please contact me at (970) 248-6197.

Sincerely,

Tracy B. Plessinger
Site Manager

Enclosure

cc w/enclosure:
A. Barnard, EPA Tribal
J. Erickson, Wyoming Dept. of Environmental Quality
B. Weed, Wind River Environmental Quality Council
Riverton Branch Library

cc w/o enclosure:
Project File RVT 410.02 (D. Roberts)

tbp/riverton/rivdvp.doc

NMSS08

2597 B 3/4 Road, Grand Junction, CO 81503 • 3610 Collins Ferry Road, P.O. Box 880, Morgantown, WV 26507
626 Cochrans Mill Road, P.O. Box 10940, Pittsburgh, PA 15236 •
REPLY TO: Grand Junction Office

DATA VALIDATION
RIVERTON, WYOMING
PROCESSING SITE

May 2004
Water Sampling

Prepared by the
U.S. Department of Energy
Grand Junction, Colorado

Work Performed under DOE Contract No. DE-AC01-02GJ79491 for the U.S. Department of Energy, Grand Junction, Colorado.

DATA VALIDATION
RIVERTON, WYOMING
PROCESSING SITE

May 2004
Water Sampling

RIVERTON, WYOMING
PROCESSING SITE
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DATA PACKAGE CONTENTS

This data package includes the following information:

Item No.	Description of Contents

1. **Site Hydrologist Summary.**

2. **Data Assessment Summary,** which includes the following:

   a. Field Activities Verification Checklist.
   b. Laboratory Performance Assessment.
   c. Field Analyses/Activities.
   d. Certification.

3. **Assessment of Anomalous Data,** which includes the following:

   a. Suspected Anomalies Report.

4. **Data Presentation:**

   a. Alternate water supply system data (General Water Quality by Parameter).
   b. Ground water quality data (Classic Ground Water Quality by Parameter).
   c. Surface water quality data.
   d. Equipment blank data.
   e. Time versus concentration graphs.
   f. Static ground water level measurement data.

5. **Sampling and Analysis Work Order and Trip Report.**

6. **Sample Location Map.**

SITE HYDROLOGIST SUMMARY

SITE HYDROLOGIST SUMMARY

Site: Riverton, Wyoming, Processing Site

Sampling Period: May 18 to May 20, 2004

SUMMARY CRITERIA

1. **Did concentrations in water from any domestic wells sampled exceed a ground water standard, primary drinking water standard, or health advisory?**

   Nine locations on the alternate water supply system were sampled during this event including four tap locations, four hydrant locations, and the supply well for the system. Samples collected from all tap locations and the source well had low concentrations of radium-226 (below detection), radium-228 (below detection), gross alpha (< 2 pCi/L), and gross beta (< 4 pCi/L). Samples collected from all locations (including hydrants) had uranium concentrations less than 0.0002 mg/L, indicating minimal contribution to the alternate water supply system from site-related ground water contamination.

   All samples collected from hydrant locations, however, had elevated concentrations of radionuclides when compared to radionuclide concentrations in the sample collected from the supply well for the system. The sample collected from hydrant location 0820 exceeded primary drinking water standards for gross alpha (15 pCi/L) and radium-226 + radium-228 (5 pCi/L), with concentrations of 70.7 pCi/L and 15.91 pCi/L, respectively. Samples collected from hydrant locations 0818 and 0919 had gross alpha concentrations (16.4 pCi/L and 18.6 pCi/L, respectively) that also exceeded the gross alpha standard. Hydrant locations were sampled after 30 minutes of flushing.

2. **Were standards exceeded at any point-of-compliance wells?**

   The UMTRA ground water standards for molybdenum and uranium were exceeded in samples collected from the point-of compliance (POC) wells listed in Table 1.

3. **As a result of this sampling round, is there any indication of contaminated ground water movement?**

   Results from this sampling event do not indicate any unexpected movement of contaminated ground water. Concentrations of molybdenum and uranium in samples collected from semiconfined aquifer wells were below their respective standard. Although concentrations of molybdenum and uranium in the surficial aquifer currently exceed their respective UMTRA ground water standard, concentrations continue to decline as shown in the time versus concentration graphs, which are included in the Data Presentation section. Ground water modeling predicts that natural flushing of the surficial aquifer will reduce concentrations below standards within 100 years.

SITE HYDROLOGIST SUMMARY (continued)

4. **Is there statistical evidence that UMTRA Project related contaminants were detected in a surface water body in greater concentrations than upstream ambient water quality?**

Surface water results were compared to benchmark values for molybdenum (0.01 mg/L) and uranium (0.009 mg/L) derived from historical data at surface water location 0794, which is on the Little Wind River upstream of the site (see sample location map). Molybdenum and uranium concentrations from Little Wind River locations 0796, 0811, and 0812 were below their respective benchmark value, which indicates minimal impact on the water quality of the Little Wind River. In addition, molybdenum and uranium concentrations from surface water locations 0749 (Peak Sulfur effluent ditch), 0810 (constructed wetlands), and 0822 (west side irrigation ditch) were below their respective benchmark values, which indicates minimal site related impact to these surface water features.

Benchmark values for molybdenum and uranium were exceeded in the samples collected from the oxbow lake (location 0747). The oxbow lake receives discharge of contaminated ground water and elevated concentrations are expected and consistent with historical results. Locations downstream of the Peak Sulfur ditch had elevated concentrations of sulfate. Samples collected from locations 0749 (effluent ditch from Peak Sulfur) and 0822 (west side irrigation ditch) had sulfate concentrations of 2,300 mg/L and 1,500 mg/L, respectively. Sulfate concentrations at location 0749 have been highly variable as shown in the time versus concentration graph, which is included in the Data Presentation section.

Table 1. Riverton POC Wells with Samples that Exceeded UMTRA Standards in May 2004.

ANALYTE	STANDARD[1]	WELLS EXCEEDING STANDARDS (CONCENTRATION[1])
Molybdenum	0.100	0707 (0.730), 0716 (0.180), 0731 (0.120)
Uranium	0.044	0707 (0.970), 0716 (0.320), 0718 (0.210), 0722 (0.870)

[1] Standards are listed in 40 CFR 192.02 Table 1 to subpart A; concentrations are in mg/L.

Sam Campbell 8-9-04

Sam Campbell
Site Lead

Date

DATA ASSESSMENT SUMMARY

Water Sampling Field Activities Verification Checklist

Project	Riverton	Date(s) of Water Sampling	May 18 to May 20, 2004
Date(s) of Verification	July 27, 2004	Name of Verifier	Sam Campbell

	Response (Yes, No, N/A)	Comments
1. Is the SAP the primary document directing field procedures?	Yes	
List other documents, SOP's, instructions.		
2. Were the sampling locations specified in the planning documents sampled?	Yes	
3. Was a pre-trip calibration conducted as specified in the above named documents?	Yes	
4. Was an operational check of the field equipment conducted twice daily?	Yes	
Did the operational checks meet criteria?	Yes	
5. Were the number and types (alkalinity, temperature, Ec, pH, turbidity, DO, ORP) of field measurements taken as specified?	Yes	
6. Was the Category of the well documented?	Yes	
7. Were the following conditions met when purging a Category I well:		
Was one pump/tubing volume purged prior to sampling?	Yes	
Did the water level stabilize prior to sampling?	Yes	
Did pH, specific conductance, and turbidity measurements stabilize prior to sampling?	Yes	
Was the flow rate less than 500 mL/min?	Yes	
If a portable pump was used, was there a 4 hour delay between pump installation and sampling?	NA	

Water Sampling Field Activities Verification Checklist (continued)

8. Were the following conditions met when purging a Category II well:	Yes	
Was the flow rate less than 500 mL/min?	Yes	
Was one pump/tubing volume removed prior to sampling?	Yes	
9. Were duplicates taken at a frequency of one per 20 samples?	Yes	
10. Were equipment blanks taken at a frequency of one per 20 samples that were collected with nondedicated equipment?	Yes	
11. Were trip blanks prepared and included with each shipment of VOC samples?	NA	
12. Were QC samples assigned a fictitious site identification number?	Yes	
Was the true identity of the samples recorded on the Quality Assurance Sample Log?	Yes	
13. Were samples collected in the containers specified?	Yes	
14. Were samples filtered and preserved as specified?	Yes	
15. Were the number and types of samples collected as specified?	Yes	
16. Were chain of custody records completed and was sample custody maintained?	Yes	
17. Are field data sheets signed and dated by both team members?	Yes	
18. Was all other pertinent information documented on the field data sheets?	Yes	
19. Was the presence or absence of ice in the cooler documented at every sample location?	Yes	Except at water line locations where radiological samples collected did not require cooling.
20. Were water levels measured at the locations specified in the planning documents?	Yes	

DATA ASSESSMENT SUMMARY

Laboratory Performance Assessment

General Information

RIN: 04050063
Sample Event: May 2004
Site(s): Riverton, Wyoming
Laboratory: Paragon Analytics
Work Order: 0405199
Analyses: Metals, inorganics, radiochemistry

All analyses were successfully completed. Samples were prepared and analyzed using accepted procedures based on methods specified by line item code as listed in Table 2. The validation of laboratory data was performed according to the SMO Data Validation Procedure (Draft March 2004).

Table 2. Analytes and Methods

ANALYTE	LIC	PREP METHOD	ANALYTICAL METHOD
Uranium	GJO-01	SW-846 3005A	SW-846 6020
Molybdenum	GJO-15	SW-846 3005A	SW-846 6020
Manganese	GJO-17	SW-846 3005A	SW-846 6010
Sulfate	MIS-A-044	SW-846 9056	SW-846 9056
Radium-226	ASP-A-016	PAL SOP783R5	PAL SOP783R5
Gross Alpha/Beta	GPC-A-001	PAL SOP702R16	PAL SOP724R8
Radium-228	GPC-A-020	SW-846 9320	SW-846 9320

Data Qualifiers Summary

Selected results were qualified with a "U" flag (nondetect) or "J" flag (estimated) as shown in Table 3.

Table 3. Data Qualifiers Summary

SAMPLE NUMBER(S)	ANALYTE(S)	FLAG	REASON
0812	Manganese	J	Matrix spike failure
0735, 0809, 0810, 0710, 0811, 0794, 0723, 2254, 0812, 0796, 2255	Molybdenum	U	Blank result > IDL
0720, 0721, 0822, 0729, 0730, 0731, 0707, 0705, 0716, 2252, 0717, 0749, 0719, 0718, 0722, 0747, 2253	Molybdenum	J	ICSAB failure
0721, 0705, 0717, 0749, 0723, 0813, 0815, 0816, 0817, 0818, 0819, 0820, 0821, 2251, 2254, 2255	Uranium	U	Blank result > IDL
0814	Uranium	J	Matrix spike not performed
0813, 0814, 0816, 0817	Gross Alpha	J	Result less than 3 times MDC
0815, 0816, 0817	Gross Beta	J	Result less than 3 times MDC
0814, 0818	Radium-226	J	Result less than 3 times MDC
0821, 2251	Radium-228	J	Result less than 3 times MDC

DATA ASSESSMENT SUMMARY (continued)

Sample Shipping/Receiving

The laboratory received thirty-eight samples accompanied by a Chain of Custody (COC) form on May 22, 2004. Signatures and dates were present on the COC indicating proper sample relinquishment and receipt. Copies of the sample tickets were not originally included in the report. Paragon Analytics was contacted on July 12, 2004 with a request to provide copies, and the copies were received July 15, 2004. Sample tickets were complete and accurate.

Holding Times and Preservation

The sample shipment was received cool and intact. The cooler containing samples for metals and radiochemistry analysis was shipped at ambient temperature. The cooler containing samples for sulfate analysis was shipped on ice and was at a received by the laboratory at a temperature of 2° C. All samples were preserved correctly for the requested analyses. All samples were analyzed within the applicable holding times.

Calibration

Method SW-846 6010
Calibrations were performed in accordance with the procedure on June 4, 2004 and June 7, 2004. The initial calibrations were performed using five calibration standards resulting in r^2 values greater than 0.995. The absolute values of the intercepts were less than 3 times the method detection limit (MDL). Calibration and laboratory spike standards were prepared from independent sources. Initial and continuing calibration verification (ICV and CCV) checks were made at the required frequency resulting in 12 CCVs. All calibration checks met the acceptance criteria.

A Reporting Limit Verification check (CRI) was made at the required frequency to verify the linearity of the calibration curve near the practical quantitation limit. The CRI results met the acceptance criteria.

Method SW-846 6020
Calibrations were performed in accordance with the procedure on June 19, 2004 and June 21, 2004. The initial calibrations were performed using five calibration standards resulting in r^2 values greater than 0.995. The absolute value of the intercepts was less than 3 times the MDL. Calibration and laboratory spike standards were prepared from independent sources. ICV and CCV checks were made at the required frequency resulting in seven CCVs for molybdenum and fifteen CCVs for uranium. All calibration checks met the acceptance criteria.

A CRI was made at the required frequency to verify the linearity of the calibration curve near the practical quantitation limit. The CRI results were within the acceptance criteria.

The mass calibration and resolution was checked at the beginning of each analytical run in accordance with the procedure. Internal standard recoveries were stable and within acceptance ranges.

Method SW-845 9056
Calibrations were performed in accordance with the procedure using five calibration standards on June 3, 2004. The r^2 value was greater than 0.995. Initial calibration and calibration check standards were prepared from independent sources. Initial and continuing calibration checks were made at the required frequency resulting in five CCVs that met the acceptance criteria.

Method PAL SOP724R8
Plateau calibrations were performed within the last 6 months (January 28, 2004). Alpha attenuation, beta attenuation, and alpha/beta crosstalk calibrations were performed on February 4, 2004 covering a range from 0 to 145 mg. All standards were counted to a minimum of 10,000 counts. All daily calibration and background checks met acceptance criteria.

Method PAL SOP783R5
Plateau calibrations were performed within the last 6 months (June 21, 2004). Efficiency calibrations were performed on June 22, 2004. All daily calibration and background checks met acceptance criteria.

Method SW-846 9320
Plateau calibrations were performed within the last 6 months (January 21, 2004). Efficiency calibrations were performed on February 2, 2004. All daily calibration and background checks met acceptance criteria.

Method and Calibration Blanks

Methods SW-846 6010 and SW-846 6020
The method blanks and initial and continuing calibration blanks were below the practical quantitation limits. In cases where blank concentration exceeded the instrument detection limit (IDL), the associated sample results were qualified with a "U" flag in the database when the sample result is greater than the IDL but less than five times the blank concentration.

Method SW-846 9056
The method blanks for sulfate were below the MDL. All initial and continuing calibration blanks were below the MDL.

Methods PAL SOP724R8, PAL SOP783R5, and SW-846 9320
All blank results were below the minimum detectable concentration (MDC).

DATA ASSESSMENT SUMMARY (continued)

ICP (Inductively Coupled Plasma) Interference Check Sample (ICS) Analysis

ICP interference check samples ICSA and ICSAB were analyzed at the required frequency, and all results meet the acceptance criteria with the following exception. The ICSAB check for molybdenum failed to meet the acceptance criteria. The affected sample results are qualified with a "J" flag in the database.

Matrix Spike Analyses

Method SW-846 6010
Two matrix spike and matrix spike duplicate (MS and MSD) pairs were analyzed for manganese; the MS analyzed on June 7, 2004 for sample 0812 failed to meet the acceptance criteria and the result was qualified with a "J" flag in the database. A post-digestion spike was analyzed for this sample met acceptance criteria. The MS/MSD analyzed on June 4, 2004 met acceptance criteria.

Method SW-846 6020
Two MS/MSD pairs were analyzed for molybdenum and uranium with all results meeting the acceptance criteria. A matrix spike was not performed on an unfiltered sample. The uranium results on unfiltered samples, therefore, were qualified with a "J" flag in the database.

Method SW-846 9056
A MS was analyzed for sulfate, and acceptance criteria were met.

Laboratory Duplicate Analysis

Methods SW-846 6010 and SW-846 6020
The relative percent difference (RPD) values for all MSD and duplicate sample results were less than 20 percent.

Method SW-846 9056
The RPD values for the MSD and laboratory duplicate sample results were less than 20 percent.

Radiochemistry
The relative error ratio values for the laboratory control sample duplicate results were less than 3.

Laboratory Control Sample

The ICV serves as a laboratory control sample for undigested metals samples. All ICV and laboratory control samples were analyzed at the correct frequency and met acceptance criteria.

DATA ASSESSMENT SUMMARY (continued)

Serial Dilution

A serial dilution was analyzed for manganese, molybdenum, and uranium. All acceptance criteria were met with the following exceptions. Serial dilution results for uranium failed to meet the acceptance criteria; however, qualification of the data was not required because the result of the non-diluted sample was less than 100 times practical quantitation limit.

Radiochemistry

Gross alpha results from samples 0813, 0814, 0816, and 0817 were less than three times the MDC and were qualified with a "J" flag in the database. Gross beta results from samples 0815, 0816, and 0817 were less than three times the MDC and were qualified with a "J" flag in the database. All sample residual masses were less than 100 mg.

Radium-226 results from samples 0814 and 0818 were less than 3 times the MDC and were qualified with a "J" flag in the database. Radium-228 results from samples 0821 and 0821 duplicate were less than 3 times the MDC and were qualified with a "J" flag in the database.

Detection Limits/Dilutions

When required, samples were diluted in a consistent and acceptable manner. The samples were diluted prior to analysis of cadmium and uranium to reduce interferences.

Completeness

All results were reported with correct units. Appropriate contract-required laboratory qualifiers were used. Appropriate target analyte lists were used, and the required detection limits were met when possible or an explanation of why they were not met was given in the laboratory case narrative.

Integration of Peaks

The integration of analytical peaks was reviewed for all ion chromatography data. The manual integrations were acceptable and all peak integrations were satisfactory.

EDD (Electronic Data Deliverable) File

An EDD file was received on July 23, 2004. The EDD validation application did not identify any problems with the EDD file.

DATA ASSESSMENT SUMMARY (continued)

Field Analyses/Activities

Results from monitor wells 0705, 0707, 0710, 0716, 0717, 0718, 0719, 0720, 0721, 0722, 0723, 0729, 0730, 0731, 0735, and 0809 were qualified with an "F" flag in the database indicating that the wells were purged and sampled using the low-flow method.

The drawdown specification in the low-flow procedure was not obtained at wells 0705 and 0719 because of the low yield of these wells. Therefore, results from these wells were qualified with a "Q" flag in the database indicating that the data is qualitative because of the sampling technique.

Two equipment blanks were collected for the 24 locations sampled using non-dedicated equipment. The equipment blanks were analyzed for the same constituents as the Riverton environmental samples. All analyte concentrations in the equipment blanks were below their respective contract required detection limit (CRDL); therefore, equipment blank results are acceptable.

Three field duplicates were collected for the 33 locations sampled. Duplicate samples were collected from monitor well 0716, surface water location 0747, and alternate water supply system hydrant location 0821. Samples from well 0716 and surface water location 0747 were duplicated by collecting filtered and unfiltered aliquots. Collection of unfiltered and filtered aliquots was conducted to assess the effect of filtration on sample concentrations. There are no established regulatory criteria for the evaluation of field duplicate samples; therefore, EPA guidance for *laboratory* duplicates (which is conservative for field duplicates) was used to assess the precision of the field duplicates. Duplicate results met the laboratory duplicate criteria (20 relative percent difference, ± the CRDL, or ± 3 sigma); therefore, duplicate results are considered acceptable, and the difference between filtered and unfiltered concentrations is within the range of analytical uncertainty.

DATA ASSESSMENT SUMMARY (continued)

Certification

All laboratory analytical quality control criteria were met except as qualified on the GJO database reports. The meaning of data qualifiers is as defined on the GJO database report or as defined in the USEPA Contract Laboratory Program Statement of Work for Inorganic Analysis, Multi-Media Multi-Concentration, Document Number ILMO2.0, 1991. All data in this package are considered validated and available for use.

Steve Donivan 8-9-04

Stephen Donivan Date
Laboratory Coordinator

Sam Campbell 8-9-04

Sam Campbell Date
Site Lead

ASSESSMENT OF ANOMALOUS DATA

ASSESSMENT OF ANOMALOUS DATA

Suspected Anomalies Report

A suspected anomalies report (SAR) was generated by the GJO database system. The SAR compares the new data set with historical data and designates suspected anomalies based on the many criteria listed as footnotes on each page. In aggregate, these criteria cause the suspected anomaly program to be very conservative; many of the data shown in the tables are not, in the evaluator's judgment, truly anomalies, but merely natural variations in data or routine changes in laboratory detection limits. The designation "OK" affirms the judgment that the particular entry is not an anomaly and, therefore, requires no further inquiry.

Values listed in the SAR were considered valid if: (1) identified low concentrations were the result of low detection limits; (2) the concentration detected was within 50 percent historical minimum or maximum values; (3) there were fewer than 5 historical samples for comparison. All results met these criteria and are considered acceptable with no follow-up action required.

SUSPECTED ANOMALIES REPORT

REPORT DATE: 7/30/2004 TIME: 11:37:30 AM

Site : RVT01 Riverton Processing Test Data Date Range : 5/1/2004 to 5/30/2004 Older Data Only Used for Baseline Data 95 Chemical Records 1032 History Records

LOC. ID.	ERR. TYPE FLAG	PARAM CODE / UNITS	ANOMALOUS TEST DATA POINT: LOG DATE	SAMPLE	VALUE	FLAGS	UNCERTAINTY	DETLIM	# OF SAMP. / %NON DETEC	ALL TIME MINIMUMS / ALL TIME MAXIMUMS		LOWER BOUND / UPPER BOUND	3 MOST RECENT SAMPLING EVENTS: LOG DATE	SAMPLE	VALUE	FLAGS	UNCERTAINTY	DETLIM	LOG DATE	SAMPLE	VALUE	FLAGS	UNCERTAINTY	DET LIM
0710	6	ORP	5/18/2004	N001	275.0000				10	94.000	96.000	0.0000	5/14/2003	N001	96.0000				5/14/2002	N001	177.0000				5/16/2001	N001	94.0000
	OK	mV							0	460.000	460.000	161.5778														
0717	6	Mn	5/20/2004	0001	0.2400				11	0.190	0.202	0.1925	5/14/2003	0001	0.2270				5/14/2002	0001	0.2020				5/16/2001	0001	0.2050
	OK	mg/L			0.0011				0	0.230	0.240	0.2273			0.0001						0.0001						0.0001
	5	ORP	5/20/2004	N001	-127.0000				10	-183.000	-170.000	0.0000	5/14/2003	N001	-106.0000				5/14/2002	N001	-22.0000				5/16/2001	N001	-14.0000
	OK	mV							0	342.000	342.000	41.7409														
	5	SO4	5/20/2004	0001	700.0000				10	692.000	705.000	715.2172	5/14/2003	0001	773.0000				5/14/2002	0001	742.0000				5/16/2001	0001	705.0000
	OK	mg/L			10				0	772.000	773.000	801.3968			0.35						0.788				N		0.126
0718	6	Mn	5/20/2004	0001	2.2000				11	1.290	1.580	0.8863	5/14/2003	0001	1.2900				5/15/2002	0001	1.6200				5/16/2001	0001	2.1300
	OK	mg/L			0 0023				0	3.180	3.280	2.0348			0.0001						0.0001						0.0001
	5	ORP	5/20/2004	N001	-159.0000				10	-46.000	53 000	0.0000	5/14/2003	N001	55 0000				5/15/2002	N001	97.0000				5/16/2001	N001	92.0000
	OK	mV							0	488.000	488.000	168.4194														
0719	5	ORP	5/20/2004	N001	-81.0000				10	-190.000	-103.000	0.0000	5/14/2003	N001	-58.0000				5/15/2002	N001	40.0000				5/16/2001	N001	108.0000
	OK	mV							0	472.000	472.000	142.1581														
0720	6	Mo	5/18/2004	0001	0.0023				8	0.002	0.003	0.0000	5/12/1998	0001	0.0032				2/9/1997	0001	0.0024				2/18/1996	0001	0.0100
	OK	mg/L			0 000093				50	0.008	0 010	0 0003	B						B						U	0	0.01
	6	ORP	5/18/2004	N001	200.0000				5	-66.000	-61.000	0.0000	5/12/1998	N001	-66.0000				2/9/1997	N001	-61.0000				2/18/1996	N001	233.0000
	OK	mV							0	463.000	463.000	-144.4905														0	0
0721	6	ORP	5/18/2004	N001	21.0000				4	-176.000	-161.000	0.0000	5/12/1998	N001	-161.0000				2/9/1997	N001	-144.0000				1/9/1994	N001	-176.0000
	OK	mV							0	434.000	434.000	-260.3863														0	0
	3	U	5/18/2004	0001	0.0001				7	0.001	0.001	0.0003	5/12/1998	0001	0.0010				2/9/1997	0001	0.0010				1/9/1994	0001	0.0010
	OK	mg/L	B		0.0000028				71.429	0.001	0.001	0.0020	U		0.001				U		0.001				U	0	0.001
0723	5	ORP	5/20/2004	N001	-73.0000				10	-393.000	-97.000	0.0000	5/14/2003	N001	-69.0000				5/15/2002	N001	54.0000				5/16/2001	N001	33.0000
	OK	mV							0	459.000	459.000	139.3817														
	3	U	5/20/2004	0001	0.0001				13	0.000	0.001	0.0001	5/14/2003	0001	0.0001				5/15/2002	0001	0.0001				5/16/2001	0001	0.0001
	OK	mg/L	B		0 0000028				46.154	0.031	0.031	0.0465	U		0.0001				U		0.0001				U		0.0001

Error Type Flags :
2 - All time high detection limit
3 - Too low (non-trend approach)
4 - Too high (non-trend approach)
5 - Too low (trend approach)
6 - Too high (trend approach)

Flags :
I - Increased detection limit due to required dilution.
L - Less than three bore volumes removed before sampling.
J - Estimated value.
H - Hold time expired, value suspect.

Approved by Jean Campbell Date 7-30-04

Hydrologist "Ok" indicates insignificant variation

Site : RVT01 Riverton Processing Test Data Date Range : 5/1/2004 to 5/30/2004 Older Data Only Used for Baseline Data 95 Chemical Records 1032 History Records

LOC. ID.	ERR. TYPE FLAG	PARAM CODE / UNITS	ANOMALOUS TEST DATA POINT: LOG DATE	SAMPLE	VALUE	FLAGS	UNCERTAINTY	DETLIM	# OF SAMP. / %NON DETEC	ALL TIME MINIMUMS / ALL TIME MAXIMUMS		LOWER BOUND / UPPER BOUND	3 MOST RECENT SAMPLING EVENTS: LOG DATE	SAMPLE	VALUE	FLAGS	UNCERTAINTY	DETLIM	LOG DATE	SAMPLE	VALUE	FLAGS	UNCERTAINTY	DET LIM
0729	6	Mn	5/19/2004	0001	0.0021			5	0.001	0.002	0.0000	5/16/1998	0001	0.0018				2/8/1997	0001	0.0013				1/10/1994	0001	0.0100
	OK	mg/L	B		0.0011			20	0.010	0.010	-0.0058	B						B						U	0	0.01
	6	ORP	5/19/2004	N001	239.0000			4	-47.000	45.000	0.0000	5/16/1998	N001	45.0000				2/8/1997	N001	110.0000				1/10/1994	N001	-47.0000
	OK	mV						0	471.000	471.000	104 8706														0	0
	5	SO4	5/19/2004	0001	150.0000			4	143.000	168.000	250.7375	5/16/1998	0001	212.0000				2/8/1997	0001	248.0000				1/10/1994	0001	143.0000
	OK	mg/L			5			0	212.000	248.000	365.2440														0	1
	5	U	5/19/2004	0001	0.0170			5	0.013	0.015	0.0192	5/16/1998	0001	0.0178				2/8/1997	0001	0.0186				1/10/1994	0001	0.0180
	OK	mg/L			0.0000028			0	0.018	0.019	0.0246														0	0 001
0730	3	Mo	5/19/2004	0001	0.0029			3	0 010	0.010	0.0050	1/10/1994	0001	0.0100				4/2/1993	0001	0.0100				4/2/1993	N001	0.0100
	OK	mg/L			0.000093			100	0.010	0.010	0.0200	U	0	0.01				U	0	0.01				U	0	0.01
	3	U	5/19/2004	0001	0.0004			3	0.001	0.001	0.0005	1/10/1994	0001	0.0010				4/2/1993	N001	0.0010				4/2/1993	0001	0.0010
	OK	mg/L			0 0000028			33.333	0.001	0.001	0.0020	U	0	0.001					0	0.001					0	0.001
0731	5	ORP	5/19/2004	N001	83.0000			8	-40.000	91.000	108.3806	5/14/2003	N001	211.0000				5/15/2002	N001	237.0000				5/16/2001	N001	91.0000
	OK	mV						0	296.000	296.000	324.0231															
	6	SO4	5/19/2004	0001	1500.0000			8	972.000	1260.000	140.4028	5/14/2003	0001	1390.0000				5/15/2002	0001	1260.0000				5/16/2001	0001	972.0000
	OK	mg/L			25			0	4200.000	4200.000	1352.1235			0.35						0.788				N		0.126
	6	U	5/19/2004	0001	0.0140			9	0.005	0.006	0.0000	5/14/2003	0001	0.0075				5/15/2002	0001	0.0061				5/16/2001	0001	0.0050
	OK	mg/L			0.000014			0	0.056	0.057	0.0080	B		0.0001				B		0.0001				B		0.0001
0747	6	Mn	5/20/2004	0001	2.1000			9	0.411	0.539	0.0000	5/13/2003	0001	0.5390				5/14/2002	0001	0.4110				5/15/2001	0001	1.0700
	OK	mg/L			0.0011			0	1.780	2.500	1.0964			0.0001						0.0001						0.0001
	5	ORP	5/20/2004	N001	41.0000			7	64.000	98.000	74.1343	5/13/2003	N001	98.0000				5/14/2002	N001	204.0000				5/15/2001	N001	159.0000
	OK	mV						0	204.000	207.000	224.1833															
0749	6	SO4	5/20/2004	0001	2300.0000			8	221.000	226.000	0.0000	5/14/2003	0001	226.0000				5/15/2002	0001	1670.0000				5/16/2001	0001	221.0000
	OK	mg/L			25			0	5900.000	5900.000	1471.1147			0.0875						1.97				N		0.0504
0794	5	SO4	5/19/2004	0001	98.0000			15	78.100	81.000	110.8466	5/12/2003	0001	363.0000				5/14/2002	0001	468.0000				5/15/2001	0001	78.1000
	OK	mg/L			2.5			0	381.000	468.000	472.3853			0.175						0.394				N		0.0252

Error Type Flags :
2 - All time high detection limit
3 - Too low (non-trend approach)
4 - Too high (non-trend approach)
5 - Too low (trend approach)
6 - Too high (trend approach)

Flags :
I - Increased detection limit due to required dilution.
L - Less than three bore volumes removed before sampling.
J - Estimated value.
H - Hold time expired, value suspect.

Approved by Jon Campbell Date 7-30-04

Hydrologist "Ok" indicates insignificant variation

Site : RVT01 Riverton Processing Test Data Date Range : 5/1/2004 to 5/30/2004 Older Data Only Used for Baseline Data 95 Chemical Records 1032 History Records

LOC. ID.	ERR. TYPE FLAG	PARAM CODE / UNITS	ANOMALOUS TEST DATA POINT: LOG DATE / FLAGS	SAMPLE / UNCERTAINTY	VALUE / DETLIM	# OF SAMP. / %NON DETEC	ALL TIME MINIMUMS / ALL TIME MAXIMUMS		LOWER BOUND / UPPER BOUND	3 MOST RECENT SAMPLING EVENTS: LOG DATE / FLAGS	SAMPLE / UNCERTAINTY	VALUE / DETLIM	LOG DATE / FLAGS	SAMPLE / UNCERTAINTY	VALUE / DETLIM	LOG DATE / FLAGS	SAMPLE / UNCERTAINTY	VALUE / DET LIM
0794	5	U	5/19/2004	0001	0.0025	17	0.002	0.002	0.0028	5/12/2003	0001	0.0077	5/14/2002	0001	0.0092	5/15/2001	0001	0.0020
	OK	mg/L			0.0000028	5 8824	0 009	0.011	0.0106	B		0.0001	B		0.0001	B		0.0001
0796	5	SO4	5/20/2004	0001	83.0000	17	89.500	103 000	98.1660	5/12/2003	0001	375.0000	5/15/2002	0001	420.0000	5/15/2001	0001	89.5000
	OK	mg/L			2.5	0	420.000	438.000	472.2260			0.175			0.394	N		0.0252

Error Type Flags :
2 - All time high detection limit
3 - Too low (non-trend approach)
4 - Too high (non-trend approach)
5 - Too low (trend approach)
6 - Too high (trend approach)

Flags :
I - Increased detection limit due to required dilution.
L - Less than three bore volumes removed before sampling.
J - Estimated value.
H - Hold time expired, value suspect.

Approved by Jon Campbell Date 7-30-04

Hydrologist "Ok" indicates insignificant variation

DATA PRESENTATION

GENERAL WATER QUALITY DATA BY PARAMETER (USEE205) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 7/30/2004 3:52 pm

PARAMETER	UNITS	LOCATION ID	LOC TYPE, SUBTYPE	SAMPLE: DATE	ID	DEPTH RANGE (FT BLS)	RESULT	QUALIFIERS: LAB	DATA	QA	DETECTION LIMIT	UN-CERTAINTY
Alkalinity, Total (As CaCO3	mg/L	0813	DS, TAP	05/18/2004	N001	0.00 - 0.00	168			#	-	-
	mg/L	0814	DS, TAP	05/18/2004	N001	0.00 - 0.00	160			#	-	-
	mg/L	0815	DS, TAP	05/18/2004	N001	0.00 - 0.00	154			#	-	-
	mg/L	0816	DS, TAP	05/18/2004	N001	0.00 - 0.00	162			#	-	-
	mg/L	0817	WL, EXDS	05/19/2004	N001		163			#	-	-
	mg/L	0818	DS, HDRT	05/19/2004	N001	0.00 - 0.00	161			#	-	-
	mg/L	0819	DS, HDRT	05/19/2004	N001	0.00 - 0.00	164			#	-	-
	mg/L	0820	DS, HDRT	05/19/2004	N001	0.00 - 0.00	160			#	-	-
	mg/L	0821	DS, HDRT	05/19/2004	N001	0.00 - 0.00	157			#	-	-
Chlorine, Total Residual	mg/L	0813	DS, TAP	05/18/2004	N001	0.00 - 0.00	0.04			#	-	-
	mg/L	0814	DS, TAP	05/18/2004	N001	0.00 - 0.00	0.03			#	-	-
	mg/L	0815	DS, TAP	05/18/2004	N001	0.00 - 0.00	0.02			#	-	-
	mg/L	0816	DS, TAP	05/18/2004	N001	0.00 - 0.00	0.02			#	-	-
	mg/L	0817	WL, EXDS	05/19/2004	N001		0.04			#	-	-
	mg/L	0818	DS, HDRT	05/19/2004	N001	0.00 - 0.00	0.04			#	-	-
	mg/L	0819	DS, HDRT	05/19/2004	N001	0.00 - 0.00	0.04			#	-	-
	mg/L	0820	DS, HDRT	05/19/2004	N001	0.00 - 0.00	0.15			#	-	-
	mg/L	0821	DS, HDRT	05/19/2004	N001	0.00 - 0.00	0.04			#	-	-
Gross Alpha	pCi/L	0813	DS, TAP	05/18/2004	N001	0.00 - 0.00	1.72		J	#	0.891	± 0.70
	pCi/L	0814	DS, TAP	05/18/2004	N001	0.00 - 0.00	1.26		J	#	1.19	± 0.75
	pCi/L	0815	DS, TAP	05/18/2004	N001	0.00 - 0.00	0.991	U		#	0.991	± 0.62
	pCi/L	0816	DS, TAP	05/18/2004	N001	0.00 - 0.00	1.31	U	J	#	1.31	± 0.69
	pCi/L	0817	WL, EXDS	05/19/2004	N001		1.35		J	#	1.22	± 0.77
	pCi/L	0818	DS, HDRT	05/19/2004	N001	0.00 - 0.00	16.4			#	0.926	± 3.05
	pCi/L	0819	DS, HDRT	05/19/2004	N001	0.00 - 0.00	18.6			#	1.43	± 3.49
	pCi/L	0820	DS, HDRT	05/19/2004	N001	0.00 - 0.00	70.7			#	1.01	± 11.7

GENERAL WATER QUALITY DATA BY PARAMETER (USEE205) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 7/30/2004 3:52 pm

PARAMETER	UNITS	LOCATION ID	LOC TYPE, SUBTYPE	SAMPLE: DATE	ID	DEPTH RANGE (FT BLS)	RESULT	QUALIFIERS: LAB	DATA	QA	DETECTION LIMIT	UN-CERTAINTY
Gross Alpha	pCi/L	0821	DS, HDRT	05/19/2004	N001	0.00 - 0.00	11.4			#	0.724	± 2.07
	pCi/L	0821	DS, HDRT	05/19/2004	N002	0.00 - 0.00	12			#	0.853	± 2.18
Gross Beta	pCi/L	0813	DS, TAP	05/18/2004	N001	0.00 - 0.00	1.98	U		#	1.98	± 1.10
	pCi/L	0814	DS, TAP	05/18/2004	N001	0.00 - 0.00	2.39	U		#	2.39	± 1.33
	pCi/L	0815	DS, TAP	05/18/2004	N001	0.00 - 0.00	2.95		J	#	2.09	± 1.25
	pCi/L	0816	DS, TAP	05/18/2004	N001	0.00 - 0.00	3.73		J	#	2.19	± 1.37
	pCi/L	0817	WL, EXDS	05/19/2004	N001		2.3		J	#	2.24	± 1.27
	pCi/L	0818	DS, HDRT	05/19/2004	N001	0.00 - 0.00	24.3			#	1.85	± 4.17
	pCi/L	0819	DS, HDRT	05/19/2004	N001	0.00 - 0.00	24.1			#	2.1	± 4.20
	pCi/L	0820	DS, HDRT	05/19/2004	N001	0.00 - 0.00	53.5			#	2.38	± 8.81
	pCi/L	0821	DS, HDRT	05/19/2004	N001	0.00 - 0.00	18.4			#	1.27	± 3.11
	pCi/L	0821	DS, HDRT	05/19/2004	N002	0.00 - 0.00	17.7			#	1.28	± 3.01
Oxidation Reduction Potent	mV	0813	DS, TAP	05/18/2004	N001	0.00 - 0.00	278			#	-	-
	mV	0814	DS, TAP	05/18/2004	N001	0.00 - 0.00	323			#	-	-
	mV	0815	DS, TAP	05/18/2004	N001	0.00 - 0.00	293			#	-	-
	mV	0816	DS, TAP	05/18/2004	N001	0.00 - 0.00	236			#	-	-
	mV	0817	WL, EXDS	05/19/2004	N001		97			#	-	-
	mV	0818	DS, HDRT	05/19/2004	N001	0.00 - 0.00	93			#	-	-
	mV	0819	DS, HDRT	05/19/2004	N001	0.00 - 0.00	126			#	-	-
	mV	0820	DS, HDRT	05/19/2004	N001	0.00 - 0.00	242			#	-	-
	mV	0821	DS, HDRT	05/19/2004	N001	0.00 - 0.00	222			#	-	-
pH	s.u.	0813	DS, TAP	05/18/2004	N001	0.00 - 0.00	9.19			#	-	-
	s.u.	0814	DS, TAP	05/18/2004	N001	0.00 - 0.00	9.04			#	-	-
	s.u.	0815	DS, TAP	05/18/2004	N001	0.00 - 0.00	9.16			#	-	-
	s.u.	0816	DS, TAP	05/18/2004	N001	0.00 - 0.00	9.08			#	-	-
	s.u.	0817	WL, EXDS	05/19/2004	N001		9.21			#	-	-

GENERAL WATER QUALITY DATA BY PARAMETER (USEE205) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 7/30/2004 3:52 pm

PARAMETER	UNITS	LOCATION ID	LOC TYPE, SUBTYPE	SAMPLE: DATE	ID	DEPTH RANGE (FT BLS)	RESULT	QUALIFIERS: LAB	DATA	QA	DETECTION LIMIT	UN-CERTAINTY
pH	s.u.	0818	DS, HDRT	05/19/2004	N001	0.00 - 0.00	9.18			#	-	-
	s.u.	0819	DS, HDRT	05/19/2004	N001	0.00 - 0.00	9.22			#	-	-
	s.u.	0820	DS, HDRT	05/19/2004	N001	0.00 - 0.00	9.17			#	-	-
	s.u.	0821	DS, HDRT	05/19/2004	N001	0.00 - 0.00	9.21			#	-	-
Radium-226	pCi/L	0813	DS, TAP	05/18/2004	N001	0.00 - 0.00	0.405	U		#	0.405	± 0.27
	pCi/L	0814	DS, TAP	05/18/2004	N001	0.00 - 0.00	0.263		UJ	#	0.193	± 0.19
	pCi/L	0815	DS, TAP	05/18/2004	N001	0.00 - 0.00	0.736	U		#	0.736	± 0.38
	pCi/L	0816	DS, TAP	05/18/2004	N001	0.00 - 0.00	0.718	U		#	0.718	± 0.39
	pCi/L	0817	WL, EXDS	05/19/2004	N001		0.783	U		#	0.783	± 0.42
	pCi/L	0818	DS, HDRT	05/19/2004	N001	0.00 - 0.00	1.58		J	#	0.555	± 0.60
	pCi/L	0819	DS, HDRT	05/19/2004	N001	0.00 - 0.00	1.64			#	0.347	± 0.58
	pCi/L	0820	DS, HDRT	05/19/2004	N001	0.00 - 0.00	7.98			#	0.451	± 2.12
	pCi/L	0821	DS, HDRT	05/19/2004	N001	0.00 - 0.00	1.64			#	0.454	± 0.60
	pCi/L	0821	DS, HDRT	05/19/2004	N002	0.00 - 0.00	0.766	U		#	0.766	± 0.52
Radium-228	pCi/L	0813	DS, TAP	05/18/2004	N001	0.00 - 0.00	0.72	U		#	0.72	± 0.35
	pCi/L	0814	DS, TAP	05/18/2004	N001	0.00 - 0.00	0.789	U		#	0.789	± 0.43
	pCi/L	0815	DS, TAP	05/18/2004	N001	0.00 - 0.00	0.759	U		#	0.759	± 0.38
	pCi/L	0816	DS, TAP	05/18/2004	N001	0.00 - 0.00	0.666	U		#	0.666	± 0.37
	pCi/L	0817	WL, EXDS	05/19/2004	N001		0.865	U		#	0.865	± 0.43
	pCi/L	0818	DS, HDRT	05/19/2004	N001	0.00 - 0.00	2.31			#	0.746	± 0.82
	pCi/L	0819	DS, HDRT	05/19/2004	N001	0.00 - 0.00	2.33			#	0.741	± 0.82
	pCi/L	0820	DS, HDRT	05/19/2004	N001	0.00 - 0.00	7.93			#	0.746	± 2.43
	pCi/L	0821	DS, HDRT	05/19/2004	N001	0.00 - 0.00	1.73		J	#	0.685	± 0.65
	pCi/L	0821	DS, HDRT	05/19/2004	N002	0.00 - 0.00	1.58		J	#	0.724	± 0.62
Specific Conductance	umhos/cm	0813	DS, TAP	05/18/2004	N001	0.00 - 0.00	628			#	-	-
	umhos/cm	0814	DS, TAP	05/18/2004	N001	0.00 - 0.00	630			#	-	-

GENERAL WATER QUALITY DATA BY PARAMETER (USEE205) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 7/30/2004 3:52 pm

PARAMETER	UNITS	LOCATION ID	LOC TYPE, SUBTYPE	SAMPLE: DATE	ID	DEPTH RANGE (FT BLS)	RESULT	QUALIFIERS: LAB	DATA	QA	DETECTION LIMIT	UN-CERTAINTY
Specific Conductance	umhos/cm	0815	DS, TAP	05/18/2004	N001	0.00 - 0.00	637			#	-	-
	umhos/cm	0816	DS, TAP	05/18/2004	N001	0.00 - 0.00	622			#	-	-
	umhos/cm	0817	WL, EXDS	05/19/2004	N001		623			#	-	-
	umhos/cm	0818	DS, HDRT	05/19/2004	N001	0.00 - 0.00	636			#	-	-
	umhos/cm	0819	DS, HDRT	05/19/2004	N001	0.00 - 0.00	628			#	-	-
	umhos/cm	0820	DS, HDRT	05/19/2004	N001	0.00 - 0.00	631			#	-	-
	umhos/cm	0821	DS, HDRT	05/19/2004	N001	0.00 - 0.00	628			#	-	-
Temperature	C	0813	DS, TAP	05/18/2004	N001	0.00 - 0.00	10.7			#	-	-
	C	0814	DS, TAP	05/18/2004	N001	0.00 - 0.00	11.95			#	-	-
	C	0815	DS, TAP	05/18/2004	N001	0.00 - 0.00	9.9			#	-	-
	C	0816	DS, TAP	05/18/2004	N001	0.00 - 0.00	13.1			#	-	-
	C	0817	WL, EXDS	05/19/2004	N001		13.6			#	-	-
	C	0818	DS, HDRT	05/19/2004	N001	0.00 - 0.00	11.8			#	-	-
	C	0819	DS, HDRT	05/19/2004	N001	0.00 - 0.00	10.0			#	-	-
	C	0820	DS, HDRT	05/19/2004	N001	0.00 - 0.00	11.1			#	-	-
	C	0821	DS, HDRT	05/19/2004	N001	0.00 - 0.00	11.2			#	-	-
Turbidity	NTU	0813	DS, TAP	05/18/2004	N001	0.00 - 0.00	0.93			#	-	-
	NTU	0814	DS, TAP	05/18/2004	N001	0.00 - 0.00	0.78			#	-	-
	NTU	0815	DS, TAP	05/18/2004	N001	0.00 - 0.00	1.32			#	-	-
	NTU	0816	DS, TAP	05/18/2004	N001	0.00 - 0.00	1.51			#	-	-
	NTU	0817	WL, EXDS	05/19/2004	N001		0.82			#	-	-
	NTU	0818	DS, HDRT	05/19/2004	N001	0.00 - 0.00	2.67			#	-	-
	NTU	0819	DS, HDRT	05/19/2004	N001	0.00 - 0.00	3.15			#	-	-
	NTU	0820	DS, HDRT	05/19/2004	N001	0.00 - 0.00	8.15			#	-	-
	NTU	0821	DS, HDRT	05/19/2004	N001	0.00 - 0.00	2.12			#	-	-
Uranium	mg/L	0813	DS, TAP	05/18/2004	N001	0.00 - 0.00	0.00009	B	U	#	2.8E-06	-

GENERAL WATER QUALITY DATA BY PARAMETER (USEE205) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 7/30/2004 3:52 pm

PARAMETER	UNITS	LOCATION ID	LOC TYPE, SUBTYPE	SAMPLE: DATE	ID	DEPTH RANGE (FT BLS)	RESULT	QUALIFIERS: LAB	DATA	QA	DETECTION LIMIT	UN-CERTAINTY
Uranium	mg/L	0814	DS, TAP	05/18/2004	N001	0.00 - 0.00	0.00018		J	#	2.8E-06	-
	mg/L	0815	DS, TAP	05/18/2004	N001	0.00 - 0.00	0.00012		U	#	2.8E-06	-
	mg/L	0816	DS, TAP	05/18/2004	N001	0.00 - 0.00	0.00011		U	#	2.8E-06	-
	mg/L	0817	WL, EXDS	05/19/2004	N001		0.0001		U	#	2.8E-06	-
	mg/L	0818	DS, HDRT	05/19/2004	N001	0.00 - 0.00	0.00009	B	U	#	2.8E-06	-
	mg/L	0819	DS, HDRT	05/19/2004	N001	0.00 - 0.00	0.00011		U	#	2.8E-06	-
	mg/L	0820	DS, HDRT	05/19/2004	N001	0.00 - 0.00	0.00012		U	#	2.8E-06	-
	mg/L	0821	DS, HDRT	05/19/2004	N001	0.00 - 0.00	0.00009	B	U	#	2.8E-06	-
	mg/L	0821	DS, HDRT	05/19/2004	N002	0.00 - 0.00	0.0001		U	#	2.8E-06	-

GENERAL WATER QUALITY DATA BY PARAMETER (USEE205) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 7/30/2004 3:52 pm

PARAMETER	UNITS	LOCATION ID	LOC TYPE, SUBTYPE	SAMPLE: DATE	ID	DEPTH RANGE (FT BLS)	RESULT	QUALIFIERS: LAB	DATA	QA	DETECTION LIMIT	UN-CERTAINTY

RECORDS: SELECTED FROM USEE200 WHERE site_code='RVT01' AND location_code in('0813','0814','0815','0816','0817','0818','0819','0820','0821') AND quality_assurance = TRUE AND (data_validation_qualifiers IS NULL OR data_validation_qualifiers NOT LIKE '%R%' AND data_validation_qualifiers NOT LIKE '%X%') AND DATE_SAMPLED between #5/1/2004# and #5/30/2004#

SAMPLE ID CODES: 000X = Filtered sample (0.45 µm). N00X = Unfiltered sample. X = replicate number.

LOCATION TYPES: DS DOMESTIC SUPPLY WL WELL

LOCATION SUBTYPES: EXDS Extraction Well Domestic Sup HDRT Hydrant TAP Tap in Domestic Supply Syste

LAB QUALIFIERS:

- * Replicate analysis not within control limits.
- + Correlation coefficient for MSA < 0.995.
- > Result above upper detection limit.
- A TIC is a suspected aldol-condensation product.
- B Inorganic: Result is between the IDL and CRDL. Organic: Analyte also found in method blank.
- C Pesticide result confirmed by GC-MS.
- D Analyte determined in diluted sample.
- E Inorganic: Estimate value because of interference, see case narrative. Organic: Analyte exceeded calibration range of the GC-MS.
- H Holding time expired, value suspect.
- I Increased detection limit due to required dilution.
- J Estimated
- M GFAA duplicate injection precision not met.
- N Inorganic or radiochemical: Spike sample recovery not within control limits. Organic: Tentatively identified compund (TIC).
- P > 25% difference in detected pesticide or Arochlor concentrations between 2 columns.
- S Result determined by method of standard addition (MSA).
- U Analytical result below detection limit.
- W Post-digestion spike outside control limits while sample absorbance < 50% of analytical spike absorbance.
- X Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- Y Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- Z Laboratory defined (USEPA CLP organic) qualifier, see case narrative.

DATA QUALIFIERS:

- F Low flow sampling method used.
- G Possible grout contamination, pH > 9.
- J Estimated value.
- L Less than 3 bore volumes purged prior to sampling.
- Q Qualitative result due to sampling technique
- R Unusable result.
- U Parameter analyzed for but was not detected.
- X Location is undefined.

QA QUALIFIER: # = validated according to Quality Assurance guidelines.

CLASSIC GROUND WATER QUALITY DATA BY PARAMETER WITH ZONE (USEE201) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 7/30/2004 1:44 pm

PARAMETER	UNITS	LOCATION ID	LOCATION TYPE	SAMPLE: DATE	SAMPLE: ID	ZONE COMPL	FLOW REL.	RESULT	QUALIFIERS: LAB	QUALIFIERS: DATA	QUALIFIERS: QA	DETECTION LIMIT	UN-CERTAINTY
Alkalinity, Total (As CaCO3	mg/L	0705	WL	05/19/2004	0001	SE	D	65		QF	#	-	-
	mg/L	0707	WL	05/19/2004	0001	SF	D	311		F	#	-	-
	mg/L	0710	WL	05/18/2004	0001	SF	U	219		F	#	-	-
	mg/L	0716	WL	05/20/2004	0001	SF	O	293		F	#	-	-
	mg/L	0717	WL	05/20/2004	0001	SE	O	212		F	#	-	-
	mg/L	0718	WL	05/20/2004	0001	SF	D	423		F	#	-	-
	mg/L	0719	WL	05/20/2004	0001	SE	D	97		QF	#	-	-
	mg/L	0720	WL	05/18/2004	0001	SF	C	350		F	#	-	-
	mg/L	0721	WL	05/18/2004	0001	SE	C	90		F	#	-	-
	mg/L	0722	WL	05/20/2004	0001	SF	D	299		F	#	-	-
	mg/L	0723	WL	05/20/2004	0001	SE	D	479		F	#	-	-
	mg/L	0729	WL	05/19/2004	0001	SF	D	370		F	#	-	-
	mg/L	0730	WL	05/19/2004	0001	SE	D	156		F	#	-	-
	mg/L	0731	WL	05/19/2004	0001	SF	U	859		F	#	-	-
	mg/L	0735	WL	05/18/2004	0001	SE	D	144		F	#	-	-
	mg/L	0809	WL	05/18/2004	0001	SF		150		F	#	-	-
	mg/L	0817	WL	05/19/2004	N001			163			#	-	-
Gross Alpha	pCi/L	0817	WL	05/19/2004	N001			1.35		J	#	1.22	± 0.77
Gross Beta	pCi/L	0817	WL	05/19/2004	N001			2.3		J	#	2.24	± 1.27
Manganese	mg/L	0705	WL	05/19/2004	0001	SE	D	0.0021	B	QF	#	0.0011	-
	mg/L	0707	WL	05/19/2004	0001	SF	D	1.900		F	#	0.0023	-
	mg/L	0710	WL	05/18/2004	0001	SF	U	0.0011	U	F	#	0.0011	-
	mg/L	0716	WL	05/20/2004	0001	SF	O	0.360		F	#	0.0011	-
	mg/L	0716	WL	05/20/2004	N002	SF	O	0.440		F	#	0.0011	-
	mg/L	0717	WL	05/20/2004	0001	SE	O	0.240		F	#	0.0011	-
	mg/L	0718	WL	05/20/2004	0001	SF	D	2.200		F	#	0.0023	-

CLASSIC GROUND WATER QUALITY DATA BY PARAMETER WITH ZONE (USEE201) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 7/30/2004 1:44 pm

PARAMETER	UNITS	LOCATION ID	LOCATION TYPE	SAMPLE: DATE	ID	ZONE COMPL	FLOW REL.	RESULT	QUALIFIERS: LAB	DATA	QA	DETECTION LIMIT	UN-CERTAINTY
Manganese	mg/L	0719	WL	05/20/2004	0001	SE	D	0.130		QF	#	0.0011	-
	mg/L	0720	WL	05/18/2004	0001	SF	C	0.110		F	#	0.0011	-
	mg/L	0721	WL	05/18/2004	0001	SE	C	0.0048	B	F	#	0.0011	-
	mg/L	0722	WL	05/20/2004	0001	SF	D	0.460		F	#	0.0011	-
	mg/L	0723	WL	05/20/2004	0001	SE	D	0.800		F	#	0.0023	-
	mg/L	0729	WL	05/19/2004	0001	SF	D	0.0021	B	F	#	0.0011	-
	mg/L	0730	WL	05/19/2004	0001	SE	D	0.096		F	#	0.0011	-
	mg/L	0731	WL	05/19/2004	0001	SF	U	0.0042	B	F	#	0.0023	-
	mg/L	0735	WL	05/18/2004	0001	SE	D	0.015		F	#	0.0011	-
	mg/L	0809	WL	05/18/2004	0001	SF		0.410		F	#	0.0011	-
Molybdenum	mg/L	0705	WL	05/19/2004	0001	SE	D	0.0032		QFJ	#	9.3E-05	-
	mg/L	0707	WL	05/19/2004	0001	SF	D	0.730		FJ	#	0.00093	-
	mg/L	0710	WL	05/18/2004	0001	SF	U	0.0016		UF	#	9.3E-05	-
	mg/L	0716	WL	05/20/2004	0001	SF	O	0.180		FJ	#	0.00093	-
	mg/L	0716	WL	05/20/2004	N002	SF	O	0.180		FJ	#	0.00093	-
	mg/L	0717	WL	05/20/2004	0001	SE	O	0.009		FJ	#	9.3E-05	-
	mg/L	0718	WL	05/20/2004	0001	SF	D	0.094		FJ	#	0.00047	-
	mg/L	0719	WL	05/20/2004	0001	SE	D	0.016		QFJ	#	9.3E-05	-
	mg/L	0720	WL	05/18/2004	0001	SF	C	0.0023		FJ	#	9.3E-05	-
	mg/L	0721	WL	05/18/2004	0001	SE	C	0.0025		FJ	#	9.3E-05	-
	mg/L	0722	WL	05/20/2004	0001	SF	D	0.095		FJ	#	0.00047	-
	mg/L	0723	WL	05/20/2004	0001	SE	D	0.00063	B	UF	#	9.3E-05	-
	mg/L	0729	WL	05/19/2004	0001	SF	D	0.0027		FJ	#	9.3E-05	-
	mg/L	0730	WL	05/19/2004	0001	SE	D	0.0029		FJ	#	9.3E-05	-
	mg/L	0731	WL	05/19/2004	0001	SF	U	0.120		FJ	#	0.00047	-
	mg/L	0735	WL	05/18/2004	0001	SE	D	0.0024		UF	#	9.3E-05	-

CLASSIC GROUND WATER QUALITY DATA BY PARAMETER WITH ZONE (USEE201) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 7/30/2004 1:44 pm

PARAMETER	UNITS	LOCATION ID	LOCATION TYPE	SAMPLE: DATE	SAMPLE: ID	ZONE COMPL	FLOW REL.	RESULT	QUALIFIERS: LAB	QUALIFIERS: DATA	QUALIFIERS: QA	DETECTION LIMIT	UN-CERTAINTY
Molybdenum	mg/L	0809	WL	05/18/2004	0001	SF		0.0021		UF	#	9.3E-05	-
Oxidation Reduction Potent	mV	0705	WL	05/19/2004	N001	SE	D	190		QF	#	-	-
	mV	0707	WL	05/19/2004	N001	SF	D	113		F	#	-	-
	mV	0710	WL	05/18/2004	N001	SF	U	275		F	#	-	-
	mV	0716	WL	05/20/2004	N001	SF	O	118		F	#	-	-
	mV	0717	WL	05/20/2004	N001	SE	O	-127		F	#	-	-
	mV	0718	WL	05/20/2004	N001	SF	D	-159		F	#	-	-
	mV	0719	WL	05/20/2004	N001	SE	D	-81		QF	#	-	-
	mV	0720	WL	05/18/2004	N001	SF	C	200		F	#	-	-
	mV	0721	WL	05/18/2004	N001	SE	C	21		F	#	-	-
	mV	0722	WL	05/20/2004	N001	SF	D	2		F	#	-	-
	mV	0723	WL	05/20/2004	N001	SE	D	-73		F	#	-	-
	mV	0729	WL	05/19/2004	N001	SF	D	239		F	#	-	-
	mV	0730	WL	05/19/2004	N001	SE	D	-150		F	#	-	-
	mV	0731	WL	05/19/2004	N001	SF	U	83		F	#	-	-
	mV	0735	WL	05/18/2004	N001	SE	D	205		F	#	-	-
	mV	0809	WL	05/18/2004	N001	SF		-206		F	#	-	-
	mV	0817	WL	05/19/2004	N001			97			#	-	-
pH	s.u.	0705	WL	05/19/2004	N001	SE	D	8.50		QF	#	-	-
	s.u.	0707	WL	05/19/2004	N001	SF	D	7.00		F	#	-	-
	s.u.	0710	WL	05/18/2004	N001	SF	U	7.55		F	#	-	-
	s.u.	0716	WL	05/20/2004	N001	SF	O	7.21		F	#	-	-
	s.u.	0717	WL	05/20/2004	N001	SE	O	7.77		F	#	-	-
	s.u.	0718	WL	05/20/2004	N001	SF	D	7.25		F	#	-	-
	s.u.	0719	WL	05/20/2004	N001	SE	D	7.64		QF	#	-	-
	s.u.	0720	WL	05/18/2004	N001	SF	C	7.38		F	#	-	-

CLASSIC GROUND WATER QUALITY DATA BY PARAMETER WITH ZONE (USEE201) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 7/30/2004 1:44 pm

PARAMETER	UNITS	LOCATION ID	LOCATION TYPE	SAMPLE: DATE	ID	ZONE COMPL	FLOW REL.	RESULT	QUALIFIERS: LAB	DATA	QA	DETECTION LIMIT	UN-CERTAINTY
pH	s.u.	0721	WL	05/18/2004	N001	SE	C	8.96		F	#	-	-
	s.u.	0722	WL	05/20/2004	N001	SF	D	6.99		F	#	-	-
	s.u.	0723	WL	05/20/2004	N001	SE	D	7.08		F	#	-	-
	s.u.	0729	WL	05/19/2004	N001	SF	D	7.29		F	#	-	-
	s.u.	0730	WL	05/19/2004	N001	SE	D	7.78		F	#	-	-
	s.u.	0731	WL	05/19/2004	N001	SF	U	8.51		F	#	-	-
	s.u.	0735	WL	05/18/2004	N001	SE	D	7.67		F	#	-	-
	s.u.	0809	WL	05/18/2004	N001	SF		7.75		F	#	-	-
	s.u.	0817	WL	05/19/2004	N001			9.21			#	-	-
Radium-226	pCi/L	0817	WL	05/19/2004	N001			0.783	U		#	0.783	± 0.42
Radium-228	pCi/L	0817	WL	05/19/2004	N001			0.865	U		#	0.865	± 0.43
Specific Conductance	umhos/cm	0705	WL	05/19/2004	N001	SE	D	1234		QF	#	-	-
	umhos/cm	0707	WL	05/19/2004	N001	SF	D	4424		F	#	-	-
	umhos/cm	0710	WL	05/18/2004	N001	SF	U	747		F	#	-	-
	umhos/cm	0716	WL	05/20/2004	N001	SF	O	1631		F	#	-	-
	umhos/cm	0717	WL	05/20/2004	N001	SE	O	1989		F	#	-	-
	umhos/cm	0718	WL	05/20/2004	N001	SF	D	4048		F	#	-	-
	umhos/cm	0719	WL	05/20/2004	N001	SE	D	1122		QF	#	-	-
	umhos/cm	0720	WL	05/18/2004	N001	SF	C	1700		F	#	-	-
	umhos/cm	0721	WL	05/18/2004	N001	SE	C	892		F	#	-	-
	umhos/cm	0722	WL	05/20/2004	N001	SF	D	2224		F	#	-	-
	umhos/cm	0723	WL	05/20/2004	N001	SE	D	4030		F	#	-	-
	umhos/cm	0729	WL	05/19/2004	N001	SF	D	1008		F	#	-	-
	umhos/cm	0730	WL	05/19/2004	N001	SE	D	1033		F	#	-	-
	umhos/cm	0731	WL	05/19/2004	N001	SF	U	4451		F	#	-	-
	umhos/cm	0735	WL	05/18/2004	N001	SE	D	1668		F	#	-	-

CLASSIC GROUND WATER QUALITY DATA BY PARAMETER WITH ZONE (USEE201) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 7/30/2004 1:44 pm

PARAMETER	UNITS	LOCATION ID	LOCATION TYPE	SAMPLE: DATE	SAMPLE: ID	ZONE COMPL	FLOW REL.	RESULT	QUALIFIERS: LAB	QUALIFIERS: DATA	QUALIFIERS: QA	DETECTION LIMIT	UN-CERTAINTY
Specific Conductance	umhos/cm	0809	WL	05/18/2004	N001	SF		781		F	#	-	-
	umhos/cm	0817	WL	05/19/2004	N001			623			#	-	-
Sulfate	mg/L	0705	WL	05/19/2004	0001	SE	D	420		QF	#	5	-
	mg/L	0707	WL	05/19/2004	0001	SF	D	2500		F	#	25	-
	mg/L	0710	WL	05/18/2004	0001	SF	U	150		F	#	5	-
	mg/L	0716	WL	05/20/2004	0001	SF	O	510		F	#	10	-
	mg/L	0716	WL	05/20/2004	N002	SF	O	520		F	#	10	-
	mg/L	0717	WL	05/20/2004	0001	SE	O	700		F	#	10	-
	mg/L	0718	WL	05/20/2004	0001	SF	D	1800		F	#	25	-
	mg/L	0719	WL	05/20/2004	0001	SE	D	390		QF	#	5	-
	mg/L	0720	WL	05/18/2004	0001	SF	C	600		F	#	10	-
	mg/L	0721	WL	05/18/2004	0001	SE	C	270		F	#	5	-
	mg/L	0722	WL	05/20/2004	0001	SF	D	1000		F	#	10	-
	mg/L	0723	WL	05/20/2004	0001	SE	D	1900		F	#	25	-
	mg/L	0729	WL	05/19/2004	0001	SF	D	150		F	#	5	-
	mg/L	0730	WL	05/19/2004	0001	SE	D	300		F	#	5	-
	mg/L	0731	WL	05/19/2004	0001	SF	U	1500		F	#	25	-
	mg/L	0735	WL	05/18/2004	0001	SE	D	610		F	#	10	-
	mg/L	0809	WL	05/18/2004	0001	SF		210		F	#	5	-
Temperature	C	0705	WL	05/19/2004	N001	SE	D	13.5		QF	#	-	-
	C	0707	WL	05/19/2004	N001	SF	D	10.1		F	#	-	-
	C	0710	WL	05/18/2004	N001	SF	U	7.4		F	#	-	-
	C	0716	WL	05/20/2004	N001	SF	O	8.9		F	#	-	-
	C	0717	WL	05/20/2004	N001	SE	O	10.3		F	#	-	-
	C	0718	WL	05/20/2004	N001	SF	D	11.3		F	#	-	-
	C	0719	WL	05/20/2004	N001	SE	D	12.0		QF	#	-	-

CLASSIC GROUND WATER QUALITY DATA BY PARAMETER WITH ZONE (USEE201) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 7/30/2004 1:44 pm

PARAMETER	UNITS	LOCATION ID	LOCATION TYPE	SAMPLE: DATE	ID	ZONE COMPL	FLOW REL.	RESULT	QUALIFIERS: LAB	DATA	QA	DETECTION LIMIT	UN-CERTAINTY
Temperature	C	0720	WL	05/18/2004	N001	SF	C	9.7		F	#	-	-
	C	0721	WL	05/18/2004	N001	SE	C	10.9		F	#	-	-
	C	0722	WL	05/20/2004	N001	SF	D	10.8		F	#	-	-
	C	0723	WL	05/20/2004	N001	SE	D	12.0		F	#	-	-
	C	0729	WL	05/19/2004	N001	SF	D	9.2		F	#	-	-
	C	0730	WL	05/19/2004	N001	SE	D	11.4		F	#	-	-
	C	0731	WL	05/19/2004	N001	SF	U	11.9		F	#	-	-
	C	0735	WL	05/18/2004	N001	SE	D	8.61		F	#	-	-
	C	0809	WL	05/18/2004	N001	SF		7.04		F	#	-	-
	C	0817	WL	05/19/2004	N001			13.6			#	-	-
Turbidity	NTU	0705	WL	05/19/2004	N001	SE	D	0.80		QF	#	-	-
	NTU	0707	WL	05/19/2004	N001	SF	D	1.15		F	#	-	-
	NTU	0710	WL	05/18/2004	N001	SF	U	1.59		F	#	-	-
	NTU	0716	WL	05/20/2004	N001	SF	O	4.89		F	#	-	-
	NTU	0717	WL	05/20/2004	N001	SE	O	0.83		F	#	-	-
	NTU	0718	WL	05/20/2004	N001	SF	D	6.78		F	#	-	-
	NTU	0719	WL	05/20/2004	N001	SE	D	2.66		QF	#	-	-
	NTU	0720	WL	05/18/2004	N001	SF	C	3.72		F	#	-	-
	NTU	0721	WL	05/18/2004	N001	SE	C	3.96		F	#	-	-
	NTU	0722	WL	05/20/2004	N001	SF	D	8.16		F	#	-	-
	NTU	0723	WL	05/20/2004	N001	SE	D	1.77		F	#	-	-
	NTU	0729	WL	05/19/2004	N001	SF	D	4.38		F	#	-	-
	NTU	0730	WL	05/19/2004	N001	SE	D	6.67		F	#	-	-
	NTU	0731	WL	05/19/2004	N001	SF	U	2.28		F	#	-	-
	NTU	0735	WL	05/18/2004	N001	SE	D	1.58		F	#	-	-
	NTU	0809	WL	05/18/2004	N001	SF		3.83		F	#	-	-

CLASSIC GROUND WATER QUALITY DATA BY PARAMETER WITH ZONE (USEE201) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 7/30/2004 1:44 pm

PARAMETER	UNITS	LOCATION ID	LOCATION TYPE	SAMPLE: DATE	SAMPLE: ID	ZONE COMPL	FLOW REL.	RESULT	QUALIFIERS: LAB	QUALIFIERS: DATA	QUALIFIERS: QA	DETECTION LIMIT	UN-CERTAINTY
Turbidity	NTU	0817	WL	05/19/2004	N001			0.82			#	-	-
Uranium	mg/L	0705	WL	05/19/2004	0001	SE	D	0.0002		UQF	#	2.8E-06	-
	mg/L	0707	WL	05/19/2004	0001	SF	D	0.970		F	#	2.8E-05	-
	mg/L	0710	WL	05/18/2004	0001	SF	U	0.005		F	#	2.8E-06	-
	mg/L	0716	WL	05/20/2004	0001	SF	O	0.320		F	#	2.8E-05	-
	mg/L	0716	WL	05/20/2004	N002	SF	O	0.310		F	#	2.8E-05	-
	mg/L	0717	WL	05/20/2004	0001	SE	O	0.00013		UF	#	2.8E-06	-
	mg/L	0718	WL	05/20/2004	0001	SF	D	0.210		F	#	1.4E-05	-
	mg/L	0719	WL	05/20/2004	0001	SE	D	0.00049		QF	#	2.8E-06	-
	mg/L	0720	WL	05/18/2004	0001	SF	C	0.011		F	#	2.8E-06	-
	mg/L	0721	WL	05/18/2004	0001	SE	C	0.00007	B	UF	#	2.8E-06	-
	mg/L	0722	WL	05/20/2004	0001	SF	D	0.870		F	#	2.8E-05	-
	mg/L	0723	WL	05/20/2004	0001	SE	D	0.00006	B	UF	#	2.8E-06	-
	mg/L	0729	WL	05/19/2004	0001	SF	D	0.017		F	#	2.8E-06	-
	mg/L	0730	WL	05/19/2004	0001	SE	D	0.00039		F	#	2.8E-06	-
	mg/L	0731	WL	05/19/2004	0001	SF	U	0.014		F	#	1.4E-05	-
	mg/L	0735	WL	05/18/2004	0001	SE	D	0.00035		F	#	2.8E-06	-
	mg/L	0809	WL	05/18/2004	0001	SF		0.0041		F	#	2.8E-06	-
	mg/L	0817	WL	05/19/2004	N001			0.0001		U	#	2.8E-06	-

CLASSIC GROUND WATER QUALITY DATA BY PARAMETER WITH ZONE (USEE201) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 7/30/2004 1:44 pm

PARAMETER	UNITS	LOCATION ID	LOCATION TYPE	SAMPLE: DATE	ID	ZONE COMPL	FLOW REL.	RESULT	QUALIFIERS: LAB	DATA	QA	DETECTION LIMIT	UN-CERTAINTY

RECORDS: SELECTED FROM USEE200 WHERE site_code='RVT01' AND quality_assurance = TRUE AND (data_validation_qualifiers IS NULL OR data_validation_qualifiers NOT LIKE '%R%' AND data_validation_qualifiers NOT LIKE '%X%') AND DATE_SAMPLED between #5/1/2004# and #5/30/2004#

SAMPLE ID CODES: 000X = Filtered sample (0.45 µm). N00X = Unfiltered sample. X = replicate number.

LOCATION TYPES: WL WELL

ZONES OF COMPLETION:

SE SEMICONFINED SANDSTONE SF SURFICIAL

FLOW CODES: C CROSS GRADIENT D DOWN GRADIENT O ON-SITE U UPGRADIENT

LAB QUALIFIERS:

- * Replicate analysis not within control limits.
- + Correlation coefficient for MSA < 0.995.
- > Result above upper detection limit.
- A TIC is a suspected aldol-condensation product.
- B Inorganic: Result is between the IDL and CRDL. Organic: Analyte also found in method blank.
- C Pesticide result confirmed by GC-MS.
- D Analyte determined in diluted sample.
- E Inorganic: Estimate value because of interference, see case narrative. Organic: Analyte exceeded calibration range of the GC-MS.
- H Holding time expired, value suspect.
- I Increased detection limit due to required dilution.
- J Estimated
- M GFAA duplicate injection precision not met.
- N Inorganic or radiochemical: Spike sample recovery not within control limits. Organic: Tentatively identified compund (TIC).
- P > 25% difference in detected pesticide or Arochlor concentrations between 2 columns.
- S Result determined by method of standard addition (MSA).
- U Analytical result below detection limit.
- W Post-digestion spike outside control limits while sample absorbance < 50% of analytical spike absorbance.
- X Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- Y Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- Z Laboratory defined (USEPA CLP organic) qualifier, see case narrative.

DATA QUALIFIERS:

F Low flow sampling method used.	G Possible grout contamination, pH > 9.	J Estimated value.
L Less than 3 bore volumes purged prior to sampling.	Q Qualitative result due to sampling technique	R Unusable result.
U Parameter analyzed for but was not detected.	X Location is undefined.	

QA QUALIFIER: # = validated according to Quality Assurance guidelines.

SURFACE WATER QUALITY DATA BY PARAMETER (USEE800) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 7/30/2004 1:44 pm

PARAMETER	UNITS	LOCATION ID	SAMPLE: DATE	ID	RESULT	QUALIFIERS: LAB	DATA	QA	DETECTION LIMIT	UN-CERTAINTY
Alkalinity, Total (As CaCO3	mg/L	0747	05/20/2004	0001	352			#	-	-
	mg/L	0749	05/20/2004	0001	451			#	-	-
	mg/L	0794	05/19/2004	0001	101			#	-	-
	mg/L	0796	05/20/2004	0001	84			#	-	-
	mg/L	0810	05/18/2004	0001	293			#	-	-
	mg/L	0811	05/19/2004	0001	91			#	-	-
	mg/L	0812	05/20/2004	0001	84			#	-	-
	mg/L	0822	05/18/2004	0001	344			#	-	-
Manganese	mg/L	0747	05/20/2004	0001	2.100			#	0.0011	-
	mg/L	0747	05/20/2004	N002	2.200			#	0.0011	-
	mg/L	0749	05/20/2004	0001	0.014			#	0.0023	-
	mg/L	0794	05/19/2004	0001	0.014			#	0.0011	-
	mg/L	0796	05/20/2004	0001	0.010			#	0.0011	-
	mg/L	0810	05/18/2004	0001	0.038			#	0.0011	-
	mg/L	0811	05/19/2004	0001	0.021			#	0.0011	-
	mg/L	0812	05/20/2004	0001	0.012	N	J	#	0.0011	-
	mg/L	0822	05/18/2004	0001	0.032			#	0.0023	-
Molybdenum	mg/L	0747	05/20/2004	0001	0.032		J	#	9.3E-05	-
	mg/L	0747	05/20/2004	N002	0.031		J	#	9.3E-05	-
	mg/L	0749	05/20/2004	0001	0.0073		J	#	9.3E-05	-
	mg/L	0794	05/19/2004	0001	0.0008	B	U	#	9.3E-05	-
	mg/L	0796	05/20/2004	0001	0.0008	B	U	#	9.3E-05	-
	mg/L	0810	05/18/2004	0001	0.0018		U	#	9.3E-05	-
	mg/L	0811	05/19/2004	0001	0.0009	B	U	#	9.3E-05	-
	mg/L	0812	05/20/2004	0001	0.0008	B	U	#	9.3E-05	-
	mg/L	0822	05/18/2004	0001	0.0048		J	#	9.3E-05	-
Oxidation Reduction Potent	mV	0747	05/20/2004	N001	41			#	-	-
	mV	0749	05/20/2004	N001	41			#	-	-
	mV	0794	05/19/2004	N001	213			#	-	-
	mV	0796	05/20/2004	N001	73			#	-	-
	mV	0810	05/18/2004	N001	202			#	-	-
	mV	0811	05/19/2004	N001	187			#	-	-
	mV	0812	05/20/2004	N001	70			#	-	-
	mV	0822	05/18/2004	N001	144			#	-	-
pH	s.u.	0747	05/20/2004	N001	6.91			#	-	-
	s.u.	0749	05/20/2004	N001	7.13			#	-	-
	s.u.	0794	05/19/2004	N001	8.46			#	-	-
	s.u.	0796	05/20/2004	N001	8.33			#	-	-

SURFACE WATER QUALITY DATA BY PARAMETER (USEE800) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 7/30/2004 1:44 pm

PARAMETER	UNITS	LOCATION ID	SAMPLE: DATE	ID	RESULT	QUALIFIERS: LAB	DATA	QA	DETECTION LIMIT	UN-CERTAINTY
pH	s.u.	0810	05/18/2004	N001	9.02			#	-	-
	s.u.	0811	05/19/2004	N001	8.41			#	-	-
	s.u.	0812	05/20/2004	N001	8.28			#	-	-
	s.u.	0822	05/18/2004	N001	7.87			#	-	-
Specific Conductance	umhos/cm	0747	05/20/2004	N001	1442			#	-	-
	umhos/cm	0749	05/20/2004	N001	5320			#	-	-
	umhos/cm	0794	05/19/2004	N001	406			#	-	-
	umhos/cm	0796	05/20/2004	N001	366			#	-	-
	umhos/cm	0810	05/18/2004	N001	1116			#	-	-
	umhos/cm	0811	05/19/2004	N001	410			#	-	-
	umhos/cm	0812	05/20/2004	N001	326			#	-	-
	umhos/cm	0822	05/18/2004	N001	3734			#	-	-
Sulfate	mg/L	0747	05/20/2004	0001	670			#	10	-
	mg/L	0747	05/20/2004	N002	660			#	10	-
	mg/L	0749	05/20/2004	0001	2300			#	25	-
	mg/L	0794	05/19/2004	0001	98			#	2.5	-
	mg/L	0796	05/20/2004	0001	83			#	2.5	-
	mg/L	0810	05/18/2004	0001	290			#	5	-
	mg/L	0811	05/19/2004	0001	97			#	2.5	-
	mg/L	0812	05/20/2004	0001	84			#	2.5	-
	mg/L	0822	05/18/2004	0001	1500			#	25	-
Temperature	C	0747	05/20/2004	N001	14.3			#	-	-
	C	0749	05/20/2004	N001	24.7			#	-	-
	C	0794	05/19/2004	N001	20.1			#	-	-
	C	0796	05/20/2004	N001	16.9			#	-	-
	C	0810	05/18/2004	N001	20.5			#	-	-
	C	0811	05/19/2004	N001	19.7			#	-	-
	C	0812	05/20/2004	N001	17.8			#	-	-
	C	0822	05/18/2004	N001	24.6			#	-	-
Turbidity	NTU	0747	05/20/2004	N001	74.3			#	-	-
	NTU	0749	05/20/2004	N001	7.81			#	-	-
	NTU	0794	05/19/2004	N001	46.7			#	-	-
	NTU	0796	05/20/2004	N001	59.1			#	-	-
	NTU	0810	05/18/2004	N001	2.01			#	-	-
	NTU	0811	05/19/2004	N001	97.0			#	-	-
	NTU	0812	05/20/2004	N001	54.3			#	-	-
	NTU	0822	05/18/2004	N001	4.86			#	-	-

SURFACE WATER QUALITY DATA BY PARAMETER (USEE800) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 7/30/2004 1:44 pm

PARAMETER	UNITS	LOCATION ID	SAMPLE: DATE	ID	RESULT	QUALIFIERS: LAB	DATA	QA	DETECTION LIMIT	UN-CERTAINTY
Uranium	mg/L	0747	05/20/2004	0001	0.440			#	2.8E-05	-
	mg/L	0747	05/20/2004	N002	0.420			#	2.8E-05	-
	mg/L	0749	05/20/2004	0001	0.0001		U	#	2.8E-06	-
	mg/L	0794	05/19/2004	0001	0.0025			#	2.8E-06	-
	mg/L	0796	05/20/2004	0001	0.0019			#	2.8E-06	-
	mg/L	0810	05/18/2004	0001	0.0076			#	2.8E-06	-
	mg/L	0811	05/19/2004	0001	0.0022			#	2.8E-06	-
	mg/L	0812	05/20/2004	0001	0.0022			#	2.8E-06	-
	mg/L	0822	05/18/2004	0001	0.0033			#	2.8E-06	-

RECORDS: SELECTED FROM USEE800 WHERE site_code='RVT01' AND quality_assurance = TRUE AND (data_validation_qualifiers IS NULL OR data_validation_qualifiers NOT LIKE '%R%' AND data_validation_qualifiers NOT LIKE '%X%') AND DATE_SAMPLED between #5/1/2004# and #5/30/2004#

SAMPLE ID CODES: 000X = Filtered sample (0.45 µm). N00X = Unfiltered sample. X = replicate number.

LAB QUALIFIERS:

- * Replicate analysis not within control limits.
- + Correlation coefficient for MSA < 0.995.
- > Result above upper detection limit.
- A TIC is a suspected aldol-condensation product.
- B Inorganic: Result is between the IDL and CRDL. Organic: Analyte also found in method blank.
- C Pesticide result confirmed by GC-MS.
- D Analyte determined in diluted sample.
- E Inorganic: Estimate value because of interference, see case narrative. Organic: Analyte exceeded calibration range of the GC-MS.
- H Holding time expired, value suspect.
- I Increased detection limit due to required dilution.
- J Estimated
- M GFAA duplicate injection precision not met.
- N Inorganic or radiochemical: Spike sample recovery not within control limits. Organic: Tentatively identified compund (TIC).
- P > 25% difference in detected pesticide or Arochlor concentrations between 2 columns.
- S Result determined by method of standard addition (MSA).
- U Analytical result below detection limit.
- W Post-digestion spike outside control limits while sample absorbance < 50% of analytical spike absorbance.
- X Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- Y Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- Z Laboratory defined (USEPA CLP organic) qualifier, see case narrative.

DATA QUALIFIERS:

- F Low flow sampling method used.
- J Estimated value.
- Q Qualitative result due to sampling technique
- U Parameter analyzed for but was not detected.
- G Possible grout contamination, pH > 9.
- L Less than 3 bore volumes purged prior to sampling.
- R Unusable result.
- X Location is undefined.

QA QUALIFIER: # = validated according to Quality Assurance guidelines.

BLANKS REPORT
LAB CODE: PAR, PARAGON (Fort Collins, CO)
LAB REQUISITION(S): 04050063
REPORT DATE: 07/30/04 11:17:04: AM

PARAMETER	SITE CODE	LOCATION ID	SAMPLE DATE	ID	UNITS	RESULT	QUALIFIERS LAB	DATA	DETECTION LIMIT	UNCERTAINTY	SAMPLE TYPE
Manganese	RVT01	0999	05/20/2004	0001	mg/L	0.0011	U		0.0011		E
Manganese	RVT01	0999	05/20/2004	0002	mg/L	0.0011	U		0.0011		E
Molybdenum	RVT01	0999	05/20/2004	0001	mg/L	0.00057	B	U	0.000093		E
Molybdenum	RVT01	0999	05/20/2004	0002	mg/L	0.00021	B	U	0.000093		E
Sulfate	RVT01	0999	05/20/2004	0001	mg/L	0.5	U		0.5		E
Sulfate	RVT01	0999	05/20/2004	0002	mg/L	0.5	U		0.5		E
Uranium	RVT01	0999	05/20/2004	0001	mg/L	0.00003	B	U	0.0000028		E
Uranium	RVT01	0999	05/20/2004	0002	mg/L	0.000061	B	U	0.0000028		E

BLANKS REPORT
LAB CODE: PAR, PARAGON (Fort Collins, CO)
LAB REQUISITION(S): 04050063
REPORT DATE: 07/30/04 11:17:04: AM

PARAMETER	SITE CODE	LOCATION ID	SAMPLE DATE	ID	UNITS	RESULT	QUALIFIERS LAB	QUALIFIERS DATA	DETECTION LIMIT	UNCERTAINTY	SAMPLE TYPE

SAMPLE ID CODES: 000X = Filtered sample (0.45 µm). N00X = Unfiltered sample. X = replicate number.

LAB QUALIFIERS:

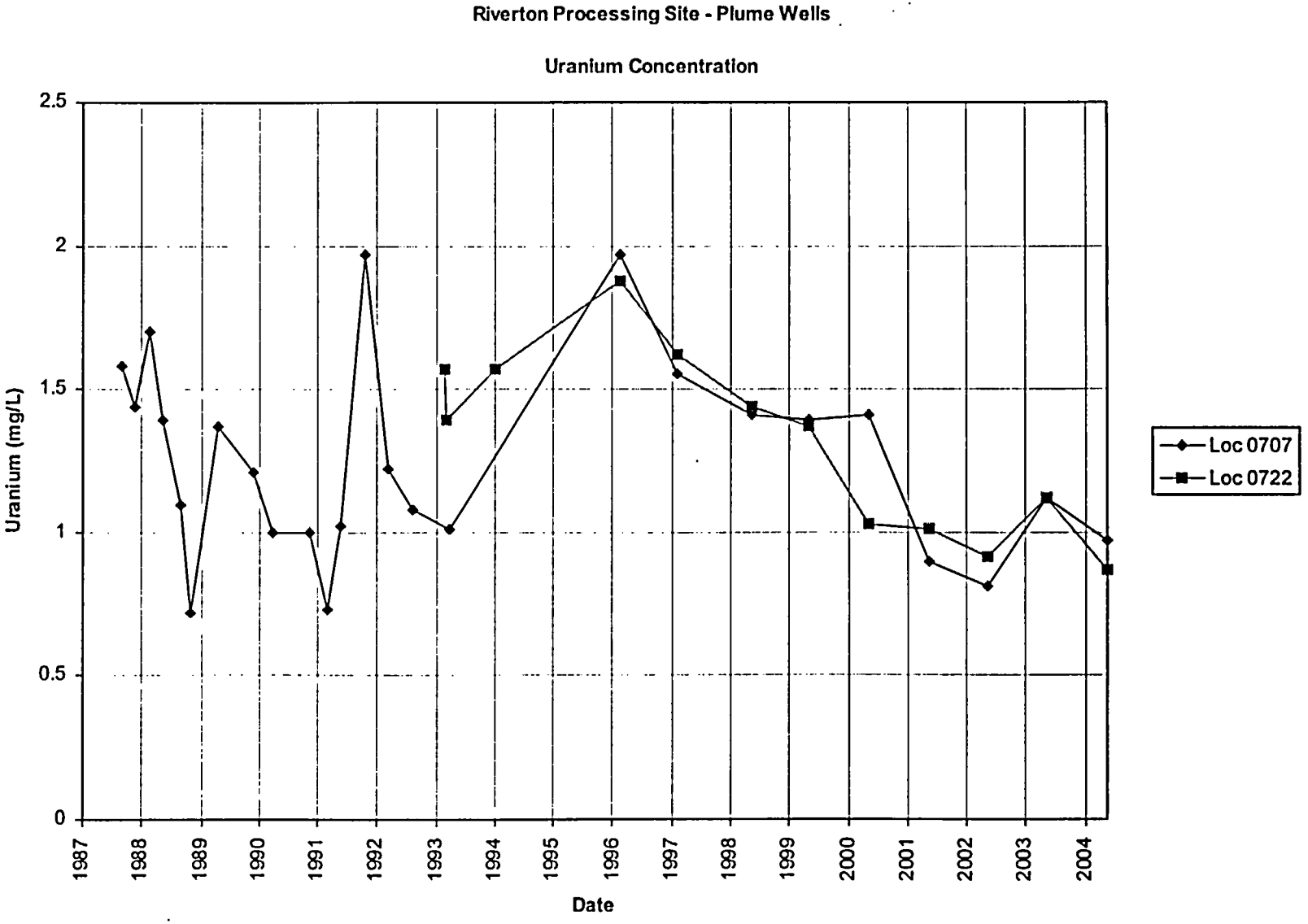
*	Replicate analysis not within control limits.
+	Correlation coefficient for MSA < 0.995.
A	TIC is a suspected aldol-condensation product.
B	Inorganic: Result is between the IDL and CRDL. Organic: Analyte also found in method blank.
E	Inorganic: Estimate value because of interference, see case narrative. Organic: Analyte exceeded calibration range of the GC-MS.
Z	Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
H	Holding time expired, value suspect.
I	Increased detection limit due to required dilution.
C	Pesticide result confirmed by GC-MS.
M	GFAA duplicate injection precision not met.
N	Inorganic or radiochemical: Spike sample recovery not within control limits. Organic: Tentatively identified compund (TIC).
S	Result determined by method of standard addition (MSA).
U	Analytical result below detection limit.
W	Post-digestion spike outside control limits while sample absorbance < 50% of analytical spike absorbance.
D	Analyte determined in diluted sample.
P	> 25% difference in detected pesticide or Arochlor concentrations between 2 columns.
X	Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
Y	Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
>	Result above upper detection limit.
J	Estimated

DATA QUALIFIERS:

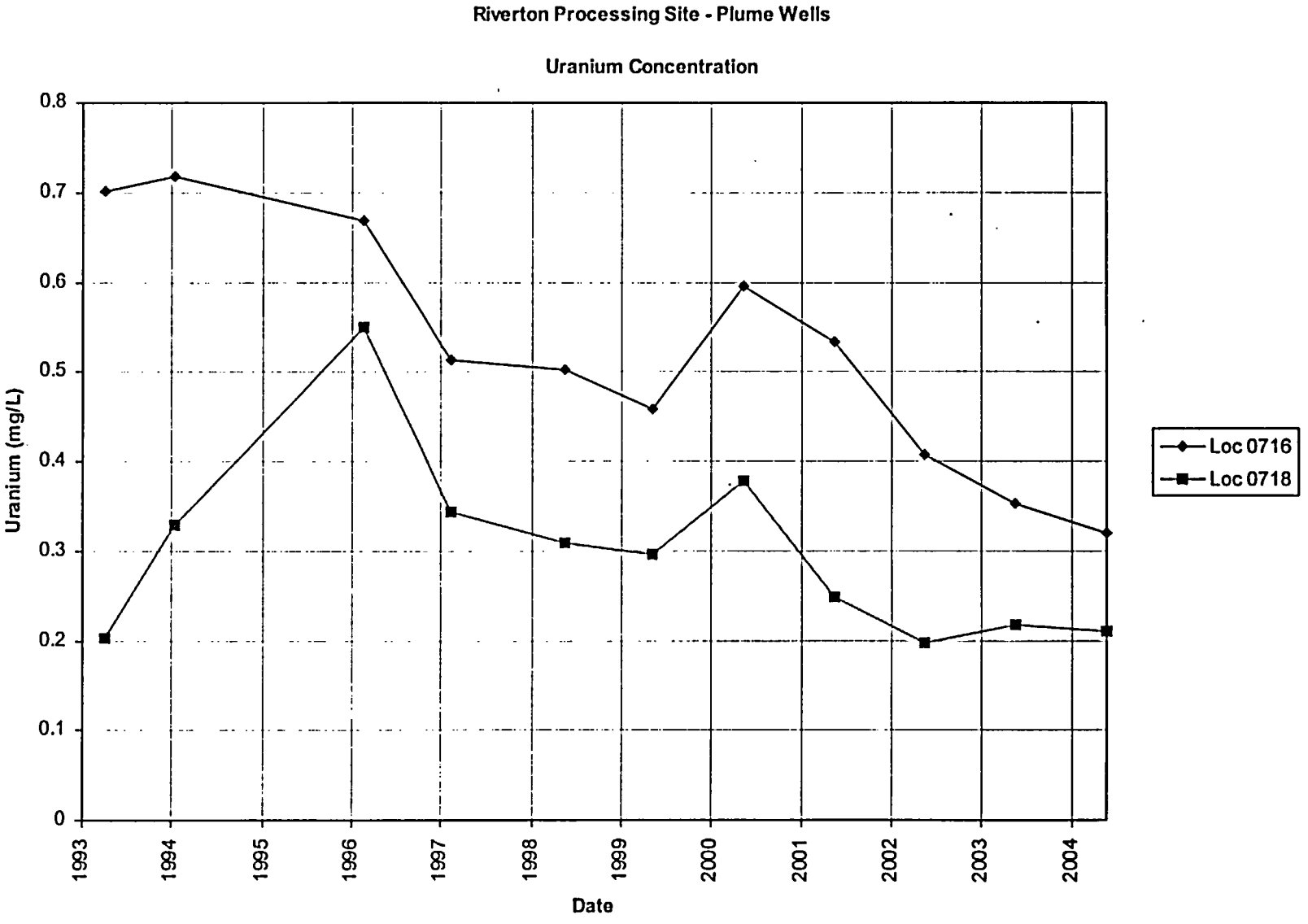
J	Estimated value.	F	Low flow sampling method used.	G	Possible grout contamination, pH > 9.
L	Less than 3 bore volumes purged prior to sampling.	R	Unusable result.	X	Location is undefined.
U	Parameter analyzed for but was not detected.	Q	Qualitative result due to sampling technique		

SAMPLE TYPES:

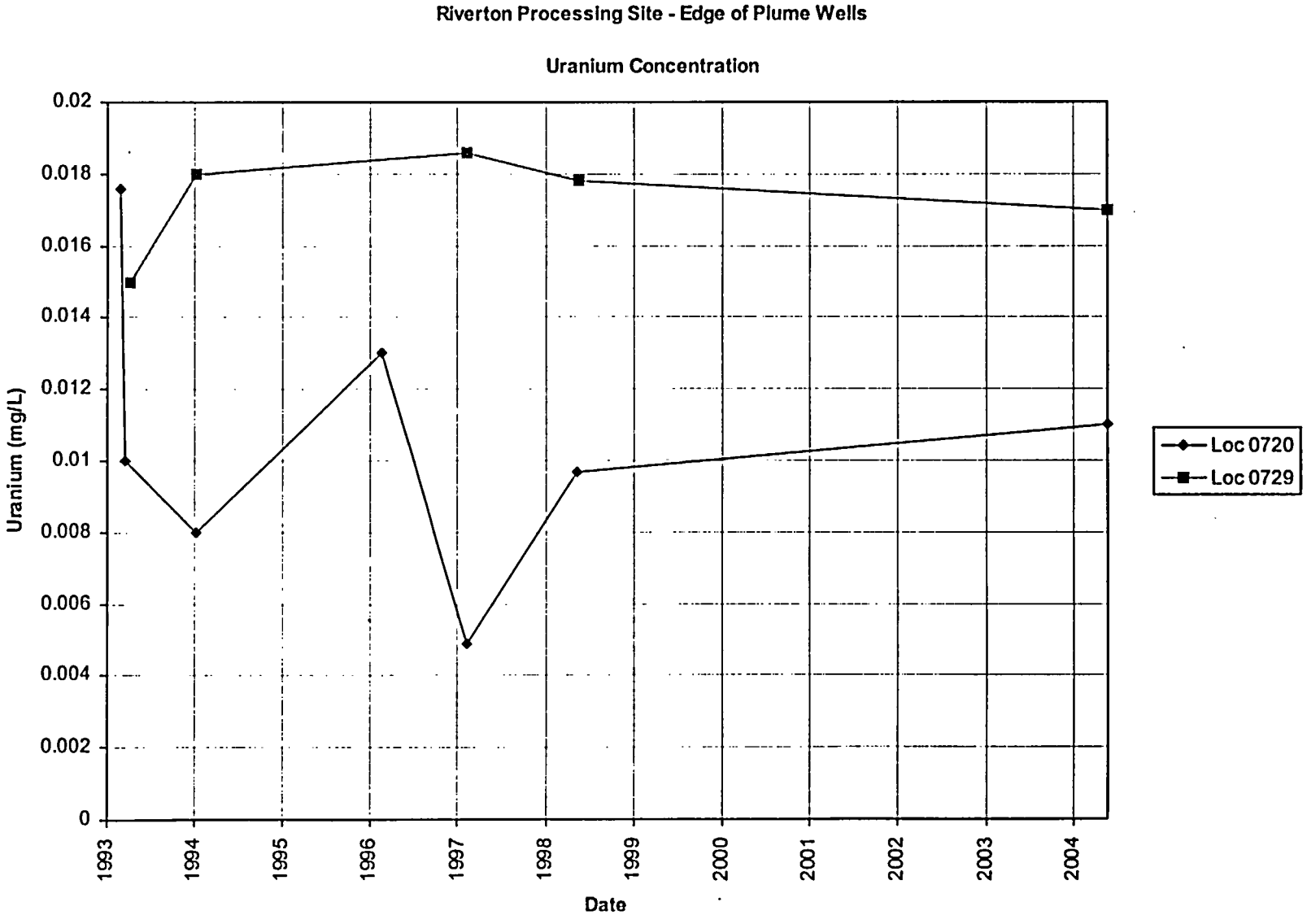
E	EQUIPMENT BLANK



7/30/2004 3:03 pm



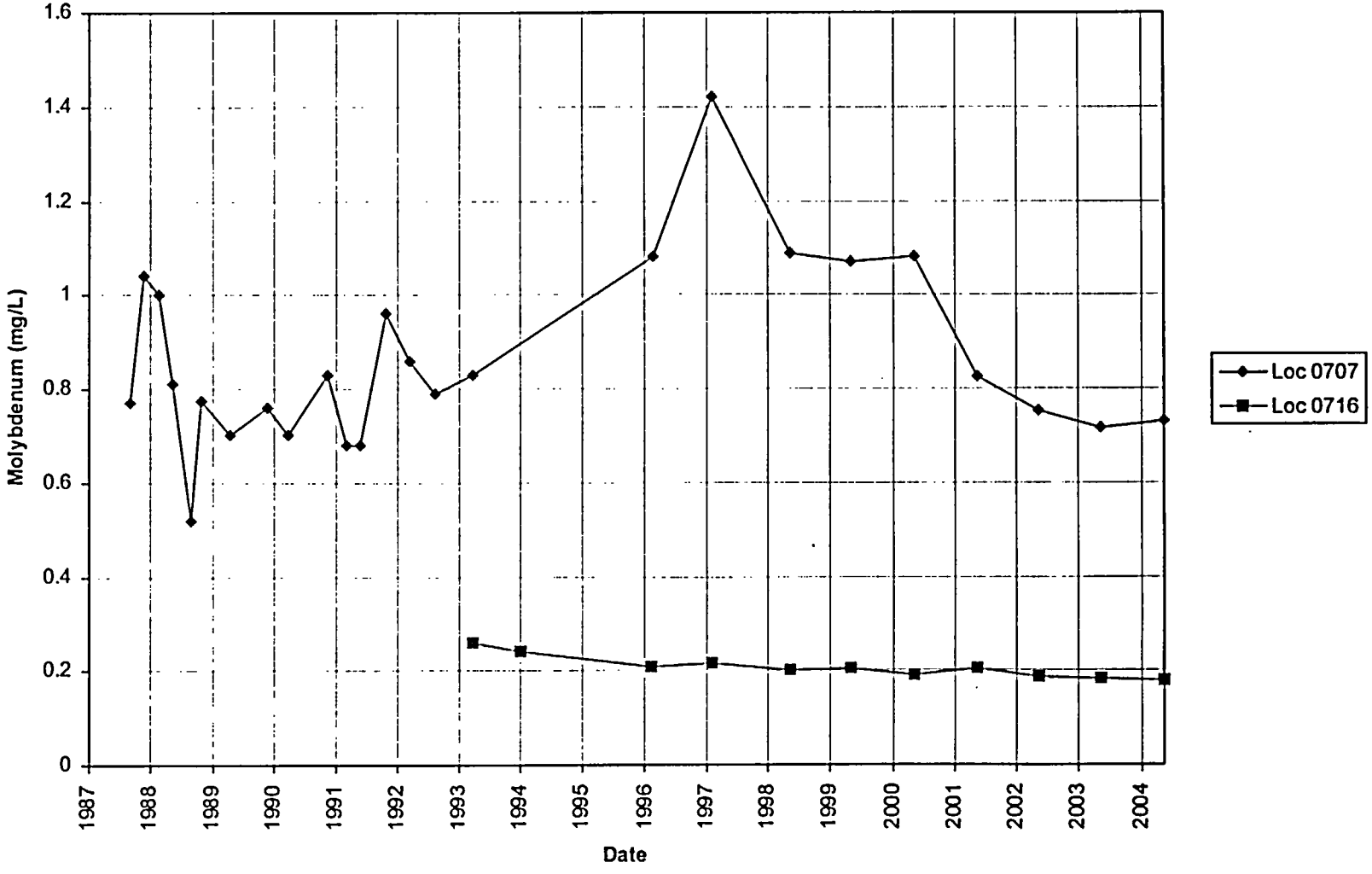
7/30/2004 2:58 pm



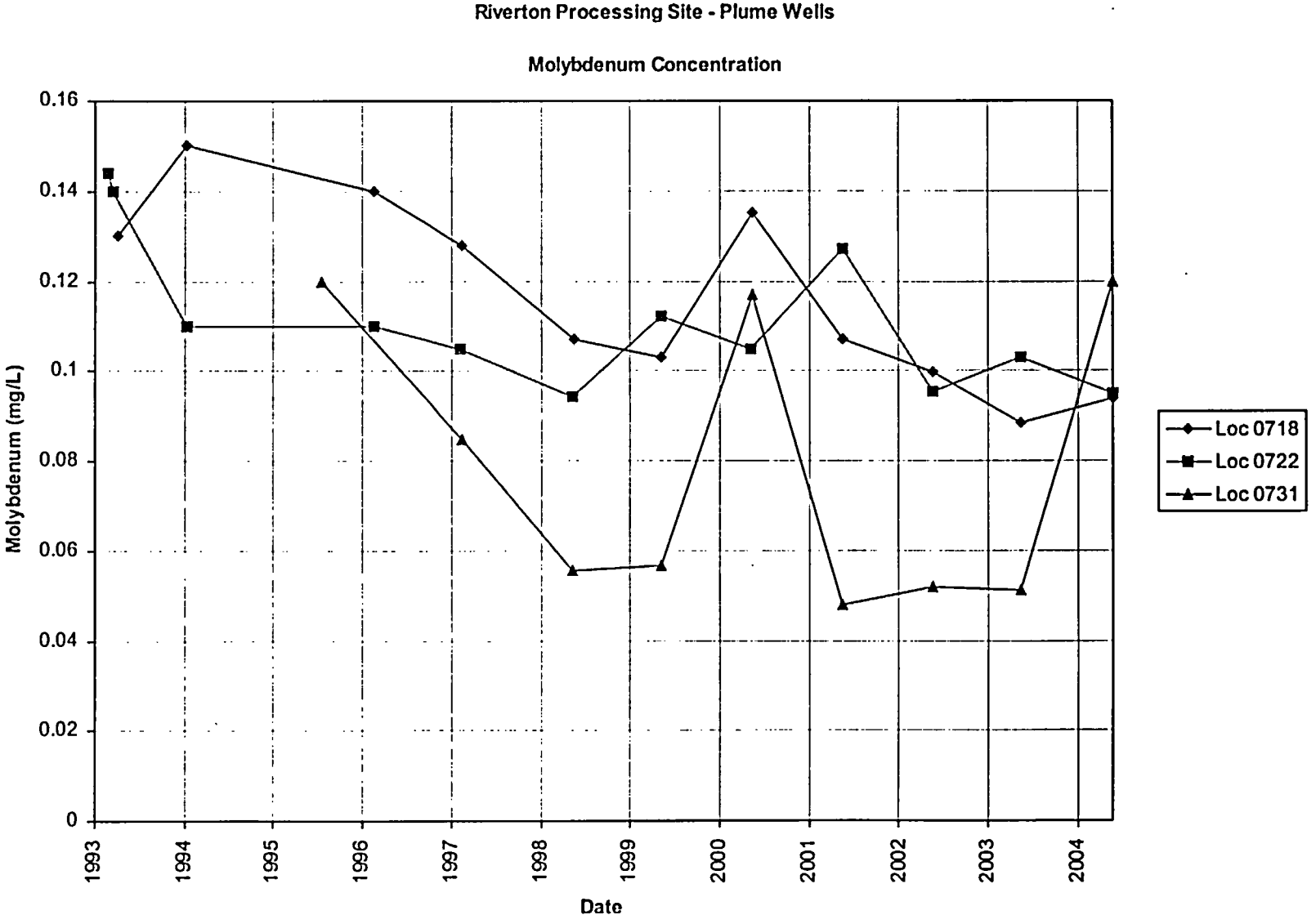
7/30/2004 3:01 pm

Riverton Processing Site - Plume Wells

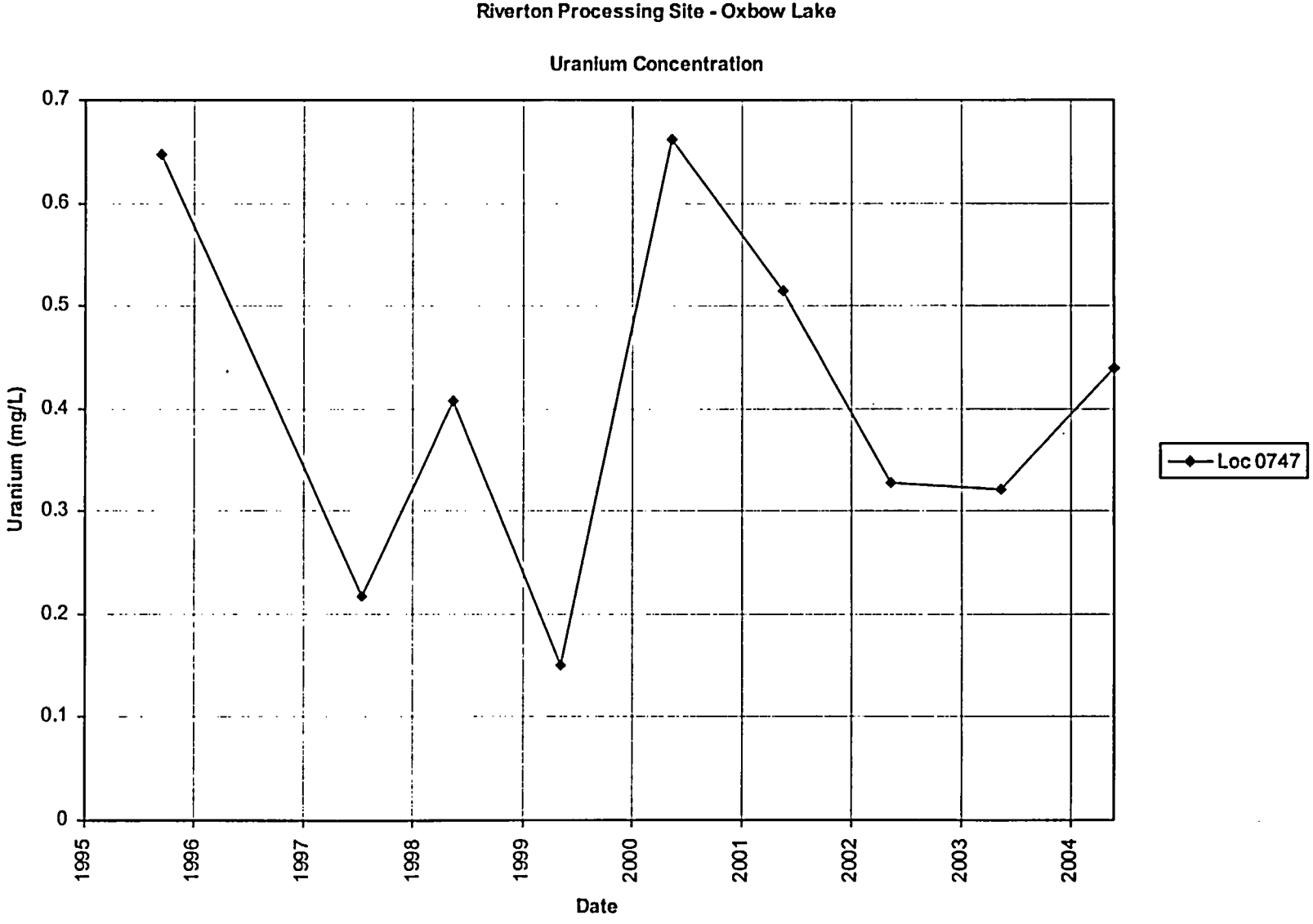
Molybdenum Concentration



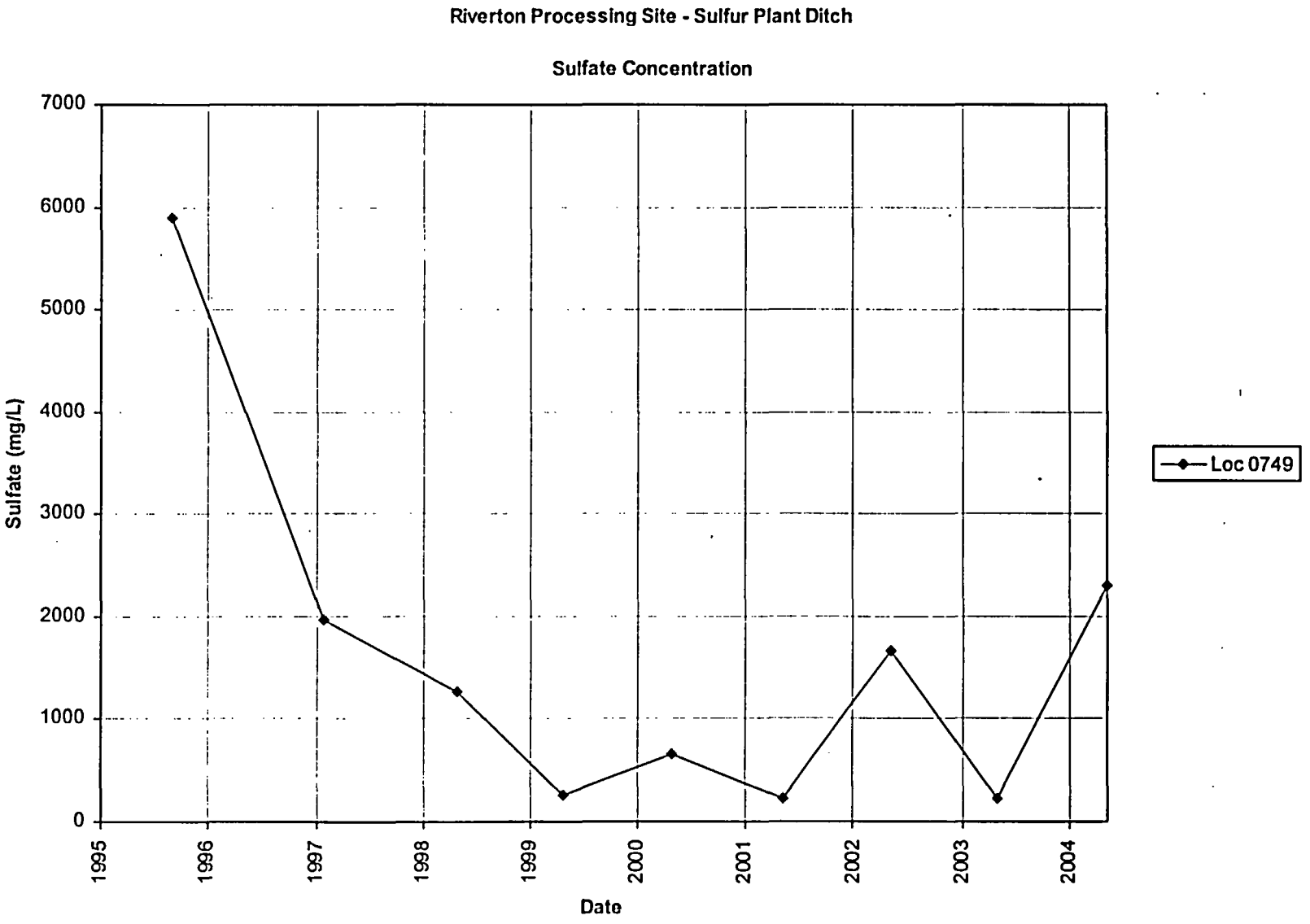
7/30/2004 3:20 pm



7/30/2004 3:22 pm



7/30/2004 3:05 pm



7/30/2004 3:07 pm

STATIC WATER LEVELS (USEE700) FOR SITE RVT01, Riverton Processing Site
REPORT DATE: 7/30/2004 2:04 pm

LOCATION CODE	FLOW CODE	TOP OF CASING ELEVATION (FT)	MEASUREMENT		DEPTH FROM TOP OF CASING (FT)	WATER ELEVATION (FT)	WATER LEVEL FLAG
			DATE	TIME			
0705	D	4930.80	05/20/2004	16:03	6.17	4924.63	
0707	D	4931.00	05/19/2004	15:14	5.25	4925.75	
0710	U	4947.90	05/18/2004	15:35	7.05	4940.85	
0716	O	4939.12	05/20/2004	08:16	8.96	4930.16	
0717	O	4938.80	05/20/2004	08:47	8.72	4930.08	
0718	D	4937.06	05/20/2004	10:39	6.89	4930.17	
0719	D	4936.94	05/20/2004	10:19	6.52	4930.42	
0720	C	4940.46	05/18/2004	16:11	5.53	4934.93	
0721	C	4940.47	05/18/2004	16:33	7.40	4933.07	
0722	D	4935.35	05/20/2004	11:41	7.13	4928.22	
0723	D	4935.26	05/20/2004	12:04	7.12	4928.14	
0729	D	4932.07	05/19/2004	07:49	6.78	4925.29	
0730	D	4932.48	05/19/2004	08:21	7.44	4925.04	
0731	U	4945.48	05/19/2004	08:59	7.19	4938.29	
0735	D	4934.16	05/18/2004	08:12	9.64	4924.52	
0809		4932.09	05/18/2004	08:42	7.37	4924.72	

RECORDS: SELECTED FROM USEE700 WHERE site_code='RVT01' AND LOG_DATE between #5/1/2004# and #5/30/2004#

FLOW CODES: C CROSS GRADIENT D DOWN GRADIENT O ON-SITE
U UPGRADIENT

WATER LEVEL FLAGS:

SAMPLING AND ANALYSIS WORK ORDER AND TRIP REPORT

Stoller

Grand Junction Office

established 1959

Task Order ST04-102
Control Number 1000-T04-1118

May 7, 2004

Tracy Plessinger
Program Manager
U.S. Department of Energy
Office of Legacy Management
2597 B ¾ Road
Grand Junction, CO 81503

SUBJECT: Contract No. DE-AC01-02GJ79491, Stoller
May 2004 Environmental Sampling at Riverton, Wyoming

Reference: FY 2004 LM Task Order No. ST04-102-R3

Dear Ms. Plessinger:

The purpose of this letter is to inform you of upcoming sampling at Riverton, Wyoming. Enclosed are the map and tables specifying sample locations and analytes for routine monitoring at Riverton, Wyoming. Water quality data will be collected from monitor wells at this site as part of the routine environmental sampling currently scheduled to begin the week of May 17, 2004.

The following lists show the monitor wells (with zone of completion), surface locations, and alternate supply system wells scheduled to be sampled during this event.

Monitor Wells (filtered)*

705 Se	716 Sf	719 Se	721 Se	723 Se	730 Se	735 Se
707 Sf	717 Se	720 Sf	722 Sf	729 Sf	731 Sf	809
710 Sf	718 Sf					

*NOTE: Se = Semi-confined sandstone; Sf = surficial

Surface Locations (filtered)

747	749	794	796	810	811	812

Alternate Water Supply

813	815	817	818	819	820	821
814	816					

QA/QC samples will be collected as directed in the *Sampling and Analysis Plan for GJO Projects*. Access agreements are being reviewed and are expected to be complete by the beginning of fieldwork.

If you have any questions, please call me at extension 6588 or Sam Campbell at extension 6654.

Sincerely,

Clay Carpenter
Project Manager

CC/lcg/lad
Enclosures (3)

cc: C. I. Bahrke, Stoller
S. E. Donivan, Stoller (e)
R. K. Johnson, Stoller (e)
K. E. Miller, Stoller (e)
D. G. Traub, Stoller (e)
Project File RVT 410.02 (Thru A. Temple)

cc w/o enclosures:
Correspondence Control File (Thru V. Creagar)

Sampling Frequencies for Locations at Riverton, Wyoming

Wells	Quarterly	Semiannually	Annually	Biennially	Not Sampled	Notes
Monitor Wells						
705			X			
707			X			Data logger
709					X	Data logger
710			X			
716			X			Data logger
717			X			
718			X			
719			X			
720			X			
721			X			
722			X			
723			X			
729			X			
730			X			
731			X			
735			X			
789					X	Data logger
809			X			
Surface Locations						
747			X			
749			X			
794			X			
796			X			
810			X			Gravel pit
811			X			Little Wind River
812			X			Little Wind River
Alternate Water Supply System						
813			X			
814			X			
815			X			
816			X			
817			X			
818			X			
819			X			
820			X			
821			X			

Sampling conducted in May

Constituent Sampling Breakdown For Individual Sites

Site	Riverton	
Analyte	Ground Water	Surface Water
Approx. No. Samples/yr	11	4
Field Measurements		
Alkalinity	X	X
Dissolved Oxygen		
Redox Potential	X	X
pH	X	X
Specific Conductance	X	X
Turbidity	X	X
Temperature	X	X
Laboratory Measurements		
Aluminum		
Ammonia as N		
Antimony		
Arsenic		
Barium		
Bromide		
Cadmium		
Calcium		
Chloride		
Chromium		
Cobalt		
Copper		
Gross Alpha	813 through 821 only	
Gross Beta	813 through 821 only	
Iron		
Lead		
Magnesium		
Manganese	X	X
Molybdenum	X	X

Constituent Sampling Breakdown For Individual Sites

Site	Riverton	
Analyte	Ground Water	Surface Water
Laboratory Measurements (Continued)		
Nickel		
Nitrate plus nitrite as N		
Nitrite		
PCBs		
Phosphate		
Potassium		
Radium-226	813 through 821 only	
Radium-228	813 through 821 only	
Selenium		
Silica		
Sodium		
Strontium		
Sulfate	X	X
Sulfide		
Thallium		
Thorium-230		
Tin		
Total Dissolved Solids		
Total Organic Carbon		
Total Suspended Solids		
Uranium	X	X
Uranium-234, -238		
Vanadium		
Zinc		
Total Analytes	8	4

Note: All samples are considered filtered unless stated otherwise. All private well samples are to be unfiltered. The total number of analytes does not include field parameters.

Stoller established 1959

Grand Junction Office

Memorandum

Control Number N/A

DATE: June 23, 2004

TO: Distribution

FROM: Sam Campbell Left for

SUBJECT: Trip Report

Site: Riverton.

Dates of Sampling Event: May 17 to May 21, 2004.

Team Members: Sam Campbell, Jeff Price, and Joe Trevino.

Number of Locations Sampled: 16 monitor wells, 8 surface water locations, and 9 alternate water supply system locations.

Locations Not Sampled/Reason: None.

Location Specific Information: Monitor well 0809 was installed south of the Little Wind River as a replacement well for decommissioned monitor well 0706. This well was developed and sampled during this event. A GPS unit was used to determine the horizontal coordinates, and a survey level was used to obtain the top of casing elevation relative to adjacent well 0735. The elevation of the top of casing at well 0809 is 4932.09 (2.07 feet lower than 0735).

Nine alternate water supply system locations were sampled, which included four tap locations (0813 to 0816), the source well for the system (0817), and four hydrant locations (0818 to 0821). All hydrant locations were flushed for 30 minutes prior to sampling. All sample locations were surveyed with a GPS unit. Free chlorine was measured at each location.

Four new surface water locations were sampled, which included a gravel pit pond (0810), two locations on the Little Wind River (0811 and 0812), and the west-side irrigation ditch (0822). All sample locations and the perimeter of the gravel pit pond were surveyed with a GPS unit.

The perimeter of the oxbow lake also was surveyed using a GPS unit.

Monitor wells 0705 and 0719 were purged and sampled using Category II criteria; all other monitor wells were purged and sampled using Category I criteria.

Field Variance: None.

Quality Control Sample Cross Reference: Following are the false identifications assigned to the quality control samples:

FALSE ID	TRUE ID	SAMPLE TYPE	ASSOCIATED MATRIX	TICKET NUMBER
2251	0821	Duplicate	Ground Water	NDU-324
2252	0716	Duplicate	Ground Water	NDX-580
2253	0747	Duplicate	Surface Water	NDX-588
2254	NA	Equipment Blank	NA	NDX-589
2255	NA	Equipment Blank	NA	NDX-592

Requisition Numbers Assigned: All samples were assigned to report identification number (RIN) 04050063.

Water Level Measurements: Water levels were measured at all sampled wells. Data loggers were downloaded from 4 locations. The data logger in well 0716 was moved to well 0702.

Well Inspection Summary: Well inspections were conducted at all sampled wells. Wells 0729 and 0730 are flush mounted wells that were buried. Well 0730 was missing the lid to the well vault and a lock; a lock was installed on the expansion plug cap. All other wells were in good condition.

Equipment: All equipment functioned properly.

Regulatory: Split samples were collected at four locations (two water supply locations and two monitor wells) by Wind River Environmental Quality Commission personnel.

Site Issues: Flushing of hydrant locations was conducted by Northern Arapaho Utility personnel as part of their semiannual flushing schedule. The 30-minute flush time was the standard operating procedure.

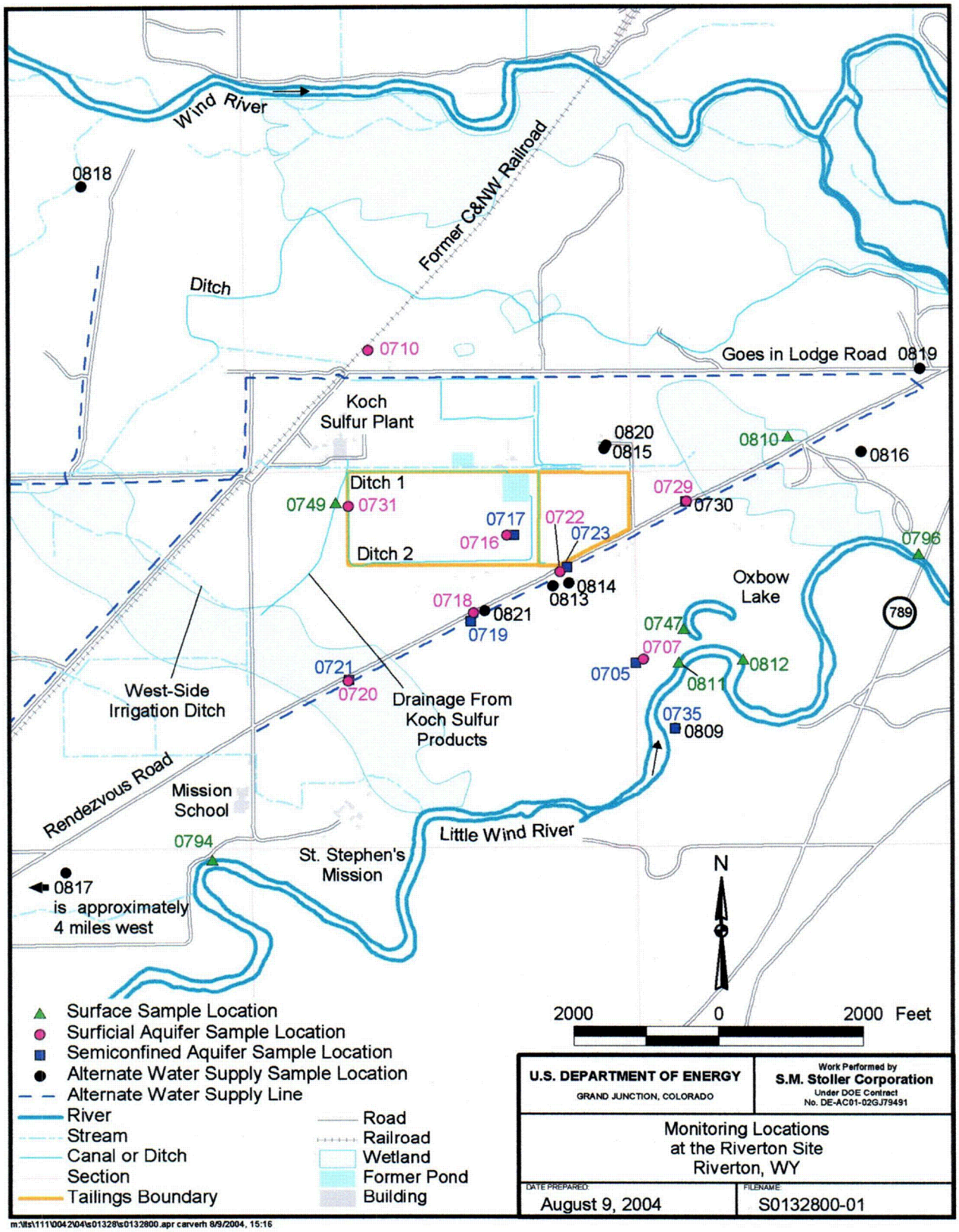
Juliana Miller is the owner of the gravel pit pond (sample location 0810). This pond will be included in the long-term monitoring program; therefore, an access agreement will be required. Her phone numbers are (307) 856-9281 and (307) 857-0895.

Corrective Action Required/Taken: Well 0730 needs a new well vault cover. All flush mount wells in the right of way along Rendezvous Road should be extended to avoid being buried.

(SEC/lcg)

cc: T. B. Plessinger, LM-50 (e)
C. I. Bahrke, Stoller (e)
K. E. Miller, Stoller (e)
Working File RVT

SAMPLE LOCATION MAP


Wind River
Former C&NW Railroad
0818
Ditch
0710
Goes in Lodge Road 0819
Koch
Sulfur Plant
0820
0815
0810
0816
Ditch 1
0749
0731
0717
0722
0729
0730
0716
0723
Ditch 2
0796
Oxbow
Lake
0718
0821
0814
0813
789
0719
0747
0707
0721
0705
0812
0720
0811
West-Side
Irrigation Ditch
Drainage From
Koch Sulfur
Products
0735
0809
Rendezvous Road
Mission
School
Little Wind River
0794
St. Stephen's
Mission
0817
is approximately
4 miles west
N
Surface Sample Location
Surficial Aquifer Sample Location
Semiconfined Aquifer Sample Location
Alternate Water Supply Sample Location
Alternate Water Supply Line
River
Stream
Canal or Ditch
Section
Tailings Boundary
Road
Railroad
Wetland
Former Pond
Building
2000
0
2000 Feet
U.S. DEPARTMENT OF ENERGY
GRAND JUNCTION, COLORADO
Work Performed by
S.M. Stoller Corporation
Under DOE Contract
No. DE-AC01-02GJ79491
Monitoring Locations
at the Riverton Site
Riverton, WY
DATE PREPARED:
August 9, 2004
FILENAME:
S0132800-01
m:\lts\111\0042\04\s01328\s0132800.apr carverh 8/9/2004, 15:16

C01