

SEMI-ANNUAL GROUND WATER,
EFFLUENT AND ENVIRONMENTAL
MONITORING REPORT

FIRST HALF OF 2013
(JANUARY THRU JUNE)

UNITED NUCLEAR CORPORATION



P.O. Box 3077
Gallup, New Mexico 87305-3077

Telephone: (505) 905-6651
Fax: (505) 905-6654

August 29, 2013

Mr. Andrew Persinko, Deputy Director
Decommissioning and Uranium Recovery Licensing Directorate
Division of Waste Management and Environmental Protection
Office of Federal and State Materials and Environmental Management Programs
U.S. Nuclear Regulatory Commission
11545 Rockville Pike
#2 White Flint Mail Stop T7 E-18
Rockville, MD 20852-2738

RE: First Half –January thru June 2013

Semi – Annual Ground Water Monitoring Report.
QA/QC Report and Effluent and Environmental Monitoring Report.

Dear Mr. Persinko ,

The above reports are submitted pursuant to our NRC Source Materials License NO. SUA-1475.
Condition 30C and 12; Section V.A. 15 of the EPA Administrative Order for the Church Rock Site.

Although not part of the performance monitoring program requirement Zone 3 wells PB-2, PB-3, PB-4,
NBL-2, RW-A, NW wells 1 thru 5, MW-6 and MW7 are also included in this report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Max Chischilly Jr.' with a stylized flourish at the end.

Max Chischilly Jr.
Radiation Safety Officer

dy
Enclosures

Cc. Mark Jancin, Chester Engineers
Joe Davis GE
Earl Dixon, NMED
Eugene Esplain, NNEPA
Yolande Norman, NRC (3 Copies)
Janet Brooks, USEPA Region 6
Jack E. Whitten, NRC Region IV

QUARTERLY SAMPLING
SEMI-ANNUAL GROUND WATER MONITORING REPORT
JANUARY TO JUNE OF 2013
FIELD DATA SHEET OF
FIRST AND SECOND QUARTER

CONTROLS

SW ALLUVIUM

ZONE - 1

ZONE - 3

GROUND WATER FIELD MONITORING
 WATER ELEVATIONS, PH, CONDUCTIVITY AND TEMPERATURE
 JANUARY _____ MONTH FIRST _____ QUARTER, 2013

WELL NO.	DEPTH SAMPLE DATE	DEPT TO WATER (FT)	ZONE - 3		FIELD COND. (US/CM)	FIELD Ph (UNITS)	FIELD TEMP. (C)
			REF. ELEV.	TOP OF WATER ELEV.			
504-B	*No Sample see below		7001.8				
	1/8/2013						
517	1058	103.99	6971.29	6867.30	5.110	3.37	11.7
	1/8/2013						
EPA-14	1146	122.62	6963.88	6841.26	4.240	4.46	9.7
	1/8/2013						
420	1544	152.95	6982.6	6829.65	3.780	6.72	8
	1/14/2013						
711	1423	182.48	7042.75	6860.27	4.230	4.66	8.3
	1/8/2013						
613	1011	79.49	6961.3	6881.81	9.290	2.87	11.3
	1/15/2013						
708	1600	155.39	7011.73	6856.34	5.500	3.35	8.8
Rinsate	1/9/2013						
(QA/QC)	1140				5	7.38	14.2
Field Blank	1/9/2013						
(QA/QC)	1200				7	7.06	14.9
	1/14/2013						
NBL-1	1520	189.47	6991.96	6802.49	5.850	2.65	7.2
	1/15/2013						
EPA-9	1420	170.42	7076.6	6906.18			
	1/14/2013						
EPA-13	1332	167.73	7031.66	6863.93	6.140	5.89	7.6
	1/17/2013						
702	1258	83.00	6974.2	6891.20			
	1/17/2013						
710	1349	164.19	7016.36	6852.17			
	1/17/2013						
712	1354	177.03	7022.16	6845.13			
	1/17/2013						
713	1400	167.61	7024.19	6856.58			
	1/17/2013						
714	1318	103.94	6962.54	6858.60			
	1/17/2013						
701	1306	84.70	6961.3	6876.60			
	1/17/2013						
706	1324	115.06	6972.12	6857.06			
	1/17/2013						
707	1345	160.02	7005.2	6845.18			
	1/8/2013						
717	1350	131.96	6972.07	6840.11	5.320	4.10	12.7
717 DUP.	1/8/2013						
(QA/QC)	1420	132.12	6972.07	6839.95	5.380	4.07	12.8
	1/8/2013						
719	1452	169.45	7001.48	6832.03	5.130	5.65	11.5
	1/17/2013						
402	1408	129.54	6968.20	6838.66			
	1/17/2013						
446	1452	161.67	6998.30	6836.63			
	1/17/2013						
424	1411	137.30	6972.62	6835.32			

COMMENTS: *No sample is collected due to the very low water volume in well 504-B

GROUND WATER FIELD MONITORING
 WATER ELEVATIONS, PH, CONDUCTIVITY AND TEMPERATURE
 April _____ MONTH Second _____ QUARTER, 2013 _____

ZONE - 3							
WELL NO.	DEPTH SAMPLE DATE	DEPT TO WATER (FT)	REF. ELEV.	TOP OF WATER ELEV.	FIELD COND. (US/CM)	FIELD Ph (UNITS)	FIELD TEMP. (C)
504-B	*No Sample see below		7001.8				
	4/2/2013						
517	1230	104.09	6971.29	6867.20	5,050	3.41	12.5
	4/9/2013						
EPA-14	1600	122.78	6963.88	6841.10	4,120	4.70	7.9
	4/9/2013						
420	O955	152.87	6982.6	6829.73	3,560	6.69	9.0
	4/8/2013						
711	1350	182.28	7042.75	6860.47	4,090	4.63	14.9
	4/2/2013						
613	1145	79.45	6961.3	6881.85	8,760	2.86	13.7
	4/8/2013						
708	1305	155.18	7011.73	6856.55	5,090	3.62	13.9
	4/10/2013						
Rinsate							
(QA/QC)	1155				2	6.30	14.2
Field Blank	4/10/2013						
(QA/QC)	1200				2	6.30	14.2
	4/11/2013						
NBL-1	1020		6991.96	** NO SAMPLE SEE BELOW			
	4/8/2013						
EPA-9	O950	169.50	7076.6	6907.10			
	4/8/2013						
EPA-13	1515	167.50	7031.66	6864.16	5,720	5.97	14.4
	4/16/2013						
702	O925	82.90	6974.2	6891.30			
	4/16/2013						
710	1025	164.19	7016.36	6852.17			
	4/16/2013						
712	1035	176.60	7022.16	6845.56			
	4/16/2013						
713	1040	167.31	7024.19	6856.88			
	4/16/2013						
714	O940	103.60	6962.54	6858.94			
	4/16/2013						
701	O935	84.70	6961.3	6876.60			
	4/16/2013						
706	O955	115.15	6972.12	6856.97			
	4/16/2013						
707	1020	159.78	7005.2	6845.42			
	4/9/2013						
717	1055	131.98	6972.07	6840.09	5,420	4.14	10.7
	4/9/2013						
717 DUP.							
(QA/QC)	1125	132.15	6972.07	6839.92	5,450	4.14	10.8
	4/9/2013						
719	O855	169.17	7001.48	6832.31	5,150	5.10	9.3
	4/16/2013						
402	1145	130.00	6968.20	6838.20			
	4/16/2013						
446	1225	161.66	6998.30	6836.64			
	4/16/2013						
424	1130	137.30	6972.62	6835.32			

COMMENTS: *No sample is collected due to the very low water volume in well 504-B
 **Attempted Sampling NBL-1 for 20 minutes but no water was collected and water level probe had mud (no water). Recommend flushing out sediment buildup in well.

QUARTERLY SAMPLING
SEMI-ANNUAL GROUND WATER MONITORING REPORT
JANUARY TO JUNE OF 2013
SOUTH WEST ALLUVIUM

*509-D

624

627

*632

801

802

803

808

*GW-1

*GW-2

*GW-3

*EPA-23

EPA-25

*EPA-28

SBL-1

LEVELS ONLY

805

807

***POINT OF COMPLIANCE WELLS**

**QUARTERLY SAMPLING
SEMI-ANNUAL GROUND WATER MONITORING REPORT**

JANUARY TO JUNE OF 2013

SOUTH WEST ALLUVIUM

*509-D

624

627

*632

801

802

803

808

*GW-1

*GW-2

*GW-3

*EPA-23

EPA-25

*EPA-28

SBL-1

LEVELS ONLY

805

807

***POINT OF COMPLIANCE WELLS**

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13010343-001
Client Sample ID: 509-D

Report Date: 02/25/13
Collection Date: 01/07/13 10:40
Date Received: 01/11/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	2460	mg/L		5		A2320 B	01/11/13 15:22 / jba
Calcium	933	mg/L		1		E200.7	01/14/13 21:00 / sf
Chloride	359	mg/L	D	4		E300.0	01/12/13 02:31 / wc
Magnesium	424	mg/L		1		E200.7	01/14/13 21:00 / sf
Nitrogen, Ammonia as N	0.88	mg/L		0.05		A4500-NH3 G	01/14/13 13:27 / lr
Nitrogen, Nitrate+Nitrite as N	7.7	mg/L	D	0.5		E353.2	01/16/13 14:52 / lr
Potassium	16	mg/L		1		E200.7	01/14/13 21:00 / sf
Sodium	448	mg/L	D	2		E200.7	01/14/13 21:00 / sf
Sulfate	2120	mg/L	D	20		E300.0	01/12/13 02:31 / wc
PHYSICAL PROPERTIES							
pH	6.57	s.u.	H	0.01		A4500-H B	01/11/13 13:31 / ab
Solids, Total Dissolved TDS @ 180 C	5450	mg/L		10		A2540 C	01/11/13 14:38 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	01/15/13 21:00 / sf
Beryllium	ND	mg/L		0.001		E200.7	01/15/13 21:00 / sf
Cadmium	ND	mg/L		0.005		E200.7	01/15/13 21:00 / sf
Cobalt	ND	mg/L		0.01		E200.7	01/15/13 21:00 / sf
Lead	ND	mg/L		0.001		E200.8	01/18/13 01:43 / clm
Manganese	3.28	mg/L		0.01		E200.7	01/15/13 21:00 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/15/13 21:00 / sf
Nickel	ND	mg/L		0.05		E200.7	01/15/13 21:00 / sf
Uranium	0.271	mg/L		0.0003		E200.8	01/18/13 01:43 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/15/13 21:00 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/23/13 15:31 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	01/31/13 12:32 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.9	pCi/L				E900.1	01/25/13 06:28 / lbb
Gross Alpha minus Rn & U Precision (±)	0.5	pCi/L				E900.1	01/25/13 06:28 / lbb
Gross Alpha minus Rn & U MDC	0.6	pCi/L				E900.1	01/25/13 06:28 / lbb
Lead 210	0.2	pCi/L	U			E909.0	02/07/13 21:19 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	02/07/13 21:19 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	02/07/13 21:19 / eli-cs
Radium 226	0.44	pCi/L				E903.0	01/30/13 12:46 / trs
Radium 226 precision (±)	0.17	pCi/L				E903.0	01/30/13 12:46 / trs
Radium 226 MDC	0.17	pCi/L				E903.0	01/30/13 12:46 / trs
Radium 228	1.4	pCi/L				RA-05	01/24/13 17:25 / gb
Radium 228 precision (±)	0.72	pCi/L				RA-05	01/24/13 17:25 / gb
Radium 228 MDC	1.1	pCi/L				RA-05	01/24/13 17:25 / gb

Report	RL - Analyte reporting limit.	MCL - Maximum contaminant level.
Definitions:	QCL - Quality control limit.	ND - Not detected at the reporting limit.
	MDC - Minimum detectable concentration	D - RL increased due to sample matrix.
	H - Analysis performed past recommended holding time.	U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13010343-001
Client Sample ID: 509-D

Report Date: 02/25/13
Collection Date: 01/07/13 10:40
Date Received: 01/11/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	-0.01	pCi/L	U			E908.0	01/30/13 16:19 / dmf
Thorium 230 precision (±)	0.05	pCi/L				E908.0	01/30/13 16:19 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	01/30/13 16:19 / dmf
DATA QUALITY							
A/C Balance (± 5)	3.04	%				A1030 E	01/17/13 07:44 / kbh
Anions	95.4	meq/L				A1030 E	01/17/13 07:44 / kbh
Cations	101	meq/L				A1030 E	01/17/13 07:44 / kbh
Solids, Total Dissolved Calculated	5600	mg/L				A1030 E	01/17/13 07:44 / kbh
TDS Balance (0.80 - 1.20)	0.980					A1030 E	01/17/13 07:44 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/14/13 15:51 / jk
Bromoform	ND	ug/L		0.50		E624	01/14/13 15:51 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	01/14/13 15:51 / jk
Chloroform	ND	ug/L		0.50		E624	01/14/13 15:51 / jk
Trihalomethanes, Total	ND	ug/L		0.50		E624	01/14/13 15:51 / jk
Surr: 1,2-Dichlorobenzene-d4	102	%REC		80-120		E624	01/14/13 15:51 / jk
Surr: Dibromofluoromethane	86.0	%REC		80-120		E624	01/14/13 15:51 / jk
Surr: p-Bromofluorobenzene	112	%REC		80-120		E624	01/14/13 15:51 / jk
Surr: Toluene-d8	105	%REC		80-120		E624	01/14/13 15:51 / jk

- The sample was received in the laboratory with a pH > 2. The pH was 7.

Report Definitions:

RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13040238-001
Client Sample ID: 509-D

Report Date: 05/21/13
Collection Date: 04/01/13 09:30
Date Received: 04/05/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	2560	mg/L		5		A2320 B	04/05/13 19:16 / jba
Calcium	898	mg/L		1		E200.7	04/15/13 14:59 / sf
Chloride	363	mg/L	D	4		E300.0	04/08/13 21:23 / wc
Magnesium	412	mg/L		1		E200.7	04/15/13 14:59 / sf
Nitrogen, Ammonia as N	1.37	mg/L		0.05		A4500-NH ₃ G	04/10/13 13:32 / lr
Nitrogen, Nitrate+Nitrite as N	7.4	mg/L	D	0.2		E353.2	04/08/13 10:55 / lr
Potassium	14	mg/L		1		E200.7	04/15/13 14:59 / sf
Sodium	432	mg/L		1		E200.7	04/15/13 14:59 / sf
Sulfate	1930	mg/L	D	20		E300.0	04/08/13 21:23 / wc
PHYSICAL PROPERTIES							
pH	6.58	s.u.	H	0.01		A4500-H B	04/05/13 15:05 / ab
Solids, Total Dissolved TDS @ 180 C	5180	mg/L		100		A2540 C	04/05/13 15:29 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	04/10/13 22:45 / cp
Beryllium	ND	mg/L		0.001		E200.8	04/10/13 22:45 / cp
Cadmium	ND	mg/L		0.005		E200.8	04/10/13 22:45 / cp
Cobalt	ND	mg/L		0.01		E200.8	04/10/13 22:45 / cp
Lead	ND	mg/L		0.001		E200.8	04/10/13 22:45 / cp
Manganese	3.32	mg/L		0.01		E200.8	04/10/13 22:45 / cp
Molybdenum	ND	mg/L		0.1		E200.8	04/10/13 22:45 / cp
Nickel	ND	mg/L		0.05		E200.8	04/10/13 22:45 / cp
Uranium	0.280	mg/L		0.0003		E200.8	04/10/13 22:45 / cp
Vanadium	ND	mg/L		0.1		E200.8	04/10/13 22:45 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/17/13 14:48 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	04/17/13 14:20 / jl1
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	1.1	pCi/L				E900.1	04/29/13 07:37 / lbb
Gross Alpha minus Rn & U Precision (±)	0.4	pCi/L				E900.1	04/29/13 07:37 / lbb
Gross Alpha minus Rn & U MDC	0.5	pCi/L				E900.1	04/29/13 07:37 / lbb
Lead 210	-0.3	pCi/L	U			E909.0	04/16/13 12:59 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	04/16/13 12:59 / eli-cs
Lead 210 MDC	1.2	pCi/L				E909.0	04/16/13 12:59 / eli-cs
Radium 226	0.24	pCi/L				E903.0	04/23/13 15:44 / lmc
Radium 226 precision (±)	0.11	pCi/L				E903.0	04/23/13 15:44 / lmc
Radium 226 MDC	0.12	pCi/L				E903.0	04/23/13 15:44 / lmc
Radium 228	1.6	pCi/L				RA-05	04/17/13 17:31 / gb
Radium 228 precision (±)	0.81	pCi/L				RA-05	04/17/13 17:31 / gb
Radium 228 MDC	1.2	pCi/L				RA-05	04/17/13 17:31 / gb

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13040238-001
Client Sample ID: 509-D

Report Date: 05/21/13
Collection Date: 04/01/13 09:30
Date Received: 04/05/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.02	pCi/L	U			E908.0	04/12/13 09:08 / dmf
Thorium 230 precision (±)	0.08	pCi/L				E908.0	04/12/13 09:08 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	04/12/13 09:08 / dmf
DATA QUALITY							
A/C Balance (± 5)	2.55	%				A1030 E	04/18/13 12:47 / kbh
Anions	93.1	meq/L				A1030 E	04/18/13 12:47 / kbh
Cations	98.0	meq/L				A1030 E	04/18/13 12:47 / kbh
Solids, Total Dissolved Calculated	5400	mg/L				A1030 E	04/18/13 12:47 / kbh
TDS Balance (0.80 - 1.20)	0.960					A1030 E	04/18/13 12:47 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/08/13 17:37 / jlr
Bromoform	ND	ug/L		0.50		E624	04/08/13 17:37 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/08/13 17:37 / jlr
Chloroform	ND	ug/L		0.50		E624	04/08/13 17:37 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	04/08/13 17:37 / jlr
Surr: 1,2-Dichlorobenzene-d4	106	%REC		73.7-126		E624	04/08/13 17:37 / jlr
Surr: Dibromofluoromethane	118	%REC		64.4-131		E624	04/08/13 17:37 / jlr
Surr: p-Bromofluorobenzene	116	%REC		67.1-133		E624	04/08/13 17:37 / jlr
Surr: Toluene-d8	95.0	%REC		79.7-125		E624	04/08/13 17:37 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 8.

Report Definitions:

RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Alluvium Monitor Wells					
Well ID:		509-D	509-D	509-D	509-D
Collection Date:		4/1/2013	1/7/2013	10/8/2012	7/9/2012
Receive Date:		4/5/2013	1/11/2013	10/12/2012	7/13/2012
Report Date:		5/21/2013	2/25/2013	11/20/2012	8/30/2012
Analyte	RUunits	C13040238-001	C13010343-001	C12100557-001	C12070454-001
Bicarbonate as HCO3	mg/L	2560	2460	2580	2530
Calcium	mg/L	898	933	856	933
Chloride	mg/L	363	359	364	214
Magnesium	mg/L	412	424	407	432
Nitrogen, Ammonia as N	mg/L	1.37	0.88	1.53	1.21
Nitrogen, Nitrate+Nitrite as N	mg/L	7.4	7.7	7.6	8.3
Potassium	mg/L	14	16	13	14
Sodium	mg/L	432	448	403	432
Sulfate	mg/L	1930	2120	1830	2260
pH	s.u.	6.58	6.57	6.55	6.58
Solids, Total Dissolved TDS @ 180 C	mg/L	5180	5450	5420	5470
Aluminum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	ND(0.01)	ND(0.01)	0.01	ND(0.01)
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	3.32	3.28	3.83	3.25
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
Uranium	mg/L	0.280	0.271	0.283	0.276
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	1.1	0.9	0.5	0.5
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.4	0.5	0.4	0.3
Gross Alpha minus Rn & U MDC	pCi/L	0.5	0.6	0.5	0.3
Lead 210	pCi/L	-0.3	0.2	0.7	0.4
Lead 210 precision (±)	pCi/L	0.7	0.6	0.6	0.9
Lead 210 MDC	pCi/L	1.2	1.0	1.0	1.5
Radium 226	pCi/L	0.24	0.44	0.30	0.44
Radium 226 precision (±)	pCi/L	0.11	0.17	0.13	0.13
Radium 226 MDC	pCi/L	0.12	0.17	0.15	0.11
Radium 228	pCi/L	1.6	1.4	1.9	0.54
Radium 228 precision (±)	pCi/L	0.81	0.72	0.87	0.56
Radium 228 MDC	pCi/L	1.2	1.1	1.3	0.90
Thorium 230	pCi/L	0.02	-0.01	0.02	0.06
Thorium 230 precision (±)	pCi/L	0.08	0.05	0.1	0.09
Thorium 230 MDC	pCi/L	0.2	0.2	0.2	0.2
A/C Balance (± 5)	%	2.55	3.04	1.52	3.14
Anions	meq/L	93.1	95.4	91.4	95.2
Cations	meq/L	98.0	101	94.2	101
Solids, Total Dissolved Calculated	mg/L	5400	5600	5200	5600
TDS Balance (0.80 - 1.20)		0.960	0.980	1.04	0.980
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13010343-012
Client Sample ID: 624

Report Date: 02/25/13
Collection Date: 01/09/13 10:20
Date Received: 01/11/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	1540	mg/L		5		A2320 B	01/11/13 18:08 / jba
Calcium	686	mg/L		1		E200.7	01/14/13 22:41 / sf
Chloride	201	mg/L	D	4		E300.0	01/14/13 16:52 / wc
Magnesium	426	mg/L		1		E200.7	01/14/13 22:41 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	01/15/13 15:57 / ljl
Nitrogen, Nitrate+Nitrite as N	77	mg/L	D	5		E353.2	01/16/13 15:32 / lr
Potassium	6	mg/L		1		E200.7	01/14/13 22:41 / sf
Sodium	298	mg/L	D	2		E200.7	01/14/13 22:41 / sf
Sulfate	2160	mg/L	D	20		E300.0	01/14/13 16:52 / wc
PHYSICAL PROPERTIES							
pH	6.61	s.u.	H	0.01		A4500-H B	01/11/13 14:04 / ab
Solids, Total Dissolved TDS @ 180 C	5080	mg/L		10		A2540 C	01/11/13 14:39 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	01/15/13 22:57 / sf
Beryllium	ND	mg/L		0.001		E200.7	01/15/13 22:57 / sf
Cadmium	ND	mg/L		0.005		E200.7	01/15/13 22:57 / sf
Cobalt	ND	mg/L		0.01		E200.7	01/15/13 22:57 / sf
Lead	ND	mg/L		0.001		E200.8	01/18/13 02:28 / clm
Manganese	0.21	mg/L		0.01		E200.7	01/15/13 22:57 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/15/13 22:57 / sf
Nickel	ND	mg/L		0.05		E200.7	01/15/13 22:57 / sf
Uranium	0.0367	mg/L		0.0003		E200.8	01/18/13 02:28 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/15/13 22:57 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/29/13 13:04 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	01/31/13 13:02 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.6	pCi/L	U			E900.1	01/25/13 08:01 / lbb
Gross Alpha minus Rn & U Precision (±)	0.4	pCi/L				E900.1	01/25/13 08:01 / lbb
Gross Alpha minus Rn & U MDC	0.6	pCi/L				E900.1	01/25/13 08:01 / lbb
Lead 210	0.9	pCi/L	U			E909.0	02/08/13 08:02 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	02/08/13 08:02 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	02/08/13 08:02 / eli-cs
Radium 226	0.35	pCi/L				E903.0	01/30/13 12:46 / trs
Radium 226 precision (±)	0.15	pCi/L				E903.0	01/30/13 12:46 / trs
Radium 226 MDC	0.17	pCi/L				E903.0	01/30/13 12:46 / trs
Radium 228	0.38	pCi/L	U			RA-05	01/24/13 18:58 / gb
Radium 228 precision (±)	0.79	pCi/L				RA-05	01/24/13 18:58 / gb
Radium 228 MDC	1.3	pCi/L				RA-05	01/24/13 18:58 / gb

Report Definitions:

RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13010343-012
Client Sample ID: 624

Report Date: 02/25/13
Collection Date: 01/09/13 10:20
Date Received: 01/11/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.03	pCi/L	U			E908.0	01/30/13 16:19 / dmf
Thorium 230 precision (±)	0.06	pCi/L				E908.0	01/30/13 16:19 / dmf
Thorium 230 MDC	0.1	pCi/L				E908.0	01/30/13 16:19 / dmf
DATA QUALITY							
A/C Balance (± 5)	0.959	%				A1030 E	01/17/13 07:45 / kbh
Anions	80.8	meq/L				A1030 E	01/17/13 07:45 / kbh
Cations	82.3	meq/L				A1030 E	01/17/13 07:45 / kbh
Solids, Total Dissolved Calculated	4900	mg/L				A1030 E	01/17/13 07:45 / kbh
TDS Balance (0.80 - 1.20)	1.04					A1030 E	01/17/13 07:45 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/15/13 02:09 / jk
Bromoform	ND	ug/L		0.50		E624	01/15/13 02:09 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	01/15/13 02:09 / jk
Chloroform	ND	ug/L		0.50		E624	01/15/13 02:09 / jk
Trihalomethanes, Total	ND	ug/L		0.50		E624	01/15/13 02:09 / jk
Surr: 1,2-Dichlorobenzene-d4	94.0	%REC		80-120		E624	01/15/13 02:09 / jk
Surr: Dibromofluoromethane	90.0	%REC		80-120		E624	01/15/13 02:09 / jk
Surr: p-Bromofluorobenzene	108	%REC		80-120		E624	01/15/13 02:09 / jk
Surr: Toluene-d8	103	%REC		80-120		E624	01/15/13 02:09 / jk

- The sample was received in the laboratory with a pH > 2. The pH was 7.

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13040238-010
Client Sample ID 624

Report Date: 05/21/13
Collection Date: 04/02/13 08:50
Date Received: 04/05/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	1570	mg/L		5		A2320 B	04/05/13 21:23 / jba
Calcium	705	mg/L		1		E200.7	04/15/13 16:13 / sf
Chloride	216	mg/L	D	4	E300.0	E300.0	04/09/13 00:59 / wc
Magnesium	427	mg/L		1	E200.7	E200.7	04/15/13 16:13 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05	A4500-NH3 G	A4500-NH3 G	04/10/13 14:00 / lr
Nitrogen, Nitrate+Nitrite as N	77	mg/L	D	5	E353.2	E353.2	04/08/13 11:28 / lr
Potassium	6	mg/L		1	E200.7	E200.7	04/15/13 16:13 / sf
Sodium	295	mg/L		1	E200.7	E200.7	04/15/13 16:13 / sf
Sulfate	2240	mg/L	D	20	E300.0	E300.0	04/09/13 00:59 / wc
PHYSICAL PROPERTIES							
pH	6.66	s.u.	H	0.01	A4500-H B	A4500-H B	04/05/13 15:32 / ab
Solids, Total Dissolved TDS @ 180 C	5210	mg/L		40	A2540 C	A2540 C	04/05/13 15:31 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1	E200.8	E200.8	04/10/13 23:55 / cp
Beryllium	ND	mg/L		0.001	E200.8	E200.8	04/10/13 23:55 / cp
Cadmium	ND	mg/L		0.005	E200.8	E200.8	04/10/13 23:55 / cp
Cobalt	ND	mg/L		0.01	E200.8	E200.8	04/10/13 23:55 / cp
Lead	ND	mg/L		0.001	E200.8	E200.8	04/10/13 23:55 / cp
Manganese	0.18	mg/L		0.01	E200.8	E200.8	04/10/13 23:55 / cp
Molybdenum	ND	mg/L		0.1	E200.8	E200.8	04/10/13 23:55 / cp
Nickel	ND	mg/L		0.05	E200.8	E200.8	04/10/13 23:55 / cp
Uranium	0.0377	mg/L		0.0003	E200.8	E200.8	04/10/13 23:55 / cp
Vanadium	ND	mg/L		0.1	E200.8	E200.8	04/10/13 23:55 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001	E1632AM	E1632AM	04/18/13 12:41 / eli-h
Selenium-IV	ND	mg/L		0.001	A3114 B	A3114 B	04/17/13 14:44 / j11
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.6	pCi/L			E900.1	E900.1	04/29/13 07:37 / lbb
Gross Alpha minus Rn & U Precision (±)	0.4	pCi/L			E900.1	E900.1	04/29/13 07:37 / lbb
Gross Alpha minus Rn & U MDC	0.5	pCi/L			E900.1	E900.1	04/29/13 07:37 / lbb
Lead 210	-0.2	pCi/L	U		E909.0	E909.0	04/16/13 12:59 / eli-cs
Lead 210 precision (±)	0.8	pCi/L			E909.0	E909.0	04/16/13 12:59 / eli-cs
Lead 210 MDC	1.3	pCi/L			E909.0	E909.0	04/16/13 12:59 / eli-cs
Radium 226	0.17	pCi/L			E903.0	E903.0	04/23/13 17:35 / lmc
Radium 226 precision (±)	0.10	pCi/L			E903.0	E903.0	04/23/13 17:35 / lmc
Radium 226 MDC	0.13	pCi/L			E903.0	E903.0	04/23/13 17:35 / lmc
Radium 228	0.71	pCi/L	U		RA-05	RA-05	04/17/13 19:06 / gb
Radium 228 precision (±)	0.98	pCi/L			RA-05	RA-05	04/17/13 19:06 / gb
Radium 228 MDC	1.6	pCi/L			RA-05	RA-05	04/17/13 19:06 / gb

Report Definitions:

RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13040238-010
Client Sample ID 624

Report Date: 05/21/13
Collection Date: 04/02/13 08:50
Date Received: 04/05/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.04	pCi/L		U		E908.0	04/12/13 09:08 / dmf
Thorium 230 precision (±)	0.08	pCi/L				E908.0	04/12/13 09:08 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	04/12/13 09:08 / dmf
DATA QUALITY							
A/C Balance (± 5)	-0.0591	%				A1030 E	04/18/13 12:48 / kbh
Anions	83.4	meq/L				A1030 E	04/18/13 12:48 / kbh
Cations	83.4	meq/L				A1030 E	04/18/13 12:48 / kbh
Solids, Total Dissolved Calculated	5000	mg/L				A1030 E	04/18/13 12:48 / kbh
TDS Balance (0.80 - 1.20)	1.04					A1030 E	04/18/13 12:48 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/09/13 01:34 / jlr
Bromoform	ND	ug/L		0.50		E624	04/09/13 01:34 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/09/13 01:34 / jlr
Chloroform	ND	ug/L		0.50		E624	04/09/13 01:34 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	04/09/13 01:34 / jlr
Surr: 1,2-Dichlorobenzene-d4	106	%REC		73.7-126		E624	04/09/13 01:34 / jlr
Surr: Dibromofluoromethane	133	%REC	S	64.4-131		E624	04/09/13 01:34 / jlr
Surr: p-Bromofluorobenzene	106	%REC		67.1-133		E624	04/09/13 01:34 / jlr
Surr: Toluene-d8	92.0	%REC		79.7-125		E624	04/09/13 01:34 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 8.

Report Definitions:	RL - Analyte reporting limit.	MCL - Maximum contaminant level.
	QCL - Quality control limit.	ND - Not detected at the reporting limit.
	MDC - Minimum detectable concentration	S - Spike recovery outside of advisory limits.
	U - Not detected at minimum detectable concentration	

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Alluvium Monitor Wells					
Well ID:		624	624	624	624
Collection Date:		4/2/2013	1/9/2013	10/9/2012	7/9/2012
Receive Date:		4/5/2013	1/11/2013	10/12/2012	7/13/2012
Report Date:		5/21/2013	2/25/2013	11/20/2012	8/30/2012
Analyte	RUnits	C13040238-010	C13010343-012	C12100557-010	C12070454-010
Bicarbonate as HCO3	mg/L	1570	1540	1550	1500
Calcium	mg/L	705	686	728	671
Chloride	mg/L	216	201	212	198
Magnesium	mg/L	427	426	418	419
Nitrogen, Ammonia as N	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	0.14
Nitrogen, Nitrate+Nitrite as N	mg/L	77	77	72	78
Potassium	mg/L	6	6	6	5
Sodium	mg/L	295	298	285	261
Sulfate	mg/L	2240	2160	2180	2120
pH	s.u.	6.66	6.61	6.66	6.72
Solids, Total Dissolved TDS @ 180 C	mg/L	5210	5080	5110	5250
Aluminum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	0.18	0.21	0.22	0.23
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
Uranium	mg/L	0.0377	0.0367	0.0351	0.0319
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	0.6	0.6	0.9	0.2
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.4	0.4	0.4	0.2
Gross Alpha minus Rn & U MDC	pCi/L	0.5	0.6	0.5	0.3
Lead 210	pCi/L	-0.2	0.9	0.7	0.04
Lead 210 precision (±)	pCi/L	0.8	0.6	0.6	0.9
Lead 210 MDC	pCi/L	1.3	1.0	1	1.4
Radium 226	pCi/L	0.17	0.35	0.24	0.42
Radium 226 precision (±)	pCi/L	0.10	0.15	0.13	0.13
Radium 226 MDC	pCi/L	0.13	0.17	0.15	0.10
Radium 228	pCi/L	0.71	0.38	-0.3	-0.4
Radium 228 precision (±)	pCi/L	0.98	0.79	0.96	0.61
Radium 228 MDC	pCi/L	1.6	1.3	1.6	1.1
Thorium 230	pCi/L	0.04	0.03	0.05	0.2
Thorium 230 precision (±)	pCi/L	0.08	0.06	0.07	0.1
Thorium 230 MDC	pCi/L	0.2	0.1	0.1	0.2
A/C Balance (± 5)	%	-0.0591	0.959	0.748	0.0472
Anions	meq/L	83.4	80.8	82.0	79.4
Cations	meq/L	83.4	82.3	83.3	79.4
Solids, Total Dissolved Calculated	mg/L	5000	4900	5000	4800
TDS Balance (0.80 - 1.20)		1.04	1.04	1.03	1.11
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

****Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.**



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13010591-001
Client Sample ID: 627

Report Date: 02/25/13
Collection Date: 01/14/13 08:57
Date Received: 01/18/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	605	mg/L		5		A2320 B	01/22/13 13:57 / jba
Calcium	561	mg/L		1		E200.7	01/22/13 22:34 / sf
Chloride	37	mg/L	D	4		E300.0	01/22/13 02:27 / wc
Magnesium	241	mg/L		1		E200.7	01/22/13 22:34 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	01/22/13 17:08 / ljl
Nitrogen, Nitrate+Nitrite as N	76	mg/L	D	5		E353.2	01/21/13 10:53 / lr
Potassium	6	mg/L		1		E200.7	01/22/13 22:34 / sf
Sodium	468	mg/L	D	2		E200.7	01/22/13 22:34 / sf
Sulfate	2370	mg/L	D	20		E300.0	01/22/13 02:27 / wc
PHYSICAL PROPERTIES							
pH	6.97	s.u.	H	0.01		A4500-H B	01/21/13 11:08 / ab
Solids, Total Dissolved TDS @ 180 C	4420	mg/L		40		A2540 C	01/21/13 08:23 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	01/23/13 02:28 / sf
Beryllium	ND	mg/L		0.001		E200.7	01/23/13 02:28 / sf
Cadmium	ND	mg/L		0.005		E200.7	01/23/13 02:28 / sf
Cobalt	ND	mg/L		0.01		E200.7	01/23/13 02:28 / sf
Lead	ND	mg/L		0.001		E200.8	01/22/13 19:31 / clm
Manganese	0.09	mg/L		0.01		E200.7	01/23/13 02:28 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/23/13 02:28 / sf
Nickel	ND	mg/L		0.05		E200.7	01/23/13 02:28 / sf
Uranium	0.0211	mg/L		0.0003		E200.8	01/22/13 19:31 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/23/13 02:28 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	02/09/13 16:21 / eli-h
Selenium-IV	0.001	mg/L		0.001		A3114 B	02/06/13 13:43 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.1	pCi/L	U			E900.1	02/08/13 09:30 / lbb
Gross Alpha minus Rn & U Precision (±)	0.2	pCi/L				E900.1	02/08/13 09:30 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	02/08/13 09:30 / lbb
Lead 210	0.6	pCi/L	U			E909.0	02/02/13 04:25 / eli-cs
Lead 210 precision (±)	0.4	pCi/L				E909.0	02/02/13 04:25 / eli-cs
Lead 210 MDC	0.7	pCi/L				E909.0	02/02/13 04:25 / eli-cs
Radium 226	0.28	pCi/L				E903.0	02/01/13 08:38 / trs
Radium 226 precision (±)	0.13	pCi/L				E903.0	02/01/13 08:38 / trs
Radium 226 MDC	0.15	pCi/L				E903.0	02/01/13 08:38 / trs
Radium 228	0.52	pCi/L	U			RA-05	01/27/13 16:17 / gb
Radium 228 precision (±)	0.65	pCi/L				RA-05	01/27/13 16:17 / gb
Radium 228 MDC	1.0	pCi/L				RA-05	01/27/13 16:17 / gb

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13010591-001
Client Sample ID: 627

Report Date: 02/25/13
Collection Date: 01/14/13 08:57
Date Received: 01/18/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.09	pCi/L	U		E908.0		02/04/13 16:38 / dmf
Thorium 230 precision (±)	0.1	pCi/L			E908.0		02/04/13 16:38 / dmf
Thorium 230 MDC	0.2	pCi/L			E908.0		02/04/13 16:38 / dmf
DATA QUALITY							
A/C Balance (± 5)	1.33	%			A1030 E		01/23/13 09:47 / kbh
Anions	66.5	meq/L			A1030 E		01/23/13 09:47 / kbh
Cations	68.3	meq/L			A1030 E		01/23/13 09:47 / kbh
Solids, Total Dissolved Calculated	4400	mg/L			A1030 E		01/23/13 09:47 / kbh
TDS Balance (0.80 - 1.20)	1.01				A1030 E		01/23/13 09:47 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50	E624		01/21/13 23:26 / jk
Bromoform	ND	ug/L		0.50	E624		01/21/13 23:26 / jk
Chlorodibromomethane	ND	ug/L		0.50	E624		01/21/13 23:26 / jk
Chloroform	ND	ug/L		0.50	E624		01/21/13 23:26 / jk
Trihalomethanes, Total	ND	ug/L		0.50	E624		01/21/13 23:26 / jk
Surr: 1,2-Dichlorobenzene-d4	113	%REC		80-120	E624		01/21/13 23:26 / jk
Surr: Dibromofluoromethane	84.0	%REC		80-120	E624		01/21/13 23:26 / jk
Surr: p-Bromofluorobenzene	103	%REC		80-120	E624		01/21/13 23:26 / jk
Surr: Toluene-d8	93.0	%REC		80-120	E624		01/21/13 23:26 / jk

- The sample was received in the laboratory with a pH > 2. The pH was 7.

Report Definitions:

RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13040238-014
Client Sample ID: 627

Report Date: 05/21/13
Collection Date: 04/02/13 13:30
Date Received: 04/05/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	610	mg/L		5		A2320 B	04/05/13 22:16 / jba
Calcium	542	mg/L		1		E200.7	04/15/13 16:32 / sf
Chloride	37	mg/L	D	4		E300.0	04/09/13 02:01 / wc
Magnesium	236	mg/L		1		E200.7	04/15/13 16:32 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH ₃ G	04/10/13 14:12 / lr
Nitrogen, Nitrate+Nitrite as N	90	mg/L	D	5		E353.2	04/08/13 11:43 / lr
Potassium	6	mg/L		1		E200.7	04/15/13 16:32 / sf
Sodium	438	mg/L		1		E200.7	04/15/13 16:32 / sf
Sulfate	2300	mg/L	D	20		E300.0	04/09/13 02:01 / wc
PHYSICAL PROPERTIES							
pH	7.01	s.u.	H	0.01		A4500-H B	04/05/13 15:43 / ab
Solids, Total Dissolved TDS @ 180 C	4280	mg/L		40		A2540 C	04/08/13 15:43 / jz
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	04/11/13 00:31 / cp
Beryllium	ND	mg/L		0.001		E200.8	04/11/13 00:31 / cp
Cadmium	ND	mg/L		0.005		E200.8	04/11/13 00:31 / cp
Cobalt	ND	mg/L		0.01		E200.8	04/11/13 00:31 / cp
Lead	ND	mg/L		0.001		E200.8	04/11/13 00:31 / cp
Manganese	0.17	mg/L		0.01		E200.8	04/11/13 00:31 / cp
Molybdenum	ND	mg/L		0.1		E200.8	04/11/13 00:31 / cp
Nickel	ND	mg/L		0.05		E200.8	04/11/13 00:31 / cp
Uranium	0.0209	mg/L		0.0003		E200.8	04/11/13 00:31 / cp
Vanadium	ND	mg/L		0.1		E200.8	04/11/13 00:31 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/19/13 11:43 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	04/17/13 14:54 / jl1
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.8	pCi/L				E900.1	04/29/13 09:09 / lbb
Gross Alpha minus Rn & U Precision (±)	0.4	pCi/L				E900.1	04/29/13 09:09 / lbb
Gross Alpha minus Rn & U MDC	0.5	pCi/L				E900.1	04/29/13 09:09 / lbb
Lead 210	0.3	pCi/L	U			E909.0	04/16/13 12:00 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	04/16/13 12:00 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	04/16/13 12:00 / eli-cs
Radium 226	0.10	pCi/L	U			E903.0	04/23/13 17:35 / lmc
Radium 226 precision (±)	0.09	pCi/L				E903.0	04/23/13 17:35 / lmc
Radium 226 MDC	0.13	pCi/L				E903.0	04/23/13 17:35 / lmc
Radium 228	0.45	pCi/L	U			RA-05	04/17/13 19:06 / gb
Radium 228 precision (±)	0.99	pCi/L				RA-05	04/17/13 19:06 / gb
Radium 228 MDC	1.6	pCi/L				RA-05	04/17/13 19:06 / gb

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13040238-014
Client Sample ID 627

Report Date: 05/21/13
Collection Date: 04/02/13 13:30
Date Received: 04/05/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.05	pCi/L	U			E908.0	04/12/13 09:09 / dmf
Thorium 230 precision (±)	0.07	pCi/L				E908.0	04/12/13 09:09 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	04/12/13 09:09 / dmf
DATA QUALITY							
A/C Balance (± 5)	0.714	%				A1030 E	04/18/13 12:49 / kbh
Anions	64.7	meq/L				A1030 E	04/18/13 12:49 / kbh
Cations	65.6	meq/L				A1030 E	04/18/13 12:49 / kbh
Solids, Total Dissolved Calculated	4200	mg/L				A1030 E	04/18/13 12:49 / kbh
TDS Balance (0.80 - 1.20)	1.01					A1030 E	04/18/13 12:49 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/09/13 03:51 / jlr
Bromoform	ND	ug/L		0.50		E624	04/09/13 03:51 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/09/13 03:51 / jlr
Chloroform	ND	ug/L		0.50		E624	04/09/13 03:51 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	04/09/13 03:51 / jlr
Surr: 1,2-Dichlorobenzene-d4	109	%REC		73.7-126		E624	04/09/13 03:51 / jlr
Surr: Dibromofluoromethane	130	%REC		64.4-131		E624	04/09/13 03:51 / jlr
Surr: p-Bromofluorobenzene	111	%REC		67.1-133		E624	04/09/13 03:51 / jlr
Surr: Toluene-d8	100	%REC		79.7-125		E624	04/09/13 03:51 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 8.

Report Definitions:

RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Alluvium Monitor Wells					
Well ID:		627	627	627	627
Collection Date:		4/2/2013	1/14/2013	10/9/2012	7/9/2012
Receive Date:		4/5/2013	1/18/2013	10/12/2012	7/13/2012
Report Date:		5/21/2013	2/25/2013	11/20/2012	8/30/2012
Analyte	RUnits	C13040238-014	C13010591-001	C12100557-016	C12070454-016
Bicarbonate as HCO3	mg/L	610	605	609	585
Calcium	mg/L	542	561	555	542
Chloride	mg/L	37	37	39	37
Magnesium	mg/L	236	241	231	242
Nitrogen, Ammonia as N	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
Nitrogen, Nitrate+Nitrite as N	mg/L	90	76	89	96
Potassium	mg/L	6	6	7	6
Sodium	mg/L	438	468	443	460
Sulfate	mg/L	2300	2370	2280	2270
pH	s.u.	7.01	6.97	6.97	7.00
Solids, Total Dissolved TDS @ 180 C	mg/L	4280	4420	4510	4380
Aluminum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	0.001
Manganese	mg/L	0.17	0.09	0.03	0.07
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
Uranium	mg/L	0.0209	0.0211	0.0199	0.0183
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	0.001	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	0.8	0.1	0.3	0.07
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.4	0.2	0.4	0.2
Gross Alpha minus Rn & U MDC	pCi/L	0.5	0.3	0.6	0.3
Lead 210	pCi/L	0.3	0.6	0.7	1
Lead 210 precision (±)	pCi/L	0.8	0.4	0.7	0.8
Lead 210 MDC	pCi/L	1.3	0.7	1.2	1.2
Radium 226	pCi/L	0.10	0.28	0.24	0.17
Radium 226 precision (±)	pCi/L	0.09	0.13	0.13	0.12
Radium 226 MDC	pCi/L	0.13	0.15	0.16	0.17
Radium 228	pCi/L	0.45	0.52	0.23	0.19
Radium 228 precision (±)	pCi/L	0.99	0.65	1.1	0.52
Radium 228 MDC	pCi/L	1.6	1.0	1.8	0.86
Thorium 230	pCi/L	0.05	0.09	0.2	0.02
Thorium 230 precision (±)	pCi/L	0.07	0.1	0.1	0.06
Thorium 230 MDC	pCi/L	0.2	0.2	0.2	0.2
A/C Balance (± 5)	%	0.714	1.33	0.971	2.27
Anions	meq/L	64.7	66.5	64.9	64.1
Cations	meq/L	65.6	68.3	66.1	67.1
Solids, Total Dissolved Calculated	mg/L	4200	4400	4300	4200
TDS Balance (0.80 - 1.20)		1.01	1.01	1.06	1.03
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13010343-009
Client Sample ID: 632

Report Date: 02/25/13
Collection Date: 01/08/13 09:05
Date Received: 01/11/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	1870	mg/L		5		A2320 B	01/11/13 17:19 / jba
Calcium	600	mg/L		1		E200.7	01/14/13 22:17 / sf
Chloride	241	mg/L	D	4		E300.0	01/14/13 16:06 / wc
Magnesium	833	mg/L		1		E200.7	01/14/13 22:17 / sf
Nitrogen, Ammonia as N	0.33	mg/L		0.05		A4500-NH3 G	01/14/13 13:55 / lr
Nitrogen, Nitrate+Nitrite as N	67	mg/L	D	5		E353.2	01/16/13 15:25 / lr
Potassium	10	mg/L		1		E200.7	01/14/13 22:17 / sf
Sodium	433	mg/L	D	2		E200.7	01/14/13 22:17 / sf
Sulfate	3420	mg/L	D	20		E300.0	01/14/13 16:06 / wc
PHYSICAL PROPERTIES							
pH	6.55	s.u.	H	0.01		A4500-H B	01/11/13 13:56 / ab
Solids, Total Dissolved TDS @ 180 C	6830	mg/L		10		A2540 C	01/11/13 14:39 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	01/15/13 22:32 / sf
Beryllium	ND	mg/L		0.001		E200.7	01/15/13 22:32 / sf
Cadmium	ND	mg/L		0.005		E200.7	01/15/13 22:32 / sf
Cobalt	ND	mg/L		0.01		E200.7	01/15/13 22:32 / sf
Lead	ND	mg/L		0.001		E200.8	01/18/13 02:18 / clm
Manganese	2.68	mg/L		0.01		E200.7	01/15/13 22:32 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/15/13 22:32 / sf
Nickel	ND	mg/L		0.05		E200.7	01/15/13 22:32 / sf
Uranium	0.0808	mg/L		0.0003		E200.8	01/18/13 02:18 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/15/13 22:32 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/29/13 12:40 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	01/31/13 12:51 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	1.4	pCi/L				E900.1	01/25/13 06:28 / lbb
Gross Alpha minus Rn & U Precision (±)	0.6	pCi/L				E900.1	01/25/13 06:28 / lbb
Gross Alpha minus Rn & U MDC	0.6	pCi/L				E900.1	01/25/13 06:28 / lbb
Lead 210	0.4	pCi/L	U			E909.0	02/08/13 05:07 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	02/08/13 05:07 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	02/08/13 05:07 / eli-cs
Radium 226	1.0	pCi/L				E903.0	01/30/13 12:46 / trs
Radium 226 precision (±)	0.22	pCi/L				E903.0	01/30/13 12:46 / trs
Radium 226 MDC	0.16	pCi/L				E903.0	01/30/13 12:46 / trs
Radium 228	1.0	pCi/L	U			RA-05	01/24/13 17:25 / gb
Radium 228 precision (±)	0.68	pCi/L				RA-05	01/24/13 17:25 / gb
Radium 228 MDC	1.1	pCi/L				RA-05	01/24/13 17:25 / gb

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 H - Analysis performed past recommended holding time.
 MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13010343-009
Client Sample ID: 632

Report Date: 02/25/13
Collection Date: 01/08/13 09:05
Date Received: 01/11/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	-0.01	pCi/L	U			E908.0	01/30/13 16:19 / dmf
Thorium 230 precision (±)	0.06	pCi/L				E908.0	01/30/13 16:19 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	01/30/13 16:19 / dmf
DATA QUALITY							
A/C Balance (± 5)	1.91	%				A1030 E	01/17/13 07:45 / kbh
Anions	113	meq/L				A1030 E	01/17/13 07:45 / kbh
Cations	118	meq/L				A1030 E	01/17/13 07:45 / kbh
Solids, Total Dissolved Calculated	6800	mg/L				A1030 E	01/17/13 07:45 / kbh
TDS Balance (0.80 - 1.20)	1.01					A1030 E	01/17/13 07:45 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/15/13 00:20 / jk
Bromoform	ND	ug/L		0.50		E624	01/15/13 00:20 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	01/15/13 00:20 / jk
Chloroform	2.74	ug/L		0.50		E624	01/15/13 00:20 / jk
Trihalomethanes, Total	2.74	ug/L		0.50		E624	01/15/13 00:20 / jk
Surr: 1,2-Dichlorobenzene-d4	92.0	%REC		80-120		E624	01/15/13 00:20 / jk
Surr: Dibromofluoromethane	87.0	%REC		80-120		E624	01/15/13 00:20 / jk
Surr: p-Bromofluorobenzene	106	%REC		80-120		E624	01/15/13 00:20 / jk
Surr: Toluene-d8	100	%REC		80-120		E624	01/15/13 00:20 / jk

- The sample was received in the laboratory with a pH > 2. The pH was 7.

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13040238-009
Client Sample ID: 632

Report Date: 05/21/13
Collection Date: 04/01/13 15:50
Date Received: 04/05/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	1910	mg/L		5		A2320 B	04/05/13 20:51 / jba
Calcium	603	mg/L		1		E200.7	04/15/13 15:55 / sf
Chloride	253	mg/L	D	4		E300.0	04/09/13 00:13 / wc
Magnesium	829	mg/L		1		E200.7	04/15/13 15:55 / sf
Nitrogen, Ammonia as N	0.39	mg/L		0.05		A4500-NH3 G	04/10/13 13:58 / lr
Nitrogen, Nitrate+Nitrite as N	65	mg/L	D	2		E353.2	04/08/13 11:25 / lr
Potassium	10	mg/L		1		E200.7	04/15/13 15:55 / sf
Sodium	413	mg/L		1		E200.7	04/15/13 15:55 / sf
Sulfate	3460	mg/L	D	20		E300.0	04/09/13 00:13 / wc
PHYSICAL PROPERTIES							
pH	6.58	s.u.	H	0.01		A4500-H B	04/05/13 15:29 / ab
Solids, Total Dissolved TDS @ 180 C	6840	mg/L		100		A2540 C	04/05/13 15:31 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	04/10/13 23:51 / cp
Beryllium	ND	mg/L		0.001		E200.8	04/10/13 23:51 / cp
Cadmium	ND	mg/L		0.005		E200.8	04/10/13 23:51 / cp
Cobalt	ND	mg/L		0.01		E200.8	04/10/13 23:51 / cp
Lead	ND	mg/L		0.001		E200.8	04/10/13 23:51 / cp
Manganese	2.69	mg/L		0.01		E200.8	04/10/13 23:51 / cp
Molybdenum	ND	mg/L		0.1		E200.8	04/10/13 23:51 / cp
Nickel	ND	mg/L		0.05		E200.8	04/10/13 23:51 / cp
Uranium	0.0864	mg/L		0.0003		E200.8	04/10/13 23:51 / cp
Vanadium	ND	mg/L		0.1		E200.8	04/10/13 23:51 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/18/13 12:33 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	04/17/13 14:43 / jl1
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	1.7	pCi/L				E900.1	04/29/13 07:37 / lbb
Gross Alpha minus Rn & U Precision (±)	0.5	pCi/L				E900.1	04/29/13 07:37 / lbb
Gross Alpha minus Rn & U MDC	0.5	pCi/L				E900.1	04/29/13 07:37 / lbb
Lead 210	0.3	pCi/L	U			E909.0	04/16/13 12:59 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	04/16/13 12:59 / eli-cs
Lead 210 MDC	1.2	pCi/L				E909.0	04/16/13 12:59 / eli-cs
Radium 226	0.51	pCi/L				E903.0	04/23/13 17:35 / lmc
Radium 226 precision (±)	0.14	pCi/L				E903.0	04/23/13 17:35 / lmc
Radium 226 MDC	0.12	pCi/L				E903.0	04/23/13 17:35 / lmc
Radium 228	1.2	pCi/L	U			RA-05	04/17/13 19:06 / gb
Radium 228 precision (±)	0.95	pCi/L				RA-05	04/17/13 19:06 / gb
Radium 228 MDC	1.5	pCi/L				RA-05	04/17/13 19:06 / gb

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13040238-009
Client Sample ID 632

Report Date: 05/21/13
Collection Date: 04/01/13 15:50
Date Received: 04/05/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.04	pCi/L		U		E908.0	04/12/13 09:08 / dmf
Thorium 230 precision (±)	0.08	pCi/L				E908.0	04/12/13 09:08 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	04/12/13 09:08 / dmf
DATA QUALITY							
A/C Balance (± 5)	0.627	%				A1030 E	04/18/13 12:48 / kbh
Anions	115	meq/L				A1030 E	04/18/13 12:48 / kbh
Cations	117	meq/L				A1030 E	04/18/13 12:48 / kbh
Solids, Total Dissolved Calculated	6800	mg/L				A1030 E	04/18/13 12:48 / kbh
TDS Balance (0.80 - 1.20)	1.00					A1030 E	04/18/13 12:48 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/11/13 16:15 / jlr
Bromoform	ND	ug/L		0.50		E624	04/11/13 16:15 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/11/13 16:15 / jlr
Chloroform	3.68	ug/L		0.50		E624	04/11/13 16:15 / jlr
Trihalomethanes, Total	3.68	ug/L		0.50		E624	04/11/13 16:15 / jlr
Surr: 1,2-Dichlorobenzene-d4	112	%REC		73.7-126		E624	04/11/13 16:15 / jlr
Surr: Dibromofluoromethane	134	%REC	S	64.4-131		E624	04/11/13 16:15 / jlr
Surr: p-Bromofluorobenzene	130	%REC		67.1-133		E624	04/11/13 16:15 / jlr
Surr: Toluene-d8	98.0	%REC		79.7-125		E624	04/11/13 16:15 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 8.

Report Definitions:

RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
U - Not detected at minimum detectable concentration

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
S - Spike recovery outside of advisory limits.

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Alluvium Monitor Wells					
Well ID:		632	632	632	632
Collection Date:		4/1/2013	1/8/2013	10/8/2012	7/9/2012
Receive Date:		4/5/2013	1/11/2013	10/12/2012	7/13/2012
Report Date:		5/21/2013	2/25/2013	11/20/2012	8/30/2012
Analyte	RUnits	C13040238-009	C13010343-009	C12100557-009	C12070454-009
Bicarbonate as HCO3	mg/L	1910	1870	1890	1840
Calcium	mg/L	603	600	632	603
Chloride	mg/L	253	241	247	227
Magnesium	mg/L	829	833	790	862
Nitrogen, Ammonia as N	mg/L	0.39	0.33	0.56	0.52
Nitrogen, Nitrate+Nitrite as N	mg/L	65	67	66	72
Potassium	mg/L	10	10	11	10
Sodium	mg/L	413	433	402	420
Sulfate	mg/L	3460	3420	3400	3270
pH	s.u.	6.58	6.55	6.56	6.61
Solids, Total Dissolved TDS @ 180 C	mg/L	6840	6830	6770	7280
Aluminum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	2.69	2.68	2.85	2.58
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
Uranium	mg/L	0.0864	0.0808	0.0780	0.0731
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	0.001
Gross Alpha minus Rn & U	pCi/L	1.7	1.4	1.1	1.1
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.5	0.6	0.4	0.3
Gross Alpha minus Rn & U MDC	pCi/L	0.5	0.6	0.5	0.3
Lead 210	pCi/L	0.3	0.4	0.8	0.1
Lead 210 precision (±)	pCi/L	0.7	0.6	0.6	0.9
Lead 210 MDC	pCi/L	1.2	1.0	1.0	1.4
Radium 226	pCi/L	0.51	1.0	0.84	1.2
Radium 226 precision (±)	pCi/L	0.14	0.22	0.19	0.20
Radium 226 MDC	pCi/L	0.12	0.16	0.15	0.10
Radium 228	pCi/L	1.2	1.0	2.2	1.0
Radium 228 precision (±)	pCi/L	0.95	0.68	0.89	0.69
Radium 228 MDC	pCi/L	1.5	1.1	1.3	1.1
Thorium 230	pCi/L	0.04	-0.01	0.03	0.07
Thorium 230 precision (±)	pCi/L	0.08	0.06	0.08	0.1
Thorium 230 MDC	pCi/L	0.2	0.2	0.1	0.2
A/C Balance (± 5)	%	0.627	1.91	0.262	4.43
Anions	meq/L	115	113	114	109
Cations	meq/L	117	118	114	120
Solids, Total Dissolved Calculated	mg/L	6800	6800	6800	6600
TDS Balance (0.80 - 1.20)		1.00	1.01	1.00	1.10
Trihalomethanes, Total	ug/L	3.68	2.74	2.98	2.73

****Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.**



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13010343-006
Client Sample ID: 801

Report Date: 02/25/13
Collection Date: 01/07/13 15:03
Date Received: 01/11/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	1520	mg/L		5		A2320 B	01/11/13 16:21 / jba
Calcium	594	mg/L		1		E200.7	01/14/13 21:25 / sf
Chloride	203	mg/L	D	4		E300.0	01/12/13 03:48 / wc
Magnesium	732	mg/L		1		E200.7	01/14/13 21:25 / sf
Nitrogen, Ammonia as N	3.23	mg/L		0.05		A4500-NH3 G	01/14/13 13:45 / lr
Nitrogen, Nitrate+Nitrite as N	24	mg/L	D	1		E353.2	01/16/13 15:17 / lr
Potassium	13	mg/L		1		E200.7	01/14/13 21:25 / sf
Sodium	387	mg/L	D	2		E200.7	01/14/13 21:25 / sf
Sulfate	3360	mg/L	D	20		E300.0	01/12/13 03:48 / wc
PHYSICAL PROPERTIES							
pH	6.63	s.u.	H	0.01		A4500-H B	01/11/13 13:48 / ab
Solids, Total Dissolved TDS @ 180 C	6100	mg/L		10		A2540 C	01/11/13 14:39 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	01/15/13 22:16 / sf
Beryllium	ND	mg/L		0.001		E200.7	01/15/13 22:16 / sf
Cadmium	ND	mg/L		0.005		E200.7	01/15/13 22:16 / sf
Cobalt	ND	mg/L		0.01		E200.7	01/15/13 22:16 / sf
Lead	ND	mg/L		0.001		E200.8	01/18/13 02:09 / clm
Manganese	5.09	mg/L		0.01		E200.7	01/15/13 22:16 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/15/13 22:16 / sf
Nickel	ND	mg/L		0.05		E200.7	01/15/13 22:16 / sf
Uranium	0.0399	mg/L		0.0003		E200.8	01/18/13 02:09 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/15/13 22:16 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/29/13 11:59 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	01/31/13 12:46 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.4	pCi/L	U			E900.1	01/25/13 06:28 / lbb
Gross Alpha minus Rn & U Precision (±)	0.4	pCi/L				E900.1	01/25/13 06:28 / lbb
Gross Alpha minus Rn & U MDC	0.6	pCi/L				E900.1	01/25/13 06:28 / lbb
Lead 210	0.6	pCi/L	U			E909.0	02/08/13 02:11 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	02/08/13 02:11 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	02/08/13 02:11 / eli-cs
Radium 226	0.62	pCi/L				E903.0	01/30/13 12:46 / trs
Radium 226 precision (±)	0.18	pCi/L				E903.0	01/30/13 12:46 / trs
Radium 226 MDC	0.16	pCi/L				E903.0	01/30/13 12:46 / trs
Radium 228	1.0	pCi/L	U			RA-05	01/24/13 17:25 / gb
Radium 228 precision (±)	0.68	pCi/L				RA-05	01/24/13 17:25 / gb
Radium 228 MDC	1.1	pCi/L				RA-05	01/24/13 17:25 / gb

Report	RL - Analyte reporting limit.	MCL - Maximum contaminant level.
Definitions:	QCL - Quality control limit.	ND - Not detected at the reporting limit.
	MDC - Minimum detectable concentration	D - RL increased due to sample matrix.
	H - Analysis performed past recommended holding time.	U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13010343-006
Client Sample ID: 801

Report Date: 02/25/13
Collection Date: 01/07/13 15:03
Date Received: 01/11/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.03	pCi/L	U			E908.0	01/30/13 16:19 / dmf
Thorium 230 precision (±)	0.07	pCi/L				E908.0	01/30/13 16:19 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	01/30/13 16:19 / dmf
DATA QUALITY							
A/C Balance (± 5)	2.50	%				A1030 E	01/17/13 07:45 / kbh
Anions	102	meq/L				A1030 E	01/17/13 07:45 / kbh
Cations	107	meq/L				A1030 E	01/17/13 07:45 / kbh
Solids, Total Dissolved Calculated	6200	mg/L				A1030 E	01/17/13 07:45 / kbh
TDS Balance (0.80 - 1.20)	0.990					A1030 E	01/17/13 07:45 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/14/13 18:53 / jk
Bromoform	ND	ug/L		0.50		E624	01/14/13 18:53 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	01/14/13 18:53 / jk
Chloroform	1.88	ug/L		0.50		E624	01/14/13 18:53 / jk
Trihalomethanes, Total	1.88	ug/L		0.50		E624	01/14/13 18:53 / jk
Surr: 1,2-Dichlorobenzene-d4	100	%REC		80-120		E624	01/14/13 18:53 / jk
Surr: Dibromofluoromethane	95.0	%REC		80-120		E624	01/14/13 18:53 / jk
Surr: p-Bromofluorobenzene	112	%REC		80-120		E624	01/14/13 18:53 / jk
Surr: Toluene-d8	104	%REC		80-120		E624	01/14/13 18:53 / jk

- The sample was received in the laboratory with a pH > 2. The pH was 7.

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13040238-006
Client Sample ID: 801

Report Date: 05/21/13
Collection Date: 04/01/13 13:05
Date Received: 04/05/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	1550	mg/L		5		A2320 B	04/05/13 20:14 / jba
Calcium	576	mg/L		1		E200.7	04/15/13 15:32 / sf
Chloride	213	mg/L	D	4		E300.0	04/08/13 22:40 / wc
Magnesium	.767	mg/L		1		E200.7	04/15/13 15:32 / sf
Nitrogen, Ammonia as N	4.15	mg/L		0.05		A4500-NH3 G	04/10/13 13:52 / lr
Nitrogen, Nitrate+Nitrite as N	12	mg/L	D	2		E353.2	04/15/13 15:32 / lr
Potassium	14	mg/L		1		E200.7	04/15/13 15:32 / sf
Sodium	378	mg/L		1		E200.7	04/15/13 15:32 / sf
Sulfate	3420	mg/L	D	20		E300.0	04/08/13 22:40 / wc
PHYSICAL PROPERTIES							
pH	6.69	s.u.	H	0.01		A4500-H B	04/05/13 15:19 / ab
Solids, Total Dissolved TDS @ 180 C	6350	mg/L		100		A2540 C	04/05/13 15:30 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	04/10/13 23:37 / cp
Beryllium	ND	mg/L		0.001		E200.8	04/10/13 23:37 / cp
Cadmium	ND	mg/L		0.005		E200.8	04/10/13 23:37 / cp
Cobalt	ND	mg/L		0.01		E200.8	04/10/13 23:37 / cp
Lead	ND	mg/L		0.001		E200.8	04/10/13 23:37 / cp
Manganese	5.46	mg/L		0.01		E200.8	04/10/13 23:37 / cp
Molybdenum	ND	mg/L		0.1		E200.8	04/10/13 23:37 / cp
Nickel	ND	mg/L		0.05		E200.8	04/10/13 23:37 / cp
Uranium	0.0418	mg/L		0.0003		E200.8	04/10/13 23:37 / cp
Vanadium	ND	mg/L		0.1		E200.8	04/10/13 23:37 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/17/13 16:31 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	04/17/13 14:38 / jl1
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.6	pCi/L				E900.1	04/29/13 07:37 / lbb
Gross Alpha minus Rn & U Precision (±)	0.4	pCi/L				E900.1	04/29/13 07:37 / lbb
Gross Alpha minus Rn & U MDC	0.5	pCi/L				E900.1	04/29/13 07:37 / lbb
Lead 210	-0.3	pCi/L	U			E909.0	04/16/13 12:59 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	04/16/13 12:59 / eli-cs
Lead 210 MDC	1.2	pCi/L				E909.0	04/16/13 12:59 / eli-cs
Radium 226	0.25	pCi/L				E903.0	04/23/13 17:35 / lmc
Radium 226 precision (±)	0.11	pCi/L				E903.0	04/23/13 17:35 / lmc
Radium 226 MDC	0.13	pCi/L				E903.0	04/23/13 17:35 / lmc
Radium 228	0.11	pCi/L	U			RA-05	04/17/13 17:31 / gb
Radium 228 precision (±)	0.77	pCi/L				RA-05	04/17/13 17:31 / gb
Radium 228 MDC	1.3	pCi/L				RA-05	04/17/13 17:31 / gb

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 H - Analysis performed past recommended holding time.

Report Definitions:
 MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13040238-006
Client Sample ID 801

Report Date: 05/21/13
Collection Date: 04/01/13 13:05
Date Received: 04/05/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.005	pCi/L	U			E908.0	04/12/13 09:08 / dmf
Thorium 230 precision (±)	0.07	pCi/L				E908.0	04/12/13 09:08 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	04/12/13 09:08 / dmf
DATA QUALITY							
A/C Balance (± 5)	2.11	%				A1030 E	04/18/13 12:48 / kbh
Anions	104	meq/L				A1030 E	04/18/13 12:48 / kbh
Cations	109	meq/L				A1030 E	04/18/13 12:48 / kbh
Solids, Total Dissolved Calculated	6300	mg/L				A1030 E	04/18/13 12:48 / kbh
TDS Balance (0.80 - 1.20)	1.01					A1030 E	04/18/13 12:48 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/11/13 14:31 / jlr
Bromoform	ND	ug/L		0.50		E624	04/11/13 14:31 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/11/13 14:31 / jlr
Chloroform	2.02	ug/L		0.50		E624	04/11/13 14:31 / jlr
Trihalomethanes, Total	2.02	ug/L		0.50		E624	04/11/13 14:31 / jlr
Surr: 1,2-Dichlorobenzene-d4	106	%REC		73.7-126		E624	04/11/13 14:31 / jlr
Surr: Dibromofluoromethane	128	%REC		64.4-131		E624	04/11/13 14:31 / jlr
Surr: p-Bromofluorobenzene	104	%REC		67.1-133		E624	04/11/13 14:31 / jlr
Surr: Toluene-d8	102	%REC		79.7-125		E624	04/11/13 14:31 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 8.

Report Definitions:

RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Alluvium Monitor Wells					
Well ID:		801	801	801	801
Collection Date:		4/1/2013	1/7/2013	10/8/2012	7/9/2012
Receive Date:		4/5/2013	1/11/2013	10/12/2012	7/13/2012
Report Date:		5/21/2013	2/25/2013	11/20/2012	8/30/2012
Analyte	RUnits	C13040238-006	C13010343-006	C12100557-006	C12070454-006
Bicarbonate as HCO3	mg/L	1550	1520	1520	1470
Calcium	mg/L	576	594	592	584
Chloride	mg/L	213	203	211	193
Magnesium	mg/L	767	732	652	708
Nitrogen, Ammonia as N	mg/L	4.15	3.23	3.8	3.30
Nitrogen, Nitrate+Nitrite as N	mg/L	27	24	20	18
Potassium	mg/L	14	13	14	13
Sodium	mg/L	378	387	352	362
Sulfate	mg/L	3420	3360	3270	3090
pH	s.u.	6.69	6.63	6.62	6.58
Solids, Total Dissolved TDS @ 180 C	mg/L	6350	6100	6120	6390
Aluminum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	5.46	5.09	5.01	4.21
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
Uranium	mg/L	0.0418	0.0399	0.0387	0.0370
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	0.6	0.4	0.7	0.5
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.4	0.4	0.4	0.3
Gross Alpha minus Rn & U MDC	pCi/L	0.5	0.6	0.5	0.3
Lead 210	pCi/L	-0.3	0.6	0.5	0.5
Lead 210 precision (±)	pCi/L	0.7	0.6	0.6	0.9
Lead 210 MDC	pCi/L	1.2	1.0	1.0	1.4
Radium 226	pCi/L	0.25	0.62	0.42	0.55
Radium 226 precision (±)	pCi/L	0.11	0.18	0.15	0.14
Radium 226 MDC	pCi/L	0.13	0.16	0.15	0.10
Radium 228	pCi/L	0.11	1.0	2.5	0.59
Radium 228 precision (±)	pCi/L	0.77	0.68	0.90	0.65
Radium 228 MDC	pCi/L	1.3	1.1	1.3	1.0
Thorium 230	pCi/L	0.005	0.03	0.02	-0.01
Thorium 230 precision (±)	pCi/L	0.07	0.07	0.1	0.06
Thorium 230 MDC	pCi/L	0.2	0.2	0.2	0.2
A/C Balance (± 5)	%	2.11	2.50	-0.655	4.25
Anions	meq/L	104	102	100	95.2
Cations	meq/L	109	107	99.2	104
Solids, Total Dissolved Calculated	mg/L	6300	6200	6000	5800
TDS Balance (0.80 - 1.20)		1.01	0.990	1.03	1.11
Trihalomethanes, Total	ug/L	2.02	1.88	1.81	2.60

****Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.**



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13010343-005
Client Sample ID: 802

Report Date: 02/25/13
Collection Date: 01/07/13 14:21
Date Received: 01/11/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	1980	mg/L		5		A2320 B	01/11/13 16:10 / jba
Calcium	629	mg/L		1		E200.7	01/14/13 21:21 / sf
Chloride	177	mg/L	D	10		E300.0	01/12/13 03:33 / wc
Magnesium	889	mg/L		1		E200.7	01/14/13 21:21 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	01/14/13 16:38 / lr
Nitrogen, Nitrate+Nitrite as N	112	mg/L	D	10		E353.2	01/16/13 15:15 / lr
Potassium	6	mg/L		1		E200.7	01/14/13 21:21 / sf
Sodium	365	mg/L	D	2		E200.7	01/14/13 21:21 / sf
Sulfate	3350	mg/L	D	40		E300.0	01/12/13 03:33 / wc
PHYSICAL PROPERTIES							
pH	6.57	s.u.	H	0.01		A4500-H B	01/11/13 13:45 / ab
Solids, Total Dissolved TDS @ 180 C	6870	mg/L		10		A2540 C	01/11/13 14:38 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	01/15/13 22:08 / sf
Beryllium	ND	mg/L		0.001		E200.7	01/15/13 22:08 / sf
Cadmium	ND	mg/L		0.005		E200.7	01/15/13 22:08 / sf
Cobalt	ND	mg/L		0.01		E200.7	01/15/13 22:08 / sf
Lead	0.001	mg/L		0.001		E200.8	01/18/13 01:53 / clm
Manganese	1.11	mg/L		0.01		E200.7	01/15/13 22:08 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/15/13 22:08 / sf
Nickel	ND	mg/L		0.05		E200.7	01/15/13 22:08 / sf
Uranium	0.125	mg/L		0.0003		E200.8	01/18/13 01:53 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/15/13 22:08 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/29/13 11:51 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	01/31/13 12:45 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.4	pCi/L	U			E900.1	01/25/13 06:28 / lbb
Gross Alpha minus Rn & U Precision (±)	0.4	pCi/L				E900.1	01/25/13 06:28 / lbb
Gross Alpha minus Rn & U MDC	0.6	pCi/L				E900.1	01/25/13 06:28 / lbb
Lead 210	0.2	pCi/L	U			E909.0	02/08/13 01:13 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	02/08/13 01:13 / eli-cs
Lead 210 MDC	1.1	pCi/L				E909.0	02/08/13 01:13 / eli-cs
Radium 226	0.48	pCi/L				E903.0	01/30/13 12:46 / trs
Radium 226 precision (±)	0.17	pCi/L				E903.0	01/30/13 12:46 / trs
Radium 226 MDC	0.17	pCi/L				E903.0	01/30/13 12:46 / trs
Radium 228	1.2	pCi/L				RA-05	01/24/13 17:25 / gb
Radium 228 precision (±)	0.71	pCi/L				RA-05	01/24/13 17:25 / gb
Radium 228 MDC	1.1	pCi/L				RA-05	01/24/13 17:25 / gb

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13010343-005
Client Sample ID: 802

Report Date: 02/25/13
Collection Date: 01/07/13 14:21
Date Received: 01/11/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.02	pCi/L	U			E908.0	01/30/13 16:19 / dmf
Thorium 230 precision (±)	0.06	pCi/L				E908.0	01/30/13 16:19 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	01/30/13 16:19 / dmf
DATA QUALITY							
A/C Balance (± 5)	2.55	%				A1030 E	01/17/13 07:45 / kbh
Anions	115	meq/L				A1030 E	01/17/13 07:45 / kbh
Cations	121	meq/L				A1030 E	01/17/13 07:45 / kbh
Solids, Total Dissolved Calculated	6900	mg/L				A1030 E	01/17/13 07:45 / kbh
TDS Balance (0.80 - 1.20)	1.00					A1030 E	01/17/13 07:45 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/14/13 18:17 / jk
Bromoform	ND	ug/L		0.50		E624	01/14/13 18:17 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	01/14/13 18:17 / jk
Chloroform	12.6	ug/L		0.50		E624	01/14/13 18:17 / jk
Trihalomethanes, Total	12.6	ug/L		0.50		E624	01/14/13 18:17 / jk
Surr: 1,2-Dichlorobenzene-d4	97.0	%REC		80-120		E624	01/14/13 18:17 / jk
Surr: Dibromofluoromethane	87.0	%REC		80-120		E624	01/14/13 18:17 / jk
Surr: p-Bromofluorobenzene	107	%REC		80-120		E624	01/14/13 18:17 / jk
Surr: Toluene-d8	106	%REC		80-120		E624	01/14/13 18:17 / jk

- The sample was received in the laboratory with a pH > 2. The pH was 7.

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13040238-005
Client Sample ID 802

Report Date: 05/21/13
Collection Date: 04/01/13 12:25
Date Received: 04/05/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	2020	mg/L		5		A2320 B	04/05/13 20:03 / jba
Calcium	620	mg/L		1		E200.7	04/15/13 15:28 / sf
Chloride	185	mg/L	D	4		E300.0	04/08/13 22:25 / wc
Magnesium	865	mg/L		1		E200.7	04/15/13 15:28 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH ₃ G	04/10/13 13:50 / lr
Nitrogen, Nitrate+Nitrite as N	115	mg/L	D	5		E353.2	04/08/13 11:05 / lr
Potassium	6	mg/L		1		E200.7	04/15/13 15:28 / sf
Sodium	349	mg/L		1		E200.7	04/15/13 15:28 / sf
Sulfate	3190	mg/L	D	20		E300.0	04/08/13 22:25 / wc
PHYSICAL PROPERTIES							
pH	6.61	s.u.	H	0.01		A4500-H B	04/05/13 15:16 / ab
Solids, Total Dissolved TDS @ 180 C	6920	mg/L		100		A2540 C	04/05/13 15:30 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	04/10/13 23:33 / cp
Beryllium	ND	mg/L		0.001		E200.8	04/10/13 23:33 / cp
Cadmium	ND	mg/L		0.005		E200.8	04/10/13 23:33 / cp
Cobalt	ND	mg/L		0.01		E200.8	04/10/13 23:33 / cp
Lead	0.001	mg/L		0.001		E200.8	04/10/13 23:33 / cp
Manganese	1.23	mg/L		0.01		E200.8	04/10/13 23:33 / cp
Molybdenum	ND	mg/L		0.1		E200.8	04/10/13 23:33 / cp
Nickel	ND	mg/L		0.05		E200.8	04/10/13 23:33 / cp
Uranium	0.132	mg/L		0.0003		E200.8	04/10/13 23:33 / cp
Vanadium	ND	mg/L		0.1		E200.8	04/10/13 23:33 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/17/13 16:23 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	04/17/13 14:37 / jl1
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.8	pCi/L				E900.1	04/29/13 07:37 / lbb
Gross Alpha minus Rn & U Precision (±)	0.4	pCi/L				E900.1	04/29/13 07:37 / lbb
Gross Alpha minus Rn & U MDC	0.5	pCi/L				E900.1	04/29/13 07:37 / lbb
Lead 210	0.2	pCi/L	U			E909.0	04/16/13 12:59 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	04/16/13 12:59 / eli-cs
Lead 210 MDC	1.2	pCi/L				E909.0	04/16/13 12:59 / eli-cs
Radium 226	0.17	pCi/L				E903.0	04/23/13 17:35 / lmc
Radium 226 precision (±)	0.1	pCi/L				E903.0	04/23/13 17:35 / lmc
Radium 226 MDC	0.12	pCi/L				E903.0	04/23/13 17:35 / lmc
Radium 228	0.61	pCi/L	U			RA-05	04/17/13 17:31 / gb
Radium 228 precision (±)	0.78	pCi/L				RA-05	04/17/13 17:31 / gb
Radium 228 MDC	1.3	pCi/L				RA-05	04/17/13 17:31 / gb

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13040238-005
Client Sample ID: 802

Report Date: 05/21/13
Collection Date: 04/01/13 12:25
Date Received: 04/05/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.07	pCi/L	U			E908.0	04/12/13 09:08 / dmf
Thorium 230 precision (±)	0.09	pCi/L				E908.0	04/12/13 09:08 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	04/12/13 09:08 / dmf
DATA QUALITY							
A/C Balance (± 5)	2.31	%				A1030 E	04/18/13 12:48 / kbh
Anions	112	meq/L				A1030 E	04/18/13 12:48 / kbh
Cations	118	meq/L				A1030 E	04/18/13 12:48 / kbh
Solids, Total Dissolved Calculated	6700	mg/L				A1030 E	04/18/13 12:48 / kbh
TDS Balance (0.80 - 1.20)	1.03					A1030 E	04/18/13 12:48 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/11/13 13:57 / jlr
Bromoform	ND	ug/L		0.50		E624	04/11/13 13:57 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/11/13 13:57 / jlr
Chloroform	13.8	ug/L		0.50		E624	04/11/13 13:57 / jlr
Trihalomethanes, Total	13.8	ug/L		0.50		E624	04/11/13 13:57 / jlr
Surr: 1,2-Dichlorobenzene-d4	105	%REC		73.7-126		E624	04/11/13 13:57 / jlr
Surr: Dibromofluoromethane	124	%REC		64.4-131		E624	04/11/13 13:57 / jlr
Surr: p-Bromofluorobenzene	116	%REC		67.1-133		E624	04/11/13 13:57 / jlr
Surr: Toluene-d8	99.0	%REC		79.7-125		E624	04/11/13 13:57 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 8.

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 U - Not detected at minimum detectable concentration

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Alluvium Monitor Wells					
Well ID:		802	802	802	802
Collection Date:		4/1/2013	1/7/2013	10/8/2012	7/9/2012
Receive Date:		4/5/2013	1/11/2013	10/12/2012	7/13/2012
Report Date:		5/21/2013	2/25/2013	11/20/2012	8/30/2012
Analyte:	RUUnits	C13040238-005	C13010343-005	C12100557-005	C12070454-005
Bicarbonate as HCO3	mg/L	2020	1980	2010	1970
Calcium	mg/L	620	629	642	609
Chloride	mg/L	185	177	193	175
Magnesium	mg/L	865	889	849	930
Nitrogen, Ammonia as N	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	0.27
Nitrogen, Nitrate+Nitrite as N	mg/L	115	112	110	113
Potassium	mg/L	6	6	6	5
Sodium	mg/L	349	365	350	347
Sulfate	mg/L	3190	3350	3420	3260
pH	s.u.	6.61	6.57	6.58	6.59
Solids, Total Dissolved TDS @ 180 C	mg/L	6920	6870	7130	7800
Aluminum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
Lead	mg/L	0.001	0.001	0.001	0.002
Manganese	mg/L	1.23	1.11	1.24	1.22
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
Uranium	mg/L	0.132	0.125	0.121	0.119
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	0.8	0.4	0.8	0.3
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.4	0.4	0.4	0.2
Gross Alpha minus Rn & U MDC	pCi/L	0.5	0.6	0.5	0.3
Lead 210	pCi/L	0.2	0.2	0.008	-0.06
Lead 210 precision (±)	pCi/L	0.7	0.7	0.6	0.9
Lead 210 MDC	pCi/L	1.2	1.1	1.0	1.4
Radium 226	pCi/L	0.17	0.48	0.19	0.35
Radium 226 precision (±)	pCi/L	0.1	0.17	0.12	0.12
Radium 226 MDC	pCi/L	0.12	0.17	0.15	0.10
Radium 228	pCi/L	0.61	1.2	1.2	-0.02
Radium 228 precision (±)	pCi/L	0.78	0.71	0.84	0.63
Radium 228 MDC	pCi/L	1.3	1.1	1.3	1.1
Thorium 230	pCi/L	0.07	0.02	-0.02	0.0007
Thorium 230 precision (±)	pCi/L	0.09	0.06	0.1	0.07
Thorium 230 MDC	pCi/L	0.2	0.2	0.3	0.2
A/C Balance (± 5)	%	2.31	2.55	-0.121	4.06
Anions	meq/L	112	115	118	113
Cations	meq/L	118	121	117	122
Solids, Total Dissolved Calculated	mg/L	6700	6900	7000	6800
TDS Balance (0.80 - 1.20)		1.03	1.00	1.02	1.15
Trihalomethanes, Total	ug/L	13.8	12.6	12.6	14.1

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13010343-003
Client Sample ID: 803

Report Date: 02/25/13
Collection Date: 01/07/13 12:58
Date Received: 01/11/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	1850	mg/L		5		A2320 B	01/11/13 15:46 / jba
Calcium	685	mg/L		1		E200.7	01/14/13 21:08 / sf
Chloride	174	mg/L	D	4		E300.0	01/23/13 17:54 / wc
Magnesium	803	mg/L		1		E200.7	01/14/13 21:08 / sf
Nitrogen, Ammonia as N	2.42	mg/L		0.05		A4500-NH3 G	01/14/13 13:37 / lr
Nitrogen, Nitrate+Nitrite as N	21	mg/L	D	2		E353.2	01/16/13 15:05 / lr
Potassium	15	mg/L		1		E200.7	01/14/13 21:08 / sf
Sodium	316	mg/L	D	2		E200.7	01/14/13 21:08 / sf
Sulfate	3410	mg/L	D	20		E300.0	01/23/13 17:54 / wc
PHYSICAL PROPERTIES							
pH	6.57	s.u.	H	0.01		A4500-H B	01/11/13 13:40 / ab
Solids, Total Dissolved TDS @ 180 C	6430	mg/L		10		A2540 C	01/11/13 14:38 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	01/15/13 22:00 / sf
Beryllium	ND	mg/L		0.001		E200.7	01/15/13 22:00 / sf
Cadmium	ND	mg/L		0.005		E200.7	01/15/13 22:00 / sf
Cobalt	ND	mg/L		0.01		E200.7	01/15/13 22:00 / sf
Lead	0.001	mg/L		0.001		E200.8	01/18/13 01:46 / clm
Manganese	2.15	mg/L		0.01		E200.7	01/15/13 22:00 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/15/13 22:00 / sf
Nickel	ND	mg/L		0.05		E200.7	01/15/13 22:00 / sf
Uranium	0.0957	mg/L		0.0003		E200.8	01/18/13 01:46 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/15/13 22:00 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/23/13 16:15 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	01/31/13 12:38 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.5	pCi/L	U			E900.1	01/25/13 06:28 / lbb
Gross Alpha minus Rn & U Precision (±)	0.4	pCi/L				E900.1	01/25/13 06:28 / lbb
Gross Alpha minus Rn & U MDC	0.6	pCi/L				E900.1	01/25/13 06:28 / lbb
Lead 210	-0.1	pCi/L	U			E909.0	02/07/13 23:16 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	02/07/13 23:16 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	02/07/13 23:16 / eli-cs
Radium 226	0.39	pCi/L				E903.0	01/30/13 12:46 / trs
Radium 226 precision (±)	0.16	pCi/L				E903.0	01/30/13 12:46 / trs
Radium 226 MDC	0.17	pCi/L				E903.0	01/30/13 12:46 / trs
Radium 228	1.3	pCi/L				RA-05	01/24/13 17:25 / gb
Radium 228 precision (±)	0.71	pCi/L				RA-05	01/24/13 17:25 / gb
Radium 228 MDC	1.1	pCi/L				RA-05	01/24/13 17:25 / gb

Report Definitions:
 RL - Analyte reporting limit. MCL - Maximum contaminant level.
 QCL - Quality control limit. ND - Not detected at the reporting limit.
 MDC - Minimum detectable concentration. D - RL increased due to sample matrix.
 H - Analysis performed past recommended holding time. U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13010343-003
Client Sample ID: 803

Report Date: 02/25/13
Collection Date: 01/07/13 12:58
Date Received: 01/11/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.04	pCi/L	U			E908.0	01/30/13 16:19 / dmf
Thorium 230 precision (±)	0.08	pCi/L				E908.0	01/30/13 16:19 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	01/30/13 16:19 / dmf
DATA QUALITY							
A/C Balance (± 5)	0.494	%				A1030 E	01/28/13 07:35 / kbh
Anions	113	meq/L				A1030 E	01/28/13 07:35 / kbh
Cations	115	meq/L				A1030 E	01/28/13 07:35 / kbh
Solids, Total Dissolved Calculated	6700	mg/L				A1030 E	01/28/13 07:35 / kbh
TDS Balance (0.80 - 1.20)	0.960					A1030 E	01/28/13 07:35 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/14/13 17:04 / jk
Bromoform	ND	ug/L		0.50		E624	01/14/13 17:04 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	01/14/13 17:04 / jk
Chloroform	11.0	ug/L		0.50		E624	01/14/13 17:04 / jk
Trihalomethanes, Total	11.0	ug/L		0.50		E624	01/14/13 17:04 / jk
Surr: 1,2-Dichlorobenzene-d4	96.0	%REC		80-120		E624	01/14/13 17:04 / jk
Surr: Dibromofluoromethane	86.0	%REC		80-120		E624	01/14/13 17:04 / jk
Surr: p-Bromofluorobenzene	106	%REC		80-120		E624	01/14/13 17:04 / jk
Surr: Toluene-d8	108	%REC		80-120		E624	01/14/13 17:04 / jk

- The sample was received in the laboratory with a pH > 2. The pH was 7.

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13040238-003
Client Sample ID 803

Report Date: 05/21/13
Collection Date: 04/01/13 11:03
Date Received: 04/05/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	1870	mg/L		5		A2320 B	04/05/13 19:38 / jba
Calcium	661	mg/L		1		E200.7	04/15/13 15:06 / sf
Chloride	172	mg/L	D	4		E300.0	04/08/13 21:54 / wc
Magnesium	790	mg/L		1		E200.7	04/15/13 15:06 / sf
Nitrogen, Ammonia as N	2.86	mg/L		0.05		A4500-NH3 G	04/10/13 13:36 / lr
Nitrogen, Nitrate+Nitrite as N	44	mg/L	D	2		E353.2	04/08/13 11:00 / lr
Potassium	15	mg/L		1		E200.7	04/15/13 15:06 / sf
Sodium	309	mg/L		1		E200.7	04/15/13 15:06 / sf
Sulfate	3280	mg/L	D	20		E300.0	04/08/13 21:54 / wc
PHYSICAL PROPERTIES							
pH	6.57	s.u.	H	0.01		A4500-H B	04/05/13 15:11 / ab
Solids, Total Dissolved TDS @ 180 C	6530	mg/L		100		A2540 C	04/05/13 15:30 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	04/10/13 23:24 / cp
Beryllium	ND	mg/L		0.001		E200.8	04/10/13 23:24 / cp
Cadmium	ND	mg/L		0.005		E200.8	04/10/13 23:24 / cp
Cobalt	ND	mg/L		0.01		E200.8	04/10/13 23:24 / cp
Lead	0.002	mg/L		0.001		E200.8	04/10/13 23:24 / cp
Manganese	2.34	mg/L		0.01		E200.8	04/10/13 23:24 / cp
Molybdenum	ND	mg/L		0.1		E200.8	04/10/13 23:24 / cp
Nickel	ND	mg/L		0.05		E200.8	04/10/13 23:24 / cp
Uranium	0.106	mg/L		0.0003		E200.8	04/10/13 23:24 / cp
Vanadium	ND	mg/L		0.1		E200.8	04/10/13 23:24 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/17/13 15:04 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	04/17/13 14:34 / jl1
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.3	pCi/L	U			E900.1	04/29/13 07:37 / lbb
Gross Alpha minus Rn & U Precision (±)	0.3	pCi/L				E900.1	04/29/13 07:37 / lbb
Gross Alpha minus Rn & U MDC	0.5	pCi/L				E900.1	04/29/13 07:37 / lbb
Lead 210	-0.2	pCi/L	U			E909.0	04/16/13 12:59 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	04/16/13 12:59 / eli-cs
Lead 210 MDC	1.2	pCi/L				E909.0	04/16/13 12:59 / eli-cs
Radium 226	0.22	pCi/L				E903.0	04/23/13 15:44 / lmc
Radium 226 precision (±)	0.11	pCi/L				E903.0	04/23/13 15:44 / lmc
Radium 226 MDC	0.13	pCi/L				E903.0	04/23/13 15:44 / lmc
Radium 228	0.64	pCi/L	U			RA-05	04/17/13 17:31 / gb
Radium 228 precision (±)	0.80	pCi/L				RA-05	04/17/13 17:31 / gb
Radium 228 MDC	1.3	pCi/L				RA-05	04/17/13 17:31 / gb

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13040238-003
Client Sample ID 803

Report Date: 05/21/13
Collection Date: 04/01/13 11:03
Date Received: 04/05/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.05	pCi/L	U			E908.0	04/12/13 09:08 / dmf
Thorium 230 precision (±)	0.08	pCi/L				E908.0	04/12/13 09:08 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	04/12/13 09:08 / dmf
DATA QUALITY							
A/C Balance (± 5)	2.43	%				A1030 E	04/18/13 12:47 / kbh
Anions	107	meq/L				A1030 E	04/18/13 12:47 / kbh
Cations	112	meq/L				A1030 E	04/18/13 12:47 / kbh
Solids, Total Dissolved Calculated	64.00	mg/L				A1030 E	04/18/13 12:47 / kbh
TDS Balance (0.80 - 1.20)	1.03					A1030 E	04/18/13 12:47 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/08/13 18:45 / jlr
Bromoform	ND	ug/L		0.50		E624	04/08/13 18:45 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/08/13 18:45 / jlr
Chloroform	14.8	ug/L		0.50		E624	04/08/13 18:45 / jlr
Trihalomethanes, Total	14.8	ug/L		0.50		E624	04/08/13 18:45 / jlr
Surr: 1,2-Dichlorobenzene-d4	107	%REC		73.7-126		E624	04/08/13 18:45 / jlr
Surr: Dibromofluoromethane	120	%REC		64.4-131		E624	04/08/13 18:45 / jlr
Surr: p-Bromofluorobenzene	107	%REC		67.1-133		E624	04/08/13 18:45 / jlr
Surr: Toluene-d8	89.0	%REC		79.7-125		E624	04/08/13 18:45 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 8.

Report Definitions: RL - Analyte reporting limit. MCL - Maximum contaminant level.
QCL - Quality control limit. ND - Not detected at the reporting limit.
MDC - Minimum detectable concentration. U - Not detected at minimum detectable concentration

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Alluvium Monitor Wells					
Well ID:		803	803	803	803
Collection Date:		4/1/2013	1/7/2013	10/8/2012	7/9/2012
Receive Date:		4/5/2013	1/11/2013	10/12/2012	7/13/2012
Report Date:		5/21/2013	2/25/2013	11/20/2012	8/30/2012
Analyte	RUnits	C13040238-003	C13010343-003	C12100557-003	C12070454-003
Bicarbonate as HCO3	mg/L	1870	1850	1750	1810
Calcium	mg/L	661	685	678	653
Chloride	mg/L	172	174	160	164
Magnesium	mg/L	790	803	723	796
Nitrogen, Ammonia as N	mg/L	2.86	2.42	1.8	2.78
Nitrogen, Nitrate+Nitrite as N	mg/L	44	21	38	50
Potassium	mg/L	15	15	14	13
Sodium	mg/L	309	316	283	297
Sulfate	mg/L	3280	3410	3300	3230
pH	s.u.	6.57	6.57	6.54	6.61
Solids, Total Dissolved TDS @ 180 C	mg/L	6530	6430	6590	6630
Aluminum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
Lead	mg/L	0.002	0.001	0.002	0.002
Manganese	mg/L	2.34	2.15	3.14	2.31
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
Uranium	mg/L	0.106	0.0957	0.0781	0.102
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	0.3	0.5	0.7	0.3
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.3	0.4	0.4	0.2
Gross Alpha minus Rn & U MDC	pCi/L	0.5	0.6	0.5	0.3
Lead 210	pCi/L	-0.2	-0.1	0.04	0.5
Lead 210 precision (±)	pCi/L	0.7	0.6	0.6	0.9
Lead 210 MDC	pCi/L	1.2	1.0	1.0	1.4
Radium 226	pCi/L	0.22	0.39	0.14	0.37
Radium 226 precision (±)	pCi/L	0.11	0.16	0.11	0.12
Radium 226 MDC	pCi/L	0.13	0.17	0.15	0.10
Radium 228	pCi/L	0.64	1.3	1.3	0.38
Radium 228 precision (±)	pCi/L	0.80	0.71	0.83	0.65
Radium 228 MDC	pCi/L	1.3	1.1	1.3	1.1
Thorium 230	pCi/L	0.05	0.04	0.009	-0.01
Thorium 230 precision (±)	pCi/L	0.08	0.08	0.1	0.08
Thorium 230 MDC	pCi/L	0.2	0.2	0.2	0.2
A/C Balance (± 5)	%	2.43	0.494	0.741	3.12
Anions	meq/L	107	113	105	105
Cations	meq/L	112	115	106	112
Solids, Total Dissolved Calculated	mg/L	6400	6700	6200	6300
TDS Balance (0.80 - 1.20)		1.03	0.960	1.06	1.06
Trihalomethanes, Total	ug/L	14.8	11.0	8.00	9.61

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13010343-004
Client Sample ID: 808

Report Date: 02/25/13
Collection Date: 01/07/13 13:39
Date Received: 01/11/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	2090	mg/L		5		A2320 B	01/11/13 15:58 / jba
Calcium	727	mg/L		1		E200.7	01/14/13 21:12 / sf
Chloride	184	mg/L	D	4		E300.0	01/23/13 18:12 / wc
Magnesium	728	mg/L		1		E200.7	01/14/13 21:12 / sf
Nitrogen, Ammonia as N	0.94	mg/L		0.05		A4500-NH3 G	01/14/13 13:39 / lr
Nitrogen, Nitrate+Nitrite as N	48	mg/L	D	2		E353.2	01/16/13 15:12 / lr
Potassium	8	mg/L		1		E200.7	01/14/13 21:12 / sf
Sodium	370	mg/L	D	2		E200.7	01/14/13 21:12 / sf
Sulfate	3160	mg/L	D	20		E300.0	01/23/13 18:12 / wc
PHYSICAL PROPERTIES							
pH	6.57	s.u.	H	0.01		A4500-H B	01/11/13 13:43 / ab
Solids, Total Dissolved TDS @ 180 C	6490	mg/L		10		A2540 C	01/11/13 14:38 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	01/15/13 22:04 / sf
Beryllium	ND	mg/L		0.001		E200.7	01/15/13 22:04 / sf
Cadmium	ND	mg/L		0.005		E200.7	01/15/13 22:04 / sf
Cobalt	ND	mg/L		0.01		E200.7	01/15/13 22:04 / sf
Lead	0.002	mg/L		0.001		E200.8	01/18/13 01:49 / clm
Manganese	1.65	mg/L		0.01		E200.7	01/15/13 22:04 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/15/13 22:04 / sf
Nickel	ND	mg/L		0.05		E200.7	01/15/13 22:04 / sf
Uranium	0.116	mg/L		0.0003		E200.8	01/18/13 01:49 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/15/13 22:04 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/23/13 16:26 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	01/31/13 12:43 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.005	pCi/L	U			E900.1	01/25/13 06:28 / lbb
Gross Alpha minus Rn & U Precision (±)	0.4	pCi/L				E900.1	01/25/13 06:28 / lbb
Gross Alpha minus Rn & U MDC	0.6	pCi/L				E900.1	01/25/13 06:28 / lbb
Lead 210	-0.07	pCi/L	U			E909.0	02/08/13 00:14 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	02/08/13 00:14 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	02/08/13 00:14 / eli-cs
Radium 226	0.47	pCi/L				E903.0	01/30/13 12:46 / trs
Radium 226 precision (±)	0.16	pCi/L				E903.0	01/30/13 12:46 / trs
Radium 226 MDC	0.16	pCi/L				E903.0	01/30/13 12:46 / trs
Radium 228	0.69	pCi/L	U			RA-05	01/24/13 17:25 / gb
Radium 228 precision (±)	0.66	pCi/L				RA-05	01/24/13 17:25 / gb
Radium 228 MDC	1.1	pCi/L				RA-05	01/24/13 17:25 / gb

Report Definitions:
 RL - Analyte reporting limit. MCL - Maximum contaminant level.
 QCL - Quality control limit. ND - Not detected at the reporting limit.
 MDC - Minimum detectable concentration. D - RL increased due to sample matrix.
 H - Analysis performed past recommended holding time. U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13010343-004
Client Sample ID: 808

Report Date: 02/25/13
Collection Date: 01/07/13 13:39
Date Received: 01/11/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.03	pCi/L	U			E908.0	01/30/13 16:19 / dmf
Thorium 230 precision (±)	0.07	pCi/L				E908.0	01/30/13 16:19 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	01/30/13 16:19 / dmf
DATA QUALITY							
A/C Balance (± 5)	0.323	%				A1030 E	01/28/13 07:35 / kbh
Anions	112	meq/L				A1030 E	01/28/13 07:35 / kbh
Cations	113	meq/L				A1030 E	01/28/13 07:35 / kbh
Solids, Total Dissolved Calculated	6600	mg/L				A1030 E	01/28/13 07:35 / kbh
TDS Balance (0.80 - 1.20)	0.980					A1030 E	01/28/13 07:35 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/14/13 17:40 / jk
Bromoform	ND	ug/L		0.50		E624	01/14/13 17:40 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	01/14/13 17:40 / jk
Chloroform	1.90	ug/L		0.50		E624	01/14/13 17:40 / jk
Trihalomethanes, Total	1.90	ug/L		0.50		E624	01/14/13 17:40 / jk
Surr: 1,2-Dichlorobenzene-d4	93.0	%REC		80-120		E624	01/14/13 17:40 / jk
Surr: Dibromofluoromethane	87.0	%REC		80-120		E624	01/14/13 17:40 / jk
Surr: p-Bromofluorobenzene	103	%REC		80-120		E624	01/14/13 17:40 / jk
Surr: Toluene-d8	104	%REC		80-120		E624	01/14/13 17:40 / jk

- The sample was received in the laboratory with a pH > 2. The pH was 7.

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13040238-004
Client Sample ID 808

Report Date: 05/21/13
Collection Date: 04/01/13 11:45
Date Received: 04/05/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	2120	mg/L		5		A2320 B	04/05/13 19:50 / jba
Calcium	715	mg/L		1		E200.7	04/15/13 15:25 / sf
Chloride	188	mg/L	D	4		E300.0	04/08/13 22:10 / wc
Magnesium	738	mg/L		1		E200.7	04/15/13 15:25 / sf
Nitrogen, Ammonia as N	1.35	mg/L		0.05		A4500-NH3 G	04/10/13 13:44 / lr
Nitrogen, Nitrate+Nitrite as N	43	mg/L	D	2		E353.2	04/08/13 11:03 / lr
Potassium	8	mg/L		1		E200.7	04/15/13 15:25 / sf
Sodium	357	mg/L		1		E200.7	04/15/13 15:25 / sf
Sulfate	3190	mg/L	D	20		E300.0	04/08/13 22:10 / wc
PHYSICAL PROPERTIES							
pH	6.71	s.u.	H	0.01		A4500-H B	04/05/13 15:13 / ab
Solids, Total Dissolved TDS @ 180 C	6600	mg/L		100		A2540 C	04/05/13 15:30 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	04/10/13 23:29 / cp
Beryllium	ND	mg/L		0.001		E200.8	04/10/13 23:29 / cp
Cadmium	ND	mg/L		0.005		E200.8	04/10/13 23:29 / cp
Cobalt	ND	mg/L		0.01		E200.8	04/10/13 23:29 / cp
Lead	0.002	mg/L		0.001		E200.8	04/10/13 23:29 / cp
Manganese	1.68	mg/L		0.01		E200.8	04/10/13 23:29 / cp
Molybdenum	ND	mg/L		0.1		E200.8	04/10/13 23:29 / cp
Nickel	ND	mg/L		0.05		E200.8	04/10/13 23:29 / cp
Uranium	0.116	mg/L		0.0003		E200.8	04/10/13 23:29 / cp
Vanadium	ND	mg/L		0.1		E200.8	04/10/13 23:29 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/17/13 16:15 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	04/17/13 14:35 / jl1
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.5	pCi/L	U			E900.1	04/29/13 07:37 / lbb
Gross Alpha minus Rn & U Precision (±)	0.4	pCi/L				E900.1	04/29/13 07:37 / lbb
Gross Alpha minus Rn & U MDC	0.5	pCi/L				E900.1	04/29/13 07:37 / lbb
Lead 210	0.1	pCi/L	U			E909.0	04/16/13 12:59 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	04/16/13 12:59 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	04/16/13 12:59 / eli-cs
Radium 226	0.03	pCi/L	U			E903.0	04/23/13 15:44 / lmc
Radium 226 precision (±)	0.08	pCi/L				E903.0	04/23/13 15:44 / lmc
Radium 226 MDC	0.13	pCi/L				E903.0	04/23/13 15:44 / lmc
Radium 228	0.49	pCi/L	U			RA-05	04/17/13 17:31 / gb
Radium 228 precision (±)	0.78	pCi/L				RA-05	04/17/13 17:31 / gb
Radium 228 MDC	1.3	pCi/L				RA-05	04/17/13 17:31 / gb

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13040238-004
Client Sample ID 808

Report Date: 05/21/13
Collection Date: 04/01/13 11:45
Date Received: 04/05/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.02	pCi/L	U			E908.0	04/12/13 09:08 / dmf
Thorium 230 precision (±)	0.07	pCi/L				E908.0	04/12/13 09:08 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	04/12/13 09:08 / dmf
DATA QUALITY							
A/C Balance (± 5)	1.31	%				A1030 E	04/18/13 12:48 / kbh
Anions	109	meq/L				A1030 E	04/18/13 12:48 / kbh
Cations	112	meq/L				A1030 E	04/18/13 12:48 / kbh
Solids, Total Dissolved Calculated	6400	mg/L				A1030 E	04/18/13 12:48 / kbh
TDS Balance (0.80 - 1.20)	1.02					A1030 E	04/18/13 12:48 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/08/13 19:19 / jlr
Bromoform	ND	ug/L		0.50		E624	04/08/13 19:19 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/08/13 19:19 / jlr
Chloroform	2.28	ug/L		0.50		E624	04/08/13 19:19 / jlr
Trihalomethanes, Total	2.28	ug/L		0.50		E624	04/08/13 19:19 / jlr
Surr: 1,2-Dichlorobenzene-d4	105	%REC		73.7-126		E624	04/08/13 19:19 / jlr
Surr: Dibromofluoromethane	125	%REC		64.4-131		E624	04/08/13 19:19 / jlr
Surr: p-Bromofluorobenzene	108	%REC		67.1-133		E624	04/08/13 19:19 / jlr
Surr: Toluene-d8	101	%REC		79.7-125		E624	04/08/13 19:19 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 8.

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Alluvium Monitor Wells					
Well ID:		808	808	808	808
Collection Date:		4/1/2013	1/7/2013	10/8/2012	7/9/2012
Receive Date:		4/5/2013	1/11/2013	10/12/2012	7/13/2012
Report Date:		5/21/2013	2/25/2013	11/20/2012	8/30/2012
Analyte	RUUnits	C13040238-004	C13010343-004	C12100557-004	C12070454-004
Bicarbonate as HCO3	mg/L	2120	2090	2150	2100
Calcium	mg/L	715	727	765	756
Chloride	mg/L	188	184	193	180
Magnesium	mg/L	738	728	713	784
Nitrogen, Ammonia as N	mg/L	1.35	0.94	1.24	0.35
Nitrogen, Nitrate+Nitrite as N	mg/L	43	48	57	70
Potassium	mg/L	8	8	7	6
Sodium	mg/L	357	370	349	353
Sulfate	mg/L	3190	3160	3150	3060
pH	s.u.	6.71	6.57	6.56	6.61
Solids, Total Dissolved TDS @ 180 C	mg/L	6600	6490	6630	7200
Aluminum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
Lead	mg/L	0.002	0.002	0.002	0.002
Manganese	mg/L	1.68	1.65	1.62	1.25
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
Uranium	mg/L	0.116	0.116	0.120	0.126
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	0.5	0.005	0.4	0.4
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.4	0.4	0.3	0.2
Gross Alpha minus Rn & U MDC	pCi/L	0.5	0.6	0.5	0.3
Lead 210	pCi/L	0.1	-0.07	0.3	0.3
Lead 210 precision (±)	pCi/L	0.7	0.6	0.6	0.9
Lead 210 MDC	pCi/L	1.3	1.0	1.0	1.4
Radium 226	pCi/L	0.03	0.47	0.07	0.40
Radium 226 precision (±)	pCi/L	0.08	0.16	0.09	0.12
Radium 226 MDC	pCi/L	0.13	0.16	0.14	0.10
Radium 228	pCi/L	0.49	0.69	0.53	-0.08
Radium 228 precision (±)	pCi/L	0.78	0.66	0.75	0.61
Radium 228 MDC	pCi/L	1.3	1.1	1.2	1.0
Thorium 230	pCi/L	0.02	0.03	0.04	0.06
Thorium 230 precision (±)	pCi/L	0.07	0.07	0.1	0.09
Thorium 230 MDC	pCi/L	0.2	0.2	0.2	0.2
A/C Balance (± 5)	%	1.31	0.323	0.895	4.33
Anions	meq/L	109	112	110	108
Cations	meq/L	112	113	112	118
Solids, Total Dissolved Calculated	mg/L	6400	6600	6500	6500
TDS Balance (0.80 - 1.20)		1.02	0.980	1.02	1.11
Trihalomethanes, Total	ug/L	2.28	1.90	2.04	3.26

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13010343-008
Client Sample ID: GW-1

Report Date: 02/25/13
Collection Date: 01/07/13 16:54
Date Received: 01/11/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	1860	mg/L		5		A2320 B	01/11/13 16:46 / jba
Calcium	735	mg/L		1		E200.7	01/14/13 22:13 / sf
Chloride	239	mg/L	D	4		E300.0	01/14/13 15:50 / wc
Magnesium	612	mg/L		1		E200.7	01/14/13 22:13 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	01/14/13 13:51 / lr
Nitrogen, Nitrate+Nitrite as N	92	mg/L	D	5		E353.2	01/16/13 15:22 / lr
Potassium	7	mg/L		1		E200.7	01/14/13 22:13 / sf
Sodium	446	mg/L	D	2		E200.7	01/14/13 22:13 / sf
Sulfate	2760	mg/L	D	20		E300.0	01/14/13 15:50 / wc
PHYSICAL PROPERTIES							
pH	6.64	s.u.	H	0.01		A4500-H B	01/11/13 13:53 / ab
Solids, Total Dissolved TDS @ 180 C	6080	mg/L		10		A2540 C	01/11/13 14:39 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	01/15/13 22:24 / sf
Beryllium	ND	mg/L		0.001		E200.7	01/15/13 22:24 / sf
Cadmium	ND	mg/L		0.005		E200.7	01/15/13 22:24 / sf
Cobalt	ND	mg/L		0.01		E200.7	01/15/13 22:24 / sf
Lead	ND	mg/L		0.001		E200.8	01/18/13 02:15 / clm
Manganese	0.12	mg/L		0.01		E200.7	01/15/13 22:24 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/15/13 22:24 / sf
Nickel	ND	mg/L		0.05		E200.7	01/15/13 22:24 / sf
Uranium	0.105	mg/L		0.0003		E200.8	01/18/13 02:15 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/15/13 22:24 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/29/13 12:32 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	01/31/13 12:49 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.8	pCi/L				E900.1	01/25/13 06:28 / lbb
Gross Alpha minus Rn & U Precision (±)	0.5	pCi/L				E900.1	01/25/13 06:28 / lbb
Gross Alpha minus Rn & U MDC	0.6	pCi/L				E900.1	01/25/13 06:28 / lbb
Lead 210	-0.07	pCi/L	U			E909.0	02/08/13 04:08 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	02/08/13 04:08 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	02/08/13 04:08 / eli-cs
Radium 226	0.30	pCi/L				E903.0	01/30/13 12:46 / trs
Radium 226 precision (±)	0.14	pCi/L				E903.0	01/30/13 12:46 / trs
Radium 226 MDC	0.16	pCi/L				E903.0	01/30/13 12:46 / trs
Radium 228	0.63	pCi/L	U			RA-05	01/24/13 17:25 / gb
Radium 228 precision (±)	0.67	pCi/L				RA-05	01/24/13 17:25 / gb
Radium 228 MDC	1.1	pCi/L				RA-05	01/24/13 17:25 / gb

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13010343-008
Client Sample ID: GW-1

Report Date: 02/25/13
Collection Date: 01/07/13 16:54
Date Received: 01/11/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	-0.003	pCi/L	U			E908.0	01/30/13 16:19 / dmf
Thorium 230 precision (±)	0.06	pCi/L				E908.0	01/30/13 16:19 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	01/30/13 16:19 / dmf
DATA QUALITY							
A/C Balance (± 5)	2.86	%				A1030 E	01/17/13 07:45 / kbh
Anions	101	meq/L				A1030 E	01/17/13 07:45 / kbh
Cations	107	meq/L				A1030 E	01/17/13 07:45 / kbh
Solids, Total Dissolved Calculated	6100	mg/L				A1030 E	01/17/13 07:45 / kbh
TDS Balance (0.80 - 1.20)	1.00					A1030 E	01/17/13 07:45 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/14/13 23:44 / jk
Bromoform	ND	ug/L		0.50		E624	01/14/13 23:44 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	01/14/13 23:44 / jk
Chloroform	2.22	ug/L		0.50		E624	01/14/13 23:44 / jk
Trihalomethanes, Total	2.22	ug/L		0.50		E624	01/14/13 23:44 / jk
Surr: 1,2-Dichlorobenzene-d4	96.0	%REC		80-120		E624	01/14/13 23:44 / jk
Surr: Dibromofluoromethane	96.0	%REC		80-120		E624	01/14/13 23:44 / jk
Surr: p-Bromofluorobenzene	105	%REC		80-120		E624	01/14/13 23:44 / jk
Surr: Toluene-d8	101	%REC		80-120		E624	01/14/13 23:44 / jk

- The sample was received in the laboratory with a pH > 2. The pH was 7.

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13040238-008
Client Sample ID: GW-1

Report Date: 05/21/13
Collection Date: 04/01/13 15:00
Date Received: 04/05/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	1920	mg/L		5		A2320 B	04/05/13 20:38 / jba
Calcium	758	mg/L		1		E200.7	04/15/13 15:51 / sf
Chloride	249	mg/L	D	4		E300.0	04/08/13 23:11 / wc
Magnesium	583	mg/L		1		E200.7	04/15/13 15:51 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	04/10/13 13:56 / lr
Nitrogen, Nitrate+Nitrite as N	94	mg/L	D	5		E353.2	04/08/13 11:23 / lr
Potassium	7	mg/L		1		E200.7	04/15/13 15:51 / sf
Sodium	431	mg/L		1		E200.7	04/15/13 15:51 / sf
Sulfate	2810	mg/L	D	20		E300.0	04/08/13 23:11 / wc
PHYSICAL PROPERTIES							
pH	6.71	s.u.	H	0.01		A4500-H B	04/05/13 15:27 / ab
Solids, Total Dissolved TDS @ 180 C	6170	mg/L		100		A2540 C	04/05/13 15:31 / ab
METALS - TOTAL							
Aluminum	0.2	mg/L		0.1		E200.8	04/10/13 23:47 / cp
Beryllium	ND	mg/L		0.001		E200.8	04/10/13 23:47 / cp
Cadmium	ND	mg/L		0.005		E200.8	04/10/13 23:47 / cp
Cobalt	ND	mg/L		0.01		E200.8	04/10/13 23:47 / cp
Lead	ND	mg/L		0.001		E200.8	04/10/13 23:47 / cp
Manganese	0.13	mg/L		0.01		E200.8	04/10/13 23:47 / cp
Molybdenum	ND	mg/L		0.1		E200.8	04/10/13 23:47 / cp
Nickel	ND	mg/L		0.05		E200.8	04/10/13 23:47 / cp
Uranium	0.113	mg/L		0.0003		E200.8	04/10/13 23:47 / cp
Vanadium	ND	mg/L		0.1		E200.8	04/10/13 23:47 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/17/13 17:03 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	04/17/13 14:41 / jl1
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.1	pCi/L	U			E900.1	04/29/13 07:37 / lbb
Gross Alpha minus Rn & U Precision (±)	0.3	pCi/L				E900.1	04/29/13 07:37 / lbb
Gross Alpha minus Rn & U MDC	0.5	pCi/L				E900.1	04/29/13 07:37 / lbb
Lead 210	0.1	pCi/L	U			E909.0	04/16/13 12:59 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	04/16/13 12:59 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	04/16/13 12:59 / eli-cs
Radium 226	0.13	pCi/L				E903.0	04/23/13 17:35 / lmc
Radium 226 precision (±)	0.09	pCi/L				E903.0	04/23/13 17:35 / lmc
Radium 226 MDC	0.12	pCi/L				E903.0	04/23/13 17:35 / lmc
Radium 228	0.05	pCi/L	U			RA-05	04/17/13 19:06 / gb
Radium 228 precision (±)	0.90	pCi/L				RA-05	04/17/13 19:06 / gb
Radium 228 MDC	1.5	pCi/L				RA-05	04/17/13 19:06 / gb

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13040238-008
Client Sample ID: GW-1

Report Date: 05/21/13
Collection Date: 04/01/13 15:00
Date Received: 04/05/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.02	pCi/L	U			E908.0	04/12/13 09:08 / dmf
Thorium 230 precision (±)	0.07	pCi/L				E908.0	04/12/13 09:08 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	04/12/13 09:08 / dmf
DATA QUALITY							
A/C Balance (± 5)	0.771	%				A1030 E	04/18/13 12:48 / kbh
Anions	103	meq/L				A1030 E	04/18/13 12:48 / kbh
Cations	105	meq/L				A1030 E	04/18/13 12:48 / kbh
Solids, Total Dissolved Calculated	6200	mg/L				A1030 E	04/18/13 12:48 / kbh
TDS Balance (0.80 - 1.20)	1.00					A1030 E	04/18/13 12:48 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/11/13 15:41 / jlr
Bromoform	ND	ug/L		0.50		E624	04/11/13 15:41 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/11/13 15:41 / jlr
Chloroform	2.32	ug/L		0.50		E624	04/11/13 15:41 / jlr
Trihalomethanes, Total	2.32	ug/L		0.50		E624	04/11/13 15:41 / jlr
Surr: 1,2-Dichlorobenzene-d4	106	%REC		73.7-126		E624	04/11/13 15:41 / jlr
Surr: Dibromofluoromethane	122	%REC		64.4-131		E624	04/11/13 15:41 / jlr
Surr: p-Bromofluorobenzene	114	%REC		67.1-133		E624	04/11/13 15:41 / jlr
Surr: Toluene-d8	99.0	%REC		79.7-125		E624	04/11/13 15:41 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 8.

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 U - Not detected at minimum detectable concentration

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Alluvium Monitor Wells					
Well ID:		GW-1	GW-1	GW-1	GW-1
Collection Date:		4/1/2013	1/7/2013	10/8/2012	7/9/2012
Receive Date:		4/5/2013	1/11/2013	10/12/2012	7/13/2012
Report Date:		5/21/2013	2/25/2013	11/20/2012	8/30/2012
Analyte	RUUnits	C13040238-008	C13010343-008	C12100557-008	C12070454-008
Bicarbonate as HCO3	mg/L	1920	1860	1950	1900
Calcium	mg/L	758	735	760	730
Chloride	mg/L	249	239	248	228
Magnesium	mg/L	583	612	546	620
Nitrogen, Ammonia as N	mg/L	ND(0.05)	ND(0.05)	0.17	0.41
Nitrogen, Nitrate+Nitrite as N	mg/L	94	92	86	92
Potassium	mg/L	7	7	7	7
Sodium	mg/L	431	446	408	433
Sulfate	mg/L	2810	2760	2740	2730
pH	s.u.	6.71	6.64	6.65	6.74
Solids, Total Dissolved TDS @ 180 C	mg/L	6170	6080	6230	6270
Aluminum	mg/L	0.2	ND(0.1)	ND(0.1)	ND(0.1)
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	0.13	0.12	0.13	0.12
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
Uranium	mg/L	0.113	0.105	0.103	0.103
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	0.1	0.8	0.5	0.3
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.3	0.5	0.4	0.2
Gross Alpha minus Rn & U MDC	pCi/L	0.5	0.6	0.5	0.3
Lead 210	pCi/L	0.1	-0.07	0.6	1
Lead 210 precision (±)	pCi/L	0.8	0.6	0.6	0.9
Lead 210 MDC	pCi/L	1.3	1.0	1.0	1.4
Radium 226	pCi/L	0.13	0.30	0.26	0.23
Radium 226 precision (±)	pCi/L	0.09	0.14	0.13	0.10
Radium 226 MDC	pCi/L	0.12	0.16	0.15	0.10
Radium 228	pCi/L	0.05	0.63	1.3	0.16
Radium 228 precision (±)	pCi/L	0.90	0.67	0.84	0.64
Radium 228 MDC	pCi/L	1.5	1.1	1.3	1.1
Thorium 230	pCi/L	0.02	-0.003	0.01	-0.003
Thorium 230 precision (±)	pCi/L	0.07	0.06	0.08	0.07
Thorium 230 MDC	pCi/L	0.2	0.2	0.2	0.2
A/C Balance (± 5)	%	0.771	2.86	-0.620	2.89
Anions	meq/L	103	101	102	101
Cations	meq/L	105	107	101	107
Solids, Total Dissolved Calculated	mg/L	6200	6100	6100	6100
TDS Balance (0.80 - 1.20)		1.00	1.00	1.03	1.03
Trihalomethanes, Total	ug/L	2.32	2.22	1.90	2.66

****Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.**



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13010343-007
Client Sample ID: GW-2

Report Date: 02/25/13
Collection Date: 01/07/13 15:52
Date Received: 01/11/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	2210	mg/L		5		A2320 B	01/11/13 16:34 / jba
Calcium	612	mg/L		1		E200.7	01/14/13 21:29 / sf
Chloride	206	mg/L	D	10		E300.0	01/14/13 15:35 / wc
Magnesium	1220	mg/L		1		E200.7	01/14/13 21:29 / sf
Nitrogen, Ammonia as N	1.35	mg/L		0.05		A4500-NH3 G	01/14/13 13:47 / lr
Nitrogen, Nitrate+Nitrite as N	15	mg/L	D	1		E353.2	01/16/13 15:20 / lr
Potassium	18	mg/L		1		E200.7	01/14/13 21:29 / sf
Sodium	416	mg/L	D	2		E200.7	01/14/13 21:29 / sf
Sulfate	4680	mg/L	D	40		E300.0	01/14/13 15:35 / wc
PHYSICAL PROPERTIES							
pH	6.39	s.u.	H	0.01		A4500-H B	01/11/13 13:51 / ab
Solids, Total Dissolved TDS @ 180 C	8820	mg/L		10		A2540 C	01/11/13 14:39 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	01/15/13 22:20 / sf
Beryllium	ND	mg/L		0.001		E200.7	01/15/13 22:20 / sf
Cadmium	ND	mg/L		0.005		E200.7	01/15/13 22:20 / sf
Cobalt	0.01	mg/L		0.01		E200.7	01/15/13 22:20 / sf
Lead	ND	mg/L		0.001		E200.8	01/18/13 02:12 / clm
Manganese	1.63	mg/L		0.01		E200.7	01/15/13 22:20 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/15/13 22:20 / sf
Nickel	ND	mg/L		0.05		E200.7	01/15/13 22:20 / sf
Uranium	0.0905	mg/L		0.0003		E200.8	01/18/13 02:12 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/15/13 22:20 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/29/13 12:07 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	01/31/13 12:48 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.5	pCi/L	U			E900.1	01/25/13 06:28 / lbb
Gross Alpha minus Rn & U Precision (±)	0.4	pCi/L				E900.1	01/25/13 06:28 / lbb
Gross Alpha minus Rn & U MDC	0.6	pCi/L				E900.1	01/25/13 06:28 / lbb
Lead 210	0.3	pCi/L	U			E909.0	02/08/13 03:10 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	02/08/13 03:10 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	02/08/13 03:10 / eli-cs
Radium 226	0.18	pCi/L	U			E903.0	01/30/13 12:46 / trs
Radium 226 precision (±)	0.15	pCi/L				E903.0	01/30/13 12:46 / trs
Radium 226 MDC	0.21	pCi/L				E903.0	01/30/13 12:46 / trs
Radium 228	0.91	pCi/L	U			RA-05	01/24/13 17:25 / gb
Radium 228 precision (±)	0.83	pCi/L				RA-05	01/24/13 17:25 / gb
Radium 228 MDC	1.3	pCi/L				RA-05	01/24/13 17:25 / gb

Report Definitions: RL - Analyte reporting limit.

QCL - Quality control limit.

MDC - Minimum detectable concentration

H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.

U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13010343-007
Client Sample ID: GW-2

Report Date: 02/25/13
Collection Date: 01/07/13 15:52
Date Received: 01/11/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.01	pCi/L	U			E908.0	01/30/13 16:19 / dmf
Thorium 230 precision (±)	0.05	pCi/L				E908.0	01/30/13 16:19 / dmf
Thorium 230 MDC	0.1	pCi/L				E908.0	01/30/13 16:19 / dmf
DATA QUALITY							
A/C Balance (± 5)	3.04	%				A1030 E	01/17/13 07:45 / kbh
Anions	140	meq/L				A1030 E	01/17/13 07:45 / kbh
Cations	149	meq/L				A1030 E	01/17/13 07:45 / kbh
Solids, Total Dissolved Calculated	8300	mg/L				A1030 E	01/17/13 07:45 / kbh
TDS Balance (0.80 - 1.20)	1.06					A1030 E	01/17/13 07:45 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/14/13 23:07 / jk
Bromoform	ND	ug/L		0.50		E624	01/14/13 23:07 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	01/14/13 23:07 / jk
Chloroform	6.20	ug/L		0.50		E624	01/14/13 23:07 / jk
Trihalomethanes, Total	6.20	ug/L		0.50		E624	01/14/13 23:07 / jk
Surr: 1,2-Dichlorobenzene-d4	97.0	%REC		80-120		E624	01/14/13 23:07 / jk
Surr: Dibromofluoromethane	94.0	%REC		80-120		E624	01/14/13 23:07 / jk
Surr: p-Bromofluorobenzene	106	%REC		80-120		E624	01/14/13 23:07 / jk
Surr: Toluene-d8	105	%REC		80-120		E624	01/14/13 23:07 / jk

- The sample was received in the laboratory with a pH > 2. The pH was 7.

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13040238-007
Client Sample ID: GW-2

Report Date: 05/21/13
Collection Date: 04/01/13 13:50
Date Received: 04/05/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	2230	mg/L		5		A2320 B	04/05/13 20:26 / jba
Calcium	604	mg/L		1		E200.7	04/15/13 15:48 / sf
Chloride	213	mg/L	D	10		E300.0	04/08/13 22:56 / wc
Magnesium	1200	mg/L		1		E200.7	04/15/13 15:48 / sf
Nitrogen, Ammonia as N	1.93	mg/L		0.05		A4500-NH3 G	04/10/13 13:54 / lr
Nitrogen, Nitrate+Nitrite as N	15	mg/L	D	1		E353.2	04/08/13 11:20 / lr
Potassium	18	mg/L		1		E200.7	04/15/13 15:48 / sf
Sodium	402	mg/L	D	2		E200.7	04/15/13 15:48 / sf
Sulfate	4820	mg/L	D	40		E300.0	04/08/13 22:56 / wc
PHYSICAL PROPERTIES							
pH	6.45	s.u.	H	0.01		A4500-H B	04/05/13 15:21 / ab
Solids, Total Dissolved TDS @ 180 C	8590	mg/L		100		A2540 C	04/05/13 15:31 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	04/10/13 23:42 / cp
Beryllium	ND	mg/L		0.001		E200.8	04/10/13 23:42 / cp
Cadmium	ND	mg/L		0.005		E200.8	04/10/13 23:42 / cp
Cobalt	0.01	mg/L		0.01		E200.8	04/10/13 23:42 / cp
Lead	ND	mg/L		0.001		E200.8	04/10/13 23:42 / cp
Manganese	1.65	mg/L		0.01		E200.8	04/10/13 23:42 / cp
Molybdenum	ND	mg/L		0.1		E200.8	04/10/13 23:42 / cp
Nickel	ND	mg/L		0.05		E200.8	04/10/13 23:42 / cp
Uranium	0.0962	mg/L		0.0003		E200.8	04/10/13 23:42 / cp
Vanadium	ND	mg/L		0.1		E200.8	04/10/13 23:42 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/17/13 16:39 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	04/17/13 14:40 / jl1
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.4	pCi/L	U			E900.1	04/29/13 07:37 / lbb
Gross Alpha minus Rn & U Precision (±)	0.4	pCi/L				E900.1	04/29/13 07:37 / lbb
Gross Alpha minus Rn & U MDC	0.5	pCi/L				E900.1	04/29/13 07:37 / lbb
Lead 210	-0.4	pCi/L	U			E909.0	04/16/13 12:59 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	04/16/13 12:59 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	04/16/13 12:59 / eli-cs
Radium 226	0.10	pCi/L	U			E903.0	04/23/13 17:35 / lmc
Radium 226 precision (±)	0.09	pCi/L				E903.0	04/23/13 17:35 / lmc
Radium 226 MDC	0.13	pCi/L				E903.0	04/23/13 17:35 / lmc
Radium 228	0.64	pCi/L	U			RA-05	04/17/13 19:06 / gb
Radium 228 precision (±)	0.99	pCi/L				RA-05	04/17/13 19:06 / gb
Radium 228 MDC	1.6	pCi/L				RA-05	04/17/13 19:06 / gb

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13040238-007
Client Sample ID: GW-2

Report Date: 05/21/13
Collection Date: 04/01/13 13:50
Date Received: 04/05/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.01	pCi/L	U			E908.0	04/12/13 09:08 / dmf
Thorium 230 precision (±)	0.06	pCi/L				E908.0	04/12/13 09:08 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	04/12/13 09:08 / dmf
DATA QUALITY							
A/C Balance (± 5)	0.911	%				A1030 E	04/18/13 12:48 / kbh
Anions	144	meq/L				A1030 E	04/18/13 12:48 / kbh
Cations	147	meq/L				A1030 E	04/18/13 12:48 / kbh
Solids, Total Dissolved Calculated	8400	mg/L				A1030 E	04/18/13 12:48 / kbh
TDS Balance (0.80 - 1.20)	1.02					A1030 E	04/18/13 12:48 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/11/13 15:06 / jlr
Bromoform	ND	ug/L		0.50		E624	04/11/13 15:06 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/11/13 15:06 / jlr
Chloroform	6.64	ug/L		0.50		E624	04/11/13 15:06 / jlr
Trihalomethanes, Total	6.64	ug/L		0.50		E624	04/11/13 15:06 / jlr
Surr: 1,2-Dichlorobenzene-d4	106	%REC		73.7-126		E624	04/11/13 15:06 / jlr
Surr: Dibromofluoromethane	126	%REC		64.4-131		E624	04/11/13 15:06 / jlr
Surr: p-Bromofluorobenzene	113	%REC		67.1-133		E624	04/11/13 15:06 / jlr
Surr: Toluene-d8	99.0	%REC		79.7-125		E624	04/11/13 15:06 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 8.

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Alluvium Monitor Wells					
Well ID:		GW-2	GW-2	GW-2	GW-2
Collection Date:		4/1/2013	1/7/2013	10/8/2012	7/9/2012
Receive Date:		4/5/2013	1/11/2013	10/12/2012	7/13/2012
Report Date:		5/21/2013	2/25/2013	11/20/2012	8/30/2012
Analyte	RUUnits	C13040238-007	C13010343-007	C12100557-007	C12070454-007
Bicarbonate as HCO3	mg/L	2230	2210	2230	2180
Calcium	mg/L	604	612	628	616
Chloride	mg/L	213	206	219	203
Magnesium	mg/L	1200	1220	1130	1220
Nitrogen, Ammonia as N	mg/L	1.93	1.35	1.4	1.22
Nitrogen, Nitrate+Nitrite as N	mg/L	15	15	15	15.4
Potassium	mg/L	18	18	17	16
Sodium	mg/L	402	416	382	401
Sulfate	mg/L	4820	4680	4700	4530
pH	s.u.	6.45	6.39	6.43	6.48
Solids, Total Dissolved TDS @ 180 C	mg/L	8590	8820	8730	8790
Aluminum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	0.01	0.01	0.01	0.01
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	1.65	1.63	1.70	1.64
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
Uranium	mg/L	0.0962	0.0905	0.0865	0.0852
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	0.4	0.5	0.5	0.1
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.4	0.4	0.4	0.2
Gross Alpha minus Rn & U MDC	pCi/L	0.5	0.6	0.5	0.3
Lead 210	pCi/L	-0.4	0.3	0.5	0.6
Lead 210 precision (±)	pCi/L	0.8	0.6	0.6	0.9
Lead 210 MDC	pCi/L	1.3	1.0	1	1.5
Radium 226	pCi/L	0.10	0.18	0.26	0.28
Radium 226 precision (±)	pCi/L	0.09	0.15	0.14	0.11
Radium 226 MDC	pCi/L	0.13	0.21	0.18	0.11
Radium 228	pCi/L	0.64	0.91	0.87	0.11
Radium 228 precision (±)	pCi/L	0.99	0.83	0.98	0.55
Radium 228 MDC	pCi/L	1.6	1.3	1.6	0.91
Thorium 230	pCi/L	0.01	0.01	0.02	0.009
Thorium 230 precision (±)	pCi/L	0.06	0.05	0.07	0.07
Thorium 230 MDC	pCi/L	0.2	0.1	0.1	0.2
A/C Balance (± 5)	%	0.911	3.04	0.0355	4.28
Anions	meq/L	144	140	142	137
Cations	meq/L	147	149	142	149
Solids, Total Dissolved Calculated	mg/L	8400	8300	8300	8200
TDS Balance (0.80 - 1.20)		1.02	1.06	1.06	1.08
Trihalomethanes, Total	ug/L	6.64	6.20	5.68	6.39

****Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.**



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13010591-003
Client Sample ID: GW-3

Report Date: 02/25/13
Collection Date: 01/14/13 10:48
Date Received: 01/18/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	1660	mg/L		5		A2320 B	01/22/13 14:18 / jba
Calcium	975	mg/L		1		E200.7	01/22/13 22:42 / sf
Chloride	172	mg/L	D	4		E300.0	01/22/13 02:58 / wc
Magnesium	310	mg/L		1		E200.7	01/22/13 22:42 / sf
Nitrogen, Ammonia as N	0.11	mg/L		0.05		A4500-NH ₃ G	01/22/13 17:12 / ljl
Nitrogen, Nitrate+Nitrite as N	82	mg/L	D	5		E353.2	01/21/13 10:58 / lr
Potassium	9	mg/L		1		E200.7	01/22/13 22:42 / sf
Sodium	344	mg/L	D	2		E200.7	01/22/13 22:42 / sf
Sulfate	2330	mg/L	D	20		E300.0	01/22/13 02:58 / wc
PHYSICAL PROPERTIES							
pH	6.61	s.u.	H	0.01		A4500-H B	01/21/13 11:13 / ab
Solids, Total Dissolved TDS @ 180 C	5410	mg/L		40		A2540 C	01/21/13 08:24 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	01/23/13 02:37 / sf
Beryllium	ND	mg/L		0.001		E200.7	01/23/13 02:37 / sf
Cadmium	ND	mg/L		0.005		E200.7	01/23/13 02:37 / sf
Cobalt	ND	mg/L		0.01		E200.7	01/23/13 02:37 / sf
Lead	ND	mg/L		0.001		E200.8	01/22/13 19:50 / clm
Manganese	1.33	mg/L		0.01		E200.7	01/23/13 02:37 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/23/13 02:37 / sf
Nickel	ND	mg/L		0.05		E200.7	01/23/13 02:37 / sf
Uranium	0.306	mg/L		0.0003		E200.8	01/22/13 19:50 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/23/13 02:37 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	02/09/13 16:37 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	02/06/13 13:46 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.08	pCi/L	U			E900.1	02/08/13 09:30 / lbb
Gross Alpha minus Rn & U Precision (±)	0.2	pCi/L				E900.1	02/08/13 09:30 / lbb
Gross Alpha minus Rn & U MDC	0.4	pCi/L				E900.1	02/08/13 09:30 / lbb
Lead 210	0.5	pCi/L	U			E909.0	02/02/13 08:55 / eli-cs
Lead 210 precision (±)	0.4	pCi/L				E909.0	02/02/13 08:55 / eli-cs
Lead 210 MDC	0.7	pCi/L				E909.0	02/02/13 08:55 / eli-cs
Radium 226	0.09	pCi/L	U			E903.0	02/01/13 10:11 / trs
Radium 226 precision (±)	0.10	pCi/L				E903.0	02/01/13 10:11 / trs
Radium 226 MDC	0.15	pCi/L				E903.0	02/01/13 10:11 / trs
Radium 228	0.39	pCi/L	U			RA-05	01/27/13 16:17 / gb
Radium 228 precision (±)	0.62	pCi/L				RA-05	01/27/13 16:17 / gb
Radium 228 MDC	1.0	pCi/L				RA-05	01/27/13 16:17 / gb

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13010591-003
Client Sample ID: GW-3

Report Date: 02/25/13
Collection Date: 01/14/13 10:48
Date Received: 01/18/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.0	pCi/L	U			E908.0	02/04/13 16:38 / dmf
Thorium 230 precision (±)	0.04	pCi/L				E908.0	02/04/13 16:38 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	02/04/13 16:38 / dmf
DATA QUALITY							
A/C Balance (± 5)	1.80	%				A1030 E	01/23/13 09:48 / kbh
Anions	86.1	meq/L				A1030 E	01/23/13 09:48 / kbh
Cations	89.3	meq/L				A1030 E	01/23/13 09:48 / kbh
Solids, Total Dissolved Calculated	5300	mg/L				A1030 E	01/23/13 09:48 / kbh
TDS Balance (0.80 - 1.20)	1.02					A1030 E	01/23/13 09:48 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/22/13 00:36 / jk
Bromoform	ND	ug/L		0.50		E624	01/22/13 00:36 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	01/22/13 00:36 / jk
Chloroform	ND	ug/L		0.50		E624	01/22/13 00:36 / jk
Trihalomethanes, Total	ND	ug/L		0.50		E624	01/22/13 00:36 / jk
Surr: 1,2-Dichlorobenzene-d4	113	%REC		80-120		E624	01/22/13 00:36 / jk
Surr: Dibromofluoromethane	137	%REC	S	80-120		E624	01/22/13 00:36 / jk
Surr: p-Bromofluorobenzene	109	%REC		80-120		E624	01/22/13 00:36 / jk
Surr: Toluene-d8	94.0	%REC		80-120		E624	01/22/13 00:36 / jk

- The sample was received in the laboratory with a pH > 2. The pH was 7.

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 U - Not detected at minimum detectable concentration

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 S - Spike recovery outside of advisory limits.



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13040238-016
Client Sample ID: GW-3

Report Date: 05/21/13
Collection Date: 04/02/13 15:10
Date Received: 04/05/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	1620	mg/L		5		A2320 B	04/05/13 22:38 / jba
Calcium	962	mg/L		1		E200.7	04/16/13 13:41 / sf
Chloride	166	mg/L	D	4		E300.0	04/09/13 02:32 / wc
Magnesium	303	mg/L		1		E200.7	04/15/13 17:28 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	04/10/13 15:58 / lr
Nitrogen, Nitrate+Nitrite as N	86	mg/L	D	5		E353.2	04/08/13 11:55 / lr
Potassium	9	mg/L		1		E200.7	04/16/13 13:41 / sf
Sodium	328	mg/L		1		E200.7	04/15/13 17:28 / sf
Sulfate	2180	mg/L	D	20		E300.0	04/09/13 02:32 / wc
PHYSICAL PROPERTIES							
pH	6.69	s.u.	H	0.01		A4500-H B	04/05/13 15:48 / ab
Solids, Total Dissolved TDS @ 180 C	5280	mg/L		40		A2540 C	04/08/13 15:44 / jz
METALS - TOTAL							
Aluminum	2.3	mg/L		0.1		E200.8	04/11/13 00:40 / cp
Beryllium	ND	mg/L		0.001		E200.8	04/11/13 00:40 / cp
Cadmium	ND	mg/L		0.005		E200.8	04/11/13 00:40 / cp
Cobalt	ND	mg/L		0.01		E200.8	04/11/13 00:40 / cp
Lead	0.003	mg/L		0.001		E200.8	04/11/13 00:40 / cp
Manganese	1.45	mg/L		0.01		E200.8	04/11/13 00:40 / cp
Molybdenum	ND	mg/L		0.1		E200.8	04/11/13 00:40 / cp
Nickel	ND	mg/L		0.05		E200.8	04/11/13 00:40 / cp
Uranium	0.311	mg/L		0.0003		E200.8	04/11/13 00:40 / cp
Vanadium	ND	mg/L		0.1		E200.8	04/11/13 00:40 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/19/13 12:15 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	04/17/13 15:00 / jl1
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	1.0	pCi/L				E900.1	04/29/13 09:09 / lbb
Gross Alpha minus Rn & U Precision (±)	0.4	pCi/L				E900.1	04/29/13 09:09 / lbb
Gross Alpha minus Rn & U MDC	0.5	pCi/L				E900.1	04/29/13 09:09 / lbb
Lead 210	0.9	pCi/L	U			E909.0	04/16/13 12:00 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	04/16/13 12:00 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	04/16/13 12:00 / eli-cs
Radium 226	0.14	pCi/L				E903.0	04/23/13 19:08 / lmc
Radium 226 precision (±)	0.09	pCi/L				E903.0	04/23/13 19:08 / lmc
Radium 226 MDC	0.12	pCi/L				E903.0	04/23/13 19:08 / lmc
Radium 228	-0.2	pCi/L	U			RA-05	04/17/13 19:05 / gb
Radium 228 precision (±)	0.88	pCi/L				RA-05	04/17/13 19:05 / gb
Radium 228 MDC	1.5	pCi/L				RA-05	04/17/13 19:05 / gb

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13040238-016
Client Sample ID: GW-3

Report Date: 05/21/13
Collection Date: 04/02/13 15:10
Date Received: 04/05/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.09	pCi/L	U		E908.0		04/12/13 09:09 / dmf
Thorium 230 precision (±)	0.1	pCi/L			E908.0		04/12/13 09:09 / dmf
Thorium 230 MDC	0.2	pCi/L			E908.0		04/12/13 09:09 / dmf
DATA QUALITY							
A/C Balance (± 5)	3.39	%			A1030 E		04/18/13 12:49 / kbh
Anions	81.7	meq/L			A1030 E		04/18/13 12:49 / kbh
Cations	87.4	meq/L			A1030 E		04/18/13 12:49 / kbh
Solids, Total Dissolved Calculated	5100	mg/L			A1030 E		04/18/13 12:49 / kbh
TDS Balance (0.80 - 1.20)	1.04				A1030 E		04/18/13 12:49 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50	E624		04/11/13 16:49 / jlr
Bromoform	ND	ug/L		0.50	E624		04/11/13 16:49 / jlr
Chlorodibromomethane	ND	ug/L		0.50	E624		04/11/13 16:49 / jlr
Chloroform	ND	ug/L		0.50	E624		04/11/13 16:49 / jlr
Trihalomethanes, Total	ND	ug/L		0.50	E624		04/11/13 16:49 / jlr
Surr: 1,2-Dichlorobenzene-d4	108	%REC		73.7-126	E624		04/11/13 16:49 / jlr
Surr: Dibromofluoromethane	130	%REC		64.4-131	E624		04/11/13 16:49 / jlr
Surr: p-Bromofluorobenzene	108	%REC		67.1-133	E624		04/11/13 16:49 / jlr
Surr: Toluene-d8	88.0	%REC		79.7-125	E624		04/11/13 16:49 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 8.

Report Definitions:

RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Alluvium Monitor Wells					
Well ID:		GW-3	GW-3	GW-3	GW-3
Collection Date:		4/2/2013	1/14/2013	10/9/2012	7/9/2012
Receive Date:		4/5/2013	1/18/2013	10/12/2012	7/13/2012
Report Date:		5/21/2013	2/25/2013	11/20/2012	8/30/2012
Analyte	RUnits	C13040238-016	C13010591-003	C12100557-014	C12070454-014
Bicarbonate as HCO3	mg/L	1620	1660	1710	1680
Calcium	mg/L	962	975	937	917
Chloride	mg/L	166	172	177	172
Magnesium	mg/L	303	310	284	296
Nitrogen, Ammonia as N	mg/L	ND(0.05)	0.11	ND(0.05)	0.09
Nitrogen, Nitrate+Nitrite as N	mg/L	86	82	87	205
Potassium	mg/L	9	9	9	8
Sodium	mg/L	328	344	328	332
Sulfate	mg/L	2180	2330	2280	2270
pH	s.u.	6.69	6.61	6.64	6.61
Solids, Total Dissolved TDS @ 180 C	mg/L	5280	5410	5330	5510
Aluminum	mg/L	2.3	ND(0.1)	0.2	0.1
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	ND(0.01)	ND(0.01)	0.01	ND(0.01)
Lead	mg/L	0.003	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	1.45	1.33	1.75	1.62
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
Uranium	mg/L	0.311	0.306	0.295	0.324
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	1.0	0.08	0.05	0.1
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.4	0.2	0.4	0.2
Gross Alpha minus Rn & U MDC	pCi/L	0.5	0.4	0.6	0.3
Lead 210	pCi/L	0.9	0.5	-0.4	0.8
Lead 210 precision (±)	pCi/L	0.8	0.4	0.6	0.7
Lead 210 MDC	pCi/L	1.3	0.7	1	1.2
Radium 226	pCi/L	0.14	0.09	0.08	0.22
Radium 226 precision (±)	pCi/L	0.09	0.10	0.10	0.1
Radium 226 MDC	pCi/L	0.12	0.15	0.15	0.10
Radium 228	pCi/L	-0.2	0.39	0.85	0.46
Radium 228 precision (±)	pCi/L	0.88	0.62	1.0	0.64
Radium 228 MDC	pCi/L	1.5	1.0	1.6	1.0
Thorium 230	pCi/L	0.09	0.0	0.09	0.02
Thorium 230 precision (±)	pCi/L	0.1	0.04	0.1	0.06
Thorium 230 MDC	pCi/L	0.2	0.2	0.1	0.1
A/C Balance (± 5)	%	3.39	1.80	-0.772	-0.393
Anions	meq/L	81.7	86.1	85.9	85.5
Cations	meq/L	87.4	89.3	84.6	84.8
Solids, Total Dissolved Calculated	mg/L	5100	5300	5200	5200
TDS Balance (0.80 - 1.20)		1.04	1.02	1.02	1.06
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	0.92

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13010343-002
Client Sample ID: EPA-23

Report Date: 02/25/13
Collection Date: 01/07/13 12:01
Date Received: 01/11/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	1240	mg/L		5		A2320 B	01/11/13 15:34 / jba
Calcium	693	mg/L		1		E200.7	01/14/13 21:04 / sf
Chloride	102	mg/L	D	4		E300.0	01/12/13 02:47 / wc
Magnesium	398	mg/L		1		E200.7	01/14/13 21:04 / sf
Nitrogen, Ammonia as N	0.47	mg/L		0.05		A4500-NH ₃ G	01/14/13 13:29 / lr
Nitrogen, Nitrate+Nitrite as N	1.1	mg/L		0.1		E353.2	01/16/13 14:55 / lr
Potassium	11	mg/L		1		E200.7	01/14/13 21:04 / sf
Sodium	154	mg/L	D	2		E200.7	01/14/13 21:04 / sf
Sulfate	2430	mg/L	D	20		E300.0	01/12/13 02:47 / wc
PHYSICAL PROPERTIES							
pH	6.69	s.u.	H	0.01		A4500-H B	01/11/13 13:33 / ab
Solids, Total Dissolved TDS @ 180 C	4500	mg/L		10		A2540 C	01/11/13 14:38 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	01/15/13 21:04 / sf
Beryllium	ND	mg/L		0.001		E200.7	01/15/13 21:04 / sf
Cadmium	ND	mg/L		0.005		E200.7	01/15/13 21:04 / sf
Cobalt	ND	mg/L		0.01		E200.7	01/15/13 21:04 / sf
Lead	ND	mg/L		0.001		E200.8	01/18/13 01:30 / clm
Manganese	5.80	mg/L		0.01		E200.7	01/15/13 21:04 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/15/13 21:04 / sf
Nickel	ND	mg/L		0.05		E200.7	01/15/13 21:04 / sf
Uranium	0.0288	mg/L		0.0003		E200.8	01/18/13 01:30 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/15/13 21:04 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/23/13 15:42 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	01/31/13 12:37 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.4	pCi/L	U			E900.1	01/25/13 06:28 / lbb
Gross Alpha minus Rn & U Precision (±)	0.4	pCi/L				E900.1	01/25/13 06:28 / lbb
Gross Alpha minus Rn & U MDC	0.6	pCi/L				E900.1	01/25/13 06:28 / lbb
Lead 210	0.5	pCi/L	U			E909.0	02/07/13 22:17 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	02/07/13 22:17 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	02/07/13 22:17 / eli-cs
Radium 226	0.20	pCi/L				E903.0	01/30/13 12:46 / trs
Radium 226 precision (±)	0.13	pCi/L				E903.0	01/30/13 12:46 / trs
Radium 226 MDC	0.17	pCi/L				E903.0	01/30/13 12:46 / trs
Radium 228	1.8	pCi/L				RA-05	01/24/13 17:25 / gb
Radium 228 precision (±)	0.75	pCi/L				RA-05	01/24/13 17:25 / gb
Radium 228 MDC	1.1	pCi/L				RA-05	01/24/13 17:25 / gb

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13010343-002
Client Sample ID: EPA-23

Report Date: 02/25/13
Collection Date: 01/07/13 12:01
Date Received: 01/11/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.02	pCi/L	U			E908.0	01/30/13 16:19 / dmf
Thorium 230 precision (±)	0.06	pCi/L				E908.0	01/30/13 16:19 / dmf
Thorium 230 MDC	0.1	pCi/L				E908.0	01/30/13 16:19 / dmf
DATA QUALITY							
A/C Balance (± 5)	0.291	%				A1030 E	01/17/13 07:44 / kbh
Anions	73.9	meq/L				A1030 E	01/17/13 07:44 / kbh
Cations	74.3	meq/L				A1030 E	01/17/13 07:44 / kbh
Solids, Total Dissolved Calculated	4400	mg/L				A1030 E	01/17/13 07:44 / kbh
TDS Balance (0.80 - 1.20)	1.02					A1030 E	01/17/13 07:44 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/14/13 16:28 / jk
Bromoform	ND	ug/L		0.50		E624	01/14/13 16:28 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	01/14/13 16:28 / jk
Chloroform	ND	ug/L		0.50		E624	01/14/13 16:28 / jk
Trihalomethanes, Total	ND	ug/L		0.50		E624	01/14/13 16:28 / jk
Surr: 1,2-Dichlorobenzene-d4	93.0	%REC		80-120		E624	01/14/13 16:28 / jk
Surr: Dibromofluoromethane	85.0	%REC		80-120		E624	01/14/13 16:28 / jk
Surr: p-Bromofluorobenzene	107	%REC		80-120		E624	01/14/13 16:28 / jk
Surr: Toluene-d8	105	%REC		80-120		E624	01/14/13 16:28 / jk

- The sample was received in the laboratory with a pH > 2. The pH was 7.

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13040238-002
Client Sample ID: EPA-23

Report Date: 05/21/13
Collection Date: 04/01/13 10:20
Date Received: 04/05/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	1280	mg/L		5		A2320 B	04/05/13 19:26 / jba
Calcium	685	mg/L		1		E200.7	04/15/13 15:03 / sf
Chloride	104	mg/L	D	4		E300.0	04/08/13 21:39 / wc
Magnesium	398	mg/L		1		E200.7	04/15/13 15:03 / sf
Nitrogen, Ammonia as N	0.54	mg/L		0.05		A4500-NH3 G	04/10/13 13:34 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	04/08/13 10:58 / lr
Potassium	11	mg/L		1		E200.7	04/15/13 15:03 / sf
Sodium	155	mg/L		1		E200.7	04/15/13 15:03 / sf
Sulfate	2350	mg/L	D	20		E300.0	04/08/13 21:39 / wc
PHYSICAL PROPERTIES							
pH	6.82	s.u.	H	0.01		A4500-H B	04/05/13 15:08 / ab
Solids, Total Dissolved TDS @ 180 C	4720	mg/L		40		A2540 C	04/05/13 15:29 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	04/10/13 23:02 / cp
Beryllium	ND	mg/L		0.001		E200.8	04/10/13 23:02 / cp
Cadmium	ND	mg/L		0.005		E200.8	04/10/13 23:02 / cp
Cobalt	ND	mg/L		0.01		E200.8	04/10/13 23:02 / cp
Lead	ND	mg/L		0.001		E200.8	04/10/13 23:02 / cp
Manganese	5.93	mg/L		0.01		E200.8	04/10/13 23:02 / cp
Molybdenum	ND	mg/L		0.1		E200.8	04/10/13 23:02 / cp
Nickel	ND	mg/L		0.05		E200.8	04/10/13 23:02 / cp
Uranium	0.0299	mg/L		0.0003		E200.8	04/10/13 23:02 / cp
Vanadium	ND	mg/L		0.1		E200.8	04/10/13 23:02 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/17/13 14:56 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	04/17/13 14:26 / jl1
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.5	pCi/L				E900.1	04/29/13 07:37 / lbb
Gross Alpha minus Rn & U Precision (±)	0.4	pCi/L				E900.1	04/29/13 07:37 / lbb
Gross Alpha minus Rn & U MDC	0.5	pCi/L				E900.1	04/29/13 07:37 / lbb
Lead 210	-0.1	pCi/L	U			E909.0	04/16/13 12:59 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	04/16/13 12:59 / eli-cs
Lead 210 MDC	1.2	pCi/L				E909.0	04/16/13 12:59 / eli-cs
Radium 226	0.17	pCi/L				E903.0	04/23/13 15:44 / lmc
Radium 226 precision (±)	0.11	pCi/L				E903.0	04/23/13 15:44 / lmc
Radium 226 MDC	0.13	pCi/L				E903.0	04/23/13 15:44 / lmc
Radium 228	0.54	pCi/L	U			RA-05	04/17/13 17:31 / gb
Radium 228 precision (±)	0.84	pCi/L				RA-05	04/17/13 17:31 / gb
Radium 228 MDC	1.4	pCi/L				RA-05	04/17/13 17:31 / gb

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.
 U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13040238-002
Client Sample ID: EPA-23

Report Date: 05/21/13
Collection Date: 04/01/13 10:20
Date Received: 04/05/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.02	pCi/L	U		E908.0		04/12/13 09:08 / dmf
Thorium 230 precision (±)	0.07	pCi/L			E908.0		04/12/13 09:08 / dmf
Thorium 230 MDC	0.2	pCi/L			E908.0		04/12/13 09:08 / dmf
DATA QUALITY							
A/C Balance (± 5)	0.752	%			A1030 E		04/18/13 12:47 / kbh
Anions	72.9	meq/L			A1030 E		04/18/13 12:47 / kbh
Cations	74.0	meq/L			A1030 E		04/18/13 12:47 / kbh
Solids, Total Dissolved Calculated	4400	mg/L			A1030 E		04/18/13 12:47 / kbh
TDS Balance (0.80 - 1.20)	1.09				A1030 E		04/18/13 12:47 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50	E624		04/08/13 18:11 / jlr
Bromoform	ND	ug/L		0.50	E624		04/08/13 18:11 / jlr
Chlorodibromomethane	ND	ug/L		0.50	E624		04/08/13 18:11 / jlr
Chloroform	ND	ug/L		0.50	E624		04/08/13 18:11 / jlr
Trihalomethanes, Total	ND	ug/L		0.50	E624		04/08/13 18:11 / jlr
Surr: 1,2-Dichlorobenzene-d4	108	%REC		73.7-126	E624		04/08/13 18:11 / jlr
Surr: Dibromofluoromethane	118	%REC		64.4-131	E624		04/08/13 18:11 / jlr
Surr: p-Bromofluorobenzene	107	%REC		67.1-133	E624		04/08/13 18:11 / jlr
Surr: Toluene-d8	89.0	%REC		79.7-125	E624		04/08/13 18:11 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 8.

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 U - Not detected at minimum detectable concentration

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Alluvium Monitor Wells					
Well ID:		EPA-23	EPA-23	EPA-23	EPA-23
Collection Date:		4/1/2013	1/7/2013	10/8/2012	7/9/2012
Receive Date:		4/5/2013	1/11/2013	10/12/2012	7/13/2012
Report Date:		5/21/2013	2/25/2013	11/20/2012	8/30/2012
Analyte	RUnits	C13040238-002	C13010343-002	C12100557-002	C12070454-002
Bicarbonate as HCO3	mg/L	1280	1240	1260	1210
Calcium	mg/L	685	693	703	658
Chloride	mg/L	104	102	104	97
Magnesium	mg/L	398	398	378	361
Nitrogen, Ammonia as N	mg/L	0.54	0.47	0.66	0.53
Nitrogen, Nitrate+Nitrite as N	mg/L	ND(0.1)	1.1	ND(0.1)	0.8
Potassium	mg/L	11	11	11	9
Sodium	mg/L	155	154	145	129
Sulfate	mg/L	2350	2430	2310	2280
pH	s.u.	6.82	6.69	6.70	6.82
Solids, Total Dissolved TDS @ 180 C	mg/L	4720	4500	4540	4660
Aluminum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	5.93	5.80	6.09	5.74
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
Uranium	mg/L	0.0299	0.0288	0.0283	0.0267
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	0.5	0.4	0.3	0.06
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.4	0.4	0.3	0.2
Gross Alpha minus Rn & U MDC	pCi/L	0.5	0.6	0.5	0.3
Lead 210	pCi/L	-0.1	0.5	0.5	0.5
Lead 210 precision (±)	pCi/L	0.7	0.6	0.6	0.9
Lead 210 MDC	pCi/L	1.2	1.0	1.0	1.4
Radium 226	pCi/L	0.17	0.20	0.18	0.33
Radium 226 precision (±)	pCi/L	0.11	0.13	0.13	0.12
Radium 226 MDC	pCi/L	0.13	0.17	0.18	0.10
Radium 228	pCi/L	0.54	1.8	0.10	0.13
Radium 228 precision (±)	pCi/L	0.84	0.75	0.96	0.53
Radium 228 MDC	pCi/L	1.4	1.1	1.6	0.88
Thorium 230	pCi/L	0.02	0.02	0.08	0.05
Thorium 230 precision (±)	pCi/L	0.07	0.06	0.1	0.08
Thorium 230 MDC	pCi/L	0.2	0.1	0.2	0.2
A/C Balance (± 5)	%	0.752	0.291	0.816	-1.21
Anions	meq/L	72.9	73.9	71.7	70.1
Cations	meq/L	74.0	74.3	72.8	68.4
Solids, Total Dissolved Calculated	mg/L	4400	4400	4300	4200
TDS Balance (0.80 - 1.20)		1.09	1.02	1.06	1.12
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

****Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.**

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13010591-002
Client Sample ID: EPA-25

Report Date: 02/25/13
Collection Date: 01/14/13 09:57
Date Received: 01/18/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	1210	mg/L		5		A2320 B	01/22/13 14:07 / jba
Calcium	830	mg/L		1		E200.7	01/22/13 22:38 / sf
Chloride	114	mg/L	D	4		E300.0	01/22/13 02:42 / wc
Magnesium	242	mg/L		1		E200.7	01/22/13 22:38 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	01/22/13 17:10 / lji
Nitrogen, Nitrate+Nitrite as N	90	mg/L	D	5		E353.2	01/21/13 10:56 / lr
Potassium	8	mg/L		1		E200.7	01/22/13 22:38 / sf
Sodium	207	mg/L	D	2		E200.7	01/22/13 22:38 / sf
Sulfate	1860	mg/L	D	20		E300.0	01/22/13 02:42 / wc
PHYSICAL PROPERTIES							
pH	6.88	s.u.	H	0.01		A4500-H B	01/21/13 11:10 / ab
Solids, Total Dissolved TDS @ 180 C	4290	mg/L		40		A2540 C	01/21/13 08:23 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	01/23/13 02:33 / sf
Beryllium	ND	mg/L		0.001		E200.7	01/23/13 02:33 / sf
Cadmium	ND	mg/L		0.005		E200.7	01/23/13 02:33 / sf
Cobalt	ND	mg/L		0.01		E200.7	01/23/13 02:33 / sf
Lead	ND	mg/L		0.001		E200.8	01/22/13 19:34 / clm
Manganese	0.10	mg/L		0.01		E200.7	01/23/13 02:33 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/23/13 02:33 / sf
Nickel	ND	mg/L		0.05		E200.7	01/23/13 02:33 / sf
Uranium	0.135	mg/L		0.0003		E200.8	01/22/13 19:34 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/23/13 02:33 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	02/09/13 16:29 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	02/06/13 13:44 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.08	pCi/L	U			E900.1	02/08/13 09:30 / lbb
Gross Alpha minus Rn & U Precision (±)	0.2	pCi/L				E900.1	02/08/13 09:30 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	02/08/13 09:30 / lbb
Lead 210	0.4	pCi/L	U			E909.0	02/02/13 06:40 / eli-cs
Lead 210 precision (±)	0.4	pCi/L				E909.0	02/02/13 06:40 / eli-cs
Lead 210 MDC	0.7	pCi/L				E909.0	02/02/13 06:40 / eli-cs
Radium 226	-0.06	pCi/L	U			E903.0	02/01/13 10:11 / trs
Radium 226 precision (±)	0.07	pCi/L				E903.0	02/01/13 10:11 / trs
Radium 226 MDC	0.15	pCi/L				E903.0	02/01/13 10:11 / trs
Radium 228	0.95	pCi/L	U			RA-05	01/27/13 16:17 / gb
Radium 228 precision (±)	0.65	pCi/L				RA-05	01/27/13 16:17 / gb
Radium 228 MDC	1.0	pCi/L				RA-05	01/27/13 16:17 / gb

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13010591-002
Client Sample ID EPA-25

Report Date: 02/25/13
Collection Date: 01/14/13 09:57
Date Received: 01/18/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.03	pCi/L	U			E908.0	02/04/13 16:38 / dmf
Thorium 230 precision (±)	0.07	pCi/L				E908.0	02/04/13 16:38 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	02/04/13 16:38 / dmf
DATA QUALITY							
A/C Balance (± 5)	2.61	%				A1030 E	01/23/13 09:47 / kbh
Anions	66.9	meq/L				A1030 E	01/23/13 09:47 / kbh
Cations	70.5	meq/L				A1030 E	01/23/13 09:47 / kbh
Solids, Total Dissolved Calculated	4200	mg/L				A1030 E	01/23/13 09:47 / kbh
TDS Balance (0.80 - 1.20)	1.02					A1030 E	01/23/13 09:47 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/22/13 00:01 / jk
Bromoform	ND	ug/L		0.50		E624	01/22/13 00:01 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	01/22/13 00:01 / jk
Chloroform	ND	ug/L		0.50		E624	01/22/13 00:01 / jk
Trihalomethanes, Total	ND	ug/L		0.50		E624	01/22/13 00:01 / jk
Surr: 1,2-Dichlorobenzene-d4	113	%REC		80-120		E624	01/22/13 00:01 / jk
Surr: Dibromofluoromethane	87.0	%REC		80-120		E624	01/22/13 00:01 / jk
Surr: p-Bromofluorobenzene	106	%REC		80-120		E624	01/22/13 00:01 / jk
Surr: Toluene-d8	93.0	%REC		80-120		E624	01/22/13 00:01 / jk

- The sample was received in the laboratory with a pH > 2. The pH was 7.

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration.
 MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13040238-015
Client Sample ID: EPA-25

Report Date: 05/21/13
Collection Date: 04/02/13 14:25
Date Received: 04/05/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	1250	mg/L		5		A2320 B	04/05/13 22:27 / jba
Calcium	777	mg/L		1		E200.7	04/15/13 16:36 / sf
Chloride	113	mg/L	D	4		E300.0	04/09/13 02:16 / wc
Magnesium	234	mg/L		1		E200.7	04/15/13 16:36 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	04/10/13 14:18 / lr
Nitrogen, Nitrate+Nitrite as N	74	mg/L	D	5		E353.2	04/08/13 11:45 / lr
Potassium	8	mg/L		1		E200.7	04/15/13 16:36 / sf
Sodium	196	mg/L		1		E200.7	04/15/13 16:36 / sf
Sulfate	1800	mg/L	D	20		E300.0	04/09/13 02:16 / wc
PHYSICAL PROPERTIES							
pH	6.92	s.u.	H	0.01		A4500-H B	04/05/13 15:45 / ab
Solids, Total Dissolved TDS @ 180 C	4310	mg/L		40		A2540 C	04/08/13 15:44 / jz
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	04/11/13 00:36 / cp
Beryllium	ND	mg/L		0.001		E200.8	04/11/13 00:36 / cp
Cadmium	ND	mg/L		0.005		E200.8	04/11/13 00:36 / cp
Cobalt	ND	mg/L		0.01		E200.8	04/11/13 00:36 / cp
Lead	ND	mg/L		0.001		E200.8	04/11/13 00:36 / cp
Manganese	0.22	mg/L		0.01		E200.8	04/11/13 00:36 / cp
Molybdenum	ND	mg/L		0.1		E200.8	04/11/13 00:36 / cp
Nickel	ND	mg/L		0.05		E200.8	04/11/13 00:36 / cp
Uranium	0.134	mg/L		0.0003		E200.8	04/11/13 00:36 / cp
Vanadium	ND	mg/L		0.1		E200.8	04/11/13 00:36 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/19/13 12:07 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	04/17/13 14:55 / j11
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.6	pCi/L				E900.1	04/29/13 09:09 / lbb
Gross Alpha minus Rn & U Precision (±)	0.4	pCi/L				E900.1	04/29/13 09:09 / lbb
Gross Alpha minus Rn & U MDC	0.5	pCi/L				E900.1	04/29/13 09:09 / lbb
Lead 210	-0.8	pCi/L	U			E909.0	04/16/13 12:00 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	04/16/13 12:00 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	04/16/13 12:00 / eli-cs
Radium 226	-0.02	pCi/L	U			E903.0	04/23/13 19:08 / lmc
Radium 226 precision (±)	0.07	pCi/L				E903.0	04/23/13 19:08 / lmc
Radium 226 MDC	0.13	pCi/L				E903.0	04/23/13 19:08 / lmc
Radium 228	0.30	pCi/L	U			RA-05	04/17/13 19:05 / gb
Radium 228 precision (±)	0.96	pCi/L				RA-05	04/17/13 19:05 / gb
Radium 228 MDC	1.6	pCi/L				RA-05	04/17/13 19:05 / gb

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13040238-015
Client Sample ID: EPA-25

Report Date: 05/21/13
Collection Date: 04/02/13 14:25
Date Received: 04/05/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.03	pCi/L	U			E908.0	04/12/13 09:09 / dmf
Thorium 230 precision (±)	0.07	pCi/L				E908.0	04/12/13 09:09 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	04/12/13 09:09 / dmf
DATA QUALITY							
A/C Balance (± 5)	0.465	%				A1030 E	04/18/13 12:49 / kbh
Anions	66.1	meq/L				A1030 E	04/18/13 12:49 / kbh
Cations	66.7	meq/L				A1030 E	04/18/13 12:49 / kbh
Solids, Total Dissolved Calculated	4100	mg/L				A1030 E	04/18/13 12:49 / kbh
TDS Balance (0.80 - 1.20)	1.06					A1030 E	04/18/13 12:49 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/09/13 04:25 / jlr
Bromoform	ND	ug/L		0.50		E624	04/09/13 04:25 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/09/13 04:25 / jlr
Chloroform	ND	ug/L		0.50		E624	04/09/13 04:25 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	04/09/13 04:25 / jlr
Surr: 1,2-Dichlorobenzene-d4	108	%REC		73.7-126		E624	04/09/13 04:25 / jlr
Surr: Dibromofluoromethane	123	%REC		64.4-131		E624	04/09/13 04:25 / jlr
Surr: p-Bromofluorobenzene	108	%REC		67.1-133		E624	04/09/13 04:25 / jlr
Surr: Toluene-d8	100	%REC		79.7-125		E624	04/09/13 04:25 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 8.

Report Definitions:

RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Alluvium Monitor Wells					
Well ID:		EPA-25	EPA-25	EPA-25	EPA-25
Collection Date:		4/2/2013	1/14/2013	10/9/2012	7/9/2012
Receive Date:		4/5/2013	1/18/2013	10/12/2012	7/13/2012
Report Date:		5/21/2013	2/25/2013	11/20/2012	8/30/2012
Analyte:	RU Units	C13040238-015	C13010591-002	C12100557-015	C12070454-015
Bicarbonate as HCO ₃	mg/L	1250	1210	1240	1160
Calcium	mg/L	777	830	810	797
Chloride	mg/L	113	114	115	103
Magnesium	mg/L	234	242	226	245
Nitrogen, Ammonia as N	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	0.08
Nitrogen, Nitrate+Nitrite as N	mg/L	74	90	72	79
Potassium	mg/L	8	8	8	8
Sodium	mg/L	196	207	191	196
Sulfate	mg/L	1800	1860	1830	1750
pH	s.u.	6.92	6.88	6.90	6.93
Solids, Total Dissolved TDS @ 180 C	mg/L	4310	4290	4180	4260
Aluminum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	0.22	0.10	0.23	0.06
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
Uranium	mg/L	0.134	0.135	0.120	0.148
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	0.6	0.08	-0.02	0.2
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.4	0.2	0.3	0.2
Gross Alpha minus Rn & U MDC	pCi/L	0.5	0.3	0.6	0.3
Lead 210	pCi/L	-0.8	0.4	0.4	0.2
Lead 210 precision (±)	pCi/L	0.7	0.4	0.6	0.7
Lead 210 MDC	pCi/L	1.3	0.7	1.0	1.2
Radium 226	pCi/L	-0.02	-0.06	-0.05	-0.03
Radium 226 precision (±)	pCi/L	0.07	0.07	0.08	0.08
Radium 226 MDC	pCi/L	0.13	0.15	0.17	0.16
Radium 228	pCi/L	0.30	0.95	0.21	0.31
Radium 228 precision (±)	pCi/L	0.96	0.65	1.1	0.51
Radium 228 MDC	pCi/L	1.6	1.0	1.8	0.83
Thorium 230	pCi/L	0.03	0.03	-0.01	0.02
Thorium 230 precision (±)	pCi/L	0.07	0.07	0.04	0.07
Thorium 230 MDC	pCi/L	0.2	0.2	0.1	0.2
A/C Balance (± 5)	%	0.465	2.61	0.489	3.93
Anions	meq/L	66.1	66.9	66.9	63.5
Cations	meq/L	66.7	70.5	67.5	68.7
Solids, Total Dissolved Calculated	mg/L	4100	4200	4100	4000
TDS Balance (0.80 - 1.20)		1.06	1.02	1.01	1.07
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13010343-010
Client Sample ID: EPA-28

Report Date: 02/25/13
Collection Date: 01/09/13 08:55
Date Received: 01/11/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	806	mg/L		5		A2320 B	01/11/13 17:39 / jba
Calcium	542	mg/L		1		E200.7	01/14/13 22:33 / sf
Chloride	120	mg/L	D	4		E300.0	01/14/13 16:21 / wc
Magnesium	512	mg/L		1		E200.7	01/14/13 22:33 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	01/15/13 15:49 / ljl
Nitrogen, Nitrate+Nitrite as N	27	mg/L	D	2		E353.2	01/16/13 15:27 / lr
Potassium	12	mg/L		1		E200.7	01/14/13 22:33 / sf
Sodium	244	mg/L	D	2		E200.7	01/14/13 22:33 / sf
Sulfate	2790	mg/L	D	20		E300.0	01/14/13 16:21 / wc
PHYSICAL PROPERTIES							
pH	6.88	s.u.	H	0.01		A4500-H B	01/11/13 13:59 / ab
Solids, Total Dissolved TDS @ 180 C	5070	mg/L		10		A2540 C	01/11/13 14:39 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	01/15/13 22:36 / sf
Beryllium	ND	mg/L		0.001		E200.7	01/15/13 22:36 / sf
Cadmium	ND	mg/L		0.005		E200.7	01/15/13 22:36 / sf
Cobalt	ND	mg/L		0.01		E200.7	01/15/13 22:36 / sf
Lead	ND	mg/L		0.001		E200.8	01/18/13 02:22 / clm
Manganese	0.80	mg/L		0.01		E200.7	01/15/13 22:36 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/15/13 22:36 / sf
Nickel	ND	mg/L		0.05		E200.7	01/15/13 22:36 / sf
Uranium	0.0499	mg/L		0.0003		E200.8	01/18/13 02:22 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/15/13 22:36 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/29/13 12:48 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	01/31/13 12:52 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.8	pCi/L				E900.1	01/25/13 06:28 / lbb
Gross Alpha minus Rn & U Precision (±)	0.5	pCi/L				E900.1	01/25/13 06:28 / lbb
Gross Alpha minus Rn & U MDC	0.6	pCi/L				E900.1	01/25/13 06:28 / lbb
Lead 210	0.8	pCi/L	U			E909.0	02/08/13 06:05 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	02/08/13 06:05 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	02/08/13 06:05 / eli-cs
Radium 226	0.87	pCi/L				E903.0	01/30/13 12:46 / trs
Radium 226 precision (±)	0.21	pCi/L				E903.0	01/30/13 12:46 / trs
Radium 226 MDC	0.17	pCi/L				E903.0	01/30/13 12:46 / trs
Radium 228	1.4	pCi/L				RA-05	01/24/13 18:58 / gb
Radium 228 precision (±)	0.85	pCi/L				RA-05	01/24/13 18:58 / gb
Radium 228 MDC	1.3	pCi/L				RA-05	01/24/13 18:58 / gb

Report Definitions:
 RL - Analyte reporting limit. MCL - Maximum contaminant level.
 QCL - Quality control limit. ND - Not detected at the reporting limit.
 MDC - Minimum detectable concentration. D - RL increased due to sample matrix.
 H - Analysis performed past recommended holding time. U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13010343-010
Client Sample ID: EPA-28

Report Date: 02/25/13
Collection Date: 01/09/13 08:55
Date Received: 01/11/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.03	pCi/L	U			E908.0	01/30/13 16:19 / dmf
Thorium 230 precision (±)	0.07	pCi/L				E908.0	01/30/13 16:19 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	01/30/13 16:19 / dmf
DATA QUALITY							
A/C Balance (± 5)	2.14	%				A1030 E	01/17/13 07:45 / kbh
Anions	76.8	meq/L				A1030 E	01/17/13 07:45 / kbh
Cations	80.1	meq/L				A1030 E	01/17/13 07:45 / kbh
Solids, Total Dissolved Calculated	4800	mg/L				A1030 E	01/17/13 07:45 / kbh
TDS Balance (0.80 - 1.20)	1.07					A1030 E	01/17/13 07:45 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/15/13 00:56 / jk
Bromoform	ND	ug/L		0.50		E624	01/15/13 00:56 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	01/15/13 00:56 / jk
Chloroform	ND	ug/L		0.50		E624	01/15/13 00:56 / jk
Trihalomethanes, Total	ND	ug/L		0.50		E624	01/15/13 00:56 / jk
Surr: 1,2-Dichlorobenzene-d4	96.0	%REC		80-120		E624	01/15/13 00:56 / jk
Surr: Dibromofluoromethane	88.0	%REC		80-120		E624	01/15/13 00:56 / jk
Surr: p-Bromofluorobenzene	112	%REC		80-120		E624	01/15/13 00:56 / jk
Surr: Toluene-d8	104	%REC		80-120		E624	01/15/13 00:56 / jk

- The sample was received in the laboratory with a pH > 2. The pH was 7.

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13040238-012
Client Sample ID: EPA-28

Report Date: 05/21/13
Collection Date: 04/02/13 10:15
Date Received: 04/05/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	797	mg/L		5		A2320 B	04/05/13 22:00 / jba
Calcium	542	mg/L		1		E200.7	04/15/13 16:21 / sf
Chloride	125	mg/L	D	4		E300.0	04/09/13 01:30 / wc
Magnesium	498	mg/L		1		E200.7	04/15/13 16:21 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	04/10/13 14:04 / lr
Nitrogen, Nitrate+Nitrite as N	27	mg/L	D	1		E353.2	04/08/13 11:38 / lr
Potassium	12	mg/L		1		E200.7	04/15/13 16:21 / sf
Sodium	238	mg/L		1		E200.7	04/15/13 16:21 / sf
Sulfate	2860	mg/L	D	20		E300.0	04/09/13 01:30 / wc
PHYSICAL PROPERTIES							
pH	6.88	s.u.	H	0.01		A4500-H B	04/05/13 15:37 / ab
Solids, Total Dissolved TDS @ 180 C	5080	mg/L		40		A2540 C	04/05/13 15:32 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	04/11/13 00:22 / cp
Beryllium	ND	mg/L		0.001		E200.8	04/11/13 00:22 / cp
Cadmium	ND	mg/L		0.005		E200.8	04/11/13 00:22 / cp
Cobalt	ND	mg/L		0.01		E200.8	04/11/13 00:22 / cp
Lead	ND	mg/L		0.001		E200.8	04/11/13 00:22 / cp
Manganese	0.78	mg/L		0.01		E200.8	04/11/13 00:22 / cp
Molybdenum	ND	mg/L		0.1		E200.8	04/11/13 00:22 / cp
Nickel	ND	mg/L		0.05		E200.8	04/11/13 00:22 / cp
Uranium	0.0474	mg/L		0.0003		E200.8	04/11/13 00:22 / cp
Vanadium	ND	mg/L		0.1		E200.8	04/11/13 00:22 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/18/13 13:13 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	04/17/13 14:47 / j11
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.8	pCi/L				E900.1	04/29/13 09:09 / lbb
Gross Alpha minus Rn & U Precision (±)	0.4	pCi/L				E900.1	04/29/13 09:09 / lbb
Gross Alpha minus Rn & U MDC	0.5	pCi/L				E900.1	04/29/13 09:09 / lbb
Lead 210	0.3	pCi/L	U			E909.0	04/16/13 12:00 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	04/16/13 12:00 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	04/16/13 12:00 / eli-cs
Radium 226	0.33	pCi/L				E903.0	04/23/13 17:35 / lmc
Radium 226 precision (±)	0.13	pCi/L				E903.0	04/23/13 17:35 / lmc
Radium 226 MDC	0.13	pCi/L				E903.0	04/23/13 17:35 / lmc
Radium 228	1.4	pCi/L	U			RA-05	04/17/13 19:06 / gb
Radium 228 precision (±)	1.0	pCi/L				RA-05	04/17/13 19:06 / gb
Radium 228 MDC	1.6	pCi/L				RA-05	04/17/13 19:06 / gb

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13040238-012
Client Sample ID: EPA-28

Report Date: 05/21/13
Collection Date: 04/02/13 10:15
Date Received: 04/05/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.0	pCi/L		U		E908.0	04/12/13 09:08 / dmf
Thorium 230 precision (±)	0.05	pCi/L				E908.0	04/12/13 09:08 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	04/12/13 09:08 / dmf
DATA QUALITY							
A/C Balance (± 5)	0.374	%				A1030 E	04/18/13 12:49 / kbh
Anions	78.1	meq/L				A1030 E	04/18/13 12:49 / kbh
Cations	78.7	meq/L				A1030 E	04/18/13 12:49 / kbh
Solids, Total Dissolved Calculated	4800	mg/L				A1030 E	04/18/13 12:49 / kbh
TDS Balance (0.80 - 1.20)	1.06					A1030 E	04/18/13 12:49 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/09/13 02:42 / jlr
Bromoform	ND	ug/L		0.50		E624	04/09/13 02:42 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/09/13 02:42 / jlr
Chloroform	ND	ug/L		0.50		E624	04/09/13 02:42 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	04/09/13 02:42 / jlr
Surr: 1,2-Dichlorobenzene-d4	106	%REC		73.7-126		E624	04/09/13 02:42 / jlr
Surr: Dibromofluoromethane	138	%REC	S	64.4-131		E624	04/09/13 02:42 / jlr
Surr: p-Bromofluorobenzene	110	%REC		67.1-133		E624	04/09/13 02:42 / jlr
Surr: Toluene-d8	99.0	%REC		79.7-125		E624	04/09/13 02:42 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 8.

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 U - Not detected at minimum detectable concentration

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 S - Spike recovery outside of advisory limits.

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Alluvium Monitor Wells					
Well ID:		EPA-28	EPA-28	EPA-28	EPA-28
Collection Date:		4/2/2013	1/9/2013	10/9/2012	7/9/2012
Receive Date:		4/5/2013	1/11/2013	10/12/2012	7/13/2012
Report Date:		5/21/2013	2/25/2013	11/20/2012	8/30/2012
Analyte	Units	C13040238-012	C13010343-010	C12100557-012	C12070454-012
Bicarbonate as HCO3	mg/L	797	806	811	798
Calcium	mg/L	542	542	576	537
Chloride	mg/L	125	120	126	121
Magnesium	mg/L	498	512	482	498
Nitrogen, Ammonia as N	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	0.13
Nitrogen, Nitrate+Nitrite as N	mg/L	27	27	26	30
Potassium	mg/L	12	12	12	11
Sodium	mg/L	238	244	231	227
Sulfate	mg/L	2860	2790	2810	2730
pH	s.u.	6.88	6.88	6.86	6.91
Solids, Total Dissolved TDS @ 180 C	mg/L	5080	5070	5120	5050
Aluminum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	0.78	0.80	0.86	0.77
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
Uranium	mg/L	0.0474	0.0499	0.0470	0.0468
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	0.8	0.8	0.5	0.5
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.4	0.5	0.4	0.3
Gross Alpha minus Rn & U MDC	pCi/L	0.5	0.6	0.6	0.3
Lead 210	pCi/L	0.3	0.8	0.2	0.3
Lead 210 precision (±)	pCi/L	0.8	0.6	0.6	0.7
Lead 210 MDC	pCi/L	1.3	1.0	1	1.2
Radium 226	pCi/L	0.33	0.87	0.32	0.51
Radium 226 precision (±)	pCi/L	0.13	0.21	0.15	0.14
Radium 226 MDC	pCi/L	0.13	0.17	0.18	0.10
Radium 228	pCi/L	1.4	1.4	-0.1	0.78
Radium 228 precision (±)	pCi/L	1.0	0.85	1.1	0.66
Radium 228 MDC	pCi/L	1.6	1.3	1.9	1.0
Thorium 230	pCi/L	0.0	0.03	0.008	0.03
Thorium 230 precision (±)	pCi/L	0.05	0.07	0.07	0.07
Thorium 230 MDC	pCi/L	0.2	0.2	0.1	0.2
A/C Balance (± 5)	%	0.374	2.14	0.842	1.61
Anions	meq/L	78.1	76.8	77.5	75.5
Cations	meq/L	78.7	80.1	78.8	78.0
Solids, Total Dissolved Calculated	mg/L	4800	4800	4800	4700
TDS Balance (0.80 - 1.20)		1.06	1.07	1.07	1.08
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	0.69

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13010343-013
Client Sample ID: SBL-1

Report Date: 02/25/13
Collection Date: 01/09/13 11:01
Date Received: 01/11/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	464	mg/L		5		A2320 B	01/11/13 18:16 / jba
Calcium	501	mg/L		1		E200.7	01/14/13 22:49 / sf
Chloride	78	mg/L	D	10		E300.0	01/14/13 17:07 / wc
Magnesium	1250	mg/L		1		E200.7	01/14/13 22:49 / sf
Nitrogen, Ammonia as N	0.08	mg/L		0.05		A4500-NH3 G	01/15/13 16:01 / ljl
Nitrogen, Nitrate+Nitrite as N	40	mg/L	D	2		E353.2	01/16/13 15:40 / lr
Potassium	14	mg/L		1		E200.7	01/14/13 22:49 / sf
Sodium	309	mg/L	D	3		E200.7	01/14/13 22:49 / sf
Sulfate	6030	mg/L	D	40		E300.0	01/14/13 17:07 / wc
PHYSICAL PROPERTIES							
pH	6.80	s.u.	H	0.01		A4500-H B	01/11/13 14:20 / ab
Solids, Total Dissolved TDS @ 180 C	9200	mg/L		10		A2540 C	01/11/13 14:39 / ab
METALS - TOTAL							
Aluminum	0.1	mg/L		0.1		E200.7	01/15/13 23:01 / sf
Beryllium	ND	mg/L		0.001		E200.8	01/18/13 02:31 / clm
Cadmium	ND	mg/L		0.005		E200.7	01/15/13 23:01 / sf
Cobalt	0.03	mg/L		0.01		E200.7	01/15/13 23:01 / sf
Lead	ND	mg/L		0.001		E200.8	01/18/13 02:31 / clm
Manganese	3.88	mg/L		0.01		E200.7	01/15/13 23:01 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/15/13 23:01 / sf
Nickel	0.08	mg/L		0.05		E200.7	01/15/13 23:01 / sf
Uranium	0.0125	mg/L		0.0003		E200.8	01/18/13 02:31 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/15/13 23:01 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/29/13 13:12 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	01/31/13 13:04 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.8	pCi/L				E900.1	01/25/13 08:01 / lbb
Gross Alpha minus Rn & U Precision (±)	0.5	pCi/L				E900.1	01/25/13 08:01 / lbb
Gross Alpha minus Rn & U MDC	0.6	pCi/L				E900.1	01/25/13 08:01 / lbb
Lead 210	0.2	pCi/L	U			E909.0	02/09/13 22:33 / eli-cs
Lead 210 precision (±)	0.5	pCi/L				E909.0	02/09/13 22:33 / eli-cs
Lead 210 MDC	0.8	pCi/L				E909.0	02/09/13 22:33 / eli-cs
Radium 226	0.50	pCi/L				E903.0	01/30/13 12:46 / trs
Radium 226 precision (±)	0.22	pCi/L				E903.0	01/30/13 12:46 / trs
Radium 226 MDC	0.25	pCi/L				E903.0	01/30/13 12:46 / trs
Radium 228	1.3	pCi/L	U			RA-05	01/24/13 18:58 / gb
Radium 228 precision (±)	1.1	pCi/L				RA-05	01/24/13 18:58 / gb
Radium 228 MDC	1.7	pCi/L				RA-05	01/24/13 18:58 / gb

Report Definitions:
 RL - Analyte reporting limit. MCL - Maximum contaminant level.
 QCL - Quality control limit. ND - Not detected at the reporting limit.
 MDC - Minimum detectable concentration. D - RL increased due to sample matrix.
 H - Analysis performed past recommended holding time. U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13010343-013
Client Sample ID: SBL-1

Report Date: 02/25/13
Collection Date: 01/09/13 11:01
Date Received: 01/11/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.06	pCi/L	U		E908.0		01/30/13 16:20 / dmf
Thorium 230 precision (±)	0.09	pCi/L			E908.0		01/30/13 16:20 / dmf
Thorium 230 MDC	0.2	pCi/L			E908.0		01/30/13 16:20 / dmf
DATA QUALITY							
A/C Balance (± 5)	1.20	%			A1030 E		01/17/13 07:46 / kbh
Anions	138	meq/L			A1030 E		01/17/13 07:46 / kbh
Cations	141	meq/L			A1030 E		01/17/13 07:46 / kbh
Solids, Total Dissolved Calculated	8600	mg/L			A1030 E		01/17/13 07:46 / kbh
TDS Balance (0.80 - 1.20)	1.07				A1030 E		01/17/13 07:46 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50	E624		01/15/13 02:45 / jk
Bromoform	ND	ug/L		0.50	E624		01/15/13 02:45 / jk
Chlorodibromomethane	ND	ug/L		0.50	E624		01/15/13 02:45 / jk
Chloroform	ND	ug/L		0.50	E624		01/15/13 02:45 / jk
Trihalomethanes, Total	ND	ug/L		0.50	E624		01/15/13 02:45 / jk
Surr: 1,2-Dichlorobenzene-d4	100	%REC		80-120	E624		01/15/13 02:45 / jk
Surr: Dibromofluoromethane	97.0	%REC		80-120	E624		01/15/13 02:45 / jk
Surr: p-Bromofluorobenzene	109	%REC		80-120	E624		01/15/13 02:45 / jk
Surr: Toluene-d8	104	%REC		80-120	E624		01/15/13 02:45 / jk

- The sample was received in the laboratory with a pH > 2. The pH was 7.

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13040238-011
Client Sample ID: SBL-1

Report Date: 05/21/13
Collection Date: 04/02/13 09:30
Date Received: 04/05/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	462	mg/L		5		A2320 B	04/05/13 21:42 / jba
Calcium	506	mg/L		1		E200.7	04/15/13 16:17 / sf
Chloride	79	mg/L	D	10		E300.0	04/09/13 01:15 / wc
Magnesium	1240	mg/L		1		E200.7	04/15/13 16:17 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	04/10/13 14:02 / lr
Nitrogen, Nitrate+Nitrite as N	40	mg/L	D	2		E353.2	04/08/13 11:30 / lr
Potassium	14	mg/L		1		E200.7	04/15/13 16:17 / sf
Sodium	303	mg/L	D	2		E200.7	04/15/13 16:17 / sf
Sulfate	5940	mg/L	D	40		E300.0	04/09/13 01:15 / wc
PHYSICAL PROPERTIES							
pH	6.87	s.u.	H	0.01		A4500-H B	04/05/13 15:35 / ab
Solids, Total Dissolved TDS @ 180 C	9080	mg/L		100		A2540 C	04/05/13 15:31 / ab
METALS - TOTAL							
Aluminum	0.4	mg/L		0.1		E200.8	04/11/13 00:00 / cp
Beryllium	ND	mg/L		0.001		E200.8	04/11/13 00:00 / cp
Cadmium	ND	mg/L		0.005		E200.8	04/11/13 00:00 / cp
Cobalt	0.02	mg/L		0.01		E200.8	04/11/13 00:00 / cp
Lead	ND	mg/L		0.001		E200.8	04/11/13 00:00 / cp
Manganese	3.89	mg/L		0.01		E200.8	04/11/13 00:00 / cp
Molybdenum	ND	mg/L		0.1		E200.8	04/11/13 00:00 / cp
Nickel	0.08	mg/L		0.05		E200.8	04/11/13 00:00 / cp
Uranium	0.0128	mg/L		0.0003		E200.8	04/11/13 00:00 / cp
Vanadium	ND	mg/L		0.1		E200.8	04/11/13 00:00 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/18/13 12:49 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	04/17/13 14:46 / jl1
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	1.1	pCi/L				E900.1	04/29/13 09:09 / lbb
Gross Alpha minus Rn & U Precision (±)	0.4	pCi/L				E900.1	04/29/13 09:09 / lbb
Gross Alpha minus Rn & U MDC	0.5	pCi/L				E900.1	04/29/13 09:09 / lbb
Lead 210	-0.3	pCi/L	U			E909.0	04/16/13 12:00 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	04/16/13 12:00 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	04/16/13 12:00 / eli-cs
Radium 226	0.38	pCi/L				E903.0	04/23/13 17:35 / lmc
Radium 226 precision (±)	0.13	pCi/L				E903.0	04/23/13 17:35 / lmc
Radium 226 MDC	0.13	pCi/L				E903.0	04/23/13 17:35 / lmc
Radium 228	2.4	pCi/L				RA-05	04/17/13 17:31 / gb
Radium 228 precision (±)	0.88	pCi/L				RA-05	04/17/13 17:31 / gb
Radium 228 MDC	1.3	pCi/L				RA-05	04/17/13 17:31 / gb

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C13040238-011
Client Sample ID: SBL-1

Report Date: 05/21/13
Collection Date: 04/02/13 09:30
Date Received: 04/05/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	-0.01	pCi/L		U		E908.0	04/12/13 09:08 / dmf
Thorium 230 precision (±)	0.07	pCi/L				E908.0	04/12/13 09:08 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	04/12/13 09:08 / dmf
DATA QUALITY							
A/C Balance (± 5)	1.83	%				A1030 E	04/18/13 12:48 / kbh
Anions	136	meq/L				A1030 E	04/18/13 12:48 / kbh
Cations	141	meq/L				A1030 E	04/18/13 12:48 / kbh
Solids, Total Dissolved Calculated	8500	mg/L				A1030 E	04/18/13 12:48 / kbh
TDS Balance (0.80 - 1.20)	1.07					A1030 E	04/18/13 12:48 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/09/13 02:08 / jlr
Bromoform	ND	ug/L		0.50		E624	04/09/13 02:08 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/09/13 02:08 / jlr
Chloroform	ND	ug/L		0.50		E624	04/09/13 02:08 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	04/09/13 02:08 / jlr
Surr: 1,2-Dichlorobenzene-d4	109	%REC		73.7-126		E624	04/09/13 02:08 / jlr
Surr: Dibromofluoromethane	134	%REC	S	64.4-131		E624	04/09/13 02:08 / jlr
Surr: p-Bromofluorobenzene	110	%REC		67.1-133		E624	04/09/13 02:08 / jlr
Surr: Toluene-d8	102	%REC		79.7-125		E624	04/09/13 02:08 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 8.

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 U - Not detected at minimum detectable concentration

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 S - Spike recovery outside of advisory limits.

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Alluvium Monitor Wells					
Well ID:	SBL-1	SBL-1	SBL-1	SBL-1	
Collection Date:	4/2/2013	1/9/2013	10/9/2012	7/9/2012	
Receive Date:	4/5/2013	1/11/2013	10/12/2012	7/13/2012	
Report Date:	5/21/2013	2/25/2013	11/20/2012	8/30/2012	
Analyte	RUUnits	C13040238-011	C13010343-013	C12100557-011	C12070454-011
Bicarbonate as HCO3	mg/L	462	464	460	446
Calcium	mg/L	506	501	520	474
Chloride	mg/L	79	78	89	79
Magnesium	mg/L	1240	1250	1150	1170
Nitrogen, Ammonia as N	mg/L	ND(0.05)	0.08	0.2	0.44
Nitrogen, Nitrate+Nitrite as N	mg/L	40	40	39	44
Potassium	mg/L	14	14	15	11
Sodium	mg/L	303	309	297	261
Sulfate	mg/L	5940	6030	5900	5680
pH	s.u.	6.87	6.80	6.83	6.91
Solids, Total Dissolved TDS @ 180 C	mg/L	9080	9200	8640	9270
Aluminum	mg/L	0.4	0.1	0.2	0.2
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	0.02	0.03	0.02	0.02
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	3.89	3.88	3.74	3.64
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	0.08	0.08	0.08	0.07
Uranium	mg/L	0.0128	0.0125	0.0120	0.0126
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	1.1	0.8	1.2	0.7
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.4	0.5	0.5	0.3
Gross Alpha minus Rn & U MDC	pCi/L	0.5	0.6	0.6	0.3
Lead 210	pCi/L	-0.3	0.2	-0.4	0.1
Lead 210 precision (±)	pCi/L	0.8	0.5	0.6	0.7
Lead 210 MDC	pCi/L	1.3	0.8	1	1.2
Radium 226	pCi/L	0.38	0.50	0.39	0.58
Radium 226 precision (±)	pCi/L	0.13	0.22	0.20	0.15
Radium 226 MDC	pCi/L	0.13	0.25	0.23	0.11
Radium 228	pCi/L	2.4	1.3	2.1	1.6
Radium 228 precision (±)	pCi/L	0.88	1.1	1.6	0.75
Radium 228 MDC	pCi/L	1.3	1.7	2.5	1.1
Thorium 230	pCi/L	-0.01	0.06	0.01	0.06
Thorium 230 precision (±)	pCi/L	0.07	0.09	0.08	0.08
Thorium 230 MDC	pCi/L	0.2	0.2	0.2	0.2
A/C Balance (± 5)	%	1.83	1.20	-0.664	0.536
Anions	meq/L	136	138	136	130
Cations	meq/L	141	141	134	132
Solids, Total Dissolved Calculated	mg/L	8500	8600	8400	8100
TDS Balance (0.80 - 1.20)		1.07	1.07	1.03	1.15
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	0.69

****Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.**



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C13010578-002
Client Sample ID 515-A

Report Date: 02/25/13
Collection Date: 01/15/13 10:15
Date Received: 01/18/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	881	mg/L		5		A2320 B	01/18/13 17:44 / jba
Calcium	460	mg/L		1		E200.7	01/21/13 18:35 / sf
Chloride	378	mg/L	D	10		E300.0	01/21/13 14:35 / wc
Magnesium	1360	mg/L		1		E200.7	01/21/13 18:35 / sf
Nitrogen, Ammonia as N	32	mg/L	D	1		A4500-NH3 G	01/22/13 16:26 / ljl
Nitrogen, Nitrate+Nitrite as N	40	mg/L	D	2		E353.2	01/18/13 16:29 / lr
Potassium	20	mg/L		1		E200.7	01/21/13 18:35 / sf
Sodium	636	mg/L	D	3		E200.7	01/21/13 18:35 / sf
Sulfate	6390	mg/L	D	40		E300.0	01/21/13 14:35 / wc
PHYSICAL PROPERTIES							
pH	6.02	s.u.	H	0.01		A4500-H B	01/18/13 15:26 / jz
Solids, Total Dissolved TDS @ 180 C	9970	mg/L		100		A2540 C	01/21/13 08:25 / ab
METALS - TOTAL							
Aluminum	0.7	mg/L		0.1		E200.7	01/23/13 00:27 / sf
Beryllium	ND	mg/L		0.001		E200.8	01/22/13 17:30 / clm
Cadmium	ND	mg/L		0.005		E200.7	01/23/13 00:27 / sf
Cobalt	0.01	mg/L		0.01		E200.7	01/23/13 00:27 / sf
Lead	0.003	mg/L		0.001		E200.8	01/22/13 17:30 / clm
Manganese	7.58	mg/L		0.01		E200.7	01/23/13 00:27 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/23/13 00:27 / sf
Nickel	0.10	mg/L		0.05		E200.7	01/23/13 00:27 / sf
Uranium	0.0105	mg/L		0.0003		E200.8	01/22/13 17:30 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/23/13 00:27 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/29/13 14:00 / eli-h
Selenium-IV	0.002	mg/L		0.001		A3114 B	02/01/13 10:06 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	1.7	pCi/L				E900.1	02/13/13 07:42 / lbb
Gross Alpha minus Rn & U Precision (±)	0.4	pCi/L				E900.1	02/13/13 07:42 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	02/13/13 07:42 / lbb
Lead 210	0.3	pCi/L	U			E909.0	02/03/13 11:52 / eli-cs
Lead 210 precision (±)	0.4	pCi/L				E909.0	02/03/13 11:52 / eli-cs
Lead 210 MDC	0.7	pCi/L				E909.0	02/03/13 11:52 / eli-cs
Radium 226	2.6	pCi/L				E903.0	02/05/13 12:11 / lbb
Radium 226 precision (±)	0.36	pCi/L				E903.0	02/05/13 12:11 / lbb
Radium 226 MDC	0.17	pCi/L				E903.0	02/05/13 12:11 / lbb
Radium 228	4.3	pCi/L				RA-05	01/31/13 12:47 / plj
Radium 228 precision (±)	1.1	pCi/L				RA-05	01/31/13 12:47 / plj
Radium 228 MDC	1.4	pCi/L				RA-05	01/31/13 12:47 / plj

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.
 U - Not detected at minimum detectable concentration

QUARTERLY SAMPLING
SEMI-ANNUAL GROUND WATER MONITORING REPORT

JANUARY TO JUNE OF 2013

ZONE - 1

515-A

*604

*614

TWQ-142

EPA-2

*EPA-4

*EPA-5

*EPA-7

LEVELS ONLY

TWQ-143

EPA-8

505-A

502-A

501-A

504-A

412

***POINT OF COMPLIANCE WELLS**



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C13010578-002
Client Sample ID 515-A

Report Date: 02/25/13
Collection Date: 01/15/13 10:15
Date Received: 01/18/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	-0.004	pCi/L	U			E908.0	01/31/13 09:13 / dmf
Thorium 230 precision (±)	0.07	pCi/L				E908.0	01/31/13 09:13 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	01/31/13 09:13 / dmf
DATA QUALITY							
A/C Balance (± 5)	1.49	%				A1030 E	01/23/13 08:15 / kbh
Anions	161	meq/L				A1030 E	01/23/13 08:15 / kbh
Cations	166	meq/L				A1030 E	01/23/13 08:15 / kbh
Solids, Total Dissolved Calculated	9900	mg/L				A1030 E	01/23/13 08:15 / kbh
TDS Balance (0.80 - 1.20)	1.01					A1030 E	01/23/13 08:15 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/18/13 17:39 / jk
Bromoform	ND	ug/L		0.50		E624	01/18/13 17:39 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	01/18/13 17:39 / jk
Chloroform	420	ug/L		50		E624	01/22/13 01:12 / jk
Trihalomethanes, Total	420	ug/L		50		E624	01/22/13 01:12 / jk
Surr: 1,2-Dichlorobenzene-d4	92.0	%REC		80-120		E624	01/18/13 17:39 / jk
Surr: Dibromofluoromethane	88.0	%REC		80-120		E624	01/18/13 17:39 / jk
Surr: p-Bromofluorobenzene	107	%REC		80-120		E624	01/18/13 17:39 / jk
Surr: Toluene-d8	106	%REC		80-120		E624	01/18/13 17:39 / jk

- The sample was received in the laboratory with a pH > 2. The pH was 7.

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration.
 MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C13040233-002
Client Sample ID 515-A

Report Date: 05/21/13
Collection Date: 04/03/13 10:20
Date Received: 04/05/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	916	mg/L		5		A2320 B	04/05/13 18:41 / jba
Calcium	452	mg/L		1		E200.7	04/15/13 13:52 / sf
Chloride	392	mg/L	D	10		E300.0	04/08/13 19:20 / wc
Magnesium	1290	mg/L		1		E200.7	04/15/13 13:52 / sf
Nitrogen, Ammonia as N	32	mg/L	D	5		A4500-NH3 G	04/10/13 15:52 / lr
Nitrogen, Nitrate+Nitrite as N	41	mg/L	D	2		E353.2	04/08/13 10:45 / lr
Potassium	18	mg/L		1		E200.7	04/15/13 13:52 / sf
Sodium	603	mg/L	D	2		E200.7	04/15/13 13:52 / sf
Sulfate	6390	mg/L	D	40		E300.0	04/08/13 19:20 / wc
PHYSICAL PROPERTIES							
pH	6.14	s.u.	H	0.01		A4500-H B	04/05/13 14:44 / ab
Solids, Total Dissolved TDS @ 180 C	10400	mg/L		100		A2540 C	04/05/13 15:28 / ab
METALS - TOTAL							
Aluminum	1.2	mg/L		0.1		E200.8	04/10/13 20:28 / cp
Beryllium	ND	mg/L		0.001		E200.8	04/10/13 20:28 / cp
Cadmium	ND	mg/L		0.005		E200.8	04/10/13 20:28 / cp
Cobalt	0.02	mg/L		0.01		E200.8	04/10/13 20:28 / cp
Lead	0.003	mg/L		0.001		E200.8	04/10/13 20:28 / cp
Manganese	7.88	mg/L		0.01		E200.8	04/10/13 20:28 / cp
Molybdenum	ND	mg/L		0.1		E200.8	04/10/13 20:28 / cp
Nickel	0.10	mg/L		0.05		E200.8	04/10/13 20:28 / cp
Uranium	0.0114	mg/L		0.0003		E200.8	04/10/13 20:28 / cp
Vanadium	ND	mg/L		0.1		E200.8	04/10/13 20:28 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/17/13 13:34 / eli-h
Selenium-IV	0.001	mg/L		0.001		A3114 B	04/17/13 14:11 / j11
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	2.1	pCi/L				E900.1	04/29/13 08:14 / lbb
Gross Alpha minus Rn & U Precision (±)	0.5	pCi/L				E900.1	04/29/13 08:14 / lbb
Gross Alpha minus Rn & U MDC	0.4	pCi/L				E900.1	04/29/13 08:14 / lbb
Lead 210	-0.2	pCi/L	U			E909.0	04/16/13 12:00 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	04/16/13 12:00 / eli-cs
Lead 210 MDC	1.4	pCi/L				E909.0	04/16/13 12:00 / eli-cs
Radium 226	2.3	pCi/L				E903.0	04/22/13 09:48 / lmc
Radium 226 precision (±)	0.30	pCi/L				E903.0	04/22/13 09:48 / lmc
Radium 226 MDC	0.14	pCi/L				E903.0	04/22/13 09:48 / lmc
Radium 228	5.2	pCi/L				RA-05	04/16/13 19:32 / gb
Radium 228 precision (±)	1.2	pCi/L				RA-05	04/16/13 19:32 / gb
Radium 228 MDC	1.6	pCi/L				RA-05	04/16/13 19:32 / gb

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C13040233-002
Client Sample ID 515-A

Report Date: 05/21/13
Collection Date: 04/03/13 10:20
Date Received: 04/05/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.02	pCi/L	U			E908.0	04/15/13 17:03 / dmf
Thorium 230 precision (±)	0.06	pCi/L				E908.0	04/15/13 17:03 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	04/15/13 17:03 / dmf
DATA QUALITY							
A/C Balance (± 5)	0.0884	%				A1030 E	04/18/13 12:47 / kbh
Anions	162	meq/L				A1030 E	04/18/13 12:47 / kbh
Cations	162	meq/L				A1030 E	04/18/13 12:47 / kbh
Solids, Total Dissolved Calculated	9800	mg/L				A1030 E	04/18/13 12:47 / kbh
TDS Balance (0.80 - 1.20)	1.06					A1030 E	04/18/13 12:47 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/09/13 05:33 / jlr
Bromoform	ND	ug/L		0.50		E624	04/09/13 05:33 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/09/13 05:33 / jlr
Chloroform	456	ug/L		5.0		E624	04/08/13 15:21 / jlr
Trihalomethanes, Total	456	ug/L		5.0		E624	04/08/13 15:21 / jlr
Surr: 1,2-Dichlorobenzene-d4	109	%REC		73.7-126		E624	04/09/13 05:33 / jlr
Surr: Dibromofluoromethane	139	%REC	S	64.4-131		E624	04/09/13 05:33 / jlr
Surr: p-Bromofluorobenzene	111	%REC		67.1-133		E624	04/09/13 05:33 / jlr
Surr: Toluene-d8	102	%REC		79.7-125		E624	04/09/13 05:33 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 8.

Report Definitions:

RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
U - Not detected at minimum detectable concentration

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
S - Spike recovery outside of advisory limits.

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 1 Monitor Wells					
Well ID:		515-A	515-A	515-A	515-A
Collection Date:		4/3/2013	1/15/2013	10/10/2012	7/11/2012
Receive Date:		4/5/2013	1/18/2013	10/12/2012	7/13/2012
Report Date:		5/21/2013	2/25/2013	11/20/2012	8/31/2012
Analyte:	Units	C13040233-002	C13010578-002	C12100566-002	C12070464-002
Bicarbonate as HCO3	mg/L	916	881	893	872
Calcium	mg/L	452	460	458	445
Chloride	mg/L	392	378	383	379
Magnesium	mg/L	1290	1360	1260	1210
Nitrogen, Ammonia as N	mg/L	32	32	28	41
Nitrogen, Nitrate+Nitrite as N	mg/L	41	40	39	45
Potassium	mg/L	18	20	20	19
Sodium	mg/L	603	636	604	575
Sulfate	mg/L	6390	6390	6160	6120
pH	s.u.	6.14	6.02	6.06	6.20
Solids, Total Dissolved TDS @ 180 C	mg/L	10400	9970	9870	10300
Aluminum	mg/L	1.2	0.7	1.4	4.7
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	0.001
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	0.02	0.01	0.02	0.02
Lead	mg/L	0.003	0.003	0.002	0.004
Manganese	mg/L	7.88	7.58	8.12	13.1
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	0.10	0.10	0.13	0.09
Uranium	mg/L	0.0114	0.0105	0.0125	0.0131
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	0.001	0.002	0.001	0.003
Gross Alpha minus Rn & U	pCi/L	2.1	1.7	1.6	1.6
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.5	0.4	0.4	0.4
Gross Alpha minus Rn & U MDC	pCi/L	0.4	0.3	0.3	0.3
Lead 210	pCi/L	-0.2	0.3	0.2	0.7
Lead 210 precision (±)	pCi/L	0.8	0.4	0.6	0.7
Lead 210 MDC	pCi/L	1.4	0.7	1	1.1
Radium 226	pCi/L	2.3	2.6	2.0	2.1
Radium 226 precision (±)	pCi/L	0.30	0.36	0.29	0.29
Radium 226 MDC	pCi/L	0.14	0.17	0.15	0.15
Radium 228	pCi/L	5.2	4.3	3.3	4.1
Radium 228 precision (±)	pCi/L	1.2	1.1	1.2	0.95
Radium 228 MDC	pCi/L	1.6	1.4	1.7	1.2
Thorium 230	pCi/L	0.02	-0.004	0.04	0.1
Thorium 230 precision (±)	pCi/L	0.06	0.07	0.09	0.1
Thorium 230 MDC	pCi/L	0.2	0.2	0.2	0.2
A/C Balance (± 5)	%	0.0884	1.49	-0.485	-1.69
Anions	meq/L	162	161	156	155
Cations	meq/L	162	166	155	150
Solids, Total Dissolved Calculated	mg/L	9800	9900	9500	9400
TDS Balance (0.80 - 1.20)		1.06	1.01	1.04	1.10
Trihalomethanes, Total	ug/L	456	420	416	367

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C13010578-003
Client Sample ID 604

Report Date: 02/25/13
Collection Date: 01/15/13 11:04
Date Received: 01/18/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	26	mg/L		5		A2320 B	01/18/13 17:51 / jba
Calcium	468	mg/L		1		E200.7	01/21/13 18:51 / sf
Chloride	59	mg/L	D	4		E300.0	01/21/13 14:52 / wc
Magnesium	862	mg/L		1		E200.7	01/21/13 18:51 / sf
Nitrogen, Ammonia as N	0.05	mg/L		0.05		A4500-NH3 G	01/22/13 16:28 / ljl
Nitrogen, Nitrate+Nitrite as N	67	mg/L	D	5		E353.2	01/18/13 16:31 / lr
Potassium	13	mg/L		1		E200.7	01/21/13 18:51 / sf
Sodium	324	mg/L	D	2		E200.7	01/21/13 18:51 / sf
Sulfate	4580	mg/L	D	20		E300.0	01/21/13 14:52 / wc
PHYSICAL PROPERTIES							
pH	5.44	s.u.	H	0.01		A4500-H B	01/18/13 15:28 / jz
Solids, Total Dissolved TDS @ 180 C	6860	mg/L		100		A2540 C	01/21/13 08:25 / ab
METALS - TOTAL							
Aluminum	1.3	mg/L		0.1		E200.7	01/23/13 00:31 / sf
Beryllium	0.002	mg/L		0.001		E200.7	01/23/13 00:31 / sf
Cadmium	ND	mg/L		0.005		E200.7	01/23/13 00:31 / sf
Cobalt	0.13	mg/L		0.01		E200.7	01/23/13 00:31 / sf
Lead	ND	mg/L		0.001		E200.8	01/22/13 17:33 / clm
Manganese	5.42	mg/L		0.01		E200.7	01/23/13 00:31 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/23/13 00:31 / sf
Nickel	0.22	mg/L		0.05		E200.7	01/23/13 00:31 / sf
Uranium	0.0003	mg/L		0.0003		E200.8	01/22/13 17:33 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/23/13 00:31 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/29/13 15:36 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	02/01/13 10:08 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	1.3	pCi/L				E900.1	02/13/13 07:42 / lbb
Gross Alpha minus Rn & U Precision (±)	0.3	pCi/L				E900.1	02/13/13 07:42 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	02/13/13 07:42 / lbb
Lead 210	0.1	pCi/L	U			E909.0	02/03/13 14:07 / eli-cs
Lead 210 precision (±)	0.4	pCi/L				E909.0	02/03/13 14:07 / eli-cs
Lead 210 MDC	0.7	pCi/L				E909.0	02/03/13 14:07 / eli-cs
Radium 226	1.4	pCi/L				E903.0	02/05/13 12:11 / lbb
Radium 226 precision (±)	0.26	pCi/L				E903.0	02/05/13 12:11 / lbb
Radium 226 MDC	0.16	pCi/L				E903.0	02/05/13 12:11 / lbb
Radium 228	4.3	pCi/L				RA-05	01/31/13 12:47 / plj
Radium 228 precision (±)	1.0	pCi/L				RA-05	01/31/13 12:47 / plj
Radium 228 MDC	1.3	pCi/L				RA-05	01/31/13 12:47 / plj

Report RL - Analyte reporting limit.
Definitions: QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C13010578-003
Client Sample ID 604

Report Date: 02/25/13
Collection Date: 01/15/13 11:04
Date Received: 01/18/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.005	pCi/L	U			E908.0	01/31/13 09:13 / dmf
Thorium 230 precision (±)	0.06	pCi/L				E908.0	01/31/13 09:13 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	01/31/13 09:13 / dmf
DATA QUALITY							
A/C Balance (± 5)	3.06	%				A1030 E	01/23/13 08:15 / kbh
Anions	102	meq/L				A1030 E	01/23/13 08:15 / kbh
Cations	109	meq/L				A1030 E	01/23/13 08:15 / kbh
Solids, Total Dissolved Calculated	6600	mg/L				A1030 E	01/23/13 08:15 / kbh
TDS Balance (0.80 - 1.20)	1.03					A1030 E	01/23/13 08:15 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/21/13 14:03 / jk
Bromoform	ND	ug/L		0.50		E624	01/21/13 14:03 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	01/21/13 14:03 / jk
Chloroform	5.84	ug/L		0.50		E624	01/21/13 14:03 / jk
Trihalomethanes, Total	5.84	ug/L		0.50		E624	01/21/13 14:03 / jk
Surr: 1,2-Dichlorobenzene-d4	114	%REC		80-120		E624	01/21/13 14:03 / jk
Surr: Dibromofluoromethane	90.0	%REC		80-120		E624	01/21/13 14:03 / jk
Surr: p-Bromofluorobenzene	115	%REC		80-120		E624	01/21/13 14:03 / jk
Surr: Toluene-d8	94.0	%REC		80-120		E624	01/21/13 14:03 / jk

- The sample was received in the laboratory with a pH > 2. The pH was 6.

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration.
 MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C13040233-003
Client Sample ID 604

Report Date: 05/21/13
Collection Date: 04/03/13 11:05
Date Received: 04/05/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	26	mg/L		5		A2320 B	04/05/13 18:48 / jba
Calcium	457	mg/L		1		E200.7	04/15/13 14:48 / sf
Chloride	63	mg/L	D	4		E300.0	04/08/13 19:35 / wc
Magnesium	840	mg/L		1		E200.7	04/15/13 14:48 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	04/10/13 15:54 / lr
Nitrogen, Nitrate+Nitrite as N	70	mg/L	D	5		E353.2	04/08/13 10:48 / lr
Potassium	12	mg/L		1		E200.7	04/15/13 14:48 / sf
Sodium	308	mg/L		1		E200.7	04/15/13 14:48 / sf
Sulfate	4470	mg/L	D	20		E300.0	04/08/13 19:35 / wc
PHYSICAL PROPERTIES							
pH	5.49	s.u.	H	0.01		A4500-H B	04/05/13 14:57 / ab
Solids, Total Dissolved TDS @ 180 C	6810	mg/L		100		A2540 C	04/05/13 15:28 / ab
METALS - TOTAL							
Aluminum	1.0	mg/L		0.1		E200.8	04/10/13 20:50 / cp
Beryllium	0.001	mg/L		0.001		E200.8	04/10/13 20:50 / cp
Cadmium	ND	mg/L		0.005		E200.8	04/10/13 20:50 / cp
Cobalt	0.13	mg/L		0.01		E200.8	04/10/13 20:50 / cp
Lead	ND	mg/L		0.001		E200.8	04/10/13 20:50 / cp
Manganese	5.06	mg/L		0.01		E200.8	04/10/13 20:50 / cp
Molybdenum	ND	mg/L		0.1		E200.8	04/10/13 20:50 / cp
Nickel	0.22	mg/L		0.05		E200.8	04/10/13 20:50 / cp
Uranium	0.0004	mg/L		0.0003		E200.8	04/10/13 20:50 / cp
Vanadium	ND	mg/L		0.1		E200.8	04/10/13 20:50 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/17/13 14:08 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	04/17/13 14:15 / jl1
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	1.4	pCi/L				E900.1	04/29/13 08:14 / lbb
Gross Alpha minus Rn & U Precision (±)	0.4	pCi/L				E900.1	04/29/13 08:14 / lbb
Gross Alpha minus Rn & U MDC	0.4	pCi/L				E900.1	04/29/13 08:14 / lbb
Lead 210	-0.3	pCi/L	U			E909.0	04/16/13 12:00 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	04/16/13 12:00 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	04/16/13 12:00 / eli-cs
Radium 226	1.3	pCi/L				E903.0	04/22/13 11:24 / lmc
Radium 226 precision (±)	0.23	pCi/L				E903.0	04/22/13 11:24 / lmc
Radium 226 MDC	0.15	pCi/L				E903.0	04/22/13 11:24 / lmc
Radium 228	3.9	pCi/L				RA-05	04/16/13 19:32 / gb
Radium 228 precision (±)	1.2	pCi/L				RA-05	04/16/13 19:32 / gb
Radium 228 MDC	1.7	pCi/L				RA-05	04/16/13 19:32 / gb

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C13040233-003
Client Sample ID 604

Report Date: 05/21/13
Collection Date: 04/03/13 11:05
Date Received: 04/05/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.03	pCi/L	U			E908.0	04/15/13 17:03 / dmf
Thorium 230 precision (±)	0.07	pCi/L				E908.0	04/15/13 17:03 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	04/15/13 17:03 / dmf
DATA QUALITY							
A/C Balance (± 5)	2.92	%				A1030 E	04/18/13 12:47 / kbh
Anions	99.7	meq/L				A1030 E	04/18/13 12:47 / kbh
Cations	106	meq/L				A1030 E	04/18/13 12:47 / kbh
Solids, Total Dissolved Calculated	6500	mg/L				A1030 E	04/18/13 12:47 / kbh
TDS Balance (0.80 - 1.20)	1.05					A1030 E	04/18/13 12:47 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/08/13 15:54 / jlr
Bromoform	ND	ug/L		0.50		E624	04/08/13 15:54 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/08/13 15:54 / jlr
Chloroform	6.80	ug/L		0.50		E624	04/08/13 15:54 / jlr
Trihalomethanes, Total	6.80	ug/L		0.50		E624	04/08/13 15:54 / jlr
Surr: 1,2-Dichlorobenzene-d4	109	%REC		73.7-126		E624	04/08/13 15:54 / jlr
Surr: Dibromofluoromethane	120	%REC		64.4-131		E624	04/08/13 15:54 / jlr
Surr: p-Bromofluorobenzene	117	%REC		67.1-133		E624	04/08/13 15:54 / jlr
Surr: Toluene-d8	98.0	%REC		79.7-125		E624	04/08/13 15:54 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 5.

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 1 Monitor Wells					
Well ID:		604	604	604	604
Collection Date:		4/3/2013	1/15/2013	10/10/2012	7/11/2012
Receive Date:		4/5/2013	1/18/2013	10/12/2012	7/13/2012
Report Date:		5/21/2013	2/25/2013	11/20/2012	8/31/2012
Analyte:	RUUnits	C13040233-003	C13010578-003	C12100566-003	C12070464-003
Bicarbonate as HCO3	mg/L	26	26	29	17
Calcium	mg/L	457	468	473	444
Chloride	mg/L	63	59	62	62
Magnesium	mg/L	840	862	794	817
Nitrogen, Ammonia as N	mg/L	ND(0.05)	0.05	ND(0.05)	ND(0.05)
Nitrogen, Nitrate+Nitrite as N	mg/L	70	67	68	71
Potassium	mg/L	12	13	13	11
Sodium	mg/L	308	324	302	292
Sulfate	mg/L	4470	4580	4620	4760
pH	s.u.	5.49	5.44	5.40	5.48
Solids, Total Dissolved TDS @ 180 C	mg/L	6810	6860	6880	7450
Aluminum	mg/L	1.0	1.3	1.6	0.9
Beryllium	mg/L	0.001	0.002	0.002	0.001
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	0.13	0.13	0.15	0.13
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	5.06	5.42	5.36	5.94
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	0.22	0.22	0.25	0.21
Uranium	mg/L	0.0004	0.0003	0.0004	0.0004
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	0.003	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	1.4	1.3	1.3	1.3
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.4	0.3	0.3	0.3
Gross Alpha minus Rn & U MDC	pCi/L	0.4	0.3	0.3	0.3
Lead 210	pCi/L	0.3	0.1	0.4	0.8
Lead 210 precision (±)	pCi/L	0.8	0.4	0.6	0.7
Lead 210 MDC	pCi/L	1.3	0.7	1	1.1
Radium 226	pCi/L	1.3	1.4	1.4	1.3
Radium 226 precision (±)	pCi/L	0.23	0.26	0.22	0.23
Radium 226 MDC	pCi/L	0.15	0.16	0.13	0.14
Radium 228	pCi/L	3.9	4.3	4.6	4.4
Radium 228 precision (±)	pCi/L	1.2	1.0	1.1	0.95
Radium 228 MDC	pCi/L	1.7	1.3	1.5	1.2
Thorium 230	pCi/L	0.03	0.005	0.05	0.06
Thorium 230 precision (±)	pCi/L	0.07	0.06	0.07	0.08
Thorium 230 MDC	pCi/L	0.2	0.2	0.1	0.2
A/C Balance (± 5)	%	2.92	3.06	-0.436	-1.81
Anions	meq/L	99.7	102	103	106
Cations	meq/L	106	109	102	102
Solids, Total Dissolved Calculated	mg/L	6500	6600	6600	6700
TDS Balance (0.80 - 1.20)		1.05	1.03	1.04	1.11
Trihalomethanes, Total	ug/L	6.80	5.84	6.60	5.96

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C13010578-001
Client Sample ID 614

Report Date: 02/25/13
Collection Date: 01/15/13 09:12
Date Received: 01/18/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	1300	mg/L		5		A2320 B	01/18/13 17:36 / jba
Calcium	558	mg/L		1		E200.7	01/21/13 18:26 / sf
Chloride	256	mg/L	D	20		E300.0	01/21/13 13:42 / wc
Magnesium	761	mg/L		1		E200.7	01/21/13 18:26 / sf
Nitrogen, Ammonia as N	172	mg/L	D	5		A4500-NH3 G	01/22/13 16:20 / ljl
Nitrogen, Nitrate+Nitrite as N	135	mg/L	D	10		E353.2	01/18/13 16:26 / lr
Potassium	17	mg/L		1		E200.7	01/21/13 18:26 / sf
Sodium	501	mg/L	D	3		E200.7	01/21/13 18:26 / sf
Sulfate	3800	mg/L	D	80		E300.0	01/21/13 13:42 / wc
PHYSICAL PROPERTIES							
pH	6.51	s.u.	H	0.01		A4500-H B	01/18/13 15:23 / jz
Solids, Total Dissolved TDS @ 180 C	7030	mg/L		100		A2540 C	01/21/13 08:24 / ab
METALS - TOTAL							
Aluminum	0.2	mg/L		0.1		E200.7	01/23/13 00:23 / sf
Beryllium	ND	mg/L		0.001		E200.8	01/22/13 17:27 / clm
Cadmium	ND	mg/L		0.005		E200.7	01/23/13 00:23 / sf
Cobalt	ND	mg/L		0.01		E200.7	01/23/13 00:23 / sf
Lead	0.003	mg/L		0.001		E200.8	01/22/13 17:27 / clm
Manganese	0.84	mg/L		0.01		E200.7	01/23/13 00:23 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/23/13 00:23 / sf
Nickel	ND	mg/L		0.05		E200.7	01/23/13 00:23 / sf
Uranium	0.0525	mg/L		0.0003		E200.8	01/22/13 17:27 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/23/13 00:23 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/29/13 13:52 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	02/01/13 10:01 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.5	pCi/L				E900.1	02/13/13 07:42 / lbb
Gross Alpha minus Rn & U Precision (±)	0.2	pCi/L				E900.1	02/13/13 07:42 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	02/13/13 07:42 / lbb
Lead 210	-0.02	pCi/L	U			E909.0	02/03/13 09:38 / eli-cs
Lead 210 precision (±)	0.4	pCi/L				E909.0	02/03/13 09:38 / eli-cs
Lead 210 MDC	0.7	pCi/L				E909.0	02/03/13 09:38 / eli-cs
Radium 226	1.0	pCi/L				E903.0	02/05/13 12:11 / lbb
Radium 226 precision (±)	0.23	pCi/L				E903.0	02/05/13 12:11 / lbb
Radium 226 MDC	0.17	pCi/L				E903.0	02/05/13 12:11 / lbb
Radium 228	3.5	pCi/L				RA-05	01/31/13 12:47 / plj
Radium 228 precision (±)	0.99	pCi/L				RA-05	01/31/13 12:47 / plj
Radium 228 MDC	1.4	pCi/L				RA-05	01/31/13 12:47 / plj

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C13010578-001
Client Sample ID 614

Report Date: 02/25/13
Collection Date: 01/15/13 09:12
Date Received: 01/18/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.05	pCi/L	U			E908.0	01/31/13 09:13 / dmf
Thorium 230 precision (±)	0.1	pCi/L				E908.0	01/31/13 09:13 / dmf
Thorium 230 MDC	0.3	pCi/L				E908.0	01/31/13 09:13 / dmf
- See Case Narrative regarding Th230 analysis.							
DATA QUALITY							
A/C Balance (± 5)	2.88	%				A1030 E	01/23/13 08:15 / kbh
Anions	118	meq/L				A1030 E	01/23/13 08:15 / kbh
Cations	125	meq/L				A1030 E	01/23/13 08:15 / kbh
Solids, Total Dissolved Calculated	7200	mg/L				A1030 E	01/23/13 08:15 / kbh
TDS Balance (0.80 - 1.20)	0.980					A1030 E	01/23/13 08:15 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/18/13 17:03 / jk
Bromoform	ND	ug/L		0.50		E624	01/18/13 17:03 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	01/18/13 17:03 / jk
Chloroform	57.6	ug/L		5.0		E624	01/22/13 02:23 / jk
Trihalomethanes, Total	57.6	ug/L		5.0		E624	01/22/13 02:23 / jk
Surr: 1,2-Dichlorobenzene-d4	94.0	%REC		80-120		E624	01/18/13 17:03 / jk
Surr: Dibromofluoromethane	82.0	%REC		80-120		E624	01/18/13 17:03 / jk
Surr: p-Bromofluorobenzene	105	%REC		80-120		E624	01/18/13 17:03 / jk
Surr: Toluene-d8	105	%REC		80-120		E624	01/18/13 17:03 / jk

- The sample was received in the laboratory with a pH > 2. The pH was 7.

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C13040233-001
Client Sample ID 614

Report Date: 05/21/13
Collection Date: 04/03/13 09:05
Date Received: 04/05/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	1280	mg/L		5		A2320 B	04/05/13 18:31 / jba
Calcium	551	mg/L		1		E200.7	04/15/13 13:48 / sf
Chloride	267	mg/L	D	10		E300.0	04/08/13 19:05 / wc
Magnesium	727	mg/L		1		E200.7	04/15/13 13:48 / sf
Nitrogen, Ammonia as N	202	mg/L	D	5		A4500-NH3 G	04/10/13 15:50 / lr
Nitrogen, Nitrate+Nitrite as N	145	mg/L	D	5		E353.2	04/08/13 10:38 / lr
Potassium	16	mg/L		1		E200.7	04/15/13 13:48 / sf
Sodium	484	mg/L	D	2		E200.7	04/15/13 13:48 / sf
Sulfate	3790	mg/L	D	40		E300.0	04/08/13 19:05 / wc
PHYSICAL PROPERTIES							
pH	6.67	s.u.	H	0.01		A4500-H B	04/05/13 14:41 / ab
Solids, Total Dissolved TDS @ 180 C	6980	mg/L		100		A2540 C	04/05/13 15:28 / ab
METALS - TOTAL							
Aluminum	0.1	mg/L		0.1		E200.8	04/10/13 20:23 / cp
Beryllium	ND	mg/L		0.001		E200.8	04/10/13 20:23 / cp
Cadmium	ND	mg/L		0.005		E200.8	04/10/13 20:23 / cp
Cobalt	ND	mg/L		0.01		E200.8	04/10/13 20:23 / cp
Lead	0.003	mg/L		0.001		E200.8	04/10/13 20:23 / cp
Manganese	0.85	mg/L		0.01		E200.8	04/10/13 20:23 / cp
Molybdenum	ND	mg/L		0.1		E200.8	04/10/13 20:23 / cp
Nickel	ND	mg/L		0.05		E200.8	04/10/13 20:23 / cp
Uranium	0.0500	mg/L		0.0003		E200.8	04/10/13 20:23 / cp
Vanadium	ND	mg/L		0.1		E200.8	04/10/13 20:23 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/17/13 13:26 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	04/17/13 14:06 / j11
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.5	pCi/L				E900.1	04/29/13 08:14 / lbb
Gross Alpha minus Rn & U Precision (±)	0.3	pCi/L				E900.1	04/29/13 08:14 / lbb
Gross Alpha minus Rn & U MDC	0.4	pCi/L				E900.1	04/29/13 08:14 / lbb
Lead 210	0.2	pCi/L	U			E909.0	04/16/13 12:00 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	04/16/13 12:00 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	04/16/13 12:00 / eli-cs
Radium 226	0.82	pCi/L				E903.0	04/22/13 09:48 / lmc
Radium 226 precision (±)	0.18	pCi/L				E903.0	04/22/13 09:48 / lmc
Radium 226 MDC	0.14	pCi/L				E903.0	04/22/13 09:48 / lmc
Radium 228	4.1	pCi/L				RA-05	04/16/13 19:32 / gb
Radium 228 precision (±)	1.1	pCi/L				RA-05	04/16/13 19:32 / gb
Radium 228 MDC	1.5	pCi/L				RA-05	04/16/13 19:32 / gb

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C13040233-001
Client Sample ID 614

Report Date: 05/21/13
Collection Date: 04/03/13 09:05
Date Received: 04/05/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.04	pCi/L	U			E908.0	04/15/13 17:03 / dmf
Thorium 230 precision (±)	0.06	pCi/L				E908.0	04/15/13 17:03 / dmf
Thorium 230 MDC	0.1	pCi/L				E908.0	04/15/13 17:03 / dmf
DATA QUALITY							
A/C Balance (± 5)	2.33	%				A1030 E	04/18/13 12:47 / kbh
Anions	118	meq/L				A1030 E	04/18/13 12:47 / kbh
Cations	123	meq/L				A1030 E	04/18/13 12:47 / kbh
Solids, Total Dissolved Calculated	7100	mg/L				A1030 E	04/18/13 12:47 / kbh
TDS Balance (0.80 - 1.20)	0.980					A1030 E	04/18/13 12:47 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/09/13 04:59 / jlr
Bromoform	ND	ug/L		0.50		E624	04/09/13 04:59 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/09/13 04:59 / jlr
Chloroform	217	ug/L		5.0		E624	04/08/13 14:45 / jlr
Trihalomethanes, Total	217	ug/L		5.0		E624	04/08/13 14:45 / jlr
Surr: 1,2-Dichlorobenzene-d4	107	%REC		73.7-126		E624	04/09/13 04:59 / jlr
Surr: Dibromofluoromethane	134	%REC	S	64.4-131		E624	04/09/13 04:59 / jlr
Surr: p-Bromofluorobenzene	107	%REC		67.1-133		E624	04/09/13 04:59 / jlr
Surr: Toluene-d8	102	%REC		79.7-125		E624	04/09/13 04:59 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 8.

Report Definitions:

RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
U - Not detected at minimum detectable concentration

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
S - Spike recovery outside of advisory limits.

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 1 Monitor Wells					
Well ID:		614	614	614	614
Collection Date:		4/3/2013	1/15/2013	10/10/2012	7/11/2012
Receive Date:		4/5/2013	1/18/2013	10/12/2012	7/13/2012
Report Date:		5/21/2013	2/25/2013	11/20/2012	8/31/2012
Analyte	RUUnits	C:13040233-001	C:13010578-001	C:12100566-001	C:12070464-001
Bicarbonate as HCO3	mg/L	1280	1300	1370	1270
Calcium	mg/L	551	558	562	527
Chloride	mg/L	267	256	269	274
Magnesium	mg/L	727	761	703	728
Nitrogen, Ammonia as N	mg/L	202	172	161	158
Nitrogen, Nitrate+Nitrite as N	mg/L	145	135	139	113
Potassium	mg/L	16	17	17	15
Sodium	mg/L	484	501	464	463
Sulfate	mg/L	3790	3800	3720	3780
pH	s.u.	6.67	6.51	6.58	6.70
Solids, Total Dissolved TDS @ 180 C	mg/L	6980	7030	7170	7010
Aluminum	mg/L	0.1	0.2	ND(0.1)	0.1
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	ND(0.01)	ND(0.01)	0.01	ND(0.01)
Lead	mg/L	0.003	0.003	0.006	0.002
Manganese	mg/L	0.85	0.84	1.64	0.61
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	ND(0.05)	ND(0.05)	0.09	ND(0.05)
Uranium	mg/L	0.0500	0.0525	0.0966	0.0421
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	0.5	0.5	0.6	0.9
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.3	0.2	0.3	0.3
Gross Alpha minus Rn & U MDC	pCi/L	0.4	0.3	0.3	0.3
Lead 210	pCi/L	0.2	-0.02	0.3	0.9
Lead 210 precision (±)	pCi/L	0.8	0.4	0.6	0.7
Lead 210 MDC	pCi/L	1.3	0.7	1	1.1
Radium 226	pCi/L	0.82	1.0	1.1	0.61
Radium 226 precision (±)	pCi/L	0.18	0.23	0.20	0.16
Radium 226 MDC	pCi/L	0.14	0.17	0.13	0.14
Radium 228	pCi/L	4.1	3.5	3.0	3.4
Radium 228 precision (±)	pCi/L	1.1	0.99	1.0	0.87
Radium 228 MDC	pCi/L	1.5	1.4	1.5	1.2
Thorium 230	pCi/L	0.04	0.05	0.04	0.06
Thorium 230 precision (±)	pCi/L	0.06	0.1	0.2	0.1
Thorium 230 MDC	pCi/L	0.1	0.3	0.4	0.3
A/C Balance (± 5)	%	2.33	2.88	0.154	-0.0926
Anions	meq/L	118	118	118	118
Cations	meq/L	123	125	118	118
Solids, Total Dissolved Calculated	mg/L	7100	7200	7100	7100
TDS Balance (0.80 - 1.20)		0.980	0.980	1.02	0.980
Trihalomethanes, Total	ug/L	217	57.6	238	132

****Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.**



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C13010578-009
Client Sample ID TWQ-142

Report Date: 02/25/13
Collection Date: 01/15/13 17:15
Date Received: 01/18/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	294	mg/L		5		A2320 B	01/18/13 19:15 / jba
Calcium	63	mg/L		1		E200.7	01/21/13 19:35 / sf
Chloride	17	mg/L		1		E300.0	01/21/13 16:37 / wc
Magnesium	34	mg/L		1		E200.7	01/21/13 19:35 / sf
Nitrogen, Ammonia as N	0.45	mg/L		0.05		A4500-NH3 G	01/22/13 16:40 / lji
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	01/18/13 16:51 / lr
Potassium	4	mg/L		1		E200.7	01/21/13 19:35 / sf
Sodium	361	mg/L		1		E200.7	01/21/13 19:35 / sf
Sulfate	717	mg/L	D	4		E300.0	01/21/13 16:37 / wc
PHYSICAL PROPERTIES							
pH	7.34	s.u.	H	0.01		A4500-H B	01/18/13 15:44 / jz
Solids, Total Dissolved TDS @ 180 C	1280	mg/L		20		A2540 C	01/21/13 08:37 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	01/23/13 01:12 / sf
Beryllium	ND	mg/L		0.001		E200.7	01/23/13 01:12 / sf
Cadmium	ND	mg/L		0.005		E200.7	01/23/13 01:12 / sf
Cobalt	ND	mg/L		0.01		E200.7	01/23/13 01:12 / sf
Lead	ND	mg/L		0.001		E200.8	02/13/13 05:00 / cp
Manganese	0.02	mg/L		0.01		E200.7	01/23/13 01:12 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/23/13 01:12 / sf
Nickel	ND	mg/L		0.05		E200.7	01/23/13 01:12 / sf
Uranium	ND	mg/L		0.0003		E200.8	01/22/13 17:02 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/23/13 01:12 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	02/09/13 14:36 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	02/01/13 10:20 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	-0.002	pCi/L	U			E900.1	02/13/13 09:18 / lbb
Gross Alpha minus Rn & U Precision (±)	0.2	pCi/L				E900.1	02/13/13 09:18 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	02/13/13 09:18 / lbb
Lead 210	0.07	pCi/L	U			E909.0	02/04/13 03:35 / eli-cs
Lead 210 precision (±)	0.4	pCi/L				E909.0	02/04/13 03:35 / eli-cs
Lead 210 MDC	0.7	pCi/L				E909.0	02/04/13 03:35 / eli-cs
Radium 226	0.76	pCi/L				E903.0	02/05/13 17:42 / lbb
Radium 226 precision (±)	0.21	pCi/L				E903.0	02/05/13 17:42 / lbb
Radium 226 MDC	0.18	pCi/L				E903.0	02/05/13 17:42 / lbb
Radium 228	0.92	pCi/L	U			RA-05	01/31/13 12:46 / plj
Radium 228 precision (±)	0.93	pCi/L				RA-05	01/31/13 12:46 / plj
Radium 228 MDC	1.5	pCi/L				RA-05	01/31/13 12:46 / plj

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C13010578-009
Client Sample ID TWQ-142

Report Date: 02/25/13
Collection Date: 01/15/13 17:15
Date Received: 01/18/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.03	pCi/L	U			E908.0	01/31/13 09:13 / dmf
Thorium 230 precision (±)	0.07	pCi/L				E908.0	01/31/13 09:13 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	01/31/13 09:13 / dmf
DATA QUALITY							
A/C Balance (± 5)	3.52	%				A1030 E	01/23/13 08:15 / kbh
Anions	20.3	meq/L				A1030 E	01/23/13 08:15 / kbh
Cations	21.8	meq/L				A1030 E	01/23/13 08:15 / kbh
Solids, Total Dissolved Calculated	1400	mg/L				A1030 E	01/23/13 08:15 / kbh
TDS Balance (0.80 - 1.20)	0.940					A1030 E	01/23/13 08:15 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/19/13 02:08 / jk
Bromoform	ND	ug/L		0.50		E624	01/19/13 02:08 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	01/19/13 02:08 / jk
Chloroform	ND	ug/L		0.50		E624	01/19/13 02:08 / jk
Trihalomethanes, Total	ND	ug/L		0.50		E624	01/19/13 02:08 / jk
Surr: 1,2-Dichlorobenzene-d4	94.0	%REC		80-120		E624	01/19/13 02:08 / jk
Surr: Dibromofluoromethane	84.0	%REC		80-120		E624	01/19/13 02:08 / jk
Surr: p-Bromofluorobenzene	108	%REC		80-120		E624	01/19/13 02:08 / jk
Surr: Toluene-d8	102	%REC		80-120		E624	01/19/13 02:08 / jk

- The sample was received in the laboratory with a pH > 2. The pH was 7.

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C13040429-006
Client Sample ID: TWQ-142

Report Date: 05/22/13
Collection Date: 04/09/13 12:55
Date Received: 04/12/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	302	mg/L		5		A2320 B	04/12/13 17:13 / jba
Calcium	62	mg/L		1		E200.7	04/16/13 18:17 / sf
Chloride	16	mg/L		1		E300.0	04/16/13 02:28 / wc
Magnesium	33	mg/L		1		E200.7	04/16/13 18:17 / sf
Nitrogen, Ammonia as N	0.45	mg/L		0.05		A4500-NH ₃ G	04/16/13 15:33 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	04/15/13 13:41 / lr
Potassium	4	mg/L		1		E200.7	04/17/13 13:14 / sf
Sodium	324	mg/L		1		E200.7	04/16/13 18:17 / sf
Sulfate	726	mg/L	D	4		E300.0	04/16/13 02:28 / wc
PHYSICAL PROPERTIES							
pH	7.40	s.u.	H	0.01		A4500-H B	04/12/13 15:09 / ab
Solids, Total Dissolved TDS @ 180 C	1320	mg/L		20		A2540 C	04/16/13 11:53 / jz
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	04/22/13 23:52 / cp
Beryllium	ND	mg/L		0.001		E200.8	04/22/13 23:52 / cp
Cadmium	ND	mg/L		0.005		E200.8	04/22/13 23:52 / cp
Cobalt	ND	mg/L		0.01		E200.8	04/22/13 23:52 / cp
Lead	ND	mg/L		0.001		E200.8	04/22/13 23:52 / cp
Manganese	ND	mg/L		0.01		E200.8	04/22/13 23:52 / cp
Molybdenum	ND	mg/L		0.1		E200.8	04/22/13 23:52 / cp
Nickel	ND	mg/L		0.05		E200.8	04/22/13 23:52 / cp
Uranium	ND	mg/L		0.0003		E200.8	04/22/13 23:52 / cp
Vanadium	ND	mg/L		0.1		E200.8	04/22/13 23:52 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/19/13 13:32 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	04/17/13 15:23 / jl1
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.6	pCi/L	U			E900.1	04/20/13 07:26 / lbb
Gross Alpha minus Rn & U Precision (±)	0.6	pCi/L				E900.1	04/20/13 07:26 / lbb
Gross Alpha minus Rn & U MDC	0.9	pCi/L				E900.1	04/20/13 07:26 / lbb
Lead 210	-0.3	pCi/L	U			E909.0	04/21/13 00:16 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	04/21/13 00:16 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	04/21/13 00:16 / eli-cs
Radium 226	0.68	pCi/L				E903.0	04/29/13 23:52 / lmc
Radium 226 precision (±)	0.21	pCi/L				E903.0	04/29/13 23:52 / lmc
Radium 226 MDC	0.21	pCi/L				E903.0	04/29/13 23:52 / lmc
Radium 228	0.83	pCi/L	U			RA-05	04/24/13 18:39 / gb
Radium 228 precision (±)	1.0	pCi/L				RA-05	04/24/13 18:39 / gb
Radium 228 MDC	1.7	pCi/L				RA-05	04/24/13 18:39 / gb

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C13040429-006
Client Sample ID TWQ-142

Report Date: 05/22/13
Collection Date: 04/09/13 12:55
Date Received: 04/12/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.1	pCi/L				E908.0	05/01/13 11:34 / dmf
Thorium 230 precision (±)	0.06	pCi/L				E908.0	05/01/13 11:34 / dmf
Thorium 230 MDC	0.07	pCi/L				E908.0	05/01/13 11:34 / dmf
DATA QUALITY							
A/C Balance (± 5)	-1.47	%				A1030 E	04/22/13 07:28 / kbh
Anions	20.6	meq/L				A1030 E	04/22/13 07:28 / kbh
Cations	20.0	meq/L				A1030 E	04/22/13 07:28 / kbh
Solids, Total Dissolved Calculated	1300	mg/L				A1030 E	04/22/13 07:28 / kbh
TDS Balance (0.80 - 1.20)	0.990					A1030 E	04/22/13 07:28 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/15/13 17:18 / jlr
Bromoform	ND	ug/L		0.50		E624	04/15/13 17:18 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/15/13 17:18 / jlr
Chloroform	ND	ug/L		0.50		E624	04/15/13 17:18 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	04/15/13 17:18 / jlr
Surr: 1,2-Dichlorobenzene-d4	104	%REC		73.7-126		E624	04/15/13 17:18 / jlr
Surr: Dibromofluoromethane	114	%REC		64.4-131		E624	04/15/13 17:18 / jlr
Surr: p-Bromofluorobenzene	112	%REC		67.1-133		E624	04/15/13 17:18 / jlr
Surr: Toluene-d8	96.0	%REC		79.7-125		E624	04/15/13 17:18 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 8.

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 1 Monitor Wells					
Well ID:		TWQ-142	TWQ-142	TWQ-142	TWQ-142
Collection Date:		4/9/2013	1/15/2013	10/16/2012	7/17/2012
Receive Date:		4/12/2013	1/18/2013	10/19/2012	7/20/2012
Report Date:		5/22/2013	2/25/2013	11/19/2012	8/31/2012
Analyte	RUunits	C13040429-006	C13010578-009	C12100859-006	C12070710-006
Bicarbonate as HCO3	mg/L	302	294	296	288
Calcium	mg/L	62	63	61	61
Chloride	mg/L	16	17	18	18
Magnesium	mg/L	33	34	31	29
Nitrogen, Ammonia as N	mg/L	0.45	0.45	0.40	ND(0.05)
Nitrogen, Nitrate+Nitrite as N	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Potassium	mg/L	4	4	4	4
Sodium	mg/L	324	361	362	336
Sulfate	mg/L	726	717	697	693
pH	s.u.	7.40	7.34	7.36	7.78
Solids, Total Dissolved TDS @ 180 C	mg/L	1320	1280	1290	1330
Aluminum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	ND(0.01)	0.02	ND(0.01)	0.02
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
Uranium	mg/L	ND(0.0003)	ND(0.0003)	ND(0.0003)	ND(0.0003)
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	0.6	-0.002	1.1	0.8
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.6	0.2	0.6	0.2
Gross Alpha minus Rn & U MDC	pCi/L	0.9	0.3	0.7	0.2
Lead 210	pCi/L	-0.3	0.07	0.4	0.4
Lead 210 precision (±)	pCi/L	0.8	0.4	0.6	0.7
Lead 210 MDC	pCi/L	1.3	0.7	1.0	1.2
Radium 226	pCi/L	0.68	0.76	0.57	0.82
Radium 226 precision (±)	pCi/L	0.21	0.21	0.15	0.16
Radium 226 MDC	pCi/L	0.21	0.18	0.16	0.09
Radium 228	pCi/L	0.83	0.92	1.1	0.72
Radium 228 precision (±)	pCi/L	1.0	0.93	1.4	0.81
Radium 228 MDC	pCi/L	1.7	1.5	2.3	1.3
Thorium 230	pCi/L	0.1	0.03	0.04	0.01
Thorium 230 precision (±)	pCi/L	0.06	0.07	0.07	0.05
Thorium 230 MDC	pCi/L	0.07	0.2	0.2	0.2
A/C Balance (± 5)	%	-1.47	3.52	3.70	1.34
Anions	meq/L	20.6	20.3	19.9	19.7
Cations	meq/L	20.0	21.8	21.5	20.2
Solids, Total Dissolved Calculated	mg/L	1300	1400	1300	1300
TDS Balance (0.80 - 1.20)		0.990	0.940	0.960	1.02
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

****Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.**



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C13010578-007
Client Sample ID EPA-2

Report Date: 02/25/13
Collection Date: 01/15/13 14:42
Date Received: 01/18/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	337	mg/L		5		A2320 B	01/18/13 19:00 / jba
Calcium	401	mg/L		1		E200.7	01/21/13 19:15 / sf
Chloride	19	mg/L	D	2		E300.0	01/21/13 16:02 / wc
Magnesium	176	mg/L		1		E200.7	01/21/13 19:15 / sf
Nitrogen, Ammonia as N	0.48	mg/L		0.05		A4500-NH3 G	01/22/13 16:36 / lji
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	01/18/13 16:46 / lr
Potassium	7	mg/L		1		E200.7	01/21/13 19:15 / sf
Sodium	216	mg/L		1		E200.7	01/21/13 19:15 / sf
Sulfate	1710	mg/L	D	8		E300.0	01/21/13 16:02 / wc
PHYSICAL PROPERTIES							
pH	6.78	s.u.	H	0.01		A4500-H B	01/18/13 15:39 / jz
Solids, Total Dissolved TDS @ 180 C	2910	mg/L		20		A2540 C	01/21/13 08:34 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	01/23/13 01:00 / sf
Beryllium	ND	mg/L		0.001		E200.7	01/23/13 01:00 / sf
Cadmium	ND	mg/L		0.005		E200.7	01/23/13 01:00 / sf
Cobalt	ND	mg/L		0.01		E200.7	01/23/13 01:00 / sf
Lead	0.002	mg/L		0.001		E200.8	01/22/13 17:46 / clm
Manganese	1.62	mg/L		0.01		E200.7	01/23/13 01:00 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/23/13 01:00 / sf
Nickel	ND	mg/L		0.05		E200.7	01/23/13 01:00 / sf
Uranium	0.0019	mg/L		0.0003		E200.8	01/22/13 17:46 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/23/13 01:00 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/29/13 14:56 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	02/01/13 10:17 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	1.1	pCi/L				E900.1	02/13/13 07:42 / lbb
Gross Alpha minus Rn & U Precision (±)	0.3	pCi/L				E900.1	02/13/13 07:42 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	02/13/13 07:42 / lbb
Lead 210	0.4	pCi/L	U			E909.0	02/03/13 23:06 / eli-cs
Lead 210 precision (±)	0.4	pCi/L				E909.0	02/03/13 23:06 / eli-cs
Lead 210 MDC	0.7	pCi/L				E909.0	02/03/13 23:06 / eli-cs
Radium 226	1.6	pCi/L				E903.0	02/05/13 17:42 / lbb
Radium 226 precision (±)	0.27	pCi/L				E903.0	02/05/13 17:42 / lbb
Radium 226 MDC	0.16	pCi/L				E903.0	02/05/13 17:42 / lbb
Radium 228	3.8	pCi/L				RA-05	01/31/13 12:47 / plj
Radium 228 precision (±)	0.95	pCi/L				RA-05	01/31/13 12:47 / plj
Radium 228 MDC	1.3	pCi/L				RA-05	01/31/13 12:47 / plj

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C13010578-007
Client Sample ID EPA-2

Report Date: 02/25/13
Collection Date: 01/15/13 14:42
Date Received: 01/18/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.008	pCi/L	U			E908.0	01/31/13 09:13 / dmf
Thorium 230 precision (±)	0.06	pCi/L				E908.0	01/31/13 09:13 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	01/31/13 09:13 / dmf
DATA QUALITY							
A/C Balance (± 5)	2.80	%				A1030 E	01/23/13 08:15 / kbh
Anions	41.7	meq/L				A1030 E	01/23/13 08:15 / kbh
Cations	44.1	meq/L				A1030 E	01/23/13 08:15 / kbh
Solids, Total Dissolved Calculated	2700	mg/L				A1030 E	01/23/13 08:15 / kbh
TDS Balance (0.80 - 1.20)	1.07					A1030 E	01/23/13 08:15 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/19/13 00:55 / jk
Bromoform	ND	ug/L		0.50		E624	01/19/13 00:55 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	01/19/13 00:55 / jk
Chloroform	ND	ug/L		0.50		E624	01/19/13 00:55 / jk
Trihalomethanes, Total	ND	ug/L		0.50		E624	01/19/13 00:55 / jk
Surr: 1,2-Dichlorobenzene-d4	94.0	%REC		80-120		E624	01/19/13 00:55 / jk
Surr: Dibromofluoromethane	88.0	%REC		80-120		E624	01/19/13 00:55 / jk
Surr: p-Bromofluorobenzene	107	%REC		80-120		E624	01/19/13 00:55 / jk
Surr: Toluene-d8	99.0	%REC		80-120		E624	01/19/13 00:55 / jk

- The sample was received in the laboratory with a pH > 2. The pH was 7.

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C13040429-004
Client Sample ID: EPA-2

Report Date: 05/22/13
Collection Date: 04/08/13 11:50
Date Received: 04/12/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	316	mg/L		5		A2320 B	04/12/13 16:57 / jba
Calcium	367	mg/L		1		E200.7	04/16/13 17:29 / sf
Chloride	20	mg/L	D	2		E300.0	04/16/13 01:11 / wc
Magnesium	166	mg/L		1		E200.7	04/16/13 17:29 / sf
Nitrogen, Ammonia as N	0.43	mg/L		0.05		A4500-NH ₃ G	04/16/13 15:29 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	04/15/13 13:36 / lr
Potassium	7	mg/L		1		E200.7	04/17/13 13:06 / sf
Sodium	193	mg/L		1		E200.7	04/16/13 17:29 / sf
Sulfate	1850	mg/L	D	8		E300.0	04/16/13 01:11 / wc
PHYSICAL PROPERTIES							
pH	6.87	s.u.	H	0.01		A4500-H B	04/12/13 15:04 / ab
Solids, Total Dissolved TDS @ 180 C	2930	mg/L		20		A2540 C	04/12/13 15:52 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	04/22/13 23:43 / cp
Beryllium	ND	mg/L		0.001		E200.8	04/22/13 23:43 / cp
Cadmium	ND	mg/L		0.005		E200.8	04/22/13 23:43 / cp
Cobalt	ND	mg/L		0.01		E200.8	04/22/13 23:43 / cp
Lead	ND	mg/L		0.001		E200.8	04/22/13 23:43 / cp
Manganese	1.51	mg/L		0.01		E200.8	04/22/13 23:43 / cp
Molybdenum	ND	mg/L		0.1		E200.8	04/22/13 23:43 / cp
Nickel	ND	mg/L		0.05		E200.8	04/22/13 23:43 / cp
Uranium	0.0017	mg/L		0.0003		E200.8	04/22/13 23:43 / cp
Vanadium	ND	mg/L		0.1		E200.8	04/22/13 23:43 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/19/13 13:16 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	04/17/13 15:20 / jl1
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	2.9	pCi/L				E900.1	04/20/13 05:42 / lbb
Gross Alpha minus Rn & U Precision (±)	0.9	pCi/L				E900.1	04/20/13 05:42 / lbb
Gross Alpha minus Rn & U MDC	0.9	pCi/L				E900.1	04/20/13 05:42 / lbb
Lead 210	-0.4	pCi/L	U			E909.0	04/21/13 00:16 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	04/21/13 00:16 / eli-cs
Lead 210 MDC	1.4	pCi/L				E909.0	04/21/13 00:16 / eli-cs
Radium 226	0.99	pCi/L				E903.0	04/29/13 22:14 / lmc
Radium 226 precision (±)	0.23	pCi/L				E903.0	04/29/13 22:14 / lmc
Radium 226 MDC	0.19	pCi/L				E903.0	04/29/13 22:14 / lmc
Radium 228	1.8	pCi/L				RA-05	04/24/13 18:39 / gb
Radium 228 precision (±)	1.0	pCi/L				RA-05	04/24/13 18:39 / gb
Radium 228 MDC	1.6	pCi/L				RA-05	04/24/13 18:39 / gb

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C13040429-004
Client Sample ID: EPA-2

Report Date: 05/22/13
Collection Date: 04/08/13 11:50
Date Received: 04/12/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.02	pCi/L	U			E908.0	05/01/13 11:34 / dmf
Thorium 230 precision (±)	0.03	pCi/L				E908.0	05/01/13 11:34 / dmf
Thorium 230 MDC	0.07	pCi/L				E908.0	05/01/13 11:34 / dmf
DATA QUALITY							
A/C Balance (± 5)	-4.31	%				A1030 E	04/22/13 07:28 / kbh
Anions	44.2	meq/L				A1030 E	04/22/13 07:28 / kbh
Cations	40.6	meq/L				A1030 E	04/22/13 07:28 / kbh
Solids, Total Dissolved Calculated	2800	mg/L				A1030 E	04/22/13 07:28 / kbh
TDS Balance (0.80 - 1.20)	1.05					A1030 E	04/22/13 07:28 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/15/13 16:10 / jlr
Bromoform	ND	ug/L		0.50		E624	04/15/13 16:10 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/15/13 16:10 / jlr
Chloroform	ND	ug/L		0.50		E624	04/15/13 16:10 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	04/15/13 16:10 / jlr
Surr: 1,2-Dichlorobenzene-d4	103	%REC		73.7-126		E624	04/15/13 16:10 / jlr
Surr: Dibromofluoromethane	120	%REC		64.4-131		E624	04/15/13 16:10 / jlr
Surr: p-Bromofluorobenzene	114	%REC		67.1-133		E624	04/15/13 16:10 / jlr
Surr: Toluene-d8	93.0	%REC		79.7-125		E624	04/15/13 16:10 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 8.

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 U - Not detected at minimum detectable concentration

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 1 Monitor Wells					
Well ID:		EPA-2	EPA-2	EPA-2	EPA-2
Collection Date:		4/8/2013	1/15/2013	10/15/2012	7/16/2012
Receive Date:		4/12/2013	1/18/2013	10/19/2012	7/20/2012
Report Date:		5/22/2013	2/25/2013	11/19/2012	8/31/2012
Analyte	RUnits	C13040429-004	C13010578-007	C12100859-004	C12070710-004
Bicarbonate as HCO3	mg/L	316	337	306	299
Calcium	mg/L	367	401	382	337
Chloride	mg/L	20	19	22	21
Magnesium	mg/L	166	176	161	155
Nitrogen, Ammonia as N	mg/L	0.43	0.48	0.44	0.42
Nitrogen, Nitrate+Nitrite as N	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Potassium	mg/L	7	7	7	6
Sodium	mg/L	193	216	215	207
Sulfate	mg/L	1850	1710	1800	1790
pH	s.u.	6.87	6.78	7.04	7.10
Solids, Total Dissolved TDS @ 180 C	mg/L	2930	2910	2990	2920
Aluminum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
Lead	mg/L	ND(0.001)	0.002	ND(0.001)	ND(0.001)
Manganese	mg/L	1.51	1.62	1.24	1.39
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
Uranium	mg/L	0.0017	0.0019	0.0020	0.0017
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	2.9	1.1	1.8	1.6
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.9	0.3	0.7	0.3
Gross Alpha minus Rn & U MDC	pCi/L	0.9	0.3	0.7	0.2
Lead 210	pCi/L	-0.4	0.4	0.2	0.8
Lead 210 precision (±)	pCi/L	0.8	0.4	0.6	0.7
Lead 210 MDC	pCi/L	1.4	0.7	1.0	1.2
Radium 226	pCi/L	0.99	1.6	0.91	1.3
Radium 226 precision (±)	pCi/L	0.23	0.27	0.13	0.19
Radium 226 MDC	pCi/L	0.19	0.16	0.10	0.09
Radium 228	pCi/L	1.8	3.8	2.4	2.2
Radium 228 precision (±)	pCi/L	1.0	0.95	0.84	0.86
Radium 228 MDC	pCi/L	1.6	1.3	1.2	1.3
Thorium 230	pCi/L	0.02	0.008	0.05	0.04
Thorium 230 precision (±)	pCi/L	0.03	0.06	0.08	0.08
Thorium 230 MDC	pCi/L	0.07	0.2	0.2	0.2
A/C Balance (± 5)	%	-4.31	2.80	-1.39	-4.75
Anions	meq/L	44.2	41.7	43.1	42.7
Cations	meq/L	40.6	44.1	41.9	38.8
Solids, Total Dissolved Calculated	mg/L	2800	2700	2800	2700
TDS Balance (0.80 - 1.20)		1.05	1.07	1.08	1.09
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

****Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.**



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C13010578-006
Client Sample ID EPA-4

Report Date: 02/25/13
Collection Date: 01/15/13 13:36
Date Received: 01/18/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	169	mg/L		5		A2320 B	01/18/13 18:52 / jba
Calcium	599	mg/L		1		E200.7	01/21/13 19:07 / sf
Chloride	34	mg/L	D	4		E300.0	01/21/13 15:44 / wc
Magnesium	394	mg/L		1		E200.7	01/21/13 19:07 / sf
Nitrogen, Ammonia as N	0.78	mg/L		0.05		A4500-NH3 G	01/22/13 16:34 / ljl
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	01/18/13 16:44 / lr
Potassium	9	mg/L		1		E200.7	01/21/13 19:07 / sf
Sodium	193	mg/L	D	2		E200.7	01/21/13 19:07 / sf
Sulfate	2950	mg/L	D	20		E300.0	01/21/13 15:44 / wc
PHYSICAL PROPERTIES							
pH	6.81	s.u.	H	0.01		A4500-H B	01/18/13 15:36 / jz
Solids, Total Dissolved TDS @ 180 C	4480	mg/L		40		A2540 C	01/21/13 08:34 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	01/23/13 00:56 / sf
Beryllium	ND	mg/L		0.001		E200.7	01/23/13 00:56 / sf
Cadmium	ND	mg/L		0.005		E200.7	01/23/13 00:56 / sf
Cobalt	ND	mg/L		0.01		E200.7	01/23/13 00:56 / sf
Lead	ND	mg/L		0.001		E200.8	01/22/13 17:43 / clm
Manganese	3.44	mg/L		0.01		E200.7	01/23/13 00:56 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/23/13 00:56 / sf
Nickel	ND	mg/L		0.05		E200.7	01/23/13 00:56 / sf
Uranium	ND	mg/L		0.0003		E200.8	01/22/13 17:43 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/23/13 00:56 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/29/13 14:48 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	02/01/13 10:15 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	1.3	pCi/L				E900.1	02/13/13 07:42 / lbb
Gross Alpha minus Rn & U Precision (±)	0.3	pCi/L				E900.1	02/13/13 07:42 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	02/13/13 07:42 / lbb
Lead 210	0.3	pCi/L	U			E909.0	02/03/13 20:51 / eli-cs
Lead 210 precision (±)	0.4	pCi/L				E909.0	02/03/13 20:51 / eli-cs
Lead 210 MDC	0.7	pCi/L				E909.0	02/03/13 20:51 / eli-cs
Radium 226	1.2	pCi/L				E903.0	02/05/13 17:42 / lbb
Radium 226 precision (±)	0.24	pCi/L				E903.0	02/05/13 17:42 / lbb
Radium 226 MDC	0.15	pCi/L				E903.0	02/05/13 17:42 / lbb
Radium 228	2.5	pCi/L				RA-05	01/31/13 12:47 / plj
Radium 228 precision (±)	0.88	pCi/L				RA-05	01/31/13 12:47 / plj
Radium 228 MDC	1.3	pCi/L				RA-05	01/31/13 12:47 / plj

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C13010578-006
Client Sample ID EPA-4

Report Date: 02/25/13
Collection Date: 01/15/13 13:36
Date Received: 01/18/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.07	pCi/L	U			E908.0	01/31/13 09:13 / dmf
Thorium 230 precision (±)	0.09	pCi/L				E908.0	01/31/13 09:13 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	01/31/13 09:13 / dmf
DATA QUALITY							
A/C Balance (± 5)	4.26	%				A1030 E	01/23/13 08:15 / kbh
Anions	65.2	meq/L				A1030 E	01/23/13 08:15 / kbh
Cations	71.0	meq/L				A1030 E	01/23/13 08:15 / kbh
Solids, Total Dissolved Calculated	4300	mg/L				A1030 E	01/23/13 08:15 / kbh
TDS Balance (0.80 - 1.20)	1.04					A1030 E	01/23/13 08:15 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/19/13 00:19 / jk
Bromoform	ND	ug/L		0.50		E624	01/19/13 00:19 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	01/19/13 00:19 / jk
Chloroform	ND	ug/L		0.50		E624	01/19/13 00:19 / jk
Trihalomethanes, Total	ND	ug/L		0.50		E624	01/19/13 00:19 / jk
Surr: 1,2-Dichlorobenzene-d4	94.0	%REC		80-120		E624	01/19/13 00:19 / jk
Surr: Dibromofluoromethane	84.0	%REC		80-120		E624	01/19/13 00:19 / jk
Surr: p-Bromofluorobenzene	110	%REC		80-120		E624	01/19/13 00:19 / jk
Surr: Toluene-d8	100	%REC		80-120		E624	01/19/13 00:19 / jk

- The sample was received in the laboratory with a pH > 2. The pH was 7.

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C13040429-001
Client Sample ID EPA-4

Report Date: 05/22/13
Collection Date: 04/08/13 09:10
Date Received: 04/12/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	162	mg/L		5		A2320 B	04/15/13 15:48 / jba
Calcium	554	mg/L		1		E200.7	04/16/13 17:07 / sf
Chloride	35	mg/L	D	4		E300.0	04/16/13 00:25 / wc
Magnesium	385	mg/L		1		E200.7	04/16/13 17:07 / sf
Nitrogen, Ammonia as N	0.72	mg/L		0.05		A4500-NH3 G	04/16/13 15:19 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	04/15/13 13:28 / lr
Potassium	9	mg/L		1		E200.7	04/17/13 12:52 / sf
Sodium	181	mg/L		1		E200.7	04/16/13 17:07 / sf
Sulfate	3080	mg/L	D	20		E300.0	04/16/13 00:25 / wc
PHYSICAL PROPERTIES							
pH	6.80	s.u.	H	0.01		A4500-H B	04/12/13 14:56 / ab
Solids, Total Dissolved TDS @ 180 C	4590	mg/L		40		A2540 C	04/12/13 15:51 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	04/19/13 16:22 / sf
Beryllium	ND	mg/L		0.001		E200.7	04/19/13 16:22 / sf
Cadmium	ND	mg/L		0.005		E200.7	04/19/13 16:22 / sf
Cobalt	ND	mg/L		0.01		E200.7	04/19/13 16:22 / sf
Lead	ND	mg/L		0.001		E200.8	04/22/13 23:34 / cp
Manganese	3.14	mg/L		0.01		E200.7	04/19/13 16:22 / sf
Molybdenum	ND	mg/L		0.1		E200.7	04/19/13 16:22 / sf
Nickel	ND	mg/L		0.05		E200.7	04/19/13 16:22 / sf
Uranium	ND	mg/L		0.0003		E200.8	04/22/13 23:34 / cp
Vanadium	ND	mg/L		0.1		E200.7	04/19/13 16:22 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/19/13 12:23 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	04/17/13 15:12 / jl1
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	2.0	pCi/L				E900.1	04/20/13 05:42 / lbb
Gross Alpha minus Rn & U Precision (±)	0.8	pCi/L				E900.1	04/20/13 05:42 / lbb
Gross Alpha minus Rn & U MDC	0.9	pCi/L				E900.1	04/20/13 05:42 / lbb
Lead 210	-0.4	pCi/L	U			E909.0	04/21/13 00:16 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	04/21/13 00:16 / eli-cs
Lead 210 MDC	1.4	pCi/L				E909.0	04/21/13 00:16 / eli-cs
Radium 226	1.2	pCi/L				E903.0	04/29/13 22:14 / lmc
Radium 226 precision (±)	0.26	pCi/L				E903.0	04/29/13 22:14 / lmc
Radium 226 MDC	0.19	pCi/L				E903.0	04/29/13 22:14 / lmc
Radium 228	1.6	pCi/L				RA-05	04/24/13 18:39 / gb
Radium 228 precision (±)	1.0	pCi/L				RA-05	04/24/13 18:39 / gb
Radium 228 MDC	1.6	pCi/L				RA-05	04/24/13 18:39 / gb

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C13040429-001
Client Sample ID: EPA-4

Report Date: 05/22/13
Collection Date: 04/08/13 09:10
Date Received: 04/12/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.08	pCi/L	U			E908.0	05/01/13 11:33 / dmf
Thorium 230 precision (±)	0.06	pCi/L				E908.0	05/01/13 11:33 / dmf
Thorium 230 MDC	0.1	pCi/L				E908.0	05/01/13 11:33 / dmf
DATA QUALITY							
A/C Balance (± 5)	-0.269	%				A1030 E	04/22/13 07:27 / kbh
Anions	67.8	meq/L				A1030 E	04/22/13 07:27 / kbh
Cations	67.5	meq/L				A1030 E	04/22/13 07:27 / kbh
Solids, Total Dissolved Calculated	4400	mg/L				A1030 E	04/22/13 07:27 / kbh
TDS Balance (0.80 - 1.20)	1.05					A1030 E	04/22/13 07:27 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/15/13 14:29 / jlr
Bromoform	ND	ug/L		0.50		E624	04/15/13 14:29 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/15/13 14:29 / jlr
Chloroform	ND	ug/L		0.50		E624	04/15/13 14:29 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	04/15/13 14:29 / jlr
Surr: 1,2-Dichlorobenzene-d4	104	%REC		73.7-126		E624	04/15/13 14:29 / jlr
Surr: Dibromofluoromethane	117	%REC		64.4-131		E624	04/15/13 14:29 / jlr
Surr: p-Bromofluorobenzene	114	%REC		67.1-133		E624	04/15/13 14:29 / jlr
Surr: Toluene-d8	94.0	%REC		79.7-125		E624	04/15/13 14:29 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 8.

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 U - Not detected at minimum detectable concentration

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 1 Monitor Wells					
Well ID:		EPA-4	EPA-4	EPA-4	EPA-4
Collection Date:		4/8/2013	1/15/2013	10/15/2012	7/16/2012
Receive Date:		4/12/2013	1/18/2013	10/19/2012	7/20/2012
Report Date:		5/22/2013	2/25/2013	11/19/2012	8/31/2012
Analyte	RUnits	C13040429-001	C13010578-006	C12100859-001	C12070710-001
Bicarbonate as HCO3	mg/L	162	169	153	143
Calcium	mg/L	554	599	592	483
Chloride	mg/L	35	34	39	38
Magnesium	mg/L	385	394	380	383
Nitrogen, Ammonia as N	mg/L	0.72	0.78	1.4	0.77
Nitrogen, Nitrate+Nitrite as N	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Potassium	mg/L	9	9	9	9
Sodium	mg/L	181	193	191	185
Sulfate	mg/L	3080	2950	3010	3040
pH	s.u.	6.80	6.81	7.04	7.07
Solids, Total Dissolved TDS @ 180 C	mg/L	4590	4480	4500	4640
Aluminum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	3.14	3.44	2.76	2.87
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
Uranium	mg/L	ND(0.0003)	ND(0.0003)	0.0003	0.0004
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	2.0	1.3	1.7	1.3
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.8	0.3	0.7	0.3
Gross Alpha minus Rn & U MDC	pCi/L	0.9	0.3	0.7	0.2
Lead 210	pCi/L	0.4	0.3	0.5	0.6
Lead 210 precision (±)	pCi/L	0.8	0.4	0.6	0.7
Lead 210 MDC	pCi/L	1.4	0.7	1.0	1.1
Radium 226	pCi/L	1.2	1.2	1.1	0.96
Radium 226 precision (±)	pCi/L	0.26	0.24	0.13	0.16
Radium 226 MDC	pCi/L	0.19	0.15	0.09	0.09
Radium 228	pCi/L	1.6	2.5	3.6	2.4
Radium 228 precision (±)	pCi/L	1.0	0.88	0.84	0.84
Radium 228 MDC	pCi/L	1.6	1.3	1.1	1.2
Thorium 230	pCi/L	0.08	0.07	0.3	0.08
Thorium 230 precision (±)	pCi/L	0.06	0.09	0.2	0.1
Thorium 230 MDC	pCi/L	0.1	0.2	0.4	0.3
A/C Balance (± 5)	%	-0.269	4.26	2.38	-2.11
Anions	meq/L	67.8	65.2	66.2	66.7
Cations	meq/L	67.5	71.0	69.4	64.0
Solids, Total Dissolved Calculated	mg/L	4400	4300	4300	4200
TDS Balance (0.80 - 1.20)		1.05	1.04	1.04	1.10
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

****Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.**



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C13010578-005
Client Sample ID EPA-5

Report Date: 02/25/13
Collection Date: 01/15/13 12:46
Date Received: 01/18/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	67	mg/L		5		A2320 B	01/18/13 18:36 / jba
Calcium	471	mg/L		1		E200.7	01/21/13 19:03 / sf
Chloride	37	mg/L	D	4		E300.0	01/21/13 15:27 / wc
Magnesium	496	mg/L		1		E200.7	01/21/13 19:03 / sf
Nitrogen, Ammonia as N	1.6	mg/L	D	0.1		A4500-NH3 G	01/22/13 16:32 / ljl
Nitrogen, Nitrate+Nitrite as N	1.9	mg/L	D	0.2		E353.2	01/18/13 16:36 / lr
Potassium	6	mg/L		1		E200.7	01/21/13 19:03 / sf
Sodium	112	mg/L	D	2		E200.7	01/21/13 19:03 / sf
Sulfate	3200	mg/L	D	20		E300.0	01/21/13 15:27 / wc
PHYSICAL PROPERTIES							
pH	5.99	s.u.	H	0.01		A4500-H B	01/18/13 15:34 / jz
Solids, Total Dissolved TDS @ 180 C	4710	mg/L		40		A2540 C	01/21/13 08:34 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	01/23/13 00:51 / sf
Beryllium	ND	mg/L		0.001		E200.7	01/23/13 00:51 / sf
Cadmium	ND	mg/L		0.005		E200.7	01/23/13 00:51 / sf
Cobalt	0.05	mg/L		0.01		E200.7	01/23/13 00:51 / sf
Lead	ND	mg/L		0.001		E200.8	01/22/13 17:39 / clm
Manganese	1.13	mg/L		0.01		E200.7	01/23/13 00:51 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/23/13 00:51 / sf
Nickel	0.06	mg/L		0.05		E200.7	01/23/13 00:51 / sf
Uranium	0.0005	mg/L		0.0003		E200.8	01/22/13 17:39 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/23/13 00:51 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/29/13 14:40 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	02/01/13 10:11 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	1	pCi/L				E900.1	02/13/13 07:42 / lbb
Gross Alpha minus Rn & U Precision (±)	0.3	pCi/L				E900.1	02/13/13 07:42 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	02/13/13 07:42 / lbb
Lead 210	0.1	pCi/L	U			E909.0	02/03/13 18:36 / eli-cs
Lead 210 precision (±)	0.4	pCi/L				E909.0	02/03/13 18:36 / eli-cs
Lead 210 MDC	0.7	pCi/L				E909.0	02/03/13 18:36 / eli-cs
Radium 226	1.5	pCi/L				E903.0	02/05/13 17:42 / lbb
Radium 226 precision (±)	0.26	pCi/L				E903.0	02/05/13 17:42 / lbb
Radium 226 MDC	0.16	pCi/L				E903.0	02/05/13 17:42 / lbb
Radium 228	2.5	pCi/L				RA-05	01/31/13 12:47 / plj
Radium 228 precision (±)	0.90	pCi/L				RA-05	01/31/13 12:47 / plj
Radium 228 MDC	1.3	pCi/L				RA-05	01/31/13 12:47 / plj

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C13010578-005
Client Sample ID EPA-5

Report Date: 02/25/13
Collection Date: 01/15/13 12:46
Date Received: 01/18/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.05	pCi/L	U			E908.0	01/31/13 09:13 / dmf
Thorium 230 precision (±)	0.09	pCi/L				E908.0	01/31/13 09:13 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	01/31/13 09:13 / dmf
DATA QUALITY							
A/C Balance (± 5)	0.316	%				A1030 E	01/23/13 08:15 / kbh
Anions	69.0	meq/L				A1030 E	01/23/13 08:15 / kbh
Cations	69.4	meq/L				A1030 E	01/23/13 08:15 / kbh
Solids, Total Dissolved Calculated	4400	mg/L				A1030 E	01/23/13 08:15 / kbh
TDS Balance (0.80 - 1.20)	1.08					A1030 E	01/23/13 08:15 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/18/13 23:42 / jk
Bromoform	ND	ug/L		0.50		E624	01/18/13 23:42 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	01/18/13 23:42 / jk
Chloroform	ND	ug/L		0.50		E624	01/18/13 23:42 / jk
Trihalomethanes, Total	ND	ug/L		0.50		E624	01/18/13 23:42 / jk
Surr: 1,2-Dichlorobenzene-d4	94.0	%REC		80-120		E624	01/18/13 23:42 / jk
Surr: Dibromofluoromethane	87.0	%REC		80-120		E624	01/18/13 23:42 / jk
Surr: p-Bromofluorobenzene	105	%REC		80-120		E624	01/18/13 23:42 / jk
Surr: Toluene-d8	107	%REC		80-120		E624	01/18/13 23:42 / jk

- The sample was received in the laboratory with a pH > 2. The pH was 7.

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C13040429-002
Client Sample ID: EPA-5

Report Date: 05/22/13
Collection Date: 04/08/13 10:10
Date Received: 04/12/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	70	mg/L		5		A2320 B	04/12/13 16:41 / jba
Calcium	470	mg/L		1		E200.7	04/16/13 17:11 / sf
Chloride	36	mg/L	D	4		E300.0	04/16/13 00:40 / wc
Magnesium	489	mg/L		1		E200.7	04/16/13 17:11 / sf
Nitrogen, Ammonia as N	2.63	mg/L		0.05		A4500-NH ₃ G	04/16/13 15:25 / lr
Nitrogen, Nitrate+Nitrite as N	2.1	mg/L	D	0.2		E353.2	04/15/13 13:31 / lr
Potassium	7	mg/L		1		E200.7	04/17/13 12:55 / sf
Sodium	108	mg/L		1		E200.7	04/16/13 17:11 / sf
Sulfate	3210	mg/L	D	20		E300.0	04/16/13 00:40 / wc
PHYSICAL PROPERTIES							
pH	6.07	s.u.	H	0.01		A4500-H B	04/12/13 14:59 / ab
Solids, Total Dissolved TDS @ 180 C	4810	mg/L		40		A2540 C	04/12/13 15:51 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	04/19/13 17:06 / sf
Beryllium	ND	mg/L		0.001		E200.7	04/19/13 17:06 / sf
Cadmium	ND	mg/L		0.005		E200.7	04/19/13 17:06 / sf
Cobalt	0.04	mg/L		0.01		E200.7	04/19/13 17:06 / sf
Lead	ND	mg/L		0.001		E200.8	04/22/13 22:46 / cp
Manganese	0.95	mg/L		0.01		E200.7	04/19/13 17:06 / sf
Molybdenum	ND	mg/L		0.1		E200.7	04/19/13 17:06 / sf
Nickel	0.06	mg/L		0.05		E200.7	04/19/13 17:06 / sf
Uranium	0.0007	mg/L		0.0003		E200.8	04/22/13 22:46 / cp
Vanadium	ND	mg/L		0.1		E200.7	04/19/13 17:06 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/19/13 12:31 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	04/17/13 15:17 / jl1
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	1.9	pCi/L				E900.1	04/20/13 05:42 / lbb
Gross Alpha minus Rn & U Precision (±)	0.8	pCi/L				E900.1	04/20/13 05:42 / lbb
Gross Alpha minus Rn & U MDC	0.9	pCi/L				E900.1	04/20/13 05:42 / lbb
Lead 210	-0.1	pCi/L	U			E909.0	04/21/13 00:16 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	04/21/13 00:16 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	04/21/13 00:16 / eli-cs
Radium 226	1.4	pCi/L				E903.0	04/29/13 22:14 / lmc
Radium 226 precision (±)	0.27	pCi/L				E903.0	04/29/13 22:14 / lmc
Radium 226 MDC	0.20	pCi/L				E903.0	04/29/13 22:14 / lmc
Radium 228	1.9	pCi/L				RA-05	04/24/13 18:39 / gb
Radium 228 precision (±)	1.0	pCi/L				RA-05	04/24/13 18:39 / gb
Radium 228 MDC	1.6	pCi/L				RA-05	04/24/13 18:39 / gb

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C13040429-002
Client Sample ID: EPA-5

Report Date: 05/22/13
Collection Date: 04/08/13 10:10
Date Received: 04/12/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.1	pCi/L				E908.0	05/01/13 11:33 / dmf
Thorium 230 precision (±)	0.05	pCi/L				E908.0	05/01/13 11:33 / dmf
Thorium 230 MDC	0.06	pCi/L				E908.0	05/01/13 11:33 / dmf
DATA QUALITY							
A/C Balance (± 5)	-0.301	%				A1030 E	04/22/13 07:28 / kbh
Anions	69.2	meq/L				A1030 E	04/22/13 07:28 / kbh
Cations	68.8	meq/L				A1030 E	04/22/13 07:28 / kbh
Solids, Total Dissolved Calculated	4400	mg/L				A1030 E	04/22/13 07:28 / kbh
TDS Balance (0.80 - 1.20)	1.10					A1030 E	04/22/13 07:28 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/15/13 15:03 / jlr
Bromoform	ND	ug/L		0.50		E624	04/15/13 15:03 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/15/13 15:03 / jlr
Chloroform	ND	ug/L		0.50		E624	04/15/13 15:03 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	04/15/13 15:03 / jlr
Surr: 1,2-Dichlorobenzene-d4	105	%REC		73.7-126		E624	04/15/13 15:03 / jlr
Surr: Dibromofluoromethane	118	%REC		64.4-131		E624	04/15/13 15:03 / jlr
Surr: p-Bromofluorobenzene	113	%REC		67.1-133		E624	04/15/13 15:03 / jlr
Surr: Toluene-d8	95.0	%REC		79.7-125		E624	04/15/13 15:03 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 8.

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 1 Monitor Wells					
Well ID:		EPA-5	EPA-5	EPA-5	EPA-5
Collection Date:		4/8/2013	1/15/2013	10/15/2012	7/16/2012
Receive Date:		4/12/2013	1/18/2013	10/19/2012	7/20/2012
Report Date:		5/22/2013	2/25/2013	11/19/2012	8/31/2012
Analyte	RUnits	C13040429-002	C13010578-005	C12100859-002	C12070710-002
Bicarbonate as HCO3	mg/L	70	67	66	69
Calcium	mg/L	470	471	488	514
Chloride	mg/L	36	37	40	41
Magnesium	mg/L	489	496	486	522
Nitrogen, Ammonia as N	mg/L	2.63	1.6	1.40	4.4
Nitrogen, Nitrate+Nitrite as N	mg/L	2.1	1.9	2.1	3.1
Potassium	mg/L	7	6	6	6
Sodium	mg/L	108	112	112	117
Sulfate	mg/L	3210	3200	3130	3230
pH	s.u.	6.07	5.99	6.16	6.28
Solids, Total Dissolved TDS @ 180 C	mg/L	4810	4710	4790	4920
Aluminum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	0.04	0.05	0.04	0.03
Lead	mg/L	ND(0.001)	ND(0.001)	0.001	0.002
Manganese	mg/L	0.95	1.13	0.90	0.98
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	0.06	0.06	0.06	ND(0.05)
Uranium	mg/L	0.0007	0.0005	0.0006	0.0010
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	1.9	1	2.2	1.7
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.8	0.3	0.7	0.3
Gross Alpha minus Rn & U MDC	pCi/L	0.9	0.3	0.7	0.2
Lead 210	pCi/L	-0.1	0.1	0.7	1
Lead 210 precision (±)	pCi/L	0.8	0.4	0.7	0.7
Lead 210 MDC	pCi/L	1.3	0.7	1.0	1.2
Radium 226	pCi/L	1.4	1.5	1.1	1.4
Radium 226 precision (±)	pCi/L	0.27	0.26	0.14	0.19
Radium 226 MDC	pCi/L	0.20	0.16	0.1	0.09
Radium 228	pCi/L	1.9	2.5	2.3	1.8
Radium 228 precision (±)	pCi/L	1.0	0.90	0.80	0.82
Radium 228 MDC	pCi/L	1.6	1.3	1.1	1.2
Thorium 230	pCi/L	0.1	0.05	0.04	0.01
Thorium 230 precision (±)	pCi/L	0.05	0.09	0.09	0.1
Thorium 230 MDC	pCi/L	0.06	0.2	0.2	0.3
A/C Balance (± 5)	%	-0.301	0.316	1.27	3.01
Anions	meq/L	69.2	69.0	67.8	69.8
Cations	meq/L	68.8	69.4	69.5	74.2
Solids, Total Dissolved Calculated	mg/L	4400	4400	4300	4500
TDS Balance (0.80 - 1.20)		1.10	1.08	1.10	1.09
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C13010578-004
Client Sample ID EPA-7

Report Date: 02/25/13
Collection Date: 01/15/13 12:06
Date Received: 01/18/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	660	mg/L		5		A2320 B	01/18/13 18:22 / jba
Calcium	509	mg/L		1		E200.7	01/21/13 18:55 / sf
Chloride	228	mg/L	D	10		E300.0	01/21/13 15:09 / wc
Magnesium	976	mg/L		1		E200.7	01/21/13 18:55 / sf
Nitrogen, Ammonia as N	0.19	mg/L		0.05		A4500-NH3 G	01/22/13 16:30 / ljl
Nitrogen, Nitrate+Nitrite as N	126	mg/L	D	10		E353.2	01/18/13 16:34 / lr
Potassium	9	mg/L		1		E200.7	01/21/13 18:55 / sf
Sodium	415	mg/L	D	2		E200.7	01/21/13 18:55 / sf
Sulfate	4510	mg/L	D	40		E300.0	01/21/13 15:09 / wc
PHYSICAL PROPERTIES							
pH	6.24	s.u.	H	0.01		A4500-H B	01/18/13 15:31 / jz
Solids, Total Dissolved TDS @ 180 C	7660	mg/L		100		A2540 C	01/21/13 08:25 / ab
METALS - TOTAL							
Aluminum	0.2	mg/L		0.1		E200.7	01/23/13 00:35 / sf
Beryllium	ND	mg/L		0.001		E200.8	01/22/13 17:36 / clm
Cadmium	ND	mg/L		0.005		E200.7	01/23/13 00:35 / sf
Cobalt	0.03	mg/L		0.01		E200.7	01/23/13 00:35 / sf
Lead	ND	mg/L		0.001		E200.8	01/22/13 17:36 / clm
Manganese	1.96	mg/L		0.01		E200.7	01/23/13 00:35 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/23/13 00:35 / sf
Nickel	ND	mg/L		0.05		E200.7	01/23/13 00:35 / sf
Uranium	0.0018	mg/L		0.0003		E200.8	01/22/13 17:36 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/23/13 00:35 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/29/13 14:32 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	02/01/13 10:09 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.5	pCi/L				E900.1	02/13/13 07:42 / lbb
Gross Alpha minus Rn & U Precision (±)	0.2	pCi/L				E900.1	02/13/13 07:42 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	02/13/13 07:42 / lbb
Lead 210	0.03	pCi/L	U			E909.0	02/03/13 16:22 / eli-cs
Lead 210 precision (±)	0.4	pCi/L				E909.0	02/03/13 16:22 / eli-cs
Lead 210 MDC	0.7	pCi/L				E909.0	02/03/13 16:22 / eli-cs
Radium 226	0.57	pCi/L				E903.0	02/05/13 17:42 / lbb
Radium 226 precision (±)	0.18	pCi/L				E903.0	02/05/13 17:42 / lbb
Radium 226 MDC	0.16	pCi/L				E903.0	02/05/13 17:42 / lbb
Radium 228	0.75	pCi/L	U			RA-05	01/31/13 12:47 / plj
Radium 228 precision (±)	0.84	pCi/L				RA-05	01/31/13 12:47 / plj
Radium 228 MDC	1.4	pCi/L				RA-05	01/31/13 12:47 / plj

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C13010578-004
Client Sample ID EPA-7

Report Date: 02/25/13
Collection Date: 01/15/13 12:06
Date Received: 01/18/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.04	pCi/L	U			E908.0	01/31/13 09:13 / dmf
Thorium 230 precision (±)	0.07	pCi/L				E908.0	01/31/13 09:13 / dmf
Thorium 230 MDC	0.1	pCi/L				E908.0	01/31/13 09:13 / dmf
DATA QUALITY							
A/C Balance (± 5)	1.52	%				A1030 E	01/23/13 08:15 / kbh
Anions	120	meq/L				A1030 E	01/23/13 08:15 / kbh
Cations	124	meq/L				A1030 E	01/23/13 08:15 / kbh
Solids, Total Dissolved Calculated	7500	mg/L				A1030 E	01/23/13 08:15 / kbh
TDS Balance (0.80 - 1.20)	1.02					A1030 E	01/23/13 08:15 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/21/13 14:38 / jk
Bromoform	ND	ug/L		0.50		E624	01/21/13 14:38 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	01/21/13 14:38 / jk
Chloroform	0.91	ug/L		0.50		E624	01/21/13 14:38 / jk
Trihalomethanes, Total	0.91	ug/L		0.50		E624	01/21/13 14:38 / jk
Surr: 1,2-Dichlorobenzene-d4	117	%REC		80-120		E624	01/21/13 14:38 / jk
Surr: Dibromofluoromethane	89.0	%REC		80-120		E624	01/21/13 14:38 / jk
Surr: p-Bromofluorobenzene	118	%REC		80-120		E624	01/21/13 14:38 / jk
Surr: Toluene-d8	93.0	%REC		80-120		E624	01/21/13 14:38 / jk

- The sample was received in the laboratory with a pH > 2. The pH was 7.

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C13040429-003
Client Sample ID: EPA-7

Report Date: 05/22/13
Collection Date: 04/08/13 11:00
Date Received: 04/12/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	654	mg/L		5		A2320 B	04/12/13 16:49 / jba
Calcium	490	mg/L		1		E200.7	04/16/13 17:25 / sf
Chloride	227	mg/L	D	10		E300.0	04/16/13 00:56 / wc
Magnesium	919	mg/L		1		E200.7	04/16/13 17:25 / sf
Nitrogen, Ammonia as N	0.09	mg/L		0.05		A4500-NH ₃ G	04/16/13 15:27 / lr
Nitrogen, Nitrate+Nitrite as N	131	mg/L	D	5		E353.2	04/15/13 13:33 / lr
Potassium	9	mg/L		1		E200.7	04/17/13 12:59 / sf
Sodium	369	mg/L	D	2		E200.7	04/16/13 17:25 / sf
Sulfate	4380	mg/L	D	40		E300.0	04/16/13 00:56 / wc
PHYSICAL PROPERTIES							
pH	6.22	s.u.	H	0.01		A4500-H B	04/12/13 15:01 / ab
Solids, Total Dissolved TDS @ 180 C	7610	mg/L		100		A2540 C	04/12/13 15:52 / ab
METALS - TOTAL							
Aluminum	0.2	mg/L		0.1		E200.8	04/22/13 23:38 / cp
Beryllium	ND	mg/L		0.001		E200.8	04/22/13 23:38 / cp
Cadmium	ND	mg/L		0.005		E200.8	04/22/13 23:38 / cp
Cobalt	0.03	mg/L		0.01		E200.8	04/22/13 23:38 / cp
Lead	ND	mg/L		0.001		E200.8	04/22/13 23:38 / cp
Manganese	1.77	mg/L		0.01		E200.8	04/22/13 23:38 / cp
Molybdenum	ND	mg/L		0.1		E200.8	04/22/13 23:38 / cp
Nickel	ND	mg/L		0.05		E200.8	04/22/13 23:38 / cp
Uranium	0.0017	mg/L		0.0003		E200.8	04/22/13 23:38 / cp
Vanadium	ND	mg/L		0.1		E200.8	04/22/13 23:38 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/19/13 13:08 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	04/17/13 15:18 / jl1
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	1.5	pCi/L				E900.1	04/20/13 05:42 / lbb
Gross Alpha minus Rn & U Precision (±)	0.7	pCi/L				E900.1	04/20/13 05:42 / lbb
Gross Alpha minus Rn & U MDC	0.9	pCi/L				E900.1	04/20/13 05:42 / lbb
Lead 210	-1	pCi/L	U			E909.0	04/21/13 00:16 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	04/21/13 00:16 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	04/21/13 00:16 / eli-cs
Radium 226	0.66	pCi/L				E903.0	04/29/13 22:14 / lmc
Radium 226 precision (±)	0.20	pCi/L				E903.0	04/29/13 22:14 / lmc
Radium 226 MDC	0.19	pCi/L				E903.0	04/29/13 22:14 / lmc
Radium 228	0.37	pCi/L	U			RA-05	04/24/13 18:39 / gb
Radium 228 precision (±)	0.95	pCi/L				RA-05	04/24/13 18:39 / gb
Radium 228 MDC	1.6	pCi/L				RA-05	04/24/13 18:39 / gb

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C13040429-003
Client Sample ID: EPA-7

Report Date: 05/22/13
Collection Date: 04/08/13 11:00
Date Received: 04/12/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.05	pCi/L				E908.0	05/01/13 11:33 / dmf
Thorium 230 precision (±)	0.04	pCi/L				E908.0	05/01/13 11:33 / dmf
Thorium 230 MDC	0.05	pCi/L				E908.0	05/01/13 11:33 / dmf
DATA QUALITY							
A/C Balance (± 5)	-0.159	%				A1030 E	04/22/13 07:28 / kbh
Anions	117	meq/L				A1030 E	04/22/13 07:28 / kbh
Cations	116	meq/L				A1030 E	04/22/13 07:28 / kbh
Solids, Total Dissolved Calculated	7200	mg/L				A1030 E	04/22/13 07:28 / kbh
TDS Balance (0.80 - 1.20)	1.05					A1030 E	04/22/13 07:28 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/15/13 15:36 / jlr
Bromoform	ND	ug/L		0.50		E624	04/15/13 15:36 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/15/13 15:36 / jlr
Chloroform	0.54	ug/L		0.50		E624	04/15/13 15:36 / jlr
Trihalomethanes, Total	0.54	ug/L		0.50		E624	04/15/13 15:36 / jlr
Surr: 1,2-Dichlorobenzene-d4	107	%REC		73.7-126		E624	04/15/13 15:36 / jlr
Surr: Dibromofluoromethane	118	%REC		64.4-131		E624	04/15/13 15:36 / jlr
Surr: p-Bromofluorobenzene	110	%REC		67.1-133		E624	04/15/13 15:36 / jlr
Surr: Toluene-d8	91.0	%REC		79.7-125		E624	04/15/13 15:36 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 8.

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 1 Monitor Wells					
Well ID:		EPA-7	EPA-7	EPA-7	EPA-7
Collection Date:		4/8/2013	1/15/2013	10/15/2012	7/16/2012
Receive Date:		4/12/2013	1/18/2013	10/19/2012	7/20/2012
Report Date:		5/22/2013	2/25/2013	11/19/2012	8/31/2012
Analyte	RUnits	C13040429-003	C13010578-004	C12100859-003	C12070710-003
Bicarbonate as HCO3	mg/L	654	660	658	645
Calcium	mg/L	490	509	522	528
Chloride	mg/L	227	228	241	231
Magnesium	mg/L	919	976	967	1040
Nitrogen, Ammonia as N	mg/L	0.09	0.19	0.18	0.20
Nitrogen, Nitrate-Nitrite as N	mg/L	131	126	131	139
Potassium	mg/L	9	9	9	9
Sodium	mg/L	369	415	415	431
Sulfate	mg/L	4380	4510	4490	4520
pH	s.u.	6.22	6.24	6.33	6.42
Solids, Total Dissolved TDS @ 180 C	mg/L	7610	7660	7740	8270
Aluminum	mg/L	0.2	0.2	0.2	0.1
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	0.03	0.03	0.03	0.03
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	1.77	1.96	1.89	2.24
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
Uranium	mg/L	0.0017	0.0018	0.0018	0.0018
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	1.5	0.5	1.7	0.7
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.7	0.2	0.7	0.2
Gross Alpha minus Rn & U MDC	pCi/L	0.9	0.3	0.7	0.2
Lead 210	pCi/L	-1	0.03	0.5	0.2
Lead 210 precision (±)	pCi/L	0.8	0.4	0.6	0.7
Lead 210 MDC	pCi/L	1.3	0.7	1.0	1.2
Radium 226	pCi/L	0.66	0.57	0.36	0.67
Radium 226 precision (±)	pCi/L	0.20	0.18	0.09	0.14
Radium 226 MDC	pCi/L	0.19	0.16	0.1	0.09
Radium 228	pCi/L	0.37	0.75	1.8	0.67
Radium 228 precision (±)	pCi/L	0.95	0.84	0.80	0.76
Radium 228 MDC	pCi/L	1.6	1.4	1.2	1.2
Thorium 230	pCi/L	0.05	0.04	0.009	0.04
Thorium 230 precision (±)	pCi/L	0.04	0.07	0.07	0.07
Thorium 230 MDC	pCi/L	0.05	0.1	0.2	0.2
A/C Balance (± 5)	%	-0.159	1.52	1.58	4.25
Anions	meq/L	117	120	120	120
Cations	meq/L	116	124	124	131
Solids, Total Dissolved Calculated	mg/L	7200	7500	7500	7700
TDS Balance (0.80 - 1.20)		1.05	1.02	1.03	1.08
Trihalomethanes, Total	ug/L	0.54	0.91	0.63	ND(0.50)

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.

QUARTERLY SAMPLING
SEMI-ANNUAL GROUND WATER MONITORING REPORT
JANUARY TO JUNE OF 2013

ZONE-3

504-B (NO SAMPLE)

*517

EPA-14

420

*711

*613

*708

NBL-1 (NO SAMPLE IN APRIL)

EPA-13

717

719

LEVELS ONLY

EPA-9

702

710

712

713

714

701

706

707

402

446

424

***POINT OF COMPLIANCE WELLS**



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone 3
Lab ID: C13010341-002
Client Sample ID: 517

Report Date: 02/22/13
Collection Date: 01/08/13 10:58
Date Received: 01/11/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	ND	mg/L		5		A2320 B	01/11/13 14:37 / jba
Calcium	485	mg/L		1		E200.7	01/14/13 20:08 / sf
Chloride	41	mg/L	D	4		E300.0	01/11/13 23:57 / wc
Magnesium	522	mg/L		1		E200.7	01/14/13 20:08 / sf
Nitrogen, Ammonia as N	11.2	mg/L	D	0.5		A4500-NH ₃ G	01/11/13 14:18 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L	D	0.2		E353.2	01/16/13 16:05 / lr
Potassium	14	mg/L		1		E200.7	01/14/13 20:08 / sf
Sodium	158	mg/L	D	2		E200.7	01/14/13 20:08 / sf
Sulfate	3900	mg/L	D	20		E300.0	01/11/13 23:57 / wc
PHYSICAL PROPERTIES							
pH	2.88	s.u.	H	0.01		A4500-H B	01/11/13 13:15 / ab
Solids, Total Dissolved TDS @ 180 C	5570	mg/L		40		A2540 C	01/14/13 15:56 / ab
METALS - TOTAL							
Aluminum	14.5	mg/L		0.1		E200.7	01/15/13 19:15 / sf
Beryllium	0.013	mg/L		0.001		E200.7	01/15/13 19:15 / sf
Cadmium	0.009	mg/L		0.005		E200.8	01/17/13 21:26 / cp
Cobalt	0.93	mg/L		0.01		E200.7	01/15/13 19:15 / sf
Lead	0.014	mg/L		0.001		E200.8	01/17/13 21:26 / cp
Manganese	11.8	mg/L		0.01		E200.7	01/15/13 19:15 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/15/13 19:15 / sf
Nickel	1.03	mg/L		0.05		E200.7	01/15/13 19:15 / sf
Uranium	0.159	mg/L		0.0003		E200.8	01/17/13 21:26 / cp
Vanadium	ND	mg/L		0.1		E200.7	01/15/13 19:15 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/23/13 14:00 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	01/28/13 11:30 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	7.2	pCi/L				E900.1	02/13/13 07:37 / lbb
Gross Alpha minus Rn & U Precision (±)	0.7	pCi/L				E900.1	02/13/13 07:37 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	02/13/13 07:37 / lbb
Lead 210	1.7	pCi/L				E909.0	02/07/13 22:03 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	02/07/13 22:03 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	02/07/13 22:03 / eli-cs
Radium 226	7.7	pCi/L				E903.0	01/28/13 23:25 / lmc
Radium 226 precision (±)	0.52	pCi/L				E903.0	01/28/13 23:25 / lmc
Radium 226 MDC	0.15	pCi/L				E903.0	01/28/13 23:25 / lmc
Radium 228	7.2	pCi/L				RA-05	01/24/13 00:45 / gb
Radium 228 precision (±)	0.90	pCi/L				RA-05	01/24/13 00:45 / gb
Radium 228 MDC	0.98	pCi/L				RA-05	01/24/13 00:45 / gb

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone 3
Lab ID: C13010341-002
Client Sample ID: 517

Report Date: 02/22/13
Collection Date: 01/08/13 10:58
Date Received: 01/11/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	6.0	pCi/L				E908.0	02/01/13 09:12 / dmf
Thorium 230 precision (±)	0.8	pCi/L				E908.0	02/01/13 09:12 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	02/01/13 09:12 / dmf
DATA QUALITY							
A/C Balance (± 5)	4.89	%				A1030 E	01/17/13 07:44 / kbh
Anions	82.6	meq/L				A1030 E	01/17/13 07:44 / kbh
Cations	91.1	meq/L				A1030 E	01/17/13 07:44 / kbh
Solids, Total Dissolved Calculated	5200	mg/L				A1030 E	01/17/13 07:44 / kbh
TDS Balance (0.80 - 1.20)	1.08					A1030 E	01/17/13 07:44 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/11/13 17:54 / jk
Bromoform	ND	ug/L		0.50		E624	01/11/13 17:54 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	01/11/13 17:54 / jk
Chloroform	4.32	ug/L		0.50		E624	01/14/13 14:39 / jk
Trihalomethanes, Total	4.32	ug/L		0.50		E624	01/14/13 14:39 / jk
Surr: 1,2-Dichlorobenzene-d4	112	%REC		80-120		E624	01/11/13 17:54 / jk
Surr: Dibromofluoromethane	106	%REC		80-120		E624	01/11/13 17:54 / jk
Surr: p-Bromofluorobenzene	112	%REC		80-120		E624	01/11/13 17:54 / jk
Surr: Toluene-d8	93.0	%REC		80-120		E624	01/11/13 17:54 / jk

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C13040244-002
Client Sample ID 517

Report Date: 05/22/13
Collection Date: 04/02/13 12:30
Date Received: 04/05/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	ND	mg/L		5		A2320 B	04/05/13 22:51 / jba
Calcium	449	mg/L		1		E200.7	04/15/13 17:39 / sf
Chloride	42	mg/L	D	4		E300.0	04/08/13 17:46 / wc
Magnesium	494	mg/L		1		E200.7	04/15/13 17:39 / sf
Nitrogen, Ammonia as N	9	mg/L	D	5		A4500-NH ₃ G	04/10/13 16:02 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	04/08/13 12:05 / lr
Potassium	13	mg/L		1		E200.7	04/16/13 13:52 / sf
Sodium	146	mg/L		1		E200.7	04/15/13 17:39 / sf
Sulfate	3940	mg/L	D	20		E300.0	04/08/13 17:46 / wc
PHYSICAL PROPERTIES							
pH	3.03	s.u.	H	0.01		A4500-H B	04/08/13 09:50 / ab
Solids, Total Dissolved TDS @ 180 C	5510	mg/L		40		A2540 C	04/08/13 15:46 / jz
METALS - TOTAL							
Aluminum	14.8	mg/L		0.1		E200.8	04/11/13 00:45 / cp
Beryllium	0.012	mg/L		0.001		E200.8	04/11/13 00:45 / cp
Cadmium	0.009	mg/L		0.005		E200.8	04/11/13 00:45 / cp
Cobalt	0.93	mg/L		0.01		E200.8	04/11/13 00:45 / cp
Lead	0.018	mg/L		0.001		E200.8	04/11/13 00:45 / cp
Manganese	11.9	mg/L		0.01		E200.8	04/11/13 00:45 / cp
Molybdenum	ND	mg/L		0.1		E200.8	04/11/13 00:45 / cp
Nickel	1.04	mg/L		0.05		E200.8	04/11/13 00:45 / cp
Uranium	0.158	mg/L		0.0003		E200.8	04/11/13 00:45 / cp
Vanadium	ND	mg/L		0.1		E200.8	04/11/13 00:45 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/17/13 13:18 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	04/17/13 15:03 / jlt
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	10.2	pCi/L				E900.1	05/08/13 06:34 / lbb
Gross Alpha minus Rn & U Precision (±)	1.0	pCi/L				E900.1	05/08/13 06:34 / lbb
Gross Alpha minus Rn & U MDC	0.4	pCi/L				E900.1	05/08/13 06:34 / lbb
Lead 210	0.9	pCi/L	U			E909.0	04/16/13 12:00 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	04/16/13 12:00 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	04/16/13 12:00 / eli-cs
Radium 226	6.4	pCi/L				E903.0	04/23/13 22:44 / lmc
Radium 226 precision (±)	0.51	pCi/L				E903.0	04/23/13 22:44 / lmc
Radium 226 MDC	0.15	pCi/L				E903.0	04/23/13 22:44 / lmc
Radium 228	14	pCi/L				RA-05	04/17/13 20:40 / gb
Radium 228 precision (±)	1.6	pCi/L				RA-05	04/17/13 20:40 / gb
Radium 228 MDC	1.6	pCi/L				RA-05	04/17/13 20:40 / gb

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C13040244-002
Client Sample ID 517

Report Date: 05/22/13
Collection Date: 04/02/13 12:30
Date Received: 04/05/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	10.0	pCi/L				E908.0	04/19/13 13:58 / dmf
Thorium 230 precision (±)	2.3	pCi/L				E908.0	04/19/13 13:58 / dmf
Thorium 230 MDC	0.5	pCi/L				E908.0	04/19/13 13:58 / dmf
DATA QUALITY							
A/C Balance (± 5)	2.67	%				A1030 E	04/18/13 12:49 / kbh
Anions	83.4	meq/L				A1030 E	04/18/13 12:49 / kbh
Cations	88.0	meq/L				A1030 E	04/18/13 12:49 / kbh
Solids, Total Dissolved Calculated	5100	mg/L				A1030 E	04/18/13 12:49 / kbh
TDS Balance (0.80 - 1.20)	1.07					A1030 E	04/18/13 12:49 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/11/13 17:23 / jlr
Bromoform	ND	ug/L		0.50		E624	04/11/13 17:23 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/11/13 17:23 / jlr
Chloroform	6.68	ug/L		0.50		E624	04/11/13 17:23 / jlr
Trihalomethanes, Total	6.68	ug/L		0.50		E624	04/11/13 17:23 / jlr
Surr: 1,2-Dichlorobenzene-d4	110	%REC		73.7-126		E624	04/11/13 17:23 / jlr
Surr: Dibromofluoromethane	132	%REC	S	64.4-131		E624	04/11/13 17:23 / jlr
Surr: p-Bromofluorobenzene	110	%REC		67.1-133		E624	04/11/13 17:23 / jlr
Surr: Toluene-d8	90.0	%REC		79.7-125		E624	04/11/13 17:23 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 3.

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
S - Spike recovery outside of advisory limits.

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 3 Monitor Wells					
Well ID:		517	517	517	517
Collection Date:		4/2/2013	1/8/2013	10/15/2012	7/16/2012
Receive Date:		4/5/2013	1/11/2013	10/19/2012	7/20/2012
Report Date:		5/22/2013	2/22/2013	11/20/2012	9/7/2012
Analyte	RUnits	C13040244-002	C13010341-002	C12100835-001	C12070713-001
Bicarbonate as HCO3	mg/L	ND(5)	ND(5)	ND(5)	ND(5)
Calcium	mg/L	449	485	456	495
Chloride	mg/L	42	41	43	45
Magnesium	mg/L	494	522	480	527
Nitrogen, Ammonia as N	mg/L	9	11.2	10.4	10.7
Nitrogen, Nitrate+Nitrite as N	mg/L	ND(0.1)	ND(0.2)	ND(1)	ND(0.1)
Potassium	mg/L	13	14	12	12
Sodium	mg/L	146	158	151	151
Sulfate	mg/L	3940	3900	3770	3940
pH	s.u.	3.03	2.88	3.09	3.17
Solids, Total Dissolved TDS @ 180 C	mg/L	5510	5570	5470	5560
Aluminum	mg/L	14.8	14.5	12.9	11.7
Beryllium	mg/L	0.012	0.013	0.011	0.010
Cadmium	mg/L	0.009	0.009	0.008	0.009
Cobalt	mg/L	0.93	0.93	0.85	0.90
Lead	mg/L	0.018	0.014	0.014	0.014
Manganese	mg/L	11.9	11.8	10.7	11.6
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	1.04	1.03	1.07	1.02
Uranium	mg/L	0.158	0.159	0.124	0.117
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	10.2	7.2	7.0	41.5
Gross Alpha minus Rn & U Precision (±)	pCi/L	1.0	0.7	0.7	3.1
Gross Alpha minus Rn & U MDC	pCi/L	0.4	0.3	0.3	0.9
Lead 210	pCi/L	0.9	1.7	1.9	1.2
Lead 210 precision (±)	pCi/L	0.8	0.8	0.7	0.7
Lead 210 MDC	pCi/L	1.3	1.3	1.1	1.2
Radium 226	pCi/L	6.4	7.7	6.6	10
Radium 226 precision (±)	pCi/L	0.51	0.52	0.48	0.62
Radium 226 MDC	pCi/L	0.15	0.15	0.15	0.15
Radium 228	pCi/L	14	7.2	14	11
Radium 228 precision (±)	pCi/L	1.6	0.90	1.2	1.1
Radium 228 MDC	pCi/L	1.6	0.98	1.1	1.1
Thorium 230	pCi/L	10.0	6.0	7.3	9.0
Thorium 230 precision (±)	pCi/L	2.3	0.8	1.7	1.5
Thorium 230 MDC	pCi/L	0.5	0.2	0.5	0.2
A/C Balance (± 5)	%	2.67	4.89	0.372	3.62
Anions	meq/L	83.4	82.6	79.9	83.5
Cations	meq/L	88.0	91.1	80.5	89.7
Solids, Total Dissolved Calculated	mg/L	5100	5200	5000	5200
TDS Balance (0.80 - 1.20)		1.07	1.08	1.11	1.07
Trihalomethanes, Total	ug/L	6.68	4.32	7.52	4.44

****Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.**



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone 3
Lab ID: C13010341-003
Client Sample ID: EPA-14

Report Date: 02/22/13
Collection Date: 01/08/13 11:46
Date Received: 01/11/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	ND	mg/L		5		A2320 B	01/11/13 14:41 / jba
Calcium	535	mg/L		1		E200.7	02/07/13 18:57 / sf
Chloride	53	mg/L	D	4		E300.0	01/12/13 00:13 / wc
Magnesium	490	mg/L		1		E200.7	02/07/13 18:57 / sf
Nitrogen, Ammonia as N	37.6	mg/L	D	0.5		A4500-NH ₃ G	01/11/13 14:24 / lr
Nitrogen, Nitrate+Nitrite as N	12.0	mg/L	D	0.5		E353.2	01/16/13 14:40 / lr
Potassium	16	mg/L		1		E200.7	02/07/13 18:57 / sf
Sodium	184	mg/L	D	2		E200.7	02/07/13 18:57 / sf
Sulfate	3360	mg/L	D	20		E300.0	01/12/13 00:13 / wc
PHYSICAL PROPERTIES							
pH	4.43	s.u.	H	0.01		A4500-H B	01/11/13 13:17 / ab
Solids, Total Dissolved TDS @ 180 C	4720	mg/L		10		A2540 C	01/11/13 14:38 / ab
METALS - TOTAL							
Aluminum	39.1	mg/L		0.1		E200.7	01/15/13 19:19 / sf
Beryllium	0.048	mg/L		0.001		E200.7	01/15/13 19:19 / sf
Cadmium	ND	mg/L		0.005		E200.7	01/15/13 19:19 / sf
Cobalt	0.53	mg/L		0.01		E200.7	01/15/13 19:19 / sf
Lead	0.010	mg/L		0.001		E200.8	01/17/13 21:30 / cp
Manganese	12.7	mg/L		0.01		E200.7	01/15/13 19:19 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/15/13 19:19 / sf
Nickel	0.49	mg/L		0.05		E200.7	01/15/13 19:19 / sf
Uranium	0.0057	mg/L		0.0003		E200.8	01/17/13 21:30 / cp
Vanadium	ND	mg/L		0.1		E200.7	01/15/13 19:19 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/23/13 14:11 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	01/28/13 11:31 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	6.5	pCi/L				E900.1	02/13/13 07:37 / lbb
Gross Alpha minus Rn & U Precision (±)	0.7	pCi/L				E900.1	02/13/13 07:37 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	02/13/13 07:37 / lbb
Lead 210	2.1	pCi/L				E909.0	02/07/13 23:18 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	02/07/13 23:18 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	02/07/13 23:18 / eli-cs
Radium 226	8.4	pCi/L				E903.0	01/28/13 23:25 / lmc
Radium 226 precision (±)	0.55	pCi/L				E903.0	01/28/13 23:25 / lmc
Radium 226 MDC	0.15	pCi/L				E903.0	01/28/13 23:25 / lmc
Radium 228	9.8	pCi/L				RA-05	01/24/13 00:45 / gb
Radium 228 precision (±)	1.0	pCi/L				RA-05	01/24/13 00:45 / gb
Radium 228 MDC	1.0	pCi/L				RA-05	01/24/13 00:45 / gb

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone 3
Lab ID: C13010341-003
Client Sample ID: EPA-14

Report Date: 02/22/13
Collection Date: 01/08/13 11:46
Date Received: 01/11/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.3	pCi/L	U			E908.0	01/30/13 16:19 / dmf
Thorium 230 precision (±)	0.6	pCi/L				E908.0	01/30/13 16:19 / dmf
Thorium 230 MDC	1.4	pCi/L				E908.0	01/30/13 16:19 / dmf
- See Case Narrative regarding Th230 analysis.							
DATA QUALITY							
A/C Balance (± 5)	8.83	%				A1030 E	02/13/13 13:16 / kbh
Anions	72.5	meq/L				A1030 E	02/13/13 13:16 / kbh
Cations	86.5	meq/L				A1030 E	02/13/13 13:16 / kbh
Solids, Total Dissolved Calculated	4700	mg/L				A1030 E	02/13/13 13:16 / kbh
TDS Balance (0.80 - 1.20)	1.00					A1030 E	02/13/13 13:16 / kbh
- The Anion / Cation balance was confirmed by re-analysis.							
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/11/13 18:30 / jk
Bromoform	ND	ug/L		0.50		E624	01/11/13 18:30 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	01/11/13 18:30 / jk
Chloroform	ND	ug/L		0.50		E624	01/14/13 15:15 / jk
Trihalomethanes, Total	ND	ug/L		0.50		E624	01/14/13 15:15 / jk
Surr: 1,2-Dichlorobenzene-d4	113	%REC		80-120		E624	01/11/13 18:30 / jk
Surr: Dibromofluoromethane	104	%REC		80-120		E624	01/11/13 18:30 / jk
Surr: p-Bromofluorobenzene	112	%REC		80-120		E624	01/11/13 18:30 / jk
Surr: Toluene-d8	95.0	%REC		80-120		E624	01/11/13 18:30 / jk

Report Definitions:

RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C13040435-010
Client Sample ID: EPA-14

Report Date: 05/22/13
Collection Date: 04/09/13 16:00
Date Received: 04/12/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	ND	mg/L		5		A2320 B	04/12/13 20:12 / jba
Calcium	221	mg/L		1		E200.7	04/26/13 16:55 / sf
Chloride	28	mg/L	D	2		E300.0	04/22/13 15:16 / wc
Magnesium	196	mg/L		1		E200.7	04/26/13 16:55 / sf
Nitrogen, Ammonia as N	37.3	mg/L	D	0.5		A4500-NH3 G	04/17/13 12:53 / lr
Nitrogen, Nitrate+Nitrite as N	3.0	mg/L	D	0.5		E353.2	04/15/13 14:53 / lr
Potassium	7	mg/L		1		E200.7	04/26/13 16:55 / sf
Sodium	78	mg/L		1		E200.7	04/26/13 16:55 / sf
Sulfate	1670	mg/L	D	8		E300.0	04/22/13 15:16 / wc
PHYSICAL PROPERTIES							
pH	4.78	s.u.	H	0.01		A4500-H B	04/15/13 09:48 / ab
Solids, Total Dissolved TDS @ 180 C	2260	mg/L		20		A2540 C	04/15/13 16:14 / ab
METALS - TOTAL							
Aluminum	19.7	mg/L		0.1		E200.7	04/22/13 14:57 / sf
Beryllium	0.021	mg/L		0.001		E200.7	04/22/13 14:57 / sf
Cadmium	0.006	mg/L		0.005		E200.7	04/22/13 14:57 / sf
Cobalt	0.62	mg/L		0.01		E200.7	04/22/13 14:57 / sf
Lead	0.009	mg/L		0.001		E200.8	04/23/13 23:14 / clm
Manganese	12.0	mg/L		0.01		E200.7	04/22/13 14:57 / sf
Molybdenum	ND	mg/L		0.1		E200.7	04/22/13 14:57 / sf
Nickel	0.60	mg/L		0.05		E200.7	04/22/13 14:57 / sf
Uranium	0.0068	mg/L		0.0003		E200.8	05/01/13 21:58 / clm
Vanadium	ND	mg/L		0.1		E200.7	04/22/13 14:57 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/23/13 13:07 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	04/17/13 15:50 / j11
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	19.5	pCi/L				E900.1	04/24/13 09:09 / lbb
Gross Alpha minus Rn & U Precision (±)	1.5	pCi/L				E900.1	04/24/13 09:09 / lbb
Gross Alpha minus Rn & U MDC	0.5	pCi/L				E900.1	04/24/13 09:09 / lbb
Lead 210	0.7	pCi/L	U			E909.0	04/21/13 23:59 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	04/21/13 23:59 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	04/21/13 23:59 / eli-cs
Radium 226	13	pCi/L				E903.0	04/29/13 22:07 / lmc
Radium 226 precision (±)	0.77	pCi/L				E903.0	04/29/13 22:07 / lmc
Radium 226 MDC	0.19	pCi/L				E903.0	04/29/13 22:07 / lmc
Radium 228	16	pCi/L				RA-05	04/24/13 21:44 / gb
Radium 228 precision (±)	1.6	pCi/L				RA-05	04/24/13 21:44 / gb
Radium 228 MDC	1.6	pCi/L				RA-05	04/24/13 21:44 / gb

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C13040435-010
Client Sample ID EPA-14

Report Date: 05/22/13
Collection Date: 04/09/13 16:00
Date Received: 04/12/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.3	pCi/L	U			E908.0	05/01/13 11:34 / dmf
Thorium 230 precision (±)	0.2	pCi/L				E908.0	05/01/13 11:34 / dmf
Thorium 230 MDC	0.3	pCi/L				E908.0	05/01/13 11:34 / dmf
- See Case Narrative regarding Th230 analysis.							
DATA QUALITY							
A/C Balance (± 5)	0.265	%				A1030 E	05/01/13 10:54 / kbh
Anions	35.9	meq/L				A1030 E	05/01/13 10:54 / kbh
Cations	36.1	meq/L				A1030 E	05/01/13 10:54 / kbh
Solids, Total Dissolved Calculated	2200	mg/L				A1030 E	05/01/13 10:54 / kbh
TDS Balance (0.80 - 1.20)	1.01					A1030 E	05/01/13 10:54 / kbh

VOLATILE ORGANIC COMPOUNDS

Bromodichloromethane	1.81	ug/L		0.50		E624	04/16/13 22:15 / jlr
Bromoform	0.66	ug/L		0.50		E624	04/16/13 22:15 / jlr
Chlorodibromomethane	1.43	ug/L		0.50		E624	04/16/13 22:15 / jlr
Chloroform	2.92	ug/L		0.50		E624	04/16/13 22:15 / jlr
Trihalomethanes, Total	6.83	ug/L		0.50		E624	04/16/13 22:15 / jlr
Surr: 1,2-Dichlorobenzene-d4	106	%REC		73.7-126		E624	04/16/13 22:15 / jlr
Surr: Dibromofluoromethane	126	%REC		64.4-131		E624	04/16/13 22:15 / jlr
Surr: p-Bromofluorobenzene	118	%REC		67.1-133		E624	04/16/13 22:15 / jlr
Surr: Toluene-d8	99.0	%REC		79.7-125		E624	04/16/13 22:15 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 5.

Report Definitions:

RL - Analyte reporting limit.

QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 3 Monitor Wells					
Well ID:		EPA-14	EPA-14	EPA-14	EPA-14
Collection Date:		4/9/2013	1/8/2013	10/9/2012	7/10/2012
Receive Date:		4/12/2013	1/11/2013	10/12/2012	7/13/2012
Report Date:		5/22/2013	2/22/2013	11/20/2012	8/30/2012
Analyte	RUnits	C13040435-010	C13010341-003	C12100571-002	C12070463-002
Bicarbonate as HCO3	mg/L	ND(5)	ND(5)	ND(5)	ND(5)
Calcium	mg/L	221	535	470	482
Chloride	mg/L	28	53	61	63
Magnesium	mg/L	196	490	480	535
Nitrogen, Ammonia as N	mg/L	37.3	37.6	24	29
Nitrogen, Nitrate+Nitrite as N	mg/L	3.0	12.0	12	23
Potassium	mg/L	7	16	12	12
Sodium	mg/L	78	184	170	174
Sulfate	mg/L	1670	3360	4090	4320
pH	s.u.	4.78	4.43	4.24	4.31
Solids, Total Dissolved TDS @ 180 C	mg/L	2260	4720	6080	5960
Aluminum	mg/L	19.7	39.1	70.8	83.8
Beryllium	mg/L	0.021	0.048	0.069	0.076
Cadmium	mg/L	0.006	ND(0.005)	0.010	ND(0.005)
Cobalt	mg/L	0.62	0.53	0.75	0.74
Lead	mg/L	0.009	0.010	0.006	0.007
Manganese	mg/L	12.0	12.7	15.1	14.9
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	0.60	0.49	0.71	0.68
Uranium	mg/L	0.0068	0.0057	0.0078	0.0099
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	19.5	6.5	4.8	6.4
Gross Alpha minus Rn & U Precision (±)	pCi/L	1.5	0.7	0.6	0.7
Gross Alpha minus Rn & U MDC	pCi/L	0.5	0.3	0.3	0.3
Lead 210	pCi/L	0.7	2.1	1.5	1.6
Lead 210 precision (±)	pCi/L	0.8	0.8	0.7	0.8
Lead 210 MDC	pCi/L	1.3	1.3	1.0	1.2
Radium 226	pCi/L	13	8.4	8.1	6.1
Radium 226 precision (±)	pCi/L	0.77	0.55	0.55	0.45
Radium 226 MDC	pCi/L	0.19	0.15	0.16	0.13
Radium 228	pCi/L	16	9.8	18	1.7
Radium 228 precision (±)	pCi/L	1.6	1.0	1.7	0.83
Radium 228 MDC	pCi/L	1.6	1.0	1.7	1.2
Thorium 230	pCi/L	0.3	0.3	0.03	0.1
Thorium 230 precision (±)	pCi/L	0.2	0.6	0.4	0.5
Thorium 230 MDC	pCi/L	0.3	1.4	1.1	1.3
A/C Balance (± 5)	%	0.265	8.83	-3.71	-1.20
Anions	meq/L	35.9	72.5	88.9	94.0
Cations	meq/L	36.1	86.5	82.6	91.8
Solids, Total Dissolved Calculated	mg/L	2200	4700	5400	5700
TDS Balance (0.80 - 1.20)		1.01	1.00	1.12	1.04
Trihalomethanes, Total	ug/L	6.83	ND(0.50)	0.66	1.81

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone 3
Lab ID: C13010341-007
Client Sample ID: 420

Report Date: 02/22/13
Collection Date: 01/08/13 15:44
Date Received: 01/11/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	484	mg/L		5		A2320 B	01/11/13 15:09 / jba
Calcium	712	mg/L		1		E200.7	01/14/13 20:44 / sf
Chloride	51	mg/L	D	2		E300.0	01/12/13 02:16 / wc
Magnesium	149	mg/L		1		E200.7	01/14/13 20:44 / sf
Nitrogen, Ammonia as N	0.07	mg/L		0.05		A4500-NH ₃ G	01/14/13 16:28 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	01/16/13 14:50 / lr
Potassium	7	mg/L		1		E200.7	01/14/13 20:44 / sf
Sodium	157	mg/L		1		E200.7	01/14/13 20:44 / sf
Sulfate	2090	mg/L	D	8		E300.0	01/12/13 02:16 / wc
PHYSICAL PROPERTIES							
pH	7.22	s.u.	H	0.01		A4500-H B	01/11/13 13:28 / ab
Solids, Total Dissolved TDS @ 180 C	3580	mg/L		10		A2540 C	01/11/13 14:38 / ab
METALS - TOTAL							
Aluminum	0.3	mg/L		0.1		E200.7	01/15/13 19:39 / sf
Beryllium	ND	mg/L		0.001		E200.7	01/15/13 19:39 / sf
Cadmium	ND	mg/L		0.005		E200.7	01/15/13 19:39 / sf
Cobalt	0.02	mg/L		0.01		E200.7	01/15/13 19:39 / sf
Lead	ND	mg/L		0.001		E200.8	01/17/13 22:05 / cp
Manganese	1.55	mg/L		0.01		E200.7	01/15/13 19:39 / sf
Molybdenum	0.8	mg/L		0.1		E200.7	01/15/13 19:39 / sf
Nickel	ND	mg/L		0.05		E200.7	01/15/13 19:39 / sf
Uranium	0.410	mg/L		0.0003		E200.8	01/17/13 22:05 / cp
Vanadium	ND	mg/L		0.1		E200.7	01/15/13 19:39 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/29/13 11:43 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	01/31/13 12:31 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	4.0	pCi/L				E900.1	02/13/13 07:37 / lbb
Gross Alpha minus Rn & U Precision (±)	0.5	pCi/L				E900.1	02/13/13 07:37 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	02/13/13 07:37 / lbb
Lead 210	1.2	pCi/L	U			E909.0	02/08/13 04:18 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	02/08/13 04:18 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	02/08/13 04:18 / eli-cs
Radium 226	4.8	pCi/L				E903.0	01/28/13 23:25 / lmc
Radium 226 precision (±)	0.45	pCi/L				E903.0	01/28/13 23:25 / lmc
Radium 226 MDC	0.17	pCi/L				E903.0	01/28/13 23:25 / lmc
Radium 228	5.3	pCi/L				RA-05	01/24/13 00:45 / gb
Radium 228 precision (±)	0.93	pCi/L				RA-05	01/24/13 00:45 / gb
Radium 228 MDC	1.1	pCi/L				RA-05	01/24/13 00:45 / gb

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone 3
Lab ID: C13010341-007
Client Sample ID: 420

Report Date: 02/22/13
Collection Date: 01/08/13 15:44
Date Received: 01/11/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.08	pCi/L	U			E908.0	01/30/13 16:19 / dmf
Thorium 230 precision (±)	0.09	pCi/L				E908.0	01/30/13 16:19 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	01/30/13 16:19 / dmf
DATA QUALITY							
A/C Balance (± 5)	1.86	%				A1030 E	01/17/13 07:44 / kbh
Anions	52.8	meq/L				A1030 E	01/17/13 07:44 / kbh
Cations	54.8	meq/L				A1030 E	01/17/13 07:44 / kbh
Solids, Total Dissolved Calculated	3400	mg/L				A1030 E	01/17/13 07:44 / kbh
TDS Balance (0.80 - 1.20)	1.05					A1030 E	01/17/13 07:44 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/11/13 20:50 / jk
Bromoform	ND	ug/L		0.50		E624	01/11/13 20:50 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	01/11/13 20:50 / jk
Chloroform	ND	ug/L		0.50		E624	01/11/13 20:50 / jk
Trihalomethanes, Total	ND	ug/L		0.50		E624	01/11/13 20:50 / jk
Surr: 1,2-Dichlorobenzene-d4	117	%REC		80-120		E624	01/11/13 20:50 / jk
Surr: Dibromofluoromethane	102	%REC		80-120		E624	01/11/13 20:50 / jk
Surr: p-Bromofluorobenzene	120	%REC		80-120		E624	01/11/13 20:50 / jk
Surr: Toluene-d8	95.0	%REC		80-120		E624	01/11/13 20:50 / jk

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C13040435-005
Client Sample ID: 420

Report Date: 05/22/13
Collection Date: 04/09/13 09:55
Date Received: 04/12/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	486	mg/L		5		A2320 B	04/12/13 19:36 / jba
Calcium	750	mg/L		1		E200.7	04/16/13 19:17 / sf
Chloride	53	mg/L	D	2		E300.0	04/16/13 10:23 / wc
Magnesium	155	mg/L		1		E200.7	04/16/13 19:17 / sf
Nitrogen, Ammonia as N	0.05	mg/L		0.05		A4500-NH ₃ G	04/17/13 12:43 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	04/15/13 14:41 / lr
Potassium	8	mg/L		1		E200.7	04/17/13 14:05 / sf
Sodium	171	mg/L		1		E200.7	04/16/13 19:17 / sf
Sulfate	2180	mg/L	D	8		E300.0	04/16/13 10:23 / wc
PHYSICAL PROPERTIES							
pH	7.09	s.u.	H	0.01		A4500-H B	04/15/13 09:35 / ab
Solids, Total Dissolved TDS @ 180 C	3650	mg/L		40		A2540 C	04/15/13 16:13 / ab
METALS - TOTAL							
Aluminum	0.2	mg/L		0.1		E200.8	04/23/13 00:40 / cp
Beryllium	ND	mg/L		0.001		E200.8	04/23/13 00:40 / cp
Cadmium	ND	mg/L		0.005		E200.8	04/23/13 00:40 / cp
Cobalt	0.02	mg/L		0.01		E200.8	04/23/13 00:40 / cp
Lead	ND	mg/L		0.001		E200.8	04/23/13 00:40 / cp
Manganese	1.68	mg/L		0.01		E200.8	04/23/13 00:40 / cp
Molybdenum	0.7	mg/L		0.1		E200.8	04/23/13 00:40 / cp
Nickel	ND	mg/L		0.05		E200.8	04/23/13 00:40 / cp
Uranium	0.403	mg/L		0.0003		E200.8	04/23/13 00:40 / cp
Vanadium	ND	mg/L		0.1		E200.8	04/23/13 00:40 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/23/13 11:59 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	04/17/13 15:36 / jl1
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	6.8	pCi/L				E900.1	04/24/13 09:09 / lbb
Gross Alpha minus Rn & U Precision (±)	0.9	pCi/L				E900.1	04/24/13 09:09 / lbb
Gross Alpha minus Rn & U MDC	0.5	pCi/L				E900.1	04/24/13 09:09 / lbb
Lead 210	0.7	pCi/L	U			E909.0	04/21/13 23:59 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	04/21/13 23:59 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	04/21/13 23:59 / eli-cs
Radium 226	6.5	pCi/L				E903.0	04/29/13 17:01 / lmc
Radium 226 precision (±)	0.55	pCi/L				E903.0	04/29/13 17:01 / lmc
Radium 226 MDC	0.19	pCi/L				E903.0	04/29/13 17:01 / lmc
Radium 228	7.7	pCi/L				RA-05	04/24/13 21:44 / gb
Radium 228 precision (±)	1.3	pCi/L				RA-05	04/24/13 21:44 / gb
Radium 228 MDC	1.6	pCi/L				RA-05	04/24/13 21:44 / gb

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C13040435-005
Client Sample ID 420

Report Date: 05/22/13
Collection Date: 04/09/13 09:55
Date Received: 04/12/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.08	pCi/L				E908.0	05/01/13 11:34 / dmf
Thorium 230 precision (±)	0.04	pCi/L				E908.0	05/01/13 11:34 / dmf
Thorium 230 MDC	0.05	pCi/L				E908.0	05/01/13 11:34 / dmf
DATA QUALITY							
A/C Balance (± 5)	2.53	%				A1030 E	04/22/13 07:30 / kbh
Anions	54.9	meq/L				A1030 E	04/22/13 07:30 / kbh
Cations	57.8	meq/L				A1030 E	04/22/13 07:30 / kbh
Solids, Total Dissolved Calculated	3600	mg/L				A1030 E	04/22/13 07:30 / kbh
TDS Balance (0.80 - 1.20)	1.02					A1030 E	04/22/13 07:30 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/16/13 01:44 / jlr
Bromoform	ND	ug/L		0.50		E624	04/16/13 01:44 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/16/13 01:44 / jlr
Chloroform	ND	ug/L		0.50		E624	04/16/13 01:44 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	04/16/13 01:44 / jlr
Surr: 1,2-Dichlorobenzene-d4	105	%REC		73.7-126		E624	04/16/13 01:44 / jlr
Surr: Dibromofluoromethane	122	%REC		64.4-131		E624	04/16/13 01:44 / jlr
Surr: p-Bromofluorobenzene	113	%REC		67.1-133		E624	04/16/13 01:44 / jlr
Surr: Toluene-d8	100	%REC		79.7-125		E624	04/16/13 01:44 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 8.

Report Definitions:

RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 3 Monitor Wells					
Well ID:		420	420	420	420
Collection Date:		4/9/2013	1/8/2013	10/16/2012	7/17/2012
Receive Date:		4/12/2013	1/11/2013	10/19/2012	7/20/2012
Report Date:		5/22/2013	2/22/2013	11/20/2012	9/7/2012
Analyte	RUnits	C13040435-005	C13010341-007	C12100835-006	C12070713-007
Bicarbonate as HCO3	mg/L	486	484	503	499
Calcium	mg/L	750	712	718	695
Chloride	mg/L	53	51	52	52
Magnesium	mg/L	155	149	144	146
Nitrogen, Ammonia as N	mg/L	0.05	0.07	0.10	0.06
Nitrogen, Nitrate+Nitrite as N	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Potassium	mg/L	8	7	7	8
Sodium	mg/L	171	157	156	170
Sulfate	mg/L	2180	2090	2070	2040
pH	s.u.	7.09	7.22	7.14	6.86
Solids, Total Dissolved TDS @ 180 C	mg/L	3650	3580	3550	3530
Aluminum	mg/L	0.2	0.3	0.2	0.4
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	0.02	0.02	0.02	0.02
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	0.001
Manganese	mg/L	1.68	1.55	1.43	0.88
Molybdenum	mg/L	0.7	0.8	0.9	0.8
Nickel	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
Uranium	mg/L	0.403	0.410	0.388	0.4
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	0.002
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	0.002
Gross Alpha minus Rn & U	pCi/L	6.8	4.0	5.2	6.6
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.9	0.5	0.6	1.3
Gross Alpha minus Rn & U MDC	pCi/L	0.5	0.3	0.3	0.9
Lead 210	pCi/L	0.7	1.2	0.3	1.2
Lead 210 precision (±)	pCi/L	0.8	0.8	0.6	0.7
Lead 210 MDC	pCi/L	1.3	1.3	1.0	1.2
Radium 226	pCi/L	6.5	4.8	4.4	4.7
Radium 226 precision (±)	pCi/L	0.55	0.45	0.39	0.42
Radium 226 MDC	pCi/L	0.19	0.17	0.14	0.15
Radium 228	pCi/L	7.7	5.3	8.1	7.1
Radium 228 precision (±)	pCi/L	1.3	0.93	1.0	1.0
Radium 228 MDC	pCi/L	1.6	1.1	1.1	1.2
Thorium 230	pCi/L	0.08	0.08	0.09	0.08
Thorium 230 precision (±)	pCi/L	0.04	0.09	0.09	0.09
Thorium 230 MDC	pCi/L	0.05	0.2	0.2	0.2
A/C Balance (± 5)	%	2.53	1.86	1.72	1.97
Anions	meq/L	54.9	52.8	52.9	52.2
Cations	meq/L	57.8	54.8	54.7	54.3
Solids, Total Dissolved Calculated	mg/L	3600	3400	3400	3400
TDS Balance (0.80 - 1.20)		1.02	1.05	1.04	1.04
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C13010580-002
Client Sample ID 711

Report Date: 02/25/13
Collection Date: 01/14/13 14:23
Date Received: 01/18/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	ND	mg/L		5		A2320 B	01/19/13 01:01 / jba
Calcium	504	mg/L		1		E200.7	01/22/13 21:34 / sf
Chloride	16	mg/L	D	4		E300.0	01/21/13 20:17 / wc
Magnesium	462	mg/L		1		E200.7	01/22/13 21:34 / sf
Nitrogen, Ammonia as N	0.43	mg/L		0.05		A4500-NH ₃ G	01/22/13 16:50 / ljl
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	01/18/13 17:06 / lr
Potassium	11	mg/L		1		E200.7	01/22/13 21:34 / sf
Sodium	103	mg/L	D	2		E200.7	01/22/13 21:34 / sf
Sulfate	3370	mg/L	D	20		E300.0	01/21/13 20:17 / wc
PHYSICAL PROPERTIES							
pH	3.87	s.u.	H	0.01		A4500-H B	01/21/13 10:03 / ab
Solids, Total Dissolved TDS @ 180 C	4850	mg/L	H	40		A2540 C	01/24/13 15:05 / jz
- H-Original TDS analysis was done within hold time. Data is from recheck analysis.							
METALS - TOTAL							
Aluminum	0.4	mg/L		0.1		E200.8	01/22/13 18:08 / clm
Beryllium	0.003	mg/L		0.001		E200.7	01/23/13 01:32 / sf
Cadmium	ND	mg/L		0.005		E200.7	01/23/13 01:32 / sf
Cobalt	0.28	mg/L		0.01		E200.7	01/23/13 01:32 / sf
Lead	0.004	mg/L		0.001		E200.8	01/22/13 18:08 / clm
Manganese	5.01	mg/L		0.01		E200.7	01/23/13 01:32 / sf
Molybdenum	0.3	mg/L		0.1		E200.7	01/23/13 01:32 / sf
Nickel	0.27	mg/L		0.05		E200.7	01/23/13 01:32 / sf
Uranium	0.0183	mg/L		0.0003		E200.8	01/22/13 18:08 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/23/13 01:32 / sf
METALS - SPECIATED							
Arsenic-III	0.005	mg/L		0.001		E1632AM	02/09/13 15:09 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	02/01/13 10:23 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	3.5	pCi/L				E900.1	02/08/13 05:27 / lbb
Gross Alpha minus Rn & U Precision (±)	0.5	pCi/L				E900.1	02/08/13 05:27 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	02/08/13 05:27 / lbb
Lead 210	0.8	pCi/L	U			E909.0	02/02/13 06:46 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	02/02/13 06:46 / eli-cs
Lead 210 MDC	1.1	pCi/L				E909.0	02/02/13 06:46 / eli-cs
Radium 226	4.4	pCi/L				E903.0	02/01/13 07:01 / trs
Radium 226 precision (±)	0.42	pCi/L				E903.0	02/01/13 07:01 / trs
Radium 226 MDC	0.15	pCi/L				E903.0	02/01/13 07:01 / trs
Radium 228	5.7	pCi/L				RA-05	01/27/13 14:44 / gb
Radium 228 precision (±)	0.76	pCi/L				RA-05	01/27/13 14:44 / gb
Radium 228 MDC	0.85	pCi/L				RA-05	01/27/13 14:44 / gb

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C13010580-002
Client Sample ID: 711

Report Date: 02/25/13
Collection Date: 01/14/13 14:23
Date Received: 01/18/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.07	pCi/L	U			E908.0	02/04/13 16:38 / dmf
Thorium 230 precision (±)	0.2	pCi/L				E908.0	02/04/13 16:38 / dmf
Thorium 230 MDC	0.4	pCi/L				E908.0	02/04/13 16:38 / dmf
- See Case Narrative regarding Th230 analysis.							
DATA QUALITY							
A/C Balance (± 5)	1.91	%				A1030 E	02/08/13 10:19 / sdw
Anions	70.6	meq/L				A1030 E	02/08/13 10:19 / sdw
Cations	73.4	meq/L				A1030 E	02/08/13 10:19 / sdw
Solids, Total Dissolved Calculated	4500	mg/L				A1030 E	02/08/13 10:19 / sdw
TDS Balance (0.80 - 1.20)	1.08					A1030 E	02/08/13 10:19 / sdw
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/21/13 15:48 / jk
Bromoform	ND	ug/L		0.50		E624	01/21/13 15:48 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	01/21/13 15:48 / jk
Chloroform	ND	ug/L		0.50		E624	01/21/13 15:48 / jk
Trihalomethanes, Total	ND	ug/L		0.50		E624	01/21/13 15:48 / jk
Surr: 1,2-Dichlorobenzene-d4	114	%REC		80-120		E624	01/21/13 15:48 / jk
Surr: Dibromofluoromethane	88.0	%REC		80-120		E624	01/21/13 15:48 / jk
Surr: p-Bromofluorobenzene	118	%REC		80-120		E624	01/21/13 15:48 / jk
Surr: Toluene-d8	92.0	%REC		80-120		E624	01/21/13 15:48 / jk

- The sample was received in the laboratory with a pH > 2. The pH was 5.

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C13040435-002
Client Sample ID 711

Report Date: 05/22/13
Collection Date: 04/08/13 13:50
Date Received: 04/12/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	04/12/13 19:14 / jba
Calcium	479	mg/L		1		E200.7	04/16/13 18:40 / sf
Chloride	16	mg/L	D	4		E300.0	04/16/13 09:37 / wc
Magnesium	458	mg/L		1		E200.7	04/16/13 18:40 / sf
Nitrogen, Ammonia as N	0.50	mg/L		0.05		A4500-NH3 G	04/17/13 12:33 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	04/15/13 14:28 / lr
Potassium	11	mg/L		1		E200.7	04/17/13 13:54 / sf
Sodium	103	mg/L		1		E200.7	04/16/13 18:40 / sf
Sulfate	3430	mg/L	D	20		E300.0	04/16/13 09:37 / wc
PHYSICAL PROPERTIES							
pH	3.41	s.u.	H	0.01		A4500-H B	04/12/13 15:48 / ab
Solids, Total Dissolved TDS @ 180 C	4680	mg/L		40		A2540 C	04/12/13 15:52 / ab
METALS - TOTAL							
Aluminum	0.3	mg/L		0.1		E200.8	04/23/13 00:27 / cp
Beryllium	0.002	mg/L		0.001		E200.8	04/23/13 00:27 / cp
Cadmium	ND	mg/L		0.005		E200.8	04/23/13 00:27 / cp
Cobalt	0.27	mg/L		0.01		E200.8	04/23/13 00:27 / cp
Lead	0.005	mg/L		0.001		E200.8	04/23/13 00:27 / cp
Manganese	5.12	mg/L		0.01		E200.8	04/23/13 00:27 / cp
Molybdenum	0.2	mg/L		0.1		E200.8	04/23/13 00:27 / cp
Nickel	0.27	mg/L		0.05		E200.8	04/23/13 00:27 / cp
Uranium	0.0210	mg/L		0.0003		E200.8	04/23/13 00:27 / cp
Vanadium	ND	mg/L		0.1		E200.8	04/23/13 00:27 / cp
METALS - SPECIATED							
Arsenic-III	0.004	mg/L		0.001		E1632AM	04/19/13 14:37 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	04/17/13 15:32 / jl1
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	6.3	pCi/L				E900.1	04/24/13 06:29 / lbb
Gross Alpha minus Rn & U Precision (±)	0.9	pCi/L				E900.1	04/24/13 06:29 / lbb
Gross Alpha minus Rn & U MDC	0.5	pCi/L				E900.1	04/24/13 06:29 / lbb
Lead 210	0.9	pCi/L	U			E909.0	04/21/13 23:59 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	04/21/13 23:59 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	04/21/13 23:59 / eli-cs
Radium 226	4.8	pCi/L				E903.0	04/29/13 17:01 / lmc
Radium 226 precision (±)	0.48	pCi/L				E903.0	04/29/13 17:01 / lmc
Radium 226 MDC	0.20	pCi/L				E903.0	04/29/13 17:01 / lmc
Radium 228	7.8	pCi/L				RA-05	04/24/13 21:44 / gb
Radium 228 precision (±)	1.3	pCi/L				RA-05	04/24/13 21:44 / gb
Radium 228 MDC	1.7	pCi/L				RA-05	04/24/13 21:44 / gb

Report Definitions:

RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C13040435-002
Client Sample ID 711

Report Date: 05/22/13
Collection Date: 04/08/13 13:50
Date Received: 04/12/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.2	pCi/L	U			E908.0	05/01/13 11:34 / dmf
Thorium 230 precision (±)	0.1	pCi/L				E908.0	05/01/13 11:34 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	05/01/13 11:34 / dmf
DATA QUALITY							
A/C Balance (± 5)	-0.310	%				A1030 E	04/22/13 07:30 / kbh
Anions	71.8	meq/L				A1030 E	04/22/13 07:30 / kbh
Cations	71.3	meq/L				A1030 E	04/22/13 07:30 / kbh
Solids, Total Dissolved Calculated	4500	mg/L				A1030 E	04/22/13 07:30 / kbh
TDS Balance (0.80 - 1.20)	1.04					A1030 E	04/22/13 07:30 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/16/13 00:03 / jlr
Bromoform	ND	ug/L		0.50		E624	04/16/13 00:03 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/16/13 00:03 / jlr
Chloroform	ND	ug/L		0.50		E624	04/16/13 00:03 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	04/16/13 00:03 / jlr
Surr: 1,2-Dichlorobenzene-d4	106	%REC		73.7-126		E624	04/16/13 00:03 / jlr
Surr: Dibromofluoromethane	146	%REC	S	64.4-131		E624	04/16/13 00:03 / jlr
Surr: p-Bromofluorobenzene	110	%REC		67.1-133		E624	04/16/13 00:03 / jlr
Surr: Toluene-d8	100	%REC		79.7-125		E624	04/16/13 00:03 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 4.

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 U - Not detected at minimum detectable concentration

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 S - Spike recovery outside of advisory limits.

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 3 Monitor Wells					
Well ID:		711	711	711	711
Collection Date:		4/8/2013	1/14/2013	10/15/2012	7/17/2012
Receive Date:		4/12/2013	1/18/2013	10/19/2012	7/20/2012
Report Date:		5/22/2013	2/25/2013	11/20/2012	9/7/2012
Analyte:	RUnits	C13040435-002	C13010580-002	C12100835-003	C12070713-004
Bicarbonate as HCO3	mg/L	ND(5)	ND(5)	ND(5)	ND(5)
Calcium	mg/L	479	504	500	482
Chloride	mg/L	16	16	16	18
Magnesium	mg/L	458	462	462	460
Nitrogen, Ammonia as N	mg/L	0.50	0.43	0.42	0.38
Nitrogen, Nitrate+Nitrite as N	mg/L	ND(0.1)	ND(0.1)	ND(0.2)	ND(0.1)
Potassium	mg/L	11	11	11	12
Sodium	mg/L	103	103	103	117
Sulfate	mg/L	3430	3370	3280	3400
pH	s.u.	3.41	3.87	3.78	3.30
Solids, Total Dissolved TDS @ 180 C	mg/L	4680	4850	4520	5020
Aluminum	mg/L	0.3	0.4	0.3	0.2
Beryllium	mg/L	0.002	0.003	0.002	0.002
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	0.27	0.28	0.29	0.28
Lead	mg/L	0.005	0.004	0.003	0.004
Manganese	mg/L	5.12	5.01	5.02	5.12
Molybdenum	mg/L	0.2	0.3	0.2	ND(0.1)
Nickel	mg/L	0.27	0.27	0.27	0.26
Uranium	mg/L	0.0210	0.0183	0.0169	0.0177
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	0.004	0.005	0.004	0.002
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	6.3	3.5	4.3	5.5
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.9	0.5	0.5	1.2
Gross Alpha minus Rn & U MDC	pCi/L	0.5	0.3	0.3	0.9
Lead 210	pCi/L	0.9	0.8	1.1	0.4
Lead 210 precision (±)	pCi/L	0.8	0.7	0.7	0.7
Lead 210 MDC	pCi/L	1.3	1.1	1.0	1.2
Radium 226	pCi/L	4.8	4.4	3.4	4.2
Radium 226 precision (±)	pCi/L	0.48	0.42	0.36	0.37
Radium 226 MDC	pCi/L	0.20	0.15	0.15	0.13
Radium 228	pCi/L	7.8	5.7	9.6	5.8
Radium 228 precision (±)	pCi/L	1.3	0.76	1.1	0.88
Radium 228 MDC	pCi/L	1.7	0.85	1.2	1.0
Thorium 230	pCi/L	0.2	0.07	0.09	0.06
Thorium 230 precision (±)	pCi/L	0.1	0.2	0.2	0.2
Thorium 230 MDC	pCi/L	0.2	0.4	0.5	0.5
A/C Balance (± 5)	%	-0.310	1.91	2.79	0.363
Anions	meq/L	71.8	70.6	68.8	71.2
Cations	meq/L	71.3	73.4	72.8	71.8
Solids, Total Dissolved Calculated	mg/L	4500	4500	4400	4500
TDS Balance (0.80 - 1.20)		1.04	1.08	1.03	1.12
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

****Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.**



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone 3
Lab ID: C13010341-001
Client Sample ID: 613

Report Date: 02/22/13
Collection Date: 01/08/13 10:11
Date Received: 01/11/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	ND	mg/L		5		A2320 B	01/11/13 14:34 / jba
Calcium	421	mg/L		1		E200.7	02/07/13 18:53 / sf
Chloride	128	mg/L	D	10		E300.0	01/11/13 23:42 / wc
Magnesium	721	mg/L		1		E200.7	02/07/13 18:53 / sf
Nitrogen, Ammonia as N	207	mg/L	D	5		A4500-NH ₃ G	01/14/13 12:55 / lr
Nitrogen, Nitrate+Nitrite as N	4	mg/L	D	1		E353.2	01/16/13 15:52 / lr
Potassium	ND	mg/L		1		E200.7	02/07/13 18:53 / sf
Sodium	256	mg/L	D	3		E200.7	02/07/13 18:53 / sf
Sulfate	8670	mg/L	D	40		E300.0	01/11/13 23:42 / wc
PHYSICAL PROPERTIES							
pH	2.89	s.u.	H	0.01		A4500-H B	01/11/13 13:12 / ab
Solids, Total Dissolved TDS @ 180 C	11800	mg/L		100		A2540 C	01/14/13 15:56 / ab
METALS - TOTAL							
Aluminum	623	mg/L		0.1		E200.7	01/15/13 19:11 / sf
Beryllium	0.184	mg/L		0.001		E200.7	01/15/13 19:11 / sf
Cadmium	0.036	mg/L		0.005		E200.7	01/15/13 19:11 / sf
Cobalt	1.93	mg/L		0.01		E200.7	01/15/13 19:11 / sf
Lead	0.011	mg/L		0.001		E200.8	02/13/13 23:13 / clm
Manganese	53.2	mg/L		0.01		E200.7	01/15/13 19:11 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/15/13 19:11 / sf
Nickel	1.89	mg/L		0.05		E200.7	01/15/13 19:11 / sf
Uranium	1.18	mg/L		0.0003		E200.8	01/17/13 21:21 / cp
Vanadium	1.8	mg/L		0.1		E200.7	01/15/13 19:11 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/23/13 13:49 / eli-h
Selenium-IV	0.002	mg/L		0.001		A3114 B	01/28/13 11:23 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	13.3	pCi/L				E900.1	02/13/13 07:37 / lbb
Gross Alpha minus Rn & U Precision (±)	0.9	pCi/L				E900.1	02/13/13 07:37 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	02/13/13 07:37 / lbb
Lead 210	1.9	pCi/L				E909.0	02/07/13 20:48 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	02/07/13 20:48 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	02/07/13 20:48 / eli-cs
Radium 226	12	pCi/L				E903.0	01/28/13 23:25 / lmc
Radium 226 precision (±)	0.88	pCi/L				E903.0	01/28/13 23:25 / lmc
Radium 226 MDC	0.26	pCi/L				E903.0	01/28/13 23:25 / lmc
Radium 228	0.55	pCi/L	U			RA-05	01/24/13 00:45 / gb
Radium 228 precision (±)	1.1	pCi/L				RA-05	01/24/13 00:45 / gb
Radium 228 MDC	1.8	pCi/L				RA-05	01/24/13 00:45 / gb

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone 3
Lab ID: C13010341-001
Client Sample ID: 613

Report Date: 02/22/13
Collection Date: 01/08/13 10:11
Date Received: 01/11/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	755	pCi/L				E908.0	02/01/13 09:12 / dmf
Thorium 230 precision (±)	84.6	pCi/L				E908.0	02/01/13 09:12 / dmf
Thorium 230 MDC	5.0	pCi/L				E908.0	02/01/13 09:12 / dmf
DATA QUALITY							
A/C Balance (± 5)	10.7	%				A1030 E	02/13/13 13:14 / kbh
Anions	187	meq/L				A1030 E	02/13/13 13:14 / kbh
Cations	232	meq/L				A1030 E	02/13/13 13:14 / kbh
Solids, Total Dissolved Calculated	10000	mg/L				A1030 E	02/13/13 13:14 / kbh
TDS Balance (0.80 - 1.20)	1.13					A1030 E	02/13/13 13:14 / kbh
- The Anion / Cation balance was confirmed by re-analysis.							
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/11/13 17:19 / jk
Bromoform	ND	ug/L		0.50		E624	01/11/13 17:19 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	01/11/13 17:19 / jk
Chloroform	102	ug/L		10		E624	01/14/13 19:29 / jk
Trihalomethanes, Total	102	ug/L		10		E624	01/14/13 19:29 / jk
Surr: 1,2-Dichlorobenzene-d4	102	%REC		80-120		E624	01/11/13 17:19 / jk
Surr: Dibromofluoromethane	100	%REC		80-120		E624	01/11/13 17:19 / jk
Surr: p-Bromofluorobenzene	98.0	%REC		80-120		E624	01/11/13 17:19 / jk
Surr: Toluene-d8	94.0	%REC		80-120		E624	01/11/13 17:19 / jk

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C13040244-001
Client Sample ID 613

Report Date: 05/22/13
Collection Date: 04/02/13 11:45
Date Received: 04/05/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	ND	mg/L		5		A2320 B	04/05/13 22:48 / jba
Calcium	430	mg/L		1		E200.7	04/15/13 17:35 / sf
Chloride	127	mg/L	D	10		E300.0	04/22/13 15:01 / wc
Magnesium	712	mg/L		1		E200.7	04/15/13 17:35 / sf
Nitrogen, Ammonia as N	197	mg/L	D	5		A4500-NH ₃ G	04/10/13 16:00 / lr
Nitrogen, Nitrate+Nitrite as N	4	mg/L	D	1		E353.2	04/08/13 12:03 / lr
Potassium	ND	mg/L		1		E200.7	04/16/13 13:48 / sf
Sodium	248	mg/L	D	2		E200.7	04/15/13 17:35 / sf
Sulfate	8950	mg/L	D	40		E300.0	04/22/13 15:01 / wc
PHYSICAL PROPERTIES							
pH	2.96	s.u.	H	0.01		A4500-H B	04/08/13 09:47 / ab
Solids, Total Dissolved TDS @ 180 C	11900	mg/L		100		A2540 C	04/08/13 15:45 / jz
METALS - TOTAL							
Aluminum	604	mg/L		0.1		E200.7	04/12/13 23:17 / sf
Beryllium	0.140	mg/L		0.001		E200.8	04/11/13 00:54 / cp
Cadmium	0.034	mg/L		0.005		E200.8	04/11/13 00:54 / cp
Cobalt	1.86	mg/L		0.01		E200.8	04/11/13 00:54 / cp
Lead	0.006	mg/L		0.001		E200.8	04/11/13 00:54 / cp
Manganese	52.2	mg/L		0.01		E200.8	04/11/13 00:54 / cp
Molybdenum	ND	mg/L		0.1		E200.8	04/11/13 00:54 / cp
Nickel	1.94	mg/L		0.05		E200.8	04/11/13 00:54 / cp
Uranium	1.05	mg/L		0.0003		E200.8	04/11/13 00:54 / cp
Vanadium	1.8	mg/L		0.1		E200.8	04/11/13 00:54 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/17/13 13:10 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	04/17/13 15:01 / jl1
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	27.9	pCi/L				E900.1	05/08/13 06:34 / lbb
Gross Alpha minus Rn & U Precision (±)	1.6	pCi/L				E900.1	05/08/13 06:34 / lbb
Gross Alpha minus Rn & U MDC	0.4	pCi/L				E900.1	05/08/13 06:34 / lbb
Lead 210	0.5	pCi/L	U			E909.0	04/16/13 12:00 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	04/16/13 12:00 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	04/16/13 12:00 / eli-cs
Radium 226	8.8	pCi/L				E903.0	04/23/13 20:46 / lmc
Radium 226 precision (±)	0.61	pCi/L				E903.0	04/23/13 20:46 / lmc
Radium 226 MDC	0.16	pCi/L				E903.0	04/23/13 20:46 / lmc
Radium 228	0.75	pCi/L	U			RA-05	04/17/13 22:22 / gb
Radium 228 precision (±)	1.3	pCi/L				RA-05	04/17/13 22:22 / gb
Radium 228 MDC	2.1	pCi/L				RA-05	04/17/13 22:22 / gb

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C13040244-001
Client Sample ID: 613

Report Date: 05/22/13
Collection Date: 04/02/13 11:45
Date Received: 04/05/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	760	pCi/L				E908.0	04/19/13 13:58 / dmf
Thorium 230 precision (±)	127	pCi/L				E908.0	04/19/13 13:58 / dmf
Thorium 230 MDC	12.9	pCi/L				E908.0	04/19/13 13:58 / dmf
DATA QUALITY							
A/C Balance (± 5)	6.97	%				A1030 E	04/24/13 08:56 / sdw
Anions	192	meq/L				A1030 E	04/24/13 08:56 / sdw
Cations	221	meq/L				A1030 E	04/24/13 08:56 / sdw
Solids, Total Dissolved Calculated	11000	mg/L				A1030 E	04/24/13 08:56 / sdw
TDS Balance (0.80 - 1.20)	1.11					A1030 E	04/24/13 08:56 / sdw
- The Anion / Cation balance was confirmed by re-analysis.							
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/11/13 18:31 / jlr
Bromoform	ND	ug/L		0.50		E624	04/11/13 18:31 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/11/13 18:31 / jlr
Chloroform	97.6	ug/L		5.0		E624	04/11/13 17:57 / jlr
Trihalomethanes, Total	97.6	ug/L		5.0		E624	04/11/13 17:57 / jlr
Surr: 1,2-Dichlorobenzene-d4	110	%REC		73.7-126		E624	04/11/13 18:31 / jlr
Surr: Dibromofluoromethane	131	%REC		64.4-131		E624	04/11/13 18:31 / jlr
Surr: p-Bromofluorobenzene	117	%REC		67.1-133		E624	04/11/13 18:31 / jlr
Surr: Toluene-d8	99.0	%REC		79.7-125		E624	04/11/13 18:31 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 3.							

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 3 Monitor Wells					
Well ID:		613	613	613	613
Collection Date:		4/2/2013	1/8/2013	10/9/2012	7/10/2012
Receive Date:		4/5/2013	1/11/2013	10/12/2012	7/13/2012
Report Date:		5/22/2013	2/22/2013	11/20/2012	8/30/2012
Analyte	RUnits	C13040244-001	C13010341-001	C12100571-001	C12070463-001
Bicarbonate as HCO3	mg/L	ND(5)	ND(5)	ND(5)	ND(5)
Calcium	mg/L	430	421	442	422
Chloride	mg/L	127	128	142	144
Magnesium	mg/L	712	721	693	697
Nitrogen, Ammonia as N	mg/L	197	207	206	202
Nitrogen, Nitrate+Nitrite as N	mg/L	4	4	3.4	5.2
Potassium	mg/L	ND(1)	ND(1)	1	ND(1)
Sodium	mg/L	248	256	248	249
Sulfate	mg/L	8950	8670	8630	8850
pH	s.u.	2.96	2.89	2.97	2.98
Solids, Total Dissolved TDS @ 180 C	mg/L	11900	11800	11900	12200
Aluminum	mg/L	604	623	566	616
Beryllium	mg/L	0.140	0.184	0.144	0.178
Cadmium	mg/L	0.034	0.036	0.036	0.041
Cobalt	mg/L	1.86	1.93	1.89	1.94
Lead	mg/L	0.006	0.011	0.007	0.006
Manganese	mg/L	52.2	53.2	51.1	52.2
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	1.94	1.89	1.90	1.78
Uranium	mg/L	1.05	1.18	0.989	1.04
Vanadium	mg/L	1.8	1.8	1.8	1.9
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	0.002	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	27.9	13.3	14.5	13.5
Gross Alpha minus Rn & U Precision (±)	pCi/L	1.6	0.9	1.1	1.0
Gross Alpha minus Rn & U MDC	pCi/L	0.4	0.3	0.3	0.3
Lead 210	pCi/L	0.5	1.9	2.4	0.6
Lead 210 precision (±)	pCi/L	0.8	0.8	0.7	0.7
Lead 210 MDC	pCi/L	1.3	1.3	1.0	1.1
Radium 226	pCi/L	8.8	12	13	8.6
Radium 226 precision (±)	pCi/L	0.61	0.88	0.85	0.58
Radium 226 MDC	pCi/L	0.16	0.26	0.23	0.16
Radium 228	pCi/L	0.75	0.55	2.0	22
Radium 228 precision (±)	pCi/L	1.3	1.1	1.5	1.7
Radium 228 MDC	pCi/L	2.1	1.8	2.4	1.5
Thorium 230	pCi/L	760	755	690	788
Thorium 230 precision (±)	pCi/L	127	84.6	112	131
Thorium 230 MDC	pCi/L	12.9	5.0	13.6	13.7
A/C Balance (± 5)	%	6.97	10.7	1.54	5.74
Anions	meq/L	192	187	185	190
Cations	meq/L	221	232	191	213
Solids, Total Dissolved Calculated	mg/L	11000	10000	10000	11000
TDS Balance (0.80 - 1.20)		1.11	1.13	1.14	1.15
Trihalomethanes, Total	ug/L	97.6	102	88.8	79.9

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C13010580-005
Client Sample ID: 708

Report Date: 02/25/13
Collection Date: 01/15/13 16:00
Date Received: 01/18/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	ND	mg/L		5		A2320 B	01/19/13 01:17 / jba
Calcium	469	mg/L		1		E200.7	01/22/13 21:50 / sf
Chloride	30	mg/L	D	4		E300.0	01/21/13 21:03 / wc
Magnesium	608	mg/L		1		E200.7	01/22/13 21:50 / sf
Nitrogen, Ammonia as N	1.33	mg/L		0.05		A4500-NH ₃ G	01/22/13 17:00 / ijl
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	01/18/13 17:19 / lr
Potassium	15	mg/L		1		E200.7	01/22/13 21:50 / sf
Sodium	128	mg/L	D	2		E200.7	01/22/13 21:50 / sf
Sulfate	4500	mg/L	D	20		E300.0	01/21/13 21:03 / wc
PHYSICAL PROPERTIES							
pH	2.96	s.u.	H	0.01		A4500-H B	01/21/13 10:11 / ab
Solids, Total Dissolved TDS @ 180 C	6200	mg/L		40		A2540 C	01/21/13 08:41 / ab
METALS - TOTAL							
Aluminum	46.6	mg/L		0.1		E200.7	01/23/13 02:04 / sf
Beryllium	0.046	mg/L		0.001		E200.7	01/23/13 02:04 / sf
Cadmium	ND	mg/L		0.005		E200.7	01/23/13 02:04 / sf
Cobalt	0.58	mg/L		0.01		E200.7	01/23/13 02:04 / sf
Lead	0.003	mg/L		0.001		E200.8	01/22/13 19:18 / clm
Manganese	13.4	mg/L		0.01		E200.7	01/23/13 02:04 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/23/13 02:04 / sf
Nickel	0.72	mg/L		0.05		E200.7	01/23/13 02:04 / sf
Uranium	0.122	mg/L		0.0003		E200.8	01/22/13 19:18 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/23/13 02:04 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	02/09/13 15:33 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	02/06/13 13:34 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	9.4	pCi/L				E900.1	02/08/13 05:27 / lbb
Gross Alpha minus Rn & U Precision (±)	0.8	pCi/L				E900.1	02/08/13 05:27 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	02/08/13 05:27 / lbb
Lead 210	0.8	pCi/L	U			E909.0	02/02/13 13:37 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	02/02/13 13:37 / eli-cs
Lead 210 MDC	1.1	pCi/L				E909.0	02/02/13 13:37 / eli-cs
Radium 226	10	pCi/L				E903.0	02/01/13 07:01 / trs
Radium 226 precision (±)	0.64	pCi/L				E903.0	02/01/13 07:01 / trs
Radium 226 MDC	0.15	pCi/L				E903.0	02/01/13 07:01 / trs
Radium 228	4.8	pCi/L				RA-05	01/27/13 14:44 / gb
Radium 228 precision (±)	0.73	pCi/L				RA-05	01/27/13 14:44 / gb
Radium 228 MDC	0.86	pCi/L				RA-05	01/27/13 14:44 / gb

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C13010580-005
Client Sample ID: 708

Report Date: 02/25/13
Collection Date: 01/15/13 16:00
Date Received: 01/18/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.7	pCi/L	U		E908.0		02/01/13 09:12 / dmf
Thorium 230 precision (±)	0.5	pCi/L			E908.0		02/01/13 09:12 / dmf
Thorium 230 MDC	0.8	pCi/L			E908.0		02/01/13 09:12 / dmf
- See Case Narrative regarding Th230 analysis.							
DATA QUALITY							
A/C Balance (± 5)	3.30	%			A1030 E		01/23/13 09:41 / kbh
Anions	95.1	meq/L			A1030 E		01/23/13 09:41 / kbh
Cations	102	meq/L			A1030 E		01/23/13 09:41 / kbh
Solids, Total Dissolved Calculated	5800	mg/L			A1030 E		01/23/13 09:41 / kbh
TDS Balance (0.80 - 1.20)	1.07				A1030 E		01/23/13 09:41 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50	E624		01/21/13 21:40 / jk
Bromoform	ND	ug/L		0.50	E624		01/21/13 21:40 / jk
Chlorodibromomethane	ND	ug/L		0.50	E624		01/21/13 21:40 / jk
Chloroform	ND	ug/L		0.50	E624		01/21/13 21:40 / jk
Trihalomethanes, Total	ND	ug/L		0.50	E624		01/21/13 21:40 / jk
Surr: 1,2-Dichlorobenzene-d4	112	%REC		80-120	E624		01/21/13 21:40 / jk
Surr: Dibromofluoromethane	69.0	%REC	S	80-120	E624		01/21/13 21:40 / jk
Surr: p-Bromofluorobenzene	104	%REC		80-120	E624		01/21/13 21:40 / jk
Surr: Toluene-d8	91.0	%REC		80-120	E624		01/21/13 21:40 / jk

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 U - Not detected at minimum detectable concentration

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 S - Spike recovery outside of advisory limits.



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C13040435-001
Client Sample ID: 708

Report Date: 05/22/13
Collection Date: 04/08/13 13:05
Date Received: 04/12/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	ND	mg/L		5		A2320 B	04/12/13 19:12 / jba
Calcium	444	mg/L		1		E200.7	04/16/13 18:36 / sf
Chloride	31	mg/L	D	4		E300.0	04/16/13 09:21 / wc
Magnesium	602	mg/L		1		E200.7	04/16/13 18:36 / sf
Nitrogen, Ammonia as N	1.47	mg/L		0.05		A4500-NH3 G	04/16/13 15:39 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	04/15/13 14:21 / lr
Potassium	15	mg/L		1		E200.7	04/17/13 13:51 / sf
Sodium	129	mg/L		1		E200.7	04/16/13 18:36 / sf
Sulfate	4480	mg/L	D	20		E300.0	04/16/13 09:21 / wc
PHYSICAL PROPERTIES							
pH	3.02	s.u.	H	0.01		A4500-H B	04/12/13 15:45 / ab
Solids, Total Dissolved TDS @ 180 C	6590	mg/L		40		A2540 C	04/12/13 15:52 / ab
METALS - TOTAL							
Aluminum	37.3	mg/L		0.1		E200.8	04/23/13 00:57 / cp
Beryllium	0.042	mg/L		0.001		E200.8	04/23/13 00:57 / cp
Cadmium	ND	mg/L		0.005		E200.8	04/23/13 00:57 / cp
Cobalt	0.58	mg/L		0.01		E200.8	04/23/13 00:57 / cp
Lead	0.004	mg/L		0.001		E200.8	04/23/13 00:57 / cp
Manganese	13.7	mg/L		0.01		E200.8	04/23/13 00:57 / cp
Molybdenum	ND	mg/L		0.1		E200.8	04/23/13 00:57 / cp
Nickel	0.75	mg/L		0.05		E200.8	04/23/13 00:57 / cp
Uranium	0.112	mg/L		0.0003		E200.8	04/23/13 00:57 / cp
Vanadium	ND	mg/L		0.1		E200.8	04/23/13 00:57 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/19/13 14:29 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	04/17/13 15:30 / jl1
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	15.3	pCi/L				E900.1	04/24/13 06:29 / lbb
Gross Alpha minus Rn & U Precision (±)	1.3	pCi/L				E900.1	04/24/13 06:29 / lbb
Gross Alpha minus Rn & U MDC	0.5	pCi/L				E900.1	04/24/13 06:29 / lbb
Lead 210	0.6	pCi/L	U			E909.0	04/21/13 23:59 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	04/21/13 23:59 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	04/21/13 23:59 / eli-cs
Radium 226	9.2	pCi/L				E903.0	04/29/13 17:01 / lmc
Radium 226 precision (±)	0.64	pCi/L				E903.0	04/29/13 17:01 / lmc
Radium 226 MDC	0.19	pCi/L				E903.0	04/29/13 17:01 / lmc
Radium 228	3.7	pCi/L				RA-05	04/24/13 21:44 / gb
Radium 228 precision (±)	1.1	pCi/L				RA-05	04/24/13 21:44 / gb
Radium 228 MDC	1.6	pCi/L				RA-05	04/24/13 21:44 / gb

Report RL - Analyte reporting limit.
Definitions: QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C13040435-001
Client Sample ID: 708

Report Date: 05/22/13
Collection Date: 04/08/13 13:05
Date Received: 04/12/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	-0.02	pCi/L	U			E908.0	05/03/13 16:31 / dmf
Thorium 230 precision (±)	0.3	pCi/L				E908.0	05/03/13 16:31 / dmf
Thorium 230 MDC	0.6	pCi/L				E908.0	05/03/13 16:31 / dmf
- See Case Narrative regarding Th230 analysis.							
DATA QUALITY							
A/C Balance (± 5)	3.69	%				A1030 E	04/22/13 07:29 / kbh
Anions	94.6	meq/L				A1030 E	04/22/13 07:29 / kbh
Cations	102	meq/L				A1030 E	04/22/13 07:29 / kbh
Solids, Total Dissolved Calculated	5800	mg/L				A1030 E	04/22/13 07:29 / kbh
TDS Balance (0.80 - 1.20)	1.14					A1030 E	04/22/13 07:29 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/15/13 23:30 / jlr
Bromoform	ND	ug/L		0.50		E624	04/15/13 23:30 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/15/13 23:30 / jlr
Chloroform	ND	ug/L		0.50		E624	04/15/13 23:30 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	04/15/13 23:30 / jlr
Surr: 1,2-Dichlorobenzene-d4	106	%REC		73.7-126		E624	04/15/13 23:30 / jlr
Surr: Dibromofluoromethane	127	%REC		64.4-131		E624	04/15/13 23:30 / jlr
Surr: p-Bromofluorobenzene	122	%REC		67.1-133		E624	04/15/13 23:30 / jlr
Surr: Toluene-d8	95.0	%REC		79.7-125		E624	04/15/13 23:30 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 3.							

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 U - Not detected at minimum detectable concentration

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 3 Monitor Wells					
Well ID:		708	708	708	708
Collection Date:		4/8/2013	1/15/2013	10/15/2012	7/16/2012
Receive Date:		4/12/2013	1/18/2013	10/19/2012	7/20/2012
Report Date:		5/22/2013	2/25/2013	11/20/2012	9/7/2012
Analyte	RUnits	C13040435-001	C13010580-005	C12100835-002	C12070713-002
Bicarbonate as HCO3	mg/L	ND(5)	ND(5)	ND(5)	ND(5)
Calcium	mg/L	444	469	460	446
Chloride	mg/L	31	30	30	30
Magnesium	mg/L	602	608	604	602
Nitrogen, Ammonia as N	mg/L	1.47	1.33	1.3	1.44
Nitrogen, Nitrate+Nitrite as N	mg/L	ND(0.1)	ND(0.1)	ND(1)	ND(0.1)
Potassium	mg/L	15	15	15	15
Sodium	mg/L	129	128	130	130
Sulfate	mg/L	4480	4500	4500	4320
pH	s.u.	3.02	2.96	2.91	2.89
Solids, Total Dissolved TDS @ 180 C	mg/L	6590	6200	6270	6250
Aluminum	mg/L	37.3	46.6	36.7	34.4
Beryllium	mg/L	0.042	0.046	0.043	0.037
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	0.58	0.58	0.60	0.60
Lead	mg/L	0.004	0.003	0.004	0.004
Manganese	mg/L	13.7	13.4	13.8	13.0
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	0.75	0.72	0.82	0.69
Uranium	mg/L	0.112	0.122	0.108	0.0958
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	15.3	9.4	11.2	29.8
Gross Alpha minus Rn & U Precision (±)	pCi/L	1.3	0.8	0.8	2.6
Gross Alpha minus Rn & U MDC	pCi/L	0.5	0.3	0.2	0.9
Lead 210	pCi/L	0.6	0.8	1.2	1.2
Lead 210 precision (±)	pCi/L	0.8	0.7	0.7	0.7
Lead 210 MDC	pCi/L	1.3	1.1	1.1	1.2
Radium 226	pCi/L	9.2	10	7.6	8.8
Radium 226 precision (±)	pCi/L	0.64	0.64	0.54	0.54
Radium 226 MDC	pCi/L	0.19	0.15	0.16	0.14
Radium 228	pCi/L	3.7	4.8	6.0	4.9
Radium 228 precision (±)	pCi/L	1.1	0.73	1.0	0.85
Radium 228 MDC	pCi/L	1.6	0.86	1.2	1.0
Thorium 230	pCi/L	-0.02	0.7	0.3	0.2
Thorium 230 precision (±)	pCi/L	0.3	0.5	0.6	0.6
Thorium 230 MDC	pCi/L	0.6	0.8	1.3	1.4
A/C Balance (± 5)	%	3.69	3.30	0.558	5.68
Anions	meq/L	94.6	95.1	95.2	91.5
Cations	meq/L	102	102	96.3	102
Solids, Total Dissolved Calculated	mg/L	5800	5800	5800	5600
TDS Balance (0.80 - 1.20)		1.14	1.07	1.08	1.11
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C13010580-003
Client Sample ID: NBL-1

Report Date: 02/25/13
Collection Date: 01/14/13 15:20
Date Received: 01/18/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	ND	mg/L		5		A2320 B	01/19/13 01:05 / jba
Calcium	492	mg/L		1		E200.7	01/22/13 21:38 / sf
Chloride	29	mg/L	D	4		E300.0	01/21/13 20:32 / wc
Magnesium	372	mg/L		1		E200.7	01/22/13 21:38 / sf
Nitrogen, Ammonia as N	0.54	mg/L		0.05		A4500-NH ₃ G	01/22/13 16:56 / lji
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	01/18/13 17:14 / lr
Potassium	10	mg/L		1		E200.7	01/22/13 21:38 / sf
Sodium	139	mg/L	D	2		E200.7	01/22/13 21:38 / sf
Sulfate	4250	mg/L	D	20		E300.0	01/21/13 20:32 / wc
PHYSICAL PROPERTIES							
pH	2.61	s.u.	H	0.01		A4500-H B	01/21/13 10:05 / ab
Solids, Total Dissolved TDS @ 180 C	5940	mg/L		40		A2540 C	01/21/13 08:38 / ab
METALS - TOTAL							
Aluminum	76.7	mg/L		0.1		E200.7	01/23/13 01:56 / sf
Beryllium	0.058	mg/L		0.001		E200.7	01/23/13 01:56 / sf
Cadmium	ND	mg/L		0.005		E200.7	01/23/13 01:56 / sf
Cobalt	1.43	mg/L		0.01		E200.7	01/23/13 01:56 / sf
Lead	0.046	mg/L		0.001		E200.8	01/22/13 19:12 / clm
Manganese	8.73	mg/L		0.01		E200.7	01/23/13 01:56 / sf
Molybdenum	0.1	mg/L		0.1		E200.7	01/23/13 01:56 / sf
Nickel	1.70	mg/L		0.05		E200.7	01/23/13 01:56 / sf
Uranium	0.458	mg/L		0.0003		E200.8	01/22/13 19:12 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/23/13 01:56 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	02/09/13 15:17 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	02/01/13 10:25 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	3.2	pCi/L				E900.1	02/08/13 05:27 / lbb
Gross Alpha minus Rn & U Precision (±)	0.5	pCi/L				E900.1	02/08/13 05:27 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	02/08/13 05:27 / lbb
Lead 210	2.0	pCi/L				E909.0	02/02/13 09:03 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	02/02/13 09:03 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	02/02/13 09:03 / eli-cs
Radium 226	4.3	pCi/L				E903.0	02/01/13 07:01 / trs
Radium 226 precision (±)	0.42	pCi/L				E903.0	02/01/13 07:01 / trs
Radium 226 MDC	0.15	pCi/L				E903.0	02/01/13 07:01 / trs
Radium 228	0.53	pCi/L	U			RA-05	01/27/13 14:44 / gb
Radium 228 precision (±)	0.53	pCi/L				RA-05	01/27/13 14:44 / gb
Radium 228 MDC	0.85	pCi/L				RA-05	01/27/13 14:44 / gb

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C13010580-003
Client Sample ID: NBL-1

Report Date: 02/25/13
Collection Date: 01/14/13 15:20
Date Received: 01/18/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	8.5	pCi/L				E908.0	02/01/13 09:12 / dmf
Thorium 230 precision (±)	1.6	pCi/L				E908.0	02/01/13 09:12 / dmf
Thorium 230 MDC	0.5	pCi/L				E908.0	02/01/13 09:12 / dmf
DATA QUALITY							
A/C Balance (± 5)	2.61	%				A1030 E	01/23/13 09:41 / kbh
Anions	89.4	meq/L				A1030 E	01/23/13 09:41 / kbh
Cations	94.2	meq/L				A1030 E	01/23/13 09:41 / kbh
Solids, Total Dissolved Calculated	5500	mg/L				A1030 E	01/23/13 09:41 / kbh
TDS Balance (0.80 - 1.20)	1.09					A1030 E	01/23/13 09:41 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/21/13 16:23 / jk
Bromoform	ND	ug/L		0.50		E624	01/21/13 16:23 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	01/21/13 16:23 / jk
Chloroform	ND	ug/L		0.50		E624	01/21/13 16:23 / jk
Trihalomethanes, Total	ND	ug/L		0.50		E624	01/21/13 16:23 / jk
Surr: 1,2-Dichlorobenzene-d4	114	%REC		80-120		E624	01/21/13 16:23 / jk
Surr: Dibromofluoromethane	101	%REC		80-120		E624	01/21/13 16:23 / jk
Surr: p-Bromofluorobenzene	125	%REC	S	80-120		E624	01/21/13 16:23 / jk
Surr: Toluene-d8	94.0	%REC		80-120		E624	01/21/13 16:23 / jk

Report Definitions:

RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
S - Spike recovery outside of advisory limits.

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 3 Monitor Wells					
Well ID:		NBL-1	NBL-1	NBL-1	NBL-1
Collection Date:		1/14/2013	10/16/2012	7/17/2012	4/10/2012
Receive Date:		1/18/2013	10/19/2012	7/20/2012	4/13/2012
Report Date:		2/25/2013	11/20/2012	9/7/2012	5/25/2012
Analyte	RUnits	C13010580-003	C12100835-010	C12070713-009	C12040738-009
Bicarbonate as HCO3	mg/L	ND(5)	ND(5)	ND(5)	ND(5)
Calcium	mg/L	492	531	526	504
Chloride	mg/L	29	30	31	30
Magnesium	mg/L	372	368	376	365
Nitrogen, Ammonia as N	mg/L	0.54	0.7	1.3	2.16
Nitrogen, Nitrate+Nitrite as N	mg/L	ND(0.1)	ND(1)	ND(1)	ND(0.5)
Potassium	mg/L	10	13	14	12
Sodium	mg/L	139	138	142	130
Sulfate	mg/L	4250	4260	4150	3500
pH	s.u.	2.61	2.73	2.76	2.80
Solids, Total Dissolved TDS @ 180 C	mg/L	5940	5530	5660	5020
Aluminum	mg/L	76.7	43.4	30.1	13.3
Beryllium	mg/L	0.058	0.039	0.034	0.03
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	1.43	0.94	1.00	0.79
Lead	mg/L	0.046	0.074	0.092	0.11
Manganese	mg/L	8.73	6.61	8.08	6.28
Molybdenum	mg/L	0.1	ND(0.1)	1.3	0.5
Nickel	mg/L	1.70	1.23	1.26	1.00
Uranium	mg/L	0.458	0.189	0.134	0.0717
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	0.032	0.014	0.03
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	0.002	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	3.2	5.1	34.5	22.7
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.5	0.6	2.8	1.6
Gross Alpha minus Rn & U MDC	pCi/L	0.3	0.3	0.9	0.5
Lead 210	pCi/L	2.0	3.4	6.5	9.8
Lead 210 precision (±)	pCi/L	0.8	0.8	1	0.9
Lead 210 MDC	pCi/L	1.3	1.1	1.2	1.3
Radium 226	pCi/L	4.3	6.0	18	23
Radium 226 precision (±)	pCi/L	0.42	0.45	0.77	1.1
Radium 226 MDC	pCi/L	0.15	0.15	0.14	0.19
Radium 228	pCi/L	0.53	5.5	16	21
Radium 228 precision (±)	pCi/L	0.53	1.1	1.4	1.4
Radium 228 MDC	pCi/L	0.85	1.4	1.3	1.2
Thorium 230	pCi/L	8.5	4.9	7.0	4.6
Thorium 230 precision (±)	pCi/L	1.6	1.1	1.6	1.0
Thorium 230 MDC	pCi/L	0.5	0.4	0.4	0.3
A/C Balance (± 5)	%	2.61	-1.34	3.21	-1.12
Anions	meq/L	89.4	89.6	87.4	74.5
Cations	meq/L	94.2	87.3	93.2	72.8
Solids, Total Dissolved Calculated	mg/L	5500	5500	5400	4650
TDS Balance (0.80 - 1.20)		1.09	1.01	1.06	1.08
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

****Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.**



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C13010580-001
Client Sample ID: EPA-13

Report Date: 02/25/13
Collection Date: 01/14/13 13:32
Date Received: 01/18/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	64	mg/L		5		A2320 B	01/19/13 00:51 / jba
Calcium	539	mg/L		1		E200.7	01/22/13 21:30 / sf
Chloride	46	mg/L	D	4		E300.0	01/21/13 20:01 / wc
Magnesium	938	mg/L		1		E200.7	01/22/13 21:30 / sf
Nitrogen, Ammonia as N	0.26	mg/L		0.05		A4500-NH ₃ G	01/22/13 16:42 / lji
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	01/18/13 16:54 / lr
Potassium	15	mg/L		1		E200.7	01/22/13 21:30 / sf
Sodium	170	mg/L	D	2		E200.7	01/22/13 21:30 / sf
Sulfate	4880	mg/L	D	20		E300.0	01/21/13 20:01 / wc
PHYSICAL PROPERTIES							
pH	6.17	s.u.	H	0.01		A4500-H B	01/21/13 10:00 / ab
Solids, Total Dissolved TDS @ 180 C	6920	mg/L		40		A2540 C	01/21/13 08:38 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	01/23/13 01:28 / sf
Beryllium	0.002	mg/L		0.001		E200.7	01/23/13 01:28 / sf
Cadmium	ND	mg/L		0.005		E200.7	01/23/13 01:28 / sf
Cobalt	0.09	mg/L		0.01		E200.7	01/23/13 01:28 / sf
Lead	ND	mg/L		0.001		E200.8	01/22/13 18:05 / clm
Manganese	7.37	mg/L		0.01		E200.7	01/23/13 01:28 / sf
Molybdenum	0.2	mg/L		0.1		E200.7	01/23/13 01:28 / sf
Nickel	0.23	mg/L		0.05		E200.7	01/23/13 01:28 / sf
Uranium	0.0120	mg/L		0.0003		E200.8	01/22/13 18:05 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/23/13 01:28 / sf
METALS - SPECIATED							
Arsenic-III	0.007	mg/L		0.001		E1632AM	02/09/13 15:01 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	02/01/13 10:22 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	5.5	pCi/L				E900.1	02/08/13 05:27 / lbb
Gross Alpha minus Rn & U Precision (±)	0.7	pCi/L				E900.1	02/08/13 05:27 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	02/08/13 05:27 / lbb
Lead 210	0.5	pCi/L	U			E909.0	02/02/13 04:29 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	02/02/13 04:29 / eli-cs
Lead 210 MDC	1.1	pCi/L				E909.0	02/02/13 04:29 / eli-cs
Radium 226	5.9	pCi/L				E903.0	02/01/13 07:01 / trs
Radium 226 precision (±)	0.53	pCi/L				E903.0	02/01/13 07:01 / trs
Radium 226 MDC	0.18	pCi/L				E903.0	02/01/13 07:01 / trs
Radium 228	8.3	pCi/L				RA-05	01/27/13 14:44 / gb
Radium 228 precision (±)	0.95	pCi/L				RA-05	01/27/13 14:44 / gb
Radium 228 MDC	1.0	pCi/L				RA-05	01/27/13 14:44 / gb

Report Definitions:

RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C13010580-001
Client Sample ID: EPA-13

Report Date: 02/25/13
Collection Date: 01/14/13 13:32
Date Received: 01/18/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.2	pCi/L	U			E908.0	02/04/13 16:38 / dmf
Thorium 230 precision (±)	0.3	pCi/L				E908.0	02/04/13 16:38 / dmf
Thorium 230 MDC	0.6	pCi/L				E908.0	02/04/13 16:38 / dmf
- See Case Narrative regarding Th230 analysis.							
DATA QUALITY							
A/C Balance (± 5)	3.60	%				A1030 E	01/23/13 09:40 / kbh
Anions	104	meq/L				A1030 E	01/23/13 09:40 / kbh
Cations	112	meq/L				A1030 E	01/23/13 09:40 / kbh
Solids, Total Dissolved Calculated	6600	mg/L				A1030 E	01/23/13 09:40 / kbh
TDS Balance (0.80 - 1.20)	1.04					A1030 E	01/23/13 09:40 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/21/13 15:13 / jk
Bromoform	ND	ug/L		0.50		E624	01/21/13 15:13 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	01/21/13 15:13 / jk
Chloroform	ND	ug/L		0.50		E624	01/21/13 15:13 / jk
Trihalomethanes, Total	ND	ug/L		0.50		E624	01/21/13 15:13 / jk
Surr: 1,2-Dichlorobenzene-d4	119	%REC		80-120		E624	01/21/13 15:13 / jk
Surr: Dibromofluoromethane	105	%REC		80-120		E624	01/21/13 15:13 / jk
Surr: p-Bromofluorobenzene	123	%REC	S	80-120		E624	01/21/13 15:13 / jk
Surr: Toluene-d8	94.0	%REC		80-120		E624	01/21/13 15:13 / jk
- The sample was received in the laboratory with a pH > 2. The pH was 7.							

Report Definitions:

RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
U - Not detected at minimum detectable concentration

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
S - Spike recovery outside of advisory limits.



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C13040435-003
Client Sample ID: EPA-13

Report Date: 05/22/13
Collection Date: 04/08/13 15:15
Date Received: 04/12/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	62	mg/L		5		A2320 B	04/12/13 19:21 / jba
Calcium	525	mg/L		1		E200.7	04/16/13 19:09 / sf
Chloride	41	mg/L	D	4		E300.0	04/16/13 09:52 / wc
Magnesium	968	mg/L		1		E200.7	04/16/13 19:09 / sf
Nitrogen, Ammonia as N	0.25	mg/L		0.05		A4500-NH ₃ G	04/17/13 12:39 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	04/15/13 14:36 / lr
Potassium	15	mg/L		1		E200.7	04/17/13 13:58 / sf
Sodium	187	mg/L		1		E200.7	04/16/13 19:09 / sf
Sulfate	5030	mg/L	D	20		E300.0	04/16/13 09:52 / wc
PHYSICAL PROPERTIES							
pH	6.08	s.u.	H	0.01		A4500-H B	04/12/13 15:50 / ab
Solids, Total Dissolved TDS @ 180 C	6890	mg/L		100		A2540 C	04/12/13 15:52 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	04/23/13 00:31 / cp
Beryllium	0.002	mg/L		0.001		E200.8	04/23/13 00:31 / cp
Cadmium	ND	mg/L		0.005		E200.8	04/23/13 00:31 / cp
Cobalt	0.09	mg/L		0.01		E200.8	04/23/13 00:31 / cp
Lead	ND	mg/L		0.001		E200.8	04/23/13 00:31 / cp
Manganese	7.38	mg/L		0.01		E200.8	04/23/13 00:31 / cp
Molybdenum	0.2	mg/L		0.1		E200.8	04/23/13 00:31 / cp
Nickel	0.24	mg/L		0.05		E200.8	04/23/13 00:31 / cp
Uranium	0.0126	mg/L		0.0003		E200.8	04/23/13 00:31 / cp
Vanadium	ND	mg/L		0.1		E200.8	04/23/13 00:31 / cp
METALS - SPECIATED							
Arsenic-III	0.023	mg/L		0.001		E1632AM	04/19/13 15:01 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	04/17/13 15:33 / jl1
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	9.6	pCi/L				E900.1	04/24/13 06:29 / lbb
Gross Alpha minus Rn & U Precision (±)	1.1	pCi/L				E900.1	04/24/13 06:29 / lbb
Gross Alpha minus Rn & U MDC	0.5	pCi/L				E900.1	04/24/13 06:29 / lbb
Lead 210	-0.6	pCi/L	U			E909.0	04/21/13 23:59 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	04/21/13 23:59 / eli-cs
Lead 210 MDC	1.2	pCi/L				E909.0	04/21/13 23:59 / eli-cs
Radium 226	6.7	pCi/L				E903.0	04/29/13 17:01 / lmc
Radium 226 precision (±)	0.56	pCi/L				E903.0	04/29/13 17:01 / lmc
Radium 226 MDC	0.19	pCi/L				E903.0	04/29/13 17:01 / lmc
Radium 228	11	pCi/L				RA-05	04/24/13 21:44 / gb
Radium 228 precision (±)	1.4	pCi/L				RA-05	04/24/13 21:44 / gb
Radium 228 MDC	1.6	pCi/L				RA-05	04/24/13 21:44 / gb

Report RL - Analyte reporting limit.
Definitions: QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C13040435-003
Client Sample ID: EPA-13

Report Date: 05/22/13
Collection Date: 04/08/13 15:15
Date Received: 04/12/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.2	pCi/L				E908.0	05/01/13 11:34 / dmf
Thorium 230 precision (±)	0.1	pCi/L				E908.0	05/01/13 11:34 / dmf
Thorium 230 MDC	0.1	pCi/L				E908.0	05/01/13 11:34 / dmf
DATA QUALITY							
A/C Balance (± 5)	3.38	%				A1030 E	04/22/13 07:30 / kbh
Anions	107	meq/L				A1030 E	04/22/13 07:30 / kbh
Cations	114	meq/L				A1030 E	04/22/13 07:30 / kbh
Solids, Total Dissolved Calculated	6800	mg/L				A1030 E	04/22/13 07:30 / kbh
TDS Balance (0.80 - 1.20)	1.01					A1030 E	04/22/13 07:30 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/16/13 00:37 / jlr
Bromoform	ND	ug/L		0.50		E624	04/16/13 00:37 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/16/13 00:37 / jlr
Chloroform	ND	ug/L		0.50		E624	04/16/13 00:37 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	04/16/13 00:37 / jlr
Surr: 1,2-Dichlorobenzene-d4	107	%REC		73.7-126		E624	04/16/13 00:37 / jlr
Surr: Dibromofluoromethane	147	%REC	S	64.4-131		E624	04/16/13 00:37 / jlr
Surr: p-Bromofluorobenzene	113	%REC		67.1-133		E624	04/16/13 00:37 / jlr
Surr: Toluene-d8	101	%REC		79.7-125		E624	04/16/13 00:37 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 7.

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
S - Spike recovery outside of advisory limits.



UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 3 Monitor Wells					
Well ID:		EPA-13	EPA-13	EPA-13	EPA-13
Collection Date:		4/8/2013	1/14/2013	10/15/2012	7/16/2012
Receive Date:		4/12/2013	1/18/2013	10/19/2012	7/20/2012
Report Date:		5/22/2013	2/25/2013	11/20/2012	9/7/2012
Analyte	RUnits	C13040435-003	C13010580-001	C12100835-004	C12070713-003
Bicarbonate as HCO3	mg/L	62	64	57	44
Calcium	mg/L	525	539	532	511
Chloride	mg/L	41	46	43	45
Magnesium	mg/L	968	938	896	911
Nitrogen, Ammonia as N	mg/L	0.25	0.26	0.26	0.25
Nitrogen, Nitrate+Nitrite as N	mg/L	ND(0.1)	ND(0.1)	0.1	ND(0.1)
Potassium	mg/L	15	15	14	13
Sodium	mg/L	187	170	171	164
Sulfate	mg/L	5030	4880	5030	4890
pH	s.u.	6.08	6.17	6.35	6.35
Solids, Total Dissolved TDS @ 180 C	mg/L	6890	6920	7160	7110
Aluminum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Beryllium	mg/L	0.002	0.002	0.002	0.001
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	0.09	0.09	0.09	0.07
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	7.38	7.37	7.68	6.89
Molybdenum	mg/L	0.2	0.2	0.2	0.2
Nickel	mg/L	0.24	0.23	0.23	0.21
Uranium	mg/L	0.0126	0.0120	0.0115	0.0172
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	0.023	0.007	0.015	0.007
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	0.001	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	9.6	5.5	5.2	8.3
Gross Alpha minus Rn & U Precision (±)	pCi/L	1.1	0.7	0.6	1.4
Gross Alpha minus Rn & U MDC	pCi/L	0.5	0.3	0.2	0.9
Lead 210	pCi/L	-0.6	0.5	-0.2	1.1
Lead 210 precision (±)	pCi/L	0.7	0.7	0.6	0.7
Lead 210 MDC	pCi/L	1.2	1.1	1.0	1.2
Radium 226	pCi/L	6.7	5.9	4.1	5.6
Radium 226 precision (±)	pCi/L	0.56	0.53	0.39	0.44
Radium 226 MDC	pCi/L	0.19	0.18	0.15	0.14
Radium 228	pCi/L	11	8.3	9.7	6.3
Radium 228 precision (±)	pCi/L	1.4	0.95	1.1	0.93
Radium 228 MDC	pCi/L	1.6	1.0	1.2	1.1
Thorium 230	pCi/L	0.2	0.2	0.1	0.002
Thorium 230 precision (±)	pCi/L	0.1	0.3	0.3	0.2
Thorium 230 MDC	pCi/L	0.1	0.6	0.6	0.5
A/C Balance (± 5)	%	3.38	3.60	0.567	2.02
Anions	meq/L	107	104	107	104
Cations	meq/L	114	112	108	108
Solids, Total Dissolved Calculated	mg/L	6800	6600	6800	6600
TDS Balance (0.80 - 1.20)		1.01	1.04	1.06	1.08
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

****Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.**



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone 3
Lab ID: C13010341-004
Client Sample ID: 717

Report Date: 02/22/13
Collection Date: 01/08/13 13:50
Date Received: 01/11/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	ND	mg/L		5		A2320 B	01/11/13 14:45 / jba
Calcium	480	mg/L		1		E200.7	01/14/13 20:16 / sf
Chloride	64	mg/L	D	4		E300.0	01/12/13 00:59 / wc
Magnesium	508	mg/L		1		E200.7	01/14/13 20:16 / sf
Nitrogen, Ammonia as N	56	mg/L	D	2		A4500-NH ₃ G	01/14/13 12:57 / lr
Nitrogen, Nitrate+Nitrite as N	31	mg/L	D	5		E353.2	01/16/13 14:42 / lr
Potassium	14	mg/L		1		E200.7	01/14/13 20:16 / sf
Sodium	192	mg/L	D	2		E200.7	01/14/13 20:16 / sf
Sulfate	4260	mg/L	D	20		E300.0	01/12/13 00:59 / wc
PHYSICAL PROPERTIES							
pH	4.14	s.u.	H	0.01		A4500-H B	01/11/13 13:20 / ab
Solids, Total Dissolved TDS @ 180 C	6190	mg/L		10		A2540 C	01/11/13 14:38 / ab
METALS - TOTAL							
Aluminum	118	mg/L		0.1		E200.7	01/15/13 19:27 / sf
Beryllium	0.104	mg/L		0.001		E200.7	01/15/13 19:27 / sf
Cadmium	0.012	mg/L		0.005		E200.7	01/15/13 19:27 / sf
Cobalt	0.95	mg/L		0.01		E200.7	01/15/13 19:27 / sf
Lead	0.012	mg/L		0.001		E200.8	01/17/13 21:34 / cp
Manganese	21.2	mg/L		0.01		E200.7	01/15/13 19:27 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/15/13 19:27 / sf
Nickel	0.89	mg/L		0.05		E200.7	01/15/13 19:27 / sf
Uranium	0.0313	mg/L		0.0003		E200.8	01/17/13 21:34 / cp
Vanadium	ND	mg/L		0.1		E200.7	01/15/13 19:27 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/23/13 14:22 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	01/28/13 11:33 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	12.1	pCi/L				E900.1	02/13/13 07:37 / lbb
Gross Alpha minus Rn & U Precision (±)	0.9	pCi/L				E900.1	02/13/13 07:37 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	02/13/13 07:37 / lbb
Lead 210	2.7	pCi/L				E909.0	02/08/13 00:33 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	02/08/13 00:33 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	02/08/13 00:33 / eli-cs
Radium 226	16	pCi/L				E903.0	01/28/13 23:25 / lmc
Radium 226 precision (±)	0.76	pCi/L				E903.0	01/28/13 23:25 / lmc
Radium 226 MDC	0.15	pCi/L				E903.0	01/28/13 23:25 / lmc
Radium 228	20	pCi/L				RA-05	01/24/13 00:45 / gb
Radium 228 precision (±)	1.3	pCi/L				RA-05	01/24/13 00:45 / gb
Radium 228 MDC	1.0	pCi/L				RA-05	01/24/13 00:45 / gb

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone 3
Lab ID: C13010341-004
Client Sample ID: 717

Report Date: 02/22/13
Collection Date: 01/08/13 13:50
Date Received: 01/11/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.08	pCi/L	U			E908.0	01/30/13 16:19 / dmf
Thorium 230 precision (±)	0.4	pCi/L				E908.0	01/30/13 16:19 / dmf
Thorium 230 MDC	1.0	pCi/L				E908.0	01/30/13 16:19 / dmf
- See Case Narrative regarding Th230 analysis.							
DATA QUALITY							
A/C Balance (± 5)	4.91	%				A1030 E	01/17/13 07:44 / kbh
Anions	93.2	meq/L				A1030 E	01/17/13 07:44 / kbh
Cations	103	meq/L				A1030 E	01/17/13 07:44 / kbh
Solids, Total Dissolved Calculated	5700	mg/L				A1030 E	01/17/13 07:44 / kbh
TDS Balance (0.80 - 1.20)	1.08					A1030 E	01/17/13 07:44 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/11/13 19:05 / jk
Bromoform	ND	ug/L		0.50		E624	01/11/13 19:05 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	01/11/13 19:05 / jk
Chloroform	4.28	ug/L		0.50		E624	01/11/13 19:05 / jk
Trihalomethanes, Total	4.28	ug/L		0.50		E624	01/11/13 19:05 / jk
Surr: 1,2-Dichlorobenzene-d4	112	%REC		80-120		E624	01/11/13 19:05 / jk
Surr: Dibromofluoromethane	100	%REC		80-120		E624	01/11/13 19:05 / jk
Surr: p-Bromofluorobenzene	112	%REC		80-120		E624	01/11/13 19:05 / jk
Surr: Toluene-d8	94.0	%REC		80-120		E624	01/11/13 19:05 / jk

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C13040435-006
Client Sample ID: 717

Report Date: 05/22/13
Collection Date: 04/09/13 10:55
Date Received: 04/12/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	ND	mg/L		5		A2320 B	04/12/13 19:48 / jba
Calcium	481	mg/L		1		E200.7	04/16/13 19:20 / sf
Chloride	65	mg/L	D	4		E300.0	04/16/13 10:38 / wc
Magnesium	520	mg/L		1		E200.7	04/16/13 19:20 / sf
Nitrogen, Ammonia as N	58	mg/L	D	1		A4500-NH3 G	04/17/13 13:55 / lr
Nitrogen, Nitrate+Nitrite as N	29	mg/L	D	2		E353.2	04/15/13 14:43 / lr
Potassium	13	mg/L		1		E200.7	04/17/13 14:50 / sf
Sodium	192	mg/L		1		E200.7	04/16/13 19:20 / sf
Sulfate	4430	mg/L	D	20		E300.0	04/16/13 10:38 / wc
PHYSICAL PROPERTIES							
pH	4.20	s.u.	H	0.01		A4500-H B	04/15/13 09:37 / ab
Solids, Total Dissolved TDS @ 180 C	6060	mg/L		40		A2540 C	04/15/13 16:14 / ab
METALS - TOTAL							
Aluminum	118	mg/L		0.1		E200.7	04/22/13 18:37 / sf
Beryllium	0.093	mg/L		0.001		E200.8	04/23/13 00:44 / cp
Cadmium	0.011	mg/L		0.005		E200.8	04/23/13 00:44 / cp
Cobalt	0.94	mg/L		0.01		E200.8	04/23/13 00:44 / cp
Lead	0.011	mg/L		0.001		E200.8	04/23/13 00:44 / cp
Manganese	21.4	mg/L		0.01		E200.8	04/23/13 00:44 / cp
Molybdenum	ND	mg/L		0.1		E200.8	04/23/13 00:44 / cp
Nickel	0.88	mg/L		0.05		E200.8	04/23/13 00:44 / cp
Uranium	0.0229	mg/L		0.0003		E200.8	04/23/13 00:44 / cp
Vanadium	ND	mg/L		0.1		E200.8	04/23/13 00:44 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/23/13 12:07 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	04/17/13 15:38 / jl1
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	26.5	pCi/L				E900.1	04/24/13 09:09 / lbb
Gross Alpha minus Rn & U Precision (±)	1.7	pCi/L				E900.1	04/24/13 09:09 / lbb
Gross Alpha minus Rn & U MDC	0.5	pCi/L				E900.1	04/24/13 09:09 / lbb
Lead 210	2.5	pCi/L				E909.0	04/21/13 23:59 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	04/21/13 23:59 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	04/21/13 23:59 / eli-cs
Radium 226	20	pCi/L				E903.0	04/29/13 17:01 / lmc
Radium 226 precision (±)	0.99	pCi/L				E903.0	04/29/13 17:01 / lmc
Radium 226 MDC	0.20	pCi/L				E903.0	04/29/13 17:01 / lmc
Radium 228	34	pCi/L				RA-05	04/24/13 21:44 / gb
Radium 228 precision (±)	2.2	pCi/L				RA-05	04/24/13 21:44 / gb
Radium 228 MDC	1.7	pCi/L				RA-05	04/24/13 21:44 / gb

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C13040435-006
Client Sample ID: 717

Report Date: 05/22/13
Collection Date: 04/09/13 10:55
Date Received: 04/12/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.2	pCi/L	U			E908.0	05/01/13 11:34 / dmf
Thorium 230 precision (±)	0.2	pCi/L				E908.0	05/01/13 11:34 / dmf
Thorium 230 MDC	0.4	pCi/L				E908.0	05/01/13 11:34 / dmf
- See Case Narrative regarding Th230 analysis.							
DATA QUALITY							
A/C Balance (± 5)	1.05	%				A1030 E	04/22/13 07:30 / kbh
Anions	96.5	meq/L				A1030 E	04/22/13 07:30 / kbh
Cations	98.5	meq/L				A1030 E	04/22/13 07:30 / kbh
Solids, Total Dissolved Calculated	5900	mg/L				A1030 E	04/22/13 07:30 / kbh
TDS Balance (0.80 - 1.20)	1.03					A1030 E	04/22/13 07:30 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/16/13 19:58 / jlr
Bromoform	ND	ug/L		0.50		E624	04/16/13 19:58 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/16/13 19:58 / jlr
Chloroform	3.68	ug/L		0.50		E624	04/16/13 19:58 / jlr
Trihalomethanes, Total	3.68	ug/L		0.50		E624	04/16/13 19:58 / jlr
Surr: 1,2-Dichlorobenzene-d4	107	%REC		73.7-126		E624	04/16/13 19:58 / jlr
Surr: Dibromofluoromethane	124	%REC		64.4-131		E624	04/16/13 19:58 / jlr
Surr: p-Bromofluorobenzene	114	%REC		67.1-133		E624	04/16/13 19:58 / jlr
Surr: Toluene-d8	89.0	%REC		79.7-125		E624	04/16/13 19:58 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 5.							

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 U - Not detected at minimum detectable concentration

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 3 Monitor Wells					
Well ID:		717	717	717	717
Collection Date:		4/9/2013	1/8/2013	10/16/2012	7/17/2012
Receive Date:		4/12/2013	1/11/2013	10/19/2012	7/20/2012
Report Date:		5/22/2013	2/22/2013	11/20/2012	9/7/2012
Analyte	RUnits	C13040435-006	C13010341-004	C12100835-007	C12070713-008
Bicarbonate as HCO3	mg/L	ND(5)	ND(5)	ND(5)	ND(5)
Calcium	mg/L	481	480	486	474
Chloride	mg/L	65	64	67	69
Magnesium	mg/L	520	508	508	517
Nitrogen, Ammonia as N	mg/L	58	56	59	61
Nitrogen, Nitrate+Nitrite as N	mg/L	29	31	30	30
Potassium	mg/L	13	14	14	14
Sodium	mg/L	192	192	186	189
Sulfate	mg/L	4430	4260	4430	4390
pH	s.u.	4.20	4.14	4.07	4.16
Solids, Total Dissolved TDS @ 180 C	mg/L	6060	6190	6120	6190
Aluminum	mg/L	118	118	122	134
Beryllium	mg/L	0.093	0.104	0.102	0.095
Cadmium	mg/L	0.011	0.012	0.016	0.011
Cobalt	mg/L	0.94	0.95	0.89	0.95
Lead	mg/L	0.011	0.012	0.010	0.011
Manganese	mg/L	21.4	21.2	22.1	21.8
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	0.88	0.89	0.88	0.90
Uranium	mg/L	0.0229	0.0313	0.0194	0.0229
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	0.002
Gross Alpha minus Rn & U	pCi/L	26.5	12.1	13.2	35.7
Gross Alpha minus Rn & U Precision (±)	pCi/L	1.7	0.9	0.9	2.8
Gross Alpha minus Rn & U MDC	pCi/L	0.5	0.3	0.3	0.9
Lead 210	pCi/L	2.5	2.7	2.4	3.4
Lead 210 precision (±)	pCi/L	0.8	0.8	0.7	0.8
Lead 210 MDC	pCi/L	1.3	1.3	1.0	1.2
Radium 226	pCi/L	20	16	12	15
Radium 226 precision (±)	pCi/L	0.99	0.76	0.66	0.73
Radium 226 MDC	pCi/L	0.20	0.15	0.15	0.14
Radium 228	pCi/L	34	20	34	22
Radium 228 precision (±)	pCi/L	2.2	1.3	1.8	1.6
Radium 228 MDC	pCi/L	1.7	1.0	1.2	1.3
Thorium 230	pCi/L	0.2	0.08	0.6	0.3
Thorium 230 precision (±)	pCi/L	0.2	0.4	0.6	0.6
Thorium 230 MDC	pCi/L	0.4	1.0	1.0	1.3
A/C Balance (± 5)	%	1.05	4.91	-1.07	2.24
Anions	meq/L	96.5	93.2	96.9	96.2
Cations	meq/L	98.5	103	94.9	101
Solids, Total Dissolved Calculated	mg/L	5900	5700	5900	5800
TDS Balance (0.80 - 1.20)		1.03	1.08	1.04	1.06
Trihalomethanes, Total	ug/L	3.68	4.28	3.48	4.40

****Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.**

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone 3
Lab ID: C13010341-006
Client Sample ID: 719

Report Date: 02/22/13
Collection Date: 01/08/13 14:52
Date Received: 01/11/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	12	mg/L		5		A2320 B	01/11/13 14:54 / jba
Calcium	530	mg/L		1		E200.7	01/14/13 20:28 / sf
Chloride	29	mg/L	D	4		E300.0	01/12/13 02:01 / wc
Magnesium	692	mg/L		1		E200.7	01/14/13 20:28 / sf
Nitrogen, Ammonia as N	0.72	mg/L		0.05		A4500-NH ₃ G	01/14/13 16:22 / lr
Nitrogen, Nitrate+Nitrite as N	0.1	mg/L		0.1		E353.2	01/16/13 14:47 / lr
Potassium	15	mg/L		1		E200.7	01/14/13 20:28 / sf
Sodium	151	mg/L	D	2		E200.7	01/14/13 20:28 / sf
Sulfate	4120	mg/L	D	20		E300.0	01/12/13 02:01 / wc
PHYSICAL PROPERTIES							
pH	5.44	s.u.	H	0.01		A4500-H B	01/11/13 13:25 / ab
Solids, Total Dissolved TDS @ 180 C	5710	mg/L		10		A2540 C	01/11/13 14:38 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	01/15/13 19:35 / sf
Beryllium	ND	mg/L		0.001		E200.7	01/15/13 19:35 / sf
Cadmium	ND	mg/L		0.005		E200.7	01/15/13 19:35 / sf
Cobalt	0.30	mg/L		0.01		E200.7	01/15/13 19:35 / sf
Lead	ND	mg/L		0.001		E200.8	01/17/13 21:43 / cp
Manganese	5.84	mg/L		0.01		E200.7	01/15/13 19:35 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/15/13 19:35 / sf
Nickel	0.37	mg/L		0.05		E200.7	01/15/13 19:35 / sf
Uranium	0.0023	mg/L		0.0003		E200.8	01/17/13 21:43 / cp
Vanadium	ND	mg/L		0.1		E200.7	01/15/13 19:35 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/23/13 14:44 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	01/31/13 12:29 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	4.3	pCi/L				E900.1	02/13/13 07:37 / lbb
Gross Alpha minus Rn & U Precision (±)	0.5	pCi/L				E900.1	02/13/13 07:37 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	02/13/13 07:37 / lbb
Lead 210	0.02	pCi/L	U			E909.0	02/08/13 03:03 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	02/08/13 03:03 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	02/08/13 03:03 / eli-cs
Radium 226	5.0	pCi/L				E903.0	01/28/13 23:25 / lmc
Radium 226 precision (±)	0.61	pCi/L				E903.0	01/28/13 23:25 / lmc
Radium 226 MDC	0.30	pCi/L				E903.0	01/28/13 23:25 / lmc
Radium 228	7.8	pCi/L				RA-05	01/24/13 00:45 / gb
Radium 228 precision (±)	1.6	pCi/L				RA-05	01/24/13 00:45 / gb
Radium 228 MDC	2.0	pCi/L				RA-05	01/24/13 00:45 / gb

Report Definitions:
 RL - Analyte reporting limit. MCL - Maximum contaminant level.
 QCL - Quality control limit. ND - Not detected at the reporting limit.
 MDC - Minimum detectable concentration. D - RL increased due to sample matrix.
 H - Analysis performed past recommended holding time. U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone 3
Lab ID: C13010341-006
Client Sample ID: 719

Report Date: 02/22/13
Collection Date: 01/08/13 14:52
Date Received: 01/11/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.2	pCi/L				E908.0	02/01/13 09:12 / dmf
Thorium 230 precision (±)	0.1	pCi/L				E908.0	02/01/13 09:12 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	02/01/13 09:12 / dmf
DATA QUALITY							
A/C Balance (± 5)	2.00	%				A1030 E	01/17/13 07:44 / kbh
Anions	86.8	meq/L				A1030 E	01/17/13 07:44 / kbh
Cations	90.4	meq/L				A1030 E	01/17/13 07:44 / kbh
Solids, Total Dissolved Calculated	5600	mg/L				A1030 E	01/17/13 07:44 / kbh
TDS Balance (0.80 - 1.20)	1.03					A1030 E	01/17/13 07:44 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/11/13 20:15 / jk
Bromoform	ND	ug/L		0.50		E624	01/11/13 20:15 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	01/11/13 20:15 / jk
Chloroform	ND	ug/L		0.50		E624	01/11/13 20:15 / jk
Trihalomethanes, Total	ND	ug/L		0.50		E624	01/11/13 20:15 / jk
Surr: 1,2-Dichlorobenzene-d4	114	%REC		80-120		E624	01/11/13 20:15 / jk
Surr: Dibromofluoromethane	96.0	%REC		80-120		E624	01/11/13 20:15 / jk
Surr: p-Bromofluorobenzene	113	%REC		80-120		E624	01/11/13 20:15 / jk
Surr: Toluene-d8	95.0	%REC		80-120		E624	01/11/13 20:15 / jk

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C13040435-004
Client Sample ID: 719

Report Date: 05/22/13
Collection Date: 04/09/13 08:55
Date Received: 04/12/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	13	mg/L		5		A2320 B	04/12/13 19:28 / jba
Calcium	528	mg/L		1		E200.7	04/16/13 19:13 / sf
Chloride	28	mg/L	D	4		E300.0	04/16/13 10:08 / wc
Magnesium	715	mg/L		1		E200.7	04/16/13 19:13 / sf
Nitrogen, Ammonia as N	0.54	mg/L		0.05		A4500-NH ₃ G	04/17/13 12:41 / lr
Nitrogen, Nitrate+Nitrite as N	0.2	mg/L		0.1		E353.2	04/15/13 14:38 / lr
Potassium	14	mg/L		1		E200.7	04/17/13 14:01 / sf
Sodium	162	mg/L		1		E200.7	04/16/13 19:13 / sf
Sulfate	4100	mg/L	D	20		E300.0	04/16/13 10:08 / wc
PHYSICAL PROPERTIES							
pH	5.70	s.u.	H	0.01		A4500-H B	04/15/13 09:32 / ab
Solids, Total Dissolved TDS @ 180 C	5670	mg/L		40		A2540 C	04/15/13 16:13 / ab
METALS - TOTAL							
Aluminum	0.7	mg/L		0.1		E200.8	04/23/13 00:36 / cp
Beryllium	ND	mg/L		0.001		E200.8	04/23/13 00:36 / cp
Cadmium	ND	mg/L		0.005		E200.8	04/23/13 00:36 / cp
Cobalt	0.32	mg/L		0.01		E200.8	04/23/13 00:36 / cp
Lead	ND	mg/L		0.001		E200.8	04/23/13 00:36 / cp
Manganese	5.93	mg/L		0.01		E200.8	04/23/13 00:36 / cp
Molybdenum	0.2	mg/L		0.1		E200.8	04/23/13 00:36 / cp
Nickel	0.40	mg/L		0.05		E200.8	04/23/13 00:36 / cp
Uranium	0.0055	mg/L		0.0003		E200.8	04/23/13 00:36 / cp
Vanadium	ND	mg/L		0.1		E200.8	04/23/13 00:36 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/19/13 15:09 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	04/17/13 15:35 / jl1
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	5.9	pCi/L				E900.1	04/24/13 06:29 / lbb
Gross Alpha minus Rn & U Precision (±)	0.9	pCi/L				E900.1	04/24/13 06:29 / lbb
Gross Alpha minus Rn & U MDC	0.5	pCi/L				E900.1	04/24/13 06:29 / lbb
Lead 210	-0.3	pCi/L	U			E909.0	04/21/13 23:59 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	04/21/13 23:59 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	04/21/13 23:59 / eli-cs
Radium 226	5.6	pCi/L				E903.0	04/29/13 17:01 / lmc
Radium 226 precision (±)	0.51	pCi/L				E903.0	04/29/13 17:01 / lmc
Radium 226 MDC	0.19	pCi/L				E903.0	04/29/13 17:01 / lmc
Radium 228	15	pCi/L				RA-05	04/24/13 21:44 / gb
Radium 228 precision (±)	1.6	pCi/L				RA-05	04/24/13 21:44 / gb
Radium 228 MDC	1.6	pCi/L				RA-05	04/24/13 21:44 / gb

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C13040435-004
Client Sample ID 719

Report Date: 05/22/13
Collection Date: 04/09/13 08:55
Date Received: 04/12/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.2	pCi/L			E908.0		05/06/13 13:23 / dmf
Thorium 230 precision (±)	0.1	pCi/L			E908.0		05/06/13 13:23 / dmf
Thorium 230 MDC	0.2	pCi/L			E908.0		05/06/13 13:23 / dmf
DATA QUALITY							
A/C Balance (± 5)	3.48	%			A1030 E		04/22/13 07:30 / kbh
Anions	86.4	meq/L			A1030 E		04/22/13 07:30 / kbh
Cations	92.7	meq/L			A1030 E		04/22/13 07:30 / kbh
Solids, Total Dissolved Calculated	5600	mg/L			A1030 E		04/22/13 07:30 / kbh
TDS Balance (0.80 - 1.20)	1.02				A1030 E		04/22/13 07:30 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50	E624		04/16/13 01:10 / jlr
Bromoform	ND	ug/L		0.50	E624		04/16/13 01:10 / jlr
Chlorodibromomethane	ND	ug/L		0.50	E624		04/16/13 01:10 / jlr
Chloroform	ND	ug/L		0.50	E624		04/16/13 01:10 / jlr
Trihalomethanes, Total	ND	ug/L		0.50	E624		04/16/13 01:10 / jlr
Surr: 1,2-Dichlorobenzene-d4	110	%REC		73.7-126	E624		04/16/13 01:10 / jlr
Surr: Dibromofluoromethane	124	%REC		64.4-131	E624		04/16/13 01:10 / jlr
Surr: p-Bromofluorobenzene	114	%REC		67.1-133	E624		04/16/13 01:10 / jlr
Surr: Toluene-d8	98.0	%REC		79.7-125	E624		04/16/13 01:10 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 6.

Report Definitions:

RL - Analyte reporting limit.

QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 3 Monitor Wells					
Well ID:		719	719	719	719
Collection Date:		4/9/2013	1/8/2013	10/16/2012	7/17/2012
Receive Date:		4/12/2013	1/11/2013	10/19/2012	7/20/2012
Report Date:		5/22/2013	2/22/2013	11/20/2012	9/7/2012
Analyte	RUunits	C13040435-004	C13010341-006	C12100835-005	C12070713-006
Bicarbonate as HCO3	mg/L	13	12	14	11
Calcium	mg/L	528	530	536	524
Chloride	mg/L	28	29	30	32
Magnesium	mg/L	715	692	674	686
Nitrogen, Ammonia as N	mg/L	0.54	0.72	0.70	0.78
Nitrogen, Nitrate+Nitrite as N	mg/L	0.2	0.1	ND(0.1)	ND(0.1)
Potassium	mg/L	14	15	14	16
Sodium	mg/L	162	151	149	163
Sulfate	mg/L	4100	4120	4180	4070
pH	s.u.	5.70	5.44	5.18	5.29
Solids, Total Dissolved TDS @ 180 C	mg/L	5670	5710	5900	6120
Aluminum	mg/L	0.7	ND(0.1)	0.1	0.2
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	0.32	0.30	0.31	0.28
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	0.002
Manganese	mg/L	5.93	5.84	6.04	5.63
Molybdenum	mg/L	0.2	ND(0.1)	0.1	0.2
Nickel	mg/L	0.40	0.37	0.39	0.33
Uranium	mg/L	0.0055	0.0023	0.0029	0.0034
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	0.001
Gross Alpha minus Rn & U	pCi/L	5.9	4.3	4.5	5.7
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.9	0.5	0.5	1.2
Gross Alpha minus Rn & U MDC	pCi/L	0.5	0.3	0.2	0.9
Lead 210	pCi/L	-0.3	0.02	0.7	0.3
Lead 210 precision (±)	pCi/L	0.7	0.8	0.7	0.7
Lead 210 MDC	pCi/L	1.3	1.3	1.0	1.2
Radium 226	pCi/L	5.6	5.0	3.4	3.9
Radium 226 precision (±)	pCi/L	0.51	0.61	0.38	0.37
Radium 226 MDC	pCi/L	0.19	0.30	0.17	0.14
Radium 228	pCi/L	15	7.8	15	7.7
Radium 228 precision (±)	pCi/L	1.6	1.6	1.4	0.97
Radium 228 MDC	pCi/L	1.6	2.0	1.3	1.1
Thorium 230	pCi/L	0.2	0.2	0.3	0.3
Thorium 230 precision (±)	pCi/L	0.1	0.1	0.2	0.2
Thorium 230 MDC	pCi/L	0.2	0.2	0.3	0.3
A/C Balance (± 5)	%	3.48	2.00	0.570	2.47
Anions	meq/L	86.4	86.8	88.1	85.8
Cations	meq/L	92.7	90.4	89.1	90.1
Solids, Total Dissolved Calculated	mg/L	5600	5600	5600	5500
TDS Balance (0.80 - 1.20)		1.02	1.03	1.05	1.11
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.

SEMI-ANNUAL GROUND WATER MONITORING REPORT
SUPPLEMENTAL QUARTERLY/ MONTHLY SAMPLING
JANUARY TO JUNE OF 2013

ZONE-3

PB-2

PB-3

PB-4

NBL-2

RW-A

NW-1

NW-2

NW-3

NW-4

NW-5

MW-6

MW-7



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C13010573-004
Client Sample ID PB-2

Report Date: 02/25/13
Collection Date: 01/15/13 13:26
Date Received: 01/18/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	65	mg/L		5		A2320 B	01/22/13 13:27 / jba
Chloride	29	mg/L	D	4		E300.0	01/19/13 06:43 / wc
PHYSICAL PROPERTIES							
pH	5.75	s.u.	H	0.01		A4500-H B	01/18/13 13:16 / jz
Solids, Total Dissolved TDS @ 180 C	4970	mg/L		40		A2540 C	01/18/13 15:57 / jz

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 D - RL increased due to sample matrix.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 H - Analysis performed past recommended holding time.



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C13040426-003
Client Sample ID PB-2

Report Date: 05/22/13
Collection Date: 04/09/13 16:05
Date Received: 04/12/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	64	mg/L		5		A2320 B	04/12/13 15:30 / jba
Chloride	30	mg/L	D	4		E300.0	04/17/13 16:00 / wc
PHYSICAL PROPERTIES							
pH	5.79	s.u.	H	0.01		A4500-H B	04/12/13 12:52 / ab
Solids, Total Dissolved TDS @ 180 C	5200	mg/L		40		A2540 C	04/15/13 16:10 / ab

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 D - RL increased due to sample matrix.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 H - Analysis performed past recommended holding time.

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 3 Monitor Wells					
Well ID:		PB-2	PB-2	PB-2	PB-2
Collection Date:		4/9/2013	1/15/2013	10/16/2012	7/17/2012
Receive Date:		4/12/2013	1/18/2013	10/19/2012	7/20/2012
Report Date:		5/22/2013	2/25/2013	11/20/2012	9/7/2012
Analyte	RUnits	C13040426-003	C13010573-004	C12100835-014	C12070713-023
Bicarbonate as HCO3	mg/L	64	65	57	75
Calcium	mg/L			555	
Chloride	mg/L	30	29	29	32
Magnesium	mg/L			508	
Nitrogen, Ammonia as N	mg/L			0.67	
Nitrogen, Nitrate+Nitrite as N	mg/L			ND(0.2)	
Potassium	mg/L			13	
Sodium	mg/L			150	
Sulfate	mg/L			3470	
pH	s.u.	5.79	5.75	5.76	5.91
Solids, Total Dissolved TDS @ 180 C	mg/L	5200	4970	5140	5260
Aluminum	mg/L			0.4	
Beryllium	mg/L			ND(0.001)	
Cadmium	mg/L			ND(0.005)	
Cobalt	mg/L			0.49	
Lead	mg/L			ND(0.001)	
Manganese	mg/L			6.21	
Molybdenum	mg/L			0.1	
Nickel	mg/L			0.62	
Uranium	mg/L			0.0212	
Vanadium	mg/L			ND(0.1)	
Arsenic-III	mg/L			ND(0.001)	
Selenium-IV	mg/L			ND(0.001)	
Gross Alpha minus Rn & U	pCi/L			14.2	
Gross Alpha minus Rn & U Precision (±)	pCi/L			0.9	
Gross Alpha minus Rn & U MDC	pCi/L			0.3	
Lead 210	pCi/L			0.6	
Lead 210 precision (±)	pCi/L			0.7	
Lead 210 MDC	pCi/L			1.0	
Radium 226	pCi/L			12	
Radium 226 precision (±)	pCi/L			0.63	
Radium 226 MDC	pCi/L			0.14	
Radium 228	pCi/L			20	
Radium 228 precision (±)	pCi/L			1.5	
Radium 228 MDC	pCi/L			1.3	
Thorium 230	pCi/L			0.3	
Thorium 230 precision (±)	pCi/L			0.2	
Thorium 230 MDC	pCi/L			0.3	
A/C Balance (± 5)	%			1.59	
Anions	meq/L			74.0	
Cations	meq/L			76.4	
Solids, Total Dissolved Calculated	mg/L			4800	
TDS Balance (0.80 - 1.20)				1.08	
Trihalomethanes, Total	ug/L			ND(0.50)	

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C13010573-009
Client Sample ID: PB-3

Report Date: 02/25/13
Collection Date: 01/16/13 08:52
Date Received: 01/18/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	179	mg/L		5		A2320 B	01/18/13 17:23 / jba
Chloride	26	mg/L	D	2		E300.0	01/19/13 08:00 / wc
PHYSICAL PROPERTIES							
pH	7.29	s.u.	H	0.01		A4500-H B	01/18/13 13:29 / jz
Solids, Total Dissolved TDS @ 180 C	3940	mg/L		40		A2540 C	01/18/13 15:59 / jz

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 D - RL increased due to sample matrix.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 H - Analysis performed past recommended holding time.



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C13040426-002
Client Sample ID: PB-3

Report Date: 05/22/13
Collection Date: 04/09/13 15:25
Date Received: 04/12/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	ND	mg/L		5		A2320 B	04/12/13 15:16 / jba
Chloride	27	mg/L	D	4		E300.0	04/17/13 15:44 / wc
PHYSICAL PROPERTIES							
pH	3.53	s.u.	H	0.01		A4500-H B	04/12/13 12:50 / ab
Solids, Total Dissolved TDS @ 180 C	4460	mg/L		40		A2540 C	04/15/13 16:10 / ab

Report Definitions:

RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
H - Analysis performed past recommended holding time.

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 3 Monitor Wells					
Well ID:		PB-3	PB-3	PB-3	PB-3
Collection Date:		4/9/2013	1/16/2013	10/16/2012	7/17/2012
Receive Date:		4/12/2013	1/18/2013	10/19/2012	7/20/2012
Report Date:		5/22/2013	2/25/2013	11/20/2012	9/7/2012
Analyte	RUUnits	C13040426-002	C13010573-009	C12100835-011	C12070713-015
Bicarbonate as HCO3	mg/L	ND(5)	179	217	202
Calcium	mg/L			596	
Chloride	mg/L	27	26	27	28
Magnesium	mg/L			288	
Nitrogen, Ammonia as N	mg/L			0.9	
Nitrogen, Nitrate+Nitrite as N	mg/L			ND(0.1)	
Potassium	mg/L			11	
Sodium	mg/L			135	
Sulfate	mg/L			2600	
pH	s.u.	9.48 3.53	7.29	6.89	7.11
Solids, Total Dissolved TDS @ 180 C	mg/L	4460	3940	4020	3930
Aluminum	mg/L			0.2	
Beryllium	mg/L			ND(0.001)	
Cadmium	mg/L			ND(0.005)	
Cobalt	mg/L			0.12	
Lead	mg/L			ND(0.001)	
Manganese	mg/L			4.19	
Molybdenum	mg/L			0.4	
Nickel	mg/L			0.17	
Uranium	mg/L			0.136	
Vanadium	mg/L			ND(0.1)	
Arsenic-III	mg/L			ND(0.001)	
Selenium-IV	mg/L			ND(0.001)	
Gross Alpha minus Rn & U	pCi/L			7.6	
Gross Alpha minus Rn & U Precision (±)	pCi/L			0.7	
Gross Alpha minus Rn & U MDC	pCi/L			0.2	
Lead 210	pCi/L			0.6	
Lead 210 precision (±)	pCi/L			0.6	
Lead 210 MDC	pCi/L			1.0	
Radium 226	pCi/L			7.1	
Radium 226 precision (±)	pCi/L			0.59	
Radium 226 MDC	pCi/L			0.21	
Radium 228	pCi/L			9.5	
Radium 228 precision (±)	pCi/L			1.6	
Radium 228 MDC	pCi/L			1.9	
Thorium 230	pCi/L			0.02	
Thorium 230 precision (±)	pCi/L			0.1	
Thorium 230 MDC	pCi/L			0.3	
A/C Balance (± 5)	%			1.06	
Anions	meq/L			58.4	
Cations	meq/L			59.7	
Solids, Total Dissolved Calculated	mg/L			3800	
TDS Balance (0.80 - 1.20)				1.06	
Trihalomethanes, Total	ug/L			ND(0.50)	

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C13010573-010
Client Sample ID: PB-4

Report Date: 02/25/13
Collection Date: 01/16/13 09:15
Date Received: 01/18/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	01/18/13 17:26 / jba
Chloride	32	mg/L	D	4		E300.0	01/19/13 08:15 / wc
PHYSICAL PROPERTIES							
pH	2.47	s.u.	H	0.01		A4500-H B	01/18/13 13:35 / jz
Solids, Total Dissolved TDS @ 180 C	7830	mg/L		100		A2540 C	01/21/13 08:24 / ab

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
H - Analysis performed past recommended holding time.



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C13040426-010
Client Sample ID: PB-4

Report Date: 05/22/13
Collection Date: 04/10/13 09:20
Date Received: 04/12/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	04/12/13 16:19 / jba
Chloride	32	mg/L	D	4		E300.0	04/16/13 00:09 / wc
PHYSICAL PROPERTIES							
pH	2.56	s.u.	H	0.01		A4500-H B	04/12/13 13:13 / ab
Solids, Total Dissolved TDS @ 180 C	7450	mg/L		100		A2540 C	04/16/13 12:03 / jz

Report Definitions:

RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
H - Analysis performed past recommended holding time.

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 3 Monitor Wells					
Well ID:		PB-4	PB-4	PB-4	PB-4
Collection Date:		4/10/2013	1/16/2013	10/16/2012	7/17/2012
Receive Date:		4/12/2013	1/18/2013	10/19/2012	7/20/2012
Report Date:		5/22/2013	2/25/2013	11/20/2012	9/7/2012
Analyte	RUnits	C13040426-010	C13010573-010	C12100835-012	C12070713-016
Bicarbonate as HCO3	mg/L	ND(5)	ND(5)	ND(5)	ND(5)
Calcium	mg/L			504	
Chloride	mg/L	32	32	30	29
Magnesium	mg/L			457	
Nitrogen, Ammonia as N	mg/L			0.27	
Nitrogen, Nitrate+Nitrite as N	mg/L			ND(2)	
Potassium	mg/L			3	
Sodium	mg/L			140	
Sulfate	mg/L			6400	
pH	s.u.	2.56	2.47	2.50	2.60
Solids, Total Dissolved TDS @ 180 C	mg/L	7450	7830	8300	6570
Aluminum	mg/L			132	
Beryllium	mg/L			0.033	
Cadmium	mg/L			ND(0.005)	
Cobalt	mg/L			1.33	
Lead	mg/L			0.022	
Manganese	mg/L			9.80	
Molybdenum	mg/L			0.4	
Nickel	mg/L			2.00	
Uranium	mg/L			0.453	
Vanadium	mg/L			ND(0.1)	
Arsenic-III	mg/L			0.011	
Selenium-IV	mg/L			ND(0.001)	
Gross Alpha minus Rn & U	pCi/L			3.3	
Gross Alpha minus Rn & U Precision (±)	pCi/L			0.5	
Gross Alpha minus Rn & U MDC	pCi/L			0.3	
Lead 210	pCi/L			0.8	
Lead 210 precision (±)	pCi/L			0.6	
Lead 210 MDC	pCi/L			1.0	
Radium 226	pCi/L			6.8	
Radium 226 precision (±)	pCi/L			0.49	
Radium 226 MDC	pCi/L			0.15	
Radium 228	pCi/L			-0.002	
Radium 228 precision (±)	pCi/L			0.83	
Radium 228 MDC	pCi/L			1.4	
Thorium 230	pCi/L			34.5	
Thorium 230 precision (±)	pCi/L			8.4	
Thorium 230 MDC	pCi/L			2.5	
A/C Balance (± 5)	%			0.782	
Anions	meq/L			134	
Cations	meq/L			136	
Solids, Total Dissolved Calculated	mg/L			7800	
TDS Balance (0.80 - 1.20)				1.06	
Trihalomethanes, Total	ug/L			ND(0.50)	

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C13010573-008
Client Sample ID: NBL-2

Report Date: 02/25/13
Collection Date: 01/16/13 08:30
Date Received: 01/18/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	400	mg/L		5		A2320 B	01/18/13 17:15 / jba
Chloride	51	mg/L	D	2		E300.0	01/19/13 07:44 / wc
PHYSICAL PROPERTIES							
pH	6.60	s.u.	H	0.01		A4500-H B	01/18/13 13:26 / jz
Solids, Total Dissolved TDS @ 180 C	3560	mg/L		40		A2540 C	01/18/13 15:58 / jz

Report Definitions:

RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
H - Analysis performed past recommended holding time.



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C13040426-001
Client Sample ID: NBL-2

Report Date: 05/22/13
Collection Date: 04/09/13 12:30
Date Received: 04/12/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	388	mg/L		5		A2320 B	04/12/13 15:06 / jba
Chloride	53	mg/L	D	2		E300.0	04/17/13 15:29 / wc
PHYSICAL PROPERTIES							
pH	6.60	s.u.	H	0.01		A4500-H B	04/12/13 12:47 / ab
Solids, Total Dissolved TDS @ 180 C	3580	mg/L		40		A2540 C	04/15/13 16:09 / ab

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 D - RL increased due to sample matrix.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 H - Analysis performed past recommended holding time.

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 3 Monitor Wells					
Well ID:		NBL-2	NBL-2	NBL-2	NBL-2
Collection Date:		4/9/2013	1/16/2013	10/16/2012	7/17/2012
Receive Date:		4/12/2013	1/18/2013	10/19/2012	7/20/2012
Report Date:		5/22/2013	2/25/2013	11/20/2012	9/7/2012
Analyte	RUnits	C13040426-001	C13010573-008	C12100835-009	C12070713-014
Bicarbonate as HCO3	mg/L	388	400	399	389
Calcium	mg/L			654	
Chloride	mg/L	53	51	51	50
Magnesium	mg/L			190	
Nitrogen, Ammonia as N	mg/L			ND(0.05)	
Nitrogen, Nitrate+Nitrite as N	mg/L			9	
Potassium	mg/L			8	
Sodium	mg/L			157	
Sulfate	mg/L			2170	
pH	s.u.	6.60	6.60	6.71	6.90
Solids, Total Dissolved TDS @ 180 C	mg/L	3580	3560	3580	3610
Aluminum	mg/L			ND(0.1)	
Beryllium	mg/L			ND(0.001)	
Cadmium	mg/L			ND(0.005)	
Cobalt	mg/L			0.03	
Lead	mg/L			ND(0.001)	
Manganese	mg/L			1.66	
Molybdenum	mg/L			0.2	
Nickel	mg/L			ND(0.05)	
Uranium	mg/L			0.195	
Vanadium	mg/L			ND(0.1)	
Arsenic-III	mg/L			ND(0.001)	
Selenium-IV	mg/L			ND(0.001)	
Gross Alpha minus Rn & U	pCi/L			5.7	
Gross Alpha minus Rn & U Precision (±)	pCi/L			0.6	
Gross Alpha minus Rn & U MDC	pCi/L			0.3	
Lead 210	pCi/L			0.3	
Lead 210 precision (±)	pCi/L			0.6	
Lead 210 MDC	pCi/L			1.0	
Radium 226	pCi/L			6.2	
Radium 226 precision (±)	pCi/L			0.66	
Radium 226 MDC	pCi/L			0.29	
Radium 228	pCi/L			12	
Radium 228 precision (±)	pCi/L			2.1	
Radium 228 MDC	pCi/L			2.7	
Thorium 230	pCi/L			0.0008	
Thorium 230 precision (±)	pCi/L			0.08	
Thorium 230 MDC	pCi/L			0.2	
A/C Balance (± 5)	%			1.28	
Anions	meq/L			53.9	
Cations	meq/L			55.3	
Solids, Total Dissolved Calculated	mg/L			3500	
TDS Balance (0.80 - 1.20)				1.03	
Trihalomethanes, Total	ug/L			ND(0.50)	

****Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.**



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C13010573-006
Client Sample ID RW-A

Report Date: 02/25/13
Collection Date: 01/15/13 13:59
Date Received: 01/18/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	215	mg/L		5		A2320 B	01/18/13 17:00 / jba
Chloride	36	mg/L	D	4		E300.0	01/19/13 07:13 / wc
PHYSICAL PROPERTIES							
pH	6.29	s.u.	H	0.01		A4500-H B	01/18/13 13:21 / jz
Solids, Total Dissolved TDS @ 180 C	4210	mg/L		40		A2540 C	01/18/13 15:58 / jz

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 D - RL increased due to sample matrix.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 H - Analysis performed past recommended holding time.



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C13040426-009
Client Sample ID: RW-A

Report Date: 05/22/13
Collection Date: 04/09/13 12:15
Date Received: 04/12/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	217	mg/L		5		A2320 B	04/12/13 16:15 / jba
Chloride	33	mg/L	D	4		E300.0	04/15/13 23:54 / wc
PHYSICAL PROPERTIES							
pH	6.34	s.u.	H	0.01		A4500-H B	04/12/13 13:08 / ab
Solids, Total Dissolved TDS @ 180 C	4340	mg/L		40		A2540 C	04/15/13 16:12 / ab

Report Definitions:

RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
H - Analysis performed past recommended holding time.

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 3 Monitor Wells					
Well ID:		RW-A	RW-A	RW-A	RW-A
Collection Date:		4/9/2013	1/15/2013	10/16/2012	7/17/2012
Receive Date:		4/12/2013	1/18/2013	10/19/2012	7/20/2012
Report Date:		5/22/2013	2/25/2013	11/20/2012	9/7/2012
Analyte	RUnits	C13040426-009	C13010573-006	C12100835-015	C12070713-020
Bicarbonate as HCO3	mg/L	217	215	227	227
Calcium	mg/L			595	
Chloride	mg/L	33	36	36	39
Magnesium	mg/L			346	
Nitrogen, Ammonia as N	mg/L			2.5	
Nitrogen, Nitrate+Nitrite as N	mg/L			ND(0.1)	
Potassium	mg/L			11	
Sodium	mg/L			149	
Sulfate	mg/L			2780	
pH	s.u.	6.34	6.29	6.43	6.45
Solids, Total Dissolved TDS @ 180 C	mg/L	4340	4210	4460	4300
Aluminum	mg/L			ND(0.1)	
Beryllium	mg/L			ND(0.001)	
Cadmium	mg/L			ND(0.005)	
Cobalt	mg/L			0.27	
Lead	mg/L			ND(0.001)	
Manganese	mg/L			4.91	
Molybdenum	mg/L			0.1	
Nickel	mg/L			0.31	
Uranium	mg/L			0.0936	
Vanadium	mg/L			ND(0.1)	
Arsenic-III	mg/L			ND(0.001)	
Selenium-IV	mg/L			ND(0.001)	
Gross Alpha minus Rn & U	pCi/L			10.7	
Gross Alpha minus Rn & U Precision (±)	pCi/L			0.8	
Gross Alpha minus Rn & U MDC	pCi/L			0.2	
Lead 210	pCi/L			0.6	
Lead 210 precision (±)	pCi/L			0.6	
Lead 210 MDC	pCi/L			1.0	
Radium 226	pCi/L			12	
Radium 226 precision (±)	pCi/L			0.76	
Radium 226 MDC	pCi/L			0.20	
Radium 228	pCi/L			21	
Radium 228 precision (±)	pCi/L			2.0	
Radium 228 MDC	pCi/L			1.9	
Thorium 230	pCi/L			0.01	
Thorium 230 precision (±)	pCi/L			0.1	
Thorium 230 MDC	pCi/L			0.4	
A/C Balance (± 5)	%			1.99	
Anions	meq/L			62.5	
Cations	meq/L			65.1	
Solids, Total Dissolved Calculated	mg/L			4000	
TDS Balance (0.80 - 1.20)				1.10	
Trihalomethanes, Total	ug/L			ND(0.50)	

****Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.**



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C13010573-001
Client Sample ID: NW-1

Report Date: 02/25/13
Collection Date: 01/15/13 10:35
Date Received: 01/18/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	244	mg/L		5		A2320 B	01/18/13 16:17 / jba
Chloride	21	mg/L	D	4		E300.0	01/19/13 04:55 / wc
PHYSICAL PROPERTIES							
pH	6.80	s.u.	H	0.01		A4500-H B	01/18/13 13:08 / jz
Solids, Total Dissolved TDS @ 180 C	4200	mg/L		40		A2540 C	01/18/13 15:56 / jz

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
H - Analysis performed past recommended holding time.



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C13040426-008
Client Sample ID: NW-1

Report Date: 05/22/13
Collection Date: 04/09/13 11:55
Date Received: 04/12/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	281	mg/L		5		A2320 B	04/12/13 16:08 / jba
Chloride	19	mg/L	D	4		E300.0	04/15/13 23:39 / wc
PHYSICAL PROPERTIES							
pH	6.77	s.u.	H	0.01		A4500-H B	04/12/13 13:05 / ab
Solids, Total Dissolved TDS @ 180 C	4240	mg/L		40		A2540 C	04/15/13 16:11 / ab

Report Definitions:

RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
H - Analysis performed past recommended holding time.



UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 3 Monitor Wells					
Well ID:		NW-1	NW-1	NW-1	NW-1
Collection Date:		4/9/2013	1/15/2013	10/16/2012	7/17/2012
Receive Date:		4/12/2013	1/18/2013	10/19/2012	7/20/2012
Report Date:		5/22/2013	2/25/2013	11/19/2012	9/7/2012
Analyte	RUnits	C13040426-008	C13010573-001	C12100871-001	C12070713-021
Bicarbonate as HCO ₃	mg/L	281	244	242	175
Chloride	mg/L	19	21	26	27
pH	s.u.	6.77	6.80	7.20	6.77
Solids, Total Dissolved TDS @ 180 C	mg/L	4240	4200	4190	4560

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C13010573-005
Client Sample ID: NW-2

Report Date: 02/25/13
Collection Date: 01/15/13 14:29
Date Received: 01/18/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	297	mg/L		5		A2320 B	01/18/13 16:53 / jba
Chloride	38	mg/L	D	4		E300.0	01/19/13 06:58 / wc
PHYSICAL PROPERTIES							
pH	6.34	s.u.	H	0.01		A4500-H B	01/18/13 13:19 / jz
Solids, Total Dissolved TDS @ 180 C	4080	mg/L		40		A2540 C	01/18/13 15:58 / jz

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
H - Analysis performed past recommended holding time.



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C13040426-006
Client Sample ID: NW-2

Report Date: 05/22/13
Collection Date: 04/09/13 10:45
Date Received: 04/12/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	276	mg/L		5		A2320 B	04/12/13 15:53 / jba
Chloride	36	mg/L	D	4		E300.0	04/15/13 22:37 / wc
PHYSICAL PROPERTIES							
pH	6.44	s.u.	H	0.01		A4500-H B	04/12/13 13:00 / ab
Solids, Total Dissolved TDS @ 180 C	4160	mg/L		40		A2540 C	04/15/13 16:11 / ab

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 D - RL increased due to sample matrix.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 H - Analysis performed past recommended holding time.



UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 3 Monitor Wells					
Well ID:		NW-2	NW-2	NW-2	NW-2
Collection Date:		4/9/2013	1/15/2013	10/16/2012	7/17/2012
Receive Date:		4/12/2013	1/18/2013	10/19/2012	7/20/2012
Report Date:		5/22/2013	2/25/2013	11/19/2012	9/7/2012
Analyte	RUnits	C13040426-006	C13010573-005	C12100871-003	C12070713-018
Bicarbonate as HCO ₃	mg/L	276	297	243	220
Chloride	mg/L	36	38	41	39
pH	s.u.	6.44	6.34	6.25	6.50
Solids, Total Dissolved TDS @ 180 C	mg/L	4160	4080	4100	4040

****Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.**



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C13010573-007
Client Sample ID NW-3

Report Date: 02/25/13
Collection Date: 01/15/13 11:32
Date Received: 01/18/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	395	mg/L		5		A2320 B	01/18/13 17:08 / jba
Chloride	38	mg/L	D	2		E300.0	01/19/13 07:29 / wc
PHYSICAL PROPERTIES							
pH	6.68	s.u.	H	0.01		A4500-H B	01/18/13 13:24 / jz
Solids, Total Dissolved TDS @ 180 C	3760	mg/L		40		A2540 C	01/18/13 15:58 / jz

Report Definitions:

RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
H - Analysis performed past recommended holding time.



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C13040426-004
Client Sample ID: NW-3

Report Date: 05/22/13
Collection Date: 04/09/13 10:00
Date Received: 04/12/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	433	mg/L		5		A2320 B	04/12/13 15:38 / jba
Chloride	40	mg/L	D	2		E300.0	04/17/13 16:15 / wc
PHYSICAL PROPERTIES							
pH	6.75	s.u.	H	0.01		A4500-H B	04/12/13 12:55 / ab
Solids, Total Dissolved TDS @ 180 C	3760	mg/L		40		A2540 C	04/15/13 16:10 / ab

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 D - RL increased due to sample matrix.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 H - Analysis performed past recommended holding time.



UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 3 Monitor Wells					
Well ID:		NW-3	NW-3	NW-3	NW-3
Collection Date:		4/9/2013	1/15/2013	10/16/2012	7/17/2012
Receive Date:		4/12/2013	1/18/2013	10/19/2012	7/20/2012
Report Date:		5/22/2013	2/25/2013	11/19/2012	9/7/2012
Analyte	RUnits	C13040426-004	C13010573-007	C12100871-005	C12070713-022
Bicarbonate as HCO3	mg/L	433	395	402	361
Chloride	mg/L	40	38	41	41
pH	s.u.	6.75	6.68	6.74	6.79
Solids, Total Dissolved TDS @ 180 C	mg/L	3760	3760	3960	3760

****Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.**



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C13010573-003
Client Sample ID NW-4

Report Date: 02/25/13
Collection Date: 01/15/13 12:17
Date Received: 01/18/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	100	mg/L		5		A2320 B	01/18/13 16:31 / jba
Chloride	29	mg/L	D	4		E300.0	01/19/13 06:27 / wc
PHYSICAL PROPERTIES							
pH	6.05	s.u.	H	0.01		A4500-H B	01/18/13 13:13 / jz
Solids, Total Dissolved TDS @ 180 C	4710	mg/L		40		A2540 C	01/18/13 15:57 / jz

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
H - Analysis performed past recommended holding time.



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C13040426-007
Client Sample ID: NW-4

Report Date: 05/22/13
Collection Date: 04/09/13 11:25
Date Received: 04/12/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	89	mg/L		5		A2320 B	04/12/13 16:00 / jba
Chloride	25	mg/L	D	4		E300.0	04/15/13 23:23 / wc
PHYSICAL PROPERTIES							
pH	6.14	s.u.	H	0.01		A4500-H B	04/12/13 13:03 / ab
Solids, Total Dissolved TDS @ 180 C	4550	mg/L		40		A2540 C	04/15/13 16:11 / ab

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 D - RL increased due to sample matrix.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 H - Analysis performed past recommended holding time.



UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 3 Monitor Wells					
Well ID:		NW-4	NW-4	NW-4	NW-4
Collection Date:		4/9/2013	1/15/2013	10/16/2012	7/17/2012
Receive Date:		4/12/2013	1/18/2013	10/19/2012	7/20/2012
Report Date:		5/22/2013	2/25/2013	11/19/2012	9/7/2012
Analyte	RUnits	C13040426-007	C13010573-003	C12100871-002	C12070713-017
Bicarbonate as HCO ₃	mg/L	89	100	112	101
Chloride	mg/L	25	29	30	29
pH	s.u.	6.14	6.05	6.12	6.17
Solids, Total Dissolved TDS @ 180 C	mg/L	4550	4710	4830	4900

****Note:** The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C13010573-002
Client Sample ID: NW-5

Report Date: 02/25/13
Collection Date: 01/15/13 11:02
Date Received: 01/18/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	374	mg/L		5		A2320 B	01/18/13 16:25 / jba
Chloride	38	mg/L	D	2		E300.0	01/19/13 05:41 / wc
PHYSICAL PROPERTIES							
pH	6.80	s.u.	H	0.01		A4500-H B	01/18/13 13:11 / jz
Solids, Total Dissolved TDS @ 180 C	3710	mg/L		40		A2540 C	01/18/13 15:57 / jz

Report Definitions:

RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
H - Analysis performed past recommended holding time.



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C13040426-005
Client Sample ID: NW-5

Report Date: 05/22/13
Collection Date: 04/09/13 10:30
Date Received: 04/12/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	393	mg/L		5		A2320 B	04/12/13 15:46 / jba
Chloride	41	mg/L	D	4		E300.0	04/17/13 16:30 / wc
PHYSICAL PROPERTIES							
pH	6.81	s.u.	H	0.01		A4500-H B	04/12/13 12:58 / ab
Solids, Total Dissolved TDS @ 180 C	4300	mg/L		40		A2540 C	04/15/13 16:10 / ab

Report Definitions:

RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
H - Analysis performed past recommended holding time.



UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 3 Monitor Wells					
Well ID:		NW-5	NW-5	NW-5	NW-5
Collection Date:		4/9/2013	1/15/2013	10/16/2012	7/17/2012
Receive Date:		4/12/2013	1/18/2013	10/19/2012	7/20/2012
Report Date:		5/22/2013	2/25/2013	11/19/2012	9/7/2012
Analyte	RUnits	C13040426-005	C13010573-002	C12100871-004	C12070713-019
Bicarbonate as HCO3	mg/L	393	374	415	422
Chloride	mg/L	41	38	43	45
pH	s.u.	6.81	6.80	6.98	7.02
Solids, Total Dissolved TDS @ 180 C	mg/L	4300	3710	4060	4050

****Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.**



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C13010580-008
Client Sample ID: MW-6

Report Date: 02/25/13
Collection Date: 01/16/13 10:50
Date Received: 01/18/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	190	mg/L		5		A2320 B	01/19/13 02:15 / jba
Calcium	542	mg/L		1		E200.7	01/22/13 22:02 / sf
Chloride	35	mg/L	D	4		E300.0	01/21/13 22:20 / wc
Magnesium	446	mg/L		1		E200.7	01/22/13 22:02 / sf
Nitrogen, Ammonia as N	0.35	mg/L		0.05		A4500-NH ₃ G	01/22/13 17:06 / ljl
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	01/18/13 17:26 / lr
Potassium	11	mg/L		1		E200.7	01/22/13 22:02 / sf
Sodium	173	mg/L	D	2		E200.7	01/22/13 22:02 / sf
Sulfate	3170	mg/L	D	20		E300.0	01/21/13 22:20 / wc
PHYSICAL PROPERTIES							
pH	6.43	s.u.	H	0.01		A4500-H B	01/21/13 10:19 / ab
Solids, Total Dissolved TDS @ 180 C	4510	mg/L		40		A2540 C	01/21/13 08:44 / ab
METALS - TOTAL							
Aluminum	0.4	mg/L		0.1		E200.7	01/23/13 02:20 / sf
Beryllium	ND	mg/L		0.001		E200.7	01/23/13 02:20 / sf
Cadmium	ND	mg/L		0.005		E200.7	01/23/13 02:20 / sf
Cobalt	0.15	mg/L		0.01		E200.7	01/23/13 02:20 / sf
Lead	0.001	mg/L		0.001		E200.8	01/22/13 19:28 / clm
Manganese	4.66	mg/L		0.01		E200.7	01/23/13 02:20 / sf
Molybdenum	2.9	mg/L		0.1		E200.7	01/23/13 02:20 / sf
Nickel	0.21	mg/L		0.05		E200.7	01/23/13 02:20 / sf
Uranium	0.0522	mg/L		0.0003		E200.8	01/22/13 19:28 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/23/13 02:20 / sf
METALS - SPECIATED							
Arsenic-III	0.005	mg/L		0.001		E1632AM	02/09/13 15:57 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	02/06/13 13:41 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	2.1	pCi/L				E900.1	02/08/13 07:13 / lbb
Gross Alpha minus Rn & U Precision (±)	0.4	pCi/L				E900.1	02/08/13 07:13 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	02/08/13 07:13 / lbb
Lead 210	0.5	pCi/L	U			E909.0	02/02/13 20:28 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	02/02/13 20:28 / eli-cs
Lead 210 MDC	1.1	pCi/L				E909.0	02/02/13 20:28 / eli-cs
Radium 226	2.3	pCi/L				E903.0	02/01/13 07:01 / trs
Radium 226 precision (±)	0.31	pCi/L				E903.0	02/01/13 07:01 / trs
Radium 226 MDC	0.16	pCi/L				E903.0	02/01/13 07:01 / trs
Radium 228	2.6	pCi/L				RA-05	01/27/13 16:17 / gb
Radium 228 precision (±)	0.75	pCi/L				RA-05	01/27/13 16:17 / gb
Radium 228 MDC	1.1	pCi/L				RA-05	01/27/13 16:17 / gb

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C13010580-008
Client Sample ID MW-6

Report Date: 02/25/13
Collection Date: 01/16/13 10:50
Date Received: 01/18/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.06	pCi/L	U			E908.0	02/04/13 16:38 / dmf
Thorium 230 precision (±)	0.08	pCi/L				E908.0	02/04/13 16:38 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	02/04/13 16:38 / dmf
DATA QUALITY							
A/C Balance (± 5)	1.11	%				A1030 E	01/23/13 09:44 / kbh
Anions	70.0	meq/L				A1030 E	01/23/13 09:44 / kbh
Cations	71.6	meq/L				A1030 E	01/23/13 09:44 / kbh
Solids, Total Dissolved Calculated	4500	mg/L				A1030 E	01/23/13 09:44 / kbh
TDS Balance (0.80 - 1.20)	1.00					A1030 E	01/23/13 09:44 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/21/13 22:51 / jk
Bromoform	ND	ug/L		0.50		E624	01/21/13 22:51 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	01/21/13 22:51 / jk
Chloroform	ND	ug/L		0.50		E624	01/21/13 22:51 / jk
Trihalomethanes, Total	ND	ug/L		0.50		E624	01/21/13 22:51 / jk
Surr: 1,2-Dichlorobenzene-d4	121	%REC	S	80-120		E624	01/21/13 22:51 / jk
Surr: Dibromofluoromethane	99.0	%REC		80-120		E624	01/21/13 22:51 / jk
Surr: p-Bromofluorobenzene	118	%REC		80-120		E624	01/21/13 22:51 / jk
Surr: Toluene-d8	92.0	%REC		80-120		E624	01/21/13 22:51 / jk

- The sample was received in the laboratory with a pH > 2. The pH was 7.

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 U - Not detected at minimum detectable concentration

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 S - Spike recovery outside of advisory limits.



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C13040435-009
Client Sample ID MW-6

Report Date: 05/22/13
Collection Date: 04/09/13 14:25
Date Received: 04/12/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	201	mg/L		5		A2320 B	04/12/13 20:07 / jba
Calcium	555	mg/L		1		E200.7	04/16/13 19:50 / sf
Chloride	31	mg/L	D	4		E300.0	04/16/13 11:25 / wc
Magnesium	458	mg/L		1		E200.7	04/16/13 19:50 / sf
Nitrogen, Ammonia as N	0.37	mg/L		0.05		A4500-NH ₃ G	04/19/13 11:05 / lr
Nitrogen, Nitrate+Nitrite as N	0.3	mg/L		0.1		E353.2	04/15/13 14:51 / lr
Potassium	10	mg/L		1		E200.7	04/17/13 15:12 / sf
Sodium	182	mg/L		1		E200.7	04/16/13 19:50 / sf
Sulfate	3260	mg/L	D	20		E300.0	04/16/13 11:25 / wc
PHYSICAL PROPERTIES							
pH	6.45	s.u.	H	0.01		A4500-H B	04/15/13 09:45 / ab
Solids, Total Dissolved TDS @ 180 C	4660	mg/L		40		A2540 C	04/15/13 16:14 / ab
METALS - TOTAL							
Aluminum	0.5	mg/L		0.1		E200.7	04/22/13 14:53 / sf
Beryllium	ND	mg/L		0.001		E200.7	04/22/13 14:53 / sf
Cadmium	ND	mg/L		0.005		E200.7	04/22/13 14:53 / sf
Cobalt	0.13	mg/L		0.01		E200.7	04/22/13 14:53 / sf
Lead	ND	mg/L		0.001		E200.8	04/23/13 23:10 / clm
Manganese	4.82	mg/L		0.01		E200.7	04/22/13 14:53 / sf
Molybdenum	2.3	mg/L		0.1		E200.7	04/22/13 14:53 / sf
Nickel	0.17	mg/L		0.05		E200.7	04/22/13 14:53 / sf
Uranium	0.0411	mg/L		0.0003		E200.8	05/01/13 21:55 / clm
Vanadium	ND	mg/L		0.1		E200.7	04/22/13 14:53 / sf
METALS - SPECIATED							
Arsenic-III	0.003	mg/L		0.001		E1632AM	04/23/13 12:59 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	04/17/13 15:49 / j11
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	2.7	pCi/L				E900.1	04/24/13 09:09 / lbb
Gross Alpha minus Rn & U Precision (±)	0.6	pCi/L				E900.1	04/24/13 09:09 / lbb
Gross Alpha minus Rn & U MDC	0.5	pCi/L				E900.1	04/24/13 09:09 / lbb
Lead 210	-0.6	pCi/L	U			E909.0	04/21/13 23:59 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	04/21/13 23:59 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	04/21/13 23:59 / eli-cs
Radium 226	2.6	pCi/L				E903.0	04/29/13 22:07 / lmc
Radium 226 precision (±)	0.34	pCi/L				E903.0	04/29/13 22:07 / lmc
Radium 226 MDC	0.17	pCi/L				E903.0	04/29/13 22:07 / lmc
Radium 228	4.2	pCi/L				RA-05	04/24/13 21:44 / gb
Radium 228 precision (±)	1.1	pCi/L				RA-05	04/24/13 21:44 / gb
Radium 228 MDC	1.5	pCi/L				RA-05	04/24/13 21:44 / gb

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C13040435-009
Client Sample ID: MW-6

Report Date: 05/22/13
Collection Date: 04/09/13 14:25
Date Received: 04/12/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.08	pCi/L				E908.0	05/01/13 11:34 / dmf
Thorium 230 precision (±)	0.05	pCi/L				E908.0	05/01/13 11:34 / dmf
Thorium 230 MDC	0.07	pCi/L				E908.0	05/01/13 11:34 / dmf
DATA QUALITY							
A/C Balance (± 5)	0.974	%				A1030 E	04/22/13 07:30 / kbh
Anions	72.2	meq/L				A1030 E	04/22/13 07:30 / kbh
Cations	73.6	meq/L				A1030 E	04/22/13 07:30 / kbh
Solids, Total Dissolved Calculated	4600	mg/L				A1030 E	04/22/13 07:30 / kbh
TDS Balance (0.80 - 1.20)	1.01					A1030 E	04/22/13 07:30 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/16/13 21:07 / jlr
Bromoform	ND	ug/L		0.50		E624	04/16/13 21:07 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/16/13 21:07 / jlr
Chloroform	ND	ug/L		0.50		E624	04/16/13 21:07 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	04/16/13 21:07 / jlr
Surr: 1,2-Dichlorobenzene-d4	105	%REC		73.7-126		E624	04/16/13 21:07 / jlr
Surr: Dibromofluoromethane	118	%REC		64.4-131		E624	04/16/13 21:07 / jlr
Surr: p-Bromofluorobenzene	115	%REC		67.1-133		E624	04/16/13 21:07 / jlr
Surr: Toluene-d8	98.0	%REC		79.7-125		E624	04/16/13 21:07 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 7.

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 3 Monitor Wells					
Well ID:		MW-6	MW-6	MW-6	MW-6
Collection Date:		4/9/2013	1/16/2013	10/17/2012	7/17/2012
Receive Date:		4/12/2013	1/18/2013	10/19/2012	7/20/2012
Report Date:		5/22/2013	2/25/2013	11/20/2012	9/7/2012
Analyte	RUUnits	C13040435-009	C13010580-008	C12100835-022	C12070713-012
Bicarbonate as HCO3	mg/L	201	190	281	454
Calcium	mg/L	555	542	508	378
Chloride	mg/L	31	35	38	122
Magnesium	mg/L	458	446	383	274
Nitrogen, Ammonia as N	mg/L	0.37	0.35	0.42	0.72
Nitrogen, Nitrate+Nitrite as N	mg/L	0.3	ND(0.1)	ND(0.1)	ND(0.1)
Potassium	mg/L	10	11	10	11
Sodium	mg/L	182	173	213	338
Sulfate	mg/L	3260	3170	2840	2290
pH	s.u.	6.45	6.43	6.61	6.77
Solids, Total Dissolved TDS @ 180 C	mg/L	4660	4510	4680	3880
Aluminum	mg/L	0.5	0.4	ND(0.1)	ND(0.1)
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	0.009
Cobalt	mg/L	0.13	0.15	0.11	0.06
Lead	mg/L	ND(0.001)	0.001	ND(0.001)	ND(0.001)
Manganese	mg/L	4.82	4.66	3.83	2.86
Molybdenum	mg/L	2.3	2.9	4.6	11.8
Nickel	mg/L	0.17	0.21	0.15	0.08
Uranium	mg/L	0.0411	0.0522	0.129	0.321
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	0.003	0.005	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	2.7	2.1	3.5	2.4
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.6	0.4	0.5	0.5
Gross Alpha minus Rn & U MDC	pCi/L	0.5	0.3	0.2	0.3
Lead 210	pCi/L	-0.6	0.5	-0.04	0.3
Lead 210 precision (±)	pCi/L	0.7	0.6	0.6	0.7
Lead 210 MDC	pCi/L	1.3	1.1	1.0	1.2
Radium 226	pCi/L	2.6	2.3	2.6	2.5
Radium 226 precision (±)	pCi/L	0.34	0.31	0.21	0.29
Radium 226 MDC	pCi/L	0.17	0.16	0.10	0.13
Radium 228	pCi/L	4.2	2.6	5.7	3.4
Radium 228 precision (±)	pCi/L	1.1	0.75	1.0	0.91
Radium 228 MDC	pCi/L	1.5	1.1	1.3	1.2
Thorium 230	pCi/L	0.08	0.06	0.07	0.005
Thorium 230 precision (±)	pCi/L	0.05	0.08	0.09	0.07
Thorium 230 MDC	pCi/L	0.07	0.2	0.2	0.2
A/C Balance (± 5)	%	0.974	1.11	1.25	-1.84
Anions	meq/L	72.2	70.0	64.8	58.6
Cations	meq/L	73.6	71.6	66.4	56.4
Solids, Total Dissolved Calculated	mg/L	4600	4500	4200	3700
TDS Balance (0.80 - 1.20)		1.01	1.00	1.13	1.06
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C13010580-004
Client Sample ID: MW-7

Report Date: 02/25/13
Collection Date: 01/14/13 16:04
Date Received: 01/18/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	386	mg/L		5		A2320 B	01/19/13 01:13 / jba
Calcium	671	mg/L		1		E200.7	01/22/13 21:42 / sf
Chloride	42	mg/L	D	2		E300.0	01/21/13 20:48 / wc
Magnesium	229	mg/L		1		E200.7	01/22/13 21:42 / sf
Nitrogen, Ammonia as N	0.51	mg/L		0.05		A4500-NH3 G	01/22/13 16:58 / ljl
Nitrogen, Nitrate+Nitrite as N	0.4	mg/L		0.1		E353.2	01/18/13 17:16 / lr
Potassium	9	mg/L		1		E200.7	01/22/13 21:42 / sf
Sodium	150	mg/L		1		E200.7	01/22/13 21:42 / sf
Sulfate	2370	mg/L	D	8		E300.0	01/21/13 20:48 / wc
PHYSICAL PROPERTIES							
pH	6.64	s.u.	H	0.01		A4500-H B	01/21/13 10:08 / ab
Solids, Total Dissolved TDS @ 180 C	3880	mg/L		40		A2540 C	01/21/13 08:39 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	01/23/13 02:00 / sf
Beryllium	ND	mg/L		0.001		E200.7	01/23/13 02:00 / sf
Cadmium	ND	mg/L		0.005		E200.7	01/23/13 02:00 / sf
Cobalt	0.06	mg/L		0.01		E200.7	01/23/13 02:00 / sf
Lead	0.001	mg/L		0.001		E200.8	01/22/13 19:15 / clm
Manganese	3.74	mg/L		0.01		E200.7	01/23/13 02:00 / sf
Molybdenum	1.1	mg/L		0.1		E200.7	01/23/13 02:00 / sf
Nickel	0.09	mg/L		0.05		E200.7	01/23/13 02:00 / sf
Uranium	0.198	mg/L		0.0003		E200.8	01/22/13 19:15 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/23/13 02:00 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	02/09/13 15:25 / eli-h
Selenium-IV	0.002	mg/L		0.001		A3114 B	02/01/13 10:26 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	7.7	pCi/L				E900.1	02/08/13 05:27 / lbb
Gross Alpha minus Rn & U Precision (±)	0.8	pCi/L				E900.1	02/08/13 05:27 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	02/08/13 05:27 / lbb
Lead 210	-0.02	pCi/L	U			E909.0	02/02/13 11:20 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	02/02/13 11:20 / eli-cs
Lead 210 MDC	1.1	pCi/L				E909.0	02/02/13 11:20 / eli-cs
Radium 226	7.8	pCi/L				E903.0	02/01/13 07:01 / trs
Radium 226 precision (±)	0.57	pCi/L				E903.0	02/01/13 07:01 / trs
Radium 226 MDC	0.16	pCi/L				E903.0	02/01/13 07:01 / trs
Radium 228	7.9	pCi/L				RA-05	01/27/13 14:44 / gb
Radium 228 precision (±)	0.87	pCi/L				RA-05	01/27/13 14:44 / gb
Radium 228 MDC	0.90	pCi/L				RA-05	01/27/13 14:44 / gb

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C13010580-004
Client Sample ID MW-7

Report Date: 02/25/13
Collection Date: 01/14/13 16:04
Date Received: 01/18/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.03	pCi/L	U			E908.0	02/04/13 16:38 / dmf
Thorium 230 precision (±)	0.07	pCi/L				E908.0	02/04/13 16:38 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	02/04/13 16:38 / dmf
DATA QUALITY							
A/C Balance (± 5)	1.89	%				A1030 E	01/23/13 09:41 / kbh
Anions	57.0	meq/L				A1030 E	01/23/13 09:41 / kbh
Cations	59.1	meq/L				A1030 E	01/23/13 09:41 / kbh
Solids, Total Dissolved Calculated	3700	mg/L				A1030 E	01/23/13 09:41 / kbh
TDS Balance (0.80 - 1.20)	1.05					A1030 E	01/23/13 09:41 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/21/13 16:58 / jk
Bromoform	ND	ug/L		0.50		E624	01/21/13 16:58 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	01/21/13 16:58 / jk
Chloroform	ND	ug/L		0.50		E624	01/21/13 16:58 / jk
Trihalomethanes, Total	ND	ug/L		0.50		E624	01/21/13 16:58 / jk
Surr: 1,2-Dichlorobenzene-d4	116	%REC		80-120		E624	01/21/13 16:58 / jk
Surr: Dibromofluoromethane	98.0	%REC		80-120		E624	01/21/13 16:58 / jk
Surr: p-Bromofluorobenzene	120	%REC		80-120		E624	01/21/13 16:58 / jk
Surr: Toluene-d8	93.0	%REC		80-120		E624	01/21/13 16:58 / jk

- The sample was received in the laboratory with a pH > 2. The pH was 7.

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C13040435-008
Client Sample ID: MW-7

Report Date: 05/22/13
Collection Date: 04/09/13 13:55
Date Received: 04/12/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	380	mg/L		5		A2320 B	04/12/13 19:59 / jba
Calcium	657	mg/L		1		E200.7	04/16/13 19:31 / sf
Chloride	42	mg/L	D	2		E300.0	04/16/13 11:09 / wc
Magnesium	230	mg/L		1		E200.7	04/16/13 19:31 / sf
Nitrogen, Ammonia as N	0.42	mg/L		0.05		A4500-NH ₃ G	04/17/13 13:59 / lr
Nitrogen, Nitrate+Nitrite as N	1.2	mg/L		0.1		E353.2	04/15/13 14:48 / lr
Potassium	8	mg/L		1		E200.7	04/17/13 14:57 / sf
Sodium	159	mg/L		1		E200.7	04/16/13 19:31 / sf
Sulfate	2470	mg/L	D	8		E300.0	04/16/13 11:09 / wc
PHYSICAL PROPERTIES							
pH	6.71	s.u.	H	0.01		A4500-H B	04/15/13 09:42 / ab
Solids, Total Dissolved TDS @ 180 C	3680	mg/L		40		A2540 C	04/15/13 16:14 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	04/23/13 00:53 / cp
Beryllium	ND	mg/L		0.001		E200.8	04/23/13 00:53 / cp
Cadmium	ND	mg/L		0.005		E200.8	04/23/13 00:53 / cp
Cobalt	0.07	mg/L		0.01		E200.8	04/23/13 00:53 / cp
Lead	ND	mg/L		0.001		E200.8	04/23/13 00:53 / cp
Manganese	3.49	mg/L		0.01		E200.8	04/23/13 00:53 / cp
Molybdenum	0.9	mg/L		0.1		E200.8	04/23/13 00:53 / cp
Nickel	0.08	mg/L		0.05		E200.8	04/23/13 00:53 / cp
Uranium	0.221	mg/L		0.0003		E200.8	04/23/13 00:53 / cp
Vanadium	ND	mg/L		0.1		E200.8	04/23/13 00:53 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/23/13 12:51 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	04/17/13 15:41 / jl1
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	8.8	pCi/L				E900.1	04/24/13 09:09 / lbb
Gross Alpha minus Rn & U Precision (±)	1.0	pCi/L				E900.1	04/24/13 09:09 / lbb
Gross Alpha minus Rn & U MDC	0.4	pCi/L				E900.1	04/24/13 09:09 / lbb
Lead 210	0.3	pCi/L	U			E909.0	04/21/13 23:59 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	04/21/13 23:59 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	04/21/13 23:59 / eli-cs
Radium 226	10	pCi/L				E903.0	04/29/13 22:07 / lmc
Radium 226 precision (±)	0.68	pCi/L				E903.0	04/29/13 22:07 / lmc
Radium 226 MDC	0.19	pCi/L				E903.0	04/29/13 22:07 / lmc
Radium 228	14	pCi/L				RA-05	04/24/13 21:44 / gb
Radium 228 precision (±)	1.5	pCi/L				RA-05	04/24/13 21:44 / gb
Radium 228 MDC	1.6	pCi/L				RA-05	04/24/13 21:44 / gb

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.
 U - Not detected at minimum detectable concentration



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C13040435-008
Client Sample ID MW-7

Report Date: 05/22/13
Collection Date: 04/09/13 13:55
Date Received: 04/12/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.07	pCi/L	U			E908.0	05/01/13 11:34 / dmf
Thorium 230 precision (±)	0.05	pCi/L				E908.0	05/01/13 11:34 / dmf
Thorium 230 MDC	0.07	pCi/L				E908.0	05/01/13 11:34 / dmf
DATA QUALITY							
A/C Balance (± 5)	-0.0685	%				A1030 E	04/22/13 07:30 / kbh
Anions	59.0	meq/L				A1030 E	04/22/13 07:30 / kbh
Cations	58.9	meq/L				A1030 E	04/22/13 07:30 / kbh
Solids, Total Dissolved Calculated	3800	mg/L				A1030 E	04/22/13 07:30 / kbh
TDS Balance (0.80 - 1.20)	0.970					A1030 E	04/22/13 07:30 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/16/13 20:33 / jlr
Bromoform	ND	ug/L		0.50		E624	04/16/13 20:33 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/16/13 20:33 / jlr
Chloroform	ND	ug/L		0.50		E624	04/16/13 20:33 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	04/16/13 20:33 / jlr
Surr: 1,2-Dichlorobenzene-d4	105	%REC		73.7-126		E624	04/16/13 20:33 / jlr
Surr: Dibromofluoromethane	118	%REC		64.4-131		E624	04/16/13 20:33 / jlr
Surr: p-Bromofluorobenzene	114	%REC		67.1-133		E624	04/16/13 20:33 / jlr
Surr: Toluene-d8	93.0	%REC		79.7-125		E624	04/16/13 20:33 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 8.

Report Definitions:

RL - Analyte reporting limit.

QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration



UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 3 Monitor Wells					
Well ID:		MW-7	MW-7	MW-7	MW-7
Collection Date:		4/9/2013	1/14/2013	10/16/2012	7/17/2012
Receive Date:		4/12/2013	1/18/2013	10/19/2012	7/20/2012
Report Date:		5/22/2013	2/25/2013	11/20/2012	9/7/2012
Analyte	RUUnits	C13040435-008	C13010580-004	C12100835-013	C12070713-013
Bicarbonate as HCO3	mg/L	380	386	348	337
Calcium	mg/L	657	671	673	650
Chloride	mg/L	42	42	41	42
Magnesium	mg/L	230	229	229	195
Nitrogen, Ammonia as N	mg/L	0.42	0.51	1.1	2.11
Nitrogen, Nitrate+Nitrite as N	mg/L	1.2	0.4	0.7	0.5
Potassium	mg/L	8	9	9	9.1
Sodium	mg/L	159	150	150	139
Sulfate	mg/L	2470	2370	2490	2390
pH	s.u.	6.71	6.64	6.73	6.64
Solids, Total Dissolved TDS @ 180 C	mg/L	3680	3880	3900	3990
Aluminum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	0.07	0.06	0.06	0.09
Lead	mg/L	ND(0.001)	0.001	ND(0.001)	ND(0.001)
Manganese	mg/L	3.49	3.74	3.77	4.32
Molybdenum	mg/L	0.9	1.1	0.8	2.0
Nickel	mg/L	0.08	0.09	0.10	0.09
Uranium	mg/L	0.221	0.198	0.165	0.0976
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	0.002
Selenium-IV	mg/L	ND(0.001)	0.002	ND(0.001)	0.002
Gross Alpha minus Rn & U	pCi/L	8.8	7.7	7.7	7.9
Gross Alpha minus Rn & U Precision (±)	pCi/L	1.0	0.8	0.7	0.8
Gross Alpha minus Rn & U MDC	pCi/L	0.4	0.3	0.2	0.3
Lead 210	pCi/L	0.3	-0.02	0.5	0.7
Lead 210 precision (±)	pCi/L	0.8	0.6	0.6	0.7
Lead 210 MDC	pCi/L	1.3	1.1	1.0	1.2
Radium 226	pCi/L	10	7.8	7.5	7.8
Radium 226 precision (±)	pCi/L	0.68	0.57	0.61	0.51
Radium 226 MDC	pCi/L	0.19	0.16	0.21	0.14
Radium 228	pCi/L	14	7.9	14	7.1
Radium 228 precision (±)	pCi/L	1.5	0.87	1.8	1.1
Radium 228 MDC	pCi/L	1.6	0.90	1.9	1.3
Thorium 230	pCi/L	0.07	0.03	0.005	-0.007
Thorium 230 precision (±)	pCi/L	0.05	0.07	0.07	0.06
Thorium 230 MDC	pCi/L	0.07	0.2	0.2	0.2
A/C Balance (± 5)	%	-0.0685	1.89	0.436	-1.50
Anions	meq/L	59.0	57.0	58.8	56.6
Cations	meq/L	58.9	59.1	59.3	54.9
Solids, Total Dissolved Calculated	mg/L	3800	3700	3800	3600
TDS Balance (0.80 - 1.20)		0.970	1.05	1.03	1.11
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.

**SEMI-ANNUAL
EFFLUENT AND ENVIRONMENTAL MONITORING REPORT
JANUARY TO JUNE OF 2013**

AVAILABLE MONITORING DATA

- **ENVIRONMENTAL INSPECTION REPORT (continued this procedure to show and maintain the integrity of the tailings area).**
- **GROUND WATER RESULT (GW-3 water well reported in accordance to Regulatory Guide 4.14 format).**

ENVIRONMENTAL INSPECTION REPORTS

ENVIRONMENTAL INSPECTION

DATE: 1-31-13

TIME START: 0912

INSPECTOR: Max Chodley J.

TIME END: 1008

<u>TAILINGS AREA:</u>	<u>OKAY</u>	<u>PROBLEM</u>	<u>COMMENTS</u>
1. Fences	<u>✓</u>	<u> </u>	<u> </u>
2. Air Monitors	<u>-</u>	<u>NA -</u>	<u>Not Applicable - Only Under RWP</u>
3. Radiation Warning Signs	<u>✓</u>	<u> </u>	<u> </u>
4. Locked Gates	<u>✓</u>	<u> </u>	<u> </u>

ACTION TAKEN: _____

ENVIRONMENTAL INSPECTION

DATE: 2-28-13

TIME START: 0935

INSPECTOR: Mal Chisnelly

TIME END: 1040

<u>TAILINGS AREA:</u>	<u>OKAY</u>	<u>PROBLEM</u>	<u>COMMENTS</u>
1. Fences	<u>✓</u>	<u> </u>	<u> </u>
2. Air Monitors	<u>- NA</u>	<u>-</u>	<u>Not Applicable - Only under RWP</u>
3. Radiation Warning Signs	<u>✓</u>	<u> </u>	<u> </u>
4. Locked Gates	<u>✓</u>	<u> </u>	<u> </u>

ACTION TAKEN: _____

ENVIRONMENTAL INSPECTION

DATE: 3-25-13

TIME START: 1300

INSPECTOR: Mal Chisobly

TIME END: 1430

<u>TAILINGS AREA:</u>	<u>OKAY</u>	<u>PROBLEM</u>	<u>COMMENTS</u>
1. Fences	<u>✓</u>	<u> </u>	<u> </u>
2. Air Monitors	<u>—</u>	<u>NA</u>	<u>Under RWP</u>
3. Radiation Warning Signs	<u>✓</u>	<u> </u>	<u> </u>
4. Locked Gates	<u>✓</u>	<u> </u>	<u> </u>

ACTION TAKEN: _____

ENVIRONMENTAL INSPECTION

DATE: 4-29-13

TIME START: 1320

INSPECTOR: Mal Chubbly

TIME END: 1430

<u>TAILINGS AREA:</u>	<u>OKAY</u>	<u>PROBLEM</u>	<u>COMMENTS</u>
1. Fences	<u>✓</u>	<u> </u>	<u> </u>
2. Air Monitors	<u>—</u>	<u>NA —</u>	<u>Under RWP</u>
3. Radiation Warning Signs	<u>✓</u>	<u> </u>	<u> </u>
4. Locked Gates	<u> </u>	<u>✓</u>	<u>see below</u>

ACTION TAKEN: Relocked the south end perimeter fence line gate @ 1400
and will remind workers to make sure all tailings
perimeter fence line gates are locked.

ENVIRONMENTAL INSPECTION

DATE: 5-31-13

TIME START: 0930

INSPECTOR: Mal Chisidley J.

TIME END: 1055

<u>TAILINGS AREA:</u>	<u>OKAY</u>	<u>PROBLEM</u>	<u>COMMENTS</u>
1. Fences	✓		
2. Air Monitors	- NA	-	Under RWP
3. Radiation Warning Signs	✓		
4. Locked Gates	✓		

ACTION TAKEN: _____

ENVIRONMENTAL INSPECTION

DATE: 6-27-13

TIME START: 1410

INSPECTOR: Mal Chasidly J.

TIME END: 1515

<u>TAILINGS AREA:</u>	<u>OKAY</u>	<u>PROBLEM</u>	<u>COMMENTS</u>
1. Fences	<u>✓</u>	<u> </u>	<u> </u>
2. Air Monitors	<u>-</u>	<u>NA -</u>	<u>Under RWP</u>
3. Radiation Warning Signs	<u>✓</u>	<u> </u>	<u> </u>
4. Locked Gates	<u>✓</u>	<u> </u>	<u> </u>

ACTION TAKEN: _____

GROUNDWATER RESULTS

QUARTERLY LIQUID SAMPLES

<u>Date/Qr.</u>	<u>Location</u>	<u>Type</u>	<u>Radionuclide</u>	<u>Concentration</u>		<u>Error Est.</u>	<u>LLD</u>
				<u>Mg/l</u>	<u>µci/ml</u>	<u>µci/ml</u>	<u>µci/ml</u>
<u>1/14/2013</u>	<u>GW-3</u>	<u>Ground</u>	U-Nat (dissolved) or total		<u>2.07E-07</u>		<u>2.00E-10</u>
<u>1st-Qr.</u>		<u>Water Well</u>					
			Th-230 (dissolved) or total		<u>9.00E-11</u>	<u>1.00E-10</u>	<u>2.00E-10</u>
			Ra-266 (dissolved) or total		<u>9.00E-11</u>	<u>1.00E-10</u>	<u>2.00E-10</u>
UNC Field Data:	PH (STD. Units) = 6.79						
	Cond. (µ MHOS) = 5,060						
	Water Depth (Ft.) = 54.72		Pb-210 (dissolved) or total		<u>5.00E-10</u>	<u>8.00E-10</u>	<u>1.00E-09</u>
	Temp. (°C) = 8.1						
			Po-210 (dissolved) or total				<u>1.00E-09</u>

COMMENTS:

QUARTERLY LIQUID SAMPLES

<u>Date/Qr.</u>	<u>Location</u>	<u>Type</u>	<u>Radionuclide</u>	<u>Concentration</u>		<u>Error Est.</u>	<u>LLD</u>
				<u>Mg/l</u>	<u>µci/ml</u>	<u>µci/ml</u>	<u>µci/ml</u>
<u>4/2/2013</u>	<u>GW-3</u>	<u>Ground</u>	U-Nat (dissolved) or total		<u>2.11E-07</u>		<u>2.00E-10</u>
<u>2nd-Qr.</u>		<u>Water Well</u>					
			Th-230 (dissolved) or total		<u>9.00E-11</u>	<u>1.00E-10</u>	<u>2.00E-10</u>
			Ra-266 (dissolved) or total		<u>1.40E-10</u>	<u>9.00E-11</u>	<u>2.00E-10</u>
			Pb-210 (dissolved) or total		<u>9.00E-10</u>	<u>8.00E-10</u>	<u>1.00E-09</u>
			Po-210 (dissolved) or total				<u>1.00E-09</u>

UNC Field Data:

PH (STD. Units) = 6.62
 Cond. (µ MHOS) = 5,210
 Water Depth (Ft.) = 54.82
 Temp. (°C) = 11.6

COMMENTS:
