SEMI-ANNUAL GROUND WATER, EFFLUENT AND ENVIRONMENTAL MONITORING REPORT

SECOND HALF OF 2012
(JULY THRU DECEMBER)

UNITED NUCLEAR CORPORATION

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

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

February 28, 2013

Mr. Keith I. McConnell, 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: Second Half – July thru December, 2012
Semi – Annual Ground Water Monitoring Report,
QA/QC Report and Effluent and Environmental Monitoring Report.

Dear Mr. McConnell:

The above reports are submitted, pursuant to our NRC Source Materials License No. SUA-1475, Condition 30C and 12; and 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, RW-11, NW wells 1 thru 5, MW-6, MW-7 and Zone 1 wells 617 and 619 are also included in this report.

Sincerely,

Max Chischilly Jr.
Radiation Safety Officer

dy
Enclosures

Cc: Mark Jancin, Chester Engineers
Roy Blickwedel, GE
Joe Davis, GE
Earl Dixon, NMED
Eugene Esplain, NNEPA
Yolande Norman, NRC (3 copies)
Katrina Higgins-Coltrain, USEPA Region 6
Jack E. Whitten, NRC Region IV

QUARTERLY SAMPLING

SEMI-ANNUAL GROUND WATER MONITORING REPORT

JULY TO DECEMBER OF 2012

FIELD DATA SHEET OF

THIRD AND FOURTH QUARTER

CONTROLS

SW ALLUVIUM

ZONE – 1

ZONE – 3

GROUND WATER FIELD MONITORING
WATER ELEVATIONS, PH, CONDUCTIVITY, AND TEMPERATURE
July_____MONTH_ Third____QUARTER, 2012

SOUTHWEST ALLUVIUM

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)	TURB. (NTU)
509-D	7/9/2012 0952	80.32	6949.5	6869.18	6,250	6.32	15.3	0.76
624	7/10/2012 0912	52.20	6898.7	6846.50	5,170	6.5	14.9	0.19
627	7/10/2012 1651	59.60	6892.4	6832.80	4,460	6.86	16.6	0.31
632	7/9/2012 1551	46.10	6903.6	6857.50	6,850	6.39	15.1	2.09
801	7/9/2012 1318	53.20	6904.3	6851.10	5,950	6.52	15.4	0.43
802	7/9/2012 1238	49.41	6907.1	6857.69	6,990	6.49	15.0	0.26
803	7/9/2012 1121	63.88	6922.6	6858.72	6,320	6.40	15.7	0.33
808	7/9/2012 1158	51.25	6910.7	6859.45	6,610	6.46	14.6	0.49
GW-1	7/9/2012 1504	63.09	6916.5	6853.41	6,250	6.59	15.2	0.25
GW-2	7/9/2012 1405	57.45	6912.9	6855.45	7,950	6.33	15.1	0.83
GW-3	7/10/2012 1400	54.50	6910.0	6855.50	4,660	6.96	18.0	6.60
EPA-23	7/9/2012 1036	56.95	6926.5	6869.55	4,350	6.54	15.5	35.8
EPA-25	7/10/2012 1557	55.10	6903.4	6848.30	4,280	6.73	16.0	2.23
EPA-28	7/10/2012 1040	64.30	6917.9	6853.60	4,700	6.71	15.7	0.28
EPA-28 DUP *(QA/QC)	7/10/2012 1119	64.70	6917.9	6853.20	4,640	6.73	15.4	0.26
SBL -1	7/10/2012 0955	50.82	6896.3	6845.48	6,900	6.41	15.7	2.48
805	7/18/2012 1240	55.70	6915.6	6859.90				
807	7/18/2012 1233	59.95	6923.4	6863.45				

COMMENTS: Turbidity measurements are taken this quarter.

GROUND WATER FIELD MONITORING
WATER ELEVATIONS, PH, CONDUCTIVITY, TURBIDITY AND TEMPERATURE
October_____MONTH_ Fourth____QUARTER, 2012

SOUTHWEST ALLUVIUM

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)	TURB (NTU)
509-D	10/8/2012 1000	80.45	6949.5	6869.05	6,160	6.46	14.5	2.15
624	10/9/2012 0942	52.30	6898.7	6846.40	4,860	6.70	14.2	0.18
627	10/9/2012 1744	59.70	6892 4	6832.70	4,440	7.03	13.9	0.35
632	10/8/2012 1610	46.30	6903.6	6857.30	6,520	6.51	16.1	1.45
801	10/8/2012 1333	53.50	6904.3	6850.80	5,910	6.57	15.6	1.97
802	10/8/2012 1251	49.70	6907.1	6857.40	6,400	6.55	16.3	0.55
803	10/8/2012 1127	64.05	6922.6	6858.55	5,960	6.53	15.4	2.71
808	10/8/2012 1206	51.40	6910.7	6859.30	6,320	6.50	15.7	3.60
GW-1	10/8/2012 1515	63.30	6916.5	6853.20	6,250	6.61	15.1	0.46
GW-2	10/8/2012 1421	57 60	6912.9	6855.30	7,550	6.39	15.7	0.76
GW-3	10/9/2012 1457	54.75	6910.0	6855.25	5,050	6.58	17.5	5.60
EPA-23	10/8/2012 1043	57.15	6926.5	6869.35	4,210	6.68	15.0	31.8
EPA-25	10/9/2012 1648	55.20	6903.4	6848.20	4,150	6.86	15.0	1.99
EPA-28	10/9/2012 1112	64.50	6917.9	6853.40	4,330	6.79	15.5	0.42
EPA-28 DUP *(QA/QC)	10/9/2012 1152	64.95	6917.9	6852.95	4,540	6.80	14.8	0.64
SBL -1	10/9/2012 1025	50.70	6896.3	6845.60	6,940	6.72	14.6	1.86
805	10/18/2012 1105	55.90	6915.6	6859.70				
807	10/18/2012 1118	60.10	6923.4	6863.30				

COMMENTS: Turbidity measurements are taken this fourth quarter for all samples

GROUND WATER FIELD MONITORING
WATER ELEVATIONS, PH, CONDUCTIVITY, AND TEMPERATURE
July_____MONTH_Third_____QUARTER, 2012___

ZONE 1

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)	TURB. (NTU)
	7/11/2012							
515-A	1000	105.00	7008.8	6903.80	8,750	5.97	15.5	24.6
	7/11/2012							
604	1043	104.10	7006.0	6901.90	5,980	5.24	15.7	0.58
	7/11/2012							
614	O901	104.65	7012.0	6907.35	7,710	6.42	16.0	8.96
	7/17/2012							
TWQ-142	1205	201.50	6983.4	6781.90	1,795	7.83	17.0	1.99
	7/16/2012							
EPA-2	1245	173.80	7019.5	6845.70	2,880	6.68	14.9	22.7
EPA-2 DUP.	7/16/2012							
*(QA/QC)	1315	174.60	7019.5	6844.90	3,030	6.73	14.5	26.9
	7/16/2012							
EPA-4	1012	207.35	7069.8	6862.45	3,570	6.55	17.7	7.82
	7/16/2012							
EPA-5	1107	125.80	7011.5	6885.70	3,990	5.96	16.1	0.24
	7/16/2012							
EPA-7	1150	115.50	7011.7	6896.20	6,880	5.99	15.7	0.37
Rinsate	7/11/2012							
*(QA/QC)	1123				45	7.53	25.8	0.26
Field Blank	7/11/2012							
(QA/QC)	1200				45	7.89	23.5	0.27
	7/18/2012							
TWQ-143	1455	208.00	6989.6	6781.60				
	7/16/2012							
EPA-8	1052	216.00	7076.4	6860.40				
	7/18/2012							
505-A	1517	120.20	6963.1	6842.90				
	7/18/2012							
502-A	1317	195.75	7025.3	6829.55				
	7/18/2012							
501-A	1350	212.20	7048.0	6835.80				
	7/18/2012							
504-A	1414	201.20	7001.4	6800.20				
	7/18/2012							
412	1445	185.55	6979.4	6793.85				

COMMENTS: _____

GROUND WATER FIELD MONITORING
WATER ELEVATIONS, PH, CONDUCTIVITY, TURBIDITY AND TEMPERATURE
October_____MONTH Fourth_____QUARTER, 2012___

ZONE 1

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)	TURB (NTU)
515-A	10/10/2012 0941	105.15	7008.8	6903.65	8,680	6.04	14.3	2.04
604	10/10/2012 1030	104.05	7006.0	6901.95	5,670	5.31	14.3	0.27
614	10/10/2012 0830	104.55	7012.0	6907.45	7,550	6.52	13.7	2.16
TWQ-142	10/16/2012 1211	201.40	6983.4	6782.00	1,798	8.07	15.3	1.11
EPA-2	10/15/2012 1127	173.90	7019.5	6845.60	2,710	6.93	14.5	21.3
EPA-2 DUP *(QA/QC)	10/15/2012 1205	174.68	7019.5	6844.82	2,560	6.93	15.0	32.0
EPA-4	10/15/2012 0853	207.51	7069.8	6862.29	4,080	6.85	13.5	9.40
EPA-5	10/15/2012 0954	125.95	7011.5	6885.55	3,850	6.11	15.2	0.35
EPA-7	10/15/2012 1037	115.60	7011.7	6896.10	6,710	6.11	15.3	0.58
Rinsate *(QA/QC)	10/10/2012 1111				3	6.52	16.4	0.68
Field Blank (QA/QC)	10/10/2012 1205				3	7.92	17.9	0.15
	10/19/2012							
TWQ-143	10/15/2012 1250	208.10	6989.6	6781.50				
EPA-8	10/18/2012 0942	215.50	7076.4	6860.90				
505-A	10/18/2012 1224	120.30	6963.1	6842.80				
502-A	10/18/2012 1240	195.95	7025.3	6829.35				
501-A	10/18/2012 1310	212.40	7048.0	6835.60				
504-A	10/19/2012 1341	201.15	7001.4	6800.25				
412	1205	185.30	6979.4	6794.10				

COMMENTS: _____

GROUND WATER FIELD MONITORING
WATER ELEVATIONS, PH, CONDUCTIVITY, AND TEMPERATURE
July _____MONTH Third _____QUARTER, 2012___

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)	TURB. (NTU)
504-B	*No Sample see below 7/16/2012		7001.8					
517	1348 7/10/2012	104.00	6971.29	6867.29	4,800	3.50	16.5	0.89
EPA-14	1254 7/17/2012	122.05	6963.88	6841.83	5,090	4.21	17.8	234
420	1025 7/17/2012	152.35	6982.6	6830.25	3,240	6.53	16.5	35.3
711	O831 7/17/2012	182.60	7042.75	6860.15	4,170	4.72	14.5	4.32
711 DUP. (QA/QC)	O906 7/10/2012	183.70	7042.75	6859.05	4,170	4.83	14.4	5.82
613	1208 7/16/2012	79.50	6961.3	6881.80	9,010	2.87	16.1	7.12
708	1433 7/17/2012	155.10	7011.73	6856.63	4,960	3.56	15.9	2.86
Rinsate (QA/QC)	1651 7/17/2012				46	8.24	29.8	0.31
Field Blank (QA/QC)	1700 7/17/2012				51	7.64	26.8	0.41
NBL-1	1341 7/16/2012	188.24	6991.96	6803.72	5,130	3.04	17.0	595
EPA-9	1057 7/16/2012	170.47	7076.6	6906.13				
EPA-13	1521 7/18/2012	167.75	7031.66	6863.91	5,670	5.86	16.4	11.8
702	1254 7/18/2012	82.75	6974.2	6891.45				
710	1339 7/18/2012	164.00	7016.36	6852.36				
712	1401 7/18/2012	176.95	7022.16	6845.21				
713	1407 7/18/2012	167.55	7024.19	6856.64				
714	1306 7/18/2012	103.40	6962.54	6859.14				
701	1300 7/18/2012	84.70	6961.3	6876.60				
706	1310 7/18/2012	114.75	6972.12	6857.37				
707	1335 7/17/2012	159.50	7005.2	6845.70				
717	1110 7/17/2012	131.70	6972.07	6840.37	5,120	4.11	15.4	1.23
719	O945 7/18/2012	169.30	7001.48	6832.18	4,930	5.59	15.7	39.6
402	1432 7/18/2012	128.55	6968.20	6839.65				
446	1425 7/18/2012	162.50	6998.30	6835.80				
424	1440	137.15	6972.62	6835.47				

COMMENTS: No Sample was collected due to the very low water volume in well 504-B

GROUND WATER FIELD MONITORING
WATER ELEVATIONS, PH, CONDUCTIVITY, TURBIDITY AND TEMPERATURE
October _____MONTH Fourth _____QUARTER, 2012___

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)	TURB (NTU)
504-B	*No Sample see below		7001.8					
	10/15/2012							
517	1236	104.15	6971.29	6867.14	4,770	3.56	16.6	0.65
	10/9/2012							
EPA-14	1340	122.35	6963.88	6841.53	4,750	4.29	16.9	2.64
	10/16/2012							
420	0930	152.60	6982.6	6830.00	3,230	6.72	14.9	37.3
	10/15/2012							
711	1516	182.55	7042.75	6860.20	4,160	5.07	16.2	34.1
	10/9/2012							
613	1255	79.55	6961.3	6881.75	8,510	2.88	15.5	101
	10/15/2012							
708	1324	155.30	7011.73	6856.43	5,010	3.54	15.8	9.30
"Rinsate"	10/17/2012							
(QA/QC)	1157				0	7.94	19.6	0.39
Field Blank	10/17/2012							
(QA/QC)	1200				3	6.60	15.1	0.17
	10/16/2012							
NBL-1	1258	188.80	6991.96	6803.16	5,110	2.73	17.4	17.4
	10/15/2012							
EPA-9	0944	169.97	7076.6	6906.63				
	10/15/2012							
EPA-13	1431	167.80	7031.66	6863.86	5,700	6.05	16.3	6.30
	10/18/2012							
702	1157	82.90	6974.2	6891.30				
	10/18/2012							
710	1302	164.30	7016.36	6852.06				
	10/18/2012							
712	1325	177.00	7022.16	6845.16				
	10/18/2012							
713	1330	167.60	7024.19	6856.59				
	10/18/2012							
714	1230	103.55	6962.54	6858.99				
	10/18/2012							
701	1216	84.75	6961.3	6876.55				
	10/18/2012							
706	1234	114.90	6972.12	6857.22				
	10/18/2012							
707	1253	159.89	7005.2	6845.31				
	10/16/2012							
717	1030	131.83	6972.07	6840.24	5,180	4.22	14.7	1.34
717 DUP.	10/16/2012							
(QA/QC)	1058	132.00	7042.75	6910.75	5,090	4.21	15.4	0.66
	10/16/2012							
719	0845	169.30	7001.48	6832.18	4,800	5.76	14.2	28.9
	10/19/2012							
402	1130	129.00	6968.20	6839.20				
	10/18/2012							
446	1350	162.00	6998.30	6836.30				
	12/3/2012							
424**	1030	137.22	6972.62	6835.40				

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

**Well 424 was first reported dry on 10/19/12 but WL measurement retaken on 12/3/12 = 137.22'.

GROUND WATER FIELD MONITORING
WATER ELEVATIONS, PH, CONDUCTIVITY, AND TEMPERATURE
__JULY_____MONTH THIRD_____QUARTER, 2012___
SUPPLEMENTAL

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)	TURB. (NTU)
PB-2	7/17/2012 1337	184.80	6989.70	6804.90	4,610	5.85	22.4	5.79
PB-3	7/17/2012 1432	185.80	6990.23	6804.43	3,500	6.41	16.8	18.0
NBL-2	7/17/2012 1147	162.75	6975.61	6812.86	3,480	6.54	14.5	0.27
RW-A	7/17/2012 1350	172.20	6983.23	6811.03	3,950	6.36	15.9	8.16
RW-11			6983.73					
PB-4	7/17/2012 1447	185.55	6990.18	6804.63	5,630	2.68	17.2	3.24
MW-6	7/17/2012 1510	192.15	6990.94	6798.79	3,670	6.81	18.4	15.2
MW-7	7/17/2012 1618	189.10	6988.82	6799.72	3,420	6.41	17.8	31.2
MW-2			6996.94					
MW-3			6986.38					
NW-1	7/17/2012 1236	197.00	6997.15	6800.15	4,100	6.61	19.3	0.88
MW-5			6990.51					
703			6978.92					
709			7003.54					
715			6963.92					
716			6964.94					
718			6995.06					
720			7001.78					
RW-16			6979.73					
RW-17			7012.78					
NW-2	7/17/2012 1256	191.94	6989.76	6797.82	3,690	6.50	14.8	197
NW-3	7/17/2012 1325	182.60	6985.57	6802.97	3,660	6.66	13.7	320
NW-4	7/17/2012 1247	191.95	6990.13	6798.18	4,340	6.03	19.4	1.53
NW-5	7/17/2012 1313	182.45	6985.85	6803.40	3,740	6.91	13.8	26.2
Z3M-1			6996.30					
Z3M-2			7009.30					

COMMENTS:

GROUND WATER FIELD MONITORING
WATER ELEVATIONS, PH, CONDUCTIVITY,TURBIDITY AND TEMPERATURE
__October_____MONTH Fourth_____QUARTER, 2012___
SUPPLEMENTAL

ZONE - 3 and Zone 1

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)	TURB (NTU)
PB-2	10/16/2012 1425	184.75	6989.70	6804.95	4,500	5.90	13.7	11.7
PB-3	10/16/2012 1401	186.28	6990.23	6803.95	3,630	6.38	17.3	46.0
NBL-2	10/16/2012 1132	163.15	6975.61	6812.46	3,230	6.75	15.4	1.20
RW-A	10/16/2012 1445	172.60	6983.23	6810.63	3,930	6.46	15.0	12.2
RW-11	10/16/2012 1500	166.20	6983.73	6817.53	4,040	6.25	14.2	17.9
PB-4	10/16/2012 1450	185.83	6990.18	6804.35	6,080	2.55	18.1	150
MW-6	10/17/2012 0930	193.45	6990.94	6797.49	3,810	6.88	15.3	0.39
MW-7	10/16/2012 1540	189.70	6988.82	6799.12	3,650	6.61	12.9	44.2
MW-2	10/18/2012 1405	160.15	6996.94	6836.79				
MW-3	10/19/2012 1155	168.40	6986.38	6817.98				
NW-1	10/16/2012 1315	198.00	6997.15	6799.15	3,890	7.07	15.8	9.57
MW-5	WATER WELL IS DRY		6990.51					
703	10/18/2012 1200	90.57	6978.92	6888.35				
709	10/18/2012 1300	159.20	7003.54	6844.34				
715	10/18/2012 1420	115.60	6963.92	6848.32				
716	10/18/2012 1415	124.00	6964.94	6840.94				
718	10/18/2012 1355	161.55	6995.06	6833.51				
720	WATER WELL IS DRY		7001.78					
RW-16	10/18/2012 1410	152.80	6979.73	6826.93				
RW-17	10/18/2012 1400	175.75	7012.78	6837.03				
NW-2	10/16/2012 1340	192.20	6989.76	6797.56	3,690	6.35	14.6	299
NW-3	10/16/2012 1405	183.00	6985.57	6802.57	3,610	6.78	12.8	16.1
NW-4	10/16/2012 1330	195.25	6990.13	6794.88	4,230	6.20	16.5	1.49
NW-5	10/16/2012 1355	182.95	6985.85	6802.90	3,810	7.02	13.0	10.1
Z3M-1	10/18/2012 1144	68.45	6996.30	6927.85				
Z3M-2	10/18/2012 1152	77.80	7009.30	6931.50				
*617	10/10/2012 0917	120.44	6999.27	6878.83	11,100	6.82	18.7	13.0
617 Rinsate (QA/QC)	10/16/2012				39	7.83	18.3	3.16
*619	10/16/2012 1000	136.33	7012.99	6876.66	5,400	6.86	20.7	22.4
619 Filtered	10/16/2012 1044				5,420	6.94	21.6	0.21
619 Rinsate (QA/QC)	1208				27	6.43	21.6	1.85

COMMENTS *Well 617 and 619 are in Zone 1

Well RW-13, RW-15 and MW-4 are dry

QUARTERLY SAMPLING

SEMI-ANNUAL GROUND WATER MONITORING REPORT

JULY TO DECEMBER OF 2012

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: C12070454-001
Client Sample ID: 509-D

Report Date: 08/30/12
Collection Date: 07/09/12 09:52
DateReceived: 07/13/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	2530	mg/L		5		A2320 B	07/16/12 17:50 / jba
Calcium	933	mg/L		1		E200.7	08/06/12 14:29 / sf
Chloride	214	mg/L	DH	4		E300.0	08/17/12 16:45 / wc
Magnesium	432	mg/L		1		E200.7	08/06/12 14:29 / sf
Nitrogen, Ammonia as N	1.21	mg/L		0.05		A4500-NH3 G	07/17/12 13:16 / lr
Nitrogen, Nitrate+Nitrite as N	8.3	mg/L	D	0.2		E353.2	07/20/12 16:47 / lr
Potassium	14	mg/L		1		E200.7	08/06/12 14:29 / sf
Sodium	432	mg/L	D	2		E200.7	08/06/12 14:29 / sf
Sulfate	2260	mg/L	DH	20		E300.0	08/17/12 16:45 / wc
- H-Original analysis was done within hold time. Data is from recheck analysis.							
PHYSICAL PROPERTIES							
pH	6.58	s.u.	H	0.01		A4500-H B	07/16/12 12:06 / ab
Solids, Total Dissolved TDS @ 180 C	5470	mg/L	H	10		A2540 C	07/16/12 12:14 / ab
- The sample was received past the EPA-recommended holding time for TDS analysis.							
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	07/27/12 01:37 / cp
Beryllium	ND	mg/L		0.001		E200.8	08/03/12 23:03 / cp
Cadmium	ND	mg/L		0.005		E200.8	07/27/12 01:37 / cp
Cobalt	ND	mg/L		0.01		E200.8	07/27/12 01:37 / cp
Lead	ND	mg/L		0.001		E200.8	07/27/12 01:37 / cp
Manganese	3.25	mg/L		0.01		E200.8	07/27/12 01:37 / cp
Molybdenum	ND	mg/L		0.1		E200.8	07/27/12 01:37 / cp
Nickel	ND	mg/L		0.05		E200.8	07/27/12 01:37 / cp
Uranium	0.276	mg/L		0.0003		E200.8	07/27/12 01:37 / cp
Vanadium	ND	mg/L		0.1		E200.8	07/27/12 01:37 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	08/02/12 14:59 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	07/26/12 14:49 / rdw
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.5	pCi/L				E900.1	08/09/12 00:07 / lbb
Gross Alpha minus Rn & U Precision (±)	0.3	pCi/L				E900.1	08/09/12 00:07 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	08/09/12 00:07 / lbb
Lead 210	0.4	pCi/L	U			E909.0	07/30/12 10:46 / eli-cs
Lead 210 precision (±)	0.9	pCi/L				E909.0	07/30/12 10:46 / eli-cs
Lead 210 MDC	1.5	pCi/L				E909.0	07/30/12 10:46 / eli-cs
Radium 226	0.44	pCi/L				E903.0	07/31/12 00:30 / trs
Radium 226 precision (±)	0.13	pCi/L				E903.0	07/31/12 00:30 / trs
Radium 226 MDC	0.11	pCi/L				E903.0	07/31/12 00:30 / trs
Radium 228	0.54	pCi/L	U			RA-05	07/25/12 17:52 / gb
Radium 228 precision (±)	0.56	pCi/L				RA-05	07/25/12 17:52 / gb
Radium 228 MDC	0.90	pCi/L				RA-05	07/25/12 17:52 / 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: C12070454-001
Client Sample ID: 509-D

Report Date: 08/30/12
Collection Date: 07/09/12 09:52
DateReceived: 07/13/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.06	pCi/L	U			E908.0	08/01/12 08:45 / dmf
Thorium 230 precision (±)	0.09	pCi/L				E908.0	08/01/12 08:45 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	08/01/12 08:45 / dmf
DATA QUALITY							
A/C Balance (± 5)	3.14	%				A1030 E	08/20/12 12:17 / kbh
Anions	95.2	meq/L				A1030 E	08/20/12 12:17 / kbh
Cations	101	meq/L				A1030 E	08/20/12 12:17 / kbh
Solids, Total Dissolved Calculated	5600	mg/L				A1030 E	08/20/12 12:17 / kbh
TDS Balance (0.80 - 1.20)	0.980					A1030 E	08/20/12 12:17 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	07/16/12 14:49 / jlr
Bromoform	ND	ug/L		0.50		E624	07/16/12 14:49 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	07/16/12 14:49 / jlr
Chloroform	ND	ug/L		0.50		E624	07/16/12 14:49 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	07/16/12 14:49 / jlr
Surr: 1,2-Dichlorobenzene-d4	88.0	%REC		80-120		E624	07/16/12 14:49 / jlr
Surr: Dibromofluoromethane	109	%REC		80-120		E624	07/16/12 14:49 / jlr
Surr: p-Bromofluorobenzene	175	%REC	S	80-120		E624	07/16/12 14:49 / jlr
Surr: Toluene-d8	104	%REC		80-120		E624	07/16/12 14:49 / 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
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: C12100557-001
Client Sample ID: 509-D

Report Date: 11/20/12
Collection Date: 10/08/12 10:00
DateReceived: 10/12/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	2580	mg/L		5		A2320 B	10/12/12 19:57 / jba
Calcium	856	mg/L		1		E200.7	10/29/12 14:23 / sf
Chloride	364	mg/L	D	4		E300.0	10/29/12 21:38 / wc
Magnesium	407	mg/L		1		E200.7	10/29/12 14:23 / sf
Nitrogen, Ammonia as N	1.53	mg/L		0.05		A4500-NH3 G	10/16/12 11:03 / ljl
Nitrogen, Nitrate+Nitrite as N	7.6	mg/L	D	0.5		E353.2	10/15/12 11:17 / lr
Potassium	13	mg/L		1		E200.7	10/29/12 14:23 / sf
Sodium	403	mg/L		1		E200.7	10/29/12 14:23 / sf
Sulfate	1830	mg/L	D	20		E300.0	10/29/12 21:38 / wc
PHYSICAL PROPERTIES							
pH	6.55	s.u.	H	0.01		A4500-H B	10/12/12 16:13 / ab
Solids, Total Dissolved TDS @ 180 C	5420	mg/L		10		A2540 C	10/12/12 16:09 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	10/23/12 20:49 / cp
Beryllium	ND	mg/L		0.001		E200.8	10/23/12 20:49 / cp
Cadmium	ND	mg/L		0.005		E200.8	10/23/12 20:49 / cp
Cobalt	0.01	mg/L		0.01		E200.8	10/23/12 20:49 / cp
Lead	ND	mg/L		0.001		E200.8	10/23/12 20:49 / cp
Manganese	3.83	mg/L		0.01		E200.8	10/23/12 20:49 / cp
Molybdenum	ND	mg/L		0.1		E200.8	10/23/12 20:49 / cp
Nickel	ND	mg/L		0.05		E200.8	10/23/12 20:49 / cp
Uranium	0.283	mg/L		0.0003		E200.8	10/23/12 20:49 / cp
Vanadium	ND	mg/L		0.1		E200.8	10/23/12 20:49 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	10/29/12 16:21 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	10/23/12 12:28 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.5	pCi/L				E900.1	10/17/12 23:57 / lbb
Gross Alpha minus Rn & U Precision (±)	0.4	pCi/L				E900.1	10/17/12 23:57 / lbb
Gross Alpha minus Rn & U MDC	0.5	pCi/L				E900.1	10/17/12 23:57 / lbb
Lead 210	0.7	pCi/L	U			E909.0	11/16/12 11:36 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	11/16/12 11:36 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	11/16/12 11:36 / eli-cs
Radium 226	0.30	pCi/L				E903.0	10/24/12 11:10 / trs
Radium 226 precision (±)	0.13	pCi/L				E903.0	10/24/12 11:10 / trs
Radium 226 MDC	0.15	pCi/L				E903.0	10/24/12 11:10 / trs
Radium 228	1.9	pCi/L				RA-05	10/19/12 20:18 / gb
Radium 228 precision (±)	0.87	pCi/L				RA-05	10/19/12 20:18 / gb
Radium 228 MDC	1.3	pCi/L				RA-05	10/19/12 20:18 / 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: C12100557-001
Client Sample ID: 509-D

Report Date: 11/20/12
Collection Date: 10/08/12 10:00
DateReceived: 10/12/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.02	pCi/L	U			E908.0	10/23/12 08:55 / dmf
Thorium 230 precision (±)	0.1	pCi/L				E908.0	10/23/12 08:55 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	10/23/12 08:55 / dmf
DATA QUALITY							
A/C Balance (± 5)	1.52	%				A1030 E	11/05/12 07:31 / kbh
Anions	91.4	meq/L				A1030 E	11/05/12 07:31 / kbh
Cations	94.2	meq/L				A1030 E	11/05/12 07:31 / kbh
Solids, Total Dissolved Calculated	5200	mg/L				A1030 E	11/05/12 07:31 / kbh
TDS Balance (0.80 - 1.20)	1.04					A1030 E	11/05/12 07:31 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	10/12/12 20:19 / jlr
Bromoform	ND	ug/L		0.50		E624	10/12/12 20:19 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	10/12/12 20:19 / jlr
Chloroform	ND	ug/L		0.50		E624	10/12/12 20:19 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	10/12/12 20:19 / jlr
Surr: 1,2-Dichlorobenzene-d4	104	%REC		80-120		E624	10/12/12 20:19 / jlr
Surr: Dibromofluoromethane	101	%REC		80-120		E624	10/12/12 20:19 / jlr
Surr: p-Bromofluorobenzene	108	%REC		80-120		E624	10/12/12 20:19 / jlr
Surr: Toluene-d8	105	%REC		80-120		E624	10/12/12 20:19 / 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.
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:		10/8/2012	7/9/2012	4/2/2012	1/2/2012
Receive Date:		10/12/2012	7/13/2012	4/6/2012	1/6/2012
Report Date:		11/20/2012	8/30/2012	5/25/2012	3/2/2012
Analyte	RUnits	C12100557:001	C12070454:001	C12040276:001	C12010151:001
Bicarbonate as HCO3	mg/L	2580	2530	2490	2360
Calcium	mg/L	856	933	933	916
Chloride	mg/L	364	214	346	356
Magnesium	mg/L	407	432	389	395
Nitrogen, Ammonia as N	mg/L	1.53	1.21	1.1	0.99
Nitrogen, Nitrate+Nitrite as N	mg/L	7.6	8.3	8.8	8.9
Potassium	mg/L	13	14	14	13
Sodium	mg/L	403	432	399	402
Sulfate	mg/L	1830	2260	1870	1840
pH	s.u.	6.55	6.58	6.53	6.81
Solids, Total Dissolved TDS @ 180 C	mg/L	5420	5470	5510	5370
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(0.01)	ND(0.01)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	0.01	ND(0.01)	ND(0.01)	ND(0.01)
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.05)	ND(0.05)
Manganese	mg/L	3.83	3.25	3.92	4.02
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	0.283	0.276	0.268	0.268
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(0.01)	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	0.3	0.8
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.4	0.3	0.3	0.3
Gross Alpha minus Rn & U MDC	pCi/L	0.5	0.3	0.4	0.4
Lead 210	pCi/L	0.7	0.4	0.2	-0.3
Lead 210 precision (±)	pCi/L	0.6	0.9	0.7	0.6
Lead 210 MDC	pCi/L	1.0	1.5	1.2	1.1
Radium 226	pCi/L	0.30	0.44	0.37	0.77
Radium 226 precision (±)	pCi/L	0.13	0.13	0.14	0.24
Radium 226 MDC	pCi/L	0.15	0.11	0.14	0.20
Radium 228	pCi/L	1.9	0.54	0.55	1.0
Radium 228 precision (±)	pCi/L	0.87	0.56	0.53	0.98
Radium 228 MDC	pCi/L	1.3	0.90	0.84	1.6
Thorium 230	pCi/L	0.02	0.06	-0.05	0.04
Thorium 230 precision (±)	pCi/L	0.1	0.09	0.08	0.07
Thorium 230 MDC	pCi/L	0.2	0.2	0.2	0.2
A/C Balance (± 5)	%	1.52	3.14	3.33	4.66
Anions	meq/L	91.4	95.2	90.1	87.5
Cations	meq/L	94.2	101	96.3	96.1
Solids, Total Dissolved Calculated	mg/L	5200	5600	5240	5130
TDS Balance (0.80 - 1.20)		1.04	0.980	1.05	1.05
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: C12070454-010
Client Sample ID: 624

Report Date: 08/30/12
Collection Date: 07/10/12 09:12
DateReceived: 07/13/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	1500	mg/L		5		A2320 B	07/13/12 21:22 / jba
Calcium	671	mg/L		1		E200.7	07/17/12 15:21 / sf
Chloride	198	mg/L	D	4		E300.0	07/17/12 04:41 / wc
Magnesium	419	mg/L		1		E200.7	07/17/12 15:21 / sf
Nitrogen, Ammonia as N	0.14	mg/L		0.05		A4500-NH3 G	07/17/12 13:48 / lr
Nitrogen, Nitrate+Nitrite as N	78	mg/L	D	5		E353.2	07/16/12 13:02 / lr
Potassium	5	mg/L		1		E200.7	07/17/12 15:21 / sf
Sodium	261	mg/L		1		E200.7	07/17/12 15:21 / sf
Sulfate	2120	mg/L	D	20		E300.0	07/17/12 04:41 / wc
PHYSICAL PROPERTIES							
pH	6.72	s.u.	H	0.01		A4500-H B	07/16/12 09:55 / ab
Solids, Total Dissolved TDS @ 180 C	5250	mg/L		10		A2540 C	07/16/12 12:04 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	07/27/12 02:51 / cp
Beryllium	ND	mg/L		0.001		E200.8	08/04/12 00:15 / cp
Cadmium	ND	mg/L		0.005		E200.8	07/27/12 02:51 / cp
Cobalt	ND	mg/L		0.01		E200.8	07/27/12 02:51 / cp
Lead	ND	mg/L		0.001		E200.8	07/27/12 02:51 / cp
Manganese	0.23	mg/L		0.01		E200.8	07/27/12 02:51 / cp
Molybdenum	ND	mg/L		0.1		E200.8	07/27/12 02:51 / cp
Nickel	ND	mg/L		0.05		E200.8	07/27/12 02:51 / cp
Uranium	0.0319	mg/L		0.0003		E200.8	07/27/12 02:51 / cp
Vanadium	ND	mg/L		0.1		E200.8	07/27/12 02:51 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	08/01/12 16:50 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	07/26/12 16:17 / rdw
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.2	pCi/L	U			E900.1	08/09/12 22:40 / lbb
Gross Alpha minus Rn & U Precision (±)	0.2	pCi/L				E900.1	08/09/12 22:40 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	08/09/12 22:40 / lbb
Lead 210	0.04	pCi/L	U			E909.0	07/30/12 17:54 / eli-cs
Lead 210 precision (±)	0.9	pCi/L				E909.0	07/30/12 17:54 / eli-cs
Lead 210 MDC	1.4	pCi/L				E909.0	07/30/12 17:54 / eli-cs
Radium 226	0.42	pCi/L				E903.0	07/31/12 02:12 / trs
Radium 226 precision (±)	0.13	pCi/L				E903.0	07/31/12 02:12 / trs
Radium 226 MDC	0.10	pCi/L				E903.0	07/31/12 02:12 / trs
Radium 228	-0.4	pCi/L	U			RA-05	07/25/12 19:27 / gb
Radium 228 precision (±)	0.61	pCi/L				RA-05	07/25/12 19:27 / gb
Radium 228 MDC	1.1	pCi/L				RA-05	07/25/12 19:27 / 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: C12070454-010
Client Sample ID: 624

Report Date: 08/30/12
Collection Date: 07/10/12 09:12
DateReceived: 07/13/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.2	pCi/L	U			E908.0	08/01/12 08:45 / dmf
Thorium 230 precision (±)	0.1	pCi/L				E908.0	08/01/12 08:45 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	08/01/12 08:45 / dmf
DATA QUALITY							
A/C Balance (± 5)	0.0472	%				A1030 E	07/23/12 07:17 / kbh
Anions	79.4	meq/L				A1030 E	07/23/12 07:17 / kbh
Cations	79.4	meq/L				A1030 E	07/23/12 07:17 / kbh
Solids, Total Dissolved Calculated	4800	mg/L				A1030 E	07/23/12 07:17 / kbh
TDS Balance (0.80 - 1.20)	1.11					A1030 E	07/23/12 07:17 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	07/17/12 00:09 / jlr
Bromoform	ND	ug/L		0.50		E624	07/17/12 00:09 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	07/17/12 00:09 / jlr
Chloroform	ND	ug/L		0.50		E624	07/17/12 00:09 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	07/17/12 00:09 / jlr
Surr: 1,2-Dichlorobenzene-d4	92.0	%REC		80-120		E624	07/17/12 00:09 / jlr
Surr: Dibromofluoromethane	123	%REC	S	80-120		E624	07/17/12 00:09 / jlr
Surr: p-Bromofluorobenzene	178	%REC	S	80-120		E624	07/17/12 00:09 / jlr
Surr: Toluene-d8	102	%REC		80-120		E624	07/17/12 00:09 / 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
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: C12100557-010
Client Sample ID: 624

Report Date: 11/20/12
Collection Date: 10/09/12 09:42
DateReceived: 10/12/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	1550	mg/L		5		A2320 B	10/12/12 22:03 / jba
Calcium	728	mg/L		1		E200.7	10/24/12 16:24 / sf
Chloride	212	mg/L	D	4		E300.0	10/15/12 18:35 / wc
Magnesium	418	mg/L		1		E200.7	10/24/12 16:24 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	10/16/12 14:31 / ab
Nitrogen, Nitrate+Nitrite as N	72	mg/L	D	10		E353.2	10/15/12 11:50 / lr
Potassium	6	mg/L		1		E200.7	10/24/12 16:24 / sf
Sodium	285	mg/L	D	2		E200.7	10/24/12 16:24 / sf
Sulfate	2180	mg/L	D	20		E300.0	10/15/12 18:35 / wc
PHYSICAL PROPERTIES							
pH	6.66	s.u.	H	0.01		A4500-H B	10/12/12 16:48 / ab
Solids, Total Dissolved TDS @ 180 C	5110	mg/L		10		A2540 C	10/12/12 16:13 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	10/23/12 21:43 / cp
Beryllium	ND	mg/L		0.001		E200.8	10/23/12 21:43 / cp
Cadmium	ND	mg/L		0.005		E200.8	10/23/12 21:43 / cp
Cobalt	ND	mg/L		0.01		E200.8	10/23/12 21:43 / cp
Lead	ND	mg/L		0.001		E200.8	10/23/12 21:43 / cp
Manganese	0.22	mg/L		0.01		E200.8	10/23/12 21:43 / cp
Molybdenum	ND	mg/L		0.1		E200.8	10/23/12 21:43 / cp
Nickel	ND	mg/L		0.05		E200.8	10/23/12 21:43 / cp
Uranium	0.0351	mg/L		0.0003		E200.8	10/23/12 21:43 / cp
Vanadium	ND	mg/L		0.1		E200.8	10/23/12 21:43 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	11/04/12 18:01 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	10/23/12 12:54 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.9	pCi/L				E900.1	10/18/12 02:12 / lbb
Gross Alpha minus Rn & U Precision (±)	0.4	pCi/L				E900.1	10/18/12 02:12 / lbb
Gross Alpha minus Rn & U MDC	0.5	pCi/L				E900.1	10/18/12 02:12 / lbb
Lead 210	0.7	pCi/L	U			E909.0	11/17/12 00:17 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	11/17/12 00:17 / eli-cs
Lead 210 MDC	1	pCi/L				E909.0	11/17/12 00:17 / eli-cs
Radium 226	0.24	pCi/L				E903.0	10/24/12 13:24 / trs
Radium 226 precision (±)	0.13	pCi/L				E903.0	10/24/12 13:24 / trs
Radium 226 MDC	0.15	pCi/L				E903.0	10/24/12 13:24 / trs
Radium 228	-0.3	pCi/L	U			RA-05	10/19/12 22:00 / gb
Radium 228 precision (±)	0.96	pCi/L				RA-05	10/19/12 22:00 / gb
Radium 228 MDC	1.6	pCi/L				RA-05	10/19/12 22:00 / 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: C12100557-010
Client Sample ID: 624

Report Date: 11/20/12
Collection Date: 10/09/12 09:42
DateReceived: 10/12/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.05	pCi/L	U			E908.0	10/23/12 08:55 / dmf
Thorium 230 precision (±)	0.07	pCi/L				E908.0	10/23/12 08:55 / dmf
Thorium 230 MDC	0.1	pCi/L				E908.0	10/23/12 08:55 / dmf
DATA QUALITY							
A/C Balance (± 5)	0.748	%				A1030 E	10/26/12 07:22 / kbh
Anions	82.0	meq/L				A1030 E	10/26/12 07:22 / kbh
Cations	83.3	meq/L				A1030 E	10/26/12 07:22 / kbh
Solids, Total Dissolved Calculated	5000	mg/L				A1030 E	10/26/12 07:22 / kbh
TDS Balance (0.80 - 1.20)	1.03					A1030 E	10/26/12 07:22 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	10/13/12 00:22 / jlr
Bromoform	ND	ug/L		0.50		E624	10/13/12 00:22 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	10/13/12 00:22 / jlr
Chloroform	ND	ug/L		0.50		E624	10/13/12 00:22 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	10/13/12 00:22 / jlr
Surr: 1,2-Dichlorobenzene-d4	103	%REC		80-120		E624	10/13/12 00:22 / jlr
Surr: Dibromofluoromethane	102	%REC		80-120		E624	10/13/12 00:22 / jlr
Surr: p-Bromofluorobenzene	109	%REC		80-120		E624	10/13/12 00:22 / jlr
Surr: Toluene-d8	104	%REC		80-120		E624	10/13/12 00:22 / 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.
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:		10/9/2012	7/~~9~~10/2012	4/3/2012	1/3/2012
Receive Date:		10/12/2012	7/13/2012	4/6/2012	1/6/2012
Report Date:		11/20/2012	8/30/2012	5/25/2012	3/2/2012
Analyte	RUnits	C12100557-010	C12070454-010	C12040276-010	C12010151-009
Bicarbonate as HCO3	mg/L	1550	1500	1510	1400
Calcium	mg/L	728	671	696	662
Chloride	mg/L	212	198	203	200
Magnesium	mg/L	418	419	400	400
Nitrogen, Ammonia as N	mg/L	ND(0.05)	0.14	ND(0.05)	ND(0.05)
Nitrogen, Nitrate+Nitrite as N	mg/L	72	78	76	75
Potassium	mg/L	6	5	6	7
Sodium	mg/L	285	261	267	269
Sulfate	mg/L	2180	2120	2170	2140
pH	s.u.	6.66	6.72	6.59	6.75
Solids, Total Dissolved TDS @ 180 C	mg/L	5110	5250	5110	5110
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(0.01)	ND(0.01)
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(0.05)	ND(0.05)
Manganese	mg/L	0.22	0.23	0.19	0.17
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	0.0351	0.0319	0.0355	0.0347
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(0.01)	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	0.9	0.2	0.003	0.5
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.4	0.2	0.2	0.3
Gross Alpha minus Rn & U MDC	pCi/L	0.5	0.3	0.4	0.4
Lead 210	pCi/L	0.7	0.04	-0.4	0.07
Lead 210 precision (±)	pCi/L	0.6	0.9	0.6	0.7
Lead 210 MDC	pCi/L	1	1.4	1	1.1
Radium 226	pCi/L	0.24	0.42	0.39	0.46
Radium 226 precision (±)	pCi/L	0.13	0.13	0.14	0.16
Radium 226 MDC	pCi/L	0.15	0.10	0.14	0.15
Radium 228	pCi/L	-0.3	-0.4	1.4	0.88
Radium 228 precision (±)	pCi/L	0.96	0.61	0.68	0.74
Radium 228 MDC	pCi/L	1.6	1.1	1.0	1.2
Thorium 230	pCi/L	0.05	0.2	0.01	0.01
Thorium 230 precision (±)	pCi/L	0.07	0.1	0.07	0.05
Thorium 230 MDC	pCi/L	0.1	0.2	0.2	0.1
A/C Balance (± 5)	%	0.748	0.0472	-0.683	-0.426
Anions	meq/L	82.0	79.4	80.5	78.4
Cations	meq/L	83.3	79.4	79.4	77.8
Solids, Total Dissolved Calculated	mg/L	5000	4800	4820	4710
TDS Balance (0.80 - 1.20)		1.03	1.11	1.06	1.08
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	2.47

****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: C12070454-016
Client Sample ID: 627

Report Date: 08/30/12
Collection Date: 07/10/12 16:51
DateReceived: 07/13/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	585	mg/L		5		A2320 B	07/13/12 22:14 / jba
Calcium	542	mg/L		1		E200.7	08/06/12 15:17 / sf
Chloride	37	mg/L	D	4		E300.0	07/17/12 07:00 / wc
Magnesium	242	mg/L		1		E200.7	08/06/12 15:17 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	07/20/12 12:04 / lr
Nitrogen, Nitrate+Nitrite as N	96	mg/L	D	5		E353.2	07/16/12 13:22 / lr
Potassium	6	mg/L		1		E200.7	08/06/12 15:17 / sf
Sodium	460	mg/L	D	2		E200.7	08/06/12 15:17 / sf
Sulfate	2270	mg/L	D	20		E300.0	07/17/12 07:00 / wc
PHYSICAL PROPERTIES							
pH	7.00	s.u.	H	0.01		A4500-H B	07/16/12 10:20 / ab
Solids, Total Dissolved TDS @ 180 C	4380	mg/L		10		A2540 C	07/16/12 12:05 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	07/27/12 03:23 / cp
Beryllium	ND	mg/L		0.001		E200.8	08/04/12 00:46 / cp
Cadmium	ND	mg/L		0.005		E200.8	07/27/12 03:23 / cp
Cobalt	ND	mg/L		0.01		E200.8	08/04/12 00:46 / cp
Lead	0.001	mg/L		0.001		E200.8	07/27/12 03:23 / cp
Manganese	0.07	mg/L		0.01		E200.8	07/27/12 03:23 / cp
Molybdenum	ND	mg/L		0.1		E200.8	07/27/12 03:23 / cp
Nickel	ND	mg/L		0.05		E200.8	07/27/12 03:23 / cp
Uranium	0.0183	mg/L		0.0003		E200.8	07/27/12 03:23 / cp
Vanadium	ND	mg/L		0.1		E200.8	07/27/12 03:23 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	08/01/12 18:09 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	07/26/12 16:36 / rdw
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.07	pCi/L	U			E900.1	08/09/12 22:40 / lbb
Gross Alpha minus Rn & U Precision (±)	0.2	pCi/L				E900.1	08/09/12 22:40 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	08/09/12 22:40 / lbb
Lead 210	1	pCi/L	U			E909.0	08/04/12 13:41 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	08/04/12 13:41 / eli-cs
Lead 210 MDC	1.2	pCi/L				E909.0	08/04/12 13:41 / eli-cs
Radium 226	0.17	pCi/L				E903.0	07/31/12 17:28 / trs
Radium 226 precision (±)	0.12	pCi/L				E903.0	07/31/12 17:28 / trs
Radium 226 MDC	0.17	pCi/L				E903.0	07/31/12 17:28 / trs
Radium 228	0.19	pCi/L	U			RA-05	07/26/12 18:55 / gb
Radium 228 precision (±)	0.52	pCi/L				RA-05	07/26/12 18:55 / gb
Radium 228 MDC	0.86	pCi/L				RA-05	07/26/12 18:55 / 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: C12070454-016
Client Sample ID: 627

Report Date: 08/30/12
Collection Date: 07/10/12 16:51
DateReceived: 07/13/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.02	pCi/L	U			E908.0	08/01/12 08:46 / dmf
Thorium 230 precision (±)	0.06	pCi/L				E908.0	08/01/12 08:46 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	08/01/12 08:46 / dmf
DATA QUALITY							
A/C Balance (± 5)	2.27	%				A1030 E	08/10/12 07:48 / kbh
Anions	64.1	meq/L				A1030 E	08/10/12 07:48 / kbh
Cations	67.1	meq/L				A1030 E	08/10/12 07:48 / kbh
Solids, Total Dissolved Calculated	4200	mg/L				A1030 E	08/10/12 07:48 / kbh
TDS Balance (0.80 - 1.20)	1.03					A1030 E	08/10/12 07:48 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	07/17/12 03:40 / jlr
Bromoform	ND	ug/L		0.50		E624	07/17/12 03:40 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	07/17/12 03:40 / jlr
Chloroform	ND	ug/L		0.50		E624	07/17/12 03:40 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	07/17/12 03:40 / jlr
Surr: 1,2-Dichlorobenzene-d4	92.0	%REC		80-120		E624	07/17/12 03:40 / jlr
Surr: Dibromofluoromethane	123	%REC	S	80-120		E624	07/17/12 03:40 / jlr
Surr: p-Bromofluorobenzene	181	%REC	S	80-120		E624	07/17/12 03:40 / jlr
Surr: Toluene-d8	108	%REC		80-120		E624	07/17/12 03:40 / 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
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: C12100557-016
Client Sample ID: 627

Report Date: 11/20/12
Collection Date: 10/09/12 17:44
DateReceived: 10/12/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	609	mg/L		5		A2320 B	10/12/12 23:17 / jba
Calcium	555	mg/L		1		E200.7	10/24/12 17:12 / sf
Chloride	39	mg/L	D	4		E300.0	10/15/12 21:09 / wc
Magnesium	231	mg/L		1		E200.7	10/24/12 17:12 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	10/16/12 11:51 / ljl
Nitrogen, Nitrate+Nitrite as N	89	mg/L	D	10		E353.2	10/15/12 12:17 / lr
Potassium	7	mg/L		1		E200.7	10/24/12 17:12 / sf
Sodium	443	mg/L	D	2		E200.7	10/24/12 17:12 / sf
Sulfate	2280	mg/L	D	20		E300.0	10/15/12 21:09 / wc
PHYSICAL PROPERTIES							
pH	6.97	s.u.	H	0.01		A4500-H B	10/12/12 17:05 / ab
Solids, Total Dissolved TDS @ 180 C	4510	mg/L		10		A2540 C	10/12/12 16:14 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	10/23/12 22:00 / cp
Beryllium	ND	mg/L		0.001		E200.8	10/23/12 22:00 / cp
Cadmium	ND	mg/L		0.005		E200.8	10/23/12 22:00 / cp
Cobalt	ND	mg/L		0.01		E200.8	10/23/12 22:00 / cp
Lead	ND	mg/L		0.001		E200.8	10/23/12 22:00 / cp
Manganese	0.03	mg/L		0.01		E200.8	10/23/12 22:00 / cp
Molybdenum	ND	mg/L		0.1		E200.8	10/23/12 22:00 / cp
Nickel	ND	mg/L		0.05		E200.8	10/23/12 22:00 / cp
Uranium	0.0199	mg/L		0.0003		E200.8	10/23/12 22:00 / cp
Vanadium	ND	mg/L		0.1		E200.8	10/23/12 22:00 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	11/04/12 19:15 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	10/23/12 13:09 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.3	pCi/L	U			E900.1	10/20/12 12:14 / lbb
Gross Alpha minus Rn & U Precision (±)	0.4	pCi/L				E900.1	10/20/12 12:14 / lbb
Gross Alpha minus Rn & U MDC	0.6	pCi/L				E900.1	10/20/12 12:14 / lbb
Lead 210	0.7	pCi/L	U			E909.0	11/17/12 05:09 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	11/17/12 05:09 / eli-cs
Lead 210 MDC	1.2	pCi/L				E909.0	11/17/12 05:09 / eli-cs
Radium 226	0.24	pCi/L				E903.0	10/24/12 13:24 / trs
Radium 226 precision (±)	0.13	pCi/L				E903.0	10/24/12 13:24 / trs
Radium 226 MDC	0.16	pCi/L				E903.0	10/24/12 13:24 / trs
Radium 228	0.23	pCi/L	U			RA-05	10/19/12 22:00 / gb
Radium 228 precision (±)	1.1	pCi/L				RA-05	10/19/12 22:00 / gb
Radium 228 MDC	1.8	pCi/L				RA-05	10/19/12 22:00 / 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: C12100557-016
Client Sample ID: 627

Report Date: 11/20/12
Collection Date: 10/09/12 17:44
DateReceived: 10/12/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.2	pCi/L				E908.0	10/23/12 13:13 / dmf
Thorium 230 precision (±)	0.1	pCi/L				E908.0	10/23/12 13:13 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	10/23/12 13:13 / dmf
DATA QUALITY							
A/C Balance (± 5)	0.971	%				A1030 E	10/26/12 07:23 / kbh
Anions	64.9	meq/L				A1030 E	10/26/12 07:23 / kbh
Cations	66.1	meq/L				A1030 E	10/26/12 07:23 / kbh
Solids, Total Dissolved Calculated	4300	mg/L				A1030 E	10/26/12 07:23 / kbh
TDS Balance (0.80 - 1.20)	1.06					A1030 E	10/26/12 07:23 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	10/13/12 03:51 / jlr
Bromoform	ND	ug/L		0.50		E624	10/13/12 03:51 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	10/13/12 03:51 / jlr
Chloroform	ND	ug/L		0.50		E624	10/13/12 03:51 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	10/13/12 03:51 / jlr
Surr: 1,2-Dichlorobenzene-d4	106	%REC		80-120		E624	10/13/12 03:51 / jlr
Surr: Dibromofluoromethane	104	%REC		80-120		E624	10/13/12 03:51 / jlr
Surr: p-Bromofluorobenzene	110	%REC		80-120		E624	10/13/12 03:51 / jlr
Surr: Toluene-d8	101	%REC		80-120		E624	10/13/12 03:51 / 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: Alluvium Monitor Wells					
Well ID:		627	627	627	627
Collection Date:		10/9/2012	7/9/2012 10 10	4/3/2012	1/3/2012
Receive Date:		10/12/2012	7/13/2012	4/6/2012	1/6/2012
Report Date:		11/20/2012	8/30/2012	5/25/2012	3/2/2012
Analyte	RUnits	C12100557-016	C12070454-016	C12040276-016	C12010151-016
Bicarbonate as HCO3	mg/L	609	585	589	552
Calcium	mg/L	555	542	556	552
Chloride	mg/L	39	37	38	38
Magnesium	mg/L	231	242	213	238
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	89	96	91	94
Potassium	mg/L	7	6	6	7
Sodium	mg/L	443	460	400	445
Sulfate	mg/L	2280	2270	2310	2300
pH	s.u.	6.97	7.00	6.91	7.07
Solids, Total Dissolved TDS @ 180 C	mg/L	4510	4380	4360	4250
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(0.01)	ND(0.01)
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)	0.001	ND(0.05)	ND(0.05)
Manganese	mg/L	0.03	0.07	0.02	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	0.0199	0.0183	0.0208	0.0192
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(0.01)	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	0.07	0.2	0.5
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.4	0.2	0.2	0.3
Gross Alpha minus Rn & U MDC	pCi/L	0.6	0.3	0.4	0.4
Lead 210	pCi/L	0.7	1	0.2	1.2
Lead 210 precision (±)	pCi/L	0.7	0.8	0.8	0.7
Lead 210 MDC	pCi/L	1.2	1.2	1.3	1.2
Radium 226	pCi/L	0.24	0.17	0.06	0.57
Radium 226 precision (±)	pCi/L	0.13	0.12	0.09	0.19
Radium 226 MDC	pCi/L	0.16	0.17	0.15	0.17
Radium 228	pCi/L	0.23	0.19	0.39	-0.1
Radium 228 precision (±)	pCi/L	1.1	0.52	0.65	0.96
Radium 228 MDC	pCi/L	1.8	0.86	1.1	1.6
Thorium 230	pCi/L	0.2	0.02	0.005	0.05
Thorium 230 precision (±)	pCi/L	0.1	0.06	0.06	0.07
Thorium 230 MDC	pCi/L	0.2	0.2	0.2	0.2
A/C Balance (± 5)	%	0.971	2.27	-1.81	1.46
Anions	meq/L	64.9	64.1	65.1	64.8
Cations	meq/L	66.1	67.1	62.8	66.7
Solids, Total Dissolved Calculated	mg/L	4300	4200	4220	4270
TDS Balance (0.80 - 1.20)		1.06	1.03	1.03	1.00
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: C12070454-009
Client Sample ID: 632

Report Date: 08/30/12
Collection Date: 07/09/12 15:51
DateReceived: 07/13/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	1840	mg/L		5		A2320 B	07/13/12 21:11 / jba
Calcium	603	mg/L		1		E200.7	08/06/12 15:09 / sf
Chloride	227	mg/L	D	10		E300.0	07/17/12 04:26 / wc
Magnesium	862	mg/L		1		E200.7	08/06/12 15:09 / sf
Nitrogen, Ammonia as N	0.52	mg/L		0.05		A4500-NH3 G	07/17/12 13:46 / lr
Nitrogen, Nitrate+Nitrite as N	72	mg/L	D	5		E353.2	07/16/12 12:55 / lr
Potassium	10	mg/L		1		E200.7	08/06/12 15:09 / sf
Sodium	420	mg/L	D	2		E200.7	08/06/12 15:09 / sf
Sulfate	3270	mg/L	D	40		E300.0	07/17/12 04:26 / wc
PHYSICAL PROPERTIES							
pH	6.61	s.u.	H	0.01		A4500-H B	07/16/12 09:52 / ab
Solids, Total Dissolved TDS @ 180 C	7280	mg/L		10		A2540 C	07/13/12 17:30 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	07/27/12 02:46 / cp
Beryllium	ND	mg/L		0.001		E200.8	08/04/12 00:10 / cp
Cadmium	ND	mg/L		0.005		E200.8	07/27/12 02:46 / cp
Cobalt	ND	mg/L		0.01		E200.8	07/27/12 02:46 / cp
Lead	ND	mg/L		0.001		E200.8	07/27/12 02:46 / cp
Manganese	2.58	mg/L		0.01		E200.8	07/27/12 02:46 / cp
Molybdenum	ND	mg/L		0.1		E200.8	07/27/12 02:46 / cp
Nickel	ND	mg/L		0.05		E200.8	07/27/12 02:46 / cp
Uranium	0.0731	mg/L		0.0003		E200.8	07/27/12 02:46 / cp
Vanadium	ND	mg/L		0.1		E200.8	07/27/12 02:46 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	08/02/12 15:22 / eli-h
Selenium-IV	0.001	mg/L		0.001		A3114 B	07/26/12 16:15 / rdw
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	1.1	pCi/L				E900.1	08/09/12 22:40 / lbb
Gross Alpha minus Rn & U Precision (±)	0.3	pCi/L				E900.1	08/09/12 22:40 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	08/09/12 22:40 / lbb
Lead 210	0.1	pCi/L	U			E909.0	07/30/12 17:07 / eli-cs
Lead 210 precision (±)	0.9	pCi/L				E909.0	07/30/12 17:07 / eli-cs
Lead 210 MDC	1.4	pCi/L				E909.0	07/30/12 17:07 / eli-cs
Radium 226	1.2	pCi/L				E903.0	07/31/12 02:12 / trs
Radium 226 precision (±)	0.20	pCi/L				E903.0	07/31/12 02:12 / trs
Radium 226 MDC	0.10	pCi/L				E903.0	07/31/12 02:12 / trs
Radium 228	1.0	pCi/L	U			RA-05	07/25/12 19:27 / gb
Radium 228 precision (±)	0.69	pCi/L				RA-05	07/25/12 19:27 / gb
Radium 228 MDC	1.1	pCi/L				RA-05	07/25/12 19:27 / 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: C12070454-009
Client Sample ID: 632

Report Date: 08/30/12
Collection Date: 07/09/12 15:51
DateReceived: 07/13/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.07	pCi/L	U			E908.0	08/01/12 08:45 / dmf
Thorium 230 precision (±)	0.1	pCi/L				E908.0	08/01/12 08:45 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	08/01/12 08:45 / dmf
DATA QUALITY							
A/C Balance (± 5)	4.43	%				A1030 E	08/10/12 07:48 / kbh
Anions	109	meq/L				A1030 E	08/10/12 07:48 / kbh
Cations	120	meq/L				A1030 E	08/10/12 07:48 / kbh
Solids, Total Dissolved Calculated	6600	mg/L				A1030 E	08/10/12 07:48 / kbh
TDS Balance (0.80 - 1.20)	1.10					A1030 E	08/10/12 07:48 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	07/16/12 23:34 / jlr
Bromoform	ND	ug/L		0.50		E624	07/16/12 23:34 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	07/16/12 23:34 / jlr
Chloroform	2.73	ug/L		0.50		E624	07/16/12 23:34 / jlr
Trihalomethanes, Total	2.73	ug/L		0.50		E624	07/16/12 23:34 / jlr
Surr: 1,2-Dichlorobenzene-d4	92.0	%REC		80-120		E624	07/16/12 23:34 / jlr
Surr: Dibromofluoromethane	124	%REC	S	80-120		E624	07/16/12 23:34 / jlr
Surr: p-Bromofluorobenzene	181	%REC	S	80-120		E624	07/16/12 23:34 / jlr
Surr: Toluene-d8	104	%REC		80-120		E624	07/16/12 23:34 / 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
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: C12100557-009
Client Sample ID: 632

Report Date: 11/20/12
Collection Date: 10/08/12 16:10
DateReceived: 10/12/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	1890	mg/L		5		A2320 B	10/12/12 21:31 / jba
Calcium	632	mg/L		1		E200.7	10/24/12 16:20 / sf
Chloride	247	mg/L	D	4		E300.0	10/15/12 18:19 / wc
Magnesium	790	mg/L		1		E200.7	10/24/12 16:20 / sf
Nitrogen, Ammonia as N	0.56	mg/L		0.05		A4500-NH3 G	10/16/12 14:28 / ab
Nitrogen, Nitrate+Nitrite as N	66	mg/L	D	10		E353.2	10/15/12 11:47 / lr
Potassium	11	mg/L		1		E200.7	10/24/12 16:20 / sf
Sodium	402	mg/L	D	2		E200.7	10/24/12 16:20 / sf
Sulfate	3400	mg/L	D	20		E300.0	10/15/12 18:19 / wc
PHYSICAL PROPERTIES							
pH	6.56	s.u.	H	0.01		A4500-H B	10/12/12 16:46 / ab
Solids, Total Dissolved TDS @ 180 C	6770	mg/L		10		A2540 C	10/12/12 16:12 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	10/26/12 16:25 / cp
Beryllium	ND	mg/L		0.001		E200.8	10/26/12 16:25 / cp
Cadmium	ND	mg/L		0.005		E200.8	10/23/12 21:30 / cp
Cobalt	ND	mg/L		0.01		E200.8	10/26/12 16:25 / cp
Lead	ND	mg/L		0.001		E200.8	10/23/12 21:30 / cp
Manganese	2.85	mg/L		0.01		E200.8	10/26/12 16:25 / cp
Molybdenum	ND	mg/L		0.1		E200.8	10/23/12 21:30 / cp
Nickel	ND	mg/L		0.05		E200.8	10/23/12 21:30 / cp
Uranium	0.0780	mg/L		0.0003		E200.8	10/23/12 21:30 / cp
Vanadium	ND	mg/L		0.1		E200.8	10/26/12 16:25 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	11/04/12 17:53 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	10/23/12 12:52 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	1.1	pCi/L				E900.1	10/18/12 02:12 / lbb
Gross Alpha minus Rn & U Precision (±)	0.4	pCi/L				E900.1	10/18/12 02:12 / lbb
Gross Alpha minus Rn & U MDC	0.5	pCi/L				E900.1	10/18/12 02:12 / lbb
Lead 210	0.8	pCi/L	U			E909.0	11/16/12 23:18 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	11/16/12 23:18 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	11/16/12 23:18 / eli-cs
Radium 226	0.84	pCi/L				E903.0	10/24/12 11:10 / trs
Radium 226 precision (±)	0.19	pCi/L				E903.0	10/24/12 11:10 / trs
Radium 226 MDC	0.15	pCi/L				E903.0	10/24/12 11:10 / trs
Radium 228	2.2	pCi/L				RA-05	10/19/12 20:18 / gb
Radium 228 precision (±)	0.89	pCi/L				RA-05	10/19/12 20:18 / gb
Radium 228 MDC	1.3	pCi/L				RA-05	10/19/12 20:18 / 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: C12100557-009
Client Sample ID: 632

Report Date: 11/20/12
Collection Date: 10/08/12 16:10
DateReceived: 10/12/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.03	pCi/L	U			E908.0	10/23/12 08:55 / dmf
Thorium 230 precision (±)	0.08	pCi/L				E908.0	10/23/12 08:55 / dmf
Thorium 230 MDC	0.1	pCi/L				E908.0	10/23/12 08:55 / dmf
DATA QUALITY							
A/C Balance (± 5)	0.262	%				A1030 E	10/26/12 07:22 / kbh
Anions	114	meq/L				A1030 E	10/26/12 07:22 / kbh
Cations	114	meq/L				A1030 E	10/26/12 07:22 / kbh
Solids, Total Dissolved Calculated	6800	mg/L				A1030 E	10/26/12 07:22 / kbh
TDS Balance (0.80 - 1.20)	1.00					A1030 E	10/26/12 07:22 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	10/12/12 23:48 / jlr
Bromoform	ND	ug/L		0.50		E624	10/12/12 23:48 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	10/12/12 23:48 / jlr
Chloroform	2.98	ug/L		0.50		E624	10/12/12 23:48 / jlr
Trihalomethanes, Total	2.98	ug/L		0.50		E624	10/12/12 23:48 / jlr
Surr: 1,2-Dichlorobenzene-d4	105	%REC		80-120		E624	10/12/12 23:48 / jlr
Surr: Dibromofluoromethane	105	%REC		80-120		E624	10/12/12 23:48 / jlr
Surr: p-Bromofluorobenzene	110	%REC		80-120		E624	10/12/12 23:48 / jlr
Surr: Toluene-d8	106	%REC		80-120		E624	10/12/12 23:48 / 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.
U - Not detected at minimum detectable concentration

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Alluvium Monitor Wells					
Well ID:		632	632	632	632
Collection Date:		10/8/2012	7/9/2012	4/2/2012	1/3/2012
Receive Date:		10/12/2012	7/13/2012	4/6/2012	1/6/2012
Report Date:		11/20/2012	8/30/2012	5/25/2012	3/2/2012
Analyte	RUnits	C12100557-009	C12070454-009	C12040276-009	C12010151-013
Bicarbonate as HCO3	mg/L	1890	1840	1860	1730
Calcium	mg/L	632	603	622	660
Chloride	mg/L	247	227	237	236
Magnesium	mg/L	790	862	750	805
Nitrogen, Ammonia as N	mg/L	0.56	0.52	0.60	0.44
Nitrogen, Nitrate+Nitrite as N	mg/L	66	72	71	73
Potassium	mg/L	11	10	10	11
Sodium	mg/L	402	420	378	407
Sulfate	mg/L	3400	3270	3380	3370
pH	s.u.	6.56	6.61	6.54	6.67
Solids, Total Dissolved TDS @ 180 C	mg/L	6770	7280	7120	7100
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(0.01)	ND(0.01)
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(0.05)	ND(0.05)
Manganese	mg/L	2.85	2.58	2.59	2.26
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	0.0780	0.0731	0.0756	0.0686
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(0.01)	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	1.1	1.1	0.9	1.2
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.4	0.3	0.4	0.4
Gross Alpha minus Rn & U MDC	pCi/L	0.5	0.3	0.4	0.4
Lead 210	pCi/L	0.8	0.1	0.3	0.7
Lead 210 precision (±)	pCi/L	0.6	0.9	0.6	0.7
Lead 210 MDC	pCi/L	1.0	1.4	1	1.1
Radium 226	pCi/L	0.84	1.2	0.56	1.3
Radium 226 precision (±)	pCi/L	0.19	0.20	0.15	0.21
Radium 226 MDC	pCi/L	0.15	0.10	0.14	0.11
Radium 228	pCi/L	2.2	1.0	0.72	1.5
Radium 228 precision (±)	pCi/L	0.89	0.69	0.64	0.71
Radium 228 MDC	pCi/L	1.3	1.1	1.0	1.1
Thorium 230	pCi/L	0.03	0.07	0.05	0.03
Thorium 230 precision (±)	pCi/L	0.08	0.1	0.07	0.09
Thorium 230 MDC	pCi/L	0.1	0.2	0.2	0.2
A/C Balance (± 5)	%	0.262	4.43	-1.31	2.98
Anions	meq/L	114	109	112	110
Cations	meq/L	114	120	109	117
Solids, Total Dissolved Calculated	mg/L	6800	6600	6620	6660
TDS Balance (0.80 - 1.20)		1.00	1.10	1.08	1.07
Trihalomethanes, Total	ug/L	2.98	2.73	3.52	3.41

****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: C12070454-006
Client Sample ID: 801

Report Date: 08/30/12
Collection Date: 07/09/12 13:18
DateReceived: 07/13/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	1470	mg/L		5		A2320 B	07/16/12 18:13 / jba
Calcium	584	mg/L		1		E200.7	08/06/12 14:57 / sf
Chloride	193	mg/L	D	4		E300.0	07/17/12 03:09 / wc
Magnesium	708	mg/L		1		E200.7	08/06/12 14:57 / sf
Nitrogen, Ammonia as N	3.30	mg/L		0.05		A4500-NH3 G	07/17/12 13:36 / lr
Nitrogen, Nitrate+Nitrite as N	18	mg/L	D	1		E353.2	07/16/12 12:47 / lr
Potassium	13	mg/L		1		E200.7	08/06/12 14:57 / sf
Sodium	362	mg/L	D	2		E200.7	08/06/12 14:57 / sf
Sulfate	3090	mg/L	D	20		E300.0	07/17/12 03:09 / wc
PHYSICAL PROPERTIES							
pH	6.58	s.u.	H	0.01		A4500-H B	07/16/12 12:12 / ab
Solids, Total Dissolved TDS @ 180 C	6390	mg/L		10		A2540 C	07/16/12 12:14 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	07/27/12 02:32 / cp
Beryllium	ND	mg/L		0.001		E200.8	08/03/12 23:57 / cp
Cadmium	ND	mg/L		0.005		E200.8	07/27/12 02:32 / cp
Cobalt	ND	mg/L		0.01		E200.8	07/27/12 02:32 / cp
Lead	ND	mg/L		0.001		E200.8	07/27/12 02:32 / cp
Manganese	4.21	mg/L		0.01		E200.8	07/27/12 02:32 / cp
Molybdenum	ND	mg/L		0.1		E200.8	07/27/12 02:32 / cp
Nickel	ND	mg/L		0.05		E200.8	07/27/12 02:32 / cp
Uranium	0.0370	mg/L		0.0003		E200.8	07/27/12 02:32 / cp
Vanadium	ND	mg/L		0.1		E200.8	07/27/12 02:32 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	08/02/12 15:07 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	07/26/12 15:04 / rdw
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.5	pCi/L				E900.1	08/09/12 00:07 / lbb
Gross Alpha minus Rn & U Precision (±)	0.3	pCi/L				E900.1	08/09/12 00:07 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	08/09/12 00:07 / lbb
Lead 210	0.5	pCi/L	U			E909.0	07/30/12 14:44 / eli-cs
Lead 210 precision (±)	0.9	pCi/L				E909.0	07/30/12 14:44 / eli-cs
Lead 210 MDC	1.4	pCi/L				E909.0	07/30/12 14:44 / eli-cs
Radium 226	0.55	pCi/L				E903.0	07/31/12 00:30 / trs
Radium 226 precision (±)	0.14	pCi/L				E903.0	07/31/12 00:30 / trs
Radium 226 MDC	0.10	pCi/L				E903.0	07/31/12 00:30 / trs
Radium 228	0.59	pCi/L	U			RA-05	07/25/12 19:27 / gb
Radium 228 precision (±)	0.65	pCi/L				RA-05	07/25/12 19:27 / gb
Radium 228 MDC	1.0	pCi/L				RA-05	07/25/12 19:27 / 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: C12070454-006
Client Sample ID: 801

Report Date: 08/30/12
Collection Date: 07/09/12 13:18
DateReceived: 07/13/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	-0.01	pCi/L	U			E908.0	08/01/12 08:45 / dmf
Thorium 230 precision (±)	0.06	pCi/L				E908.0	08/01/12 08:45 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	08/01/12 08:45 / dmf
DATA QUALITY							
A/C Balance (± 5)	4.25	%				A1030 E	08/10/12 07:48 / kbh
Anions	95.2	meq/L				A1030 E	08/10/12 07:48 / kbh
Cations	104	meq/L				A1030 E	08/10/12 07:48 / kbh
Solids, Total Dissolved Calculated	5800	mg/L				A1030 E	08/10/12 07:48 / kbh
TDS Balance (0.80 - 1.20)	1.11					A1030 E	08/10/12 07:48 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	07/16/12 17:43 / jlr
Bromoform	ND	ug/L		0.50		E624	07/16/12 17:43 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	07/16/12 17:43 / jlr
Chloroform	1.89	ug/L		0.50		E624	07/16/12 17:43 / jlr
Trihalomethanes, Total	2.60	ug/L		0.50		E624	07/16/12 17:43 / jlr
Surr: 1,2-Dichlorobenzene-d4	93.0	%REC		80-120		E624	07/16/12 17:43 / jlr
Surr: Dibromofluoromethane	130	%REC	S	80-120		E624	07/16/12 17:43 / jlr
Surr: p-Bromofluorobenzene	181	%REC	S	80-120		E624	07/16/12 17:43 / jlr
Surr: Toluene-d8	108	%REC		80-120		E624	07/16/12 17:43 / 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
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: C12100557-006
Client Sample ID: 801

Report Date: 11/20/12
Collection Date: 10/08/12 13:33
DateReceived: 10/12/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	1520	mg/L		5		A2320 B	10/12/12 20:54 / jba
Calcium	592	mg/L		1		E200.7	10/24/12 16:03 / sf
Chloride	211	mg/L	D	4		E300.0	10/15/12 17:33 / wc
Magnesium	652	mg/L		1		E200.7	10/24/12 16:03 / sf
Nitrogen, Ammonia as N	3.8	mg/L	D	0.1		A4500-NH3 G	10/16/12 14:25 / ab
Nitrogen, Nitrate+Nitrite as N	20	mg/L	D	1		E353.2	10/15/12 11:40 / lr
Potassium	14	mg/L		1		E200.7	10/24/12 16:03 / sf
Sodium	352	mg/L	D	2		E200.7	10/24/12 16:03 / sf
Sulfate	3270	mg/L	D	20		E300.0	10/15/12 17:33 / wc
PHYSICAL PROPERTIES							
pH	6.62	s.u.	H	0.01		A4500-H B	10/12/12 16:26 / ab
Solids, Total Dissolved TDS @ 180 C	6120	mg/L		10		A2540 C	10/12/12 16:12 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	10/26/12 16:12 / cp
Beryllium	ND	mg/L		0.001		E200.8	10/26/12 16:12 / cp
Cadmium	ND	mg/L		0.005		E200.8	10/23/12 21:21 / cp
Cobalt	ND	mg/L		0.01		E200.8	10/26/12 16:12 / cp
Lead	ND	mg/L		0.001		E200.8	10/23/12 21:21 / cp
Manganese	5.01	mg/L		0.01		E200.8	10/26/12 16:12 / cp
Molybdenum	ND	mg/L		0.1		E200.8	10/23/12 21:21 / cp
Nickel	ND	mg/L		0.05		E200.8	10/23/12 21:21 / cp
Uranium	0.0387	mg/L		0.0003		E200.8	10/23/12 21:21 / cp
Vanadium	ND	mg/L		0.1		E200.8	10/26/12 16:12 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	11/04/12 17:13 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	10/23/12 12:46 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.7	pCi/L				E900.1	10/18/12 02:12 / lbb
Gross Alpha minus Rn & U Precision (±)	0.4	pCi/L				E900.1	10/18/12 02:12 / lbb
Gross Alpha minus Rn & U MDC	0.5	pCi/L				E900.1	10/18/12 02:12 / lbb
Lead 210	0.5	pCi/L	U			E909.0	11/16/12 16:28 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	11/16/12 16:28 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	11/16/12 16:28 / eli-cs
Radium 226	0.42	pCi/L				E903.0	10/24/12 11:10 / trs
Radium 226 precision (±)	0.15	pCi/L				E903.0	10/24/12 11:10 / trs
Radium 226 MDC	0.15	pCi/L				E903.0	10/24/12 11:10 / trs
Radium 228	2.5	pCi/L				RA-05	10/19/12 20:18 / gb
Radium 228 precision (±)	0.90	pCi/L				RA-05	10/19/12 20:18 / gb
Radium 228 MDC	1.3	pCi/L				RA-05	10/19/12 20:18 / 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: C12100557-006
Client Sample ID: 801

Report Date: 11/20/12
Collection Date: 10/08/12 13:33
DateReceived: 10/12/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.02	pCi/L	U			E908.0	10/23/12 08:55 / dmf
Thorium 230 precision (±)	0.1	pCi/L				E908.0	10/23/12 08:55 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	10/23/12 08:55 / dmf
DATA QUALITY							
A/C Balance (± 5)	-0.655	%				A1030 E	10/26/12 07:22 / kbh
Anions	100	meq/L				A1030 E	10/26/12 07:22 / kbh
Cations	99.2	meq/L				A1030 E	10/26/12 07:22 / kbh
Solids, Total Dissolved Calculated	6000	mg/L				A1030 E	10/26/12 07:22 / kbh
TDS Balance (0.80 - 1.20)	1.03					A1030 E	10/26/12 07:22 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	10/12/12 18:01 / jlr
Bromoform	ND	ug/L		0.50		E624	10/12/12 18:01 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	10/12/12 18:01 / jlr
Chloroform	1.81	ug/L		0.50		E624	10/12/12 18:01 / jlr
Trihalomethanes, Total	1.81	ug/L		0.50		E624	10/12/12 18:01 / jlr
Surr: 1,2-Dichlorobenzene-d4	104	%REC		80-120		E624	10/12/12 18:01 / jlr
Surr: Dibromofluoromethane	99.0	%REC		80-120		E624	10/12/12 18:01 / jlr
Surr: p-Bromofluorobenzene	110	%REC		80-120		E624	10/12/12 18:01 / jlr
Surr: Toluene-d8	105	%REC		80-120		E624	10/12/12 18:01 / 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.
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:		10/8/2012	7/9/2012	4/2/2012	1/2/2012
Receive Date:		10/12/2012	7/13/2012	4/6/2012	1/6/2012
Report Date:		11/20/2012	8/30/2012	5/25/2012	3/2/2012
Analyte	RUnits	C12100557-006	C12070454-006	C12040276-006	C12010151-006
Bicarbonate as HCO3	mg/L	1520	1470	1470	1360
Calcium	mg/L	592	584	576	567
Chloride	mg/L	211	193	200	200
Magnesium	mg/L	652	708	622	610
Nitrogen, Ammonia as N	mg/L	3.8	3.30	3.2	3.2
Nitrogen, Nitrate+Nitrite as N	mg/L	20	18	14.5	11.9
Potassium	mg/L	14	13	13	13
Sodium	mg/L	352	362	332	331
Sulfate	mg/L	3270	3090	3180	3150
pH	s.u.	6.62	6.58	6.57	6.80
Solids, Total Dissolved TDS @ 180 C	mg/L	6120	6390	6220	6040
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(0.01)	ND(0.01)
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(0.05)	ND(0.05)
Manganese	mg/L	5.01	4.21	3.76	3.62
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	0.0387	0.0370	0.0407	0.0375
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(0.01)	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	0.7	0.5	0.1	0.7
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.4	0.3	0.2	0.3
Gross Alpha minus Rn & U MDC	pCi/L	0.5	0.3	0.4	0.4
Lead 210	pCi/L	0.5	0.5	-0.1	0.9
Lead 210 precision (±)	pCi/L	0.6	0.9	0.6	0.7
Lead 210 MDC	pCi/L	1.0	1.4	1	1.1
Radium 226	pCi/L	0.42	0.55	0.40	0.59
Radium 226 precision (±)	pCi/L	0.15	0.14	0.14	0.15
Radium 226 MDC	pCi/L	0.15	0.10	0.14	0.12
Radium 228	pCi/L	2.5	0.59	0.65	0.44
Radium 228 precision (±)	pCi/L	0.90	0.65	0.52	0.57
Radium 228 MDC	pCi/L	1.3	1.0	0.82	0.92
Thorium 230	pCi/L	0.02	-0.01	-0.04	0.02
Thorium 230 precision (±)	pCi/L	0.1	0.06	0.07	0.06
Thorium 230 MDC	pCi/L	0.2	0.2	0.2	0.2
A/C Balance (± 5)	%	-0.655	4.25	-1.03	-0.492
Anions	meq/L	100	95.2	96.8	94.3
Cations	meq/L	99.2	104	94.8	93.4
Solids, Total Dissolved Calculated	mg/L	6000	5800	5730	5610
TDS Balance (0.80 - 1.20)		1.03	1.11	1.09	1.08
Trihalomethanes, Total	ug/L	1.81	2.60	2.76	2.68

****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: C12070454-005
Client Sample ID: 802

Report Date: 08/30/12
Collection Date: 07/09/12 12:38
DateReceived: 07/13/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	1970	mg/L		5		A2320 B	07/16/12 18:02 / jba
Calcium	609	mg/L		1		E200.7	07/17/12 14:46 / sf
Chloride	175	mg/L	D	10		E300.0	07/17/12 02:22 / wc
Magnesium	930	mg/L		1		E200.7	07/17/12 14:46 / sf
Nitrogen, Ammonia as N	0.27	mg/L		0.05		A4500-NH3 G	07/31/12 15:33 / lr
Nitrogen, Nitrate+Nitrite as N	113	mg/L	D	5		E353.2	07/20/12 16:50 / lr
Potassium	5	mg/L		1		E200.7	07/17/12 14:46 / sf
Sodium	347	mg/L		1		E200.7	07/17/12 14:46 / sf
Sulfate	3260	mg/L	D	40		E300.0	07/17/12 02:22 / wc
PHYSICAL PROPERTIES							
pH	6.59	s.u.	H	0.01		A4500-H B	07/16/12 12:09 / ab
Solids, Total Dissolved TDS @ 180 C	7800	mg/L		10		A2540 C	07/16/12 12:14 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	07/27/12 02:28 / cp
Beryllium	ND	mg/L		0.001		E200.8	08/03/12 23:52 / cp
Cadmium	ND	mg/L		0.005		E200.8	07/27/12 02:28 / cp
Cobalt	ND	mg/L		0.01		E200.8	07/27/12 02:28 / cp
Lead	0.002	mg/L		0.001		E200.8	07/27/12 02:28 / cp
Manganese	1.22	mg/L		0.01		E200.8	07/27/12 02:28 / cp
Molybdenum	ND	mg/L		0.1		E200.8	07/27/12 02:28 / cp
Nickel	ND	mg/L		0.05		E200.8	07/27/12 02:28 / cp
Uranium	0.119	mg/L		0.0003		E200.8	07/27/12 02:28 / cp
Vanadium	ND	mg/L		0.1		E200.8	07/27/12 02:28 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	08/01/12 15:55 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	07/26/12 15:02 / rdw
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.3	pCi/L				E900.1	08/09/12 00:07 / lbb
Gross Alpha minus Rn & U Precision (±)	0.2	pCi/L				E900.1	08/09/12 00:07 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	08/09/12 00:07 / lbb
Lead 210	-0.06	pCi/L	U			E909.0	07/30/12 13:56 / eli-cs
Lead 210 precision (±)	0.9	pCi/L				E909.0	07/30/12 13:56 / eli-cs
Lead 210 MDC	1.4	pCi/L				E909.0	07/30/12 13:56 / eli-cs
Radium 226	0.35	pCi/L				E903.0	07/31/12 00:30 / trs
Radium 226 precision (±)	0.12	pCi/L				E903.0	07/31/12 00:30 / trs
Radium 226 MDC	0.10	pCi/L				E903.0	07/31/12 00:30 / trs
Radium 228	-0.02	pCi/L	U			RA-05	07/25/12 19:27 / gb
Radium 228 precision (±)	0.63	pCi/L				RA-05	07/25/12 19:27 / gb
Radium 228 MDC	1.1	pCi/L				RA-05	07/25/12 19:27 / 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: C12070454-005
Client Sample ID: 802

Report Date: 08/30/12
Collection Date: 07/09/12 12:38
DateReceived: 07/13/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.0007	pCi/L	U			E908.0	08/01/12 08:45 / dmf
Thorium 230 precision (±)	0.07	pCi/L				E908.0	08/01/12 08:45 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	08/01/12 08:45 / dmf
DATA QUALITY							
A/C Balance (± 5)	4.06	%				A1030 E	07/23/12 07:17 / kbh
Anions	113	meq/L				A1030 E	07/23/12 07:17 / kbh
Cations	122	meq/L				A1030 E	07/23/12 07:17 / kbh
Solids, Total Dissolved Calculated	6800	mg/L				A1030 E	07/23/12 07:17 / kbh
TDS Balance (0.80 - 1.20)	1.15					A1030 E	07/23/12 07:17 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	07/16/12 17:08 / jlr
Bromoform	ND	ug/L		0.50		E624	07/16/12 17:08 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	07/16/12 17:08 / jlr
Chloroform	13.4	ug/L		0.50		E624	07/16/12 17:08 / jlr
Trihalomethanes, Total	14.1	ug/L		0.50		E624	07/16/12 17:08 / jlr
Surr: 1,2-Dichlorobenzene-d4	91.0	%REC		80-120		E624	07/16/12 17:08 / jlr
Surr: Dibromofluoromethane	122	%REC	S	80-120		E624	07/16/12 17:08 / jlr
Surr: p-Bromofluorobenzene	179	%REC	S	80-120		E624	07/16/12 17:08 / jlr
Surr: Toluene-d8	118	%REC		80-120		E624	07/16/12 17:08 / 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
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: C12100557-005
Client Sample ID: 802

Report Date: 11/20/12
Collection Date: 10/08/12 12:51
DateReceived: 10/12/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	2010	mg/L		5		A2320 B	10/12/12 20:43 / jba
Calcium	642	mg/L		1		E200.7	10/24/12 15:59 / sf
Chloride	193	mg/L	D	4		E300.0	10/15/12 17:18 / wc
Magnesium	849	mg/L		1		E200.7	10/24/12 15:59 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	10/16/12 14:23 / ab
Nitrogen, Nitrate+Nitrite as N	110	mg/L	D	10		E353.2	10/15/12 11:37 / lr
Potassium	6	mg/L		1		E200.7	10/24/12 15:59 / sf
Sodium	350	mg/L	D	2		E200.7	10/24/12 15:59 / sf
Sulfate	3420	mg/L	D	20		E300.0	10/15/12 17:18 / wc
PHYSICAL PROPERTIES							
pH	6.58	s.u.	H	0.01		A4500-H B	10/12/12 16:24 / ab
Solids, Total Dissolved TDS @ 180 C	7130	mg/L		10		A2540 C	10/12/12 16:11 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	10/23/12 21:19 / cp
Beryllium	ND	mg/L		0.001		E200.8	10/23/12 21:19 / cp
Cadmium	ND	mg/L		0.005		E200.8	10/23/12 21:19 / cp
Cobalt	ND	mg/L		0.01		E200.8	10/23/12 21:19 / cp
Lead	0.001	mg/L		0.001		E200.8	10/23/12 21:19 / cp
Manganese	1.24	mg/L		0.01		E200.8	10/23/12 21:19 / cp
Molybdenum	ND	mg/L		0.1		E200.8	10/23/12 21:19 / cp
Nickel	ND	mg/L		0.05		E200.8	10/23/12 21:19 / cp
Uranium	0.121	mg/L		0.0003		E200.8	10/23/12 21:19 / cp
Vanadium	ND	mg/L		0.1		E200.8	10/23/12 21:19 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	11/04/12 17:05 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	10/23/12 12:40 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.8	pCi/L				E900.1	10/18/12 02:12 / lbb
Gross Alpha minus Rn & U Precision (±)	0.4	pCi/L				E900.1	10/18/12 02:12 / lbb
Gross Alpha minus Rn & U MDC	0.5	pCi/L				E900.1	10/18/12 02:12 / lbb
Lead 210	0.008	pCi/L	U			E909.0	11/16/12 15:30 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	11/16/12 15:30 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	11/16/12 15:30 / eli-cs
Radium 226	0.19	pCi/L				E903.0	10/24/12 11:10 / trs
Radium 226 precision (±)	0.12	pCi/L				E903.0	10/24/12 11:10 / trs
Radium 226 MDC	0.15	pCi/L				E903.0	10/24/12 11:10 / trs
Radium 228	1.2	pCi/L	U			RA-05	10/19/12 20:18 / gb
Radium 228 precision (±)	0.84	pCi/L				RA-05	10/19/12 20:18 / gb
Radium 228 MDC	1.3	pCi/L				RA-05	10/19/12 20:18 / 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: C12100557-005
Client Sample ID: 802

Report Date: 11/20/12
Collection Date: 10/08/12 12:51
DateReceived: 10/12/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	-0.02	pCi/L	U			E908.0	10/23/12 08:55 / dmf
Thorium 230 precision (±)	0.1	pCi/L				E908.0	10/23/12 08:55 / dmf
Thorium 230 MDC	0.3	pCi/L				E908.0	10/23/12 08:55 / dmf
- See Case Narrative regarding Th230 analysis.							
DATA QUALITY							
A/C Balance (± 5)	-0.121	%				A1030 E	10/26/12 07:22 / kbh
Anions	118	meq/L				A1030 E	10/26/12 07:22 / kbh
Cations	117	meq/L				A1030 E	10/26/12 07:22 / kbh
Solids, Total Dissolved Calculated	7000	mg/L				A1030 E	10/26/12 07:22 / kbh
TDS Balance (0.80 - 1.20)	1.02					A1030 E	10/26/12 07:22 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	10/12/12 17:26 / jlr
Bromoform	ND	ug/L		0.50		E624	10/12/12 17:26 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	10/12/12 17:26 / jlr
Chloroform	12.6	ug/L		0.50		E624	10/12/12 17:26 / jlr
Trihalomethanes, Total	12.6	ug/L		0.50		E624	10/12/12 17:26 / jlr
Surr: 1,2-Dichlorobenzene-d4	102	%REC		80-120		E624	10/12/12 17:26 / jlr
Surr: Dibromofluoromethane	98.0	%REC		80-120		E624	10/12/12 17:26 / jlr
Surr: p-Bromofluorobenzene	109	%REC		80-120		E624	10/12/12 17:26 / jlr
Surr: Toluene-d8	105	%REC		80-120		E624	10/12/12 17:26 / 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.
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:		10/8/2012	7/9/2012	4/2/2012	1/2/2012
Receive Date:		10/12/2012	7/13/2012	4/6/2012	1/6/2012
Report Date:		11/20/2012	8/30/2012	5/25/2012	3/2/2012
Analyte	RUnits	C12100557-005	C12070454-005	C12040276-005	C12010151-005
Bicarbonate as HCO3	mg/L	2010	1970	1990	1840
Calcium	mg/L	642	609	636	634
Chloride	mg/L	193	175	202	185
Magnesium	mg/L	849	930	858	907
Nitrogen, Ammonia as N	mg/L	ND(0.05)	0.27	ND(0.05)	ND(0.05)
Nitrogen, Nitrate+Nitrite as N	mg/L	110	113	116	114
Potassium	mg/L	6	5	6	7
Sodium	mg/L	350	347	339	366
Sulfate	mg/L	3420	3260	3490	3410
pH	s.u.	6.58	6.59	6.56	6.75
Solids, Total Dissolved TDS @ 180 C	mg/L	7130	7800	7540	7500
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(0.01)	ND(0.01)
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	0.002	ND(0.05)	ND(0.05)
Manganese	mg/L	1.24	1.22	1.17	1.20
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	0.121	0.119	0.137	0.123
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(0.01)	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	0.3	-0.2	0.6
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.4	0.2	0.2	0.3
Gross Alpha minus Rn & U MDC	pCi/L	0.5	0.3	0.4	0.4
Lead 210	pCi/L	0.008	-0.06	-0.4	0.0
Lead 210 precision (±)	pCi/L	0.6	0.9	0.7	0.6
Lead 210 MDC	pCi/L	1.0	1.4	1.2	1.1
Radium 226	pCi/L	0.19	0.35	0.15	0.33
Radium 226 precision (±)	pCi/L	0.12	0.12	0.10	0.12
Radium 226 MDC	pCi/L	0.15	0.10	0.14	0.12
Radium 228	pCi/L	1.2	-0.02	0.43	0.48
Radium 228 precision (±)	pCi/L	0.84	0.63	0.51	0.56
Radium 228 MDC	pCi/L	1.3	1.1	0.82	0.90
Thorium 230	pCi/L	-0.02	0.0007	0.03	-0.004
Thorium 230 precision (±)	pCi/L	0.1	0.07	0.07	0.05
Thorium 230 MDC	pCi/L	0.3	0.2	0.2	0.2
A/C Balance (± 5)	%	-0.121	4.06	-0.447	3.31
Anions	meq/L	118	113	118	115
Cations	meq/L	117	122	117	122
Solids, Total Dissolved Calculated	mg/L	7000	6800	6990	6930
TDS Balance (0.80 - 1.20)		1.02	1.15	1.08	1.08
Trihalomethanes, Total	ug/L	12.6	14.1	16.8	18.2

****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: C12070454-003
Client Sample ID: 803

Report Date: 08/30/12
Collection Date: 07/09/12 11:21
DateReceived: 07/13/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	1810	mg/L		5		A2320 B	07/13/12 20:23 / jba
Calcium	653	mg/L		1		E200.7	07/17/12 14:38 / sf
Chloride	164	mg/L	D	4		E300.0	07/17/12 01:51 / wc
Magnesium	796	mg/L		1		E200.7	07/17/12 14:38 / sf
Nitrogen, Ammonia as N	2.78	mg/L		0.05		A4500-NH3 G	07/17/12 13:26 / lr
Nitrogen, Nitrate+Nitrite as N	50	mg/L	D	5		E353.2	07/16/12 12:42 / lr
Potassium	13	mg/L		1		E200.7	07/17/12 14:38 / sf
Sodium	297	mg/L		1		E200.7	07/17/12 14:38 / sf
Sulfate	3230	mg/L	D	20		E300.0	07/17/12 01:51 / wc
PHYSICAL PROPERTIES							
pH	6.61	s.u.	H	0.01		A4500-H B	07/16/12 09:38 / ab
Solids, Total Dissolved TDS @ 180 C	6630	mg/L		10		A2540 C	07/13/12 17:29 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	07/27/12 02:19 / cp
Beryllium	ND	mg/L		0.001		E200.8	08/03/12 23:43 / cp
Cadmium	ND	mg/L		0.005		E200.8	07/27/12 02:19 / cp
Cobalt	ND	mg/L		0.01		E200.8	07/27/12 02:19 / cp
Lead	0.002	mg/L		0.001		E200.8	07/27/12 02:19 / cp
Manganese	2.31	mg/L		0.01		E200.8	07/27/12 02:19 / cp
Molybdenum	ND	mg/L		0.1		E200.8	07/27/12 02:19 / cp
Nickel	ND	mg/L		0.05		E200.8	07/27/12 02:19 / cp
Uranium	0.102	mg/L		0.0003		E200.8	07/27/12 02:19 / cp
Vanadium	ND	mg/L		0.1		E200.8	07/27/12 02:19 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	08/01/12 15:24 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	07/26/12 14:58 / rdw
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.3	pCi/L	U			E900.1	08/09/12 00:07 / lbb
Gross Alpha minus Rn & U Precision (±)	0.2	pCi/L				E900.1	08/09/12 00:07 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	08/09/12 00:07 / lbb
Lead 210	0.5	pCi/L	U			E909.0	07/30/12 12:21 / eli-cs
Lead 210 precision (±)	0.9	pCi/L				E909.0	07/30/12 12:21 / eli-cs
Lead 210 MDC	1.4	pCi/L				E909.0	07/30/12 12:21 / eli-cs
Radium 226	0.37	pCi/L				E903.0	07/31/12 00:30 / trs
Radium 226 precision (±)	0.12	pCi/L				E903.0	07/31/12 00:30 / trs
Radium 226 MDC	0.10	pCi/L				E903.0	07/31/12 00:30 / trs
Radium 228	0.38	pCi/L	U			RA-05	07/25/12 19:27 / gb
Radium 228 precision (±)	0.65	pCi/L				RA-05	07/25/12 19:27 / gb
Radium 228 MDC	1.1	pCi/L				RA-05	07/25/12 19:27 / 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: C12070454-003
Client Sample ID: 803

Report Date: 08/30/12
Collection Date: 07/09/12 11:21
DateReceived: 07/13/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	-0.01	pCi/L	U			E908.0	08/01/12 08:45 / dmf
Thorium 230 precision (±)	0.08	pCi/L				E908.0	08/01/12 08:45 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	08/01/12 08:45 / dmf
DATA QUALITY							
A/C Balance (± 5)	3.12	%				A1030 E	07/23/12 07:17 / kbh
Anions	105	meq/L				A1030 E	07/23/12 07:17 / kbh
Cations	112	meq/L				A1030 E	07/23/12 07:17 / kbh
Solids, Total Dissolved Calculated	6300	mg/L				A1030 E	07/23/12 07:17 / kbh
TDS Balance (0.80 - 1.20)	1.06					A1030 E	07/23/12 07:17 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	07/16/12 15:58 / jlr
Bromoform	ND	ug/L		0.50		E624	07/16/12 15:58 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	07/16/12 15:58 / jlr
Chloroform	8.92	ug/L		0.50		E624	07/16/12 15:58 / jlr
Trihalomethanes, Total	9.61	ug/L		0.50		E624	07/16/12 15:58 / jlr
Surr: 1,2-Dichlorobenzene-d4	89.0	%REC		80-120		E624	07/16/12 15:58 / jlr
Surr: Dibromofluoromethane	118	%REC		80-120		E624	07/16/12 15:58 / jlr
Surr: p-Bromofluorobenzene	178	%REC	S	80-120		E624	07/16/12 15:58 / jlr
Surr: Toluene-d8	115	%REC		80-120		E624	07/16/12 15:58 / 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
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: C12100557-003
Client Sample ID: 803

Report Date: 11/20/12
Collection Date: 10/08/12 11:27
DateReceived: 10/12/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	1750	mg/L		5		A2320 B	10/12/12 20:19 / jba
Calcium	678	mg/L		1		E200.7	10/24/12 15:51 / sf
Chloride	160	mg/L	D	4		E300.0	10/15/12 15:45 / wc
Magnesium	723	mg/L		1		E200.7	10/24/12 15:51 / sf
Nitrogen, Ammonia as N	1.8	mg/L	D	0.1		A4500-NH3 G	10/16/12 11:07 / ljl
Nitrogen, Nitrate+Nitrite as N	38	mg/L	D	2		E353.2	10/15/12 11:27 / lr
Potassium	14	mg/L		1		E200.7	10/24/12 15:51 / sf
Sodium	283	mg/L	D	2		E200.7	10/24/12 15:51 / sf
Sulfate	3300	mg/L	D	20		E300.0	10/15/12 15:45 / wc
PHYSICAL PROPERTIES							
pH	6.54	s.u.	H	0.01		A4500-H B	10/12/12 16:18 / ab
Solids, Total Dissolved TDS @ 180 C	6590	mg/L		10		A2540 C	10/12/12 16:11 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	10/23/12 21:13 / cp
Beryllium	ND	mg/L		0.001		E200.8	10/23/12 21:13 / cp
Cadmium	ND	mg/L		0.005		E200.8	10/23/12 21:13 / cp
Cobalt	ND	mg/L		0.01		E200.8	10/23/12 21:13 / cp
Lead	0.002	mg/L		0.001		E200.8	10/23/12 21:13 / cp
Manganese	3.14	mg/L		0.01		E200.8	10/23/12 21:13 / cp
Molybdenum	ND	mg/L		0.1		E200.8	10/23/12 21:13 / cp
Nickel	ND	mg/L		0.05		E200.8	10/23/12 21:13 / cp
Uranium	0.0781	mg/L		0.0003		E200.8	10/23/12 21:13 / cp
Vanadium	ND	mg/L		0.1		E200.8	10/23/12 21:13 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	10/29/12 16:37 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	10/23/12 12:36 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.7	pCi/L				E900.1	10/18/12 02:12 / lbb
Gross Alpha minus Rn & U Precision (±)	0.4	pCi/L				E900.1	10/18/12 02:12 / lbb
Gross Alpha minus Rn & U MDC	0.5	pCi/L				E900.1	10/18/12 02:12 / lbb
Lead 210	0.04	pCi/L	U			E909.0	11/16/12 13:33 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	11/16/12 13:33 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	11/16/12 13:33 / eli-cs
Radium 226	0.14	pCi/L	U			E903.0	10/24/12 11:10 / trs
Radium 226 precision (±)	0.11	pCi/L				E903.0	10/24/12 11:10 / trs
Radium 226 MDC	0.15	pCi/L				E903.0	10/24/12 11:10 / trs
Radium 228	1.3	pCi/L				RA-05	10/19/12 20:18 / gb
Radium 228 precision (±)	0.83	pCi/L				RA-05	10/19/12 20:18 / gb
Radium 228 MDC	1.3	pCi/L				RA-05	10/19/12 20:18 / 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: C12100557-003
Client Sample ID: 803

Report Date: 11/20/12
Collection Date: 10/08/12 11:27
DateReceived: 10/12/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.009	pCi/L	U			E908.0	10/23/12 08:55 / dmf
Thorium 230 precision (±)	0.1	pCi/L				E908.0	10/23/12 08:55 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	10/23/12 08:55 / dmf
DATA QUALITY							
A/C Balance (± 5)	0.741	%				A1030 E	10/26/12 07:22 / kbh
Anions	105	meq/L				A1030 E	10/26/12 07:22 / kbh
Cations	106	meq/L				A1030 E	10/26/12 07:22 / kbh
Solids, Total Dissolved Calculated	6200	mg/L				A1030 E	10/26/12 07:22 / kbh
TDS Balance (0.80 - 1.20)	1.06					A1030 E	10/26/12 07:22 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	10/12/12 16:17 / jlr
Bromoform	ND	ug/L		0.50		E624	10/12/12 16:17 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	10/12/12 16:17 / jlr
Chloroform	8.00	ug/L		0.50		E624	10/12/12 16:17 / jlr
Trihalomethanes, Total	8.00	ug/L		0.50		E624	10/12/12 16:17 / jlr
Surr: 1,2-Dichlorobenzene-d4	102	%REC		80-120		E624	10/12/12 16:17 / jlr
Surr: Dibromofluoromethane	95.0	%REC		80-120		E624	10/12/12 16:17 / jlr
Surr: p-Bromofluorobenzene	109	%REC		80-120		E624	10/12/12 16:17 / jlr
Surr: Toluene-d8	106	%REC		80-120		E624	10/12/12 16:17 / 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.
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:		10/8/2012	7/9/2012	4/2/2012	1/2/2012
Receive Date:		10/12/2012	7/13/2012	4/6/2012	1/6/2012
Report Date:		11/20/2012	8/30/2012	5/25/2012	3/2/2012
Analyte	RUnits	C12100557-003	C12070454-003	C12040276-003	C12010151-003
Bicarbonate as HCO3	mg/L	1750	1810	1780	1700
Calcium	mg/L	678	653	701	680
Chloride	mg/L	160	164	163	171
Magnesium	mg/L	723	796	750	742
Nitrogen, Ammonia as N	mg/L	1.8	2.78	1.57	3.1
Nitrogen, Nitrate+Nitrite as N	mg/L	38	50	41	48
Potassium	mg/L	14	13	14	15
Sodium	mg/L	283	297	288	300
Sulfate	mg/L	3300	3230	3420	3300
pH	s.u.	6.54	6.61	6.52	6.70
Solids, Total Dissolved TDS @ 180 C	mg/L	6590	6630	7000	6790
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(0.01)	ND(0.01)
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	ND(0.05)	ND(0.05)
Manganese	mg/L	3.14	2.31	2.48	2.01
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	0.0781	0.102	0.111	0.118
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(0.01)	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	0.7	0.3	0.1	0.5
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.4	0.2	0.2	0.3
Gross Alpha minus Rn & U MDC	pCi/L	0.5	0.3	0.4	0.4
Lead 210	pCi/L	0.04	0.5	0.5	0.5
Lead 210 precision (±)	pCi/L	0.6	0.9	0.8	0.7
Lead 210 MDC	pCi/L	1.0	1.4	1.3	1.1
Radium 226	pCi/L	0.14	0.37	0.27	0.51
Radium 226 precision (±)	pCi/L	0.11	0.12	0.12	0.15
Radium 226 MDC	pCi/L	0.15	0.10	0.14	0.12
Radium 228	pCi/L	1.3	0.38	0.93	0.56
Radium 228 precision (±)	pCi/L	0.83	0.65	0.53	0.59
Radium 228 MDC	pCi/L	1.3	1.1	0.82	0.95
Thorium 230	pCi/L	0.009	-0.01	-0.008	0.003
Thorium 230 precision (±)	pCi/L	0.1	0.08	0.05	0.1
Thorium 230 MDC	pCi/L	0.2	0.2	0.2	0.2
A/C Balance (± 5)	%	0.741	3.12	0.921	1.79
Anions	meq/L	105	105	108	105
Cations	meq/L	106	112	110	109
Solids, Total Dissolved Calculated	mg/L	6200	6300	6400	6270
TDS Balance (0.80 - 1.20)		1.06	1.06	1.09	1.08
Trihalomethanes, Total	ug/L	8.00	9.61	15.6	9.92

****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: C12070454-004
Client Sample ID: 808

Report Date: 08/30/12
Collection Date: 07/09/12 11:58
DateReceived: 07/13/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	2100	mg/L		5		A2320 B	07/13/12 20:35 / jba
Calcium	756	mg/L		1		E200.7	08/06/12 14:53 / sf
Chloride	180	mg/L	D	10		E300.0	07/17/12 02:07 / wc
Magnesium	784	mg/L		1		E200.7	08/06/12 14:53 / sf
Nitrogen, Ammonia as N	0.35	mg/L		0.05		A4500-NH3 G	07/17/12 13:28 / lr
Nitrogen, Nitrate+Nitrite as N	70	mg/L	D	5		E353.2	07/16/12 12:45 / lr
Potassium	6	mg/L		1		E200.7	08/06/12 14:53 / sf
Sodium	353	mg/L	D	2		E200.7	08/06/12 14:53 / sf
Sulfate	3060	mg/L	D	40		E300.0	07/17/12 02:07 / wc
PHYSICAL PROPERTIES							
pH	6.61	s.u.	H	0.01		A4500-H B	07/16/12 09:41 / ab
Solids, Total Dissolved TDS @ 180 C	7200	mg/L		10		A2540 C	07/13/12 17:29 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	07/27/12 02:23 / cp
Beryllium	ND	mg/L		0.001		E200.8	08/03/12 23:48 / cp
Cadmium	ND	mg/L		0.005		E200.8	07/27/12 02:23 / cp
Cobalt	ND	mg/L		0.01		E200.8	07/27/12 02:23 / cp
Lead	0.002	mg/L		0.001		E200.8	07/27/12 02:23 / cp
Manganese	1.25	mg/L		0.01		E200.8	07/27/12 02:23 / cp
Molybdenum	ND	mg/L		0.1		E200.8	07/27/12 02:23 / cp
Nickel	ND	mg/L		0.05		E200.8	07/27/12 02:23 / cp
Uranium	0.126	mg/L		0.0003		E200.8	07/27/12 02:23 / cp
Vanadium	ND	mg/L		0.1		E200.8	07/27/12 02:23 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	08/01/12 15:47 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	07/26/12 15:00 / rdw
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.4	pCi/L				E900.1	08/09/12 00:07 / lbb
Gross Alpha minus Rn & U Precision (±)	0.2	pCi/L				E900.1	08/09/12 00:07 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	08/09/12 00:07 / lbb
Lead 210	0.3	pCi/L	U			E909.0	07/30/12 13:09 / eli-cs
Lead 210 precision (±)	0.9	pCi/L				E909.0	07/30/12 13:09 / eli-cs
Lead 210 MDC	1.4	pCi/L				E909.0	07/30/12 13:09 / eli-cs
Radium 226	0.40	pCi/L				E903.0	07/31/12 00:30 / trs
Radium 226 precision (±)	0.12	pCi/L				E903.0	07/31/12 00:30 / trs
Radium 226 MDC	0.10	pCi/L				E903.0	07/31/12 00:30 / trs
Radium 228	-0.08	pCi/L	U			RA-05	07/25/12 19:27 / gb
Radium 228 precision (±)	0.61	pCi/L				RA-05	07/25/12 19:27 / gb
Radium 228 MDC	1.0	pCi/L				RA-05	07/25/12 19:27 / 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: C12070454-004
Client Sample ID: 808

Report Date: 08/30/12
Collection Date: 07/09/12 11:58
DateReceived: 07/13/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.06	pCi/L	U			E908.0	08/01/12 08:45 / dmf
Thorium 230 precision (±)	0.09	pCi/L				E908.0	08/01/12 08:45 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	08/01/12 08:45 / dmf
DATA QUALITY							
A/C Balance (± 5)	4.33	%				A1030 E	08/10/12 07:47 / kbh
Anions	108	meq/L				A1030 E	08/10/12 07:47 / kbh
Cations	118	meq/L				A1030 E	08/10/12 07:47 / kbh
Solids, Total Dissolved Calculated	6500	mg/L				A1030 E	08/10/12 07:47 / kbh
TDS Balance (0.80 - 1.20)	1.11					A1030 E	08/10/12 07:47 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	07/16/12 16:33 / jlr
Bromoform	ND	ug/L		0.50		E624	07/16/12 16:33 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	07/16/12 16:33 / jlr
Chloroform	2.57	ug/L		0.50		E624	07/16/12 16:33 / jlr
Trihalomethanes, Total	3.26	ug/L		0.50		E624	07/16/12 16:33 / jlr
Surr: 1,2-Dichlorobenzene-d4	91.0	%REC		80-120		E624	07/16/12 16:33 / jlr
Surr: Dibromofluoromethane	121	%REC	S	80-120		E624	07/16/12 16:33 / jlr
Surr: p-Bromofluorobenzene	177	%REC	S	80-120		E624	07/16/12 16:33 / jlr
Surr: Toluene-d8	105	%REC		80-120		E624	07/16/12 16:33 / 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
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: C12100557-004
Client Sample ID: 808

Report Date: 11/20/12
Collection Date: 10/08/12 12:06
DateReceived: 10/12/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	2150	mg/L		5		A2320 B	10/12/12 20:31 / jba
Calcium	765	mg/L		1		E200.7	10/24/12 15:55 / sf
Chloride	193	mg/L	D	4		E300.0	10/15/12 16:31 / wc
Magnesium	713	mg/L		1		E200.7	10/24/12 15:55 / sf
Nitrogen, Ammonia as N	1.24	mg/L		0.05		A4500-NH3 G	10/16/12 14:17 / ab
Nitrogen, Nitrate+Nitrite as N	57	mg/L	D	5		E353.2	10/15/12 11:35 / lr
Potassium	7	mg/L		1		E200.7	10/24/12 15:55 / sf
Sodium	349	mg/L	D	2		E200.7	10/24/12 15:55 / sf
Sulfate	3150	mg/L	D	20		E300.0	10/15/12 16:31 / wc
PHYSICAL PROPERTIES							
pH	6.56	s.u.	H	0.01		A4500-H B	10/12/12 16:21 / ab
Solids, Total Dissolved TDS @ 180 C	6630	mg/L		10		A2540 C	10/12/12 16:11 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	10/23/12 21:16 / cp
Beryllium	ND	mg/L		0.001		E200.8	10/23/12 21:16 / cp
Cadmium	ND	mg/L		0.005		E200.8	10/23/12 21:16 / cp
Cobalt	ND	mg/L		0.01		E200.8	10/23/12 21:16 / cp
Lead	0.002	mg/L		0.001		E200.8	10/23/12 21:16 / cp
Manganese	1.62	mg/L		0.01		E200.8	10/23/12 21:16 / cp
Molybdenum	ND	mg/L		0.1		E200.8	10/23/12 21:16 / cp
Nickel	ND	mg/L		0.05		E200.8	10/23/12 21:16 / cp
Uranium	0.120	mg/L		0.0003		E200.8	10/23/12 21:16 / cp
Vanadium	ND	mg/L		0.1		E200.8	10/23/12 21:16 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	10/29/12 16:45 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	10/23/12 12:38 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.4	pCi/L	U			E900.1	10/18/12 02:12 / lbb
Gross Alpha minus Rn & U Precision (±)	0.3	pCi/L				E900.1	10/18/12 02:12 / lbb
Gross Alpha minus Rn & U MDC	0.5	pCi/L				E900.1	10/18/12 02:12 / lbb
Lead 210	0.3	pCi/L	U			E909.0	11/16/12 14:31 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	11/16/12 14:31 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	11/16/12 14:31 / eli-cs
Radium 226	0.07	pCi/L	U			E903.0	10/24/12 11:10 / trs
Radium 226 precision (±)	0.09	pCi/L				E903.0	10/24/12 11:10 / trs
Radium 226 MDC	0.14	pCi/L				E903.0	10/24/12 11:10 / trs
Radium 228	0.53	pCi/L	U			RA-05	10/19/12 20:18 / gb
Radium 228 precision (±)	0.75	pCi/L				RA-05	10/19/12 20:18 / gb
Radium 228 MDC	1.2	pCi/L				RA-05	10/19/12 20:18 / 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: C12100557-004
Client Sample ID: 808

Report Date: 11/20/12
Collection Date: 10/08/12 12:06
DateReceived: 10/12/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.04	pCi/L	U			E908.0	10/23/12 08:55 / dmf
Thorium 230 precision (±)	0.1	pCi/L				E908.0	10/23/12 08:55 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	10/23/12 08:55 / dmf
DATA QUALITY							
A/C Balance (± 5)	0.895	%				A1030 E	10/26/12 07:22 / kbh
Anions	110	meq/L				A1030 E	10/26/12 07:22 / kbh
Cations	112	meq/L				A1030 E	10/26/12 07:22 / kbh
Solids, Total Dissolved Calculated	6500	mg/L				A1030 E	10/26/12 07:22 / kbh
TDS Balance (0.80 - 1.20)	1.02					A1030 E	10/26/12 07:22 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	10/12/12 16:51 / jlr
Bromoform	ND	ug/L		0.50		E624	10/12/12 16:51 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	10/12/12 16:51 / jlr
Chloroform	2.04	ug/L		0.50		E624	10/12/12 16:51 / jlr
Trihalomethanes, Total	2.04	ug/L		0.50		E624	10/12/12 16:51 / jlr
Surr: 1,2-Dichlorobenzene-d4	104	%REC		80-120		E624	10/12/12 16:51 / jlr
Surr: Dibromofluoromethane	96.0	%REC		80-120		E624	10/12/12 16:51 / jlr
Surr: p-Bromofluorobenzene	112	%REC		80-120		E624	10/12/12 16:51 / jlr
Surr: Toluene-d8	105	%REC		80-120		E624	10/12/12 16:51 / 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.
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:		10/8/2012	7/9/2012	4/2/2012	1/2/2012
Receive Date:		10/12/2012	7/13/2012	4/6/2012	1/6/2012
Report Date:		11/20/2012	8/30/2012	5/25/2012	3/2/2012
Analyte	RUnits	C12100557-004	C12070454-004	C12040276-004	C12010151-004
Bicarbonate as HCO3	mg/L	2150	2100	2070	1920
Calcium	mg/L	765	756	747	761
Chloride	mg/L	193	180	186	183
Magnesium	mg/L	713	784	686	718
Nitrogen, Ammonia as N	mg/L	1.24	0.35	0.81	0.14
Nitrogen, Nitrate+Nitrite as N	mg/L	57	70	70	88
Potassium	mg/L	7	6	7	6
Sodium	mg/L	349	353	324	336
Sulfate	mg/L	3150	3060	3130	3020
pH	s.u.	6.56	6.61	6.55	6.67
Solids, Total Dissolved TDS @ 180 C	mg/L	6630	7200	6890	6790
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(0.01)	ND(0.01)
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	ND(0.05)	ND(0.05)
Manganese	mg/L	1.62	1.25	1.30	0.97
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	0.120	0.126	0.135	0.128
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(0.01)	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	0.4	0.07	0.1
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.3	0.2	0.2	0.2
Gross Alpha minus Rn & U MDC	pCi/L	0.5	0.3	0.4	0.4
Lead 210	pCi/L	0.3	0.3	0.008	0.1
Lead 210 precision (±)	pCi/L	0.6	0.9	0.6	0.7
Lead 210 MDC	pCi/L	1.0	1.4	1	1.1
Radium 226	pCi/L	0.07	0.40	0.01	0.21
Radium 226 precision (±)	pCi/L	0.09	0.12	0.08	0.10
Radium 226 MDC	pCi/L	0.14	0.10	0.14	0.12
Radium 228	pCi/L	0.53	-0.08	0.45	0.49
Radium 228 precision (±)	pCi/L	0.75	0.61	0.50	0.56
Radium 228 MDC	pCi/L	1.2	1.0	0.80	0.90
Thorium 230	pCi/L	0.04	0.06	-0.005	0.03
Thorium 230 precision (±)	pCi/L	0.1	0.09	0.06	0.07
Thorium 230 MDC	pCi/L	0.2	0.2	0.2	0.2
A/C Balance (± 5)	%	0.895	4.33	-0.427	2.84
Anions	meq/L	110	108	109	106
Cations	meq/L	112	118	108	112
Solids, Total Dissolved Calculated	mg/L	6500	6500	6420	6370
TDS Balance (0.80 - 1.20)		1.02	1.11	1.07	1.07
Trihalomethanes, Total	ug/L	2.04	3.26	3.92	4.28

**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: C12070454-008
Client Sample ID: GW-1

Report Date: 08/30/12
Collection Date: 07/09/12 15:04
DateReceived: 07/13/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	1900	mg/L		5		A2320 B	07/13/12 21:00 / jba
Calcium	730	mg/L		1		E200.7	08/06/12 15:05 / sf
Chloride	228	mg/L	D	4		E300.0	07/17/12 04:10 / wc
Magnesium	620	mg/L		1		E200.7	08/06/12 15:05 / sf
Nitrogen, Ammonia as N	0.41	mg/L		0.05		A4500-NH3 G	07/17/12 13:44 / lr
Nitrogen, Nitrate+Nitrite as N	92	mg/L	D	5		E353.2	07/16/12 12:52 / lr
Potassium	7	mg/L		1		E200.7	08/06/12 15:05 / sf
Sodium	433	mg/L	D	2		E200.7	08/06/12 15:05 / sf
Sulfate	2730	mg/L	D	20		E300.0	07/17/12 04:10 / wc
PHYSICAL PROPERTIES							
pH	6.74	s.u.	H	0.01		A4500-H B	07/16/12 09:49 / ab
Solids, Total Dissolved TDS @ 180 C	6270	mg/L		10		A2540 C	07/13/12 17:29 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	07/27/12 02:42 / cp
Beryllium	ND	mg/L		0.001		E200.8	08/04/12 00:06 / cp
Cadmium	ND	mg/L		0.005		E200.8	07/27/12 02:42 / cp
Cobalt	ND	mg/L		0.01		E200.8	07/27/12 02:42 / cp
Lead	ND	mg/L		0.001		E200.8	07/27/12 02:42 / cp
Manganese	0.12	mg/L		0.01		E200.8	07/27/12 02:42 / cp
Molybdenum	ND	mg/L		0.1		E200.8	07/27/12 02:42 / cp
Nickel	ND	mg/L		0.05		E200.8	07/27/12 02:42 / cp
Uranium	0.103	mg/L		0.0003		E200.8	07/27/12 02:42 / cp
Vanadium	ND	mg/L		0.1		E200.8	07/27/12 02:42 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	08/01/12 16:19 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	07/26/12 16:09 / rdw
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.3	pCi/L	U			E900.1	08/09/12 22:40 / lbb
Gross Alpha minus Rn & U Precision (±)	0.2	pCi/L				E900.1	08/09/12 22:40 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	08/09/12 22:40 / lbb
Lead 210	1	pCi/L	U			E909.0	07/30/12 16:19 / eli-cs
Lead 210 precision (±)	0.9	pCi/L				E909.0	07/30/12 16:19 / eli-cs
Lead 210 MDC	1.4	pCi/L				E909.0	07/30/12 16:19 / eli-cs
Radium 226	0.23	pCi/L				E903.0	07/31/12 02:12 / trs
Radium 226 precision (±)	0.10	pCi/L				E903.0	07/31/12 02:12 / trs
Radium 226 MDC	0.10	pCi/L				E903.0	07/31/12 02:12 / trs
Radium 228	0.16	pCi/L	U			RA-05	07/25/12 19:27 / gb
Radium 228 precision (±)	0.64	pCi/L				RA-05	07/25/12 19:27 / gb
Radium 228 MDC	1.1	pCi/L				RA-05	07/25/12 19:27 / 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: C12070454-008
Client Sample ID: GW-1

Report Date: 08/30/12
Collection Date: 07/09/12 15:04
DateReceived: 07/13/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	-0.003	pCi/L	U			E908.0	08/01/12 08:45 / dmf
Thorium 230 precision (±)	0.07	pCi/L				E908.0	08/01/12 08:45 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	08/01/12 08:45 / dmf
DATA QUALITY							
A/C Balance (± 5)	2.89	%				A1030 E	08/10/12 07:48 / kbh
Anions	101	meq/L				A1030 E	08/10/12 07:48 / kbh
Cations	107	meq/L				A1030 E	08/10/12 07:48 / kbh
Solids, Total Dissolved Calculated	6100	mg/L				A1030 E	08/10/12 07:48 / kbh
TDS Balance (0.80 - 1.20)	1.03					A1030 E	08/10/12 07:48 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	07/16/12 22:58 / jlr
Bromoform	ND	ug/L		0.50		E624	07/16/12 22:58 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	07/16/12 22:58 / jlr
Chloroform	1.96	ug/L		0.50		E624	07/16/12 22:58 / jlr
Trihalomethanes, Total	2.66	ug/L		0.50		E624	07/16/12 22:58 / jlr
Surr: 1,2-Dichlorobenzene-d4	90.0	%REC		80-120		E624	07/16/12 22:58 / jlr
Surr: Dibromofluoromethane	124	%REC	S	80-120		E624	07/16/12 22:58 / jlr
Surr: p-Bromofluorobenzene	179	%REC	S	80-120		E624	07/16/12 22:58 / jlr
Surr: Toluene-d8	107	%REC		80-120		E624	07/16/12 22:58 / 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
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: C12100557-008
Client Sample ID: GW-1

Report Date: 11/20/12
Collection Date: 10/08/12 15:15
DateReceived: 10/12/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	1950	mg/L		5		A2320 B	10/12/12 21:19 / jba
Calcium	760	mg/L		1		E200.7	10/24/12 16:16 / sf
Chloride	248	mg/L	D	4		E300.0	10/15/12 18:04 / wc
Magnesium	546	mg/L		1		E200.7	10/24/12 16:16 / sf
Nitrogen, Ammonia as N	0.17	mg/L		0.05		A4500-NH3 G	10/17/12 11:50 / lr
Nitrogen, Nitrate+Nitrite as N	86	mg/L	D	10		E353.2	10/15/12 11:45 / lr
Potassium	7	mg/L		1		E200.7	10/24/12 16:16 / sf
Sodium	408	mg/L	D	2		E200.7	10/24/12 16:16 / sf
Sulfate	2740	mg/L	D	20		E300.0	10/15/12 18:04 / wc
PHYSICAL PROPERTIES							
pH	6.65	s.u.	H	0.01		A4500-H B	10/12/12 16:43 / ab
Solids, Total Dissolved TDS @ 180 C	6230	mg/L		10		A2540 C	10/12/12 16:12 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	10/26/12 16:21 / cp
Beryllium	ND	mg/L		0.001		E200.8	10/26/12 16:21 / cp
Cadmium	ND	mg/L		0.005		E200.8	10/23/12 21:27 / cp
Cobalt	ND	mg/L		0.01		E200.8	10/26/12 16:21 / cp
Lead	ND	mg/L		0.001		E200.8	11/03/12 04:59 / cp
Manganese	0.13	mg/L		0.01		E200.8	10/26/12 16:21 / cp
Molybdenum	ND	mg/L		0.1		E200.8	10/23/12 21:27 / cp
Nickel	ND	mg/L		0.05		E200.8	10/26/12 16:21 / cp
Uranium	0.103	mg/L		0.0003		E200.8	10/23/12 21:27 / cp
Vanadium	ND	mg/L		0.1		E200.8	10/26/12 16:21 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	11/04/12 17:29 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	10/23/12 12:50 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.5	pCi/L	U			E900.1	10/18/12 02:12 / lbb
Gross Alpha minus Rn & U Precision (±)	0.4	pCi/L				E900.1	10/18/12 02:12 / lbb
Gross Alpha minus Rn & U MDC	0.5	pCi/L				E900.1	10/18/12 02:12 / lbb
Lead 210	0.6	pCi/L	U			E909.0	11/16/12 22:20 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	11/16/12 22:20 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	11/16/12 22:20 / eli-cs
Radium 226	0.26	pCi/L				E903.0	10/24/12 11:10 / trs
Radium 226 precision (±)	0.13	pCi/L				E903.0	10/24/12 11:10 / trs
Radium 226 MDC	0.15	pCi/L				E903.0	10/24/12 11:10 / trs
Radium 228	1.3	pCi/L				RA-05	10/19/12 20:18 / gb
Radium 228 precision (±)	0.84	pCi/L				RA-05	10/19/12 20:18 / gb
Radium 228 MDC	1.3	pCi/L				RA-05	10/19/12 20:18 / 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: C12100557-008
Client Sample ID: GW-1

Report Date: 11/20/12
Collection Date: 10/08/12 15:15
DateReceived: 10/12/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.01	pCi/L	U			E908.0	10/23/12 08:55 / dmf
Thorium 230 precision (±)	0.08	pCi/L				E908.0	10/23/12 08:55 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	10/23/12 08:55 / dmf
DATA QUALITY							
A/C Balance (± 5)	-0.620	%				A1030 E	10/26/12 07:22 / kbh
Anions	102	meq/L				A1030 E	10/26/12 07:22 / kbh
Cations	101	meq/L				A1030 E	10/26/12 07:22 / kbh
Solids, Total Dissolved Calculated	6100	mg/L				A1030 E	10/26/12 07:22 / kbh
TDS Balance (0.80 - 1.20)	1.03					A1030 E	10/26/12 07:22 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	10/12/12 19:10 / jlr
Bromoform	ND	ug/L		0.50		E624	10/12/12 19:10 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	10/12/12 19:10 / jlr
Chloroform	1.90	ug/L		0.50		E624	10/12/12 19:10 / jlr
Trihalomethanes, Total	1.90	ug/L		0.50		E624	10/12/12 19:10 / jlr
Surr: 1,2-Dichlorobenzene-d4	104	%REC		80-120		E624	10/12/12 19:10 / jlr
Surr: Dibromofluoromethane	100	%REC		80-120		E624	10/12/12 19:10 / jlr
Surr: p-Bromofluorobenzene	111	%REC		80-120		E624	10/12/12 19:10 / jlr
Surr: Toluene-d8	104	%REC		80-120		E624	10/12/12 19:10 / 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.
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:		10/8/2012	7/9/2012	4/2/2012	1/2/2012
Receive Date:		10/12/2012	7/13/2012	4/6/2012	1/6/2012
Report Date:		11/20/2012	8/30/2012	5/25/2012	3/2/2012
Analyte	RUnits	C12100557-008	C12070454-008	C12040276-008	C12010151-008
Bicarbonate as HCO3	mg/L	1950	1900	1850	1750
Calcium	mg/L	760	730	702	672
Chloride	mg/L	248	228	228	236
Magnesium	mg/L	546	620	580	581
Nitrogen, Ammonia as N	mg/L	0.17	0.41	0.51	0.58
Nitrogen, Nitrate+Nitrite as N	mg/L	86	92	91	90
Potassium	mg/L	7	7	7	8
Sodium	mg/L	408	433	386	388
Sulfate	mg/L	2740	2730	2750	2810
pH	s.u.	6.65	6.74	6.66	6.83
Solids, Total Dissolved TDS @ 180 C	mg/L	6230	6270	6470	6350
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(0.01)	ND(0.01)
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(0.05)	ND(0.05)
Manganese	mg/L	0.13	0.12	0.11	0.11
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	0.103	0.103	0.107	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(0.01)	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	0.3	0.1	0.3
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.4	0.2	0.2	0.3
Gross Alpha minus Rn & U MDC	pCi/L	0.5	0.3	0.4	0.4
Lead 210	pCi/L	0.6	1	0.009	0.6
Lead 210 precision (±)	pCi/L	0.6	0.9	0.8	0.6
Lead 210 MDC	pCi/L	1.0	1.4	1.3	1.1
Radium 226	pCi/L	0.26	0.23	0.04	0.36
Radium 226 precision (±)	pCi/L	0.13	0.10	0.08	0.14
Radium 226 MDC	pCi/L	0.15	0.10	0.14	0.13
Radium 228	pCi/L	1.3	0.16	0.77	0.86
Radium 228 precision (±)	pCi/L	0.84	0.64	0.51	0.65
Radium 228 MDC	pCi/L	1.3	1.1	0.79	1.0
Thorium 230	pCi/L	0.01	-0.003	0.03	-0.008
Thorium 230 precision (±)	pCi/L	0.08	0.07	0.07	0.05
Thorium 230 MDC	pCi/L	0.2	0.2	0.2	0.2
A/C Balance (± 5)	%	-0.620	2.89	-0.0454	-0.960
Anions	meq/L	102	101	99.9	100
Cations	meq/L	101	107	99.8	98.4
Solids, Total Dissolved Calculated	mg/L	6100	6100	5950	5970
TDS Balance (0.80 - 1.20)		1.03	1.03	1.09	1.06
Trihalomethanes, Total	ug/L	1.90	2.66	1.84	6.52

**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: C12070454-007
Client Sample ID: GW-2

Report Date: 08/30/12
Collection Date: 07/09/12 14:05
DateReceived: 07/13/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	2180	mg/L		5		A2320 B	07/13/12 20:48 / jba
Calcium	616	mg/L		1		E200.7	08/06/12 15:01 / sf
Chloride	203	mg/L	D	10		E300.0	07/17/12 03:55 / wc
Magnesium	1220	mg/L		1		E200.7	08/06/12 15:01 / sf
Nitrogen, Ammonia as N	1.22	mg/L		0.05		A4500-NH3 G	07/17/12 13:42 / lr
Nitrogen, Nitrate+Nitrite as N	15.4	mg/L	D	0.5		E353.2	07/16/12 12:50 / lr
Potassium	16	mg/L		1		E200.7	08/06/12 15:01 / sf
Sodium	401	mg/L	D	3		E200.7	08/06/12 15:01 / sf
Sulfate	4530	mg/L	D	40		E300.0	07/17/12 03:55 / wc
PHYSICAL PROPERTIES							
pH	6.48	s.u.	H	0.01		A4500-H B	07/16/12 09:47 / ab
Solids, Total Dissolved TDS @ 180 C	8790	mg/L		10		A2540 C	07/13/12 17:29 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	07/27/12 02:37 / cp
Beryllium	ND	mg/L		0.001		E200.8	08/04/12 00:01 / cp
Cadmium	ND	mg/L		0.005		E200.8	07/27/12 02:37 / cp
Cobalt	0.01	mg/L		0.01		E200.8	07/27/12 02:37 / cp
Lead	ND	mg/L		0.001		E200.8	07/27/12 02:37 / cp
Manganese	1.64	mg/L		0.01		E200.8	07/27/12 02:37 / cp
Molybdenum	ND	mg/L		0.1		E200.8	07/27/12 02:37 / cp
Nickel	ND	mg/L		0.05		E200.8	07/27/12 02:37 / cp
Uranium	0.0852	mg/L		0.0003		E200.8	07/27/12 02:37 / cp
Vanadium	ND	mg/L		0.1		E200.8	07/27/12 02:37 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	08/02/12 15:15 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	07/26/12 16:07 / rdw
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.1	pCi/L	U			E900.1	08/09/12 00:07 / lbb
Gross Alpha minus Rn & U Precision (±)	0.2	pCi/L				E900.1	08/09/12 00:07 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	08/09/12 00:07 / lbb
Lead 210	0.6	pCi/L	U			E909.0	07/30/12 15:31 / eli-cs
Lead 210 precision (±)	0.9	pCi/L				E909.0	07/30/12 15:31 / eli-cs
Lead 210 MDC	1.5	pCi/L				E909.0	07/30/12 15:31 / eli-cs
Radium 226	0.28	pCi/L				E903.0	07/31/12 00:30 / trs
Radium 226 precision (±)	0.11	pCi/L				E903.0	07/31/12 00:30 / trs
Radium 226 MDC	0.11	pCi/L				E903.0	07/31/12 00:30 / trs
Radium 228	0.11	pCi/L	U			RA-05	07/25/12 17:52 / gb
Radium 228 precision (±)	0.55	pCi/L				RA-05	07/25/12 17:52 / gb
Radium 228 MDC	0.91	pCi/L				RA-05	07/25/12 17:52 / 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: C12070454-007
Client Sample ID: GW-2

Report Date: 08/30/12
Collection Date: 07/09/12 14:05
DateReceived: 07/13/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.009	pCi/L	U			E908.0	08/01/12 08:45 / dmf
Thorium 230 precision (±)	0.07	pCi/L				E908.0	08/01/12 08:45 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	08/01/12 08:45 / dmf
DATA QUALITY							
A/C Balance (± 5)	4.28	%				A1030 E	08/10/12 07:48 / kbh
Anions	137	meq/L				A1030 E	08/10/12 07:48 / kbh
Cations	149	meq/L				A1030 E	08/10/12 07:48 / kbh
Solids, Total Dissolved Calculated	8200	mg/L				A1030 E	08/10/12 07:48 / kbh
TDS Balance (0.80 - 1.20)	1.08					A1030 E	08/10/12 07:48 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	07/16/12 18:18 / jlr
Bromoform	ND	ug/L		0.50		E624	07/16/12 18:18 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	07/16/12 18:18 / jlr
Chloroform	5.68	ug/L		0.50		E624	07/16/12 18:18 / jlr
Trihalomethanes, Total	6.39	ug/L		0.50		E624	07/16/12 18:18 / jlr
Surr: 1,2-Dichlorobenzene-d4	91.0	%REC		80-120		E624	07/16/12 18:18 / jlr
Surr: Dibromofluoromethane	126	%REC	S	80-120		E624	07/16/12 18:18 / jlr
Surr: p-Bromofluorobenzene	176	%REC	S	80-120		E624	07/16/12 18:18 / jlr
Surr: Toluene-d8	108	%REC		80-120		E624	07/16/12 18:18 / 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
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: C12100557-007
Client Sample ID: GW-2

Report Date: 11/20/12
Collection Date: 10/08/12 14:21
DateReceived: 10/12/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	2230	mg/L		5		A2320 B	10/12/12 21:07 / jba
Calcium	628	mg/L		1		E200.7	10/24/12 16:12 / sf
Chloride	219	mg/L	D	10		E300.0	10/15/12 17:48 / wc
Magnesium	1130	mg/L		1		E200.7	10/24/12 16:12 / sf
Nitrogen, Ammonia as N	1.4	mg/L	D	0.1		A4500-NH3 G	10/17/12 11:48 / lr
Nitrogen, Nitrate+Nitrite as N	15	mg/L	D	1		E353.2	10/15/12 11:42 / lr
Potassium	17	mg/L		1		E200.7	10/24/12 16:12 / sf
Sodium	382	mg/L	D	3		E200.7	10/24/12 16:12 / sf
Sulfate	4700	mg/L	D	40		E300.0	10/15/12 17:48 / wc
PHYSICAL PROPERTIES							
pH	6.43	s.u.	H	0.01		A4500-H B	10/12/12 16:29 / ab
Solids, Total Dissolved TDS @ 180 C	8730	mg/L		10		A2540 C	10/12/12 16:12 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	10/26/12 16:16 / cp
Beryllium	ND	mg/L		0.001		E200.8	10/26/12 16:16 / cp
Cadmium	ND	mg/L		0.005		E200.8	10/23/12 21:24 / cp
Cobalt	0.01	mg/L		0.01		E200.8	10/26/12 16:16 / cp
Lead	ND	mg/L		0.001		E200.8	10/23/12 21:24 / cp
Manganese	1.70	mg/L		0.01		E200.8	10/26/12 16:16 / cp
Molybdenum	ND	mg/L		0.1		E200.8	10/23/12 21:24 / cp
Nickel	ND	mg/L		0.05		E200.8	10/23/12 21:24 / cp
Uranium	0.0865	mg/L		0.0003		E200.8	10/23/12 21:24 / cp
Vanadium	ND	mg/L		0.1		E200.8	10/26/12 16:16 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	11/04/12 17:21 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	10/23/12 12:48 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.5	pCi/L				E900.1	10/18/12 02:12 / lbb
Gross Alpha minus Rn & U Precision (±)	0.4	pCi/L				E900.1	10/18/12 02:12 / lbb
Gross Alpha minus Rn & U MDC	0.5	pCi/L				E900.1	10/18/12 02:12 / lbb
Lead 210	0.5	pCi/L	U			E909.0	11/16/12 21:21 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	11/16/12 21:21 / eli-cs
Lead 210 MDC	1	pCi/L				E909.0	11/16/12 21:21 / eli-cs
Radium 226	0.26	pCi/L				E903.0	10/24/12 11:10 / trs
Radium 226 precision (±)	0.14	pCi/L				E903.0	10/24/12 11:10 / trs
Radium 226 MDC	0.18	pCi/L				E903.0	10/24/12 11:10 / trs
Radium 228	0.87	pCi/L	U			RA-05	10/19/12 20:18 / gb
Radium 228 precision (±)	0.98	pCi/L				RA-05	10/19/12 20:18 / gb
Radium 228 MDC	1.6	pCi/L				RA-05	10/19/12 20:18 / 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: C12100557-007
Client Sample ID: GW-2

Report Date: 11/20/12
Collection Date: 10/08/12 14:21
DateReceived: 10/12/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.02	pCi/L	U			E908.0	10/23/12 08:55 / dmf
Thorium 230 precision (±)	0.07	pCi/L				E908.0	10/23/12 08:55 / dmf
Thorium 230 MDC	0.1	pCi/L				E908.0	10/23/12 08:55 / dmf
DATA QUALITY							
A/C Balance (± 5)	0.0355	%				A1030 E	10/26/12 07:22 / kbh
Anions	142	meq/L				A1030 E	10/26/12 07:22 / kbh
Cations	142	meq/L				A1030 E	10/26/12 07:22 / kbh
Solids, Total Dissolved Calculated	8300	mg/L				A1030 E	10/26/12 07:22 / kbh
TDS Balance (0.80 - 1.20)	1.06					A1030 E	10/26/12 07:22 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	10/12/12 18:35 / jlr
Bromoform	ND	ug/L		0.50		E624	10/12/12 18:35 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	10/12/12 18:35 / jlr
Chloroform	5.68	ug/L		0.50		E624	10/12/12 18:35 / jlr
Trihalomethanes, Total	5.68	ug/L		0.50		E624	10/12/12 18:35 / jlr
Surr: 1,2-Dichlorobenzene-d4	102	%REC		80-120		E624	10/12/12 18:35 / jlr
Surr: Dibromofluoromethane	102	%REC		80-120		E624	10/12/12 18:35 / jlr
Surr: p-Bromofluorobenzene	108	%REC		80-120		E624	10/12/12 18:35 / jlr
Surr: Toluene-d8	103	%REC		80-120		E624	10/12/12 18:35 / 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.
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:		10/8/2012	7/9/2012	4/2/2012	1/2/2012
Receive Date:		10/12/2012	7/13/2012	4/6/2012	1/6/2012
Report Date:		11/20/2012	8/30/2012	5/25/2012	3/2/2012
Analyte	RUnits	C12100557-007	C12070454-007	C12040276-007	C12010151-007
Bicarbonate as HCO3	mg/L	2230	2180	2200	2030
Calcium	mg/L	628	616	626	578
Chloride	mg/L	219	203	204	208
Magnesium	mg/L	1130	1220	1110	1080
Nitrogen, Ammonia as N	mg/L	1.4	1.22	0.73	0.5
Nitrogen, Nitrate+Nitrite as N	mg/L	15	15.4	16.7	14.7
Potassium	mg/L	17	16	16	16
Sodium	mg/L	382	401	379	376
Sulfate	mg/L	4700	4530	4570	4580
pH	s.u.	6.43	6.48	6.39	6.56
Solids, Total Dissolved TDS @ 180 C	mg/L	8730	8790	8910	8580
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(0.01)	ND(0.01)
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(0.05)	ND(0.05)
Manganese	mg/L	1.70	1.64	1.59	1.45
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	0.0865	0.0852	0.0924	0.0880
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(0.01)	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	0.1	0.4	0.03
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	0.4	0.4
Lead 210	pCi/L	0.5	0.6	0.1	0.2
Lead 210 precision (±)	pCi/L	0.6	0.9	0.6	0.6
Lead 210 MDC	pCi/L	1	1.5	1	1.1
Radium 226	pCi/L	0.26	0.28	0.25	0.45
Radium 226 precision (±)	pCi/L	0.14	0.11	0.13	0.19
Radium 226 MDC	pCi/L	0.18	0.11	0.15	0.19
Radium 228	pCi/L	0.87	0.11	1.0	0.49
Radium 228 precision (±)	pCi/L	0.98	0.55	0.58	0.90
Radium 228 MDC	pCi/L	1.6	0.91	0.89	1.5
Thorium 230	pCi/L	0.02	0.009	0.03	0.1
Thorium 230 precision (±)	pCi/L	0.07	0.07	0.08	0.1
Thorium 230 MDC	pCi/L	0.1	0.2	0.2	0.2
A/C Balance (± 5)	%	0.0355	4.28	0.495	-0.556
Anions	meq/L	142	137	138	136
Cations	meq/L	142	149	139	134
Solids, Total Dissolved Calculated	mg/L	8300	8200	8070	7910
TDS Balance (0.80 - 1.20)		1.06	1.08	1.10	1.08
Trihalomethanes, Total	ug/L	5.68	6.39	6.92	6.48

****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: C12070454-014
Client Sample ID: GW-3

Report Date: 08/30/12
Collection Date: 07/10/12 14:00
DateReceived: 07/13/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	1680	mg/L		5		A2320 B	07/16/12 18:24 / jba
Calcium	917	mg/L		1		E200.7	07/17/12 15:36 / sf
Chloride	172	mg/L	D	4		E300.0	07/17/12 05:43 / wc
Magnesium	296	mg/L		1		E200.7	07/17/12 15:36 / sf
Nitrogen, Ammonia as N	0.09	mg/L		0.05		A4500-NH3 G	07/17/12 13:56 / lr
Nitrogen, Nitrate+Nitrite as N	205	mg/L	D	5		E353.2	07/16/12 13:17 / lr
Potassium	8	mg/L		1		E200.7	07/17/12 15:36 / sf
Sodium	332	mg/L		1		E200.7	07/17/12 15:36 / sf
Sulfate	2270	mg/L	D	20		E300.0	07/17/12 05:43 / wc
PHYSICAL PROPERTIES							
pH	6.61	s.u.	H	0.01		A4500-H B	07/16/12 12:14 / ab
Solids, Total Dissolved TDS @ 180 C	5510	mg/L		10		A2540 C	07/16/12 12:14 / ab
METALS - TOTAL							
Aluminum	0.1	mg/L		0.1		E200.7	07/25/12 21:48 / sf
Beryllium	ND	mg/L		0.001		E200.7	07/25/12 21:48 / sf
Cadmium	ND	mg/L		0.005		E200.7	07/25/12 21:48 / sf
Cobalt	ND	mg/L		0.01		E200.7	07/25/12 21:48 / sf
Lead	ND	mg/L		0.001		E200.8	08/07/12 12:00 / cp
Manganese	1.62	mg/L		0.01		E200.7	07/25/12 21:48 / sf
Molybdenum	ND	mg/L		0.1		E200.7	07/25/12 21:48 / sf
Nickel	ND	mg/L		0.05		E200.7	07/25/12 21:48 / sf
Uranium	0.324	mg/L		0.0003		E200.8	08/07/12 12:00 / cp
Vanadium	ND	mg/L		0.1		E200.8	08/07/12 12:00 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	08/01/12 17:54 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	07/26/12 16:32 / rdw
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.1	pCi/L	U			E900.1	08/09/12 22:40 / lbb
Gross Alpha minus Rn & U Precision (±)	0.2	pCi/L				E900.1	08/09/12 22:40 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	08/09/12 22:40 / lbb
Lead 210	0.8	pCi/L	U			E909.0	08/04/12 12:06 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	08/04/12 12:06 / eli-cs
Lead 210 MDC	1.2	pCi/L				E909.0	08/04/12 12:06 / eli-cs
Radium 226	0.22	pCi/L				E903.0	07/31/12 02:12 / trs
Radium 226 precision (±)	0.1	pCi/L				E903.0	07/31/12 02:12 / trs
Radium 226 MDC	0.10	pCi/L				E903.0	07/31/12 02:12 / trs
Radium 228	0.46	pCi/L	U			RA-05	07/25/12 19:26 / gb
Radium 228 precision (±)	0.64	pCi/L				RA-05	07/25/12 19:26 / gb
Radium 228 MDC	1.0	pCi/L				RA-05	07/25/12 19:26 / 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: C12070454-014
Client Sample ID: GW-3

Report Date: 08/30/12
Collection Date: 07/10/12 14:00
DateReceived: 07/13/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.02	pCi/L	U			E908.0	08/01/12 08:46 / dmf
Thorium 230 precision (±)	0.06	pCi/L				E908.0	08/01/12 08:46 / dmf
Thorium 230 MDC	0.1	pCi/L				E908.0	08/01/12 08:46 / dmf
DATA QUALITY							
A/C Balance (± 5)	-0.393	%				A1030 E	07/23/12 07:18 / kbh
Anions	85.5	meq/L				A1030 E	07/23/12 07:18 / kbh
Cations	84.8	meq/L				A1030 E	07/23/12 07:18 / kbh
Solids, Total Dissolved Calculated	5200	mg/L				A1030 E	07/23/12 07:18 / kbh
TDS Balance (0.80 - 1.20)	1.06					A1030 E	07/23/12 07:18 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	07/17/12 02:29 / jlr
Bromoform	ND	ug/L		0.50		E624	07/17/12 02:29 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	07/17/12 02:29 / jlr
Chloroform	ND	ug/L		0.50		E624	07/17/12 02:29 / jlr
Trihalomethanes, Total	0.92	ug/L		0.50		E624	07/17/12 02:29 / jlr
Surr: 1,2-Dichlorobenzene-d4	91.0	%REC		80-120		E624	07/17/12 02:29 / jlr
Surr: Dibromofluoromethane	125	%REC	S	80-120		E624	07/17/12 02:29 / jlr
Surr: p-Bromofluorobenzene	171	%REC	S	80-120		E624	07/17/12 02:29 / jlr
Surr: Toluene-d8	110	%REC		80-120		E624	07/17/12 02:29 / 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
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: C12100557-014
Client Sample ID: GW-3

Report Date: 11/20/12
Collection Date: 10/09/12 14:57
DateReceived: 10/12/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	1710	mg/L		5		A2320 B	10/12/12 22:59 / jba
Calcium	937	mg/L		1		E200.7	10/24/12 17:00 / sf
Chloride	177	mg/L	D	4		E300.0	10/15/12 20:07 / wc
Magnesium	284	mg/L		1		E200.7	10/24/12 17:00 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	10/16/12 11:43 / ljl
Nitrogen, Nitrate+Nitrite as N	87	mg/L	D	10		E353.2	10/15/12 12:13 / lr
Potassium	9	mg/L		1		E200.7	10/24/12 17:00 / sf
Sodium	328	mg/L	D	2		E200.7	10/24/12 17:00 / sf
Sulfate	2280	mg/L	D	20		E300.0	10/15/12 20:07 / wc
PHYSICAL PROPERTIES							
pH	6.64	s.u.	H	0.01		A4500-H B	10/12/12 16:59 / ab
Solids, Total Dissolved TDS @ 180 C	5330	mg/L		10		A2540 C	10/12/12 16:14 / ab
METALS - TOTAL							
Aluminum	0.2	mg/L		0.1		E200.8	10/26/12 16:43 / cp
Beryllium	ND	mg/L		0.001		E200.8	10/26/12 16:43 / cp
Cadmium	ND	mg/L		0.005		E200.8	10/23/12 21:54 / cp
Cobalt	0.01	mg/L		0.01		E200.8	10/26/12 16:43 / cp
Lead	ND	mg/L		0.001		E200.8	10/23/12 21:54 / cp
Manganese	1.75	mg/L		0.01		E200.8	10/26/12 16:43 / cp
Molybdenum	ND	mg/L		0.1		E200.8	10/23/12 21:54 / cp
Nickel	ND	mg/L		0.05		E200.8	10/23/12 21:54 / cp
Uranium	0.295	mg/L		0.0003		E200.8	10/23/12 21:54 / cp
Vanadium	ND	mg/L		0.1		E200.8	10/26/12 16:43 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	11/04/12 18:59 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	10/23/12 13:01 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.05	pCi/L	U			E900.1	10/20/12 12:14 / lbb
Gross Alpha minus Rn & U Precision (±)	0.4	pCi/L				E900.1	10/20/12 12:14 / lbb
Gross Alpha minus Rn & U MDC	0.6	pCi/L				E900.1	10/20/12 12:14 / lbb
Lead 210	-0.4	pCi/L	U			E909.0	11/17/12 03:12 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	11/17/12 03:12 / eli-cs
Lead 210 MDC	1	pCi/L				E909.0	11/17/12 03:12 / eli-cs
Radium 226	0.08	pCi/L	U			E903.0	10/24/12 13:24 / trs
Radium 226 precision (±)	0.10	pCi/L				E903.0	10/24/12 13:24 / trs
Radium 226 MDC	0.15	pCi/L				E903.0	10/24/12 13:24 / trs
Radium 228	0.85	pCi/L	U			RA-05	10/19/12 22:00 / gb
Radium 228 precision (±)	1.0	pCi/L				RA-05	10/19/12 22:00 / gb
Radium 228 MDC	1.6	pCi/L				RA-05	10/19/12 22:00 / 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: C12100557-014
Client Sample ID: GW-3

Report Date: 11/20/12
Collection Date: 10/09/12 14:57
DateReceived: 10/12/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.09	pCi/L	U			E908.0	10/23/12 08:55 / dmf
Thorium 230 precision (±)	0.1	pCi/L				E908.0	10/23/12 08:55 / dmf
Thorium 230 MDC	0.1	pCi/L				E908.0	10/23/12 08:55 / dmf
DATA QUALITY							
A/C Balance (± 5)	-0.772	%				A1030 E	10/26/12 07:23 / kbh
Anions	85.9	meq/L				A1030 E	10/26/12 07:23 / kbh
Cations	84.6	meq/L				A1030 E	10/26/12 07:23 / kbh
Solids, Total Dissolved Calculated	5200	mg/L				A1030 E	10/26/12 07:23 / kbh
TDS Balance (0.80 - 1.20)	1.02					A1030 E	10/26/12 07:23 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	10/13/12 02:41 / jlr
Bromoform	ND	ug/L		0.50		E624	10/13/12 02:41 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	10/13/12 02:41 / jlr
Chloroform	ND	ug/L		0.50		E624	10/13/12 02:41 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	10/13/12 02:41 / jlr
Surr: 1,2-Dichlorobenzene-d4	104	%REC		80-120		E624	10/13/12 02:41 / jlr
Surr: Dibromofluoromethane	104	%REC		80-120		E624	10/13/12 02:41 / jlr
Surr: p-Bromofluorobenzene	107	%REC		80-120		E624	10/13/12 02:41 / jlr
Surr: Toluene-d8	105	%REC		80-120		E624	10/13/12 02:41 / 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.
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:		10/9/2012	7/9/2012 10	4/3/2012	1/3/2012
Receive Date:		10/12/2012	7/13/2012	4/6/2012	1/6/2012
Report Date:		11/20/2012	8/30/2012	5/25/2012	3/2/2012
Analyte	RUnits	C12100557-014	C12070454-014	C12040276-014	C12010151-014
Bicarbonate as HCO3	mg/L	1710	1680	1640	1380
Calcium	mg/L	937	917	903	946
Chloride	mg/L	177	172	167	167
Magnesium	mg/L	284	296	270	292
Nitrogen, Ammonia as N	mg/L	ND(0.05)	0.09	ND(0.05)	ND(0.05)
Nitrogen, Nitrate+Nitrite as N	mg/L	87	205	88	89
Potassium	mg/L	9	8	9	10
Sodium	mg/L	328	332	315	342
Sulfate	mg/L	2280	2270	2210	2180
pH	s.u.	6.64	6.61	6.61	6.82
Solids, Total Dissolved TDS @ 180 C	mg/L	5330	5510	5480	5050
Aluminum	mg/L	0.2	0.1	ND(0.1)	0.2
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.01)	ND(0.01)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	0.01	ND(0.01)	ND(0.01)	ND(0.01)
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.05)	ND(0.05)
Manganese	mg/L	1.75	1.62	1.38	1.06
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	0.295	0.324	0.274	0.256
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(0.01)	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	0.05	0.1	0.07	0.4
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.4	0.2	0.2	0.3
Gross Alpha minus Rn & U MDC	pCi/L	0.6	0.3	0.4	0.4
Lead 210	pCi/L	-0.4	0.8	0.5	0.09
Lead 210 precision (±)	pCi/L	0.6	0.7	0.7	0.6
Lead 210 MDC	pCi/L	1	1.2	1.2	1.1
Radium 226	pCi/L	0.08	0.22	0.10	0.37
Radium 226 precision (±)	pCi/L	0.10	0.1	0.1	0.15
Radium 226 MDC	pCi/L	0.15	0.10	0.14	0.15
Radium 228	pCi/L	0.85	0.46	0.18	0.54
Radium 228 precision (±)	pCi/L	1.0	0.64	0.61	0.86
Radium 228 MDC	pCi/L	1.6	1.0	1.0	1.4
Thorium 230	pCi/L	0.09	0.02	0.08	-0.004
Thorium 230 precision (±)	pCi/L	0.1	0.06	0.09	0.04
Thorium 230 MDC	pCi/L	0.1	0.1	0.2	0.1
A/C Balance (± 5)	%	-0.772	-0.393	-1.19	4.91
Anions	meq/L	85.9	85.5	83.2	78.3
Cations	meq/L	84.6	84.8	81.3	86.4
Solids, Total Dissolved Calculated	mg/L	5200	5200	5050	4990
TDS Balance (0.80 - 1.20)		1.02	1.06	1.09	1.01
Trihalomethanes, Total	ug/L	ND(0.50)	0.92	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: C12070454-002
Client Sample ID: EPA-23

Report Date: 08/30/12
Collection Date: 07/09/12 10:36
DateReceived: 07/13/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	1210	mg/L		5		A2320 B	07/13/12 20:11 / jba
Calcium	658	mg/L		1		E200.7	07/17/12 14:34 / sf
Chloride	97	mg/L	D	4		E300.0	07/17/12 01:36 / wc
Magnesium	361	mg/L		1		E200.7	07/17/12 14:34 / sf
Nitrogen, Ammonia as N	0.53	mg/L		0.05		A4500-NH3 G	07/17/12 13:18 / lr
Nitrogen, Nitrate+Nitrite as N	0.8	mg/L		0.1		E353.2	07/16/12 12:40 / lr
Potassium	9	mg/L		1		E200.7	07/17/12 14:34 / sf
Sodium	129	mg/L		1		E200.7	07/17/12 14:34 / sf
Sulfate	2280	mg/L	D	20		E300.0	07/17/12 01:36 / wc
PHYSICAL PROPERTIES							
pH	6.82	s.u.	H	0.01		A4500-H B	07/16/12 09:35 / ab
Solids, Total Dissolved TDS @ 180 C	4660	mg/L		10		A2540 C	07/13/12 17:28 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	07/27/12 01:55 / cp
Beryllium	ND	mg/L		0.001		E200.8	08/03/12 23:39 / cp
Cadmium	ND	mg/L		0.005		E200.8	07/27/12 01:55 / cp
Cobalt	ND	mg/L		0.01		E200.8	07/27/12 01:55 / cp
Lead	ND	mg/L		0.001		E200.8	07/27/12 01:55 / cp
Manganese	5.74	mg/L		0.01		E200.8	07/27/12 01:55 / cp
Molybdenum	ND	mg/L		0.1		E200.8	07/27/12 01:55 / cp
Nickel	ND	mg/L		0.05		E200.8	07/27/12 01:55 / cp
Uranium	0.0267	mg/L		0.0003		E200.8	07/27/12 01:55 / cp
Vanadium	ND	mg/L		0.1		E200.8	07/27/12 01:55 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	08/01/12 15:01 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	07/26/12 14:52 / rdw
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.06	pCi/L	U			E900.1	08/09/12 00:07 / lbb
Gross Alpha minus Rn & U Precision (±)	0.2	pCi/L				E900.1	08/09/12 00:07 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	08/09/12 00:07 / lbb
Lead 210	0.5	pCi/L	U			E909.0	07/30/12 11:34 / eli-cs
Lead 210 precision (±)	0.9	pCi/L				E909.0	07/30/12 11:34 / eli-cs
Lead 210 MDC	1.4	pCi/L				E909.0	07/30/12 11:34 / eli-cs
Radium 226	0.33	pCi/L				E903.0	07/31/12 00:30 / trs
Radium 226 precision (±)	0.12	pCi/L				E903.0	07/31/12 00:30 / trs
Radium 226 MDC	0.10	pCi/L				E903.0	07/31/12 00:30 / trs
Radium 228	0.13	pCi/L	U			RA-05	07/25/12 17:52 / gb
Radium 228 precision (±)	0.53	pCi/L				RA-05	07/25/12 17:52 / gb
Radium 228 MDC	0.88	pCi/L				RA-05	07/25/12 17:52 / 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: C12070454-002
Client Sample ID: EPA-23

Report Date: 08/30/12
Collection Date: 07/09/12 10:36
DateReceived: 07/13/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.05	pCi/L	U			E908.0	08/01/12 08:45 / dmf
Thorium 230 precision (±)	0.08	pCi/L				E908.0	08/01/12 08:45 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	08/01/12 08:45 / dmf
DATA QUALITY							
A/C Balance (± 5)	-1.21	%				A1030 E	07/23/12 07:17 / kbh
Anions	70.1	meq/L				A1030 E	07/23/12 07:17 / kbh
Cations	68.4	meq/L				A1030 E	07/23/12 07:17 / kbh
Solids, Total Dissolved Calculated	4200	mg/L				A1030 E	07/23/12 07:17 / kbh
TDS Balance (0.80 - 1.20)	1.12					A1030 E	07/23/12 07:17 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	07/16/12 15:23 / jlr
Bromoform	ND	ug/L		0.50		E624	07/16/12 15:23 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	07/16/12 15:23 / jlr
Chloroform	ND	ug/L		0.50		E624	07/16/12 15:23 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	07/16/12 15:23 / jlr
Surr: 1,2-Dichlorobenzene-d4	90.0	%REC		80-120		E624	07/16/12 15:23 / jlr
Surr: Dibromofluoromethane	116	%REC		80-120		E624	07/16/12 15:23 / jlr
Surr: p-Bromofluorobenzene	178	%REC	S	80-120		E624	07/16/12 15:23 / jlr
Surr: Toluene-d8	105	%REC		80-120		E624	07/16/12 15:23 / 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
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: C12100557-002
Client Sample ID: EPA-23

Report Date: 11/20/12
Collection Date: 10/08/12 10:43
DateReceived: 10/12/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	1260	mg/L		5		A2320 B	10/12/12 20:07 / jba
Calcium	703	mg/L		1		E200.7	10/24/12 15:47 / sf
Chloride	104	mg/L	D	4		E300.0	10/15/12 15:30 / wc
Magnesium	378	mg/L		1		E200.7	10/24/12 15:47 / sf
Nitrogen, Ammonia as N	0.66	mg/L		0.05		A4500-NH3 G	10/16/12 11:05 / ljl
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	10/15/12 11:20 / lr
Potassium	11	mg/L		1		E200.7	10/24/12 15:47 / sf
Sodium	145	mg/L	D	2		E200.7	10/24/12 15:47 / sf
Sulfate	2310	mg/L	D	20		E300.0	10/15/12 15:30 / wc
PHYSICAL PROPERTIES							
pH	6.70	s.u.	H	0.01		A4500-H B	10/12/12 16:16 / ab
Solids, Total Dissolved TDS @ 180 C	4540	mg/L		10		A2540 C	10/12/12 16:10 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	10/23/12 21:11 / cp
Beryllium	ND	mg/L		0.001		E200.8	10/23/12 21:11 / cp
Cadmium	ND	mg/L		0.005		E200.8	10/23/12 21:11 / cp
Cobalt	ND	mg/L		0.01		E200.8	10/23/12 21:11 / cp
Lead	ND	mg/L		0.001		E200.8	10/23/12 21:11 / cp
Manganese	6.09	mg/L		0.01		E200.8	10/23/12 21:11 / cp
Molybdenum	ND	mg/L		0.1		E200.8	10/23/12 21:11 / cp
Nickel	ND	mg/L		0.05		E200.8	10/23/12 21:11 / cp
Uranium	0.0283	mg/L		0.0003		E200.8	10/23/12 21:11 / cp
Vanadium	ND	mg/L		0.1		E200.8	10/23/12 21:11 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	10/29/12 16:29 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	10/23/12 12:34 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.3	pCi/L	U			E900.1	10/17/12 23:57 / lbb
Gross Alpha minus Rn & U Precision (±)	0.3	pCi/L				E900.1	10/17/12 23:57 / lbb
Gross Alpha minus Rn & U MDC	0.5	pCi/L				E900.1	10/17/12 23:57 / lbb
Lead 210	0.5	pCi/L	U			E909.0	11/16/12 12:34 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	11/16/12 12:34 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	11/16/12 12:34 / eli-cs
Radium 226	0.18	pCi/L				E903.0	10/24/12 11:10 / trs
Radium 226 precision (±)	0.13	pCi/L				E903.0	10/24/12 11:10 / trs
Radium 226 MDC	0.18	pCi/L				E903.0	10/24/12 11:10 / trs
Radium 228	0.10	pCi/L	U			RA-05	10/19/12 20:18 / gb
Radium 228 precision (±)	0.96	pCi/L				RA-05	10/19/12 20:18 / gb
Radium 228 MDC	1.6	pCi/L				RA-05	10/19/12 20:18 / 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: C12100557-002
Client Sample ID: EPA-23

Report Date: 11/20/12
Collection Date: 10/08/12 10:43
DateReceived: 10/12/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.08	pCi/L	U			E908.0	10/23/12 08:55 / dmf
Thorium 230 precision (±)	0.1	pCi/L				E908.0	10/23/12 08:55 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	10/23/12 08:55 / dmf
DATA QUALITY							
A/C Balance (± 5)	0.816	%				A1030 E	10/26/12 07:21 / kbh
Anions	71.7	meq/L				A1030 E	10/26/12 07:21 / kbh
Cations	72.8	meq/L				A1030 E	10/26/12 07:21 / kbh
Solids, Total Dissolved Calculated	4300	mg/L				A1030 E	10/26/12 07:21 / kbh
TDS Balance (0.80 - 1.20)	1.06					A1030 E	10/26/12 07:21 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	10/12/12 15:42 / jlr
Bromoform	ND	ug/L		0.50		E624	10/12/12 15:42 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	10/12/12 15:42 / jlr
Chloroform	ND	ug/L		0.50		E624	10/12/12 15:42 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	10/12/12 15:42 / jlr
Surr: 1,2-Dichlorobenzene-d4	102	%REC		80-120		E624	10/12/12 15:42 / jlr
Surr: Dibromofluoromethane	96.0	%REC		80-120		E624	10/12/12 15:42 / jlr
Surr: p-Bromofluorobenzene	110	%REC		80-120		E624	10/12/12 15:42 / jlr
Surr: Toluene-d8	106	%REC		80-120		E624	10/12/12 15:42 / 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.
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:		10/8/2012	7/9/2012	4/2/2012	1/2/2012
Receive Date:		10/12/2012	7/13/2012	4/6/2012	1/6/2012
Report Date:		11/20/2012	8/30/2012	5/25/2012	3/2/2012
Analyte	RUnits	C12100557-002	C12070454-002	C12040276-002	C12010151-002
Bicarbonate as HCO3	mg/L	1260	1210	1200	1160
Calcium	mg/L	703	658	658	646
Chloride	mg/L	104	97	99	107
Magnesium	mg/L	378	361	371	384
Nitrogen, Ammonia as N	mg/L	0.66	0.53	0.63	2.1
Nitrogen, Nitrate+Nitrite as N	mg/L	ND(0.1)	0.8	0.2	13
Potassium	mg/L	11	9	11	12
Sodium	mg/L	145	129	141	152
Sulfate	mg/L	2310	2280	2340	2350
pH	s.u.	6.70	6.82	6.66	6.86
Solids, Total Dissolved TDS @ 180 C	mg/L	4540	4660	4670	4720
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(0.01)	ND(0.01)
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(0.05)	ND(0.05)
Manganese	mg/L	6.09	5.74	6.15	5.78
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	0.0283	0.0267	0.0342	0.0305
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(0.01)	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	0.06	-0.1	0.5
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.3	0.2	0.2	0.3
Gross Alpha minus Rn & U MDC	pCi/L	0.5	0.3	0.4	0.4
Lead 210	pCi/L	0.5	0.5	0.1	0.2
Lead 210 precision (±)	pCi/L	0.6	0.9	0.6	0.6
Lead 210 MDC	pCi/L	1.0	1.4	1	1.1
Radium 226	pCi/L	0.18	0.33	0.24	0.48
Radium 226 precision (±)	pCi/L	0.13	0.12	0.13	0.18
Radium 226 MDC	pCi/L	0.18	0.10	0.16	0.18
Radium 228	pCi/L	0.10	0.13	0.22	-0.05
Radium 228 precision (±)	pCi/L	0.96	0.53	0.56	0.81
Radium 228 MDC	pCi/L	1.6	0.88	0.92	1.4
Thorium 230	pCi/L	0.08	0.05	-0.004	0.01
Thorium 230 precision (±)	pCi/L	0.1	0.08	0.05	0.06
Thorium 230 MDC	pCi/L	0.2	0.2	0.2	0.2
A/C Balance (± 5)	%	0.816	-1.21	-1.02	-0.571
Anions	meq/L	71.7	70.1	71.3	71.7
Cations	meq/L	72.8	68.4	69.8	70.9
Solids, Total Dissolved Calculated	mg/L	4300	4200	4230	4290
TDS Balance (0.80 - 1.20)		1.06	1.12	1.10	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: SW Alluvium
Lab ID: C12070454-015
Client Sample ID: EPA-25

Report Date: 08/30/12
Collection Date: 07/10/12 15:57
DateReceived: 07/13/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	1160	mg/L		5		A2320 B	07/13/12 22:07 / jba
Calcium	797	mg/L		1		E200.7	08/06/12 15:13 / sf
Chloride	103	mg/L	D	4		E300.0	07/17/12 05:58 / wc
Magnesium	245	mg/L		1		E200.7	08/06/12 15:13 / sf
Nitrogen, Ammonia as N	0.08	mg/L		0.05		A4500-NH3 G	07/17/12 13:58 / lr
Nitrogen, Nitrate+Nitrite as N	79	mg/L	D	5		E353.2	07/16/12 13:20 / lr
Potassium	8	mg/L		1		E200.7	08/06/12 15:13 / sf
Sodium	196	mg/L	D	2		E200.7	08/06/12 15:13 / sf
Sulfate	1750	mg/L	D	20		E300.0	07/17/12 05:58 / wc
PHYSICAL PROPERTIES							
pH	6.93	s.u.	H	0.01		A4500-H B	07/16/12 10:17 / ab
Solids, Total Dissolved TDS @ 180 C	4260	mg/L		10		A2540 C	07/16/12 12:05 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	07/25/12 21:52 / sf
Beryllium	ND	mg/L		0.001		E200.7	07/25/12 21:52 / sf
Cadmium	ND	mg/L		0.005		E200.7	07/25/12 21:52 / sf
Cobalt	ND	mg/L		0.01		E200.7	07/25/12 21:52 / sf
Lead	ND	mg/L		0.001		E200.8	08/07/12 12:05 / cp
Manganese	0.06	mg/L		0.01		E200.7	07/25/12 21:52 / sf
Molybdenum	ND	mg/L		0.1		E200.7	07/25/12 21:52 / sf
Nickel	ND	mg/L		0.05		E200.7	07/25/12 21:52 / sf
Uranium	0.148	mg/L		0.0003		E200.8	08/07/12 12:05 / cp
Vanadium	ND	mg/L		0.1		E200.8	08/07/12 12:05 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	08/01/12 18:01 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	07/26/12 16:34 / rdw
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.2	pCi/L	U			E900.1	08/09/12 22:40 / lbb
Gross Alpha minus Rn & U Precision (±)	0.2	pCi/L				E900.1	08/09/12 22:40 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	08/09/12 22:40 / lbb
Lead 210	0.2	pCi/L	U			E909.0	08/04/12 12:54 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	08/04/12 12:54 / eli-cs
Lead 210 MDC	1.2	pCi/L				E909.0	08/04/12 12:54 / eli-cs
Radium 226	-0.03	pCi/L	U			E903.0	07/31/12 17:28 / trs
Radium 226 precision (±)	0.08	pCi/L				E903.0	07/31/12 17:28 / trs
Radium 226 MDC	0.16	pCi/L				E903.0	07/31/12 17:28 / trs
Radium 228	0.31	pCi/L	U			RA-05	07/26/12 18:55 / gb
Radium 228 precision (±)	0.51	pCi/L				RA-05	07/26/12 18:55 / gb
Radium 228 MDC	0.83	pCi/L				RA-05	07/26/12 18:55 / 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: C12070454-015
Client Sample ID: EPA-25

Report Date: 08/30/12
Collection Date: 07/10/12 15:57
DateReceived: 07/13/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.02	pCi/L	U			E908.0	08/01/12 08:46 / dmf
Thorium 230 precision (±)	0.07	pCi/L				E908.0	08/01/12 08:46 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	08/01/12 08:46 / dmf
DATA QUALITY							
A/C Balance (± 5)	3.93	%				A1030 E	08/10/12 07:48 / kbh
Anions	63.5	meq/L				A1030 E	08/10/12 07:48 / kbh
Cations	68.7	meq/L				A1030 E	08/10/12 07:48 / kbh
Solids, Total Dissolved Calculated	4000	mg/L				A1030 E	08/10/12 07:48 / kbh
TDS Balance (0.80 - 1.20)	1.07					A1030 E	08/10/12 07:48 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	07/17/12 03:05 / jlr
Bromoform	ND	ug/L		0.50		E624	07/17/12 03:05 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	07/17/12 03:05 / jlr
Chloroform	ND	ug/L		0.50		E624	07/17/12 03:05 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	07/17/12 03:05 / jlr
Surr: 1,2-Dichlorobenzene-d4	93.0	%REC		80-120		E624	07/17/12 03:05 / jlr
Surr: Dibromofluoromethane	132	%REC	S	80-120		E624	07/17/12 03:05 / jlr
Surr: p-Bromofluorobenzene	184	%REC	S	80-120		E624	07/17/12 03:05 / jlr
Surr: Toluene-d8	113	%REC		80-120		E624	07/17/12 03:05 / 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
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: C12100557-015
Client Sample ID: EPA-25

Report Date: 11/20/12
Collection Date: 10/09/12 16:48
DateReceived: 10/12/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	1240	mg/L		5		A2320 B	10/12/12 23:09 / jba
Calcium	810	mg/L		1		E200.7	10/24/12 17:08 / sf
Chloride	115	mg/L	D	4		E300.0	10/15/12 20:53 / wc
Magnesium	226	mg/L		1		E200.7	10/24/12 17:08 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	10/16/12 11:49 / ljl
Nitrogen, Nitrate+Nitrite as N	72	mg/L	D	10		E353.2	10/15/12 12:15 / lr
Potassium	8	mg/L		1		E200.7	10/24/12 17:08 / sf
Sodium	191	mg/L	D	2		E200.7	10/24/12 17:08 / sf
Sulfate	1830	mg/L	D	20		E300.0	10/15/12 20:53 / wc
PHYSICAL PROPERTIES							
pH	6.90	s.u.	H	0.01		A4500-H B	10/12/12 17:02 / ab
Solids, Total Dissolved TDS @ 180 C	4180	mg/L		10		A2540 C	10/12/12 16:14 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	10/26/12 17:04 / cp
Beryllium	ND	mg/L		0.001		E200.8	10/26/12 17:04 / cp
Cadmium	ND	mg/L		0.005		E200.8	10/23/12 21:57 / cp
Cobalt	ND	mg/L		0.01		E200.8	10/26/12 17:04 / cp
Lead	ND	mg/L		0.001		E200.8	10/23/12 21:57 / cp
Manganese	0.23	mg/L		0.01		E200.8	10/26/12 17:04 / cp
Molybdenum	ND	mg/L		0.1		E200.8	10/23/12 21:57 / cp
Nickel	ND	mg/L		0.05		E200.8	10/23/12 21:57 / cp
Uranium	0.120	mg/L		0.0003		E200.8	10/23/12 21:57 / cp
Vanadium	ND	mg/L		0.1		E200.8	10/26/12 17:04 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	11/04/12 19:07 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	10/23/12 13:03 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	-0.02	pCi/L	U			E900.1	10/20/12 12:14 / lbb
Gross Alpha minus Rn & U Precision (±)	0.3	pCi/L				E900.1	10/20/12 12:14 / lbb
Gross Alpha minus Rn & U MDC	0.6	pCi/L				E900.1	10/20/12 12:14 / lbb
Lead 210	0.4	pCi/L	U			E909.0	11/17/12 04:10 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	11/17/12 04:10 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	11/17/12 04:10 / eli-cs
Radium 226	-0.05	pCi/L	U			E903.0	10/24/12 13:24 / trs
Radium 226 precision (±)	0.08	pCi/L				E903.0	10/24/12 13:24 / trs
Radium 226 MDC	0.17	pCi/L				E903.0	10/24/12 13:24 / trs
Radium 228	0.21	pCi/L	U			RA-05	10/19/12 22:00 / gb
Radium 228 precision (±)	1.1	pCi/L				RA-05	10/19/12 22:00 / gb
Radium 228 MDC	1.8	pCi/L				RA-05	10/19/12 22:00 / 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: C12100557-015
Client Sample ID: EPA-25

Report Date: 11/20/12
Collection Date: 10/09/12 16:48
DateReceived: 10/12/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	-0.01	pCi/L	U			E908.0	10/23/12 08:55 / dmf
Thorium 230 precision (±)	0.04	pCi/L				E908.0	10/23/12 08:55 / dmf
Thorium 230 MDC	0.1	pCi/L				E908.0	10/23/12 08:55 / dmf
DATA QUALITY							
A/C Balance (± 5)	0.489	%				A1030 E	10/26/12 07:23 / kbh
Anions	66.9	meq/L				A1030 E	10/26/12 07:23 / kbh
Cations	67.5	meq/L				A1030 E	10/26/12 07:23 / kbh
Solids, Total Dissolved Calculated	4100	mg/L				A1030 E	10/26/12 07:23 / kbh
TDS Balance (0.80 - 1.20)	1.01					A1030 E	10/26/12 07:23 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	10/13/12 03:16 / jlr
Bromoform	ND	ug/L		0.50		E624	10/13/12 03:16 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	10/13/12 03:16 / jlr
Chloroform	ND	ug/L		0.50		E624	10/13/12 03:16 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	10/13/12 03:16 / jlr
Surr: 1,2-Dichlorobenzene-d4	103	%REC		80-120		E624	10/13/12 03:16 / jlr
Surr: Dibromofluoromethane	102	%REC		80-120		E624	10/13/12 03:16 / jlr
Surr: p-Bromofluorobenzene	108	%REC		80-120		E624	10/13/12 03:16 / jlr
Surr: Toluene-d8	106	%REC		80-120		E624	10/13/12 03:16 / 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.
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:		10/9/2012	7/~~9~~10/2012	4/3/2012	1/3/2012
Receive Date:		10/12/2012	7/13/2012	4/6/2012	1/6/2012
Report Date:		11/20/2012	8/30/2012	5/25/2012	3/2/2012
Analyte	RUnits	C12100557-015	C12070454-015	C12040276-015	C12010151-015
Bicarbonate as HCO3	mg/L	1240	1160	1110	1080
Calcium	mg/L	810	797	756	793
Chloride	mg/L	115	103	103	103
Magnesium	mg/L	226	245	217	239
Nitrogen, Ammonia as N	mg/L	ND(0.05)	0.08	ND(0.05)	ND(0.05)
Nitrogen, Nitrate+Nitrite as N	mg/L	72	79	75	78
Potassium	mg/L	8	8	7	9
Sodium	mg/L	191	196	177	192
Sulfate	mg/L	1830	1750	1790	1780
pH	s.u.	6.90	6.93	6.90	7.00
Solids, Total Dissolved TDS @ 180 C	mg/L	4180	4260	4170	4140
Aluminum	mg/L	ND(0.1)	ND(0.1)	0.2	ND(0.1)
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.01)	ND(0.01)
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(0.05)	ND(0.05)
Manganese	mg/L	0.23	0.06	0.21	0.18
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	0.120	0.148	0.110	0.120
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(0.01)	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	-0.02	0.2	-0.05	0.07
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.3	0.2	0.2	0.2
Gross Alpha minus Rn & U MDC	pCi/L	0.6	0.3	0.4	0.4
Lead 210	pCi/L	0.4	0.2	0.2	0.05
Lead 210 precision (±)	pCi/L	0.6	0.7	0.8	0.6
Lead 210 MDC	pCi/L	1.0	1.2	1.3	1.1
Radium 226	pCi/L	-0.05	-0.03	-0.05	0.31
Radium 226 precision (±)	pCi/L	0.08	0.08	0.08	0.16
Radium 226 MDC	pCi/L	0.17	0.16	0.16	0.19
Radium 228	pCi/L	0.21	0.31	0.63	-0.5
Radium 228 precision (±)	pCi/L	1.1	0.51	0.70	1.0
Radium 228 MDC	pCi/L	1.8	0.83	1.1	1.8
Thorium 230	pCi/L	-0.01	0.02	0.008	0.08
Thorium 230 precision (±)	pCi/L	0.04	0.07	0.05	0.09
Thorium 230 MDC	pCi/L	0.1	0.2	0.1	0.2
A/C Balance (± 5)	%	0.489	3.93	0.0300	3.44
Anions	meq/L	66.9	63.5	63.4	63.3
Cations	meq/L	67.5	68.7	63.5	67.8
Solids, Total Dissolved Calculated	mg/L	4100	4000	3930	4020
TDS Balance (0.80 - 1.20)		1.01	1.07	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: C12070454-012
Client Sample ID: EPA-28

Report Date: 08/30/12
Collection Date: 07/10/12 10:40
DateReceived: 07/13/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	798	mg/L		5		A2320 B	07/13/12 21:49 / jba
Calcium	537	mg/L		1		E200.7	07/17/12 15:28 / sf
Chloride	121	mg/L	D	4		E300.0	07/17/12 05:12 / wc
Magnesium	498	mg/L		1		E200.7	07/17/12 15:28 / sf
Nitrogen, Ammonia as N	0.13	mg/L		0.05		A4500-NH3 G	07/17/12 13:52 / lr
Nitrogen, Nitrate+Nitrite as N	30	mg/L	D	2		E353.2	07/16/12 13:12 / lr
Potassium	11	mg/L		1		E200.7	07/17/12 15:28 / sf
Sodium	227	mg/L		1		E200.7	07/17/12 15:28 / sf
Sulfate	2730	mg/L	D	20		E300.0	07/17/12 05:12 / wc
PHYSICAL PROPERTIES							
pH	6.91	s.u.	H	0.01		A4500-H B	07/16/12 10:00 / ab
Solids, Total Dissolved TDS @ 180 C	5050	mg/L		10		A2540 C	07/16/12 12:05 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	07/27/12 03:19 / cp
Beryllium	ND	mg/L		0.001		E200.8	08/04/12 00:42 / cp
Cadmium	ND	mg/L		0.005		E200.8	07/27/12 03:19 / cp
Cobalt	ND	mg/L		0.01		E200.8	08/04/12 00:42 / cp
Lead	ND	mg/L		0.001		E200.8	07/27/12 03:19 / cp
Manganese	0.77	mg/L		0.01		E200.8	07/27/12 03:19 / cp
Molybdenum	ND	mg/L		0.1		E200.8	07/27/12 03:19 / cp
Nickel	ND	mg/L		0.05		E200.8	07/27/12 03:19 / cp
Uranium	0.0468	mg/L		0.0003		E200.8	07/27/12 03:19 / cp
Vanadium	ND	mg/L		0.1		E200.8	07/27/12 03:19 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	08/01/12 17:07 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	07/26/12 16:21 / rdw
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.5	pCi/L				E900.1	08/09/12 22:40 / lbb
Gross Alpha minus Rn & U Precision (±)	0.3	pCi/L				E900.1	08/09/12 22:40 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	08/09/12 22:40 / lbb
Lead 210	0.3	pCi/L	U			E909.0	08/04/12 10:31 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	08/04/12 10:31 / eli-cs
Lead 210 MDC	1.2	pCi/L				E909.0	08/04/12 10:31 / eli-cs
Radium 226	0.51	pCi/L				E903.0	07/31/12 02:12 / trs
Radium 226 precision (±)	0.14	pCi/L				E903.0	07/31/12 02:12 / trs
Radium 226 MDC	0.10	pCi/L				E903.0	07/31/12 02:12 / trs
Radium 228	0.78	pCi/L	U			RA-05	07/25/12 19:26 / gb
Radium 228 precision (±)	0.66	pCi/L				RA-05	07/25/12 19:26 / gb
Radium 228 MDC	1.0	pCi/L				RA-05	07/25/12 19:26 / 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: C12070454-012
Client Sample ID: EPA-28

Report Date: 08/30/12
Collection Date: 07/10/12 10:40
DateReceived: 07/13/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.03	pCi/L	U			E908.0	08/01/12 08:46 / dmf
Thorium 230 precision (±)	0.07	pCi/L				E908.0	08/01/12 08:46 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	08/01/12 08:46 / dmf
DATA QUALITY							
A/C Balance (± 5)	1.61	%				A1030 E	07/23/12 07:18 / kbh
Anions	75.5	meq/L				A1030 E	07/23/12 07:18 / kbh
Cations	78.0	meq/L				A1030 E	07/23/12 07:18 / kbh
Solids, Total Dissolved Calculated	4700	mg/L				A1030 E	07/23/12 07:18 / kbh
TDS Balance (0.80 - 1.20)	1.08					A1030 E	07/23/12 07:18 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	07/17/12 01:19 / jlr
Bromoform	ND	ug/L		0.50		E624	07/17/12 01:19 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	07/17/12 01:19 / jlr
Chloroform	ND	ug/L		0.50		E624	07/17/12 01:19 / jlr
Trihalomethanes, Total	0.69	ug/L		0.50		E624	07/17/12 01:19 / jlr
Surr: 1,2-Dichlorobenzene-d4	92.0	%REC		80-120		E624	07/17/12 01:19 / jlr
Surr: Dibromofluoromethane	124	%REC	S	80-120		E624	07/17/12 01:19 / jlr
Surr: p-Bromofluorobenzene	180	%REC	S	80-120		E624	07/17/12 01:19 / jlr
Surr: Toluene-d8	105	%REC		80-120		E624	07/17/12 01:19 / 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
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: C12100557-012
Client Sample ID: EPA-28

Report Date: 11/20/12
Collection Date: 10/09/12 11:12
DateReceived: 10/12/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	811	mg/L		5		A2320 B	10/12/12 22:39 / jba
Calcium	576	mg/L		1		E200.7	10/24/12 16:52 / sf
Chloride	126	mg/L	D	4		E300.0	10/15/12 19:06 / wc
Magnesium	482	mg/L		1		E200.7	10/24/12 16:52 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	10/16/12 14:33 / ab
Nitrogen, Nitrate+Nitrite as N	26	mg/L	D	5		E353.2	10/15/12 11:55 / lr
Potassium	12	mg/L		1		E200.7	10/24/12 16:52 / sf
Sodium	231	mg/L	D	2		E200.7	10/24/12 16:52 / sf
Sulfate	2810	mg/L	D	20		E300.0	10/15/12 19:06 / wc
PHYSICAL PROPERTIES							
pH	6.86	s.u.	H	0.01		A4500-H B	10/12/12 16:54 / ab
Solids, Total Dissolved TDS @ 180 C	5120	mg/L		10		A2540 C	10/12/12 16:13 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	10/30/12 21:18 / sf
Beryllium	ND	mg/L		0.001		E200.7	10/30/12 21:18 / sf
Cadmium	ND	mg/L		0.005		E200.7	10/30/12 21:18 / sf
Cobalt	ND	mg/L		0.01		E200.8	10/26/12 16:34 / cp
Lead	ND	mg/L		0.001		E200.8	10/23/12 21:49 / cp
Manganese	0.86	mg/L		0.01		E200.8	10/26/12 16:34 / cp
Molybdenum	ND	mg/L		0.1		E200.7	10/30/12 21:18 / sf
Nickel	ND	mg/L		0.05		E200.7	10/30/12 21:18 / sf
Uranium	0.0470	mg/L		0.0003		E200.8	10/23/12 21:49 / cp
Vanadium	ND	mg/L		0.1		E200.7	10/30/12 21:18 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	11/04/12 18:17 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	10/23/12 12:57 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.5	pCi/L	U			E900.1	10/20/12 12:14 / lbb
Gross Alpha minus Rn & U Precision (±)	0.4	pCi/L				E900.1	10/20/12 12:14 / lbb
Gross Alpha minus Rn & U MDC	0.6	pCi/L				E900.1	10/20/12 12:14 / lbb
Lead 210	0.2	pCi/L	U			E909.0	11/17/12 02:14 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	11/17/12 02:14 / eli-cs
Lead 210 MDC	1	pCi/L				E909.0	11/17/12 02:14 / eli-cs
Radium 226	0.32	pCi/L				E903.0	10/24/12 13:24 / trs
Radium 226 precision (±)	0.15	pCi/L				E903.0	10/24/12 13:24 / trs
Radium 226 MDC	0.18	pCi/L				E903.0	10/24/12 13:24 / trs
Radium 228	-0.1	pCi/L	U			RA-05	10/19/12 22:00 / gb
Radium 228 precision (±)	1.1	pCi/L				RA-05	10/19/12 22:00 / gb
Radium 228 MDC	1.9	pCi/L				RA-05	10/19/12 22:00 / 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: C12100557-012
Client Sample ID: EPA-28

Report Date: 11/20/12
Collection Date: 10/09/12 11:12
DateReceived: 10/12/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.008	pCi/L	U			E908.0	10/23/12 08:55 / dmf
Thorium 230 precision (±)	0.07	pCi/L				E908.0	10/23/12 08:55 / dmf
Thorium 230 MDC	0.1	pCi/L				E908.0	10/23/12 08:55 / dmf
DATA QUALITY							
A/C Balance (± 5)	0.842	%				A1030 E	10/26/12 07:23 / kbh
Anions	77.5	meq/L				A1030 E	10/26/12 07:23 / kbh
Cations	78.8	meq/L				A1030 E	10/26/12 07:23 / kbh
Solids, Total Dissolved Calculated	4800	mg/L				A1030 E	10/26/12 07:23 / kbh
TDS Balance (0.80 - 1.20)	1.07					A1030 E	10/26/12 07:23 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	10/13/12 01:32 / jlr
Bromoform	ND	ug/L		0.50		E624	10/13/12 01:32 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	10/13/12 01:32 / jlr
Chloroform	ND	ug/L		0.50		E624	10/13/12 01:32 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	10/13/12 01:32 / jlr
Surr: 1,2-Dichlorobenzene-d4	103	%REC		80-120		E624	10/13/12 01:32 / jlr
Surr: Dibromofluoromethane	102	%REC		80-120		E624	10/13/12 01:32 / jlr
Surr: p-Bromofluorobenzene	109	%REC		80-120		E624	10/13/12 01:32 / jlr
Surr: Toluene-d8	104	%REC		80-120		E624	10/13/12 01:32 / 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.
U - Not detected at minimum detectable concentration

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Alluvium Monitor Wells					
Well ID:		EPA-28	EPA-28	EPA-28	EPA-28
Collection Date:		10/9/2012	7/~~9~~10/2012	4/3/2012	1/3/2012
Receive Date:		10/12/2012	7/13/2012	4/6/2012	1/6/2012
Report Date:		11/20/2012	8/30/2012	5/25/2012	3/2/2012
Analyte	RUnits	C12100557-012	C12070454-012	C12040276-012	C12010151-011
Bicarbonate as HCO3	mg/L	811	798	808	749
Calcium	mg/L	576	537	558	536
Chloride	mg/L	126	121	122	126
Magnesium	mg/L	482	498	451	439
Nitrogen, Ammonia as N	mg/L	ND(0.05)	0.13	ND(0.05)	ND(0.05)
Nitrogen, Nitrate+Nitrite as N	mg/L	26	30	29	34
Potassium	mg/L	12	11	12	11
Sodium	mg/L	231	227	215	209
Sulfate	mg/L	2810	2730	2770	2710
pH	s.u.	6.86	6.91	6.79	6.95
Solids, Total Dissolved TDS @ 180 C	mg/L	5120	5050	5000	4960
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(0.01)	ND(0.01)
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(0.05)	ND(0.05)
Manganese	mg/L	0.86	0.77	0.76	0.72
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	0.0470	0.0468	0.0520	0.0498
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(0.01)	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	0.4	0.5
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.4	0.3	0.3	0.3
Gross Alpha minus Rn & U MDC	pCi/L	0.6	0.3	0.4	0.4
Lead 210	pCi/L	0.2	0.3	0.2	0.6
Lead 210 precision (±)	pCi/L	0.6	0.7	0.6	0.7
Lead 210 MDC	pCi/L	1	1.2	1	1.1
Radium 226	pCi/L	0.32	0.51	0.12	0.48
Radium 226 precision (±)	pCi/L	0.15	0.14	0.10	0.16
Radium 226 MDC	pCi/L	0.18	0.10	0.15	0.15
Radium 228	pCi/L	-0.1	0.78	0.29	0.74
Radium 228 precision (±)	pCi/L	1.1	0.66	0.64	0.87
Radium 228 MDC	pCi/L	1.9	1.0	1.1	1.4
Thorium 230	pCi/L	0.008	0.03	0.005	-0.008
Thorium 230 precision (±)	pCi/L	0.07	0.07	0.07	0.05
Thorium 230 MDC	pCi/L	0.1	0.2	0.2	0.2
A/C Balance (± 5)	%	0.842	1.61	-1.18	-1.65
Anions	meq/L	77.5	75.5	76.4	74.7
Cations	meq/L	78.8	78.0	74.6	72.3
Solids, Total Dissolved Calculated	mg/L	4800	4700	4670	4570
TDS Balance (0.80 - 1.20)		1.07	1.08	1.07	1.09
Trihalomethanes, Total	ug/L	ND(0.50)	0.69	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: C12070454-011
Client Sample ID: SBL-1

Report Date: 08/30/12
Collection Date: 07/10/12 09:55
DateReceived: 07/13/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	446	mg/L		5		A2320 B	07/13/12 21:39 / jba
Calcium	474	mg/L		1		E200.7	07/17/12 15:25 / sf
Chloride	79	mg/L	D	10		E300.0	07/17/12 04:56 / wc
Magnesium	1170	mg/L		1		E200.7	07/17/12 15:25 / sf
Nitrogen, Ammonia as N	0.44	mg/L		0.05		A4500-NH3 G	07/17/12 13:50 / lr
Nitrogen, Nitrate+Nitrite as N	44	mg/L	D	2		E353.2	07/16/12 13:10 / lr
Potassium	11	mg/L		1		E200.7	07/17/12 15:25 / sf
Sodium	261	mg/L		1		E200.7	07/17/12 15:25 / sf
Sulfate	5680	mg/L	D	40		E300.0	07/17/12 04:56 / wc
PHYSICAL PROPERTIES							
pH	6.91	s.u.	H	0.01		A4500-H B	07/16/12 09:57 / ab
Solids, Total Dissolved TDS @ 180 C	9270	mg/L		10		A2540 C	07/16/12 12:05 / ab
METALS - TOTAL							
Aluminum	0.2	mg/L		0.1		E200.8	07/27/12 02:55 / cp
Beryllium	ND	mg/L		0.001		E200.8	08/04/12 00:37 / cp
Cadmium	ND	mg/L		0.005		E200.8	07/27/12 02:55 / cp
Cobalt	0.02	mg/L		0.01		E200.8	07/27/12 02:55 / cp
Lead	ND	mg/L		0.001		E200.8	07/27/12 02:55 / cp
Manganese	3.64	mg/L		0.01		E200.8	07/27/12 02:55 / cp
Molybdenum	ND	mg/L		0.1		E200.8	07/27/12 02:55 / cp
Nickel	0.07	mg/L		0.05		E200.8	07/27/12 02:55 / cp
Uranium	0.0126	mg/L		0.0003		E200.8	07/27/12 02:55 / cp
Vanadium	ND	mg/L		0.1		E200.8	07/27/12 02:55 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	08/01/12 16:59 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	07/26/12 16:19 / rdw
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.7	pCi/L				E900.1	08/09/12 22:40 / lbb
Gross Alpha minus Rn & U Precision (±)	0.3	pCi/L				E900.1	08/09/12 22:40 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	08/09/12 22:40 / lbb
Lead 210	0.1	pCi/L	U			E909.0	08/04/12 09:44 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	08/04/12 09:44 / eli-cs
Lead 210 MDC	1.2	pCi/L				E909.0	08/04/12 09:44 / eli-cs
Radium 226	0.58	pCi/L				E903.0	07/31/12 02:12 / trs
Radium 226 precision (±)	0.15	pCi/L				E903.0	07/31/12 02:12 / trs
Radium 226 MDC	0.11	pCi/L				E903.0	07/31/12 02:12 / trs
Radium 228	1.6	pCi/L				RA-05	07/25/12 19:26 / gb
Radium 228 precision (±)	0.75	pCi/L				RA-05	07/25/12 19:26 / gb
Radium 228 MDC	1.1	pCi/L				RA-05	07/25/12 19:26 / 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: C12070454-011
Client Sample ID: SBL-1

Report Date: 08/30/12
Collection Date: 07/10/12 09:55
DateReceived: 07/13/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.06	pCi/L	U			E908.0	08/01/12 08:46 / dmf
Thorium 230 precision (±)	0.08	pCi/L				E908.0	08/01/12 08:46 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	08/01/12 08:46 / dmf
DATA QUALITY							
A/C Balance (± 5)	0.536	%				A1030 E	07/23/12 07:18 / kbh
Anions	130	meq/L				A1030 E	07/23/12 07:18 / kbh
Cations	132	meq/L				A1030 E	07/23/12 07:18 / kbh
Solids, Total Dissolved Calculated	8100	mg/L				A1030 E	07/23/12 07:18 / kbh
TDS Balance (0.80 - 1.20)	1.15					A1030 E	07/23/12 07:18 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	07/17/12 00:44 / jlr
Bromoform	ND	ug/L		0.50		E624	07/17/12 00:44 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	07/17/12 00:44 / jlr
Chloroform	ND	ug/L		0.50		E624	07/17/12 00:44 / jlr
Trihalomethanes, Total	0.69	ug/L		0.50		E624	07/17/12 00:44 / jlr
Surr: 1,2-Dichlorobenzene-d4	93.0	%REC		80-120		E624	07/17/12 00:44 / jlr
Surr: Dibromofluoromethane	130	%REC	S	80-120		E624	07/17/12 00:44 / jlr
Surr: p-Bromofluorobenzene	179	%REC	S	80-120		E624	07/17/12 00:44 / jlr
Surr: Toluene-d8	106	%REC		80-120		E624	07/17/12 00:44 / 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
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: C12100557-011
Client Sample ID: SBL-1

Report Date: 11/20/12
Collection Date: 10/09/12 10:25
DateReceived: 10/12/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	460	mg/L		5		A2320 B	10/12/12 22:23 / jba
Calcium	520	mg/L		1		E200.7	10/24/12 16:48 / sf
Chloride	89	mg/L	D	10		E300.0	10/15/12 18:50 / wc
Magnesium	1150	mg/L		1		E200.7	10/24/12 16:48 / sf
Nitrogen, Ammonia as N	0.2	mg/L	D	0.1		A4500-NH3 G	10/17/12 11:56 / lr
Nitrogen, Nitrate+Nitrite as N	39	mg/L	D	5		E353.2	10/15/12 11:52 / lr
Potassium	15	mg/L		1		E200.7	10/24/12 16:48 / sf
Sodium	297	mg/L	D	2		E200.7	10/24/12 16:48 / sf
Sulfate	5900	mg/L	D	40		E300.0	10/15/12 18:50 / wc
PHYSICAL PROPERTIES							
pH	6.83	s.u.	H	0.01		A4500-H B	10/12/12 16:51 / ab
Solids, Total Dissolved TDS @ 180 C	8640	mg/L		10		A2540 C	10/12/12 16:13 / ab
METALS - TOTAL							
Aluminum	0.2	mg/L		0.1		E200.7	10/30/12 21:14 / sf
Beryllium	ND	mg/L		0.001		E200.7	10/30/12 21:14 / sf
Cadmium	ND	mg/L		0.005		E200.8	10/23/12 21:46 / cp
Cobalt	0.02	mg/L		0.01		E200.7	10/30/12 21:14 / sf
Lead	ND	mg/L		0.001		E200.8	10/23/12 21:46 / cp
Manganese	3.74	mg/L		0.01		E200.7	10/30/12 21:14 / sf
Molybdenum	ND	mg/L		0.1		E200.8	10/23/12 21:46 / cp
Nickel	0.08	mg/L		0.05		E200.7	10/30/12 21:14 / sf
Uranium	0.0120	mg/L		0.0003		E200.8	10/23/12 21:46 / cp
Vanadium	ND	mg/L		0.1		E200.8	10/26/12 16:30 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	11/04/12 18:09 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	10/23/12 12:55 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	1.2	pCi/L				E900.1	10/20/12 12:14 / lbb
Gross Alpha minus Rn & U Precision (±)	0.5	pCi/L				E900.1	10/20/12 12:14 / lbb
Gross Alpha minus Rn & U MDC	0.6	pCi/L				E900.1	10/20/12 12:14 / lbb
Lead 210	-0.4	pCi/L	U			E909.0	11/17/12 01:15 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	11/17/12 01:15 / eli-cs
Lead 210 MDC	1	pCi/L				E909.0	11/17/12 01:15 / eli-cs
Radium 226	0.39	pCi/L				E903.0	10/24/12 13:24 / trs
Radium 226 precision (±)	0.20	pCi/L				E903.0	10/24/12 13:24 / trs
Radium 226 MDC	0.23	pCi/L				E903.0	10/24/12 13:24 / trs
Radium 228	2.1	pCi/L	U			RA-05	10/19/12 22:00 / gb
Radium 228 precision (±)	1.6	pCi/L				RA-05	10/19/12 22:00 / gb
Radium 228 MDC	2.5	pCi/L				RA-05	10/19/12 22:00 / 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: C12100557-011
Client Sample ID: SBL-1

Report Date: 11/20/12
Collection Date: 10/09/12 10:25
DateReceived: 10/12/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.01	pCi/L	U			E908.0	10/23/12 08:55 / dmf
Thorium 230 precision (±)	0.08	pCi/L				E908.0	10/23/12 08:55 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	10/23/12 08:55 / dmf
DATA QUALITY							
A/C Balance (± 5)	-0.664	%				A1030 E	10/26/12 07:22 / kbh
Anions	136	meq/L				A1030 E	10/26/12 07:22 / kbh
Cations	134	meq/L				A1030 E	10/26/12 07:22 / kbh
Solids, Total Dissolved Calculated	8400	mg/L				A1030 E	10/26/12 07:22 / kbh
TDS Balance (0.80 - 1.20)	1.03					A1030 E	10/26/12 07:22 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	10/13/12 00:57 / jlr
Bromoform	ND	ug/L		0.50		E624	10/13/12 00:57 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	10/13/12 00:57 / jlr
Chloroform	ND	ug/L		0.50		E624	10/13/12 00:57 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	10/13/12 00:57 / jlr
Surr: 1,2-Dichlorobenzene-d4	106	%REC		80-120		E624	10/13/12 00:57 / jlr
Surr: Dibromofluoromethane	106	%REC		80-120		E624	10/13/12 00:57 / jlr
Surr: p-Bromofluorobenzene	108	%REC		80-120		E624	10/13/12 00:57 / jlr
Surr: Toluene-d8	107	%REC		80-120		E624	10/13/12 00:57 / 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.
U - Not detected at minimum detectable concentration

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Alluvium Monitor Wells					
Well ID:		SBL-1	SBL-1	SBL-1	SBL-1
Collection Date:		10/9/2012	7/~~9~~10/2012	4/3/2012	1/3/2012
Receive Date:		10/12/2012	7/13/2012	4/6/2012	1/6/2012
Report Date:		11/20/2012	8/30/2012	5/25/2012	3/2/2012
Analyte	RUnits	C12100557-011	C12070454-011	C12040276-011	C12010151-010
Bicarbonate as HCO3	mg/L	460	446	438	419
Calcium	mg/L	520	474	534	526
Chloride	mg/L	89	79	78	83
Magnesium	mg/L	1150	1170	1130	1170
Nitrogen, Ammonia as N	mg/L	0.2	0.44	ND(0.05)	ND(0.1)
Nitrogen, Nitrate+Nitrite as N	mg/L	39	44	42	41
Potassium	mg/L	15	11	15	15
Sodium	mg/L	297	261	287	300
Sulfate	mg/L	5900	5680	5810	5820
pH	s.u.	6.83	6.91	6.76	6.97
Solids, Total Dissolved TDS @ 180 C	mg/L	8640	9270	9420	9090
Aluminum	mg/L	0.2	0.2	ND(0.1)	0.3
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.01)	ND(0.01)
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(0.05)	ND(0.05)
Manganese	mg/L	3.74	3.64	3.57	3.44
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	0.08	0.07	0.07	0.08
Uranium	mg/L	0.0120	0.0126	0.0129	0.0135
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(0.01)	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	1.2	0.7	0.4	0.6
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.5	0.3	0.3	0.3
Gross Alpha minus Rn & U MDC	pCi/L	0.6	0.3	0.4	0.4
Lead 210	pCi/L	-0.4	0.1	0.0	-0.09
Lead 210 precision (±)	pCi/L	0.6	0.7	0.7	0.6
Lead 210 MDC	pCi/L	1	1.2	1.2	1.1
Radium 226	pCi/L	0.39	0.58	0.39	0.46
Radium 226 precision (±)	pCi/L	0.20	0.15	0.15	0.19
Radium 226 MDC	pCi/L	0.23	0.11	0.16	0.20
Radium 228	pCi/L	2.1	1.6	0.45	1.2
Radium 228 precision (±)	pCi/L	1.6	0.75	0.69	1.2
Radium 228 MDC	pCi/L	2.5	1.1	1.1	1.9
Thorium 230	pCi/L	0.01	0.06	0.0006	0.03
Thorium 230 precision (±)	pCi/L	0.08	0.08	0.06	0.07
Thorium 230 MDC	pCi/L	0.2	0.2	0.2	0.2
A/C Balance (± 5)	%	-0.664	0.536	-0.0970	0.911
Anions	meq/L	136	130	133	133
Cations	meq/L	134	132	133	136
Solids, Total Dissolved Calculated	mg/L	8400	8100	8250	8300
TDS Balance (0.80 - 1.20)		1.03	1.15	1.14	1.10
Trihalomethanes, Total	ug/L	ND(0.50)	0.69	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.**

QUARTERLY SAMPLING

SEMI-ANNUAL GROUND WATER MONITORING REPORT

JULY TO DECEMBER OF 2012

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: C12070464-002
Client Sample ID: 515-A

Report Date: 08/31/12
Collection Date: 07/11/12 10:00
DateReceived: 07/13/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	872	mg/L		5		A2320 B	07/16/12 16:38 / jba
Calcium	445	mg/L		1		E200.7	07/18/12 18:03 / sf
Chloride	379	mg/L	D	10		E300.0	07/18/12 05:19 / wc
Magnesium	1210	mg/L		1		E200.7	07/18/12 18:03 / sf
Nitrogen, Ammonia as N	41	mg/L	D	1		A4500-NH3 G	07/20/12 12:27 / lr
Nitrogen, Nitrate+Nitrite as N	45	mg/L	D	5		E353.2	07/16/12 15:30 / lr
Potassium	19	mg/L		1		E200.7	07/18/12 18:03 / sf
Sodium	575	mg/L	D	2		E200.7	07/18/12 18:03 / sf
Sulfate	6120	mg/L	D	40		E300.0	07/18/12 05:19 / wc
PHYSICAL PROPERTIES							
pH	6.20	s.u.	H	0.01		A4500-H B	07/16/12 12:37 / ab
Solids, Total Dissolved TDS @ 180 C	10300	mg/L		10		A2540 C	07/16/12 12:13 / ab
METALS - TOTAL							
Aluminum	4.7	mg/L		0.1		E200.7	07/18/12 17:08 / sf
Beryllium	0.001	mg/L		0.001		E200.8	07/24/12 20:33 / cp
Cadmium	ND	mg/L		0.005		E200.7	07/18/12 17:08 / sf
Cobalt	0.02	mg/L		0.01		E200.8	07/24/12 20:33 / cp
Lead	0.004	mg/L		0.001		E200.8	07/24/12 20:33 / cp
Manganese	13.1	mg/L		0.01		E200.7	07/18/12 17:08 / sf
Molybdenum	ND	mg/L		0.1		E200.7	07/18/12 17:08 / sf
Nickel	0.09	mg/L		0.05		E200.8	07/24/12 20:33 / cp
Uranium	0.0131	mg/L		0.0003		E200.8	07/24/12 20:33 / cp
Vanadium	ND	mg/L		0.1		E200.8	07/24/12 20:33 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	08/01/12 14:37 / eli-h
Selenium-IV	0.003	mg/L		0.001		A3114 B	07/26/12 17:00 / rdw
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	1.6	pCi/L				E900.1	08/10/12 00:29 / lbb
Gross Alpha minus Rn & U Precision (±)	0.4	pCi/L				E900.1	08/10/12 00:29 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	08/10/12 00:29 / lbb
Lead 210	0.7	pCi/L	U			E909.0	08/05/12 16:23 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	08/05/12 16:23 / eli-cs
Lead 210 MDC	1.1	pCi/L				E909.0	08/05/12 16:23 / eli-cs
Radium 226	2.1	pCi/L				E903.0	07/31/12 11:17 / lbb
Radium 226 precision (±)	0.29	pCi/L				E903.0	07/31/12 11:17 / lbb
Radium 226 MDC	0.15	pCi/L				E903.0	07/31/12 11:17 / lbb
Radium 228	4.1	pCi/L				RA-05	07/24/12 20:54 / gb
Radium 228 precision (±)	0.95	pCi/L				RA-05	07/24/12 20:54 / gb
Radium 228 MDC	1.2	pCi/L				RA-05	07/24/12 20:54 / 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: C12070464-002
Client Sample ID: 515-A

Report Date: 08/31/12
Collection Date: 07/11/12 10:00
DateReceived: 07/13/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.1	pCi/L	U			E908.0	08/06/12 08:40 / dmf
Thorium 230 precision (±)	0.1	pCi/L				E908.0	08/06/12 08:40 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	08/06/12 08:40 / dmf
DATA QUALITY							
A/C Balance (± 5)	-1.69	%				A1030 E	08/20/12 12:40 / kbh
Anions	155	meq/L				A1030 E	08/20/12 12:40 / kbh
Cations	150	meq/L				A1030 E	08/20/12 12:40 / kbh
Solids, Total Dissolved Calculated	9400	mg/L				A1030 E	08/20/12 12:40 / kbh
TDS Balance (0.80 - 1.20)	1.10					A1030 E	08/20/12 12:40 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	07/17/12 06:00 / jlr
Bromoform	ND	ug/L		0.50		E624	07/17/12 06:00 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	07/17/12 06:00 / jlr
Chloroform	366	ug/L		5.0		E624	07/16/12 19:28 / jlr
Trihalomethanes, Total	367	ug/L		0.50		E624	07/17/12 06:00 / jlr
Surr: 1,2-Dichlorobenzene-d4	93.0	%REC		80-120		E624	07/17/12 06:00 / jlr
Surr: Dibromofluoromethane	136	%REC	S	80-120		E624	07/17/12 06:00 / jlr
Surr: p-Bromofluorobenzene	181	%REC	S	80-120		E624	07/17/12 06:00 / jlr
Surr: Toluene-d8	104	%REC		80-120		E624	07/17/12 06:00 / 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
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-1
Lab ID: C12100566-002
Client Sample ID: 515-A

Report Date: 11/20/12
Collection Date: 10/10/12 09:41
DateReceived: 10/12/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	893	mg/L		5		A2320 B	10/15/12 17:00 / jba
Calcium	458	mg/L		1		E200.7	10/24/12 17:20 / sf
Chloride	383	mg/L	D	10		E300.0	10/16/12 02:17 / wc
Magnesium	1260	mg/L		1		E200.7	10/24/12 17:20 / sf
Nitrogen, Ammonia as N	28	mg/L	D	1		A4500-NH3 G	10/16/12 16:11 / ab
Nitrogen, Nitrate+Nitrite as N	39	mg/L	D	2		E353.2	10/15/12 14:43 / lr
Potassium	20	mg/L		1		E200.7	10/24/12 17:20 / sf
Sodium	604	mg/L	D	3		E200.7	10/24/12 17:20 / sf
Sulfate	6160	mg/L	D	40		E300.0	10/16/12 02:17 / wc
PHYSICAL PROPERTIES							
pH	6.06	s.u.	H	0.01		A4500-H B	10/15/12 10:03 / ab
Solids, Total Dissolved TDS @ 180 C	9870	mg/L		10		A2540 C	10/15/12 12:20 / ab
METALS - TOTAL							
Aluminum	1.4	mg/L		0.1		E200.8	10/19/12 19:43 / cp
Beryllium	ND	mg/L		0.001		E200.8	10/19/12 19:43 / cp
Cadmium	ND	mg/L		0.005		E200.8	10/19/12 19:43 / cp
Cobalt	0.02	mg/L		0.01		E200.8	10/19/12 19:43 / cp
Lead	0.002	mg/L		0.001		E200.8	10/19/12 19:43 / cp
Manganese	8.12	mg/L		0.01		E200.7	11/15/12 14:50 / sf
Molybdenum	ND	mg/L		0.1		E200.8	10/19/12 19:43 / cp
Nickel	0.13	mg/L		0.05		E200.8	10/19/12 19:43 / cp
Uranium	0.0125	mg/L		0.0003		E200.8	10/19/12 19:43 / cp
Vanadium	ND	mg/L		0.1		E200.8	10/19/12 19:43 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	10/29/12 14:45 / eli-h
Selenium-IV	0.001	mg/L		0.001		A3114 B	10/23/12 13:23 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	1.6	pCi/L				E900.1	11/08/12 22:02 / lbb
Gross Alpha minus Rn & U Precision (±)	0.4	pCi/L				E900.1	11/08/12 22:02 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	11/08/12 22:02 / lbb
Lead 210	0.2	pCi/L	U			E909.0	11/17/12 09:03 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	11/17/12 09:03 / eli-cs
Lead 210 MDC	1	pCi/L				E909.0	11/17/12 09:03 / eli-cs
Radium 226	2.0	pCi/L				E903.0	10/29/12 18:06 / gb
Radium 226 precision (±)	0.29	pCi/L				E903.0	10/29/12 18:06 / gb
Radium 226 MDC	0.15	pCi/L				E903.0	10/29/12 18:06 / gb
Radium 228	3.3	pCi/L				RA-05	10/23/12 22:48 / gb
Radium 228 precision (±)	1.2	pCi/L				RA-05	10/23/12 22:48 / gb
Radium 228 MDC	1.7	pCi/L				RA-05	10/23/12 22:48 / 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: C12100566-002
Client Sample ID: 515-A

Report Date: 11/20/12
Collection Date: 10/10/12 09:41
DateReceived: 10/12/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.04	pCi/L	U			E908.0	10/29/12 09:16 / dmf
Thorium 230 precision (±)	0.09	pCi/L				E908.0	10/29/12 09:16 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	10/29/12 09:16 / dmf
DATA QUALITY							
A/C Balance (± 5)	-0.485	%				A1030 E	10/26/12 07:25 / kbh
Anions	156	meq/L				A1030 E	10/26/12 07:25 / kbh
Cations	155	meq/L				A1030 E	10/26/12 07:25 / kbh
Solids, Total Dissolved Calculated	9500	mg/L				A1030 E	10/26/12 07:25 / kbh
TDS Balance (0.80 - 1.20)	1.04					A1030 E	10/26/12 07:25 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	10/20/12 06:19 / jk
Bromoform	ND	ug/L		0.50		E624	10/20/12 06:19 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	10/20/12 06:19 / jk
Chloroform	416	ug/L		5.0		E624	10/17/12 04:18 / jk
Trihalomethanes, Total	416	ug/L		5.0		E624	10/17/12 04:18 / jk
Surr: 1,2-Dichlorobenzene-d4	104	%REC		80-120		E624	10/20/12 06:19 / jk
Surr: Dibromofluoromethane	114	%REC		80-120		E624	10/20/12 06:19 / jk
Surr: p-Bromofluorobenzene	98.0	%REC		80-120		E624	10/20/12 06:19 / jk
Surr: Toluene-d8	100	%REC		80-120		E624	10/20/12 06:19 / 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

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:		10/10/2012	7/11/2012	4/4/2012	1/4/2012
Receive Date:		10/12/2012	7/13/2012	4/6/2012	1/6/2012
Report Date:		11/20/2012	8/31/2012	5/24/2012	3/2/2012
Analyte	RUnits	C12100566-002	C12070464-002	C12040278-002	C12010154-003
Bicarbonate as HCO3	mg/L	893	872	818	729
Calcium	mg/L	458	445	419	533
Chloride	mg/L	383	379	363	361
Magnesium	mg/L	1260	1210	1120	1290
Nitrogen, Ammonia as N	mg/L	28	41	36.0	44
Nitrogen, Nitrate+Nitrite as N	mg/L	39	45	46	42
Potassium	mg/L	20	19	21	24
Sodium	mg/L	604	575	557	642
Sulfate	mg/L	6160	6120	6080	6030
pH	s.u.	6.06	6.20	6.13	6.51
Solids, Total Dissolved TDS @ 180 C	mg/L	9870	10300	10400	9920
Aluminum	mg/L	1.4	4.7	2.3	1.4
Beryllium	mg/L	ND(0.001)	0.001	ND(0.01)	ND(0.01)
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	0.002	0.004	ND(0.05)	ND(0.05)
Manganese	mg/L	8.12	13.1	10.8	11.1
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	0.13	0.09	0.10	0.09
Uranium	mg/L	0.0125	0.0131	0.0104	0.0094
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	0.003	0.002	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	1.6	1.6	2.3	1.8
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.4	0.4	0.5	0.5
Gross Alpha minus Rn & U MDC	pCi/L	0.3	0.3	0.4	0.4
Lead 210	pCi/L	0.2	0.7	0.8	0.09
Lead 210 precision (±)	pCi/L	0.6	0.7	0.7	0.6
Lead 210 MDC	pCi/L	1	1.1	1.2	1.0
Radium 226	pCi/L	2.0	2.1	1.2	1.3
Radium 226 precision (±)	pCi/L	0.29	0.29	0.28	0.23
Radium 226 MDC	pCi/L	0.15	0.15	0.22	0.16
Radium 228	pCi/L	3.3	4.1	2.5	2.5
Radium 228 precision (±)	pCi/L	1.2	0.95	1.2	1.5
Radium 228 MDC	pCi/L	1.7	1.2	1.8	2.3
Thorium 230	pCi/L	0.04	0.1	0.03	0.0
Thorium 230 precision (±)	pCi/L	0.09	0.1	0.08	0.04
Thorium 230 MDC	pCi/L	0.2	0.2	0.2	0.1
A/C Balance (± 5)	%	-0.485	-1.69	-4.09	4.39
Anions	meq/L	156	155	153	151
Cations	meq/L	155	150	141	165
Solids, Total Dissolved Calculated	mg/L	9500	9400	9150	9420
TDS Balance (0.80 - 1.20)		1.04	1.10	1.14	1.05
Trihalomethanes, Total	ug/L	416	367	124	146

****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: C12070464-003
Client Sample ID: 604

Report Date: 08/31/12
Collection Date: 07/11/12 10:43
DateReceived: 07/13/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	17	mg/L		5		A2320 B	07/17/12 16:20 / jba
Calcium	444	mg/L		1		E200.7	07/18/12 18:07 / sf
Chloride	62	mg/L	D	4		E300.0	07/18/12 05:34 / wc
Magnesium	817	mg/L		1		E200.7	07/18/12 18:07 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	07/20/12 12:28 / lr
Nitrogen, Nitrate+Nitrite as N	71	mg/L	D	5		E353.2	07/16/12 15:18 / lr
Potassium	11	mg/L		1		E200.7	07/18/12 18:07 / sf
Sodium	292	mg/L		1		E200.7	07/18/12 18:07 / sf
Sulfate	4760	mg/L	D	40		E300.0	07/21/12 02:58 / ljl
PHYSICAL PROPERTIES							
pH	5.48	s.u.	H	0.01		A4500-H B	07/16/12 12:39 / ab
Solids, Total Dissolved TDS @ 180 C	7450	mg/L		10		A2540 C	07/16/12 12:13 / ab
METALS - TOTAL							
Aluminum	0.9	mg/L		0.1		E200.7	07/25/12 16:17 / sf
Beryllium	0.001	mg/L		0.001		E200.7	07/25/12 16:17 / sf
Cadmium	ND	mg/L		0.005		E200.7	07/25/12 16:17 / sf
Cobalt	0.13	mg/L		0.01		E200.7	07/25/12 16:17 / sf
Lead	ND	mg/L		0.001		E200.8	07/26/12 22:40 / cp
Manganese	5.94	mg/L		0.01		E200.8	07/26/12 22:40 / cp
Molybdenum	ND	mg/L		0.1		E200.7	07/25/12 16:17 / sf
Nickel	0.21	mg/L		0.05		E200.8	07/26/12 22:40 / cp
Uranium	0.0004	mg/L		0.0003		E200.8	07/26/12 22:40 / cp
Vanadium	ND	mg/L		0.1		E200.7	07/25/12 16:17 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	08/02/12 15:38 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	07/26/12 17:02 / rdw
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	1.3	pCi/L				E900.1	08/10/12 00:29 / lbb
Gross Alpha minus Rn & U Precision (±)	0.3	pCi/L				E900.1	08/10/12 00:29 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	08/10/12 00:29 / lbb
Lead 210	0.8	pCi/L	U			E909.0	08/05/12 17:29 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	08/05/12 17:29 / eli-cs
Lead 210 MDC	1.1	pCi/L				E909.0	08/05/12 17:29 / eli-cs
Radium 226	1.3	pCi/L				E903.0	07/31/12 11:17 / lbb
Radium 226 precision (±)	0.23	pCi/L				E903.0	07/31/12 11:17 / lbb
Radium 226 MDC	0.14	pCi/L				E903.0	07/31/12 11:17 / lbb
Radium 228	4.4	pCi/L				RA-05	07/24/12 20:54 / gb
Radium 228 precision (±)	0.95	pCi/L				RA-05	07/24/12 20:54 / gb
Radium 228 MDC	1.2	pCi/L				RA-05	07/24/12 20:54 / 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: C12070464-003
Client Sample ID: 604

Report Date: 08/31/12
Collection Date: 07/11/12 10:43
DateReceived: 07/13/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.06	pCi/L	U			E908.0	08/06/12 08:40 / dmf
Thorium 230 precision (±)	0.08	pCi/L				E908.0	08/06/12 08:40 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	08/06/12 08:40 / dmf
DATA QUALITY							
A/C Balance (± 5)	-1.81	%				A1030 E	08/20/12 12:40 / kbh
Anions	106	meq/L				A1030 E	08/20/12 12:40 / kbh
Cations	102	meq/L				A1030 E	08/20/12 12:40 / kbh
Solids, Total Dissolved Calculated	6700	mg/L				A1030 E	08/20/12 12:40 / kbh
TDS Balance (0.80 - 1.20)	1.11					A1030 E	08/20/12 12:40 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	07/21/12 00:20 / jk
Bromoform	ND	ug/L		0.50		E624	07/21/12 00:20 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	07/21/12 00:20 / jk
Chloroform	5.96	ug/L		0.50		E624	07/21/12 00:20 / jk
Trihalomethanes, Total	5.96	ug/L		0.50		E624	07/21/12 00:20 / jk
Surr: 1,2-Dichlorobenzene-d4	96.0	%REC		80-120		E624	07/21/12 00:20 / jk
Surr: Dibromofluoromethane	87.0	%REC		80-120		E624	07/21/12 00:20 / jk
Surr: p-Bromofluorobenzene	82.0	%REC		80-120		E624	07/21/12 00:20 / jk
Surr: Toluene-d8	94.0	%REC		80-120		E624	07/21/12 00:20 / 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: C12100566-003
Client Sample ID: 604

Report Date: 11/20/12
Collection Date: 10/10/12 10:30
DateReceived: 10/12/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	29	mg/L		5		A2320 B	10/15/12 17:07 / jba
Calcium	473	mg/L		1		E200.7	10/24/12 17:36 / sf
Chloride	62	mg/L	D	4		E300.0	10/16/12 02:33 / wc
Magnesium	794	mg/L		1		E200.7	10/24/12 17:36 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	10/16/12 14:45 / ab
Nitrogen, Nitrate+Nitrite as N	68	mg/L	D	5		E353.2	10/15/12 14:45 / lr
Potassium	13	mg/L		1		E200.7	10/24/12 17:36 / sf
Sodium	302	mg/L	D	2		E200.7	10/24/12 17:36 / sf
Sulfate	4620	mg/L	D	40		E300.0	10/16/12 19:34 / wc
PHYSICAL PROPERTIES							
pH	5.40	s.u.	H	0.01		A4500-H B	10/15/12 10:06 / ab
Solids, Total Dissolved TDS @ 180 C	6880	mg/L		10		A2540 C	10/15/12 12:20 / ab
METALS - TOTAL							
Aluminum	1.6	mg/L		0.1		E200.8	10/19/12 19:45 / cp
Beryllium	0.002	mg/L		0.001		E200.8	10/19/12 19:45 / cp
Cadmium	ND	mg/L		0.005		E200.8	10/19/12 19:45 / cp
Cobalt	0.15	mg/L		0.01		E200.8	10/19/12 19:45 / cp
Lead	ND	mg/L		0.001		E200.8	10/19/12 19:45 / cp
Manganese	5.36	mg/L		0.01		E200.8	10/19/12 19:45 / cp
Molybdenum	ND	mg/L		0.1		E200.8	10/19/12 19:45 / cp
Nickel	0.25	mg/L		0.05		E200.8	10/19/12 19:45 / cp
Uranium	0.0004	mg/L		0.0003		E200.8	10/19/12 19:45 / cp
Vanadium	ND	mg/L		0.1		E200.8	10/19/12 19:45 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	10/29/12 14:53 / eli-h
Selenium-IV	0.003	mg/L		0.001		A3114 B	10/23/12 13:25 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	1.3	pCi/L				E900.1	11/08/12 22:02 / lbb
Gross Alpha minus Rn & U Precision (±)	0.3	pCi/L				E900.1	11/08/12 22:02 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	11/08/12 22:02 / lbb
Lead 210	0.4	pCi/L	U			E909.0	11/17/12 10:01 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	11/17/12 10:01 / eli-cs
Lead 210 MDC	1	pCi/L				E909.0	11/17/12 10:01 / eli-cs
Radium 226	1.4	pCi/L				E903.0	10/29/12 18:06 / gb
Radium 226 precision (±)	0.22	pCi/L				E903.0	10/29/12 18:06 / gb
Radium 226 MDC	0.13	pCi/L				E903.0	10/29/12 18:06 / gb
Radium 228	4.6	pCi/L				RA-05	10/23/12 22:48 / gb
Radium 228 precision (±)	1.1	pCi/L				RA-05	10/23/12 22:48 / gb
Radium 228 MDC	1.5	pCi/L				RA-05	10/23/12 22:48 / 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: C12100566-003
Client Sample ID: 604

Report Date: 11/20/12
Collection Date: 10/10/12 10:30
DateReceived: 10/12/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.05	pCi/L	U			E908.0	10/29/12 09:16 / dmf
Thorium 230 precision (±)	0.07	pCi/L				E908.0	10/29/12 09:16 / dmf
Thorium 230 MDC	0.1	pCi/L				E908.0	10/29/12 09:16 / dmf
DATA QUALITY							
A/C Balance (± 5)	-0.436	%				A1030 E	10/26/12 07:25 / kbh
Anions	103	meq/L				A1030 E	10/26/12 07:25 / kbh
Cations	102	meq/L				A1030 E	10/26/12 07:25 / kbh
Solids, Total Dissolved Calculated	6600	mg/L				A1030 E	10/26/12 07:25 / kbh
TDS Balance (0.80 - 1.20)	1.04					A1030 E	10/26/12 07:25 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	10/17/12 00:06 / jk
Bromoform	ND	ug/L		0.50		E624	10/17/12 00:06 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	10/17/12 00:06 / jk
Chloroform	6.60	ug/L		0.50		E624	10/17/12 00:06 / jk
Trihalomethanes, Total	6.60	ug/L		0.50		E624	10/17/12 00:06 / jk
Surr: 1,2-Dichlorobenzene-d4	102	%REC		80-120		E624	10/17/12 00:06 / jk
Surr: Dibromofluoromethane	114	%REC		80-120		E624	10/17/12 00:06 / jk
Surr: p-Bromofluorobenzene	101	%REC		80-120		E624	10/17/12 00:06 / jk
Surr: Toluene-d8	99.0	%REC		80-120		E624	10/17/12 00:06 / 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

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 1 Monitor Wells					
Well ID:		604	604	604	604
Collection Date:		10/10/2012	7/11/2012	4/4/2012	1/4/2012
Receive Date:		10/12/2012	7/13/2012	4/6/2012	1/6/2012
Report Date:		11/20/2012	8/31/2012	5/24/2012	3/2/2012
Analyte	RUnits	C12100566-003	C12070464-003	C12040278-001	C12010154-002
Bicarbonate as HCO3	mg/L	29	17	12	18
Calcium	mg/L	473	444	410	506
Chloride	mg/L	62	62	56	56
Magnesium	mg/L	794	817	733	842
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	68	71	71	69
Potassium	mg/L	13	11	13	14
Sodium	mg/L	302	292	290	321
Sulfate	mg/L	4620	4760	4630	4440
pH	s.u.	5.40	5.48	5.46	5.48
Solids, Total Dissolved TDS @ 180 C	mg/L	6880	7450	7140	7100
Aluminum	mg/L	1.6	0.9	1.8	2.0
Beryllium	mg/L	0.002	0.001	ND(0.01)	ND(0.01)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	0.15	0.13	0.17	0.16
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.05)	ND(0.05)
Manganese	mg/L	5.36	5.94	6.75	6.41
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	0.25	0.21	0.26	0.24
Uranium	mg/L	0.0004	0.0004	ND(0.0003)	0.0005
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	0.003	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	1.3	1.3	2.8	1.6
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.3	0.3	0.6	0.5
Gross Alpha minus Rn & U MDC	pCi/L	0.3	0.3	0.4	0.4
Lead 210	pCi/L	0.4	0.8	0.5	1.1
Lead 210 precision (±)	pCi/L	0.6	0.7	0.8	0.6
Lead 210 MDC	pCi/L	1	1.1	1.3	1.0
Radium 226	pCi/L	1.4	1.3	1.5	1.5
Radium 226 precision (±)	pCi/L	0.22	0.23	0.24	0.26
Radium 226 MDC	pCi/L	0.13	0.14	0.14	0.18
Radium 228	pCi/L	4.6	4.4	3.5	3.6
Radium 228 precision (±)	pCi/L	1.1	0.95	0.84	0.95
Radium 228 MDC	pCi/L	1.5	1.2	1.2	1.3
Thorium 230	pCi/L	0.05	0.06	-0.004	0.02
Thorium 230 precision (±)	pCi/L	0.07	0.08	0.05	0.1
Thorium 230 MDC	pCi/L	0.1	0.2	0.2	0.2
A/C Balance (± 5)	%	-0.436	-1.81	-4.50	4.63
Anions	meq/L	103	106	103	99.3
Cations	meq/L	102	102	93.7	109
Solids, Total Dissolved Calculated	mg/L	6600	6700	6430	6500
TDS Balance (0.80 - 1.20)		1.04	1.11	1.11	1.09
Trihalomethanes, Total	ug/L	6.60	5.96	1.08	2.69

**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: C12070464-001
Client Sample ID: 614

Report Date: 08/31/12
Collection Date: 07/11/12 09:01
DateReceived: 07/13/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	1270	mg/L		5		A2320 B	07/16/12 16:29 / jba
Calcium	527	mg/L		1		E200.7	07/18/12 17:59 / sf
Chloride	274	mg/L	D	10		E300.0	07/18/12 05:03 / wc
Magnesium	728	mg/L		1		E200.7	07/18/12 17:59 / sf
Nitrogen, Ammonia as N	158	mg/L	D	2		A4500-NH3 G	07/20/12 12:25 / lr
Nitrogen, Nitrate+Nitrite as N	113	mg/L	D	5		E353.2	07/16/12 15:28 / lr
Potassium	15	mg/L		1		E200.7	07/18/12 17:59 / sf
Sodium	463	mg/L		1		E200.7	07/18/12 17:59 / sf
Sulfate	3780	mg/L	D	40		E300.0	07/18/12 05:03 / wc
PHYSICAL PROPERTIES							
pH	6.70	s.u.	H	0.01		A4500-H B	07/16/12 12:34 / ab
Solids, Total Dissolved TDS @ 180 C	7010	mg/L		10		A2540 C	07/16/12 12:12 / ab
METALS - TOTAL							
Aluminum	0.1	mg/L		0.1		E200.8	07/26/12 22:35 / cp
Beryllium	ND	mg/L		0.001		E200.7	07/25/12 16:13 / sf
Cadmium	ND	mg/L		0.005		E200.7	07/25/12 16:13 / sf
Cobalt	ND	mg/L		0.01		E200.7	07/25/12 16:13 / sf
Lead	0.002	mg/L		0.001		E200.8	07/26/12 22:35 / cp
Manganese	0.61	mg/L		0.01		E200.8	07/26/12 22:35 / cp
Molybdenum	ND	mg/L		0.1		E200.7	07/25/12 16:13 / sf
Nickel	ND	mg/L		0.05		E200.7	07/25/12 16:13 / sf
Uranium	0.0421	mg/L		0.0003		E200.8	07/26/12 22:35 / cp
Vanadium	ND	mg/L		0.1		E200.7	07/25/12 16:13 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	08/01/12 18:49 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	07/26/12 16:58 / rdw
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.9	pCi/L				E900.1	08/10/12 00:29 / lbb
Gross Alpha minus Rn & U Precision (±)	0.3	pCi/L				E900.1	08/10/12 00:29 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	08/10/12 00:29 / lbb
Lead 210	0.9	pCi/L	U			E909.0	08/05/12 15:16 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	08/05/12 15:16 / eli-cs
Lead 210 MDC	1.1	pCi/L				E909.0	08/05/12 15:16 / eli-cs
Radium 226	0.61	pCi/L				E903.0	07/31/12 11:17 / lbb
Radium 226 precision (±)	0.16	pCi/L				E903.0	07/31/12 11:17 / lbb
Radium 226 MDC	0.14	pCi/L				E903.0	07/31/12 11:17 / lbb
Radium 228	3.4	pCi/L				RA-05	07/24/12 20:54 / gb
Radium 228 precision (±)	0.87	pCi/L				RA-05	07/24/12 20:54 / gb
Radium 228 MDC	1.2	pCi/L				RA-05	07/24/12 20:54 / 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: C12070464-001
Client Sample ID: 614

Report Date: 08/31/12
Collection Date: 07/11/12 09:01
DateReceived: 07/13/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.06	pCi/L	U			E908.0	08/06/12 08:40 / dmf
Thorium 230 precision (±)	0.1	pCi/L				E908.0	08/06/12 08:40 / dmf
Thorium 230 MDC	0.3	pCi/L				E908.0	08/06/12 08:40 / dmf
DATA QUALITY							
A/C Balance (± 5)	-0.0926	%				A1030 E	08/20/12 12:40 / kbh
Anions	118	meq/L				A1030 E	08/20/12 12:40 / kbh
Cations	118	meq/L				A1030 E	08/20/12 12:40 / kbh
Solids, Total Dissolved Calculated	7100	mg/L				A1030 E	08/20/12 12:40 / kbh
TDS Balance (0.80 - 1.20)	0.980					A1030 E	08/20/12 12:40 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	07/17/12 04:50 / jlr
Bromoform	ND	ug/L		0.50		E624	07/17/12 04:50 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	07/17/12 04:50 / jlr
Chloroform	132	ug/L		5.0		E624	07/17/12 21:49 / jk
Trihalomethanes, Total	132	ug/L		5.0		E624	07/17/12 21:49 / jk
Surr: 1,2-Dichlorobenzene-d4	93.0	%REC		80-120		E624	07/17/12 04:50 / jlr
Surr: Dibromofluoromethane	133	%REC	S	80-120		E624	07/17/12 04:50 / jlr
Surr: p-Bromofluorobenzene	182	%REC	S	80-120		E624	07/17/12 04:50 / jlr
Surr: Toluene-d8	106	%REC		80-120		E624	07/17/12 04:50 / 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
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-1
Lab ID: C12100566-001
Client Sample ID: 614

Report Date: 11/20/12
Collection Date: 10/10/12 08:30
DateReceived: 10/12/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	1370	mg/L		5		A2320 B	10/15/12 16:52 / jba
Calcium	562	mg/L		1		E200.7	10/24/12 17:16 / sf
Chloride	269	mg/L	D	10		E300.0	10/16/12 02:02 / wc
Magnesium	703	mg/L		1		E200.7	10/24/12 17:16 / sf
Nitrogen, Ammonia as N	161	mg/L	D	5		A4500-NH3 G	10/16/12 16:09 / ab
Nitrogen, Nitrate+Nitrite as N	139	mg/L	D	5		E353.2	10/15/12 14:40 / lr
Potassium	17	mg/L		1		E200.7	10/24/12 17:16 / sf
Sodium	464	mg/L	D	3		E200.7	10/24/12 17:16 / sf
Sulfate	3720	mg/L	D	40		E300.0	10/16/12 02:02 / wc
PHYSICAL PROPERTIES							
pH	6.58	s.u.	H	0.01		A4500-H B	10/15/12 09:57 / ab
Solids, Total Dissolved TDS @ 180 C	7170	mg/L		10		A2540 C	10/15/12 12:19 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	11/20/12 01:42 / cp
Beryllium	ND	mg/L		0.001		E200.8	11/20/12 01:42 / cp
Cadmium	ND	mg/L		0.005		E200.8	11/20/12 01:42 / cp
Cobalt	ND	mg/L		0.01		E200.8	11/20/12 01:42 / cp
Lead	0.003	mg/L		0.001		E200.8	11/20/12 01:42 / cp
Manganese	0.82	mg/L		0.01		E200.8	11/20/12 01:42 / cp
Molybdenum	ND	mg/L		0.1		E200.8	11/20/12 01:42 / cp
Nickel	ND	mg/L		0.05		E200.8	11/20/12 01:42 / cp
Uranium	0.0459	mg/L		0.0003		E200.8	11/20/12 01:42 / cp
Vanadium	ND	mg/L		0.1		E200.8	11/20/12 01:42 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	10/29/12 14:37 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	10/23/12 13:11 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.6	pCi/L				E900.1	11/08/12 22:02 / lbb
Gross Alpha minus Rn & U Precision (±)	0.3	pCi/L				E900.1	11/08/12 22:02 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	11/08/12 22:02 / lbb
Lead 210	0.3	pCi/L	U			E909.0	11/17/12 08:04 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	11/17/12 08:04 / eli-cs
Lead 210 MDC	1	pCi/L				E909.0	11/17/12 08:04 / eli-cs
Radium 226	1.1	pCi/L				E903.0	10/29/12 18:06 / gb
Radium 226 precision (±)	0.20	pCi/L				E903.0	10/29/12 18:06 / gb
Radium 226 MDC	0.13	pCi/L				E903.0	10/29/12 18:06 / gb
Radium 228	3.0	pCi/L				RA-05	10/23/12 22:48 / gb
Radium 228 precision (±)	1.0	pCi/L				RA-05	10/23/12 22:48 / gb
Radium 228 MDC	1.5	pCi/L				RA-05	10/23/12 22:48 / 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: C12100566-001
Client Sample ID: 614

Report Date: 11/20/12
Collection Date: 10/10/12 08:30
DateReceived: 10/12/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.04	pCi/L	U			E908.0	10/29/12 09:16 / dmf
Thorium 230 precision (±)	0.2	pCi/L				E908.0	10/29/12 09:16 / dmf
Thorium 230 MDC	0.4	pCi/L				E908.0	10/29/12 09:16 / dmf
- See Case Narrative regarding Th230 analysis.							
DATA QUALITY							
A/C Balance (± 5)	0.154	%				A1030 E	10/26/12 07:24 / kbh
Anions	118	meq/L				A1030 E	10/26/12 07:24 / kbh
Cations	118	meq/L				A1030 E	10/26/12 07:24 / kbh
Solids, Total Dissolved Calculated	7100	mg/L				A1030 E	10/26/12 07:24 / kbh
TDS Balance (0.80 - 1.20)	1.02					A1030 E	10/26/12 07:24 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	10/20/12 07:31 / jk
Bromoform	ND	ug/L		0.50		E624	10/20/12 07:31 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	10/20/12 07:31 / jk
Chloroform	238	ug/L		5.0		E624	10/17/12 06:41 / jk
Trihalomethanes, Total	238	ug/L		5.0		E624	10/17/12 06:41 / jk
Surr: 1,2-Dichlorobenzene-d4	100	%REC		80-120		E624	10/20/12 07:31 / jk
Surr: Dibromofluoromethane	108	%REC		80-120		E624	10/20/12 07:31 / jk
Surr: p-Bromofluorobenzene	93.0	%REC		80-120		E624	10/20/12 07:31 / jk
Surr: Toluene-d8	103	%REC		80-120		E624	10/20/12 07:31 / 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

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 1 Monitor Wells					
Well ID:		614	614	614	614
Collection Date:		10/10/2012	7/11/2012	4/4/2012	1/4/2012
Receive Date:		10/12/2012	7/13/2012	4/6/2012	1/6/2012
Report Date:		11/20/2012	8/31/2012	5/24/2012	3/2/2012
Analyte	RUnits	C12100566-001	C12070464-001	C12040278-003	C12010154-001
Bicarbonate as HCO3	mg/L	1370	1270	1190	1170
Calcium	mg/L	562	527	492	550
Chloride	mg/L	269	274	261	264
Magnesium	mg/L	703	728	641	671
Nitrogen, Ammonia as N	mg/L	161	158	138	137
Nitrogen, Nitrate+Nitrite as N	mg/L	139	113	144	137
Potassium	mg/L	17	15	17	14
Sodium	mg/L	464	463	448	449
Sulfate	mg/L	3720	3780	3610	3630
pH	s.u.	6.58	6.70	6.70	6.87
Solids, Total Dissolved TDS @ 180 C	mg/L	7170	7010	7500	6980
Aluminum	mg/L	ND(0.1)	0.1	ND(0.1)	ND(0.1)
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.01)	ND(0.01)
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	0.003	0.002	ND(0.05)	ND(0.05)
Manganese	mg/L	0.82	0.61	0.61	0.43
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	0.0459	0.0421	0.0463	0.0469
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	0.9	1.3	0.7
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.3	0.3	0.4	0.4
Gross Alpha minus Rn & U MDC	pCi/L	0.3	0.3	0.4	0.4
Lead 210	pCi/L	0.3	0.9	-0.1	0.5
Lead 210 precision (±)	pCi/L	0.6	0.7	0.6	0.6
Lead 210 MDC	pCi/L	1	1.1	1.1	1.0
Radium 226	pCi/L	1.1	0.61	0.85	0.46
Radium 226 precision (±)	pCi/L	0.20	0.16	0.17	0.13
Radium 226 MDC	pCi/L	0.13	0.14	0.12	0.13
Radium 228	pCi/L	3.0	3.4	3.3	4.1
Radium 228 precision (±)	pCi/L	1.0	0.87	0.73	0.94
Radium 228 MDC	pCi/L	1.5	1.2	0.97	1.3
Thorium 230	pCi/L	0.04	0.06	0.04	-0.004
Thorium 230 precision (±)	pCi/L	0.2	0.1	0.1	0.04
Thorium 230 MDC	pCi/L	0.4	0.3	0.3	0.1
A/C Balance (± 5)	%	0.154	-0.0926	-2.43	0.260
Anions	meq/L	118	118	112	112
Cations	meq/L	118	118	107	112
Solids, Total Dissolved Calculated	mg/L	7100	7100	6730	6780
TDS Balance (0.80 - 1.20)		1.02	0.980	1.11	1.03
Trihalomethanes, Total	ug/L	238	132	48.4	135

**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: C12070710-006
Client Sample ID: TWQ-142

Report Date: 08/31/12
Collection Date: 07/17/12 12:05
DateReceived: 07/20/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	288	mg/L		5		A2320 B	07/20/12 17:43 / jba
Calcium	61	mg/L		1		E200.7	08/09/12 17:01 / sf
Chloride	18	mg/L		1		E300.0	07/24/12 10:08 / ljl
Magnesium	29	mg/L		1		E200.7	08/10/12 15:06 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	07/30/12 15:21 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	07/24/12 16:31 / lr
Potassium	4	mg/L		1		E200.7	08/10/12 15:06 / sf
Sodium	336	mg/L		1		E200.7	08/10/12 15:06 / sf
Sulfate	693	mg/L	D	4		E300.0	07/24/12 10:08 / ljl
PHYSICAL PROPERTIES							
pH	7.78	s.u.	H	0.01		A4500-H B	07/23/12 09:33 / ab
Solids, Total Dissolved TDS @ 180 C	1330	mg/L		10		A2540 C	07/20/12 16:43 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	07/24/12 16:52 / cp
Beryllium	ND	mg/L		0.001		E200.8	07/24/12 16:52 / cp
Cadmium	ND	mg/L		0.005		E200.8	07/24/12 16:52 / cp
Cobalt	ND	mg/L		0.01		E200.8	07/24/12 16:52 / cp
Lead	ND	mg/L		0.001		E200.8	07/24/12 16:52 / cp
Manganese	0.02	mg/L		0.01		E200.8	07/24/12 16:52 / cp
Molybdenum	ND	mg/L		0.1		E200.8	07/24/12 16:52 / cp
Nickel	ND	mg/L		0.05		E200.8	07/24/12 16:52 / cp
Uranium	ND	mg/L		0.0003		E200.8	07/24/12 16:52 / cp
Vanadium	ND	mg/L		0.1		E200.8	07/24/12 16:52 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	08/01/12 20:23 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	07/26/12 17:32 / rdw
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.8	pCi/L				E900.1	08/01/12 13:12 / lbb
Gross Alpha minus Rn & U Precision (±)	0.2	pCi/L				E900.1	08/01/12 13:12 / lbb
Gross Alpha minus Rn & U MDC	0.2	pCi/L				E900.1	08/01/12 13:12 / lbb
Lead 210	0.4	pCi/L	U			E909.0	08/14/12 05:41 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	08/14/12 05:41 / eli-cs
Lead 210 MDC	1.2	pCi/L				E909.0	08/14/12 05:41 / eli-cs
Radium 226	0.82	pCi/L				E903.0	08/06/12 11:47 / lbb
Radium 226 precision (±)	0.16	pCi/L				E903.0	08/06/12 11:47 / lbb
Radium 226 MDC	0.09	pCi/L				E903.0	08/06/12 11:47 / lbb
Radium 228	0.72	pCi/L	U			RA-05	07/30/12 22:49 / gb
Radium 228 precision (±)	0.81	pCi/L				RA-05	07/30/12 22:49 / gb
Radium 228 MDC	1.3	pCi/L				RA-05	07/30/12 22:49 / 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: C12070710-006
Client Sample ID: TWQ-142

Report Date: 08/31/12
Collection Date: 07/17/12 12:05
DateReceived: 07/20/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.01	pCi/L	U			E908.0	08/07/12 17:00 / dmf
Thorium 230 precision (±)	0.05	pCi/L				E908.0	08/07/12 17:00 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	08/07/12 17:00 / dmf
DATA QUALITY							
A/C Balance (± 5)	1.34	%				A1030 E	08/13/12 12:59 / kbh
Anions	19.7	meq/L				A1030 E	08/13/12 12:59 / kbh
Cations	20.2	meq/L				A1030 E	08/13/12 12:59 / kbh
Solids, Total Dissolved Calculated	1300	mg/L				A1030 E	08/13/12 12:59 / kbh
TDS Balance (0.80 - 1.20)	1.02					A1030 E	08/13/12 12:59 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	07/25/12 02:32 / jk
Bromoform	ND	ug/L		0.50		E624	07/25/12 02:32 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	07/25/12 02:32 / jk
Chloroform	ND	ug/L		0.50		E624	07/25/12 02:32 / jk
Trihalomethanes, Total	ND	ug/L		0.50		E624	07/25/12 02:32 / jk
Surr: 1,2-Dichlorobenzene-d4	104	%REC		80-120		E624	07/25/12 02:32 / jk
Surr: Dibromofluoromethane	94.0	%REC		80-120		E624	07/25/12 02:32 / jk
Surr: p-Bromofluorobenzene	80.0	%REC		80-120		E624	07/25/12 02:32 / jk
Surr: Toluene-d8	82.0	%REC		80-120		E624	07/25/12 02:32 / 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: C12100859-006
Client Sample ID: TWQ-142

Report Date: 11/19/12
Collection Date: 10/16/12 12:11
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	296	mg/L		5		A2320 B	10/22/12 18:44 / jba
Calcium	61	mg/L		1		E200.7	11/12/12 18:03 / sf
Chloride	18	mg/L		1		E300.0	10/22/12 23:46 / wc
Magnesium	31	mg/L		1		E200.7	11/12/12 18:03 / sf
Nitrogen, Ammonia as N	0.40	mg/L		0.05		A4500-NH3 G	10/26/12 17:32 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	10/25/12 14:24 / ljl
Potassium	4	mg/L		1		E200.7	11/12/12 18:03 / sf
Sodium	362	mg/L		1		E200.7	11/12/12 18:03 / sf
Sulfate	697	mg/L	D	4		E300.0	10/22/12 23:46 / wc
PHYSICAL PROPERTIES							
pH	7.36	s.u.	H	0.01		A4500-H B	10/22/12 10:53 / ab
Solids, Total Dissolved TDS @ 180 C	1290	mg/L		10		A2540 C	10/22/12 08:16 / jz
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	10/26/12 22:23 / cp
Beryllium	ND	mg/L		0.001		E200.8	10/26/12 22:23 / cp
Cadmium	ND	mg/L		0.005		E200.8	10/26/12 22:23 / cp
Cobalt	ND	mg/L		0.01		E200.8	10/26/12 22:23 / cp
Lead	ND	mg/L		0.001		E200.8	10/26/12 22:23 / cp
Manganese	ND	mg/L		0.01		E200.8	10/26/12 22:23 / cp
Molybdenum	ND	mg/L		0.1		E200.8	10/26/12 22:23 / cp
Nickel	ND	mg/L		0.05		E200.8	10/26/12 22:23 / cp
Uranium	ND	mg/L		0.0003		E200.8	10/26/12 22:23 / cp
Vanadium	ND	mg/L		0.1		E200.8	10/26/12 22:23 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	11/05/12 12:08 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	11/07/12 14:23 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	1.1	pCi/L				E900.1	10/25/12 06:36 / lbb
Gross Alpha minus Rn & U Precision (±)	0.6	pCi/L				E900.1	10/25/12 06:36 / lbb
Gross Alpha minus Rn & U MDC	0.7	pCi/L				E900.1	10/25/12 06:36 / lbb
Lead 210	0.4	pCi/L	U			E909.0	11/19/12 09:21 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	11/19/12 09:21 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	11/19/12 09:21 / eli-cs
Radium 226	0.57	pCi/L				E903.0	11/07/12 23:27 / gb
Radium 226 precision (±)	0.15	pCi/L				E903.0	11/07/12 23:27 / gb
Radium 226 MDC	0.16	pCi/L				E903.0	11/07/12 23:27 / gb
Radium 228	1.1	pCi/L	U			RA-05	10/31/12 22:46 / gb
Radium 228 precision (±)	1.4	pCi/L				RA-05	10/31/12 22:46 / gb
Radium 228 MDC	2.3	pCi/L				RA-05	10/31/12 22:46 / 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: C12100859-006
Client Sample ID: TWQ-142

Report Date: 11/19/12
Collection Date: 10/16/12 12:11
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.04	pCi/L	U			E908.0	11/06/12 08:57 / dmf
Thorium 230 precision (±)	0.07	pCi/L				E908.0	11/06/12 08:57 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	11/06/12 08:57 / dmf
DATA QUALITY							
A/C Balance (± 5)	3.70	%				A1030 E	11/19/12 07:28 / kbh
Anions	19.9	meq/L				A1030 E	11/19/12 07:28 / kbh
Cations	21.5	meq/L				A1030 E	11/19/12 07:28 / kbh
Solids, Total Dissolved Calculated	1300	mg/L				A1030 E	11/19/12 07:28 / kbh
TDS Balance (0.80 - 1.20)	0.960					A1030 E	11/19/12 07:28 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	10/26/12 18:36 / jk
Bromoform	ND	ug/L		0.50		E624	10/26/12 18:36 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	10/26/12 18:36 / jk
Chloroform	ND	ug/L		0.50		E624	10/26/12 18:36 / jk
Trihalomethanes, Total	ND	ug/L		0.50		E624	10/26/12 18:36 / jk
Surr: 1,2-Dichlorobenzene-d4	104	%REC		80-120		E624	10/26/12 18:36 / jk
Surr: Dibromofluoromethane	145	%REC	S	80-120		E624	10/26/12 18:36 / jk
Surr: p-Bromofluorobenzene	125	%REC	S	80-120		E624	10/26/12 18:36 / jk
Surr: Toluene-d8	110	%REC		80-120		E624	10/26/12 18:36 / 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.

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:		10/16/2012	7/17/2012	4/10/2012	1/10/2012
Receive Date:		10/19/2012	7/20/2012	4/13/2012	1/13/2012
Report Date:		11/19/2012	8/31/2012	5/25/2012	3/2/2012
Analyte	RUnits	G12100859-006	G120707.10-006	G12040734-006	G12010434-006
Bicarbonate as HCO3	mg/L	296	288	283	269
Calcium	mg/L	61	61	52	57
Chloride	mg/L	18	18	16	17
Magnesium	mg/L	31	29	26	26
Nitrogen, Ammonia as N	mg/L	0.40	ND(0.05)	0.45	0.39
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	362	336	312	308
Sulfate	mg/L	697	693	658	672
pH	s.u.	7.36	7.78	7.34	7.14
Solids, Total Dissolved TDS @ 180 C	mg/L	1290	1330	1260	1240
Aluminum	mg/L	ND(0.1)	ND(0.1)	0.1	ND(0.1)
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.01)	ND(0.01)
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(0.05)	ND(0.05)
Manganese	mg/L	ND(0.01)	0.02	0.02	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(0.01)	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	0.7	0.3
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.6	0.2	0.4	0.3
Gross Alpha minus Rn & U MDC	pCi/L	0.7	0.2	0.5	0.4
Lead 210	pCi/L	0.4	0.4	0.1	0.2
Lead 210 precision (±)	pCi/L	0.6	0.7	0.8	0.6
Lead 210 MDC	pCi/L	1.0	1.2	1.3	1.0
Radium 226	pCi/L	0.57	0.82	0.66	0.80
Radium 226 precision (±)	pCi/L	0.15	0.16	0.22	0.21
Radium 226 MDC	pCi/L	0.16	0.09	0.21	0.19
Radium 228	pCi/L	1.1	0.72	0.07	1.8
Radium 228 precision (±)	pCi/L	1.4	0.81	0.95	1.1
Radium 228 MDC	pCi/L	2.3	1.3	1.6	1.6
Thorium 230	pCi/L	0.04	0.01	0.04	0.06
Thorium 230 precision (±)	pCi/L	0.07	0.05	0.07	0.08
Thorium 230 MDC	pCi/L	0.2	0.2	0.2	0.2
A/C Balance (± 5)	%	3.70	1.34	-1.05	-0.816
Anions	meq/L	19.9	19.7	18.8	18.9
Cations	meq/L	21.5	20.2	18.4	18.5
Solids, Total Dissolved Calculated	mg/L	1300	1300	1220	1230
TDS Balance (0.80 - 1.20)		0.960	1.02	1.03	1.01
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: C12070710-004
Client Sample ID: EPA-2

Report Date: 08/31/12
Collection Date: 07/16/12 12:45
DateReceived: 07/20/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	299	mg/L		5		A2320 B	07/20/12 17:27 / jba
Calcium	337	mg/L		1		E200.7	08/09/12 16:53 / sf
Chloride	21	mg/L	D	2		E300.0	07/24/12 09:33 / ljl
Magnesium	155	mg/L		1		E200.7	08/09/12 16:53 / sf
Nitrogen, Ammonia as N	0.42	mg/L		0.05		A4500-NH3 G	07/28/12 14:58 / ljl
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	07/24/12 16:26 / lr
Potassium	6	mg/L		1		E200.7	08/16/12 12:31 / sf
Sodium	207	mg/L		1		E200.7	08/16/12 12:31 / sf
Sulfate	1790	mg/L	D	8		E300.0	07/24/12 09:33 / ljl
PHYSICAL PROPERTIES							
pH	7.10	s.u.	H	0.01		A4500-H B	07/23/12 09:27 / ab
Solids, Total Dissolved TDS @ 180 C	2920	mg/L		10		A2540 C	07/20/12 16:43 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	08/10/12 16:33 / cp
Beryllium	ND	mg/L		0.001		E200.7	08/10/12 14:46 / sf
Cadmium	ND	mg/L		0.005		E200.8	08/10/12 16:33 / cp
Cobalt	ND	mg/L		0.01		E200.8	08/10/12 16:33 / cp
Lead	ND	mg/L		0.001		E200.8	08/10/12 16:33 / cp
Manganese	1.39	mg/L		0.01		E200.8	08/10/12 16:33 / cp
Molybdenum	ND	mg/L		0.1		E200.8	08/10/12 16:33 / cp
Nickel	ND	mg/L		0.05		E200.8	08/10/12 16:33 / cp
Uranium	0.0017	mg/L		0.0003		E200.8	08/10/12 16:33 / cp
Vanadium	ND	mg/L		0.1		E200.8	08/10/12 16:33 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	08/01/12 20:07 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	07/26/12 17:29 / rdw
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	1.6	pCi/L				E900.1	08/01/12 13:12 / lbb
Gross Alpha minus Rn & U Precision (±)	0.3	pCi/L				E900.1	08/01/12 13:12 / lbb
Gross Alpha minus Rn & U MDC	0.2	pCi/L				E900.1	08/01/12 13:12 / lbb
Lead 210	0.8	pCi/L	U			E909.0	08/14/12 03:00 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	08/14/12 03:00 / eli-cs
Lead 210 MDC	1.2	pCi/L				E909.0	08/14/12 03:00 / eli-cs
Radium 226	1.3	pCi/L				E903.0	08/06/12 11:47 / lbb
Radium 226 precision (±)	0.19	pCi/L				E903.0	08/06/12 11:47 / lbb
Radium 226 MDC	0.09	pCi/L				E903.0	08/06/12 11:47 / lbb
Radium 228	2.2	pCi/L				RA-05	07/30/12 22:49 / gb
Radium 228 precision (±)	0.86	pCi/L				RA-05	07/30/12 22:49 / gb
Radium 228 MDC	1.3	pCi/L				RA-05	07/30/12 22:49 / 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: C12070710-004
Client Sample ID: EPA-2

Report Date: 08/31/12
Collection Date: 07/16/12 12:45
DateReceived: 07/20/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.04	pCi/L	U			E908.0	08/07/12 17:00 / dmf
Thorium 230 precision (±)	0.08	pCi/L				E908.0	08/07/12 17:00 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	08/07/12 17:00 / dmf
DATA QUALITY							
A/C Balance (± 5)	-4.75	%				A1030 E	08/20/12 07:12 / kbh
Anions	42.7	meq/L				A1030 E	08/20/12 07:12 / kbh
Cations	38.8	meq/L				A1030 E	08/20/12 07:12 / kbh
Solids, Total Dissolved Calculated	2700	mg/L				A1030 E	08/20/12 07:12 / kbh
TDS Balance (0.80 - 1.20)	1.09					A1030 E	08/20/12 07:12 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	07/25/12 01:19 / jk
Bromoform	ND	ug/L		0.50		E624	07/25/12 01:19 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	07/25/12 01:19 / jk
Chloroform	ND	ug/L		0.50		E624	07/25/12 01:19 / jk
Trihalomethanes, Total	ND	ug/L		0.50		E624	07/25/12 01:19 / jk
Surr: 1,2-Dichlorobenzene-d4	106	%REC		80-120		E624	07/25/12 01:19 / jk
Surr: Dibromofluoromethane	92.0	%REC		80-120		E624	07/25/12 01:19 / jk
Surr: p-Bromofluorobenzene	85.0	%REC		80-120		E624	07/25/12 01:19 / jk
Surr: Toluene-d8	90.0	%REC		80-120		E624	07/25/12 01:19 / 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: C12100859-004
Client Sample ID: EPA-2

Report Date: 11/19/12
Collection Date: 10/15/12 11:27
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	306	mg/L		5		A2320 B	10/22/12 18:27 / jba
Calcium	382	mg/L		1		E200.7	11/10/12 00:47 / sf
Chloride	22	mg/L	D	2		E300.0	10/22/12 23:15 / wc
Magnesium	161	mg/L		1		E200.7	11/10/12 00:47 / sf
Nitrogen, Ammonia as N	0.44	mg/L		0.05		A4500-NH3 G	10/26/12 17:28 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	10/25/12 14:14 / ljl
Potassium	7	mg/L		1		E200.7	11/10/12 00:47 / sf
Sodium	215	mg/L		1		E200.7	11/10/12 00:47 / sf
Sulfate	1800	mg/L	D	8		E300.0	10/22/12 23:15 / wc
PHYSICAL PROPERTIES							
pH	7.04	s.u.	H	0.01		A4500-H B	10/22/12 10:36 / ab
Solids, Total Dissolved TDS @ 180 C	2990	mg/L		10		A2540 C	10/22/12 08:15 / jz
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	10/26/12 22:14 / cp
Beryllium	ND	mg/L		0.001		E200.8	10/26/12 22:14 / cp
Cadmium	ND	mg/L		0.005		E200.8	10/26/12 22:14 / cp
Cobalt	ND	mg/L		0.01		E200.8	10/26/12 22:14 / cp
Lead	ND	mg/L		0.001		E200.8	10/26/12 22:14 / cp
Manganese	1.24	mg/L		0.01		E200.8	10/26/12 22:14 / cp
Molybdenum	ND	mg/L		0.1		E200.8	10/26/12 22:14 / cp
Nickel	ND	mg/L		0.05		E200.8	10/26/12 22:14 / cp
Uranium	0.0020	mg/L		0.0003		E200.8	10/26/12 22:14 / cp
Vanadium	ND	mg/L		0.1		E200.8	10/26/12 22:14 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	11/05/12 11:52 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	11/07/12 14:19 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	1.8	pCi/L				E900.1	10/25/12 06:36 / lbb
Gross Alpha minus Rn & U Precision (±)	0.7	pCi/L				E900.1	10/25/12 06:36 / lbb
Gross Alpha minus Rn & U MDC	0.7	pCi/L				E900.1	10/25/12 06:36 / lbb
Lead 210	0.2	pCi/L	U			E909.0	11/19/12 07:24 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	11/19/12 07:24 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	11/19/12 07:24 / eli-cs
Radium 226	0.91	pCi/L				E903.0	11/07/12 23:27 / gb
Radium 226 precision (±)	0.13	pCi/L				E903.0	11/07/12 23:27 / gb
Radium 226 MDC	0.10	pCi/L				E903.0	11/07/12 23:27 / gb
Radium 228	2.4	pCi/L				RA-05	10/31/12 21:13 / gb
Radium 228 precision (±)	0.84	pCi/L				RA-05	10/31/12 21:13 / gb
Radium 228 MDC	1.2	pCi/L				RA-05	10/31/12 21:13 / 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: C12100859-004
Client Sample ID: EPA-2

Report Date: 11/19/12
Collection Date: 10/15/12 11:27
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.05	pCi/L	U			E908.0	11/06/12 08:57 / dmf
Thorium 230 precision (±)	0.08	pCi/L				E908.0	11/06/12 08:57 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	11/06/12 08:57 / dmf
DATA QUALITY							
A/C Balance (± 5)	-1.39	%				A1030 E	11/12/12 14:49 / kbh
Anions	43.1	meq/L				A1030 E	11/12/12 14:49 / kbh
Cations	41.9	meq/L				A1030 E	11/12/12 14:49 / kbh
Solids, Total Dissolved Calculated	2800	mg/L				A1030 E	11/12/12 14:49 / kbh
TDS Balance (0.80 - 1.20)	1.08					A1030 E	11/12/12 14:49 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	10/26/12 17:26 / jk
Bromoform	ND	ug/L		0.50		E624	10/26/12 17:26 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	10/26/12 17:26 / jk
Chloroform	ND	ug/L		0.50		E624	10/26/12 17:26 / jk
Trihalomethanes, Total	ND	ug/L		0.50		E624	10/26/12 17:26 / jk
Surr: 1,2-Dichlorobenzene-d4	105	%REC		80-120		E624	10/26/12 17:26 / jk
Surr: Dibromofluoromethane	147	%REC	S	80-120		E624	10/26/12 17:26 / jk
Surr: p-Bromofluorobenzene	125	%REC	S	80-120		E624	10/26/12 17:26 / jk
Surr: Toluene-d8	112	%REC		80-120		E624	10/26/12 17:26 / 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
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:		EPA-2	EPA-2	EPA-2	EPA-2
Collection Date:		10/15/2012	7/16/2012	4/9/2012	1/9/2012
Receive Date:		10/19/2012	7/20/2012	4/13/2012	1/13/2012
Report Date:		11/19/2012	8/31/2012	5/25/2012	3/2/2012
Analyte	RUnits	C12100859-004	C12070710-004	C12040734-004	C12010434-004
Bicarbonate as HCO3	mg/L	306	299	305	286
Calcium	mg/L	382	337	349	345
Chloride	mg/L	22	21	22	21
Magnesium	mg/L	161	155	162	143
Nitrogen, Ammonia as N	mg/L	0.44	0.42	0.43	0.35
Nitrogen, Nitrate+Nitrite as N	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Potassium	mg/L	7	6	6	6
Sodium	mg/L	215	207	201	184
Sulfate	mg/L	1800	1790	1790	1720
pH	s.u.	7.04	7.10	6.88	6.77
Solids, Total Dissolved TDS @ 180 C	mg/L	2990	2920	2960	2850
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(0.01)	ND(0.01)
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(0.05)	ND(0.05)
Manganese	mg/L	1.24	1.39	1.90	1.18
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	0.0020	0.0017	0.0025	0.0020
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(0.01)	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	1.8	1.6	1.3	1.1
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.7	0.3	0.5	0.4
Gross Alpha minus Rn & U MDC	pCi/L	0.7	0.2	0.5	0.4
Lead 210	pCi/L	0.2	0.8	0.3	0.4
Lead 210 precision (±)	pCi/L	0.6	0.7	0.8	0.6
Lead 210 MDC	pCi/L	1.0	1.2	1.3	1
Radium 226	pCi/L	0.91	1.3	1.1	1.4
Radium 226 precision (±)	pCi/L	0.13	0.19	0.25	0.24
Radium 226 MDC	pCi/L	0.10	0.09	0.20	0.17
Radium 228	pCi/L	2.4	2.2	2.7	1.3
Radium 228 precision (±)	pCi/L	0.84	0.86	1.0	1.9
Radium 228 MDC	pCi/L	1.2	1.3	1.5	3.0
Thorium 230	pCi/L	0.05	0.04	0.008	0.04
Thorium 230 precision (±)	pCi/L	0.08	0.08	0.06	0.1
Thorium 230 MDC	pCi/L	0.2	0.2	0.2	0.3
A/C Balance (± 5)	%	-1.4	-4.75	-3.80	-5.02
Anions	meq/L	43.1	42.7	42.8	41.1
Cations	meq/L	41.9	38.8	39.7	37.2
Solids, Total Dissolved Calculated	mg/L	2800	2700	2710	2590
TDS Balance (0.80 - 1.20)		1.08	1.09	1.09	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: C12070710-001
Client Sample ID: EPA-4

Report Date: 08/31/12
Collection Date: 07/16/12 10:12
DateReceived: 07/20/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	143	mg/L		5		A2320 B	07/20/12 16:42 / jba
Calcium	483	mg/L		1		E200.7	07/27/12 15:58 / sf
Chloride	38	mg/L	D	4		E300.0	07/24/12 08:41 / ljl
Magnesium	383	mg/L		1		E200.7	07/27/12 15:58 / sf
Nitrogen, Ammonia as N	0.77	mg/L		0.05		A4500-NH3 G	07/28/12 14:48 / ljl
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	07/24/12 16:13 / lr
Potassium	9	mg/L		1		E200.7	07/27/12 15:58 / sf
Sodium	185	mg/L		1		E200.7	07/27/12 15:58 / sf
Sulfate	3040	mg/L	D	20		E300.0	07/24/12 08:41 / ljl
PHYSICAL PROPERTIES							
pH	7.07	s.u.	H	0.01		A4500-H B	07/23/12 09:19 / ab
Solids, Total Dissolved TDS @ 180 C	4640	mg/L		10		A2540 C	07/20/12 16:42 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	08/10/12 15:48 / cp
Beryllium	ND	mg/L		0.001		E200.8	08/10/12 15:48 / cp
Cadmium	ND	mg/L		0.005		E200.8	08/10/12 15:48 / cp
Cobalt	ND	mg/L		0.01		E200.8	08/10/12 15:48 / cp
Lead	ND	mg/L		0.001		E200.8	08/10/12 15:48 / cp
Manganese	2.87	mg/L		0.01		E200.8	08/10/12 15:48 / cp
Molybdenum	ND	mg/L		0.1		E200.8	08/10/12 15:48 / cp
Nickel	ND	mg/L		0.05		E200.8	08/10/12 15:48 / cp
Uranium	0.0004	mg/L		0.0003		E200.8	08/10/12 15:48 / cp
Vanadium	ND	mg/L		0.1		E200.8	08/10/12 15:48 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	08/01/12 19:12 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	07/26/12 17:12 / rdw
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	1.3	pCi/L				E900.1	08/01/12 09:30 / lbb
Gross Alpha minus Rn & U Precision (±)	0.3	pCi/L				E900.1	08/01/12 09:30 / lbb
Gross Alpha minus Rn & U MDC	0.2	pCi/L				E900.1	08/01/12 09:30 / lbb
Lead 210	0.6	pCi/L	U			E909.0	08/06/12 06:42 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	08/06/12 06:42 / eli-cs
Lead 210 MDC	1.1	pCi/L				E909.0	08/06/12 06:42 / eli-cs
Radium 226	0.96	pCi/L				E903.0	08/06/12 11:47 / lbb
Radium 226 precision (±)	0.16	pCi/L				E903.0	08/06/12 11:47 / lbb
Radium 226 MDC	0.09	pCi/L				E903.0	08/06/12 11:47 / lbb
Radium 228	2.4	pCi/L				RA-05	07/30/12 22:49 / gb
Radium 228 precision (±)	0.84	pCi/L				RA-05	07/30/12 22:49 / gb
Radium 228 MDC	1.2	pCi/L				RA-05	07/30/12 22:49 / 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: C12070710-001
Client Sample ID: EPA-4

Report Date: 08/31/12
Collection Date: 07/16/12 10:12
DateReceived: 07/20/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.08	pCi/L	U			E908.0	08/07/12 16:59 / dmf
Thorium 230 precision (±)	0.1	pCi/L				E908.0	08/07/12 16:59 / dmf
Thorium 230 MDC	0.3	pCi/L				E908.0	08/07/12 16:59 / dmf
- See Case Narrative regarding Th230 analysis.							
DATA QUALITY							
A/C Balance (± 5)	-2.11	%				A1030 E	07/31/12 06:25 / kbh
Anions	66.7	meq/L				A1030 E	07/31/12 06:25 / kbh
Cations	64.0	meq/L				A1030 E	07/31/12 06:25 / kbh
Solids, Total Dissolved Calculated	4200	mg/L				A1030 E	07/31/12 06:25 / kbh
TDS Balance (0.80 - 1.20)	1.10					A1030 E	07/31/12 06:25 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	07/24/12 23:29 / jk
Bromoform	ND	ug/L		0.50		E624	07/24/12 23:29 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	07/24/12 23:29 / jk
Chloroform	ND	ug/L		0.50		E624	07/24/12 23:29 / jk
Trihalomethanes, Total	ND	ug/L		0.50		E624	07/24/12 23:29 / jk
Surr: 1,2-Dichlorobenzene-d4	99.0	%REC		80-120		E624	07/24/12 23:29 / jk
Surr: Dibromofluoromethane	98.0	%REC		80-120		E624	07/24/12 23:29 / jk
Surr: p-Bromofluorobenzene	80.0	%REC		80-120		E624	07/24/12 23:29 / jk
Surr: Toluene-d8	94.0	%REC		80-120		E624	07/24/12 23:29 / 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: C12100859-001
Client Sample ID: EPA-4

Report Date: 11/19/12
Collection Date: 10/15/12 08:53
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	153	mg/L		5		A2320 B	10/22/12 18:04 / jba
Calcium	592	mg/L		1		E200.7	11/10/12 00:31 / sf
Chloride	39	mg/L	D	4		E300.0	10/22/12 21:58 / wc
Magnesium	380	mg/L		1		E200.7	11/10/12 00:31 / sf
Nitrogen, Ammonia as N	1.4	mg/L	D	0.1		A4500-NH3 G	10/26/12 17:22 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	10/25/12 13:57 / ljl
Potassium	9	mg/L		1		E200.7	11/10/12 00:31 / sf
Sodium	191	mg/L	D	2		E200.7	11/10/12 00:31 / sf
Sulfate	3010	mg/L	D	20		E300.0	10/22/12 21:58 / wc
PHYSICAL PROPERTIES							
pH	7.04	s.u.	H	0.01		A4500-H B	10/22/12 10:28 / ab
Solids, Total Dissolved TDS @ 180 C	4500	mg/L		10		A2540 C	10/22/12 08:15 / jz
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	10/26/12 22:27 / cp
Beryllium	ND	mg/L		0.001		E200.8	10/26/12 22:27 / cp
Cadmium	ND	mg/L		0.005		E200.8	10/26/12 22:27 / cp
Cobalt	ND	mg/L		0.01		E200.8	10/26/12 22:27 / cp
Lead	ND	mg/L		0.001		E200.8	10/26/12 22:27 / cp
Manganese	2.76	mg/L		0.01		E200.8	10/26/12 22:27 / cp
Molybdenum	ND	mg/L		0.1		E200.8	10/26/12 22:27 / cp
Nickel	ND	mg/L		0.05		E200.8	10/26/12 22:27 / cp
Uranium	0.0003	mg/L		0.0003		E200.8	10/26/12 22:27 / cp
Vanadium	ND	mg/L		0.1		E200.8	10/26/12 22:27 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	11/05/12 11:12 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	11/07/12 14:09 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	1.7	pCi/L				E900.1	10/25/12 06:36 / lbb
Gross Alpha minus Rn & U Precision (±)	0.7	pCi/L				E900.1	10/25/12 06:36 / lbb
Gross Alpha minus Rn & U MDC	0.7	pCi/L				E900.1	10/25/12 06:36 / lbb
Lead 210	0.5	pCi/L	U			E909.0	11/19/12 04:28 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	11/19/12 04:28 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	11/19/12 04:28 / eli-cs
Radium 226	1.1	pCi/L				E903.0	11/07/12 23:27 / gb
Radium 226 precision (±)	0.13	pCi/L				E903.0	11/07/12 23:27 / gb
Radium 226 MDC	0.09	pCi/L				E903.0	11/07/12 23:27 / gb
Radium 228	3.6	pCi/L				RA-05	10/31/12 21:12 / gb
Radium 228 precision (±)	0.84	pCi/L				RA-05	10/31/12 21:12 / gb
Radium 228 MDC	1.1	pCi/L				RA-05	10/31/12 21:12 / 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: C12100859-001
Client Sample ID: EPA-4

Report Date: 11/19/12
Collection Date: 10/15/12 08:53
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.3	pCi/L	U			E908.0	11/06/12 08:57 / dmf
Thorium 230 precision (±)	0.2	pCi/L				E908.0	11/06/12 08:57 / dmf
Thorium 230 MDC	0.4	pCi/L				E908.0	11/06/12 08:57 / dmf
- See Case Narrative regarding TH230 analysis.							
DATA QUALITY							
A/C Balance (± 5)	2.38	%				A1030 E	11/12/12 14:49 / kbh
Anions	66.2	meq/L				A1030 E	11/12/12 14:49 / kbh
Cations	69.4	meq/L				A1030 E	11/12/12 14:49 / kbh
Solids, Total Dissolved Calculated	4300	mg/L				A1030 E	11/12/12 14:49 / kbh
TDS Balance (0.80 - 1.20)	1.04					A1030 E	11/12/12 14:49 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	10/26/12 15:42 / jk
Bromoform	ND	ug/L		0.50		E624	10/26/12 15:42 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	10/26/12 15:42 / jk
Chloroform	ND	ug/L		0.50		E624	10/26/12 15:42 / jk
Trihalomethanes, Total	ND	ug/L		0.50		E624	10/26/12 15:42 / jk
Surr: 1,2-Dichlorobenzene-d4	102	%REC		80-120		E624	10/26/12 15:42 / jk
Surr: Dibromofluoromethane	152	%REC	S	80-120		E624	10/26/12 15:42 / jk
Surr: p-Bromofluorobenzene	116	%REC		80-120		E624	10/26/12 15:42 / jk
Surr: Toluene-d8	106	%REC		80-120		E624	10/26/12 15:42 / 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
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:		EPA-4	EPA-4	EPA-4	EPA-4
Collection Date:		10/15/2012	7/16/2012	4/9/2012	1/9/2012
Receive Date:		10/19/2012	7/20/2012	7/13/2012	1/13/2012
Report Date:		11/19/2012	8/31/2012	5/25/2012	3/2/2012
Analyte	RUnits	G12100859-001	G12070710-001	G12040734-001	G12010434-001
Bicarbonate as HCO3	mg/L	153	143	167	148
Calcium	mg/L	592	483	523	586
Chloride	mg/L	39	38	34	36
Magnesium	mg/L	380	383	374	353
Nitrogen, Ammonia as N	mg/L	1.4	0.77	0.75	0.68
Nitrogen, Nitrate+Nitrite as N	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Potassium	mg/L	9	9	8	8
Sodium	mg/L	191	185	179	174
Sulfate	mg/L	3010	3040	2740	2930
pH	s.u.	7.04	7.07	6.79	6.59
Solids, Total Dissolved TDS @ 180 C	mg/L	4500	4640	4450	4430
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(0.01)	ND(0.01)
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(0.05)	ND(0.05)
Manganese	mg/L	2.76	2.87	3.62	2.73
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	0.0003	0.0004	0.0005	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(0.01)	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	1.7	1.3	1.3	1.2
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.7	0.3	0.5	0.4
Gross Alpha minus Rn & U MDC	pCi/L	0.7	0.2	0.5	0.4
Lead 210	pCi/L	0.5	0.6	0.2	0.6
Lead 210 precision (±)	pCi/L	0.6	0.7	0.8	0.6
Lead 210 MDC	pCi/L	1.0	1.1	1.3	1.0
Radium 226	pCi/L	1.1	0.96	1.4	1.3
Radium 226 precision (±)	pCi/L	0.13	0.16	0.25	0.21
Radium 226 MDC	pCi/L	0.09	0.09	0.17	0.14
Radium 228	pCi/L	3.6	2.4	3.7	1.2
Radium 228 precision (±)	pCi/L	0.84	0.84	0.91	0.66
Radium 228 MDC	pCi/L	1.1	1.2	1.2	1.0
Thorium 230	pCi/L	0.3	0.08	0.1	0.1
Thorium 230 precision (±)	pCi/L	0.2	0.1	0.2	0.1
Thorium 230 MDC	pCi/L	0.4	0.3	0.3	0.3
A/C Balance (± 5)	%	2.38	-2.11	3.36	1.29
Anions	meq/L	66.2	66.7	60.7	64.4
Cations	meq/L	69.4	64.0	64.9	66.1
Solids, Total Dissolved Calculated	mg/L	4300	4200	3970	4190
TDS Balance (0.80 - 1.20)		1.04	1.10	1.12	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-1
Lab ID: C12070710-002
Client Sample ID: EPA-5

Report Date: 08/31/12
Collection Date: 07/16/12 11:07
DateReceived: 07/20/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	69	mg/L		5		A2320 B	07/20/12 16:50 / jba
Calcium	514	mg/L		1		E200.7	08/16/12 12:27 / sf
Chloride	41	mg/L	D	4		E300.0	07/24/12 08:58 / ljl
Magnesium	522	mg/L		1		E200.7	08/16/12 12:27 / sf
Nitrogen, Ammonia as N	4.4	mg/L	D	0.1		A4500-NH3 G	07/28/12 14:54 / ljl
Nitrogen, Nitrate+Nitrite as N	3.1	mg/L		0.1		E353.2	07/24/12 16:21 / lr
Potassium	6	mg/L		1		E200.7	08/16/12 12:27 / sf
Sodium	117	mg/L	D	2		E200.7	08/16/12 12:27 / sf
Sulfate	3230	mg/L	D	20		E300.0	07/24/12 08:58 / ljl
PHYSICAL PROPERTIES							
pH	6.28	s.u.	H	0.01		A4500-H B	07/23/12 09:22 / ab
Solids, Total Dissolved TDS @ 180 C	4920	mg/L		10		A2540 C	07/20/12 16:42 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	08/10/12 16:24 / cp
Beryllium	ND	mg/L		0.001		E200.8	08/18/12 08:24 / cp
Cadmium	ND	mg/L		0.005		E200.8	08/10/12 16:24 / cp
Cobalt	0.03	mg/L		0.01		E200.8	08/10/12 16:24 / cp
Lead	0.002	mg/L		0.001		E200.8	08/10/12 16:24 / cp
Manganese	0.98	mg/L		0.01		E200.8	08/10/12 16:24 / cp
Molybdenum	ND	mg/L		0.1		E200.8	08/10/12 16:24 / cp
Nickel	ND	mg/L		0.05		E200.8	08/10/12 16:24 / cp
Uranium	0.0010	mg/L		0.0003		E200.8	08/10/12 16:24 / cp
Vanadium	ND	mg/L		0.1		E200.8	08/10/12 16:24 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	08/01/12 19:36 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	07/26/12 17:17 / rdw
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	1.7	pCi/L				E900.1	08/01/12 09:30 / lbb
Gross Alpha minus Rn & U Precision (±)	0.3	pCi/L				E900.1	08/01/12 09:30 / lbb
Gross Alpha minus Rn & U MDC	0.2	pCi/L				E900.1	08/01/12 09:30 / lbb
Lead 210	1	pCi/L	U			E909.0	08/14/12 00:20 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	08/14/12 00:20 / eli-cs
Lead 210 MDC	1.2	pCi/L				E909.0	08/14/12 00:20 / eli-cs
Radium 226	1.4	pCi/L				E903.0	08/06/12 11:47 / lbb
Radium 226 precision (±)	0.19	pCi/L				E903.0	08/06/12 11:47 / lbb
Radium 226 MDC	0.09	pCi/L				E903.0	08/06/12 11:47 / lbb
Radium 228	1.8	pCi/L				RA-05	07/30/12 22:49 / gb
Radium 228 precision (±)	0.82	pCi/L				RA-05	07/30/12 22:49 / gb
Radium 228 MDC	1.2	pCi/L				RA-05	07/30/12 22:49 / 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: C12070710-002
Client Sample ID: EPA-5

Report Date: 08/31/12
Collection Date: 07/16/12 11:07
DateReceived: 07/20/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.01	pCi/L	U			E908.0	08/07/12 16:59 / dmf
Thorium 230 precision (±)	0.1	pCi/L				E908.0	08/07/12 16:59 / dmf
Thorium 230 MDC	0.3	pCi/L				E908.0	08/07/12 16:59 / dmf
- See Case Narrative regarding Th230 analysis.							
DATA QUALITY							
A/C Balance (± 5)	3.01	%				A1030 E	08/31/12 13:48 / kbh
Anions	69.8	meq/L				A1030 E	08/31/12 13:48 / kbh
Cations	74.2	meq/L				A1030 E	08/31/12 13:48 / kbh
Solids, Total Dissolved Calculated	4500	mg/L				A1030 E	08/31/12 13:48 / kbh
TDS Balance (0.80 - 1.20)	1.09					A1030 E	08/31/12 13:48 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	07/25/12 00:06 / jk
Bromoform	ND	ug/L		0.50		E624	07/25/12 00:06 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	07/25/12 00:06 / jk
Chloroform	ND	ug/L		0.50		E624	07/25/12 00:06 / jk
Trihalomethanes, Total	ND	ug/L		0.50		E624	07/25/12 00:06 / jk
Surr: 1,2-Dichlorobenzene-d4	99.0	%REC		80-120		E624	07/25/12 00:06 / jk
Surr: Dibromofluoromethane	95.0	%REC		80-120		E624	07/25/12 00:06 / jk
Surr: p-Bromofluorobenzene	85.0	%REC		80-120		E624	07/25/12 00:06 / jk
Surr: Toluene-d8	88.0	%REC		80-120		E624	07/25/12 00:06 / 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: C12100859-002
Client Sample ID: EPA-5

Report Date: 11/19/12
Collection Date: 10/15/12 09:54
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	66	mg/L		5		A2320 B	10/22/12 18:11 / jba
Calcium	488	mg/L		1		E200.7	11/10/12 00:39 / sf
Chloride	40	mg/L	D	4		E300.0	10/22/12 22:44 / wc
Magnesium	486	mg/L		1		E200.7	11/10/12 00:39 / sf
Nitrogen, Ammonia as N	1.40	mg/L		0.05		A4500-NH3 G	10/26/12 17:24 / lr
Nitrogen, Nitrate+Nitrite as N	2.1	mg/L	D	0.2		E353.2	10/25/12 14:07 / ljl
Potassium	6	mg/L		1		E200.7	11/10/12 00:39 / sf
Sodium	112	mg/L	D	2		E200.7	11/10/12 00:39 / sf
Sulfate	3130	mg/L	D	20		E300.0	10/22/12 22:44 / wc
PHYSICAL PROPERTIES							
pH	6.16	s.u.	H	0.01		A4500-H B	10/22/12 10:31 / ab
Solids, Total Dissolved TDS @ 180 C	4790	mg/L		10		A2540 C	10/22/12 08:15 / jz
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	10/26/12 22:05 / cp
Beryllium	ND	mg/L		0.001		E200.8	10/26/12 22:05 / cp
Cadmium	ND	mg/L		0.005		E200.8	10/26/12 22:05 / cp
Cobalt	0.04	mg/L		0.01		E200.8	10/26/12 22:05 / cp
Lead	0.001	mg/L		0.001		E200.8	10/26/12 22:05 / cp
Manganese	0.90	mg/L		0.01		E200.8	10/26/12 22:05 / cp
Molybdenum	ND	mg/L		0.1		E200.8	10/26/12 22:05 / cp
Nickel	0.06	mg/L		0.05		E200.8	10/26/12 22:05 / cp
Uranium	0.0006	mg/L		0.0003		E200.8	10/26/12 22:05 / cp
Vanadium	ND	mg/L		0.1		E200.8	10/26/12 22:05 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	11/05/12 11:20 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	11/07/12 14:15 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	2.2	pCi/L				E900.1	10/25/12 06:36 / lbb
Gross Alpha minus Rn & U Precision (±)	0.7	pCi/L				E900.1	10/25/12 06:36 / lbb
Gross Alpha minus Rn & U MDC	0.7	pCi/L				E900.1	10/25/12 06:36 / lbb
Lead 210	0.7	pCi/L	U			E909.0	11/19/12 05:27 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	11/19/12 05:27 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	11/19/12 05:27 / eli-cs
Radium 226	1.1	pCi/L				E903.0	11/07/12 23:27 / gb
Radium 226 precision (±)	0.14	pCi/L				E903.0	11/07/12 23:27 / gb
Radium 226 MDC	0.1	pCi/L				E903.0	11/07/12 23:27 / gb
Radium 228	2.3	pCi/L				RA-05	10/31/12 21:13 / gb
Radium 228 precision (±)	0.80	pCi/L				RA-05	10/31/12 21:13 / gb
Radium 228 MDC	1.1	pCi/L				RA-05	10/31/12 21:13 / 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: C12100859-002
Client Sample ID: EPA-5

Report Date: 11/19/12
Collection Date: 10/15/12 09:54
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.04	pCi/L	U			E908.0	11/06/12 08:57 / dmf
Thorium 230 precision (±)	0.09	pCi/L				E908.0	11/06/12 08:57 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	11/06/12 08:57 / dmf
DATA QUALITY							
A/C Balance (± 5)	1.27	%				A1030 E	11/12/12 14:49 / kbh
Anions	67.8	meq/L				A1030 E	11/12/12 14:49 / kbh
Cations	69.5	meq/L				A1030 E	11/12/12 14:49 / kbh
Solids, Total Dissolved Calculated	4300	mg/L				A1030 E	11/12/12 14:49 / kbh
TDS Balance (0.80 - 1.20)	1.10					A1030 E	11/12/12 14:49 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	10/26/12 16:16 / jk
Bromoform	ND	ug/L		0.50		E624	10/26/12 16:16 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	10/26/12 16:16 / jk
Chloroform	ND	ug/L		0.50		E624	10/26/12 16:16 / jk
Trihalomethanes, Total	ND	ug/L		0.50		E624	10/26/12 16:16 / jk
Surr: 1,2-Dichlorobenzene-d4	102	%REC		80-120		E624	10/26/12 16:16 / jk
Surr: Dibromofluoromethane	140	%REC	S	80-120		E624	10/26/12 16:16 / jk
Surr: p-Bromofluorobenzene	121	%REC	S	80-120		E624	10/26/12 16:16 / jk
Surr: Toluene-d8	109	%REC		80-120		E624	10/26/12 16:16 / 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.

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:		10/15/2012	7/16/2012	4/9/2012	1/9/2012
Receive Date:		10/19/2012	7/20/2012	4/13/2012	1/13/2012
Report Date:		11/19/2012	8/31/2012	5/25/2012	3/2/2012
Analyte	RUnits	G12100859-002	G12070710-002	G12040734-002	G12010434-002
Bicarbonate as HCO3	mg/L	66	69	64	61
Calcium	mg/L	488	514	451	442
Chloride	mg/L	40	41	38	39
Magnesium	mg/L	486	522	490	426
Nitrogen, Ammonia as N	mg/L	1.40	4.4	3.9	4.2
Nitrogen, Nitrate+Nitrite as N	mg/L	2.1	3.1	4.0	1.0
Potassium	mg/L	6	6	6	6
Sodium	mg/L	112	117	107	98
Sulfate	mg/L	3130	3230	3130	3150
pH	s.u.	6.16	6.28	5.91	5.89
Solids, Total Dissolved TDS @ 180 C	mg/L	4790	4920	4770	4760
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(0.01)	ND(0.01)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	0.04	0.03	0.04	0.03
Lead	mg/L	0.001	0.002	ND(0.05)	ND(0.05)
Manganese	mg/L	0.90	0.98	1.15	1.14
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	0.06	ND(0.05)	0.05	0.05
Uranium	mg/L	0.0006	0.0010	0.0007	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(0.01)	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	2.2	1.7	2.1	1.6
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.7	0.3	0.5	0.5
Gross Alpha minus Rn & U MDC	pCi/L	0.7	0.2	0.5	0.4
Lead 210	pCi/L	0.7	1	0.1	0.3
Lead 210 precision (±)	pCi/L	0.7	0.7	0.8	0.6
Lead 210 MDC	pCi/L	1.0	1.2	1.3	1
Radium 226	pCi/L	1.1	1.4	1.5	1.6
Radium 226 precision (±)	pCi/L	0.14	0.19	0.28	0.23
Radium 226 MDC	pCi/L	0.1	0.09	0.18	0.14
Radium 228	pCi/L	2.3	1.8	2.5	0.97
Radium 228 precision (±)	pCi/L	0.80	0.82	0.86	0.75
Radium 228 MDC	pCi/L	1.1	1.2	1.2	1.2
Thorium 230	pCi/L	0.04	0.01	0.001	0.02
Thorium 230 precision (±)	pCi/L	0.09	0.1	0.1	0.1
Thorium 230 MDC	pCi/L	0.2	0.3	0.3	0.3
A/C Balance (± 5)	%	1.27	3.01	0.264	-4.60
Anions	meq/L	67.8	69.8	67.6	67.7
Cations	meq/L	69.5	74.2	67.9	61.8
Solids, Total Dissolved Calculated	mg/L	4300	4500	4290	4210
TDS Balance (0.80 - 1.20)		1.10	1.09	1.11	1.14
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: C12070710-003
Client Sample ID: EPA-7

Report Date: 08/31/12
Collection Date: 07/16/12 11:50
DateReceived: 07/20/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	645	mg/L		5		A2320 B	07/20/12 17:11 / jba
Calcium	528	mg/L		1		E200.7	08/09/12 16:49 / sf
Chloride	231	mg/L	D	10		E300.0	07/24/12 09:15 / ljl
Magnesium	1040	mg/L		1		E200.7	08/09/12 16:49 / sf
Nitrogen, Ammonia as N	0.20	mg/L		0.05		A4500-NH3 G	07/28/12 14:56 / ljl
Nitrogen, Nitrate+Nitrite as N	139	mg/L	D	5		E353.2	07/24/12 16:23 / lr
Potassium	9	mg/L		1		E200.7	08/10/12 14:23 / sf
Sodium	431	mg/L		1		E200.7	08/10/12 14:23 / sf
Sulfate	4520	mg/L	D	40		E300.0	07/24/12 09:15 / ljl
PHYSICAL PROPERTIES							
pH	6.42	s.u.	H	0.01		A4500-H B	07/23/12 09:25 / ab
Solids, Total Dissolved TDS @ 180 C	8270	mg/L		10		A2540 C	07/20/12 16:42 / ab
METALS - TOTAL							
Aluminum	0.1	mg/L		0.1		E200.8	08/10/12 16:28 / cp
Beryllium	ND	mg/L		0.001		E200.8	08/18/12 08:29 / cp
Cadmium	ND	mg/L		0.005		E200.8	08/10/12 16:28 / cp
Cobalt	0.03	mg/L		0.01		E200.8	08/10/12 16:28 / cp
Lead	ND	mg/L		0.001		E200.8	08/10/12 16:28 / cp
Manganese	2.24	mg/L		0.01		E200.8	08/10/12 16:28 / cp
Molybdenum	ND	mg/L		0.1		E200.8	08/10/12 16:28 / cp
Nickel	ND	mg/L		0.05		E200.8	08/10/12 16:28 / cp
Uranium	0.0018	mg/L		0.0003		E200.8	08/10/12 16:28 / cp
Vanadium	ND	mg/L		0.1		E200.8	08/10/12 16:28 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	08/01/12 19:59 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	07/26/12 17:27 / rdw
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.7	pCi/L				E900.1	08/01/12 13:12 / lbb
Gross Alpha minus Rn & U Precision (±)	0.2	pCi/L				E900.1	08/01/12 13:12 / lbb
Gross Alpha minus Rn & U MDC	0.2	pCi/L				E900.1	08/01/12 13:12 / lbb
Lead 210	0.2	pCi/L	U			E909.0	08/14/12 01:40 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	08/14/12 01:40 / eli-cs
Lead 210 MDC	1.2	pCi/L				E909.0	08/14/12 01:40 / eli-cs
Radium 226	0.67	pCi/L				E903.0	08/06/12 11:47 / lbb
Radium 226 precision (±)	0.14	pCi/L				E903.0	08/06/12 11:47 / lbb
Radium 226 MDC	0.09	pCi/L				E903.0	08/06/12 11:47 / lbb
Radium 228	0.67	pCi/L	U			RA-05	07/30/12 22:49 / gb
Radium 228 precision (±)	0.76	pCi/L				RA-05	07/30/12 22:49 / gb
Radium 228 MDC	1.2	pCi/L				RA-05	07/30/12 22:49 / 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: C12070710-003
Client Sample ID: EPA-7

Report Date: 08/31/12
Collection Date: 07/16/12 11:50
DateReceived: 07/20/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.04	pCi/L	U			E908.0	08/07/12 16:59 / dmf
Thorium 230 precision (±)	0.07	pCi/L				E908.0	08/07/12 16:59 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	08/07/12 16:59 / dmf
DATA QUALITY							
A/C Balance (± 5)	4.25	%				A1030 E	08/13/12 12:59 / kbh
Anions	120	meq/L				A1030 E	08/13/12 12:59 / kbh
Cations	131	meq/L				A1030 E	08/13/12 12:59 / kbh
Solids, Total Dissolved Calculated	7700	mg/L				A1030 E	08/13/12 12:59 / kbh
TDS Balance (0.80 - 1.20)	1.08					A1030 E	08/13/12 12:59 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	07/25/12 00:42 / jk
Bromoform	ND	ug/L		0.50		E624	07/25/12 00:42 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	07/25/12 00:42 / jk
Chloroform	ND	ug/L		0.50		E624	07/25/12 00:42 / jk
Trihalomethanes, Total	ND	ug/L		0.50		E624	07/25/12 00:42 / jk
Surr: 1,2-Dichlorobenzene-d4	104	%REC		80-120		E624	07/25/12 00:42 / jk
Surr: Dibromofluoromethane	101	%REC		80-120		E624	07/25/12 00:42 / jk
Surr: p-Bromofluorobenzene	86.0	%REC		80-120		E624	07/25/12 00:42 / jk
Surr: Toluene-d8	100	%REC		80-120		E624	07/25/12 00:42 / 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: C12100859-003
Client Sample ID: EPA-7

Report Date: 11/19/12
Collection Date: 10/15/12 10:37
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	658	mg/L		5		A2320 B	10/22/12 18:19 / jba
Calcium	522	mg/L		1		E200.7	11/10/12 00:43 / sf
Chloride	241	mg/L	D	10		E300.0	10/22/12 23:00 / wc
Magnesium	967	mg/L		1		E200.7	11/10/12 00:43 / sf
Nitrogen, Ammonia as N	0.18	mg/L		0.05		A4500-NH3 G	10/26/12 17:26 / lr
Nitrogen, Nitrate+Nitrite as N	131	mg/L	D	10		E353.2	10/25/12 14:12 / ljl
Potassium	9	mg/L		1		E200.7	11/10/12 00:43 / sf
Sodium	415	mg/L	D	2		E200.7	11/10/12 00:43 / sf
Sulfate	4490	mg/L	D	40		E300.0	10/22/12 23:00 / wc
PHYSICAL PROPERTIES							
pH	6.33	s.u.	H	0.01		A4500-H B	10/22/12 10:34 / ab
Solids, Total Dissolved TDS @ 180 C	7740	mg/L		10		A2540 C	10/22/12 08:15 / jz
METALS - TOTAL							
Aluminum	0.2	mg/L		0.1		E200.8	10/26/12 22:10 / cp
Beryllium	ND	mg/L		0.001		E200.8	10/26/12 22:10 / cp
Cadmium	ND	mg/L		0.005		E200.8	10/26/12 22:10 / cp
Cobalt	0.03	mg/L		0.01		E200.8	10/26/12 22:10 / cp
Lead	ND	mg/L		0.001		E200.8	10/26/12 22:10 / cp
Manganese	1.89	mg/L		0.01		E200.8	10/26/12 22:10 / cp
Molybdenum	ND	mg/L		0.1		E200.8	10/26/12 22:10 / cp
Nickel	ND	mg/L		0.05		E200.8	10/26/12 22:10 / cp
Uranium	0.0018	mg/L		0.0003		E200.8	10/26/12 22:10 / cp
Vanadium	ND	mg/L		0.1		E200.8	10/26/12 22:10 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	11/05/12 11:28 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	11/07/12 14:17 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	1.7	pCi/L				E900.1	10/25/12 06:36 / lbb
Gross Alpha minus Rn & U Precision (±)	0.7	pCi/L				E900.1	10/25/12 06:36 / lbb
Gross Alpha minus Rn & U MDC	0.7	pCi/L				E900.1	10/25/12 06:36 / lbb
Lead 210	0.5	pCi/L	U			E909.0	11/19/12 06:25 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	11/19/12 06:25 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	11/19/12 06:25 / eli-cs
Radium 226	0.36	pCi/L				E903.0	11/07/12 23:27 / gb
Radium 226 precision (±)	0.09	pCi/L				E903.0	11/07/12 23:27 / gb
Radium 226 MDC	0.1	pCi/L				E903.0	11/07/12 23:27 / gb
Radium 228	1.8	pCi/L				RA-05	10/31/12 21:13 / gb
Radium 228 precision (±)	0.80	pCi/L				RA-05	10/31/12 21:13 / gb
Radium 228 MDC	1.2	pCi/L				RA-05	10/31/12 21:13 / 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: C12100859-003
Client Sample ID: EPA-7

Report Date: 11/19/12
Collection Date: 10/15/12 10:37
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.009	pCi/L	U			E908.0	11/06/12 08:57 / dmf
Thorium 230 precision (±)	0.07	pCi/L				E908.0	11/06/12 08:57 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	11/06/12 08:57 / dmf
DATA QUALITY							
A/C Balance (± 5)	1.58	%				A1030 E	11/12/12 14:49 / kbh
Anions	120	meq/L				A1030 E	11/12/12 14:49 / kbh
Cations	124	meq/L				A1030 E	11/12/12 14:49 / kbh
Solids, Total Dissolved Calculated	7500	mg/L				A1030 E	11/12/12 14:49 / kbh
TDS Balance (0.80 - 1.20)	1.03					A1030 E	11/12/12 14:49 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	10/26/12 16:51 / jk
Bromoform	ND	ug/L		0.50		E624	10/26/12 16:51 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	10/26/12 16:51 / jk
Chloroform	0.63	ug/L		0.50		E624	10/26/12 16:51 / jk
Trihalomethanes, Total	0.63	ug/L		0.50		E624	10/26/12 16:51 / jk
Surr: 1,2-Dichlorobenzene-d4	106	%REC		80-120		E624	10/26/12 16:51 / jk
Surr: Dibromofluoromethane	155	%REC	S	80-120		E624	10/26/12 16:51 / jk
Surr: p-Bromofluorobenzene	123	%REC	S	80-120		E624	10/26/12 16:51 / jk
Surr: Toluene-d8	111	%REC		80-120		E624	10/26/12 16:51 / 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.

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:		10/15/2012	7/16/2012	4/9/2012	1/9/2012
Receive Date:		10/19/2012	7/20/2012	4/13/2012	1/13/2012
Report Date:		11/19/2012	8/31/2012	5/25/2012	3/2/2012
Analyte	RUnits	C12100859-003	C12070710-003	C12040734-003	C12010434-003
Bicarbonate as HCO3	mg/L	658	645	630	584
Calcium	mg/L	522	528	453	490
Chloride	mg/L	241	231	218	218
Magnesium	mg/L	967	1040	939	874
Nitrogen, Ammonia as N	mg/L	0.18	0.20	0.15	0.14
Nitrogen, Nitrate+Nitrite as N	mg/L	131	139	133	126
Potassium	mg/L	9	9	8	7
Sodium	mg/L	415	431	361	343
Sulfate	mg/L	4490	4520	4440	4610
pH	s.u.	6.33	6.42	6.22	6.27
Solids, Total Dissolved TDS @ 180 C	mg/L	7740	8270	8210	8010
Aluminum	mg/L	0.2	0.1	0.2	0.2
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.01)	ND(0.01)
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(0.05)	ND(0.05)
Manganese	mg/L	1.89	2.24	2.56	2.38
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	0.0018	0.0018	0.0021	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(0.01)	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	1.7	0.7	0.4	0.3
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.7	0.2	0.3	0.3
Gross Alpha minus Rn & U MDC	pCi/L	0.7	0.2	0.5	0.4
Lead 210	pCi/L	0.5	0.2	0.08	0.3
Lead 210 precision (±)	pCi/L	0.6	0.7	0.8	0.6
Lead 210 MDC	pCi/L	1.0	1.2	1.3	1.0
Radium 226	pCi/L	0.36	0.67	0.55	0.53
Radium 226 precision (±)	pCi/L	0.09	0.14	0.18	0.15
Radium 226 MDC	pCi/L	0.1	0.09	0.18	0.14
Radium 228	pCi/L	1.8	0.67	0.52	1.4
Radium 228 precision (±)	pCi/L	0.80	0.76	0.83	0.71
Radium 228 MDC	pCi/L	1.2	1.2	1.4	1.1
Thorium 230	pCi/L	0.009	0.04	-0.01	0.009
Thorium 230 precision (±)	pCi/L	0.07	0.07	0.05	0.06
Thorium 230 MDC	pCi/L	0.2	0.2	0.2	0.2
A/C Balance (± 5)	%	1.58	4.25	-1.11	-3.99
Anions	meq/L	120	120	118	121
Cations	meq/L	124	131	116	111
Solids, Total Dissolved Calculated	mg/L	7500	7700	7320	7390
TDS Balance (0.80 - 1.20)		1.03	1.08	1.12	1.08
Trihalomethanes, Total	ug/L	0.63	ND(0.50)	0.64	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

JULY TO DECEMBER OF 2012

ZONE-3

504-B (NO SAMPLE)

*517

EPA-14

420

*711

*613

*708

NBL-1

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: C12070713-001
Client Sample ID: 517

Report Date: 09/07/12
Collection Date: 07/16/12 13:48
DateReceived: 07/20/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	07/20/12 18:12 / jba
Calcium	495	mg/L		1		E200.7	08/09/12 17:05 / sf
Chloride	45	mg/L	D	4		E300.0	07/24/12 12:09 / ljl
Magnesium	527	mg/L		1		E200.7	08/09/12 17:05 / sf
Nitrogen, Ammonia as N	10.7	mg/L	D	0.5		A4500-NH3 G	07/28/12 15:08 / ljl
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	07/24/12 16:33 / lr
Potassium	12	mg/L		1		E200.7	08/10/12 15:10 / sf
Sodium	151	mg/L		1		E200.7	08/10/12 15:10 / sf
Sulfate	3940	mg/L	D	20		E300.0	07/24/12 12:09 / ljl
PHYSICAL PROPERTIES							
pH	3.17	s.u.	H	0.01		A4500-H B	07/23/12 09:43 / ab
Solids, Total Dissolved TDS @ 180 C	5560	mg/L		10		A2540 C	07/20/12 16:43 / ab
METALS - TOTAL							
Aluminum	11.7	mg/L		0.1		E200.8	08/10/12 16:42 / cp
Beryllium	0.010	mg/L		0.001		E200.8	08/18/12 08:38 / cp
Cadmium	0.009	mg/L		0.005		E200.8	08/10/12 16:42 / cp
Cobalt	0.90	mg/L		0.01		E200.8	08/10/12 16:42 / cp
Lead	0.014	mg/L		0.001		E200.8	08/10/12 16:42 / cp
Manganese	11.6	mg/L		0.01		E200.8	08/10/12 16:42 / cp
Molybdenum	ND	mg/L		0.1		E200.8	08/10/12 16:42 / cp
Nickel	1.02	mg/L		0.05		E200.8	08/10/12 16:42 / cp
Uranium	0.117	mg/L		0.0003		E200.8	08/10/12 16:42 / cp
Vanadium	ND	mg/L		0.1		E200.8	08/10/12 16:42 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	08/01/12 20:30 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	07/26/12 17:39 / rdw
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	41.5	pCi/L				E900.1	08/31/12 12:12 / lbb
Gross Alpha minus Rn & U Precision (±)	3.1	pCi/L				E900.1	08/31/12 12:12 / lbb
Gross Alpha minus Rn & U MDC	0.9	pCi/L				E900.1	08/31/12 12:12 / lbb
Lead 210	1.2	pCi/L				E909.0	08/14/12 07:01 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	08/14/12 07:01 / eli-cs
Lead 210 MDC	1.2	pCi/L				E909.0	08/14/12 07:01 / eli-cs
Radium 226	10	pCi/L				E903.0	08/06/12 15:11 / lbb
Radium 226 precision (±)	0.62	pCi/L				E903.0	08/06/12 15:11 / lbb
Radium 226 MDC	0.15	pCi/L				E903.0	08/06/12 15:11 / lbb
Radium 228	11	pCi/L				RA-05	07/31/12 19:38 / gb
Radium 228 precision (±)	1.1	pCi/L				RA-05	07/31/12 19:38 / gb
Radium 228 MDC	1.1	pCi/L				RA-05	07/31/12 19:38 / 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: C12070713-001
Client Sample ID: 517

Report Date: 09/07/12
Collection Date: 07/16/12 13:48
DateReceived: 07/20/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	9.0	pCi/L				E908.0	08/20/12 08:48 / dmf
Thorium 230 precision (±)	1.5	pCi/L				E908.0	08/20/12 08:48 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	08/20/12 08:48 / dmf
DATA QUALITY							
A/C Balance (± 5)	3.62	%				A1030 E	08/13/12 13:00 / kbh
Anions	83.5	meq/L				A1030 E	08/13/12 13:00 / kbh
Cations	89.7	meq/L				A1030 E	08/13/12 13:00 / kbh
Solids, Total Dissolved Calculated	5200	mg/L				A1030 E	08/13/12 13:00 / kbh
TDS Balance (0.80 - 1.20)	1.07					A1030 E	08/13/12 13:00 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	07/25/12 03:08 / jk
Bromoform	ND	ug/L		0.50		E624	07/25/12 03:08 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	07/25/12 03:08 / jk
Chloroform	4.44	ug/L		0.50		E624	07/25/12 03:08 / jk
Trihalomethanes, Total	4.44	ug/L		0.50		E624	07/25/12 03:08 / jk
Surr: 1,2-Dichlorobenzene-d4	101	%REC		80-120		E624	07/25/12 03:08 / jk
Surr: Dibromofluoromethane	93.0	%REC		80-120		E624	07/25/12 03:08 / jk
Surr: p-Bromofluorobenzene	80.0	%REC		80-120		E624	07/25/12 03:08 / jk
Surr: Toluene-d8	96.0	%REC		80-120		E624	07/25/12 03:08 / jk

- 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.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C12100835-001
Client Sample ID: 517

Report Date: 11/20/12
Collection Date: 10/15/12 12:36
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	10/19/12 19:12 / jba
Calcium	456	mg/L		1		E200.7	11/09/12 21:25 / sf
Chloride	43	mg/L	D	4		E300.0	10/19/12 23:02 / wc
Magnesium	480	mg/L		1		E200.7	11/09/12 21:25 / sf
Nitrogen, Ammonia as N	10.4	mg/L	D	0.5		A4500-NH3 G	10/26/12 16:20 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L	D	1		E353.2	10/25/12 11:52 / ljl
Potassium	12	mg/L		1		E200.7	11/09/12 21:25 / sf
Sodium	151	mg/L	D	2		E200.7	11/09/12 21:25 / sf
Sulfate	3770	mg/L	D	20		E300.0	10/19/12 23:02 / wc
PHYSICAL PROPERTIES							
pH	3.09	s.u.	H	0.01		A4500-H B	10/19/12 15:15 / ab
Solids, Total Dissolved TDS @ 180 C	5470	mg/L		10		A2540 C	10/19/12 15:09 / jz
METALS - TOTAL							
Aluminum	12.9	mg/L		0.1		E200.8	10/26/12 21:14 / cp
Beryllium	0.011	mg/L		0.001		E200.8	10/26/12 21:14 / cp
Cadmium	0.008	mg/L		0.005		E200.8	10/26/12 21:14 / cp
Cobalt	0.85	mg/L		0.01		E200.8	10/26/12 21:14 / cp
Lead	0.014	mg/L		0.001		E200.8	10/26/12 21:14 / cp
Manganese	10.7	mg/L		0.01		E200.8	10/26/12 21:14 / cp
Molybdenum	ND	mg/L		0.1		E200.8	10/26/12 21:14 / cp
Nickel	1.07	mg/L		0.05		E200.8	10/26/12 21:14 / cp
Uranium	0.124	mg/L		0.0003		E200.8	10/26/12 21:14 / cp
Vanadium	ND	mg/L		0.1		E200.8	10/26/12 21:14 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	11/05/12 12:59 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	11/07/12 14:37 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	7.0	pCi/L				E900.1	11/19/12 23:35 / lbb
Gross Alpha minus Rn & U Precision (±)	0.7	pCi/L				E900.1	11/19/12 23:35 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	11/19/12 23:35 / lbb
Lead 210	1.9	pCi/L				E909.0	11/15/12 14:19 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	11/15/12 14:19 / eli-cs
Lead 210 MDC	1.1	pCi/L				E909.0	11/15/12 14:19 / eli-cs
Radium 226	6.6	pCi/L				E903.0	11/05/12 13:13 / gb
Radium 226 precision (±)	0.48	pCi/L				E903.0	11/05/12 13:13 / gb
Radium 226 MDC	0.15	pCi/L				E903.0	11/05/12 13:13 / gb
Radium 228	14	pCi/L				RA-05	10/31/12 18:03 / gb
Radium 228 precision (±)	1.2	pCi/L				RA-05	10/31/12 18:03 / gb
Radium 228 MDC	1.1	pCi/L				RA-05	10/31/12 18:03 / 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: C12100835-001
Client Sample ID: 517

Report Date: 11/20/12
Collection Date: 10/15/12 12:36
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	7.3	pCi/L				E908.0	11/01/12 08:57 / dmf
Thorium 230 precision (±)	1.7	pCi/L				E908.0	11/01/12 08:57 / dmf
Thorium 230 MDC	0.5	pCi/L				E908.0	11/01/12 08:57 / dmf
DATA QUALITY							
A/C Balance (± 5)	0.372	%				A1030 E	11/12/12 14:46 / kbh
Anions	79.9	meq/L				A1030 E	11/12/12 14:46 / kbh
Cations	80.5	meq/L				A1030 E	11/12/12 14:46 / kbh
Solids, Total Dissolved Calculated	5000	mg/L				A1030 E	11/12/12 14:46 / kbh
TDS Balance (0.80 - 1.20)	1.11					A1030 E	11/12/12 14:46 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	10/25/12 02:19 / jk
Bromoform	ND	ug/L		0.50		E624	10/25/12 02:19 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	10/25/12 02:19 / jk
Chloroform	7.52	ug/L		0.50		E624	10/25/12 02:19 / jk
Trihalomethanes, Total	7.52	ug/L		0.50		E624	10/25/12 02:19 / jk
Surr: 1,2-Dichlorobenzene-d4	104	%REC		80-120		E624	10/25/12 02:19 / jk
Surr: Dibromofluoromethane	145	%REC	S	80-120		E624	10/25/12 02:19 / jk
Surr: p-Bromofluorobenzene	115	%REC		80-120		E624	10/25/12 02:19 / jk
Surr: Toluene-d8	109	%REC		80-120		E624	10/25/12 02:19 / jk

- 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
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:		10/15/2012	7/16/2012	4/9/2012	1/9/2012
Receive Date:		10/19/2012	7/20/2012	4/13/2012	1/13/2012
Report Date:		11/20/2012	9/7/2012	5/25/2012	3/5/2012
Analyte	RUnits	C12100835-001	C12070713-001	C12040738-001	C12010437-001
Bicarbonate as HCO3	mg/L	ND(5)	ND(5)	ND(5)	ND(5)
Calcium	mg/L	456	495	435	475
Chloride	mg/L	43	45	49	42
Magnesium	mg/L	480	527	479	463
Nitrogen, Ammonia as N	mg/L	10.4	10.7	10.8	10.9
Nitrogen, Nitrate+Nitrite as N	mg/L	ND(1)	ND(0.1)	ND(0.5)	ND(0.5)
Potassium	mg/L	12	12	12	13
Sodium	mg/L	151	151	147	146
Sulfate	mg/L	3770	3940	3980	3770
pH	s.u.	3.09	3.17	3.25	3.07
Solids, Total Dissolved TDS @ 180 C	mg/L	5470	5560	5580	5350
Aluminum	mg/L	12.9	11.7	10.9	10.8
Beryllium	mg/L	0.011	0.010	0.01	0.01
Cadmium	mg/L	0.008	0.009	0.011	0.010
Cobalt	mg/L	0.85	0.90	0.98	0.92
Lead	mg/L	0.014	0.014	ND(0.05)	ND(0.05)
Manganese	mg/L	10.7	11.6	11.9	11.2
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	1.07	1.02	1.04	1.01
Uranium	mg/L	0.124	0.117	0.107	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(0.01)	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	7.0	41.5	12.4	13.7
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.7	3.1	1.2	1.3
Gross Alpha minus Rn & U MDC	pCi/L	0.3	0.9	0.5	0.4
Lead 210	pCi/L	1.9	1.2	1.7	2.3
Lead 210 precision (±)	pCi/L	0.7	0.7	0.8	0.6
Lead 210 MDC	pCi/L	1.1	1.2	1.3	1.0
Radium 226	pCi/L	6.6	10	7.3	5.1
Radium 226 precision (±)	pCi/L	0.48	0.62	0.58	0.30
Radium 226 MDC	pCi/L	0.15	0.15	0.18	0.11
Radium 228	pCi/L	14	11	14	12
Radium 228 precision (±)	pCi/L	1.2	1.1	1.2	1.1
Radium 228 MDC	pCi/L	1.1	1.1	1.1	1.1
Thorium 230	pCi/L	7.3	9.0	4.0	3.0
Thorium 230 precision (±)	pCi/L	1.7	1.5	1.2	0.6
Thorium 230 MDC	pCi/L	0.5	0.2	0.7	0.2
A/C Balance (± 5)	%	0.372	3.62	-4.14	-1.03
Anions	meq/L	79.9	83.5	84.3	79.7
Cations	meq/L	80.5	89.7	77.6	78.1
Solids, Total Dissolved Calculated	mg/L	5000	5200	5140	4950
TDS Balance (0.80 - 1.20)		1.11	1.07	1.09	1.08
Trihalomethanes, Total	ug/L	7.52	4.44	4.80	3.84

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: C12070463-002
Client Sample ID: EPA-14

Report Date: 08/30/12
Collection Date: 07/10/12 12:54
DateReceived: 07/13/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	07/16/12 16:19 / jba
Calcium	482	mg/L		1		E200.7	07/18/12 17:55 / sf
Chloride	63	mg/L	D	4		E300.0	07/18/12 04:48 / wc
Magnesium	535	mg/L		1		E200.7	07/18/12 17:55 / sf
Nitrogen, Ammonia as N	29	mg/L	D	1		A4500-NH3 G	07/20/12 12:23 / lr
Nitrogen, Nitrate+Nitrite as N	23	mg/L	D	2		E353.2	07/23/12 11:42 / lr
Potassium	12	mg/L		1		E200.7	07/18/12 17:55 / sf
Sodium	174	mg/L		1		E200.7	07/18/12 17:55 / sf
Sulfate	4320	mg/L	D	40		E300.0	07/21/12 02:06 / ljl
PHYSICAL PROPERTIES							
pH	4.31	s.u.	H	0.01		A4500-H B	07/16/12 12:31 / ab
Solids, Total Dissolved TDS @ 180 C	5960	mg/L		10		A2540 C	07/16/12 12:12 / ab
METALS - TOTAL							
Aluminum	83.8	mg/L		0.1		E200.7	07/25/12 16:02 / sf
Beryllium	0.076	mg/L		0.001		E200.7	07/25/12 16:02 / sf
Cadmium	ND	mg/L		0.005		E200.7	07/25/12 16:02 / sf
Cobalt	0.74	mg/L		0.01		E200.7	07/25/12 16:02 / sf
Lead	0.007	mg/L		0.001		E200.8	07/26/12 22:31 / cp
Manganese	14.9	mg/L		0.01		E200.7	07/25/12 16:02 / sf
Molybdenum	ND	mg/L		0.1		E200.7	07/25/12 16:02 / sf
Nickel	0.68	mg/L		0.05		E200.7	07/25/12 16:02 / sf
Uranium	0.0099	mg/L		0.0003		E200.8	07/26/12 22:31 / cp
Vanadium	ND	mg/L		0.1		E200.7	07/25/12 16:02 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	08/02/12 15:30 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	07/26/12 16:56 / rdw
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	6.4	pCi/L				E900.1	08/10/12 00:29 / lbb
Gross Alpha minus Rn & U Precision (±)	0.7	pCi/L				E900.1	08/10/12 00:29 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	08/10/12 00:29 / lbb
Lead 210	1.6	pCi/L				E909.0	08/05/12 14:10 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	08/05/12 14:10 / eli-cs
Lead 210 MDC	1.2	pCi/L				E909.0	08/05/12 14:10 / eli-cs
Radium 226	6.1	pCi/L				E903.0	07/30/12 18:08 / lbb
Radium 226 precision (±)	0.45	pCi/L				E903.0	07/30/12 18:08 / lbb
Radium 226 MDC	0.13	pCi/L				E903.0	07/30/12 18:08 / lbb
Radium 228	1.7	pCi/L				RA-05	07/23/12 19:07 / plj
Radium 228 precision (±)	0.83	pCi/L				RA-05	07/23/12 19:07 / plj
Radium 228 MDC	1.2	pCi/L				RA-05	07/23/12 19:07 / 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 3
Lab ID: C12070463-002
Client Sample ID: EPA-14

Report Date: 08/30/12
Collection Date: 07/10/12 12:54
DateReceived: 07/13/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.1	pCi/L	U			E908.0	08/06/12 08:40 / dmf
Thorium 230 precision (±)	0.5	pCi/L				E908.0	08/06/12 08:40 / dmf
Thorium 230 MDC	1.3	pCi/L				E908.0	08/06/12 08:40 / dmf
- See Case Narrative regarding Th230 analysis.							
DATA QUALITY							
A/C Balance (± 5)	-1.20	%				A1030 E	07/24/12 10:14 / kbh
Anions	94.0	meq/L				A1030 E	07/24/12 10:14 / kbh
Cations	91.8	meq/L				A1030 E	07/24/12 10:14 / kbh
Solids, Total Dissolved Calculated	5700	mg/L				A1030 E	07/24/12 10:14 / kbh
TDS Balance (0.80 - 1.20)	1.04					A1030 E	07/24/12 10:14 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	07/17/12 04:15 / jlr
Bromoform	ND	ug/L		0.50		E624	07/17/12 04:15 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	07/17/12 04:15 / jlr
Chloroform	1.81	ug/L		0.50		E624	07/17/12 04:15 / jlr
Trihalomethanes, Total	1.81	ug/L		0.50		E624	07/17/12 04:15 / jlr
Surr: 1,2-Dichlorobenzene-d4	93.0	%REC		80-120		E624	07/17/12 04:15 / jlr
Surr: Dibromofluoromethane	136	%REC	S	80-120		E624	07/17/12 04:15 / jlr
Surr: p-Bromofluorobenzene	184	%REC	S	80-120		E624	07/17/12 04:15 / jlr
Surr: Toluene-d8	113	%REC		80-120		E624	07/17/12 04:15 / 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.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C12100571-002
Client Sample ID: EPA-14

Report Date: 11/20/12
Collection Date: 10/09/12 13:40
DateReceived: 10/12/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	10/15/12 17:59 / jba
Calcium	470	mg/L		1		E200.7	11/19/12 19:51 / sf
Chloride	61	mg/L	D	4		E300.0	10/16/12 05:38 / wc
Magnesium	480	mg/L		1		E200.7	11/19/12 19:51 / sf
Nitrogen, Ammonia as N	24	mg/L	D	1		A4500-NH3 G	10/16/12 16:15 / ab
Nitrogen, Nitrate+Nitrite as N	12	mg/L	D	1		E353.2	10/15/12 13:27 / lr
Potassium	12	mg/L		1		E200.7	11/19/12 19:51 / sf
Sodium	170	mg/L		1		E200.7	11/19/12 19:51 / sf
Sulfate	4090	mg/L	D	40		E300.0	10/16/12 20:05 / wc
PHYSICAL PROPERTIES							
pH	4.24	s.u.	H	0.01		A4500-H B	10/15/12 10:39 / ab
Solids, Total Dissolved TDS @ 180 C	6080	mg/L		10		A2540 C	10/15/12 12:21 / ab
METALS - TOTAL							
Aluminum	70.8	mg/L		0.1		E200.8	11/20/12 01:45 / cp
Beryllium	0.069	mg/L		0.001		E200.8	11/20/12 01:45 / cp
Cadmium	0.010	mg/L		0.005		E200.8	11/20/12 01:45 / cp
Cobalt	0.75	mg/L		0.01		E200.8	11/20/12 01:45 / cp
Lead	0.006	mg/L		0.001		E200.8	11/20/12 01:45 / cp
Manganese	15.1	mg/L		0.01		E200.8	11/20/12 01:45 / cp
Molybdenum	ND	mg/L		0.1		E200.8	11/20/12 01:45 / cp
Nickel	0.71	mg/L		0.05		E200.8	11/20/12 01:45 / cp
Uranium	0.0078	mg/L		0.0003		E200.8	11/20/12 01:45 / cp
Vanadium	ND	mg/L		0.1		E200.8	11/20/12 01:45 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	10/29/12 16:13 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	11/07/12 14:31 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	4.8	pCi/L				E900.1	11/08/12 23:41 / lbb
Gross Alpha minus Rn & U Precision (±)	0.6	pCi/L				E900.1	11/08/12 23:41 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	11/08/12 23:41 / lbb
Lead 210	1.5	pCi/L				E909.0	11/17/12 07:06 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	11/17/12 07:06 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	11/17/12 07:06 / eli-cs
Radium 226	8.1	pCi/L				E903.0	10/24/12 13:24 / trs
Radium 226 precision (±)	0.55	pCi/L				E903.0	10/24/12 13:24 / trs
Radium 226 MDC	0.16	pCi/L				E903.0	10/24/12 13:24 / trs
Radium 228	18	pCi/L				RA-05	10/19/12 21:59 / gb
Radium 228 precision (±)	1.7	pCi/L				RA-05	10/19/12 21:59 / gb
Radium 228 MDC	1.7	pCi/L				RA-05	10/19/12 21:59 / 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: C12100571-002
Client Sample ID: EPA-14

Report Date: 11/20/12
Collection Date: 10/09/12 13:40
DateReceived: 10/12/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.03	pCi/L	U			E908.0	10/29/12 09:16 / dmf
Thorium 230 precision (±)	0.4	pCi/L				E908.0	10/29/12 09:16 / dmf
Thorium 230 MDC	1.1	pCi/L				E908.0	10/29/12 09:16 / dmf
- See Case Narrative regarding Th230 analysis.							
DATA QUALITY							
A/C Balance (± 5)	-3.71	%				A1030 E	11/20/12 10:09 / sdw
Anions	88.9	meq/L				A1030 E	11/20/12 10:09 / sdw
Cations	82.6	meq/L				A1030 E	11/20/12 10:09 / sdw
Solids, Total Dissolved Calculated	5400	mg/L				A1030 E	11/20/12 10:09 / sdw
TDS Balance (0.80 - 1.20)	1.12					A1030 E	11/20/12 10:09 / sdw
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	10/17/12 03:06 / jk
Bromoform	ND	ug/L		0.50		E624	10/17/12 03:06 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	10/17/12 03:06 / jk
Chloroform	0.66	ug/L		0.50		E624	10/17/12 03:06 / jk
Trihalomethanes, Total	0.66	ug/L		0.50		E624	10/17/12 03:06 / jk
Surr: 1,2-Dichlorobenzene-d4	96.0	%REC		80-120		E624	10/17/12 03:06 / jk
Surr: Dibromofluoromethane	112	%REC		80-120		E624	10/17/12 03:06 / jk
Surr: p-Bromofluorobenzene	101	%REC		80-120		E624	10/17/12 03:06 / jk
Surr: Toluene-d8	98.0	%REC		80-120		E624	10/17/12 03:06 / 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

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:		10/9/2012	7/10/2012	4/3/2012	1/3/2012
Receive Date:		10/12/2012	7/13/2012	4/6/2012	1/6/2012
Report Date:		11/20/2012	8/30/2012	5/22/2012	3/2/2012
Analyte	**RUnits**	**C12100571-002**	**C12070463-002**	**C12040277-002**	**C12010153-002**
Bicarbonate as HCO3	mg/L	ND(5)	ND(5)	ND(5)	ND(5)
Calcium	mg/L	470	482	483	514
Chloride	mg/L	61	63	57	60
Magnesium	mg/L	480	535	481	566
Nitrogen, Ammonia as N	mg/L	24	29	30	36.0
Nitrogen, Nitrate+Nitrite as N	mg/L	12	23	18	21
Potassium	mg/L	12	12	12	13
Sodium	mg/L	170	174	169	177
Sulfate	mg/L	4090	4320	4330	4470
pH	s.u.	4.24	4.31	4.26	4.20
Solids, Total Dissolved TDS @ 180 C	mg/L	6080	5960	5930	6240
Aluminum	mg/L	70.8	83.8	84.4	97.3
Beryllium	mg/L	0.069	0.076	0.09	0.10
Cadmium	mg/L	0.010	ND(0.005)	0.010	0.010
Cobalt	mg/L	0.75	0.74	0.85	0.92
Lead	mg/L	0.006	0.007	ND(0.05)	ND(0.05)
Manganese	mg/L	15.1	14.9	16.7	17.3
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	0.71	0.68	0.82	0.83
Uranium	mg/L	0.0078	0.0099	0.0124	0.0145
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	4.8	6.4	13.5	7.5
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.6	0.7	1.2	0.8
Gross Alpha minus Rn & U MDC	pCi/L	0.3	0.3	0.4	0.4
Lead 210	pCi/L	1.5	1.6	1.6	1.4
Lead 210 precision (±)	pCi/L	0.7	0.8	0.6	0.7
Lead 210 MDC	pCi/L	1.0	1.2	1	1.1
Radium 226	pCi/L	8.1	6.1	6.8	8.2
Radium 226 precision (±)	pCi/L	0.55	0.45	0.47	0.54
Radium 226 MDC	pCi/L	0.16	0.13	0.13	0.15
Radium 228	pCi/L	18	1.7	16	18
Radium 228 precision (±)	pCi/L	1.7	0.83	1.1	1.4
Radium 228 MDC	pCi/L	1.7	1.2	0.96	1.3
Thorium 230	pCi/L	0.03	0.1	0.07	-0.05
Thorium 230 precision (±)	pCi/L	0.4	0.5	0.5	0.3
Thorium 230 MDC	pCi/L	1.1	1.3	1.4	1.1
A/C Balance (± 5)	%	-3.71	-1.20	-5.77	-0.368
Anions	meq/L	88.9	94.0	93.2	96.3
Cations	meq/L	82.6	91.8	83.1	95.6
Solids, Total Dissolved Calculated	mg/L	5400	5700	5650	5890
TDS Balance (0.80 - 1.20)		1.12	1.04	1.05	1.06
Trihalomethanes, Total	ug/L	0.66	1.81	1.02	1.22

****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: C12070713-007
Client Sample ID: 420

Report Date: 09/07/12
Collection Date: 07/17/12 10:25
DateReceived: 07/20/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	499	mg/L		5		A2320 B	07/20/12 19:07 / jba
Calcium	695	mg/L		1		E200.7	08/06/12 16:08 / sf
Chloride	52	mg/L	D	2		E300.0	07/24/12 14:29 / ljl
Magnesium	146	mg/L		1		E200.7	08/06/12 16:08 / sf
Nitrogen, Ammonia as N	0.06	mg/L		0.05		A4500-NH3 G	07/28/12 15:24 / ljl
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	07/27/12 14:16 / ljl
Potassium	8	mg/L		1		E200.7	08/06/12 16:08 / sf
Sodium	170	mg/L		1		E200.7	08/06/12 16:08 / sf
Sulfate	2040	mg/L	D	20		E300.0	07/25/12 18:51 / wc
PHYSICAL PROPERTIES							
pH	6.86	s.u.	H	0.01		A4500-H B	07/23/12 10:03 / ab
Solids, Total Dissolved TDS @ 180 C	3530	mg/L		10		A2540 C	07/23/12 09:27 / ab
METALS - TOTAL							
Aluminum	0.4	mg/L		0.1		E200.7	08/21/12 15:09 / sf
Beryllium	ND	mg/L		0.001		E200.7	08/21/12 15:09 / sf
Cadmium	ND	mg/L		0.005		E200.7	08/21/12 15:09 / sf
Cobalt	0.02	mg/L		0.01		E200.7	08/21/12 15:09 / sf
Lead	0.001	mg/L		0.001		E200.8	08/10/12 23:24 / cp
Manganese	0.88	mg/L		0.01		E200.7	08/21/12 15:09 / sf
Molybdenum	0.8	mg/L		0.1		E200.7	08/21/12 15:09 / sf
Nickel	ND	mg/L		0.05		E200.7	08/21/12 15:09 / sf
Uranium	0.4	mg/L	D	0.2		E200.7	08/21/12 15:09 / sf
Vanadium	ND	mg/L		0.1		E200.7	08/21/12 15:09 / sf
METALS - SPECIATED							
Arsenic-III	0.002	mg/L		0.001		E1632AM	08/01/12 22:05 / eli-h
Selenium-IV	0.002	mg/L		0.001		A3114 B	07/26/12 17:59 / rdw
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	6.6	pCi/L				E900.1	08/31/12 12:12 / lbb
Gross Alpha minus Rn & U Precision (±)	1.3	pCi/L				E900.1	08/31/12 12:12 / lbb
Gross Alpha minus Rn & U MDC	0.9	pCi/L				E900.1	08/31/12 12:12 / lbb
Lead 210	1.2	pCi/L				E909.0	08/14/12 15:03 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	08/14/12 15:03 / eli-cs
Lead 210 MDC	1.2	pCi/L				E909.0	08/14/12 15:03 / eli-cs
Radium 226	4.7	pCi/L				E903.0	08/06/12 16:42 / lbb
Radium 226 precision (±)	0.42	pCi/L				E903.0	08/06/12 16:42 / lbb
Radium 226 MDC	0.15	pCi/L				E903.0	08/06/12 16:42 / lbb
Radium 228	7.1	pCi/L				RA-05	07/31/12 19:38 / gb
Radium 228 precision (±)	1.0	pCi/L				RA-05	07/31/12 19:38 / gb
Radium 228 MDC	1.2	pCi/L				RA-05	07/31/12 19:38 / 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: C12070713-007
Client Sample ID: 420

Report Date: 09/07/12
Collection Date: 07/17/12 10:25
DateReceived: 07/20/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.08	pCi/L	U			E908.0	08/09/12 08:48 / dmf
Thorium 230 precision (±)	0.09	pCi/L				E908.0	08/09/12 08:48 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	08/09/12 08:48 / dmf
DATA QUALITY							
A/C Balance (± 5)	1.97	%				A1030 E	08/10/12 07:51 / kbh
Anions	52.2	meq/L				A1030 E	08/10/12 07:51 / kbh
Cations	54.3	meq/L				A1030 E	08/10/12 07:51 / kbh
Solids, Total Dissolved Calculated	3400	mg/L				A1030 E	08/10/12 07:51 / kbh
TDS Balance (0.80 - 1.20)	1.04					A1030 E	08/10/12 07:51 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	07/25/12 06:47 / jk
Bromoform	ND	ug/L		0.50		E624	07/25/12 06:47 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	07/25/12 06:47 / jk
Chloroform	ND	ug/L		0.50		E624	07/25/12 06:47 / jk
Trihalomethanes, Total	ND	ug/L		0.50		E624	07/25/12 06:47 / jk
Surr: 1,2-Dichlorobenzene-d4	96.0	%REC		80-120		E624	07/25/12 06:47 / jk
Surr: Dibromofluoromethane	95.0	%REC		80-120		E624	07/25/12 06:47 / jk
Surr: p-Bromofluorobenzene	86.0	%REC		80-120		E624	07/25/12 06:47 / jk
Surr: Toluene-d8	98.0	%REC		80-120		E624	07/25/12 06:47 / 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-3
Lab ID: C12100835-006
Client Sample ID: 420

Report Date: 11/20/12
Collection Date: 10/16/12 09:30
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	503	mg/L		5		A2320 B	10/19/12 19:41 / jba
Calcium	718	mg/L		1		E200.7	11/09/12 22:34 / sf
Chloride	52	mg/L	D	2		E300.0	10/20/12 00:29 / wc
Magnesium	144	mg/L		1		E200.7	11/09/12 22:34 / sf
Nitrogen, Ammonia as N	0.10	mg/L		0.05		A4500-NH3 G	10/26/12 16:30 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	10/22/12 14:14 / lr
Potassium	7	mg/L		1		E200.7	11/09/12 22:34 / sf
Sodium	156	mg/L		1		E200.7	11/09/12 22:34 / sf
Sulfate	2070	mg/L	D	20		E300.0	10/22/12 18:14 / wc
PHYSICAL PROPERTIES							
pH	7.14	s.u.	H	0.01		A4500-H B	10/19/12 15:39 / ab
Solids, Total Dissolved TDS @ 180 C	3550	mg/L		10		A2540 C	10/22/12 16:34 / jz
METALS - TOTAL							
Aluminum	0.2	mg/L		0.1		E200.8	11/07/12 11:38 / cp
Beryllium	ND	mg/L		0.001		E200.8	11/07/12 11:38 / cp
Cadmium	ND	mg/L		0.005		E200.8	11/07/12 11:38 / cp
Cobalt	0.02	mg/L		0.01		E200.8	11/07/12 11:38 / cp
Lead	ND	mg/L		0.001		E200.8	11/07/12 11:38 / cp
Manganese	1.43	mg/L		0.01		E200.8	11/07/12 11:38 / cp
Molybdenum	0.9	mg/L		0.1		E200.8	11/07/12 11:38 / cp
Nickel	ND	mg/L		0.05		E200.8	11/07/12 11:38 / cp
Uranium	0.388	mg/L		0.0003		E200.8	11/07/12 11:38 / cp
Vanadium	ND	mg/L		0.1		E200.8	11/07/12 11:38 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	11/05/12 13:55 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	11/07/12 13:59 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	5.2	pCi/L				E900.1	11/19/12 23:35 / lbb
Gross Alpha minus Rn & U Precision (±)	0.6	pCi/L				E900.1	11/19/12 23:35 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	11/19/12 23:35 / lbb
Lead 210	0.3	pCi/L	U			E909.0	11/18/12 02:55 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	11/18/12 02:55 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	11/18/12 02:55 / eli-cs
Radium 226	4.4	pCi/L				E903.0	11/05/12 13:13 / gb
Radium 226 precision (±)	0.39	pCi/L				E903.0	11/05/12 13:13 / gb
Radium 226 MDC	0.14	pCi/L				E903.0	11/05/12 13:13 / gb
Radium 228	8.1	pCi/L				RA-05	10/31/12 18:03 / gb
Radium 228 precision (±)	1.0	pCi/L				RA-05	10/31/12 18:03 / gb
Radium 228 MDC	1.1	pCi/L				RA-05	10/31/12 18:03 / 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: C12100835-006
Client Sample ID: 420

Report Date: 11/20/12
Collection Date: 10/16/12 09:30
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.09	pCi/L	U			E908.0	11/01/12 13:58 / dmf
Thorium 230 precision (±)	0.09	pCi/L				E908.0	11/01/12 13:58 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	11/01/12 13:58 / dmf
DATA QUALITY							
A/C Balance (± 5)	1.72	%				A1030 E	11/12/12 14:46 / kbh
Anions	52.9	meq/L				A1030 E	11/12/12 14:46 / kbh
Cations	54.7	meq/L				A1030 E	11/12/12 14:46 / kbh
Solids, Total Dissolved Calculated	3400	mg/L				A1030 E	11/12/12 14:46 / kbh
TDS Balance (0.80 - 1.20)	1.04					A1030 E	11/12/12 14:46 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	10/25/12 15:43 / jk
Bromoform	ND	ug/L		0.50		E624	10/25/12 15:43 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	10/25/12 15:43 / jk
Chloroform	ND	ug/L		0.50		E624	10/25/12 15:43 / jk
Trihalomethanes, Total	ND	ug/L		0.50		E624	10/25/12 15:43 / jk
Surr: 1,2-Dichlorobenzene-d4	102	%REC		80-120		E624	10/25/12 15:43 / jk
Surr: Dibromofluoromethane	129	%REC	S	80-120		E624	10/25/12 15:43 / jk
Surr: p-Bromofluorobenzene	118	%REC		80-120		E624	10/25/12 15:43 / jk
Surr: Toluene-d8	108	%REC		80-120		E624	10/25/12 15:43 / 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.

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 3 Monitor Wells					
Well ID:		420	420	420	420
Collection Date:		10/16/2012	7/17/2012	4/10/2012	1/10/2012
Receive Date:		10/19/2012	7/20/2012	4/13/2012	1/13/2012
Report Date:		11/20/2012	9/7/2012	5/25/2012	3/5/2012
Analyte	RUnits	C12100835-006	C12070713-007	C12040738-007	C12010437-007
Bicarbonate as HCO3	mg/L	503	499	483	477
Calcium	mg/L	718	695	643	700
Chloride	mg/L	52	52	50	50
Magnesium	mg/L	144	146	137	128
Nitrogen, Ammonia as N	mg/L	0.10	0.06	0.08	0.09
Nitrogen, Nitrate+Nitrite as N	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Potassium	mg/L	7	8	6	6
Sodium	mg/L	156	170	141	135
Sulfate	mg/L	2070	2040	1960	1980
pH	s.u.	7.14	6.86	6.93	6.51
Solids, Total Dissolved TDS @ 180 C	mg/L	3550	3530	3510	3430
Aluminum	mg/L	0.2	0.4	0.6	0.1
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.01)	ND(0.01)
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)	0.001	ND(0.05)	ND(0.05)
Manganese	mg/L	1.43	0.88	1.21	1.50
Molybdenum	mg/L	0.9	0.8	1.0	1.2
Nickel	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
Uranium	mg/L	0.388	0.4	0.390	0.406
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	0.002	ND(0.01)	0.010
Selenium-IV	mg/L	ND(0.001)	0.002	ND(0.001)	0.002
Gross Alpha minus Rn & U	pCi/L	5.2	6.6	4.7	5.3
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.6	1.3	0.8	0.8
Gross Alpha minus Rn & U MDC	pCi/L	0.3	0.9	0.5	0.4
Lead 210	pCi/L	0.3	1.2	0.9	0.8
Lead 210 precision (±)	pCi/L	0.6	0.7	0.8	0.5
Lead 210 MDC	pCi/L	1.0	1.2	1.3	0.9
Radium 226	pCi/L	4.4	4.7	5.3	4.7
Radium 226 precision (±)	pCi/L	0.39	0.42	0.50	0.31
Radium 226 MDC	pCi/L	0.14	0.15	0.18	0.12
Radium 228	pCi/L	8.1	7.1	8.4	6.2
Radium 228 precision (±)	pCi/L	1.0	1.0	1.0	0.99
Radium 228 MDC	pCi/L	1.1	1.2	1.1	1.2
Thorium 230	pCi/L	0.09	0.08	0.01	0.04
Thorium 230 precision (±)	pCi/L	0.09	0.09	0.05	0.06
Thorium 230 MDC	pCi/L	0.2	0.2	0.1	0.1
A/C Balance (± 5)	%	1.72	1.97	-0.405	0.945
Anions	meq/L	52.9	52.2	50.1	50.5
Cations	meq/L	54.7	54.3	49.6	51.5
Solids, Total Dissolved Calculated	mg/L	3400	3400	3190	3250
TDS Balance (0.80 - 1.20)		1.04	1.04	1.10	1.06
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	0.80

**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: C12070713-004
Client Sample ID: 711

Report Date: 09/07/12
Collection Date: 07/17/12 08:31
DateReceived: 07/20/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	07/20/12 18:46 / jba
Calcium	482	mg/L		1		E200.7	08/09/12 17:24 / sf
Chloride	18	mg/L	D	4		E300.0	07/24/12 13:36 / ljl
Magnesium	460	mg/L		1		E200.7	08/09/12 17:24 / sf
Nitrogen, Ammonia as N	0.38	mg/L		0.05		A4500-NH3 G	07/28/12 15:18 / ljl
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	07/24/12 16:41 / lr
Potassium	12	mg/L		1		E200.7	08/13/12 16:16 / sf
Sodium	117	mg/L		1		E200.7	08/13/12 16:16 / sf
Sulfate	3400	mg/L	D	20		E300.0	07/24/12 13:36 / ljl
PHYSICAL PROPERTIES							
pH	3.30	s.u.	H	0.01		A4500-H B	07/23/12 09:55 / ab
Solids, Total Dissolved TDS @ 180 C	5020	mg/L		10		A2540 C	07/20/12 16:44 / ab
METALS - TOTAL							
Aluminum	0.2	mg/L		0.1		E200.8	08/10/12 17:09 / cp
Beryllium	0.002	mg/L		0.001		E200.8	08/18/12 08:47 / cp
Cadmium	ND	mg/L		0.005		E200.8	08/10/12 17:09 / cp
Cobalt	0.28	mg/L		0.01		E200.8	08/10/12 17:09 / cp
Lead	0.004	mg/L		0.001		E200.8	08/10/12 17:09 / cp
Manganese	5.12	mg/L		0.01		E200.8	08/10/12 17:09 / cp
Molybdenum	ND	mg/L		0.1		E200.8	08/10/12 17:09 / cp
Nickel	0.26	mg/L		0.05		E200.8	08/10/12 17:09 / cp
Uranium	0.0177	mg/L		0.0003		E200.8	08/10/12 17:09 / cp
Vanadium	ND	mg/L		0.1		E200.8	08/10/12 17:09 / cp
METALS - SPECIATED							
Arsenic-III	0.002	mg/L		0.001		E1632AM	08/02/12 15:54 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	07/26/12 17:53 / rdw
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	5.5	pCi/L				E900.1	08/31/12 12:12 / lbb
Gross Alpha minus Rn & U Precision (±)	1.2	pCi/L				E900.1	08/31/12 12:12 / lbb
Gross Alpha minus Rn & U MDC	0.9	pCi/L				E900.1	08/31/12 12:12 / lbb
Lead 210	0.4	pCi/L	U			E909.0	08/14/12 11:02 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	08/14/12 11:02 / eli-cs
Lead 210 MDC	1.2	pCi/L				E909.0	08/14/12 11:02 / eli-cs
Radium 226	4.2	pCi/L				E903.0	08/06/12 16:42 / lbb
Radium 226 precision (±)	0.37	pCi/L				E903.0	08/06/12 16:42 / lbb
Radium 226 MDC	0.13	pCi/L				E903.0	08/06/12 16:42 / lbb
Radium 228	5.8	pCi/L				RA-05	07/31/12 19:38 / gb
Radium 228 precision (±)	0.88	pCi/L				RA-05	07/31/12 19:38 / gb
Radium 228 MDC	1.0	pCi/L				RA-05	07/31/12 19:38 / 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: C12070713-004
Client Sample ID: 711

Report Date: 09/07/12
Collection Date: 07/17/12 08:31
DateReceived: 07/20/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.06	pCi/L	U			E908.0	08/09/12 08:48 / dmf
Thorium 230 precision (±)	0.2	pCi/L				E908.0	08/09/12 08:48 / dmf
Thorium 230 MDC	0.5	pCi/L				E908.0	08/09/12 08:48 / dmf
- See Case Narrative regarding Th230 analysis.							
DATA QUALITY							
A/C Balance (± 5)	0.363	%				A1030 E	08/15/12 07:02 / kbh
Anions	71.2	meq/L				A1030 E	08/15/12 07:02 / kbh
Cations	71.8	meq/L				A1030 E	08/15/12 07:02 / kbh
Solids, Total Dissolved Calculated	4500	mg/L				A1030 E	08/15/12 07:02 / kbh
TDS Balance (0.80 - 1.20)	1.12					A1030 E	08/15/12 07:02 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	07/25/12 04:58 / jk
Bromoform	ND	ug/L		0.50		E624	07/25/12 04:58 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	07/25/12 04:58 / jk
Chloroform	ND	ug/L		0.50		E624	07/25/12 04:58 / jk
Trihalomethanes, Total	ND	ug/L		0.50		E624	07/25/12 04:58 / jk
Surr: 1,2-Dichlorobenzene-d4	101	%REC		80-120		E624	07/25/12 04:58 / jk
Surr: Dibromofluoromethane	92.0	%REC		80-120		E624	07/25/12 04:58 / jk
Surr: p-Bromofluorobenzene	85.0	%REC		80-120		E624	07/25/12 04:58 / jk
Surr: Toluene-d8	98.0	%REC		80-120		E624	07/25/12 04:58 / jk
- 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

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C12100835-003
Client Sample ID: 711

Report Date: 11/20/12
Collection Date: 10/15/12 15:16
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	10/19/12 19:18 / jba
Calcium	500	mg/L		1		E200.7	11/09/12 22:22 / sf
Chloride	16	mg/L	D	4		E300.0	10/19/12 23:37 / wc
Magnesium	462	mg/L		1		E200.7	11/09/12 22:22 / sf
Nitrogen, Ammonia as N	0.42	mg/L		0.05		A4500-NH3 G	10/26/12 16:24 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L	D	0.2		E353.2	10/25/12 12:07 / ljl
Potassium	11	mg/L		1		E200.7	11/09/12 22:22 / sf
Sodium	103	mg/L	D	2		E200.7	11/09/12 22:22 / sf
Sulfate	3280	mg/L	D	20		E300.0	10/19/12 23:37 / wc
PHYSICAL PROPERTIES							
pH	3.78	s.u.	H	0.01		A4500-H B	10/19/12 15:20 / ab
Solids, Total Dissolved TDS @ 180 C	4520	mg/L		10		A2540 C	10/19/12 15:10 / jz
METALS - TOTAL							
Aluminum	0.3	mg/L		0.1		E200.8	10/26/12 20:56 / cp
Beryllium	0.002	mg/L		0.001		E200.8	10/26/12 20:56 / cp
Cadmium	ND	mg/L		0.005		E200.8	10/26/12 20:56 / cp
Cobalt	0.29	mg/L		0.01		E200.8	10/26/12 20:56 / cp
Lead	0.003	mg/L		0.001		E200.8	10/26/12 20:56 / cp
Manganese	5.02	mg/L		0.01		E200.8	10/26/12 20:56 / cp
Molybdenum	0.2	mg/L		0.1		E200.8	10/26/12 20:56 / cp
Nickel	0.27	mg/L		0.05		E200.8	10/26/12 20:56 / cp
Uranium	0.0169	mg/L		0.0003		E200.8	10/26/12 20:56 / cp
Vanadium	ND	mg/L		0.1		E200.8	10/26/12 20:56 / cp
METALS - SPECIATED							
Arsenic-III	0.004	mg/L		0.001		E1632AM	11/05/12 13:31 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	11/07/12 14:45 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	4.3	pCi/L				E900.1	11/19/12 23:35 / lbb
Gross Alpha minus Rn & U Precision (±)	0.5	pCi/L				E900.1	11/19/12 23:35 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	11/19/12 23:35 / lbb
Lead 210	1.1	pCi/L				E909.0	11/18/12 00:00 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	11/18/12 00:00 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	11/18/12 00:00 / eli-cs
Radium 226	3.4	pCi/L				E903.0	11/05/12 13:13 / gb
Radium 226 precision (±)	0.36	pCi/L				E903.0	11/05/12 13:13 / gb
Radium 226 MDC	0.15	pCi/L				E903.0	11/05/12 13:13 / gb
Radium 228	9.6	pCi/L				RA-05	10/31/12 18:03 / gb
Radium 228 precision (±)	1.1	pCi/L				RA-05	10/31/12 18:03 / gb
Radium 228 MDC	1.2	pCi/L				RA-05	10/31/12 18:03 / 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: C12100835-003
Client Sample ID: 711

Report Date: 11/20/12
Collection Date: 10/15/12 15:16
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.09	pCi/L	U			E908.0	11/01/12 13:57 / dmf
Thorium 230 precision (±)	0.2	pCi/L				E908.0	11/01/12 13:57 / dmf
Thorium 230 MDC	0.5	pCi/L				E908.0	11/01/12 13:57 / dmf
- See Case Narrative regarding Th230 analysis.							
DATA QUALITY							
A/C Balance (± 5)	2.79	%				A1030 E	11/12/12 14:46 / kbh
Anions	68.8	meq/L				A1030 E	11/12/12 14:46 / kbh
Cations	72.8	meq/L				A1030 E	11/12/12 14:46 / kbh
Solids, Total Dissolved Calculated	4400	mg/L				A1030 E	11/12/12 14:46 / kbh
TDS Balance (0.80 - 1.20)	1.03					A1030 E	11/12/12 14:46 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	10/25/12 03:30 / jk
Bromoform	ND	ug/L		0.50		E624	10/25/12 03:30 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	10/25/12 03:30 / jk
Chloroform	ND	ug/L		0.50		E624	10/25/12 03:30 / jk
Trihalomethanes, Total	ND	ug/L		0.50		E624	10/25/12 03:30 / jk
Surr: 1,2-Dichlorobenzene-d4	106	%REC		80-120		E624	10/25/12 03:30 / jk
Surr: Dibromofluoromethane	144	%REC	S	80-120		E624	10/25/12 03:30 / jk
Surr: p-Bromofluorobenzene	116	%REC		80-120		E624	10/25/12 03:30 / jk
Surr: Toluene-d8	108	%REC		80-120		E624	10/25/12 03:30 / 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
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:		10/15/2012	7/17/2012	4/9/2012	1/19/2012
Receive Date:		10/19/2012	7/20/2012	4/13/2012	1/13/2012
Report Date:		11/20/2012	9/7/2012	5/25/2012	3/5/2012
Analyte	RUnits	C12100835-003	C12070713-004	C12040738-003	C12010437-003
Bicarbonate as HCO3	mg/L	ND(5)	ND(5)	ND(5)	ND(5)
Calcium	mg/L	500	482	450	485
Chloride	mg/L	16	18	18	17
Magnesium	mg/L	462	460	449	422
Nitrogen, Ammonia as N	mg/L	0.42	0.38	0.39	0.34
Nitrogen, Nitrate+Nitrite as N	mg/L	ND(0.2)	ND(0.1)	ND(0.2)	ND(0.1)
Potassium	mg/L	11	12	10	10
Sodium	mg/L	103	117	97	95
Sulfate	mg/L	3280	3400	3650	3400
pH	s.u.	3.78	3.30	3.25	3.27
Solids, Total Dissolved TDS @ 180 C	mg/L	4520	5020	4860	4730
Aluminum	mg/L	0.3	0.2	0.2	0.2
Beryllium	mg/L	0.002	0.002	ND(0.01)	ND(0.01)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	0.29	0.28	0.29	0.33
Lead	mg/L	0.003	0.004	ND(0.05)	ND(0.05)
Manganese	mg/L	5.02	5.12	5.36	5.36
Molybdenum	mg/L	0.2	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	0.27	0.26	0.26	0.29
Uranium	mg/L	0.0169	0.0177	0.0203	0.0185
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	0.004	0.002	ND(0.01)	0.004
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	4.3	5.5	4.6	5.0
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.5	1.2	0.8	0.8
Gross Alpha minus Rn & U MDC	pCi/L	0.3	0.9	0.5	0.4
Lead 210	pCi/L	1.1	0.4	0.3	0.7
Lead 210 precision (±)	pCi/L	0.7	0.7	0.8	0.6
Lead 210 MDC	pCi/L	1.0	1.2	1.3	1.0
Radium 226	pCi/L	3.4	4.2	4.6	3.1
Radium 226 precision (±)	pCi/L	0.36	0.37	0.45	0.22
Radium 226 MDC	pCi/L	0.15	0.13	0.17	0.09
Radium 228	pCi/L	9.6	5.8	7.7	6.4
Radium 228 precision (±)	pCi/L	1.1	0.88	0.93	0.81
Radium 228 MDC	pCi/L	1.2	1.0	1.0	0.91
Thorium 230	pCi/L	0.09	0.06	0.1	0.07
Thorium 230 precision (±)	pCi/L	0.2	0.2	0.2	0.2
Thorium 230 MDC	pCi/L	0.5	0.5	0.2	0.4
A/C Balance (± 5)	%	2.79	0.363	-6.11	-1.43
Anions	meq/L	68.8	71.2	76.5	71.4
Cations	meq/L	72.8	71.8	67.7	69.4
Solids, Total Dissolved Calculated	mg/L	4400	4500	4680	4440
TDS Balance (0.80 - 1.20)		1.03	1.12	1.04	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: Zone 3
Lab ID: C12070463-001
Client Sample ID: 613

Report Date: 08/30/12
Collection Date: 07/10/12 12:08
DateReceived: 07/13/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	07/16/12 16:16 / jba
Calcium	422	mg/L		1		E200.7	08/03/12 15:08 / sf
Chloride	144	mg/L	D	10		E300.0	08/15/12 18:16 / wc
Magnesium	697	mg/L		1		E200.7	08/03/12 15:08 / sf
Nitrogen, Ammonia as N	202	mg/L	D	2		A4500-NH3 G	07/20/12 12:21 / lr
Nitrogen, Nitrate+Nitrite as N	5.2	mg/L	D	0.5		E353.2	07/23/12 11:35 / lr
Potassium	ND	mg/L		1		E200.7	08/06/12 15:21 / sf
Sodium	249	mg/L	D	3		E200.7	08/06/12 15:21 / sf
Sulfate	8850	mg/L	D	40		E300.0	08/15/12 18:16 / wc
PHYSICAL PROPERTIES							
pH	2.98	s.u.	H	0.01		A4500-H B	07/16/12 12:25 / ab
Solids, Total Dissolved TDS @ 180 C	12200	mg/L		10		A2540 C	07/17/12 10:40 / ab
METALS - TOTAL							
Aluminum	616	mg/L		0.1		E200.7	07/18/12 17:04 / sf
Beryllium	0.178	mg/L		0.001		E200.7	07/18/12 17:04 / sf
Cadmium	0.041	mg/L		0.005		E200.8	07/24/12 20:30 / cp
Cobalt	1.94	mg/L		0.01		E200.8	07/24/12 20:30 / cp
Lead	0.006	mg/L		0.001		E200.8	07/24/12 20:30 / cp
Manganese	52.2	mg/L		0.01		E200.7	07/18/12 17:04 / sf
Molybdenum	ND	mg/L		0.1		E200.7	07/18/12 17:04 / sf
Nickel	1.78	mg/L		0.05		E200.7	07/18/12 17:04 / sf
Uranium	1.04	mg/L		0.0003		E200.8	07/24/12 20:30 / cp
Vanadium	1.9	mg/L		0.1		E200.8	07/24/12 20:30 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	08/01/12 18:17 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	07/26/12 16:46 / rdw
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	13.5	pCi/L				E900.1	08/10/12 00:29 / lbb
Gross Alpha minus Rn & U Precision (±)	1.0	pCi/L				E900.1	08/10/12 00:29 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	08/10/12 00:29 / lbb
Lead 210	0.6	pCi/L	U			E909.0	08/05/12 13:04 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	08/05/12 13:04 / eli-cs
Lead 210 MDC	1.1	pCi/L				E909.0	08/05/12 13:04 / eli-cs
Radium 226	8.6	pCi/L				E903.0	07/30/12 18:08 / lbb
Radium 226 precision (±)	0.58	pCi/L				E903.0	07/30/12 18:08 / lbb
Radium 226 MDC	0.16	pCi/L				E903.0	07/30/12 18:08 / lbb
Radium 228	22	pCi/L				RA-05	07/23/12 19:07 / plj
Radium 228 precision (±)	1.7	pCi/L				RA-05	07/23/12 19:07 / plj
Radium 228 MDC	1.5	pCi/L				RA-05	07/23/12 19:07 / 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 3
Lab ID: C12070463-001
Client Sample ID: 613

Report Date: 08/30/12
Collection Date: 07/10/12 12:08
DateReceived: 07/13/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	788	pCi/L				E908.0	08/06/12 16:40 / dmf
Thorium 230 precision (±)	131	pCi/L				E908.0	08/06/12 16:40 / dmf
Thorium 230 MDC	13.7	pCi/L				E908.0	08/06/12 16:40 / dmf
DATA QUALITY							
A/C Balance (± 5)	5.74	%				A1030 E	08/23/12 11:10 / kbh
Anions	190	meq/L				A1030 E	08/23/12 11:10 / kbh
Cations	213	meq/L				A1030 E	08/23/12 11:10 / kbh
Solids, Total Dissolved Calculated	11000	mg/L				A1030 E	08/23/12 11:10 / kbh
TDS Balance (0.80 - 1.20)	1.15					A1030 E	08/23/12 11:10 / kbh
- The Anion / Cation balance was confirmed by re-analysis.							
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	07/17/12 05:25 / jlr
Bromoform	ND	ug/L		0.50		E624	07/17/12 05:25 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	07/17/12 05:25 / jlr
Chloroform	79.2	ug/L		5.0		E624	07/16/12 18:53 / jlr
Trihalomethanes, Total	79.9	ug/L		0.50		E624	07/17/12 05:25 / jlr
Surr: 1,2-Dichlorobenzene-d4	92.0	%REC		80-120		E624	07/17/12 05:25 / jlr
Surr: Dibromofluoromethane	133	%REC	S	80-120		E624	07/17/12 05:25 / jlr
Surr: p-Bromofluorobenzene	176	%REC	S	80-120		E624	07/17/12 05:25 / jlr
Surr: Toluene-d8	104	%REC		80-120		E624	07/17/12 05:25 / 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.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C12100571-001
Client Sample ID: 613

Report Date: 11/20/12
Collection Date: 10/09/12 12:55
DateReceived: 10/12/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	10/15/12 17:36 / jba
Calcium	442	mg/L		1		E200.7	10/24/12 18:09 / sf
Chloride	142	mg/L	D	10		E300.0	10/16/12 05:22 / wc
Magnesium	693	mg/L		1		E200.7	10/24/12 18:09 / sf
Nitrogen, Ammonia as N	206	mg/L	D	5		A4500-NH3 G	10/16/12 16:13 / ab
Nitrogen, Nitrate+Nitrite as N	3.4	mg/L	D	0.5		E353.2	10/15/12 13:25 / lr
Potassium	1	mg/L		1		E200.7	10/24/12 18:09 / sf
Sodium	248	mg/L	D	3		E200.7	10/24/12 18:09 / sf
Sulfate	8630	mg/L	D	40		E300.0	10/16/12 05:22 / wc
PHYSICAL PROPERTIES							
pH	2.97	s.u.	H	0.01		A4500-H B	10/15/12 10:36 / ab
Solids, Total Dissolved TDS @ 180 C	11900	mg/L		10		A2540 C	10/15/12 12:21 / ab
METALS - TOTAL							
Aluminum	566	mg/L	D	0.5		E200.7	10/18/12 20:22 / jl1
Beryllium	0.144	mg/L		0.001		E200.8	10/18/12 11:19 / cp
Cadmium	0.036	mg/L		0.005		E200.8	10/18/12 11:19 / cp
Cobalt	1.89	mg/L		0.01		E200.8	10/18/12 11:19 / cp
Lead	0.007	mg/L		0.001		E200.8	10/18/12 11:19 / cp
Manganese	51.1	mg/L		0.01		E200.8	10/18/12 11:19 / cp
Molybdenum	ND	mg/L		0.1		E200.8	10/18/12 11:19 / cp
Nickel	1.90	mg/L		0.05		E200.8	10/18/12 11:19 / cp
Uranium	0.989	mg/L		0.0003		E200.8	10/18/12 11:19 / cp
Vanadium	1.8	mg/L		0.1		E200.8	10/18/12 11:19 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	10/29/12 15:49 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	11/07/12 14:29 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	14.5	pCi/L				E900.1	11/08/12 23:41 / lbb
Gross Alpha minus Rn & U Precision (±)	1.1	pCi/L				E900.1	11/08/12 23:41 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	11/08/12 23:41 / lbb
Lead 210	2.4	pCi/L				E909.0	11/17/12 06:07 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	11/17/12 06:07 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	11/17/12 06:07 / eli-cs
Radium 226	13	pCi/L				E903.0	10/24/12 13:24 / trs
Radium 226 precision (±)	0.85	pCi/L				E903.0	10/24/12 13:24 / trs
Radium 226 MDC	0.23	pCi/L				E903.0	10/24/12 13:24 / trs
Radium 228	2.0	pCi/L	U			RA-05	10/19/12 21:59 / gb
Radium 228 precision (±)	1.5	pCi/L				RA-05	10/19/12 21:59 / gb
Radium 228 MDC	2.4	pCi/L				RA-05	10/19/12 21:59 / 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: C12100571-001
Client Sample ID: 613

Report Date: 11/20/12
Collection Date: 10/09/12 12:55
DateReceived: 10/12/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	690	pCi/L				E908.0	11/01/12 08:57 / dmf
Thorium 230 precision (±)	112	pCi/L				E908.0	11/01/12 08:57 / dmf
Thorium 230 MDC	13.6	pCi/L				E908.0	11/01/12 08:57 / dmf
DATA QUALITY							
A/C Balance (± 5)	1.54	%				A1030 E	10/26/12 07:25 / kbh
Anions	185	meq/L				A1030 E	10/26/12 07:25 / kbh
Cations	191	meq/L				A1030 E	10/26/12 07:25 / kbh
Solids, Total Dissolved Calculated	10000	mg/L				A1030 E	10/26/12 07:25 / kbh
TDS Balance (0.80 - 1.20)	1.14					A1030 E	10/26/12 07:25 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	10/20/12 06:55 / jk
Bromoform	ND	ug/L		0.50		E624	10/20/12 06:55 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	10/20/12 06:55 / jk
Chloroform	88.8	ug/L		1.0		E624	10/17/12 06:05 / jk
Trihalomethanes, Total	88.8	ug/L		1.0		E624	10/17/12 06:05 / jk
Surr: 1,2-Dichlorobenzene-d4	100	%REC		80-120		E624	10/20/12 06:55 / jk
Surr: Dibromofluoromethane	112	%REC		80-120		E624	10/20/12 06:55 / jk
Surr: p-Bromofluorobenzene	96.0	%REC		80-120		E624	10/20/12 06:55 / jk
Surr: Toluene-d8	100	%REC		80-120		E624	10/20/12 06:55 / 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.

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 3 Monitor Wells					
Well ID:		613	613	613	613
Collection Date:		10/9/2012	7/10/2012	4/3/2012	1/3/2012
Receive Date:		10/12/2012	7/13/2012	4/6/2012	1/6/2012
Report Date:		11/20/2012	8/30/2012	5/22/2012	3/2/2012
Analyte	RUnits	C12100571-001	C12070463-001	C12040277-001	C12010153-001
Bicarbonate as HCO3	mg/L	ND(5)	ND(5)	ND(5)	ND(5)
Calcium	mg/L	442	422	430	467
Chloride	mg/L	142	144	136	137
Magnesium	mg/L	693	697	639	714
Nitrogen, Ammonia as N	mg/L	206	202	166	199
Nitrogen, Nitrate+Nitrite as N	mg/L	3.4	5.2	5.3	4.5
Potassium	mg/L	1	ND(1)	ND(1)	2
Sodium	mg/L	248	249	207	262
Sulfate	mg/L	8630	8850	9200	9270
pH	s.u.	2.97	2.98	2.99	3.03
Solids, Total Dissolved TDS @ 180 C	mg/L	11900	12200	12200	12100
Aluminum	mg/L	566	616	604	590
Beryllium	mg/L	0.144	0.178	0.18	0.18
Cadmium	mg/L	0.036	0.041	0.034	0.036
Cobalt	mg/L	1.89	1.94	1.87	1.92
Lead	mg/L	0.007	0.006	ND(0.05)	ND(0.05)
Manganese	mg/L	51.1	52.2	53.8	53.9
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	1.90	1.78	1.90	1.60
Uranium	mg/L	0.989	1.04	1.03	0.979
Vanadium	mg/L	1.8	1.9	2.0	1.8
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	14.5	13.5	29.0	28.4
Gross Alpha minus Rn & U Precision (±)	pCi/L	1.1	1.0	1.7	1.6
Gross Alpha minus Rn & U MDC	pCi/L	0.3	0.3	0.4	0.4
Lead 210	pCi/L	2.4	0.6	0.5	0.7
Lead 210 precision (±)	pCi/L	0.7	0.7	0.6	0.6
Lead 210 MDC	pCi/L	1.0	1.1	1	1.1
Radium 226	pCi/L	13	8.6	3.6	27
Radium 226 precision (±)	pCi/L	0.85	0.58	0.56	1.0
Radium 226 MDC	pCi/L	0.23	0.16	0.32	0.17
Radium 228	pCi/L	2.0	22	2.3	0.62
Radium 228 precision (±)	pCi/L	1.5	1.7	1.5	1.4
Radium 228 MDC	pCi/L	2.4	1.5	2.4	2.3
Thorium 230	pCi/L	690	788	805	971
Thorium 230 precision (±)	pCi/L	112	131	144	188
Thorium 230 MDC	pCi/L	13.6	13.7	16.4	19.8
A/C Balance (± 5)	%	1.54	5.74	-4.68	-0.210
Anions	meq/L	185	190	196	197
Cations	meq/L	191	213	178	196
Solids, Total Dissolved Calculated	mg/L	10000	11000	10800	10900
TDS Balance (0.80 - 1.20)		1.14	1.15	1.13	1.11
Trihalomethanes, Total	ug/L	88.8	79.9	73.6	106

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: C12070713-002
Client Sample ID: 708

Report Date: 09/07/12
Collection Date: 07/16/12 14:33
DateReceived: 07/20/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	07/20/12 18:15 / jba
Calcium	446	mg/L		1		E200.7	08/10/12 15:13 / sf
Chloride	30	mg/L	D	4		E300.0	07/24/12 13:02 / ljl
Magnesium	602	mg/L		1		E200.7	08/10/12 15:13 / sf
Nitrogen, Ammonia as N	1.44	mg/L		0.05		A4500-NH3 G	07/28/12 15:14 / ljl
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	07/24/12 16:36 / lr
Potassium	15	mg/L		1		E200.7	08/10/12 15:13 / sf
Sodium	130	mg/L		1		E200.7	08/10/12 15:13 / sf
Sulfate	4320	mg/L	D	40		E300.0	07/25/12 17:59 / wc
PHYSICAL PROPERTIES							
pH	2.89	s.u.	H	0.01		A4500-H B	07/23/12 09:49 / ab
Solids, Total Dissolved TDS @ 180 C	6250	mg/L		10		A2540 C	07/20/12 16:43 / ab
METALS - TOTAL							
Aluminum	34.4	mg/L		0.1		E200.8	08/10/12 22:48 / cp
Beryllium	0.037	mg/L		0.001		E200.8	08/10/12 22:48 / cp
Cadmium	ND	mg/L		0.005		E200.7	08/07/12 17:32 / sf
Cobalt	0.60	mg/L		0.01		E200.8	08/10/12 22:48 / cp
Lead	0.004	mg/L		0.001		E200.8	08/10/12 22:48 / cp
Manganese	13.0	mg/L		0.01		E200.7	08/07/12 17:32 / sf
Molybdenum	ND	mg/L		0.1		E200.7	08/07/12 17:32 / sf
Nickel	0.69	mg/L		0.05		E200.7	08/07/12 17:32 / sf
Uranium	0.0958	mg/L		0.0003		E200.8	08/10/12 22:48 / cp
Vanadium	ND	mg/L		0.1		E200.8	08/10/12 22:48 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	08/01/12 20:54 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	07/26/12 17:45 / rdw
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	29.8	pCi/L				E900.1	08/31/12 12:12 / lbb
Gross Alpha minus Rn & U Precision (±)	2.6	pCi/L				E900.1	08/31/12 12:12 / lbb
Gross Alpha minus Rn & U MDC	0.9	pCi/L				E900.1	08/31/12 12:12 / lbb
Lead 210	1.2	pCi/L				E909.0	08/14/12 08:22 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	08/14/12 08:22 / eli-cs
Lead 210 MDC	1.2	pCi/L				E909.0	08/14/12 08:22 / eli-cs
Radium 226	8.8	pCi/L				E903.0	08/06/12 15:11 / lbb
Radium 226 precision (±)	0.54	pCi/L				E903.0	08/06/12 15:11 / lbb
Radium 226 MDC	0.14	pCi/L				E903.0	08/06/12 15:11 / lbb
Radium 228	4.9	pCi/L				RA-05	07/31/12 19:38 / gb
Radium 228 precision (±)	0.85	pCi/L				RA-05	07/31/12 19:38 / gb
Radium 228 MDC	1.0	pCi/L				RA-05	07/31/12 19:38 / 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: C12070713-002
Client Sample ID: 708

Report Date: 09/07/12
Collection Date: 07/16/12 14:33
DateReceived: 07/20/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.2	pCi/L	U			E908.0	08/28/12 10:43 / dmf
Thorium 230 precision (±)	0.6	pCi/L				E908.0	08/28/12 10:43 / dmf
Thorium 230 MDC	1.4	pCi/L				E908.0	08/28/12 10:43 / dmf
- See Case Narrative regarding Th230 analysis.							
DATA QUALITY							
A/C Balance (± 5)	5.68	%				A1030 E	08/15/12 14:08 / kbh
Anions	91.5	meq/L				A1030 E	08/15/12 14:08 / kbh
Cations	102	meq/L				A1030 E	08/15/12 14:08 / kbh
Solids, Total Dissolved Calculated	5600	mg/L				A1030 E	08/15/12 14:08 / kbh
TDS Balance (0.80 - 1.20)	1.11					A1030 E	08/15/12 14:08 / kbh
- The Anion / Cation balance was confirmed by re-analysis.							
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	07/25/12 03:45 / jk
Bromoform	ND	ug/L		0.50		E624	07/25/12 03:45 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	07/25/12 03:45 / jk
Chloroform	ND	ug/L		0.50		E624	07/25/12 03:45 / jk
Trihalomethanes, Total	ND	ug/L		0.50		E624	07/25/12 03:45 / jk
Surr: 1,2-Dichlorobenzene-d4	94.0	%REC		80-120		E624	07/25/12 03:45 / jk
Surr: Dibromofluoromethane	90.0	%REC		80-120		E624	07/25/12 03:45 / jk
Surr: p-Bromofluorobenzene	78.0	%REC	S	80-120		E624	07/25/12 03:45 / jk
Surr: Toluene-d8	92.0	%REC		80-120		E624	07/25/12 03:45 / 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: C12100835-002
Client Sample ID: 708

Report Date: 11/20/12
Collection Date: 10/15/12 13:24
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	10/19/12 19:14 / jba
Calcium	460	mg/L		1		E200.7	11/09/12 22:18 / sf
Chloride	30	mg/L	D	4		E300.0	10/19/12 23:19 / wc
Magnesium	604	mg/L		1		E200.7	11/09/12 22:18 / sf
Nitrogen, Ammonia as N	1.3	mg/L	D	0.1		A4500-NH3 G	10/26/12 16:22 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L	D	1		E353.2	10/25/12 12:02 / ljl
Potassium	15	mg/L		1		E200.7	11/09/12 22:18 / sf
Sodium	130	mg/L	D	2		E200.7	11/09/12 22:18 / sf
Sulfate	4500	mg/L	D	40		E300.0	10/22/12 17:21 / wc
PHYSICAL PROPERTIES							
pH	2.91	s.u.	H	0.01		A4500-H B	10/19/12 15:17 / ab
Solids, Total Dissolved TDS @ 180 C	6270	mg/L		10		A2540 C	10/19/12 15:10 / jz
METALS - TOTAL							
Aluminum	36.7	mg/L		0.1		E200.8	10/26/12 21:18 / cp
Beryllium	0.043	mg/L		0.001		E200.8	10/26/12 21:18 / cp
Cadmium	ND	mg/L		0.005		E200.8	10/26/12 21:18 / cp
Cobalt	0.60	mg/L		0.01		E200.8	10/26/12 21:18 / cp
Lead	0.004	mg/L		0.001		E200.8	10/26/12 21:18 / cp
Manganese	13.8	mg/L		0.01		E200.8	10/26/12 21:18 / cp
Molybdenum	ND	mg/L		0.1		E200.8	10/26/12 21:18 / cp
Nickel	0.82	mg/L		0.05		E200.8	10/26/12 21:18 / cp
Uranium	0.108	mg/L		0.0003		E200.8	10/26/12 21:18 / cp
Vanadium	ND	mg/L		0.1		E200.8	10/26/12 21:18 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	11/05/12 13:23 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	11/07/12 14:43 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	11.2	pCi/L				E900.1	11/19/12 23:35 / lbb
Gross Alpha minus Rn & U Precision (±)	0.8	pCi/L				E900.1	11/19/12 23:35 / lbb
Gross Alpha minus Rn & U MDC	0.2	pCi/L				E900.1	11/19/12 23:35 / lbb
Lead 210	1.2	pCi/L				E909.0	11/17/12 23:01 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	11/17/12 23:01 / eli-cs
Lead 210 MDC	1.1	pCi/L				E909.0	11/17/12 23:01 / eli-cs
Radium 226	7.6	pCi/L				E903.0	11/05/12 13:13 / gb
Radium 226 precision (±)	0.54	pCi/L				E903.0	11/05/12 13:13 / gb
Radium 226 MDC	0.16	pCi/L				E903.0	11/05/12 13:13 / gb
Radium 228	6.0	pCi/L				RA-05	10/31/12 18:03 / gb
Radium 228 precision (±)	1.0	pCi/L				RA-05	10/31/12 18:03 / gb
Radium 228 MDC	1.2	pCi/L				RA-05	10/31/12 18:03 / 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: C12100835-002
Client Sample ID: 708

Report Date: 11/20/12
Collection Date: 10/15/12 13:24
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.3	pCi/L	U			E908.0	11/01/12 13:57 / dmf
Thorium 230 precision (±)	0.6	pCi/L				E908.0	11/01/12 13:57 / dmf
Thorium 230 MDC	1.3	pCi/L				E908.0	11/01/12 13:57 / dmf
- See Case Narrative regarding Th230 analysis.							
DATA QUALITY							
A/C Balance (± 5)	0.558	%				A1030 E	11/12/12 14:46 / kbh
Anions	95.2	meq/L				A1030 E	11/12/12 14:46 / kbh
Cations	96.3	meq/L				A1030 E	11/12/12 14:46 / kbh
Solids, Total Dissolved Calculated	5800	mg/L				A1030 E	11/12/12 14:46 / kbh
TDS Balance (0.80 - 1.20)	1.08					A1030 E	11/12/12 14:46 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	10/25/12 02:55 / jk
Bromoform	ND	ug/L		0.50		E624	10/25/12 02:55 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	10/25/12 02:55 / jk
Chloroform	ND	ug/L		0.50		E624	10/25/12 02:55 / jk
Trihalomethanes, Total	ND	ug/L		0.50		E624	10/25/12 02:55 / jk
Surr: 1,2-Dichlorobenzene-d4	102	%REC		80-120		E624	10/25/12 02:55 / jk
Surr: Dibromofluoromethane	137	%REC	S	80-120		E624	10/25/12 02:55 / jk
Surr: p-Bromofluorobenzene	116	%REC		80-120		E624	10/25/12 02:55 / jk
Surr: Toluene-d8	109	%REC		80-120		E624	10/25/12 02:55 / jk
- 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
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:		708	708	708	708
Collection Date:		10/15/2012	7/16/2012	4/9/2012	1/9/2012
Receive Date:		10/19/2012	7/20/2012	4/13/2012	1/13/2012
Report Date:		11/20/2012	9/7/2012	5/25/2012	3/5/2012
Analyte	RUnits	C12100835-002	C12070713-002	C12040738-002	C12010437-002
Bicarbonate as HCO3	mg/L	ND(5)	ND(5)	ND(5)	ND(5)
Calcium	mg/L	460	446	419	455
Chloride	mg/L	30	30	51	30
Magnesium	mg/L	604	602	579	543
Nitrogen, Ammonia as N	mg/L	1.3	1.44	1.60	1.4
Nitrogen, Nitrate+Nitrite as N	mg/L	ND(1)	ND(0.1)	ND(0.5)	ND(0.5)
Potassium	mg/L	15	15	13	15
Sodium	mg/L	130	130	117	120
Sulfate	mg/L	4500	4320	4530	4640
pH	s.u.	2.91	2.89	3.03	2.98
Solids, Total Dissolved TDS @ 180 C	mg/L	6270	6250	6420	6380
Aluminum	mg/L	36.7	34.4	34.6	26.4
Beryllium	mg/L	0.043	0.037	0.04	0.03
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	0.60	0.60	0.54	0.59
Lead	mg/L	0.004	0.004	ND(0.05)	ND(0.05)
Manganese	mg/L	13.8	13.0	12.0	13.2
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	0.82	0.69	0.72	0.66
Uranium	mg/L	0.108	0.0958	0.0864	0.0890
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(0.01)	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	11.2	29.8	13.7	13.0
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.8	2.6	1.3	1.2
Gross Alpha minus Rn & U MDC	pCi/L	0.2	0.9	0.5	0.4
Lead 210	pCi/L	1.2	1.2	1.5	1.6
Lead 210 precision (±)	pCi/L	0.7	0.7	0.8	0.6
Lead 210 MDC	pCi/L	1.1	1.2	1.3	1.0
Radium 226	pCi/L	7.6	8.8	9.8	6.8
Radium 226 precision (±)	pCi/L	0.54	0.54	0.69	0.32
Radium 226 MDC	pCi/L	0.16	0.14	0.19	0.09
Radium 228	pCi/L	6.0	4.9	4.7	5.6
Radium 228 precision (±)	pCi/L	1.0	0.85	0.91	0.80
Radium 228 MDC	pCi/L	1.2	1.0	1.2	0.95
Thorium 230	pCi/L	0.3	0.2	1.2	0.5
Thorium 230 precision (±)	pCi/L	0.6	0.6	0.8	0.8
Thorium 230 MDC	pCi/L	1.3	1.4	1.1	1.8
A/C Balance (± 5)	%	0.558	5.68	-4.37	-4.47
Anions	meq/L	95.2	91.5	99.0	97.4
Cations	meq/L	96.3	102	90.7	89.1
Solids, Total Dissolved Calculated	mg/L	5800	5600	5820	5850
TDS Balance (0.80 - 1.20)		1.08	1.11	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-3
Lab ID: C12070713-009
Client Sample ID: NBL-1

Report Date: 09/07/12
Collection Date: 07/17/12 13:41
DateReceived: 07/20/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	07/20/12 19:23 / jba
Calcium	526	mg/L		1		E200.7	08/06/12 16:16 / sf
Chloride	31	mg/L	D	4		E300.0	07/24/12 15:04 / ljl
Magnesium	376	mg/L		1		E200.7	08/06/12 16:16 / sf
Nitrogen, Ammonia as N	1.3	mg/L	D	0.1		A4500-NH3 G	07/28/12 15:30 / ljl
Nitrogen, Nitrate+Nitrite as N	ND	mg/L	D	1		E353.2	07/27/12 15:18 / ljl
Potassium	14	mg/L		1		E200.7	08/06/12 16:16 / sf
Sodium	142	mg/L		1		E200.7	08/06/12 16:16 / sf
Sulfate	4150	mg/L	D	40		E300.0	07/25/12 19:26 / wc
PHYSICAL PROPERTIES							
pH	2.76	s.u.	H	0.01		A4500-H B	07/23/12 10:08 / ab
Solids, Total Dissolved TDS @ 180 C	5660	mg/L		10		A2540 C	07/23/12 09:28 / ab
METALS - TOTAL							
Aluminum	30.1	mg/L		0.1		E200.8	08/10/12 17:17 / cp
Beryllium	0.034	mg/L		0.001		E200.8	08/15/12 09:35 / cp
Cadmium	ND	mg/L		0.005		E200.7	08/07/12 17:44 / sf
Cobalt	1.00	mg/L		0.01		E200.8	08/10/12 17:17 / cp
Lead	0.092	mg/L		0.001		E200.8	08/10/12 17:17 / cp
Manganese	8.08	mg/L		0.01		E200.7	08/07/12 17:44 / sf
Molybdenum	1.3	mg/L		0.1		E200.7	08/07/12 17:44 / sf
Nickel	1.26	mg/L		0.05		E200.7	08/07/12 17:44 / sf
Uranium	0.134	mg/L		0.0003		E200.8	08/10/12 17:17 / cp
Vanadium	ND	mg/L		0.1		E200.8	08/10/12 17:17 / cp
METALS - SPECIATED							
Arsenic-III	0.014	mg/L		0.001		E1632AM	08/01/12 22:20 / eli-h
Selenium-IV	0.002	mg/L		0.001		A3114 B	07/26/12 18:15 / rdw
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	34.5	pCi/L				E900.1	08/31/12 13:54 / lbb
Gross Alpha minus Rn & U Precision (±)	2.8	pCi/L				E900.1	08/31/12 13:54 / lbb
Gross Alpha minus Rn & U MDC	0.9	pCi/L				E900.1	08/31/12 13:54 / lbb
Lead 210	6.5	pCi/L				E909.0	08/17/12 15:08 / eli-cs
Lead 210 precision (±)	1	pCi/L				E909.0	08/17/12 15:08 / eli-cs
Lead 210 MDC	1.2	pCi/L				E909.0	08/17/12 15:08 / eli-cs
Radium 226	18	pCi/L				E903.0	08/06/12 16:42 / lbb
Radium 226 precision (±)	0.77	pCi/L				E903.0	08/06/12 16:42 / lbb
Radium 226 MDC	0.14	pCi/L				E903.0	08/06/12 16:42 / lbb
Radium 228	16	pCi/L				RA-05	07/31/12 21:12 / gb
Radium 228 precision (±)	1.4	pCi/L				RA-05	07/31/12 21:12 / gb
Radium 228 MDC	1.3	pCi/L				RA-05	07/31/12 21:12 / 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: C12070713-009
Client Sample ID: NBL-1

Report Date: 09/07/12
Collection Date: 07/17/12 13:41
DateReceived: 07/20/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	7.0	pCi/L				E908.0	08/28/12 10:43 / dmf
Thorium 230 precision (±)	1.6	pCi/L				E908.0	08/28/12 10:43 / dmf
Thorium 230 MDC	0.4	pCi/L				E908.0	08/28/12 10:43 / dmf
DATA QUALITY							
A/C Balance (± 5)	3.21	%				A1030 E	08/10/12 07:51 / kbh
Anions	87.4	meq/L				A1030 E	08/10/12 07:51 / kbh
Cations	93.2	meq/L				A1030 E	08/10/12 07:51 / kbh
Solids, Total Dissolved Calculated	5400	mg/L				A1030 E	08/10/12 07:51 / kbh
TDS Balance (0.80 - 1.20)	1.06					A1030 E	08/10/12 07:51 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	07/25/12 22:29 / jk
Bromoform	ND	ug/L		0.50		E624	07/25/12 22:29 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	07/25/12 22:29 / jk
Chloroform	ND	ug/L		0.50		E624	07/25/12 22:29 / jk
Trihalomethanes, Total	ND	ug/L		0.50		E624	07/25/12 22:29 / jk
Surr: 1,2-Dichlorobenzene-d4	95.0	%REC		80-120		E624	07/25/12 22:29 / jk
Surr: Dibromofluoromethane	95.0	%REC		80-120		E624	07/25/12 22:29 / jk
Surr: p-Bromofluorobenzene	83.0	%REC		80-120		E624	07/25/12 22:29 / jk
Surr: Toluene-d8	92.0	%REC		80-120		E624	07/25/12 22:29 / 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.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C12100835-010
Client Sample ID: NBL-1

Report Date: 11/20/12
Collection Date: 10/16/12 12:58
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	10/19/12 20:00 / jba
Calcium	531	mg/L		1		E200.7	11/09/12 22:54 / sf
Chloride	30	mg/L	D	4		E300.0	10/20/12 02:48 / wc
Magnesium	368	mg/L		1		E200.7	11/09/12 22:54 / sf
Nitrogen, Ammonia as N	0.7	mg/L	D	0.1		A4500-NH3 G	10/26/12 16:42 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L	D	1		E353.2	10/25/12 13:34 / ljl
Potassium	13	mg/L		1		E200.7	11/09/12 22:54 / sf
Sodium	138	mg/L	D	2		E200.7	11/09/12 22:54 / sf
Sulfate	4260	mg/L	D	40		E300.0	10/22/12 20:33 / wc
PHYSICAL PROPERTIES							
pH	2.73	s.u.	H	0.01		A4500-H B	10/19/12 15:50 / ab
Solids, Total Dissolved TDS @ 180 C	5530	mg/L		10		A2540 C	10/22/12 16:35 / jz
METALS - TOTAL							
Aluminum	43.4	mg/L		0.1		E200.7	11/07/12 22:48 / sf
Beryllium	0.039	mg/L		0.001		E200.8	11/07/12 12:07 / cp
Cadmium	ND	mg/L		0.005		E200.8	11/07/12 12:07 / cp
Cobalt	0.94	mg/L		0.01		E200.8	11/07/12 12:07 / cp
Lead	0.074	mg/L		0.001		E200.8	11/07/12 12:07 / cp
Manganese	6.61	mg/L		0.01		E200.8	11/07/12 12:07 / cp
Molybdenum	ND	mg/L		0.1		E200.8	11/07/12 12:07 / cp
Nickel	1.23	mg/L		0.05		E200.7	11/07/12 22:48 / sf
Uranium	0.189	mg/L		0.0003		E200.8	11/07/12 12:07 / cp
Vanadium	ND	mg/L		0.1		E200.8	11/07/12 12:07 / cp
METALS - SPECIATED							
Arsenic-III	0.032	mg/L		0.001		E1632AM	11/05/12 14:43 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	11/07/12 11:09 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	5.1	pCi/L				E900.1	11/19/12 23:35 / lbb
Gross Alpha minus Rn & U Precision (±)	0.6	pCi/L				E900.1	11/19/12 23:35 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	11/19/12 23:35 / lbb
Lead 210	3.4	pCi/L				E909.0	11/18/12 06:49 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	11/18/12 06:49 / eli-cs
Lead 210 MDC	1.1	pCi/L				E909.0	11/18/12 06:49 / eli-cs
Radium 226	6.0	pCi/L				E903.0	11/05/12 15:07 / gb
Radium 226 precision (±)	0.45	pCi/L				E903.0	11/05/12 15:07 / gb
Radium 226 MDC	0.15	pCi/L				E903.0	11/05/12 15:07 / gb
Radium 228	5.5	pCi/L				RA-05	10/31/12 19:38 / gb
Radium 228 precision (±)	1.1	pCi/L				RA-05	10/31/12 19:38 / gb
Radium 228 MDC	1.4	pCi/L				RA-05	10/31/12 19:38 / 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: C12100835-010
Client Sample ID: NBL-1

Report Date: 11/20/12
Collection Date: 10/16/12 12:58
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	4.9	pCi/L				E908.0	11/01/12 08:57 / dmf
Thorium 230 precision (±)	1.1	pCi/L				E908.0	11/01/12 08:57 / dmf
Thorium 230 MDC	0.4	pCi/L				E908.0	11/01/12 08:57 / dmf
DATA QUALITY							
A/C Balance (± 5)	-1.34	%				A1030 E	11/12/12 14:47 / kbh
Anions	89.6	meq/L				A1030 E	11/12/12 14:47 / kbh
Cations	87.3	meq/L				A1030 E	11/12/12 14:47 / kbh
Solids, Total Dissolved Calculated	5500	mg/L				A1030 E	11/12/12 14:47 / kbh
TDS Balance (0.80 - 1.20)	1.01					A1030 E	11/12/12 14:47 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	10/25/12 18:04 / jk
Bromoform	ND	ug/L		0.50		E624	10/25/12 18:04 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	10/25/12 18:04 / jk
Chloroform	ND	ug/L		0.50		E624	10/25/12 18:04 / jk
Trihalomethanes, Total	ND	ug/L		0.50		E624	10/25/12 18:04 / jk
Surr: 1,2-Dichlorobenzene-d4	104	%REC		80-120		E624	10/25/12 18:04 / jk
Surr: Dibromofluoromethane	143	%REC	S	80-120		E624	10/25/12 18:04 / jk
Surr: p-Bromofluorobenzene	122	%REC	S	80-120		E624	10/25/12 18:04 / jk
Surr: Toluene-d8	110	%REC		80-120		E624	10/25/12 18:04 / jk

- 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:		NBL-1	NBL-1	NBL-1	NBL-1
Collection Date:		10/16/2012	7/17/2012	4/10/2012	1/10/2012
Receive Date:		10/19/2012	7/20/2012	4/13/2012	1/13/2012
Report Date:		11/20/2012	9/7/2012	5/25/2012	3/5/2012
Analyte	RUnits	C12100835-010	C12070713-009	C12040738-009	C12010437-009
Bicarbonate as HCO3	mg/L	ND(5)	ND(5)	ND(5)	ND(5)
Calcium	mg/L	531	526	504	586
Chloride	mg/L	30	31	30	33
Magnesium	mg/L	368	376	365	319
Nitrogen, Ammonia as N	mg/L	0.7	1.3	2.16	2.8
Nitrogen, Nitrate+Nitrite as N	mg/L	ND(1)	ND(1)	ND(0.5)	ND(0.5)
Potassium	mg/L	13	14	12	11
Sodium	mg/L	138	142	130	130
Sulfate	mg/L	4260	4150	3500	3350
pH	s.u.	2.73	2.76	2.80	2.93
Solids, Total Dissolved TDS @ 180 C	mg/L	5530	5660	5020	4320
Aluminum	mg/L	43.4	30.1	13.3	5.9
Beryllium	mg/L	0.039	0.034	0.03	0.03
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	0.94	1.00	0.79	0.91
Lead	mg/L	0.074	0.092	0.11	ND(0.05)
Manganese	mg/L	6.61	8.08	6.28	7.47
Molybdenum	mg/L	ND(0.1)	1.3	0.5	ND(0.1)
Nickel	mg/L	1.23	1.26	1.00	0.97
Uranium	mg/L	0.189	0.134	0.0717	0.0568
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	0.032	0.014	0.03	0.028
Selenium-IV	mg/L	ND(0.001)	0.002	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	5.1	34.5	22.7	20.8
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.6	2.8	1.6	1.5
Gross Alpha minus Rn & U MDC	pCi/L	0.3	0.9	0.5	0.4
Lead 210	pCi/L	3.4	6.5	9.8	1.6
Lead 210 precision (±)	pCi/L	0.8	1	0.9	0.6
Lead 210 MDC	pCi/L	1.1	1.2	1.3	0.9
Radium 226	pCi/L	6.0	18	23	17
Radium 226 precision (±)	pCi/L	0.45	0.77	1.1	0.51
Radium 226 MDC	pCi/L	0.15	0.14	0.19	0.1
Radium 228	pCi/L	5.5	16	21	17
Radium 228 precision (±)	pCi/L	1.1	1.4	1.4	1.4
Radium 228 MDC	pCi/L	1.4	1.3	1.2	1.2
Thorium 230	pCi/L	4.9	7.0	4.6	3.0
Thorium 230 precision (±)	pCi/L	1.1	1.6	1.0	0.7
Thorium 230 MDC	pCi/L	0.4	0.4	0.3	0.3
A/C Balance (± 5)	%	-1.34	3.21	-1.12	-2.18
Anions	meq/L	89.6	87.4	74.5	70.7
Cations	meq/L	87.3	93.2	72.8	67.7
Solids, Total Dissolved Calculated	mg/L	5500	5400	4650	4480
TDS Balance (0.80 - 1.20)		1.01	1.06	1.08	0.960
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: C12070713-003
Client Sample ID: EPA-13

Report Date: 09/07/12
Collection Date: 07/16/12 15:21
DateReceived: 07/20/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	44	mg/L		5		A2320 B	07/20/12 18:22 / jba
Calcium	511	mg/L		1		E200.7	08/09/12 17:20 / sf
Chloride	45	mg/L	D	4		E300.0	07/24/12 13:19 / ljl
Magnesium	911	mg/L		1		E200.7	08/09/12 17:20 / sf
Nitrogen, Ammonia as N	0.25	mg/L		0.05		A4500-NH3 G	07/28/12 15:16 / ljl
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	07/24/12 16:38 / lr
Potassium	13	mg/L		1		E200.7	08/10/12 15:17 / sf
Sodium	164	mg/L		1		E200.7	08/10/12 15:17 / sf
Sulfate	4890	mg/L	D	40		E300.0	07/25/12 18:16 / wc
PHYSICAL PROPERTIES							
pH	6.35	s.u.	H	0.01		A4500-H B	07/23/12 09:52 / ab
Solids, Total Dissolved TDS @ 180 C	7110	mg/L		10		A2540 C	07/20/12 16:44 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	08/10/12 16:46 / cp
Beryllium	0.001	mg/L		0.001		E200.8	08/18/12 08:43 / cp
Cadmium	ND	mg/L		0.005		E200.8	08/10/12 16:46 / cp
Cobalt	0.07	mg/L		0.01		E200.8	08/10/12 16:46 / cp
Lead	ND	mg/L		0.001		E200.8	08/10/12 16:46 / cp
Manganese	6.89	mg/L		0.01		E200.8	08/10/12 16:46 / cp
Molybdenum	0.2	mg/L		0.1		E200.8	08/10/12 16:46 / cp
Nickel	0.21	mg/L		0.05		E200.8	08/10/12 16:46 / cp
Uranium	0.0172	mg/L		0.0003		E200.8	08/10/12 16:46 / cp
Vanadium	ND	mg/L		0.1		E200.8	08/10/12 16:46 / cp
METALS - SPECIATED							
Arsenic-III	0.007	mg/L		0.001		E1632AM	08/02/12 15:46 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	07/26/12 17:51 / rdw
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	8.3	pCi/L				E900.1	08/31/12 12:12 / lbb
Gross Alpha minus Rn & U Precision (±)	1.4	pCi/L				E900.1	08/31/12 12:12 / lbb
Gross Alpha minus Rn & U MDC	0.9	pCi/L				E900.1	08/31/12 12:12 / lbb
Lead 210	1.1	pCi/L	U			E909.0	08/14/12 09:42 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	08/14/12 09:42 / eli-cs
Lead 210 MDC	1.2	pCi/L				E909.0	08/14/12 09:42 / eli-cs
Radium 226	5.6	pCi/L				E903.0	08/06/12 15:11 / lbb
Radium 226 precision (±)	0.44	pCi/L				E903.0	08/06/12 15:11 / lbb
Radium 226 MDC	0.14	pCi/L				E903.0	08/06/12 15:11 / lbb
Radium 228	6.3	pCi/L				RA-05	07/31/12 19:38 / gb
Radium 228 precision (±)	0.93	pCi/L				RA-05	07/31/12 19:38 / gb
Radium 228 MDC	1.1	pCi/L				RA-05	07/31/12 19:38 / 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: C12070713-003
Client Sample ID: EPA-13

Report Date: 09/07/12
Collection Date: 07/16/12 15:21
DateReceived: 07/20/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.002	pCi/L	U			E908.0	08/09/12 08:48 / dmf
Thorium 230 precision (±)	0.2	pCi/L				E908.0	08/09/12 08:48 / dmf
Thorium 230 MDC	0.5	pCi/L				E908.0	08/09/12 08:48 / dmf
- See Case Narrative regarding Th230 analysis.							
DATA QUALITY							
A/C Balance (± 5)	2.02	%				A1030 E	08/13/12 13:00 / kbh
Anions	104	meq/L				A1030 E	08/13/12 13:00 / kbh
Cations	108	meq/L				A1030 E	08/13/12 13:00 / kbh
Solids, Total Dissolved Calculated	6600	mg/L				A1030 E	08/13/12 13:00 / kbh
TDS Balance (0.80 - 1.20)	1.08					A1030 E	08/13/12 13:00 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	07/25/12 04:21 / jk
Bromoform	ND	ug/L		0.50		E624	07/25/12 04:21 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	07/25/12 04:21 / jk
Chloroform	ND	ug/L		0.50		E624	07/25/12 04:21 / jk
Trihalomethanes, Total	ND	ug/L		0.50		E624	07/25/12 04:21 / jk
Surr: 1,2-Dichlorobenzene-d4	98.0	%REC		80-120		E624	07/25/12 04:21 / jk
Surr: Dibromofluoromethane	96.0	%REC		80-120		E624	07/25/12 04:21 / jk
Surr: p-Bromofluorobenzene	87.0	%REC		80-120		E624	07/25/12 04:21 / jk
Surr: Toluene-d8	91.0	%REC		80-120		E624	07/25/12 04:21 / 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: C12100835-004
Client Sample ID: EPA-13

Report Date: 11/20/12
Collection Date: 10/15/12 14:31
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	57	mg/L		5		A2320 B	10/19/12 19:26 / jba
Calcium	532	mg/L		1		E200.7	11/09/12 22:26 / sf
Chloride	43	mg/L	D	4		E300.0	10/19/12 23:54 / wc
Magnesium	896	mg/L		1		E200.7	11/09/12 22:26 / sf
Nitrogen, Ammonia as N	0.26	mg/L		0.05		A4500-NH3 G	10/26/12 16:26 / lr
Nitrogen, Nitrate+Nitrite as N	0.1	mg/L		0.1		E353.2	10/25/12 12:12 / ljl
Potassium	14	mg/L		1		E200.7	11/09/12 22:26 / sf
Sodium	171	mg/L	D	2		E200.7	11/09/12 22:26 / sf
Sulfate	5030	mg/L	D	40		E300.0	10/22/12 17:39 / wc
PHYSICAL PROPERTIES							
pH	6.35	s.u.	H	0.01		A4500-H B	10/19/12 15:23 / ab
Solids, Total Dissolved TDS @ 180 C	7160	mg/L		10		A2540 C	10/19/12 15:10 / jz
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	10/26/12 21:01 / cp
Beryllium	0.002	mg/L		0.001		E200.8	10/26/12 21:01 / cp
Cadmium	ND	mg/L		0.005		E200.8	10/26/12 21:01 / cp
Cobalt	0.09	mg/L		0.01		E200.8	10/26/12 21:01 / cp
Lead	ND	mg/L		0.001		E200.8	10/26/12 21:01 / cp
Manganese	7.68	mg/L		0.01		E200.8	10/26/12 21:01 / cp
Molybdenum	0.2	mg/L		0.1		E200.8	10/26/12 21:01 / cp
Nickel	0.23	mg/L		0.05		E200.8	10/26/12 21:01 / cp
Uranium	0.0115	mg/L		0.0003		E200.8	10/26/12 21:01 / cp
Vanadium	ND	mg/L		0.1		E200.8	10/26/12 21:01 / cp
METALS - SPECIATED							
Arsenic-III	0.015	mg/L		0.001		E1632AM	11/05/12 13:39 / eli-h
Selenium-IV	0.001	mg/L		0.001		A3114 B	11/07/12 14:47 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	5.2	pCi/L				E900.1	11/19/12 23:35 / lbb
Gross Alpha minus Rn & U Precision (±)	0.6	pCi/L				E900.1	11/19/12 23:35 / lbb
Gross Alpha minus Rn & U MDC	0.2	pCi/L				E900.1	11/19/12 23:35 / lbb
Lead 210	-0.2	pCi/L	U			E909.0	11/18/12 00:58 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	11/18/12 00:58 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	11/18/12 00:58 / eli-cs
Radium 226	4.1	pCi/L				E903.0	11/05/12 13:13 / gb
Radium 226 precision (±)	0.39	pCi/L				E903.0	11/05/12 13:13 / gb
Radium 226 MDC	0.15	pCi/L				E903.0	11/05/12 13:13 / gb
Radium 228	9.7	pCi/L				RA-05	10/31/12 18:03 / gb
Radium 228 precision (±)	1.1	pCi/L				RA-05	10/31/12 18:03 / gb
Radium 228 MDC	1.2	pCi/L				RA-05	10/31/12 18:03 / 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: C12100835-004
Client Sample ID: EPA-13

Report Date: 11/20/12
Collection Date: 10/15/12 14:31
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.1	pCi/L	U			E908.0	11/01/12 13:57 / dmf
Thorium 230 precision (±)	0.3	pCi/L				E908.0	11/01/12 13:57 / dmf
Thorium 230 MDC	0.6	pCi/L				E908.0	11/01/12 13:57 / dmf
- See Case Narrative regarding Th230 analysis.							
DATA QUALITY							
A/C Balance (± 5)	0.567	%				A1030 E	11/12/12 14:46 / kbh
Anions	107	meq/L				A1030 E	11/12/12 14:46 / kbh
Cations	108	meq/L				A1030 E	11/12/12 14:46 / kbh
Solids, Total Dissolved Calculated	6800	mg/L				A1030 E	11/12/12 14:46 / kbh
TDS Balance (0.80 - 1.20)	1.06					A1030 E	11/12/12 14:46 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	10/25/12 04:05 / jk
Bromoform	ND	ug/L		0.50		E624	10/25/12 04:05 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	10/25/12 04:05 / jk
Chloroform	ND	ug/L		0.50		E624	10/25/12 04:05 / jk
Trihalomethanes, Total	ND	ug/L		0.50		E624	10/25/12 04:05 / jk
Surr: 1,2-Dichlorobenzene-d4	107	%REC		80-120		E624	10/25/12 04:05 / jk
Surr: Dibromofluoromethane	149	%REC	S	80-120		E624	10/25/12 04:05 / jk
Surr: p-Bromofluorobenzene	120	%REC		80-120		E624	10/25/12 04:05 / jk
Surr: Toluene-d8	110	%REC		80-120		E624	10/25/12 04:05 / 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
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:		EPA-13	EPA-13	EPA-13	EPA-13
Collection Date:		10/15/2012	7/16/2012	4/9/2012	1/10/2012
Receive Date:		10/19/2012	7/20/2012	4/13/2012	1/13/2012
Report Date:		11/20/2012	9/7/2012	5/25/2012	3/5/2012
Analyte	RUnits	C12100835-004	C12070713-003	C12040738-005	C12010437-005
Bicarbonate as HCO3	mg/L	57	44	58	51
Calcium	mg/L	532	511	466	500
Chloride	mg/L	43	45	42	41
Magnesium	mg/L	896	911	862	790
Nitrogen, Ammonia as N	mg/L	0.26	0.25	0.26	0.26
Nitrogen, Nitrate+Nitrite as N	mg/L	0.1	ND(0.1)	ND(0.1)	0.2
Potassium	mg/L	14	13	13	13
Sodium	mg/L	171	164	153	151
Sulfate	mg/L	5030	4890	4770	4850
pH	s.u.	6.35	6.35	6.12	6.12
Solids, Total Dissolved TDS @ 180 C	mg/L	7160	7110	7110	6780
Aluminum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Beryllium	mg/L	0.002	0.001	ND(0.01)	ND(0.01)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	0.09	0.07	0.08	0.09
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.05)	ND(0.05)
Manganese	mg/L	7.68	6.89	7.46	7.18
Molybdenum	mg/L	0.2	0.2	0.2	0.2
Nickel	mg/L	0.23	0.21	0.21	0.22
Uranium	mg/L	0.0115	0.0172	0.0174	0.0118
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	0.015	0.007	ND(0.01)	0.019
Selenium-IV	mg/L	0.001	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	5.2	8.3	6.7	6.6
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.6	1.4	0.9	0.9
Gross Alpha minus Rn & U MDC	pCi/L	0.2	0.9	0.5	0.4
Lead 210	pCi/L	-0.2	1.1	1.9	0.5
Lead 210 precision (±)	pCi/L	0.6	0.7	0.8	0.5
Lead 210 MDC	pCi/L	1.0	1.2	1.3	0.9
Radium 226	pCi/L	4.1	5.6	6.9	5.1
Radium 226 precision (±)	pCi/L	0.39	0.44	0.57	0.35
Radium 226 MDC	pCi/L	0.15	0.14	0.18	0.14
Radium 228	pCi/L	9.7	6.3	8.7	7.6
Radium 228 precision (±)	pCi/L	1.1	0.93	1.0	1.2
Radium 228 MDC	pCi/L	1.2	1.1	1.1	1.4
Thorium 230	pCi/L	0.1	0.002	0.05	0.02
Thorium 230 precision (±)	pCi/L	0.3	0.2	0.2	0.2
Thorium 230 MDC	pCi/L	0.6	0.5	0.4	0.5
A/C Balance (± 5)	%	0.567	2.02	-0.0623	-3.05
Anions	meq/L	107	104	101	103
Cations	meq/L	108	108	101	97.0
Solids, Total Dissolved Calculated	mg/L	6800	6600	6360	6400
TDS Balance (0.80 - 1.20)		1.06	1.08	1.11	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: C12070713-008
Client Sample ID: 717

Report Date: 09/07/12
Collection Date: 07/17/12 11:10
DateReceived: 07/20/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	07/20/12 19:19 / jba
Calcium	474	mg/L		1		E200.7	08/06/12 16:12 / sf
Chloride	69	mg/L	D	4		E300.0	07/24/12 14:46 / ljl
Magnesium	517	mg/L		1		E200.7	08/06/12 16:12 / sf
Nitrogen, Ammonia as N	61	mg/L	D	2		A4500-NH3 G	07/28/12 15:28 / ljl
Nitrogen, Nitrate+Nitrite as N	30	mg/L	D	2		E353.2	07/27/12 14:18 / ljl
Potassium	14	mg/L		1		E200.7	08/06/12 16:12 / sf
Sodium	189	mg/L		1		E200.7	08/06/12 16:12 / sf
Sulfate	4390	mg/L	D	40		E300.0	07/25/12 19:08 / wc
PHYSICAL PROPERTIES							
pH	4.16	s.u.	H	0.01		A4500-H B	07/23/12 10:05 / ab
Solids, Total Dissolved TDS @ 180 C	6190	mg/L		10		A2540 C	07/23/12 09:28 / ab
METALS - TOTAL							
Aluminum	134	mg/L		0.1		E200.7	08/13/12 16:27 / sf
Beryllium	0.095	mg/L		0.001		E200.8	08/10/12 23:45 / cp
Cadmium	0.011	mg/L		0.005		E200.8	08/10/12 23:45 / cp
Cobalt	0.95	mg/L		0.01		E200.8	08/10/12 23:45 / cp
Lead	0.011	mg/L		0.001		E200.8	08/10/12 23:45 / cp
Manganese	21.8	mg/L		0.01		E200.8	08/10/12 23:45 / cp
Molybdenum	ND	mg/L		0.1		E200.8	08/10/12 23:45 / cp
Nickel	0.90	mg/L		0.05		E200.8	08/10/12 23:45 / cp
Uranium	0.0229	mg/L		0.0003		E200.8	08/10/12 23:45 / cp
Vanadium	ND	mg/L		0.1		E200.8	08/10/12 23:45 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	08/02/12 16:25 / eli-h
Selenium-IV	0.002	mg/L		0.001		A3114 B	07/26/12 18:01 / rdw
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	35.7	pCi/L				E900.1	08/31/12 13:54 / lbb
Gross Alpha minus Rn & U Precision (±)	2.8	pCi/L				E900.1	08/31/12 13:54 / lbb
Gross Alpha minus Rn & U MDC	0.9	pCi/L				E900.1	08/31/12 13:54 / lbb
Lead 210	3.4	pCi/L				E909.0	08/14/12 16:23 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	08/14/12 16:23 / eli-cs
Lead 210 MDC	1.2	pCi/L				E909.0	08/14/12 16:23 / eli-cs
Radium 226	15	pCi/L				E903.0	08/06/12 16:42 / lbb
Radium 226 precision (±)	0.73	pCi/L				E903.0	08/06/12 16:42 / lbb
Radium 226 MDC	0.14	pCi/L				E903.0	08/06/12 16:42 / lbb
Radium 228	22	pCi/L				RA-05	07/31/12 21:12 / gb
Radium 228 precision (±)	1.6	pCi/L				RA-05	07/31/12 21:12 / gb
Radium 228 MDC	1.3	pCi/L				RA-05	07/31/12 21:12 / 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: C12070713-008
Client Sample ID: 717

Report Date: 09/07/12
Collection Date: 07/17/12 11:10
DateReceived: 07/20/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.3	pCi/L	U			E908.0	08/09/12 08:48 / dmf
Thorium 230 precision (±)	0.6	pCi/L				E908.0	08/09/12 08:48 / dmf
Thorium 230 MDC	1.3	pCi/L				E908.0	08/09/12 08:48 / dmf
- See Case Narrative regarding Th230 analysis.							
DATA QUALITY							
A/C Balance (± 5)	2.24	%				A1030 E	08/10/12 07:51 / kbh
Anions	96.2	meq/L				A1030 E	08/10/12 07:51 / kbh
Cations	101	meq/L				A1030 E	08/10/12 07:51 / kbh
Solids, Total Dissolved Calculated	5800	mg/L				A1030 E	08/10/12 07:51 / kbh
TDS Balance (0.80 - 1.20)	1.06					A1030 E	08/10/12 07:51 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	07/25/12 17:39 / jk
Bromoform	ND	ug/L		0.50		E624	07/25/12 17:39 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	07/25/12 17:39 / jk
Chloroform	4.40	ug/L		0.50		E624	07/25/12 17:39 / jk
Trihalomethanes, Total	4.40	ug/L		0.50		E624	07/25/12 17:39 / jk
Surr: 1,2-Dichlorobenzene-d4	100	%REC		80-120		E624	07/25/12 17:39 / jk
Surr: Dibromofluoromethane	100	%REC		80-120		E624	07/25/12 17:39 / jk
Surr: p-Bromofluorobenzene	82.0	%REC		80-120		E624	07/25/12 17:39 / jk
Surr: Toluene-d8	100	%REC		80-120		E624	07/25/12 17:39 / jk
- 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
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: C12100835-007
Client Sample ID: 717

Report Date: 11/20/12
Collection Date: 10/16/12 10:30
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	10/19/12 19:44 / jba
Calcium	486	mg/L		1		E200.7	11/09/12 22:38 / sf
Chloride	67	mg/L	D	4		E300.0	10/20/12 00:47 / wc
Magnesium	508	mg/L		1		E200.7	11/09/12 22:38 / sf
Nitrogen, Ammonia as N	59	mg/L	D	2		A4500-NH3 G	10/26/12 16:32 / lr
Nitrogen, Nitrate+Nitrite as N	30	mg/L	D	2		E353.2	10/22/12 14:19 / lr
Potassium	14	mg/L		1		E200.7	11/09/12 22:38 / sf
Sodium	186	mg/L	D	2		E200.7	11/09/12 22:38 / sf
Sulfate	4430	mg/L	D	40		E300.0	10/22/12 19:06 / wc
PHYSICAL PROPERTIES							
pH	4.07	s.u.	H	0.01		A4500-H B	10/19/12 15:42 / ab
Solids, Total Dissolved TDS @ 180 C	6120	mg/L		10		A2540 C	10/22/12 16:34 / jz
METALS - TOTAL							
Aluminum	122	mg/L		0.1		E200.7	11/07/12 22:36 / sf
Beryllium	0.102	mg/L		0.001		E200.8	11/07/12 11:48 / cp
Cadmium	0.016	mg/L		0.005		E200.8	11/07/12 11:48 / cp
Cobalt	0.89	mg/L		0.01		E200.8	11/07/12 11:48 / cp
Lead	0.010	mg/L		0.001		E200.8	11/07/12 11:48 / cp
Manganese	22.1	mg/L		0.01		E200.7	11/07/12 22:36 / sf
Molybdenum	ND	mg/L		0.1		E200.8	11/07/12 11:48 / cp
Nickel	0.88	mg/L		0.05		E200.8	11/07/12 11:48 / cp
Uranium	0.0194	mg/L		0.0003		E200.8	11/07/12 11:48 / cp
Vanadium	ND	mg/L		0.1		E200.8	11/07/12 11:48 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	11/05/12 14:03 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	11/07/12 14:01 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	13.2	pCi/L				E900.1	11/19/12 23:35 / lbb
Gross Alpha minus Rn & U Precision (±)	0.9	pCi/L				E900.1	11/19/12 23:35 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	11/19/12 23:35 / lbb
Lead 210	2.4	pCi/L				E909.0	11/18/12 03:54 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	11/18/12 03:54 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	11/18/12 03:54 / eli-cs
Radium 226	12	pCi/L				E903.0	11/05/12 15:07 / gb
Radium 226 precision (±)	0.66	pCi/L				E903.0	11/05/12 15:07 / gb
Radium 226 MDC	0.15	pCi/L				E903.0	11/05/12 15:07 / gb
Radium 228	34	pCi/L				RA-05	10/31/12 18:03 / gb
Radium 228 precision (±)	1.8	pCi/L				RA-05	10/31/12 18:03 / gb
Radium 228 MDC	1.2	pCi/L				RA-05	10/31/12 18:03 / 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: C12100835-007
Client Sample ID: 717

Report Date: 11/20/12
Collection Date: 10/16/12 10:30
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.6	pCi/L	U			E908.0	11/16/12 09:56 / dmf
Thorium 230 precision (±)	0.6	pCi/L				E908.0	11/16/12 09:56 / dmf
Thorium 230 MDC	1.0	pCi/L				E908.0	11/16/12 09:56 / dmf
- See Case Narrative regarding Th230 analysis.							
DATA QUALITY							
A/C Balance (± 5)	-1.07	%				A1030 E	11/12/12 14:46 / kbh
Anions	96.9	meq/L				A1030 E	11/12/12 14:46 / kbh
Cations	94.9	meq/L				A1030 E	11/12/12 14:46 / kbh
Solids, Total Dissolved Calculated	5900	mg/L				A1030 E	11/12/12 14:46 / kbh
TDS Balance (0.80 - 1.20)	1.04					A1030 E	11/12/12 14:46 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	10/25/12 16:18 / jk
Bromoform	ND	ug/L		0.50		E624	10/25/12 16:18 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	10/25/12 16:18 / jk
Chloroform	3.48	ug/L		0.50		E624	10/25/12 16:18 / jk
Trihalomethanes, Total	3.48	ug/L		0.50		E624	10/25/12 16:18 / jk
Surr: 1,2-Dichlorobenzene-d4	103	%REC		80-120		E624	10/25/12 16:18 / jk
Surr: Dibromofluoromethane	141	%REC	S	80-120		E624	10/25/12 16:18 / jk
Surr: p-Bromofluorobenzene	116	%REC		80-120		E624	10/25/12 16:18 / jk
Surr: Toluene-d8	110	%REC		80-120		E624	10/25/12 16:18 / 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
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:		717	717	717	717
Collection Date:		10/16/2012	7/17/2012	4/10/2012	1/10/2012
Receive Date:		10/19/2012	7/20/2012	4/13/2012	1/13/2012
Report Date:		11/20/2012	9/7/2012	5/25/2012	3/5/2012
Analyte	RUnits	C12100835-007	C12070713-008	C12040738-008	C12010437-008
Bicarbonate as HCO3	mg/L	ND(5)	ND(5)	ND(5)	ND(5)
Calcium	mg/L	486	474	438	456
Chloride	mg/L	67	69	66	68
Magnesium	mg/L	508	517	500	499
Nitrogen, Ammonia as N	mg/L	59	61	62	65
Nitrogen, Nitrate+Nitrite as N	mg/L	30	30	31	30
Potassium	mg/L	14	14	12	13
Sodium	mg/L	186	189	170	174
Sulfate	mg/L	4430	4390	4570	4650
pH	s.u.	4.07	4.16	4.12	4.14
Solids, Total Dissolved TDS @ 180 C	mg/L	6120	6190	6240	6310
Aluminum	mg/L	122	134	130	124
Beryllium	mg/L	0.102	0.095	0.10	0.11
Cadmium	mg/L	0.016	0.011	0.016	0.015
Cobalt	mg/L	0.89	0.95	1.00	1.07
Lead	mg/L	0.010	0.011	ND(0.05)	ND(0.05)
Manganese	mg/L	22.1	21.8	22.4	22.3
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	0.88	0.90	0.86	0.91
Uranium	mg/L	0.0194	0.0229	0.0247	0.0348
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(0.01)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	0.002	ND(0.001)	0.002
Gross Alpha minus Rn & U	pCi/L	13.2	35.7	21.5	22.1
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.9	2.8	1.6	1.6
Gross Alpha minus Rn & U MDC	pCi/L	0.3	0.9	0.5	0.4
Lead 210	pCi/L	2.4	3.4	3.4	2.7
Lead 210 precision (±)	pCi/L	0.7	0.8	0.8	0.6
Lead 210 MDC	pCi/L	1.0	1.2	1.3	0.9
Radium 226	pCi/L	12	15	15	12
Radium 226 precision (±)	pCi/L	0.66	0.73	0.84	0.56
Radium 226 MDC	pCi/L	0.15	0.14	0.19	0.16
Radium 228	pCi/L	34	22	30	21
Radium 228 precision (±)	pCi/L	1.8	1.6	1.6	1.7
Radium 228 MDC	pCi/L	1.2	1.3	1.2	1.6
Thorium 230	pCi/L	0.6	0.3	0.2	0.1
Thorium 230 precision (±)	pCi/L	0.6	0.6	0.4	0.5
Thorium 230 MDC	pCi/L	1.0	1.3	0.7	1.3
A/C Balance (± 5)	%	-1.07	2.24	-6.72	-5.89
Anions	meq/L	96.9	96.2	103	102
Cations	meq/L	94.9	101	89.7	91.0
Solids, Total Dissolved Calculated	mg/L	5900	5800	5950	6040
TDS Balance (0.80 - 1.20)		1.04	1.06	1.05	1.04
Trihalomethanes, Total	ug/L	3.48	4.40	2.01	2.88

****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: C12070713-006
Client Sample ID: 719

Report Date: 09/07/12
Collection Date: 07/17/12 09:45
DateReceived: 07/20/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	11	mg/L		5		A2320 B	07/20/12 18:59 / jba
Calcium	524	mg/L		1		E200.7	08/09/12 17:42 / sf
Chloride	32	mg/L	D	4		E300.0	07/24/12 14:11 / ljl
Magnesium	686	mg/L		1		E200.7	08/09/12 17:42 / sf
Nitrogen, Ammonia as N	0.78	mg/L		0.05		A4500-NH3 G	07/28/12 15:22 / ljl
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	07/27/12 14:13 / ljl
Potassium	16	mg/L		1		E200.7	08/13/12 16:23 / sf
Sodium	163	mg/L		1		E200.7	08/13/12 16:23 / sf
Sulfate	4070	mg/L	D	40		E300.0	07/25/12 18:33 / wc
PHYSICAL PROPERTIES							
pH	5.29	s.u.	H	0.01		A4500-H B	07/23/12 10:00 / ab
Solids, Total Dissolved TDS @ 180 C	6120	mg/L		10		A2540 C	07/23/12 09:27 / ab
METALS - TOTAL							
Aluminum	0.2	mg/L		0.1		E200.8	08/10/12 22:52 / cp
Beryllium	ND	mg/L		0.001		E200.8	08/10/12 22:52 / cp
Cadmium	ND	mg/L		0.005		E200.7	08/07/12 17:36 / sf
Cobalt	0.28	mg/L		0.01		E200.8	08/10/12 22:52 / cp
Lead	0.002	mg/L		0.001		E200.8	08/10/12 22:52 / cp
Manganese	5.63	mg/L		0.01		E200.7	08/07/12 17:36 / sf
Molybdenum	0.2	mg/L		0.1		E200.7	08/07/12 17:36 / sf
Nickel	0.33	mg/L		0.05		E200.7	08/07/12 17:36 / sf
Uranium	0.0034	mg/L		0.0003		E200.8	08/10/12 22:52 / cp
Vanadium	ND	mg/L		0.1		E200.8	08/10/12 22:52 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	08/01/12 21:41 / eli-h
Selenium-IV	0.001	mg/L		0.001		A3114 B	07/26/12 17:57 / rdw
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	5.7	pCi/L				E900.1	08/31/12 12:12 / lbb
Gross Alpha minus Rn & U Precision (±)	1.2	pCi/L				E900.1	08/31/12 12:12 / lbb
Gross Alpha minus Rn & U MDC	0.9	pCi/L				E900.1	08/31/12 12:12 / lbb
Lead 210	0.3	pCi/L	U			E909.0	08/14/12 13:43 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	08/14/12 13:43 / eli-cs
Lead 210 MDC	1.2	pCi/L				E909.0	08/14/12 13:43 / eli-cs
Radium 226	3.9	pCi/L				E903.0	08/06/12 16:42 / lbb
Radium 226 precision (±)	0.37	pCi/L				E903.0	08/06/12 16:42 / lbb
Radium 226 MDC	0.14	pCi/L				E903.0	08/06/12 16:42 / lbb
Radium 228	7.7	pCi/L				RA-05	07/31/12 19:38 / gb
Radium 228 precision (±)	0.97	pCi/L				RA-05	07/31/12 19:38 / gb
Radium 228 MDC	1.1	pCi/L				RA-05	07/31/12 19:38 / 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: C12070713-006
Client Sample ID: 719

Report Date: 09/07/12
Collection Date: 07/17/12 09:45
DateReceived: 07/20/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.3	pCi/L				E908.0	08/28/12 10:43 / dmf
Thorium 230 precision (±)	0.2	pCi/L				E908.0	08/28/12 10:43 / dmf
Thorium 230 MDC	0.3	pCi/L				E908.0	08/28/12 10:43 / dmf
DATA QUALITY							
A/C Balance (± 5)	2.47	%				A1030 E	08/15/12 07:02 / kbh
Anions	85.8	meq/L				A1030 E	08/15/12 07:02 / kbh
Cations	90.1	meq/L				A1030 E	08/15/12 07:02 / kbh
Solids, Total Dissolved Calculated	5500	mg/L				A1030 E	08/15/12 07:02 / kbh
TDS Balance (0.80 - 1.20)	1.11					A1030 E	08/15/12 07:02 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	07/25/12 06:11 / jk
Bromoform	ND	ug/L		0.50		E624	07/25/12 06:11 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	07/25/12 06:11 / jk
Chloroform	ND	ug/L		0.50		E624	07/25/12 06:11 / jk
Trihalomethanes, Total	ND	ug/L		0.50		E624	07/25/12 06:11 / jk
Surr: 1,2-Dichlorobenzene-d4	99.0	%REC		80-120		E624	07/25/12 06:11 / jk
Surr: Dibromofluoromethane	92.0	%REC		80-120		E624	07/25/12 06:11 / jk
Surr: p-Bromofluorobenzene	85.0	%REC		80-120		E624	07/25/12 06:11 / jk
Surr: Toluene-d8	96.0	%REC		80-120		E624	07/25/12 06:11 / 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.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C12100835-005
Client Sample ID: 719

Report Date: 11/20/12
Collection Date: 10/16/12 08:45
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	14	mg/L		5		A2320 B	10/19/12 19:32 / jba
Calcium	536	mg/L		1		E200.7	11/09/12 22:30 / sf
Chloride	30	mg/L	D	4		E300.0	10/20/12 00:12 / wc
Magnesium	674	mg/L		1		E200.7	11/09/12 22:30 / sf
Nitrogen, Ammonia as N	0.70	mg/L		0.05		A4500-NH3 G	10/26/12 16:28 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	10/22/12 14:06 / lr
Potassium	14	mg/L		1		E200.7	11/09/12 22:30 / sf
Sodium	149	mg/L	D	2		E200.7	11/09/12 22:30 / sf
Sulfate	4180	mg/L	D	40		E300.0	10/22/12 17:56 / wc
PHYSICAL PROPERTIES							
pH	5.18	s.u.	H	0.01		A4500-H B	10/19/12 15:25 / ab
Solids, Total Dissolved TDS @ 180 C	5900	mg/L		10		A2540 C	10/22/12 16:34 / jz
METALS - TOTAL							
Aluminum	0.1	mg/L		0.1		E200.8	10/26/12 21:05 / cp
Beryllium	ND	mg/L		0.001		E200.8	10/26/12 21:05 / cp
Cadmium	ND	mg/L		0.005		E200.8	10/26/12 21:05 / cp
Cobalt	0.31	mg/L		0.01		E200.8	10/26/12 21:05 / cp
Lead	ND	mg/L		0.001		E200.8	10/26/12 21:05 / cp
Manganese	6.04	mg/L		0.01		E200.8	10/26/12 21:05 / cp
Molybdenum	0.1	mg/L		0.1		E200.8	10/26/12 21:05 / cp
Nickel	0.39	mg/L		0.05		E200.8	10/26/12 21:05 / cp
Uranium	0.0029	mg/L		0.0003		E200.8	10/26/12 21:05 / cp
Vanadium	ND	mg/L		0.1		E200.8	10/26/12 21:05 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	11/05/12 13:47 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	11/07/12 13:57 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	4.5	pCi/L				E900.1	11/19/12 23:35 / lbb
Gross Alpha minus Rn & U Precision (±)	0.5	pCi/L				E900.1	11/19/12 23:35 / lbb
Gross Alpha minus Rn & U MDC	0.2	pCi/L				E900.1	11/19/12 23:35 / lbb
Lead 210	0.7	pCi/L	U			E909.0	11/18/12 01:57 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	11/18/12 01:57 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	11/18/12 01:57 / eli-cs
Radium 226	3.4	pCi/L				E903.0	11/05/12 13:13 / gb
Radium 226 precision (±)	0.38	pCi/L				E903.0	11/05/12 13:13 / gb
Radium 226 MDC	0.17	pCi/L				E903.0	11/05/12 13:13 / gb
Radium 228	15	pCi/L				RA-05	10/31/12 18:03 / gb
Radium 228 precision (±)	1.4	pCi/L				RA-05	10/31/12 18:03 / gb
Radium 228 MDC	1.3	pCi/L				RA-05	10/31/12 18:03 / 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: C12100835-005
Client Sample ID: 719

Report Date: 11/20/12
Collection Date: 10/16/12 08:45
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.3	pCi/L				E908.0	11/01/12 08:57 / dmf
Thorium 230 precision (±)	0.2	pCi/L				E908.0	11/01/12 08:57 / dmf
Thorium 230 MDC	0.3	pCi/L				E908.0	11/01/12 08:57 / dmf
DATA QUALITY							
A/C Balance (± 5)	0.570	%				A1030 E	11/12/12 14:46 / kbh
Anions	88.1	meq/L				A1030 E	11/12/12 14:46 / kbh
Cations	89.1	meq/L				A1030 E	11/12/12 14:46 / kbh
Solids, Total Dissolved Calculated	5600	mg/L				A1030 E	11/12/12 14:46 / kbh
TDS Balance (0.80 - 1.20)	1.05					A1030 E	11/12/12 14:46 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	10/25/12 15:08 / jk
Bromoform	ND	ug/L		0.50		E624	10/25/12 15:08 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	10/25/12 15:08 / jk
Chloroform	ND	ug/L		0.50		E624	10/25/12 15:08 / jk
Trihalomethanes, Total	ND	ug/L		0.50		E624	10/25/12 15:08 / jk
Surr: 1,2-Dichlorobenzene-d4	103	%REC		80-120		E624	10/25/12 15:08 / jk
Surr: Dibromofluoromethane	125	%REC	S	80-120		E624	10/25/12 15:08 / jk
Surr: p-Bromofluorobenzene	114	%REC		80-120		E624	10/25/12 15:08 / jk
Surr: Toluene-d8	107	%REC		80-120		E624	10/25/12 15:08 / 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.
S - Spike recovery outside of advisory limits.

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 3 Monitor Wells					
Well ID:		719	719	719	719
Collection Date:		10/16/2012	7/17/2012	4/10/2012	1/10/2012
Receive Date:		10/19/2012	7/20/2012	4/13/2012	1/13/2012
Report Date:		11/20/2012	9/7/2012	5/25/2012	3/5/2012
Analyte	RUnits	C12100835-005	C12070713-006	C12040738-006	C12010437-006
Bicarbonate as HCO3	mg/L	14	11	ND(5)	ND(5)
Calcium	mg/L	536	524	481	497
Chloride	mg/L	30	32	31	30
Magnesium	mg/L	674	686	664	588
Nitrogen, Ammonia as N	mg/L	0.70	0.78	0.81	0.76
Nitrogen, Nitrate+Nitrite as N	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Potassium	mg/L	14	16	13	13
Sodium	mg/L	149	163	138	135
Sulfate	mg/L	4180	4070	4010	3970
pH	s.u.	5.18	5.29	3.97	3.90
Solids, Total Dissolved TDS @ 180 C	mg/L	5900	6120	5990	5490
Aluminum	mg/L	0.1	0.2	0.3	0.3
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.01)	ND(0.01)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	0.31	0.28	0.25	0.38
Lead	mg/L	ND(0.001)	0.002	ND(0.05)	ND(0.05)
Manganese	mg/L	6.04	5.63	5.16	5.68
Molybdenum	mg/L	0.1	0.2	0.3	ND(0.1)
Nickel	mg/L	0.39	0.33	0.34	0.46
Uranium	mg/L	0.0029	0.0034	0.0048	0.0067
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(0.01)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	0.001	ND(0.001)	0.001
Gross Alpha minus Rn & U	pCi/L	4.5	5.7	4.1	5.0
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.5	1.2	0.7	0.8
Gross Alpha minus Rn & U MDC	pCi/L	0.2	0.9	0.5	0.4
Lead 210	pCi/L	0.7	0.3	0.9	0.01
Lead 210 precision (±)	pCi/L	0.7	0.7	0.8	0.5
Lead 210 MDC	pCi/L	1.0	1.2	1.3	0.9
Radium 226	pCi/L	3.4	3.9	4.3	3.3
Radium 226 precision (±)	pCi/L	0.38	0.37	0.44	0.24
Radium 226 MDC	pCi/L	0.17	0.14	0.18	0.11
Radium 228	pCi/L	15	7.7	9.7	11
Radium 228 precision (±)	pCi/L	1.4	0.97	1.0	1.1
Radium 228 MDC	pCi/L	1.3	1.1	1.1	1.1
Thorium 230	pCi/L	0.3	0.3	0.9	0.07
Thorium 230 precision (±)	pCi/L	0.2	0.2	0.4	0.1
Thorium 230 MDC	pCi/L	0.3	0.3	0.4	0.2
A/C Balance (± 5)	%	0.570	2.47	-0.260	-2.13
Anions	meq/L	88.1	85.8	86.0	83.6
Cations	meq/L	89.1	90.1	85.5	80.1
Solids, Total Dissolved Calculated	mg/L	5600	5500	5340	5250
TDS Balance (0.80 - 1.20)		1.05	1.11	1.11	1.05
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

JULY TO DECEMBER OF 2012

ZONE-3 & ZONE -1

PB-2

PB-3

PB-4

NBL-2

RW-A

NW-1

NW-2

NW-3

NW-4

NW-5

MW-6

MW-7

RW-11 (OCTOBER ONLY)

617 (OCTOBER ONLY-ZONE1)

619 (OCTOBER ONLY-ZONE1)

619 FILTERED (OCTOBER ONELY –ZONE1)

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C12070713-023
Client Sample ID: PB-2

Report Date: 09/07/12
Collection Date: 07/17/12 13:37
DateReceived: 07/20/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	75	mg/L		5		A2320 B	07/20/12 21:10 / jba
Chloride	32	mg/L	D	4		E300.0	07/24/12 03:26 / ljl
PHYSICAL PROPERTIES							
pH	5.91	s.u.	H	0.01		A4500-H B	07/23/12 12:11 / ab
Solids, Total Dissolved TDS @ 180 C	5260	mg/L		10		A2540 C	07/23/12 09:33 / 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: C12100835-014
Client Sample ID: PB-2

Report Date: 11/20/12
Collection Date: 10/16/12 14:25
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	57	mg/L		5		A2320 B	10/19/12 20:26 / jba
Calcium	555	mg/L		1		E200.7	11/09/12 23:30 / sf
Chloride	29	mg/L	D	4		E300.0	10/20/12 03:58 / wc
Magnesium	508	mg/L		1		E200.7	11/09/12 23:30 / sf
Nitrogen, Ammonia as N	0.67	mg/L		0.05		A4500-NH3 G	10/29/12 13:59 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L	D	0.2		E353.2	10/25/12 12:37 / ljl
Potassium	13	mg/L		1		E200.7	11/09/12 23:30 / sf
Sodium	150	mg/L	D	2		E200.7	11/09/12 23:30 / sf
Sulfate	3470	mg/L	D	20		E300.0	10/20/12 03:58 / wc
PHYSICAL PROPERTIES							
pH	5.76	s.u.	H	0.01		A4500-H B	10/19/12 16:00 / ab
Solids, Total Dissolved TDS @ 180 C	5140	mg/L		10		A2540 C	10/22/12 16:36 / jz
METALS - TOTAL							
Aluminum	0.4	mg/L		0.1		E200.8	11/07/12 12:17 / cp
Beryllium	ND	mg/L		0.001		E200.8	11/07/12 12:17 / cp
Cadmium	ND	mg/L		0.005		E200.8	11/07/12 12:17 / cp
Cobalt	0.49	mg/L		0.01		E200.8	11/07/12 12:17 / cp
Lead	ND	mg/L		0.001		E200.8	11/07/12 12:17 / cp
Manganese	6.21	mg/L		0.01		E200.8	11/07/12 12:17 / cp
Molybdenum	0.1	mg/L		0.1		E200.8	11/07/12 12:17 / cp
Nickel	0.62	mg/L		0.05		E200.8	11/07/12 12:17 / cp
Uranium	0.0212	mg/L		0.0003		E200.8	11/07/12 12:17 / cp
Vanadium	ND	mg/L		0.1		E200.8	11/07/12 12:17 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	11/05/12 15:41 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	11/07/12 11:23 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	14.2	pCi/L				E900.1	11/20/12 01:28 / lbb
Gross Alpha minus Rn & U Precision (±)	0.9	pCi/L				E900.1	11/20/12 01:28 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	11/20/12 01:28 / lbb
Lead 210	0.6	pCi/L	U			E909.0	11/18/12 10:43 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	11/18/12 10:43 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	11/18/12 10:43 / eli-cs
Radium 226	12	pCi/L				E903.0	11/05/12 15:07 / gb
Radium 226 precision (±)	0.63	pCi/L				E903.0	11/05/12 15:07 / gb
Radium 226 MDC	0.14	pCi/L				E903.0	11/05/12 15:07 / gb
Radium 228	20	pCi/L				RA-05	10/31/12 19:38 / gb
Radium 228 precision (±)	1.5	pCi/L				RA-05	10/31/12 19:38 / gb
Radium 228 MDC	1.3	pCi/L				RA-05	10/31/12 19:38 / 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: C12100835-014
Client Sample ID: PB-2

Report Date: 11/20/12
Collection Date: 10/16/12 14:25
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.3	pCi/L				E908.0	11/01/12 08:57 / dmf
Thorium 230 precision (±)	0.2	pCi/L				E908.0	11/01/12 08:57 / dmf
Thorium 230 MDC	0.3	pCi/L				E908.0	11/01/12 08:57 / dmf
DATA QUALITY							
A/C Balance (± 5)	1.59	%				A1030 E	11/12/12 14:47 / kbh
Anions	74.0	meq/L				A1030 E	11/12/12 14:47 / kbh
Cations	76.4	meq/L				A1030 E	11/12/12 14:47 / kbh
Solids, Total Dissolved Calculated	4800	mg/L				A1030 E	11/12/12 14:47 / kbh
TDS Balance (0.80 - 1.20)	1.08					A1030 E	11/12/12 14:47 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	10/27/12 00:28 / jk
Bromoform	ND	ug/L		0.50		E624	10/27/12 00:28 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	10/27/12 00:28 / jk
Chloroform	ND	ug/L		0.50		E624	10/27/12 00:28 / jk
Trihalomethanes, Total	ND	ug/L		0.50		E624	10/27/12 00:28 / jk
Surr: 1,2-Dichlorobenzene-d4	106	%REC		80-120		E624	10/27/12 00:28 / jk
Surr: Dibromofluoromethane	157	%REC	S	80-120		E624	10/27/12 00:28 / jk
Surr: p-Bromofluorobenzene	126	%REC	S	80-120		E624	10/27/12 00:28 / jk
Surr: Toluene-d8	110	%REC		80-120		E624	10/27/12 00:28 / 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.
S - Spike recovery outside of advisory limits.

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:		10/16/2012	7/17/2012	4/10/2012	1/11/2012
Receive Date:		10/19/2012	7/20/2012	4/13/2012	1/13/2012
Report Date:		11/20/2012	9/7/2012	5/24/2012	3/1/2012
Analyte	RUnits	C12100835-014	C12070713-023	C12040742-011	C12010443-005
Bicarbonate as HCO3	mg/L	57	75	76	55
Calcium	mg/L	555			
Chloride	mg/L	29	32	29	30
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.	5.76	5.91	5.93	5.95
Solids, Total Dissolved TDS @ 180 C	mg/L	5140	5260	5320	5280
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: C12070713-015
Client Sample ID: PB-3

Report Date: 09/07/12
Collection Date: 07/17/12 14:32
DateReceived: 07/20/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	202	mg/L		5		A2320 B	07/20/12 20:14 / jba
Chloride	28	mg/L	D	2		E300.0	07/24/12 00:32 / ljl
PHYSICAL PROPERTIES							
pH	7.11	s.u.	H	0.01		A4500-H B	07/23/12 10:36 / ab
Solids, Total Dissolved TDS @ 180 C	3930	mg/L		10		A2540 C	07/23/12 09:30 / 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: C12100835-011
Client Sample ID: PB-3

Report Date: 11/20/12
Collection Date: 10/16/12 14:01
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	217	mg/L		5		A2320 B	10/19/12 20:08 / jba
Calcium	596	mg/L		1		E200.7	11/09/12 23:18 / sf
Chloride	27	mg/L	D	2		E300.0	10/20/12 03:06 / wc
Magnesium	288	mg/L		1		E200.7	11/09/12 23:18 / sf
Nitrogen, Ammonia as N	0.9	mg/L	D	0.1		A4500-NH3 G	10/26/12 16:48 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	10/25/12 13:29 / ljl
Potassium	11	mg/L		1		E200.7	11/09/12 23:18 / sf
Sodium	135	mg/L		1		E200.7	11/09/12 23:18 / sf
Sulfate	2600	mg/L	D	20		E300.0	10/22/12 20:50 / wc
PHYSICAL PROPERTIES							
pH	6.89	s.u.	H	0.01		A4500-H B	10/19/12 15:52 / ab
Solids, Total Dissolved TDS @ 180 C	4020	mg/L		10		A2540 C	10/22/12 16:35 / jz
METALS - TOTAL							
Aluminum	0.2	mg/L		0.1		E200.8	11/07/12 12:09 / cp
Beryllium	ND	mg/L		0.001		E200.8	11/07/12 12:09 / cp
Cadmium	ND	mg/L		0.005		E200.8	11/07/12 12:09 / cp
Cobalt	0.12	mg/L		0.01		E200.8	11/07/12 12:09 / cp
Lead	ND	mg/L		0.001		E200.8	11/07/12 12:09 / cp
Manganese	4.19	mg/L		0.01		E200.8	11/07/12 12:09 / cp
Molybdenum	0.4	mg/L		0.1		E200.8	11/07/12 12:09 / cp
Nickel	0.17	mg/L		0.05		E200.8	11/07/12 12:09 / cp
Uranium	0.136	mg/L		0.0003		E200.8	11/07/12 12:09 / cp
Vanadium	ND	mg/L		0.1		E200.8	11/07/12 12:09 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	11/05/12 14:51 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	11/07/12 11:15 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	7.6	pCi/L				E900.1	11/19/12 23:35 / lbb
Gross Alpha minus Rn & U Precision (±)	0.7	pCi/L				E900.1	11/19/12 23:35 / lbb
Gross Alpha minus Rn & U MDC	0.2	pCi/L				E900.1	11/19/12 23:35 / lbb
Lead 210	0.6	pCi/L	U			E909.0	11/18/12 07:48 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	11/18/12 07:48 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	11/18/12 07:48 / eli-cs
Radium 226	7.1	pCi/L				E903.0	11/05/12 15:07 / gb
Radium 226 precision (±)	0.59	pCi/L				E903.0	11/05/12 15:07 / gb
Radium 226 MDC	0.21	pCi/L				E903.0	11/05/12 15:07 / gb
Radium 228	9.5	pCi/L				RA-05	10/31/12 19:38 / gb
Radium 228 precision (±)	1.6	pCi/L				RA-05	10/31/12 19:38 / gb
Radium 228 MDC	1.9	pCi/L				RA-05	10/31/12 19:38 / 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: C12100835-011
Client Sample ID: PB-3

Report Date: 11/20/12
Collection Date: 10/16/12 14:01
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.02	pCi/L	U			E908.0	11/01/12 13:58 / dmf
Thorium 230 precision (±)	0.1	pCi/L				E908.0	11/01/12 13:58 / dmf
Thorium 230 MDC	0.3	pCi/L				E908.0	11/01/12 13:58 / dmf
- See Case Narrative regarding Th230 analysis.							
DATA QUALITY							
A/C Balance (± 5)	1.06	%				A1030 E	11/12/12 14:47 / kbh
Anions	58.4	meq/L				A1030 E	11/12/12 14:47 / kbh
Cations	59.7	meq/L				A1030 E	11/12/12 14:47 / kbh
Solids, Total Dissolved Calculated	3800	mg/L				A1030 E	11/12/12 14:47 / kbh
TDS Balance (0.80 - 1.20)	1.06					A1030 E	11/12/12 14:47 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	10/25/12 18:39 / jk
Bromoform	ND	ug/L		0.50		E624	10/25/12 18:39 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	10/25/12 18:39 / jk
Chloroform	ND	ug/L		0.50		E624	10/25/12 18:39 / jk
Trihalomethanes, Total	ND	ug/L		0.50		E624	10/25/12 18:39 / jk
Surr: 1,2-Dichlorobenzene-d4	108	%REC		80-120		E624	10/25/12 18:39 / jk
Surr: Dibromofluoromethane	159	%REC	S	80-120		E624	10/25/12 18:39 / jk
Surr: p-Bromofluorobenzene	125	%REC	S	80-120		E624	10/25/12 18:39 / jk
Surr: Toluene-d8	110	%REC		80-120		E624	10/25/12 18:39 / 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
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:		PB-3	PB-3	PB-3	PB-3
Collection Date:		10/16/2012	7/17/2012	4/10/2012	1/10/2012
Receive Date:		10/19/2012	7/20/2012	4/13/2012	1/13/2012
Report Date:		11/20/2012	9/7/2012	5/24/2012	3/1/2012
Analyte	RUnits	C12100835-011	C12070713-015	C12040742-002	C12010443-002
Bicarbonate as HCO3	mg/L	217	202	229	211
Calcium	mg/L	596			
Chloride	mg/L	27	28	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.	6.89	7.11	6.64	7.61
Solids, Total Dissolved TDS @ 180 C	mg/L	4020	3930	3760	3640
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: C12070713-016
Client Sample ID: PB-4

Report Date: 09/07/12
Collection Date: 07/17/12 14:47
DateReceived: 07/20/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	07/20/12 20:17 / jba
Chloride	29	mg/L	D	4		E300.0	07/24/12 00:49 / ljl
PHYSICAL PROPERTIES							
pH	2.60	s.u.	H	0.01		A4500-H B	07/23/12 10:39 / ab
Solids, Total Dissolved TDS @ 180 C	6570	mg/L		10		A2540 C	07/23/12 09:31 / 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: C12100835-012
Client Sample ID: PB-4

Report Date: 11/20/12
Collection Date: 10/16/12 14:50
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	10/19/12 20:11 / jba
Calcium	504	mg/L		1		E200.7	11/09/12 23:22 / sf
Chloride	30	mg/L	D	4		E300.0	10/20/12 03:23 / wc
Magnesium	457	mg/L		1		E200.7	11/09/12 23:22 / sf
Nitrogen, Ammonia as N	0.27	mg/L		0.05		A4500-NH3 G	10/29/12 13:57 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L	D	2		E353.2	10/25/12 12:27 / ljl
Potassium	3	mg/L		1		E200.7	11/09/12 23:22 / sf
Sodium	140	mg/L	D	2		E200.7	11/09/12 23:22 / sf
Sulfate	6400	mg/L	D	80		E300.0	11/13/12 12:41 / wc
PHYSICAL PROPERTIES							
pH	2.50	s.u.	H	0.01		A4500-H B	10/19/12 15:55 / ab
Solids, Total Dissolved TDS @ 180 C	8300	mg/L		10		A2540 C	10/22/12 16:35 / jz
METALS - TOTAL							
Aluminum	132	mg/L		0.1		E200.7	11/07/12 22:56 / sf
Beryllium	0.033	mg/L		0.001		E200.8	11/07/12 12:12 / cp
Cadmium	ND	mg/L		0.005		E200.8	11/07/12 12:12 / cp
Cobalt	1.33	mg/L		0.01		E200.8	11/07/12 12:12 / cp
Lead	0.022	mg/L		0.001		E200.8	11/07/12 12:12 / cp
Manganese	9.80	mg/L		0.01		E200.8	11/07/12 12:12 / cp
Molybdenum	0.4	mg/L		0.1		E200.8	11/07/12 12:12 / cp
Nickel	2.00	mg/L		0.05		E200.7	11/07/12 22:56 / sf
Uranium	0.453	mg/L		0.0003		E200.8	11/07/12 12:12 / cp
Vanadium	ND	mg/L		0.1		E200.8	11/07/12 12:12 / cp
METALS - SPECIATED							
Arsenic-III	0.011	mg/L		0.001		E1632AM	11/05/12 15:25 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	11/07/12 11:19 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	3.3	pCi/L				E900.1	11/20/12 01:28 / lbb
Gross Alpha minus Rn & U Precision (±)	0.5	pCi/L				E900.1	11/20/12 01:28 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	11/20/12 01:28 / lbb
Lead 210	0.8	pCi/L	U			E909.0	11/18/12 08:46 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	11/18/12 08:46 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	11/18/12 08:46 / eli-cs
Radium 226	6.8	pCi/L				E903.0	11/05/12 15:07 / gb
Radium 226 precision (±)	0.49	pCi/L				E903.0	11/05/12 15:07 / gb
Radium 226 MDC	0.15	pCi/L				E903.0	11/05/12 15:07 / gb
Radium 228	-0.002	pCi/L	U			RA-05	10/31/12 19:38 / gb
Radium 228 precision (±)	0.83	pCi/L				RA-05	10/31/12 19:38 / gb
Radium 228 MDC	1.4	pCi/L				RA-05	10/31/12 19:38 / 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: C12100835-012
Client Sample ID: PB-4

Report Date: 11/20/12
Collection Date: 10/16/12 14:50
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	34.5	pCi/L				E908.0	11/06/12 14:37 / dmf
Thorium 230 precision (±)	8.4	pCi/L				E908.0	11/06/12 14:37 / dmf
Thorium 230 MDC	2.5	pCi/L				E908.0	11/06/12 14:37 / dmf
DATA QUALITY							
A/C Balance (± 5)	0.782	%				A1030 E	11/15/12 14:47 / sdw
Anions	134	meq/L				A1030 E	11/15/12 14:47 / sdw
Cations	136	meq/L				A1030 E	11/15/12 14:47 / sdw
Solids, Total Dissolved Calculated	7800	mg/L				A1030 E	11/15/12 14:47 / sdw
TDS Balance (0.80 - 1.20)	1.06					A1030 E	11/15/12 14:47 / sdw
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	10/26/12 23:18 / jk
Bromoform	ND	ug/L		0.50		E624	10/26/12 23:18 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	10/26/12 23:18 / jk
Chloroform	ND	ug/L		0.50		E624	10/26/12 23:18 / jk
Trihalomethanes, Total	ND	ug/L		0.50		E624	10/26/12 23:18 / jk
Surr: 1,2-Dichlorobenzene-d4	105	%REC		80-120		E624	10/26/12 23:18 / jk
Surr: Dibromofluoromethane	153	%REC	S	80-120		E624	10/26/12 23:18 / jk
Surr: p-Bromofluorobenzene	123	%REC	S	80-120		E624	10/26/12 23:18 / jk
Surr: Toluene-d8	110	%REC		80-120		E624	10/26/12 23:18 / jk

- 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:		PB-4	PB-4	PB-4	PB-4
Collection Date:		10/16/2012	7/17/2012	4/10/2012	10/11/2011
Receive Date:		10/19/2012	7/20/2012	4/13/2012	10/14/2011
Report Date:		11/20/2012	9/7/2012	5/24/2012	11/30/2011
Analyte	RUnits	C12100835-012	C12070713-016	C12040742-003	C11100573-015
Bicarbonate as HCO3	mg/L	ND(5)	ND(5)	ND(5)	ND(5)
Calcium	mg/L	504			507
Chloride	mg/L	30	29	30	31
Magnesium	mg/L	457			375
Nitrogen, Ammonia as N	mg/L	0.27			0.6
Nitrogen, Nitrate+Nitrite as N	mg/L	ND(2)			ND(0.5)
Potassium	mg/L	3			12
Sodium	mg/L	140			141
Sulfate	mg/L	6400			5440
pH	s.u.	2.50	2.60	2.64	2.79
Solids, Total Dissolved TDS @ 180 C	mg/L	8300	6570	6020	6630
Aluminum	mg/L	132			29.2
Beryllium	mg/L	0.033			ND(0.01)
Cadmium	mg/L	ND(0.005)			ND(0.005)
Cobalt	mg/L	1.33			0.65
Lead	mg/L	0.022			0.63
Manganese	mg/L	9.80			6.06
Molybdenum	mg/L	0.4			0.5
Nickel	mg/L	2.00			0.91
Uranium	mg/L	0.453			0.239
Vanadium	mg/L	ND(0.1)			ND(0.1)
Arsenic-III	mg/L	0.011			0.007
Selenium-IV	mg/L	ND(0.001)			0.002
Gross Alpha minus Rn & U	pCi/L	3.3			31.3
Gross Alpha minus Rn & U MDC	pCi/L	0.3			0.4
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.5			1.7
Lead 210	pCi/L	0.8			12.7
Lead 210 MDC	pCi/L	1.0			1.2
Lead 210 precision (±)	pCi/L	0.6			0.9
Radium 226	pCi/L	6.8			13
Radium 226 MDC	pCi/L	0.15			0.14
Radium 226 precision (±)	pCi/L	0.49			0.67
Radium 228	pCi/L	-0.002			9.5
Radium 228 MDC	pCi/L	1.4			1.3
Radium 228 precision (±)	pCi/L	0.83			1.1
Thorium 230	pCi/L	34.5			25.7
Thorium 230 MDC	pCi/L	2.5			0.5
Thorium 230 precision (±)	pCi/L	8.4			4.7
A/C Balance (± 5)	%	0.782			-8.98
Anions	meq/L	134			114
Cations	meq/L	136			95.4
Solids, Total Dissolved Calculated	mg/L	7800			6590
TDS Balance (0.80 - 1.20)		1.06			1.01
Trihalomethanes, Total	ug/L	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: C12070713-014
Client Sample ID: NBL-2

Report Date: 09/07/12
Collection Date: 07/17/12 11:47
DateReceived: 07/20/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	389	mg/L		5		A2320 B	07/20/12 19:59 / jba
Chloride	50	mg/L	D	2		E300.0	07/24/12 00:14 / ljl
PHYSICAL PROPERTIES							
pH	6.90	s.u.	H	0.01		A4500-H B	07/23/12 10:33 / ab
Solids, Total Dissolved TDS @ 180 C	3610	mg/L		10		A2540 C	07/23/12 09:29 / 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: C12100835-009
Client Sample ID: NBL-2

Report Date: 11/20/12
Collection Date: 10/16/12 11:32
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	399	mg/L		5		A2320 B	10/19/12 19:57 / jba
Calcium	654	mg/L		1		E200.7	11/09/12 22:50 / sf
Chloride	51	mg/L	D	2		E300.0	10/20/12 02:31 / wc
Magnesium	190	mg/L		1		E200.7	11/09/12 22:50 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	10/26/12 17:34 / lr
Nitrogen, Nitrate+Nitrite as N	9	mg/L	D	1		E353.2	10/22/12 14:29 / lr
Potassium	8	mg/L		1		E200.7	11/09/12 22:50 / sf
Sodium	157	mg/L		1		E200.7	11/09/12 22:50 / sf
Sulfate	2170	mg/L	D	40		E300.0	10/22/12 20:16 / wc
PHYSICAL PROPERTIES							
pH	6.71	s.u.	H	0.01		A4500-H B	10/19/12 15:47 / ab
Solids, Total Dissolved TDS @ 180 C	3580	mg/L		10		A2540 C	10/22/12 16:35 / jz
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	11/07/12 22:44 / sf
Beryllium	ND	mg/L		0.001		E200.7	11/07/12 22:44 / sf
Cadmium	ND	mg/L		0.005		E200.7	11/07/12 22:44 / sf
Cobalt	0.03	mg/L		0.01		E200.7	11/07/12 22:44 / sf
Lead	ND	mg/L		0.001		E200.8	11/12/12 22:51 / cp
Manganese	1.66	mg/L		0.01		E200.7	11/07/12 22:44 / sf
Molybdenum	0.2	mg/L		0.1		E200.7	11/07/12 22:44 / sf
Nickel	ND	mg/L		0.05		E200.7	11/07/12 22:44 / sf
Uranium	0.195	mg/L		0.0003		E200.8	11/12/12 22:51 / cp
Vanadium	ND	mg/L		0.1		E200.7	11/07/12 22:44 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	11/05/12 14:35 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	11/07/12 11:07 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	5.7	pCi/L				E900.1	11/19/12 23:35 / lbb
Gross Alpha minus Rn & U Precision (±)	0.6	pCi/L				E900.1	11/19/12 23:35 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	11/19/12 23:35 / lbb
Lead 210	0.3	pCi/L	U			E909.0	11/18/12 05:51 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	11/18/12 05:51 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	11/18/12 05:51 / eli-cs
Radium 226	6.2	pCi/L				E903.0	11/05/12 15:07 / gb
Radium 226 precision (±)	0.66	pCi/L				E903.0	11/05/12 15:07 / gb
Radium 226 MDC	0.29	pCi/L				E903.0	11/05/12 15:07 / gb
Radium 228	12	pCi/L				RA-05	10/31/12 19:38 / gb
Radium 228 precision (±)	2.1	pCi/L				RA-05	10/31/12 19:38 / gb
Radium 228 MDC	2.7	pCi/L				RA-05	10/31/12 19:38 / 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: C12100835-009
Client Sample ID: NBL-2

Report Date: 11/20/12
Collection Date: 10/16/12 11:32
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.0008	pCi/L	U			E908.0	11/01/12 13:58 / dmf
Thorium 230 precision (±)	0.08	pCi/L				E908.0	11/01/12 13:58 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	11/01/12 13:58 / dmf
DATA QUALITY							
A/C Balance (± 5)	1.28	%				A1030 E	11/12/12 14:47 / kbh
Anions	53.9	meq/L				A1030 E	11/12/12 14:47 / kbh
Cations	55.3	meq/L				A1030 E	11/12/12 14:47 / kbh
Solids, Total Dissolved Calculated	3500	mg/L				A1030 E	11/12/12 14:47 / kbh
TDS Balance (0.80 - 1.20)	1.03					A1030 E	11/12/12 14:47 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	10/25/12 17:28 / jk
Bromoform	ND	ug/L		0.50		E624	10/25/12 17:28 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	10/25/12 17:28 / jk
Chloroform	ND	ug/L		0.50		E624	10/25/12 17:28 / jk
Trihalomethanes, Total	ND	ug/L		0.50		E624	10/25/12 17:28 / jk
Surr: 1,2-Dichlorobenzene-d4	107	%REC		80-120		E624	10/25/12 17:28 / jk
Surr: Dibromofluoromethane	158	%REC	S	80-120		E624	10/25/12 17:28 / jk
Surr: p-Bromofluorobenzene	124	%REC	S	80-120		E624	10/25/12 17:28 / jk
Surr: Toluene-d8	110	%REC		80-120		E624	10/25/12 17:28 / 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
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:		NBL-2	NBL-2	NBL-2	NBL-2
Collection Date:		10/16/2012	7/17/2012	4/10/2012	1/10/2012
Receive Date:		10/19/2012	7/20/2012	4/13/2012	1/13/2012
Report Date:		11/20/2012	9/7/2012	5/24/2012	3/1/2012
Analyte	RUnits	C12100835-009	C12070713-014	C12040742-001	C12010443-001
Bicarbonate as HCO3	mg/L	399	389	381	391
Calcium	mg/L	654			
Chloride	mg/L	51	50	49	52
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.	6.71	6.90	6.71	7.44
Solids, Total Dissolved TDS @ 180 C	mg/L	3580	3610	3610	3580
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: C12070713-020
Client Sample ID: RW-A

Report Date: 09/07/12
Collection Date: 07/17/12 13:50
DateReceived: 07/20/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	227	mg/L		5		A2320 B	07/20/12 20:48 / jba
Chloride	39	mg/L	D	4		E300.0	07/24/12 01:59 / ljl
PHYSICAL PROPERTIES							
pH	6.45	s.u.	H	0.01		A4500-H B	07/23/12 10:49 / ab
Solids, Total Dissolved TDS @ 180 C	4300	mg/L		10		A2540 C	07/23/12 09:32 / 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: C12100835-015
Client Sample ID: RW-A

Report Date: 11/20/12
Collection Date: 10/16/12 14:45
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	227	mg/L		5		A2320 B	10/19/12 20:34 / jba
Calcium	595	mg/L		1		E200.7	11/09/12 23:39 / sf
Chloride	36	mg/L	D	4		E300.0	10/20/12 04:15 / wc
Magnesium	346	mg/L		1		E200.7	11/09/12 23:39 / sf
Nitrogen, Ammonia as N	2.5	mg/L	D	0.1		A4500-NH3 G	10/26/12 16:56 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	10/25/12 12:42 / ljl
Potassium	11	mg/L		1		E200.7	11/09/12 23:39 / sf
Sodium	149	mg/L		1		E200.7	11/09/12 23:39 / sf
Sulfate	2780	mg/L	D	20		E300.0	10/20/12 04:15 / wc
PHYSICAL PROPERTIES							
pH	6.43	s.u.	H	0.01		A4500-H B	10/19/12 16:03 / ab
Solids, Total Dissolved TDS @ 180 C	4460	mg/L		10		A2540 C	10/22/12 16:36 / jz
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	11/07/12 12:20 / cp
Beryllium	ND	mg/L		0.001		E200.8	11/07/12 12:20 / cp
Cadmium	ND	mg/L		0.005		E200.8	11/07/12 12:20 / cp
Cobalt	0.27	mg/L		0.01		E200.8	11/07/12 12:20 / cp
Lead	ND	mg/L		0.001		E200.8	11/07/12 12:20 / cp
Manganese	4.91	mg/L		0.01		E200.8	11/07/12 12:20 / cp
Molybdenum	0.1	mg/L		0.1		E200.8	11/07/12 12:20 / cp
Nickel	0.31	mg/L		0.05		E200.8	11/07/12 12:20 / cp
Uranium	0.0936	mg/L		0.0003		E200.8	11/07/12 12:20 / cp
Vanadium	ND	mg/L		0.1		E200.8	11/07/12 12:20 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	11/05/12 15:49 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	11/07/12 13:31 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	10.7	pCi/L				E900.1	11/20/12 01:28 / lbb
Gross Alpha minus Rn & U Precision (±)	0.8	pCi/L				E900.1	11/20/12 01:28 / lbb
Gross Alpha minus Rn & U MDC	0.2	pCi/L				E900.1	11/20/12 01:28 / lbb
Lead 210	0.6	pCi/L	U			E909.0	11/18/12 11:41 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	11/18/12 11:41 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	11/18/12 11:41 / eli-cs
Radium 226	12	pCi/L				E903.0	11/05/12 15:07 / gb
Radium 226 precision (±)	0.76	pCi/L				E903.0	11/05/12 15:07 / gb
Radium 226 MDC	0.20	pCi/L				E903.0	11/05/12 15:07 / gb
Radium 228	21	pCi/L				RA-05	10/31/12 19:38 / gb
Radium 228 precision (±)	2.0	pCi/L				RA-05	10/31/12 19:38 / gb
Radium 228 MDC	1.9	pCi/L				RA-05	10/31/12 19:38 / 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: C12100835-015
Client Sample ID: RW-A

Report Date: 11/20/12
Collection Date: 10/16/12 14:45
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.01	pCi/L	U			E908.0	11/01/12 13:58 / dmf
Thorium 230 precision (±)	0.1	pCi/L				E908.0	11/01/12 13:58 / dmf
Thorium 230 MDC	0.4	pCi/L				E908.0	11/01/12 13:58 / dmf
- See Case Narrative regarding Th230 analysis.							
DATA QUALITY							
A/C Balance (± 5)	1.99	%				A1030 E	11/12/12 14:47 / kbh
Anions	62.5	meq/L				A1030 E	11/12/12 14:47 / kbh
Cations	65.1	meq/L				A1030 E	11/12/12 14:47 / kbh
Solids, Total Dissolved Calculated	4000	mg/L				A1030 E	11/12/12 14:47 / kbh
TDS Balance (0.80 - 1.20)	1.10					A1030 E	11/12/12 14:47 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	10/27/12 01:03 / jk
Bromoform	ND	ug/L		0.50		E624	10/27/12 01:03 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	10/27/12 01:03 / jk
Chloroform	ND	ug/L		0.50		E624	10/27/12 01:03 / jk
Trihalomethanes, Total	ND	ug/L		0.50		E624	10/27/12 01:03 / jk
Surr: 1,2-Dichlorobenzene-d4	106	%REC		80-120		E624	10/27/12 01:03 / jk
Surr: Dibromofluoromethane	153	%REC	S	80-120		E624	10/27/12 01:03 / jk
Surr: p-Bromofluorobenzene	126	%REC	S	80-120		E624	10/27/12 01:03 / jk
Surr: Toluene-d8	110	%REC		80-120		E624	10/27/12 01:03 / 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
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:		RW-A	RW-A	RW-A	RW-A
Collection Date:		10/16/2012	7/17/2012	4/10/2012	1/11/2012
Receive Date:		10/19/2012	7/20/2012	4/13/2012	1/13/2012
Report Date:		11/20/2012	9/7/2012	5/24/2012	3/1/2012
Analyte	RUnits	C12100835-015	C12070713-020	C12040742-012	C12010443-011
Bicarbonate as HCO3	mg/L	227	227	229	221
Calcium	mg/L	595			
Chloride	mg/L	36	39	36	36
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.	6.43	6.45	6.42	6.94
Solids, Total Dissolved TDS @ 180 C	mg/L	4460	4300	4320	4200
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: C12070713-021
Client Sample ID: NW-1

Report Date: 09/07/12
Collection Date: 07/17/12 12:36
DateReceived: 07/20/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	175	mg/L		5		A2320 B	07/20/12 20:56 / jba
Chloride	27	mg/L	D	4		E300.0	07/24/12 02:16 / ljl
PHYSICAL PROPERTIES							
pH	6.77	s.u.	H	0.01		A4500-H B	07/23/12 10:52 / ab
Solids, Total Dissolved TDS @ 180 C	4560	mg/L		10		A2540 C	07/23/12 09:32 / 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: C12100871-001
Client Sample ID: NW-1

Report Date: 11/19/12
Collection Date: 10/16/12 13:15
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	242	mg/L		5		A2320 B	10/22/12 21:39 / jba
Chloride	26	mg/L	D	2		E300.0	10/23/12 10:18 / wc
PHYSICAL PROPERTIES							
pH	7.20	s.u.	H	0.01		A4500-H B	10/22/12 12:52 / ab
Solids, Total Dissolved TDS @ 180 C	4190	mg/L		10		A2540 C	10/22/12 16:42 / 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:		NW-1	NW-1	NW-1	NW-1
Collection Date:		10/16/2012	7/17/2012	4/10/2012	1/11/2012
Receive Date:		10/19/2012	7/20/2012	4/13/2012	1/13/2012
Report Date:		11/19/2012	9/7/2012	5/24/2012	3/1/2012
Analyte	RUnits	G12100871-001	G12070713-021	G12040742-006	G12010443-007
Bicarbonate as HCO3	mg/L	242	175	125	124
Chloride	mg/L	26	27	25	24
pH	s.u.	7.20	6.77	6.73	7.29
Solids, Total Dissolved TDS @ 180 C	mg/L	4190	4560	4680	4600

**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: C12070713-018
Client Sample ID: NW-2

Report Date: 09/07/12
Collection Date: 07/17/12 12:56
DateReceived: 07/20/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	220	mg/L		5		A2320 B	07/20/12 20:32 / jba
Chloride	39	mg/L	D	2		E300.0	07/24/12 01:24 / ljl
PHYSICAL PROPERTIES							
pH	6.50	s.u.	H	0.01		A4500-H B	07/23/12 10:44 / ab
Solids, Total Dissolved TDS @ 180 C	4040	mg/L		10		A2540 C	07/23/12 09:31 / 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: C12100871-003
Client Sample ID: NW-2

Report Date: 11/19/12
Collection Date: 10/16/12 13:40
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	243	mg/L		5		A2320 B	10/22/12 21:54 / jba
Chloride	41	mg/L	D	2		E300.0	10/23/12 10:49 / wc
PHYSICAL PROPERTIES							
pH	6.25	s.u.	H	0.01		A4500-H B	10/22/12 12:57 / ab
Solids, Total Dissolved TDS @ 180 C	4100	mg/L		10		A2540 C	10/22/12 16:42 / 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:		NW-2	NW-2	NW-2	NW-2
Collection Date:		10/16/2012	7/17/2012	4/10/2012	1/11/2012
Receive Date:		10/19/2012	7/20/2012	4/13/2012	1/13/2012
Report Date:		11/19/2012	9/7/2012	5/24/2012	3/1/2012
Analyte	RUnits	C12100871-003	C12070713-018	C12040742-008	C12010443-008
Bicarbonate as HCO3	mg/L	243	220	331	323
Chloride	mg/L	41	39	40	40
pH	s.u.	6.25	6.50	6.52	7.31
Solids, Total Dissolved TDS @ 180 C	mg/L	4100	4040	4000	3900

**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: C12070713-022
Client Sample ID: NW-3

Report Date: 09/07/12
Collection Date: 07/17/12 13:25
DateReceived: 07/20/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	361	mg/L		5		A2320 B	07/20/12 21:04 / jba
Chloride	41	mg/L	D	2		E300.0	07/24/12 02:34 / ljl
PHYSICAL PROPERTIES							
pH	6.79	s.u.	H	0.01		A4500-H B	07/23/12 12:07 / ab
Solids, Total Dissolved TDS @ 180 C	3760	mg/L		10		A2540 C	07/23/12 09:32 / 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: C12100871-005
Client Sample ID: NW-3

Report Date: 11/19/12
Collection Date: 10/16/12 14:05
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	402	mg/L		5		A2320 B	10/22/12 22:10 / jba
Chloride	41	mg/L	D	2		E300.0	10/23/12 11:50 / wc
PHYSICAL PROPERTIES							
pH	6.74	s.u.	H	0.01		A4500-H B	10/22/12 13:14 / ab
Solids, Total Dissolved TDS @ 180 C	3960	mg/L		10		A2540 C	10/22/12 16:42 / 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:		NW-3	NW-3	NW-3	NW-3
Collection Date:		10/16/2012	7/17/2012	4/10/2012	1/11/2012
Receive Date:		10/19/2012	7/20/2012	4/13/2012	1/13/2012
Report Date:		11/19/2012	9/7/2012	5/24/2012	3/1/2012
Analyte	RUnits	C12100871-005	C12070713-022	C12040742-010	C12010443-010
Bicarbonate as HCO3	mg/L	402	361	390	379
Chloride	mg/L	41	41	40	42
pH	s.u.	6.74	6.79	6.82	7.60
Solids, Total Dissolved TDS @ 180 C	mg/L	3960	3760	3880	3860

**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: C12070713-017
Client Sample ID: NW-4

Report Date: 09/07/12
Collection Date: 07/17/12 12:47
DateReceived: 07/20/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	101	mg/L		5		A2320 B	07/20/12 20:24 / jba
Chloride	29	mg/L	D	4		E300.0	07/24/12 01:06 / ljl
PHYSICAL PROPERTIES							
pH	6.17	s.u.	H	0.01		A4500-H B	07/23/12 10:41 / ab
Solids, Total Dissolved TDS @ 180 C	4900	mg/L		10		A2540 C	07/23/12 09:31 / 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: C12100871-002
Client Sample ID: NW-4

Report Date: 11/19/12
Collection Date: 10/16/12 13:30
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	112	mg/L		5		A2320 B	10/22/12 21:46 / jba
Chloride	30	mg/L	D	4		E300.0	10/23/12 10:33 / wc
PHYSICAL PROPERTIES							
pH	6.12	s.u.	H	0.01		A4500-H B	10/22/12 12:54 / ab
Solids, Total Dissolved TDS @ 180 C	4830	mg/L		10		A2540 C	10/22/12 16:42 / 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:		NW-4	NW-4	NW-4	NW-4
Collection Date:		10/16/2012	7/17/2012	4/10/2012	1/11/2012
Receive Date:		10/19/2012	7/20/2012	4/13/2012	1/13/2012
Report Date:		11/19/2012	9/7/2012	5/24/2012	3/1/2012
Analyte	RUnits	C12100871-002	C12070713-017	C12040742-007	C12010443-006
Bicarbonate as HCO3	mg/L	112	101	146	137
Chloride	mg/L	30	29	28	28
pH	s.u.	6.12	6.17	6.27	6.73
Solids, Total Dissolved TDS @ 180 C	mg/L	4830	4900	4860	4730

**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: C12070713-019
Client Sample ID: NW-5

Report Date: 09/07/12
Collection Date: 07/17/12 13:13
DateReceived: 07/20/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	422	mg/L		5		A2320 B	07/20/12 20:40 / jba
Chloride	45	mg/L	D	2		E300.0	07/24/12 01:41 / ljl
PHYSICAL PROPERTIES							
pH	7.02	s.u.	H	0.01		A4500-H B	07/23/12 10:47 / ab
Solids, Total Dissolved TDS @ 180 C	4050	mg/L		10		A2540 C	07/23/12 09:32 / 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: C12100871-004
Client Sample ID: NW-5

Report Date: 11/19/12
Collection Date: 10/16/12 13:55
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	415	mg/L		5		A2320 B	10/22/12 22:02 / jba
Chloride	43	mg/L	D	2		E300.0	10/23/12 11:04 / wc
PHYSICAL PROPERTIES							
pH	6.98	s.u.	H	0.01		A4500-H B	10/22/12 13:00 / ab
Solids, Total Dissolved TDS @ 180 C	4060	mg/L		10		A2540 C	10/22/12 16:42 / 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:		NW-5	NW-5	NW-5	NW-5
Collection Date:		10/16/2012	7/17/2012	4/10/2012	1/11/2012
Receive Date:		10/19/2012	7/20/2012	4/13/2012	1/13/2012
Report Date:		11/19/2012	9/7/2012	5/24/2012	3/1/2012
Analyte	RUnits	C12100871-004	C12070713-019	C12040742-009	C12010443-009
Bicarbonate as HCO3	mg/L	415	422	511	475
Chloride	mg/L	43	45	49	47
pH	s.u.	6.98	7.02	7.08	7.61
Solids, Total Dissolved TDS @ 180 C	mg/L	4060	4050	3830	3380

**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: C12070713-012
Client Sample ID: MW-6

Report Date: 09/07/12
Collection Date: 07/17/12 15:10
DateReceived: 07/20/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	454	mg/L		5		A2320 B	07/20/12 19:42 / jba
Calcium	378	mg/L		1		E200.7	08/06/12 16:27 / sf
Chloride	122	mg/L	D	4		E300.0	07/24/12 16:31 / ljl
Magnesium	274	mg/L		1		E200.7	08/06/12 16:27 / sf
Nitrogen, Ammonia as N	0.72	mg/L		0.05		A4500-NH3 G	07/28/12 15:42 / ljl
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	07/27/12 15:33 / ljl
Potassium	11	mg/L		1		E200.7	08/06/12 16:27 / sf
Sodium	338	mg/L		1		E200.7	08/06/12 16:27 / sf
Sulfate	2290	mg/L	D	40		E300.0	07/25/12 19:43 / wc
PHYSICAL PROPERTIES							
pH	6.77	s.u.	H	0.01		A4500-H B	07/23/12 10:28 / ab
Solids, Total Dissolved TDS @ 180 C	3880	mg/L		10		A2540 C	07/23/12 09:29 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	08/10/12 17:44 / cp
Beryllium	ND	mg/L		0.001		E200.8	08/18/12 09:29 / cp
Cadmium	0.009	mg/L		0.005		E200.8	08/10/12 17:44 / cp
Cobalt	0.06	mg/L		0.01		E200.8	08/10/12 17:44 / cp
Lead	ND	mg/L		0.001		E200.8	08/10/12 17:44 / cp
Manganese	2.86	mg/L		0.01		E200.8	08/10/12 17:44 / cp
Molybdenum	11.8	mg/L		0.1		E200.8	08/10/12 17:44 / cp
Nickel	0.08	mg/L		0.05		E200.8	08/10/12 17:44 / cp
Uranium	0.321	mg/L		0.0003		E200.8	08/10/12 17:44 / cp
Vanadium	ND	mg/L		0.1		E200.8	08/10/12 17:44 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	08/02/12 16:49 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	07/26/12 18:20 / rdw
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	2.4	pCi/L				E900.1	08/01/12 22:28 / lbb
Gross Alpha minus Rn & U Precision (±)	0.5	pCi/L				E900.1	08/01/12 22:28 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	08/01/12 22:28 / lbb
Lead 210	0.3	pCi/L	U			E909.0	08/17/12 17:31 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	08/17/12 17:31 / eli-cs
Lead 210 MDC	1.2	pCi/L				E909.0	08/17/12 17:31 / eli-cs
Radium 226	2.5	pCi/L				E903.0	08/06/12 21:20 / lbb
Radium 226 precision (±)	0.29	pCi/L				E903.0	08/06/12 21:20 / lbb
Radium 226 MDC	0.13	pCi/L				E903.0	08/06/12 21:20 / lbb
Radium 228	3.4	pCi/L				RA-05	07/31/12 21:12 / gb
Radium 228 precision (±)	0.91	pCi/L				RA-05	07/31/12 21:12 / gb
Radium 228 MDC	1.2	pCi/L				RA-05	07/31/12 21:12 / 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: C12070713-012
Client Sample ID: MW-6

Report Date: 09/07/12
Collection Date: 07/17/12 15:10
DateReceived: 07/20/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.005	pCi/L	U			E908.0	08/09/12 08:48 / dmf
Thorium 230 precision (±)	0.07	pCi/L				E908.0	08/09/12 08:48 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	08/09/12 08:48 / dmf
DATA QUALITY							
A/C Balance (± 5)	-1.84	%				A1030 E	08/10/12 07:52 / kbh
Anions	58.6	meq/L				A1030 E	08/10/12 07:52 / kbh
Cations	56.4	meq/L				A1030 E	08/10/12 07:52 / kbh
Solids, Total Dissolved Calculated	3700	mg/L				A1030 E	08/10/12 07:52 / kbh
TDS Balance (0.80 - 1.20)	1.06					A1030 E	08/10/12 07:52 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	07/26/12 00:18 / jk
Bromoform	ND	ug/L		0.50		E624	07/26/12 00:18 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	07/26/12 00:18 / jk
Chloroform	ND	ug/L		0.50		E624	07/26/12 00:18 / jk
Trihalomethanes, Total	ND	ug/L		0.50		E624	07/26/12 00:18 / jk
Surr: 1,2-Dichlorobenzene-d4	98.0	%REC		80-120		E624	07/26/12 00:18 / jk
Surr: Dibromofluoromethane	96.0	%REC		80-120		E624	07/26/12 00:18 / jk
Surr: p-Bromofluorobenzene	84.0	%REC		80-120		E624	07/26/12 00:18 / jk
Surr: Toluene-d8	97.0	%REC		80-120		E624	07/26/12 00:18 / 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-3
Lab ID: C12100835-022
Client Sample ID: MW-6

Report Date: 11/20/12
Collection Date: 10/17/12 09:30
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	281	mg/L		5		A2320 B	10/19/12 22:00 / jba
Calcium	508	mg/L		1		E200.7	11/10/12 00:27 / sf
Chloride	38	mg/L	D	4		E300.0	10/20/12 07:44 / wc
Magnesium	383	mg/L		1		E200.7	11/10/12 00:27 / sf
Nitrogen, Ammonia as N	0.42	mg/L		0.05		A4500-NH3 G	10/26/12 17:20 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	10/25/12 13:24 / ljl
Potassium	10	mg/L		1		E200.7	11/10/12 00:27 / sf
Sodium	213	mg/L	D	2		E200.7	11/10/12 00:27 / sf
Sulfate	2840	mg/L	D	20		E300.0	10/20/12 07:44 / wc
PHYSICAL PROPERTIES							
pH	6.61	s.u.	H	0.01		A4500-H B	10/19/12 16:24 / ab
Solids, Total Dissolved TDS @ 180 C	4680	mg/L		10		A2540 C	10/22/12 16:38 / jz
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	11/07/12 12:49 / cp
Beryllium	ND	mg/L		0.001		E200.8	11/07/12 12:49 / cp
Cadmium	ND	mg/L		0.005		E200.8	11/07/12 12:49 / cp
Cobalt	0.11	mg/L		0.01		E200.8	11/07/12 12:49 / cp
Lead	ND	mg/L		0.001		E200.8	11/07/12 12:49 / cp
Manganese	3.83	mg/L		0.01		E200.8	11/07/12 12:49 / cp
Molybdenum	4.6	mg/L		0.1		E200.8	11/07/12 12:49 / cp
Nickel	0.15	mg/L		0.05		E200.8	11/07/12 12:49 / cp
Uranium	0.129	mg/L		0.0003		E200.8	11/07/12 12:49 / cp
Vanadium	ND	mg/L		0.1		E200.8	11/07/12 12:49 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	11/06/12 11:10 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	11/07/12 13:54 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	3.5	pCi/L				E900.1	11/20/12 01:28 / lbb
Gross Alpha minus Rn & U Precision (±)	0.5	pCi/L				E900.1	11/20/12 01:28 / lbb
Gross Alpha minus Rn & U MDC	0.2	pCi/L				E900.1	11/20/12 01:28 / lbb
Lead 210	-0.04	pCi/L	U			E909.0	11/19/12 03:30 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	11/19/12 03:30 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	11/19/12 03:30 / eli-cs
Radium 226	2.6	pCi/L				E903.0	11/07/12 23:27 / gb
Radium 226 precision (±)	0.21	pCi/L				E903.0	11/07/12 23:27 / gb
Radium 226 MDC	0.10	pCi/L				E903.0	11/07/12 23:27 / gb
Radium 228	5.7	pCi/L				RA-05	10/31/12 21:12 / gb
Radium 228 precision (±)	1.0	pCi/L				RA-05	10/31/12 21:12 / gb
Radium 228 MDC	1.3	pCi/L				RA-05	10/31/12 21:12 / 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: C12100835-022
Client Sample ID: MW-6

Report Date: 11/20/12
Collection Date: 10/17/12 09:30
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.07	pCi/L	U			E908.0	11/01/12 13:58 / dmf
Thorium 230 precision (±)	0.09	pCi/L				E908.0	11/01/12 13:58 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	11/01/12 13:58 / dmf
DATA QUALITY							
A/C Balance (± 5)	1.25	%				A1030 E	11/12/12 14:48 / kbh
Anions	64.8	meq/L				A1030 E	11/12/12 14:48 / kbh
Cations	66.4	meq/L				A1030 E	11/12/12 14:48 / kbh
Solids, Total Dissolved Calculated	4200	mg/L				A1030 E	11/12/12 14:48 / kbh
TDS Balance (0.80 - 1.20)	1.13					A1030 E	11/12/12 14:48 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	10/27/12 05:10 / jk
Bromoform	ND	ug/L		0.50		E624	10/27/12 05:10 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	10/27/12 05:10 / jk
Chloroform	ND	ug/L		0.50		E624	10/27/12 05:10 / jk
Trihalomethanes, Total	ND	ug/L		0.50		E624	10/27/12 05:10 / jk
Surr: 1,2-Dichlorobenzene-d4	104	%REC		80-120		E624	10/27/12 05:10 / jk
Surr: Dibromofluoromethane	158	%REC	S	80-120		E624	10/27/12 05:10 / jk
Surr: p-Bromofluorobenzene	125	%REC	S	80-120		E624	10/27/12 05:10 / jk
Surr: Toluene-d8	102	%REC		80-120		E624	10/27/12 05:10 / 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.

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:		10/17/2012	7/17/2012	4/10/2012	1/10/2012
Receive Date:		10/19/2012	7/20/2012	4/13/2012	1/13/2012
Report Date:		11/20/2012	9/7/2012	5/24/2012	3/1/2012
Analyte	RUnits	C12100835-022	C12070713-012	C12040742-004	C12010443-003
Bicarbonate as HCO3	mg/L	281	454	235	206
Calcium	mg/L	508	378		
Chloride	mg/L	38	122	38	37
Magnesium	mg/L	383	274		
Nitrogen, Ammonia as N	mg/L	0.42	0.72		
Nitrogen, Nitrate+Nitrite as N	mg/L	ND(0.1)	ND(0.1)		
Potassium	mg/L	10	11		
Sodium	mg/L	213	338		
Sulfate	mg/L	2840	2290		
pH	s.u.	6.61	6.77	6.45	7.04
Solids, Total Dissolved TDS @ 180 C	mg/L	4680	3880	3970	3920
Aluminum	mg/L	ND(0.1)	ND(0.1)		
Beryllium	mg/L	ND(0.001)	ND(0.001)		
Cadmium	mg/L	ND(0.005)	0.009		
Cobalt	mg/L	0.11	0.06		
Lead	mg/L	ND(0.001)	ND(0.001)		
Manganese	mg/L	3.83	2.86		
Molybdenum	mg/L	4.6	11.8		
Nickel	mg/L	0.15	0.08		
Uranium	mg/L	0.129	0.321		
Vanadium	mg/L	ND(0.1)	ND(0.1)		
Arsenic-III	mg/L	ND(0.001)	ND(0.001)		
Selenium-IV	mg/L	ND(0.001)	ND(0.001)		
Gross Alpha minus Rn & U	pCi/L	3.5	2.4		
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.5	0.5		
Gross Alpha minus Rn & U MDC	pCi/L	0.2	0.3		
Lead 210	pCi/L	-0.04	0.3		
Lead 210 precision (±)	pCi/L	0.6	0.7		
Lead 210 MDC	pCi/L	1.0	1.2		
Radium 226	pCi/L	2.6	2.5		
Radium 226 precision (±)	pCi/L	0.21	0.29		
Radium 226 MDC	pCi/L	0.10	0.13		
Radium 228	pCi/L	5.7	3.4		
Radium 228 precision (±)	pCi/L	1.0	0.91		
Radium 228 MDC	pCi/L	1.3	1.2		
Thorium 230	pCi/L	0.07	0.005		
Thorium 230 precision (±)	pCi/L	0.09	0.07		
Thorium 230 MDC	pCi/L	0.2	0.2		
A/C Balance (± 5)	%	1.25	-1.84		
Anions	meq/L	64.8	58.6		
Cations	meq/L	66.4	56.4		
Solids, Total Dissolved Calculated	mg/L	4200	3700		
TDS Balance (0.80 - 1.20)		1.13	1.06		
Trihalomethanes, Total	ug/L	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: C12070713-013
Client Sample ID: MW-7

Report Date: 09/07/12
Collection Date: 07/17/12 16:18
DateReceived: 07/20/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	337	mg/L		5		A2320 B	07/20/12 19:50 / jba
Calcium	650	mg/L		0.5		E200.8	08/10/12 18:07 / cp
Chloride	42	mg/L	D	2		E300.0	07/23/12 23:22 / ljl
Magnesium	195	mg/L		0.5		E200.8	08/10/12 18:07 / cp
Nitrogen, Ammonia as N	2.11	mg/L		0.05		A4500-NH3 G	07/28/12 15:44 / ljl
Nitrogen, Nitrate+Nitrite as N	0.5	mg/L		0.1		E353.2	07/27/12 14:48 / ljl
Potassium	9.1	mg/L		0.5		E200.8	08/10/12 18:07 / cp
Sodium	139	mg/L		0.5		E200.8	08/10/12 18:07 / cp
Sulfate	2390	mg/L	D	20		E300.0	07/25/12 20:35 / wc
PHYSICAL PROPERTIES							
pH	6.64	s.u.	H	0.01		A4500-H B	07/23/12 10:31 / ab
Solids, Total Dissolved TDS @ 180 C	3990	mg/L		10		A2540 C	07/23/12 09:29 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	08/10/12 18:07 / cp
Beryllium	ND	mg/L		0.001		E200.8	08/10/12 18:07 / cp
Cadmium	ND	mg/L		0.005		E200.8	08/10/12 18:07 / cp
Cobalt	0.09	mg/L		0.01		E200.8	08/10/12 18:07 / cp
Lead	ND	mg/L		0.001		E200.8	08/10/12 18:07 / cp
Manganese	4.32	mg/L		0.01		E200.8	08/10/12 18:07 / cp
Molybdenum	2.0	mg/L		0.1		E200.8	08/10/12 18:07 / cp
Nickel	0.09	mg/L		0.05		E200.8	08/10/12 18:07 / cp
Uranium	0.0976	mg/L		0.0003		E200.8	08/10/12 18:07 / cp
Vanadium	ND	mg/L		0.1		E200.8	08/10/12 18:07 / cp
METALS - SPECIATED							
Arsenic-III	0.002	mg/L		0.001		E1632AM	08/01/12 23:39 / eli-h
Selenium-IV	0.002	mg/L		0.001		A3114 B	07/26/12 18:22 / rdw
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	7.9	pCi/L				E900.1	08/01/12 22:28 / lbb
Gross Alpha minus Rn & U Precision (±)	0.8	pCi/L				E900.1	08/01/12 22:28 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	08/01/12 22:28 / lbb
Lead 210	0.7	pCi/L	U			E909.0	08/17/12 18:18 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	08/17/12 18:18 / eli-cs
Lead 210 MDC	1.2	pCi/L				E909.0	08/17/12 18:18 / eli-cs
Radium 226	7.8	pCi/L				E903.0	08/06/12 21:20 / lbb
Radium 226 precision (±)	0.51	pCi/L				E903.0	08/06/12 21:20 / lbb
Radium 226 MDC	0.14	pCi/L				E903.0	08/06/12 21:20 / lbb
Radium 228	7.1	pCi/L				RA-05	07/31/12 21:12 / gb
Radium 228 precision (±)	1.1	pCi/L				RA-05	07/31/12 21:12 / gb
Radium 228 MDC	1.3	pCi/L				RA-05	07/31/12 21:12 / 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: C12070713-013
Client Sample ID: MW-7

Report Date: 09/07/12
Collection Date: 07/17/12 16:18
DateReceived: 07/20/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	-0.007	pCi/L	U			E908.0	08/09/12 08:48 / dmf
Thorium 230 precision (±)	0.06	pCi/L				E908.0	08/09/12 08:48 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	08/09/12 08:48 / dmf
DATA QUALITY							
A/C Balance (± 5)	-1.50	%				A1030 E	08/15/12 14:33 / kbh
Anions	56.6	meq/L				A1030 E	08/15/12 14:33 / kbh
Cations	54.9	meq/L				A1030 E	08/15/12 14:33 / kbh
Solids, Total Dissolved Calculated	3600	mg/L				A1030 E	08/15/12 14:33 / kbh
TDS Balance (0.80 - 1.20)	1.11					A1030 E	08/15/12 14:33 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	07/26/12 00:55 / jk
Bromoform	ND	ug/L		0.50		E624	07/26/12 00:55 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	07/26/12 00:55 / jk
Chloroform	ND	ug/L		0.50		E624	07/26/12 00:55 / jk
Trihalomethanes, Total	ND	ug/L		0.50		E624	07/26/12 00:55 / jk
Surr: 1,2-Dichlorobenzene-d4	99.0	%REC		80-120		E624	07/26/12 00:55 / jk
Surr: Dibromofluoromethane	97.0	%REC		80-120		E624	07/26/12 00:55 / jk
Surr: p-Bromofluorobenzene	85.0	%REC		80-120		E624	07/26/12 00:55 / jk
Surr: Toluene-d8	93.0	%REC		80-120		E624	07/26/12 00:55 / 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-3
Lab ID: C12100835-013
Client Sample ID: MW-7

Report Date: 11/20/12
Collection Date: 10/16/12 15:40
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	348	mg/L		5		A2320 B	10/19/12 20:19 / jba
Calcium	673	mg/L		1		E200.7	11/09/12 23:26 / sf
Chloride	41	mg/L	D	2		E300.0	10/20/12 03:41 / wc
Magnesium	229	mg/L		1		E200.7	11/09/12 23:26 / sf
Nitrogen, Ammonia as N	1.1	mg/L	D	0.1		A4500-NH3 G	10/26/12 16:52 / lr
Nitrogen, Nitrate+Nitrite as N	0.7	mg/L	D	0.2		E353.2	10/25/12 12:32 / ljl
Potassium	9	mg/L		1		E200.7	11/09/12 23:26 / sf
Sodium	150	mg/L		1		E200.7	11/09/12 23:26 / sf
Sulfate	2490	mg/L	D	20		E300.0	10/22/12 21:25 / wc
PHYSICAL PROPERTIES							
pH	6.73	s.u.	H	0.01		A4500-H B	10/19/12 15:58 / ab
Solids, Total Dissolved TDS @ 180 C	3900	mg/L		10		A2540 C	10/22/12 16:35 / jz
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	11/07/12 12:14 / cp
Beryllium	ND	mg/L		0.001		E200.8	11/07/12 12:14 / cp
Cadmium	ND	mg/L		0.005		E200.8	11/07/12 12:14 / cp
Cobalt	0.06	mg/L		0.01		E200.8	11/07/12 12:14 / cp
Lead	ND	mg/L		0.001		E200.8	11/07/12 12:14 / cp
Manganese	3.77	mg/L		0.01		E200.8	11/07/12 12:14 / cp
Molybdenum	0.8	mg/L		0.1		E200.8	11/07/12 12:14 / cp
Nickel	0.10	mg/L		0.05		E200.8	11/07/12 12:14 / cp
Uranium	0.165	mg/L		0.0003		E200.8	11/07/12 12:14 / cp
Vanadium	ND	mg/L		0.1		E200.8	11/07/12 12:14 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	11/05/12 15:33 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	11/07/12 11:21 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	7.7	pCi/L				E900.1	11/20/12 01:28 / lbb
Gross Alpha minus Rn & U Precision (±)	0.7	pCi/L				E900.1	11/20/12 01:28 / lbb
Gross Alpha minus Rn & U MDC	0.2	pCi/L				E900.1	11/20/12 01:28 / lbb
Lead 210	0.5	pCi/L	U			E909.0	11/18/12 09:44 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	11/18/12 09:44 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	11/18/12 09:44 / eli-cs
Radium 226	7.5	pCi/L				E903.0	11/05/12 15:07 / gb
Radium 226 precision (±)	0.61	pCi/L				E903.0	11/05/12 15:07 / gb
Radium 226 MDC	0.21	pCi/L				E903.0	11/05/12 15:07 / gb
Radium 228	14	pCi/L				RA-05	10/31/12 19:38 / gb
Radium 228 precision (±)	1.8	pCi/L				RA-05	10/31/12 19:38 / gb
Radium 228 MDC	1.9	pCi/L				RA-05	10/31/12 19:38 / 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: C12100835-013
Client Sample ID: MW-7

Report Date: 11/20/12
Collection Date: 10/16/12 15:40
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.005	pCi/L	U			E908.0	11/01/12 13:58 / dmf
Thorium 230 precision (±)	0.07	pCi/L				E908.0	11/01/12 13:58 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	11/01/12 13:58 / dmf
DATA QUALITY							
A/C Balance (± 5)	0.436	%				A1030 E	11/12/12 14:47 / kbh
Anions	58.8	meq/L				A1030 E	11/12/12 14:47 / kbh
Cations	59.3	meq/L				A1030 E	11/12/12 14:47 / kbh
Solids, Total Dissolved Calculated	3800	mg/L				A1030 E	11/12/12 14:47 / kbh
TDS Balance (0.80 - 1.20)	1.03					A1030 E	11/12/12 14:47 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	10/26/12 23:53 / jk
Bromoform	ND	ug/L		0.50		E624	10/26/12 23:53 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	10/26/12 23:53 / jk
Chloroform	ND	ug/L		0.50		E624	10/26/12 23:53 / jk
Trihalomethanes, Total	ND	ug/L		0.50		E624	10/26/12 23:53 / jk
Surr: 1,2-Dichlorobenzene-d4	105	%REC		80-120		E624	10/26/12 23:53 / jk
Surr: Dibromofluoromethane	151	%REC	S	80-120		E624	10/26/12 23:53 / jk
Surr: p-Bromofluorobenzene	126	%REC	S	80-120		E624	10/26/12 23:53 / jk
Surr: Toluene-d8	111	%REC		80-120		E624	10/26/12 23:53 / 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
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:		MW-7	MW-7	MW-7	MW-7
Collection Date:		10/16/2012	7/17/2012	4/10/2012	1/10/2012
Receive Date:		10/19/2012	7/20/2012	4/13/2012	1/13/2012
Report Date:		11/20/2012	9/7/2012	5/24/2012	3/1/2012
Analyte	RUnits	C12100835-013	C12070713-013	C12040742-005	C12010443-004
Bicarbonate as HCO3	mg/L	348	337	409	445
Calcium	mg/L	673	650		
Chloride	mg/L	41	42	43	49
Magnesium	mg/L	229	195		
Nitrogen, Ammonia as N	mg/L	1.1	2.11		
Nitrogen, Nitrate+Nitrite as N	mg/L	0.7	0.5		
Potassium	mg/L	9	9.1		
Sodium	mg/L	150	139		
Sulfate	mg/L	2490	2390		
pH	s.u.	6.73	6.64	6.71	7.17
Solids, Total Dissolved TDS @ 180 C	mg/L	3900	3990	3800	3670
Aluminum	mg/L	ND(0.1)	ND(0.1)		
Beryllium	mg/L	ND(0.001)	ND(0.001)		
Cadmium	mg/L	ND(0.005)	ND(0.005)		
Cobalt	mg/L	0.06	0.09		
Lead	mg/L	ND(0.001)	ND(0.001)		
Manganese	mg/L	3.77	4.32		
Molybdenum	mg/L	0.8	2.0		
Nickel	mg/L	0.10	0.09		
Uranium	mg/L	0.165	0.0976		
Vanadium	mg/L	ND(0.1)	ND(0.1)		
Arsenic-III	mg/L	ND(0.001)	0.002		
Selenium-IV	mg/L	ND(0.001)	0.002		
Gross Alpha minus Rn & U	pCi/L	7.7	7.9		
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.7	0.8		
Gross Alpha minus Rn & U MDC	pCi/L	0.2	0.3		
Lead 210	pCi/L	0.5	0.7		
Lead 210 precision (±)	pCi/L	0.6	0.7		
Lead 210 MDC	pCi/L	1.0	1.2		
Radium 226	pCi/L	7.5	7.8		
Radium 226 precision (±)	pCi/L	0.61	0.51		
Radium 226 MDC	pCi/L	0.21	0.14		
Radium 228	pCi/L	14	7.1		
Radium 228 precision (±)	pCi/L	1.8	1.1		
Radium 228 MDC	pCi/L	1.9	1.3		
Thorium 230	pCi/L	0.005	-0.007		
Thorium 230 precision (±)	pCi/L	0.07	0.06		
Thorium 230 MDC	pCi/L	0.2	0.2		
A/C Balance (± 5)	%	0.436	-1.50		
Anions	meq/L	58.8	56.6		
Cations	meq/L	59.3	54.9		
Solids, Total Dissolved Calculated	mg/L	3800	3600		
TDS Balance (0.80 - 1.20)		1.03	1.11		
Trihalomethanes, Total	ug/L	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: C12100835-016
Client Sample ID: RW-11

Report Date: 11/20/12
Collection Date: 10/16/12 15:00
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	220	mg/L		5		A2320 B	10/19/12 20:42 / jba
Calcium	594	mg/L		1		E200.7	11/09/12 23:43 / sf
Chloride	38	mg/L	D	4		E300.0	10/20/12 04:33 / wc
Magnesium	373	mg/L		1		E200.7	11/09/12 23:43 / sf
Nitrogen, Ammonia as N	1.9	mg/L	D	0.1		A4500-NH3 G	10/26/12 16:58 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	10/25/12 12:49 / ljl
Potassium	11	mg/L		1		E200.7	11/09/12 23:43 / sf
Sodium	145	mg/L	D	2		E200.7	11/09/12 23:43 / sf
Sulfate	2880	mg/L	D	20		E300.0	10/20/12 04:33 / wc
PHYSICAL PROPERTIES							
pH	6.22	s.u.	H	0.01		A4500-H B	10/19/12 16:08 / ab
Solids, Total Dissolved TDS @ 180 C	4540	mg/L		10		A2540 C	10/22/12 16:36 / jz
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	11/07/12 12:22 / cp
Beryllium	ND	mg/L		0.001		E200.8	11/07/12 12:22 / cp
Cadmium	ND	mg/L		0.005		E200.8	11/07/12 12:22 / cp
Cobalt	0.25	mg/L		0.01		E200.8	11/07/12 12:22 / cp
Lead	ND	mg/L		0.001		E200.8	11/07/12 12:22 / cp
Manganese	5.12	mg/L		0.01		E200.8	11/07/12 12:22 / cp
Molybdenum	0.2	mg/L		0.1		E200.8	11/07/12 12:22 / cp
Nickel	0.29	mg/L		0.05		E200.8	11/07/12 12:22 / cp
Uranium	0.140	mg/L		0.0003		E200.8	11/07/12 12:22 / cp
Vanadium	ND	mg/L		0.1		E200.8	11/07/12 12:22 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	11/05/12 15:57 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	11/07/12 13:37 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	9.8	pCi/L				E900.1	11/20/12 01:28 / lbb
Gross Alpha minus Rn & U Precision (±)	0.8	pCi/L				E900.1	11/20/12 01:28 / lbb
Gross Alpha minus Rn & U MDC	0.2	pCi/L				E900.1	11/20/12 01:28 / lbb
Lead 210	0.5	pCi/L	U			E909.0	11/18/12 12:40 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	11/18/12 12:40 / eli-cs
Lead 210 MDC	1	pCi/L				E909.0	11/18/12 12:40 / eli-cs
Radium 226	9.7	pCi/L				E903.0	11/05/12 15:07 / gb
Radium 226 precision (±)	0.63	pCi/L				E903.0	11/05/12 15:07 / gb
Radium 226 MDC	0.18	pCi/L				E903.0	11/05/12 15:07 / gb
Radium 228	20	pCi/L				RA-05	10/31/12 19:38 / gb
Radium 228 precision (±)	1.8	pCi/L				RA-05	10/31/12 19:38 / gb
Radium 228 MDC	1.6	pCi/L				RA-05	10/31/12 19:38 / 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: C12100835-016
Client Sample ID: RW-11

Report Date: 11/20/12
Collection Date: 10/16/12 15:00
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.2	pCi/L	U			E908.0	11/01/12 13:58 / dmf
Thorium 230 precision (±)	0.2	pCi/L				E908.0	11/01/12 13:58 / dmf
Thorium 230 MDC	0.4	pCi/L				E908.0	11/01/12 13:58 / dmf
- See Case Narrative regarding Th230 analysis.							
DATA QUALITY							
A/C Balance (± 5)	1.81	%				A1030 E	11/12/12 14:47 / kbh
Anions	64.7	meq/L				A1030 E	11/12/12 14:47 / kbh
Cations	67.1	meq/L				A1030 E	11/12/12 14:47 / kbh
Solids, Total Dissolved Calculated	4200	mg/L				A1030 E	11/12/12 14:47 / kbh
TDS Balance (0.80 - 1.20)	1.09					A1030 E	11/12/12 14:47 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	10/27/12 01:39 / jk
Bromoform	ND	ug/L		0.50		E624	10/27/12 01:39 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	10/27/12 01:39 / jk
Chloroform	ND	ug/L		0.50		E624	10/27/12 01:39 / jk
Trihalomethanes, Total	ND	ug/L		0.50		E624	10/27/12 01:39 / jk
Surr: 1,2-Dichlorobenzene-d4	108	%REC		80-120		E624	10/27/12 01:39 / jk
Surr: Dibromofluoromethane	154	%REC	S	80-120		E624	10/27/12 01:39 / jk
Surr: p-Bromofluorobenzene	126	%REC	S	80-120		E624	10/27/12 01:39 / jk
Surr: Toluene-d8	110	%REC		80-120		E624	10/27/12 01:39 / 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
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:		RW-11	RW-11	RW-11	RW-11
Collection Date:		10/16/2012	10/11/2011	10/12/2010	10/13/2009
Receive Date:		10/19/2012	10/14/2011	10/15/2010	10/15/2009
Report Date:		11/20/2012	11/30/2011	11/23/2010	11/30/2009
Analyte	RUnits	C12100835-016	C11100573-013	C10100652-014	C09100637-012
Bicarbonate as HCO3	mg/L	220	209	242	238
Calcium	mg/L	594	556	561	547
Chloride	mg/L	38	38	35	32
Magnesium	mg/L	373	308	278	259
Nitrogen, Ammonia as N	mg/L	1.9	1.8	2.45	2.99
Nitrogen, Nitrate+Nitrite as N	mg/L	ND(0.1)	ND(0.5)	ND(0.1)	ND(0.1)
Potassium	mg/L	11	11	10	10
Sodium	mg/L	145	144	144	130
Sulfate	mg/L	2880	2800	2630	2530
pH	s.u.	6.22	7.34	6.56	7.45
Solids, Total Dissolved TDS @ 180 C	mg/L	4540	4130	3970	3800
Aluminum	mg/L	ND(0.1)	ND(0.1)	0.3	ND(0.1)
Beryllium	mg/L	ND(0.001)	ND(0.01)	ND(0.01)	ND(0.01)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	0.25	0.21	0.18	0.16
Lead	mg/L	ND(0.001)	ND(0.05)	ND(0.05)	ND(0.05)
Manganese	mg/L	5.12	4.68	3.93	4.27
Molybdenum	mg/L	0.2	0.1	0.8	0.2
Nickel	mg/L	0.29	0.24	0.20	0.18
Uranium	mg/L	0.140	0.134	0.246	0.134
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	0.006	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	9.8	10.1	12.4	10
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.8	1	1.2	1.4
Gross Alpha minus Rn & U MDC	pCi/L	0.2	0.4	0.5	0.9
Lead 210	pCi/L	0.5	0.5	0.3	0.4
Lead 210 precision (±)	pCi/L	0.6	0.8	1	2.2
Lead 210 MDC	pCi/L	1	1.3	1.6	3.7
Radium 226	pCi/L	9.7	9.6	10	9.3
Radium 226 precision (±)	pCi/L	0.63	0.56	0.62	0.53
Radium 226 MDC	pCi/L	0.18	0.13	0.15	0.10
Radium 228	pCi/L	20	13	17	13
Radium 228 precision (±)	pCi/L	1.8	1.2	1.1	1.1
Radium 228 MDC	pCi/L	1.6	1.2	0.89	1.0
Thorium 230	pCi/L	0.2	0.03	0.4	-0.004
Thorium 230 precision (±)	pCi/L	0.2	0.2	0.3	0.09
Thorium 230 MDC	pCi/L	0.4	0.4	0.4	0.2
A/C Balance (± 5)	%	1.81	-2.56	-1.96	-2.61
Anions	meq/L	64.7	62.9	59.6	57.4
Cations	meq/L	67.1	59.7	57.3	54.5
Solids, Total Dissolved Calculated	mg/L	4200	3980	3770	3640
TDS Balance (0.80 - 1.20)		1.09	1.04	1.05	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-1
Lab ID: C12100566-006
Client Sample ID: 617

Report Date: 11/20/12
Collection Date: 10/10/12 09:17
DateReceived: 10/12/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	1540	mg/L		5		A2320 B	10/15/12 17:28 / jba
Calcium	505	mg/L		1		E200.7	10/24/12 18:00 / sf
Chloride	263	mg/L	D	10		E300.0	10/16/12 04:36 / wc
Magnesium	1560	mg/L		1		E200.7	10/24/12 18:00 / sf
Nitrogen, Ammonia as N	264	mg/L	D	5		A4500-NH3 G	10/17/12 11:58 / lr
Nitrogen, Nitrate+Nitrite as N	98	mg/L	D	10		E353.2	10/15/12 13:20 / lr
Potassium	26	mg/L		1		E200.7	10/24/12 18:00 / sf
Sodium	504	mg/L	D	3		E200.7	10/24/12 18:00 / sf
Sulfate	7340	mg/L	D	40		E300.0	10/16/12 04:36 / wc
PHYSICAL PROPERTIES							
pH	6.75	s.u.	H	0.01		A4500-H B	10/15/12 10:14 / ab
Solids, Total Dissolved TDS @ 180 C	11600	mg/L		10		A2540 C	10/15/12 12:21 / ab
METALS - TOTAL							
Aluminum	1.9	mg/L		0.1		E200.8	10/19/12 19:53 / cp
Beryllium	ND	mg/L		0.001		E200.8	10/19/12 19:53 / cp
Cadmium	ND	mg/L		0.005		E200.8	10/19/12 19:53 / cp
Cobalt	0.01	mg/L		0.01		E200.8	10/19/12 19:53 / cp
Lead	0.004	mg/L		0.001		E200.8	10/19/12 19:53 / cp
Manganese	2.10	mg/L		0.01		E200.8	10/19/12 19:53 / cp
Molybdenum	ND	mg/L		0.1		E200.8	10/19/12 19:53 / cp
Nickel	0.07	mg/L		0.05		E200.8	10/19/12 19:53 / cp
Uranium	0.0811	mg/L		0.0003		E200.8	10/19/12 19:53 / cp
Vanadium	ND	mg/L		0.1		E200.8	10/19/12 19:53 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	10/29/12 15:33 / eli-h
Selenium-IV	0.005	mg/L		0.001		A3114 B	10/31/12 13:05 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	1.9	pCi/L				E900.1	11/08/12 23:41 / lbb
Gross Alpha minus Rn & U Precision (±)	0.4	pCi/L				E900.1	11/08/12 23:41 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	11/08/12 23:41 / lbb
Lead 210	0.6	pCi/L	U			E909.0	11/17/12 21:04 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	11/17/12 21:04 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	11/17/12 21:04 / eli-cs
Radium 226	2.1	pCi/L				E903.0	10/29/12 21:54 / gb
Radium 226 precision (±)	0.33	pCi/L				E903.0	10/29/12 21:54 / gb
Radium 226 MDC	0.19	pCi/L				E903.0	10/29/12 21:54 / gb
Radium 228	6.9	pCi/L				RA-05	10/23/12 22:47 / gb
Radium 228 precision (±)	1.6	pCi/L				RA-05	10/23/12 22:47 / gb
Radium 228 MDC	2.2	pCi/L				RA-05	10/23/12 22:47 / 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: C12100566-006
Client Sample ID: 617

Report Date: 11/20/12
Collection Date: 10/10/12 09:17
DateReceived: 10/12/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	-0.02	pCi/L	U			E908.0	10/29/12 09:16 / dmf
Thorium 230 precision (±)	0.07	pCi/L				E908.0	10/29/12 09:16 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	10/29/12 09:16 / dmf
DATA QUALITY							
A/C Balance (± 5)	0.690	%				A1030 E	10/26/12 07:25 / kbh
Anions	192	meq/L				A1030 E	10/26/12 07:25 / kbh
Cations	195	meq/L				A1030 E	10/26/12 07:25 / kbh
Solids, Total Dissolved Calculated	11000	mg/L				A1030 E	10/26/12 07:25 / kbh
TDS Balance (0.80 - 1.20)	1.02					A1030 E	10/26/12 07:25 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	10/17/12 01:54 / jk
Bromoform	ND	ug/L		0.50		E624	10/17/12 01:54 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	10/17/12 01:54 / jk
Chloroform	2.23	ug/L		0.50		E624	10/17/12 01:54 / jk
Trihalomethanes, Total	2.23	ug/L		0.50		E624	10/17/12 01:54 / jk
Surr: 1,2-Dichlorobenzene-d4	98.0	%REC		80-120		E624	10/17/12 01:54 / jk
Surr: Dibromofluoromethane	123	%REC	S	80-120		E624	10/17/12 01:54 / jk
Surr: p-Bromofluorobenzene	99.0	%REC		80-120		E624	10/17/12 01:54 / jk
Surr: Toluene-d8	105	%REC		80-120		E624	10/17/12 01:54 / jk

- 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.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-31 re
Lab ID: C12100835-017
Client Sample ID: 619

Report Date: 11/20/12
Collection Date: 10/16/12 10:00
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	506	mg/L		5		A2320 B	10/19/12 20:50 / jba
Calcium	562	mg/L		1		E200.7	11/09/12 23:47 / sf
Chloride	118	mg/L	D	4		E300.0	10/20/12 04:50 / wc
Magnesium	658	mg/L		1		E200.7	11/09/12 23:47 / sf
Nitrogen, Ammonia as N	0.87	mg/L		0.05		A4500-NH3 G	10/29/12 14:01 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	10/25/12 12:59 / ljl
Potassium	14	mg/L		1		E200.7	11/09/12 23:47 / sf
Sodium	275	mg/L	D	2		E200.7	11/09/12 23:47 / sf
Sulfate	3750	mg/L	D	20		E300.0	10/20/12 04:50 / wc
PHYSICAL PROPERTIES							
pH	7.08	s.u.	H	0.01		A4500-H B	10/19/12 16:11 / ab
Solids, Total Dissolved TDS @ 180 C	6050	mg/L		10		A2540 C	10/22/12 16:36 / jz
METALS - TOTAL							
Aluminum	0.5	mg/L		0.1		E200.8	11/07/12 12:36 / cp
Beryllium	ND	mg/L		0.001		E200.8	11/07/12 12:36 / cp
Cadmium	ND	mg/L		0.005		E200.8	11/07/12 12:36 / cp
Cobalt	0.10	mg/L		0.01		E200.8	11/07/12 12:36 / cp
Lead	0.003	mg/L		0.001		E200.8	11/07/12 12:36 / cp
Manganese	4.91	mg/L		0.01		E200.8	11/07/12 12:36 / cp
Molybdenum	ND	mg/L		0.1		E200.8	11/07/12 12:36 / cp
Nickel	0.27	mg/L		0.05		E200.8	11/07/12 12:36 / cp
Uranium	0.0469	mg/L		0.0003		E200.8	11/07/12 12:36 / cp
Vanadium	ND	mg/L		0.1		E200.8	11/07/12 12:36 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	11/05/12 16:05 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	11/07/12 13:39 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	2.6	pCi/L				E900.1	11/20/12 01:28 / lbb
Gross Alpha minus Rn & U Precision (±)	0.4	pCi/L				E900.1	11/20/12 01:28 / lbb
Gross Alpha minus Rn & U MDC	0.2	pCi/L				E900.1	11/20/12 01:28 / lbb
Lead 210	0.8	pCi/L	U			E909.0	11/18/12 13:38 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	11/18/12 13:38 / eli-cs
Lead 210 MDC	1	pCi/L				E909.0	11/18/12 13:38 / eli-cs
Radium 226	1.9	pCi/L				E903.0	11/05/12 17:05 / gb
Radium 226 precision (±)	0.26	pCi/L				E903.0	11/05/12 17:05 / gb
Radium 226 MDC	0.15	pCi/L				E903.0	11/05/12 17:05 / gb
Radium 228	8.9	pCi/L				RA-05	10/31/12 19:38 / gb
Radium 228 precision (±)	1.2	pCi/L				RA-05	10/31/12 19:38 / gb
Radium 228 MDC	1.4	pCi/L				RA-05	10/31/12 19:38 / 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-31 w
Lab ID: C12100835-017
Client Sample ID: 619

Report Date: 11/20/12
Collection Date: 10/16/12 10:00
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.005	pCi/L	U			E908.0	11/01/12 13:58 / dmf
Thorium 230 precision (±)	0.07	pCi/L				E908.0	11/01/12 13:58 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	11/01/12 13:58 / dmf
DATA QUALITY							
A/C Balance (± 5)	2.69	%				A1030 E	11/12/12 14:48 / kbh
Anions	89.6	meq/L				A1030 E	11/12/12 14:48 / kbh
Cations	94.6	meq/L				A1030 E	11/12/12 14:48 / kbh
Solids, Total Dissolved Calculated	5600	mg/L				A1030 E	11/12/12 14:48 / kbh
TDS Balance (0.80 - 1.20)	1.07					A1030 E	11/12/12 14:48 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	10/27/12 02:13 / jk
Bromoform	ND	ug/L		0.50		E624	10/27/12 02:13 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	10/27/12 02:13 / jk
Chloroform	ND	ug/L		0.50		E624	10/27/12 02:13 / jk
Trihalomethanes, Total	ND	ug/L		0.50		E624	10/27/12 02:13 / jk
Surr: 1,2-Dichlorobenzene-d4	106	%REC		80-120		E624	10/27/12 02:13 / jk
Surr: Dibromofluoromethane	158	%REC	S	80-120		E624	10/27/12 02:13 / jk
Surr: p-Bromofluorobenzene	130	%REC	S	80-120		E624	10/27/12 02:13 / jk
Surr: Toluene-d8	111	%REC		80-120		E624	10/27/12 02:13 / 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-31
Lab ID: C12100835-018
Client Sample ID: 619 Filtered

Report Date: 11/20/12
Collection Date: 10/16/12 10:44
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	518	mg/L		5		A2320 B	10/19/12 21:20 / jba
Calcium	553	mg/L		1		E200.7	11/09/12 23:51 / sf
Chloride	119	mg/L	D	4		E300.0	10/20/12 06:00 / wc
Magnesium	652	mg/L		1		E200.7	11/09/12 23:51 / sf
Nitrogen, Ammonia as N	0.9	mg/L	D	0.1		A4500-NH3 G	10/29/12 14:03 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	10/25/12 13:04 / ljl
Potassium	14	mg/L		1		E200.7	11/09/12 23:51 / sf
Sodium	275	mg/L	D	2		E200.7	11/09/12 23:51 / sf
Sulfate	3720	mg/L	D	20		E300.0	10/20/12 06:00 / wc
PHYSICAL PROPERTIES							
pH	7.08	s.u.	H	0.01		A4500-H B	10/19/12 16:14 / ab
Solids, Total Dissolved TDS @ 180 C	6200	mg/L		10		A2540 C	10/22/12 16:37 / jz
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	11/07/12 12:38 / cp
Beryllium	ND	mg/L		0.001		E200.8	11/07/12 12:38 / cp
Cadmium	ND	mg/L		0.005		E200.8	11/07/12 12:38 / cp
Cobalt	0.11	mg/L		0.01		E200.8	11/07/12 12:38 / cp
Lead	ND	mg/L		0.001		E200.8	11/07/12 12:38 / cp
Manganese	4.94	mg/L		0.01		E200.8	11/07/12 12:38 / cp
Molybdenum	ND	mg/L		0.1		E200.8	11/07/12 12:38 / cp
Nickel	0.27	mg/L		0.05		E200.8	11/07/12 12:38 / cp
Uranium	0.0474	mg/L		0.0003		E200.8	11/07/12 12:38 / cp
Vanadium	ND	mg/L		0.1		E200.8	11/07/12 12:38 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	11/05/12 16:13 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	11/07/12 13:41 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	2.4	pCi/L				E900.1	11/20/12 01:28 / lbb
Gross Alpha minus Rn & U Precision (±)	0.4	pCi/L				E900.1	11/20/12 01:28 / lbb
Gross Alpha minus Rn & U MDC	0.2	pCi/L				E900.1	11/20/12 01:28 / lbb
Lead 210	0.5	pCi/L	U			E909.0	11/18/12 14:37 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	11/18/12 14:37 / eli-cs
Lead 210 MDC	1	pCi/L				E909.0	11/18/12 14:37 / eli-cs
Radium 226	1.8	pCi/L				E903.0	11/05/12 17:05 / gb
Radium 226 precision (±)	0.25	pCi/L				E903.0	11/05/12 17:05 / gb
Radium 226 MDC	0.14	pCi/L				E903.0	11/05/12 17:05 / gb
Radium 228	9.4	pCi/L				RA-05	10/31/12 19:38 / gb
Radium 228 precision (±)	1.2	pCi/L				RA-05	10/31/12 19:38 / gb
Radium 228 MDC	1.3	pCi/L				RA-05	10/31/12 19:38 / 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~~ 1 ~~2~~
Lab ID: C12100835-018
Client Sample ID: 619 Filtered

Report Date: 11/20/12
Collection Date: 10/16/12 10:44
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.08	pCi/L	U			E908.0	11/01/12 13:58 / dmf
Thorium 230 precision (±)	0.1	pCi/L				E908.0	11/01/12 13:58 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	11/01/12 13:58 / dmf
DATA QUALITY							
A/C Balance (± 5)	2.34	%				A1030 E	11/12/12 14:48 / kbh
Anions	89.3	meq/L				A1030 E	11/12/12 14:48 / kbh
Cations	93.6	meq/L				A1030 E	11/12/12 14:48 / kbh
Solids, Total Dissolved Calculated	5600	mg/L				A1030 E	11/12/12 14:48 / kbh
TDS Balance (0.80 - 1.20)	1.10					A1030 E	11/12/12 14:48 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	10/27/12 02:49 / jk
Bromoform	ND	ug/L		0.50		E624	10/27/12 02:49 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	10/27/12 02:49 / jk
Chloroform	ND	ug/L		0.50		E624	10/27/12 02:49 / jk
Trihalomethanes, Total	ND	ug/L		0.50		E624	10/27/12 02:49 / jk
Surr: 1,2-Dichlorobenzene-d4	108	%REC		80-120		E624	10/27/12 02:49 / jk
Surr: Dibromofluoromethane	154	%REC	S	80-120		E624	10/27/12 02:49 / jk
Surr: p-Bromofluorobenzene	130	%REC	S	80-120		E624	10/27/12 02:49 / jk
Surr: Toluene-d8	110	%REC		80-120		E624	10/27/12 02:49 / 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.

SEMI-ANNUAL

EFFLUENT AND ENVIRONMENTAL MONITORING REPORT

JULY TO DECEMBER OF 2012

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: 7-30-12 TIME START: 1152

INSPECTOR: Max Chischilly Jr. TIME END: 1315

TAILINGS AREA:	OKAY	PROBLEM	COMMENTS
1. Fences		✓	See below
2. Air Monitors	— NA —		Not Applicable - Only under RWP
3. Radiation Warning Signs	✓		
4. Locked Gates	✓		

ACTION TAKEN: Flood events during the weekend of July 28, 2012 had damaged perimeter fence lines at four different locations as described below.

1. Sec. 2 (tailings area): South end fenceline at bottom of pipeline arroya is washed out.

2. Sec. 2 (tailings area): About 100' of fencing is partially down adjacent to the main entrance gate and bottom of pipeline arroya.

3. Sec. 2 (tailings area): About 220' of fencing is down in the eastend across from reclaimed borrow pit no. 2.

4. Sec. 36 and NIR boundary: About 400' of fencing is down in the northend near entrance gate and cattle guard.

The above items will be replaced after the rainy season and/or temporarily repaired as soon as possible to keep out livestock or unauthorized entry and continual survelliance will be on going.

ENVIRONMENTAL INSPECTION

DATE: 8-28-12 TIME START: 1020

INSPECTOR: Mark Chadelly Jr. TIME END: 1200

TAILINGS AREA:	OKAY	PROBLEM	COMMENTS
1. Fences	✓		See below
2. Air Monitors	-NA-		Not Applicable - Only under RWP
3. Radiation Warning Signs	✓		
4. Locked Gates	✓		

ACTION TAKEN: Pending perimeter fenceline repair work under the items listed in the 7-30-12 report were done as follows:

2. Temporary repairal on 8-1-12 and additional complete repairal on 9-14,26-12.

4. Temporary repairal on 8-1-12 and additional complete repairal on 8-28-12.

ENVIRONMENTAL INSPECTION

DATE: 9-26-12 TIME START: 1502

INSPECTOR: Mal Chiarelly Jr. TIME END: 1600

TAILINGS AREA:	OKAY	PROBLEM	COMMENTS
1. Fences	✓		See below
2. Air Monitors	– NA	–	Not Applicable - Only under RWP
3. Radiation Warning Signs	✓		
4. Locked Gates	✓		

ACTION TAKEN: Complete fenceline repairal was done on item no. 3 listed in the 7-30-12 report during the week of 9-24-12.

ENVIRONMENTAL INSPECTION

DATE: 10-31-12 TIME START: 1324

INSPECTOR: Mark Chuckelly Jr. TIME END: 1444

TAILINGS AREA:	OKAY	PROBLEM	COMMENTS
1. Fences	✓		See below
2. Air Monitors	— NA	—	NA- Not Applicable Only under RWP
3. Radiation Warning Signs	✓		
4. Locked Gates	✓		

ACTION TAKEN: Complete fenceline repairal was done on item no. 1 listed in the 7-30-12 report on 10-11-12.

ENVIRONMENTAL INSPECTION

DATE: 11-28-12 TIME START: 1415

INSPECTOR: Mal Chadley Jr. TIME END: 1525

TAILINGS AREA:	OKAY	PROBLEM	COMMENTS
1. Fences	✓		
2. Air Monitors	— NA —		Not Applicable - Only under RWP
3. Radiation Warning Signs	✓		
4. Locked Gates	✓		

ACTION TAKEN:

ENVIRONMENTAL INSPECTION

DATE: 12-12-12 TIME START: 1310

INSPECTOR: Max Chambly Jr. TIME END: 1415

TAILINGS AREA:	OKAY	PROBLEM	COMMENTS
1. Fences	✓		
2. Air Monitors	— NA	—	Not Applicable - Only under RWP
3. Radiation Warning Signs	✓		
4. Locked Gates	✓		

ACTION TAKEN:

GROUNDWATER RESULTS

QUARTERLY LIQUID SAMPLES

Date/Qr.	Location	Type	Radionuclide	Concentration Mg/l	Concentration µci/ml	Error Est. µci/ml	LLD µci/ml
7/10/2012	GW-3	Ground	U-Nat (dissolved) or total		2.19E-07		2.00E-10
3rd-Qr.		Water Well					
			Th-230 (dissolved) or total		2.00E-11	6.00E-11	2.00E-10
			Ra-266 (dissolved) or total		2.20E-10	1.00E-10	2.00E-10
			Pb-210 (dissolved) or total		8.00E-10	7.00E-10	1.00E-09
			Po-210 (dissolved) or total				1.00E-09

UNC Field Data:
PH (STD. Units) = 6.96
Cond. (µ MHOS) = 4,660
Water Depth (Ft.) = 54.50
Temp. (°C) = 18.0

COMMENTS: Other field measurement is the turbidity (NTU) for well GW-3 = 6.60 this quarter.

QUARTERLY LIQUID SAMPLES

Date/Qr.	Location	Type	Radionuclide	Concentration Mg/l	Concentration µci/ml	Error Est. µci/ml	LLD µci/ml
10/9/2012	GW-3	Ground	U-Nat (dissolved) or total		2.00E-07		2.00E-10
4th-Qr.		Water Well					
			Th-230 (dissolved) or total		9.00E-11	1.00E-10	2.00E-10
			Ra-266 (dissolved) or total		8.00E-11	1.00E-10	2.00E-10
			Pb-210 (dissolved) or total		-4.00E-10	6.00E-10	1.00E-09
			Po-210 (dissolved) or total				1.00E-09

UNC Field Data:
PH (STD. Units) = 6.58
Cond. (µ MHOS) = 5,050
Water Depth (Ft.) = 54.75
Temp. (°C) = 17.5

COMMENTS: Other field measurement is the turbidity (NTU) for well GW-3 = 5.60 this quarter.

SEMI-ANNUAL GROUND WATER QUALITY ASSURANCE REPORT

SECOND HALF OF 2012
(JULY THRU DECEMBER)

SEMI – ANNUAL QUALITY ASSURANCE

CHURCH ROCK SITE

JULY TO DECEMBER OF 2012 SAMPLING EVENTS

FEBRUARY – 2013

TABLE OF CONTENTS

1.0 REQUIREMENTS

The quality assurance and control procedures are contained in Sec. 3.0 of the Remedial Action Plan of Church Rock Site dated April 1989. The procedure address sampling, chain of custody, laboratory quality control, and data validation. These requirements became effective July3, 1989, when United Nuclear received the Administrative Order on the Church Rock Site from the U.S. Environmental Protection Agency (USEPA).

2.0 FIELD SAMPLING PROCEDURES AND QA/QC REPORT

Copies of the 2012 quarterly (3rd and 4th) field low flow purging and sampling data sheets are included in Appendix A. These sheets indicate the field parameter of pH, temperature, conductivity, turbidity and the water level drop in the well if any, during the sampling. The quarterly QA/QC Field Blank, Rinsate and Duplicate analysis report are included in Appendix B.

3.0 CHAIN OF CUSTODY

Copies of the quarterly Chain of Custody report are included in Appendix C. Energy Laboratories, Inc., our contract laboratory is located in Casper, Wyoming. Energy Labs inspect the sample shipment upon arrival to verify the information of the Chain of Custody form and to determine if sample arrive at the appropriate temperature.

4.0 LABORATORY CONTROL

Copies of the quarterly internal Quality Control reports prepared by Energy Laboratories and associated EPA performance evaluations are included in Appendix D (1 of 2 and 2 of 2).

5.0 DATA EVALUATION

Analytical reports are reviewed by the Remedial Project Managers and site Radiation Safety Officer after receipt from Energy Labs. Significant increase or decrease and out of range values are identified and the laboratory is requested to recheck the suspect values. The laboratory responds by checking transcription for these items, and where necessary, repeats the analysis. A revised report is then issued for that sample if an error is discovered.

APPENDIX – A

QUARTERLY

FIELD DATA SHEET

PH Standard Verification Check

STD.	PH Reading	Date/Time	Initial
4-Buffer	3.98	7-9-12/0928	[illegible]
7-Buffer	7.02	7-9-12/0932	[illegible]

(Quar. Performance Monitoring – Pg. 1 of 7)
GROUND WATER MONITORING FIELD DATA SHEET
Third QUARTER 2012
SAMPLING

Cond. Standard Verification Check

STD.	µS/cm Reading	Date/Time	Initial
1413 µS/cm	1420	7-9-12/0914	[illegible]

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
				1st Cond. 5,880	2nd Cond. 6,080	Stable Cond. 6,130	Ending Cond. 6,250
	509-D			1st pH 6.70	2nd pH 6.65	Stable pH 6.57	Ending pH 6.32
		80.32'	80.50'	1st Temp. 15.3	2nd Temp. 15.3	Stable Temp. 15.0	Ending Temp. 15.3
7-9-12	Time	Bubbler Start	Bubbler End	Comments: Conductivity is in uS/cm Turbidity is in NTU Temperature is in °C pH is in std. units			
	0952	0.191'	0.215'	NTU = 0.76			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
				1st Cond. 3,510	2nd Cond. 3,990	Stable Cond. 4,110	Ending Cond. 4,350
	EPA-23			1st pH 6.95	2nd pH 6.88	Stable pH 6.76	Ending pH 6.54
		56.95'	57.25'	1st Temp. 17.5	2nd Temp. 16.8	Stable Temp. 16.4	Ending Temp. 15.5
7-9-12	Time	Bubbler Start	Bubbler End	Comments: NTU = 35.8			
	1036	5.019'	4.703'	Turbidity secondary NTU std. verification on 7–9–12 @ 0915: 5.86(5.83 std.), 57.3(57.3 std.) & 483(482.std.).			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
				1st Cond. 5,090	2nd Cond. 5,600	Stable Cond. 5,830	Ending Cond. 6,320
	803			1st pH 6.40	2nd pH 6.41	Stable pH 6.40	Ending pH 6.40
		63.88'	64.00'	1st Temp. 18.2	2nd Temp. 18.0	Stable Temp. 17.1	Ending Temp. 15.7
7-9-12	Time	Bubbler Start	Bubbler End	Comments: NTU = 0.33			
	1121	12.936'	12.804'				

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
				1st Cond. 5,580	2nd Cond. 5,750	Stable Cond. 6,100	Ending Cond. 6,610
	808			1st pH 6.65	2nd pH 6.61	Stable pH 6.53	Ending pH 6.46
		51.25'	51.40'	1st Temp. 16.8	2nd Temp. 16.3	Stable Temp. 16.1	Ending Temp. 14.6
7-9-12	Time	Bubbler Start	Bubbler End	Comments: NTU = 0.49			
	1158	12.440'	12.298'				

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
				1st Cond. 5,940	2nd Cond. 6,350	Stable Cond. 6,630	Ending Cond. 6,990
	802			1st pH 6.62	2nd pH 6.60	Stable pH 6.57	Ending pH 6.49
		49.41'	49.46'	1st Temp. 16.8	2nd Temp. 16.5	Stable Temp. 15.8	Ending Temp. 15.0
7-9-12	Time	Bubbler Start	Bubbler End	Comments: NTU = 0.26			
	1238	3.523'	3.873'				

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
				1st Cond. 5,460	2nd Cond. 5,440	Stable Cond. 5,600	Ending Cond. 5,950
	801			1st pH 6.61	2nd pH 6.59	Stable pH 6.57	Ending pH 6.52
		53.20'	54.36'	1st Temp. 16.9	2nd Temp. 16.2	Stable Temp. 16.0	Ending Temp. 15.4
7-9-12	Time	Bubbler Start	Bubbler End	Comments: NTU = 0.43			
	1318	8.544'	7.383'				

PH Standard Verification Check

STD.	PH Reading	Date/Time	Initial
4-Buffer	4.02	7-10-12/0842	MZ
7-Buffer	7.03	7-10-12/0834	MZ

(Quar. Performance Monitoring – Pg. 2 of 7)
GROUND WATER MONITORING FIELD DATA SHEET
Third QUARTER 2012
SAMPLING

Cond. Standard Verification Check

STD.	µS/cm Reading	Date/Time	Initial
1413 µS/cm	1448	7-10-12/0843	MZ

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	GW-2			1st Cond. 6,900	2nd Cond. 7,270	Stable Cond. 7,440	Ending Cond. 7,950
				1st pH 6.38	2nd pH 6.37	Stable pH 6.37	Ending pH 6.33
		57.45'	58.10'	1st Temp. 17.4	2nd Temp. 17.1	Stable Temp. 16.6	Ending Temp. 15.1
7-9-12	Time	Bubbler Start	Bubbler End	Comments: NTU = 0.83			
	1405	13.399'	12.693'				

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	GW-1			1st Cond. 2,600	2nd Cond. 5,860	Stable Cond. 5,950	Ending Cond. 6,250
				1st pH 6.89	2nd pH 6.83	Stable pH 6.78	Ending pH 6.59
		63.09'	63.10'	1st Temp. 15.5	2nd Temp. 15.4	Stable Temp. 15.3	Ending Temp. 15.2
7-9-12	Time	Bubbler Start	Bubbler End	Comments: NTU = 0.25			
	1504	7.710'	7.650'				

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	632			1st Cond. 6,220	2nd Cond. 6,390	Stable Cond. 6,450	Ending Cond. 6,850
				1st pH 6.64	2nd pH 6.60	Stable pH 6.58	Ending pH 6.39
		46.10'	49.70'	1st Temp. 16.3	2nd Temp. 16.1	Stable Temp. 15.6	Ending Temp. 15.1
7-9-12	Time	Bubbler Start	Bubbler End	Comments: NTU = 2.09			
	1551	10.991'	7.276'				

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	624			1st Cond. 4,180	2nd Cond. 4,580	Stable Cond. 4,930	Ending Cond. 5,170
				1st pH 6.92	2nd pH 6.84	Stable pH 6.69	Ending pH 6.50
		52.20'	52.21'	1st Temp. 15.7	2nd Temp. 15.7	Stable Temp. 15.1	Ending Temp. 14.9
7-10-12	Time	Bubbler Start	Bubbler End	Comments: NTU = 0.19			
	0912	10.387'	10.538'	Turbidity secondary NTU std. verification check on 7–10–12 @ 0835: 5.82(5.83 std.), 57.3(57.3 std.) & 483(482 std.).			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	SBL-1			1st Cond. 6,710	2nd Cond. 6,990	Stable Cond. 7,120	Ending Cond. 6,900
				1st pH 6.93	2nd pH 6.89	Stable pH 6.87	Ending pH 6.41
		50.82'	51.71'	1st Temp. 16.5	2nd Temp. 16.2	Stable Temp. 15.5	Ending Temp. 15.7
7-10-12	Time	Bubbler Start	Bubbler End	Comments: NTU = 2.48			
	0955	3.957'	3.059'				

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	EPA-28			1st Cond. 4,000	2nd Cond. 4,230	Stable Cond. 4,460	Ending Cond. 4,700
				1st pH 7.49	2nd pH 7.46	Stable pH 7.13	Ending pH 6.71
		64.30'	64.70'	1st Temp. 17.5	2nd Temp. 17.0	Stable Temp. 16.8	Ending Temp. 15.7
7-10-12	Time	Bubbler Start	Bubbler End	Comments: NTU = 0.28			
	1040	6.163'	5.727'				

PH Standard Verification Check

STD.	PH Reading	Date/Time	Initial
-Buffer			
-Buffer			

(Quar. Performance Monitoring – Pg. 3 of 7)

GROUND WATER MONITORING FIELD DATA SHEET

Third QUARTER 2012

SAMPLING

Cond. Standard Verification Check

STD.	µS/cm Reading	Date/Time	Initial
1413 µS/cm			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
7-10-12	EPA-28 DUPLICATE	64.70'	64.75'	1st Cond. 4,720	2nd Cond. 4,740	Stable Cond. 4,800	Ending Cond. 4,640
				1st pH 6.71	2nd pH 6.72	Stable pH 6.72	Ending pH 6.73
				1st Temp. 15.7	2nd Temp. 15.6	Stable Temp. 15.5	Ending Temp. 15.4
	Time	Bubbler Start	Bubbler End	Comments: NTU = 0.26			
	1119	5.727'	5.673'				

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
7-10-12	613	79.50'	80.55'	1st Cond. 8,470	2nd Cond. 8,650	Stable Cond. 8,760	Ending Cond. 9,010
				1st pH 3.07	2nd pH 3.03	Stable pH 3.00	Ending pH 2.87
				1st Temp. 17.2	2nd Temp. 16.7	Stable Temp. 16.3	Ending Temp. 16.1
	Time	Bubbler Start	Bubbler End	Comments: NTU = 7.12			
	1208	5.308'	4.423'				

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
7-10-12	EPA-14	122.05'	122.20'	1st Cond. 4,730	2nd Cond. 4,800	Stable Cond. 4,940	Ending Cond. 5,090
				1st pH 4.27	2nd pH 4.27	Stable pH 4.28	Ending pH 4.21
				1st Temp. 17.3	2nd Temp. 17.3	Stable Temp. 16.9	Ending Temp. 17.8
	Time	Bubbler Start	Bubbler End	Comments: NTU = 234			
	1254	0.309'	0.220'				

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
7-10-12	GW-3	54.50'	56.20'	1st Cond. 4,280	2nd Cond. 4,440	Stable Cond. 4,660	Ending Cond. 4,660
				1st pH 7.12	2nd pH 7.07	Stable pH 6.96	Ending pH 6.96
				1st Temp. 18.4	2nd Temp. 18.5	Stable Temp. 18.0	Ending Temp. 18.0
	Time	Bubbler Start	Bubbler End	Comments: NTU = 6.60 Very slow discharge.			
	1400	1.148'	0.107'				

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
7-10-12	EPA-25	55.10'	55.20'	1st Cond. 3,320	2nd Cond. 3,500	Stable Cond. 3,780	Ending Cond. 4,280
				1st pH 6.84	2nd pH 6.82	Stable pH 6.80	Ending pH 6.73
				1st Temp. 19.8	2nd Temp. 18.9	Stable Temp. 18.7	Ending Temp. 16.0
	Time	Bubbler Start	Bubbler End	Comments: NTU = 2.23			
	1557	5.850'	5.735'				

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
7-10-12	627	59.60'	59.70'	1st Cond. 4,140	2nd Cond. 4,290	Stable Cond. 4,390	Ending Cond. 4,460
				1st pH 6.88	2nd pH 6.88	Stable pH 6.86	Ending pH 6.86
				1st Temp. 18.6	2nd Temp. 18.7	Stable Temp. 18.0	Ending Temp. 16.6
	Time	Bubbler Start	Bubbler End	Comments: NTU = 0.31			
	1651	2.977'	2.890'				

PH Standard Verification Check

STD.	PH Reading	Date/Time	Initial
4-Buffer	4.07	7-11-12/0821	mc
7-Buffer	7.01	7-11-12/0823	mc

(Quar. Performance Monitoring – Pg. 4 of 7)
GROUND WATER MONITORING FIELD DATA SHEET
Third QUARTER 2012
SAMPLING

Cond. Standard Verification Check

STD.	µS/cm Reading	Date/Time	Initial
1413 µS/cm	1510	7-11-12/0825	mc

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	614			1st Cond. 6,950	2nd Cond. 7,210	Stable Cond. 7,400	Ending Cond. 7,710
				1st pH 7.28	2nd pH 7.24	Stable pH 7.21	Ending pH 6.42
		104.65'	105.40'	1st Temp. 16.8	2nd Temp. 16.5	Stable Temp. 16.3	Ending Temp. 16.0
7-11-12	Time	Bubbler Start	Bubbler End	Comments: NTU = 8.96			
	0901	1.826'	1.084'	Turbidity secondary NTU std. verification ck. on 7-11-12 @ 0828: 5.78(5.83 std.), 57.2(57.3 std.) & 485(482 std.).			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	515-A			1st Cond. 8,610	2nd Cond. 8,560	Stable Cond. 8,700	Ending Cond. 8,750
				1st pH 7.40	2nd pH 7.38	Stable pH 7.28	Ending pH 5.97
		105.00'	112.20'	1st Temp. 15.7	2nd Temp. 15.4	Stable Temp. 15.2	Ending Temp. 15.5
7-11-12	Time	Bubbler Start	Bubbler End	Comments: NTU = 24.6			
	1000	7.962'	0.987'				

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	604			1st Cond. 5,280	2nd Cond. 5,720	Stable Cond. 5,910	Ending Cond. 5,980
				1st pH 5.89	2nd pH 5.88	Stable pH 5.84	Ending pH 5.24
		104.10'	104.80'	1st Temp. 16.6	2nd Temp. 16.4	Stable Temp. 15.9	Ending Temp. 15.7
7-11-12	Time	Bubbler Start	Bubbler End	Comments: NTU = 0.58			
	1043	5.405'	4.692'				

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	RINSATE			1st Cond. 45	2nd Cond.	Stable Cond.	Ending Cond.
				1st pH 7.53	2nd pH	Stable pH	Ending pH
				1st Temp. 25.8	2nd Temp.	Stable Temp.	Ending Temp.
7-11-12	Time	Bubbler Start	Bubbler End	Comments: NTU = 0.26			
	1123						

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	FIELD BLANK			1st Cond. 45	2nd Cond.	Stable Cond.	Ending Cond.
				1st pH 7.89	2nd pH	Stable pH	Ending pH
				1st Temp. 23.5	2nd Temp.	Stable Temp.	Ending Temp.
7-11-12	Time	Bubbler Start	Bubbler End	Comments: NTU = 0.27			
	1200						

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
				1st Cond.	2nd Cond.	Stable Cond.	Ending Cond.
				1st pH	2nd pH	Stable pH	Ending pH
				1st Temp.	2nd Temp.	Stable Temp.	Ending Temp.
	Time	Bubbler Start	Bubbler End	Comments:			

PH Standard Verification Check

STD.	PH Reading	Date/Time	Initial
4-Buffer	3.99	7-16-12/0934	[illegible]
7-Buffer	7.00	7-16-12/0933	[illegible]

(Quar. Performance Monitoring – Pg. 5 of 7)
GROUND WATER MONITORING FIELD DATA SHEET
Third QUARTER 2012
SAMPLING

Cond. Standard Verification Check

STD.	µS/cm Reading	Date/Time	Initial
1413 µS/cm	1435	7-16-12/0932	[illegible]

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	EPA-4			1st Cond. 3,730	2nd Cond. 3,880	Stable Cond. 3,950	Ending Cond. 3,570
				1st pH 7.52	2nd pH 7.57	Stable pH 7.59	Ending pH 6.55
		207.35'	207.82'	1st Temp. 16.3	2nd Temp. 15.7	Stable Temp. 15.2	Ending Temp. 17.7
7-16-12	Time	Bubbler Start	Bubbler End	Comments: NTU = 7.82			
	1012	15.389'	15.911'	Turbidity secondary NTU std. verification ck. on 7-16-12 @ 0935: 5.67(5.83 std.), 57.1(57.3 std.) & 482(482 std.).			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	EPA-5			1st Cond. 3,700	2nd Cond. 3,840	Stable Cond. 3,980	Ending Cond. 3,990
				1st pH 7.07	2nd pH 7.06	Stable pH 7.04	Ending pH 5.96
		125.80'	126.45'	1st Temp. 16.8	2nd Temp. 16.8	Stable Temp. 16.6	Ending Temp. 16.1
7-16-12	Time	Bubbler Start	Bubbler End	Comments: NTU = 0.24			
	1107	5.016'	5.371'				

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	EPA-7			1st Cond. 6,000	2nd Cond. 6,690	Stable Cond. 6,700	Ending Cond. 6,880
				1st pH 7.87	2nd pH 7.87	Stable pH 7.85	Ending pH 5.99
		115.50'	117.25'	1st Temp. 16.7	2nd Temp. 16.6	Stable Temp. 15.9	Ending Temp. 15.7
7-16-12	Time	Bubbler Start	Bubbler End	Comments: NTU = 0.37			
	1150	11.600'	9.854'				

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	EPA-2			1st Cond. 2,630	2nd Cond. 2,710	Stable Cond. 2,830	Ending Cond. 2,880
				1st pH 7.42	2nd pH 7.44	Stable pH 7.43	Ending pH 6.68
		173.80'	174.60'	1st Temp. 16.1	2nd Temp. 15.2	Stable Temp. 15.0	Ending Temp. 14.9
7-16-12	Time	Bubbler Start	Bubbler End	Comments: NTU = 22.7			
	1245	7.681'	6.911'				

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	EPA-2			1st Cond. 2,880	2nd Cond. 2,940	Stable Cond. 2,910	Ending Cond. 3,030
	DUPLICATE			1st pH 6.68	2nd pH 6.68	Stable pH 6.68	Ending pH 6.73
		174.60'	174.75'	1st Temp. 14.7	2nd Temp. 14.5	Stable Temp. 14.4	Ending Temp. 14.5
7-16-12	Time	Bubbler Start	Bubbler End	Comments: NTU = 26.9			
	1315	6.911'	6.579'				

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	517			1st Cond. 4,420	2nd Cond. 4,900	Stable Cond. 5,040	Ending Cond. 4,800
				1st pH 2.92	2nd pH 2.85	Stable pH 2.81	Ending pH 3.50
		104.00'	110.55'	1st Temp. 17.4	2nd Temp. 17.0	Stable Temp. 16.4	Ending Temp. 16.5
7-16-12	Time	Bubbler Start	Bubbler End	Comments: NTU = 0.89			
	1348	2.599'	0.255'				

PH Standard Verification Check

STD.	PH Reading	Date/Time	Initial
4-Buffer	4.03	7-17-12/0816	[illegible]
7-Buffer	7.05	7-17-12/0815	[illegible]

(Quar. Performance Monitoring – Pg. 6 of 7)
GROUND WATER MONITORING FIELD DATA SHEET
Third QUARTER 2012
SAMPLING

Cond. Standard Verification Check

STD.	µS/cm Reading	Date/Time	Initial
1413 µS/cm	1447	7-17-12/0817	[illegible]

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	708			1st Cond. 4,340	2nd Cond. 4,780	Stable Cond. 5,110	Ending Cond. 4,960
				1st pH 2.74	2nd pH 2.72	Stable pH 2.69	Ending pH 3.56
		155.10'	156.30'	1st Temp. 17.6	2nd Temp. 17.5	Stable Temp. 16.9	Ending Temp. 15.9
7-16-12	Time	Bubbler Start	Bubbler End	Comments: NTU = 2.86			
	1433	3.419'	3.275'				

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	EPA-13			1st Cond. 4,860	2nd Cond. 5,220	Stable Cond. 5,550	Ending Cond. 5,670
				1st pH 6.65	2nd pH 6.72	Stable pH 6.79	Ending pH 5.86
		167.75'	168.80'	1st Temp. 17.7	2nd Temp. 17.3	Stable Temp. 16.5	Ending Temp. 16.4
7-16-12	Time	Bubbler Start	Bubbler End	Comments: NTU = 11.8			
	1521	4.112'	2.926'				

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	711			1st Cond. 4,020	2nd Cond. 4,240	Stable Cond. 4,310	Ending Cond. 4,170
				1st pH 3.11	2nd pH 3.10	Stable pH 3.09	Ending pH 4.72
		182.60'	183.70'	1st Temp. 15.1	2nd Temp. 14.8	Stable Temp. 14.7	Ending Temp. 14.5
7-17-12	Time	Bubbler Start	Bubbler End	Comments: NTU = 4.32			
	0831	9.528'	8.424'	Turbidity secondary NTU std. verification ck. on 7-17-12 @ 0818: 5.67(5.83 std.), 57.4(57.3 std.) & 484(482 std.).			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	711			1st Cond. 4,190	2nd Cond. 4,220	Stable Cond. 4,240	Ending Cond. 4,170
	DUPLICATE			1st pH 4.74	2nd pH 4.74	Stable pH 4.75	Ending pH 4.83
		183.70'	184.31'	1st Temp. 14.3	2nd Temp. 14.3	Stable Temp. 14.2	Ending Temp. 14.4
7-17-12	Time	Bubbler Start	Bubbler End	Comments: NTU = 5.82			
	0906	8.424'	7.185'				

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	719			1st Cond. 3,930	2nd Cond. 4,580	Stable Cond. 4,860	Ending Cond. 4,930
				1st pH 4.03	2nd pH 4.03	Stable pH 4.01	Ending pH 5.59
		169.30'	169.70'	1st Temp. 16.8	2nd Temp. 16.8	Stable Temp. 16.3	Ending Temp. 15.7
7-17-12	Time	Bubbler Start	Bubbler End	Comments: NTU = 39.6			
	0945	0.324'	0.338'				

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	420			1st Cond. 2,940	2nd Cond. 2,960	Stable Cond. 3,160	Ending Cond. 3,240
				1st pH 7.35	2nd pH 7.37	Stable pH 7.39	Ending pH 6.53
		152.35'	153.20'	1st Temp. 17.0	2nd Temp. 16.4	Stable Temp. 15.8	Ending Temp. 16.5
7-17-12	Time	Bubbler Start	Bubbler End	Comments: NTU = 35.3			
	1025	2.101'	1.306'				

PH Standard Verification Check

STD.	PH Reading	Date/Time	Initial
4-Buffer			
7-Buffer			

(Quar. Performance Monitoring – Pg. 7 of 7)

GROUND WATER MONITORING FIELD DATA SHEET

Third QUARTER 2012

SAMPLING

Cond. Standard Verification Check

STD.	µS/cm Reading	Date/Time	Initial
1413 µS/cm			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	717			1st Cond. 4,800	2nd Cond. 4,900	Stable Cond. 5,130	Ending Cond. 5,120
				1st pH 4.15	2nd pH 4.14	Stable pH 4.14	Ending pH 4.11
		131.70'	131.85'	1st Temp. 17.6	2nd Temp. 16.5	Stable Temp. 16.4	Ending Temp. 15.4
7-17-12	Time	Bubbler Start	Bubbler End	Comments: NTU = 1.23			
	1110	0.225'	0.222'				

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	TWQ-142			1st Cond. 1,671	2nd Cond. 1,764	Stable Cond. 1,688	Ending Cond. 1,795
				1st pH 7.43	2nd pH 7.41	Stable pH 7.40	Ending pH 7.83
		201.50'	201.95'	1st Temp. 18.0	2nd Temp. 17.2	Stable Temp. 16.9	Ending Temp. 17.0
7-17-12	Time	Bubbler Start	Bubbler End	Comments: NTU = 1.99			
	1205	19.298'	18.850'				

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	NBL-1			1st Cond. 2,660	2nd Cond. 2,640	Stable Cond. 2,620	Ending Cond. 5,130
				1st pH 4.67	2nd pH 4.80	Stable pH 4.83	Ending pH 3.04
		188.24'	188.50'	1st Temp. 24.0	2nd Temp. 22.6	Stable Temp. 21.5	Ending Temp. 17.0
7-17-12	Time	Bubbler Start	Bubbler End	Comments: NTU = 595			
	1341	4.014'	3.784'				

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	RINSATE			1st Cond. 46	2nd Cond.	Stable Cond.	Ending Cond.
				1st pH 8.24	2nd pH	Stable pH	Ending pH
				1st Temp. 29.8	2nd Temp.	Stable Temp.	Ending Temp.
7-17-12	Time	Bubbler Start	Bubbler End	Comments: NTU = 0.31			
	1651						

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	FIELD BLANK			1st Cond. 51	2nd Cond.	Stable Cond.	Ending Cond.
				1st pH 7.64	2nd pH	Stable pH	Ending pH
				1st Temp. 26.8	2nd Temp.	Stable Temp.	Ending Temp.
7-17-12	Time	Bubbler Start	Bubbler End	Comments: NTU = 0.41			
	1700						

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
				1st Cond.	2nd Cond.	Stable Cond.	Ending Cond.
				1st pH	2nd pH	Stable pH	Ending pH
				1st Temp.	2nd Temp.	Stable Temp.	Ending Temp.
	Time	Bubbler Start	Bubbler End	Comments:			

PH Standard Verification Check

STD.	PH Reading	Date/Time	Initial
4-Buffer	4.03	7-17-12/0816	rc
7-Buffer	7.05	7-17-12/0815	rc

(Monthly/Quar. Supplemental – Pg. 1 of 2)
GROUND WATER MONITORING FIELD DATA SHEET
Third **QUARTER 2012**
SAMPLING

Cond. Standard Verification Check

STD.	µS/cm Reading	Date/Time	Initial
1413 µS/cm	1447	7-17-12/0817	rc

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
				1st Cond. 2,830	2nd Cond. 3,200	Stable Cond. 3,310	Ending Cond. 3,480
	NBL-2			1st pH 7.65	2nd pH 7.68	Stable pH 7.70	Ending pH 6.54
		162.75'	163.00'	1st Temp. 16.4	2nd Temp. 16.3	Stable Temp. 15.5	Ending Temp. 14.5
7-17-12	Time	Bubbler Start	Bubbler End	Comments: NTU = 0.27			
	1147	0.847'	0.615'				

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
				1st Cond. 2,980	2nd Cond. 3,330	Stable Cond. 3,390	Ending Cond. 3,560
	PB-3			1st pH 7.50	2nd pH 7.55	Stable pH 7.59	Ending pH 6.41
		185.80'	186.00'	1st Temp. 18.1	2nd Temp. 18.1	Stable Temp. 17.6	Ending Temp. 16.8
7-17-12	Time	Bubbler Start	Bubbler End	Comments: NTU = 18.0			
	1432						

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
				1st Cond. 5,350	2nd Cond. 5,430	Stable Cond. 5,580	Ending Cond. 5,630
	PB-4			1st pH 2.69	2nd pH 2.64	Stable pH 2.62	Ending pH 2.68
		185.55'	186.00'	1st Temp. 18.5	2nd Temp. 18.2	Stable Temp. 17.8	Ending Temp. 17.2
7-17-12	Time	Bubbler Start	Bubbler End	Comments: NTU = 324			
	1447						

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
				1st Cond. 3,390	2nd Cond. 3,600	Stable Cond. 3,690	Ending Cond. 3,670
	MW-6			1st pH 7.47	2nd pH 7.45	Stable pH 7.39	Ending pH 6.81
		192.15'	192.60'	1st Temp. 20.1	2nd Temp. 19.5	Stable Temp. 18.4	Ending Temp. 18.4
7-17-12	Time	Bubbler Start	Bubbler End	Comments:			
	1510						

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
				1st Cond. 2,710	2nd Cond. 3,180	Stable Cond. 3,310	Ending Cond. 3,420
	MW-7			1st pH 7.56	2nd pH 7.57	Stable pH 7.57	Ending pH 6.41
		189.10'	189.30'	1st Temp. 20.8	2nd Temp. 19.9	Stable Temp. 19.9	Ending Temp. 17.8
7-17-12	Time	Bubbler Start	Bubbler End	Comments: NTU = 31.2			
	1618						

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
				1st Cond. 4,020	2nd Cond. 4,070	Stable Cond. 4,090	Ending Cond. 4,100
	NW-1			1st pH 6.54	2nd pH 6.58	Stable pH 6.60	Ending pH 6.61
		197.00'	197.30'	1st Temp. 19.7	2nd Temp. 19.7	Stable Temp. 19.5	Ending Temp. 19.3
7-17-12	Time	Bubbler Start	Bubbler End	Comments: NTU = 0.88			
	1236						

PH Standard Verification Check

STD.	PH Reading	Date/Time	Initial
4-Buffer			
7-Buffer			

(Monthly/Quar. Supplemental – Pg. 2 of 2)

GROUND WATER MONITORING FIELD DATA SHEET

Third QUARTER 2012

SAMPLING

Cond. Standard Verification Check

STD.	µS/cm Reading	Date/Time	Initial
1413 µS/cm			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
7-17-12	NW-4	191.95'	192.25'	1st Cond. 4,310	2nd Cond. 4,340	Stable Cond. 4,340	Ending Cond. 4,340
				1st pH 6.16	2nd pH 6.06	Stable pH 6.04	Ending pH 6.03
				1st Temp. 19.4	2nd Temp. 19.4	Stable Temp. 19.4	Ending Temp. 19.4
	Time 1247	Bubbler Start	Bubbler End	Comments: NTU = 1.53			
7-17-12	NW-2	191.94'	191.45'	1st Cond. 3,560	2nd Cond. 3,660	Stable Cond. 3,680	Ending Cond. 3,690
				1st pH 6.55	2nd pH 6.53	Stable pH 6.51	Ending pH 6.50
				1st Temp. 15.0	2nd Temp. 14.9	Stable Temp. 14.9	Ending Temp. 14.8
	Time 1256	Bubbler Start	Bubbler End	Comments: NTU = 197			
7-17-12	NW-5	182.45'	183.00'	1st Cond. 3,440	2nd Cond. 3,640	Stable Cond. 3,710	Ending Cond. 3,740
				1st pH 6.97	2nd pH 6.92	Stable pH 6.92	Ending pH 6.91
				1st Temp. 14.4	2nd Temp. 14.2	Stable Temp. 14.0	Ending Temp. 13.8
	Time 1313	Bubbler Start	Bubbler End	Comments: NTU = 26.2			
7-17-12	NW-3	182.60'	184.45'	1st Cond. 3,520	2nd Cond. 3,630	Stable Cond. 3,640	Ending Cond. 3,660
				1st pH 6.77	2nd pH 6.70	Stable pH 6.67	Ending pH 6.66
				1st Temp. 14.1	2nd Temp. 13.9	Stable Temp. 13.8	Ending Temp. 13.7
	Time 1325	Bubbler Start	Bubbler End	Comments: NTU = 320			
7-17-12	PB-2	184.80'	185.55'	1st Cond. 4,640	2nd Cond. 4,630	Stable Cond. 4,610	Ending Cond. 4,610
				1st pH 6.06	2nd pH 5.89	Stable pH 5.86	Ending pH 5.85
				1st Temp. 22.2	2nd Temp. 22.3	Stable Temp. 22.3	Ending Temp. 22.4
	Time 1337	Bubbler Start	Bubbler End	Comments: NTU = 5.79			
7-17-12	RW-A	172.20'	172.70'	1st Cond. 3,790	2nd Cond. 3,910	Stable Cond. 3,940	Ending Cond. 3,950
				1st pH 6.45	2nd pH 6.39	Stable pH 6.37	Ending pH 6.36
				1st Temp. 16.1	2nd Temp. 16.0	Stable Temp. 16.0	Ending Temp. 15.9
	Time 1350	Bubbler Start	Bubbler End	Comments: NTU = 8.16			

PH Standard Verification Check

STD.	PH Reading	Date/Time	Initial
4-Buffer	4.05	10-8-12/0919	mc
7-Buffer	7.01	10-8-12/0918	mc

(Quar. Performance Monitoring – Pg. 1 of 7)
GROUND WATER MONITORING FIELD DATA SHEET
Fourth QUARTER 2012
SAMPLING

Cond. Standard Verification Check

STD.	µS/cm Reading	Date/Time	Initial
1413 µS/cm	1433	10-8-12/0920	mc

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	509-D			1st Cond. 5,560	2nd Cond. 5,700	Stable Cond. 6,070	Ending Cond. 6,160
				1st pH 6.92	2nd pH 6.91	Stable pH 6.84	Ending pH 6.46
		80.45'	80.55'	1st Temp. 14.2	2nd Temp. 14.0	Stable Temp. 13.9	Ending Temp. 14.5
10-8-12	Time	Bubbler Start	Bubbler End	Comments:	Conductivity is in uS/cm Temperature is in °C pH is in std. units	Turbidity is in NTU	
	1000	0.200'	0.210'	NTU = 2.15			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	EPA-23			1st Cond. 2,520	2nd Cond. 4,120	Stable Cond. 4,180	Ending Cond. 4,210
				1st pH 7.01	2nd pH 6.96	Stable pH 6.84	Ending pH 6.68
		57.15'	57.45'	1st Temp. 15.3	2nd Temp. 14.6	Stable Temp. 14.5	Ending Temp. 15.0
10-8-12	Time	Bubbler Start	Bubbler End	Comments: NTU = 31.8			
	1043	4.820'	4.662'	Turbidity secondary NTU std. verification on 10–8–12 @ 0925: 5.50(5.54 std.), 56.9(56.8 std.) & 481(480 std.).			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	803			1st Cond. 2,520	2nd Cond. 5,900	Stable Cond. 5,980	Ending Cond. 5,960
				1st pH 6.57	2nd pH 6.57	Stable pH 6.57	Ending pH 6.53
		64.05'	64.20'	1st Temp. 15.6	2nd Temp. 15.9	Stable Temp. 15.2	Ending Temp. 15.4
10-8-12	Time	Bubbler Start	Bubbler End	Comments: NTU = 2.71			
	1127	12.720'	12.604'				

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	808			1st Cond. 2,510	2nd Cond. 6,240	Stable Cond. 6,250	Ending Cond. 6,320
				1st pH 6.53	2nd pH 6.53	Stable pH 6.52	Ending pH 6.50
		51.40'	51.50'	1st Temp. 15.0	2nd Temp. 15.0	Stable Temp. 14.9	Ending Temp. 15.7
10-8-12	Time	Bubbler Start	Bubbler End	Comments: NTU = 3.60			
	1206	12.216'	12.120'				

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	802			1st Cond. 5,570	2nd Cond. 6,160	Stable Cond. 6,370	Ending Cond. 6,400
				1st pH 6.62	2nd pH 6.60	Stable pH 6.59	Ending pH 6.55
		49.70'	49.75'	1st Temp. 17.6	2nd Temp. 17.3	Stable Temp. 16.6	Ending Temp. 16.3
10-8-12	Time	Bubbler Start	Bubbler End	Comments: NTU = 0.55			
	1251	18.053'	18.013'				

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	801			1st Cond. 5,580	2nd Cond. 5,640	Stable Cond. 5,730	Ending Cond. 5,910
				1st pH 6.68	2nd pH 6.65	Stable pH 6.64	Ending pH 6.57
		53.50'	54.75'	1st Temp. 16.9	2nd Temp. 16.5	Stable Temp. 16.2	Ending Temp. 15.6
10-8-12	Time	Bubbler Start	Bubbler End	Comments: NTU = 1.97			
	1333	8.284'	6.962'				

PH Standard Verification Check

STD.	PH Reading	Date/Time	Initial
4-Buffer	4.07	10-9-12/0910	[illegible]
7-Buffer	7.01	10-9-12/0907	[illegible]

(Quar. Performance Monitoring – Pg. 2 of 7)

GROUND WATER MONITORING FIELD DATA SHEET

Fourth QUARTER 2012

SAMPLING

Cond. Standard Verification Check

STD.	µS/cm Reading	Date/Time	Initial
1413 µS/cm	1438	10-9-12/0911	[illegible]

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
10-8-12	GW-2	57.60'	58.32'	1st Cond. 6,810	2nd Cond. 7,000	Stable Cond. 7,190	Ending Cond. 7,550
				1st pH 6.92	2nd pH 6.86	Stable pH 6.12	Ending pH 6.39
				1st Temp. 17.3	2nd Temp. 16.7	Stable Temp. 16.5	Ending Temp. 15.7
	Time	Bubbler Start	Bubbler End	Comments: NTU = 0.76			
	1421	13.222'	12.463'				

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
10-8-12	GW-1	63.30'	63.40'	1st Cond. 5,050	2nd Cond. 5,180	Stable Cond. 5,390	Ending Cond. 6,250
				1st pH 7.40	2nd pH 7.26	Stable pH 7.06	Ending pH 6.61
				1st Temp. 17.3	2nd Temp. 16.9	Stable Temp. 16.4	Ending Temp. 15.1
	Time	Bubbler Start	Bubbler End	Comments: NTU = 0.46			
	1515	3.410'	3.307'				

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
10-8-12	632	46.30'	50.30'	1st Cond. 5,030	2nd Cond. 5,950	Stable Cond. 6,140	Ending Cond. 6,520
				1st pH 6.75	2nd pH 6.72	Stable pH 6.69	Ending pH 6.51
				1st Temp. 17.8	2nd Temp. 17.5	Stable Temp. 17.2	Ending Temp. 16.1
	Time	Bubbler Start	Bubbler End	Comments: NTU = 1.45			
	1610	10.748'	6.688'				

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
10-9-12	624	52.30'	52.40'	1st Cond. 4,380	2nd Cond. 4,440	Stable Cond. 4,890	Ending Cond. 4,860
				1st pH 7.37	2nd pH 7.30	Stable pH 6.99	Ending pH 6.70
				1st Temp. 14.0	2nd Temp. 13.8	Stable Temp. 13.6	Ending Temp. 14.2
	Time	Bubbler Start	Bubbler End	Comments: NTU = 0.18			
	0942	10.255'	10.210'	Turbidity secondary NTU std. verification on 10–9–12 @ 0815: 5.56(5.54 std.), 57.1(56.8 std.) & 482(480 std.).			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
10-9-12	SBL-1	50.70'	51.65'	1st Cond. 6,210	2nd Cond. 6,370	Stable Cond. 6,640	Ending Cond. 6,940
				1st pH 7.07	2nd pH 6.98	Stable pH 6.87	Ending pH 6.72
				1st Temp. 15.0	2nd Temp. 14.8	Stable Temp. 14.6	Ending Temp. 14.6
	Time	Bubbler Start	Bubbler End	Comments: NTU = 1.86			
	1025	2.344'	2.982'				

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
10-9-12	EPA-28	64.50'	64.95'	1st Cond. 3,720	2nd Cond. 3,920	Stable Cond. 4,370	Ending Cond. 4,330
				1st pH 7.30	2nd pH 7.23	Stable pH 7.04	Ending pH 6.79
				1st Temp. 16.7	2nd Temp. 16.4	Stable Temp. 15.8	Ending Temp. 15.5
	Time	Bubbler Start	Bubbler End	Comments: NTU = 0.42			
	1112	5.943'	5.493'				

PH Standard Verification Check

STD.	PH Reading	Date/Time	Initial
4-Buffer			
7-Buffer			

(Quar. Performance Monitoring – Pg. 3 of 7)
GROUND WATER MONITORING FIELD DATA SHEET
Fourth QUARTER 2012
SAMPLING

Cond. Standard Verification Check

STD.	µS/cm Reading	Date/Time	Initial
1413 µS/cm			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
				1st Cond. 4,490	2nd Cond. 4,530	Stable Cond. 4,510	Ending Cond. 4,540
	EPA-28			1st pH 6.78	2nd pH 6.78	Stable pH 6.78	Ending pH 6.80
	DUPLICATE	64.95'	64.70'	1st Temp. 15.3	2nd Temp. 15.3	Stable Temp. 14.9	Ending Temp. 14.8
10-9-12	Time	Bubbler Start	Bubbler End	Comments: NTU = 0.64			
	1152	5.493'	5.420'				

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
				1st Cond. 7,180	2nd Cond. 8,030	Stable Cond. 8,410	Ending Cond. 8,510
	613			1st pH 3.05	2nd pH 3.02	Stable pH 2.98	Ending pH 2.88
		79.55'	80.55'	1st Temp. 18.0	2nd Temp. 17.3	Stable Temp. 16.0	Ending Temp. 15.5
10-9-12	Time	Bubbler Start	Bubbler End	Comments: NTU= 101			
	1255	5.284'	4.279'				

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
				1st Cond. 3,900	2nd Cond. 4,420	Stable Cond. 4,750	Ending Cond. 4,750
	EPA-14			1st pH 4.27	2nd pH 4.28	Stable pH 4.29	Ending pH 4.29
		122.35'	122.45'	1st Temp. 18.1	2nd Temp. 17.3	Stable Temp. 16.9	Ending Temp. 16.9
10-9-12	Time	Bubbler Start	Bubbler End	Comments: NTU= 2.64			
	1340	0.216'	0.122'				

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
				1st Cond. 5,040	2nd Cond. 5,040	Stable Cond. 5,050	Ending Cond. 5,050
	GW-3			1st pH 6.57	2nd pH 6.57	Stable pH 6.58	Ending pH 6.58
		54.75'	56.85'	1st Temp. 17.1	2nd Temp. 17.3	Stable Temp. 17.4	Ending Temp. 17.5
10-9-12	Time	Bubbler Start	Bubbler End	Comments: NTU= 5.60			
	1457	0.885'	0.122'	Very slow discharge, needs total inspection on line and pump.			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
				1st Cond. 3,390	2nd Cond. 3,500	Stable Cond. 3,600	Ending Cond. 4,150
	EPA-25			1st pH 7.09	2nd pH 7.05	Stable pH 7.01	Ending pH 6.86
		55.20'	55.30'	1st Temp. 16.9	2nd Temp. 16.8	Stable Temp. 16.4	Ending Temp. 15.0
10-9-12	Time	Bubbler Start	Bubbler End	Comments: NTU=1.99			
	1648	5.773'	5.265'				

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
				1st Cond. 3,820	2nd Cond. 4,080	Stable Cond. 4,210	Ending Cond. 4,440
	627			1st pH 7.22	2nd pH 7.17	Stable pH 7.13	Ending pH 7.03
		59.70'	59.75'	1st Temp. 16.5	2nd Temp. 16.6	Stable Temp. 15.8	Ending Temp. 13.9
10-9-12	Time	Bubbler Start	Bubbler End	Comments: NTU= 0.35			
	1744	2.937'	2.851'				

PH Standard Verification Check

STD.	PH Reading	Date/Time	Initial
4-Buffer	4.05	10-10-12/0810	[illegible]
7-Buffer	7.04	10-10-12/0805	[illegible]

(Quar. Performance Monitoring – Pg. 4 of 7)

GROUND WATER MONITORING FIELD DATA SHEET

Fourth QUARTER 2012

SAMPLING

Cond. Standard Verification Check

STD.	µS/cm Reading	Date/Time	Initial
1413 µS/cm	1432	10-10-12/0808	[illegible]

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	614			1st Cond. 6,970	2nd Cond. 7,080	Stable Cond. 7,370	Ending Cond. 7,550
				1st pH 7.05	2nd pH 7.03	Stable pH 6.90	Ending pH 6.52
		104.55'	105.40'	1st Temp. 13.1	2nd Temp. 13.1	Stable Temp. 12.8	Ending Temp. 13.7
10-10-12	Time	Bubbler Start	Bubbler End	Comments: NTU = 2.16			
	0830	1.816'	0.479'	Turbidity secondary NTU std. verification on 10–10–12 @ 0812: 5.59(5.54 std.), 57.0(56.8 std.) & 484(480 std.).			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	515-A			1st Cond. 6,400	2nd Cond. 7,810	Stable Cond. 8,410	Ending Cond. 8,680
				1st pH 6.10	2nd pH 6.09	Stable pH 6.08	Ending pH 6.04
		105.15'	112.70'	1st Temp. 14.4	2nd Temp. 14.2	Stable Temp. 14.0	Ending Temp. 14.3
10-10-12	Time	Bubbler Start	Bubbler End	Comments: NTU = 2.04			
	0941	7.867'	0.448'				

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	604			1st Cond. 5,490	2nd Cond. 5,600	Stable Cond. 5,730	Ending Cond. 5,670
				1st pH 5.39	2nd pH 5.38	Stable pH 5.37	Ending pH 5.31
		104.05'	104.90'	1st Temp. 15.0	2nd Temp. 14.8	Stable Temp. 14.6	Ending Temp. 14.3
10-10-12	Time	Bubbler Start	Bubbler End	Comments: NTU = 0.27			
	1030	5.366'	4.534'				

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	RINSATE			1st Cond. 3	2nd Cond.	Stable Cond.	Ending Cond.
				1st pH 6.52	2nd pH	Stable pH	Ending pH
				1st Temp. 16.4	2nd Temp.	Stable Temp.	Ending Temp.
10-10-12	Time	Bubbler Start	Bubbler End	Comments: NTU = 0.68			
	1111						

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	FIELD BLANK			1st Cond. 3	2nd Cond.	Stable Cond.	Ending Cond.
				1st pH 7.92	2nd pH	Stable pH	Ending pH
				1st Temp. 17.9	2nd Temp.	Stable Temp.	Ending Temp.
10-10-12	Time	Bubbler Start	Bubbler End	Comments: NTU = 0.15			
	1205						

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
				1st Cond.	2nd Cond.	Stable Cond.	Ending Cond.
				1st pH	2nd pH	Stable pH	Ending pH
				1st Temp.	2nd Temp.	Stable Temp.	Ending Temp.
	Time	Bubbler Start	Bubbler End	Comments:			

PH Standard Verification Check

STD.	PH Reading	Date/Time	Initial
4-Buffer	4.05	10-15-12/0759	rc
7-Buffer	7.01	10-15-12/0758	rc

(Quar. Performance Monitoring – Pg. 5 of 7)
GROUND WATER MONITORING FIELD DATA SHEET
Fourth QUARTER 2012
SAMPLING

Cond. Standard Verification Check

STD.	µS/cm Reading	Date/Time	Initial
1413 µS/cm	1455	10-15-12/0800	rc

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
10-15-12	EPA-4	207.51'	207.97'	1st Cond. 3,930	2nd Cond. 3,980	Stable Cond. 4,000	Ending Cond. 4,080
				1st pH 7.41	2nd pH 7.48	Stable pH 7.54	Ending pH 6.85
				1st Temp. 13.1	2nd Temp. 13.0	Stable Temp. 12.8	Ending Temp. 13.5
	Time	Bubbler Start	Bubbler End	Comments: NTU = 9.40			
	0853	15.388'	14.910'	Turbidity secondary NTU std. verification on 10–15–12 @ 0750: 5.48(5.54 std.), 56.9(56.8 std.) & 484(480 std.).			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
10-15-12	EPA-5	125.95'	126.60'	1st Cond. 3,430	2nd Cond. 3,760	Stable Cond. 3,900	Ending Cond. 3,850
				1st pH 6.44	2nd pH 6.42	Stable pH 6.40	Ending pH 6.11
				1st Temp. 15.3	2nd Temp. 15.1	Stable Temp. 14.8	Ending Temp. 15.2
	Time	Bubbler Start	Bubbler End	Comments: NTU = 0.35			
	0954	4.879'	4.234'				

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
10-15-12	EPA-7	115.60'	117.43'	1st Cond. 5,530	2nd Cond. 6,540	Stable Cond. 6,680	Ending Cond. 6,710
				1st pH 7.48	2nd pH 7.50	Stable pH 7.48	Ending pH 6.11
				1st Temp. 15.5	2nd Temp. 15.4	Stable Temp. 15.0	Ending Temp. 15.3
	Time	Bubbler Start	Bubbler End	Comments: NTU = 0.58			
	1037	11.400'	9.784'				

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
10-15-12	EPA-2	173.90'	174.68'	1st Cond. 2,210	2nd Cond. 2,570	Stable Cond. 2,850	Ending Cond. 2,710
				1st pH 7.39	2nd pH 7.42	Stable pH 7.44	Ending pH 6.93
				1st Temp. 15.9	2nd Temp. 15.4	Stable Temp. 14.8	Ending Temp. 14.5
	Time	Bubbler Start	Bubbler End	Comments: NTU = 21.3			
	1127	7.599'	6.800'				

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
10-15-12	EPA-2 DUPLICATE	174.68'	174.82'	1st Cond. 2,760	2nd Cond. 2,770	Stable Cond. 2,780	Ending Cond. 2,560
				1st pH 6.91	2nd pH 6.90	Stable pH 6.90	Ending pH 6.93
				1st Temp. 14.0	2nd Temp. 14.1	Stable Temp. 14.0	Ending Temp. 15.0
	Time	Bubbler Start	Bubbler End	Comments: NTU = 32.0			
	1205	6.800'	6.696'				

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
10-15-12	517	104.15'	111.10'	1st Cond. 3,950	2nd Cond. 4,750	Stable Cond. 4,840	Ending Cond. 4,770
				1st pH 2.85	2nd pH 2.87	Stable pH 2.88	Ending pH 3.56
				1st Temp. 17.1	2nd Temp. 17.0	Stable Temp. 16.7	Ending Temp. 16.6
	Time	Bubbler Start	Bubbler End	Comments: NTU = 0.65			
	1236	2.537'	0.301'				

PH Standard Verification Check

STD.	PH Reading	Date/Time	Initial
4-Buffer	3.99	10-16-12/0815	[illegible]
7-Buffer	7.03	10-16-12/0810	[illegible]

(Quar. Performance Monitoring – Pg. 6 of 7)

GROUND WATER MONITORING FIELD DATA SHEET

Fourth QUARTER 2012

SAMPLING

Cond. Standard Verification Check

STD.	µS/cm Reading	Date/Time	Initial
1413 µS/cm	1460	10-16-12/0816	[illegible]

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
10-15-12	708	155.30'	156.45'	1st Cond. 4,630	2nd Cond. 5,020	Stable Cond. 5,170	Ending Cond. 5,010
	Time	Bubbler Start	Bubbler End	1st pH 2.85	2nd pH 2.82	Stable pH 2.78	Ending pH 3.54
	1324	3.277'	2.136'	1st Temp. 17.0	2nd Temp. 16.7	Stable Temp. 16.4	Ending Temp. 15.8
				Comments: NTU= 9.30			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
10-15-12	EPA-13	167.80'	168.80'	1st Cond. 5,280	2nd Cond. 5,510	Stable Cond. 5,550	Ending Cond. 5,700
	Time	Bubbler Start	Bubbler End	1st pH 6.60	2nd pH 6.62	Stable pH 6.64	Ending pH 6.05
	1431	3.980'	2.753'	1st Temp. 17.3	2nd Temp. 16.8	Stable Temp. 16.6	Ending Temp. 16.3
				Comments: NTU=6.30			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
10-15-12	711	182.55'	183.00'	1st Cond. 3,820	2nd Cond. 3,910	Stable Cond. 3,990	Ending Cond. 4,160
	Time	Bubbler Start	Bubbler End	1st pH 3.70	2nd pH 3.73	Stable pH 3.77	Ending pH 5.07
	1516	9.502'	9.050'	1st Temp. 18.1	2nd Temp. 17.8	Stable Temp. 17.5	Ending Temp. 16.2
				Comments: NTU= 34.1	Bladder pump ruptured @ 1415 and was replaced but needs further inspection due to air pockets.		

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
10-16-12	719	169.30'	170.00'	1st Cond. 3,880	2nd Cond. 4,610	Stable Cond. 4,810	Ending Cond. 4,800
	Time	Bubbler Start	Bubbler End	1st pH 5.49	2nd pH 5.50	Stable pH 5.51	Ending pH 5.76
	0845	0.345'	0.407'	1st Temp. 13.6	2nd Temp. 13.5	Stable Temp. 13.4	Ending Temp. 14.2
				Comments: NTU= 28.9			

Turbidity secondary NTU std. verification on 10–16–12 @ 0810: 5.65(5.54 std.), 57.1(56.8 std.) & 482(480 std.).

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
10-16-12	420	152.60'	153.50'	1st Cond. 2,980	2nd Cond. 3,130	Stable Cond. 3,170	Ending Cond. 3,230
	Time	Bubbler Start	Bubbler End	1st pH 7.37	2nd pH 7.39	Stable pH 7.41	Ending pH 6.72
	0930	1.894'	1.118'	1st Temp. 13.8	2nd Temp. 13.7	Stable Temp. 13.5	Ending Temp. 14.9
				Comments: NTU=37.3			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
10-16-12	717	131.83'	132.00'	1st Cond. 3,990	2nd Cond. 4,910	Stable Cond. 5,040	Ending Cond. 5,180
	Time	Bubbler Start	Bubbler End	1st pH 4.32	2nd pH 4.32	Stable pH 4.31	Ending pH 4.22
	1030	0.257'	0.272'	1st Temp. 14.8	2nd Temp. 14.6	Stable Temp. 14.2	Ending Temp. 14.7
				Comments: NTU = 1.34			

PH Standard Verification Check

STD.	PH Reading	Date/Time	Initial
4-Buffer	4.01	10-17-12/0800	MZ
7-Buffer	7.00	10-17-12/0756	MZ

(Quar. Performance Monitoring – Pg. 7 of 7)

GROUND WATER MONITORING FIELD DATA SHEET

Fourth QUARTER 2012

SAMPLING

Cond. Standard Verification Check

STD.	µS/cm Reading	Date/Time	Initial
1413 µS/cm	1459	10-17-12/0758	MZ

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	717			1st Cond. 5,180	2nd Cond. 5,190	Stable Cond. 5,190	Ending Cond. 5,090
	DUPLICATE	132.00'	132.00'	1st pH 4.22	2nd pH 4.23	Stable pH 4.23	Ending pH 4.21
10-16-12				1st Temp. 14.2	2nd Temp. 14.2	Stable Temp. 14.0	Ending Temp. 15.4
	Time	Bubbler Start	Bubbler End	Comments: NTU = 0.66			
	1058	0.272'	0.265'				

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	TWQ-142			1st Cond. 1,560	2nd Cond. 1,674	Stable Cond. 1,732	Ending Cond. 1,798
		201.40'	202.10'	1st pH 7.76	2nd pH 7.74	Stable pH 7.70	Ending pH 8.07
10-16-12				1st Temp. 17.1	2nd Temp. 16.5	Stable Temp. 16.1	Ending Temp. 15.3
	Time	Bubbler Start	Bubbler End	Comments: NTU = 1.11			
	1211	19.340'	18.556'				

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	NBL-1			1st Cond. 5,020	2nd Cond. 5,070	Stable Cond. 5,100	Ending Cond. 5,110
		188.80'	189.05'	1st pH 2.80	2nd pH 2.76	Stable pH 2.74	Ending pH 2.73
10-16-12				1st Temp. 17.6	2nd Temp. 17.5	Stable Temp. 17.4	Ending Temp. 17.4
	Time	Bubbler Start	Bubbler End	Comments: NTU = 17.4			
	1258	3.492'	3.240'				

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	RINSATE			1st Cond. 0	2nd Cond.	Stable Cond.	Ending Cond.
				1st pH 7.94	2nd pH	Stable pH	Ending pH
10-17-12				1st Temp. 19.6	2nd Temp.	Stable Temp.	Ending Temp.
	Time	Bubbler Start	Bubbler End	Comments: NTU = 0.39			
	1157			Turbidity secondary NTU std. verification on 10–17–12 @ 0805: 5.70(5.54 std.), 57.3(56.8 std.) & 483(480 std.).			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	FIELD			1st Cond. 3	2nd Cond.	Stable Cond.	Ending Cond.
	BLANK			1st pH 6.60	2nd pH	Stable pH	Ending pH
10-17-12				1st Temp. 15.1	2nd Temp.	Stable Temp.	Ending Temp.
	Time	Bubbler Start	Bubbler End	Comments: NTU = 0.17			
	1200						

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
				1st Cond.	2nd Cond.	Stable Cond.	Ending Cond.
				1st pH	2nd pH	Stable pH	Ending pH
				1st Temp.	2nd Temp.	Stable Temp.	Ending Temp.
	Time	Bubbler Start	Bubbler End	Comments:			

PH Standard Verification Check

STD.	PH Reading	Date/Time	Initial
4-Buffer	4.05	10-10-12/0810	[illegible]
7-Buffer	7.04	10-10-12/0805	[illegible]

(Monthly/Quar. Supplemental – Pg. 1 of 3)
GROUND WATER MONITORING FIELD DATA SHEET
Fourth QUARTER 2012
SAMPLING

Cond. Standard Verification Check

STD.	µS/cm Reading	Date/Time	Initial
1413 µS/cm	1432	10-10-12/0808	[illegible]

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	617			1st Cond. 11,100	2nd Cond.	Stable Cond.	Ending Cond.
				1st pH 6.82	2nd pH	Stable pH	Ending pH
		120.44'	123.49'	1st Temp. 18.7	2nd Temp.	Stable Temp.	Ending Temp.
10-10-12	Time	Bubbler Start	Bubbler End	Comments: NTU = 13.0			
	0917						

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	617			1st Cond. 39	2nd Cond.	Stable Cond.	Ending Cond.
				1st pH 7.83	2nd pH	Stable pH	Ending pH
	RINSATE			1st Temp. 18.3	2nd Temp.	Stable Temp.	Ending Temp.
10-10-12	Time	Bubbler Start	Bubbler End	Comments: NTU = 3.16			
	1024						

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	NBL-2			1st Cond. 3,250	2nd Cond. 3,260	Stable Cond. 3,310	Ending Cond. 3,230
				1st pH 6.78	2nd pH 6.78	Stable pH 6.81	Ending pH 6.75
		163.15'	163.50'	1st Temp. 14.8	2nd Temp. 14.5	Stable Temp. 14.3	Ending Temp. 15.4
10-16-12	Time	Bubbler Start	Bubbler End	Comments: NTU = 1.20			
	1132	0.497'	0.328'				

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	PB-3			1st Cond. 3,190	2nd Cond. 3,270	Stable Cond. 3,520	Ending Cond. 3,630
				1st pH 7.05	2nd pH 7.11	Stable pH 7.21	Ending pH 6.38
		186.28'	186.72'	1st Temp. 18.4	2nd Temp. 17.9	Stable Temp. 17.5	Ending Temp. 17.3
10-16-12	Time	Bubbler Start	Bubbler End	Comments: NTU = 46.0			
	1401						

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	PB-4			1st Cond. 5,560	2nd Cond. 5,680	Stable Cond. 5,930	Ending Cond. 6,080
				1st pH 2.66	2nd pH 2.62	Stable pH 2.58	Ending pH 2.55
		185.83'	186.30'	1st Temp. 18.9	2nd Temp. 18.8	Stable Temp. 18.3	Ending Temp. 18.1
10-16-12	Time	Bubbler Start	Bubbler End	Comments: NTU = 150			
	1450						

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	NW-1			1st Cond. 3,790	2nd Cond. 3,850	Stable Cond. 3,880	Ending Cond. 3,890
				1st pH 6.54	2nd pH 6.76	Stable pH 6.93	Ending pH 7.07
		198.00'	198.20'	1st Temp. 16.7	2nd Temp. 16.4	Stable Temp. 16.2	Ending Temp. 15.8
10-16-12	Time	Bubbler Start	Bubbler End	Comments: NTU = 9.57			
	1315						

PH Standard Verification Check

STD.	PH Reading	Date/Time	Initial
4-Buffer	3.99	10-16-12/0815	[illegible]
7-Buffer	7.03	10-16-12/0810	[illegible]

(Monthly/Quar. Supplemental – Pg. 2 of 3)
GROUND WATER MONITORING FIELD DATA SHEET
Fourth QUARTER 2012
SAMPLING

Cond. Standard Verification Check

STD.	µS/cm Reading	Date/Time	Initial
1413 µS/cm	1460	10-16-12/0816	[illegible]

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
10-16-12	NW-4	195.25'	195.70'	1st Cond. 3,930	2nd Cond. 4,200	Stable Cond. 4,230	Ending Cond. 4,230
				1st pH 6.94	2nd pH 6.49	Stable pH 6.29	Ending pH 6.20
				1st Temp. 16.5	2nd Temp. 16.5	Stable Temp. 16.5	Ending Temp. 16.5
	Time 1330	Bubbler Start	Bubbler End	Comments: NTU = 1.49			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
10-16-12	NW-2	192.20'	193.40'	1st Cond. 3,600	2nd Cond. 3,680	Stable Cond. 3,690	Ending Cond. 3,690
				1st pH 6.24	2nd pH 6.28	Stable pH 6.31	Ending pH 6.35
				1st Temp. 14.6	2nd Temp. 14.7	Stable Temp. 14.7	Ending Temp. 14.6
	Time 1340	Bubbler Start	Bubbler End	Comments: NTU = 299			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
10-16-12	NW-5	182.95'	183.60'	1st Cond. 3,760	2nd Cond. 3,780	Stable Cond. 3,800	Ending Cond. 3,810
				1st pH 6.85	2nd pH 6.93	Stable pH 6.99	Ending pH 7.02
				1st Temp. 13.2	2nd Temp. 13.1	Stable Temp. 13.1	Ending Temp. 13.0
	Time 1355	Bubbler Start	Bubbler End	Comments: NTU = 10.1			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
10-16-12	NW-3	183.00'	183.90'	1st Cond. 3,830	2nd Cond. 3,580	Stable Cond. 3,600	Ending Cond. 3,610
				1st pH 6.78	2nd pH 6.77	Stable pH 6.78	Ending pH 6.78
				1st Temp. 12.8	2nd Temp. 12.8	Stable Temp. 12.8	Ending Temp. 12.8
	Time 1405	Bubbler Start	Bubbler End	Comments: NTU = 16.1			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
10-16-12	PB-2	184.75'	186.90'	1st Cond. 4,340	2nd Cond. 4,420	Stable Cond. 4,480	Ending Cond. 4,500
				1st pH 6.13	2nd pH 5.90	Stable pH 5.92	Ending pH 5.90
				1st Temp. 13.6	2nd Temp. 13.6	Stable Temp. 13.7	Ending Temp. 13.7
	Time 1425	Bubbler Start	Bubbler End	Comments: NTU = 11.7			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
10-16-12	RW-A	172.60'	174.65'	1st Cond. 3,920	2nd Cond. 3,920	Stable Cond. 3,930	Ending Cond. 3,930
				1st pH 6.46	2nd pH 6.46	Stable pH 6.46	Ending pH 6.46
				1st Temp. 15.0	2nd Temp. 15.0	Stable Temp. 14.9	Ending Temp. 15.0
	Time 1445	Bubbler Start	Bubbler End	Comments: NTU = 12.2			

PH Standard Verification Check

STD.	PH Reading	Date/Time	Initial
4-Buffer	4.01	10-17-12/0800	[illegible]
7-Buffer	7.00	10-17-12/0756	[illegible]

(Monthly/Quar. Supplemental – Pg. 3 of 3)

GROUND WATER MONITORING FIELD DATA SHEET

Fourth QUARTER 2012

SAMPLING

Cond. Standard Verification Check

STD.	µS/cm Reading	Date/Time	Initial
1413 µS/cm	1459	10-17-12/0758	[illegible]

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
10-16-12	RW-11	166.20'	172.40'	1st Cond. 3,890	2nd Cond. 3,990	Stable Cond. 4,000	Ending Cond. 4,040
				1st pH 6.30	2nd pH 6.26	Stable pH 6.25	Ending pH 6.25
				1st Temp. 14.2	2nd Temp. 14.2	Stable Temp. 14.2	Ending Temp. 14.2
	Time 1500	Bubbler Start	Bubbler End	Comments: NTU = 17.9			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
10-16-12	619	136.33'		1st Cond. 5,400	2nd Cond.	Stable Cond.	Ending Cond.
				1st pH 6.86	2nd pH	Stable pH	Ending pH
				1st Temp. 20.7	2nd Temp.	Stable Temp.	Ending Temp.
	Time 1000	Bubbler Start	Bubbler End	Comments: NTU = 22.4 (Unfiltered)			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
10-16-12	619 FILTERED	136.33'		1st Cond. 5,420	2nd Cond.	Stable Cond.	Ending Cond.
				1st pH 6.94	2nd pH	Stable pH	Ending pH
				1st Temp. 21.6	2nd Temp.	Stable Temp.	Ending Temp.
	Time 1044	Bubbler Start	Bubbler End	Comments: NTU = 0.21			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
10-16-12	619 RINSATE			1st Cond. 27	2nd Cond.	Stable Cond.	Ending Cond.
				1st pH 6.43	2nd pH	Stable pH	Ending pH
				1st Temp. 21.8	2nd Temp.	Stable Temp.	Ending Temp.
	Time 1208	Bubbler Start	Bubbler End	Comments: NTU = 1.85			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
10-16-12	mw-7	189.70'	189.75'	1st Cond. 2,950	2nd Cond. 3,330	Stable Cond. 3,440	Ending Cond. 3,650
				1st pH 6.88	2nd pH 6.93	Stable pH 6.96	Ending pH 6.61
				1st Temp. 18.1	2nd Temp. 17.4	Stable Temp. 17.1	Ending Temp. 12.9
	Time 1540	Bubbler Start	Bubbler End	Comments: NTU = 44.2			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
10-17-12	mw-6	193.45'	193.72'	1st Cond. 3,550	2nd Cond. 3,620	Stable Cond. 3,800	Ending Cond. 3,810
				1st pH 7.63	2nd pH 7.62	Stable pH 7.60	Ending pH 6.88
				1st Temp. 15.2	2nd Temp. 15.2	Stable Temp. 15.3	Ending Temp. 15.3
	Time 0930	Bubbler Start	Bubbler End	Comments: NTU = 0.39			

Turbidity secondary NTU std. verification on 10–17–12 @ 0805: 5.70(5.54 std.), 57.3(56.8 std.) & 483(480 std.).

APPENDIX B

QUARTERLY SAMPLING

SEMI-ANNUAL GROUND WATER MONITORING REPORT

JULY TO DECEMBER OF 2012

QA/QC CONTROLS

FIELD BLANKS
RINSATES

617 RINSATE (OCTOBER SUPPLEMENTAL)
619 RINSATE (OCTOBER SUPPLEMENTAL)

EPA-28 AND EPA-28 DUPLICATES FOR SW ALLUVIUM

EPA-2 AND EPA-2 DUPLICATES FOR ZONE 1

711 AND 711 DUPLICATE FOR ZONE 3 (IN JULY)
717 AND 717 DUPLICATE FOR ZONE 3 (IN OCTOBER)

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone 1
Lab ID: C12070464-005
Client Sample ID: Field Blank

Report Date: 08/31/12
Collection Date: 07/11/12 12:00
DateReceived: 07/13/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	18	mg/L		5		A2320 B	07/17/12 16:32 / jba
Calcium	ND	mg/L		1		E200.7	07/18/12 18:55 / sf
Chloride	4	mg/L		1		E300.0	07/18/12 07:06 / wc
Magnesium	ND	mg/L		1		E200.7	07/18/12 18:55 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	07/20/12 12:32 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	07/16/12 15:12 / lr
Potassium	ND	mg/L		1		E200.7	07/18/12 18:55 / sf
Sodium	11	mg/L		1		E200.7	07/18/12 18:55 / sf
Sulfate	1	mg/L		1		E300.0	07/18/12 07:06 / wc
PHYSICAL PROPERTIES							
pH	7.45	s.u.	H	0.01		A4500-H B	07/16/12 12:45 / ab
Solids, Total Dissolved TDS @ 180 C	28	mg/L		10		A2540 C	07/16/12 12:13 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	07/25/12 16:25 / sf
Beryllium	ND	mg/L		0.001		E200.7	07/25/12 16:25 / sf
Cadmium	ND	mg/L		0.005		E200.7	07/25/12 16:25 / sf
Cobalt	ND	mg/L		0.01		E200.7	07/25/12 16:25 / sf
Lead	ND	mg/L		0.001		E200.8	07/26/12 22:49 / cp
Manganese	ND	mg/L		0.01		E200.7	07/25/12 16:25 / sf
Molybdenum	ND	mg/L		0.1		E200.7	07/25/12 16:25 / sf
Nickel	ND	mg/L		0.05		E200.7	07/25/12 16:25 / sf
Uranium	ND	mg/L		0.0003		E200.8	07/26/12 22:49 / cp
Vanadium	ND	mg/L		0.1		E200.7	07/25/12 16:25 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	08/01/12 23:47 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	07/26/12 17:09 / rdw
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.2	pCi/L	U			E900.1	07/19/12 10:14 / lbb
Gross Alpha minus Rn & U Precision (±)	0.6	pCi/L				E900.1	07/19/12 10:14 / lbb
Gross Alpha minus Rn & U MDC	0.9	pCi/L				E900.1	07/19/12 10:14 / lbb
Lead 210	0.3	pCi/L	U			E909.0	08/05/12 19:41 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	08/05/12 19:41 / eli-cs
Lead 210 MDC	1.1	pCi/L				E909.0	08/05/12 19:41 / eli-cs
Radium 226	-0.05	pCi/L	U			E903.0	07/31/12 11:17 / lbb
Radium 226 precision (±)	0.09	pCi/L				E903.0	07/31/12 11:17 / lbb
Radium 226 MDC	0.17	pCi/L				E903.0	07/31/12 11:17 / lbb
Radium 228	2.7	pCi/L				RA-05	07/24/12 20:54 / gb
Radium 228 precision (±)	1.0	pCi/L				RA-05	07/24/12 20:54 / gb
Radium 228 MDC	1.5	pCi/L				RA-05	07/24/12 20:54 / gb

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.
H - Analysis performed past recommended holding time.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone 1
Lab ID: C12070464-005
Client Sample ID: Field Blank

Report Date: 08/31/12
Collection Date: 07/11/12 12:00
DateReceived: 07/13/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.05	pCi/L	U			E908.0	08/06/12 08:40 / dmf
Thorium 230 precision (±)	0.08	pCi/L				E908.0	08/06/12 08:40 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	08/06/12 08:40 / dmf
DATA QUALITY							
A/C Balance (± 5)	1.71	%				A1030 E	08/20/12 12:41 / kbh
Anions	0.455	meq/L				A1030 E	08/20/12 12:41 / kbh
Cations	0.471	meq/L				A1030 E	08/20/12 12:41 / kbh
Solids, Total Dissolved Calculated	31	mg/L				A1030 E	08/20/12 12:41 / kbh
TDS Balance (0.80 - 1.20)	0.900					A1030 E	08/20/12 12:41 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	1.23	ug/L		0.50		E624	07/20/12 18:17 / jk
Bromoform	2.91	ug/L		0.50		E624	07/20/12 18:17 / jk
Chlorodibromomethane	2.48	ug/L		0.50		E624	07/20/12 18:17 / jk
Chloroform	1.50	ug/L		0.50		E624	07/20/12 18:17 / jk
Trihalomethanes, Total	8.12	ug/L		0.50		E624	07/20/12 18:17 / jk
Surr: 1,2-Dichlorobenzene-d4	93.0	%REC		80-120		E624	07/20/12 18:17 / jk
Surr: Dibromofluoromethane	89.0	%REC		80-120		E624	07/20/12 18:17 / jk
Surr: p-Bromofluorobenzene	79.0	%REC	S	80-120		E624	07/20/12 18:17 / jk
Surr: Toluene-d8	90.0	%REC		80-120		E624	07/20/12 18:17 / 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
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: C12070713-011
Client Sample ID: Field Blank

Report Date: 09/07/12
Collection Date: 07/17/12 17:00
DateReceived: 07/20/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	14	mg/L		5		A2320 B	07/20/12 19:34 / jba
Calcium	ND	mg/L		0.5		E200.8	08/10/12 17:26 / cp
Chloride	5	mg/L		1		E300.0	07/24/12 16:13 / ljl
Magnesium	ND	mg/L		0.5		E200.8	08/10/12 17:26 / cp
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	07/28/12 15:40 / ljl
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	07/27/12 15:28 / ljl
Potassium	ND	mg/L		0.5		E200.8	08/10/12 17:26 / cp
Sodium	10.2	mg/L		0.5		E200.8	08/10/12 17:26 / cp
Sulfate	1	mg/L		1		E300.0	07/24/12 16:13 / ljl
PHYSICAL PROPERTIES							
pH	7.50	s.u.	H	0.01		A4500-H B	07/23/12 10:14 / ab
Solids, Total Dissolved TDS @ 180 C	35	mg/L		10		A2540 C	07/23/12 09:28 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	08/10/12 17:26 / cp
Beryllium	ND	mg/L		0.001		E200.8	08/18/12 09:25 / cp
Cadmium	ND	mg/L		0.005		E200.8	08/10/12 17:26 / cp
Cobalt	ND	mg/L		0.01		E200.8	08/10/12 17:26 / cp
Lead	ND	mg/L		0.001		E200.8	08/10/12 17:26 / cp
Manganese	ND	mg/L		0.01		E200.8	08/10/12 17:26 / cp
Molybdenum	ND	mg/L		0.1		E200.8	08/10/12 17:26 / cp
Nickel	ND	mg/L		0.05		E200.8	08/10/12 17:26 / cp
Uranium	ND	mg/L		0.0003		E200.8	08/10/12 17:26 / cp
Vanadium	ND	mg/L		0.1		E200.8	08/10/12 17:26 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	08/01/12 22:36 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	07/26/12 18:18 / rdw
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.2	pCi/L	U			E900.1	08/02/12 06:36 / lbb
Gross Alpha minus Rn & U Precision (±)	0.8	pCi/L				E900.1	08/02/12 06:36 / lbb
Gross Alpha minus Rn & U MDC	1.3	pCi/L				E900.1	08/02/12 06:36 / lbb
Lead 210	0.3	pCi/L	U			E909.0	08/17/12 16:43 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	08/17/12 16:43 / eli-cs
Lead 210 MDC	1.2	pCi/L				E909.0	08/17/12 16:43 / eli-cs
Radium 226	-0.02	pCi/L	U			E903.0	08/06/12 16:42 / lbb
Radium 226 precision (±)	0.08	pCi/L				E903.0	08/06/12 16:42 / lbb
Radium 226 MDC	0.15	pCi/L				E903.0	08/06/12 16:42 / lbb
Radium 228	-0.4	pCi/L	U			RA-05	07/31/12 21:12 / gb
Radium 228 precision (±)	0.80	pCi/L				RA-05	07/31/12 21:12 / gb
Radium 228 MDC	1.4	pCi/L				RA-05	07/31/12 21:12 / gb

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.
H - Analysis performed past recommended holding time.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C12070713-011
Client Sample ID: Field Blank

Report Date: 09/07/12
Collection Date: 07/17/12 17:00
DateReceived: 07/20/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.005	pCi/L	U			E908.0	08/09/12 08:48 / dmf
Thorium 230 precision (±)	0.07	pCi/L				E908.0	08/09/12 08:48 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	08/09/12 08:48 / dmf
DATA QUALITY							
A/C Balance (± 5)	7.02	%				A1030 E	09/07/12 14:29 / sdw
Anions	0.393	meq/L				A1030 E	09/07/12 14:29 / sdw
Cations	0.453	meq/L				A1030 E	09/07/12 14:29 / sdw
Solids, Total Dissolved Calculated	42	mg/L				A1030 E	09/07/12 14:29 / sdw
TDS Balance (0.80 - 1.20)	0.830					A1030 E	09/07/12 14:29 / sdw
- The ion balance is not appropriate for samples having a conductivity less than 300 umhos/cm.							
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	1.18	ug/L		0.50		E624	07/25/12 23:42 / jk
Bromoform	3.24	ug/L		0.50		E624	07/25/12 23:42 / jk
Chlorodibromomethane	2.46	ug/L		0.50		E624	07/25/12 23:42 / jk
Chloroform	1.18	ug/L		0.50		E624	07/25/12 23:42 / jk
Trihalomethanes, Total	8.05	ug/L		0.50		E624	07/25/12 23:42 / jk
Surr: 1,2-Dichlorobenzene-d4	98.0	%REC		80-120		E624	07/25/12 23:42 / jk
Surr: Dibromofluoromethane	95.0	%REC		80-120		E624	07/25/12 23:42 / jk
Surr: p-Bromofluorobenzene	79.0	%REC	S	80-120		E624	07/25/12 23:42 / jk
Surr: Toluene-d8	94.0	%REC		80-120		E624	07/25/12 23:42 / 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
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-1
Lab ID: C12100566-005
Client Sample ID: Field Blank

Report Date: 11/20/12
Collection Date: 10/10/12 12:05
DateReceived: 10/12/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	10/15/12 17:17 / jba
Calcium	ND	mg/L		1		E200.7	10/24/12 17:52 / sf
Chloride	ND	mg/L		1		E300.0	10/16/12 04:21 / wc
Magnesium	ND	mg/L		1		E200.7	10/24/12 17:52 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	10/16/12 14:53 / ab
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	10/15/12 13:13 / lr
Potassium	ND	mg/L		1		E200.7	10/24/12 17:52 / sf
Sodium	ND	mg/L		1		E200.7	10/24/12 17:52 / sf
Sulfate	ND	mg/L		1		E300.0	10/16/12 04:21 / wc
PHYSICAL PROPERTIES							
pH	6.21	s.u.	H	0.01		A4500-H B	10/15/12 10:11 / ab
Solids, Total Dissolved TDS @ 180 C	ND	mg/L		10		A2540 C	10/15/12 12:20 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	10/19/12 19:51 / cp
Beryllium	ND	mg/L		0.001		E200.8	10/19/12 19:51 / cp
Cadmium	ND	mg/L		0.005		E200.8	10/19/12 19:51 / cp
Cobalt	ND	mg/L		0.01		E200.8	10/19/12 19:51 / cp
Lead	0.001	mg/L		0.001		E200.8	10/19/12 19:51 / cp
Manganese	ND	mg/L		0.01		E200.8	10/19/12 19:51 / cp
Molybdenum	ND	mg/L		0.1		E200.8	10/19/12 19:51 / cp
Nickel	ND	mg/L		0.05		E200.8	10/19/12 19:51 / cp
Uranium	ND	mg/L		0.0003		E200.8	10/19/12 19:51 / cp
Vanadium	ND	mg/L		0.1		E200.8	10/19/12 19:51 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	10/29/12 15:25 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	10/23/12 13:32 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.04	pCi/L	U			E900.1	11/08/12 22:02 / lbb
Gross Alpha minus Rn & U Precision (±)	0.2	pCi/L				E900.1	11/08/12 22:02 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	11/08/12 22:02 / lbb
Lead 210	0.6	pCi/L	U			E909.0	11/17/12 11:58 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	11/17/12 11:58 / eli-cs
Lead 210 MDC	1	pCi/L				E909.0	11/17/12 11:58 / eli-cs
Radium 226	0.01	pCi/L	U			E903.0	10/29/12 18:06 / gb
Radium 226 precision (±)	0.13	pCi/L				E903.0	10/29/12 18:06 / gb
Radium 226 MDC	0.23	pCi/L				E903.0	10/29/12 18:06 / gb
Radium 228	-0.7	pCi/L	U			RA-05	10/23/12 22:48 / gb
Radium 228 precision (±)	1.5	pCi/L				RA-05	10/23/12 22:48 / gb
Radium 228 MDC	2.6	pCi/L				RA-05	10/23/12 22:48 / gb

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.
H - Analysis performed past recommended holding time.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C12100566-005
Client Sample ID: Field Blank

Report Date: 11/20/12
Collection Date: 10/10/12 12:05
DateReceived: 10/12/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.07	pCi/L	U			E908.0	10/29/12 09:16 / dmf
Thorium 230 precision (±)	0.1	pCi/L				E908.0	10/29/12 09:16 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	10/29/12 09:16 / dmf
DATA QUALITY							
A/C Balance (± 5)	8.15	%				A1030 E	10/26/12 07:25 / kbh
Anions	0.0415	meq/L				A1030 E	10/26/12 07:25 / kbh
Cations	0.0489	meq/L				A1030 E	10/26/12 07:25 / kbh
- The ion balance is not appropriate for samples having a conductivity less than 300 umhos/cm.							
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	10/17/12 01:18 / jk
Bromoform	ND	ug/L		0.50		E624	10/17/12 01:18 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	10/17/12 01:18 / jk
Chloroform	ND	ug/L		0.50		E624	10/17/12 01:18 / jk
Trihalomethanes, Total	1.06	ug/L		0.50		E624	10/17/12 01:18 / jk
Surr: 1,2-Dichlorobenzene-d4	97.0	%REC		80-120		E624	10/17/12 01:18 / jk
Surr: Dibromofluoromethane	107	%REC		80-120		E624	10/17/12 01:18 / jk
Surr: p-Bromofluorobenzene	103	%REC		80-120		E624	10/17/12 01:18 / jk
Surr: Toluene-d8	101	%REC		80-120		E624	10/17/12 01:18 / 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: C12100835-021
Client Sample ID: Field Blank

Report Date: 11/20/12
Collection Date: 10/17/12 12:00
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	10/19/12 21:52 / jba
Calcium	ND	mg/L		1		E200.7	11/10/12 00:23 / sf
Chloride	ND	mg/L		1		E300.0	10/20/12 07:27 / wc
Magnesium	ND	mg/L		1		E200.7	11/10/12 00:23 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	10/26/12 17:18 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	10/25/12 13:19 / ljl
Potassium	ND	mg/L		1		E200.7	11/10/12 00:23 / sf
Sodium	ND	mg/L		1		E200.7	11/10/12 00:23 / sf
Sulfate	ND	mg/L		1		E300.0	10/20/12 07:27 / wc
PHYSICAL PROPERTIES							
pH	6.01	s.u.	H	0.01		A4500-H B	10/19/12 16:22 / ab
Solids, Total Dissolved TDS @ 180 C	ND	mg/L		10		A2540 C	10/22/12 16:37 / jz
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	11/07/12 12:47 / cp
Beryllium	ND	mg/L		0.001		E200.8	11/07/12 12:47 / cp
Cadmium	ND	mg/L		0.005		E200.8	11/07/12 12:47 / cp
Cobalt	ND	mg/L		0.01		E200.8	11/07/12 12:47 / cp
Lead	ND	mg/L		0.001		E200.8	11/07/12 12:47 / cp
Manganese	ND	mg/L		0.01		E200.8	11/07/12 12:47 / cp
Molybdenum	ND	mg/L		0.1		E200.8	11/07/12 12:47 / cp
Nickel	ND	mg/L		0.05		E200.8	11/07/12 12:47 / cp
Uranium	ND	mg/L		0.0003		E200.8	11/07/12 12:47 / cp
Vanadium	ND	mg/L		0.1		E200.8	11/07/12 12:47 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	11/05/12 16:53 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	11/07/12 13:52 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.3	pCi/L				E900.1	11/20/12 01:28 / lbb
Gross Alpha minus Rn & U Precision (±)	0.2	pCi/L				E900.1	11/20/12 01:28 / lbb
Gross Alpha minus Rn & U MDC	0.2	pCi/L				E900.1	11/20/12 01:28 / lbb
Lead 210	0.5	pCi/L	U			E909.0	11/19/12 02:31 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	11/19/12 02:31 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	11/19/12 02:31 / eli-cs
Radium 226	-0.09	pCi/L	U			E903.0	11/07/12 23:27 / gb
Radium 226 precision (±)	0.09	pCi/L				E903.0	11/07/12 23:27 / gb
Radium 226 MDC	0.17	pCi/L				E903.0	11/07/12 23:27 / gb
Radium 228	0.39	pCi/L	U			RA-05	10/31/12 21:12 / gb
Radium 228 precision (±)	1.2	pCi/L				RA-05	10/31/12 21:12 / gb
Radium 228 MDC	2.0	pCi/L				RA-05	10/31/12 21:12 / gb

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.
H - Analysis performed past recommended holding time.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C12100835-021
Client Sample ID: Field Blank

Report Date: 11/20/12
Collection Date: 10/17/12 12:00
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.1	pCi/L	U			E908.0	11/01/12 13:58 / dmf
Thorium 230 precision (±)	0.1	pCi/L				E908.0	11/01/12 13:58 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	11/01/12 13:58 / dmf
DATA QUALITY							
A/C Balance (± 5)	18.0	%				A1030 E	11/12/12 14:48 / kbh
Anions	0.0200	meq/L				A1030 E	11/12/12 14:48 / kbh
Cations	0.0288	meq/L				A1030 E	11/12/12 14:48 / kbh
- The ion balance is not appropriate for samples having a conductivity less than 300 umhos/cm.							
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	0.84	ug/L		0.50		E624	10/27/12 04:34 / jk
Bromoform	1.22	ug/L		0.50		E624	10/27/12 04:34 / jk
Chlorodibromomethane	1.63	ug/L		0.50		E624	10/27/12 04:34 / jk
Chloroform	2.51	ug/L		0.50		E624	10/27/12 04:34 / jk
Trihalomethanes, Total	6.20	ug/L		0.50		E624	10/27/12 04:34 / jk
Surr: 1,2-Dichlorobenzene-d4	106	%REC		80-120		E624	10/27/12 04:34 / jk
Surr: Dibromofluoromethane	155	%REC	S	80-120		E624	10/27/12 04:34 / jk
Surr: p-Bromofluorobenzene	128	%REC	S	80-120		E624	10/27/12 04:34 / jk
Surr: Toluene-d8	110	%REC		80-120		E624	10/27/12 04:34 / 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
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 1
Lab ID: C12070464-004
Client Sample ID: Rinsate

Report Date: 08/31/12
Collection Date: 07/11/12 11:23
DateReceived: 07/13/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	15	mg/L		5		A2320 B	07/17/12 16:26 / jba
Calcium	ND	mg/L		1		E200.7	07/18/12 18:51 / sf
Chloride	5	mg/L		1		E300.0	07/18/12 06:20 / wc
Magnesium	ND	mg/L		1		E200.7	07/18/12 18:51 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	07/20/12 12:30 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	07/16/12 15:32 / lr
Potassium	ND	mg/L		1		E200.7	07/18/12 18:51 / sf
Sodium	10	mg/L		1		E200.7	07/18/12 18:51 / sf
Sulfate	5	mg/L		1		E300.0	07/18/12 06:20 / wc
PHYSICAL PROPERTIES							
pH	7.40	s.u.	H	0.01		A4500-H B	07/16/12 12:42 / ab
Solids, Total Dissolved TDS @ 180 C	36	mg/L		10		A2540 C	07/16/12 12:13 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	07/25/12 16:22 / sf
Beryllium	ND	mg/L		0.001		E200.7	07/25/12 16:22 / sf
Cadmium	ND	mg/L		0.005		E200.7	07/25/12 16:22 / sf
Cobalt	ND	mg/L		0.01		E200.7	07/25/12 16:22 / sf
Lead	ND	mg/L		0.001		E200.8	07/26/12 22:45 / cp
Manganese	ND	mg/L		0.01		E200.7	07/25/12 16:22 / sf
Molybdenum	ND	mg/L		0.1		E200.7	07/25/12 16:22 / sf
Nickel	ND	mg/L		0.05		E200.7	07/25/12 16:22 / sf
Uranium	ND	mg/L		0.0003		E200.8	07/26/12 22:45 / cp
Vanadium	ND	mg/L		0.1		E200.7	07/25/12 16:22 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	08/01/12 19:04 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	07/26/12 17:04 / rdw
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.2	pCi/L	U			E900.1	07/19/12 10:14 / lbb
Gross Alpha minus Rn & U Precision (±)	0.6	pCi/L				E900.1	07/19/12 10:14 / lbb
Gross Alpha minus Rn & U MDC	1	pCi/L				E900.1	07/19/12 10:14 / lbb
Lead 210	0.03	pCi/L	U			E909.0	08/05/12 18:35 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	08/05/12 18:35 / eli-cs
Lead 210 MDC	1.1	pCi/L				E909.0	08/05/12 18:35 / eli-cs
Radium 226	-0.08	pCi/L	U			E903.0	07/31/12 11:17 / lbb
Radium 226 precision (±)	0.07	pCi/L				E903.0	07/31/12 11:17 / lbb
Radium 226 MDC	0.17	pCi/L				E903.0	07/31/12 11:17 / lbb
Radium 228	0.73	pCi/L	U			RA-05	07/24/12 20:54 / gb
Radium 228 precision (±)	0.88	pCi/L				RA-05	07/24/12 20:54 / gb
Radium 228 MDC	1.4	pCi/L				RA-05	07/24/12 20:54 / gb

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.
H - Analysis performed past recommended holding time.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone 1
Lab ID: C12070464-004
Client Sample ID: Rinsate

Report Date: 08/31/12
Collection Date: 07/11/12 11:23
DateReceived: 07/13/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.08	pCi/L	U			E908.0	08/06/12 08:40 / dmf
Thorium 230 precision (±)	0.09	pCi/L				E908.0	08/06/12 08:40 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	08/06/12 08:40 / dmf
DATA QUALITY							
A/C Balance (± 5)	-3.84	%				A1030 E	08/20/12 12:41 / kbh
Anions	0.489	meq/L				A1030 E	08/20/12 12:41 / kbh
Cations	0.453	meq/L				A1030 E	08/20/12 12:41 / kbh
Solids, Total Dissolved Calculated	34	mg/L				A1030 E	08/20/12 12:41 / kbh
TDS Balance (0.80 - 1.20)	1.06					A1030 E	08/20/12 12:41 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	1.5	ug/L		1.0		E624	07/20/12 18:53 / jk
Bromoform	3.2	ug/L		1.0		E624	07/20/12 18:53 / jk
Chlorodibromomethane	2.8	ug/L		1.0		E624	07/20/12 18:53 / jk
Chloroform	2.0	ug/L		1.0		E624	07/20/12 18:53 / jk
Trihalomethanes, Total	9.6	ug/L		1.0		E624	07/20/12 18:53 / jk
Surr: 1,2-Dichlorobenzene-d4	91.0	%REC		80-120		E624	07/20/12 18:53 / jk
Surr: Dibromofluoromethane	87.0	%REC		80-120		E624	07/20/12 18:53 / jk
Surr: p-Bromofluorobenzene	84.0	%REC		80-120		E624	07/20/12 18:53 / jk
Surr: Toluene-d8	86.0	%REC		80-120		E624	07/20/12 18:53 / 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: C12070713-010
Client Sample ID: Rinsate

Report Date: 09/07/12
Collection Date: 07/17/12 16:51
DateReceived: 07/20/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	5	mg/L		5		A2320 B	07/20/12 19:28 / jba
Calcium	ND	mg/L		1		E200.7	08/06/12 16:19 / sf
Chloride	4	mg/L		1		E300.0	07/24/12 15:21 / ljl
Magnesium	ND	mg/L		1		E200.7	08/06/12 16:19 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	07/28/12 15:32 / ljl
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	07/27/12 15:23 / ljl
Potassium	ND	mg/L		1		E200.7	08/06/12 16:19 / sf
Sodium	12	mg/L		1		E200.7	08/06/12 16:19 / sf
Sulfate	1	mg/L		1		E300.0	07/24/12 15:21 / ljl
PHYSICAL PROPERTIES							
pH	7.47	s.u.	H	0.01		A4500-H B	07/23/12 10:11 / ab
Solids, Total Dissolved TDS @ 180 C	38	mg/L		10		A2540 C	07/23/12 09:28 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	08/10/12 17:22 / cp
Beryllium	ND	mg/L		0.001		E200.8	08/18/12 09:01 / cp
Cadmium	ND	mg/L		0.005		E200.8	08/10/12 17:22 / cp
Cobalt	ND	mg/L		0.01		E200.8	08/10/12 17:22 / cp
Lead	ND	mg/L		0.001		E200.8	08/10/12 17:22 / cp
Manganese	ND	mg/L		0.01		E200.8	08/10/12 17:22 / cp
Molybdenum	ND	mg/L		0.1		E200.8	08/10/12 17:22 / cp
Nickel	ND	mg/L		0.05		E200.8	08/10/12 17:22 / cp
Uranium	ND	mg/L		0.0003		E200.8	08/10/12 17:22 / cp
Vanadium	ND	mg/L		0.1		E200.8	08/10/12 17:22 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	08/01/12 22:28 / eli-h
Selenium-IV	0.002	mg/L		0.001		A3114 B	07/26/12 18:16 / rdw
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.6	pCi/L	U			E900.1	08/02/12 06:36 / lbb
Gross Alpha minus Rn & U Precision (±)	0.8	pCi/L				E900.1	08/02/12 06:36 / lbb
Gross Alpha minus Rn & U MDC	1.3	pCi/L				E900.1	08/02/12 06:36 / lbb
Lead 210	-0.04	pCi/L	U			E909.0	08/17/12 15:56 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	08/17/12 15:56 / eli-cs
Lead 210 MDC	1.2	pCi/L				E909.0	08/17/12 15:56 / eli-cs
Radium 226	0.002	pCi/L	U			E903.0	08/06/12 16:42 / lbb
Radium 226 precision (±)	0.09	pCi/L				E903.0	08/06/12 16:42 / lbb
Radium 226 MDC	0.15	pCi/L				E903.0	08/06/12 16:42 / lbb
Radium 228	-1	pCi/L	U			RA-05	07/31/12 21:12 / gb
Radium 228 precision (±)	0.77	pCi/L				RA-05	07/31/12 21:12 / gb
Radium 228 MDC	1.4	pCi/L				RA-05	07/31/12 21:12 / gb

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.
H - Analysis performed past recommended holding time.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C12070713-010
Client Sample ID: Rinsate

Report Date: 09/07/12
Collection Date: 07/17/12 16:51
DateReceived: 07/20/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.03	pCi/L	U			E908.0	08/09/12 08:48 / dmf
Thorium 230 precision (±)	0.07	pCi/L				E908.0	08/09/12 08:48 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	08/09/12 08:48 / dmf
DATA QUALITY							
A/C Balance (± 5)	38.2	%				A1030 E	08/15/12 14:09 / kbh
Anions	0.245	meq/L				A1030 E	08/15/12 14:09 / kbh
Cations	0.546	meq/L				A1030 E	08/15/12 14:09 / kbh
Solids, Total Dissolved Calculated	27	mg/L				A1030 E	08/15/12 14:09 / kbh
TDS Balance (0.80 - 1.20)	1.41					A1030 E	08/15/12 14:09 / kbh
- The ion balance is not appropriate for samples having a conductivity less than 300 umhos/cm.							
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	1.84	ug/L		0.50		E624	07/25/12 23:06 / jk
Bromoform	4.16	ug/L		0.50		E624	07/25/12 23:06 / jk
Chlorodibromomethane	3.57	ug/L		0.50		E624	07/25/12 23:06 / jk
Chloroform	2.02	ug/L		0.50		E624	07/25/12 23:06 / jk
Trihalomethanes, Total	11.6	ug/L		0.50		E624	07/25/12 23:06 / jk
Surr: 1,2-Dichlorobenzene-d4	94.0	%REC		80-120		E624	07/25/12 23:06 / jk
Surr: Dibromofluoromethane	94.0	%REC		80-120		E624	07/25/12 23:06 / jk
Surr: p-Bromofluorobenzene	81.0	%REC		80-120		E624	07/25/12 23:06 / jk
Surr: Toluene-d8	96.0	%REC		80-120		E624	07/25/12 23:06 / 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: C12100566-004
Client Sample ID: Rinsate

Report Date: 11/20/12
Collection Date: 10/10/12 11:11
DateReceived: 10/12/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	10/15/12 17:12 / jba
Calcium	ND	mg/L		1		E200.7	10/24/12 17:48 / sf
Chloride	ND	mg/L		1		E300.0	10/16/12 03:34 / wc
Magnesium	ND	mg/L		1		E200.7	10/24/12 17:48 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	10/16/12 14:51 / ab
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	10/15/12 14:47 / lr
Potassium	ND	mg/L		1		E200.7	10/24/12 17:48 / sf
Sodium	ND	mg/L		1		E200.7	10/24/12 17:48 / sf
Sulfate	ND	mg/L		1		E300.0	10/16/12 03:34 / wc
PHYSICAL PROPERTIES							
pH	6.24	s.u.	H	0.01		A4500-H B	10/15/12 10:08 / ab
Solids, Total Dissolved TDS @ 180 C	ND	mg/L		10		A2540 C	10/15/12 12:20 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	10/19/12 19:48 / cp
Beryllium	ND	mg/L		0.001		E200.8	10/19/12 19:48 / cp
Cadmium	ND	mg/L		0.005		E200.8	10/19/12 19:48 / cp
Cobalt	ND	mg/L		0.01		E200.8	10/19/12 19:48 / cp
Lead	ND	mg/L		0.001		E200.8	10/19/12 19:48 / cp
Manganese	ND	mg/L		0.01		E200.8	10/19/12 19:48 / cp
Molybdenum	ND	mg/L		0.1		E200.8	10/19/12 19:48 / cp
Nickel	ND	mg/L		0.05		E200.8	10/19/12 19:48 / cp
Uranium	ND	mg/L		0.0003		E200.8	10/19/12 19:48 / cp
Vanadium	ND	mg/L		0.1		E200.8	10/19/12 19:48 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	10/29/12 15:17 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	10/23/12 13:27 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.2	pCi/L	U			E900.1	11/08/12 22:02 / lbb
Gross Alpha minus Rn & U Precision (±)	0.2	pCi/L				E900.1	11/08/12 22:02 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	11/08/12 22:02 / lbb
Lead 210	-0.06	pCi/L	U			E909.0	11/17/12 11:00 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	11/17/12 11:00 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	11/17/12 11:00 / eli-cs
Radium 226	-0.1	pCi/L	U			E903.0	10/29/12 18:06 / gb
Radium 226 precision (±)	0.09	pCi/L				E903.0	10/29/12 18:06 / gb
Radium 226 MDC	0.22	pCi/L				E903.0	10/29/12 18:06 / gb
Radium 228	0.80	pCi/L	U			RA-05	10/23/12 22:48 / gb
Radium 228 precision (±)	1.6	pCi/L				RA-05	10/23/12 22:48 / gb
Radium 228 MDC	2.5	pCi/L				RA-05	10/23/12 22:48 / gb

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.
H - Analysis performed past recommended holding time.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C12100566-004
Client Sample ID: Rinsate

Report Date: 11/20/12
Collection Date: 10/10/12 11:11
DateReceived: 10/12/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.05	pCi/L	U			E908.0	10/29/12 09:16 / dmf
Thorium 230 precision (±)	0.1	pCi/L				E908.0	10/29/12 09:16 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	10/29/12 09:16 / dmf
DATA QUALITY							
A/C Balance (± 5)	-3.45	%				A1030 E	10/26/12 07:25 / kbh
Anions	0.0436	meq/L				A1030 E	10/26/12 07:25 / kbh
Cations	0.0407	meq/L				A1030 E	10/26/12 07:25 / kbh
- The ion balance is not appropriate for samples having a conductivity less than 300 umhos/cm.							
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	10/17/12 00:42 / jk
Bromoform	ND	ug/L		0.50		E624	10/17/12 00:42 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	10/17/12 00:42 / jk
Chloroform	0.78	ug/L		0.50		E624	10/17/12 00:42 / jk
Trihalomethanes, Total	2.11	ug/L		0.50		E624	10/17/12 00:42 / jk
Surr: 1,2-Dichlorobenzene-d4	103	%REC		80-120		E624	10/17/12 00:42 / jk
Surr: Dibromofluoromethane	104	%REC		80-120		E624	10/17/12 00:42 / jk
Surr: p-Bromofluorobenzene	100	%REC		80-120		E624	10/17/12 00:42 / jk
Surr: Toluene-d8	98.0	%REC		80-120		E624	10/17/12 00:42 / 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: C12100835-020
Client Sample ID: Rinsate

Report Date: 11/20/12
Collection Date: 10/17/12 11:57
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	10/19/12 21:47 / jba
Calcium	ND	mg/L		1		E200.7	11/10/12 00:19 / sf
Chloride	ND	mg/L		1		E300.0	10/20/12 07:10 / wc
Magnesium	ND	mg/L		1		E200.7	11/10/12 00:19 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	10/26/12 17:12 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	10/25/12 13:14 / ljl
Potassium	ND	mg/L		1		E200.7	11/10/12 00:19 / sf
Sodium	ND	mg/L		1		E200.7	11/10/12 00:19 / sf
Sulfate	ND	mg/L		1		E300.0	10/20/12 07:10 / wc
PHYSICAL PROPERTIES							
pH	8.36	s.u.	H	0.01		A4500-H B	10/19/12 16:19 / ab
Solids, Total Dissolved TDS @ 180 C	ND	mg/L		10		A2540 C	10/22/12 16:37 / jz
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	11/07/12 12:44 / cp
Beryllium	ND	mg/L		0.001		E200.8	11/07/12 12:44 / cp
Cadmium	ND	mg/L		0.005		E200.8	11/07/12 12:44 / cp
Cobalt	ND	mg/L		0.01		E200.8	11/07/12 12:44 / cp
Lead	ND	mg/L		0.001		E200.8	11/07/12 12:44 / cp
Manganese	ND	mg/L		0.01		E200.8	11/07/12 12:44 / cp
Molybdenum	ND	mg/L		0.1		E200.8	11/07/12 12:44 / cp
Nickel	ND	mg/L		0.05		E200.8	11/07/12 12:44 / cp
Uranium	ND	mg/L		0.0003		E200.8	11/07/12 12:44 / cp
Vanadium	ND	mg/L		0.1		E200.8	11/07/12 12:44 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	11/05/12 16:45 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	11/07/12 13:50 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.2	pCi/L	U			E900.1	11/20/12 01:28 / lbb
Gross Alpha minus Rn & U Precision (±)	0.2	pCi/L				E900.1	11/20/12 01:28 / lbb
Gross Alpha minus Rn & U MDC	0.2	pCi/L				E900.1	11/20/12 01:28 / lbb
Lead 210	0.3	pCi/L	U			E909.0	11/19/12 01:33 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	11/19/12 01:33 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	11/19/12 01:33 / eli-cs
Radium 226	-0.07	pCi/L	U			E903.0	11/07/12 23:27 / gb
Radium 226 precision (±)	0.09	pCi/L				E903.0	11/07/12 23:27 / gb
Radium 226 MDC	0.18	pCi/L				E903.0	11/07/12 23:27 / gb
Radium 228	2.1	pCi/L				RA-05	10/31/12 21:12 / gb
Radium 228 precision (±)	1.4	pCi/L				RA-05	10/31/12 21:12 / gb
Radium 228 MDC	2.1	pCi/L				RA-05	10/31/12 21:12 / gb

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.
H - Analysis performed past recommended holding time.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C12100835-020
Client Sample ID: Rinsate

Report Date: 11/20/12
Collection Date: 10/17/12 11:57
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.04	pCi/L	U			E908.0	11/01/12 13:58 / dmf
Thorium 230 precision (±)	0.08	pCi/L				E908.0	11/01/12 13:58 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	11/01/12 13:58 / dmf
DATA QUALITY							
A/C Balance (± 5)	-12.6	%				A1030 E	11/12/12 14:48 / kbh
Anions	0.0937	meq/L				A1030 E	11/12/12 14:48 / kbh
Cations	0.0727	meq/L				A1030 E	11/12/12 14:48 / kbh
- The ion balance is not appropriate for samples having a conductivity less than 300 umhos/cm.							
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	0.62	ug/L		0.50		E624	10/27/12 03:59 / jk
Bromoform	0.90	ug/L		0.50		E624	10/27/12 03:59 / jk
Chlorodibromomethane	1.29	ug/L		0.50		E624	10/27/12 03:59 / jk
Chloroform	2.03	ug/L		0.50		E624	10/27/12 03:59 / jk
Trihalomethanes, Total	4.85	ug/L		0.50		E624	10/27/12 03:59 / jk
Surr: 1,2-Dichlorobenzene-d4	106	%REC		80-120		E624	10/27/12 03:59 / jk
Surr: Dibromofluoromethane	151	%REC	S	80-120		E624	10/27/12 03:59 / jk
Surr: p-Bromofluorobenzene	126	%REC	S	80-120		E624	10/27/12 03:59 / jk
Surr: Toluene-d8	108	%REC		80-120		E624	10/27/12 03:59 / 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
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-1
Lab ID: C12100566-007
Client Sample ID: 617 Rinsate

Report Date: 11/20/12
Collection Date: 10/10/12 10:24
DateReceived: 10/12/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	10/15/12 17:33 / jba
Calcium	ND	mg/L		1		E200.7	10/24/12 18:05 / sf
Chloride	ND	mg/L		1		E300.0	10/16/12 04:51 / wc
Magnesium	ND	mg/L		1		E200.7	10/24/12 18:05 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	10/17/12 12:00 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	10/15/12 13:23 / lr
Potassium	ND	mg/L		1		E200.7	10/24/12 18:05 / sf
Sodium	ND	mg/L		1		E200.7	10/24/12 18:05 / sf
Sulfate	ND	mg/L		1		E300.0	10/16/12 04:51 / wc
PHYSICAL PROPERTIES							
pH	5.99	s.u.	H	0.01		A4500-H B	10/15/12 10:28 / ab
Solids, Total Dissolved TDS @ 180 C	ND	mg/L		10		A2540 C	10/15/12 12:21 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	10/19/12 19:56 / cp
Beryllium	ND	mg/L		0.001		E200.8	10/19/12 19:56 / cp
Cadmium	ND	mg/L		0.005		E200.8	10/19/12 19:56 / cp
Cobalt	ND	mg/L		0.01		E200.8	10/19/12 19:56 / cp
Lead	ND	mg/L		0.001		E200.8	10/19/12 19:56 / cp
Manganese	ND	mg/L		0.01		E200.8	10/19/12 19:56 / cp
Molybdenum	ND	mg/L		0.1		E200.8	10/19/12 19:56 / cp
Nickel	ND	mg/L		0.05		E200.8	10/19/12 19:56 / cp
Uranium	ND	mg/L		0.0003		E200.8	10/19/12 19:56 / cp
Vanadium	ND	mg/L		0.1		E200.8	10/19/12 19:56 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	10/29/12 15:41 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	10/31/12 13:07 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.2	pCi/L	U			E900.1	11/08/12 23:41 / lbb
Gross Alpha minus Rn & U Precision (±)	0.2	pCi/L				E900.1	11/08/12 23:41 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	11/08/12 23:41 / lbb
Lead 210	0.5	pCi/L	U			E909.0	11/17/12 22:02 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	11/17/12 22:02 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	11/17/12 22:02 / eli-cs
Radium 226	-0.07	pCi/L	U			E903.0	10/29/12 21:54 / gb
Radium 226 precision (±)	0.09	pCi/L				E903.0	10/29/12 21:54 / gb
Radium 226 MDC	0.20	pCi/L				E903.0	10/29/12 21:54 / gb
Radium 228	-1	pCi/L	U			RA-05	10/23/12 22:47 / gb
Radium 228 precision (±)	1.3	pCi/L				RA-05	10/23/12 22:47 / gb
Radium 228 MDC	2.3	pCi/L				RA-05	10/23/12 22:47 / gb

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.
H - Analysis performed past recommended holding time.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C12100566-007
Client Sample ID: 617 Rinsate

Report Date: 11/20/12
Collection Date: 10/10/12 10:24
DateReceived: 10/12/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.01	pCi/L	U			E908.0	10/29/12 09:16 / dmf
Thorium 230 precision (±)	0.07	pCi/L				E908.0	10/29/12 09:16 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	10/29/12 09:16 / dmf
DATA QUALITY							
A/C Balance (± 5)	-61.0	%				A1030 E	10/26/12 07:25 / kbh
Anions	0.108	meq/L				A1030 E	10/26/12 07:25 / kbh
Cations	0.0261	meq/L				A1030 E	10/26/12 07:25 / kbh
- The ion balance is not appropriate for samples having a conductivity less than 300 umhos/cm.							
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	10/17/12 02:30 / jk
Bromoform	0.55	ug/L		0.50		E624	10/17/12 02:30 / jk
Chlorodibromomethane	0.76	ug/L		0.50		E624	10/17/12 02:30 / jk
Chloroform	1.07	ug/L		0.50		E624	10/17/12 02:30 / jk
Trihalomethanes, Total	2.86	ug/L		0.50		E624	10/17/12 02:30 / jk
Surr: 1,2-Dichlorobenzene-d4	100	%REC		80-120		E624	10/17/12 02:30 / jk
Surr: Dibromofluoromethane	108	%REC		80-120		E624	10/17/12 02:30 / jk
Surr: p-Bromofluorobenzene	105	%REC		80-120		E624	10/17/12 02:30 / jk
Surr: Toluene-d8	102	%REC		80-120		E624	10/17/12 02:30 / 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-31 ne
Lab ID: C12100835-019
Client Sample ID: 619 Rinsate

Report Date: 11/20/12
Collection Date: 10/16/12 12:08
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	6	mg/L		5		A2320 B	10/19/12 21:34 / jba
Calcium	ND	mg/L		1		E200.7	11/09/12 23:55 / sf
Chloride	ND	mg/L		1		E300.0	10/20/12 06:52 / wc
Magnesium	ND	mg/L		1		E200.7	11/09/12 23:55 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	10/26/12 17:04 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	10/25/12 13:09 / ljl
Potassium	ND	mg/L		1		E200.7	11/09/12 23:55 / sf
Sodium	5	mg/L		1		E200.7	11/09/12 23:55 / sf
Sulfate	8	mg/L		1		E300.0	10/20/12 06:52 / wc
PHYSICAL PROPERTIES							
pH	6.20	s.u.	H	0.01		A4500-H B	10/19/12 16:16 / ab
Solids, Total Dissolved TDS @ 180 C	11	mg/L		10		A2540 C	10/22/12 16:37 / jz
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	11/07/12 12:41 / cp
Beryllium	ND	mg/L		0.001		E200.8	11/07/12 12:41 / cp
Cadmium	ND	mg/L		0.005		E200.8	11/07/12 12:41 / cp
Cobalt	ND	mg/L		0.01		E200.8	11/07/12 12:41 / cp
Lead	ND	mg/L		0.001		E200.8	11/07/12 12:41 / cp
Manganese	ND	mg/L		0.01		E200.8	11/07/12 12:41 / cp
Molybdenum	ND	mg/L		0.1		E200.8	11/07/12 12:41 / cp
Nickel	ND	mg/L		0.05		E200.8	11/07/12 12:41 / cp
Uranium	ND	mg/L		0.0003		E200.8	11/07/12 12:41 / cp
Vanadium	ND	mg/L		0.1		E200.8	11/07/12 12:41 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	11/05/12 16:37 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	11/07/12 13:43 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.2	pCi/L	U			E900.1	11/20/12 01:28 / lbb
Gross Alpha minus Rn & U Precision (±)	0.2	pCi/L				E900.1	11/20/12 01:28 / lbb
Gross Alpha minus Rn & U MDC	0.2	pCi/L				E900.1	11/20/12 01:28 / lbb
Lead 210	0.3	pCi/L	U			E909.0	11/19/12 00:34 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	11/19/12 00:34 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	11/19/12 00:34 / eli-cs
Radium 226	-0.2	pCi/L	U			E903.0	11/05/12 17:05 / gb
Radium 226 precision (±)	0.1	pCi/L				E903.0	11/05/12 17:05 / gb
Radium 226 MDC	0.24	pCi/L				E903.0	11/05/12 17:05 / gb
Radium 228	1.4	pCi/L	U			RA-05	10/31/12 18:03 / gb
Radium 228 precision (±)	1.2	pCi/L				RA-05	10/31/12 18:03 / gb
Radium 228 MDC	1.9	pCi/L				RA-05	10/31/12 18:03 / gb

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.
H - Analysis performed past recommended holding time.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-31 m
Lab ID: C12100835-019
Client Sample ID: 619 Rinsate

Report Date: 11/20/12
Collection Date: 10/16/12 12:08
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	-0.01	pCi/L	U			E908.0	11/01/12 13:58 / dmf
Thorium 230 precision (±)	0.07	pCi/L				E908.0	11/01/12 13:58 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	11/01/12 13:58 / dmf
DATA QUALITY							
A/C Balance (± 5)	-10.7	%				A1030 E	11/12/12 14:48 / kbh
Anions	0.285	meq/L				A1030 E	11/12/12 14:48 / kbh
Cations	0.230	meq/L				A1030 E	11/12/12 14:48 / kbh
Solids, Total Dissolved Calculated	17	mg/L				A1030 E	11/12/12 14:48 / kbh
TDS Balance (0.80 - 1.20)	0.650					A1030 E	11/12/12 14:48 / kbh
- The ion balance is not appropriate for samples having a conductivity less than 300 umhos/cm.							
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	0.78	ug/L		0.50		E624	10/27/12 03:24 / jk
Bromoform	1.02	ug/L		0.50		E624	10/27/12 03:24 / jk
Chlorodibromomethane	1.47	ug/L		0.50		E624	10/27/12 03:24 / jk
Chloroform	2.52	ug/L		0.50		E624	10/27/12 03:24 / jk
Trihalomethanes, Total	5.78	ug/L		0.50		E624	10/27/12 03:24 / jk
Surr: 1,2-Dichlorobenzene-d4	106	%REC		80-120		E624	10/27/12 03:24 / jk
Surr: Dibromofluoromethane	159	%REC	S	80-120		E624	10/27/12 03:24 / jk
Surr: p-Bromofluorobenzene	130	%REC	S	80-120		E624	10/27/12 03:24 / jk
Surr: Toluene-d8	110	%REC		80-120		E624	10/27/12 03:24 / 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
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:		10/9/2012	7/~~9~~10/2012	4/3/2012	1/3/2012
Receive Date:		10/12/2012	7/13/2012	4/6/2012	1/6/2012
Report Date:		11/20/2012	8/30/2012	5/25/2012	3/2/2012
Analyte	**RUnits**	**C12100557-012**	**C12070454-012**	**C12040276-012**	**C12010151-011**
Bicarbonate as HCO3	mg/L	811	798	808	749
Calcium	mg/L	576	537	558	536
Chloride	mg/L	126	121	122	126
Magnesium	mg/L	482	498	451	439
Nitrogen, Ammonia as N	mg/L	ND(0.05)	0.13	ND(0.05)	ND(0.05)
Nitrogen, Nitrate+Nitrite as N	mg/L	26	30	29	34
Potassium	mg/L	12	11	12	11
Sodium	mg/L	231	227	215	209
Sulfate	mg/L	2810	2730	2770	2710
pH	s.u.	6.86	6.91	6.79	6.95
Solids, Total Dissolved TDS @ 180 C	mg/L	5120	5050	5000	4960
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(0.01)	ND(0.01)
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(0.05)	ND(0.05)
Manganese	mg/L	0.86	0.77	0.76	0.72
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	0.0470	0.0468	0.0520	0.0498
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(0.01)	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	0.4	0.5
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.4	0.3	0.3	0.3
Gross Alpha minus Rn & U MDC	pCi/L	0.6	0.3	0.4	0.4
Lead 210	pCi/L	0.2	0.3	0.2	0.6
Lead 210 precision (±)	pCi/L	0.6	0.7	0.6	0.7
Lead 210 MDC	pCi/L	1	1.2	1	1.1
Radium 226	pCi/L	0.32	0.51	0.12	0.48
Radium 226 precision (±)	pCi/L	0.15	0.14	0.10	0.16
Radium 226 MDC	pCi/L	0.18	0.10	0.15	0.15
Radium 228	pCi/L	-0.1	0.78	0.29	0.74
Radium 228 precision (±)	pCi/L	1.1	0.66	0.64	0.87
Radium 228 MDC	pCi/L	1.9	1.0	1.1	1.4
Thorium 230	pCi/L	0.008	0.03	0.005	-0.008
Thorium 230 precision (±)	pCi/L	0.07	0.07	0.07	0.05
Thorium 230 MDC	pCi/L	0.1	0.2	0.2	0.2
A/C Balance (± 5)	%	0.842	1.61	-1.18	-1.65
Anions	meq/L	77.5	75.5	76.4	74.7
Cations	meq/L	78.8	78.0	74.6	72.3
Solids, Total Dissolved Calculated	mg/L	4800	4700	4670	4570
TDS Balance (0.80 - 1.20)		1.07	1.08	1.07	1.09
Trihalomethanes, Total	ug/L	ND(0.50)	0.69	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.**

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Alluvium Monitor Wells					
Well ID:		EPA-28 Duplicate	EPA-28 Duplicate	EPA-28 Duplicate	EPA-28 Duplicate
Collection Date:		10/9/2012	7/9/2012 10	4/3/2012	1/3/2012
Receive Date:		10/12/2012	7/13/2012	4/6/2012	1/6/2012
Report Date:		11/20/2012	8/30/2012	5/25/2012	3/2/2012
Analyte	RUnits	C12100557-013	C12070454-013	C12040276-013	C12010151-012
Bicarbonate as HCO3	mg/L	674	678	727	676
Calcium	mg/L	556	532	548	590
Chloride	mg/L	122	117	119	122
Magnesium	mg/L	460	487	442	477
Nitrogen, Ammonia as N	mg/L	ND(0.05)	0.09	ND(0.05)	ND(0.05)
Nitrogen, Nitrate+Nitrite as N	mg/L	23	27	15	30
Potassium	mg/L	12	11	12	13
Sodium	mg/L	242	238	218	234
Sulfate	mg/L	2900	2780	2790	2750
pH	s.u.	6.86	6.88	6.82	7.00
Solids, Total Dissolved TDS @ 180 C	mg/L	4980	5020	5010	4770
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(0.01)	ND(0.01)
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(0.05)	ND(0.05)
Manganese	mg/L	0.72	0.66	0.70	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)	ND(0.05)	ND(0.05)
Uranium	mg/L	0.0384	0.0396	0.0459	0.0450
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(0.01)	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	0.5	0.5	0.3	0.6
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.5	0.3	0.3	0.3
Gross Alpha minus Rn & U MDC	pCi/L	0.6	0.3	0.4	0.4
Lead 210	pCi/L	1	0.9	0.8	0.6
Lead 210 precision (±)	pCi/L	0.5	0.7	0.7	0.7
Lead 210 MDC	pCi/L	0.8	1.2	1.2	1.1
Radium 226	pCi/L	0.27	0.55	0.41	0.60
Radium 226 precision (±)	pCi/L	0.13	0.14	0.15	0.17
Radium 226 MDC	pCi/L	0.16	0.10	0.15	0.14
Radium 228	pCi/L	1.5	1.4	0.84	0.27
Radium 228 precision (±)	pCi/L	1.1	0.71	0.69	0.80
Radium 228 MDC	pCi/L	1.7	1.1	1.1	1.3
Thorium 230	pCi/L	0.04	0.008	0.009	0.02
Thorium 230 precision (±)	pCi/L	0.08	0.05	0.06	0.06
Thorium 230 MDC	pCi/L	0.1	0.1	0.2	0.2
A/C Balance (± 5)	%	-0.0669	2.15	-1.22	3.49
Anions	meq/L	76.5	74.0	75.3	73.9
Cations	meq/L	76.4	77.3	73.5	79.2
Solids, Total Dissolved Calculated	mg/L	4700	4600	4620	4650
TDS Balance (0.80 - 1.20)		1.05	1.09	1.08	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: C12070454-013
Client Sample ID: EPA-28 Duplicate

Report Date: 08/30/12
Collection Date: 07/10/12 11:19
DateReceived: 07/13/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	678	mg/L		5		A2320 B	07/13/12 21:57 / jba
Calcium	532	mg/L		1		E200.7	07/17/12 15:32 / sf
Chloride	117	mg/L	D	4		E300.0	07/17/12 05:27 / wc
Magnesium	487	mg/L		1		E200.7	07/17/12 15:32 / sf
Nitrogen, Ammonia as N	0.09	mg/L		0.05		A4500-NH3 G	07/17/12 13:54 / lr
Nitrogen, Nitrate+Nitrite as N	27	mg/L	D	2		E353.2	07/16/12 13:15 / lr
Potassium	11	mg/L		1		E200.7	07/17/12 15:32 / sf
Sodium	238	mg/L		1		E200.7	07/17/12 15:32 / sf
Sulfate	2780	mg/L	D	20		E300.0	07/17/12 05:27 / wc
PHYSICAL PROPERTIES							
pH	6.88	s.u.	H	0.01		A4500-H B	07/16/12 10:03 / ab
Solids, Total Dissolved TDS @ 180 C	5020	mg/L		10		A2540 C	07/16/12 12:05 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	07/27/12 03:28 / cp
Beryllium	ND	mg/L		0.001		E200.8	08/04/12 00:51 / cp
Cadmium	ND	mg/L		0.005		E200.8	07/27/12 03:28 / cp
Cobalt	ND	mg/L		0.01		E200.8	08/04/12 00:51 / cp
Lead	ND	mg/L		0.001		E200.8	07/27/12 03:28 / cp
Manganese	0.66	mg/L		0.01		E200.8	07/27/12 03:28 / cp
Molybdenum	ND	mg/L		0.1		E200.8	07/27/12 03:28 / cp
Nickel	ND	mg/L		0.05		E200.8	07/27/12 03:28 / cp
Uranium	0.0396	mg/L		0.0003		E200.8	07/27/12 03:28 / cp
Vanadium	ND	mg/L		0.1		E200.8	07/27/12 03:28 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	08/01/12 17:14 / eli-h
Selenium-IV	0.002	mg/L		0.001		A3114 B	07/26/12 16:30 / rdw
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.5	pCi/L				E900.1	08/09/12 22:40 / lbb
Gross Alpha minus Rn & U Precision (±)	0.3	pCi/L				E900.1	08/09/12 22:40 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	08/09/12 22:40 / lbb
Lead 210	0.9	pCi/L	U			E909.0	08/04/12 11:19 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	08/04/12 11:19 / eli-cs
Lead 210 MDC	1.2	pCi/L				E909.0	08/04/12 11:19 / eli-cs
Radium 226	0.55	pCi/L				E903.0	07/31/12 02:12 / trs
Radium 226 precision (±)	0.14	pCi/L				E903.0	07/31/12 02:12 / trs
Radium 226 MDC	0.10	pCi/L				E903.0	07/31/12 02:12 / trs
Radium 228	1.4	pCi/L				RA-05	07/25/12 19:26 / gb
Radium 228 precision (±)	0.71	pCi/L				RA-05	07/25/12 19:26 / gb
Radium 228 MDC	1.1	pCi/L				RA-05	07/25/12 19:26 / 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: C12070454-013
Client Sample ID: EPA-28 Duplicate

Report Date: 08/30/12
Collection Date: 07/10/12 11:19
DateReceived: 07/13/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.008	pCi/L	U			E908.0	08/01/12 08:46 / dmf
Thorium 230 precision (±)	0.05	pCi/L				E908.0	08/01/12 08:46 / dmf
Thorium 230 MDC	0.1	pCi/L				E908.0	08/01/12 08:46 / dmf
DATA QUALITY							
A/C Balance (± 5)	2.15	%				A1030 E	07/23/12 07:18 / kbh
Anions	74.0	meq/L				A1030 E	07/23/12 07:18 / kbh
Cations	77.3	meq/L				A1030 E	07/23/12 07:18 / kbh
Solids, Total Dissolved Calculated	4600	mg/L				A1030 E	07/23/12 07:18 / kbh
TDS Balance (0.80 - 1.20)	1.09					A1030 E	07/23/12 07:18 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	07/17/12 01:54 / jlr
Bromoform	ND	ug/L		0.50		E624	07/17/12 01:54 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	07/17/12 01:54 / jlr
Chloroform	ND	ug/L		0.50		E624	07/17/12 01:54 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	07/17/12 01:54 / jlr
Surr: 1,2-Dichlorobenzene-d4	91.0	%REC		80-120		E624	07/17/12 01:54 / jlr
Surr: Dibromofluoromethane	125	%REC	S	80-120		E624	07/17/12 01:54 / jlr
Surr: p-Bromofluorobenzene	181	%REC	S	80-120		E624	07/17/12 01:54 / jlr
Surr: Toluene-d8	100	%REC		80-120		E624	07/17/12 01:54 / 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
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: C12100557-013
Client Sample ID: EPA-28 Duplicate

Report Date: 11/20/12
Collection Date: 10/09/12 11:52
DateReceived: 10/12/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	674	mg/L		5		A2320 B	10/12/12 22:48 / jba
Calcium	556	mg/L		1		E200.7	10/24/12 16:56 / sf
Chloride	122	mg/L	D	4		E300.0	10/15/12 19:21 / wc
Magnesium	460	mg/L		1		E200.7	10/24/12 16:56 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	10/16/12 14:35 / ab
Nitrogen, Nitrate+Nitrite as N	23	mg/L	D	2		E353.2	10/15/12 12:05 / lr
Potassium	12	mg/L		1		E200.7	10/24/12 16:56 / sf
Sodium	242	mg/L	D	2		E200.7	10/24/12 16:56 / sf
Sulfate	2900	mg/L	D	20		E300.0	10/15/12 19:21 / wc
PHYSICAL PROPERTIES							
pH	6.86	s.u.	H	0.01		A4500-H B	10/12/12 16:57 / ab
Solids, Total Dissolved TDS @ 180 C	4980	mg/L		10		A2540 C	10/12/12 16:13 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	10/26/12 16:38 / cp
Beryllium	ND	mg/L		0.001		E200.8	10/26/12 16:38 / cp
Cadmium	ND	mg/L		0.005		E200.8	10/23/12 21:51 / cp
Cobalt	ND	mg/L		0.01		E200.8	10/26/12 16:38 / cp
Lead	ND	mg/L		0.001		E200.8	10/23/12 21:51 / cp
Manganese	0.72	mg/L		0.01		E200.8	10/26/12 16:38 / cp
Molybdenum	ND	mg/L		0.1		E200.8	10/23/12 21:51 / cp
Nickel	ND	mg/L		0.05		E200.8	10/26/12 16:38 / cp
Uranium	0.0384	mg/L		0.0003		E200.8	10/23/12 21:51 / cp
Vanadium	ND	mg/L		0.1		E200.8	10/26/12 16:38 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	11/04/12 18:25 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	10/23/12 12:59 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.5	pCi/L	U			E900.1	10/20/12 12:14 / lbb
Gross Alpha minus Rn & U Precision (±)	0.5	pCi/L				E900.1	10/20/12 12:14 / lbb
Gross Alpha minus Rn & U MDC	0.6	pCi/L				E900.1	10/20/12 12:14 / lbb
Lead 210	1	pCi/L				E909.0	11/15/12 01:03 / eli-cs
Lead 210 precision (±)	0.5	pCi/L				E909.0	11/15/12 01:03 / eli-cs
Lead 210 MDC	0.8	pCi/L				E909.0	11/15/12 01:03 / eli-cs
Radium 226	0.27	pCi/L				E903.0	10/24/12 13:24 / trs
Radium 226 precision (±)	0.13	pCi/L				E903.0	10/24/12 13:24 / trs
Radium 226 MDC	0.16	pCi/L				E903.0	10/24/12 13:24 / trs
Radium 228	1.5	pCi/L	U			RA-05	10/19/12 22:00 / gb
Radium 228 precision (±)	1.1	pCi/L				RA-05	10/19/12 22:00 / gb
Radium 228 MDC	1.7	pCi/L				RA-05	10/19/12 22:00 / 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: C12100557-013
Client Sample ID: EPA-28 Duplicate

Report Date: 11/20/12
Collection Date: 10/09/12 11:52
DateReceived: 10/12/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.04	pCi/L	U			E908.0	10/23/12 08:55 / dmf
Thorium 230 precision (±)	0.08	pCi/L				E908.0	10/23/12 08:55 / dmf
Thorium 230 MDC	0.1	pCi/L				E908.0	10/23/12 08:55 / dmf
DATA QUALITY							
A/C Balance (± 5)	-0.0669	%				A1030 E	10/26/12 07:23 / kbh
Anions	76.5	meq/L				A1030 E	10/26/12 07:23 / kbh
Cations	76.4	meq/L				A1030 E	10/26/12 07:23 / kbh
Solids, Total Dissolved Calculated	4700	mg/L				A1030 E	10/26/12 07:23 / kbh
TDS Balance (0.80 - 1.20)	1.05					A1030 E	10/26/12 07:23 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	10/13/12 02:07 / jlr
Bromoform	ND	ug/L		0.50		E624	10/13/12 02:07 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	10/13/12 02:07 / jlr
Chloroform	ND	ug/L		0.50		E624	10/13/12 02:07 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	10/13/12 02:07 / jlr
Surr: 1,2-Dichlorobenzene-d4	106	%REC		80-120		E624	10/13/12 02:07 / jlr
Surr: Dibromofluoromethane	106	%REC		80-120		E624	10/13/12 02:07 / jlr
Surr: p-Bromofluorobenzene	111	%REC		80-120		E624	10/13/12 02:07 / jlr
Surr: Toluene-d8	105	%REC		80-120		E624	10/13/12 02:07 / 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.
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:		10/15/2012	7/16/2012	4/9/2012	1/9/2012
Receive Date:		10/19/2012	7/20/2012	4/13/2012	1/13/2012
Report Date:		11/19/2012	8/31/2012	5/25/2012	3/2/2012
Analyte	RUnits	C12100859-004	C12070710-004	C12040734-004	C12010434-004
Bicarbonate as HCO3	mg/L	306	299	305	286
Calcium	mg/L	382	337	349	345
Chloride	mg/L	22	21	22	21
Magnesium	mg/L	161	155	162	143
Nitrogen, Ammonia as N	mg/L	0.44	0.42	0.43	0.35
Nitrogen, Nitrate+Nitrite as N	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Potassium	mg/L	7	6	6	6
Sodium	mg/L	215	207	201	184
Sulfate	mg/L	1800	1790	1790	1720
pH	s.u.	7.04	7.10	6.88	6.77
Solids, Total Dissolved TDS @ 180 C	mg/L	2990	2920	2960	2850
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(0.01)	ND(0.01)
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(0.05)	ND(0.05)
Manganese	mg/L	1.24	1.39	1.90	1.18
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	0.0020	0.0017	0.0025	0.0020
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(0.01)	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	1.8	1.6	1.3	1.1
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.7	0.3	0.5	0.4
Gross Alpha minus Rn & U MDC	pCi/L	0.7	0.2	0.5	0.4
Lead 210	pCi/L	0.2	0.8	0.3	0.4
Lead 210 precision (±)	pCi/L	0.6	0.7	0.8	0.6
Lead 210 MDC	pCi/L	1.0	1.2	1.3	1
Radium 226	pCi/L	0.91	1.3	1.1	1.4
Radium 226 precision (±)	pCi/L	0.13	0.19	0.25	0.24
Radium 226 MDC	pCi/L	0.10	0.09	0.20	0.17
Radium 228	pCi/L	2.4	2.2	2.7	1.3
Radium 228 precision (±)	pCi/L	0.84	0.86	1.0	1.9
Radium 228 MDC	pCi/L	1.2	1.3	1.5	3.0
Thorium 230	pCi/L	0.05	0.04	0.008	0.04
Thorium 230 precision (±)	pCi/L	0.08	0.08	0.06	0.1
Thorium 230 MDC	pCi/L	0.2	0.2	0.2	0.3
A/C Balance (± 5)	%	-1.4	-4.75	-3.80	-5.02
Anions	meq/L	43.1	42.7	42.8	41.1
Cations	meq/L	41.9	38.8	39.7	37.2
Solids, Total Dissolved Calculated	mg/L	2800	2700	2710	2590
TDS Balance (0.80 - 1.20)		1.08	1.09	1.09	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.

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 1 Monitor Wells					
Well ID:		EPA-2 Duplicate	EPA-2 Duplicate	EPA-2 Duplicate	EPA-2 Duplicate
Collection Date:		10/15/2012	7/16/2012	4/9/2012	1/9/2012
Receive Date:		10/19/2012	7/20/2012	4/13/2012	1/13/2012
Report Date:		11/19/2012	8/31/2012	5/25/2012	3/2/2012
Analyte	RUnits	C12100859-005	C12070710-005	C12040734-005	C12010434-005
Bicarbonate as HCO3	mg/L	338	323	328	310
Calcium	mg/L	391	388	340	351
Chloride	mg/L	21	21	20	19
Magnesium	mg/L	169	178	156	147
Nitrogen, Ammonia as N	mg/L	0.42	0.46	0.46	0.36
Nitrogen, Nitrate+Nitrite as N	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Potassium	mg/L	7	5	6	6
Sodium	mg/L	216	175	195	187
Sulfate	mg/L	1700	1730	1720	1610
pH	s.u.	6.75	6.76	6.76	6.32
Solids, Total Dissolved TDS @ 180 C	mg/L	2820	2890	2820	2710
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(0.01)	ND(0.01)
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(0.05)	ND(0.05)
Manganese	mg/L	1.39	1.43	1.45	1.20
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	0.0022	0.0014	0.0020	0.0023
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(0.01)	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	2.8	1.4	1.5	0.9
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.8	0.3	0.5	0.4
Gross Alpha minus Rn & U MDC	pCi/L	0.7	0.2	0.5	0.4
Lead 210	pCi/L	0.6	0.5	0.4	0.4
Lead 210 precision (±)	pCi/L	0.6	0.7	0.8	0.6
Lead 210 MDC	pCi/L	1.0	1.2	1.3	1
Radium 226	pCi/L	1.1	1.6	1.1	1.1
Radium 226 precision (±)	pCi/L	0.16	0.21	0.23	0.21
Radium 226 MDC	pCi/L	0.13	0.09	0.17	0.15
Radium 228	pCi/L	3.0	2.4	3.9	0.82
Radium 228 precision (±)	pCi/L	1.1	0.87	0.93	1.1
Radium 228 MDC	pCi/L	1.5	1.3	1.3	1.7
Thorium 230	pCi/L	0.4	0.02	0.01	0.005
Thorium 230 precision (±)	pCi/L	0.2	0.06	0.05	0.06
Thorium 230 MDC	pCi/L	0.2	0.1	0.1	0.2
A/C Balance (± 5)	%	1.84	-0.0702	-4.04	-1.48
Anions	meq/L	41.5	41.9	41.7	39.1
Cations	meq/L	43.0	41.8	38.5	37.9
Solids, Total Dissolved Calculated	mg/L	2700	2700	2630	2500
TDS Balance (0.80 - 1.20)		1.04	1.07	1.07	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-1
Lab ID: C12070710-005
Client Sample ID: EPA-2 Duplicate

Report Date: 08/31/12
Collection Date: 07/16/12 13:15
DateReceived: 07/20/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	323	mg/L		5		A2320 B	07/20/12 17:35 / jba
Calcium	388	mg/L		1		E200.7	08/09/12 16:57 / sf
Chloride	21	mg/L	D	2		E300.0	07/24/12 09:50 / ljl
Magnesium	178	mg/L		1		E200.7	08/09/12 16:57 / sf
Nitrogen, Ammonia as N	0.46	mg/L		0.05		A4500-NH3 G	07/28/12 15:00 / ljl
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	07/24/12 16:28 / lr
Potassium	5	mg/L		1		E200.7	08/10/12 14:50 / sf
Sodium	175	mg/L		1		E200.7	08/10/12 14:50 / sf
Sulfate	1730	mg/L	D	8		E300.0	07/24/12 09:50 / ljl
PHYSICAL PROPERTIES							
pH	6.76	s.u.	H	0.01		A4500-H B	07/23/12 09:30 / ab
Solids, Total Dissolved TDS @ 180 C	2890	mg/L		10		A2540 C	07/20/12 16:43 / ab
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	08/10/12 16:37 / cp
Beryllium	ND	mg/L		0.001		E200.7	08/10/12 14:54 / sf
Cadmium	ND	mg/L		0.005		E200.8	08/10/12 16:37 / cp
Cobalt	ND	mg/L		0.01		E200.8	08/10/12 16:37 / cp
Lead	ND	mg/L		0.001		E200.8	08/10/12 16:37 / cp
Manganese	1.43	mg/L		0.01		E200.8	08/10/12 16:37 / cp
Molybdenum	ND	mg/L		0.1		E200.8	08/10/12 16:37 / cp
Nickel	ND	mg/L		0.05		E200.8	08/10/12 16:37 / cp
Uranium	0.0014	mg/L		0.0003		E200.8	08/10/12 16:37 / cp
Vanadium	ND	mg/L		0.1		E200.8	08/10/12 16:37 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	08/01/12 20:15 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	07/26/12 17:31 / rdw
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	1.4	pCi/L				E900.1	08/01/12 13:12 / lbb
Gross Alpha minus Rn & U Precision (±)	0.3	pCi/L				E900.1	08/01/12 13:12 / lbb
Gross Alpha minus Rn & U MDC	0.2	pCi/L				E900.1	08/01/12 13:12 / lbb
Lead 210	0.5	pCi/L	U			E909.0	08/14/12 04:21 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	08/14/12 04:21 / eli-cs
Lead 210 MDC	1.2	pCi/L				E909.0	08/14/12 04:21 / eli-cs
Radium 226	1.6	pCi/L				E903.0	08/06/12 11:47 / lbb
Radium 226 precision (±)	0.21	pCi/L				E903.0	08/06/12 11:47 / lbb
Radium 226 MDC	0.09	pCi/L				E903.0	08/06/12 11:47 / lbb
Radium 228	2.4	pCi/L				RA-05	07/30/12 22:49 / gb
Radium 228 precision (±)	0.87	pCi/L				RA-05	07/30/12 22:49 / gb
Radium 228 MDC	1.3	pCi/L				RA-05	07/30/12 22:49 / 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: C12070710-005
Client Sample ID: EPA-2 Duplicate

Report Date: 08/31/12
Collection Date: 07/16/12 13:15
DateReceived: 07/20/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.02	pCi/L	U			E908.0	08/07/12 17:00 / dmf
Thorium 230 precision (±)	0.06	pCi/L				E908.0	08/07/12 17:00 / dmf
Thorium 230 MDC	0.1	pCi/L				E908.0	08/07/12 17:00 / dmf
DATA QUALITY							
A/C Balance (± 5)	-0.0702	%				A1030 E	08/13/12 12:59 / kbh
Anions	41.9	meq/L				A1030 E	08/13/12 12:59 / kbh
Cations	41.8	meq/L				A1030 E	08/13/12 12:59 / kbh
Solids, Total Dissolved Calculated	2700	mg/L				A1030 E	08/13/12 12:59 / kbh
TDS Balance (0.80 - 1.20)	1.07					A1030 E	08/13/12 12:59 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	07/25/12 01:55 / jk
Bromoform	ND	ug/L		0.50		E624	07/25/12 01:55 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	07/25/12 01:55 / jk
Chloroform	ND	ug/L		0.50		E624	07/25/12 01:55 / jk
Trihalomethanes, Total	ND	ug/L		0.50		E624	07/25/12 01:55 / jk
Surr: 1,2-Dichlorobenzene-d4	100	%REC		80-120		E624	07/25/12 01:55 / jk
Surr: Dibromofluoromethane	91.0	%REC		80-120		E624	07/25/12 01:55 / jk
Surr: p-Bromofluorobenzene	87.0	%REC		80-120		E624	07/25/12 01:55 / jk
Surr: Toluene-d8	91.0	%REC		80-120		E624	07/25/12 01:55 / 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: C12100859-005
Client Sample ID: EPA-2 Duplicate

Report Date: 11/19/12
Collection Date: 10/15/12 12:05
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	338	mg/L		5		A2320 B	10/22/12 18:36 / jba
Calcium	391	mg/L		1		E200.7	11/10/12 00:52 / sf
Chloride	21	mg/L	D	2		E300.0	10/22/12 23:31 / wc
Magnesium	169	mg/L		1		E200.7	11/10/12 00:52 / sf
Nitrogen, Ammonia as N	0.42	mg/L		0.05		A4500-NH3 G	10/26/12 17:30 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	10/25/12 14:19 / ljl
Potassium	7	mg/L		1		E200.7	11/10/12 00:52 / sf
Sodium	216	mg/L		1		E200.7	11/10/12 00:52 / sf
Sulfate	1700	mg/L	D	8		E300.0	10/22/12 23:31 / wc
PHYSICAL PROPERTIES							
pH	6.75	s.u.	H	0.01		A4500-H B	10/22/12 10:39 / ab
Solids, Total Dissolved TDS @ 180 C	2820	mg/L		10		A2540 C	10/22/12 08:16 / jz
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	10/26/12 22:18 / cp
Beryllium	ND	mg/L		0.001		E200.8	10/26/12 22:18 / cp
Cadmium	ND	mg/L		0.005		E200.8	10/26/12 22:18 / cp
Cobalt	ND	mg/L		0.01		E200.8	10/26/12 22:18 / cp
Lead	ND	mg/L		0.001		E200.8	10/26/12 22:18 / cp
Manganese	1.39	mg/L		0.01		E200.8	10/26/12 22:18 / cp
Molybdenum	ND	mg/L		0.1		E200.8	10/26/12 22:18 / cp
Nickel	ND	mg/L		0.05		E200.8	10/26/12 22:18 / cp
Uranium	0.0022	mg/L		0.0003		E200.8	10/26/12 22:18 / cp
Vanadium	ND	mg/L		0.1		E200.8	10/26/12 22:18 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	11/05/12 12:00 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	11/07/12 14:21 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	2.8	pCi/L				E900.1	10/25/12 06:36 / lbb
Gross Alpha minus Rn & U Precision (±)	0.8	pCi/L				E900.1	10/25/12 06:36 / lbb
Gross Alpha minus Rn & U MDC	0.7	pCi/L				E900.1	10/25/12 06:36 / lbb
Lead 210	0.6	pCi/L	U			E909.0	11/19/12 08:22 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	11/19/12 08:22 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	11/19/12 08:22 / eli-cs
Radium 226	1.1	pCi/L				E903.0	11/07/12 23:27 / gb
Radium 226 precision (±)	0.16	pCi/L				E903.0	11/07/12 23:27 / gb
Radium 226 MDC	0.13	pCi/L				E903.0	11/07/12 23:27 / gb
Radium 228	3.0	pCi/L				RA-05	10/31/12 21:13 / gb
Radium 228 precision (±)	1.1	pCi/L				RA-05	10/31/12 21:13 / gb
Radium 228 MDC	1.5	pCi/L				RA-05	10/31/12 21:13 / 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: C12100859-005
Client Sample ID: EPA-2 Duplicate

Report Date: 11/19/12
Collection Date: 10/15/12 12:05
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.4	pCi/L				E908.0	11/16/12 08:25 / dmf
Thorium 230 precision (±)	0.2	pCi/L				E908.0	11/16/12 08:25 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	11/16/12 08:25 / dmf
DATA QUALITY							
A/C Balance (± 5)	1.84	%				A1030 E	11/12/12 14:49 / kbh
Anions	41.5	meq/L				A1030 E	11/12/12 14:49 / kbh
Cations	43.0	meq/L				A1030 E	11/12/12 14:49 / kbh
Solids, Total Dissolved Calculated	2700	mg/L				A1030 E	11/12/12 14:49 / kbh
TDS Balance (0.80 - 1.20)	1.04					A1030 E	11/12/12 14:49 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	10/26/12 18:02 / jk
Bromoform	ND	ug/L		0.50		E624	10/26/12 18:02 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	10/26/12 18:02 / jk
Chloroform	ND	ug/L		0.50		E624	10/26/12 18:02 / jk
Trihalomethanes, Total	ND	ug/L		0.50		E624	10/26/12 18:02 / jk
Surr: 1,2-Dichlorobenzene-d4	105	%REC		80-120		E624	10/26/12 18:02 / jk
Surr: Dibromofluoromethane	152	%REC	S	80-120		E624	10/26/12 18:02 / jk
Surr: p-Bromofluorobenzene	126	%REC	S	80-120		E624	10/26/12 18:02 / jk
Surr: Toluene-d8	110	%REC		80-120		E624	10/26/12 18:02 / 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.
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:		10/15/2012	7/17/2012	4/9/2012	1/19/2012
Receive Date:		10/19/2012	7/20/2012	4/13/2012	1/13/2012
Report Date:		11/20/2012	9/7/2012	5/25/2012	3/5/2012
Analyte	RUnits	C12100835-003	C12070713-004	C12040738-003	C12010437-003
Bicarbonate as HCO3	mg/L	ND(5)	ND(5)	ND(5)	ND(5)
Calcium	mg/L	500	482	450	485
Chloride	mg/L	16	18	18	17
Magnesium	mg/L	462	460	449	422
Nitrogen, Ammonia as N	mg/L	0.42	0.38	0.39	0.34
Nitrogen, Nitrate+Nitrite as N	mg/L	ND(0.2)	ND(0.1)	ND(0.2)	ND(0.1)
Potassium	mg/L	11	12	10	10
Sodium	mg/L	103	117	97	95
Sulfate	mg/L	3280	3400	3650	3400
pH	s.u.	3.78	3.30	3.25	3.27
Solids, Total Dissolved TDS @ 180 C	mg/L	4520	5020	4860	4730
Aluminum	mg/L	0.3	0.2	0.2	0.2
Beryllium	mg/L	0.002	0.002	ND(0.01)	ND(0.01)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	0.29	0.28	0.29	0.33
Lead	mg/L	0.003	0.004	ND(0.05)	ND(0.05)
Manganese	mg/L	5.02	5.12	5.36	5.36
Molybdenum	mg/L	0.2	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	0.27	0.26	0.26	0.29
Uranium	mg/L	0.0169	0.0177	0.0203	0.0185
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	0.004	0.002	ND(0.01)	0.004
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	4.3	5.5	4.6	5.0
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.5	1.2	0.8	0.8
Gross Alpha minus Rn & U MDC	pCi/L	0.3	0.9	0.5	0.4
Lead 210	pCi/L	1.1	0.4	0.3	0.7
Lead 210 precision (±)	pCi/L	0.7	0.7	0.8	0.6
Lead 210 MDC	pCi/L	1.0	1.2	1.3	1.0
Radium 226	pCi/L	3.4	4.2	4.6	3.1
Radium 226 precision (±)	pCi/L	0.36	0.37	0.45	0.22
Radium 226 MDC	pCi/L	0.15	0.13	0.17	0.09
Radium 228	pCi/L	9.6	5.8	7.7	6.4
Radium 228 precision (±)	pCi/L	1.1	0.88	0.93	0.81
Radium 228 MDC	pCi/L	1.2	1.0	1.0	0.91
Thorium 230	pCi/L	0.09	0.06	0.1	0.07
Thorium 230 precision (±)	pCi/L	0.2	0.2	0.2	0.2
Thorium 230 MDC	pCi/L	0.5	0.5	0.2	0.4
A/C Balance (± 5)	%	2.79	0.363	-6.11	-1.43
Anions	meq/L	68.8	71.2	76.5	71.4
Cations	meq/L	72.8	71.8	67.7	69.4
Solids, Total Dissolved Calculated	mg/L	4400	4500	4680	4440
TDS Balance (0.80 - 1.20)		1.03	1.12	1.04	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.**

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 3 Monitor Wells					
Well ID:		711 Duplicate	711 Duplicate	711 Duplicate	711 Duplicate
Collection Date:		7/17/2012	4/9/2012	1/9/2012	10/11/2011
Receive Date:		7/20/2012	4/13/2012	1/13/2012	10/14/2011
Report Date:		9/7/2012	5/25/2012	3/5/2012	11/30/2011
Analyte	RUnits	C12070713-005	C12040738-004	C12010437-004	C11100573-007
Bicarbonate as HCO3	mg/L	ND(5)	ND(5)	ND(5)	7
Calcium	mg/L	486	449	454	471
Chloride	mg/L	18	17	17	16
Magnesium	mg/L	461	451	428	450
Nitrogen, Ammonia as N	mg/L	0.40	0.39	0.34	0.4
Nitrogen, Nitrate+Nitrite as N	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.5)
Potassium	mg/L	12	10	10	11
Sodium	mg/L	113	94	94	98
Sulfate	mg/L	3420	3370	3360	3420
pH	s.u.	4.73	4.77	4.07	5.27
Solids, Total Dissolved TDS @ 180 C	mg/L	4850	4940	4810	4940
Aluminum	mg/L	0.2	0.2	0.2	0.2
Beryllium	mg/L	0.002	ND(0.01)	ND(0.01)	ND(0.01)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	0.27	0.28	0.36	0.28
Lead	mg/L	ND(0.001)	ND(0.05)	ND(0.05)	ND(0.05)
Manganese	mg/L	5.02	5.17	5.66	5.02
Molybdenum	mg/L	0.1	0.1	ND(0.1)	0.1
Nickel	mg/L	0.26	0.26	0.29	0.26
Uranium	mg/L	0.0162	0.0188	0.0160	0.0157
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	0.004	ND(0.01)	0.006	0.015
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	5.4	5.3	4.3	4.4
Gross Alpha minus Rn & U Precision (±)	pCi/L	1.2	0.8	0.7	0.7
Gross Alpha minus Rn & U MDC	pCi/L	0.9	0.5	0.4	0.4
Lead 210	pCi/L	1.6	0.7	0.1	0.1
Lead 210 precision (±)	pCi/L	0.8	0.8	0.5	0.8
Lead 210 MDC	pCi/L	1.2	1.3	0.9	1.3
Radium 226	pCi/L	3.5	4.0	3.1	3.7
Radium 226 precision (±)	pCi/L	0.36	0.41	0.22	0.37
Radium 226 MDC	pCi/L	0.15	0.17	0.09	0.14
Radium 228	pCi/L	6.7	7.9	6.0	6.5
Radium 228 precision (±)	pCi/L	0.97	0.92	0.82	0.83
Radium 228 MDC	pCi/L	1.1	1.0	0.95	0.94
Thorium 230	pCi/L	0.07	0.05	0.1	0.1
Thorium 230 precision (±)	pCi/L	0.2	0.2	0.3	0.2
Thorium 230 MDC	pCi/L	0.4	0.4	0.6	0.4
A/C Balance (± 5)	%	3.17	-0.714	-3.02	-4.90
Anions	meq/L	71.8	70.6	70.3	71.8
Cations	meq/L	76.4	69.6	66.2	65.1
Solids, Total Dissolved Calculated	mg/L	4500	4400	4370	4480
TDS Balance (0.80 - 1.20)		1.07	1.12	1.10	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-3
Lab ID: C12070713-005
Client Sample ID: 711 Duplicate

Report Date: 09/07/12
Collection Date: 07/17/12 09:06
DateReceived: 07/20/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	07/20/12 18:53 / jba
Calcium	486	mg/L		1		E200.7	08/09/12 17:38 / sf
Chloride	18	mg/L	D	4		E300.0	07/24/12 13:54 / ljl
Magnesium	461	mg/L		1		E200.7	08/09/12 17:38 / sf
Nitrogen, Ammonia as N	0.40	mg/L		0.05		A4500-NH3 G	07/28/12 15:20 / ljl
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	07/27/12 14:08 / ljl
Potassium	12	mg/L		1		E200.7	08/13/12 16:20 / sf
Sodium	113	mg/L		1		E200.7	08/13/12 16:20 / sf
Sulfate	3420	mg/L	D	20		E300.0	07/24/12 13:54 / ljl
PHYSICAL PROPERTIES							
pH	4.73	s.u.	H	0.01		A4500-H B	07/23/12 09:57 / ab
Solids, Total Dissolved TDS @ 180 C	4850	mg/L		10		A2540 C	07/23/12 09:27 / ab
METALS - TOTAL							
Aluminum	0.2	mg/L		0.1		E200.8	08/10/12 17:13 / cp
Beryllium	0.002	mg/L		0.001		E200.8	08/18/12 08:52 / cp
Cadmium	ND	mg/L		0.005		E200.8	08/10/12 17:13 / cp
Cobalt	0.27	mg/L		0.01		E200.8	08/10/12 17:13 / cp
Lead	ND	mg/L		0.001		E200.8	08/10/12 17:13 / cp
Manganese	5.02	mg/L		0.01		E200.8	08/10/12 17:13 / cp
Molybdenum	0.1	mg/L		0.1		E200.8	08/10/12 17:13 / cp
Nickel	0.26	mg/L		0.05		E200.8	08/10/12 17:13 / cp
Uranium	0.0162	mg/L		0.0003		E200.8	08/10/12 17:13 / cp
Vanadium	ND	mg/L		0.1		E200.8	08/10/12 17:13 / cp
METALS - SPECIATED							
Arsenic-III	0.004	mg/L		0.001		E1632AM	08/02/12 16:17 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	07/26/12 17:55 / rdw
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	5.4	pCi/L				E900.1	08/31/12 12:12 / lbb
Gross Alpha minus Rn & U Precision (±)	1.2	pCi/L				E900.1	08/31/12 12:12 / lbb
Gross Alpha minus Rn & U MDC	0.9	pCi/L				E900.1	08/31/12 12:12 / lbb
Lead 210	1.6	pCi/L				E909.0	08/14/12 12:22 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	08/14/12 12:22 / eli-cs
Lead 210 MDC	1.2	pCi/L				E909.0	08/14/12 12:22 / eli-cs
Radium 226	3.5	pCi/L				E903.0	08/06/12 16:42 / lbb
Radium 226 precision (±)	0.36	pCi/L				E903.0	08/06/12 16:42 / lbb
Radium 226 MDC	0.15	pCi/L				E903.0	08/06/12 16:42 / lbb
Radium 228	6.7	pCi/L				RA-05	07/31/12 19:38 / gb
Radium 228 precision (±)	0.97	pCi/L				RA-05	07/31/12 19:38 / gb
Radium 228 MDC	1.1	pCi/L				RA-05	07/31/12 19:38 / 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: C12070713-005
Client Sample ID: 711 Duplicate

Report Date: 09/07/12
Collection Date: 07/17/12 09:06
DateReceived: 07/20/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.07	pCi/L	U			E908.0	08/09/12 08:48 / dmf
Thorium 230 precision (±)	0.2	pCi/L				E908.0	08/09/12 08:48 / dmf
Thorium 230 MDC	0.4	pCi/L				E908.0	08/09/12 08:48 / dmf
- See Case Narrative regarding Th230 analysis.							
DATA QUALITY							
A/C Balance (± 5)	3.17	%				A1030 E	08/15/12 07:02 / kbh
Anions	71.8	meq/L				A1030 E	08/15/12 07:02 / kbh
Cations	76.4	meq/L				A1030 E	08/15/12 07:02 / kbh
Solids, Total Dissolved Calculated	4500	mg/L				A1030 E	08/15/12 07:02 / kbh
TDS Balance (0.80 - 1.20)	1.07					A1030 E	08/15/12 07:02 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	07/25/12 05:34 / jk
Bromoform	ND	ug/L		0.50		E624	07/25/12 05:34 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	07/25/12 05:34 / jk
Chloroform	ND	ug/L		0.50		E624	07/25/12 05:34 / jk
Trihalomethanes, Total	ND	ug/L		0.50		E624	07/25/12 05:34 / jk
Surr: 1,2-Dichlorobenzene-d4	97.0	%REC		80-120		E624	07/25/12 05:34 / jk
Surr: Dibromofluoromethane	95.0	%REC		80-120		E624	07/25/12 05:34 / jk
Surr: p-Bromofluorobenzene	85.0	%REC		80-120		E624	07/25/12 05:34 / jk
Surr: Toluene-d8	96.0	%REC		80-120		E624	07/25/12 05:34 / 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

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 3 Monitor Wells					
Well ID:		717	717	717	717
Collection Date:		10/16/2012	7/17/2012	4/10/2012	1/10/2012
Receive Date:		10/19/2012	7/20/2012	4/13/2012	1/13/2012
Report Date:		11/20/2012	9/7/2012	5/25/2012	3/5/2012
Analyte	RUnits	C12100835-007	C12070713-008	C12040738-008	C12010437-008
Bicarbonate as HCO3	mg/L	ND(5)	ND(5)	ND(5)	ND(5)
Calcium	mg/L	486	474	438	456
Chloride	mg/L	67	69	66	68
Magnesium	mg/L	508	517	500	499
Nitrogen, Ammonia as N	mg/L	59	61	62	65
Nitrogen, Nitrate+Nitrite as N	mg/L	30	30	31	30
Potassium	mg/L	14	14	12	13
Sodium	mg/L	186	189	170	174
Sulfate	mg/L	4430	4390	4570	4650
pH	s.u.	4.07	4.16	4.12	4.14
Solids, Total Dissolved TDS @ 180 C	mg/L	6120	6190	6240	6310
Aluminum	mg/L	122	134	130	124
Beryllium	mg/L	0.102	0.095	0.10	0.11
Cadmium	mg/L	0.016	0.011	0.016	0.015
Cobalt	mg/L	0.89	0.95	1.00	1.07
Lead	mg/L	0.010	0.011	ND(0.05)	ND(0.05)
Manganese	mg/L	22.1	21.8	22.4	22.3
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	0.88	0.90	0.86	0.91
Uranium	mg/L	0.0194	0.0229	0.0247	0.0348
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(0.01)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	0.002	ND(0.001)	0.002
Gross Alpha minus Rn & U	pCi/L	13.2	35.7	21.5	22.1
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.9	2.8	1.6	1.6
Gross Alpha minus Rn & U MDC	pCi/L	0.3	0.9	0.5	0.4
Lead 210	pCi/L	2.4	3.4	3.4	2.7
Lead 210 precision (±)	pCi/L	0.7	0.8	0.8	0.6
Lead 210 MDC	pCi/L	1.0	1.2	1.3	0.9
Radium 226	pCi/L	12	15	15	12
Radium 226 precision (±)	pCi/L	0.66	0.73	0.84	0.56
Radium 226 MDC	pCi/L	0.15	0.14	0.19	0.16
Radium 228	pCi/L	34	22	30	21
Radium 228 precision (±)	pCi/L	1.8	1.6	1.6	1.7
Radium 228 MDC	pCi/L	1.2	1.3	1.2	1.6
Thorium 230	pCi/L	0.6	0.3	0.2	0.1
Thorium 230 precision (±)	pCi/L	0.6	0.6	0.4	0.5
Thorium 230 MDC	pCi/L	1.0	1.3	0.7	1.3
A/C Balance (± 5)	%	-1.07	2.24	-6.72	-5.89
Anions	meq/L	96.9	96.2	103	102
Cations	meq/L	94.9	101	89.7	91.0
Solids, Total Dissolved Calculated	mg/L	5900	5800	5950	6040
TDS Balance (0.80 - 1.20)		1.04	1.06	1.05	1.04
Trihalomethanes, Total	ug/L	3.48	4.40	2.01	2.88

**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: C12100835-008
Client Sample ID: 717 Duplicate

Report Date: 11/20/12
Collection Date: 10/16/12 10:58
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	10/19/12 19:47 / jba
Calcium	504	mg/L		1		E200.7	11/09/12 22:46 / sf
Chloride	67	mg/L	D	4		E300.0	10/20/12 01:39 / wc
Magnesium	510	mg/L		1		E200.7	11/09/12 22:46 / sf
Nitrogen, Ammonia as N	58	mg/L	D	2		A4500-NH3 G	10/26/12 16:34 / lr
Nitrogen, Nitrate+Nitrite as N	30	mg/L	D	2		E353.2	10/22/12 14:24 / lr
Potassium	14	mg/L		1		E200.7	11/09/12 22:46 / sf
Sodium	181	mg/L	D	2		E200.7	11/09/12 22:46 / sf
Sulfate	4410	mg/L	D	40		E300.0	10/22/12 19:58 / wc
PHYSICAL PROPERTIES							
pH	4.06	s.u.	H	0.01		A4500-H B	10/19/12 15:44 / ab
Solids, Total Dissolved TDS @ 180 C	6090	mg/L		10		A2540 C	10/22/12 16:34 / jz
METALS - TOTAL							
Aluminum	120	mg/L		0.1		E200.7	11/07/12 22:40 / sf
Beryllium	0.104	mg/L		0.001		E200.8	11/07/12 12:02 / cp
Cadmium	0.016	mg/L		0.005		E200.8	11/07/12 12:02 / cp
Cobalt	0.90	mg/L		0.01		E200.8	11/07/12 12:02 / cp
Lead	0.010	mg/L		0.001		E200.8	11/07/12 12:02 / cp
Manganese	21.2	mg/L		0.01		E200.7	11/07/12 22:40 / sf
Molybdenum	ND	mg/L		0.1		E200.8	11/07/12 12:02 / cp
Nickel	0.90	mg/L		0.05		E200.8	11/07/12 12:02 / cp
Uranium	0.0192	mg/L		0.0003		E200.8	11/07/12 12:02 / cp
Vanadium	ND	mg/L		0.1		E200.8	11/07/12 12:02 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	11/05/12 14:27 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	11/07/12 14:07 / jrm
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	14.5	pCi/L				E900.1	11/19/12 23:35 / lbb
Gross Alpha minus Rn & U Precision (±)	0.9	pCi/L				E900.1	11/19/12 23:35 / lbb
Gross Alpha minus Rn & U MDC	0.2	pCi/L				E900.1	11/19/12 23:35 / lbb
Lead 210	2.7	pCi/L				E909.0	11/18/12 04:52 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	11/18/12 04:52 / eli-cs
Lead 210 MDC	1.1	pCi/L				E909.0	11/18/12 04:52 / eli-cs
Radium 226	12	pCi/L				E903.0	11/05/12 15:07 / gb
Radium 226 precision (±)	0.64	pCi/L				E903.0	11/05/12 15:07 / gb
Radium 226 MDC	0.15	pCi/L				E903.0	11/05/12 15:07 / gb
Radium 228	35	pCi/L				RA-05	10/31/12 18:03 / gb
Radium 228 precision (±)	1.8	pCi/L				RA-05	10/31/12 18:03 / gb
Radium 228 MDC	1.2	pCi/L				RA-05	10/31/12 18:03 / 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: C12100835-008
Client Sample ID: 717 Duplicate

Report Date: 11/20/12
Collection Date: 10/16/12 10:58
DateReceived: 10/19/12
Matrix: Aqueous

Analyses	Result	Units	Qualifier	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.04	pCi/L	U			E908.0	11/01/12 13:58 / dmf
Thorium 230 precision (±)	0.5	pCi/L				E908.0	11/01/12 13:58 / dmf
Thorium 230 MDC	1.3	pCi/L				E908.0	11/01/12 13:58 / dmf
- See Case Narrative regarding Th230 analysis.							
DATA QUALITY							
A/C Balance (± 5)	-0.474	%				A1030 E	11/12/12 14:46 / kbh
Anions	96.5	meq/L				A1030 E	11/12/12 14:46 / kbh
Cations	95.6	meq/L				A1030 E	11/12/12 14:46 / kbh
Solids, Total Dissolved Calculated	5900	mg/L				A1030 E	11/12/12 14:46 / kbh
TDS Balance (0.80 - 1.20)	1.04					A1030 E	11/12/12 14:46 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	10/25/12 16:53 / jk
Bromoform	ND	ug/L		0.50		E624	10/25/12 16:53 / jk
Chlorodibromomethane	ND	ug/L		0.50		E624	10/25/12 16:53 / jk
Chloroform	6.40	ug/L		0.50		E624	10/25/12 16:53 / jk
Trihalomethanes, Total	6.40	ug/L		0.50		E624	10/25/12 16:53 / jk
Surr: 1,2-Dichlorobenzene-d4	104	%REC		80-120		E624	10/25/12 16:53 / jk
Surr: Dibromofluoromethane	152	%REC	S	80-120		E624	10/25/12 16:53 / jk
Surr: p-Bromofluorobenzene	118	%REC		80-120		E624	10/25/12 16:53 / jk
Surr: Toluene-d8	110	%REC		80-120		E624	10/25/12 16:53 / 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
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.

APPENDIX - C

QUARTERLY

CHAIN OF CUSTODY REPORT

UNITED NUCLEAR CORPORATION
(State Road 566 - 21 Miles NE of Gallup)
P.O. Box 3077
Gallup, NM 87305-3077
505-905-6651

CHAIN OF CUSTODY

Energy Laboratories, Inc.
Laboratory

2393 N. Salt Creek Highway
Address

Casper WY 82601
City State Zip

307-235-0515
Phone No.

SW Alluvium

All analysis will be performed in accordance with EPA approved procedures and/or 15th Edition of Standard Methods

UNC Submittal No. TE-5-7-2012 (Pg. 1 of 3)

Sample Description	Date	Time	Filter 0.45u	PRESERVATION plain	HNO_3	H_2SO_4	$Na_2S_2O_3$	HCl	Preserved By	Analysis Required (For all samples listed)
509-D	7-9-12	0952	✓	✓	✓	✓	✓		M. Chischilly	As, Be, Ca, Cd, Cl, HCO_3,
EPA-23		1036								K, Mg, Mn, Na, NH_4, Ni,
803		1121								NO_3, Pb, Pb-210, pH, Se,
808		1158								SO_4, TDS, Th-230, U, V,
802		1238								Chloroform, Gross
801		1318								Alpha (-) U & Rn,
GW-2		1405								Combined Ra-226 & Ra-228, Al,
GW-1		1504								Co, Mo & Total Trihalomethanes (TTHMs)
632		1551								
624	7-10-12	0912								
SBL-1		0955								
EPA-28		1040								
EPA-28 DUPLICATE		1119								
GW-3		1400								
EPA-25		1557								
627		1651								

Sampled by: Mel Chischilly Jr.
Dispatched by: Doris Young
Carrier: UPS- Ground
9 iced cooler
Method of Shipment

Received by: [signature]
7-11-12 12:45
Date Time

7-9-12 @ 1630
7-10-12 @ 1730
Date Time
[signature]
Lab Receipt Signature
Date Time

The above analysis to be performed is authorized by:
Mel Chischilly Jr.
Signature
7-11-12
Date

7-13-12 10:45
14.4 ICE

UNITED NUCLEAR CORPORATION
(State Road 566 - 21 Miles NE of Gallup)
P.O. Box 3077
Gallup, NM 87305-3077
505-905-6851

CHAIN OF CUSTODY

Energy Laboratories, Inc.
Laboratory

2393 N. Salt Creek Highway
Address

Casper WY 82601
City State Zip

307-235-0515
Phone No.

ZONE - 3

All analysis will be performed in accordance with EPA approved procedures and/or 15th Edition of Standard Methods

UNC Submittal No. TE- 5-7-2012 (Pg. 2 of 3)

Sample Description	Date	Time	Filter 0.45u	PRESERVATION plain	HNO_3	H_2SO_4	$Na_2S_2O_3$	HCl	Preserved By	Analysis Required (For all samples listed)
613	7-10-12	1208	✓	✓	✓	✓	✓		M. Chischilly	As, Be, Ca, Cd, Cl, HCO_3,
EPA-14	7-10-12	1254	✓	✓	✓	✓	✓		M. Chischilly	K, Mg, Mn, Na, NH_4, Ni,
										NO_3, Pb, Pb-210, pH, Se,
										SO_4, TDS, Th-230, U, V,
										Chloroform, Gross
										Alpha (-) U & Rn,
										Combined Ra-226 & Ra-228, Al,
										Co, Mo & Total Trihalomethanes (TTHMs)

Sampled by: Mel Chischilly Jr.
Dispatched by: Dorie Young
Carrier: UPS-Ground
9 iced cooler
Method of Shipment

Received by [signature]
7-11-12 Date
12:45 Time

7-10-12 Date 1730 Time
[signature]
Lab Receipt Signature
7/13/12 Date 1045 Time

The above analysis to be performed is authorized by:
Mel Chischilly Jr.
Signature
7-11-12
Date

14.4
UPS Gr

UNITED NUCLEAR CORPORATION
(State Road 566 - 21 Miles NE of Gallup)
P.O. Box 3077
Gallup, NM 87305-3077
505-905-8851

CHAIN OF CUSTODY

Energy Laboratories, Inc.
Laboratory

2393 N. Salt Creek Highway
Address

Casper WY 82601
City State Zip

307-235-0515
Phone No.

ZONE - 1

All analysis will be performed in accordance with EPA approved procedures and/or 15th Edition of Standard Methods

UNC Submittal No. TE-5-7-2012 (Pg. 3 of 3)

Sample Description	Date	Time	Filter 0.45u	PRESERVATION plain	HNO_3	H_2SO_4	$Na_2S_2O_3$	HCl	Preserved By	Analysis Required (For all samples listed)
614	7-11-12	0901	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓		M. Chischilly	As, Be, Ca, Cd, Cl, HCO_3,
515-A	↓	1000	↓	↓	↓	↓	↓		↓	K, Mg, Mn, Na, NH_4, Ni,
604	↓	1043	↓	↓	↓	↓	↓		↓	NO_3, Pb, Pb-210, pH, Se,
RINSATE	↓	1123	↓	↓	↓	↓	↓		↓	SO_4, TDS, Th-230, U, V,
FIELD BLANK	↓	1200	↓	↓	↓	↓	↓		↓	Chloroform, Gross
										Alpha (-) U & Rn,
										Combined Ra-226 & Ra-228, Al,
										Co, Mo & Total Trihalomethanes (TTHMs)

Sampled by: Mel Chischilly Jr.
Dispatched by: Doris Young
Carrier: UPS - Ground
9 iced cooler
Method of Shipment

Received by [illegible]
7-11-12 12:45
Date Time

7-11-12 1200
Date Time

Lab Receipt Signature

Date Time

The above analysis to be performed is authorized by:
Mel Chischilly Jr.
Signature

7-11-12
Date

Standard Reporting Procedures

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Workorder Receipt Checklist

United Nuclear Corporation C12070454

Login completed by: Corinne Wagner
Date Received: 7/13/2012
Reviewed by: BL2000\kmiller
Received by: dw
Reviewed Date: 7/19/2012
Carrier name: Ground

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	14.4°C Melted Ice		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	Not Applicable ☐

Contact and Corrective Action Comments:

Did not receive all of the bottles for all of the samples listed on COC. Missing bottles were received on 7/16/2012 at 10:45AM.

Standard Reporting Procedures

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Workorder Receipt Checklist

United Nuclear Corporation C12070463

Login completed by: Corinne Wagner
Date Received: 7/13/2012
Reviewed by: BL2000\kmiller
Received by: ckw
Reviewed Date: 7/19/2012
Carrier name: Ground

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	14.4°C Melted Ice		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	Not Applicable ☐

Contact and Corrective Action Comments:

None

Standard Reporting Procedures

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Workorder Receipt Checklist

United Nuclear Corporation C12070464

Login completed by: Corinne Wagner
Date Received: 7/13/2012
Reviewed by: BL2000\kmiller
Received by: ckw
Reviewed Date: 7/20/2012
Carrier name: Ground

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	14.4°C Melted Ice		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	Not Applicable ☐

Contact and Corrective Action Comments:

None

UNITED NUCLEAR CORPORATION
(State Road 566 - 21 Miles NE of Gallup)
P.O. Box 3077
Gallup, NM 87305-3077
505-905-8651

CHAIN OF CUSTODY

Energy Laboratories, Inc.
Laboratory

2393 N. Salt Creek Highway
Address

Casper WY 82601
City State Zip

307-235-0515
Phone No.

ZONE - 1

All analysis will be performed in accordance with EPA approved procedures and/or 15th Edition of Standard Methods

UNC Submittal No. TE-6-7-2012 (Pg. 1 of 2)

Sample Description	Date	Time	Filter 0.45u	PRESERVATION plain	HNO_3	H_2SO_4	$Na_2S_2O_3$	HCl	Preserved By	Analysis Required (For all samples listed)
EPA-4	7-16-12	1012	✓	✓	✓	✓	✓		M. Chischilly	As, Be, Ca, Cd, Cl, HCO_3,
EPA-5		1107								K, Mg, Mn, Na, NH_4, Ni,
EPA-7		1150								NO_3, Pb, Pb-210, pH, Se,
EPA-2		1245								SO_4, TDS, Th-230, U, V,
EPA-2 DUPLICATE		1315								Chloroform, Gross
TWQ-142	7-17-12	1205								Alpha (-) U & Rn,
										Combined Ra-226 & Ra-228, Al,
										Co, Mo & Total Trihalomethanes (TTHMs)

Sampled by: Mel Chischilly Jr. Received by: [illegible]
Dispatched by: [illegible] Date: 7-17-12 Time: 11:22
Carrier: UPS- Ground
8 iced cooler
Method of Shipment

7-16-12 @ 1630
7-17-12 @ 1700
Date Time
Lab Receipt Signature: Dorian Bris 9:30
7-20-12 / 930
Date Time

The above analysis to be performed is authorized by:
Signature: Mel Chischilly Jr.
Date: 7-18-12

C12070710 UPS-G 6.2°C/1
ICE

UNITED NUCLEAR CORPORATION
(State Road 566 - 21 Miles NE of Gallup)
P.O. Box 3077
Gallup, NM 87305-3077
505-905-6851

CHAIN OF CUSTODY

Energy Laboratories, Inc.
Laboratory

2393 N. Salt Creek Highway
Address

Casper WY 82601
City State Zip

307-235-0515
Phone No.

ZONE - 3

All analysis will be performed in accordance with EPA approved procedures and/or 15th Edition of Standard Methods

UNC Submittal No. TE- 6-7-2012 (Pg. 2 of 2)

Sample Description	Date	Time	Filter 0.45u	PRESERVATION plain	HNO_3	H_2SO_4	$Na_2S_2O_3$	HCl	Preserved By	Analysis Required (For all samples listed)
517	7-16-12	1348	✓	✓	✓	✓	✓		M. Chischilly	As, Be, Ca, Cd, Cl, HCO_3,
708	7-16-12	1433								K, Mg, Mn, Na, NH_4, Ni,
EPA-13	7-16-12	1521								NO_3, Pb, Pb-210, pH, Se,
711	7-17-12	0831								SO_4, TDS, Th-230, U, V,
711 DUPLICATE		0906								Chloroform, Gross
719		0945								Alpha (-) U & Rn,
420		1025								Combined Ra-226 & Ra-228, Al,
717		1110								Co, Mo & Total Trihalomethanes (TTHMs)
NBL-1		1341								
RINSATE		1651								
FIELD BLANK		1700								
MW-6		1510								
MW-7		1618								

Sampled by: Mac Chischilly Jr.
Dispatched by: Dorie Yazzie
Carrier: UPS - Ground
8 iced cooler
Method of Shipment

Received by
7-17-12 11:23
Date Time

7-16-12 @ 1630
7-17-12 @ 1700
Date Time

Lab Receipt Signature
7-20-12 / 930
Date Time

The above analysis to be performed is authorized by:
Mac Chischilly Jr.
Signature
7-18-12
Date

C12070713

UNC MINING & MILLING
(St. Rd. 566 - 21 Miles NE of Gallup)
P. O. Box 3077
Gallup, NM 87305-3077
(505) 905-6651

CHAIN OF CUSTODY

ZONE - 3

All analysis will be performed in accordance with EPA approved procedures and/or 15th Edition of Standard Methods

Energy Laboratories, Inc.
Laboratory

2393 N. Salt Creek Highway
Address

Casper — WY — 82601
City — State — Zip

(307) 235-0515
Phone No.

UNC Submittal No. EW-3-7-2012

Sample Description	Date	Time	Filter 0.45u	PRESERVATION plain	HNO_3	H_2SO_4	$Na_2S_2O_3$	NaOH	Preserved By	Analysis Required
NBL-2	7-17-12	1147		✓					M. Chischilly	Bicarbonate (HCO_3), Chloride (Cl), pH, TDS
PB-3		1432								
PB-4		1447								
NW-1		1236								
NW-4		1247								
NW-2		1256								
NW-5		1313								
NW-3		1325								
PB-2		1337								
AW-A		1350								

Sampled By: Mel Chischilly Jr.
Dispatched By: Doris Yazzie
Carrier: UPS - Ground
8 iced cooler
Method of Shipment

Received By: [signature]
7-17-12 — 11:23
Date — Time

7-17-12 — 1700
Date — Time

Lab Receipt Signature: [signature]
7-20-12 / 930
Date — Time

The above analysis to be performed is authorized by:
Mel Chischilly Jr.
Signature
7-18-12
Date

C12070713

Standard Reporting Procedures

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Workorder Receipt Checklist

United Nuclear Corporation C12070710

Login completed by: Kathryn (Kate) L. Miller
Date Received: 7/20/2012
Reviewed by: BL2000\kschroeder
Received by: th
Reviewed Date: 7/27/2012
Carrier name: Ground

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	8.2°C On Ice		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	Not Applicable ☐

Contact and Corrective Action Comments:

None

Standard Reporting Procedures

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Workorder Receipt Checklist

United Nuclear Corporation C12070713

Login completed by: Kathryn (Kate) L. Miller
Date Received: 7/20/2012
Reviewed by: BL2000\kschroeder
Received by: th
Reviewed Date: 7/27/2012
Carrier name: Ground

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	8.2°C On Ice		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	Not Applicable ☐

Contact and Corrective Action Comments:

None

UNITED NUCLEAR CORPORATION
(State Road 566 - 21 Miles NE of Gallup)
P.O. Box 3077
Gallup, NM 87305-3077
505-905-6651

CHAIN OF CUSTODY

Energy Laboratories, Inc.
Laboratory

2393 N. Salt Creek Highway
Address

Casper WY 82601
City State Zip

307-235-0515
Phone No.

SW Alluvium

All analysis will be performed in accordance with EPA approved procedures and/or 15th Edition of Standard Methods

UNC Submittal No. TE-7-10-2012 (Pg. 1 of 3)

Sample Description	Date	Time	Filter 0.45u	PRESERVATION plain	HNO_3	H_2SO_4	$Na_2S_2O_3$	HCl	Preserved By	Analysis Required (For all samples listed)
509-D	10-8-12	1000	✓ MC	✓ MC	✓ MC	✓ MC	✓ MC		M. Chischilly	As, Be, Ca, Cd, Cl, HCO_3,
EPA-23	↓	1043	↓	↓	↓	↓	↓		↓	K, Mg, Mn, Na, NH_4, Ni,
803	↓	1127	↓	↓	↓	↓	↓		↓	NO_3, Pb, Pb-210, pH, Se,
808	↓	1206	↓	↓	↓	↓	↓		↓	SO_4, TDS, Th-230, U, V,
802	↓	1251	↓	↓	↓	↓	↓		↓	Chloroform, Gross
801	↓	1333	↓	↓	↓	↓	↓		↓	Alpha (-) U & Rn,
GW-2	↓	1421	↓	↓	↓	↓	↓		↓	Combined Ra-226 & Ra-228, Al,
GW-1	↓	1515	↓	↓	↓	↓	↓		↓	Co, Mo & Total Trihalomethanes (TTHMs)
632	↓	1610	↓	↓	↓	↓	↓		↓	
624	10-9-12	0942	↓	↓	↓	↓	↓		↓	
SBL-1	↓	1025	↓	↓	↓	↓	↓		↓	
EPA-28	↓	1112	↓	↓	↓	↓	↓		↓	
EPA-28 DUPLICATE	↓	1152	↓	↓	↓	↓	↓		↓	
GW-3	↓	1457	↓	↓	↓	↓	↓		↓	
EPA-25	↓	1648	↓	↓	↓	↓	↓		↓	
627	↓	1744	↓	↓	↓	↓	↓		↓	

Sampled by: Max Chischilly Jr.
Dispatched by: Doris Yazzie
Carrier: UPS Ground
9 iced cooler
Method of Shipment

Received by [signature]
10-10-12 1117
Date Time

10-8-12 1700
10-9-12 1800
Date Time

Kate Miller
Lab Receipt Signature

10/12/12 9:30
Date Time

Seals, ice 0.6

The above analysis to be performed is authorized by:
Max Chischilly Jr.
Signature

10-10-2012
Date

C1200557

UNITED NUCLEAR CORPORATION
(State Road 566 - 21 Miles NE of Gallup)
P.O. Box 3077
Gallup, NM 87305-3077
505-905-6851

CHAIN OF CUSTODY

Energy Laboratories, Inc.
Laboratory

2393 N. Salt Creek Highway
Address

Casper WY 82601
City State Zip

307-235-0515
Phone No.

ZONE - 3

All analysis will be performed in accordance with EPA approved procedures and/or 15th Edition of Standard Methods

UNC Submittal No. TE-7-10-2012 (Pg. 2 of 3)

Sample Description	Date	Time	Filter 0.45u	PRESERVATION plain	HNO_3	H_2SO_4	$Na_2S_2O_3$	HCl	Preserved By	Analysis Required (For all samples listed)
613	10-9-12	1255	✓	✓	✓	✓	✓		M. Chischilly	As, Be, Ca, Cd, Cl, HCO_3,
EPA-14	10-9-12	1340	✓	✓	✓	✓	✓		M. Chischilly	K, Mg, Mn, Na, NH_4, Ni,
										NO_3, Pb, Pb-210, pH, Se,
										SO_4, TDS, Th-230, U, V,
										Chloroform, Gross
										Alpha (-) U & Rn,
										Combined Ra-226 & Ra-228, Al,
										Co, Mo & Total Trihalomethanes (TTHMs)

Sampled by: Max Chischilly Jr.
Dispatched by: Dorie Young
Carrier: UPS Ground
9 Iced cooler
Method of Shipment

Received by [signature] 10-10-12 1:17
Date Time

10-9-12 1800
Date Time
Kristo Miller
Lab Receipt Signature
10/12/12 9:30
Date Time
Seals Intact
O.G

The above analysis to be performed is authorized by:
Max Chischilly Jr.
Signature
10-10-2012
Date

C12100571

UNITED NUCLEAR CORPORATION
(State Road 566 - 21 Miles NE of Gallup)
P.O. Box 3077
Gallup, NM 87305-3077
505-905-6851

CHAIN OF CUSTODY

Energy Laboratories, Inc.
Laboratory

2393 N. Salt Creek Highway
Address

Casper WY 82601
City State Zip

307-235-0515
Phone No.

ZONE - 1

All analysis will be performed in accordance with EPA approved procedures and/or 15th Edition of Standard Methods

UNC Submittal No. TE-10-7-2012 (Pg. 3 of 3)

Sample Description	Date	Time	Filter 0.45u	PRESERVATION plain	HNO_3	H_2SO_4	$Na_2S_2O_3$	HCl	Preserved By	Analysis Required (For all samples listed)
614	10-10-12	0830	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓		M. Chischilly	As, Be, Ca, Cd, Cl, HCO_3,
515-A	↓	0941	↓	↓	↓	↓	↓		↓	K, Mg, Mn, Na, NH_4, Ni,
604		1030								NO_3, Pb, Pb-210, pH, Se,
RINSATE		1111								SO_4, TDS, Th-230, U, V,
FIELD BLANK		1205								Chloroform, Gross
617		0917								Alpha (-) U & Rn,
617 RINSATE	↓	1024	↓	↓	↓	↓	↓		↓	Combined Ra-226 & Ra-228, Al,
										Co, Mo & Total Trihalomethanes (TTHMs)

Sampled by: Mal Chischilly Jr.
Dispatched by: Dorie Young
Carrier: UPS Ground
9 iced cooler
Method of Shipment

Received by [illegible] 10-10-12 Date 1:17 Time

10-10-12 Date 1210 Time
Lab Receipt Signature
10/12/12 Date 9:30 Time

The above analysis to be performed is authorized by:
Mal Chischilly Jr.
Signature
10-10-2012
Date

Seals + ice 0.4

C12100566

Standard Reporting Procedures

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Workorder Receipt Checklist

United Nuclear Corporation C12100557

Login completed by: Kerri Schroeder
Date Received: 10/12/2012
Reviewed by: BL2000\swaldrop
Received by: km
Reviewed Date: 10/18/2012
Carrier name: Ground

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	0.6°C On Ice		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	Not Applicable ☐

Contact and Corrective Action Comments:

None

Standard Reporting Procedures

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Workorder Receipt Checklist

United Nuclear Corporation C12100571

Login completed by: Kerri Schroeder
Date Received: 10/12/2012
Reviewed by: BL2000\swaldrop
Received by: km
Reviewed Date: 10/18/2012
Carrier name: Ground

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	0.6°C On Ice		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	Not Applicable ☐

Contact and Corrective Action Comments:

None

Standard Reporting Procedures

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Workorder Receipt Checklist

United Nuclear Corporation C12100566

Login completed by: Kerri Schroeder
Date Received: 10/12/2012
Reviewed by: BL2000\swaldrop
Received by: km
Reviewed Date: 10/18/2012
Carrier name: Ground

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	0.6°C On Ice		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	Not Applicable ☐

Contact and Corrective Action Comments:

None

UNITED NUCLEAR CORPORATION
(State Road 566 - 21 Miles NE of Gallup)
P.O. Box 3077
Gallup, NM 87305-3077
505-905-6651

CHAIN OF CUSTODY

Energy Laboratories, Inc.
Laboratory

2393 N. Salt Creek Highway
Address

Casper WY 82601
City State Zip

307-235-0515
Phone No.

ZONE - 1

All analysis will be performed in accordance with EPA approved procedures and/or 15th Edition of Standard Methods

UNC Submittal No. TE- 8-10-2012 (Pg. 1 of 3)

Sample Description	Date	Time	Filter 0.4Su	PRESERVATION plain	HNO_3	H_2SO_4	$Na_2S_2O_3$	HCl	Preserved By	Analysis Required (For all samples listed)
EPA-4	10-15-12	0853	✓ MC	✓ MC	✓ MC	✓ MC	✓ MC		M. Chischilly	As, Be, Ca, Cd, Cl, HCO_3,
EPA-5	↓	0954	↓	↓	↓	↓	↓		↓	K, Mg, Mn, Na, NH_4, Ni,
EPA-7	↓	1037	↓	↓	↓	↓	↓		↓	NO_3, Pb, Pb-210, pH, Se,
EPA-2	↓	1127	↓	↓	↓	↓	↓		↓	SO_4, TDS, Th-230, U, V,
EPA-2 DUPLICATE	↓	1205	↓	↓	↓	↓	↓		↓	Chloroform, Gross
TWQ-142	10-16-12	1211	↓	↓	↓	↓	↓		↓	Alpha (-) U & Rn,
										Combined Ra-226 & Ra-228, Al,
										Co, Mo & Total Trihalomethanes (TTHMs)

Sampled by: Maf Chaddy Jr.
Dispatched by: [illegible]
Carrier: UPS- Ground
10 Iced Cooler
Method of Shipment

Received by [illegible]
10-17-12 3:58
Date Time

10-15-12 1630
10-16-12 1600
Date Time
[illegible]
Lab Receipt Signature
10/19/12 9:30
Date Time
5.4 on ice
Seals on coolers

The above analysis to be performed is authorized by:
Maf Chaddy Jr.
Signature
10-17-2012
Date

C12100859

UNITED NUCLEAR CORPORATION
(State Road 566 - 21 Miles NE of Gallup)
P.O. Box 3077
Gallup, NM 87305-3077
505-905-6651

CHAIN OF CUSTODY

Energy Laboratories, Inc.
Laboratory

2393 N. Salt Creek Highway
Address

Casper WY 82601
City State Zip

307-235-0515
Phone No.

ZONE - 3

All analysis will be performed in accordance with EPA approved procedures and/or 15th Edition of Standard Methods

UNC Submittal No. TE-8-10-2012 (Pg. 2 of 3)

Sample Description	Date	Time	Filter 0.45u	PRESERVATION plain	HNO_3	H_2SO_4	$Na_2S_2O_3$	HCl	Preserved By	Analysis Required (For all samples listed)
517	10-15-12	1236	✓	✓	✓	✓	✓		M. Chischilly	As, Be, Ca, Cd, Cl, HCO_3,
708		1324								K, Mg, Mn, Na, NH_4, Ni,
711		1516								NO_3, Pb, Pb-210, pH, Se,
EPA-13		1431								SO_4, TDS, Th-230, U, V,
719	10-16-12	0845								Chloroform, Gross
420		0930								Alpha (-) U & Rn,
717		1030								Combined Ra-226 & Ra-228, Al,
717 DUPLICATE		1058								Co, Mo & Total Trihalomethanes (TTHMs)
NBL-2		1132								
NBL-1		1258								
PB-3		1401								
PB-4		1450								
MW-7		1540								
PB-2		1425								
RW-A		1445								

Sampled by: Mel Chischilly Jr.
Dispatched by: [illegible]
Carrier: UPS-Ground
10 Iced cooler
Method of Shipment

Received by [illegible]
10-17-12 3:58
Date Time

10-15-12 1630
10-16-12 1660
Date Time
Lab Receipt Signature
10/19/12 9:30
Date Time
5.4 on ice
Deals

The above analysis to be performed is authorized by:
Mel Chischilly Jr.
Signature
10-17-2012
Date

C12100835

UNITED NUCLEAR CORPORATION
(State Road 566 - 21 Miles NE of Gallup)
P.O. Box 3077
Gallup, NM 87305-3077
505-905-6651

CHAIN OF CUSTODY

Energy Laboratories, Inc.
Laboratory

2393 N. Salt Creek Highway
Address

Casper WY 82601
City State Zip

307-235-0515
Phone No.

ZONE - 3

All analysis will be performed in accordance with EPA approved procedures and/or 15th Edition of Standard Methods

UNC Submittal No. TE- 8-10-2012 (Pg. 3 of 3)

Sample Description	Date	Time	Filter 0.45u	PRESERVATION plain	HNO_3	H_2SO_4	$Na_2S_2O_3$	HCl	Preserved By	Analysis Required (For all samples listed)
RW-11	10-16-12	1500	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓		M. Chischilly	As, Be, Ca, Cd, Cl, HCO_3,
619	↓	1000	↓	↓	↓	↓	↓		↓	K, Mg, Mn, Na, NH_4, Ni,
619 FILTERED		1044								NO_3, Pb, Pb-210, pH, Se,
619 RINSATE		1208								SO_4, TDS, Th-230, U, V,
RINSATE	10-17-12	1157								Chloroform, Gross
FIELD BLANK	10-17-12	1200	↓	↓	↓	↓	↓		↓	Alpha (-) U & Rn,
MW-6	10-17-12	0930	↓	↓	↓	↓	↓		↓	Combined Ra-226 & Ra-228, Al,
										Co, Mo & Total Trihalomethanes (TTHMs)

Sampled by: Mel Chischilly Jr.
Dispatched by: [signature]
Carrier: UPS Ground
10 iced cooler
Method of Shipment

Received by [signature]
10-17-12 3:50
Date Time

10-17-12 1200
10-16-12 1600
Date Time

[signature]
Lab Receipt Signature

10/19/12 9:30
Date Time

5.4 on ice
seals.

The above analysis to be performed is authorized by:
Mel Chischilly Jr.
Signature

10-17-2012
Date

C12100835

Standard Reporting Procedures

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Workorder Receipt Checklist

United Nuclear Corporation C12100859

Login completed by: Kerri Schroeder
Date Received: 10/19/2012
Reviewed by: BL2000\cwagner
Received by: tjp
Reviewed Date: 10/23/2012
Carrier name: Ground

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	5.4°C On Ice		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	Not Applicable ☐

Contact and Corrective Action Comments:

None

Standard Reporting Procedures

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Workorder Receipt Checklist

United Nuclear Corporation C12100835

Login completed by: Kerri Schroeder
Date Received: 10/19/2012
Reviewed by: BL2000\cwagner
Received by: tjp
Reviewed Date: 10/23/2012
Carrier name: Ground

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	5.4°C On Ice		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	Not Applicable ☐

Contact and Corrective Action Comments:

None

UNC MINING & MILLING
(St. Rd. 566 - 21 Miles NE of Gallup)
P. O. Box 3077
Gallup, NM 87305-3077
(505) 905-8651

CHAIN OF CUSTODY

ZONE - 3

All analysis will be performed in accordance with EPA approved procedures and/or 15th Edition of Standard Methods

Energy Laboratories, Inc.
Laboratory

2393 N. Salt Creek Highway
Address

Casper WY 82601
City State Zip

(307) 235-0515
Phone No.

UNC Submittal No. EW- 4-10-2012

Sample Description	Date	Time	Filter 0.45u	PRESERVATION plain	HNO_3	H_2SO_4	$Na_2S_2O_3$	NaOH	Preserved By	Analysis Required
NW-1	10-16-12	1315		✓					M. Chischilly	Bicarbonate (HCO_3), Chloride (Cl), pH, TDS
NW-4	↓	1330		↓					↓	
NW-2		1340								
NW-5		1355								
NW-3		1405								

Sampled By: Mel Chischilly Jr.
Dispatched By: [signature]
Carrier: UPS Ground
10 iced cooler
Method of Shipment

Received By: [signature]
10-17-12 Date
5:58 Time

10-16-12 Date
1600 Time
Lab Receipt Signature
10/19/12 Date
9:30 Time

The above analysis to be performed is authorized by:
Mel Chischilly Jr.
Signature
10-17-2012
Date

S.4 on ice
Seals on cooler

C12100871

Standard Reporting Procedures

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Workorder Receipt Checklist

United Nuclear Corporation C12100871

Login completed by: Kerri Schroeder
Date Received: 10/19/2012
Reviewed by: BL2000\alynch
Received by: tjp
Reviewed Date: 10/22/2012
Carrier name: Ground

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	5.4°C On Ice		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	Not Applicable ☐

Contact and Corrective Action Comments:

None

APPENDIX - D (1 OF 2)

THIRD QUARTER

LABORATORY QUALITY CONTROL AND

PERFORMANCE REPORT

ANALYTICAL SUMMARY REPORT

August 30, 2012

United Nuclear Corporation
21 Miles NE of Gallup
Gallup, NM 87305

Workorder No.: C12070454 Quote ID: C129 - Quarterly Long List

Project Name: SW Alluvium

Energy Laboratories, Inc. Casper WY received the following 16 samples for United Nuclear Corporation on 7/13/2012 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C12070454-001	509-D	07/09/12 9:52	07/13/12	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Total Alkalinity QA Calculations Arsenic Speciation Selenium-IV, Total CVAA Selenium Prep E300.0 Anions Nitrogen, Ammonia Nitrogen, Nitrate + Nitrite pH Metals Preparation by EPA 200.2 Gross Alpha minus Rn222 and Uranium Lead 210, Total Radium 226, Total Radium 228, Total Thorium, Isotopic Solids, Total Dissolved Solids, Total Dissolved - Calculated E624 Purgeable Organics
C12070454-002	EPA-23	07/09/12 10:36	07/13/12	Aqueous	Same As Above
C12070454-003	803	07/09/12 11:21	07/13/12	Aqueous	Same As Above
C12070454-004	808	07/09/12 11:58	07/13/12	Aqueous	Same As Above
C12070454-005	802	07/09/12 12:38	07/13/12	Aqueous	Same As Above
C12070454-006	801	07/09/12 13:18	07/13/12	Aqueous	Same As Above
C12070454-007	GW-2	07/09/12 14:05	07/13/12	Aqueous	Same As Above
C12070454-008	GW-1	07/09/12 15:04	07/13/12	Aqueous	Same As Above
C12070454-009	632	07/09/12 15:51	07/13/12	Aqueous	Same As Above
C12070454-010	624	07/10/12 9:12	07/13/12	Aqueous	Same As Above
C12070454-011	SBL-1	07/10/12 9:55	07/13/12	Aqueous	Same As Above
C12070454-012	EPA-28	07/10/12 10:40	07/13/12	Aqueous	Same As Above
C12070454-013	EPA-28 Duplicate	07/10/12 11:19	07/13/12	Aqueous	Same As Above
C12070454-014	GW-3	07/10/12 14:00	07/13/12	Aqueous	Same As Above
C12070454-015	EPA-25	07/10/12 15:57	07/13/12	Aqueous	Same As Above
C12070454-016	627	07/10/12 16:51	07/13/12	Aqueous	Same As Above

ANALYTICAL SUMMARY REPORT

The results as reported relate only to the item(s) submitted for testing. The analyses presented in this report were performed at Energy Laboratories, Inc., 2393 Salt Creek Hwy., Casper, WY 82601, unless otherwise noted. Radiochemistry analyses were performed at Energy Laboratories, Inc., 2325 Kerzell Lane, Casper, WY 82601, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

If you have any questions regarding these test results, please call.

Report Approved By:

Stephanie D Waldrop
Reporting Supervisor

Digitally signed by
Stephanie Waldrop
Date: 2012.08.30 17:15:58 -06:00

CLIENT: United Nuclear Corporation
Project: SW Alluvium
Sample Delivery Group: C12070454

Report Date: 08/30/12

CASE NARRATIVE

BRANCH LABORATORY SUBCONTRACT ANALYSIS
Tests associated with analyst identified as ELI-H were subcontracted to Energy Laboratories, 3161 E.Lyndale Ave., Helena, MT, EPA Number MT00945. Tests associated with analyst identified as ELI-CS were subcontracted to Energy Laboratories, 415 Graham Rd., College Station, TX, EPA Number TX01520.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/30/12

Project: SW Alluvium **Work Order:** C12070454

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2320 B										Batch: R161902
Sample ID: MBLK	2	Method Blank				Run: MANTECH_120713B				07/13/12 15:28
Alkalinity, Total as CaCO3		ND	mg/L	3						
Bicarbonate as HCO3		ND	mg/L	1						
Sample ID: LCS-6677		Laboratory Control Sample				Run: MANTECH_120713B				07/13/12 15:44
Alkalinity, Total as CaCO3		201	mg/L	5.0	100	90	110			
Sample ID: C12070448-009AMS		Sample Matrix Spike				Run: MANTECH_120713B				07/13/12 19:45
Alkalinity, Total as CaCO3		458	mg/L	5.0	105	80	120			
Sample ID: C12070454-010ADUP	2	Sample Duplicate				Run: MANTECH_120713B				07/13/12 21:32
Alkalinity, Total as CaCO3		1230	mg/L	5.0				0.4	10	
Bicarbonate as HCO3		1500	mg/L	5.0				0.4	10	
Method: A2320 B										Batch: R161953
Sample ID: MBLK	2	Method Blank				Run: MANTECH_120716B				07/16/12 15:10
Alkalinity, Total as CaCO3		4	mg/L	3						
Bicarbonate as HCO3		5	mg/L	1						
Sample ID: LCS-6677		Laboratory Control Sample				Run: MANTECH_120716B				07/16/12 15:25
Alkalinity, Total as CaCO3		202	mg/L	5.0	99	90	110			
Sample ID: C12070476-001ADUP	2	Sample Duplicate				Run: MANTECH_120716B				07/16/12 15:40
Alkalinity, Total as CaCO3		86.2	mg/L	5.0				0.2	10	
Bicarbonate as HCO3		105	mg/L	5.0				0.2	10	
Sample ID: C12070460-001AMS		Sample Matrix Spike				Run: MANTECH_120716B				07/16/12 15:56
Alkalinity, Total as CaCO3		361	mg/L	5.0	100	80	120			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/30/12

Project: SW Alluvium **Work Order:** C12070454

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C									Batch: TDS120713B	
Sample ID: MB-1_120713B		Method Blank				Run: BAL-1_120713B			07/13/12 17:28	
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	4						
Sample ID: LCS-2_120713B		Laboratory Control Sample				Run: BAL-1_120713B			07/13/12 17:28	
Solids, Total Dissolved TDS @ 180 C		1070	mg/L	10	97	90	110			
Sample ID: C12070454-002A DUP		Sample Duplicate				Run: BAL-1_120713B			07/13/12 17:28	
Solids, Total Dissolved TDS @ 180 C		4700	mg/L	10				1.0	5	
Sample ID: C12070454-003A MS		Sample Matrix Spike				Run: BAL-1_120713B			07/13/12 17:29	
Solids, Total Dissolved TDS @ 180 C		16700	mg/L	10	100	90	110			
Method: A2540 C									Batch: TDS120716A	
Sample ID: MB-1_120716A		Method Blank				Run: BAL-1_120716B			07/16/12 12:03	
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	4						
Sample ID: LCS-2_120716A		Laboratory Control Sample				Run: BAL-1_120716B			07/16/12 12:03	
Solids, Total Dissolved TDS @ 180 C		1070	mg/L	10	97	90	110			
Sample ID: C12070452-001A MS		Sample Matrix Spike				Run: BAL-1_120716B			07/16/12 12:04	
Solids, Total Dissolved TDS @ 180 C		1350	mg/L	10	99	90	110			
Sample ID: C12070456-001A DUP		Sample Duplicate				Run: BAL-1_120716B			07/16/12 12:06	
Solids, Total Dissolved TDS @ 180 C		402	mg/L	10				3.8	5	
Sample ID: C12070456-012A MS		Sample Matrix Spike				Run: BAL-1_120716B			07/16/12 12:10	
Solids, Total Dissolved TDS @ 180 C		1470	mg/L	10	99	90	110			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/30/12

Project: SW Alluvium **Work Order:** C12070454

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A3114 B								Analytical Run: CVAA-C202_120726A		
Sample ID: ICV		Initial Calibration Verification Standard							07/26/12 14:08	
Selenium-IV		0.0259	mg/L	0.0010	103	90	110			
Method: A3114 B									Batch: 34467	
Sample ID: MB-34467		Method Blank				Run: CVAA-C202_120726A			07/26/12 14:45	
Selenium-IV		ND	mg/L	0.0005						
Sample ID: LCS-34467		Laboratory Control Sample				Run: CVAA-C202_120726A			07/26/12 14:47	
Selenium-IV		0.0235	mg/L	0.0010	94	90	110			
Sample ID: C12070454-002CMS		Sample Matrix Spike				Run: CVAA-C202_120726A			07/26/12 14:54	
Selenium-IV		0.0191	mg/L	0.0010	77	85	115			S
Sample ID: C12070454-002CMSD		Sample Matrix Spike Duplicate				Run: CVAA-C202_120726A			07/26/12 14:56	
Selenium-IV		0.0179	mg/L	0.0010	72	85	115	6.4	10	S
Method: A3114 B								Analytical Run: CVAA-C202_120726B		
Sample ID: ICV		Initial Calibration Verification Standard							07/26/12 15:54	
Selenium-IV		0.0264	mg/L	0.0010	106	90	110			
Method: A3114 B									Batch: 34467	
Sample ID: MB-34467		Method Blank				Run: CVAA-C202_120726B			07/26/12 16:03	
Selenium-IV		ND	mg/L	0.0005						
Sample ID: LCS-34467		Laboratory Control Sample				Run: CVAA-C202_120726B			07/26/12 16:05	
Selenium-IV		0.0251	mg/L	0.0010	101	90	110			
Sample ID: C12070454-008CMS		Sample Matrix Spike				Run: CVAA-C202_120726B			07/26/12 16:11	
Selenium-IV		0.0232	mg/L	0.0010	93	85	115			
Sample ID: C12070454-008CMSD		Sample Matrix Spike Duplicate				Run: CVAA-C202_120726B			07/26/12 16:13	
Selenium-IV		0.0223	mg/L	0.0010	89	85	115	3.9	10	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/30/12

Project: SW Alluvium **Work Order:** C12070454

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-H B									Analytical Run: PHSC_101-C_120716A	
Sample ID: pH 6.86		Initial Calibration Verification Standard							07/16/12 09:08	
pH		6.85	s.u.	0.010	100	98	102			
Sample ID: pH 6.86		Initial Calibration Verification Standard							07/16/12 11:53	
pH		6.85	s.u.	0.010	100	98	102			
Sample ID: pH 6.86		Initial Calibration Verification Standard							07/16/12 14:23	
pH		6.85	s.u.	0.010	100	98	102			
Method: A4500-H B									Batch: R161919	
Sample ID: C12070454-004ADUP		Sample Duplicate				Run: PHSC_101-C_120716A			07/16/12 09:43	
pH		6.62	s.u.	0.010				0.2	3	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium

Report Date: 08/30/12
Work Order: C12070454

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-NH3 G										Batch: R162001
Sample ID: MBLK-1		Method Blank				Run: TECHNICON_120717A				07/17/12 10:56
Nitrogen, Ammonia as N		ND	mg/L	0.02						
Sample ID: LCS-2		Laboratory Control Sample				Run: TECHNICON_120717A				07/17/12 10:58
Nitrogen, Ammonia as N		1.92	mg/L	0.050	96	90	110			
Sample ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_120717A				07/17/12 11:00
Nitrogen, Ammonia as N		1.99	mg/L	0.050	102	80	120			
Sample ID: C12070454-006DMS		Sample Matrix Spike				Run: TECHNICON_120717A				07/17/12 13:38
Nitrogen, Ammonia as N		5.24	mg/L	0.050	102	90	110			
Sample ID: C12070454-006DMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_120717A				07/17/12 13:40
Nitrogen, Ammonia as N		5.29	mg/L	0.050	105	90	110	0.9	10	
Sample ID: C12070454-016DMS		Sample Matrix Spike				Run: TECHNICON_120717A				07/17/12 14:08
Nitrogen, Ammonia as N		2.07	mg/L	0.050	101	90	110			
Sample ID: C12070454-016DMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_120717A				07/17/12 14:10
Nitrogen, Ammonia as N		2.08	mg/L	0.050	101	90	110	0.5	10	
Method: A4500-NH3 G										Batch: R162158
Sample ID: MBLK-1		Method Blank				Run: TECHNICON_120720A				07/20/12 11:38
Nitrogen, Ammonia as N		ND	mg/L	0.02						
Sample ID: LCS-2		Laboratory Control Sample				Run: TECHNICON_120720A				07/20/12 11:41
Nitrogen, Ammonia as N		2.18	mg/L	0.050	109	90	110			
Sample ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_120720A				07/20/12 11:43
Nitrogen, Ammonia as N		1.99	mg/L	0.050	102	80	120			
Sample ID: C12070460-002EMS		Sample Matrix Spike				Run: TECHNICON_120720A				07/20/12 12:15
Nitrogen, Ammonia as N		2.05	mg/L	0.050	105	90	110			
Sample ID: C12070460-002EMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_120720A				07/20/12 12:17
Nitrogen, Ammonia as N		2.07	mg/L	0.050	106	90	110	1.0	10	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium

Report Date: 08/30/12
Work Order: C12070454

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-NH3 G										Batch: R162598
Sample ID: MBLK-1		Method Blank				Run: TECHNICON_120731A				07/31/12 14:49
Nitrogen, Ammonia as N		ND	mg/L	0.02						
Sample ID: LCS-2		Laboratory Control Sample				Run: TECHNICON_120731A				07/31/12 14:51
Nitrogen, Ammonia as N		2.02	mg/L	0.050	101	90	110			
Sample ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_120731A				07/31/12 14:53
Nitrogen, Ammonia as N		2.00	mg/L	0.050	102	80	120			
Sample ID: C12071021-004EMS		Sample Matrix Spike				Run: TECHNICON_120731A				07/31/12 15:25
Nitrogen, Ammonia as N		1.93	mg/L	0.050	98	90	110			
Sample ID: C12071021-004EMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_120731A				07/31/12 15:27
Nitrogen, Ammonia as N		1.90	mg/L	0.050	97	90	110	1.6	10	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/30/12

Project: SW Alluvium **Work Order:** C12070454

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E1632AM									Analytical Run: SUB-H81966	
Sample ID: AS-ICV 25ppb-8/1/201		Initial Calibration Verification Standard							08/01/12 13:57	
Arsenic-III		24.4	ug/L	5.0	98	87.6	114			
Method: E1632AM									Batch: H_R81966	
Sample ID: ICB		Method Blank				Run: SUB-H81966			08/01/12 14:20	
Arsenic-III		ND	ug/L	2						
Sample ID: AS-LFB 50ppb-8/1/20		Laboratory Fortified Blank				Run: SUB-H81966			08/01/12 14:28	
Arsenic-III		45.1	ug/L	5.0	90	55	146			
Sample ID: H12070284-013E MS		Sample Matrix Spike				Run: SUB-H81966			08/01/12 17:22	
Arsenic-III		55.2	ug/L	5.0	110	55	146			
Sample ID: H12070284-013E MSD		Sample Matrix Spike Duplicate				Run: SUB-H81966			08/01/12 17:30	
Arsenic-III		55.8	ug/L	5.0	112	55	146	1.2	20	
Sample ID: C12070710-001E		Sample Matrix Spike				Run: SUB-H81966			08/01/12 19:20	
Arsenic-III		51.1	ug/L	5.0	102	55	146			
Sample ID: C12070710-001E		Sample Matrix Spike Duplicate				Run: SUB-H81966			08/01/12 19:28	
Arsenic-III		52.2	ug/L	5.0	104	55	146	2.0	20	
Method: E1632AM									Analytical Run: SUB-H81970	
Sample ID: AS-ICV 25ppb-8/2/201		Initial Calibration Verification Standard							08/02/12 14:18	
Arsenic-III		24.2	ug/L	5.0	97	87.6	114			
Method: E1632AM									Batch: H_R81970	
Sample ID: ICB		Method Blank				Run: SUB-H81970			08/02/12 14:42	
Arsenic-III		ND	ug/L	2						
Sample ID: AS-LFB 50ppb-8/2/20		Laboratory Fortified Blank				Run: SUB-H81970			08/02/12 14:50	
Arsenic-III		45.4	ug/L	5.0	91	55	146			
Sample ID: C12070713-004E		Sample Matrix Spike				Run: SUB-H81970			08/02/12 16:02	
Arsenic-III		43.8	ug/L	5.0	83	55	146			
Sample ID: C12070713-004E		Sample Matrix Spike Duplicate				Run: SUB-H81970			08/02/12 16:09	
Arsenic-III		45.4	ug/L	5.0	86	55	146	3.6	20	
Sample ID: C12070713-012E		Sample Matrix Spike				Run: SUB-H81970			08/02/12 16:56	
Arsenic-III		42.1	ug/L	5.0	84	55	146			
Sample ID: C12070713-012E		Sample Matrix Spike Duplicate				Run: SUB-H81970			08/02/12 17:04	
Arsenic-III		42.2	ug/L	5.0	84	55	146	0.1	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/30/12

Project: SW Alluvium **Work Order:** C12070454

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-C_120806A	
Sample ID: ICV	4	Initial Calibration Verification Standard							08/06/12 11:36	
Calcium		50.8	mg/L	0.50	102	95	105			
Magnesium		49.8	mg/L	0.50	100	95	105			
Potassium		49.5	mg/L	2.7	99	95	105			
Sodium		50.7	mg/L	0.50	101	95	105			
Sample ID: ICSA	4	Interference Check Sample A							08/06/12 12:24	
Calcium		516	mg/L	0.50	103	80	120			
Magnesium		519	mg/L	0.50	104	80	120			
Potassium		0.000300	mg/L	0.50						
Sodium		0.0973	mg/L	0.50						
Sample ID: ICSAB	4	Interference Check Sample AB							08/06/12 12:28	
Calcium		506	mg/L	0.50	101	80	120			
Magnesium		522	mg/L	0.50	104	80	120			
Potassium		-0.00150	mg/L	0.50						
Sodium		0.308	mg/L	0.50						
Method: E200.7									Batch: R162893	
Sample ID: MB-120806A	4	Method Blank				Run: ICP2-C_120806A			08/06/12 12:48	
Calcium		ND	mg/L	0.06						
Magnesium		ND	mg/L	0.03						
Potassium		ND	mg/L	0.06						
Sodium		ND	mg/L	0.3						
Sample ID: LFB-120806A	4	Laboratory Fortified Blank				Run: ICP2-C_120806A			08/06/12 12:52	
Calcium		49.5	mg/L	0.50	99	85	115			
Magnesium		47.4	mg/L	0.50	95	85	115			
Potassium		43.7	mg/L	0.50	87	85	115			
Sodium		47.8	mg/L	0.50	96	85	115			
Sample ID: C12070454-001BMS2	4	Sample Matrix Spike				Run: ICP2-C_120806A			08/06/12 14:33	
Calcium		1140	mg/L	1.0	83	70	130			
Magnesium		671	mg/L	1.0	93	70	130			
Potassium		239	mg/L	1.0	88	70	130			
Sodium		680	mg/L	1.6	97	70	130			
Sample ID: C12070454-001BMSD	4	Sample Matrix Spike Duplicate				Run: ICP2-C_120806A			08/06/12 14:49	
Calcium		1170	mg/L	1.0	92	70	130	2.1	20	
Magnesium		693	mg/L	1.0	102	70	130	3.3	20	
Potassium		245	mg/L	1.0	90	70	130	2.5	20	
Sodium		683	mg/L	1.6	99	70	130	0.5	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/30/12

Project: SW Alluvium **Work Order:** C12070454

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP4-C_120717A	
Sample ID: ICV	4	Initial Calibration Verification Standard							07/17/12 12:44	
Calcium		50.3	mg/L	0.50	101	95	105			
Magnesium		51.0	mg/L	0.50	102	95	105			
Potassium		50.3	mg/L	0.50	101	95	105			
Sodium		51.4	mg/L	0.50	103	95	105			
Sample ID: ICSA	4	Interference Check Sample A							07/17/12 12:58	
Calcium		456	mg/L	0.50	91	80	120			
Magnesium		521	mg/L	0.50	104	80	120			
Potassium		-0.00740	mg/L	0.50						
Sodium		0.453	mg/L	0.50						
Sample ID: ICSAB	4	Interference Check Sample AB							07/17/12 13:02	
Calcium		453	mg/L	0.50	91	80	120			
Magnesium		520	mg/L	0.50	104	80	120			
Potassium		-0.00393	mg/L	0.50						
Sodium		0.290	mg/L	0.50						
Method: E200.7									Batch: R162026	
Sample ID: MB-120717A	4	Method Blank				Run: ICP4-C_120717A			07/17/12 13:06	
Calcium		0.03	mg/L	0.02						
Magnesium		ND	mg/L	0.01						
Potassium		ND	mg/L	0.04						
Sodium		ND	mg/L	0.2						
Sample ID: LFB-120717A	4	Laboratory Fortified Blank				Run: ICP4-C_120717A			07/17/12 13:09	
Calcium		49.5	mg/L	0.50	99	85	115			
Magnesium		49.6	mg/L	0.50	99	85	115			
Potassium		51.6	mg/L	0.50	103	85	115			
Sodium		50.4	mg/L	0.50	101	85	115			
Sample ID: C12070454-015BMS2	4	Sample Matrix Spike				Run: ICP4-C_120717A			07/17/12 15:44	
Calcium		961	mg/L	1.0	174	70	130			S
Magnesium		475	mg/L	1.0	122	70	130			
Potassium		238	mg/L	1.0	91	70	130			
Sodium		418	mg/L	1.0	112	70	130			
Sample ID: C12070454-015BMSD	4	Sample Matrix Spike Duplicate				Run: ICP4-C_120717A			07/17/12 15:48	
Calcium		947	mg/L	1.0	168	70	130	1.5	20	S
Magnesium		469	mg/L	1.0	120	70	130	1.1	20	
Potassium		229	mg/L	1.0	88	70	130	3.9	20	
Sodium		408	mg/L	1.0	108	70	130	2.4	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium

Report Date: 08/30/12
Work Order: C12070454

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP4-C_120725A	
Sample ID: ICV	7	Initial Calibration Verification Standard							07/25/12 15:08	
Aluminum		5.04	mg/L	0.10	101	95	105			
Beryllium		0.501	mg/L	0.010	100	95	105			
Cadmium		0.474	mg/L	0.010	95	95	105			
Cobalt		0.959	mg/L	0.010	96	95	105			
Manganese		4.91	mg/L	0.010	98	95	105			
Molybdenum		0.983	mg/L	0.10	98	95	105			
Nickel		0.958	mg/L	0.050	96	95	105			
Sample ID: ICSA	7	Interference Check Sample A							07/25/12 15:22	
Aluminum		497	mg/L	0.10	99	80	120			
Beryllium		0.000220	mg/L	0.010						
Cadmium		0.00660	mg/L	0.010						
Cobalt		-0.00255	mg/L	0.010						
Manganese		0.0176	mg/L	0.010						
Molybdenum		0.00610	mg/L	0.10						
Nickel		0.00264	mg/L	0.050						
Sample ID: ICSAB	7	Interference Check Sample AB							07/25/12 15:26	
Aluminum		501	mg/L	0.10	100	80	120			
Beryllium		0.472	mg/L	0.010	94	80	120			
Cadmium		0.866	mg/L	0.010	87	80	120			
Cobalt		0.434	mg/L	0.010	87	80	120			
Manganese		0.471	mg/L	0.010	94	80	120			
Molybdenum		0.00263	mg/L	0.10						
Nickel		0.865	mg/L	0.050	86	80	120			
Method: E200.7									Batch: 34384	
Sample ID: MB-34384	7	Method Blank				Run: ICP4-C_120725A			07/25/12 21:41	
Aluminum		ND	mg/L	0.01						
Beryllium		ND	mg/L	5E-05						
Cadmium		ND	mg/L	0.0003						
Cobalt		ND	mg/L	0.002						
Manganese		ND	mg/L	0.0002						
Molybdenum		ND	mg/L	0.003						
Nickel		ND	mg/L	0.001						
Sample ID: LCS3-34384	7	Laboratory Control Sample				Run: ICP4-C_120725A			07/25/12 21:45	
Aluminum		2.48	mg/L	0.030	99	85	115			
Beryllium		0.241	mg/L	0.0010	97	85	115			
Cadmium		0.236	mg/L	0.0010	94	85	115			
Cobalt		0.467	mg/L	0.0050	93	85	115			
Manganese		2.39	mg/L	0.0010	96	85	115			
Molybdenum		0.489	mg/L	0.0028	98	85	115			
Nickel		0.478	mg/L	0.0050	96	85	115			

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/30/12

Project: SW Alluvium **Work Order:** C12070454

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7										Batch: 34384
Sample ID: C12070620-002CMS3	7	Sample Matrix Spike				Run: ICP4-C_120725A			07/25/12 22:18	
Aluminum		20.0	mg/L	0.030		70	130			A
Beryllium		0.235	mg/L	0.0010	94	70	130			
Cadmium		0.223	mg/L	0.0010	89	70	130			
Cobalt		0.449	mg/L	0.0050	89	70	130			
Manganese		3.41	mg/L	0.0010	91	70	130			
Molybdenum		0.470	mg/L	0.0028	94	70	130			
Nickel		0.466	mg/L	0.0050	92	70	130			
Sample ID: C12070620-002CMSD	7	Sample Matrix Spike Duplicate				Run: ICP4-C_120725A			07/25/12 22:22	
Aluminum		20.1	mg/L	0.030		70	130	0.8	20	A
Beryllium		0.237	mg/L	0.0010	94	70	130	0.9	20	
Cadmium		0.225	mg/L	0.0010	90	70	130	0.9	20	
Cobalt		0.456	mg/L	0.0050	90	70	130	1.5	20	
Manganese		3.39	mg/L	0.0010	90	70	130	0.6	20	
Molybdenum		0.478	mg/L	0.0028	96	70	130	1.8	20	
Nickel		0.472	mg/L	0.0050	93	70	130	1.2	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

MDC - Minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/30/12

Project: SW Alluvium **Work Order:** C12070454

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS4-C_120726A	
Sample ID: ICV	9	Initial Calibration Verification Standard								07/26/12 11:34
Aluminum		0.0518	mg/L	0.0010	104	90	110			
Cadmium		0.0515	mg/L	0.0010	103	90	110			
Cobalt		0.0518	mg/L	0.0010	104	90	110			
Lead		0.0485	mg/L	0.0010	97	90	110			
Manganese		0.0505	mg/L	0.0010	101	90	110			
Molybdenum		0.0501	mg/L	0.0010	100	90	110			
Nickel		0.0515	mg/L	0.0010	103	90	110			
Uranium		0.0506	mg/L	0.00030	101	90	110			
Vanadium		0.0502	mg/L	0.0010	100	90	110			
Method: E200.8										Batch: 34329
Sample ID: MB-34329	9	Method Blank				Run: ICPMS4-C_120726A				07/27/12 01:24
Aluminum		0.002	mg/L	0.001						
Cadmium		4E-05	mg/L	3E-05						
Cobalt		ND	mg/L	4E-05						
Lead		2E-05	mg/L	1E-05						
Manganese		0.0003	mg/L	4E-05						
Molybdenum		ND	mg/L	4E-05						
Nickel		0.0002	mg/L	4E-05						
Uranium		9E-06	mg/L	8E-06						
Vanadium		0.004	mg/L	8E-05						
Sample ID: LCS3-34329	9	Laboratory Control Sample				Run: ICPMS4-C_120726A				07/27/12 01:28
Aluminum		2.18	mg/L	0.030	87	85	115			
Cadmium		0.270	mg/L	0.0010	108	85	115			
Cobalt		0.453	mg/L	0.0050	91	85	115			
Lead		0.535	mg/L	0.0010	107	85	115			
Manganese		2.34	mg/L	0.0010	94	85	115			
Molybdenum		0.542	mg/L	0.0010	108	85	115			
Nickel		0.475	mg/L	0.0050	95	85	115			
Uranium		0.481	mg/L	0.00030	96	85	115			
Vanadium		0.500	mg/L	0.010	99	85	115			
Sample ID: C12070454-001CMS3	9	Sample Matrix Spike				Run: ICPMS4-C_120726A				07/27/12 01:42
Aluminum		2.44	mg/L	0.030	96	70	130			
Cadmium		0.253	mg/L	0.0010	101	70	130			
Cobalt		0.515	mg/L	0.0050	101	70	130			
Lead		0.565	mg/L	0.0010	113	70	130			
Manganese		5.84	mg/L	0.0010	103	70	130			
Molybdenum		0.528	mg/L	0.0010	105	70	130			
Nickel		0.490	mg/L	0.0050	96	70	130			
Uranium		0.835	mg/L	0.00030	112	70	130			
Vanadium		0.522	mg/L	0.010	104	70	130			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/30/12

Project: SW Alluvium **Work Order:** C12070454

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8										Batch: 34329
Sample ID: C12070454-001CMSD	9	Sample Matrix Spike Duplicate				Run: ICPMS4-C_120726A			07/27/12 01:46	
Aluminum		2.27	mg/L	0.030	89	70	130	7.2	20	
Cadmium		0.238	mg/L	0.0010	95	70	130	6.2	20	
Cobalt		0.483	mg/L	0.0050	95	70	130	6.4	20	
Lead		0.512	mg/L	0.0010	102	70	130	9.9	20	
Manganese		5.49	mg/L	0.0010	90	70	130	6.1	20	
Molybdenum		0.503	mg/L	0.0010	100	70	130	4.8	20	
Nickel		0.470	mg/L	0.0050	92	70	130	4.3	20	
Uranium		0.776	mg/L	0.00030	100	70	130	7.4	20	
Vanadium		0.502	mg/L	0.010	100	70	130	3.8	20	
Sample ID: C12070454-013CMS3	9	Sample Matrix Spike				Run: ICPMS4-C_120726A			07/27/12 03:32	
Aluminum		2.25	mg/L	0.030	89	70	130			
Cadmium		0.249	mg/L	0.0010	99	70	130			
Cobalt		0.470	mg/L	0.0050	94	70	130			
Lead		0.500	mg/L	0.0010	100	70	130			
Manganese		3.01	mg/L	0.0010	94	70	130			
Molybdenum		0.520	mg/L	0.0010	104	70	130			
Nickel		0.454	mg/L	0.0050	89	70	130			
Uranium		0.560	mg/L	0.00030	104	70	130			
Vanadium		0.489	mg/L	0.010	97	70	130			
Sample ID: C12070454-013CMSD	9	Sample Matrix Spike Duplicate				Run: ICPMS4-C_120726A			07/27/12 03:37	
Aluminum		2.27	mg/L	0.030	90	70	130	1.0	20	
Cadmium		0.250	mg/L	0.0010	100	70	130	0.6	20	
Cobalt		0.474	mg/L	0.0050	94	70	130	0.8	20	
Lead		0.503	mg/L	0.0010	101	70	130	0.5	20	
Manganese		3.04	mg/L	0.0010	95	70	130	0.8	20	
Molybdenum		0.523	mg/L	0.0010	105	70	130	0.6	20	
Nickel		0.465	mg/L	0.0050	91	70	130	2.4	20	
Uranium		0.560	mg/L	0.00030	104	70	130	0.0	20	
Vanadium		0.498	mg/L	0.010	99	70	130	1.9	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/30/12

Project: SW Alluvium **Work Order:** C12070454

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS4-C_120803A	
Sample ID: ICV	2	Initial Calibration Verification Standard							08/03/12 21:14	
Beryllium		0.0527	mg/L	0.0010	105	90	110			
Cobalt		0.0511	mg/L	0.0010	102	90	110			
Method: E200.8										Batch: 34329
Sample ID: MB-34329	2	Method Blank				Run: ICPMS4-C_120803A			08/03/12 22:50	
Beryllium		ND	mg/L	5E-05						
Cobalt		ND	mg/L	4E-05						
Sample ID: LCS3-34329	2	Laboratory Control Sample				Run: ICPMS4-C_120803A			08/03/12 22:55	
Beryllium		0.254	mg/L	0.0010	102	85	115			
Cobalt		0.499	mg/L	0.0050	100	85	115			
Sample ID: C12070454-001CMS3	2	Sample Matrix Spike				Run: ICPMS4-C_120803A			08/03/12 23:08	
Beryllium		0.214	mg/L	0.0010	86	70	130			
Cobalt		0.522	mg/L	0.0050	102	70	130			
Sample ID: C12070454-001CMSD	2	Sample Matrix Spike Duplicate				Run: ICPMS4-C_120803A			08/03/12 23:12	
Beryllium		0.206	mg/L	0.0010	82	70	130	3.9	20	
Cobalt		0.502	mg/L	0.0050	99	70	130	3.8	20	
Sample ID: C12070454-013CMS3	2	Sample Matrix Spike				Run: ICPMS4-C_120803A			08/04/12 00:55	
Beryllium		0.214	mg/L	0.0010	86	70	130			
Cobalt		0.469	mg/L	0.0050	93	70	130			
Sample ID: C12070454-013CMSD	2	Sample Matrix Spike Duplicate				Run: ICPMS4-C_120803A			08/04/12 00:59	
Beryllium		0.213	mg/L	0.0010	85	70	130	0.3	20	
Cobalt		0.477	mg/L	0.0050	95	70	130	1.7	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium

Report Date: 08/30/12
Work Order: C12070454

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS4-C_120806A	
Sample ID: ICV	3	Initial Calibration Verification Standard							08/06/12 11:36	
Lead		0.0483	mg/L	0.0010	97	90	110			
Uranium		0.0505	mg/L	0.00030	101	90	110			
Vanadium		0.0466	mg/L	0.0010	93	90	110			
Method: E200.8									Batch: 34384	
Sample ID: MB-34384	3	Method Blank				Run: ICPMS4-C_120806A			08/07/12 11:47	
Lead		2E-05	mg/L	1E-05						
Uranium		ND	mg/L	8E-06						
Vanadium		0.003	mg/L	8E-05						
Sample ID: LCS3-34384	3	Laboratory Control Sample				Run: ICPMS4-C_120806A			08/07/12 11:51	
Lead		0.526	mg/L	0.0010	105	85	115			
Uranium		0.509	mg/L	0.00030	102	85	115			
Vanadium		0.503	mg/L	0.010	100	85	115			
Sample ID: C12070541-002CMS3	3	Sample Matrix Spike				Run: ICPMS4-C_120806A			08/07/12 12:14	
Lead		0.577	mg/L	0.0010	115	70	130			
Uranium		0.585	mg/L	0.00030	111	70	130			
Vanadium		0.540	mg/L	0.010	106	70	130			
Sample ID: C12070541-002CMSD	3	Sample Matrix Spike Duplicate				Run: ICPMS4-C_120806A			08/07/12 12:18	
Lead		0.570	mg/L	0.0010	114	70	130	1.2	20	
Uranium		0.581	mg/L	0.00030	110	70	130	0.8	20	
Vanadium		0.524	mg/L	0.010	103	70	130	3.1	20	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/30/12

Project: SW Alluvium **Work Order:** C12070454

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0									Analytical Run: IC2-C_120716A	
Sample ID: ICV-071612-10	2	Initial Calibration Verification Standard							07/16/12 14:48	
Chloride		10.00	mg/L	1.0	100	90	110			
Sulfate		39.8	mg/L	1.0	100	90	110			
Method: E300.0									Batch: R161997	
Sample ID: ICB-071612-11	2	Method Blank				Run: IC2-C_120716A			07/16/12 15:04	
Chloride		ND	mg/L	0.03						
Sulfate		0.2	mg/L	0.10						
Sample ID: LFB-071612-13	2	Laboratory Fortified Blank				Run: IC2-C_120716A			07/16/12 15:35	
Chloride		9.84	mg/L	1.0	98	90	110			
Sulfate		40.0	mg/L	1.0	99	90	110			
Sample ID: LFBD-071612-14	2	Laboratory Fortified Blank Duplicate				Run: IC2-C_120716A			07/16/12 15:50	
Chloride		9.88	mg/L	1.0	99	90	110	0.4	10	
Sulfate		40.2	mg/L	1.0	100	90	110	0.5	10	
Sample ID: C12070437-003AMS	2	Sample Matrix Spike				Run: IC2-C_120716A			07/16/12 23:48	
Chloride		215	mg/L	1.0	99	90	110			
Sulfate		832	mg/L	4.2	96	90	110			
Sample ID: C12070437-003AMSD	2	Sample Matrix Spike Duplicate				Run: IC2-C_120716A			07/17/12 00:04	
Chloride		212	mg/L	1.0	92	90	110	1.6	10	
Sulfate		819	mg/L	4.2	90	90	110	1.5	10	
Sample ID: C12070454-006AMS	2	Sample Matrix Spike				Run: IC2-C_120716A			07/17/12 03:24	
Chloride		384	mg/L	4.2	95	90	110			
Sulfate		3900	mg/L	17	100	90	110			
Sample ID: C12070454-006AMSD	2	Sample Matrix Spike Duplicate				Run: IC2-C_120716A			07/17/12 03:39	
Chloride		384	mg/L	4.2	95	90	110	0.1	10	
Sulfate		3880	mg/L	17	98	90	110	0.5	10	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/30/12

Project: SW Alluvium **Work Order:** C12070454

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0									Analytical Run: IC2-C_120817A	
Sample ID: ICV-081712-10	2	Initial Calibration Verification Standard							08/17/12 13:15	
Chloride		10.2	mg/L	1.0	102	90	110			
Sulfate		41.3	mg/L	1.0	103	90	110			
Method: E300.0									Batch: R163463	
Sample ID: ICB-081712-11	2	Method Blank				Run: IC2-C_120817A			08/17/12 13:33	
Chloride		ND	mg/L	0.04						
Sulfate		0.2	mg/L	0.1						
Sample ID: LFB-081712-13	2	Laboratory Fortified Blank				Run: IC2-C_120817A			08/17/12 14:08	
Chloride		10.1	mg/L	1.0	101	90	110			
Sulfate		41.1	mg/L	1.0	102	90	110			
Sample ID: LFBD-081712-14	2	Laboratory Fortified Blank Duplicate				Run: IC2-C_120817A			08/17/12 14:25	
Chloride		10.2	mg/L	1.0	102	90	110	0.8	10	
Sulfate		41.5	mg/L	1.0	103	90	110	0.9	10	
Sample ID: C12080732-001AMS	2	Sample Matrix Spike				Run: IC2-C_120817A			08/17/12 15:00	
Chloride		56.4	mg/L	1.0	99	90	110			
Sulfate		169	mg/L	1.7	102	90	110			
Sample ID: C12080732-001AMSD	2	Sample Matrix Spike Duplicate				Run: IC2-C_120817A			08/17/12 15:17	
Chloride		56.3	mg/L	1.0	99	90	110	0.1	10	
Sulfate		169	mg/L	1.7	102	90	110	0.1	10	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/30/12

Project: SW Alluvium **Work Order:** C12070454

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E353.2										Batch: R161946
Sample ID: MBLK-1		Method Blank				Run: TECHNICON_120716A				07/16/12 11:07
Nitrogen, Nitrate+Nitrite as N		ND	mg/L	0.06						
Sample ID: LCS-2		Laboratory Control Sample				Run: TECHNICON_120716A				07/16/12 11:10
Nitrogen, Nitrate+Nitrite as N		2.56	mg/L	0.10	102	90	110			
Sample ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_120716A				07/16/12 11:12
Nitrogen, Nitrate+Nitrite as N		1.85	mg/L	0.10	94	90	110			
Sample ID: C12070452-001CMS		Sample Matrix Spike				Run: TECHNICON_120716A				07/16/12 12:30
Nitrogen, Nitrate+Nitrite as N		7.43	mg/L	0.20	105	90	110			
Sample ID: C12070452-001CMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_120716A				07/16/12 12:32
Nitrogen, Nitrate+Nitrite as N		7.38	mg/L	0.20	104	90	110	0.7	10	
Sample ID: C12070454-010DMS		Sample Matrix Spike				Run: TECHNICON_120716A				07/16/12 13:05
Nitrogen, Nitrate+Nitrite as N		176	mg/L	5.0	102	90	110			
Sample ID: C12070454-010DMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_120716A				07/16/12 13:07
Nitrogen, Nitrate+Nitrite as N		178	mg/L	5.0	104	90	110	1.1	10	
Method: E353.2										Batch: R162173
Sample ID: MBLK-1		Method Blank				Run: TECHNICON_120720B				07/20/12 16:32
Nitrogen, Nitrate+Nitrite as N		ND	mg/L	0.06						
Sample ID: LCS-2		Laboratory Control Sample				Run: TECHNICON_120720B				07/20/12 16:35
Nitrogen, Nitrate+Nitrite as N		2.54	mg/L	0.10	102	90	110			
Sample ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_120720B				07/20/12 16:37
Nitrogen, Nitrate+Nitrite as N		2.10	mg/L	0.10	107	90	110			
Sample ID: C12070298-011AMS		Sample Matrix Spike				Run: TECHNICON_120720B				07/20/12 16:42
Nitrogen, Nitrate+Nitrite as N		18.6	mg/L	0.50	102	90	110			
Sample ID: C12070298-011AMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_120720B				07/20/12 16:45
Nitrogen, Nitrate+Nitrite as N		18.8	mg/L	0.50	104	90	110	1.1	10	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/30/12

Project: SW Alluvium **Work Order:** C12070454

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624									Analytical Run: R162004	
Sample ID: 16-Jul-12_CCV_3	9	Continuing Calibration Verification Standard							07/16/12 12:14	
Bromodichloromethane		9.36	ug/L	1.0	94	70	130			
Bromoform		8.56	ug/L	1.0	86	70	130			
Chlorodibromomethane		9.36	ug/L	1.0	94	70	130			
Chloroform		9.76	ug/L	1.0	98	70	130			
Trihalomethanes, Total		37.0	ug/L	1.0	93	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	128	80	120			S
Surr: Dibromofluoromethane				1.0	116	80	120			
Surr: p-Bromofluorobenzene				1.0	114	80	120			
Surr: Toluene-d8				1.0	110	80	120			
Sample ID: 16-Jul-12_CCV_19	9	Continuing Calibration Verification Standard							07/16/12 21:48	
Bromodichloromethane		8.40	ug/L	1.0	84	70	130			
Bromoform		8.68	ug/L	1.0	87	70	130			
Chlorodibromomethane		8.00	ug/L	1.0	80	70	130			
Chloroform		10.6	ug/L	1.0	106	70	130			
Trihalomethanes, Total		35.7	ug/L	1.0	89	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	153	80	120			S
Surr: Dibromofluoromethane				1.0	122	80	120			S
Surr: p-Bromofluorobenzene				1.0	120	80	120			
Surr: Toluene-d8				1.0	104	80	120			
Method: E624									Batch: R162004	
Sample ID: 16-Jul-12_LCS_4	9	Laboratory Control Sample				Run: 5975VOC1_120716A			07/16/12 12:49	
Bromodichloromethane		7.40	ug/L	1.0	74	72.3	123			
Bromoform		9.20	ug/L	1.0	92	70.3	128			
Chlorodibromomethane		7.48	ug/L	1.0	75	69.1	123			
Chloroform		9.36	ug/L	1.0	94	72.9	130			
Trihalomethanes, Total		33.4	ug/L	1.0	84	75.7	121			
Surr: 1,2-Dichlorobenzene-d4				1.0	155	82	118			S
Surr: Dibromofluoromethane				1.0	118	74.8	123			
Surr: p-Bromofluorobenzene				1.0	133	82.4	121			S
Surr: Toluene-d8				1.0	105	76.4	125			
Sample ID: 16-Jul-12_MBLK_6	9	Method Blank				Run: 5975VOC1_120716A			07/16/12 13:58	
Bromodichloromethane		ND	ug/L	1.0						
Bromoform		ND	ug/L	1.0						
Chlorodibromomethane		ND	ug/L	1.0						
Chloroform		ND	ug/L	1.0						
Trihalomethanes, Total		ND	ug/L	1.0						
Surr: 1,2-Dichlorobenzene-d4				1.0	90	80	120			
Surr: Dibromofluoromethane				1.0	114	80	120			
Surr: p-Bromofluorobenzene				1.0	180	80	120			S
Surr: Toluene-d8				1.0	112	80	120			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium

Report Date: 08/30/12
Work Order: C12070454

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624										Batch: R162004
Sample ID: C12070463-001HMS	9	Sample Matrix Spike				Run: 5975VOC1_120716A			07/16/12 20:03	
Bromodichloromethane		74.4	ug/L	5.0	74	72.3	123			
Bromoform		88.0	ug/L	5.0	88	70.3	128			
Chlorodibromomethane		67.6	ug/L	5.0	68	69.1	123			S
Chloroform		185	ug/L	5.0	106	72.9	130			
Trihalomethanes, Total		415	ug/L	5.0	84	75.7	121			
Surr: 1,2-Dichlorobenzene-d4				1.0	154	82	118			S
Surr: Dibromofluoromethane				1.0	123	74.8	123			
Surr: p-Bromofluorobenzene				1.0	126	82.4	121			S
Surr: Toluene-d8				1.0	106	76.4	125			
Sample ID: C12070463-001HMSD	9	Sample Matrix Spike Duplicate				Run: 5975VOC1_120716A			07/16/12 20:38	
Bromodichloromethane		81.2	ug/L	5.0	81	72.3	123	8.7	20	
Bromoform		80.0	ug/L	5.0	80	70.3	128	9.5	20	
Chlorodibromomethane		69.2	ug/L	5.0	69	69.1	123	2.3	20	
Chloroform		182	ug/L	5.0	103	72.9	130	1.3	20	
Trihalomethanes, Total		413	ug/L	5.0	83	75.7	121	0.5	20	
Surr: 1,2-Dichlorobenzene-d4				1.0	159	82	118			S
Surr: Dibromofluoromethane				1.0	120	74.8	123			
Surr: p-Bromofluorobenzene				1.0	120	82.4	121			
Surr: Toluene-d8				1.0	113	76.4	125			

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.
S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium

Report Date: 08/30/12
Work Order: C12070454

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E900.1										Batch: GA-0547
Sample ID: LCS-GA-0547		Laboratory Control Sample				Run: G5000W_120717A				08/08/12 22:25
Gross Alpha minus Rn & U		20.9	pCi/L		101	70	130			
Sample ID: MB-GA-0547	3	Method Blank				Run: G5000W_120717A				08/08/12 22:25
Gross Alpha minus Rn & U		-0.04	pCi/L							U
Gross Alpha minus Rn & U Precision (±)		0.2	pCi/L							
Gross Alpha minus Rn & U MDC		0.3	pCi/L							
Sample ID: C12070454-007GMS		Sample Matrix Spike				Run: G5000W_120717A				08/09/12 00:07
Gross Alpha minus Rn & U		37.4	pCi/L		92	70	130			
Sample ID: C12070454-007GMSD		Sample Matrix Spike Duplicate				Run: G5000W_120717A				08/09/12 00:07
Gross Alpha minus Rn & U		38.8	pCi/L		94	70	130	3.7	21.6	
Method: E900.1										Batch: GA-0564
Sample ID: LCS-GA-0548		Laboratory Control Sample				Run: G542M_120718B				08/09/12 22:40
Gross Alpha minus Rn & U		21.0	pCi/L		100	70	130			
Sample ID: MB-GA-0548	3	Method Blank				Run: G542M_120718B				08/09/12 22:40
Gross Alpha minus Rn & U		0.1	pCi/L							U
Gross Alpha minus Rn & U Precision (±)		0.2	pCi/L							
Gross Alpha minus Rn & U MDC		0.3	pCi/L							
Sample ID: C12070456-008GMS		Sample Matrix Spike				Run: G542M_120718B				08/09/12 00:23
Gross Alpha minus Rn & U		54.4	pCi/L		129	70	130			
Sample ID: C12070456-008GMSD		Sample Matrix Spike Duplicate				Run: G542M_120718B				08/09/12 00:23
Gross Alpha minus Rn & U		47.2	pCi/L		108	70	130	14	20.4	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/30/12

Project: SW Alluvium **Work Order:** C12070454

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E903.0										Batch: RA226-6114
Sample ID: C12070456-001GDUP	3	Sample Duplicate				Run: BERTHOLD 770-1_120720C				07/31/12 17:28
Radium 226		1.2	pCi/L					3.3	50.9	
Radium 226 precision (±)		0.25	pCi/L							
Radium 226 MDC		0.17	pCi/L							
Sample ID: C12070456-009GMS		Sample Matrix Spike				Run: BERTHOLD 770-1_120720C				07/31/12 19:30
Radium 226		17	pCi/L		112	70	130			
Sample ID: MB-RA226-6114	3	Method Blank				Run: BERTHOLD 770-1_120720C				07/31/12 21:04
Radium 226		0.03	pCi/L							U
Radium 226 precision (±)		0.10	pCi/L							
Radium 226 MDC		0.2	pCi/L							
Sample ID: LCS-RA226-6114		Laboratory Control Sample				Run: BERTHOLD 770-1_120720C				07/31/12 21:04
Radium 226		6.3	pCi/L		99	80	120			
Method: E903.0										Batch: RA226-6113
Sample ID: C12070443-002DMS		Sample Matrix Spike				Run: TENNELEC-3_120720E				07/31/12 00:30
Radium 226		15	pCi/L		110	70	130			
Sample ID: C12070443-006DDUP	3	Sample Duplicate				Run: TENNELEC-3_120720E				07/31/12 00:30
Radium 226		0.66	pCi/L					2.3	69.8	
Radium 226 precision (±)		0.22	pCi/L							
Radium 226 MDC		0.20	pCi/L							
Sample ID: MB-RA226-6113	3	Method Blank				Run: TENNELEC-3_120720E				07/31/12 02:12
Radium 226		0.2	pCi/L							
Radium 226 precision (±)		0.10	pCi/L							
Radium 226 MDC		0.1	pCi/L							
Sample ID: LCS-RA226-6113		Laboratory Control Sample				Run: TENNELEC-3_120720E				07/31/12 02:12
Radium 226		6.0	pCi/L		93	80	120			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium

Report Date: 08/30/12
Work Order: C12070454

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E908.0										Batch: RA-TH-ISO-1664
Sample ID: LCS-RA-TH-ISO-1664		Laboratory Control Sample				Run: ALPHANALYST_120730A				08/01/12 08:45
Thorium 230		5.3	pCi/L		103	80	120			
Sample ID: C12070454-016GMS		Sample Matrix Spike				Run: ALPHANALYST_120730A				08/01/12 08:46
Thorium 230		11.5	pCi/L		97	70	130			
Sample ID: C12070454-016GMSD		Sample Matrix Spike Duplicate				Run: ALPHANALYST_120730A				08/01/12 08:46
Thorium 230		11.9	pCi/L		100	70	130	3.4	43	
Sample ID: MB-RA-TH-ISO-1664	3	Method Blank				Run: ALPHANALYST_120730A				08/01/12 08:46
Thorium 230		0.02	pCi/L							U
Thorium 230 precision (±)		0.06	pCi/L							
Thorium 230 MDC		0.2	pCi/L							

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/30/12

Project: SW Alluvium **Work Order:** C12070454

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E909.0									Batch: T_PB-210-0268	
Sample ID: MB-PB-210-0268	3	Method Blank				Run: SUB-T46542			07/29/12 23:41	
Lead 210		0.1	pCi/L							U
Lead 210 precision (±)		0.8	pCi/L							
Lead 210 MDC		1	pCi/L							
Sample ID: LCS-PB-210-0268		Laboratory Control Sample				Run: SUB-T46542			07/30/12 00:28	
Lead 210		110	pCi/L		90	70	130			
Sample ID: T12060098-006GMS		Sample Matrix Spike				Run: SUB-T46542			07/30/12 02:03	
Lead 210		260	pCi/L		107	70	130			
Sample ID: T12060098-006GMSD		Sample Matrix Spike Duplicate				Run: SUB-T46542			07/30/12 02:51	
Lead 210		260	pCi/L		105	70	130	2.1	15.2	
Method: E909.0									Batch: T_PB-210-0269	
Sample ID: MB-PB-210-0269	3	Method Blank				Run: SUB-T46639			08/04/12 08:08	
Lead 210		-0.2	pCi/L							U
Lead 210 precision (±)		0.7	pCi/L							
Lead 210 MDC		1	pCi/L							
Sample ID: LCS-PB-210-0269		Laboratory Control Sample				Run: SUB-T46639			08/04/12 08:56	
Lead 210		120	pCi/L		98	70	130			
Sample ID: C12070446-001NMS		Sample Matrix Spike				Run: SUB-T46639			08/04/12 15:16	
Lead 210		280	pCi/L		93	70	130			
Sample ID: C12070446-001NMSD		Sample Matrix Spike Duplicate				Run: SUB-T46639			08/04/12 16:04	
Lead 210		270	pCi/L		91	70	130	2.0	15	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/30/12

Project: SW Alluvium **Work Order:** C12070454

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: RA-05										Batch: RA228-4168
Sample ID: LCS-228-RA226-6113		Laboratory Control Sample				Run: TENNELEC-3_120720B			07/25/12 17:52	
Radium 228		4.7	pCi/L		104	80	120			
Sample ID: MB-RA226-6113	3	Method Blank				Run: TENNELEC-3_120720B			07/25/12 17:52	
Radium 228		-0.3	pCi/L							U
Radium 228 precision (±)		0.6	pCi/L							
Radium 228 MDC		1.0	pCi/L							
Sample ID: C12070443-006DDUP	3	Sample Duplicate				Run: TENNELEC-3_120720B			07/25/12 17:52	
Radium 228		1.1	pCi/L					5.1	160.3	U
Radium 228 precision (±)		1.1	pCi/L							
Radium 228 MDC		1.7	pCi/L							
Sample ID: C12070454-007GMS		Sample Matrix Spike				Run: TENNELEC-3_120720B			07/25/12 17:52	
Radium 228		7.9	pCi/L		80	70	130			
Method: RA-05										Batch: RA228-4169
Sample ID: LCS-228-RA226-6114		Laboratory Control Sample				Run: TENNELEC-3_120720C			07/26/12 18:55	
Radium 228		4.4	pCi/L		94	80	120			
Sample ID: MB-RA226-6114	3	Method Blank				Run: TENNELEC-3_120720C			07/26/12 18:55	
Radium 228		-0.08	pCi/L							U
Radium 228 precision (±)		0.5	pCi/L							
Radium 228 MDC		0.9	pCi/L							
Sample ID: C12070456-001GDUP	3	Sample Duplicate				Run: TENNELEC-3_120720C			07/26/12 18:55	
Radium 228		2.8	pCi/L					16	54.1	
Radium 228 precision (±)		0.67	pCi/L							
Radium 228 MDC		0.89	pCi/L							
Sample ID: C12070456-015GMS		Sample Matrix Spike				Run: TENNELEC-3_120720C			07/26/12 18:55	
Radium 228		9.9	pCi/L		93	70	130			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

ANALYTICAL SUMMARY REPORT

August 31, 2012

United Nuclear Corporation
21 Miles NE of Gallup
Gallup, NM 87305

Workorder No.: C12070464 Quote ID: C129 - Quarterly Long List

Project Name: Zone 1

Energy Laboratories, Inc. Casper WY received the following 5 samples for United Nuclear Corporation on 7/13/2012 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C12070464-001	614	07/11/12 9:01	07/13/12	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Total Alkalinity QA Calculations Arsenic Speciation Selenium-IV, Total CVAA Selenium Prep E300.0 Anions Nitrogen, Ammonia Nitrogen, Nitrate + Nitrite pH Metals Preparation by EPA 200.2 Gross Alpha minus Rn222 and Uranium Lead 210, Total Radium 226, Total Radium 228, Total Thorium, Isotopic Solids, Total Dissolved Solids, Total Dissolved - Calculated E624 Purgeable Organics
C12070464-002	515-A	07/11/12 10:00	07/13/12	Aqueous	Same As Above
C12070464-003	604	07/11/12 10:43	07/13/12	Aqueous	Same As Above
C12070464-004	Rinsate	07/11/12 11:23	07/13/12	Aqueous	Same As Above
C12070464-005	Field Blank	07/11/12 12:00	07/13/12	Aqueous	Same As Above

The results as reported relate only to the item(s) submitted for testing. The analyses presented in this report were performed at Energy Laboratories, Inc., 2393 Salt Creek Hwy., Casper, WY 82601, unless otherwise noted. Radiochemistry analyses were performed at Energy Laboratories, Inc., 2325 Kerzell Lane, Casper, WY 82601, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

If you have any questions regarding these test results, please call.

Report Approved By: Stephanie D Waldrop
Reporting Supervisor

Digitally signed by Stephanie Waldrop
Date: 2012.08.31 13:07:24 -06:00

CLIENT: United Nuclear Corporation
Project: Zone 1
Sample Delivery Group: C12070464

Report Date: 08/31/12

CASE NARRATIVE

BRANCH LABORATORY SUBCONTRACT ANALYSIS
Tests associated with analyst identified as ELI-H were subcontracted to Energy Laboratories, 3161 E.Lyndale Ave., Helena, MT, EPA Number MT00945.
Tests associated with analyst identified as ELI-CS were subcontracted to Energy Laboratories, 415 Graham Rd., College Station, TX, EPA Number TX01520.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/31/12

Project: Zone 1 **Work Order:** C12070464

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2320 B										Batch: R161953
Sample ID: MBLK	2	Method Blank				Run: MANTECH_120716B				07/16/12 15:10
Alkalinity, Total as CaCO3		4	mg/L	3						
Bicarbonate as HCO3		5	mg/L	1						
Sample ID: LCS-6677		Laboratory Control Sample				Run: MANTECH_120716B				07/16/12 15:25
Alkalinity, Total as CaCO3		202	mg/L	5.0	99	90	110			
Sample ID: C12070460-001AMS		Sample Matrix Spike				Run: MANTECH_120716B				07/16/12 15:56
Alkalinity, Total as CaCO3		361	mg/L	5.0	100	80	120			
Sample ID: C12070464-005ADUP	2	Sample Duplicate				Run: MANTECH_120716B				07/16/12 17:03
Alkalinity, Total as CaCO3		15.5	mg/L	5.0				4.3	10	
Bicarbonate as HCO3		18.9	mg/L	5.0				4.4	10	
Method: A2320 B										Batch: R162014
Sample ID: MBLK	2	Method Blank				Run: MANTECH_120717B				07/17/12 15:45
Alkalinity, Total as CaCO3		ND	mg/L	3						
Bicarbonate as HCO3		ND	mg/L	1						
Sample ID: LCS-6677		Laboratory Control Sample				Run: MANTECH_120717B				07/17/12 15:59
Alkalinity, Total as CaCO3		200	mg/L	5.0	100	90	110			
Sample ID: C12070298-002ADUP	2	Sample Duplicate				Run: MANTECH_120717B				07/17/12 16:14
Alkalinity, Total as CaCO3		48.0	mg/L	5.0				1.2	10	
Bicarbonate as HCO3		58.6	mg/L	5.0				1.2	10	
Sample ID: C12070511-001AMS		Sample Matrix Spike				Run: MANTECH_120717B				07/17/12 16:48
Alkalinity, Total as CaCO3		210	mg/L	5.0	101	80	120			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/31/12

Project: Zone 1 **Work Order:** C12070464

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C									Batch: TDS120716A	
Sample ID: MB-1_120716A		Method Blank				Run: BAL-1_120716B			07/16/12 12:03	
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	4						
Sample ID: LCS-2_120716A		Laboratory Control Sample				Run: BAL-1_120716B			07/16/12 12:03	
Solids, Total Dissolved TDS @ 180 C		1070	mg/L	10	97	90	110			
Sample ID: C12070456-012A MS		Sample Matrix Spike				Run: BAL-1_120716B			07/16/12 12:10	
Solids, Total Dissolved TDS @ 180 C		1470	mg/L	10	99	90	110			
Sample ID: C12070464-001A DUP		Sample Duplicate				Run: BAL-1_120716B			07/16/12 12:12	
Solids, Total Dissolved TDS @ 180 C		7310	mg/L	10				4.2	5	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/31/12

Project: Zone 1 **Work Order:** C12070464

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A3114 B								Analytical Run: CVAA-C202_120726B		
Sample ID: ICV		Initial Calibration Verification Standard							07/26/12 15:54	
Selenium-IV		0.0264	mg/L	0.0010	106	90	110			
Method: A3114 B									Batch: 34468	
Sample ID: MB-34468		Method Blank				Run: CVAA-C202_120726B			07/26/12 16:38	
Selenium-IV		0.0009	mg/L	0.0005						
Sample ID: C12070463-001CMS		Sample Matrix Spike				Run: CVAA-C202_120726B			07/26/12 16:48	
Selenium-IV		0.0222	mg/L	0.0010	89	85	115			
Sample ID: C12070463-001CMSD		Sample Matrix Spike Duplicate				Run: CVAA-C202_120726B			07/26/12 16:50	
Selenium-IV		0.0213	mg/L	0.0010	85	85	115	4.2	10	
Sample ID: C12070710-001CMS		Sample Matrix Spike				Run: CVAA-C202_120726B			07/26/12 17:13	
Selenium-IV		0.0191	mg/L	0.0010	76	85	115			S
Sample ID: C12070710-001CMSD		Sample Matrix Spike Duplicate				Run: CVAA-C202_120726B			07/26/12 17:15	
Selenium-IV		0.0203	mg/L	0.0010	81	85	115	6.3	10	S

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone 1

Report Date: 08/31/12
Work Order: C12070464

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-H B								Analytical Run: PHSC_101-C_120716A		
Sample ID: pH 6.86		Initial Calibration Verification Standard							07/16/12 09:08	
pH		6.85	s.u.	0.010	100	98	102			
Method: A4500-H B									Batch: R161919	
Sample ID: C12070454-004ADUP		Sample Duplicate				Run: PHSC_101-C_120716A			07/16/12 09:43	
pH		6.62	s.u.	0.010				0.2	3	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone 1

Report Date: 08/31/12
Work Order: C12070464

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-NH3 G										Batch: R162158
Sample ID: MBLK-1		Method Blank				Run: TECHNICON_120720A				07/20/12 11:38
Nitrogen, Ammonia as N		ND	mg/L	0.02						
Sample ID: LCS-2		Laboratory Control Sample				Run: TECHNICON_120720A				07/20/12 11:41
Nitrogen, Ammonia as N		2.18	mg/L	0.050	109	90	110			
Sample ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_120720A				07/20/12 11:43
Nitrogen, Ammonia as N		1.99	mg/L	0.050	102	80	120			
Sample ID: C12070460-002EMS		Sample Matrix Spike				Run: TECHNICON_120720A				07/20/12 12:15
Nitrogen, Ammonia as N		2.05	mg/L	0.050	105	90	110			
Sample ID: C12070460-002EMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_120720A				07/20/12 12:17
Nitrogen, Ammonia as N		2.07	mg/L	0.050	106	90	110	1.0	10	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/31/12

Project: Zone 1 **Work Order:** C12070464

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E1632AM									Analytical Run: SUB-H81966	
Sample ID: AS-ICV 25ppb-8/1/201		Initial Calibration Verification Standard							08/01/12 13:57	
Arsenic-III		24.4	ug/L	5.0	98	87.6	114			
Sample ID: AS-50.0-8/1/2012		Continuing Calibration Verification Standard							08/01/12 14:12	
Arsenic-III		50.4	ug/L	5.0	101	85	115			
Method: E1632AM									Batch: H_R81966	
Sample ID: ICB		Method Blank				Run: SUB-H81966			08/01/12 14:20	
Arsenic-III		ND	ug/L	2						
Sample ID: AS-LFB 50ppb-8/1/20		Laboratory Fortified Blank				Run: SUB-H81966			08/01/12 14:28	
Arsenic-III		45.1	ug/L	5.0	90	55	146			
Sample ID: H12070284-002E MS		Sample Matrix Spike				Run: SUB-H81966			08/01/12 15:08	
Arsenic-III		45.3	ug/L	5.0	91	55	146			
Sample ID: H12070284-002E MSD		Sample Matrix Spike Duplicate				Run: SUB-H81966			08/01/12 15:16	
Arsenic-III		44.4	ug/L	5.0	89	55	146	2.1	20	
Method: E1632AM									Analytical Run: SUB-H81970	
Sample ID: AS-ICV 25ppb-8/2/201		Initial Calibration Verification Standard							08/02/12 14:18	
Arsenic-III		24.2	ug/L	5.0	97	87.6	114			
Sample ID: AS-50.0-8/2/2012		Continuing Calibration Verification Standard							08/02/12 14:34	
Arsenic-III		49.5	ug/L	5.0	99	85	115			
Method: E1632AM									Batch: H_R81970	
Sample ID: ICB		Method Blank				Run: SUB-H81970			08/02/12 14:42	
Arsenic-III		ND	ug/L	2						
Sample ID: AS-LFB 50ppb-8/2/20		Laboratory Fortified Blank				Run: SUB-H81970			08/02/12 14:50	
Arsenic-III		45.4	ug/L	5.0	91	55	146			
Sample ID: C12070713-004E		Sample Matrix Spike				Run: SUB-H81970			08/02/12 16:02	
Arsenic-III		43.8	ug/L	5.0	83	55	146			
Sample ID: C12070713-004E		Sample Matrix Spike Duplicate				Run: SUB-H81970			08/02/12 16:09	
Arsenic-III		45.4	ug/L	5.0	86	55	146	3.6	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/31/12

Project: Zone 1 **Work Order:** C12070464

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP4-C_120718A	
Sample ID: ICV	8	Initial Calibration Verification Standard							07/18/12 14:12	
Aluminum		4.87	mg/L	0.10	97	95	105			
Cadmium		0.473	mg/L	0.010	95	95	105			
Calcium		49.9	mg/L	0.50	100	95	105			
Magnesium		50.1	mg/L	0.50	100	95	105			
Manganese		4.90	mg/L	0.010	98	95	105			
Molybdenum		0.981	mg/L	0.10	98	95	105			
Potassium		49.4	mg/L	0.50	99	95	105			
Sodium		50.4	mg/L	0.50	101	95	105			
Sample ID: ICSA	8	Interference Check Sample A							07/18/12 14:26	
Aluminum		485	mg/L	0.10	97	80	120			
Cadmium		0.00741	mg/L	0.010						
Calcium		455	mg/L	0.50	91	80	120			
Magnesium		517	mg/L	0.50	103	80	120			
Manganese		0.0174	mg/L	0.010						
Molybdenum		0.00638	mg/L	0.10						
Potassium		-0.0109	mg/L	0.50						
Sodium		0.422	mg/L	0.50						
Sample ID: ICSAB	8	Interference Check Sample AB							07/18/12 14:30	
Aluminum		490	mg/L	0.10	98	80	120			
Cadmium		0.855	mg/L	0.010	86	80	120			
Calcium		451	mg/L	0.50	90	80	120			
Magnesium		514	mg/L	0.50	103	80	120			
Manganese		0.463	mg/L	0.010	93	80	120			
Molybdenum		0.00241	mg/L	0.10						
Potassium		-0.0228	mg/L	0.50						
Sodium		0.352	mg/L	0.50						
Method: E200.7									Batch: 34328	
Sample ID: MB-34328	4	Method Blank				Run: ICP4-C_120718A			07/18/12 16:35	
Aluminum		ND	mg/L	0.009						
Cadmium		ND	mg/L	0.0004						
Manganese		ND	mg/L	0.0010						
Molybdenum		ND	mg/L	0.003						
Sample ID: LCS3-34328	4	Laboratory Control Sample				Run: ICP4-C_120718A			07/18/12 16:38	
Aluminum		2.5	mg/L	0.10	101	85	115			
Cadmium		0.25	mg/L	0.0010	100	85	115			
Manganese		2.5	mg/L	0.010	100	85	115			
Molybdenum		0.50	mg/L	0.10	100	85	115			
Sample ID: C12070460-003DMS3	4	Sample Matrix Spike				Run: ICP4-C_120718A			07/18/12 16:56	
Aluminum		2.6	mg/L	0.10	104	70	130			
Cadmium		0.24	mg/L	0.0010	95	70	130			
Manganese		2.8	mg/L	0.010	113	70	130			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/31/12

Project: Zone 1 **Work Order:** C12070464

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7										Batch: 34328
Sample ID: C12070460-003DMS3	4	Sample Matrix Spike				Run: ICP4-C_120718A				07/18/12 16:56
Molybdenum		0.50	mg/L	0.10	100	70	130			
Sample ID: C12070460-003DMSD	4	Sample Matrix Spike Duplicate				Run: ICP4-C_120718A				07/18/12 17:00
Aluminum		2.6	mg/L	0.10	106	70	130	1.5	20	
Cadmium		0.24	mg/L	0.0010	95	70	130	0.0	20	
Manganese		2.8	mg/L	0.010	113	70	130	0.2	20	
Molybdenum		0.50	mg/L	0.10	99	70	130	0.7	20	
Method: E200.7										Batch: R162060
Sample ID: MB-120718A	4	Method Blank				Run: ICP4-C_120718A				07/18/12 14:34
Calcium		ND	mg/L	0.02						
Magnesium		0.03	mg/L	0.01						
Potassium		ND	mg/L	0.04						
Sodium		ND	mg/L	0.2						
Sample ID: LFB-120718A	4	Laboratory Fortified Blank				Run: ICP4-C_120718A				07/18/12 14:38
Calcium		48.3	mg/L	0.50	97	85	115			
Magnesium		47.9	mg/L	0.50	96	85	115			
Potassium		48.4	mg/L	0.50	97	85	115			
Sodium		48.2	mg/L	0.50	96	85	115			
Sample ID: C12070464-003BMS2	4	Sample Matrix Spike				Run: ICP4-C_120718A				07/18/12 18:44
Calcium		664	mg/L	1.0	86	70	130			
Magnesium		1040	mg/L	1.0	90	70	130			
Potassium		249	mg/L	1.0	93	70	130			
Sodium		524	mg/L	1.0	91	70	130			
Sample ID: C12070464-003BMSD	4	Sample Matrix Spike Duplicate				Run: ICP4-C_120718A				07/18/12 18:47
Calcium		661	mg/L	1.0	85	70	130	0.5	20	
Magnesium		1040	mg/L	1.0	88	70	130	0.4	20	
Potassium		251	mg/L	1.0	94	70	130	0.7	20	
Sodium		526	mg/L	1.0	92	70	130	0.4	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/31/12

Project: Zone 1 **Work Order:** C12070464

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP4-C_120725A	
Sample ID: ICV	8	Initial Calibration Verification Standard							07/25/12 15:08	
Aluminum		5.04	mg/L	0.10	101	95	105			
Beryllium		0.501	mg/L	0.010	100	95	105			
Cadmium		0.474	mg/L	0.010	95	95	105			
Cobalt		0.959	mg/L	0.010	96	95	105			
Manganese		4.91	mg/L	0.010	98	95	105			
Molybdenum		0.983	mg/L	0.10	98	95	105			
Nickel		0.958	mg/L	0.050	96	95	105			
Vanadium		1.02	mg/L	0.10	102	95	105			
Sample ID: ICSA	8	Interference Check Sample A							07/25/12 15:22	
Aluminum		497	mg/L	0.10	99	80	120			
Beryllium		0.000220	mg/L	0.010						
Cadmium		0.00660	mg/L	0.010						
Cobalt		-0.00255	mg/L	0.010						
Manganese		0.0176	mg/L	0.010						
Molybdenum		0.00610	mg/L	0.10						
Nickel		0.00264	mg/L	0.050						
Vanadium		0.00693	mg/L	0.10						
Sample ID: ICSAB	8	Interference Check Sample AB							07/25/12 15:26	
Aluminum		501	mg/L	0.10	100	80	120			
Beryllium		0.472	mg/L	0.010	94	80	120			
Cadmium		0.866	mg/L	0.010	87	80	120			
Cobalt		0.434	mg/L	0.010	87	80	120			
Manganese		0.471	mg/L	0.010	94	80	120			
Molybdenum		0.00263	mg/L	0.10						
Nickel		0.865	mg/L	0.050	86	80	120			
Vanadium		0.530	mg/L	0.10	106	80	120			
Method: E200.7									Batch: R162376	
Sample ID: MB-120725A	8	Method Blank				Run: ICP4-C_120725A			07/25/12 15:30	
Aluminum		0.010	mg/L	0.009						
Beryllium		ND	mg/L	6E-05						
Cadmium		ND	mg/L	0.0004						
Cobalt		ND	mg/L	0.002						
Manganese		ND	mg/L	0.0010						
Molybdenum		ND	mg/L	0.003						
Nickel		ND	mg/L	0.002						
Vanadium		0.005	mg/L	0.002						
Sample ID: LFB-120725A	8	Laboratory Fortified Blank				Run: ICP4-C_120725A			07/25/12 15:33	
Aluminum		0.971	mg/L	0.10	96	85	115			
Beryllium		0.949	mg/L	0.010	95	85	115			
Cadmium		0.937	mg/L	0.010	94	85	115			
Cobalt		0.925	mg/L	0.010	93	85	115			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/31/12

Project: Zone 1 **Work Order:** C12070464

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7										Batch: R162376
Sample ID: LFB-120725A	8	Laboratory Fortified Blank				Run: ICP4-C_120725A				07/25/12 15:33
Manganese		0.942	mg/L	0.010	94	85	115			
Molybdenum		0.955	mg/L	0.10	95	85	115			
Nickel		0.922	mg/L	0.050	92	85	115			
Vanadium		1.14	mg/L	0.10	113	85	115			
Sample ID: C12070464-005CMS2	8	Sample Matrix Spike				Run: ICP4-C_120725A				07/25/12 16:29
Aluminum		0.926	mg/L	0.030	91	70	130			
Beryllium		0.903	mg/L	0.0010	89	70	130			
Cadmium		0.937	mg/L	0.0010	92	70	130			
Cobalt		0.906	mg/L	0.0050	89	70	130			
Manganese		0.912	mg/L	0.0010	89	70	130			
Molybdenum		0.914	mg/L	0.0029	90	70	130			
Nickel		0.901	mg/L	0.0050	88	70	130			
Vanadium		1.11	mg/L	0.012	109	70	130			
Sample ID: C12070464-005CMSD	8	Sample Matrix Spike Duplicate				Run: ICP4-C_120725A				07/25/12 16:32
Aluminum		0.892	mg/L	0.030	87	70	130	3.8	20	
Beryllium		0.892	mg/L	0.0010	87	70	130	1.3	20	
Cadmium		0.931	mg/L	0.0010	91	70	130	0.6	20	
Cobalt		0.896	mg/L	0.0050	88	70	130	1.1	20	
Manganese		0.900	mg/L	0.0010	88	70	130	1.3	20	
Molybdenum		0.908	mg/L	0.0029	89	70	130	0.6	20	
Nickel		0.894	mg/L	0.0050	88	70	130	0.8	20	
Vanadium		1.10	mg/L	0.012	108	70	130	1.2	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/31/12

Project: Zone 1 **Work Order:** C12070464

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS2-C_120724A	
Sample ID: ICV	6	Initial Calibration Verification Standard							07/24/12 10:51	
Beryllium		0.0511	mg/L	0.0010	102	90	110			
Cobalt		0.0514	mg/L	0.0010	103	90	110			
Lead		0.0505	mg/L	0.0010	101	90	110			
Nickel		0.0491	mg/L	0.0010	98	90	110			
Uranium		0.0518	mg/L	0.00030	104	90	110			
Vanadium		0.0512	mg/L	0.0010	102	90	110			
Method: E200.8									Batch: 34328	
Sample ID: MB-34328	6	Method Blank				Run: ICPMS2-C_120724A			07/24/12 19:32	
Beryllium		ND	mg/L	5E-05						
Cobalt		ND	mg/L	1E-05						
Lead		9E-05	mg/L	3E-05						
Nickel		0.0004	mg/L	3E-05						
Uranium		ND	mg/L	1E-05						
Vanadium		ND	mg/L	3E-05						
Sample ID: LCS3-34328	6	Laboratory Control Sample				Run: ICPMS2-C_120724A			07/24/12 19:35	
Beryllium		0.25	mg/L	0.0010	101	85	115			
Cobalt		0.48	mg/L	0.010	97	85	115			
Lead		0.51	mg/L	0.0010	102	85	115			
Nickel		0.49	mg/L	0.050	98	85	115			
Uranium		0.52	mg/L	0.00030	104	85	115			
Vanadium		0.49	mg/L	0.10	98	85	115			
Sample ID: C12070460-003DMS3	6	Sample Matrix Spike				Run: ICPMS2-C_120724A			07/24/12 20:23	
Beryllium		0.25	mg/L	0.0010	98	70	130			
Cobalt		0.48	mg/L	0.010	95	70	130			
Lead		0.51	mg/L	0.0010	102	70	130			
Nickel		0.49	mg/L	0.050	98	70	130			
Uranium		0.54	mg/L	0.00030	107	70	130			
Vanadium		0.50	mg/L	0.10	99	70	130			
Sample ID: C12070460-003DMSD	6	Sample Matrix Spike Duplicate				Run: ICPMS2-C_120724A			07/24/12 20:25	
Beryllium		0.24	mg/L	0.0010	95	70	130	3.6	20	
Cobalt		0.48	mg/L	0.010	95	70	130	0.1	20	
Lead		0.50	mg/L	0.0010	101	70	130	1.4	20	
Nickel		0.47	mg/L	0.050	93	70	130	4.9	20	
Uranium		0.54	mg/L	0.00030	107	70	130	0.1	20	
Vanadium		0.50	mg/L	0.10	99	70	130	1.0	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/31/12

Project: Zone 1 **Work Order:** C12070464

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS4-C_120726A	
Sample ID: ICV	5	Initial Calibration Verification Standard							07/26/12 11:34	
Aluminum		0.0518	mg/L	0.0010	104	90	110			
Lead		0.0485	mg/L	0.0010	97	90	110			
Manganese		0.0505	mg/L	0.0010	101	90	110			
Nickel		0.0515	mg/L	0.0010	103	90	110			
Uranium		0.0506	mg/L	0.00030	101	90	110			
Method: E200.8									Batch: R162424	
Sample ID: LRB	5	Method Blank				Run: ICPMS4-C_120726A			07/26/12 12:11	
Aluminum		0.00133	mg/L	0.10						
Lead		ND	mg/L	0.0010						
Manganese		ND	mg/L	0.010						
Nickel		ND	mg/L	0.050						
Uranium		1.02E-05	mg/L	0.00030						
Sample ID: LFB	5	Laboratory Fortified Blank				Run: ICPMS4-C_120726A			07/26/12 12:15	
Aluminum		0.0536	mg/L	0.0010	105	85	115			
Lead		0.0499	mg/L	0.0010	100	85	115			
Manganese		0.0528	mg/L	0.0010	106	85	115			
Nickel		0.0524	mg/L	0.0010	105	85	115			
Uranium		0.0517	mg/L	0.00030	103	85	115			
Sample ID: C12070320-001BMS4	5	Sample Matrix Spike				Run: ICPMS4-C_120726A			07/26/12 20:37	
Aluminum		0.0902	mg/L	0.030	93	70	130			
Lead		0.0529	mg/L	0.0010	105	70	130			
Manganese		0.0772	mg/L	0.0010	108	70	130			
Nickel		0.0524	mg/L	0.0050	88	70	130			
Uranium		0.0572	mg/L	0.00030	112	70	130			
Sample ID: C12070320-001BMSD	5	Sample Matrix Spike Duplicate				Run: ICPMS4-C_120726A			07/26/12 20:41	
Aluminum		0.0913	mg/L	0.030	95	70	130	1.2	20	
Lead		0.0530	mg/L	0.0010	105	70	130	0.1	20	
Manganese		0.0778	mg/L	0.0010	109	70	130	0.8	20	
Nickel		0.0539	mg/L	0.0050	90	70	130	2.8	20	
Uranium		0.0566	mg/L	0.00030	111	70	130	0.9	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/31/12

Project: Zone 1 **Work Order:** C12070464

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0									Analytical Run: IC1-C_120720A	
Sample ID: ICV-072012-10		Initial Calibration Verification Standard							07/20/12 18:33	
Sulfate		40.5	mg/L	1.0	101	90	110			
Method: E300.0									Batch: R162227	
Sample ID: ICB-072012-11		Method Blank				Run: IC1-C_120720A			07/20/12 18:50	
Sulfate		ND	mg/L	0.1						
Sample ID: LFB-072012-12		Laboratory Fortified Blank				Run: IC1-C_120720A			07/20/12 19:08	
Sulfate		41.1	mg/L	1.0	103	90	110			
Sample ID: C12070464-003AMS		Sample Matrix Spike				Run: IC1-C_120720A			07/21/12 03:15	
Sulfate		6710	mg/L	42	98	90	110			
Sample ID: C12070464-003AMSD		Sample Matrix Spike Duplicate				Run: IC1-C_120720A			07/21/12 03:33	
Sulfate		6700	mg/L	42	97	90	110	0.2	10	
Method: E300.0									Analytical Run: IC2-C_120717A	
Sample ID: ICV-071712-10	2	Initial Calibration Verification Standard							07/17/12 18:46	
Chloride		10.1	mg/L	1.0	101	90	110			
Sulfate		40.3	mg/L	1.0	101	90	110			
Method: E300.0									Batch: R162047	
Sample ID: ICB-071712-11	2	Method Blank				Run: IC2-C_120717A			07/17/12 19:02	
Chloride		ND	mg/L	0.03						
Sulfate		0.2	mg/L	0.10						
Sample ID: LFB-071712-12	2	Laboratory Fortified Blank				Run: IC2-C_120717A			07/17/12 19:17	
Chloride		9.95	mg/L	1.0	99	90	110			
Sulfate		40.4	mg/L	1.0	100	90	110			
Sample ID: C12070464-004AMS	2	Sample Matrix Spike				Run: IC2-C_120717A			07/18/12 06:36	
Chloride		14.3	mg/L	1.0	102	90	110			
Sulfate		45.8	mg/L	1.0	106	90	110			
Sample ID: C12070464-004AMSD	2	Sample Matrix Spike Duplicate				Run: IC2-C_120717A			07/18/12 06:51	
Chloride		14.4	mg/L	1.0	103	90	110	0.6	10	
Sulfate		45.9	mg/L	1.0	107	90	110	0.4	10	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/31/12

Project: Zone 1 **Work Order:** C12070464

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E353.2										Batch: R161946
Sample ID: MBLK-1		Method Blank				Run: TECHNICON_120716A				07/16/12 11:07
Nitrogen, Nitrate+Nitrite as N		ND	mg/L	0.06						
Sample ID: LCS-2		Laboratory Control Sample				Run: TECHNICON_120716A				07/16/12 11:10
Nitrogen, Nitrate+Nitrite as N		2.56	mg/L	0.10	102	90	110			
Sample ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_120716A				07/16/12 11:12
Nitrogen, Nitrate+Nitrite as N		1.85	mg/L	0.10	94	90	110			
Sample ID: C12070464-003DMS		Sample Matrix Spike				Run: TECHNICON_120716A				07/16/12 15:20
Nitrogen, Nitrate+Nitrite as N		169	mg/L	5.0	102	90	110			
Sample ID: C12070464-003DMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_120716A				07/16/12 15:23
Nitrogen, Nitrate+Nitrite as N		167	mg/L	5.0	100	90	110	1.2	10	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/31/12

Project: Zone 1 **Work Order:** C12070464

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624									Analytical Run: R162004	
Sample ID: 16-Jul-12_CCV_3	9	Continuing Calibration Verification Standard							07/16/12 12:14	
Bromodichloromethane		9.36	ug/L	1.0	94	70	130			
Bromoform		8.56	ug/L	1.0	86	70	130			
Chlorodibromomethane		9.36	ug/L	1.0	94	70	130			
Chloroform		9.76	ug/L	1.0	98	70	130			
Trihalomethanes, Total		37.0	ug/L	1.0	93	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	128	80	120			S
Surr: Dibromofluoromethane				1.0	116	80	120			
Surr: p-Bromofluorobenzene				1.0	114	80	120			
Surr: Toluene-d8				1.0	110	80	120			
Sample ID: 16-Jul-12_CCV_19	9	Continuing Calibration Verification Standard							07/16/12 21:48	
Bromodichloromethane		8.40	ug/L	1.0	84	70	130			
Bromoform		8.68	ug/L	1.0	87	70	130			
Chlorodibromomethane		8.00	ug/L	1.0	80	70	130			
Chloroform		10.6	ug/L	1.0	106	70	130			
Trihalomethanes, Total		35.7	ug/L	1.0	89	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	153	80	120			S
Surr: Dibromofluoromethane				1.0	122	80	120			S
Surr: p-Bromofluorobenzene				1.0	120	80	120			
Surr: Toluene-d8				1.0	104	80	120			
Method: E624									Batch: R162004	
Sample ID: 16-Jul-12_LCS_4	9	Laboratory Control Sample				Run: 5975VOC1_120716A			07/16/12 12:49	
Bromodichloromethane		7.40	ug/L	1.0	74	72.3	123			
Bromoform		9.20	ug/L	1.0	92	70.3	128			
Chlorodibromomethane		7.48	ug/L	1.0	75	69.1	123			
Chloroform		9.36	ug/L	1.0	94	72.9	130			
Trihalomethanes, Total		33.4	ug/L	1.0	84	75.7	121			
Surr: 1,2-Dichlorobenzene-d4				1.0	155	82	118			S
Surr: Dibromofluoromethane				1.0	118	74.8	123			
Surr: p-Bromofluorobenzene				1.0	133	82.4	121			S
Surr: Toluene-d8				1.0	105	76.4	125			
Sample ID: 16-Jul-12_MBLK_6	9	Method Blank				Run: 5975VOC1_120716A			07/16/12 13:58	
Bromodichloromethane		ND	ug/L	1.0						
Bromoform		ND	ug/L	1.0						
Chlorodibromomethane		ND	ug/L	1.0						
Chloroform		ND	ug/L	1.0						
Trihalomethanes, Total		ND	ug/L	1.0						
Surr: 1,2-Dichlorobenzene-d4				1.0	90	80	120			
Surr: Dibromofluoromethane				1.0	114	80	120			
Surr: p-Bromofluorobenzene				1.0	180	80	120			S
Surr: Toluene-d8				1.0	112	80	120			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/31/12

Project: Zone 1 **Work Order:** C12070464

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624										Batch: R162004
Sample ID: C12070463-001HMS	9	Sample Matrix Spike				Run: 5975VOC1_120716A				07/16/12 20:03
Bromodichloromethane		74.4	ug/L	5.0	74	72.3	123			
Bromoform		88.0	ug/L	5.0	88	70.3	128			
Chlorodibromomethane		67.6	ug/L	5.0	68	69.1	123			S
Chloroform		185	ug/L	5.0	106	72.9	130			
Trihalomethanes, Total		415	ug/L	5.0	84	75.7	121			
Surr: 1,2-Dichlorobenzene-d4				1.0	154	82	118			S
Surr: Dibromofluoromethane				1.0	123	74.8	123			
Surr: p-Bromofluorobenzene				1.0	126	82.4	121			S
Surr: Toluene-d8				1.0	106	76.4	125			
Sample ID: C12070463-001HMSD	9	Sample Matrix Spike Duplicate				Run: 5975VOC1_120716A				07/16/12 20:38
Bromodichloromethane		81.2	ug/L	5.0	81	72.3	123	8.7	20	
Bromoform		80.0	ug/L	5.0	80	70.3	128	9.5	20	
Chlorodibromomethane		69.2	ug/L	5.0	69	69.1	123	2.3	20	
Chloroform		182	ug/L	5.0	103	72.9	130	1.3	20	
Trihalomethanes, Total		413	ug/L	5.0	83	75.7	121	0.5	20	
Surr: 1,2-Dichlorobenzene-d4				1.0	159	82	118			S
Surr: Dibromofluoromethane				1.0	120	74.8	123			
Surr: p-Bromofluorobenzene				1.0	120	82.4	121			
Surr: Toluene-d8				1.0	113	76.4	125			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/31/12

Project: Zone 1 **Work Order:** C12070464

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624									Analytical Run: R162022	
Sample ID: 071712_CCV_9	9	Continuing Calibration Verification Standard							07/17/12 13:27	
Bromodichloromethane		11.2	ug/L	1.0	112	70	130			
Bromoform		10.6	ug/L	1.0	106	70	130			
Chlorodibromomethane		11.6	ug/L	1.0	116	70	130			
Chloroform		10.5	ug/L	1.0	105	70	130			
Trihalomethanes, Total		43.9	ug/L	1.0	110	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	94	80	120			
Surr: Dibromofluoromethane				1.0	88	80	120			
Surr: p-Bromofluorobenzene				1.0	82	80	120			
Surr: Toluene-d8				1.0	96	80	120			
Method: E624									Batch: R162022	
Sample ID: 071712_LCS_10	9	Laboratory Control Sample				Run: SATURNCA_120717A			07/17/12 14:03	
Bromodichloromethane		8.36	ug/L	1.0	84	72.3	123			
Bromoform		8.88	ug/L	1.0	89	70.3	128			
Chlorodibromomethane		9.32	ug/L	1.0	93	69.1	123			
Chloroform		8.96	ug/L	1.0	90	72.9	130			
Trihalomethanes, Total		35.5	ug/L	1.0	89	75.7	121			
Surr: 1,2-Dichlorobenzene-d4				1.0	98	82	118			
Surr: Dibromofluoromethane				1.0	91	74.8	123			
Surr: p-Bromofluorobenzene				1.0	83	82.4	121			
Surr: Toluene-d8				1.0	96	76.4	125			
Sample ID: 071712_MBLK_12	9	Method Blank				Run: SATURNCA_120717A			07/17/12 15:16	
Bromodichloromethane		ND	ug/L	1.0						
Bromoform		ND	ug/L	1.0						
Chlorodibromomethane		ND	ug/L	1.0						
Chloroform		ND	ug/L	1.0						
Trihalomethanes, Total		ND	ug/L	1.0						
Surr: 1,2-Dichlorobenzene-d4				1.0	100	80	120			
Surr: Dibromofluoromethane				1.0	90	80	120			
Surr: p-Bromofluorobenzene				1.0	84	80	120			
Surr: Toluene-d8				1.0	99	80	120			
Sample ID: C12070464-001HMS	4	Sample Matrix Spike				Run: SATURNCA_120717A			07/17/12 22:25	
Bromodichloromethane		92.0	ug/L	5.0	92	72.3	123			
Bromoform		102	ug/L	5.0	102	70.3	128			
Chlorodibromomethane		93.2	ug/L	5.0	93	69.1	123			
Chloroform		233	ug/L	5.0	101	72.9	130			
Sample ID: C12070464-001HMSD	4	Sample Matrix Spike Duplicate				Run: SATURNCA_120717A			07/17/12 23:02	
Bromodichloromethane		87.6	ug/L	5.0	88	72.3	123	4.9	20	
Bromoform		99.6	ug/L	5.0	100	70.3	128	2.4	20	
Chlorodibromomethane		96.4	ug/L	5.0	96	69.1	123	3.4	20	
Chloroform		218	ug/L	5.0	86	72.9	130	6.4	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/31/12

Project: Zone 1 **Work Order:** C12070464

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624									Analytical Run: R162223	
Sample ID: 072012_CCV_19	9	Continuing Calibration Verification Standard							07/20/12 21:54	
Bromodichloromethane		10.0	ug/L	1.0	100	70	130			
Bromoform		11.2	ug/L	1.0	112	70	130			
Chlorodibromomethane		10.2	ug/L	1.0	102	70	130			
Chloroform		9.52	ug/L	1.0	95	70	130			
Trihalomethanes, Total		41.0	ug/L	1.0	102	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	106	80	120			
Surr: Dibromofluoromethane				1.0	85	80	120			
Surr: p-Bromofluorobenzene				1.0	87	80	120			
Surr: Toluene-d8				1.0	94	80	120			
Method: E624									Batch: R162223	
Sample ID: 072012_LCS_4	9	Laboratory Control Sample				Run: SATURNCA_120720C			07/20/12 12:10	
Bromodichloromethane		8.76	ug/L	1.0	88	72.3	123			
Bromoform		10.1	ug/L	1.0	101	70.3	128			
Chlorodibromomethane		9.68	ug/L	1.0	97	69.1	123			
Chloroform		8.36	ug/L	1.0	84	72.9	130			
Trihalomethanes, Total		36.9	ug/L	1.0	92	75.7	121			
Surr: 1,2-Dichlorobenzene-d4				1.0	104	82	118			
Surr: Dibromofluoromethane				1.0	88	74.8	123			
Surr: p-Bromofluorobenzene				1.0	86	82.4	121			
Surr: Toluene-d8				1.0	92	76.4	125			
Sample ID: 072012_MBLK_6	9	Method Blank				Run: SATURNCA_120720C			07/20/12 13:23	
Bromodichloromethane		ND	ug/L	1.0						
Bromoform		ND	ug/L	1.0						
Chlorodibromomethane		ND	ug/L	1.0						
Chloroform		ND	ug/L	1.0						
Trihalomethanes, Total		ND	ug/L	1.0						
Surr: 1,2-Dichlorobenzene-d4				1.0	101	80	120			
Surr: Dibromofluoromethane				1.0	92	80	120			
Surr: p-Bromofluorobenzene				1.0	82	80	120			
Surr: Toluene-d8				1.0	99	80	120			
Sample ID: C12070464-004HMS	9	Sample Matrix Spike				Run: SATURNCA_120720C			07/20/12 20:05	
Bromodichloromethane		189	ug/L	10	94	72.3	123			
Bromoform		196	ug/L	10	96	70.3	128			
Chlorodibromomethane		206	ug/L	10	103	69.1	123			
Chloroform		182	ug/L	10	91	72.9	130			
Trihalomethanes, Total		774	ug/L	10	96	75.7	121			
Surr: 1,2-Dichlorobenzene-d4				1.0	98	82	118			
Surr: Dibromofluoromethane				1.0	84	74.8	123			
Surr: p-Bromofluorobenzene				1.0	84	82.4	121			
Surr: Toluene-d8				1.0	97	76.4	125			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/31/12

Project: Zone 1 **Work Order:** C12070464

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624										Batch: R162223
Sample ID: C12070464-004HMSD	9	Sample Matrix Spike Duplicate				Run: SATURNCA_120720C			07/20/12 20:41	
Bromodichloromethane		179	ug/L	10	90	72.3	123	5.2	20	
Bromoform		210	ug/L	10	104	70.3	128	7.1	20	
Chlorodibromomethane		200	ug/L	10	100	69.1	123	3.1	20	
Chloroform		183	ug/L	10	92	72.9	130	0.4	20	
Trihalomethanes, Total		773	ug/L	10	96	75.7	121	0.1	20	
Surr: 1,2-Dichlorobenzene-d4				1.0	103	82	118			
Surr: Dibromofluoromethane				1.0	86	74.8	123			
Surr: p-Bromofluorobenzene				1.0	93	82.4	121			
Surr: Toluene-d8				1.0	94	76.4	125			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/31/12

Project: Zone 1 **Work Order:** C12070464

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E900.1										Batch: GA-0565
Sample ID: LCS-GA-0549		Laboratory Control Sample				Run: BERTHOLD 770-1_120718C				08/09/12 22:49
Gross Alpha minus Rn & U		23.3	pCi/L		112	70	130			
Sample ID: MB-GA-0549	3	Method Blank				Run: BERTHOLD 770-1_120718C				08/09/12 22:49
Gross Alpha minus Rn & U		-0.04	pCi/L							U
Gross Alpha minus Rn & U Precision (±)		0.1	pCi/L							
Gross Alpha minus Rn & U MDC		0.3	pCi/L							
Sample ID: C12070456-015GMS		Sample Matrix Spike				Run: BERTHOLD 770-1_120718C				08/10/12 00:29
Gross Alpha minus Rn & U		42.1	pCi/L		102	70	130			
Sample ID: C12070456-015GMSD		Sample Matrix Spike Duplicate				Run: BERTHOLD 770-1_120718C				08/10/12 00:29
Gross Alpha minus Rn & U		44.7	pCi/L		106	70	130	6.0	21.6	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/31/12

Project: Zone 1 **Work Order:** C12070464

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E903.0										Batch: RA226-6117
Sample ID: LCS-RA226-6117		Laboratory Control Sample				Run: BERTHOLD 770-2_120720A				07/31/12 11:17
Radium 226		6.0	pCi/L		98	80	120			
Sample ID: C12070464-001GMS		Sample Matrix Spike				Run: BERTHOLD 770-2_120720A				07/31/12 11:17
Radium 226		11	pCi/L		86	70	130			
Sample ID: C12070464-001GMSD		Sample Matrix Spike Duplicate				Run: BERTHOLD 770-2_120720A				07/31/12 11:17
Radium 226		9.8	pCi/L		76	70	130	14	26.2	
Sample ID: MB-RA226-6117	3	Method Blank				Run: BERTHOLD 770-2_120720A				07/31/12 14:20
Radium 226		-0.07	pCi/L							U
Radium 226 precision (±)		0.08	pCi/L							
Radium 226 MDC		0.2	pCi/L							

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/31/12

Project: Zone 1 **Work Order:** C12070464

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E908.0										Batch: RA-TH-ISO-1666
Sample ID: LCS-RA-TH-ISO-1666		Laboratory Control Sample				Run: ALPHANALYST_120801B				08/06/12 08:40
Thorium 230		4.5	pCi/L		88	80	120			
Sample ID: C12070464-003GMS		Sample Matrix Spike				Run: ALPHANALYST_120801B				08/06/12 08:40
Thorium 230		12.2	pCi/L		103	70	130			
Sample ID: C12070464-003GMSD		Sample Matrix Spike Duplicate				Run: ALPHANALYST_120801B				08/06/12 08:40
Thorium 230		10.9	pCi/L		92	70	130	12	40.8	
Sample ID: MB-RA-TH-ISO-1666	3	Method Blank				Run: ALPHANALYST_120801B				08/06/12 08:40
Thorium 230		0.02	pCi/L							U
Thorium 230 precision (±)		0.08	pCi/L							
Thorium 230 MDC		0.2	pCi/L							

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/31/12

Project: Zone 1 **Work Order:** C12070464

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E909.0									Batch: T_PB-210-0271	
Sample ID: MB-PB-210-0271	3	Method Blank				Run: SUB-T46637			08/05/12 05:22	
Lead 210		0.09	pCi/L							U
Lead 210 precision (±)		0.7	pCi/L							
Lead 210 MDC		1	pCi/L							
Sample ID: LCS-PB-210-0271		Laboratory Control Sample				Run: SUB-T46637			08/05/12 06:28	
Lead 210		130	pCi/L		102	70	130			
Sample ID: T12070077-013FMS		Sample Matrix Spike				Run: SUB-T46637			08/05/12 08:40	
Lead 210		350	pCi/L		103	70	130			
Sample ID: T12070077-013FMSD		Sample Matrix Spike Duplicate				Run: SUB-T46637			08/05/12 09:46	
Lead 210		350	pCi/L		103	70	130	0.4	14.3	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/31/12

Project: Zone 1 **Work Order:** C12070464

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: RA-05									Batch: RA228-4170	
Sample ID: LCS-228-RA226-6117		Laboratory Control Sample				Run: TENNELEC-3_120720A			07/24/12 20:54	
Radium 228		5.0	pCi/L		111	80	120			
Sample ID: MB-RA226-6117	3	Method Blank				Run: TENNELEC-3_120720A			07/24/12 20:54	
Radium 228		-0.4	pCi/L							U
Radium 228 precision (±)		0.8	pCi/L							
Radium 228 MDC		1	pCi/L							
Sample ID: C12070524-001DMS		Sample Matrix Spike				Run: TENNELEC-3_120720A			07/24/12 20:54	
Radium 228		13	pCi/L		130	70	130			
Sample ID: C12070524-001DMSD		Sample Matrix Spike Duplicate				Run: TENNELEC-3_120720A			07/24/12 20:54	
Radium 228		12	pCi/L		127	70	130	1.2	47	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

ANALYTICAL SUMMARY REPORT

August 31, 2012

United Nuclear Corporation
21 Miles NE of Gallup
Gallup, NM 87305

Workorder No.: C12070710 Quote ID: C129 - Quarterly Long List

Project Name: Zone-1

Energy Laboratories, Inc. Casper WY received the following 6 samples for United Nuclear Corporation on 7/20/2012 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C12070710-001	EPA-4	07/16/12 10:12	07/20/12	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Total Alkalinity QA Calculations Arsenic Speciation Selenium-IV, Total CVAA Selenium Prep E300.0 Anions Nitrogen, Ammonia Nitrogen, Nitrate + Nitrite pH Metals Preparation by EPA 200.2 Gross Alpha minus Rn222 and Uranium Lead 210, Total Radium 226, Total Radium 228, Total Thorium, Isotopic Solids, Total Dissolved Solids, Total Dissolved - Calculated E624 Purgeable Organics
C12070710-002	EPA-5	07/16/12 11:07	07/20/12	Aqueous	Same As Above
C12070710-003	EPA-7	07/16/12 11:50	07/20/12	Aqueous	Same As Above
C12070710-004	EPA-2	07/16/12 12:45	07/20/12	Aqueous	Same As Above
C12070710-005	EPA-2 Duplicate	07/16/12 13:15	07/20/12	Aqueous	Same As Above
C12070710-006	TWQ-142	07/17/12 12:05	07/20/12	Aqueous	Same As Above

The results as reported relate only to the item(s) submitted for testing. The analyses presented in this report were performed at Energy Laboratories, Inc., 2393 Salt Creek Hwy., Casper, WY 82601, unless otherwise noted. Radiochemistry analyses were performed at Energy Laboratories, Inc., 2325 Kerzell Lane, Casper, WY 82601, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

If you have any questions regarding these test results, please call.

Report Approved By: Stephanie D Waldrop
Reporting Supervisor

Digitally signed by Stephanie Waldrop
Date: 2012.08.31 14:20:25 -06:00

CLIENT: United Nuclear Corporation
Project: Zone-1
Sample Delivery Group: C12070710

Report Date: 08/31/12

CASE NARRATIVE

TH230 ANALYSIS
The sample-specific MDC for this sample could not be achieved due to significant matrix interferences, restricting the volume of sample to be used in the analysis.

BRANCH LABORATORY SUBCONTRACT ANALYSIS
Tests associated with analyst identified as ELI-H were subcontracted to Energy Laboratories, 3161 E.Lyndale Ave., Helena, MT, EPA Number MT00945.

Tests associated with analyst identified as ELI-CS were subcontracted to Energy Laboratories, 415 Graham Rd., College Station, TX, EPA Number TX01520.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/31/12

Project: Zone-1 **Work Order:** C12070710

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2320 B										Batch: R162186
Sample ID: MBLK	2	Method Blank				Run: MANTECH_120720B				07/20/12 14:54
Alkalinity, Total as CaCO3		ND	mg/L	5.0						
Bicarbonate as HCO3		2.52	mg/L	5.0						
Sample ID: LCS-6677		Laboratory Control Sample				Run: MANTECH_120720B				07/20/12 15:09
Alkalinity, Total as CaCO3		203	mg/L	5.0	101	90	110			
Sample ID: C12070681-001AMS		Sample Matrix Spike				Run: MANTECH_120720B				07/20/12 15:40
Alkalinity, Total as CaCO3		272	mg/L	5.0	85	80	120			
Sample ID: C12070710-003ADUP	2	Sample Duplicate				Run: MANTECH_120720B				07/20/12 17:19
Alkalinity, Total as CaCO3		519	mg/L	5.0				2.0	10	
Bicarbonate as HCO3		633	mg/L	5.0				2.0	10	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/31/12

Project: Zone-1 **Work Order:** C12070710

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C									Batch: TDS120720B	
Sample ID: MB-1_120720B		Method Blank				Run: BAL-1_120720D			07/20/12 16:41	
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	4						
Sample ID: LCS-2_120720B		Laboratory Control Sample				Run: BAL-1_120720D			07/20/12 16:42	
Solids, Total Dissolved TDS @ 180 C		1130	mg/L	10	102	90	110			
Sample ID: C12070710-001A DUP		Sample Duplicate				Run: BAL-1_120720D			07/20/12 16:42	
Solids, Total Dissolved TDS @ 180 C		4650	mg/L	10				0.2	5	
Sample ID: C12070710-002A MS		Sample Matrix Spike				Run: BAL-1_120720D			07/20/12 16:42	
Solids, Total Dissolved TDS @ 180 C		8940	mg/L	10	100	90	110			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/31/12

Project: Zone-1 **Work Order:** C12070710

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A3114 B									Analytical Run: CVAA-C202_120726B	
Sample ID: ICV		Initial Calibration Verification Standard							07/26/12 15:54	
Selenium-IV		0.0264	mg/L	0.0010	106	90	110			
Method: A3114 B									Batch: 34468	
Sample ID: MB-34468		Method Blank				Run: CVAA-C202_120726B			07/26/12 16:38	
Selenium-IV		0.0009	mg/L	0.0005						
Sample ID: LCS-34468		Laboratory Control Sample				Run: CVAA-C202_120726B			07/26/12 16:43	
Selenium-IV		0.0256	mg/L	0.0010	98	90	110			
Sample ID: C12070710-001CMS		Sample Matrix Spike				Run: CVAA-C202_120726B			07/26/12 17:13	
Selenium-IV		0.0191	mg/L	0.0010	76	85	115			S
Sample ID: C12070710-001CMSD		Sample Matrix Spike Duplicate				Run: CVAA-C202_120726B			07/26/12 17:15	
Selenium-IV		0.0203	mg/L	0.0010	81	85	115	6.3	10	S

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/31/12

Project: Zone-1 **Work Order:** C12070710

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-H B									Analytical Run: PHSC_101-C_120723A	
Sample ID: pH 6.86		Initial Calibration Verification Standard							07/23/12 08:58	
pH		6.85	s.u.	0.010	100	98	102			
Sample ID: pH 6.86		Initial Calibration Verification Standard							07/23/12 11:47	
pH		6.85	s.u.	0.010	100	98	102			
Sample ID: pH 6.86		Initial Calibration Verification Standard							07/23/12 15:21	
pH		6.84	s.u.	0.010	100	98	102			
Method: A4500-H B										Batch: R162194
Sample ID: C12070713-001ADUP		Sample Duplicate				Run: PHSC_101-C_120723A			07/23/12 09:46	
pH		3.17	s.u.	0.010				0.0	3	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/31/12

Project: Zone-1 **Work Order:** C12070710

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-NH3 G									Batch: R162472	
Sample ID: MBLK-1	Method Blank					Run: TECHNICON_120728A			07/28/12 14:38	
Nitrogen, Ammonia as N		ND	mg/L	0.02						
Sample ID: LCS-2	Laboratory Control Sample					Run: TECHNICON_120728A			07/28/12 14:40	
Nitrogen, Ammonia as N		2.02	mg/L	0.050	101	90	110			
Sample ID: LFB-3	Laboratory Fortified Blank					Run: TECHNICON_120728A			07/28/12 14:42	
Nitrogen, Ammonia as N		2.04	mg/L	0.050	104	80	120			
Sample ID: C12070710-001DMS	Sample Matrix Spike					Run: TECHNICON_120728A			07/28/12 14:50	
Nitrogen, Ammonia as N		2.89	mg/L	0.050	109	90	110			
Sample ID: C12070710-001DMSD	Sample Matrix Spike Duplicate					Run: TECHNICON_120728A			07/28/12 14:52	
Nitrogen, Ammonia as N		2.99	mg/L	0.050	114	90	110	3.4	10	S
Sample ID: C12070713-001DMS	Sample Matrix Spike					Run: TECHNICON_120728A			07/28/12 15:10	
Nitrogen, Ammonia as N		31.3	mg/L	0.50	106	90	110			
Sample ID: C12070713-001DMSD	Sample Matrix Spike Duplicate					Run: TECHNICON_120728A			07/28/12 15:12	
Nitrogen, Ammonia as N		31.5	mg/L	0.50	107	90	110	0.6	10	
Method: A4500-NH3 G									Batch: R162527	
Sample ID: MBLK-1	Method Blank					Run: TECHNICON_120730A			07/30/12 13:24	
Nitrogen, Ammonia as N		ND	mg/L	0.02						
Sample ID: LCS-2	Laboratory Control Sample					Run: TECHNICON_120730A			07/30/12 13:26	
Nitrogen, Ammonia as N		2.00	mg/L	0.050	100	90	110			
Sample ID: LFB-3	Laboratory Fortified Blank					Run: TECHNICON_120730A			07/30/12 13:28	
Nitrogen, Ammonia as N		2.01	mg/L	0.050	103	80	120			
Sample ID: C12070710-006DMS	Sample Matrix Spike					Run: TECHNICON_120730A			07/30/12 15:23	
Nitrogen, Ammonia as N		1.91	mg/L	0.050	97	90	110			
Sample ID: C12070710-006DMSD	Sample Matrix Spike Duplicate					Run: TECHNICON_120730A			07/30/12 15:25	
Nitrogen, Ammonia as N		1.96	mg/L	0.050	100	90	110	2.6	10	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/31/12

Project: Zone-1 **Work Order:** C12070710

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E1632AM									Analytical Run: SUB-H81966	
Sample ID: AS-ICV 25ppb-8/1/201		Initial Calibration Verification Standard							08/01/12 13:57	
Arsenic-III		24.4	ug/L	5.0	98	87.6	114			
Method: E1632AM									Batch: H_R81966	
Sample ID: ICB		Method Blank				Run: SUB-H81966			08/01/12 14:20	
Arsenic-III		ND	ug/L	2						
Sample ID: AS-LFB 50ppb-8/1/20		Laboratory Fortified Blank				Run: SUB-H81966			08/01/12 14:28	
Arsenic-III		45.1	ug/L	5.0	90	55	146			
Sample ID: C12070710-001E		Sample Matrix Spike				Run: SUB-H81966			08/01/12 19:20	
Arsenic-III		51.1	ug/L	5.0	102	55	146			
Sample ID: C12070710-001E		Sample Matrix Spike Duplicate				Run: SUB-H81966			08/01/12 19:28	
Arsenic-III		52.2	ug/L	5.0	104	55	146	2.0	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/31/12

Project: Zone-1 **Work Order:** C12070710

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-C_120816A	
Sample ID: ICV	4	Initial Calibration Verification Standard							08/16/12 11:10	
Calcium		51.1	mg/L	0.50	102	95	105			
Magnesium		50.7	mg/L	0.50	101	95	105			
Potassium		47.3	mg/L	0.50	95	95	105			
Sodium		51.2	mg/L	0.50	102	95	105			
Sample ID: ICSA	4	Interference Check Sample A							08/16/12 11:50	
Calcium		494	mg/L	0.50	99	80	120			
Magnesium		508	mg/L	0.50	102	80	120			
Potassium		0.000500	mg/L	0.50						
Sodium		0.105	mg/L	0.50						
Sample ID: ICSAB	4	Interference Check Sample AB							08/16/12 11:54	
Calcium		492	mg/L	0.50	98	80	120			
Magnesium		506	mg/L	0.50	101	80	120			
Potassium		0.00220	mg/L	0.50						
Sodium		-0.00730	mg/L	0.50						
Method: E200.7										Batch: R163363
Sample ID: MB-120816A	4	Method Blank				Run: ICP2-C_120816A			08/16/12 12:15	
Calcium		0.2	mg/L	0.06						
Magnesium		ND	mg/L	0.03						
Potassium		ND	mg/L	0.06						
Sodium		ND	mg/L	0.3						
Sample ID: LFB-120816A	4	Laboratory Fortified Blank				Run: ICP2-C_120816A			08/16/12 12:19	
Calcium		49.3	mg/L	0.50	98	85	115			
Magnesium		47.5	mg/L	0.50	95	85	115			
Potassium		43.4	mg/L	0.50	87	85	115			
Sodium		49.1	mg/L	0.50	98	85	115			
Sample ID: C12080321-001BMS2	4	Sample Matrix Spike				Run: ICP2-C_120816A			08/16/12 14:20	
Calcium		73.7	mg/L	1.0	93	70	130			
Magnesium		52.2	mg/L	1.0	95	70	130			
Potassium		55.4	mg/L	1.0	85	70	130			
Sodium		165	mg/L	1.0	96	70	130			
Sample ID: C12080321-001BMSD	4	Sample Matrix Spike Duplicate				Run: ICP2-C_120816A			08/16/12 14:24	
Calcium		76.8	mg/L	1.0	99	70	130	4.1	20	
Magnesium		52.3	mg/L	1.0	95	70	130	0.2	20	
Potassium		56.1	mg/L	1.0	86	70	130	1.3	20	
Sodium		164	mg/L	1.0	92	70	130	1.1	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/31/12

Project: Zone-1 **Work Order:** C12070710

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP4-C_120727A	
Sample ID: ICV	4	Initial Calibration Verification Standard							07/27/12 11:57	
Calcium		51.4	mg/L	0.50	103	95	105			
Magnesium		49.4	mg/L	0.50	99	95	105			
Potassium		49.9	mg/L	0.50	100	95	105			
Sodium		51.2	mg/L	0.50	102	95	105			
Sample ID: ICSA	4	Interference Check Sample A							07/27/12 12:11	
Calcium		465	mg/L	0.50	93	80	120			
Magnesium		503	mg/L	0.50	101	80	120			
Potassium		-0.0312	mg/L	0.50						
Sodium		0.335	mg/L	0.50						
Sample ID: ICSAB	4	Interference Check Sample AB							07/27/12 12:15	
Calcium		465	mg/L	0.50	93	80	120			
Magnesium		503	mg/L	0.50	101	80	120			
Potassium		-0.0376	mg/L	0.50						
Sodium		0.367	mg/L	0.50						
Method: E200.7										Batch: R162484
Sample ID: MB-120727A	4	Method Blank				Run: ICP4-C_120727A			07/27/12 12:38	
Calcium		ND	mg/L	0.02						
Magnesium		0.01	mg/L	0.01						
Potassium		ND	mg/L	0.04						
Sodium		ND	mg/L	0.2						
Sample ID: LFB-120727A	4	Laboratory Fortified Blank				Run: ICP4-C_120727A			07/27/12 12:41	
Calcium		51.8	mg/L	0.50	104	85	115			
Magnesium		48.2	mg/L	0.50	96	85	115			
Potassium		45.2	mg/L	0.50	90	85	115			
Sodium		48.6	mg/L	0.50	97	85	115			
Sample ID: C12070895-012BMS2	4	Sample Matrix Spike				Run: ICP4-C_120727A			07/27/12 16:24	
Calcium		214	mg/L	1.0	83	70	130			
Magnesium		57.0	mg/L	1.0	96	70	130			
Potassium		54.4	mg/L	1.0	102	70	130			
Sodium		83.1	mg/L	1.0	99	70	130			
Sample ID: C12070895-012BMSD	4	Sample Matrix Spike Duplicate				Run: ICP4-C_120727A			07/27/12 16:28	
Calcium		211	mg/L	1.0	77	70	130	1.5	20	
Magnesium		56.3	mg/L	1.0	95	70	130	1.2	20	
Potassium		51.4	mg/L	1.0	96	70	130	5.6	20	
Sodium		80.0	mg/L	1.0	93	70	130	3.8	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1

Report Date: 08/31/12
Work Order: C12070710

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP4-C_120809A	
Sample ID: ICV	2	Initial Calibration Verification Standard							08/09/12 15:40	
Calcium		51.0	mg/L	0.50	102	95	105			
Magnesium		50.9	mg/L	0.50	102	95	105			
Sample ID: ICSA	2	Interference Check Sample A							08/09/12 15:54	
Calcium		461	mg/L	0.50	92	80	120			
Magnesium		513	mg/L	0.50	103	80	120			
Sample ID: ICSAB	2	Interference Check Sample AB							08/09/12 15:58	
Calcium		461	mg/L	0.50	92	80	120			
Magnesium		512	mg/L	0.50	102	80	120			
Method: E200.7									Batch: R163074	
Sample ID: MB-120809A	2	Method Blank				Run: ICP4-C_120809A			08/09/12 16:02	
Calcium		ND	mg/L	0.02						
Magnesium		ND	mg/L	0.01						
Sample ID: LFB-120809A	2	Laboratory Fortified Blank				Run: ICP4-C_120809A			08/09/12 16:06	
Calcium		49.2	mg/L	0.50	98	85	115			
Magnesium		48.5	mg/L	0.50	97	85	115			
Sample ID: C12080299-001BMS2	2	Sample Matrix Spike				Run: ICP4-C_120809A			08/09/12 16:17	
Calcium		3000	mg/L	1.1	99	70	130			
Magnesium		2550	mg/L	1.0	98	70	130			
Sample ID: C12080299-001BMSD	2	Sample Matrix Spike Duplicate				Run: ICP4-C_120809A			08/09/12 16:20	
Calcium		2940	mg/L	1.1	97	70	130	1.9	20	
Magnesium		2510	mg/L	1.0	96	70	130	1.6	20	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/31/12

Project: Zone-1 **Work Order:** C12070710

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP4-C_120810A	
Sample ID: ICV	4	Initial Calibration Verification Standard							08/10/12 13:30	
Beryllium		0.487	mg/L	0.010	97	95	105			
Magnesium		49.5	mg/L	0.50	99	95	105			
Potassium		48.0	mg/L	0.50	96	95	105			
Sodium		49.3	mg/L	0.50	99	95	105			
Sample ID: ICSA	4	Interference Check Sample A							08/10/12 13:44	
Beryllium		0.000110	mg/L	0.010						
Magnesium		502	mg/L	0.50	100	80	120			
Potassium		-0.0346	mg/L	0.50						
Sodium		0.126	mg/L	0.50						
Sample ID: ICSAB	4	Interference Check Sample AB							08/10/12 13:48	
Beryllium		0.451	mg/L	0.010	90	80	120			
Magnesium		501	mg/L	0.50	100	80	120			
Potassium		-0.00799	mg/L	0.50						
Sodium		0.240	mg/L	0.50						
Method: E200.7									Batch: R163141	
Sample ID: MB-120810A	4	Method Blank				Run: ICP4-C_120810A			08/10/12 13:52	
Beryllium		ND	mg/L	6E-05						
Magnesium		ND	mg/L	0.01						
Potassium		ND	mg/L	0.04						
Sodium		ND	mg/L	0.2						
Sample ID: LFB-120810A	4	Laboratory Fortified Blank				Run: ICP4-C_120810A			08/10/12 13:56	
Beryllium		0.879	mg/L	0.010	88	85	115			
Magnesium		46.4	mg/L	0.50	93	85	115			
Potassium		44.3	mg/L	0.50	89	85	115			
Sodium		44.9	mg/L	0.50	90	85	115			
Sample ID: C12070710-005CMS2	4	Sample Matrix Spike				Run: ICP4-C_120810A			08/10/12 14:58	
Beryllium		0.876	mg/L	0.0010	86	70	130			
Magnesium		212	mg/L	1.0	89	70	130			
Potassium		57.0	mg/L	1.0	97	70	130			
Sodium		250	mg/L	1.0		70	130			A
Sample ID: C12070710-005CMSD	4	Sample Matrix Spike Duplicate				Run: ICP4-C_120810A			08/10/12 15:02	
Beryllium		0.913	mg/L	0.0010	90	70	130	4.2	20	
Magnesium		221	mg/L	1.0	108	70	130	4.5	20	
Potassium		58.9	mg/L	1.0	101	70	130	3.3	20	
Sodium		260	mg/L	1.0		70	130	4.0	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

MDC - Minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/31/12

Project: Zone-1 **Work Order:** C12070710

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS4-C_120724A	
Sample ID: ICV	10	Initial Calibration Verification Standard							07/24/12 13:32	
Aluminum		0.0521	mg/L	0.0010	104	90	110			
Beryllium		0.0506	mg/L	0.0010	101	90	110			
Cadmium		0.0520	mg/L	0.0010	104	90	110			
Cobalt		0.0522	mg/L	0.0010	104	90	110			
Lead		0.0503	mg/L	0.0010	101	90	110			
Manganese		0.0511	mg/L	0.0010	102	90	110			
Molybdenum		0.0501	mg/L	0.0010	100	90	110			
Nickel		0.0522	mg/L	0.0010	104	90	110			
Uranium		0.0506	mg/L	0.00030	101	90	110			
Vanadium		0.0505	mg/L	0.0010	101	90	110			
Method: E200.8									Batch: 34418	
Sample ID: MB-34418	10	Method Blank				Run: ICPMS4-C_120724A			07/24/12 16:24	
Aluminum		0.002	mg/L	0.001						
Beryllium		ND	mg/L	5E-05						
Cadmium		3E-05	mg/L	3E-05						
Cobalt		ND	mg/L	4E-05						
Lead		2E-05	mg/L	1E-05						
Manganese		0.001	mg/L	4E-05						
Molybdenum		8E-05	mg/L	4E-05						
Nickel		0.0002	mg/L	4E-05						
Uranium		ND	mg/L	8E-06						
Vanadium		0.008	mg/L	8E-05						
Sample ID: LCS3-34418	10	Laboratory Control Sample				Run: ICPMS4-C_120724A			07/24/12 16:29	
Aluminum		2.28	mg/L	0.030	91	85	115			
Beryllium		0.251	mg/L	0.0010	100	85	115			
Cadmium		0.278	mg/L	0.0010	111	85	115			
Cobalt		0.488	mg/L	0.0050	98	85	115			
Lead		0.511	mg/L	0.0010	102	85	115			
Manganese		2.38	mg/L	0.0010	95	85	115			
Molybdenum		0.539	mg/L	0.0010	108	85	115			
Nickel		0.510	mg/L	0.0050	102	85	115			
Uranium		0.513	mg/L	0.00030	103	85	115			
Vanadium		0.529	mg/L	0.010	104	85	115			
Sample ID: C12070685-001BMS3	10	Sample Matrix Spike				Run: ICPMS4-C_120724A			07/24/12 17:29	
Aluminum		8.34	mg/L	0.030	144	70	130			S
Beryllium		0.233	mg/L	0.0010	93	70	130			
Cadmium		0.267	mg/L	0.0010	106	70	130			
Cobalt		0.477	mg/L	0.0050	95	70	130			
Lead		0.524	mg/L	0.0010	103	70	130			
Manganese		2.41	mg/L	0.0010	93	70	130			
Molybdenum		0.554	mg/L	0.0010	109	70	130			
Nickel		0.517	mg/L	0.0050	101	70	130			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/31/12

Project: Zone-1 **Work Order:** C12070710

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8										Batch: 34418
Sample ID: C12070685-001BMS3	10	Sample Matrix Spike				Run: ICPMS4-C_120724A			07/24/12 17:29	
Uranium		0.553	mg/L	0.00030	110	70	130			
Vanadium		0.555	mg/L	0.010	108	70	130			
Sample ID: C12070685-001BMSD	10	Sample Matrix Spike Duplicate				Run: ICPMS4-C_120724A			07/24/12 17:33	
Aluminum		8.16	mg/L	0.030	136	70	130	2.2	20	S
Beryllium		0.233	mg/L	0.0010	93	70	130	0.1	20	
Cadmium		0.268	mg/L	0.0010	107	70	130	0.4	20	
Cobalt		0.479	mg/L	0.0050	95	70	130	0.4	20	
Lead		0.523	mg/L	0.0010	103	70	130	0.2	20	
Manganese		2.41	mg/L	0.0010	93	70	130	0.1	20	
Molybdenum		0.556	mg/L	0.0010	109	70	130	0.3	20	
Nickel		0.524	mg/L	0.0050	103	70	130	1.5	20	
Uranium		0.546	mg/L	0.00030	109	70	130	1.2	20	
Vanadium		0.559	mg/L	0.010	109	70	130	0.8	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/31/12

Project: Zone-1 **Work Order:** C12070710

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS4-C_120810A	
Sample ID: ICV	10	Initial Calibration Verification Standard							08/10/12 14:41	
Aluminum		0.0520	mg/L	0.0010	104	90	110			
Beryllium		0.0500	mg/L	0.0010	100	90	110			
Cadmium		0.0514	mg/L	0.0010	103	90	110			
Cobalt		0.0525	mg/L	0.0010	105	90	110			
Lead		0.0506	mg/L	0.0010	101	90	110			
Manganese		0.0507	mg/L	0.0010	101	90	110			
Molybdenum		0.0472	mg/L	0.0010	94	90	110			
Nickel		0.0517	mg/L	0.0010	103	90	110			
Uranium		0.0515	mg/L	0.00030	103	90	110			
Vanadium		0.0482	mg/L	0.0010	97	90	110			
Method: E200.8										Batch: R163136
Sample ID: LRB	10	Method Blank				Run: ICPMS4-C_120810A			08/10/12 15:17	
Aluminum		ND	mg/L	0.0002						
Beryllium		ND	mg/L	2E-05						
Cadmium		ND	mg/L	3E-05						
Cobalt		ND	mg/L	3E-05						
Lead		ND	mg/L	2E-05						
Manganese		ND	mg/L	3E-05						
Molybdenum		ND	mg/L	3E-05						
Nickel		ND	mg/L	9E-05						
Uranium		0.0001	mg/L	9E-06						
Vanadium		ND	mg/L	4E-05						
Sample ID: LFB	10	Laboratory Fortified Blank				Run: ICPMS4-C_120810A			08/10/12 15:22	
Aluminum		0.0553	mg/L	0.0010	111	85	115			
Beryllium		0.0513	mg/L	0.0010	103	85	115			
Cadmium		0.0524	mg/L	0.0010	105	85	115			
Cobalt		0.0543	mg/L	0.0010	109	85	115			
Lead		0.0528	mg/L	0.0010	106	85	115			
Manganese		0.0531	mg/L	0.0010	106	85	115			
Molybdenum		0.0482	mg/L	0.0010	96	85	115			
Nickel		0.0533	mg/L	0.0010	107	85	115			
Uranium		0.0534	mg/L	0.00030	107	85	115			
Vanadium		0.0501	mg/L	0.0010	100	85	115			
Sample ID: C12070710-001CMS	10	Sample Matrix Spike				Run: ICPMS4-C_120810A			08/10/12 16:11	
Aluminum		0.0946	mg/L	0.030	95	70	130			
Beryllium		0.0728	mg/L	0.0010	73	70	130			
Cadmium		0.0975	mg/L	0.0010	97	70	130			
Cobalt		0.105	mg/L	0.0050	104	70	130			
Lead		0.109	mg/L	0.0010	109	70	130			
Manganese		2.95	mg/L	0.0010		70	130			A
Molybdenum		0.103	mg/L	0.0010	103	70	130			
Nickel		0.103	mg/L	0.0050	101	70	130			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

MDC - Minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/31/12

Project: Zone-1 **Work Order:** C12070710

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Batch: R163136	
Sample ID: C12070710-001CMS	10	Sample Matrix Spike				Run: ICPMS4-C_120810A			08/10/12 16:11	
Uranium		0.120	mg/L	0.00030	120	70	130			
Vanadium		0.104	mg/L	0.010	104	70	130			
Sample ID: C12070710-001CMSD	10	Sample Matrix Spike Duplicate				Run: ICPMS4-C_120810A			08/10/12 16:15	
Aluminum		0.0940	mg/L	0.030	94	70	130	0.6	20	
Beryllium		0.0741	mg/L	0.0010	74	70	130	1.8	20	
Cadmium		0.101	mg/L	0.0010	100	70	130	3.2	20	
Cobalt		0.108	mg/L	0.0050	107	70	130	2.8	20	
Lead		0.113	mg/L	0.0010	112	70	130	3.3	20	
Manganese		3.08	mg/L	0.0010	20	70	130	4.3	20	S
Molybdenum		0.106	mg/L	0.0010	106	70	130	3.6	20	
Nickel		0.104	mg/L	0.0050	102	70	130	0.8	20	
Uranium		0.126	mg/L	0.00030	126	70	130	5.2	20	
Vanadium		0.105	mg/L	0.010	105	70	130	0.4	20	
Method: E200.8									Analytical Run: ICPMS4-C_120817A	
Sample ID: ICV		Initial Calibration Verification Standard							08/17/12 10:08	
Beryllium		0.0495	mg/L	0.0010	99	90	110			
Method: E200.8									Batch: R163446	
Sample ID: LRB		Method Blank				Run: ICPMS4-C_120817A			08/17/12 11:52	
Beryllium		ND	mg/L	2E-05						
Sample ID: LFB		Laboratory Fortified Blank				Run: ICPMS4-C_120817A			08/17/12 11:56	
Beryllium		0.0515	mg/L	0.0010	103	85	115			
Sample ID: C12070544-001AMS		Sample Matrix Spike				Run: ICPMS4-C_120817A			08/17/12 16:44	
Beryllium		0.0476	mg/L	0.0010	95	70	130			
Sample ID: C12070544-001AMSD		Sample Matrix Spike Duplicate				Run: ICPMS4-C_120817A			08/17/12 17:06	
Beryllium		0.0484	mg/L	0.0010	97	70	130	1.5	20	
Sample ID: C12070544-001AMS4		Sample Matrix Spike				Run: ICPMS4-C_120817A			08/17/12 16:44	
Beryllium		0.0476	mg/L	0.0010	95	70	130			
Sample ID: C12070544-001AMSD		Sample Matrix Spike Duplicate				Run: ICPMS4-C_120817A			08/17/12 17:06	
Beryllium		0.0484	mg/L	0.0010	97	70	130	1.5	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/31/12

Project: Zone-1 **Work Order:** C12070710

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0									Analytical Run: IC1-C_120723A	
Sample ID: ICV-072312-10	2	Initial Calibration Verification Standard							07/23/12 18:10	
Chloride		10.3	mg/L	1.0	103	90	110			
Sulfate		40.6	mg/L	1.0	102	90	110			
Sample ID: ICBD-072312-12	2	Initial Calibration Blank, Instrument Blank							07/23/12 18:45	
Chloride		0.0210	mg/L	1.0		0	0			
Sulfate		0.0830	mg/L	1.0		0	0			
Method: E300.0									Batch: R162333	
Sample ID: ICB-072312-11	2	Method Blank				Run: IC1-C_120723A			07/23/12 18:27	
Chloride		ND	mg/L	0.04						
Sulfate		ND	mg/L	0.1						
Sample ID: LFB-072312-13	2	Laboratory Fortified Blank				Run: IC1-C_120723A			07/23/12 19:02	
Chloride		10.0	mg/L	1.0	100	90	110			
Sulfate		40.6	mg/L	1.0	101	90	110			
Sample ID: LFBD-072312-14	2	Laboratory Fortified Blank Duplicate				Run: IC1-C_120723A			07/23/12 19:20	
Chloride		10.2	mg/L	1.0	102	90	110	1.9	10	
Sulfate		43.1	mg/L	1.0	108	90	110	5.9	10	
Sample ID: C12070687-001BMS	2	Sample Matrix Spike				Run: IC1-C_120723A			07/24/12 08:06	
Chloride		131	mg/L	2.1	103	90	110			
Sulfate		1390	mg/L	8.3	98	90	110			
Sample ID: C12070687-001BMSD	2	Sample Matrix Spike Duplicate				Run: IC1-C_120723A			07/24/12 08:23	
Chloride		129	mg/L	2.1	101	90	110	1.4	10	
Sulfate		1380	mg/L	8.3	96	90	110	0.7	10	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/31/12

Project: Zone-1 **Work Order:** C12070710

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E353.2										Batch: R162313
Sample ID: MBLK-1		Method Blank				Run: TECHNICON_120724A				07/24/12 16:06
Nitrogen, Nitrate+Nitrite as N		ND	mg/L	0.06						
Sample ID: LCS-2		Laboratory Control Sample				Run: TECHNICON_120724A				07/24/12 16:08
Nitrogen, Nitrate+Nitrite as N		2.44	mg/L	0.10	98	90	110			
Sample ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_120724A				07/24/12 16:11
Nitrogen, Nitrate+Nitrite as N		2.07	mg/L	0.10	106	90	110			
Sample ID: C12070710-001DMS		Sample Matrix Spike				Run: TECHNICON_120724A				07/24/12 16:16
Nitrogen, Nitrate+Nitrite as N		2.02	mg/L	0.10	103	90	110			
Sample ID: C12070710-001DMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_120724A				07/24/12 16:18
Nitrogen, Nitrate+Nitrite as N		2.07	mg/L	0.10	106	90	110	2.4	10	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/31/12

Project: Zone-1 **Work Order:** C12070710

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624									Analytical Run: R162351	
Sample ID: 072412_CCV_19	9	Continuing Calibration Verification Standard							07/24/12 21:40	
Bromodichloromethane		10.4	ug/L	1.0	104	70	130			
Bromoform		10.4	ug/L	1.0	104	70	130			
Chlorodibromomethane		11.2	ug/L	1.0	112	70	130			
Chloroform		9.92	ug/L	1.0	99	70	130			
Trihalomethanes, Total		41.9	ug/L	1.0	105	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	97	80	120			
Surr: Dibromofluoromethane				1.0	91	80	120			
Surr: p-Bromofluorobenzene				1.0	82	80	120			
Surr: Toluene-d8				1.0	102	80	120			
Method: E624									Batch: R162351	
Sample ID: C12070535-003FMS	9	Sample Matrix Spike				Run: SATURNCA_120724D			07/24/12 19:51	
Bromodichloromethane		169	ug/L	10	84	72.3	123			
Bromoform		179	ug/L	10	90	70.3	128			
Chlorodibromomethane		183	ug/L	10	92	69.1	123			
Chloroform		166	ug/L	10	83	72.9	130			
Trihalomethanes, Total		698	ug/L	10	87	75.7	121			
Surr: 1,2-Dichlorobenzene-d4				1.0	98	82	118			
Surr: Dibromofluoromethane				1.0	85	74.8	123			
Surr: p-Bromofluorobenzene				1.0	81	82.4	121			S
Surr: Toluene-d8				1.0	95	76.4	125			
Sample ID: C12070535-003FMSD	9	Sample Matrix Spike Duplicate				Run: SATURNCA_120724D			07/24/12 20:27	
Bromodichloromethane		183	ug/L	10	92	72.3	123	8.2	20	
Bromoform		192	ug/L	10	96	70.3	128	6.9	20	
Chlorodibromomethane		187	ug/L	10	94	69.1	123	2.2	20	
Chloroform		172	ug/L	10	86	72.9	130	3.3	20	
Trihalomethanes, Total		734	ug/L	10	92	75.7	121	5.1	20	
Surr: 1,2-Dichlorobenzene-d4				1.0	102	82	118			
Surr: Dibromofluoromethane				1.0	85	74.8	123			
Surr: p-Bromofluorobenzene				1.0	89	82.4	121			
Surr: Toluene-d8				1.0	96	76.4	125			
Sample ID: 072412_LCS_4	9	Laboratory Control Sample				Run: SATURNCA_120724D			07/24/12 12:09	
Bromodichloromethane		9.96	ug/L	1.0	100	72.3	123			
Bromoform		11.7	ug/L	1.0	117	70.3	128			
Chlorodibromomethane		10.4	ug/L	1.0	104	69.1	123			
Chloroform		9.76	ug/L	1.0	98	72.9	130			
Trihalomethanes, Total		41.8	ug/L	1.0	104	75.7	121			
Surr: 1,2-Dichlorobenzene-d4				1.0	102	82	118			
Surr: Dibromofluoromethane				1.0	91	74.8	123			
Surr: p-Bromofluorobenzene				1.0	90	82.4	121			
Surr: Toluene-d8				1.0	95	76.4	125			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/31/12

Project: Zone-1 **Work Order:** C12070710

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624									Batch: R162351	
Sample ID: 072412_MBLK_6	9	Method Blank				Run: SATURNCA_120724D			07/24/12 13:22	
Bromodichloromethane		ND	ug/L	1.0						
Bromoform		ND	ug/L	1.0						
Chlorodibromomethane		ND	ug/L	1.0						
Chloroform		ND	ug/L	1.0						
Trihalomethanes, Total		ND	ug/L	1.0						
Surr: 1,2-Dichlorobenzene-d4				1.0	95	80	120			
Surr: Dibromofluoromethane				1.0	84	80	120			
Surr: p-Bromofluorobenzene				1.0	77	80	120			S
Surr: Toluene-d8				1.0	96	80	120			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/31/12

Project: Zone-1 **Work Order:** C12070710

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E900.1										Batch: GA-0558
Sample ID: LCS-GA-0551		Laboratory Control Sample				Run: BERTHOLD 770-2_120723B				08/01/12 09:30
Gross Alpha minus Rn & U		22.4	pCi/L		109	70	130			
Sample ID: MB-GA-0551	3	Method Blank				Run: BERTHOLD 770-2_120723B				08/01/12 09:30
Gross Alpha minus Rn & U		0.1	pCi/L							U
Gross Alpha minus Rn & U Precision (±)		0.1	pCi/L							
Gross Alpha minus Rn & U MDC		0.2	pCi/L							
Sample ID: C12070710-006GMS		Sample Matrix Spike				Run: BERTHOLD 770-2_120723B				08/01/12 13:12
Gross Alpha minus Rn & U		42.0	pCi/L		100	70	130			
Sample ID: C12070710-006GMSD		Sample Matrix Spike Duplicate				Run: BERTHOLD 770-2_120723B				08/01/12 13:12
Gross Alpha minus Rn & U		44.7	pCi/L		104	70	130	6.1	19.2	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/31/12

Project: Zone-1 **Work Order:** C12070710

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E903.0										Batch: RA226-6129
Sample ID: LCS-RA226-6129		Laboratory Control Sample				Run: TENNELEC-3_120726E			08/06/12 10:10	
Radium 226		6.0	pCi/L		95	80	120			
Sample ID: C12070669-001FMS		Sample Matrix Spike				Run: TENNELEC-3_120726E			08/06/12 10:10	
Radium 226		12	pCi/L		92	70	130			
Sample ID: C12070669-001FMSD		Sample Matrix Spike Duplicate				Run: TENNELEC-3_120726E			08/06/12 10:10	
Radium 226		13	pCi/L		98	70	130	6.9	23.5	
Sample ID: MB-RA226-6129	3	Method Blank				Run: TENNELEC-3_120726E			08/06/12 11:47	
Radium 226		0.10	pCi/L							U
Radium 226 precision (±)		0.07	pCi/L							
Radium 226 MDC		0.10	pCi/L							

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/31/12

Project: Zone-1 **Work Order:** C12070710

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E908.0										Batch: RA-TH-ISO-1668
Sample ID: LCS-RA-TH-ISO-1668		Laboratory Control Sample				Run: ALPHANALYST_120806A				08/07/12 16:59
Thorium 230		5.7	pCi/L		112	80	120			
Sample ID: C12070592-003DMS		Sample Matrix Spike				Run: ALPHANALYST_120806A				08/07/12 16:59
Thorium 230		12	pCi/L		101	70	130			
Sample ID: C12070592-003DMSD		Sample Matrix Spike Duplicate				Run: ALPHANALYST_120806A				08/07/12 16:59
Thorium 230		11	pCi/L		96	70	130	4.7	41.1	
Sample ID: MB-RA-TH-ISO-1668	3	Method Blank				Run: ALPHANALYST_120806A				08/07/12 17:00
Thorium 230		-0.02	pCi/L							U
Thorium 230 precision (±)		0.06	pCi/L							
Thorium 230 MDC		0.2	pCi/L							

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/31/12

Project: Zone-1 **Work Order:** C12070710

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E909.0										Batch: T_PB-210-0271
Sample ID: MB-PB-210-0271	3	Method Blank				Run: SUB-T46637				08/05/12 05:22
Lead 210		0.09	pCi/L							U
Lead 210 precision (±)		0.7	pCi/L							
Lead 210 MDC		1	pCi/L							
Sample ID: LCS-PB-210-0271		Laboratory Control Sample				Run: SUB-T46637				08/05/12 06:28
Lead 210		130	pCi/L		102	70	130			
Sample ID: T12070077-013FMS		Sample Matrix Spike				Run: SUB-T46637				08/05/12 08:40
Lead 210		350	pCi/L		103	70	130			
Sample ID: T12070077-013FMSD		Sample Matrix Spike Duplicate				Run: SUB-T46637				08/05/12 09:46
Lead 210		350	pCi/L		103	70	130	0.4	14.3	
Method: E909.0										Batch: T_PB-210-0272
Sample ID: MB-PB-210-0272	3	Method Blank				Run: SUB-T46781				08/13/12 16:19
Lead 210		0.3	pCi/L							U
Lead 210 precision (±)		0.7	pCi/L							
Lead 210 MDC		1	pCi/L							
Sample ID: LCS-PB-210-0272		Laboratory Control Sample				Run: SUB-T46781				08/13/12 17:39
Lead 210		120	pCi/L		99	70	130			
Sample ID: T12070052-001BMS		Sample Matrix Spike				Run: SUB-T46781				08/13/12 20:19
Lead 210		330	pCi/L		117	70	130			
Sample ID: T12070052-001BMSD		Sample Matrix Spike Duplicate				Run: SUB-T46781				08/13/12 21:40
Lead 210		320	pCi/L		114	70	130	2.5	14	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/31/12

Project: Zone-1 **Work Order:** C12070710

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: RA-05										Batch: RA228-4175
Sample ID: LCS-228-RA226-6129		Laboratory Control Sample				Run: TENNELEC-3_120726A			07/30/12 21:14	
Radium 228		4.7	pCi/L		94	80	120			
Sample ID: MB-RA226-6129	3	Method Blank				Run: TENNELEC-3_120726A			07/30/12 21:15	
Radium 228		0.2	pCi/L							U
Radium 228 precision (±)		0.7	pCi/L							
Radium 228 MDC		1	pCi/L							
Sample ID: C12070687-001FMS		Sample Matrix Spike				Run: TENNELEC-3_120726A			07/30/12 21:15	
Radium 228		11	pCi/L		102	70	130			
Sample ID: C12070687-001FMSD		Sample Matrix Spike Duplicate				Run: TENNELEC-3_120726A			07/30/12 21:15	
Radium 228		12	pCi/L		110	70	130	8.3	42.4	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

ANALYTICAL SUMMARY REPORT

August 30, 2012

United Nuclear Corporation
21 Miles NE of Gallup
Gallup, NM 87305

Workorder No.: C12070463 Quote ID: C129 - Quarterly Long List

Project Name: Zone 3

Energy Laboratories, Inc. Casper WY received the following 2 samples for United Nuclear Corporation on 7/13/2012 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C12070463-001	613	07/10/12 12:08	07/13/12	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Total Alkalinity QA Calculations Arsenic Speciation Selenium-IV, Total CVAA Selenium Prep E300.0 Anions Nitrogen, Ammonia Nitrogen, Nitrate + Nitrite pH Metals Preparation by EPA 200.2 Gross Alpha minus Rn222 and Uranium Lead 210, Total Radium 226, Total Radium 228, Total Thorium, Isotopic Solids, Total Dissolved Solids, Total Dissolved - Calculated E624 Purgeable Organics
C12070463-002	EPA-14	07/10/12 12:54	07/13/12	Aqueous	Same As Above

The results as reported relate only to the item(s) submitted for testing. The analyses presented in this report were performed at Energy Laboratories, Inc., 2393 Salt Creek Hwy., Casper, WY 82601, unless otherwise noted. Radiochemistry analyses were performed at Energy Laboratories, Inc., 2325 Kerzell Lane, Casper, WY 82601, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

If you have any questions regarding these test results, please call.

Report Approved By: Stephanie D Waldrop
Reporting Supervisor

Digitally signed by
Stephanie Waldrop
Date: 2012.08.30 17:56:18 -06:00

CLIENT: United Nuclear Corporation
Project: Zone 3
Sample Delivery Group: C12070463

Report Date: 08/30/12

CASE NARRATIVE

TH230 ANALYSIS
The sample-specific MDC for this sample could not be achieved due to significant matrix interferences, restricting the volume of sample to be used in the analysis.

BRANCH LABORATORY SUBCONTRACT ANALYSIS
Tests associated with analyst identified as ELI-H were subcontracted to Energy Laboratories, 3161 E.Lyndale Ave., Helena, MT, EPA Number MT00945.

Tests associated with analyst identified as ELI-CS were subcontracted to Energy Laboratories, 415 Graham Rd., College Station, TX, EPA Number TX01520.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/30/12

Project: Zone 3 **Work Order:** C12070463

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2320 B										Batch: R161953
Sample ID: MBLK	2	Method Blank				Run: MANTECH_120716B				07/16/12 15:10
Alkalinity, Total as CaCO3		4.27	mg/L	5.0						
Bicarbonate as HCO3		5.21	mg/L	5.0						
Sample ID: LCS-6677		Laboratory Control Sample				Run: MANTECH_120716B				07/16/12 15:25
Alkalinity, Total as CaCO3		202	mg/L	5.0	99	90	110			
Sample ID: C12070476-001ADUP	2	Sample Duplicate				Run: MANTECH_120716B				07/16/12 15:40
Alkalinity, Total as CaCO3		86.2	mg/L	5.0				0.2	10	
Bicarbonate as HCO3		105	mg/L	5.0				0.2	10	
Sample ID: C12070460-001AMS		Sample Matrix Spike				Run: MANTECH_120716B				07/16/12 15:56
Alkalinity, Total as CaCO3		361	mg/L	5.0	100	80	120			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/30/12

Project: Zone 3 **Work Order:** C12070463

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C										Batch: TDS120716A
Sample ID: MB-1_120716A		Method Blank				Run: BAL-1_120716B				07/16/12 12:03
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	4						
Sample ID: LCS-2_120716A		Laboratory Control Sample				Run: BAL-1_120716B				07/16/12 12:03
Solids, Total Dissolved TDS @ 180 C		1070	mg/L	10	97	90	110			
Sample ID: C12070456-012A MS		Sample Matrix Spike				Run: BAL-1_120716B				07/16/12 12:10
Solids, Total Dissolved TDS @ 180 C		1470	mg/L	10	99	90	110			
Sample ID: C12070464-001A DUP		Sample Duplicate				Run: BAL-1_120716B				07/16/12 12:12
Solids, Total Dissolved TDS @ 180 C		7310	mg/L	10				4.2	5	
Method: A2540 C										Batch: TDS120717A
Sample ID: MB-1_120717A		Method Blank				Run: BAL-1_120717B				07/17/12 10:39
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	4						
Sample ID: LCS-2_120717A		Laboratory Control Sample				Run: BAL-1_120717B				07/17/12 10:40
Solids, Total Dissolved TDS @ 180 C		1110	mg/L	10	100	90	110			
Sample ID: C12070463-001A DUP		Sample Duplicate				Run: BAL-1_120717B				07/17/12 10:41
Solids, Total Dissolved TDS @ 180 C		12300	mg/L	10				0.9	5	
Sample ID: C12070468-001A MS		Sample Matrix Spike				Run: BAL-1_120717B				07/17/12 10:41
Solids, Total Dissolved TDS @ 180 C		2170	mg/L	10	100	90	110			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone 3

Report Date: 08/30/12
Work Order: C12070463

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A3114 B									Analytical Run: CVAA-C202_120726B	
Sample ID: ICV		Initial Calibration Verification Standard							07/26/12 15:54	
Selenium-IV		0.0264	mg/L	0.0010	106	90	110			
Method: A3114 B									Batch: 34468	
Sample ID: MB-34468		Method Blank				Run: CVAA-C202_120726B			07/26/12 16:38	
Selenium-IV		0.0009	mg/L	0.0005						
Sample ID: LCS-34468		Laboratory Control Sample				Run: CVAA-C202_120726B			07/26/12 16:43	
Selenium-IV		0.0256	mg/L	0.0010	98	90	110			
Sample ID: C12070463-001CMS		Sample Matrix Spike				Run: CVAA-C202_120726B			07/26/12 16:48	
Selenium-IV		0.0222	mg/L	0.0010	89	85	115			
Sample ID: C12070463-001CMSD		Sample Matrix Spike Duplicate				Run: CVAA-C202_120726B			07/26/12 16:50	
Selenium-IV		0.0213	mg/L	0.0010	85	85	115	4.2	10	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/30/12
Project: Zone 3 **Work Order:** C12070463

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-H B								Analytical Run: PHSC_101-C_120716A		
Sample ID: pH 6.86		Initial Calibration Verification Standard							07/16/12 09:08	
pH		6.85	s.u.	0.010	100	98	102			
Sample ID: pH 6.86		Initial Calibration Verification Standard							07/16/12 11:53	
pH		6.85	s.u.	0.010	100	98	102			
Sample ID: pH 6.86		Initial Calibration Verification Standard							07/16/12 14:23	
pH		6.85	s.u.	0.010	100	98	102			
Method: A4500-H B									Batch: R161919	
Sample ID: C12070463-001ADUP		Sample Duplicate				Run: PHSC_101-C_120716A			07/16/12 12:28	
pH		2.97	s.u.	0.010				0.3	3	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone 3

Report Date: 08/30/12
Work Order: C12070463

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-NH3 G										Batch: R162158
Sample ID: MBLK-1		Method Blank				Run: TECHNICON_120720A				07/20/12 11:38
Nitrogen, Ammonia as N		ND	mg/L	0.02						
Sample ID: LCS-2		Laboratory Control Sample				Run: TECHNICON_120720A				07/20/12 11:41
Nitrogen, Ammonia as N		2.18	mg/L	0.050	109	90	110			
Sample ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_120720A				07/20/12 11:43
Nitrogen, Ammonia as N		1.99	mg/L	0.050	102	80	120			
Sample ID: C12070460-002EMS		Sample Matrix Spike				Run: TECHNICON_120720A				07/20/12 12:15
Nitrogen, Ammonia as N		2.05	mg/L	0.050	105	90	110			
Sample ID: C12070460-002EMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_120720A				07/20/12 12:17
Nitrogen, Ammonia as N		2.07	mg/L	0.050	106	90	110	1.0	10	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone 3

Report Date: 08/30/12
Work Order: C12070463

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E1632AM									Analytical Run: SUB-H81966	
Sample ID: AS-ICV 25ppb-8/1/201		Initial Calibration Verification Standard							08/01/12 13:57	
Arsenic-III		24.4	ug/L	5.0	98	87.6	114			
Sample ID: AS-50.0-8/1/2012		Continuing Calibration Verification Standard							08/01/12 17:38	
Arsenic-III		48.9	ug/L	5.0	98	85	115			
Method: E1632AM									Batch: H_R81966	
Sample ID: ICB		Method Blank				Run: SUB-H81966			08/01/12 14:20	
Arsenic-III		ND	ug/L	2						
Sample ID: AS-LFB 50ppb-8/1/20		Laboratory Fortified Blank				Run: SUB-H81966			08/01/12 14:28	
Arsenic-III		45.1	ug/L	5.0	90	55	146			
Sample ID: H12070284-013E MS		Sample Matrix Spike				Run: SUB-H81966			08/01/12 17:22	
Arsenic-III		55.2	ug/L	5.0	110	55	146			
Sample ID: H12070284-013E MSD		Sample Matrix Spike Duplicate				Run: SUB-H81966			08/01/12 17:30	
Arsenic-III		55.8	ug/L	5.0	112	55	146	1.2	20	
Sample ID: C12070710-001E		Sample Matrix Spike				Run: SUB-H81966			08/01/12 19:20	
Arsenic-III		51.1	ug/L	5.0	102	55	146			
Sample ID: C12070710-001E		Sample Matrix Spike Duplicate				Run: SUB-H81966			08/01/12 19:28	
Arsenic-III		52.2	ug/L	5.0	104	55	146	2.0	20	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone 3

Report Date: 08/30/12
Work Order: C12070463

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E1632AM									Analytical Run: SUB-H81970	
Sample ID: AS-ICV 25ppb-8/2/201		Initial Calibration Verification Standard							08/02/12 14:18	
Arsenic-III		24.2	ug/L	5.0	97	87.6	114			
Sample ID: AS-50.0-8/2/2012		Continuing Calibration Verification Standard							08/02/12 14:34	
Arsenic-III		49.5	ug/L	5.0	99	85	115			
Method: E1632AM									Batch: H_R81970	
Sample ID: ICB		Method Blank				Run: SUB-H81970			08/02/12 14:42	
Arsenic-III		ND	ug/L	2						
Sample ID: AS-LFB 50ppb-8/2/20		Laboratory Fortified Blank				Run: SUB-H81970			08/02/12 14:50	
Arsenic-III		45.4	ug/L	5.0	91	55	146			
Sample ID: C12070713-004E		Sample Matrix Spike				Run: SUB-H81970			08/02/12 16:02	
Arsenic-III		43.8	ug/L	5.0	83	55	146			
Sample ID: C12070713-004E		Sample Matrix Spike Duplicate				Run: SUB-H81970			08/02/12 16:09	
Arsenic-III		45.4	ug/L	5.0	86	55	146	3.6	20	
Sample ID: C12070713-012E		Sample Matrix Spike				Run: SUB-H81970			08/02/12 16:56	
Arsenic-III		42.1	ug/L	5.0	84	55	146			
Sample ID: C12070713-012E		Sample Matrix Spike Duplicate				Run: SUB-H81970			08/02/12 17:04	
Arsenic-III		42.2	ug/L	5.0	84	55	146	0.1	20	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/30/12
Project: Zone 3 **Work Order:** C12070463

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-C_120806A	
Sample ID: ICV	2	Initial Calibration Verification Standard							08/06/12 11:36	
Potassium		49.5	mg/L	2.7	99	95	105			
Sodium		50.7	mg/L	0.50	101	95	105			
Sample ID: ICSA	2	Interference Check Sample A							08/06/12 12:24	
Potassium		0.000300	mg/L	0.50						
Sodium		0.0973	mg/L	0.50						
Sample ID: ICSAB	2	Interference Check Sample AB							08/06/12 12:28	
Potassium		-0.00150	mg/L	0.50						
Sodium		0.308	mg/L	0.50						
Method: E200.7									Batch: R162893	
Sample ID: MB-120806A	2	Method Blank				Run: ICP2-C_120806A			08/06/12 12:48	
Potassium		ND	mg/L	0.06						
Sodium		ND	mg/L	0.3						
Sample ID: LFB-120806A	2	Laboratory Fortified Blank				Run: ICP2-C_120806A			08/06/12 12:52	
Potassium		43.7	mg/L	0.50	87	85	115			
Sodium		47.8	mg/L	0.50	96	85	115			
Sample ID: C12070727-002BMS2	2	Sample Matrix Spike				Run: ICP2-C_120806A			08/06/12 15:41	
Potassium		477	mg/L	1.0	91	70	130			
Sodium		4260	mg/L	3.2		70	130			A
Sample ID: C12070727-002BMSD	2	Sample Matrix Spike Duplicate				Run: ICP2-C_120806A			08/06/12 15:45	
Potassium		470	mg/L	1.0	89	70	130	1.4	20	
Sodium		4260	mg/L	3.2		70	130	0.0	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

MDC - Minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/30/12
Project: Zone 3 **Work Order:** C12070463

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP4-C_120718A	
Sample ID: ICV	9	Initial Calibration Verification Standard							07/18/12 14:12	
Aluminum		4.87	mg/L	0.10	97	95	105			
Beryllium		0.499	mg/L	0.010	100	95	105			
Calcium		49.9	mg/L	0.50	100	95	105			
Magnesium		50.1	mg/L	0.50	100	95	105			
Manganese		4.90	mg/L	0.010	98	95	105			
Molybdenum		0.981	mg/L	0.10	98	95	105			
Nickel		0.955	mg/L	0.050	96	95	105			
Potassium		49.4	mg/L	0.50	99	95	105			
Sodium		50.4	mg/L	0.50	101	95	105			
Sample ID: ICSA	9	Interference Check Sample A							07/18/12 14:26	
Aluminum		485	mg/L	0.10	97	80	120			
Beryllium		0.000340	mg/L	0.010						
Calcium		455	mg/L	0.50	91	80	120			
Magnesium		517	mg/L	0.50	103	80	120			
Manganese		0.0174	mg/L	0.010						
Molybdenum		0.00638	mg/L	0.10						
Nickel		0.00339	mg/L	0.050						
Potassium		-0.0109	mg/L	0.50						
Sodium		0.422	mg/L	0.50						
Sample ID: ICSAB	9	Interference Check Sample AB							07/18/12 14:30	
Aluminum		490	mg/L	0.10	98	80	120			
Beryllium		0.463	mg/L	0.010	93	80	120			
Calcium		451	mg/L	0.50	90	80	120			
Magnesium		514	mg/L	0.50	103	80	120			
Manganese		0.463	mg/L	0.010	93	80	120			
Molybdenum		0.00241	mg/L	0.10						
Nickel		0.844	mg/L	0.050	84	80	120			
Potassium		-0.0228	mg/L	0.50						
Sodium		0.352	mg/L	0.50						
Method: E200.7									Batch: 34328	
Sample ID: MB-34328	5	Method Blank				Run: ICP4-C_120718A			07/18/12 16:35	
Aluminum		ND	mg/L	0.009						
Beryllium		ND	mg/L	6E-05						
Manganese		ND	mg/L	0.0010						
Molybdenum		ND	mg/L	0.003						
Nickel		ND	mg/L	0.002						
Sample ID: LCS3-34328	5	Laboratory Control Sample				Run: ICP4-C_120718A			07/18/12 16:38	
Aluminum		2.5	mg/L	0.10	101	85	115			
Beryllium		0.25	mg/L	0.0010	101	85	115			
Manganese		2.5	mg/L	0.010	100	85	115			
Molybdenum		0.50	mg/L	0.10	100	85	115			

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/30/12

Project: Zone 3 **Work Order:** C12070463

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7										Batch: 34328
Sample ID: LCS3-34328	5	Laboratory Control Sample				Run: ICP4-C_120718A				07/18/12 16:38
Nickel		0.49	mg/L	0.050	98	85	115			
Sample ID: C12070460-003DMS3	5	Sample Matrix Spike				Run: ICP4-C_120718A				07/18/12 16:56
Aluminum		2.6	mg/L	0.10	104	70	130			
Beryllium		0.25	mg/L	0.0010	99	70	130			
Manganese		2.8	mg/L	0.010	113	70	130			
Molybdenum		0.50	mg/L	0.10	100	70	130			
Nickel		0.47	mg/L	0.050	95	70	130			
Sample ID: C12070460-003DMSD	5	Sample Matrix Spike Duplicate				Run: ICP4-C_120718A				07/18/12 17:00
Aluminum		2.6	mg/L	0.10	106	70	130	1.5	20	
Beryllium		0.25	mg/L	0.0010	99	70	130	0.3	20	
Manganese		2.8	mg/L	0.010	113	70	130	0.2	20	
Molybdenum		0.50	mg/L	0.10	99	70	130	0.7	20	
Nickel		0.47	mg/L	0.050	95	70	130	0.0	20	
Method: E200.7										Batch: R162060
Sample ID: MB-120718A	4	Method Blank				Run: ICP4-C_120718A				07/18/12 14:34
Calcium		ND	mg/L	0.02						
Magnesium		0.03	mg/L	0.01						
Potassium		ND	mg/L	0.04						
Sodium		ND	mg/L	0.2						
Sample ID: LFB-120718A	4	Laboratory Fortified Blank				Run: ICP4-C_120718A				07/18/12 14:38
Calcium		48.3	mg/L	0.50	97	85	115			
Magnesium		47.9	mg/L	0.50	96	85	115			
Potassium		48.4	mg/L	0.50	97	85	115			
Sodium		48.2	mg/L	0.50	96	85	115			
Sample ID: C12070492-001BMS2	4	Sample Matrix Spike				Run: ICP4-C_120718A				07/18/12 16:27
Calcium		705	mg/L	1.0	85	70	130			
Magnesium		430	mg/L	1.0	94	70	130			
Potassium		238	mg/L	1.0	90	70	130			
Sodium		1260	mg/L	1.0		70	130			A
Sample ID: C12070492-001BMSD	4	Sample Matrix Spike Duplicate				Run: ICP4-C_120718A				07/18/12 16:31
Calcium		706	mg/L	1.0	85	70	130	0.1	20	
Magnesium		430	mg/L	1.0	94	70	130	0.1	20	
Potassium		239	mg/L	1.0	90	70	130	0.2	20	
Sodium		1260	mg/L	1.0		70	130	0.0	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

MDC - Minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/30/12

Project: Zone 3 **Work Order:** C12070463

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP4-C_120725A	
Sample ID: ICV	8	Initial Calibration Verification Standard								07/25/12 15:08
Aluminum		5.04	mg/L	0.10	101	95	105			
Beryllium		0.501	mg/L	0.010	100	95	105			
Cadmium		0.474	mg/L	0.010	95	95	105			
Cobalt		0.959	mg/L	0.010	96	95	105			
Manganese		4.91	mg/L	0.010	98	95	105			
Molybdenum		0.983	mg/L	0.10	98	95	105			
Nickel		0.958	mg/L	0.050	96	95	105			
Vanadium		1.02	mg/L	0.10	102	95	105			
Sample ID: ICSA	8	Interference Check Sample A								07/25/12 15:22
Aluminum		497	mg/L	0.10	99	80	120			
Beryllium		0.000220	mg/L	0.010						
Cadmium		0.00660	mg/L	0.010						
Cobalt		-0.00255	mg/L	0.010						
Manganese		0.0176	mg/L	0.010						
Molybdenum		0.00610	mg/L	0.10						
Nickel		0.00264	mg/L	0.050						
Vanadium		0.00693	mg/L	0.10						
Sample ID: ICSAB	8	Interference Check Sample AB								07/25/12 15:26
Aluminum		501	mg/L	0.10	100	80	120			
Beryllium		0.472	mg/L	0.010	94	80	120			
Cadmium		0.866	mg/L	0.010	87	80	120			
Cobalt		0.434	mg/L	0.010	87	80	120			
Manganese		0.471	mg/L	0.010	94	80	120			
Molybdenum		0.00263	mg/L	0.10						
Nickel		0.865	mg/L	0.050	86	80	120			
Vanadium		0.530	mg/L	0.10	106	80	120			
Method: E200.7									Batch: R162376	
Sample ID: MB-120725A	8	Method Blank				Run: ICP4-C_120725A				07/25/12 15:30
Aluminum		0.010	mg/L	0.009						
Beryllium		ND	mg/L	6E-05						
Cadmium		ND	mg/L	0.0004						
Cobalt		ND	mg/L	0.002						
Manganese		ND	mg/L	0.0010						
Molybdenum		ND	mg/L	0.003						
Nickel		ND	mg/L	0.002						
Vanadium		0.005	mg/L	0.002						
Sample ID: LFB-120725A	8	Laboratory Fortified Blank				Run: ICP4-C_120725A				07/25/12 15:33
Aluminum		0.971	mg/L	0.10	96	85	115			
Beryllium		0.949	mg/L	0.010	95	85	115			
Cadmium		0.937	mg/L	0.010	94	85	115			
Cobalt		0.925	mg/L	0.010	93	85	115			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/30/12

Project: Zone 3 **Work Order:** C12070463

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7										Batch: R162376
Sample ID: LFB-120725A	8	Laboratory Fortified Blank				Run: ICP4-C_120725A				07/25/12 15:33
Manganese		0.942	mg/L	0.010	94	85	115			
Molybdenum		0.955	mg/L	0.10	95	85	115			
Nickel		0.922	mg/L	0.050	92	85	115			
Vanadium		1.14	mg/L	0.10	113	85	115			
Sample ID: C12070434-001BMS2	8	Sample Matrix Spike				Run: ICP4-C_120725A				07/25/12 15:40
Aluminum		1.0	mg/L	0.10	100	70	130			
Beryllium		0.98	mg/L	0.0010	96	70	130			
Cadmium		0.95	mg/L	0.0010	93	70	130			
Cobalt		0.95	mg/L	0.010	93	70	130			
Manganese		0.97	mg/L	0.010	95	70	130			
Molybdenum		0.97	mg/L	0.10	95	70	130			
Nickel		0.94	mg/L	0.050	92	70	130			
Vanadium		1.2	mg/L	0.10	116	70	130			
Sample ID: C12070434-001BMSD	8	Sample Matrix Spike Duplicate				Run: ICP4-C_120725A				07/25/12 15:44
Aluminum		1.0	mg/L	0.10	100	70	130	0.0	20	
Beryllium		0.98	mg/L	0.0010	96	70	130	0.2	20	
Cadmium		0.95	mg/L	0.0010	94	70	130	0.1	20	
Cobalt		0.94	mg/L	0.010	93	70	130	0.4	20	
Manganese		0.96	mg/L	0.010	95	70	130	0.4	20	
Molybdenum		0.98	mg/L	0.10	95	70	130	0.1	20	
Nickel		0.94	mg/L	0.050	92	70	130	0.6	20	
Vanadium		1.2	mg/L	0.10	115	70	130	0.3	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone 3

Report Date: 08/30/12
Work Order: C12070463

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP4-C_120803A	
Sample ID: ICV	2	Initial Calibration Verification Standard							08/03/12 13:32	
Calcium		49.8	mg/L	0.50	100	95	105			
Magnesium		49.3	mg/L	0.50	99	95	105			
Sample ID: ICSA	2	Interference Check Sample A							08/03/12 14:42	
Calcium		443	mg/L	0.50	89	80	120			
Magnesium		502	mg/L	0.50	100	80	120			
Sample ID: ICSAB	2	Interference Check Sample AB							08/03/12 14:46	
Calcium		446	mg/L	0.50	89	80	120			
Magnesium		501	mg/L	0.50	100	80	120			
Method: E200.7									Batch: R162831	
Sample ID: MB-120803A	2	Method Blank				Run: ICP4-C_120803A			08/03/12 14:50	
Calcium		0.03	mg/L	0.02						
Magnesium		ND	mg/L	0.01						
Sample ID: LFB-120803A	2	Laboratory Fortified Blank				Run: ICP4-C_120803A			08/03/12 14:54	
Calcium		46.9	mg/L	0.50	94	85	115			
Magnesium		46.7	mg/L	0.50	93	85	115			
Sample ID: C12070582-002BMS2	2	Sample Matrix Spike				Run: ICP4-C_120803A			08/03/12 15:01	
Calcium		136	mg/L	1.0	87	70	130			
Magnesium		79.0	mg/L	1.0	94	70	130			
Sample ID: C12070582-002BMSD	2	Sample Matrix Spike Duplicate				Run: ICP4-C_120803A			08/03/12 15:05	
Calcium		133	mg/L	1.0	81	70	130	2.0	20	
Magnesium		78.1	mg/L	1.0	92	70	130	1.2	20	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/30/12

Project: Zone 3 **Work Order:** C12070463

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS2-C_120724A	
Sample ID: ICV	5	Initial Calibration Verification Standard							07/24/12 10:51	
Cadmium		0.0505	mg/L	0.0010	101	90	110			
Cobalt		0.0514	mg/L	0.0010	103	90	110			
Lead		0.0505	mg/L	0.0010	101	90	110			
Uranium		0.0518	mg/L	0.00030	104	90	110			
Vanadium		0.0512	mg/L	0.0010	102	90	110			
Method: E200.8									Batch: 34328	
Sample ID: MB-34328	5	Method Blank				Run: ICPMS2-C_120724A			07/24/12 19:32	
Cadmium		ND	mg/L	2E-05						
Cobalt		ND	mg/L	1E-05						
Lead		9E-05	mg/L	3E-05						
Uranium		ND	mg/L	1E-05						
Vanadium		ND	mg/L	3E-05						
Sample ID: LCS3-34328	5	Laboratory Control Sample				Run: ICPMS2-C_120724A			07/24/12 19:35	
Cadmium		0.25	mg/L	0.0010	101	85	115			
Cobalt		0.48	mg/L	0.010	97	85	115			
Lead		0.51	mg/L	0.0010	102	85	115			
Uranium		0.52	mg/L	0.00030	104	85	115			
Vanadium		0.49	mg/L	0.10	98	85	115			
Sample ID: C12070460-003DMS3	5	Sample Matrix Spike				Run: ICPMS2-C_120724A			07/24/12 20:23	
Cadmium		0.25	mg/L	0.0010	100	70	130			
Cobalt		0.48	mg/L	0.010	95	70	130			
Lead		0.51	mg/L	0.0010	102	70	130			
Uranium		0.54	mg/L	0.00030	107	70	130			
Vanadium		0.50	mg/L	0.10	99	70	130			
Sample ID: C12070460-003DMSD	5	Sample Matrix Spike Duplicate				Run: ICPMS2-C_120724A			07/24/12 20:25	
Cadmium		0.25	mg/L	0.0010	99	70	130	1.1	20	
Cobalt		0.48	mg/L	0.010	95	70	130	0.1	20	
Lead		0.50	mg/L	0.0010	101	70	130	1.4	20	
Uranium		0.54	mg/L	0.00030	107	70	130	0.1	20	
Vanadium		0.50	mg/L	0.10	99	70	130	1.0	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone 3

Report Date: 08/30/12
Work Order: C12070463

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS4-C_120726A	
Sample ID: ICV	2	Initial Calibration Verification Standard							07/26/12 11:34	
Lead		0.0485	mg/L	0.0010	97	90	110			
Uranium		0.0506	mg/L	0.00030	101	90	110			
Method: E200.8									Batch: R162424	
Sample ID: LRB	2	Method Blank				Run: ICPMS4-C_120726A			07/26/12 12:11	
Lead		ND	mg/L	2E-05						
Uranium		1E-05	mg/L	9E-06						
Sample ID: LFB	2	Laboratory Fortified Blank				Run: ICPMS4-C_120726A			07/26/12 12:15	
Lead		0.0499	mg/L	0.0010	100	85	115			
Uranium		0.0517	mg/L	0.00030	103	85	115			
Sample ID: C12070320-001BMS4	2	Sample Matrix Spike				Run: ICPMS4-C_120726A			07/26/12 20:37	
Lead		0.0529	mg/L	0.0010	105	70	130			
Uranium		0.0572	mg/L	0.00030	112	70	130			
Sample ID: C12070320-001BMSD	2	Sample Matrix Spike Duplicate				Run: ICPMS4-C_120726A			07/26/12 20:41	
Lead		0.0530	mg/L	0.0010	105	70	130	0.1	20	
Uranium		0.0566	mg/L	0.00030	111	70	130	0.9	20	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone 3

Report Date: 08/30/12
Work Order: C12070463

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0									Analytical Run: IC1-C_120720A	
Sample ID: ICV-072012-10		Initial Calibration Verification Standard							07/20/12 18:33	
Sulfate		40.5	mg/L	1.0	101	90	110			
Method: E300.0									Batch: R162227	
Sample ID: ICB-072012-11		Method Blank				Run: IC1-C_120720A			07/20/12 18:50	
Sulfate		ND	mg/L	0.1						
Sample ID: LFB-072012-12		Laboratory Fortified Blank				Run: IC1-C_120720A			07/20/12 19:08	
Sulfate		41.1	mg/L	1.0	103	90	110			
Sample ID: C12070464-003AMS		Sample Matrix Spike				Run: IC1-C_120720A			07/21/12 03:15	
Sulfate		6710	mg/L	42	98	90	110			
Sample ID: C12070464-003AMSD		Sample Matrix Spike Duplicate				Run: IC1-C_120720A			07/21/12 03:33	
Sulfate		6700	mg/L	42	97	90	110	0.2	10	
Method: E300.0									Analytical Run: IC2-C_120717A	
Sample ID: ICV-071712-10	2	Initial Calibration Verification Standard							07/17/12 18:46	
Chloride		10.1	mg/L	1.0	101	90	110			
Sulfate		40.3	mg/L	1.0	101	90	110			
Method: E300.0									Batch: R162047	
Sample ID: ICB-071712-11	2	Method Blank				Run: IC2-C_120717A			07/17/12 19:02	
Chloride		ND	mg/L	0.03						
Sulfate		0.2	mg/L	0.10						
Sample ID: LFB-071712-12	2	Laboratory Fortified Blank				Run: IC2-C_120717A			07/17/12 19:17	
Chloride		9.95	mg/L	1.0	99	90	110			
Sulfate		40.4	mg/L	1.0	100	90	110			
Sample ID: C12070408-008AMS	2	Sample Matrix Spike				Run: IC2-C_120717A			07/18/12 03:00	
Chloride		512	mg/L	4.2	98	90	110			
Sulfate		2460	mg/L	17	97	90	110			
Sample ID: C12070408-008AMSD	2	Sample Matrix Spike Duplicate				Run: IC2-C_120717A			07/18/12 03:15	
Chloride		519	mg/L	4.2	102	90	110	1.4	10	
Sulfate		2490	mg/L	17	100	90	110	1.0	10	
Sample ID: C12070464-004AMS	2	Sample Matrix Spike				Run: IC2-C_120717A			07/18/12 06:36	
Chloride		14.3	mg/L	1.0	102	90	110			
Sulfate		45.8	mg/L	1.0	106	90	110			
Sample ID: C12070464-004AMSD	2	Sample Matrix Spike Duplicate				Run: IC2-C_120717A			07/18/12 06:51	
Chloride		14.4	mg/L	1.0	103	90	110	0.6	10	
Sulfate		45.9	mg/L	1.0	107	90	110	0.4	10	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/30/12

Project: Zone 3 **Work Order:** C12070463

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0									Analytical Run: IC2-C_120815A	
Sample ID: ICV-081512-10	2	Initial Calibration Verification Standard							08/15/12 15:57	
Chloride		9.84	mg/L	1.0	98	90	110			
Sulfate		40.0	mg/L	1.0	100	90	110			
Method: E300.0									Batch: R163372	
Sample ID: ICB-081512-11	2	Method Blank				Run: IC2-C_120815A			08/15/12 16:14	
Chloride		ND	mg/L	0.03						
Sulfate		0.2	mg/L	0.10						
Sample ID: LFB-081512-12	2	Laboratory Fortified Blank				Run: IC2-C_120815A			08/15/12 16:32	
Chloride		10.2	mg/L	1.0	102	90	110			
Sulfate		40.3	mg/L	1.0	100	90	110			
Sample ID: C12080573-001BMS	2	Sample Matrix Spike				Run: IC2-C_120815A			08/15/12 17:07	
Chloride		78.3	mg/L	1.0	102	90	110			
Sulfate		966	mg/L	4.2	119	90	110			S
- Matrix spike recoveries outside the acceptance range are considered matrix-related.										
Sample ID: C12080573-001BMSD	2	Sample Matrix Spike Duplicate				Run: IC2-C_120815A			08/15/12 17:24	
Chloride		77.3	mg/L	1.0	100	90	110	1.3	10	
Sulfate		956	mg/L	4.2	114	90	110	1.1	10	S
- Matrix spike recoveries outside the acceptance range are considered matrix-related.										
Sample ID: LFB-081612-54	2	Laboratory Fortified Blank				Run: IC2-C_120815A			08/16/12 09:07	
Chloride		10.4	mg/L	1.0	104	90	110			
Sulfate		41.9	mg/L	1.0	104	90	110			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone 3

Report Date: 08/30/12
Work Order: C12070463

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E353.2										Batch: R162256
Sample ID: MBLK-1		Method Blank				Run: TECHNICON_120723A				07/23/12 11:27
Nitrogen, Nitrate+Nitrite as N		ND	mg/L	0.06						
Sample ID: LCS-2		Laboratory Control Sample				Run: TECHNICON_120723A				07/23/12 11:30
Nitrogen, Nitrate+Nitrite as N		2.56	mg/L	0.10	102	90	110			
Sample ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_120723A				07/23/12 11:32
Nitrogen, Nitrate+Nitrite as N		2.12	mg/L	0.10	108	90	110			
Sample ID: C12070463-001DMS		Sample Matrix Spike				Run: TECHNICON_120723A				07/23/12 11:37
Nitrogen, Nitrate+Nitrite as N		15.1	mg/L	0.50	102	90	110			
Sample ID: C12070463-001DMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_120723A				07/23/12 11:40
Nitrogen, Nitrate+Nitrite as N		15.1	mg/L	0.50	102	90	110	0.0	10	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/30/12

Project: Zone 3 **Work Order:** C12070463

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624									Analytical Run: R162004	
Sample ID: 16-Jul-12_CCV_3	9	Continuing Calibration Verification Standard							07/16/12 12:14	
Bromodichloromethane		9.36	ug/L	1.0	94	70	130			
Bromoform		8.56	ug/L	1.0	86	70	130			
Chlorodibromomethane		9.36	ug/L	1.0	94	70	130			
Chloroform		9.76	ug/L	1.0	98	70	130			
Trihalomethanes, Total		37.0	ug/L	1.0	93	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	128	80	120			S
Surr: Dibromofluoromethane				1.0	116	80	120			
Surr: p-Bromofluorobenzene				1.0	114	80	120			
Surr: Toluene-d8				1.0	110	80	120			
Sample ID: 16-Jul-12_CCV_19	9	Continuing Calibration Verification Standard							07/16/12 21:48	
Bromodichloromethane		8.40	ug/L	1.0	84	70	130			
Bromoform		8.68	ug/L	1.0	87	70	130			
Chlorodibromomethane		8.00	ug/L	1.0	80	70	130			
Chloroform		10.6	ug/L	1.0	106	70	130			
Trihalomethanes, Total		35.7	ug/L	1.0	89	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	153	80	120			S
Surr: Dibromofluoromethane				1.0	122	80	120			S
Surr: p-Bromofluorobenzene				1.0	120	80	120			
Surr: Toluene-d8				1.0	104	80	120			
Method: E624									Batch: R162004	
Sample ID: 16-Jul-12_LCS_4	9	Laboratory Control Sample				Run: 5975VOC1_120716A			07/16/12 12:49	
Bromodichloromethane		7.40	ug/L	1.0	74	72.3	123			
Bromoform		9.20	ug/L	1.0	92	70.3	128			
Chlorodibromomethane		7.48	ug/L	1.0	75	69.1	123			
Chloroform		9.36	ug/L	1.0	94	72.9	130			
Trihalomethanes, Total		33.4	ug/L	1.0	84	75.7	121			
Surr: 1,2-Dichlorobenzene-d4				1.0	155	82	118			S
Surr: Dibromofluoromethane				1.0	118	74.8	123			
Surr: p-Bromofluorobenzene				1.0	133	82.4	121			S
Surr: Toluene-d8				1.0	105	76.4	125			
Sample ID: 16-Jul-12_MBLK_6	9	Method Blank				Run: 5975VOC1_120716A			07/16/12 13:58	
Bromodichloromethane		ND	ug/L	1.0						
Bromoform		ND	ug/L	1.0						
Chlorodibromomethane		ND	ug/L	1.0						
Chloroform		ND	ug/L	1.0						
Trihalomethanes, Total		ND	ug/L	1.0						
Surr: 1,2-Dichlorobenzene-d4				1.0	90	80	120			
Surr: Dibromofluoromethane				1.0	114	80	120			
Surr: p-Bromofluorobenzene				1.0	180	80	120			S
Surr: Toluene-d8				1.0	112	80	120			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone 3

Report Date: 08/30/12
Work Order: C12070463

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624										Batch: R162004
Sample ID: C12070463-001HMS	9	Sample Matrix Spike				Run: 5975VOC1_120716A			07/16/12 20:03	
Bromodichloromethane		74.4	ug/L	5.0	74	72.3	123			
Bromoform		88.0	ug/L	5.0	88	70.3	128			
Chlorodibromomethane		67.6	ug/L	5.0	68	69.1	123			S
Chloroform		185	ug/L	5.0	106	72.9	130			
Trihalomethanes, Total		415	ug/L	5.0	84	75.7	121			
Surr: 1,2-Dichlorobenzene-d4				1.0	154	82	118			S
Surr: Dibromofluoromethane				1.0	123	74.8	123			
Surr: p-Bromofluorobenzene				1.0	126	82.4	121			S
Surr: Toluene-d8				1.0	106	76.4	125			
Sample ID: C12070463-001HMSD	9	Sample Matrix Spike Duplicate				Run: 5975VOC1_120716A			07/16/12 20:38	
Bromodichloromethane		81.2	ug/L	5.0	81	72.3	123	8.7	20	
Bromoform		80.0	ug/L	5.0	80	70.3	128	9.5	20	
Chlorodibromomethane		69.2	ug/L	5.0	69	69.1	123	2.3	20	
Chloroform		182	ug/L	5.0	103	72.9	130	1.3	20	
Trihalomethanes, Total		413	ug/L	5.0	83	75.7	121	0.5	20	
Surr: 1,2-Dichlorobenzene-d4				1.0	159	82	118			S
Surr: Dibromofluoromethane				1.0	120	74.8	123			
Surr: p-Bromofluorobenzene				1.0	120	82.4	121			
Surr: Toluene-d8				1.0	113	76.4	125			

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.
S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone 3

Report Date: 08/30/12
Work Order: C12070463

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E900.1										Batch: GA-0565
Sample ID: LCS-GA-0549		Laboratory Control Sample				Run: BERTHOLD 770-1_120718C				08/09/12 22:49
Gross Alpha minus Rn & U		23.3	pCi/L		112	70	130			
Sample ID: MB-GA-0549	3	Method Blank				Run: BERTHOLD 770-1_120718C				08/09/12 22:49
Gross Alpha minus Rn & U		-0.04	pCi/L							U
Gross Alpha minus Rn & U Precision (±)		0.1	pCi/L							
Gross Alpha minus Rn & U MDC		0.3	pCi/L							
Sample ID: C12070456-015GMS		Sample Matrix Spike				Run: BERTHOLD 770-1_120718C				08/10/12 00:29
Gross Alpha minus Rn & U		42.1	pCi/L		102	70	130			
Sample ID: C12070456-015GMSD		Sample Matrix Spike Duplicate				Run: BERTHOLD 770-1_120718C				08/10/12 00:29
Gross Alpha minus Rn & U		44.7	pCi/L		106	70	130	6.0	21.6	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 08/30/12

Project: Zone 3 **Work Order:** C12070463

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E903.0										Batch: RA226-6110
Sample ID: LCS-RA226-6110		Laboratory Control Sample				Run: BERTHOLD 770-1_120718B				07/30/12 14:54
Radium 226		6.9	pCi/L		109	80	120			
Sample ID: C12070408-004CMS		Sample Matrix Spike				Run: BERTHOLD 770-1_120718B				07/30/12 14:54
Radium 226		12	pCi/L		92	70	130			
Sample ID: C12070408-004CMSD		Sample Matrix Spike Duplicate				Run: BERTHOLD 770-1_120718B				07/30/12 14:54
Radium 226		11	pCi/L		85	70	130	6.3	25.6	
Sample ID: MB-RA226-6110	3	Method Blank				Run: BERTHOLD 770-1_120718B				07/30/12 18:08
Radium 226		0.006	pCi/L							U
Radium 226 precision (±)		0.09	pCi/L							
Radium 226 MDC		0.2	pCi/L							

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone 3

Report Date: 08/30/12
Work Order: C12070463

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E908.0									Batch: RA-TH-ISO-1666	
Sample ID: LCS-RA-TH-ISO-1666		Laboratory Control Sample				Run: ALPHANALYST_120801B			08/06/12 08:40	
Thorium 230		4.5	pCi/L		88	80	120			
Sample ID: C12070464-003GMS		Sample Matrix Spike				Run: ALPHANALYST_120801B			08/06/12 08:40	
Thorium 230		12.2	pCi/L		103	70	130			
Sample ID: C12070464-003GMSD		Sample Matrix Spike Duplicate				Run: ALPHANALYST_120801B			08/06/12 08:40	
Thorium 230		10.9	pCi/L		92	70	130	12	40.8	
Sample ID: MB-RA-TH-ISO-1666	3	Method Blank				Run: ALPHANALYST_120801B			08/06/12 08:40	
Thorium 230		0.02	pCi/L							U
Thorium 230 precision (±)		0.08	pCi/L							
Thorium 230 MDC		0.2	pCi/L							
Method: E908.0									Batch: RA-TH-ISO-1667	
Sample ID: LCS-RA-TH-ISO-1667		Laboratory Control Sample				Run: ALPHANALYST_120802B			08/06/12 16:39	
Thorium 230		6.0	pCi/L		115	80	120			
Sample ID: C12070460-001IMS		Sample Matrix Spike				Run: ALPHANALYST_120802B			08/06/12 16:39	
Thorium 230		11.3	pCi/L		94	70	130			
Sample ID: C12070460-001IMSD		Sample Matrix Spike Duplicate				Run: ALPHANALYST_120802B			08/06/12 16:39	
Thorium 230		14.0	pCi/L		118	70	130	22	48.3	
Sample ID: MB-RA-TH-ISO-1667	3	Method Blank				Run: ALPHANALYST_120802B			08/06/12 16:40	
Thorium 230		0.10	pCi/L							U
Thorium 230 precision (±)		0.1	pCi/L							
Thorium 230 MDC		0.2	pCi/L							

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone 3

Report Date: 08/30/12
Work Order: C12070463

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E909.0									Batch: T_PB-210-0271	
Sample ID: MB-PB-210-0271	3	Method Blank				Run: SUB-T46637			08/05/12 05:22	
Lead 210		0.09	pCi/L							U
Lead 210 precision (±)		0.7	pCi/L							
Lead 210 MDC		1	pCi/L							
Sample ID: LCS-PB-210-0271		Laboratory Control Sample				Run: SUB-T46637			08/05/12 06:28	
Lead 210		130	pCi/L		102	70	130			
Sample ID: T12070077-013FMS		Sample Matrix Spike				Run: SUB-T46637			08/05/12 08:40	
Lead 210		350	pCi/L		103	70	130			
Sample ID: T12070077-013FMSD		Sample Matrix Spike Duplicate				Run: SUB-T46637			08/05/12 09:46	
Lead 210		350	pCi/L		103	70	130	0.4	14.3	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone 3

Report Date: 08/30/12
Work Order: C12070463

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: RA-05										Batch: RA228-4165
Sample ID: LCS-228-RA226-6110		Laboratory Control Sample				Run: TENNELEC-3_120718A			07/23/12 17:33	
Radium 228		4.4	pCi/L		97	80	120			
Sample ID: MB-RA226-6110	3	Method Blank				Run: TENNELEC-3_120718A			07/23/12 17:33	
Radium 228		-0.1	pCi/L							U
Radium 228 precision (±)		0.7	pCi/L							
Radium 228 MDC		1	pCi/L							
Sample ID: C12070445-001AMS		Sample Matrix Spike				Run: TENNELEC-3_120718A			07/23/12 17:34	
Radium 228		9.0	pCi/L		90	70	130			
Sample ID: C12070445-001AMSD		Sample Matrix Spike Duplicate				Run: TENNELEC-3_120718A			07/23/12 17:34	
Radium 228		10.5	pCi/L		106	70	130	16	48.3	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

ANALYTICAL SUMMARY REPORT

September 07, 2012

United Nuclear Corporation
21 Miles NE of Gallup
Gallup, NM 87305

Workorder No.: C12070713 Quote ID: C129 - Quarterly Long List

Project Name: Zone-3

Energy Laboratories, Inc. Casper WY received the following 23 samples for United Nuclear Corporation on 7/20/2012 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C12070713-001	517	07/16/12 13:48	07/20/12	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Total Alkalinity QA Calculations Arsenic Speciation Selenium-IV, Total CVAA Selenium Prep E300.0 Anions Nitrogen, Ammonia Nitrogen, Nitrate + Nitrite pH Metals Preparation by EPA 200.2 Gross Alpha minus Rn222 and Uranium Lead 210, Total Radium 226, Total Radium 228, Total Thorium, Isotopic Solids, Total Dissolved Solids, Total Dissolved - Calculated E624 Purgeable Organics
C12070713-002	708	07/16/12 14:33	07/20/12	Aqueous	Same As Above
C12070713-003	EPA-13	07/16/12 15:21	07/20/12	Aqueous	Same As Above
C12070713-004	711	07/17/12 8:31	07/20/12	Aqueous	Same As Above
C12070713-005	711 Duplicate	07/17/12 9:06	07/20/12	Aqueous	Same As Above
C12070713-006	719	07/17/12 9:45	07/20/12	Aqueous	Same As Above
C12070713-007	420	07/17/12 10:25	07/20/12	Aqueous	Same As Above
C12070713-008	717	07/17/12 11:10	07/20/12	Aqueous	Same As Above
C12070713-009	NBL-1	07/17/12 13:41	07/20/12	Aqueous	Same As Above
C12070713-010	Rinsate	07/17/12 16:51	07/20/12	Aqueous	Same As Above
C12070713-011	Field Blank	07/17/12 17:00	07/20/12	Aqueous	Same As Above
C12070713-012	MW-6	07/17/12 15:10	07/20/12	Aqueous	Same As Above
C12070713-013	MW-7	07/17/12 16:18	07/20/12	Aqueous	Same As Above
C12070713-014	NBL-2	07/17/12 11:47	07/20/12	Aqueous	Alkalinity E300.0 Anions pH Solids, Total Dissolved
C12070713-015	PB-3	07/17/12 14:32	07/20/12	Aqueous	Same As Above

ANALYTICAL SUMMARY REPORT

C12070713-016	PB-4	07/17/12 14:47 07/20/12	Aqueous	Same As Above
C12070713-017	NW-4	07/17/12 12:47 07/20/12	Aqueous	Same As Above
C12070713-018	NW-2	07/17/12 12:56 07/20/12	Aqueous	Same As Above
C12070713-019	NW-5	07/17/12 13:13 07/20/12	Aqueous	Same As Above
C12070713-020	RW-A	07/17/12 13:50 07/20/12	Aqueous	Same As Above
C12070713-021	NW-1	07/17/12 12:36 07/20/12	Aqueous	Same As Above
C12070713-022	NW-3	07/17/12 13:25 07/20/12	Aqueous	Same As Above
C12070713-023	PB-2	07/17/12 13:37 07/20/12	Aqueous	Same As Above

The results as reported relate only to the item(s) submitted for testing. The analyses presented in this report were performed at Energy Laboratories, Inc., 2393 Salt Creek Hwy., Casper, WY 82601, unless otherwise noted. Radiochemistry analyses were performed at Energy Laboratories, Inc., 2325 Kerzell Lane, Casper, WY 82601, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

If you have any questions regarding these test results, please call.

Report Approved By:

Stephanie D Waldrop
Reporting Supervisor

Digitally signed by
Stephanie Waldrop
Date: 2012.09.07 16:49:00 -06:00

CLIENT: United Nuclear Corporation
Project: Zone-3
Sample Delivery Group: C12070713

Report Date: 09/07/12

CASE NARRATIVE

TH230 ANALYSIS
The sample-specific MDC for this sample could not be achieved due to significant matrix interferences, restricting the volume of sample to be used in the analysis.

BRANCH LABORATORY SUBCONTRACT ANALYSIS
Tests associated with analyst identified as ELI-H were subcontracted to Energy Laboratories, 3161 E.Lyndale Ave., Helena, MT, EPA Number MT00945.

Tests associated with analyst identified as ELI-CS were subcontracted to Energy Laboratories, 415 Graham Rd., College Station, TX, EPA Number TX01520.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 09/07/12

Project: Zone-3 **Work Order:** C12070713

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2320 B										Batch: R162186
Sample ID: MBLK	2	Method Blank				Run: MANTECH_120720B			07/20/12 14:54	
Alkalinity, Total as CaCO3		ND	mg/L	5.0						
Bicarbonate as HCO3		2.52	mg/L	5.0						
Sample ID: LCS-6677		Laboratory Control Sample				Run: MANTECH_120720B			07/20/12 15:09	
Alkalinity, Total as CaCO3		203	mg/L	5.0	101	90	110			
Sample ID: C12070713-004ADUP	2	Sample Duplicate				Run: MANTECH_120720B			07/20/12 18:49	
Alkalinity, Total as CaCO3		ND	mg/L	5.0					10	
Bicarbonate as HCO3		ND	mg/L	5.0					10	
Sample ID: C12070713-007AMS		Sample Matrix Spike				Run: MANTECH_120720B			07/20/12 19:16	
Alkalinity, Total as CaCO3		559	mg/L	5.0	120	80	120			
Sample ID: C12070713-014ADUP	2	Sample Duplicate				Run: MANTECH_120720B			07/20/12 20:06	
Alkalinity, Total as CaCO3		315	mg/L	5.0				1.1	10	
Bicarbonate as HCO3		384	mg/L	5.0				1.1	10	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 09/07/12

Project: Zone-3 **Work Order:** C12070713

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C									Batch: TDS120720B	
Sample ID: MB-1_120720B		Method Blank				Run: BAL-1_120720D			07/20/12 16:41	
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	4						
Sample ID: LCS-2_120720B		Laboratory Control Sample				Run: BAL-1_120720D			07/20/12 16:42	
Solids, Total Dissolved TDS @ 180 C		1130	mg/L	10	102	90	110			
Sample ID: C12070710-002A MS		Sample Matrix Spike				Run: BAL-1_120720D			07/20/12 16:42	
Solids, Total Dissolved TDS @ 180 C		8940	mg/L	10	100	90	110			
Sample ID: C12070717-001A DUP		Sample Duplicate				Run: BAL-1_120720D			07/20/12 16:44	
Solids, Total Dissolved TDS @ 180 C		9300	mg/L	10				2.0	5	
Method: A2540 C									Batch: TDS120723A	
Sample ID: MB-1_120723A		Method Blank				Run: BAL-1_120723A			07/23/12 08:22	
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	4						
Sample ID: LCS-2_120723A		Laboratory Control Sample				Run: BAL-1_120723A			07/23/12 08:22	
Solids, Total Dissolved TDS @ 180 C		1100	mg/L	10	99	90	110			
Sample ID: C12070741-007A MS		Sample Matrix Spike				Run: BAL-1_120723A			07/23/12 09:20	
Solids, Total Dissolved TDS @ 180 C		7300	mg/L	10	102	90	110			
Sample ID: C12070713-005A DUP		Sample Duplicate				Run: BAL-1_120723A			07/23/12 09:27	
Solids, Total Dissolved TDS @ 180 C		4800	mg/L	10				1.0	5	
Sample ID: C12070713-015A DUP		Sample Duplicate				Run: BAL-1_120723A			07/23/12 09:30	
Solids, Total Dissolved TDS @ 180 C		3880	mg/L	10				1.3	5	
Sample ID: C12070713-016A MS		Sample Matrix Spike				Run: BAL-1_120723A			07/23/12 09:31	
Solids, Total Dissolved TDS @ 180 C		10200	mg/L	10	91	90	110			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3

Report Date: 09/07/12
Work Order: C12070713

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A3114 B								Analytical Run: CVAA-C202_120726B		
Sample ID: ICV		Initial Calibration Verification Standard							07/26/12 15:54	
Selenium-IV		0.0264	mg/L	0.0010	106	90	110			
Method: A3114 B									Batch: 34469	
Sample ID: MB-34469		Method Blank				Run: CVAA-C202_120726B			07/26/12 17:35	
Selenium-IV		ND	mg/L	0.0005						
Sample ID: LCS-34469		Laboratory Control Sample				Run: CVAA-C202_120726B			07/26/12 17:37	
Selenium-IV		0.0226	mg/L	0.0010	90	90	110			
Sample ID: C12070713-001CMS		Sample Matrix Spike				Run: CVAA-C202_120726B			07/26/12 17:41	
Selenium-IV		0.0181	mg/L	0.0010	72	85	115			S
Sample ID: C12070713-001CMSD		Sample Matrix Spike Duplicate				Run: CVAA-C202_120726B			07/26/12 17:43	
Selenium-IV		0.0166	mg/L	0.0010	67	85	115	8.6	10	S
Sample ID: C12070713-008CMS		Sample Matrix Spike				Run: CVAA-C202_120726B			07/26/12 18:02	
Selenium-IV		0.0199	mg/L	0.0010	72	85	115			S
Sample ID: C12070713-008CMSD		Sample Matrix Spike Duplicate				Run: CVAA-C202_120726B			07/26/12 18:04	
Selenium-IV		0.0231	mg/L	0.0010	85	85	115	15	10	R

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
S - Spike recovery outside of advisory limits.
ND - Not detected at the reporting limit.
R - RPD exceeds advisory limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 09/07/12

Project: Zone-3 **Work Order:** C12070713

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-H B								Analytical Run: PHSC_101-C_120723A		
Sample ID: pH 6.86		Initial Calibration Verification Standard							07/23/12 08:58	
pH		6.85	s.u.	0.010	100	98	102			
Sample ID: pH 6.86		Initial Calibration Verification Standard							07/23/12 11:47	
pH		6.85	s.u.	0.010	100	98	102			
Sample ID: pH 6.86		Initial Calibration Verification Standard							07/23/12 15:21	
pH		6.84	s.u.	0.010	100	98	102			
Method: A4500-H B									Batch: R162194	
Sample ID: C12070713-001ADUP		Sample Duplicate				Run: PHSC_101-C_120723A			07/23/12 09:46	
pH		3.17	s.u.	0.010				0.0	3	
Sample ID: C12070713-011ADUP		Sample Duplicate				Run: PHSC_101-C_120723A			07/23/12 10:16	
pH		7.51	s.u.	0.010				0.1	3	
Sample ID: C12070713-021ADUP		Sample Duplicate				Run: PHSC_101-C_120723A			07/23/12 10:55	
pH		6.76	s.u.	0.010				0.1	3	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3

Report Date: 09/07/12
Work Order: C12070713

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-NH3 G										Batch: R162472
Sample ID: MBLK-1	Method Blank					Run: TECHNICON_120728A			07/28/12 14:38	
Nitrogen, Ammonia as N		ND	mg/L	0.02						
Sample ID: LCS-2	Laboratory Control Sample					Run: TECHNICON_120728A			07/28/12 14:40	
Nitrogen, Ammonia as N		2.02	mg/L	0.050	101	90	110			
Sample ID: LFB-3	Laboratory Fortified Blank					Run: TECHNICON_120728A			07/28/12 14:42	
Nitrogen, Ammonia as N		2.04	mg/L	0.050	104	80	120			
Sample ID: C12070713-001DMS	Sample Matrix Spike					Run: TECHNICON_120728A			07/28/12 15:10	
Nitrogen, Ammonia as N		31.3	mg/L	0.50	106	90	110			
Sample ID: C12070713-001DMSD	Sample Matrix Spike Duplicate					Run: TECHNICON_120728A			07/28/12 15:12	
Nitrogen, Ammonia as N		31.5	mg/L	0.50	107	90	110	0.6	10	
Sample ID: C12070713-013DMS	Sample Matrix Spike					Run: TECHNICON_120728A			07/28/12 15:46	
Nitrogen, Ammonia as N		4.27	mg/L	0.050	112	90	110			S
- Matrix spike recoveries outside the acceptance range are considered matrix-related.										
Sample ID: C12070713-013DMSD	Sample Matrix Spike Duplicate					Run: TECHNICON_120728A			07/28/12 15:48	
Nitrogen, Ammonia as N		4.27	mg/L	0.050	112	90	110	0.0	10	S
- Matrix spike recoveries outside the acceptance range are considered matrix-related.										

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.
S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 09/07/12

Project: Zone-3 **Work Order:** C12070713

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E1632AM									Analytical Run: SUB-H81966	
Sample ID: AS-ICV 25ppb-8/1/201		Initial Calibration Verification Standard							08/01/12 13:57	
Arsenic-III		24.4	ug/L	5.0	98	87.6	114			
Method: E1632AM									Batch: H_R81966	
Sample ID: ICB		Method Blank				Run: SUB-H81966			08/01/12 14:20	
Arsenic-III		ND	ug/L	2						
Sample ID: AS-LFB 50ppb-8/1/20		Laboratory Fortified Blank				Run: SUB-H81966			08/01/12 14:28	
Arsenic-III		45.1	ug/L	5.0	90	55	146			
Sample ID: C12070713-012E		Sample Matrix Spike				Run: SUB-H81966			08/01/12 23:07	
Arsenic-III		51.4	ug/L	5.0	103	55	146			
Sample ID: C12070713-012E		Sample Matrix Spike Duplicate				Run: SUB-H81966			08/01/12 23:15	
Arsenic-III		51.0	ug/L	5.0	102	55	146	0.7	20	
Sample ID: C12070713-002E		Sample Matrix Spike				Run: SUB-H81966			08/01/12 21:02	
Arsenic-III		49.8	ug/L	5.0	100	55	146			
Sample ID: C12070713-002E		Sample Matrix Spike Duplicate				Run: SUB-H81966			08/01/12 21:10	
Arsenic-III		50.0	ug/L	5.0	100	55	146	0.4	20	
Method: E1632AM									Analytical Run: SUB-H81970	
Sample ID: AS-ICV 25ppb-8/2/201		Initial Calibration Verification Standard							08/02/12 14:18	
Arsenic-III		24.2	ug/L	5.0	97	87.6	114			
Method: E1632AM									Batch: H_R81970	
Sample ID: ICB		Method Blank				Run: SUB-H81970			08/02/12 14:42	
Arsenic-III		ND	ug/L	2						
Sample ID: AS-LFB 50ppb-8/2/20		Laboratory Fortified Blank				Run: SUB-H81970			08/02/12 14:50	
Arsenic-III		45.4	ug/L	5.0	91	55	146			
Sample ID: C12070713-004E		Sample Matrix Spike				Run: SUB-H81970			08/02/12 16:02	
Arsenic-III		43.8	ug/L	5.0	83	55	146			
Sample ID: C12070713-004E		Sample Matrix Spike Duplicate				Run: SUB-H81970			08/02/12 16:09	
Arsenic-III		45.4	ug/L	5.0	86	55	146	3.6	20	
Sample ID: C12070713-012E		Sample Matrix Spike				Run: SUB-H81970			08/02/12 16:56	
Arsenic-III		42.1	ug/L	5.0	84	55	146			
Sample ID: C12070713-012E		Sample Matrix Spike Duplicate				Run: SUB-H81970			08/02/12 17:04	
Arsenic-III		42.2	ug/L	5.0	84	55	146	0.1	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 09/07/12

Project: Zone-3 **Work Order:** C12070713

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-C_120821A	
Sample ID: ICV	9	Initial Calibration Verification Standard							08/21/12 12:11	
Aluminum		4.80	mg/L	0.10	96	95	105			
Beryllium		0.514	mg/L	0.010	103	95	105			
Cadmium		0.501	mg/L	0.010	100	95	105			
Cobalt		1.00	mg/L	0.010	100	95	105			
Manganese		5.07	mg/L	0.010	101	95	105			
Molybdenum		1.00	mg/L	0.10	100	95	105			
Nickel		0.994	mg/L	0.050	99	95	105			
Uranium		5.10	mg/L	1.0	102	95	105			
Vanadium		1.04	mg/L	0.10	104	95	105			
Sample ID: ICSA	9	Interference Check Sample A							08/21/12 12:48	
Aluminum		500	mg/L	0.10	100	80	120			
Beryllium		0.000100	mg/L	0.010						
Cadmium		-0.00530	mg/L	0.010						
Cobalt		-0.00370	mg/L	0.010						
Manganese		-0.00330	mg/L	0.010						
Molybdenum		-0.0175	mg/L	0.10						
Nickel		-0.00350	mg/L	0.050						
Uranium		0.0405	mg/L	1.0						
Vanadium		0.0189	mg/L	0.10						
Sample ID: ICSAB	9	Interference Check Sample AB							08/21/12 12:52	
Aluminum		504	mg/L	0.10	101	80	120			
Beryllium		0.508	mg/L	0.010	102	80	120			
Cadmium		1.00	mg/L	0.010	100	80	120			
Cobalt		0.496	mg/L	0.010	99	80	120			
Manganese		0.504	mg/L	0.010	101	80	120			
Molybdenum		-0.0177	mg/L	0.10						
Nickel		0.970	mg/L	0.050	97	80	120			
Uranium		0.0378	mg/L	1.0						
Vanadium		0.530	mg/L	0.10	106	80	120			
Method: E200.7										Batch: 34419
Sample ID: MB-34419	9	Method Blank				Run: ICP2-C_120821A			08/21/12 14:49	
Aluminum		ND	mg/L	0.10						
Beryllium		ND	mg/L	0.0010						
Cadmium		ND	mg/L	0.0050						
Cobalt		ND	mg/L	0.010						
Manganese		ND	mg/L	0.010						
Molybdenum		ND	mg/L	0.10						
Nickel		ND	mg/L	0.050						
Uranium		ND	mg/L	0.00030						
Vanadium		ND	mg/L	0.10						

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 09/07/12

Project: Zone-3 **Work Order:** C12070713

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7										Batch: 34419
Sample ID: LCS3-34419	9	Laboratory Control Sample				Run: ICP2-C_120821A				08/21/12 15:05
Aluminum		2.43	mg/L	0.030	97	85	115			
Beryllium		0.252	mg/L	0.0010	101	85	115			
Cadmium		0.254	mg/L	0.0010	102	85	115			
Cobalt		0.494	mg/L	0.0050	99	85	115			
Manganese		2.51	mg/L	0.0010	101	85	115			
Molybdenum		0.492	mg/L	0.0023	98	85	115			
Nickel		0.494	mg/L	0.0050	99	85	115			
Uranium		0.518	mg/L	0.25	104	85	115			
Vanadium		0.509	mg/L	0.014	102	85	115			
Sample ID: C12070720-002AMS3	9	Sample Matrix Spike				Run: ICP2-C_120821A				08/21/12 15:17
Aluminum		2.48	mg/L	0.030	98	70	130			
Beryllium		0.253	mg/L	0.0010	101	70	130			
Cadmium		0.254	mg/L	0.0010	102	70	130			
Cobalt		0.498	mg/L	0.0050	100	70	130			
Manganese		2.54	mg/L	0.0010	102	70	130			
Molybdenum		0.496	mg/L	0.0023	99	70	130			
Nickel		0.492	mg/L	0.0050	98	70	130			
Uranium		0.517	mg/L	0.25	103	70	130			
Vanadium		0.514	mg/L	0.014	103	70	130			
Sample ID: C12070720-002AMSD	9	Sample Matrix Spike Duplicate				Run: ICP2-C_120821A				08/21/12 15:21
Aluminum		2.43	mg/L	0.030	96	70	130	1.9	20	
Beryllium		0.249	mg/L	0.0010	100	70	130	1.5	20	
Cadmium		0.251	mg/L	0.0010	101	70	130	1.2	20	
Cobalt		0.488	mg/L	0.0050	98	70	130	1.9	20	
Manganese		2.51	mg/L	0.0010	100	70	130	1.3	20	
Molybdenum		0.492	mg/L	0.0023	98	70	130	0.8	20	
Nickel		0.484	mg/L	0.0050	97	70	130	1.6	20	
Uranium		0.511	mg/L	0.25	102	70	130	1.2	20	
Vanadium		0.509	mg/L	0.014	102	70	130	1.0	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 09/07/12

Project: Zone-3 **Work Order:** C12070713

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP4-C_120806A	
Sample ID: ICV	4	Initial Calibration Verification Standard							08/06/12 11:47	
Calcium		50.2	mg/L	0.50	100	95	105			
Magnesium		49.9	mg/L	0.50	100	95	105			
Potassium		50.0	mg/L	0.50	100	95	105			
Sodium		51.0	mg/L	0.50	102	95	105			
Sample ID: ICSA	4	Interference Check Sample A							08/06/12 12:01	
Calcium		454	mg/L	0.50	91	80	120			
Magnesium		512	mg/L	0.50	102	80	120			
Potassium		-0.00507	mg/L	0.50						
Sodium		0.344	mg/L	0.50						
Sample ID: ICSAB	4	Interference Check Sample AB							08/06/12 13:35	
Calcium		453	mg/L	0.50	91	80	120			
Magnesium		517	mg/L	0.50	103	80	120			
Potassium		-0.0156	mg/L	0.50						
Sodium		0.343	mg/L	0.50						
Method: E200.7									Batch: R162898	
Sample ID: MB-120806A	4	Method Blank				Run: ICP4-C_120806A			08/06/12 13:39	
Calcium		ND	mg/L	0.02						
Magnesium		ND	mg/L	0.01						
Potassium		ND	mg/L	0.04						
Sodium		ND	mg/L	0.2						
Sample ID: LFB-120806A	4	Laboratory Fortified Blank				Run: ICP4-C_120806A			08/06/12 13:43	
Calcium		49.0	mg/L	0.50	98	85	115			
Magnesium		49.4	mg/L	0.50	99	85	115			
Potassium		48.4	mg/L	0.50	97	85	115			
Sodium		48.8	mg/L	0.50	98	85	115			
Sample ID: C12070713-006BMS2	4	Sample Matrix Spike				Run: ICP4-C_120806A			08/06/12 16:00	
Calcium		721	mg/L	1.0	79	70	130			
Magnesium		902	mg/L	1.0	80	70	130			
Potassium		271	mg/L	1.0	100	70	130			
Sodium		398	mg/L	1.0	91	70	130			
Sample ID: C12070713-006BMSD	4	Sample Matrix Spike Duplicate				Run: ICP4-C_120806A			08/06/12 16:04	
Calcium		722	mg/L	1.0	80	70	130	0.2	20	
Magnesium		901	mg/L	1.0	79	70	130	0.1	20	
Potassium		277	mg/L	1.0	102	70	130	2.2	20	
Sodium		401	mg/L	1.0	92	70	130	0.6	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 09/07/12

Project: Zone-3 **Work Order:** C12070713

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP4-C_120807A	
Sample ID: ICV	4	Initial Calibration Verification Standard							08/07/12 15:32	
Cadmium		0.474	mg/L	0.010	95	95	105			
Manganese		4.77	mg/L	0.010	95	95	105			
Molybdenum		0.964	mg/L	0.10	96	95	105			
Nickel		0.965	mg/L	0.050	96	95	105			
Sample ID: ICSA	4	Interference Check Sample A							08/07/12 15:46	
Cadmium		0.00523	mg/L	0.010						
Manganese		-0.00752	mg/L	0.010						
Molybdenum		0.00875	mg/L	0.10						
Nickel		-0.000900	mg/L	0.050						
Sample ID: ICSAB	4	Interference Check Sample AB							08/07/12 15:50	
Cadmium		0.847	mg/L	0.010	85	80	120			
Manganese		0.432	mg/L	0.010	86	80	120			
Molybdenum		0.00745	mg/L	0.10						
Nickel		0.866	mg/L	0.050	87	80	120			
Method: E200.7										Batch: 34419
Sample ID: MB-34419	4	Method Blank				Run: ICP4-C_120807A			08/07/12 17:15	
Cadmium		ND	mg/L	0.0003						
Manganese		ND	mg/L	0.0002						
Molybdenum		ND	mg/L	0.003						
Nickel		ND	mg/L	0.001						
Sample ID: LCS3-34419	4	Laboratory Control Sample				Run: ICP4-C_120807A			08/07/12 17:29	
Cadmium		0.244	mg/L	0.0010	98	85	115			
Manganese		2.49	mg/L	0.0010	99	85	115			
Molybdenum		0.496	mg/L	0.0028	99	85	115			
Nickel		0.497	mg/L	0.0050	99	85	115			
Sample ID: C12070720-002AMS3	4	Sample Matrix Spike				Run: ICP4-C_120807A			08/07/12 17:56	
Cadmium		0.255	mg/L	0.0010	102	70	130			
Manganese		2.74	mg/L	0.0010	109	70	130			
Molybdenum		0.556	mg/L	0.0028	111	70	130			
Nickel		0.535	mg/L	0.0050	107	70	130			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 09/07/12

Project: Zone-3 **Work Order:** C12070713

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP4-C_120809A	
Sample ID: ICV	2	Initial Calibration Verification Standard							08/09/12 15:40	
Calcium		51.0	mg/L	0.50	102	95	105			
Magnesium		50.9	mg/L	0.50	102	95	105			
Sample ID: ICSA	2	Interference Check Sample A							08/09/12 15:54	
Calcium		461	mg/L	0.50	92	80	120			
Magnesium		513	mg/L	0.50	103	80	120			
Sample ID: ICSAB	2	Interference Check Sample AB							08/09/12 15:58	
Calcium		461	mg/L	0.50	92	80	120			
Magnesium		512	mg/L	0.50	102	80	120			
Method: E200.7									Batch: R163074	
Sample ID: MB-120809A	2	Method Blank				Run: ICP4-C_120809A			08/09/12 16:02	
Calcium		ND	mg/L	0.02						
Magnesium		ND	mg/L	0.01						
Sample ID: LFB-120809A	2	Laboratory Fortified Blank				Run: ICP4-C_120809A			08/09/12 16:06	
Calcium		49.2	mg/L	0.50	98	85	115			
Magnesium		48.5	mg/L	0.50	97	85	115			
Sample ID: C12070713-001BMS2	2	Sample Matrix Spike				Run: ICP4-C_120809A			08/09/12 17:09	
Calcium		729	mg/L	1.0	92	70	130			
Magnesium		770	mg/L	1.0	95	70	130			
Sample ID: C12070713-001BMSD	2	Sample Matrix Spike Duplicate				Run: ICP4-C_120809A			08/09/12 17:12	
Calcium		685	mg/L	1.0	75	70	130	6.3	20	
Magnesium		730	mg/L	1.0	80	70	130	5.3	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 09/07/12

Project: Zone-3 **Work Order:** C12070713

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP4-C_120810A	
Sample ID: ICV	4	Initial Calibration Verification Standard							08/10/12 13:30	
Calcium		49.3	mg/L	0.50	99	95	105			
Magnesium		49.5	mg/L	0.50	99	95	105			
Potassium		48.0	mg/L	0.50	96	95	105			
Sodium		49.3	mg/L	0.50	99	95	105			
Sample ID: ICSA	4	Interference Check Sample A							08/10/12 13:44	
Calcium		443	mg/L	0.50	89	80	120			
Magnesium		502	mg/L	0.50	100	80	120			
Potassium		-0.0346	mg/L	0.50						
Sodium		0.126	mg/L	0.50						
Sample ID: ICSAB	4	Interference Check Sample AB							08/10/12 13:48	
Calcium		445	mg/L	0.50	89	80	120			
Magnesium		501	mg/L	0.50	100	80	120			
Potassium		-0.00799	mg/L	0.50						
Sodium		0.240	mg/L	0.50						
Method: E200.7									Batch: R163141	
Sample ID: MB-120810A	4	Method Blank				Run: ICP4-C_120810A			08/10/12 13:52	
Calcium		ND	mg/L	0.02						
Magnesium		ND	mg/L	0.01						
Potassium		ND	mg/L	0.04						
Sodium		ND	mg/L	0.2						
Sample ID: LFB-120810A	4	Laboratory Fortified Blank				Run: ICP4-C_120810A			08/10/12 13:56	
Calcium		46.8	mg/L	0.50	94	85	115			
Magnesium		46.4	mg/L	0.50	93	85	115			
Potassium		44.3	mg/L	0.50	89	85	115			
Sodium		44.9	mg/L	0.50	90	85	115			
Sample ID: C12070710-005CMS2	4	Sample Matrix Spike				Run: ICP4-C_120810A			08/10/12 14:58	
Calcium		393	mg/L	1.0		70	130			A
Magnesium		212	mg/L	1.0	89	70	130			
Potassium		57.0	mg/L	1.0	97	70	130			
Sodium		250	mg/L	1.0		70	130			A
Sample ID: C12070710-005CMSD	4	Sample Matrix Spike Duplicate				Run: ICP4-C_120810A			08/10/12 15:02	
Calcium		395	mg/L	1.0		70	130	0.6	20	A
Magnesium		221	mg/L	1.0	108	70	130	4.5	20	
Potassium		58.9	mg/L	1.0	101	70	130	3.3	20	
Sodium		260	mg/L	1.0		70	130	4.0	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

MDC - Minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 09/07/12

Project: Zone-3 **Work Order:** C12070713

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP4-C_120813A	
Sample ID: ICV	3	Initial Calibration Verification Standard							08/13/12 15:03	
Aluminum		5.01	mg/L	0.10	100	95	105			
Potassium		50.6	mg/L	0.50	101	95	105			
Sodium		51.4	mg/L	0.50	103	95	105			
Sample ID: ICSA	3	Interference Check Sample A							08/13/12 15:17	
Aluminum		486	mg/L	0.10	97	80	120			
Potassium		-0.0197	mg/L	0.50						
Sodium		0.203	mg/L	0.50						
Sample ID: ICSAB	3	Interference Check Sample AB							08/13/12 15:21	
Aluminum		488	mg/L	0.10	98	80	120			
Potassium		-0.0132	mg/L	0.50						
Sodium		0.380	mg/L	0.50						
Method: E200.7									Batch: R163199	
Sample ID: MB-120813A	3	Method Blank				Run: ICP4-C_120813A			08/13/12 15:25	
Aluminum		0.02	mg/L	0.009						
Potassium		ND	mg/L	0.04						
Sodium		ND	mg/L	0.2						
Sample ID: LFB-120813A	3	Laboratory Fortified Blank				Run: ICP4-C_120813A			08/13/12 15:29	
Aluminum		0.967	mg/L	0.10	94	85	115			
Potassium		49.3	mg/L	0.50	99	85	115			
Sodium		49.2	mg/L	0.50	98	85	115			
Sample ID: C12070713-008CMS2	3	Sample Matrix Spike				Run: ICP4-C_120813A			08/13/12 16:31	
Aluminum		151	mg/L	0.12		70	130			A
Potassium		644	mg/L	5.7	123	70	130			
Sodium		798	mg/L	8.9	117	70	130			
Sample ID: C12070713-008CMSD	3	Sample Matrix Spike Duplicate				Run: ICP4-C_120813A			08/13/12 16:34	
Aluminum		144	mg/L	0.12		70	130	5.1	20	A
Potassium		596	mg/L	5.7	114	70	130	7.8	20	
Sodium		758	mg/L	8.9	109	70	130	5.2	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

MDC - Minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 09/07/12

Project: Zone-3 **Work Order:** C12070713

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS4-C_120810A	
Sample ID: ICV	14	Initial Calibration Verification Standard							08/10/12 14:41	
Aluminum		0.0520	mg/L	0.0010	104	90	110			
Beryllium		0.0500	mg/L	0.0010	100	90	110			
Cadmium		0.0514	mg/L	0.0010	103	90	110			
Calcium		10.1	mg/L	0.0066	101	90	110			
Cobalt		0.0525	mg/L	0.0010	105	90	110			
Lead		0.0506	mg/L	0.0010	101	90	110			
Magnesium		9.87	mg/L	0.0027	99	90	110			
Manganese		0.0507	mg/L	0.0010	101	90	110			
Molybdenum		0.0472	mg/L	0.0010	94	90	110			
Nickel		0.0517	mg/L	0.0010	103	90	110			
Potassium		9.83	mg/L	0.0041	98	90	110			
Sodium		9.77	mg/L	0.0043	98	90	110			
Uranium		0.0515	mg/L	0.00030	103	90	110			
Vanadium		0.0482	mg/L	0.0010	97	90	110			
Method: E200.8									Batch: 34419	
Sample ID: MB-34419	6	Method Blank				Run: ICPMS4-C_120810A			08/10/12 22:35	
Aluminum		0.002	mg/L	0.001						
Beryllium		ND	mg/L	5E-05						
Cobalt		ND	mg/L	4E-05						
Lead		3E-05	mg/L	1E-05						
Uranium		2E-05	mg/L	8E-06						
Vanadium		0.008	mg/L	8E-05						
Sample ID: LCS3-34419	6	Laboratory Control Sample				Run: ICPMS4-C_120810A			08/10/12 22:40	
Aluminum		2.22	mg/L	0.030	89	85	115			
Beryllium		0.227	mg/L	0.0010	91	85	115			
Cobalt		0.486	mg/L	0.0050	97	85	115			
Lead		0.502	mg/L	0.0010	100	85	115			
Uranium		0.501	mg/L	0.00030	100	85	115			
Vanadium		0.489	mg/L	0.010	96	85	115			
Sample ID: C12070720-002AMS3	6	Sample Matrix Spike				Run: ICPMS4-C_120810A			08/10/12 23:33	
Aluminum		2.16	mg/L	0.030	86	70	130			
Beryllium		0.216	mg/L	0.0010	86	70	130			
Cobalt		0.480	mg/L	0.0050	96	70	130			
Lead		0.508	mg/L	0.0010	101	70	130			
Uranium		0.518	mg/L	0.00030	104	70	130			
Vanadium		0.494	mg/L	0.010	97	70	130			
Sample ID: C12070720-002AMSD	6	Sample Matrix Spike Duplicate				Run: ICPMS4-C_120810A			08/10/12 23:37	
Aluminum		2.24	mg/L	0.030	88	70	130	3.2	20	
Beryllium		0.226	mg/L	0.0010	90	70	130	4.3	20	
Cobalt		0.484	mg/L	0.0050	97	70	130	0.9	20	
Lead		0.511	mg/L	0.0010	102	70	130	0.6	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 09/07/12

Project: Zone-3 **Work Order:** C12070713

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8										Batch: 34419
Sample ID: C12070720-002AMSD	6	Sample Matrix Spike Duplicate				Run: ICPMS4-C_120810A				08/10/12 23:37
Uranium		0.524	mg/L	0.00030	105	70	130	1.0	20	
Vanadium		0.499	mg/L	0.010	98	70	130	1.0	20	
Method: E200.8										Batch: R163136
Sample ID: LRB	14	Method Blank				Run: ICPMS4-C_120810A				08/10/12 15:17
Aluminum		ND	mg/L	0.0002						
Beryllium		ND	mg/L	2E-05						
Cadmium		ND	mg/L	3E-05						
Calcium		ND	mg/L	0.007						
Cobalt		ND	mg/L	3E-05						
Lead		ND	mg/L	2E-05						
Magnesium		ND	mg/L	0.003						
Manganese		ND	mg/L	3E-05						
Molybdenum		ND	mg/L	3E-05						
Nickel		ND	mg/L	9E-05						
Potassium		0.009	mg/L	0.004						
Sodium		0.008	mg/L	0.004						
Uranium		0.0001	mg/L	9E-06						
Vanadium		ND	mg/L	4E-05						
Sample ID: LFB	14	Laboratory Fortified Blank				Run: ICPMS4-C_120810A				08/10/12 15:22
Aluminum		0.0553	mg/L	0.0010	111	85	115			
Beryllium		0.0513	mg/L	0.0010	103	85	115			
Cadmium		0.0524	mg/L	0.0010	105	85	115			
Calcium		13.2	mg/L	0.0066	105	85	115			
Cobalt		0.0543	mg/L	0.0010	109	85	115			
Lead		0.0528	mg/L	0.0010	106	85	115			
Magnesium		12.9	mg/L	0.0027	103	85	115			
Manganese		0.0531	mg/L	0.0010	106	85	115			
Molybdenum		0.0482	mg/L	0.0010	96	85	115			
Nickel		0.0533	mg/L	0.0010	107	85	115			
Potassium		13.0	mg/L	0.0041	104	85	115			
Sodium		12.7	mg/L	0.0043	101	85	115			
Uranium		0.0534	mg/L	0.00030	107	85	115			
Vanadium		0.0501	mg/L	0.0010	100	85	115			
Sample ID: C12070746-002AMS4	14	Sample Matrix Spike				Run: ICPMS4-C_120810A				08/10/12 21:32
Aluminum		0.0494	mg/L	0.030	95	70	130			
Beryllium		0.0416	mg/L	0.0010	83	70	130			
Cadmium		0.0477	mg/L	0.0010	95	70	130			
Calcium		152	mg/L	1.0		70	130			A
Cobalt		0.0512	mg/L	0.0050	102	70	130			
Lead		0.0492	mg/L	0.0010	98	70	130			
Magnesium		65.1	mg/L	1.0		70	130			A
Manganese		0.0963	mg/L	0.0010	103	70	130			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

MDC - Minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 09/07/12

Project: Zone-3 **Work Order:** C12070713

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8										Batch: R163136
Sample ID: C12070746-002AMS4	14	Sample Matrix Spike				Run: ICPMS4-C_120810A			08/10/12 21:32	
Molybdenum		0.0958	mg/L	0.0010	101	70	130			
Nickel		0.0507	mg/L	0.0050	99	70	130			
Potassium		18.7	mg/L	1.0	101	70	130			
Sodium		93.8	mg/L	1.0		70	130			A
Uranium		0.430	mg/L	0.00030		70	130			A
Vanadium		0.0500	mg/L	0.010	99	70	130			
Sample ID: C12070746-002AMSD	14	Sample Matrix Spike Duplicate				Run: ICPMS4-C_120810A			08/10/12 21:37	
Aluminum		0.0508	mg/L	0.030	97	70	130	2.8	20	
Beryllium		0.0415	mg/L	0.0010	83	70	130	0.2	20	
Cadmium		0.0477	mg/L	0.0010	95	70	130	0.2	20	
Calcium		154	mg/L	1.0		70	130	1.8	20	A
Cobalt		0.0517	mg/L	0.0050	103	70	130	1.0	20	
Lead		0.0512	mg/L	0.0010	102	70	130	3.9	20	
Magnesium		65.5	mg/L	1.0		70	130	0.6	20	A
Manganese		0.0975	mg/L	0.0010	105	70	130	1.2	20	
Molybdenum		0.0963	mg/L	0.0010	102	70	130	0.5	20	
Nickel		0.0512	mg/L	0.0050	100	70	130	1.0	20	
Potassium		19.0	mg/L	1.0	103	70	130	1.4	20	
Sodium		95.4	mg/L	1.0		70	130	1.7	20	A
Uranium		0.432	mg/L	0.00030		70	130	0.7	20	A
Vanadium		0.0507	mg/L	0.010	101	70	130	1.5	20	
Method: E200.8										Analytical Run: ICPMS4-C_120814A
Sample ID: ICV		Initial Calibration Verification Standard								08/14/12 11:51
Beryllium		0.0519	mg/L	0.0010	104	90	110			
Method: E200.8										Batch: 34419
Sample ID: MB-34419		Method Blank				Run: ICPMS4-C_120814A			08/15/12 09:22	
Beryllium		ND	mg/L	5E-05						
Sample ID: LCS3-34419		Laboratory Control Sample				Run: ICPMS4-C_120814A			08/15/12 09:26	
Beryllium		0.238	mg/L	0.0010	95	85	115			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

MDC - Minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3

Report Date: 09/07/12
Work Order: C12070713

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS4-C_120817A	
Sample ID: ICV		Initial Calibration Verification Standard							08/17/12 10:08	
Beryllium		0.0495	mg/L	0.0010	99	90	110			
Method: E200.8									Batch: R163446	
Sample ID: LRB		Method Blank				Run: ICPMS4-C_120817A			08/17/12 11:52	
Beryllium		ND	mg/L	2E-05						
Sample ID: LFB		Laboratory Fortified Blank				Run: ICPMS4-C_120817A			08/17/12 11:56	
Beryllium		0.0515	mg/L	0.0010	103	85	115			
Sample ID: C12070544-001AMS		Sample Matrix Spike				Run: ICPMS4-C_120817A			08/17/12 16:44	
Beryllium		0.0476	mg/L	0.0010	95	70	130			
Sample ID: C12070544-001AMSD		Sample Matrix Spike Duplicate				Run: ICPMS4-C_120817A			08/17/12 17:06	
Beryllium		0.0484	mg/L	0.0010	97	70	130	1.5	20	
Sample ID: C12070544-001AMS4		Sample Matrix Spike				Run: ICPMS4-C_120817A			08/17/12 16:44	
Beryllium		0.0476	mg/L	0.0010	95	70	130			
Sample ID: C12070544-001AMSD		Sample Matrix Spike Duplicate				Run: ICPMS4-C_120817A			08/17/12 17:06	
Beryllium		0.0484	mg/L	0.0010	97	70	130	1.5	20	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 09/07/12

Project: Zone-3 **Work Order:** C12070713

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0									Analytical Run: IC1-C_120723A	
Sample ID: ICV-072312-10	2	Initial Calibration Verification Standard							07/23/12 18:10	
Chloride		10.3	mg/L	1.0	103	90	110			
Sulfate		40.6	mg/L	1.0	102	90	110			
Sample ID: ICBD-072312-12	2	Initial Calibration Blank, Instrument Blank							07/23/12 18:45	
Chloride		0.0210	mg/L	1.0		0	0			
Sulfate		0.0830	mg/L	1.0		0	0			
Method: E300.0									Batch: R162333	
Sample ID: ICB-072312-11	2	Method Blank				Run: IC1-C_120723A			07/23/12 18:27	
Chloride		ND	mg/L	0.04						
Sulfate		ND	mg/L	0.1						
Sample ID: LFB-072312-13	2	Laboratory Fortified Blank				Run: IC1-C_120723A			07/23/12 19:02	
Chloride		10.0	mg/L	1.0	100	90	110			
Sulfate		40.6	mg/L	1.0	101	90	110			
Sample ID: LFBD-072312-14	2	Laboratory Fortified Blank Duplicate				Run: IC1-C_120723A			07/23/12 19:20	
Chloride		10.2	mg/L	1.0	102	90	110	1.9	10	
Sulfate		43.1	mg/L	1.0	108	90	110	5.9	10	
Sample ID: C12070713-001AMS	2	Sample Matrix Spike				Run: IC1-C_120723A			07/24/12 12:27	
Chloride		251	mg/L	4.2	103	90	110			
Sulfate		4730	mg/L	17		90	110			A
Sample ID: C12070713-001AMSD	2	Sample Matrix Spike Duplicate				Run: IC1-C_120723A			07/24/12 12:44	
Chloride		249	mg/L	4.2	102	90	110	1.0	10	
Sulfate		4690	mg/L	17		90	110	0.9	10	A
Sample ID: C12070713-012AMS	2	Sample Matrix Spike				Run: IC1-C_120723A			07/24/12 16:48	
Chloride		325	mg/L	4.2	101	90	110			
Sulfate		5660	mg/L	17		90	110			A
Sample ID: C12070713-012AMSD	2	Sample Matrix Spike Duplicate				Run: IC1-C_120723A			07/24/12 17:05	
Chloride		326	mg/L	4.2	102	90	110	0.1	10	
Sulfate		5660	mg/L	17		90	110	0.1	10	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

MDC - Minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 09/07/12

Project: Zone-3 **Work Order:** C12070713

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0									Analytical Run: IC1-C_120725A	
Sample ID: ICV-072512-10		Initial Calibration Verification Standard							07/25/12 15:04	
Sulfate		40.3	mg/L	1.0	101	90	110			
Method: E300.0									Batch: R162404	
Sample ID: ICB-072512-11		Method Blank				Run: IC1-C_120725A			07/25/12 15:22	
Sulfate		0.1	mg/L	0.1						
Sample ID: LFB-072512-13		Laboratory Fortified Blank				Run: IC1-C_120725A			07/25/12 15:57	
Sulfate		40.1	mg/L	1.0	100	90	110			
Sample ID: LFBD-072512-14		Laboratory Fortified Blank Duplicate				Run: IC1-C_120725A			07/25/12 16:14	
Sulfate		40.9	mg/L	1.0	102	90	110			
Sample ID: C12070713-013AMS		Sample Matrix Spike				Run: IC1-C_120725A			07/25/12 20:53	
Sulfate		3220	mg/L	17	104	90	110			
Sample ID: C12070713-013AMSD		Sample Matrix Spike Duplicate				Run: IC1-C_120725A			07/25/12 21:10	
Sulfate		3210	mg/L	17	102	90	110	0.4	10	
Sample ID: LFB-072612-71		Laboratory Fortified Blank				Run: IC1-C_120725A			07/26/12 08:46	
Sulfate		40.5	mg/L	1.0	101	90	110			
Method: E300.0									Analytical Run: IC2-C_120723A	
Sample ID: ICV-072312-10		Initial Calibration Verification Standard							07/23/12 22:30	
Chloride		10.4	mg/L	1.0	104	90	110			
Method: E300.0									Batch: R162341	
Sample ID: ICB-072312-11		Method Blank				Run: IC2-C_120723A			07/23/12 22:47	
Chloride		ND	mg/L	0.03						
Sample ID: LFB-072312-12		Laboratory Fortified Blank				Run: IC2-C_120723A			07/23/12 23:05	
Chloride		10.3	mg/L	1.0	103	90	110			
Sample ID: C12070713-013AMS		Sample Matrix Spike				Run: IC2-C_120723A			07/23/12 23:39	
Chloride		148	mg/L	2.1	107	90	110			
Sample ID: C12070713-013AMSD		Sample Matrix Spike Duplicate				Run: IC2-C_120723A			07/23/12 23:57	
Chloride		148	mg/L	2.1	106	90	110	0.4	10	
Sample ID: C12070713-023AMS		Sample Matrix Spike				Run: IC2-C_120723A			07/24/12 03:43	
Chloride		238	mg/L	4.2	103	90	110			
Sample ID: C12070713-023AMSD		Sample Matrix Spike Duplicate				Run: IC2-C_120723A			07/24/12 04:01	
Chloride		238	mg/L	4.2	103	90	110	0.1	10	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 09/07/12

Project: Zone-3 **Work Order:** C12070713

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E353.2										Batch: R162313
Sample ID: MBLK-1		Method Blank				Run: TECHNICON_120724A				07/24/12 16:06
Nitrogen, Nitrate+Nitrite as N		ND	mg/L	0.06						
Sample ID: LCS-2		Laboratory Control Sample				Run: TECHNICON_120724A				07/24/12 16:08
Nitrogen, Nitrate+Nitrite as N		2.44	mg/L	0.10	98	90	110			
Sample ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_120724A				07/24/12 16:11
Nitrogen, Nitrate+Nitrite as N		2.07	mg/L	0.10	106	90	110			
Sample ID: C12070710-001DMS		Sample Matrix Spike				Run: TECHNICON_120724A				07/24/12 16:16
Nitrogen, Nitrate+Nitrite as N		2.02	mg/L	0.10	103	90	110			
Sample ID: C12070710-001DMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_120724A				07/24/12 16:18
Nitrogen, Nitrate+Nitrite as N		2.07	mg/L	0.10	106	90	110	2.4	10	
Method: E353.2										Batch: R162469
Sample ID: MBLK-1		Method Blank				Run: TECHNICON_120727A				07/27/12 12:26
Nitrogen, Nitrate+Nitrite as N		ND	mg/L	0.06						
Sample ID: LCS-2		Laboratory Control Sample				Run: TECHNICON_120727A				07/27/12 12:28
Nitrogen, Nitrate+Nitrite as N		2.51	mg/L	0.10	100	90	110			
Sample ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_120727A				07/27/12 12:31
Nitrogen, Nitrate+Nitrite as N		2.11	mg/L	0.10	108	90	110			
Sample ID: C12070814-001HMS		Sample Matrix Spike				Run: TECHNICON_120727A				07/27/12 13:48
Nitrogen, Nitrate+Nitrite as N		2.66	mg/L	0.10	106	90	110			
Sample ID: C12070814-001HMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_120727A				07/27/12 13:51
Nitrogen, Nitrate+Nitrite as N		2.64	mg/L	0.10	105	90	110	0.8	10	
Sample ID: C12070738-003DMS		Sample Matrix Spike				Run: TECHNICON_120727A				07/27/12 14:56
Nitrogen, Nitrate+Nitrite as N		15.2	mg/L	0.50	106	90	110			
Sample ID: C12070738-003DMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_120727A				07/27/12 14:58
Nitrogen, Nitrate+Nitrite as N		15.4	mg/L	0.50	108	90	110	1.3	10	
Sample ID: C12070803-001CMS		Sample Matrix Spike				Run: TECHNICON_120727A				07/27/12 15:41
Nitrogen, Nitrate+Nitrite as N		6.04	mg/L	0.20	106	90	110			
Sample ID: C12070803-001CMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_120727A				07/27/12 15:43
Nitrogen, Nitrate+Nitrite as N		5.94	mg/L	0.20	103	90	110	1.7	10	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 09/07/12

Project: Zone-3 **Work Order:** C12070713

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624										Batch: R162351
Sample ID: C12070535-003FMS	9	Sample Matrix Spike				Run: SATURNCA_120724D				07/24/12 19:51
Bromodichloromethane		169	ug/L	10	84	72.3	123			
Bromoform		179	ug/L	10	90	70.3	128			
Chlorodibromomethane		183	ug/L	10	92	69.1	123			
Chloroform		166	ug/L	10	83	72.9	130			
Trihalomethanes, Total		698	ug/L	10	87	75.7	121			
Surr: 1,2-Dichlorobenzene-d4				1.0	98	82	118			
Surr: Dibromofluoromethane				1.0	85	74.8	123			
Surr: p-Bromofluorobenzene				1.0	81	82.4	121			S
Surr: Toluene-d8				1.0	95	76.4	125			
Sample ID: C12070535-003FMSD	9	Sample Matrix Spike Duplicate				Run: SATURNCA_120724D				07/24/12 20:27
Bromodichloromethane		183	ug/L	10	92	72.3	123	8.2	20	
Bromoform		192	ug/L	10	96	70.3	128	6.9	20	
Chlorodibromomethane		187	ug/L	10	94	69.1	123	2.2	20	
Chloroform		172	ug/L	10	86	72.9	130	3.3	20	
Trihalomethanes, Total		734	ug/L	10	92	75.7	121	5.1	20	
Surr: 1,2-Dichlorobenzene-d4				1.0	102	82	118			
Surr: Dibromofluoromethane				1.0	85	74.8	123			
Surr: p-Bromofluorobenzene				1.0	89	82.4	121			
Surr: Toluene-d8				1.0	96	76.4	125			
Sample ID: 072412_LCS_4	9	Laboratory Control Sample				Run: SATURNCA_120724D				07/24/12 12:09
Bromodichloromethane		9.96	ug/L	1.0	100	72.3	123			
Bromoform		11.7	ug/L	1.0	117	70.3	128			
Chlorodibromomethane		10.4	ug/L	1.0	104	69.1	123			
Chloroform		9.76	ug/L	1.0	98	72.9	130			
Trihalomethanes, Total		41.8	ug/L	1.0	104	75.7	121			
Surr: 1,2-Dichlorobenzene-d4				1.0	102	82	118			
Surr: Dibromofluoromethane				1.0	91	74.8	123			
Surr: p-Bromofluorobenzene				1.0	90	82.4	121			
Surr: Toluene-d8				1.0	95	76.4	125			
Sample ID: 072412_MBLK_6	9	Method Blank				Run: SATURNCA_120724D				07/24/12 13:22
Bromodichloromethane		ND	ug/L	1.0						
Bromoform		ND	ug/L	1.0						
Chlorodibromomethane		ND	ug/L	1.0						
Chloroform		ND	ug/L	1.0						
Trihalomethanes, Total		ND	ug/L	1.0						
Surr: 1,2-Dichlorobenzene-d4				1.0	95	80	120			
Surr: Dibromofluoromethane				1.0	84	80	120			
Surr: p-Bromofluorobenzene				1.0	77	80	120			S
Surr: Toluene-d8				1.0	96	80	120			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 09/07/12

Project: Zone-3 **Work Order:** C12070713

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624									Analytical Run: R162392	
Sample ID: 072512_CCV_19	9	Continuing Calibration Verification Standard							07/25/12 21:16	
Bromodichloromethane		9.64	ug/L	1.0	96	70	130			
Bromoform		9.60	ug/L	1.0	96	70	130			
Chlorodibromomethane		11.0	ug/L	1.0	110	70	130			
Chloroform		9.44	ug/L	1.0	94	70	130			
Trihalomethanes, Total		39.7	ug/L	1.0	99	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	101	80	120			
Surr: Dibromofluoromethane				1.0	90	80	120			
Surr: p-Bromofluorobenzene				1.0	89	80	120			
Surr: Toluene-d8				1.0	93	80	120			
Method: E624									Batch: R162392	
Sample ID: 072512_LCS_4	9	Laboratory Control Sample				Run: SATURNCA_120725C			07/25/12 11:53	
Bromodichloromethane		8.60	ug/L	1.0	86	72.3	123			
Bromoform		9.16	ug/L	1.0	92	70.3	128			
Chlorodibromomethane		8.72	ug/L	1.0	87	69.1	123			
Chloroform		8.36	ug/L	1.0	84	72.9	130			
Trihalomethanes, Total		34.8	ug/L	1.0	87	75.7	121			
Surr: 1,2-Dichlorobenzene-d4				1.0	97	82	118			
Surr: Dibromofluoromethane				1.0	88	74.8	123			
Surr: p-Bromofluorobenzene				1.0	80	82.4	121			S
Surr: Toluene-d8				1.0	96	76.4	125			
Sample ID: 072512_MBLK_6	9	Method Blank				Run: SATURNCA_120725C			07/25/12 13:07	
Bromodichloromethane		ND	ug/L	1.0						
Bromoform		ND	ug/L	1.0						
Chlorodibromomethane		ND	ug/L	1.0						
Chloroform		ND	ug/L	1.0						
Trihalomethanes, Total		ND	ug/L	1.0						
Surr: 1,2-Dichlorobenzene-d4				1.0	101	80	120			
Surr: Dibromofluoromethane				1.0	90	80	120			
Surr: p-Bromofluorobenzene				1.0	84	80	120			
Surr: Toluene-d8				1.0	98	80	120			
Sample ID: C12070607-003BMS	9	Sample Matrix Spike				Run: SATURNCA_120725C			07/25/12 19:27	
Bromodichloromethane		160	ug/L	10	80	72.3	123			
Bromoform		186	ug/L	10	93	70.3	128			
Chlorodibromomethane		178	ug/L	10	89	69.1	123			
Chloroform		165	ug/L	10	82	72.9	130			
Trihalomethanes, Total		689	ug/L	10	86	75.7	121			
Surr: 1,2-Dichlorobenzene-d4				1.0	96	82	118			
Surr: Dibromofluoromethane				1.0	85	74.8	123			
Surr: p-Bromofluorobenzene				1.0	88	82.4	121			
Surr: Toluene-d8				1.0	94	76.4	125			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 09/07/12

Project: Zone-3 **Work Order:** C12070713

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624										Batch: R162392
Sample ID: C12070607-003BMSD	9	Sample Matrix Spike Duplicate				Run: SATURNCA_120725C			07/25/12 20:04	
Bromodichloromethane		175	ug/L	10	88	72.3	123	9.1	20	
Bromoform		192	ug/L	10	96	70.3	128	3.4	20	
Chlorodibromomethane		187	ug/L	10	94	69.1	123	4.8	20	
Chloroform		180	ug/L	10	90	72.9	130	8.8	20	
Trihalomethanes, Total		734	ug/L	10	92	75.7	121	6.4	20	
Surr: 1,2-Dichlorobenzene-d4				1.0	100	82	118			
Surr: Dibromofluoromethane				1.0	91	74.8	123			
Surr: p-Bromofluorobenzene				1.0	89	82.4	121			
Surr: Toluene-d8				1.0	98	76.4	125			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 09/07/12

Project: Zone-3 **Work Order:** C12070713

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E900.1										Batch: GA-0578
Sample ID: LCS-GA-0578		Laboratory Control Sample				Run: BERTHOLD 770-1_120830A				08/31/12 12:12
Gross Alpha minus Rn & U		23.1	pCi/L		112	80	120			
Sample ID: MB-GA-0578	3	Method Blank				Run: BERTHOLD 770-1_120830A				08/31/12 12:12
Gross Alpha minus Rn & U		-0.5	pCi/L							U
Gross Alpha minus Rn & U Precision (±)		0.4	pCi/L							
Gross Alpha minus Rn & U MDC		0.9	pCi/L							
Sample ID: C12081137-001FMS		Sample Matrix Spike				Run: BERTHOLD 770-1_120830A				08/31/12 13:54
Gross Alpha minus Rn & U		61.9	pCi/L		120	70	130			
Sample ID: C12081137-001FMSD		Sample Matrix Spike Duplicate				Run: BERTHOLD 770-1_120830A				08/31/12 13:54
Gross Alpha minus Rn & U		58.7	pCi/L		112	70	130	5.3	27.4	
Method: E900.1										Batch: GA-0559
Sample ID: LCS-GA-0553		Laboratory Control Sample				Run: BERTHOLD 770-2_120724C				08/01/12 17:43
Gross Alpha minus Rn & U		18.3	pCi/L		91	70	130			
Sample ID: MB-GA-0553	3	Method Blank				Run: BERTHOLD 770-2_120724C				08/01/12 17:43
Gross Alpha minus Rn & U		0.07	pCi/L							U
Gross Alpha minus Rn & U Precision (±)		0.2	pCi/L							
Gross Alpha minus Rn & U MDC		0.3	pCi/L							
Sample ID: C12070713-013GMS		Sample Matrix Spike				Run: BERTHOLD 770-2_120724C				08/01/12 22:28
Gross Alpha minus Rn & U		40.4	pCi/L		77	70	130			
Sample ID: C12070713-013GMSD		Sample Matrix Spike Duplicate				Run: BERTHOLD 770-2_120724C				08/01/12 22:28
Gross Alpha minus Rn & U		43.3	pCi/L		87	70	130	6.7	22.5	
Method: E900.1										Batch: GA-0560
Sample ID: LCS-GA-0560		Laboratory Control Sample				Run: G5000W_120801A				08/02/12 06:36
Gross Alpha minus Rn & U		24.1	pCi/L		117	70	130			
Sample ID: MB-GA-0560	3	Method Blank				Run: G5000W_120801A				08/02/12 06:36
Gross Alpha minus Rn & U		-0.3	pCi/L							U
Gross Alpha minus Rn & U Precision (±)		0.7	pCi/L							
Gross Alpha minus Rn & U MDC		1	pCi/L							
Sample ID: C12070717-010CMS		Sample Matrix Spike				Run: G5000W_120801A				08/02/12 06:36
Gross Alpha minus Rn & U		70.2	pCi/L		123	70	130			
Sample ID: C12070717-010CMSD		Sample Matrix Spike Duplicate				Run: G5000W_120801A				08/02/12 06:36
Gross Alpha minus Rn & U		64.2	pCi/L		112	70	130	8.9	28.2	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 09/07/12

Project: Zone-3 **Work Order:** C12070713

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E903.0										Batch: RA226-6130
Sample ID: LCS-RA226-6130		Laboratory Control Sample				Run: BERTHOLD 770-1_120727B				08/06/12 15:11
Radium 226		6.4	pCi/L		103	80	120			
Sample ID: C12070712-001EMS		Sample Matrix Spike				Run: BERTHOLD 770-1_120727B				08/06/12 15:11
Radium 226		18	pCi/L		101	70	130			
Sample ID: C12070712-001EMSD		Sample Matrix Spike Duplicate				Run: BERTHOLD 770-1_120727B				08/06/12 15:11
Radium 226		18	pCi/L		99	70	130	0.7	22.6	
Sample ID: MB-RA226-6130	3	Method Blank				Run: BERTHOLD 770-1_120727B				08/06/12 21:20
Radium 226		-0.04	pCi/L							U
Radium 226 precision (±)		0.07	pCi/L							
Radium 226 MDC		0.1	pCi/L							

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 09/07/12

Project: Zone-3 **Work Order:** C12070713

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E908.0										Batch: RA-TH-ISO-1669
Sample ID: LCS-RA-TH-ISO-1669		Laboratory Control Sample				Run: ALPHANALYST_120807A				08/09/12 08:48
Thorium 230		4.9	pCi/L		96	80	120			
Sample ID: C12070839-006DMS		Sample Matrix Spike				Run: ALPHANALYST_120807A				08/09/12 08:49
Thorium 230		11.7	pCi/L		92	70	130			
Sample ID: C12070839-006DMSD		Sample Matrix Spike Duplicate				Run: ALPHANALYST_120807A				08/09/12 08:49
Thorium 230		13.0	pCi/L		101	70	130	11	43.2	
Sample ID: MB-RA-TH-ISO-1669	3	Method Blank				Run: ALPHANALYST_120807A				08/09/12 08:49
Thorium 230		0.02	pCi/L							U
Thorium 230 precision (±)		0.07	pCi/L							
Thorium 230 MDC		0.2	pCi/L							
Method: E908.0										Batch: RA-TH-ISO-1684
Sample ID: LCS-RA-TH-ISO-1678		Laboratory Control Sample				Run: ALPHANALYST_120822B				08/28/12 10:43
Thorium 230		4.9	pCi/L		85	80	120			
Sample ID: C12080903-001EMS		Sample Matrix Spike				Run: ALPHANALYST_120822B				08/28/12 10:43
Thorium 230		13.0	pCi/L		105	70	130			
Sample ID: C12080903-001EMSD		Sample Matrix Spike Duplicate				Run: ALPHANALYST_120822B				08/28/12 10:44
Thorium 230		14.2	pCi/L		116	70	130	8.6	48	
Sample ID: MB-RA-TH-ISO-1678	3	Method Blank				Run: ALPHANALYST_120822B				08/28/12 10:44
Thorium 230		0.5	pCi/L							
Thorium 230 precision (±)		0.3	pCi/L							
Thorium 230 MDC		0.3	pCi/L							
Method: E908.0										Batch: RA-TH-ISO-1676
Sample ID: LCS-RA-TH-ISO-1676		Laboratory Control Sample				Run: EGG-ORTEC_120816A				08/20/12 08:49
Thorium 230		7.5	pCi/L		146	80	120			S
- LCS response is outside of the acceptance range for this analysis. Since the MB, MS, MSD, and all tracer recoveries are acceptable the batch is approved.										
Sample ID: C12071046-001BMS		Sample Matrix Spike				Run: EGG-ORTEC_120816A				08/21/12 10:39
Thorium 230		11.7	pCi/L		103	70	130			
Sample ID: C12071046-001BMSD		Sample Matrix Spike Duplicate				Run: EGG-ORTEC_120816A				08/20/12 08:48
Thorium 230		12.5	pCi/L		110	70	130	6.9	44.7	
Sample ID: MB-RA-TH-ISO-1676	3	Method Blank				Run: EGG-ORTEC_120816A				08/20/12 08:49
Thorium 230		0.03	pCi/L							U
Thorium 230 precision (±)		0.07	pCi/L							
Thorium 230 MDC		0.1	pCi/L							

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 09/07/12

Project: Zone-3 **Work Order:** C12070713

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E909.0									Batch: T_PB-210-0272	
Sample ID: MB-PB-210-0272	3	Method Blank				Run: SUB-T46781			08/13/12 16:19	
Lead 210		0.3	pCi/L							U
Lead 210 precision (±)		0.7	pCi/L							
Lead 210 MDC		1	pCi/L							
Sample ID: LCS-PB-210-0272		Laboratory Control Sample				Run: SUB-T46781			08/13/12 17:39	
Lead 210		120	pCi/L		99	70	130			
Sample ID: T12070052-001BMS		Sample Matrix Spike				Run: SUB-T46781			08/13/12 20:19	
Lead 210		330	pCi/L		117	70	130			
Sample ID: T12070052-001BMSD		Sample Matrix Spike Duplicate				Run: SUB-T46781			08/13/12 21:40	
Lead 210		320	pCi/L		114	70	130	2.5	14	
Method: E909.0									Batch: T_PB-210-0275	
Sample ID: MB-PB-210-0275	3	Method Blank				Run: SUB-T46843			08/17/12 11:58	
Lead 210		0.2	pCi/L							U
Lead 210 precision (±)		0.7	pCi/L							
Lead 210 MDC		1	pCi/L							
Sample ID: LCS-PB-210-0275		Laboratory Control Sample				Run: SUB-T46843			08/17/12 12:46	
Lead 210		120	pCi/L		97	70	130			
Sample ID: T12080002-001FMS		Sample Matrix Spike				Run: SUB-T46843			08/17/12 19:53	
Lead 210		290	pCi/L		78	70	130			
Sample ID: T12080002-001FMSD		Sample Matrix Spike Duplicate				Run: SUB-T46843			08/17/12 20:41	
Lead 210		330	pCi/L		90	70	130	13	15.3	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 09/07/12

Project: Zone-3 **Work Order:** C12070713

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: RA-05										Batch: RA228-4176
Sample ID: LCS-228-RA226-6130		Laboratory Control Sample				Run: TENNELEC-3_120727A			07/31/12 19:38	
Radium 228		3.8	pCi/L		84	80	120			
Sample ID: MB-RA226-6130	3	Method Blank				Run: TENNELEC-3_120727A			07/31/12 19:38	
Radium 228		-0.2	pCi/L							U
Radium 228 precision (±)		0.7	pCi/L							
Radium 228 MDC		1	pCi/L							
Sample ID: C12070713-007GMS		Sample Matrix Spike				Run: TENNELEC-3_120727A			07/31/12 19:38	
Radium 228		14	pCi/L		71	70	130			
Sample ID: C12070713-007GMSD		Sample Matrix Spike Duplicate				Run: TENNELEC-3_120727A			07/31/12 19:38	
Radium 228		15	pCi/L		82	70	130	5.6	37	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

APPENDIX - D (2 OF 2)

FOURTH QUARTER

LABORATORY QUALITY CONTROL AND

PERFORMANCE REPORT

ANALYTICAL SUMMARY REPORT

November 20, 2012

United Nuclear Corporation
21 Miles NE of Gallup
Gallup, NM 87305

Workorder No.: C12100557 Quote ID: C129 - Quarterly Long List

Project Name: SW Alluvium

Energy Laboratories, Inc. Casper WY received the following 16 samples for United Nuclear Corporation on 10/12/2012 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C12100557-001	509-D	10/08/12 10:00	10/12/12	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Total Alkalinity QA Calculations Arsenic Speciation Selenium-IV, Total CVAA Selenium Prep E300.0 Anions Nitrogen, Ammonia Nitrogen, Nitrate + Nitrite pH Metals Preparation by EPA 200.2 Gross Alpha minus Rn222 and Uranium Lead 210, Total Radium 226, Total Radium 228, Total Thorium, Isotopic Solids, Total Dissolved Solids, Total Dissolved - Calculated E624 Purgeable Organics
C12100557-002	EPA-23	10/08/12 10:43	10/12/12	Aqueous	Same As Above
C12100557-003	803	10/08/12 11:27	10/12/12	Aqueous	Same As Above
C12100557-004	808	10/08/12 12:06	10/12/12	Aqueous	Same As Above
C12100557-005	802	10/08/12 12:51	10/12/12	Aqueous	Same As Above
C12100557-006	801	10/08/12 13:33	10/12/12	Aqueous	Same As Above
C12100557-007	GW-2	10/08/12 14:21	10/12/12	Aqueous	Same As Above
C12100557-008	GW-1	10/08/12 15:15	10/12/12	Aqueous	Same As Above
C12100557-009	632	10/08/12 16:10	10/12/12	Aqueous	Same As Above
C12100557-010	624	10/09/12 9:42	10/12/12	Aqueous	Same As Above
C12100557-011	SBL-1	10/09/12 10:25	10/12/12	Aqueous	Same As Above
C12100557-012	EPA-28	10/09/12 11:12	10/12/12	Aqueous	Same As Above
C12100557-013	EPA-28 Duplicate	10/09/12 11:52	10/12/12	Aqueous	Same As Above
C12100557-014	GW-3	10/09/12 14:57	10/12/12	Aqueous	Same As Above
C12100557-015	EPA-25	10/09/12 16:48	10/12/12	Aqueous	Same As Above
C12100557-016	627	10/09/12 17:44	10/12/12	Aqueous	Same As Above

ANALYTICAL SUMMARY REPORT

The results as reported relate only to the item(s) submitted for testing. The analyses presented in this report were performed at Energy Laboratories, Inc., 2393 Salt Creek Hwy., Casper, WY 82601, unless otherwise noted. Radiochemistry analyses were performed at Energy Laboratories, Inc., 2325 Kerzell Lane, Casper, WY 82601, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

If you have any questions regarding these test results, please call.

Report Approved By:

Stephanie D Waldrop
Reporting Supervisor

Digitally signed by
Stephanie Waldrop
Date: 2012.11.20 18:09:44 -07:00

CLIENT: United Nuclear Corporation
Project: SW Alluvium
Sample Delivery Group: C12100557

Report Date: 11/20/12

CASE NARRATIVE

TH230 ANALYSIS
The sample-specific MDC for this sample could not be achieved due to significant matrix interferences, restricting the volume of sample to be used in the analysis.

BRANCH LABORATORY SUBCONTRACT ANALYSIS
Tests associated with analyst identified as ELI-CS were subcontracted to Energy Laboratories, 415 Graham Rd., College Station, TX, EPA Number TX01520.

Tests associated with analyst identified as ELI-H were subcontracted to Energy Laboratories, 3161 E.Lyndale Ave., Helena, MT, EPA Number MT00945.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium

Report Date: 11/20/12
Work Order: C12100557

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2320 B										Batch: R165758
Sample ID: MBLK	2	Method Blank				Run: MANTECH_121012B				10/12/12 13:17
Alkalinity, Total as CaCO3		ND	mg/L	5.0						
Bicarbonate as HCO3		1.96	mg/L	5.0						
Sample ID: LCS_121003		Laboratory Control Sample				Run: MANTECH_121012B				10/12/12 13:32
Alkalinity, Total as CaCO3		208	mg/L	5.0	104	90	110			
Sample ID: C12100557-010ADUP	2	Sample Duplicate				Run: MANTECH_121012B				10/12/12 22:14
Alkalinity, Total as CaCO3		1270	mg/L	5.0				0.1	10	
Bicarbonate as HCO3		1550	mg/L	5.0				0.1	10	
Sample ID: C12100557-011AMS		Sample Matrix Spike				Run: MANTECH_121012B				10/12/12 22:30
Alkalinity, Total as CaCO3		499	mg/L	5.0	97	80	120			

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: SW Alluvium **Work Order:** C12100557

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C									Batch: TDS121012A	
Sample ID: MB-1_121012A		Method Blank				Run: BAL-1_121012B			10/12/12 16:03	
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	4						
Sample ID: LCS-2_121012A		Laboratory Control Sample				Run: BAL-1_121012B			10/12/12 16:03	
Solids, Total Dissolved TDS @ 180 C		1100	mg/L	10	99	90	110			
Sample ID: C12100557-003A DUP		Sample Duplicate				Run: BAL-1_121012B			10/12/12 16:11	
Solids, Total Dissolved TDS @ 180 C		6540	mg/L	10				0.8	5	
Sample ID: C12100557-004A MS		Sample Matrix Spike				Run: BAL-1_121012B			10/12/12 16:11	
Solids, Total Dissolved TDS @ 180 C		16800	mg/L	10	101	90	110			
Sample ID: C12100557-013A DUP		Sample Duplicate				Run: BAL-1_121012B			10/12/12 16:13	
Solids, Total Dissolved TDS @ 180 C		5060	mg/L	10				1.8	5	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: SW Alluvium **Work Order:** C12100557

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A3114 B								Analytical Run: CVAA-C202_121023A		
Sample ID: ICV		Initial Calibration Verification Standard								10/23/12 12:20
Selenium-IV		0.0253	mg/L	0.0010	101	90	110			
Method: A3114 B										Batch: 35501
Sample ID: MB-35501		Method Blank				Run: CVAA-C202_121023A				10/23/12 12:24
Selenium-IV		ND	mg/L	0.0005						
Sample ID: LCS-35501		Laboratory Control Sample				Run: CVAA-C202_121023A				10/23/12 12:25
Selenium-IV		0.0241	mg/L	0.0010	97	90	110			
Sample ID: C12100557-001DMS		Sample Matrix Spike				Run: CVAA-C202_121023A				10/23/12 12:30
Selenium-IV		0.0256	mg/L	0.0010	103	85	115			
Sample ID: C12100557-001DMSD		Sample Matrix Spike Duplicate				Run: CVAA-C202_121023A				10/23/12 12:32
Selenium-IV		0.0256	mg/L	0.0010	102	85	115	0.2	10	
Sample ID: C12100566-001DMS		Sample Matrix Spike				Run: CVAA-C202_121023A				10/23/12 13:13
Selenium-IV		0.0259	mg/L	0.0010	104	85	115			
Sample ID: C12100566-001DMSD		Sample Matrix Spike Duplicate				Run: CVAA-C202_121023A				10/23/12 13:15
Selenium-IV		0.0252	mg/L	0.0010	101	85	115	2.6	10	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: SW Alluvium **Work Order:** C12100557

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-H B									Analytical Run: PHSC_101-C_121012A	
Sample ID: pH 6.86		Initial Calibration Verification Standard							10/12/12 08:57	
pH		6.83	s.u.	0.010	100	98	102			
Sample ID: PH 6.86		Initial Calibration Verification Standard							10/12/12 15:24	
pH		6.83	s.u.	0.010	100	98	102			
Method: A4500-H B									Batch: R165712	
Sample ID: C12100557-007ADUP		Sample Duplicate				Run: PHSC_101-C_121012A			10/12/12 16:32	
pH		6.44	s.u.	0.010				0.2	3	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12
Project: SW Alluvium **Work Order:** C12100557

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-NH3 G										Batch: R165859
Sample ID: MBLK-1		Method Blank				Run: TECHNICON_121016A				10/16/12 10:39
Nitrogen, Ammonia as N		ND	mg/L	0.02						
Sample ID: LCS-2		Laboratory Control Sample				Run: TECHNICON_121016A				10/16/12 10:41
Nitrogen, Ammonia as N		1.95	mg/L	0.050	98	90	110			
Sample ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_121016A				10/16/12 10:43
Nitrogen, Ammonia as N		2.01	mg/L	0.050	103	80	120			
Sample ID: C12100557-014EMS		Sample Matrix Spike				Run: TECHNICON_121016A				10/16/12 11:45
Nitrogen, Ammonia as N		1.86	mg/L	0.050	95	90	110			
Sample ID: C12100557-014EMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_121016A				10/16/12 11:47
Nitrogen, Ammonia as N		1.95	mg/L	0.050	99	90	110	4.7	10	
Method: A4500-NH3 G										Batch: R165877
Sample ID: MBLK-1		Method Blank				Run: TECHNICON_121016B				10/16/12 14:10
Nitrogen, Ammonia as N		ND	mg/L	0.02						
Sample ID: LCS-2		Laboratory Control Sample				Run: TECHNICON_121016B				10/16/12 14:13
Nitrogen, Ammonia as N		1.99	mg/L	0.050	100	90	110			
Sample ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_121016B				10/16/12 14:15
Nitrogen, Ammonia as N		2.07	mg/L	0.050	106	80	120			
Sample ID: C12100557-004EMS		Sample Matrix Spike				Run: TECHNICON_121016B				10/16/12 14:19
Nitrogen, Ammonia as N		3.29	mg/L	0.050	106	90	110			
Sample ID: C12100557-004EMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_121016B				10/16/12 14:21
Nitrogen, Ammonia as N		3.38	mg/L	0.050	110	90	110	2.7	10	
Sample ID: C12100566-003EMS		Sample Matrix Spike				Run: TECHNICON_121016B				10/16/12 14:47
Nitrogen, Ammonia as N		2.09	mg/L	0.050	104	90	110			
Sample ID: C12100566-003EMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_121016B				10/16/12 14:49
Nitrogen, Ammonia as N		2.18	mg/L	0.050	109	90	110	4.2	10	
Sample ID: C12100571-002EMS		Sample Matrix Spike				Run: TECHNICON_121016B				10/16/12 16:17
Nitrogen, Ammonia as N		63.0	mg/L	1.0	101	90	110			
Sample ID: C12100571-002EMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_121016B				10/16/12 16:19
Nitrogen, Ammonia as N		63.7	mg/L	1.0	103	90	110	1.1	10	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: SW Alluvium **Work Order:** C12100557

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-NH3 G										Batch: R165932
Sample ID: MBLK-1		Method Blank				Run: TECHNICON_121017A				10/17/12 11:42
Nitrogen, Ammonia as N		ND	mg/L	0.02						
Sample ID: LCS-2		Laboratory Control Sample				Run: TECHNICON_121017A				10/17/12 11:44
Nitrogen, Ammonia as N		2.01	mg/L	0.050	100	90	110			
Sample ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_121017A				10/17/12 11:46
Nitrogen, Ammonia as N		2.03	mg/L	0.050	104	80	120			
Sample ID: C12100557-008EMS		Sample Matrix Spike				Run: TECHNICON_121017A				10/17/12 11:52
Nitrogen, Ammonia as N		2.02	mg/L	0.050	95	90	110			
Sample ID: C12100557-008EMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_121017A				10/17/12 11:54
Nitrogen, Ammonia as N		2.03	mg/L	0.050	95	90	110	0.5	10	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: SW Alluvium **Work Order:** C12100557

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E1632AM									Analytical Run: SUB-H84055	
Sample ID: AS-ICV 25ppb-10/29/2		Initial Calibration Verification Standard							10/29/12 12:33	
Arsenic-III		25.0	ug/L	5.0	100	87.6	114			
Method: E1632AM									Batch: H_R84055	
Sample ID: ICB		Method Blank				Run: SUB-H84055			10/29/12 12:58	
Arsenic-III		ND	ug/L	2						
Sample ID: AS-LFB 50ppb-10/29/		Laboratory Fortified Blank				Run: SUB-H84055			10/29/12 13:16	
Arsenic-III		49.5	ug/L	5.0	99	55	146			
Sample ID: C12100571-001B		Sample Matrix Spike				Run: SUB-H84055			10/29/12 15:57	
Arsenic-III		40.0	ug/L	5.0	80	55	146			
Sample ID: C12100571-001B		Sample Matrix Spike Duplicate				Run: SUB-H84055			10/29/12 16:05	
Arsenic-III		41.5	ug/L	5.0	83	55	146	3.8	20	
Method: E1632AM									Analytical Run: SUB-H84195	
Sample ID: AS-ICV 25ppb-11/4/20		Initial Calibration Verification Standard							11/04/12 16:17	
Arsenic-III		24.0	ug/L	5.0	96	87.6	114			
Method: E1632AM									Batch: H_R84195	
Sample ID: ICB		Method Blank				Run: SUB-H84195			11/04/12 16:41	
Arsenic-III		ND	ug/L	2						
Sample ID: AS-LFB 50ppb-11/4/2		Laboratory Fortified Blank				Run: SUB-H84195			11/04/12 16:49	
Arsenic-III		44.5	ug/L	5.0	89	55	146			
Sample ID: C12100557-008B		Sample Matrix Spike				Run: SUB-H84195			11/04/12 17:37	
Arsenic-III		45.4	ug/L	5.0	91	55	146			
Sample ID: C12100557-008B		Sample Matrix Spike Duplicate				Run: SUB-H84195			11/04/12 17:45	
Arsenic-III		46.1	ug/L	5.0	92	55	146	1.5	20	
Sample ID: C12100557-016B		Sample Matrix Spike				Run: SUB-H84195			11/04/12 19:23	
Arsenic-III		45.9	ug/L	5.0	92	55	146			
Sample ID: C12100557-016B		Sample Matrix Spike Duplicate				Run: SUB-H84195			11/04/12 19:31	
Arsenic-III		47.2	ug/L	5.0	94	55	146	2.8	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: SW Alluvium **Work Order:** C12100557

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-C_121024B	
Sample ID: ICV	4	Initial Calibration Verification Standard							10/24/12 11:21	
Calcium		51.8	mg/L	0.50	104	95	105			
Magnesium		50.2	mg/L	0.50	100	95	105			
Potassium		47.8	mg/L	0.50	96	95	105			
Sodium		50.6	mg/L	0.50	101	95	105			
Sample ID: ICSA	4	Interference Check Sample A							10/24/12 11:50	
Calcium		512	mg/L	0.50	102	80	120			
Magnesium		520	mg/L	0.50	104	80	120			
Potassium		0.00560	mg/L	0.50						
Sodium		0.597	mg/L	0.50						
Sample ID: ICSAB	4	Interference Check Sample AB							10/24/12 11:54	
Calcium		501	mg/L	0.50	100	80	120			
Magnesium		496	mg/L	0.50	99	80	120			
Potassium		0.000500	mg/L	0.50						
Sodium		0.650	mg/L	0.50						
Method: E200.7									Batch: R166285	
Sample ID: MB-121024A	4	Method Blank				Run: ICP2-C_121024B			10/24/12 12:14	
Calcium		ND	mg/L	0.06						
Magnesium		ND	mg/L	0.03						
Potassium		ND	mg/L	0.06						
Sodium		ND	mg/L	0.3						
Sample ID: LFB-121024A	4	Laboratory Fortified Blank				Run: ICP2-C_121024B			10/24/12 12:18	
Calcium		49.0	mg/L	0.50	98	85	115			
Magnesium		48.5	mg/L	0.50	97	85	115			
Potassium		44.9	mg/L	0.50	90	85	115			
Sodium		47.1	mg/L	0.50	94	85	115			
Sample ID: C12100557-010CMS2	4	Sample Matrix Spike				Run: ICP2-C_121024B			10/24/12 16:40	
Calcium		958	mg/L	1.0	90	70	130			
Magnesium		626	mg/L	1.0	81	70	130			
Potassium		241	mg/L	1.0	92	70	130			
Sodium		502	mg/L	1.6	85	70	130			
Sample ID: C12100557-010CMSD	4	Sample Matrix Spike Duplicate				Run: ICP2-C_121024B			10/24/12 16:44	
Calcium		969	mg/L	1.0	95	70	130	1.2	20	
Magnesium		643	mg/L	1.0	88	70	130	2.7	20	
Potassium		259	mg/L	1.0	99	70	130	7.3	20	
Sodium		529	mg/L	1.6	96	70	130	5.2	20	
Sample ID: C12100566-003CMS2	4	Sample Matrix Spike				Run: ICP2-C_121024B			10/24/12 17:40	
Calcium		726	mg/L	1.0	100	70	130			
Magnesium		999	mg/L	1.0	81	70	130			
Potassium		264	mg/L	1.0	99	70	130			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: SW Alluvium **Work Order:** C12100557

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7										Batch: R166285
Sample ID: C12100566-003CMS2	4	Sample Matrix Spike				Run: ICP2-C_121024B			10/24/12 17:40	
Sodium		557	mg/L	1.6	100	70	130			
Sample ID: C12100566-003CMSD	4	Sample Matrix Spike Duplicate				Run: ICP2-C_121024B			10/24/12 17:44	
Calcium		728	mg/L	1.0	100	70	130	0.2	20	
Magnesium		1020	mg/L	1.0	90	70	130	2.3	20	
Potassium		261	mg/L	1.0	97	70	130	1.2	20	
Sodium		561	mg/L	1.6	102	70	130	0.7	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: SW Alluvium **Work Order:** C12100557

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-C_121030A	
Sample ID: ICV	8	Initial Calibration Verification Standard								10/30/12 12:59
Aluminum		4.80	mg/L	0.10	96	95	105			
Beryllium		0.515	mg/L	0.010	103	95	105			
Cadmium		0.508	mg/L	0.010	102	95	105			
Cobalt		1.01	mg/L	0.010	101	95	105			
Manganese		5.15	mg/L	0.010	103	95	105			
Molybdenum		1.05	mg/L	0.10	105	95	105			
Nickel		1.02	mg/L	0.050	102	95	105			
Vanadium		1.00	mg/L	0.10	100	95	105			
Sample ID: ICSA	8	Interference Check Sample A								10/30/12 13:40
Aluminum		506	mg/L	0.10	101	80	120			
Beryllium		0.000200	mg/L	0.010						
Cadmium		-0.00320	mg/L	0.010						
Cobalt		-0.00350	mg/L	0.010						
Manganese		-0.00320	mg/L	0.010						
Molybdenum		-0.0205	mg/L	0.10						
Nickel		-0.00400	mg/L	0.050						
Vanadium		0.0123	mg/L	0.10						
Sample ID: ICSAB	8	Interference Check Sample AB								10/30/12 13:44
Aluminum		511	mg/L	0.10	102	80	120			
Beryllium		0.517	mg/L	0.010	103	80	120			
Cadmium		0.987	mg/L	0.010	99	80	120			
Cobalt		0.485	mg/L	0.010	97	80	120			
Manganese		0.510	mg/L	0.010	102	80	120			
Molybdenum		-0.0202	mg/L	0.10						
Nickel		0.973	mg/L	0.050	97	80	120			
Vanadium		0.522	mg/L	0.10	104	80	120			
Method: E200.7										Batch: 35404
Sample ID: MB-35404	8	Method Blank				Run: ICP2-C_121030A				10/30/12 21:02
Aluminum		ND	mg/L	0.10						
Beryllium		ND	mg/L	0.0010						
Cadmium		ND	mg/L	0.0050						
Cobalt		ND	mg/L	0.010						
Manganese		ND	mg/L	0.010						
Molybdenum		ND	mg/L	0.10						
Nickel		ND	mg/L	0.050						
Vanadium		ND	mg/L	0.10						
Sample ID: LCS3-35404	8	Laboratory Control Sample				Run: ICP2-C_121030A				10/30/12 21:06
Aluminum		2.44	mg/L	0.030	98	85	115			
Beryllium		0.256	mg/L	0.0010	103	85	115			
Cadmium		0.261	mg/L	0.0010	104	85	115			
Cobalt		0.516	mg/L	0.0050	103	85	115			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: SW Alluvium **Work Order:** C12100557

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7										Batch: 35404
Sample ID: LCS3-35404	8	Laboratory Control Sample				Run: ICP2-C_121030A				10/30/12 21:06
Manganese		2.56	mg/L	0.0010	102	85	115			
Molybdenum		0.537	mg/L	0.0023	107	85	115			
Nickel		0.513	mg/L	0.0050	103	85	115			
Vanadium		0.517	mg/L	0.014	103	85	115			
Sample ID: C12100557-016DMS3	8	Sample Matrix Spike				Run: ICP2-C_121030A				10/30/12 21:26
Aluminum		4.74	mg/L	0.030	95	70	130			
Beryllium		0.507	mg/L	0.0010	101	70	130			
Cadmium		0.497	mg/L	0.0011	99	70	130			
Cobalt		0.990	mg/L	0.0050	99	70	130			
Manganese		5.09	mg/L	0.0010	101	70	130			
Molybdenum		1.04	mg/L	0.0045	104	70	130			
Nickel		0.987	mg/L	0.0050	99	70	130			
Vanadium		1.01	mg/L	0.028	101	70	130			
Sample ID: C12100557-016DMSD	8	Sample Matrix Spike Duplicate				Run: ICP2-C_121030A				10/30/12 21:30
Aluminum		4.89	mg/L	0.030	98	70	130	3.2	20	
Beryllium		0.516	mg/L	0.0010	103	70	130	1.7	20	
Cadmium		0.519	mg/L	0.0011	104	70	130	4.4	20	
Cobalt		1.02	mg/L	0.0050	102	70	130	2.9	20	
Manganese		5.22	mg/L	0.0010	104	70	130	2.4	20	
Molybdenum		1.08	mg/L	0.0045	108	70	130	4.0	20	
Nickel		1.03	mg/L	0.0050	103	70	130	3.9	20	
Vanadium		1.06	mg/L	0.028	106	70	130	4.6	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: SW Alluvium **Work Order:** C12100557

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP4-C_121029A	
Sample ID: ICV	4	Initial Calibration Verification Standard							10/29/12 13:39	
Calcium		49.6	mg/L	0.50	99	95	105			
Magnesium		50.0	mg/L	0.50	100	95	105			
Potassium		49.5	mg/L	0.50	99	95	105			
Sodium		50.7	mg/L	0.50	101	95	105			
Sample ID: ICSA	4	Interference Check Sample A							10/29/12 13:53	
Calcium		439	mg/L	0.50	88	80	120			
Magnesium		484	mg/L	0.50	97	80	120			
Potassium		-0.0161	mg/L	0.50						
Sodium		-0.289	mg/L	0.50						
Sample ID: ICSAB	4	Interference Check Sample AB							10/29/12 13:58	
Calcium		435	mg/L	0.50	87	80	120			
Magnesium		484	mg/L	0.50	97	80	120			
Potassium		-0.0210	mg/L	0.50						
Sodium		-0.314	mg/L	0.50						
Method: E200.7									Batch: R166468	
Sample ID: MB-121026A	4	Method Blank				Run: ICP4-C_121029A			10/29/12 14:16	
Calcium		ND	mg/L	0.02						
Magnesium		ND	mg/L	0.02						
Potassium		ND	mg/L	0.04						
Sodium		ND	mg/L	0.2						
Sample ID: LFB-121026A	4	Laboratory Fortified Blank				Run: ICP4-C_121029A			10/29/12 14:20	
Calcium		46.2	mg/L	0.50	92	85	115			
Magnesium		46.6	mg/L	0.50	93	85	115			
Potassium		45.6	mg/L	0.50	91	85	115			
Sodium		45.8	mg/L	0.50	92	85	115			
Sample ID: C12100557-001CMS2	4	Sample Matrix Spike				Run: ICP4-C_121029A			10/29/12 14:27	
Calcium		1020	mg/L	1.0	63	70	130			S
Magnesium		614	mg/L	1.0	81	70	130			
Potassium		241	mg/L	1.0	89	70	130			
Sodium		600	mg/L	1.0	77	70	130			
Sample ID: C12100557-001CMSD	4	Sample Matrix Spike Duplicate				Run: ICP4-C_121029A			10/29/12 14:31	
Calcium		1020	mg/L	1.0	62	70	130	0.3	20	S
Magnesium		610	mg/L	1.0	80	70	130	0.5	20	
Potassium		241	mg/L	1.0	89	70	130	0.0	20	
Sodium		597	mg/L	1.0	76	70	130	0.6	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: SW Alluvium **Work Order:** C12100557

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS2-C_121023A	
Sample ID: ICV	10	Initial Calibration Verification Standard							10/23/12 13:47	
Aluminum		0.0517	mg/L	0.0010	103	90	110			
Beryllium		0.0524	mg/L	0.0010	105	90	110			
Cadmium		0.0521	mg/L	0.0010	104	90	110			
Cobalt		0.0533	mg/L	0.0010	107	90	110			
Lead		0.0507	mg/L	0.0010	101	90	110			
Manganese		0.0524	mg/L	0.0010	105	90	110			
Molybdenum		0.0480	mg/L	0.0010	96	90	110			
Nickel		0.0520	mg/L	0.0010	104	90	110			
Uranium		0.0508	mg/L	0.00030	102	90	110			
Vanadium		0.0521	mg/L	0.0010	104	90	110			
Method: E200.8									Batch: 35404	
Sample ID: MB-35404	10	Method Blank				Run: ICPMS2-C_121023A			10/23/12 20:42	
Aluminum		0.002	mg/L	0.0007						
Beryllium		ND	mg/L	3E-05						
Cadmium		ND	mg/L	4E-05						
Cobalt		ND	mg/L	0.0001						
Lead		2E-05	mg/L	2E-05						
Manganese		0.0002	mg/L	7E-05						
Molybdenum		0.0003	mg/L	6E-05						
Nickel		0.004	mg/L	5E-05						
Uranium		3E-05	mg/L	1E-05						
Vanadium		ND	mg/L	0.0001						
Sample ID: LCS3-35404	10	Laboratory Control Sample				Run: ICPMS2-C_121023A			10/23/12 20:44	
Aluminum		2.36	mg/L	0.030	94	85	115			
Beryllium		0.241	mg/L	0.0010	96	85	115			
Cadmium		0.241	mg/L	0.0010	97	85	115			
Cobalt		0.503	mg/L	0.0050	101	85	115			
Lead		0.503	mg/L	0.0010	101	85	115			
Manganese		2.47	mg/L	0.0010	99	85	115			
Molybdenum		0.510	mg/L	0.0010	102	85	115			
Nickel		0.517	mg/L	0.0050	103	85	115			
Uranium		0.520	mg/L	0.00030	104	85	115			
Vanadium		0.475	mg/L	0.010	95	85	115			
Sample ID: C12100557-001DMS3	10	Sample Matrix Spike				Run: ICPMS2-C_121023A			10/23/12 20:52	
Aluminum		5.00	mg/L	0.030	99	70	130			
Beryllium		0.489	mg/L	0.0010	98	70	130			
Cadmium		0.499	mg/L	0.0010	100	70	130			
Cobalt		1.02	mg/L	0.0050	101	70	130			
Lead		1.05	mg/L	0.0010	105	70	130			
Manganese		8.57	mg/L	0.0010	95	70	130			
Molybdenum		1.04	mg/L	0.0010	104	70	130			
Nickel		1.08	mg/L	0.0050	105	70	130			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: SW Alluvium **Work Order:** C12100557

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8										Batch: 35404
Sample ID: C12100557-001DMS3	10	Sample Matrix Spike				Run: ICPMS2-C_121023A			10/23/12 20:52	
Uranium		1.34	mg/L	0.00030	106	70	130			
Vanadium		1.04	mg/L	0.010	104	70	130			
Sample ID: C12100557-001DMSD	10	Sample Matrix Spike Duplicate				Run: ICPMS2-C_121023A			10/23/12 20:54	
Aluminum		4.99	mg/L	0.030	99	70	130	0.2	20	
Beryllium		0.489	mg/L	0.0010	98	70	130	0.0	20	
Cadmium		0.503	mg/L	0.0010	101	70	130	0.8	20	
Cobalt		1.04	mg/L	0.0050	103	70	130	1.9	20	
Lead		1.05	mg/L	0.0010	105	70	130	0.3	20	
Manganese		8.68	mg/L	0.0010	97	70	130	1.3	20	
Molybdenum		1.06	mg/L	0.0010	106	70	130	1.6	20	
Nickel		1.08	mg/L	0.0050	105	70	130	0.4	20	
Uranium		1.35	mg/L	0.00030	106	70	130	0.6	20	
Vanadium		1.03	mg/L	0.010	103	70	130	0.3	20	
Sample ID: C12100557-016DMS3	10	Sample Matrix Spike				Run: ICPMS2-C_121023A			10/23/12 22:02	
Aluminum		4.86	mg/L	0.030	97	70	130			
Beryllium		0.478	mg/L	0.0010	96	70	130			
Cadmium		0.502	mg/L	0.0010	100	70	130			
Cobalt		1.03	mg/L	0.0050	103	70	130			
Lead		1.05	mg/L	0.0010	105	70	130			
Manganese		5.10	mg/L	0.0010	101	70	130			
Molybdenum		1.05	mg/L	0.0010	105	70	130			
Nickel		1.08	mg/L	0.0050	106	70	130			
Uranium		1.08	mg/L	0.00030	107	70	130			
Vanadium		1.04	mg/L	0.010	102	70	130			
Sample ID: C12100557-016DMSD	10	Sample Matrix Spike Duplicate				Run: ICPMS2-C_121023A			10/23/12 22:05	
Aluminum		5.05	mg/L	0.030	101	70	130	3.8	20	
Beryllium		0.496	mg/L	0.0010	99	70	130	3.8	20	
Cadmium		0.513	mg/L	0.0010	103	70	130	2.1	20	
Cobalt		1.06	mg/L	0.0050	106	70	130	3.1	20	
Lead		1.08	mg/L	0.0010	108	70	130	2.6	20	
Manganese		5.31	mg/L	0.0010	105	70	130	4.0	20	
Molybdenum		1.06	mg/L	0.0010	106	70	130	1.5	20	
Nickel		1.10	mg/L	0.0050	108	70	130	1.7	20	
Uranium		1.10	mg/L	0.00030	108	70	130	1.6	20	
Vanadium		1.09	mg/L	0.010	106	70	130	3.8	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: SW Alluvium **Work Order:** C12100557

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS4-C_121026A	
Sample ID: ICV	6	Initial Calibration Verification Standard							10/26/12 11:50	
Aluminum		0.0512	mg/L	0.0010	102	90	110			
Beryllium		0.0508	mg/L	0.0010	102	90	110			
Cobalt		0.0533	mg/L	0.0010	107	90	110			
Manganese		0.0518	mg/L	0.0010	104	90	110			
Nickel		0.0523	mg/L	0.0010	105	90	110			
Vanadium		0.0524	mg/L	0.0010	105	90	110			
Method: E200.8									Batch: 35404	
Sample ID: MB-35404	6	Method Blank				Run: ICPMS4-C_121026A			10/26/12 15:43	
Aluminum		0.003	mg/L	0.001						
Beryllium		ND	mg/L	5E-05						
Cobalt		ND	mg/L	4E-05						
Manganese		0.0002	mg/L	4E-05						
Nickel		0.0002	mg/L	4E-05						
Vanadium		0.004	mg/L	8E-05						
Sample ID: LCS3-35404	6	Laboratory Control Sample				Run: ICPMS4-C_121026A			10/26/12 15:47	
Aluminum		2.54	mg/L	0.030	102	85	115			
Beryllium		0.256	mg/L	0.0010	102	85	115			
Cobalt		0.516	mg/L	0.0050	103	85	115			
Manganese		2.60	mg/L	0.0010	104	85	115			
Nickel		0.528	mg/L	0.0050	106	85	115			
Vanadium		0.516	mg/L	0.010	102	85	115			
Sample ID: C12100557-016DMS3	6	Sample Matrix Spike				Run: ICPMS4-C_121026A			10/26/12 17:13	
Aluminum		4.69	mg/L	0.030	94	70	130			
Beryllium		0.425	mg/L	0.0010	85	70	130			
Cobalt		0.937	mg/L	0.0050	94	70	130			
Manganese		4.87	mg/L	0.0010	97	70	130			
Nickel		1.01	mg/L	0.0050	101	70	130			
Vanadium		1.09	mg/L	0.010	108	70	130			
Sample ID: C12100557-016DMSD	6	Sample Matrix Spike Duplicate				Run: ICPMS4-C_121026A			10/26/12 17:17	
Aluminum		4.94	mg/L	0.030	99	70	130	5.3	20	
Beryllium		0.451	mg/L	0.0010	90	70	130	5.9	20	
Cobalt		0.986	mg/L	0.0050	99	70	130	5.1	20	
Manganese		5.15	mg/L	0.0010	102	70	130	5.5	20	
Nickel		0.972	mg/L	0.0050	97	70	130	4.3	20	
Vanadium		1.04	mg/L	0.010	103	70	130	4.7	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: SW Alluvium **Work Order:** C12100557

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS4-C_121102A	
Sample ID: ICV		Initial Calibration Verification Standard							11/02/12 14:07	
Lead		0.0487	mg/L	0.0010	97	90	110			
Method: E200.8									Batch: 35404	
Sample ID: MB-35404		Method Blank				Run: ICPMS4-C_121102A			11/03/12 04:46	
Lead		3E-05	mg/L	1E-05						
Sample ID: LCS3-35404		Laboratory Control Sample				Run: ICPMS4-C_121102A			11/03/12 04:51	
Lead		0.508	mg/L	0.0010	102	85	115			
Sample ID: C12100557-001DMS3		Sample Matrix Spike				Run: ICPMS4-C_121102A			11/03/12 05:08	
Lead		1.04	mg/L	0.0010	104	70	130			
Sample ID: C12100557-001DMSD		Sample Matrix Spike Duplicate				Run: ICPMS4-C_121102A			11/03/12 05:12	
Lead		1.01	mg/L	0.0010	101	70	130	2.8	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: SW Alluvium **Work Order:** C12100557

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0									Analytical Run: IC1-C_121029A	
Sample ID: ICV-102912-10	2	Initial Calibration Verification Standard							10/29/12 11:29	
Chloride		9.96	mg/L	1.0	100	90	110			
Sulfate		40.4	mg/L	1.0	101	90	110			
Method: E300.0									Batch: R166524	
Sample ID: ICB-102912-11	2	Method Blank				Run: IC1-C_121029A			10/29/12 11:47	
Chloride		ND	mg/L	0.04						
Sulfate		0.1	mg/L	0.1						
Sample ID: LFB-102912-12	2	Laboratory Fortified Blank				Run: IC1-C_121029A			10/29/12 12:04	
Chloride		10.0	mg/L	1.0	100	90	110			
Sulfate		40.2	mg/L	1.0	100	90	110			
Sample ID: C12101099-006BMS	2	Sample Matrix Spike				Run: IC1-C_121029A			10/29/12 20:46	
Chloride		27.9	mg/L	1.0	99	90	110			
Sulfate		276	mg/L	1.7	94	90	110			
Sample ID: C12101099-006BMSD	2	Sample Matrix Spike Duplicate				Run: IC1-C_121029A			10/29/12 21:04	
Chloride		27.9	mg/L	1.0	98	90	110	0.3	10	
Sulfate		274	mg/L	1.7	91	90	110	0.7	10	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: SW Alluvium **Work Order:** C12100557

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0									Analytical Run: IC2-C_121015A	
Sample ID: ICV	2	Initial Calibration Verification Standard							10/15/12 12:09	
Chloride		9.99	mg/L	1.0	100	90	110			
Sulfate		40.4	mg/L	1.0	101	90	110			
Method: E300.0									Batch: R165865	
Sample ID: ICB	2	Method Blank				Run: IC2-C_121015A			10/15/12 12:25	
Chloride		ND	mg/L	0.03						
Sulfate		0.1	mg/L	0.10						
Sample ID: LFB	2	Laboratory Fortified Blank				Run: IC2-C_121015A			10/15/12 12:40	
Chloride		10.0	mg/L	1.0	100	90	110			
Sulfate		40.0	mg/L	1.0	100	90	110			
Sample ID: C12100557-004AMS	2	Sample Matrix Spike				Run: IC2-C_121015A			10/15/12 16:47	
Chloride		391	mg/L	4.2	99	90	110			
Sulfate		3950	mg/L	17	100	90	110			
Sample ID: C12100557-004AMSD	2	Sample Matrix Spike Duplicate				Run: IC2-C_121015A			10/15/12 17:02	
Chloride		392	mg/L	4.2	99	90	110	0.3	10	
Sulfate		3950	mg/L	17	100	90	110	0.0	10	
Sample ID: C12100557-014AMS	2	Sample Matrix Spike				Run: IC2-C_121015A			10/15/12 20:23	
Chloride		371	mg/L	4.2	97	90	110			
Sulfate		3030	mg/L	17	94	90	110			
Sample ID: C12100557-014AMSD	2	Sample Matrix Spike Duplicate				Run: IC2-C_121015A			10/15/12 20:38	
Chloride		372	mg/L	4.2	97	90	110	0.2	10	
Sulfate		3000	mg/L	17	91	90	110	0.8	10	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: SW Alluvium **Work Order:** C12100557

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E353.2										Batch: R165810
Sample ID: MBLK-1		Method Blank				Run: TECHNICON_121015A				10/15/12 10:45
Nitrogen, Nitrate+Nitrite as N		ND	mg/L	0.003						
Sample ID: LCS-2		Laboratory Control Sample				Run: TECHNICON_121015A				10/15/12 10:47
Nitrogen, Nitrate+Nitrite as N		2.58	mg/L	0.10	103	90	110			
Sample ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_121015A				10/15/12 10:50
Nitrogen, Nitrate+Nitrite as N		1.98	mg/L	0.10	101	90	110			
Sample ID: C12100557-003EMS		Sample Matrix Spike				Run: TECHNICON_121015A				10/15/12 11:30
Nitrogen, Nitrate+Nitrite as N		91.1	mg/L	2.5	110	90	110			
Sample ID: C12100557-003EMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_121015A				10/15/12 11:32
Nitrogen, Nitrate+Nitrite as N		90.1	mg/L	2.5	108	90	110	1.1	10	
Sample ID: C12100557-013EMS		Sample Matrix Spike				Run: TECHNICON_121015A				10/15/12 12:07
Nitrogen, Nitrate+Nitrite as N		73.9	mg/L	2.5	105	90	110			
Sample ID: C12100557-013EMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_121015A				10/15/12 12:10
Nitrogen, Nitrate+Nitrite as N		73.7	mg/L	2.5	104	90	110	0.3	10	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: SW Alluvium **Work Order:** C12100557

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624									Analytical Run: R165783	
Sample ID: 12-Oct-12_CCV_19	9	Continuing Calibration Verification Standard							10/12/12 22:38	
Bromodichloromethane		11.0	ug/L	1.0	110	70	130			
Bromoform		10.2	ug/L	1.0	102	70	130			
Chlorodibromomethane		9.44	ug/L	1.0	94	70	130			
Chloroform		10.6	ug/L	1.0	106	70	130			
Trihalomethanes, Total		41.4	ug/L	1.0	103	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	100	80	120			
Surr: Dibromofluoromethane				1.0	106	80	120			
Surr: p-Bromofluorobenzene				1.0	103	80	120			
Surr: Toluene-d8				1.0	111	80	120			
Method: E624									Batch: R165783	
Sample ID: 12-Oct-12_LCS_4	9	Laboratory Control Sample				Run: GCMS2_121012A			10/12/12 13:36	
Bromodichloromethane		9.20	ug/L	1.0	92	72.3	123			
Bromoform		9.52	ug/L	1.0	95	70.3	128			
Chlorodibromomethane		8.12	ug/L	1.0	81	69.1	123			
Chloroform		9.60	ug/L	1.0	96	72.9	130			
Trihalomethanes, Total		36.4	ug/L	1.0	91	75.7	121			
Surr: 1,2-Dichlorobenzene-d4				1.0	98	82	118			
Surr: Dibromofluoromethane				1.0	95	74.8	123			
Surr: p-Bromofluorobenzene				1.0	105	82.4	121			
Surr: Toluene-d8				1.0	110	76.4	125			
Sample ID: 12-Oct-12_MBLK_6	9	Method Blank				Run: GCMS2_121012A			10/12/12 14:46	
Bromodichloromethane		ND	ug/L	1.0						
Bromoform		ND	ug/L	1.0						
Chlorodibromomethane		ND	ug/L	1.0						
Chloroform		ND	ug/L	1.0						
Trihalomethanes, Total		ND	ug/L	1.0						
Surr: 1,2-Dichlorobenzene-d4				1.0	104	80	120			
Surr: Dibromofluoromethane				1.0	98	80	120			
Surr: p-Bromofluorobenzene				1.0	112	80	120			
Surr: Toluene-d8				1.0	106	80	120			
Sample ID: C12100557-001HMS	9	Sample Matrix Spike				Run: GCMS2_121012A			10/12/12 20:54	
Bromodichloromethane		96.0	ug/L	5.0	96	72.3	123			
Bromoform		98.4	ug/L	5.0	98	70.3	128			
Chlorodibromomethane		96.0	ug/L	5.0	96	69.1	123			
Chloroform		102	ug/L	5.0	102	72.9	130			
Trihalomethanes, Total		392	ug/L	5.0	98	75.7	121			
Surr: 1,2-Dichlorobenzene-d4				1.0	97	82	118			
Surr: Dibromofluoromethane				1.0	102	74.8	123			
Surr: p-Bromofluorobenzene				1.0	102	82.4	121			
Surr: Toluene-d8				1.0	108	76.4	125			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: SW Alluvium **Work Order:** C12100557

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624										Batch: R165783
Sample ID: C12100557-001HMSD	9	Sample Matrix Spike Duplicate				Run: GCMS2_121012A			10/12/12 21:29	
Bromodichloromethane		95.2	ug/L	5.0	95	72.3	123	0.8	20	
Bromoform		99.2	ug/L	5.0	99	70.3	128	0.8	20	
Chlorodibromomethane		95.6	ug/L	5.0	96	69.1	123	0.4	20	
Chloroform		100	ug/L	5.0	100	72.9	130	2.0	20	
Trihalomethanes, Total		390	ug/L	5.0	98	75.7	121	0.6	20	
Surr: 1,2-Dichlorobenzene-d4				1.0	98	82	118			
Surr: Dibromofluoromethane				1.0	101	74.8	123			
Surr: p-Bromofluorobenzene				1.0	103	82.4	121			
Surr: Toluene-d8				1.0	106	76.4	125			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: SW Alluvium **Work Order:** C12100557

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E900.1										Batch: GA-0606
Sample ID: LCS-GA-0603		Laboratory Control Sample				Run: BERTHOLD 770-2_121015B				10/17/12 23:57
Gross Alpha minus Rn & U		16.8	pCi/L		83	80	120			
Sample ID: MB-GA-0603	3	Method Blank				Run: BERTHOLD 770-2_121015B				10/17/12 23:57
Gross Alpha minus Rn & U		0.2	pCi/L							U
Gross Alpha minus Rn & U Precision (±)		0.3	pCi/L							
Gross Alpha minus Rn & U MDC		0.5	pCi/L							
Sample ID: C12100356-001EMS		Sample Matrix Spike				Run: BERTHOLD 770-2_121015B				10/17/12 23:57
Gross Alpha minus Rn & U		63.9	pCi/L		103	70	130			
Sample ID: C12100356-001EMSD		Sample Matrix Spike Duplicate				Run: BERTHOLD 770-2_121015B				10/17/12 23:57
Gross Alpha minus Rn & U		64.9	pCi/L		105	70	130	1.4	22.6	
Method: E900.1										Batch: GA-0604
Sample ID: LCS-GA-0604		Laboratory Control Sample				Run: BERTHOLD 770-2_121019A				10/20/12 12:14
Gross Alpha minus Rn & U		22.8	pCi/L		112	80	120			
Sample ID: MB-GA-0604	3	Method Blank				Run: BERTHOLD 770-2_121019A				10/20/12 12:14
Gross Alpha minus Rn & U		-0.02	pCi/L							U
Gross Alpha minus Rn & U Precision (±)		0.4	pCi/L							
Gross Alpha minus Rn & U MDC		0.6	pCi/L							
Sample ID: C12100563-007DMS		Sample Matrix Spike				Run: BERTHOLD 770-2_121019A				10/20/12 18:15
Gross Alpha minus Rn & U		44.1	pCi/L		106	70	130			
Sample ID: C12100563-007DMSD		Sample Matrix Spike Duplicate				Run: BERTHOLD 770-2_121019A				10/20/12 18:15
Gross Alpha minus Rn & U		40.7	pCi/L		103	70	130	8.1	25.7	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: SW Alluvium **Work Order:** C12100557

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E903.0										Batch: RA226-6302
Sample ID: C12100434-002EMS		Sample Matrix Spike				Run: BERTHOLD 770-1_121016A			10/24/12 16:11	
Radium 226		12	pCi/L		92	70	130			
Sample ID: C12100434-002EMSD		Sample Matrix Spike Duplicate				Run: BERTHOLD 770-1_121016A			10/24/12 16:11	
Radium 226		12	pCi/L		86	70	130	6.2	26.5	
Sample ID: MB-RA226-6302	3	Method Blank				Run: BERTHOLD 770-1_121016A			10/24/12 16:11	
Radium 226		-0.03	pCi/L							U
Radium 226 precision (±)		0.1	pCi/L							
Radium 226 MDC		0.2	pCi/L							
Sample ID: LCS-RA226-6302		Laboratory Control Sample				Run: BERTHOLD 770-1_121016A			10/24/12 16:11	
Radium 226		6.4	pCi/L		101	80	120			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: SW Alluvium **Work Order:** C12100557

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E908.0									Batch: RA-TH-ISO-1720	
Sample ID: LCS-RA-TH-ISO-1720		Laboratory Control Sample				Run: EGG-ORTEC_121019A			10/23/12 08:55	
Thorium 230		5.1	pCi/L		99	80	120			
Sample ID: C12100557-016GMS		Sample Matrix Spike				Run: EGG-ORTEC_121019A			10/23/12 13:13	
Thorium 230		8.9	pCi/L		68	70	130			S
- Spike response is outside of the acceptance range for this analysis. Since the LCS, MSD, and all tracer recoveries are acceptable the batch is approved.										
Sample ID: C12100557-016GMSD		Sample Matrix Spike Duplicate				Run: EGG-ORTEC_121019A			10/23/12 13:13	
Thorium 230		12.8	pCi/L		98	70	130	35	51	
Sample ID: MB-RA-TH-ISO-1720	3	Method Blank				Run: EGG-ORTEC_121019A			10/23/12 13:13	
Thorium 230		0.02	pCi/L							U
Thorium 230 precision (±)		0.08	pCi/L							
Thorium 230 MDC		0.2	pCi/L							

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: SW Alluvium **Work Order:** C12100557

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E909.0									Batch: T_PB-210-0300	
Sample ID: MB-PB-210-0300	3	Method Blank				Run: SUB-T48102			11/13/12 22:29	
Lead 210		0.3	pCi/L							U
Lead 210 precision (±)		0.3	pCi/L							
Lead 210 MDC		0.5	pCi/L							
Sample ID: LCS-PB-210-0300		Laboratory Control Sample				Run: SUB-T48102			11/14/12 07:21	
Lead 210		100	pCi/L		100	70	130			
Sample ID: TAP WATERMS		Sample Matrix Spike				Run: SUB-T48102			11/14/12 16:12	
Lead 210		100	pCi/L		100	70	130			
Sample ID: TAP WATERMSD		Sample Matrix Spike Duplicate				Run: SUB-T48102			11/14/12 20:37	
Lead 210		100	pCi/L		99	70	130	1.4	12.2	
Method: E909.0									Batch: T_PB-210-0304	
Sample ID: MB-PB-210-0304	3	Method Blank				Run: SUB-T48117			11/16/12 06:44	
Lead 210		0.4	pCi/L							U
Lead 210 precision (±)		0.6	pCi/L							
Lead 210 MDC		1.0	pCi/L							
Sample ID: LCS-PB-210-0304		Laboratory Control Sample				Run: SUB-T48117			11/16/12 07:42	
Lead 210		99	pCi/L		97	70	130			
Sample ID: T12100048-003AMS		Sample Matrix Spike				Run: SUB-T48117			11/16/12 09:39	
Lead 210		240	pCi/L		97	70	130			
Sample ID: T12100048-003AMSD		Sample Matrix Spike Duplicate				Run: SUB-T48117			11/16/12 10:38	
Lead 210		240	pCi/L		96	70	130	0.8	14.8	
Method: E909.0									Batch: T_PB-210-0305	
Sample ID: MB-PB-210-0305	3	Method Blank				Run: SUB-T48118			11/16/12 19:24	
Lead 210			pCi/L							U
Lead 210 precision (±)		0.6	pCi/L							
Lead 210 MDC		0.9	pCi/L							
Sample ID: LCS-PB-210-0305		Laboratory Control Sample				Run: SUB-T48118			11/16/12 20:23	
Lead 210		100	pCi/L		99	70	130			
Sample ID: T12100078-002BMS		Sample Matrix Spike				Run: SUB-T48118			11/17/12 13:55	
Lead 210		270	pCi/L		95	70	130			
Sample ID: T12100078-002BMSD		Sample Matrix Spike Duplicate				Run: SUB-T48118			11/17/12 14:53	
Lead 210		270	pCi/L		95	70	130	0.5	14.8	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: SW Alluvium **Work Order:** C12100557

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: RA-05									Batch: RA228-4250	
Sample ID: LCS-228-RA226-6302		Laboratory Control Sample				Run: TENNELEC-3_121016B			10/19/12 20:18	
Radium 228		5.7	pCi/L		112	80	120			
Sample ID: MB-RA226-6302	3	Method Blank				Run: TENNELEC-3_121016B			10/19/12 20:18	
Radium 228		0.5	pCi/L							U
Radium 228 precision (±)		1	pCi/L							
Radium 228 MDC		2	pCi/L							
Sample ID: C12100434-002EMS		Sample Matrix Spike				Run: TENNELEC-3_121016B			10/19/12 20:18	
Radium 228		14	pCi/L		118	70	130			
Sample ID: C12100434-002EMSD		Sample Matrix Spike Duplicate				Run: TENNELEC-3_121016B			10/19/12 20:18	
Radium 228		13	pCi/L		104	70	130	9.0	42.3	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

ANALYTICAL SUMMARY REPORT

November 20, 2012

United Nuclear Corporation
21 Miles NE of Gallup
Gallup, NM 87305

Workorder No.: C12100566 Quote ID: C129 - Quarterly Long List

Project Name: Zone-1

Energy Laboratories, Inc. Casper WY received the following 7 samples for United Nuclear Corporation on 10/12/2012 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C12100566-001	614	10/10/12 8:30	10/12/12	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Total Alkalinity QA Calculations Arsenic Speciation Selenium-IV, Total CVAA Selenium Prep E300.0 Anions Nitrogen, Ammonia Nitrogen, Nitrate + Nitrite pH Metals Preparation by EPA 200.2 Gross Alpha minus Rn222 and Uranium Lead 210, Total Radium 226, Total Radium 228, Total Thorium, Isotopic Solids, Total Dissolved Solids, Total Dissolved - Calculated E624 Purgeable Organics
C12100566-002	515-A	10/10/12 9:41	10/12/12	Aqueous	Same As Above
C12100566-003	604	10/10/12 10:30	10/12/12	Aqueous	Same As Above
C12100566-004	Rinsate	10/10/12 11:11	10/12/12	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Total Alkalinity QA Calculations Arsenic Speciation Selenium-IV, Total CVAA Selenium Prep E300.0 Anions Nitrogen, Ammonia Nitrogen, Nitrate + Nitrite pH Metals Preparation by EPA 200.2 Gross Alpha minus Rn222 and Uranium Lead 210, Total Radium 226, Total Radium 228, Total Thorium, Isotopic Solids, Total Dissolved E624 Purgeable Organics
C12100566-005	Field Blank	10/10/12 12:05	10/12/12	Aqueous	Same As Above

ANALYTICAL SUMMARY REPORT

C12100566-006	617	10/10/12 9:17	10/12/12	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Total Alkalinity QA Calculations Arsenic Speciation Selenium-IV, Total CVAA Selenium Prep E300.0 Anions Nitrogen, Ammonia Nitrogen, Nitrate + Nitrite pH Metals Preparation by EPA 200.2 Gross Alpha minus Rn222 and Uranium Lead 210, Total Radium 226, Total Radium 228, Total Thorium, Isotopic Solids, Total Dissolved Solids, Total Dissolved - Calculated E624 Purgeable Organics
C12100566-007	617 Rinsate	10/10/12 10:24	10/12/12	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Total Alkalinity QA Calculations Arsenic Speciation Selenium-IV, Total CVAA Selenium Prep E300.0 Anions Nitrogen, Ammonia Nitrogen, Nitrate + Nitrite pH Metals Preparation by EPA 200.2 Gross Alpha minus Rn222 and Uranium Lead 210, Total Radium 226, Total Radium 228, Total Thorium, Isotopic Solids, Total Dissolved E624 Purgeable Organics

The results as reported relate only to the item(s) submitted for testing. The analyses presented in this report were performed at Energy Laboratories, Inc., 2393 Salt Creek Hwy., Casper, WY 82601, unless otherwise noted. Radiochemistry analyses were performed at Energy Laboratories, Inc., 2325 Kerzell Lane, Casper, WY 82601, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

If you have any questions regarding these test results, please call.

Report Approved By:

Stephanie D Waldrop
Reporting Supervisor

Digitally signed by
Stephanie Waldrop
Date: 2012.11.20 16:29:32 -07:00

CLIENT: United Nuclear Corporation
Project: Zone-1
Sample Delivery Group: C12100566

Report Date: 11/20/12

CASE NARRATIVE

TH230 ANALYSIS
The sample-specific MDC for this sample could not be achieved due to significant matrix interferences, restricting the volume of sample to be used in the analysis.

BRANCH LABORATORY SUBCONTRACT ANALYSIS
Tests associated with analyst identified as ELI-H were subcontracted to Energy Laboratories, 3161 E.Lyndale Ave., Helena, MT, EPA Number MT00945.

Tests associated with analyst identified as ELI-CS were subcontracted to Energy Laboratories, 415 Graham Rd., College Station, TX, EPA Number TX01520.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1

Report Date: 11/20/12
Work Order: C12100566

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2320 B										Batch: R165837
Sample ID: MBLK	2	Method Blank				Run: MANTECH_121015B				10/15/12 14:27
Alkalinity, Total as CaCO3		ND	mg/L	5.0						
Bicarbonate as HCO3		2.06	mg/L	5.0						
Sample ID: LCS_121003		Laboratory Control Sample				Run: MANTECH_121015B				10/15/12 14:41
Alkalinity, Total as CaCO3		208	mg/L	5.0	104	90	110			
Sample ID: C12100562-001ADUP	2	Sample Duplicate				Run: MANTECH_121015B				10/15/12 14:57
Alkalinity, Total as CaCO3		182	mg/L	5.0				0.7	10	
Bicarbonate as HCO3		222	mg/L	5.0				0.7	10	
Sample ID: C12100562-002AMS		Sample Matrix Spike				Run: MANTECH_121015B				10/15/12 15:14
Alkalinity, Total as CaCO3		535	mg/L	5.0	112	80	120			

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-1 **Work Order:** C12100566

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C										Batch: TDS121015A
Sample ID: MB-1_121015A		Method Blank				Run: BAL-1_121015A				10/15/12 12:08
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	4						
Sample ID: LCS-2_121015A		Laboratory Control Sample				Run: BAL-1_121015A				10/15/12 12:08
Solids, Total Dissolved TDS @ 180 C		1080	mg/L	10	97	90	110			
Sample ID: C12100555-001A MS		Sample Matrix Spike				Run: BAL-1_121015A				10/15/12 12:16
Solids, Total Dissolved TDS @ 180 C		1900	mg/L	10	98	90	110			
Sample ID: C12100566-001A DUP		Sample Duplicate				Run: BAL-1_121015A				10/15/12 12:19
Solids, Total Dissolved TDS @ 180 C		6990	mg/L	10				2.5	5	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-1 **Work Order:** C12100566

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A3114 B									Analytical Run: CVAA-C202_121023A	
Sample ID: ICV		Initial Calibration Verification Standard							10/23/12 12:20	
Selenium-IV		0.0253	mg/L	0.0010	101	90	110			
Method: A3114 B									Batch: 35501	
Sample ID: MB-35501		Method Blank				Run: CVAA-C202_121023A			10/23/12 12:24	
Selenium-IV		ND	mg/L	0.0005						
Sample ID: LCS-35501		Laboratory Control Sample				Run: CVAA-C202_121023A			10/23/12 12:25	
Selenium-IV		0.0241	mg/L	0.0010	97	90	110			
Sample ID: C12100566-001DMS		Sample Matrix Spike				Run: CVAA-C202_121023A			10/23/12 13:13	
Selenium-IV		0.0259	mg/L	0.0010	104	85	115			
Sample ID: C12100566-001DMSD		Sample Matrix Spike Duplicate				Run: CVAA-C202_121023A			10/23/12 13:15	
Selenium-IV		0.0252	mg/L	0.0010	101	85	115	2.6	10	
Method: A3114 B									Batch: 35502	
Sample ID: MB-35502		Method Blank				Run: CVAA-C202_121023A			10/23/12 13:17	
Selenium-IV		ND	mg/L	0.0005						
Sample ID: LCS-35502		Laboratory Control Sample				Run: CVAA-C202_121023A			10/23/12 13:19	
Selenium-IV		0.0226	mg/L	0.0010	90	90	110			
Sample ID: C12100571-002DMS		Sample Matrix Spike				Run: CVAA-C202_121023A			10/23/12 13:46	
Selenium-IV		0.0181	mg/L	0.0010	72	85	115			S
Sample ID: C12100571-002DMSD		Sample Matrix Spike Duplicate				Run: CVAA-C202_121023A			10/23/12 13:48	
Selenium-IV		0.0170	mg/L	0.0010	68	85	115	6.2	10	S
Method: A3114 B									Analytical Run: CVAA-C202_121031A	
Sample ID: ICV		Initial Calibration Verification Standard							10/31/12 12:23	
Selenium		0.0268	mg/L	0.0010	107	90	110			
Method: A3114 B									Batch: 35588A	
Sample ID: MB-35588		Method Blank				Run: CVAA-C202_121031A			10/31/12 12:50	
Selenium-IV		ND	mg/L	0.0005						
Sample ID: LCS-35588		Laboratory Control Sample				Run: CVAA-C202_121031A			10/31/12 12:52	
Selenium-IV		0.0270	mg/L	0.0010	108	90	110			
Sample ID: C12100566-007DMS		Sample Matrix Spike				Run: CVAA-C202_121031A			10/31/12 13:08	
Selenium-IV		0.0257	mg/L	0.0010	103	85	115			
Sample ID: C12100566-007DMSD		Sample Matrix Spike Duplicate				Run: CVAA-C202_121031A			10/31/12 13:14	
Selenium-IV		0.0247	mg/L	0.0010	99	85	115	3.9	10	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-1 **Work Order:** C12100566

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-H B									Analytical Run: PHSC_101-C_121015A	
Sample ID: pH 6.86		Initial Calibration Verification Standard							10/15/12 09:11	
pH		6.84	s.u.	0.010	100	98	102			
Sample ID: PH 6.86		Initial Calibration Verification Standard							10/15/12 12:00	
pH		6.84	s.u.	0.010	100	98	102			
Method: A4500-H B									Batch: R165778	
Sample ID: C12100566-001ADUP		Sample Duplicate				Run: PHSC_101-C_121015A			10/15/12 10:00	
pH		6.56	s.u.	0.010				0.3	3	
Sample ID: C12100566-006ADUP		Sample Duplicate				Run: PHSC_101-C_121015A			10/15/12 10:16	
pH		6.74	s.u.	0.010				0.1	3	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-1 **Work Order:** C12100566

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-NH3 G										Batch: R165877
Sample ID: MBLK-1		Method Blank				Run: TECHNICON_121016B				10/16/12 14:10
Nitrogen, Ammonia as N		ND	mg/L	0.02						
Sample ID: LCS-2		Laboratory Control Sample				Run: TECHNICON_121016B				10/16/12 14:13
Nitrogen, Ammonia as N		1.99	mg/L	0.050	100	90	110			
Sample ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_121016B				10/16/12 14:15
Nitrogen, Ammonia as N		2.07	mg/L	0.050	106	80	120			
Sample ID: C12100566-003EMS		Sample Matrix Spike				Run: TECHNICON_121016B				10/16/12 14:47
Nitrogen, Ammonia as N		2.09	mg/L	0.050	104	90	110			
Sample ID: C12100566-003EMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_121016B				10/16/12 14:49
Nitrogen, Ammonia as N		2.18	mg/L	0.050	109	90	110	4.2	10	
Method: A4500-NH3 G										Batch: R165932
Sample ID: MBLK-1		Method Blank				Run: TECHNICON_121017A				10/17/12 11:42
Nitrogen, Ammonia as N		ND	mg/L	0.02						
Sample ID: LCS-2		Laboratory Control Sample				Run: TECHNICON_121017A				10/17/12 11:44
Nitrogen, Ammonia as N		2.01	mg/L	0.050	100	90	110			
Sample ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_121017A				10/17/12 11:46
Nitrogen, Ammonia as N		2.03	mg/L	0.050	104	80	120			
Sample ID: C12100557-008EMS		Sample Matrix Spike				Run: TECHNICON_121017A				10/17/12 11:52
Nitrogen, Ammonia as N		2.02	mg/L	0.050	95	90	110			
Sample ID: C12100557-008EMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_121017A				10/17/12 11:54
Nitrogen, Ammonia as N		2.03	mg/L	0.050	95	90	110	0.5	10	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1

Report Date: 11/20/12
Work Order: C12100566

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E1632AM									Analytical Run: SUB-H84055	
Sample ID: AS-ICV 25ppb-10/29/2		Initial Calibration Verification Standard							10/29/12 12:33	
Arsenic-III		25.0	ug/L	5.0	100	87.6	114			
Method: E1632AM									Batch: H_R84055	
Sample ID: ICB		Method Blank				Run: SUB-H84055			10/29/12 12:58	
Arsenic-III		ND	ug/L	2						
Sample ID: AS-LFB 50ppb-10/29/		Laboratory Fortified Blank				Run: SUB-H84055			10/29/12 13:16	
Arsenic-III		49.5	ug/L	5.0	99	55	146			
Sample ID: H12100275-002A MS		Sample Matrix Spike				Run: SUB-H84055			10/29/12 13:40	
Arsenic-III		49.5	ug/L	5.0	99	55	146			
Sample ID: H12100275-002A MSD		Sample Matrix Spike Duplicate				Run: SUB-H84055			10/29/12 13:48	
Arsenic-III		49.6	ug/L	5.0	99	55	146	0.2	20	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-1 **Work Order:** C12100566

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-C_121024B	
Sample ID: ICV	4	Initial Calibration Verification Standard							10/24/12 11:21	
Calcium		51.8	mg/L	0.50	104	95	105			
Magnesium		50.2	mg/L	0.50	100	95	105			
Potassium		47.8	mg/L	0.50	96	95	105			
Sodium		50.6	mg/L	0.50	101	95	105			
Sample ID: ICSA	4	Interference Check Sample A							10/24/12 11:50	
Calcium		512	mg/L	0.50	102	80	120			
Magnesium		520	mg/L	0.50	104	80	120			
Potassium		0.00560	mg/L	0.50						
Sodium		0.597	mg/L	0.50						
Sample ID: ICSAB	4	Interference Check Sample AB							10/24/12 11:54	
Calcium		501	mg/L	0.50	100	80	120			
Magnesium		496	mg/L	0.50	99	80	120			
Potassium		0.000500	mg/L	0.50						
Sodium		0.650	mg/L	0.50						
Method: E200.7									Batch: R166285	
Sample ID: MB-121024A	4	Method Blank				Run: ICP2-C_121024B			10/24/12 12:14	
Calcium		ND	mg/L	0.06						
Magnesium		ND	mg/L	0.03						
Potassium		ND	mg/L	0.06						
Sodium		ND	mg/L	0.3						
Sample ID: LFB-121024A	4	Laboratory Fortified Blank				Run: ICP2-C_121024B			10/24/12 12:18	
Calcium		49.0	mg/L	0.50	98	85	115			
Magnesium		48.5	mg/L	0.50	97	85	115			
Potassium		44.9	mg/L	0.50	90	85	115			
Sodium		47.1	mg/L	0.50	94	85	115			
Sample ID: C12100566-003CMS2	4	Sample Matrix Spike				Run: ICP2-C_121024B			10/24/12 17:40	
Calcium		726	mg/L	1.0	100	70	130			
Magnesium		999	mg/L	1.0	81	70	130			
Potassium		264	mg/L	1.0	99	70	130			
Sodium		557	mg/L	1.6	100	70	130			
Sample ID: C12100566-003CMSD	4	Sample Matrix Spike Duplicate				Run: ICP2-C_121024B			10/24/12 17:44	
Calcium		728	mg/L	1.0	100	70	130	0.2	20	
Magnesium		1020	mg/L	1.0	90	70	130	2.3	20	
Potassium		261	mg/L	1.0	97	70	130	1.2	20	
Sodium		561	mg/L	1.6	102	70	130	0.7	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-1 **Work Order:** C12100566

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-C_121115A	
Sample ID: ICV		Initial Calibration Verification Standard							11/15/12 12:39	
Manganese		5.08	mg/L	0.010	102	95	105			
Sample ID: ICSA		Interference Check Sample A							11/15/12 13:09	
Manganese		-0.00290	mg/L	0.010						
Sample ID: ICSAB		Interference Check Sample AB							11/15/12 13:13	
Manganese		0.506	mg/L	0.010	101	80	120			
Method: E200.7										Batch: 35402
Sample ID: MB-35402		Method Blank				Run: ICP2-C_121115A			11/15/12 14:42	
Manganese		ND	mg/L	0.0002						
Sample ID: LCS3-35402		Laboratory Control Sample				Run: ICP2-C_121115A			11/15/12 14:46	
Manganese		2.61	mg/L	0.0010	104	85	115			
Sample ID: C12100556-001CMS3		Sample Matrix Spike				Run: ICP2-C_121115A			11/15/12 14:58	
Manganese		2.88	mg/L	0.0010	102	70	130			
Sample ID: C12100556-001CMSD		Sample Matrix Spike Duplicate				Run: ICP2-C_121115A			11/15/12 15:02	
Manganese		2.93	mg/L	0.0010	104	70	130	1.4	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-1 **Work Order:** C12100566

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS2-C_121019A	
Sample ID: ICV	10	Initial Calibration Verification Standard							10/19/12 14:15	
Aluminum		0.0524	mg/L	0.0010	105	90	110			
Beryllium		0.0530	mg/L	0.0010	106	90	110			
Cadmium		0.0517	mg/L	0.0010	103	90	110			
Cobalt		0.0528	mg/L	0.0010	106	90	110			
Lead		0.0478	mg/L	0.0010	96	90	110			
Manganese		0.0523	mg/L	0.0010	105	90	110			
Molybdenum		0.0486	mg/L	0.0010	97	90	110			
Nickel		0.0514	mg/L	0.0010	103	90	110			
Uranium		0.0459	mg/L	0.00030	92	90	110			
Vanadium		0.0502	mg/L	0.0010	100	90	110			
Method: E200.8									Batch: 35402	
Sample ID: MB-35402	10	Method Blank				Run: ICPMS2-C_121019A			10/19/12 18:32	
Aluminum		0.003	mg/L	0.0007						
Beryllium		ND	mg/L	3E-05						
Cadmium		ND	mg/L	4E-05						
Cobalt		ND	mg/L	0.0001						
Lead		ND	mg/L	2E-05						
Manganese		8E-05	mg/L	7E-05						
Molybdenum		0.0005	mg/L	6E-05						
Nickel		0.001	mg/L	5E-05						
Uranium		2E-05	mg/L	1E-05						
Vanadium		ND	mg/L	0.0001						
Sample ID: LCS3-35402	10	Laboratory Control Sample				Run: ICPMS2-C_121019A			10/19/12 18:34	
Aluminum		2.46	mg/L	0.030	98	85	115			
Beryllium		0.270	mg/L	0.0010	108	85	115			
Cadmium		0.239	mg/L	0.0010	96	85	115			
Cobalt		0.511	mg/L	0.0050	102	85	115			
Lead		0.484	mg/L	0.0010	97	85	115			
Manganese		2.45	mg/L	0.0010	98	85	115			
Molybdenum		0.518	mg/L	0.0010	104	85	115			
Nickel		0.505	mg/L	0.0050	101	85	115			
Uranium		0.501	mg/L	0.00030	100	85	115			
Vanadium		0.484	mg/L	0.010	97	85	115			
Sample ID: C12100556-001CMS3	10	Sample Matrix Spike				Run: ICPMS2-C_121019A			10/19/12 18:53	
Aluminum		2.21	mg/L	0.030	88	70	130			
Beryllium		0.219	mg/L	0.0010	87	70	130			
Cadmium		0.216	mg/L	0.0010	86	70	130			
Cobalt		0.487	mg/L	0.0050	97	70	130			
Lead		0.515	mg/L	0.0010	103	70	130			
Manganese		2.62	mg/L	0.0010	93	70	130			
Molybdenum		0.820	mg/L	0.0010	111	70	130			
Nickel		0.509	mg/L	0.0050	97	70	130			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-1 **Work Order:** C12100566

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8										Batch: 35402
Sample ID: C12100556-001CMS3	10	Sample Matrix Spike				Run: ICPMS2-C_121019A			10/19/12 18:53	
Uranium		0.669	mg/L	0.00030	121	70	130			
Vanadium		0.473	mg/L	0.010	95	70	130			
Sample ID: C12100556-001CMSD	10	Sample Matrix Spike Duplicate				Run: ICPMS2-C_121019A			10/19/12 18:55	
Aluminum		2.19	mg/L	0.030	87	70	130	0.7	20	
Beryllium		0.223	mg/L	0.0010	89	70	130	1.8	20	
Cadmium		0.214	mg/L	0.0010	86	70	130	0.9	20	
Cobalt		0.488	mg/L	0.0050	97	70	130	0.2	20	
Lead		0.518	mg/L	0.0010	104	70	130	0.6	20	
Manganese		2.65	mg/L	0.0010	94	70	130	1.2	20	
Molybdenum		0.810	mg/L	0.0010	109	70	130	1.2	20	
Nickel		0.513	mg/L	0.0050	98	70	130	0.7	20	
Uranium		0.666	mg/L	0.00030	120	70	130	0.4	20	
Vanadium		0.486	mg/L	0.010	97	70	130	2.8	20	

Qualifiers:

RL - *Analyte reporting limit.*

MDC - Minimum detectable concentration

ND - *Not detected at the reporting limit.*

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-1 **Work Order:** C12100566

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS2-C_121119A	
Sample ID: ICV	10	Initial Calibration Verification Standard							11/19/12 13:57	
Aluminum		0.0503	mg/L	0.0010	101	90	110			
Beryllium		0.0512	mg/L	0.0010	102	90	110			
Cadmium		0.0503	mg/L	0.0010	101	90	110			
Cobalt		0.0528	mg/L	0.0010	106	90	110			
Lead		0.0500	mg/L	0.0010	100	90	110			
Manganese		0.0504	mg/L	0.0010	101	90	110			
Molybdenum		0.0510	mg/L	0.0010	102	90	110			
Nickel		0.0514	mg/L	0.0010	103	90	110			
Uranium		0.0492	mg/L	0.00030	99	90	110			
Vanadium		0.0503	mg/L	0.0010	101	90	110			
Method: E200.8										Batch: 35766
Sample ID: MB-35766	10	Method Blank				Run: ICPMS2-C_121119A			11/20/12 01:14	
Aluminum		0.0211	mg/L	0.10						
Beryllium		ND	mg/L	0.0010						
Cadmium		ND	mg/L	0.0050						
Cobalt		ND	mg/L	0.010						
Lead		3.35E-05	mg/L	0.0010						
Manganese		ND	mg/L	0.010						
Molybdenum		0.000170	mg/L	0.10						
Nickel		0.00159	mg/L	0.050						
Uranium		2.75E-05	mg/L	0.00030						
Vanadium		ND	mg/L	0.10						
Sample ID: LCS3-35766	10	Laboratory Control Sample				Run: ICPMS2-C_121119A			11/20/12 01:16	
Aluminum		2.48	mg/L	0.030	99	85	115			
Beryllium		0.251	mg/L	0.0010	100	85	115			
Cadmium		0.258	mg/L	0.0010	103	85	115			
Cobalt		0.492	mg/L	0.0050	98	85	115			
Lead		0.498	mg/L	0.0010	100	85	115			
Manganese		2.46	mg/L	0.0010	98	85	115			
Molybdenum		0.513	mg/L	0.0010	103	85	115			
Nickel		0.497	mg/L	0.0050	99	85	115			
Uranium		0.529	mg/L	0.00030	106	85	115			
Vanadium		0.494	mg/L	0.010	99	85	115			
Sample ID: C12110538-001AMS3	10	Sample Matrix Spike				Run: ICPMS2-C_121119A			11/20/12 01:24	
Aluminum		2.54	mg/L	0.030	99	70	130			
Beryllium		0.254	mg/L	0.0010	101	70	130			
Cadmium		0.249	mg/L	0.0010	99	70	130			
Cobalt		0.505	mg/L	0.0050	101	70	130			
Lead		0.500	mg/L	0.0010	100	70	130			
Manganese		2.75	mg/L	0.0010	99	70	130			
Molybdenum		0.508	mg/L	0.0010	101	70	130			
Nickel		0.518	mg/L	0.0050	102	70	130			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-1 **Work Order:** C12100566

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8										Batch: 35766
Sample ID: C12110538-001AMS3	10	Sample Matrix Spike				Run: ICPMS2-C_121119A				11/20/12 01:24
Uranium		0.518	mg/L	0.00030	103	70	130			
Vanadium		0.504	mg/L	0.010	101	70	130			
Sample ID: C12110538-001AMSD	10	Sample Matrix Spike Duplicate				Run: ICPMS2-C_121119A				11/20/12 01:37
Aluminum		2.57	mg/L	0.030	100	70	130	1.2	20	
Beryllium		0.253	mg/L	0.0010	101	70	130	0.1	20	
Cadmium		0.253	mg/L	0.0010	101	70	130	1.5	20	
Cobalt		0.501	mg/L	0.0050	100	70	130	0.8	20	
Lead		0.505	mg/L	0.0010	101	70	130	1.0	20	
Manganese		2.75	mg/L	0.0010	99	70	130	0.0	20	
Molybdenum		0.510	mg/L	0.0010	101	70	130	0.3	20	
Nickel		0.530	mg/L	0.0050	104	70	130	2.3	20	
Uranium		0.525	mg/L	0.00030	105	70	130	1.3	20	
Vanadium		0.502	mg/L	0.010	100	70	130	0.4	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-1 **Work Order:** C12100566

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0									Analytical Run: IC2-C_121015A	
Sample ID: ICV	2	Initial Calibration Verification Standard							10/15/12 12:09	
Chloride		9.99	mg/L	1.0	100	90	110			
Sulfate		40.4	mg/L	1.0	101	90	110			
Method: E300.0									Batch: R165865	
Sample ID: ICB	2	Method Blank				Run: IC2-C_121015A			10/15/12 12:25	
Chloride		ND	mg/L	0.03						
Sulfate		0.1	mg/L	0.10						
Sample ID: LFB	2	Laboratory Fortified Blank				Run: IC2-C_121015A			10/15/12 12:40	
Chloride		10.0	mg/L	1.0	100	90	110			
Sulfate		40.0	mg/L	1.0	100	90	110			
Sample ID: C12100566-004AMS	2	Sample Matrix Spike				Run: IC2-C_121015A			10/16/12 03:50	
Chloride		10.2	mg/L	1.0	100	90	110			
Sulfate		40.7	mg/L	1.0	100	90	110			
Sample ID: C12100566-004AMSD	2	Sample Matrix Spike Duplicate				Run: IC2-C_121015A			10/16/12 04:05	
Chloride		10.4	mg/L	1.0	102	90	110	1.8	10	
Sulfate		41.4	mg/L	1.0	102	90	110	1.9	10	
Method: E300.0									Analytical Run: IC2-C_121016A	
Sample ID: ICV-101612-10		Initial Calibration Verification Standard							10/16/12 16:29	
Sulfate		39.7	mg/L	1.0	99	90	110			
Method: E300.0									Batch: R165971	
Sample ID: ICB-101612-11		Method Blank				Run: IC2-C_121016A			10/16/12 16:45	
Sulfate		0.2	mg/L	0.10						
Sample ID: LFB-101612-12		Laboratory Fortified Blank				Run: IC2-C_121016A			10/16/12 17:00	
Sulfate		39.0	mg/L	1.0	97	90	110			
Sample ID: C12100574-004AMS		Sample Matrix Spike				Run: IC2-C_121016A			10/16/12 21:22	
Sulfate		2460	mg/L	8.3		90	110			A
Sample ID: C12100574-004AMSD		Sample Matrix Spike Duplicate				Run: IC2-C_121016A			10/16/12 21:38	
Sulfate		2440	mg/L	8.3		90	110	0.9	10	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

MDC - Minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1

Report Date: 11/20/12
Work Order: C12100566

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E353.2										Batch: R165810
Sample ID: MBLK-1		Method Blank				Run: TECHNICON_121015A				10/15/12 10:45
Nitrogen, Nitrate+Nitrite as N		ND	mg/L	0.003						
Sample ID: LCS-2		Laboratory Control Sample				Run: TECHNICON_121015A				10/15/12 10:47
Nitrogen, Nitrate+Nitrite as N		2.58	mg/L	0.10	103	90	110			
Sample ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_121015A				10/15/12 10:50
Nitrogen, Nitrate+Nitrite as N		1.98	mg/L	0.10	101	90	110			
Sample ID: C12100566-005EMS		Sample Matrix Spike				Run: TECHNICON_121015A				10/15/12 13:15
Nitrogen, Nitrate+Nitrite as N		1.93	mg/L	0.10	98	90	110			
Sample ID: C12100566-005EMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_121015A				10/15/12 13:17
Nitrogen, Nitrate+Nitrite as N		1.93	mg/L	0.10	98	90	110	0.0	10	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-1 **Work Order:** C12100566

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624									Analytical Run: R165900	
Sample ID: 101612_CCV_19	9	Continuing Calibration Verification Standard							10/16/12 22:18	
Bromodichloromethane		10.4	ug/L	1.0	104	70	130			
Bromoform		9.92	ug/L	1.0	99	70	130			
Chlorodibromomethane		10.5	ug/L	1.0	105	70	130			
Chloroform		10.6	ug/L	1.0	106	70	130			
Trihalomethanes, Total		41.5	ug/L	1.0	104	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	97	80	120			
Surr: Dibromofluoromethane				1.0	104	80	120			
Surr: p-Bromofluorobenzene				1.0	102	80	120			
Surr: Toluene-d8				1.0	100	80	120			
Method: E624									Batch: R165900	
Sample ID: 101612_LCS_4	9	Laboratory Control Sample				Run: SATURNCA_121016A			10/16/12 13:12	
Bromodichloromethane		8.96	ug/L	1.0	90	72.3	123			
Bromoform		11.1	ug/L	1.0	111	70.3	128			
Chlorodibromomethane		8.64	ug/L	1.0	86	69.1	123			
Chloroform		9.60	ug/L	1.0	96	72.9	130			
Trihalomethanes, Total		38.3	ug/L	1.0	96	75.7	121			
Surr: 1,2-Dichlorobenzene-d4				1.0	104	82	118			
Surr: Dibromofluoromethane				1.0	107	74.8	123			
Surr: p-Bromofluorobenzene				1.0	111	82.4	121			
Surr: Toluene-d8				1.0	97	76.4	125			
Sample ID: 101612_MBLK_6	9	Method Blank				Run: SATURNCA_121016A			10/16/12 14:24	
Bromodichloromethane		ND	ug/L	1.0						
Bromoform		ND	ug/L	1.0						
Chlorodibromomethane		ND	ug/L	1.0						
Chloroform		ND	ug/L	1.0						
Trihalomethanes, Total		ND	ug/L	1.0						
Surr: 1,2-Dichlorobenzene-d4				1.0	94	80	120			
Surr: Dibromofluoromethane				1.0	107	80	120			
Surr: p-Bromofluorobenzene				1.0	97	80	120			
Surr: Toluene-d8				1.0	103	80	120			
Sample ID: C12100566-001HMS	9	Sample Matrix Spike				Run: SATURNCA_121016A			10/17/12 07:17	
Bromodichloromethane		84.0	ug/L	5.0	84	72.3	123			
Bromoform		95.6	ug/L	5.0	96	70.3	128			
Chlorodibromomethane		84.8	ug/L	5.0	85	69.1	123			
Chloroform		314	ug/L	5.0	76	72.9	130			
Trihalomethanes, Total		579	ug/L	5.0	85	75.7	121			
Surr: 1,2-Dichlorobenzene-d4				1.0	100	82	118			
Surr: Dibromofluoromethane				1.0	107	74.8	123			
Surr: p-Bromofluorobenzene				1.0	110	82.4	121			
Surr: Toluene-d8				1.0	97	76.4	125			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-1 **Work Order:** C12100566

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624										Batch: R165900
Sample ID: C12100566-001HMSD	9	Sample Matrix Spike Duplicate				Run: SATURNCA_121016A			10/17/12 07:53	
Bromodichloromethane		98.4	ug/L	5.0	98	72.3	123	16	20	
Bromoform		99.2	ug/L	5.0	99	70.3	128	3.7	20	
Chlorodibromomethane		102	ug/L	5.0	102	69.1	123	19	20	
Chloroform		323	ug/L	5.0	85	72.9	130	2.8	20	
Trihalomethanes, Total		623	ug/L	5.0	96	75.7	121	7.4	20	
Surr: 1,2-Dichlorobenzene-d4				1.0	96	82	118			
Surr: Dibromofluoromethane				1.0	108	74.8	123			
Surr: p-Bromofluorobenzene				1.0	104	82.4	121			
Surr: Toluene-d8				1.0	104	76.4	125			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-1 **Work Order:** C12100566

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624									Analytical Run: R166168	
Sample ID: 101912_CCV_19	7	Continuing Calibration Verification Standard							10/19/12 23:08	
Bromodichloromethane		10.3	ug/L	1.0	103	70	130			
Bromoform		10.1	ug/L	1.0	101	70	130			
Chlorodibromomethane		10.6	ug/L	1.0	106	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	97	80	120			
Surr: Dibromofluoromethane				1.0	101	80	120			
Surr: p-Bromofluorobenzene				1.0	98	80	120			
Surr: Toluene-d8				1.0	102	80	120			
Method: E624									Batch: R166168	
Sample ID: C12100431-001HMSD	7	Sample Matrix Spike Duplicate				Run: SATURNCA_121019A			10/19/12 20:08	
Bromodichloromethane		193	ug/L	10	96	72.3	123	1.2	20	
Bromoform		201	ug/L	10	100	70.3	128	2.4	20	
Chlorodibromomethane		192	ug/L	10	96	69.1	123	6.1	20	
Surr: 1,2-Dichlorobenzene-d4				1.0	103	82	118			
Surr: Dibromofluoromethane				1.0	101	74.8	123			
Surr: p-Bromofluorobenzene				1.0	102	82.4	121			
Surr: Toluene-d8				1.0	99	76.4	125			
Sample ID: 101912_LCS_4	7	Laboratory Control Sample				Run: SATURNCA_121019A			10/19/12 13:36	
Bromodichloromethane		10.8	ug/L	1.0	108	72.3	123			
Bromoform		11.4	ug/L	1.0	114	70.3	128			
Chlorodibromomethane		11.2	ug/L	1.0	112	69.1	123			
Surr: 1,2-Dichlorobenzene-d4				1.0	103	82	118			
Surr: Dibromofluoromethane				1.0	102	74.8	123			
Surr: p-Bromofluorobenzene				1.0	106	82.4	121			
Surr: Toluene-d8				1.0	100	76.4	125			
Sample ID: 101912_MBLK_6	7	Method Blank				Run: SATURNCA_121019A			10/19/12 14:47	
Bromodichloromethane		ND	ug/L	1.0						
Bromoform		ND	ug/L	1.0						
Chlorodibromomethane		ND	ug/L	1.0						
Surr: 1,2-Dichlorobenzene-d4				1.0	96	80	120			
Surr: Dibromofluoromethane				1.0	100	80	120			
Surr: p-Bromofluorobenzene				1.0	94	80	120			
Surr: Toluene-d8				1.0	98	80	120			
Sample ID: C12100431-001HMS	7	Sample Matrix Spike				Run: SATURNCA_121019A			10/19/12 21:20	
Bromodichloromethane		195	ug/L	10	98	72.3	123			
Bromoform		196	ug/L	10	98	70.3	128			
Chlorodibromomethane		204	ug/L	10	102	69.1	123			
Surr: 1,2-Dichlorobenzene-d4				1.0	98	82	118			
Surr: Dibromofluoromethane				1.0	107	74.8	123			
Surr: p-Bromofluorobenzene				1.0	96	82.4	121			
Surr: Toluene-d8				1.0	102	76.4	125			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1

Report Date: 11/20/12
Work Order: C12100566

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E900.1										Batch: GA-0617
Sample ID: LCS-GA-0605		Laboratory Control Sample				Run: BERTHOLD 770-2_121019E				11/08/12 22:02
Gross Alpha minus Rn & U		21.4	pCi/L		105	80	120			
Sample ID: MB-GA-0605	3	Method Blank				Run: BERTHOLD 770-2_121019E				11/08/12 22:02
Gross Alpha minus Rn & U		0.04	pCi/L							U
Gross Alpha minus Rn & U Precision (±)		0.2	pCi/L							
Gross Alpha minus Rn & U MDC		0.3	pCi/L							
Sample ID: C12100566-002GMS		Sample Matrix Spike				Run: BERTHOLD 770-2_121019E				11/08/12 22:02
Gross Alpha minus Rn & U		43.9	pCi/L		103	70	130			
Sample ID: C12100566-002GMSD		Sample Matrix Spike Duplicate				Run: BERTHOLD 770-2_121019E				11/08/12 22:02
Gross Alpha minus Rn & U		40.1	pCi/L		95	70	130	9.2	22	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1

Report Date: 11/20/12
Work Order: C12100566

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E903.0										Batch: RA226-6308
Sample ID: C12100563-003DMS		Sample Matrix Spike				Run: BERTHOLD 770-1_121018A			10/29/12 16:08	
Radium 226		18	pCi/L		119	70	130			
Sample ID: C12100563-003DMSD		Sample Matrix Spike Duplicate				Run: BERTHOLD 770-1_121018A			10/29/12 18:06	
Radium 226		17	pCi/L		110	70	130	6.6	23	
Sample ID: MB-RA226-6308	3	Method Blank				Run: BERTHOLD 770-1_121018A			10/29/12 21:54	
Radium 226		-0.1	pCi/L							U
Radium 226 precision (±)		0.09	pCi/L							
Radium 226 MDC		0.2	pCi/L							
Sample ID: LCS-RA226-6308		Laboratory Control Sample				Run: BERTHOLD 770-1_121018A			10/29/12 21:54	
Radium 226		5.3	pCi/L		86	80	120			

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-1 **Work Order:** C12100566

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E908.0										Batch: RA-TH-ISO-1726
Sample ID: LCS-RA-TH-ISO-1726		Laboratory Control Sample				Run: ALPHANALYST_121025A				10/29/12 09:16
Thorium 230		5.1	pCi/L		99	80	120			
Sample ID: C12100563-005DMS		Sample Matrix Spike				Run: ALPHANALYST_121025A				10/29/12 09:16
Thorium 230		12	pCi/L		97	70	130			
Sample ID: C12100563-005DMSD		Sample Matrix Spike Duplicate				Run: ALPHANALYST_121025A				10/29/12 09:16
Thorium 230		11	pCi/L		95	70	130	1.9	41.1	
Sample ID: MB-RA-TH-ISO-1726	3	Method Blank				Run: ALPHANALYST_121025A				10/29/12 09:17
Thorium 230		0.03	pCi/L							U
Thorium 230 precision (±)		0.06	pCi/L							
Thorium 230 MDC		0.2	pCi/L							

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-1 **Work Order:** C12100566

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E909.0									Batch: T_PB-210-0305	
Sample ID: MB-PB-210-0305	3	Method Blank				Run: SUB-T48118			11/16/12 19:24	
Lead 210			pCi/L							U
Lead 210 precision (±)		0.6	pCi/L							
Lead 210 MDC		0.9	pCi/L							
Sample ID: LCS-PB-210-0305		Laboratory Control Sample				Run: SUB-T48118			11/16/12 20:23	
Lead 210		100	pCi/L		99	70	130			
Sample ID: T12100078-002BMS		Sample Matrix Spike				Run: SUB-T48118			11/17/12 13:55	
Lead 210		270	pCi/L		95	70	130			
Sample ID: T12100078-002BMSD		Sample Matrix Spike Duplicate				Run: SUB-T48118			11/17/12 14:53	
Lead 210		270	pCi/L		95	70	130	0.5	14.8	
Method: E909.0									Batch: T_PB-210-0306	
Sample ID: MB-PB-210-0306	3	Method Blank				Run: SUB-T48121			11/17/12 19:06	
Lead 210		-0.02	pCi/L							U
Lead 210 precision (±)		0.6	pCi/L							
Lead 210 MDC		1.0	pCi/L							
Sample ID: LCS-PB-210-0306		Laboratory Control Sample				Run: SUB-T48121			11/17/12 20:05	
Lead 210		94	pCi/L		93	70	130			
Sample ID: T12100078-003BMS		Sample Matrix Spike				Run: SUB-T48121			11/18/12 16:34	
Lead 210		250	pCi/L		94	70	130			
Sample ID: T12100078-003BMSD		Sample Matrix Spike Duplicate				Run: SUB-T48121			11/18/12 17:32	
Lead 210		250	pCi/L		92	70	130	2.4	14.9	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-1 **Work Order:** C12100566

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: RA-05										Batch: RA228-4252
Sample ID: LCS-228-RA226-6308		Laboratory Control Sample				Run: TENNELEC-3_121018C			10/23/12 21:13	
Radium 228		6.4	pCi/L		116	80	120			
Sample ID: MB-RA226-6308	3	Method Blank				Run: TENNELEC-3_121018C			10/23/12 21:13	
Radium 228		0.9	pCi/L							U
Radium 228 precision (±)		1	pCi/L							
Radium 228 MDC		2	pCi/L							
Sample ID: C12100563-007DMS		Sample Matrix Spike				Run: TENNELEC-3_121018C			10/23/12 21:13	
Radium 228		11.0	pCi/L		103	70	130			
Sample ID: C12100563-007DMSD		Sample Matrix Spike Duplicate				Run: TENNELEC-3_121018C			10/23/12 21:13	
Radium 228		11.3	pCi/L		107	70	130	3.1	59.8	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

ANALYTICAL SUMMARY REPORT

November 19, 2012

United Nuclear Corporation
21 Miles NE of Gallup
Gallup, NM 87305

Workorder No.: C12100859 Quote ID: C129 - Quarterly Long List

Project Name: Zone-1

Energy Laboratories, Inc. Casper WY received the following 6 samples for United Nuclear Corporation on 10/19/2012 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C12100859-001	EPA-4	10/15/12 8:53	10/19/12	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Total Alkalinity QA Calculations Arsenic Speciation Selenium-IV, Total CVAA Selenium Prep E300.0 Anions Nitrogen, Ammonia Nitrogen, Nitrate + Nitrite pH Metals Preparation by EPA 200.2 Gross Alpha minus Rn222 and Uranium Lead 210, Total Radium 226, Total Radium 228, Total Thorium, Isotopic Solids, Total Dissolved Solids, Total Dissolved - Calculated E624 Purgeable Organics
C12100859-002	EPA-5	10/15/12 9:54	10/19/12	Aqueous	Same As Above
C12100859-003	EPA-7	10/15/12 10:37	10/19/12	Aqueous	Same As Above
C12100859-004	EPA-2	10/15/12 11:27	10/19/12	Aqueous	Same As Above
C12100859-005	EPA-2 Duplicate	10/15/12 12:05	10/19/12	Aqueous	Same As Above
C12100859-006	TWQ-142	10/16/12 12:11	10/19/12	Aqueous	Same As Above

The results as reported relate only to the item(s) submitted for testing. The analyses presented in this report were performed at Energy Laboratories, Inc., 2393 Salt Creek Hwy., Casper, WY 82601, unless otherwise noted. Radiochemistry analyses were performed at Energy Laboratories, Inc., 2325 Kerzell Lane, Casper, WY 82601, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

If you have any questions regarding these test results, please call.

Report Approved By:

Stephanie D Waldrop
Reporting Supervisor

Digitally signed by
Stephanie Waldrop
Date: 2012.11.19 16:53:58 -07:00

CLIENT: United Nuclear Corporation
Project: Zone-1
Sample Delivery Group: C12100859

Report Date: 11/19/12

CASE NARRATIVE

TH230 ANALYSIS
The sample-specific MDC for this sample could not be achieved due to significant matrix interferences, restricting the volume of sample to be used in the analysis.

BRANCH LABORATORY SUBCONTRACT ANALYSIS
Tests associated with analyst identified as ELI-H were subcontracted to Energy Laboratories, 3161 E.Lyndale Ave., Helena, MT, EPA Number MT00945.

Tests associated with analyst identified as ELI-CS were subcontracted to Energy Laboratories, 415 Graham Rd., College Station, TX, EPA Number TX01520.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/19/12

Project: Zone-1 **Work Order:** C12100859

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2320 B										Batch: R166144
Sample ID: MBLK	2	Method Blank				Run: MANTECH_121022B			10/22/12 15:13	
Alkalinity, Total as CaCO3		ND	mg/L	5.0						
Bicarbonate as HCO3		1.95	mg/L	5.0						
Sample ID: LCS_121003		Laboratory Control Sample				Run: MANTECH_121022B			10/22/12 15:26	
Alkalinity, Total as CaCO3		207	mg/L	5.0	103	90	110			
Sample ID: C12100849-001ADUP	2	Sample Duplicate				Run: MANTECH_121022B			10/22/12 15:47	
Alkalinity, Total as CaCO3		836	mg/L	5.0				0.6	10	
Bicarbonate as HCO3		1020	mg/L	5.0				0.7	10	
Sample ID: C12100849-002AMS		Sample Matrix Spike				Run: MANTECH_121022B			10/22/12 16:06	
Alkalinity, Total as CaCO3		288	mg/L	5.0	105	80	120			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/19/12

Project: Zone-1 **Work Order:** C12100859

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C									Batch: TDS121022A	
Sample ID: MB-1_121022A		Method Blank				Run: BAL-1_121022A			10/22/12 08:14	
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	4						
Sample ID: LCS-2_121022A		Laboratory Control Sample				Run: BAL-1_121022A			10/22/12 08:14	
Solids, Total Dissolved TDS @ 180 C		1080	mg/L	10	97	90	110			
Sample ID: C12100859-001A DUP		Sample Duplicate				Run: BAL-1_121022A			10/22/12 08:15	
Solids, Total Dissolved TDS @ 180 C		4380	mg/L	10				2.6	5	
Sample ID: C12100859-002A MS		Sample Matrix Spike				Run: BAL-1_121022A			10/22/12 08:15	
Solids, Total Dissolved TDS @ 180 C		8640	mg/L	10	96	90	110			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/19/12

Project: Zone-1 **Work Order:** C12100859

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A3114 B								Analytical Run: CVAA-C202_121107B		
Sample ID: ICV		Initial Calibration Verification Standard							11/07/12 13:21	
Selenium-IV		0.0271	mg/L	0.0010	108	90	110			
Method: A3114 B									Batch: 35588	
Sample ID: MB-35588		Method Blank				Run: CVAA-C202_121107B			11/07/12 13:26	
Selenium-IV		ND	mg/L	0.0005						
Sample ID: LCS-35588		Laboratory Control Sample				Run: CVAA-C202_121107B			11/07/12 13:28	
Selenium-IV		0.0271	mg/L	0.0010	108	90	110			
Sample ID: C12100835-007DMS		Sample Matrix Spike				Run: CVAA-C202_121107B			11/07/12 14:03	
Selenium-IV		0.0268	mg/L	0.0010	107	85	115			
Sample ID: C12100835-007DMSD		Sample Matrix Spike Duplicate				Run: CVAA-C202_121107B			11/07/12 14:05	
Selenium-IV		0.0266	mg/L	0.0010	106	85	115	0.7	10	
Method: A3114 B									Batch: 35589	
Sample ID: MB-35589		Method Blank				Run: CVAA-C202_121107B			11/07/12 14:25	
Selenium-IV		ND	mg/L	0.0005						
Sample ID: C12100835-001DMS		Sample Matrix Spike				Run: CVAA-C202_121107B			11/07/12 14:39	
Selenium-IV		0.0228	mg/L	0.0010	91	85	115			
Sample ID: C12100835-001DMSD		Sample Matrix Spike Duplicate				Run: CVAA-C202_121107B			11/07/12 14:41	
Selenium-IV		0.0221	mg/L	0.0010	88	85	115	3.1	10	
Sample ID: LCS-35589		Laboratory Control Sample				Run: CVAA-C202_121107B			11/07/12 14:49	
Selenium-IV		0.0244	mg/L	0.0010	98	90	110			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/19/12

Project: Zone-1 **Work Order:** C12100859

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-H B								Analytical Run: PHSC_101-C_121022A		
Sample ID: pH 6.86		Initial Calibration Verification Standard							10/22/12 09:24	
pH		6.83	s.u.	0.010	100	98	102			
Method: A4500-H B									Batch: R166104	
Sample ID: C12100859-005ADUP		Sample Duplicate				Run: PHSC_101-C_121022A			10/22/12 10:42	
pH		6.75	s.u.	0.010				0.0	3	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1

Report Date: 11/19/12
Work Order: C12100859

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-NH3 G										Batch: R166402
Sample ID: MBLK-1		Method Blank				Run: TECHNICON_121026A				10/26/12 10:20
Nitrogen, Ammonia as N		ND	mg/L	0.02						
Sample ID: LCS-2		Laboratory Control Sample				Run: TECHNICON_121026A				10/26/12 10:22
Nitrogen, Ammonia as N		1.98	mg/L	0.050	99	90	110			
Sample ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_121026A				10/26/12 10:24
Nitrogen, Ammonia as N		2.01	mg/L	0.050	103	80	120			
Sample ID: C12100835-020EMS		Sample Matrix Spike				Run: TECHNICON_121026A				10/26/12 17:14
Nitrogen, Ammonia as N		2.11	mg/L	0.050	106	90	110			
Sample ID: C12100835-020EMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_121026A				10/26/12 17:16
Nitrogen, Ammonia as N		2.07	mg/L	0.050	104	90	110	1.9	10	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1

Report Date: 11/19/12
Work Order: C12100859

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E1632AM									Analytical Run: SUB-H84213	
Sample ID: AS-ICV 25ppb-11/5/20		Initial Calibration Verification Standard							11/05/12 10:24	
Arsenic-III		24.3	ug/L	5.0	97	87.6	114			
Method: E1632AM									Batch: H_R84213	
Sample ID: ICB		Method Blank				Run: SUB-H84213			11/05/12 10:48	
Arsenic-III		ND	ug/L	2						
Sample ID: AS-LFB 50ppb-11/5/2		Laboratory Fortified Blank				Run: SUB-H84213			11/05/12 10:56	
Arsenic-III		49.8	ug/L	5.0	100	55	146			
Sample ID: C12100859-003E		Sample Matrix Spike				Run: SUB-H84213			11/05/12 11:36	
Arsenic-III		47.2	ug/L	5.0	94	55	146			
Sample ID: C12100859-003E		Sample Matrix Spike Duplicate				Run: SUB-H84213			11/05/12 11:44	
Arsenic-III		48.3	ug/L	5.0	97	55	146	2.4	20	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/19/12

Project: Zone-1 **Work Order:** C12100859

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-C_121109B	
Sample ID: ICV	4	Initial Calibration Verification Standard							11/09/12 13:45	
Calcium		50.0	mg/L	0.50	100	95	105			
Magnesium		51.5	mg/L	0.50	103	95	105			
Potassium		49.4	mg/L	2.7	99	95	105			
Sodium		52.7	mg/L	0.50	105	95	105			
Sample ID: ICSA	4	Interference Check Sample A							11/09/12 14:25	
Calcium		503	mg/L	0.50	101	80	120			
Magnesium		535	mg/L	0.50	107	80	120			
Potassium		-0.00200	mg/L	0.50						
Sodium		-0.0409	mg/L	0.50						
Sample ID: ICSAB	4	Interference Check Sample AB							11/09/12 14:29	
Calcium		504	mg/L	0.50	101	80	120			
Magnesium		545	mg/L	0.50	109	80	120			
Potassium		-0.00180	mg/L	0.50						
Sodium		0.102	mg/L	0.50						
Method: E200.7										Batch: R167033
Sample ID: MB-121109A	4	Method Blank				Run: ICP2-C_121109B			11/09/12 14:53	
Calcium		ND	mg/L	0.06						
Magnesium		ND	mg/L	0.03						
Potassium		ND	mg/L	0.06						
Sodium		ND	mg/L	0.03						
Sample ID: LFB-121109A	4	Laboratory Fortified Blank				Run: ICP2-C_121109B			11/09/12 14:58	
Calcium		48.2	mg/L	0.50	96	85	115			
Magnesium		48.4	mg/L	0.50	97	85	115			
Potassium		44.5	mg/L	0.50	89	85	115			
Sodium		47.6	mg/L	0.50	95	85	115			
Sample ID: C12100835-019CMS2	4	Sample Matrix Spike				Run: ICP2-C_121109B			11/10/12 00:11	
Calcium		51.9	mg/L	1.0	101	70	130			
Magnesium		49.4	mg/L	1.0	97	70	130			
Potassium		47.5	mg/L	1.0	93	70	130			
Sodium		54.5	mg/L	1.0	98	70	130			
Sample ID: C12100835-019CMSD	4	Sample Matrix Spike Duplicate				Run: ICP2-C_121109B			11/10/12 00:15	
Calcium		52.1	mg/L	1.0	101	70	130	0.4	20	
Magnesium		48.4	mg/L	1.0	95	70	130	2.1	20	
Potassium		46.8	mg/L	1.0	92	70	130	1.5	20	
Sodium		54.6	mg/L	1.0	98	70	130	0.2	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/19/12

Project: Zone-1 **Work Order:** C12100859

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-C_121112A	
Sample ID: ICV	4	Initial Calibration Verification Standard							11/12/12 12:57	
Calcium		50.7	mg/L	0.50	101	95	105			
Magnesium		52.6	mg/L	0.50	105	95	105			
Potassium		51.7	mg/L	2.7	103	95	105			
Sodium		51.7	mg/L	0.50	103	95	105			
Sample ID: ICSA	4	Interference Check Sample A							11/12/12 13:37	
Calcium		492	mg/L	0.50	98	80	120			
Magnesium		533	mg/L	0.50	107	80	120			
Potassium		-0.000900	mg/L	0.50						
Sodium		-0.125	mg/L	0.50						
Sample ID: ICSAB	4	Interference Check Sample AB							11/12/12 13:41	
Calcium		503	mg/L	0.50	101	80	120			
Magnesium		514	mg/L	0.50	103	80	120			
Potassium		ND	mg/L	0.50						
Sodium		-0.119	mg/L	0.50						
Method: E200.7									Batch: R167105	
Sample ID: MB-121112A	4	Method Blank				Run: ICP2-C_121112A			11/12/12 14:05	
Calcium		ND	mg/L	0.06						
Magnesium		ND	mg/L	0.03						
Potassium		ND	mg/L	0.06						
Sodium		ND	mg/L	0.3						
Sample ID: LFB-121112A	4	Laboratory Fortified Blank				Run: ICP2-C_121112A			11/12/12 14:09	
Calcium		49.8	mg/L	0.50	100	85	115			
Magnesium		49.7	mg/L	0.50	99	85	115			
Potassium		44.9	mg/L	0.50	90	85	115			
Sodium		48.9	mg/L	0.50	98	85	115			
Sample ID: C12100836-011CMS2	4	Sample Matrix Spike				Run: ICP2-C_121112A			11/12/12 17:50	
Calcium		231	mg/L	1.0	75	70	130			
Magnesium		63.5	mg/L	1.0	98	70	130			
Potassium		49.4	mg/L	1.0	89	70	130			
Sodium		104	mg/L	1.0	100	70	130			
Sample ID: C12100836-011CMSD	4	Sample Matrix Spike Duplicate				Run: ICP2-C_121112A			11/12/12 17:54	
Calcium		232	mg/L	1.0	77	70	130	0.4	20	
Magnesium		63.0	mg/L	1.0	97	70	130	0.8	20	
Potassium		49.7	mg/L	1.0	90	70	130	0.7	20	
Sodium		105	mg/L	1.0	101	70	130	0.6	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/19/12

Project: Zone-1 **Work Order:** C12100859

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8								Analytical Run: ICPMS4-C_121026A		
Sample ID: ICV	10	Initial Calibration Verification Standard								10/26/12 11:50
Aluminum		0.0512	mg/L	0.0010	102	90	110			
Beryllium		0.0508	mg/L	0.0010	102	90	110			
Cadmium		0.0503	mg/L	0.0010	101	90	110			
Cobalt		0.0533	mg/L	0.0010	107	90	110			
Lead		0.0506	mg/L	0.0010	101	90	110			
Manganese		0.0518	mg/L	0.0010	104	90	110			
Molybdenum		0.0515	mg/L	0.0010	103	90	110			
Nickel		0.0523	mg/L	0.0010	105	90	110			
Uranium		0.0522	mg/L	0.00030	104	90	110			
Vanadium		0.0524	mg/L	0.0010	105	90	110			
Method: E200.8										Batch: 35485
Sample ID: MB-35485	10	Method Blank				Run: ICPMS4-C_121026A				10/26/12 21:53
Aluminum		0.005	mg/L	0.001						
Beryllium		ND	mg/L	5E-05						
Cadmium		ND	mg/L	3E-05						
Cobalt		ND	mg/L	4E-05						
Lead		ND	mg/L	1E-05						
Manganese		ND	mg/L	4E-05						
Molybdenum		0.0003	mg/L	4E-05						
Nickel		0.0001	mg/L	4E-05						
Uranium		ND	mg/L	8E-06						
Vanadium		0.005	mg/L	8E-05						
Sample ID: LCS3-35485	10	Laboratory Control Sample				Run: ICPMS4-C_121026A				10/26/12 21:57
Aluminum		2.38	mg/L	0.030	95	85	115			
Beryllium		0.248	mg/L	0.0010	99	85	115			
Cadmium		0.252	mg/L	0.0010	101	85	115			
Cobalt		0.489	mg/L	0.0050	98	85	115			
Lead		0.495	mg/L	0.0010	99	85	115			
Manganese		2.47	mg/L	0.0010	99	85	115			
Molybdenum		0.488	mg/L	0.0010	98	85	115			
Nickel		0.495	mg/L	0.0050	99	85	115			
Uranium		0.551	mg/L	0.00030	110	85	115			
Vanadium		0.498	mg/L	0.010	99	85	115			
Sample ID: C12100859-001CMS3	10	Sample Matrix Spike				Run: ICPMS4-C_121026A				10/26/12 22:49
Aluminum		2.32	mg/L	0.030	93	70	130			
Beryllium		0.225	mg/L	0.0010	90	70	130			
Cadmium		0.241	mg/L	0.0010	96	70	130			
Cobalt		0.468	mg/L	0.0050	93	70	130			
Lead		0.506	mg/L	0.0010	101	70	130			
Manganese		5.31	mg/L	0.0010	102	70	130			
Molybdenum		0.519	mg/L	0.0010	104	70	130			
Nickel		0.443	mg/L	0.0050	88	70	130			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1

Report Date: 11/19/12
Work Order: C12100859

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8										Batch: 35485
Sample ID: C12100859-001CMS3	10	Sample Matrix Spike				Run: ICPMS4-C_121026A			10/26/12 22:49	
Uranium		0.599	mg/L	0.00030	120	70	130			
Vanadium		0.486	mg/L	0.010	96	70	130			
Sample ID: C12100859-001CMSD	10	Sample Matrix Spike Duplicate				Run: ICPMS4-C_121026A			10/26/12 22:53	
Aluminum		2.30	mg/L	0.030	92	70	130	0.6	20	
Beryllium		0.222	mg/L	0.0010	89	70	130	1.4	20	
Cadmium		0.237	mg/L	0.0010	95	70	130	1.4	20	
Cobalt		0.477	mg/L	0.0050	95	70	130	1.9	20	
Lead		0.504	mg/L	0.0010	101	70	130	0.4	20	
Manganese		5.40	mg/L	0.0010	106	70	130	1.7	20	
Molybdenum		0.508	mg/L	0.0010	101	70	130	2.2	20	
Nickel		0.462	mg/L	0.0050	92	70	130	4.2	20	
Uranium		0.596	mg/L	0.00030	119	70	130	0.5	20	
Vanadium		0.504	mg/L	0.010	99	70	130	3.6	20	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/19/12

Project: Zone-1 **Work Order:** C12100859

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0									Analytical Run: IC2-C_121022A	
Sample ID: ICV-102212-10	2	Initial Calibration Verification Standard							10/22/12 17:36	
Chloride		10.0	mg/L	1.0	100	90	110			
Sulfate		40.7	mg/L	1.0	102	90	110			
Method: E300.0									Batch: R166214	
Sample ID: ICB-102212-11	2	Method Blank				Run: IC2-C_121022A			10/22/12 17:52	
Chloride		ND	mg/L	0.03						
Sulfate		0.2	mg/L	0.10						
Sample ID: LFB-102212-12	2	Laboratory Fortified Blank				Run: IC2-C_121022A			10/22/12 18:07	
Chloride		9.81	mg/L	1.0	98	90	110			
Sulfate		39.5	mg/L	1.0	98	90	110			
Sample ID: C12100859-001AMS	2	Sample Matrix Spike				Run: IC2-C_121022A			10/22/12 22:14	
Chloride		239	mg/L	4.2	100	90	110			
Sulfate		3780	mg/L	17	96	90	110			
Sample ID: C12100859-001AMSD	2	Sample Matrix Spike Duplicate				Run: IC2-C_121022A			10/22/12 22:29	
Chloride		240	mg/L	4.2	101	90	110	0.3	10	
Sulfate		3730	mg/L	17	91	90	110	1.1	10	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1

Report Date: 11/19/12
Work Order: C12100859

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E353.2										Batch: R166338
Sample ID: MBLK-1		Method Blank				Run: TECHNICON_121025A			10/25/12 11:44	
Nitrogen, Nitrate+Nitrite as N		ND	mg/L	0.003						
Sample ID: LCS-2		Laboratory Control Sample				Run: TECHNICON_121025A			10/25/12 11:47	
Nitrogen, Nitrate+Nitrite as N		2.55	mg/L	0.10	102	90	110			
Sample ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_121025A			10/25/12 11:49	
Nitrogen, Nitrate+Nitrite as N		2.05	mg/L	0.10	105	90	110			
Sample ID: LFB-53		Laboratory Fortified Blank				Run: TECHNICON_121025A			10/25/12 13:54	
Nitrogen, Nitrate+Nitrite as N		2.06	mg/L	0.10	105	90	110			
Sample ID: C12100859-001DMS		Sample Matrix Spike				Run: TECHNICON_121025A			10/25/12 13:59	
Nitrogen, Nitrate+Nitrite as N		1.37	mg/L	0.10	69	90	110			S
- Matrix spike recoveries outside the acceptance range are considered matrix-related.										
Sample ID: C12100859-001DMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_121025A			10/25/12 14:02	
Nitrogen, Nitrate+Nitrite as N		1.37	mg/L	0.10	69	90	110	0.0	10	S
- Matrix spike recoveries outside the acceptance range are considered matrix-related.										

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.
S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1

Report Date: 11/19/12
Work Order: C12100859

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624									Analytical Run: R166419	
Sample ID: 26-Oct-12_CCV_3	9	Continuing Calibration Verification Standard							10/26/12 12:47	
Bromodichloromethane		15.3	ug/L	1.0	153	70	130			S
Bromoform		12.2	ug/L	1.0	122	70	130			
Chlorodibromomethane		12.6	ug/L	1.0	126	70	130			
Chloroform		15.1	ug/L	1.0	151	70	130			S
Trihalomethanes, Total		55.1	ug/L	1.0	138	70	130			S
Surr: 1,2-Dichlorobenzene-d4				1.0	102	80	120			
Surr: Dibromofluoromethane				1.0	140	80	120			S
Surr: p-Bromofluorobenzene				1.0	116	80	120			
Surr: Toluene-d8				1.0	115	80	120			
Method: E624									Batch: R166419	
Sample ID: 26-Oct-12_LCS_4	9	Laboratory Control Sample				Run: 5975VOC1_121026A			10/26/12 13:21	
Bromodichloromethane		14.7	ug/L	1.0	147	72.3	123			S
Bromoform		12.4	ug/L	1.0	124	70.3	128			
Chlorodibromomethane		12.2	ug/L	1.0	122	69.1	123			
Chloroform		16.1	ug/L	1.0	161	72.9	130			S
Trihalomethanes, Total		55.4	ug/L	1.0	138	75.7	121			S
Surr: 1,2-Dichlorobenzene-d4				1.0	103	82	118			
Surr: Dibromofluoromethane				1.0	139	74.8	123			S
Surr: p-Bromofluorobenzene				1.0	116	82.4	121			
Surr: Toluene-d8				1.0	114	76.4	125			
Sample ID: 26-Oct-12_MBLK_6	9	Method Blank				Run: 5975VOC1_121026A			10/26/12 14:32	
Bromodichloromethane		ND	ug/L	1.0						
Bromoform		ND	ug/L	1.0						
Chlorodibromomethane		ND	ug/L	1.0						
Chloroform		ND	ug/L	1.0						
Trihalomethanes, Total		ND	ug/L	1.0						
Surr: 1,2-Dichlorobenzene-d4				1.0	104	80	120			
Surr: Dibromofluoromethane				1.0	138	80	120			S
Surr: p-Bromofluorobenzene				1.0	124	80	120			S
Surr: Toluene-d8				1.0	110	80	120			
Sample ID: C12100798-035AMS	9	Sample Matrix Spike				Run: 5975VOC1_121026A			10/26/12 20:22	
Bromodichloromethane		270	ug/L	10	135	72.3	123			S
Bromoform		218	ug/L	10	109	70.3	128			
Chlorodibromomethane		219	ug/L	10	110	69.1	123			
Chloroform		300	ug/L	10	150	72.9	130			S
Trihalomethanes, Total		1010	ug/L	10	126	75.7	121			S
Surr: 1,2-Dichlorobenzene-d4				1.0	101	82	118			
Surr: Dibromofluoromethane				1.0	148	74.8	123			S
Surr: p-Bromofluorobenzene				1.0	116	82.4	121			
Surr: Toluene-d8				1.0	115	76.4	125			

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.
S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/19/12

Project: Zone-1 **Work Order:** C12100859

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624									Batch: R166419	
Sample ID: C12100798-035AMSD	9	Sample Matrix Spike Duplicate				Run: 5975VOC1_121026A			10/26/12 20:57	
Bromodichloromethane		260	ug/L	10	130	72.3	123	3.9	20	S
Bromoform		205	ug/L	10	102	70.3	128	6.4	20	
Chlorodibromomethane		218	ug/L	10	109	69.1	123	0.4	20	
Chloroform		293	ug/L	10	146	72.9	130	2.4	20	S
Trihalomethanes, Total		976	ug/L	10	122	75.7	121	3.2	20	S
Surr: 1,2-Dichlorobenzene-d4				1.0	104	82	118			
Surr: Dibromofluoromethane				1.0	144	74.8	123			S
Surr: p-Bromofluorobenzene				1.0	116	82.4	121			
Surr: Toluene-d8				1.0	113	76.4	125			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/19/12

Project: Zone-1 **Work Order:** C12100859

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E900.1									Batch: GA-0611	
Sample ID: LCS-GA-0611		Laboratory Control Sample				Run: BERTHOLD 770-1_121023A			10/25/12 06:36	
Gross Alpha minus Rn & U		19.7	pCi/L		99	80	120			
Sample ID: MB-GA-0611	3	Method Blank				Run: BERTHOLD 770-1_121023A			10/25/12 06:36	
Gross Alpha minus Rn & U		-0.4	pCi/L							U
Gross Alpha minus Rn & U Precision (±)		0.3	pCi/L							
Gross Alpha minus Rn & U MDC		0.7	pCi/L							
Sample ID: C12100859-006GMS		Sample Matrix Spike				Run: BERTHOLD 770-1_121023A			10/25/12 06:36	
Gross Alpha minus Rn & U		55.8	pCi/L		130	70	130			
Sample ID: C12100859-006GMSD		Sample Matrix Spike Duplicate				Run: BERTHOLD 770-1_121023A			10/25/12 08:07	
Gross Alpha minus Rn & U		48.6	pCi/L		115	70	130	14	26.5	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1

Report Date: 11/19/12
Work Order: C12100859

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E903.0										Batch: RA226-6349
Sample ID: C12100891-001EMS		Sample Matrix Spike				Run: BERTHOLD 770-1_121025B			11/08/12 03:30	
Radium 226		13	pCi/L		99	70	130			
Sample ID: C12100891-001EMSD		Sample Matrix Spike Duplicate				Run: BERTHOLD 770-1_121025B			11/08/12 06:30	
Radium 226		14	pCi/L		106	70	130	6.2	20.8	
Sample ID: MB-RA226-6328	3	Method Blank				Run: BERTHOLD 770-1_121025B			11/08/12 06:30	
Radium 226		-0.04	pCi/L							U
Radium 226 precision (±)		0.07	pCi/L							
Radium 226 MDC		0.1	pCi/L							
Sample ID: LCS-RA226-6328		Laboratory Control Sample				Run: BERTHOLD 770-1_121025B			11/08/12 06:30	
Radium 226		6.6	pCi/L		105	80	120			

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/19/12

Project: Zone-1 **Work Order:** C12100859

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E908.0										Batch: RA-TH-ISO-1732
Sample ID: LCS-RA-TH-ISO-1732		Laboratory Control Sample				Run: ALPHANALYST_121102B				11/06/12 08:57
Thorium 230		4.7	pCi/L		92	80	120			
Sample ID: C12101260-001EMS		Sample Matrix Spike				Run: ALPHANALYST_121102B				11/06/12 08:58
Thorium 230		12	pCi/L		97	70	130			
Sample ID: C12101260-001EMSD		Sample Matrix Spike Duplicate				Run: ALPHANALYST_121102B				11/06/12 08:58
Thorium 230		11	pCi/L		91	70	130	6.7	43.3	
Sample ID: MB-RA-TH-ISO-1732	3	Method Blank				Run: ALPHANALYST_121102B				11/06/12 08:58
Thorium 230		ND	pCi/L							U
Thorium 230 precision (±)		0.05	pCi/L							
Thorium 230 MDC		0.2	pCi/L							

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1

Report Date: 11/19/12
Work Order: C12100859

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E909.0										Batch: T_PB-210-0307
Sample ID: MB-PB-210-0307	3	Method Blank				Run: SUB-T48125				11/18/12 22:37
Lead 210		0.2	pCi/L							U
Lead 210 precision (±)		0.6	pCi/L							
Lead 210 MDC		1	pCi/L							
Sample ID: LCS-PB-210-0307		Laboratory Control Sample				Run: SUB-T48125				11/18/12 23:36
Lead 210		93	pCi/L		91	70	130			
Sample ID: T12100082-008FMS		Sample Matrix Spike				Run: SUB-T48125				11/19/12 11:18
Lead 210		190	pCi/L		96	70	130			
Sample ID: T12100082-008FMSD		Sample Matrix Spike Duplicate				Run: SUB-T48125				11/19/12 12:16
Lead 210		190	pCi/L		96	70	130	0.7	14.9	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1

Report Date: 11/19/12
Work Order: C12100859

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: RA-05										Batch: RA228-4259
Sample ID: LCS-228-RA226-6328		Laboratory Control Sample				Run: TENNELEC-3_121025B			10/31/12 21:12	
Radium 228		5.8	pCi/L		116	80	120			
Sample ID: MB-RA226-6328	3	Method Blank				Run: TENNELEC-3_121025B			10/31/12 21:12	
Radium 228		0.4	pCi/L							U
Radium 228 precision (±)		1.0	pCi/L							
Radium 228 MDC		2	pCi/L							
Sample ID: C12100891-002EMS		Sample Matrix Spike				Run: TENNELEC-3_121025B			10/31/12 21:12	
Radium 228		14	pCi/L		124	70	130			
Sample ID: C12100891-002EMSD		Sample Matrix Spike Duplicate				Run: TENNELEC-3_121025B			10/31/12 21:12	
Radium 228		14	pCi/L		123	70	130	1.2	42.4	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

ANALYTICAL SUMMARY REPORT

November 20, 2012

United Nuclear Corporation
21 Miles NE of Gallup
Gallup, NM 87305

Workorder No.: C12100571 Quote ID: C129 - Quarterly Long List

Project Name: Zone-3

Energy Laboratories, Inc. Casper WY received the following 2 samples for United Nuclear Corporation on 10/12/2012 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C12100571-001	613	10/09/12 12:55	10/12/12	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Total Alkalinity QA Calculations Arsenic Speciation Selenium-IV, Total CVAA Selenium Prep E300.0 Anions Nitrogen, Ammonia Nitrogen, Nitrate + Nitrite pH Metals Preparation by EPA 200.2 Gross Alpha minus Rn222 and Uranium Lead 210, Total Radium 226, Total Radium 228, Total Thorium, Isotopic Solids, Total Dissolved Solids, Total Dissolved - Calculated E624 Purgeable Organics
C12100571-002	EPA-14	10/09/12 13:40	10/12/12	Aqueous	Same As Above

The results as reported relate only to the item(s) submitted for testing. The analyses presented in this report were performed at Energy Laboratories, Inc., 2393 Salt Creek Hwy., Casper, WY 82601, unless otherwise noted. Radiochemistry analyses were performed at Energy Laboratories, Inc., 2325 Kerzell Lane, Casper, WY 82601, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

If you have any questions regarding these test results, please call.

Report Approved By:

Stephanie D Waldrop
Reporting Supervisor

Digitally signed by
Stephanie Waldrop
Date: 2012.11.20 11:36:20 -07:00

CLIENT: United Nuclear Corporation
Project: Zone-3
Sample Delivery Group: C12100571

Report Date: 11/20/12

CASE NARRATIVE

TH230 ANALYSIS
The sample-specific MDC for this sample could not be achieved due to significant matrix interferences, restricting the volume of sample to be used in the analysis.

BRANCH LABORATORY SUBCONTRACT ANALYSIS
Tests associated with analyst identified as ELI-H were subcontracted to Energy Laboratories, 3161 E.Lyndale Ave., Helena, MT, EPA Number MT00945.

Tests associated with analyst identified as ELI-CS were subcontracted to Energy Laboratories, 415 Graham Rd., College Station, TX, EPA Number TX01520.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-3 **Work Order:** C12100571

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2320 B									Batch: R165837	
Sample ID: MBLK	2	Method Blank				Run: MANTECH_121015B			10/15/12 14:27	
Alkalinity, Total as CaCO3		ND	mg/L	5.0						
Bicarbonate as HCO3		2.06	mg/L	5.0						
Sample ID: LCS_121003		Laboratory Control Sample				Run: MANTECH_121015B			10/15/12 14:41	
Alkalinity, Total as CaCO3		208	mg/L	5.0	104	90	110			
Sample ID: C12100571-002ADUP	2	Sample Duplicate				Run: MANTECH_121015B			10/15/12 18:02	
Alkalinity, Total as CaCO3		ND	mg/L	5.0					10	
Bicarbonate as HCO3		ND	mg/L	5.0					10	
Sample ID: C12100572-001AMS		Sample Matrix Spike				Run: MANTECH_121015B			10/15/12 18:19	
Alkalinity, Total as CaCO3		249	mg/L	5.0	97	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3

Report Date: 11/20/12
Work Order: C12100571

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C										Batch: TDS121015A
Sample ID: MB-1_121015A		Method Blank				Run: BAL-1_121015A				10/15/12 12:08
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	4						
Sample ID: LCS-2_121015A		Laboratory Control Sample				Run: BAL-1_121015A				10/15/12 12:08
Solids, Total Dissolved TDS @ 180 C		1080	mg/L	10	97	90	110			
Sample ID: C12100555-001A MS		Sample Matrix Spike				Run: BAL-1_121015A				10/15/12 12:16
Solids, Total Dissolved TDS @ 180 C		1900	mg/L	10	98	90	110			
Sample ID: C12100566-001A DUP		Sample Duplicate				Run: BAL-1_121015A				10/15/12 12:19
Solids, Total Dissolved TDS @ 180 C		6990	mg/L	10				2.5	5	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-3 **Work Order:** C12100571

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A3114 B								Analytical Run: CVAA-C202_121107B		
Sample ID: ICV		Initial Calibration Verification Standard							11/07/12 13:21	
Selenium-IV		0.0271	mg/L	0.0010	108	90	110			
Method: A3114 B									Batch: 35589	
Sample ID: MB-35589		Method Blank				Run: CVAA-C202_121107B			11/07/12 14:25	
Selenium-IV		ND	mg/L	0.0005						
Sample ID: C12100835-001DMS		Sample Matrix Spike				Run: CVAA-C202_121107B			11/07/12 14:39	
Selenium-IV		0.0228	mg/L	0.0010	91	85	115			
Sample ID: C12100835-001DMSD		Sample Matrix Spike Duplicate				Run: CVAA-C202_121107B			11/07/12 14:41	
Selenium-IV		0.0221	mg/L	0.0010	88	85	115	3.1	10	
Sample ID: LCS-35589		Laboratory Control Sample				Run: CVAA-C202_121107B			11/07/12 14:49	
Selenium-IV		0.0244	mg/L	0.0010	98	90	110			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-3 **Work Order:** C12100571

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-H B								Analytical Run: PHSC_101-C_121015A		
Sample ID: pH 6.86		Initial Calibration Verification Standard							10/15/12 09:11	
pH		6.84	s.u.	0.010	100	98	102			
Sample ID: PH 6.86		Initial Calibration Verification Standard							10/15/12 12:00	
pH		6.84	s.u.	0.010	100	98	102			
Method: A4500-H B									Batch: R165778	
Sample ID: C12100566-001ADUP		Sample Duplicate				Run: PHSC_101-C_121015A			10/15/12 10:00	
pH		6.56	s.u.	0.010				0.3	3	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3

Report Date: 11/20/12
Work Order: C12100571

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-NH3 G										Batch: R165877
Sample ID: MBLK-1		Method Blank				Run: TECHNICON_121016B				10/16/12 14:10
Nitrogen, Ammonia as N		ND	mg/L	0.02						
Sample ID: LCS-2		Laboratory Control Sample				Run: TECHNICON_121016B				10/16/12 14:13
Nitrogen, Ammonia as N		1.99	mg/L	0.050	100	90	110			
Sample ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_121016B				10/16/12 14:15
Nitrogen, Ammonia as N		2.07	mg/L	0.050	106	80	120			
Sample ID: C12100571-002EMS		Sample Matrix Spike				Run: TECHNICON_121016B				10/16/12 16:17
Nitrogen, Ammonia as N		63.0	mg/L	1.0	101	90	110			
Sample ID: C12100571-002EMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_121016B				10/16/12 16:19
Nitrogen, Ammonia as N		63.7	mg/L	1.0	103	90	110	1.1	10	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-3 **Work Order:** C12100571

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E1632AM									Analytical Run: SUB-H84055	
Sample ID: AS-ICV 25ppb-10/29/2		Initial Calibration Verification Standard							10/29/12 12:33	
Arsenic-III		25.0	ug/L	5.0	100	87.6	114			
Method: E1632AM									Batch: H_R84055	
Sample ID: ICB		Method Blank				Run: SUB-H84055			10/29/12 12:58	
Arsenic-III		ND	ug/L	2						
Sample ID: AS-LFB 50ppb-10/29/		Laboratory Fortified Blank				Run: SUB-H84055			10/29/12 13:16	
Arsenic-III		49.5	ug/L	5.0	99	55	146			
Sample ID: C12100571-001B		Sample Matrix Spike				Run: SUB-H84055			10/29/12 15:57	
Arsenic-III		40.0	ug/L	5.0	80	55	146			
Sample ID: C12100571-001B		Sample Matrix Spike Duplicate				Run: SUB-H84055			10/29/12 16:05	
Arsenic-III		41.5	ug/L	5.0	83	55	146	3.8	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-3 **Work Order:** C12100571

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-C_121018A	
Sample ID: ICV		Initial Calibration Verification Standard							10/18/12 13:49	
Aluminum		4.91	mg/L	0.10	98	95	105			
Sample ID: ICSA		Interference Check Sample A							10/18/12 14:30	
Aluminum		511	mg/L	0.10	102	80	120			
Sample ID: ICSAB		Interference Check Sample AB							10/18/12 14:34	
Aluminum		520	mg/L	0.10	104	80	120			
Method: E200.7									Batch: 35405	
Sample ID: MB-35405		Method Blank				Run: ICP2-C_121018A			10/18/12 20:14	
Aluminum		0.01	mg/L	0.009						
Sample ID: LCS3-35405		Laboratory Control Sample				Run: ICP2-C_121018A			10/18/12 20:18	
Aluminum		2.49	mg/L	0.030	99	85	115			
Sample ID: C12100579-004CMS3		Sample Matrix Spike				Run: ICP2-C_121018A			10/18/12 20:58	
Aluminum		2.48	mg/L	0.030	99	70	130			
Sample ID: C12100579-004CMSD		Sample Matrix Spike Duplicate				Run: ICP2-C_121018A			10/18/12 21:02	
Aluminum		2.52	mg/L	0.030	100	70	130	1.6	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-3 **Work Order:** C12100571

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-C_121024B	
Sample ID: ICV	4	Initial Calibration Verification Standard							10/24/12 11:21	
Calcium		51.8	mg/L	0.50	104	95	105			
Magnesium		50.2	mg/L	0.50	100	95	105			
Potassium		47.8	mg/L	0.50	96	95	105			
Sodium		50.6	mg/L	0.50	101	95	105			
Sample ID: ICSA	4	Interference Check Sample A							10/24/12 11:50	
Calcium		512	mg/L	0.50	102	80	120			
Magnesium		520	mg/L	0.50	104	80	120			
Potassium		0.00560	mg/L	0.50						
Sodium		0.597	mg/L	0.50						
Sample ID: ICSAB	4	Interference Check Sample AB							10/24/12 11:54	
Calcium		501	mg/L	0.50	100	80	120			
Magnesium		496	mg/L	0.50	99	80	120			
Potassium		0.000500	mg/L	0.50						
Sodium		0.650	mg/L	0.50						
Method: E200.7										Batch: R166285
Sample ID: MB-121024A	4	Method Blank				Run: ICP2-C_121024B			10/24/12 12:14	
Calcium		ND	mg/L	0.06						
Magnesium		ND	mg/L	0.03						
Potassium		ND	mg/L	0.06						
Sodium		ND	mg/L	0.3						
Sample ID: LFB-121024A	4	Laboratory Fortified Blank				Run: ICP2-C_121024B			10/24/12 12:18	
Calcium		49.0	mg/L	0.50	98	85	115			
Magnesium		48.5	mg/L	0.50	97	85	115			
Potassium		44.9	mg/L	0.50	90	85	115			
Sodium		47.1	mg/L	0.50	94	85	115			
Sample ID: C12100566-003CMS2	4	Sample Matrix Spike				Run: ICP2-C_121024B			10/24/12 17:40	
Calcium		726	mg/L	1.0	100	70	130			
Magnesium		999	mg/L	1.0	81	70	130			
Potassium		264	mg/L	1.0	99	70	130			
Sodium		557	mg/L	1.6	100	70	130			
Sample ID: C12100566-003CMSD	4	Sample Matrix Spike Duplicate				Run: ICP2-C_121024B			10/24/12 17:44	
Calcium		728	mg/L	1.0	100	70	130	0.2	20	
Magnesium		1020	mg/L	1.0	90	70	130	2.3	20	
Potassium		261	mg/L	1.0	97	70	130	1.2	20	
Sodium		561	mg/L	1.6	102	70	130	0.7	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-3 **Work Order:** C12100571

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-C_121119A	
Sample ID: ICV	4	Initial Calibration Verification Standard							11/19/12 12:02	
Calcium		52.1	mg/L	0.50	104	95	105			
Magnesium		51.2	mg/L	0.50	102	95	105			
Potassium		48.9	mg/L	0.50	98	95	105			
Sodium		52.7	mg/L	0.50	105	95	105			
Sample ID: ICSA	4	Interference Check Sample A							11/19/12 12:30	
Calcium		509	mg/L	0.50	102	80	120			
Magnesium		517	mg/L	0.50	103	80	120			
Potassium		-0.000700	mg/L	0.50						
Sodium		0.166	mg/L	0.50						
Sample ID: ICSAB	4	Interference Check Sample AB							11/19/12 12:34	
Calcium		509	mg/L	0.50	102	80	120			
Magnesium		504	mg/L	0.50	101	80	120			
Potassium		0.00120	mg/L	0.50						
Sodium		0.0652	mg/L	0.50						
Method: E200.7										Batch: 35766
Sample ID: MB-35766	4	Method Blank				Run: ICP2-C_121119A			11/19/12 19:03	
Calcium		ND	mg/L	0.04						
Magnesium		ND	mg/L	0.03						
Potassium		ND	mg/L	0.02						
Sodium		ND	mg/L	0.2						
Sample ID: LCS3-35766	4	Laboratory Control Sample				Run: ICP2-C_121119A			11/19/12 19:07	
Calcium		23.5	mg/L	1.0	94	85	115			
Magnesium		23.5	mg/L	1.0	94	85	115			
Potassium		24.7	mg/L	1.0	99	85	115			
Sodium		24.7	mg/L	1.0	99	85	115			
Sample ID: C12110538-001AMS3	4	Sample Matrix Spike				Run: ICP2-C_121119A			11/19/12 19:59	
Calcium		653	mg/L	1.0		70	130			A
Magnesium		90.1	mg/L	1.0	92	70	130			
Potassium		30.6	mg/L	1.0	95	70	130			
Sodium		53.1	mg/L	1.0	96	70	130			
Sample ID: C12110538-001AMSD	4	Sample Matrix Spike Duplicate				Run: ICP2-C_121119A			11/19/12 20:03	
Calcium		702	mg/L	1.0		70	130	7.2	20	A
Magnesium		95.4	mg/L	1.0	113	70	130	5.7	20	
Potassium		32.2	mg/L	1.0	102	70	130	5.3	20	
Sodium		56.7	mg/L	1.0	110	70	130	6.6	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

MDC - Minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-3 **Work Order:** C12100571

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS2-C_121119A	
Sample ID: ICV	10	Initial Calibration Verification Standard							11/19/12 13:57	
Aluminum		0.0503	mg/L	0.0010	101	90	110			
Beryllium		0.0512	mg/L	0.0010	102	90	110			
Cadmium		0.0503	mg/L	0.0010	101	90	110			
Cobalt		0.0528	mg/L	0.0010	106	90	110			
Lead		0.0500	mg/L	0.0010	100	90	110			
Manganese		0.0504	mg/L	0.0010	101	90	110			
Molybdenum		0.0510	mg/L	0.0010	102	90	110			
Nickel		0.0514	mg/L	0.0010	103	90	110			
Uranium		0.0492	mg/L	0.00030	99	90	110			
Vanadium		0.0503	mg/L	0.0010	101	90	110			
Method: E200.8										Batch: 35766
Sample ID: MB-35766	10	Method Blank				Run: ICPMS2-C_121119A			11/20/12 01:14	
Aluminum		0.0211	mg/L	0.10						
Beryllium		ND	mg/L	0.0010						
Cadmium		ND	mg/L	0.0050						
Cobalt		ND	mg/L	0.010						
Lead		3.35E-05	mg/L	0.0010						
Manganese		ND	mg/L	0.010						
Molybdenum		0.000170	mg/L	0.10						
Nickel		0.00159	mg/L	0.050						
Uranium		2.75E-05	mg/L	0.00030						
Vanadium		ND	mg/L	0.10						
Sample ID: LCS3-35766	10	Laboratory Control Sample				Run: ICPMS2-C_121119A			11/20/12 01:16	
Aluminum		2.48	mg/L	0.030	99	85	115			
Beryllium		0.251	mg/L	0.0010	100	85	115			
Cadmium		0.258	mg/L	0.0010	103	85	115			
Cobalt		0.492	mg/L	0.0050	98	85	115			
Lead		0.498	mg/L	0.0010	100	85	115			
Manganese		2.46	mg/L	0.0010	98	85	115			
Molybdenum		0.513	mg/L	0.0010	103	85	115			
Nickel		0.497	mg/L	0.0050	99	85	115			
Uranium		0.529	mg/L	0.00030	106	85	115			
Vanadium		0.494	mg/L	0.010	99	85	115			
Sample ID: C12110538-001AMS3	10	Sample Matrix Spike				Run: ICPMS2-C_121119A			11/20/12 01:24	
Aluminum		2.54	mg/L	0.030	99	70	130			
Beryllium		0.254	mg/L	0.0010	101	70	130			
Cadmium		0.249	mg/L	0.0010	99	70	130			
Cobalt		0.505	mg/L	0.0050	101	70	130			
Lead		0.500	mg/L	0.0010	100	70	130			
Manganese		2.75	mg/L	0.0010	99	70	130			
Molybdenum		0.508	mg/L	0.0010	101	70	130			
Nickel		0.518	mg/L	0.0050	102	70	130			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-3 **Work Order:** C12100571

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8										Batch: 35766
Sample ID: C12110538-001AMS3	10	Sample Matrix Spike				Run: ICPMS2-C_121119A				11/20/12 01:24
Uranium		0.518	mg/L	0.00030	103	70	130			
Vanadium		0.504	mg/L	0.010	101	70	130			
Sample ID: C12110538-001AMSD	10	Sample Matrix Spike Duplicate				Run: ICPMS2-C_121119A				11/20/12 01:37
Aluminum		2.57	mg/L	0.030	100	70	130	1.2	20	
Beryllium		0.253	mg/L	0.0010	101	70	130	0.1	20	
Cadmium		0.253	mg/L	0.0010	101	70	130	1.5	20	
Cobalt		0.501	mg/L	0.0050	100	70	130	0.8	20	
Lead		0.505	mg/L	0.0010	101	70	130	1.0	20	
Manganese		2.75	mg/L	0.0010	99	70	130	0.0	20	
Molybdenum		0.510	mg/L	0.0010	101	70	130	0.3	20	
Nickel		0.530	mg/L	0.0050	104	70	130	2.3	20	
Uranium		0.525	mg/L	0.00030	105	70	130	1.3	20	
Vanadium		0.502	mg/L	0.010	100	70	130	0.4	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-3 **Work Order:** C12100571

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS4-C_121017A	
Sample ID: ICV	9	Initial Calibration Verification Standard							10/17/12 12:08	
Beryllium		0.0486	mg/L	0.0010	97	90	110			
Cadmium		0.0498	mg/L	0.0010	100	90	110			
Cobalt		0.0513	mg/L	0.0010	103	90	110			
Lead		0.0493	mg/L	0.0010	99	90	110			
Manganese		0.0497	mg/L	0.0010	99	90	110			
Molybdenum		0.0482	mg/L	0.0010	96	90	110			
Nickel		0.0500	mg/L	0.0010	100	90	110			
Uranium		0.0510	mg/L	0.00030	102	90	110			
Vanadium		0.0480	mg/L	0.0010	96	90	110			
Method: E200.8									Batch: 35405	
Sample ID: MB-35405	9	Method Blank				Run: ICPMS4-C_121017A			10/18/12 11:06	
Beryllium		ND	mg/L	5E-05						
Cadmium		4E-05	mg/L	3E-05						
Cobalt		ND	mg/L	4E-05						
Lead		ND	mg/L	1E-05						
Manganese		8E-05	mg/L	4E-05						
Molybdenum		0.002	mg/L	4E-05						
Nickel		0.0001	mg/L	4E-05						
Uranium		ND	mg/L	8E-06						
Vanadium		0.008	mg/L	8E-05						
Sample ID: LCS3-35405	9	Laboratory Control Sample				Run: ICPMS4-C_121017A			10/18/12 11:11	
Beryllium		0.242	mg/L	0.0010	97	85	115			
Cadmium		0.273	mg/L	0.0010	109	85	115			
Cobalt		0.491	mg/L	0.0050	98	85	115			
Lead		0.506	mg/L	0.0010	101	85	115			
Manganese		2.43	mg/L	0.0010	97	85	115			
Molybdenum		0.533	mg/L	0.0010	106	85	115			
Nickel		0.516	mg/L	0.0050	103	85	115			
Uranium		0.526	mg/L	0.00030	105	85	115			
Vanadium		0.493	mg/L	0.010	97	85	115			
Sample ID: C12100579-004CMS3	9	Sample Matrix Spike				Run: ICPMS4-C_121017A			10/18/12 12:09	
Beryllium		0.238	mg/L	0.0010	95	70	130			
Cadmium		0.266	mg/L	0.0010	106	70	130			
Cobalt		0.486	mg/L	0.0050	97	70	130			
Lead		0.516	mg/L	0.0010	103	70	130			
Manganese		2.45	mg/L	0.0010	97	70	130			
Molybdenum		0.540	mg/L	0.0010	107	70	130			
Nickel		0.510	mg/L	0.0050	102	70	130			
Uranium		0.546	mg/L	0.00030	109	70	130			
Vanadium		0.509	mg/L	0.010	100	70	130			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-3 **Work Order:** C12100571

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8										Batch: 35405
Sample ID: C12100579-004CMSD	9	Sample Matrix Spike Duplicate				Run: ICPMS4-C_121017A			10/18/12 12:13	
Beryllium		0.244	mg/L	0.0010	97	70	130	2.4	20	
Cadmium		0.266	mg/L	0.0010	106	70	130	0.0	20	
Cobalt		0.489	mg/L	0.0050	98	70	130	0.7	20	
Lead		0.515	mg/L	0.0010	103	70	130	0.0	20	
Manganese		2.46	mg/L	0.0010	97	70	130	0.4	20	
Molybdenum		0.546	mg/L	0.0010	108	70	130	1.0	20	
Nickel		0.504	mg/L	0.0050	101	70	130	1.1	20	
Uranium		0.551	mg/L	0.00030	110	70	130	0.8	20	
Vanadium		0.506	mg/L	0.010	100	70	130	0.6	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-3 **Work Order:** C12100571

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0									Analytical Run: IC2-C_121015A	
Sample ID: ICV	2	Initial Calibration Verification Standard							10/15/12 12:09	
Chloride		9.99	mg/L	1.0	100	90	110			
Sulfate		40.4	mg/L	1.0	101	90	110			
Method: E300.0									Batch: R165865	
Sample ID: ICB	2	Method Blank				Run: IC2-C_121015A			10/15/12 12:25	
Chloride		ND	mg/L	0.03						
Sulfate		0.1	mg/L	0.10						
Sample ID: LFB	2	Laboratory Fortified Blank				Run: IC2-C_121015A			10/15/12 12:40	
Chloride		10.0	mg/L	1.0	100	90	110			
Sulfate		40.0	mg/L	1.0	100	90	110			
Sample ID: C12100566-004AMS	2	Sample Matrix Spike				Run: IC2-C_121015A			10/16/12 03:50	
Chloride		10.2	mg/L	1.0	100	90	110			
Sulfate		40.7	mg/L	1.0	100	90	110			
Sample ID: C12100566-004AMSD	2	Sample Matrix Spike Duplicate				Run: IC2-C_121015A			10/16/12 04:05	
Chloride		10.4	mg/L	1.0	102	90	110	1.8	10	
Sulfate		41.4	mg/L	1.0	102	90	110	1.9	10	
Sample ID: C12100574-004AMS	2	Sample Matrix Spike				Run: IC2-C_121015A			10/16/12 07:26	
Chloride		209	mg/L	4.2	98	90	110			
Sulfate		2810	mg/L	17	103	90	110			
Sample ID: C12100574-004AMSD	2	Sample Matrix Spike Duplicate				Run: IC2-C_121015A			10/16/12 07:41	
Chloride		206	mg/L	4.2	97	90	110	1.2	10	
Sulfate		2740	mg/L	17	93	90	110	2.8	10	
Method: E300.0									Analytical Run: IC2-C_121016A	
Sample ID: ICV-101612-10		Initial Calibration Verification Standard							10/16/12 16:29	
Sulfate		39.7	mg/L	1.0	99	90	110			
Method: E300.0									Batch: R165971	
Sample ID: ICB-101612-11		Method Blank				Run: IC2-C_121016A			10/16/12 16:45	
Sulfate		0.2	mg/L	0.10						
Sample ID: LFB-101612-12		Laboratory Fortified Blank				Run: IC2-C_121016A			10/16/12 17:00	
Sulfate		39.0	mg/L	1.0	97	90	110			
Sample ID: C12100574-004AMS		Sample Matrix Spike				Run: IC2-C_121016A			10/16/12 21:22	
Sulfate		2460	mg/L	8.3		90	110			A
Sample ID: C12100574-004AMSD		Sample Matrix Spike Duplicate				Run: IC2-C_121016A			10/16/12 21:38	
Sulfate		2440	mg/L	8.3		90	110	0.9	10	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

MDC - Minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-3 **Work Order:** C12100571

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E353.2										Batch: R165810
Sample ID: MBLK-1		Method Blank				Run: TECHNICON_121015A				10/15/12 10:45
Nitrogen, Nitrate+Nitrite as N		ND	mg/L	0.003						
Sample ID: LCS-2		Laboratory Control Sample				Run: TECHNICON_121015A				10/15/12 10:47
Nitrogen, Nitrate+Nitrite as N		2.58	mg/L	0.10	103	90	110			
Sample ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_121015A				10/15/12 10:50
Nitrogen, Nitrate+Nitrite as N		1.98	mg/L	0.10	101	90	110			
Sample ID: C12100566-005EMS		Sample Matrix Spike				Run: TECHNICON_121015A				10/15/12 13:15
Nitrogen, Nitrate+Nitrite as N		1.93	mg/L	0.10	98	90	110			
Sample ID: C12100566-005EMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_121015A				10/15/12 13:17
Nitrogen, Nitrate+Nitrite as N		1.93	mg/L	0.10	98	90	110	0.0	10	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-3 **Work Order:** C12100571

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624										Analytical Run: R165900
Sample ID: 101612_CCV_19	9	Continuing Calibration Verification Standard								10/16/12 22:18
Bromodichloromethane		10.4	ug/L	1.0	104	70	130			
Bromoform		9.92	ug/L	1.0	99	70	130			
Chlorodibromomethane		10.5	ug/L	1.0	105	70	130			
Chloroform		10.6	ug/L	1.0	106	70	130			
Trihalomethanes, Total		41.5	ug/L	1.0	104	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	97	80	120			
Surr: Dibromofluoromethane				1.0	104	80	120			
Surr: p-Bromofluorobenzene				1.0	102	80	120			
Surr: Toluene-d8				1.0	100	80	120			
Method: E624										Batch: R165900
Sample ID: 101612_LCS_4	9	Laboratory Control Sample				Run: SATURNCA_121016A				10/16/12 13:12
Bromodichloromethane		8.96	ug/L	1.0	90	72.3	123			
Bromoform		11.1	ug/L	1.0	111	70.3	128			
Chlorodibromomethane		8.64	ug/L	1.0	86	69.1	123			
Chloroform		9.60	ug/L	1.0	96	72.9	130			
Trihalomethanes, Total		38.3	ug/L	1.0	96	75.7	121			
Surr: 1,2-Dichlorobenzene-d4				1.0	104	82	118			
Surr: Dibromofluoromethane				1.0	107	74.8	123			
Surr: p-Bromofluorobenzene				1.0	111	82.4	121			
Surr: Toluene-d8				1.0	97	76.4	125			
Sample ID: 101612_MBLK_6	9	Method Blank				Run: SATURNCA_121016A				10/16/12 14:24
Bromodichloromethane		ND	ug/L	1.0						
Bromoform		ND	ug/L	1.0						
Chlorodibromomethane		ND	ug/L	1.0						
Chloroform		ND	ug/L	1.0						
Trihalomethanes, Total		ND	ug/L	1.0						
Surr: 1,2-Dichlorobenzene-d4				1.0	94	80	120			
Surr: Dibromofluoromethane				1.0	107	80	120			
Surr: p-Bromofluorobenzene				1.0	97	80	120			
Surr: Toluene-d8				1.0	103	80	120			
Sample ID: C12100566-001HMS	9	Sample Matrix Spike				Run: SATURNCA_121016A				10/17/12 07:17
Bromodichloromethane		84.0	ug/L	5.0	84	72.3	123			
Bromoform		95.6	ug/L	5.0	96	70.3	128			
Chlorodibromomethane		84.8	ug/L	5.0	85	69.1	123			
Chloroform		314	ug/L	5.0	76	72.9	130			
Trihalomethanes, Total		579	ug/L	5.0	85	75.7	121			
Surr: 1,2-Dichlorobenzene-d4				1.0	100	82	118			
Surr: Dibromofluoromethane				1.0	107	74.8	123			
Surr: p-Bromofluorobenzene				1.0	110	82.4	121			
Surr: Toluene-d8				1.0	97	76.4	125			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-3 **Work Order:** C12100571

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624										Batch: R165900
Sample ID: C12100566-001HMSD	9	Sample Matrix Spike Duplicate				Run: SATURNCA_121016A			10/17/12 07:53	
Bromodichloromethane		98.4	ug/L	5.0	98	72.3	123	16	20	
Bromoform		99.2	ug/L	5.0	99	70.3	128	3.7	20	
Chlorodibromomethane		102	ug/L	5.0	102	69.1	123	19	20	
Chloroform		323	ug/L	5.0	85	72.9	130	2.8	20	
Trihalomethanes, Total		623	ug/L	5.0	96	75.7	121	7.4	20	
Surr: 1,2-Dichlorobenzene-d4				1.0	96	82	118			
Surr: Dibromofluoromethane				1.0	108	74.8	123			
Surr: p-Bromofluorobenzene				1.0	104	82.4	121			
Surr: Toluene-d8				1.0	104	76.4	125			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-3 **Work Order:** C12100571

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624									Analytical Run: R166168	
Sample ID: 101912_CCV_19	7	Continuing Calibration Verification Standard							10/19/12 23:08	
Bromodichloromethane		10.3	ug/L	1.0	103	70	130			
Bromoform		10.1	ug/L	1.0	101	70	130			
Chlorodibromomethane		10.6	ug/L	1.0	106	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	97	80	120			
Surr: Dibromofluoromethane				1.0	101	80	120			
Surr: p-Bromofluorobenzene				1.0	98	80	120			
Surr: Toluene-d8				1.0	102	80	120			
Method: E624									Batch: R166168	
Sample ID: C12100431-001HMSD	7	Sample Matrix Spike Duplicate				Run: SATURNCA_121019A			10/19/12 20:08	
Bromodichloromethane		193	ug/L	10	96	72.3	123	1.2	20	
Bromoform		201	ug/L	10	100	70.3	128	2.4	20	
Chlorodibromomethane		192	ug/L	10	96	69.1	123	6.1	20	
Surr: 1,2-Dichlorobenzene-d4				1.0	103	82	118			
Surr: Dibromofluoromethane				1.0	101	74.8	123			
Surr: p-Bromofluorobenzene				1.0	102	82.4	121			
Surr: Toluene-d8				1.0	99	76.4	125			
Sample ID: 101912_LCS_4	7	Laboratory Control Sample				Run: SATURNCA_121019A			10/19/12 13:36	
Bromodichloromethane		10.8	ug/L	1.0	108	72.3	123			
Bromoform		11.4	ug/L	1.0	114	70.3	128			
Chlorodibromomethane		11.2	ug/L	1.0	112	69.1	123			
Surr: 1,2-Dichlorobenzene-d4				1.0	103	82	118			
Surr: Dibromofluoromethane				1.0	102	74.8	123			
Surr: p-Bromofluorobenzene				1.0	106	82.4	121			
Surr: Toluene-d8				1.0	100	76.4	125			
Sample ID: 101912_MBLK_6	7	Method Blank				Run: SATURNCA_121019A			10/19/12 14:47	
Bromodichloromethane		ND	ug/L	1.0						
Bromoform		ND	ug/L	1.0						
Chlorodibromomethane		ND	ug/L	1.0						
Surr: 1,2-Dichlorobenzene-d4				1.0	96	80	120			
Surr: Dibromofluoromethane				1.0	100	80	120			
Surr: p-Bromofluorobenzene				1.0	94	80	120			
Surr: Toluene-d8				1.0	98	80	120			
Sample ID: C12100431-001HMS	7	Sample Matrix Spike				Run: SATURNCA_121019A			10/19/12 21:20	
Bromodichloromethane		195	ug/L	10	98	72.3	123			
Bromoform		196	ug/L	10	98	70.3	128			
Chlorodibromomethane		204	ug/L	10	102	69.1	123			
Surr: 1,2-Dichlorobenzene-d4				1.0	98	82	118			
Surr: Dibromofluoromethane				1.0	107	74.8	123			
Surr: p-Bromofluorobenzene				1.0	96	82.4	121			
Surr: Toluene-d8				1.0	102	76.4	125			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-3 **Work Order:** C12100571

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E900.1										Batch: GA-0617
Sample ID: LCS-GA-0605		Laboratory Control Sample				Run: BERTHOLD 770-2_121019E				11/08/12 22:02
Gross Alpha minus Rn & U		21.4	pCi/L		105	80	120			
Sample ID: MB-GA-0605	3	Method Blank				Run: BERTHOLD 770-2_121019E				11/08/12 22:02
Gross Alpha minus Rn & U		0.04	pCi/L							U
Gross Alpha minus Rn & U Precision (±)		0.2	pCi/L							
Gross Alpha minus Rn & U MDC		0.3	pCi/L							
Sample ID: C12100566-002GMS		Sample Matrix Spike				Run: BERTHOLD 770-2_121019E				11/08/12 22:02
Gross Alpha minus Rn & U		43.9	pCi/L		103	70	130			
Sample ID: C12100566-002GMSD		Sample Matrix Spike Duplicate				Run: BERTHOLD 770-2_121019E				11/08/12 22:02
Gross Alpha minus Rn & U		40.1	pCi/L		95	70	130	9.2	22	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-3 **Work Order:** C12100571

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E903.0										Batch: RA226-6302
Sample ID: C12100434-002EMS		Sample Matrix Spike				Run: BERTHOLD 770-1_121016A				10/24/12 16:11
Radium 226		12	pCi/L		92	70	130			
Sample ID: C12100434-002EMSD		Sample Matrix Spike Duplicate				Run: BERTHOLD 770-1_121016A				10/24/12 16:11
Radium 226		12	pCi/L		86	70	130	6.2	26.5	
Sample ID: MB-RA226-6302	3	Method Blank				Run: BERTHOLD 770-1_121016A				10/24/12 16:11
Radium 226		-0.03	pCi/L							U
Radium 226 precision (±)		0.1	pCi/L							
Radium 226 MDC		0.2	pCi/L							
Sample ID: LCS-RA226-6302		Laboratory Control Sample				Run: BERTHOLD 770-1_121016A				10/24/12 16:11
Radium 226		6.4	pCi/L		101	80	120			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-3 **Work Order:** C12100571

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E908.0									Batch: RA-TH-ISO-1726	
Sample ID: LCS-RA-TH-ISO-1726		Laboratory Control Sample				Run: ALPHANALYST_121025A			10/29/12 09:16	
Thorium 230		5.1	pCi/L		99	80	120			
Sample ID: C12100563-005DMS		Sample Matrix Spike				Run: ALPHANALYST_121025A			10/29/12 09:16	
Thorium 230		12	pCi/L		97	70	130			
Sample ID: C12100563-005DMSD		Sample Matrix Spike Duplicate				Run: ALPHANALYST_121025A			10/29/12 09:16	
Thorium 230		11	pCi/L		95	70	130	1.9	41.1	
Sample ID: MB-RA-TH-ISO-1726	3	Method Blank				Run: ALPHANALYST_121025A			10/29/12 09:17	
Thorium 230		0.03	pCi/L							U
Thorium 230 precision (±)		0.06	pCi/L							
Thorium 230 MDC		0.2	pCi/L							
Method: E908.0									Batch: RA-TH-ISO-1727	
Sample ID: LCS-RA-TH-ISO-1727		Laboratory Control Sample				Run: ALPHANALYST_121029B			11/01/12 08:57	
Thorium 230		5.1	pCi/L		99	80	120			
Sample ID: C12100911-001DMS		Sample Matrix Spike				Run: ALPHANALYST_121029B			11/01/12 08:57	
Thorium 230		11.9	pCi/L		98	70	130			
Sample ID: C12100911-001DMSD		Sample Matrix Spike Duplicate				Run: ALPHANALYST_121029B			11/01/12 08:57	
Thorium 230		11.8	pCi/L		97	70	130	0.8	46.2	
Sample ID: MB-RA-TH-ISO-1727	3	Method Blank				Run: ALPHANALYST_121029B			11/01/12 08:57	
Thorium 230		0.009	pCi/L							U
Thorium 230 precision (±)		0.06	pCi/L							
Thorium 230 MDC		0.2	pCi/L							

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-3 **Work Order:** C12100571

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E909.0									Batch: T_PB-210-0305	
Sample ID: MB-PB-210-0305	3	Method Blank				Run: SUB-T48118			11/16/12 19:24	
Lead 210			pCi/L							U
Lead 210 precision (±)		0.6	pCi/L							
Lead 210 MDC		0.9	pCi/L							
Sample ID: LCS-PB-210-0305		Laboratory Control Sample				Run: SUB-T48118			11/16/12 20:23	
Lead 210		100	pCi/L		99	70	130			
Sample ID: T12100078-002BMS		Sample Matrix Spike				Run: SUB-T48118			11/17/12 13:55	
Lead 210		270	pCi/L		95	70	130			
Sample ID: T12100078-002BMSD		Sample Matrix Spike Duplicate				Run: SUB-T48118			11/17/12 14:53	
Lead 210		270	pCi/L		95	70	130	0.5	14.8	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-3 **Work Order:** C12100571

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: RA-05										Batch: RA228-4250
Sample ID: LCS-228-RA226-6302		Laboratory Control Sample				Run: TENNELEC-3_121016B			10/19/12 20:18	
Radium 228		5.7	pCi/L		112	80	120			
Sample ID: MB-RA226-6302	3	Method Blank				Run: TENNELEC-3_121016B			10/19/12 20:18	
Radium 228		0.5	pCi/L							U
Radium 228 precision (±)		1	pCi/L							
Radium 228 MDC		2	pCi/L							
Sample ID: C12100434-002EMS		Sample Matrix Spike				Run: TENNELEC-3_121016B			10/19/12 20:18	
Radium 228		14	pCi/L		118	70	130			
Sample ID: C12100434-002EMSD		Sample Matrix Spike Duplicate				Run: TENNELEC-3_121016B			10/19/12 20:18	
Radium 228		13	pCi/L		104	70	130	9.0	42.3	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

ANALYTICAL SUMMARY REPORT

November 20, 2012

United Nuclear Corporation
21 Miles NE of Gallup
Gallup, NM 87305

Workorder No.: C12100835 Quote ID: C129 - Quarterly Long List

Project Name: Zone-3

Energy Laboratories, Inc. Casper WY received the following 22 samples for United Nuclear Corporation on 10/19/2012 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C12100835-001	517	10/15/12 12:36	10/19/12	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Total Alkalinity QA Calculations Arsenic Speciation Selenium-IV, Total CVAA Selenium Prep E300.0 Anions Nitrogen, Ammonia Nitrogen, Nitrate + Nitrite pH Metals Preparation by EPA 200.2 Gross Alpha minus Rn222 and Uranium Lead 210, Total Radium 226, Total Radium 228, Total Thorium, Isotopic Solids, Total Dissolved Solids, Total Dissolved - Calculated E624 Purgeable Organics
C12100835-002	708	10/15/12 13:24	10/19/12	Aqueous	Same As Above
C12100835-003	711	10/15/12 15:16	10/19/12	Aqueous	Same As Above
C12100835-004	EPA-13	10/15/12 14:31	10/19/12	Aqueous	Same As Above
C12100835-005	719	10/16/12 8:45	10/19/12	Aqueous	Same As Above
C12100835-006	420	10/16/12 9:30	10/19/12	Aqueous	Same As Above
C12100835-007	717	10/16/12 10:30	10/19/12	Aqueous	Same As Above
C12100835-008	717 Duplicate	10/16/12 10:58	10/19/12	Aqueous	Same As Above
C12100835-009	NBL-2	10/16/12 11:32	10/19/12	Aqueous	Same As Above
C12100835-010	NBL-1	10/16/12 12:58	10/19/12	Aqueous	Same As Above
C12100835-011	PB-3	10/16/12 14:01	10/19/12	Aqueous	Same As Above
C12100835-012	PB-4	10/16/12 14:50	10/19/12	Aqueous	Same As Above
C12100835-013	MW-7	10/16/12 15:40	10/19/12	Aqueous	Same As Above
C12100835-014	PB-2	10/16/12 14:25	10/19/12	Aqueous	Same As Above
C12100835-015	RW-A	10/16/12 14:45	10/19/12	Aqueous	Same As Above
C12100835-016	RW-11	10/16/12 15:00	10/19/12	Aqueous	Same As Above

ANALYTICAL SUMMARY REPORT

C12100835-017	619	10/16/12 10:00	10/19/12	Aqueous	Same As Above
C12100835-018	619 Filtered	10/16/12 10:44	10/19/12	Aqueous	Same As Above
C12100835-019	619 Rinsate	10/16/12 12:08	10/19/12	Aqueous	Same As Above
C12100835-020	Rinsate	10/17/12 11:57	10/19/12	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Total Alkalinity QA Calculations Arsenic Speciation Selenium-IV, Total CVAA Selenium Prep E300.0 Anions Nitrogen, Ammonia Nitrogen, Nitrate + Nitrite pH Metals Preparation by EPA 200.2 Gross Alpha minus Rn222 and Uranium Lead 210, Total Radium 226, Total Radium 228, Total Thorium, Isotopic Solids, Total Dissolved E624 Purgeable Organics
C12100835-021	Field Blank	10/17/12 12:00	10/19/12	Aqueous	Same As Above
C12100835-022	MW-6	10/17/12 9:30	10/19/12	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Total Alkalinity QA Calculations Arsenic Speciation Selenium-IV, Total CVAA Selenium Prep E300.0 Anions Nitrogen, Ammonia Nitrogen, Nitrate + Nitrite pH Metals Preparation by EPA 200.2 Gross Alpha minus Rn222 and Uranium Lead 210, Total Radium 226, Total Radium 228, Total Thorium, Isotopic Solids, Total Dissolved Solids, Total Dissolved - Calculated E624 Purgeable Organics

The results as reported relate only to the item(s) submitted for testing. The analyses presented in this report were performed at Energy Laboratories, Inc., 2393 Salt Creek Hwy., Casper, WY 82601, unless otherwise noted. Radiochemistry analyses were performed at Energy Laboratories, Inc., 2325 Kerzell Lane, Casper, WY 82601, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

If you have any questions regarding these test results, please call.

Report Approved By: Stephanie D Waldrop
Reporting Supervisor

Digitally signed by
Stephanie Waldrop
Date: 2012.11.20 15:50:53 -07:00

CLIENT: United Nuclear Corporation
Project: Zone-3
Sample Delivery Group: C12100835

Report Date: 11/20/12

CASE NARRATIVE

ANALYTICAL COMMENTS
Some samples for Nitrate + Nitrite analysis were diluted due to over preservation with H2SO4. These samples are reporting ND at an elevated report limit.

TH230 ANALYSIS
The sample-specific MDC for this sample could not be achieved due to significant matrix interferences, restricting the volume of sample to be used in the analysis.

BRANCH LABORATORY SUBCONTRACT ANALYSIS
Tests associated with analyst identified as ELI-H were subcontracted to Energy Laboratories, 3161 E.Lyndale Ave., Helena, MT, EPA Number MT00945.

Tests associated with analyst identified as ELI-CS were subcontracted to Energy Laboratories, 415 Graham Rd., College Station, TX, EPA Number TX01520.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-3 **Work Order:** C12100835

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2320 B										Batch: R166093
Sample ID: MBLK	2	Method Blank				Run: MANTECH_121019B			10/19/12 15:02	
Alkalinity, Total as CaCO3		ND	mg/L	5.0						
Bicarbonate as HCO3		1.80	mg/L	5.0						
Sample ID: LCS_121003		Laboratory Control Sample				Run: MANTECH_121019B			10/19/12 15:16	
Alkalinity, Total as CaCO3		206	mg/L	5.0	103	90	110			
Sample ID: C12100835-008ADUP	2	Sample Duplicate				Run: MANTECH_121019B			10/19/12 19:50	
Alkalinity, Total as CaCO3		ND	mg/L	5.0					10	
Bicarbonate as HCO3		ND	mg/L	5.0					10	
Sample ID: C12100835-018ADUP	2	Sample Duplicate				Run: MANTECH_121019B			10/19/12 21:29	
Alkalinity, Total as CaCO3		433	mg/L	5.0				2.0	10	
Bicarbonate as HCO3		528	mg/L	5.0				2.0	10	
Sample ID: C12100835-019AMS		Sample Matrix Spike				Run: MANTECH_121019B			10/19/12 21:42	
Alkalinity, Total as CaCO3		136	mg/L	5.0	104	80	120			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-3 **Work Order:** C12100835

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C										Batch: TDS121019A
Sample ID: MB-1_121019A		Method Blank				Run: BAL-1_121019A				10/19/12 15:06
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	4						
Sample ID: LCS-2_121019A		Laboratory Control Sample				Run: BAL-1_121019A				10/19/12 15:06
Solids, Total Dissolved TDS @ 180 C		995	mg/L	10	100	90	110			
Sample ID: C12100717-001A MS		Sample Matrix Spike				Run: BAL-1_121019A				10/19/12 15:07
Solids, Total Dissolved TDS @ 180 C		400000	mg/L	10	92	90	110			
Sample ID: C12100800-010A DUP		Sample Duplicate				Run: BAL-1_121019A				10/19/12 15:09
Solids, Total Dissolved TDS @ 180 C		2580	mg/L	10				1.2	5	
Sample ID: C12100836-007A MS		Sample Matrix Spike				Run: BAL-1_121019A				10/19/12 15:13
Solids, Total Dissolved TDS @ 180 C		4460	mg/L	10	98	90	110			
Method: A2540 C										Batch: TDS121022B
Sample ID: MB-1_121022B		Method Blank				Run: BAL-1_121022B				10/22/12 16:33
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	4						
Sample ID: LCS-2_121022B		Laboratory Control Sample				Run: BAL-1_121022B				10/22/12 16:33
Solids, Total Dissolved TDS @ 180 C		1080	mg/L	10	97	90	110			
Sample ID: C12100835-005A MS		Sample Matrix Spike				Run: BAL-1_121022B				10/22/12 16:34
Solids, Total Dissolved TDS @ 180 C		9920	mg/L	10	100	90	110			
Sample ID: C12100835-014A DUP		Sample Duplicate				Run: BAL-1_121022B				10/22/12 16:36
Solids, Total Dissolved TDS @ 180 C		5210	mg/L	10				1.4	5	
Sample ID: C12100849-003A MS		Sample Matrix Spike				Run: BAL-1_121022B				10/22/12 16:40
Solids, Total Dissolved TDS @ 180 C		7710	mg/L	10	94	90	110			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-3 **Work Order:** C12100835

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A3114 B								Analytical Run: CVAA-C202_121107A		
Sample ID: ICV		Initial Calibration Verification Standard								11/07/12 11:00
Selenium-IV		0.0270	mg/L	0.0010	108	90	110			
Method: A3114 B										Batch: 35588
Sample ID: MB-35588		Method Blank				Run: CVAA-C202_121107A				11/07/12 11:03
Selenium-IV		ND	mg/L	0.0005						
Sample ID: LCS-35588		Laboratory Control Sample				Run: CVAA-C202_121107A				11/07/12 11:05
Selenium-IV		0.0272	mg/L	0.0010	109	90	110			
Sample ID: C12100835-010DMS		Sample Matrix Spike				Run: CVAA-C202_121107A				11/07/12 11:11
Selenium-IV		0.0234	mg/L	0.0010	94	85	115			
Sample ID: C12100835-010DMSD		Sample Matrix Spike Duplicate				Run: CVAA-C202_121107A				11/07/12 11:17
Selenium-IV		0.0212	mg/L	0.0010	85	85	115	9.9	10	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-3 **Work Order:** C12100835

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A3114 B								Analytical Run: CVAA-C202_121107B		
Sample ID: ICV		Initial Calibration Verification Standard							11/07/12 13:21	
Selenium-IV		0.0271	mg/L	0.0010	108	90	110			
Method: A3114 B									Batch: 35588	
Sample ID: MB-35588		Method Blank				Run: CVAA-C202_121107B			11/07/12 13:26	
Selenium-IV		ND	mg/L	0.0005						
Sample ID: LCS-35588		Laboratory Control Sample				Run: CVAA-C202_121107B			11/07/12 13:28	
Selenium-IV		0.0271	mg/L	0.0010	108	90	110			
Sample ID: C12100835-015DMS		Sample Matrix Spike				Run: CVAA-C202_121107B			11/07/12 13:33	
Selenium-IV		0.0267	mg/L	0.0010	107	85	115			
Sample ID: C12100835-015DMSD		Sample Matrix Spike Duplicate				Run: CVAA-C202_121107B			11/07/12 13:34	
Selenium-IV		0.0268	mg/L	0.0010	107	85	115	0.6	10	
Sample ID: C12100835-007DMS		Sample Matrix Spike				Run: CVAA-C202_121107B			11/07/12 14:03	
Selenium-IV		0.0268	mg/L	0.0010	107	85	115			
Sample ID: C12100835-007DMSD		Sample Matrix Spike Duplicate				Run: CVAA-C202_121107B			11/07/12 14:05	
Selenium-IV		0.0266	mg/L	0.0010	106	85	115	0.7	10	
Method: A3114 B									Batch: 35589	
Sample ID: MB-35589		Method Blank				Run: CVAA-C202_121107B			11/07/12 14:25	
Selenium-IV		ND	mg/L	0.0005						
Sample ID: C12100835-001DMS		Sample Matrix Spike				Run: CVAA-C202_121107B			11/07/12 14:39	
Selenium-IV		0.0228	mg/L	0.0010	91	85	115			
Sample ID: C12100835-001DMSD		Sample Matrix Spike Duplicate				Run: CVAA-C202_121107B			11/07/12 14:41	
Selenium-IV		0.0221	mg/L	0.0010	88	85	115	3.1	10	
Sample ID: LCS-35589		Laboratory Control Sample				Run: CVAA-C202_121107B			11/07/12 14:49	
Selenium-IV		0.0244	mg/L	0.0010	98	90	110			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-3 **Work Order:** C12100835

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-H B								Analytical Run: PHSC_101-C_121019A		
Sample ID: pH 6.86		Initial Calibration Verification Standard							10/19/12 08:46	
pH		6.84	s.u.	0.010	100	98	102			
Sample ID: pH 6.86		Initial Calibration Verification Standard							10/19/12 14:35	
pH		6.84	s.u.	0.010	100	98	102			
Method: A4500-H B									Batch: R166032	
Sample ID: C12100835-005ADUP		Sample Duplicate				Run: PHSC_101-C_121019A			10/19/12 15:28	
pH		5.21	s.u.	0.010				0.6	3	
Sample ID: C12100835-015ADUP		Sample Duplicate				Run: PHSC_101-C_121019A			10/19/12 16:06	
pH		6.42	s.u.	0.010				0.2	3	
Sample ID: C12100835-022ADUP		Sample Duplicate				Run: PHSC_101-C_121019A			10/19/12 16:27	
pH		6.60	s.u.	0.010				0.2	3	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-3 **Work Order:** C12100835

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-NH3 G										Batch: R166402
Sample ID: MBLK-1		Method Blank				Run: TECHNICON_121026A				10/26/12 10:20
Nitrogen, Ammonia as N		ND	mg/L	0.02						
Sample ID: LCS-2		Laboratory Control Sample				Run: TECHNICON_121026A				10/26/12 10:22
Nitrogen, Ammonia as N		1.98	mg/L	0.050	99	90	110			
Sample ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_121026A				10/26/12 10:24
Nitrogen, Ammonia as N		2.01	mg/L	0.050	103	80	120			
Sample ID: C12100835-010EMS		Sample Matrix Spike				Run: TECHNICON_121026A				10/26/12 16:44
Nitrogen, Ammonia as N		4.90	mg/L	0.10	108	90	110			
Sample ID: C12100835-010EMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_121026A				10/26/12 16:46
Nitrogen, Ammonia as N		4.86	mg/L	0.10	107	90	110	0.8	10	
Sample ID: C12100835-020EMS		Sample Matrix Spike				Run: TECHNICON_121026A				10/26/12 17:14
Nitrogen, Ammonia as N		2.11	mg/L	0.050	106	90	110			
Sample ID: C12100835-020EMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_121026A				10/26/12 17:16
Nitrogen, Ammonia as N		2.07	mg/L	0.050	104	90	110	1.9	10	
Method: A4500-NH3 G										Batch: R166449
Sample ID: MBLK-1		Method Blank				Run: TECHNICON_121029A				10/29/12 11:43
Nitrogen, Ammonia as N		0.02	mg/L	0.02						
Sample ID: LCS-2		Laboratory Control Sample				Run: TECHNICON_121029A				10/29/12 11:45
Nitrogen, Ammonia as N		2.03	mg/L	0.050	100	90	110			
Sample ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_121029A				10/29/12 11:47
Nitrogen, Ammonia as N		2.01	mg/L	0.050	101	80	120			
Sample ID: C12101137-005EMS		Sample Matrix Spike				Run: TECHNICON_121029A				10/29/12 13:47
Nitrogen, Ammonia as N		2.21	mg/L	0.050	110	90	110			
Sample ID: C12101137-005EMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_121029A				10/29/12 13:49
Nitrogen, Ammonia as N		2.14	mg/L	0.050	107	90	110	3.2	10	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-3 **Work Order:** C12100835

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E1632AM									Analytical Run: SUB-H84213	
Sample ID: AS-ICV 25ppb-11/5/20		Initial Calibration Verification Standard							11/05/12 10:24	
Arsenic-III		24.3	ug/L	5.0	97	87.6	114			
Method: E1632AM									Batch: H_R84213	
Sample ID: ICB		Method Blank				Run: SUB-H84213			11/05/12 10:48	
Arsenic-III		ND	ug/L	2						
Sample ID: AS-LFB 50ppb-11/5/2		Laboratory Fortified Blank				Run: SUB-H84213			11/05/12 10:56	
Arsenic-III		49.8	ug/L	5.0	100	55	146			
Sample ID: H12110035-001A MS		Sample Matrix Spike				Run: SUB-H84213			11/05/12 12:35	
Arsenic-III		90.7	ug/L	5.0	84	55	146			
Sample ID: H12110035-001A MSD		Sample Matrix Spike Duplicate				Run: SUB-H84213			11/05/12 12:43	
Arsenic-III		91.2	ug/L	5.0	84	55	146	0.6	20	
Sample ID: C12100835-007B		Sample Matrix Spike				Run: SUB-H84213			11/05/12 14:11	
Arsenic-III		50.8	ug/L	5.0	102	55	146			
Sample ID: C12100835-007B		Sample Matrix Spike Duplicate				Run: SUB-H84213			11/05/12 14:19	
Arsenic-III		50.4	ug/L	5.0	101	55	146	0.7	20	
Sample ID: C12100835-018B		Sample Matrix Spike				Run: SUB-H84213			11/05/12 16:21	
Arsenic-III		45.8	ug/L	5.0	92	55	146			
Sample ID: C12100835-018B		Sample Matrix Spike Duplicate				Run: SUB-H84213			11/05/12 16:29	
Arsenic-III		46.2	ug/L	5.0	92	55	146	0.9	20	
Method: E1632AM									Analytical Run: SUB-H84261	
Sample ID: AS-ICV 25ppb-11/6/20		Initial Calibration Verification Standard							11/06/12 10:30	
Arsenic-III		25.6	ug/L	5.0	102	87.6	114			
Method: E1632AM									Batch: H_R84261	
Sample ID: ICB		Method Blank				Run: SUB-H84261			11/06/12 10:54	
Arsenic-III		ND	ug/L	2						
Sample ID: AS-LFB 50ppb-11/6/2		Laboratory Fortified Blank				Run: SUB-H84261			11/06/12 11:02	
Arsenic-III		46.5	ug/L	5.0	93	55	146			
Sample ID: H12110044-001A MS		Sample Matrix Spike				Run: SUB-H84261			11/06/12 11:41	
Arsenic-III		91.9	ug/L	5.0	92	55	146			
Sample ID: H12110044-001A MSD		Sample Matrix Spike Duplicate				Run: SUB-H84261			11/06/12 11:49	
Arsenic-III		94.1	ug/L	5.0	94	55	146	2.4	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-3 **Work Order:** C12100835

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-C_121107A	
Sample ID: ICV	8	Initial Calibration Verification Standard								11/07/12 13:51
Aluminum		4.95	mg/L	0.10	99	95	105			
Beryllium		0.513	mg/L	0.010	103	95	105			
Cadmium		0.504	mg/L	0.010	101	95	105			
Cobalt		1.02	mg/L	0.010	102	95	105			
Manganese		5.15	mg/L	0.010	103	95	105			
Molybdenum		1.05	mg/L	0.10	105	95	105			
Nickel		1.04	mg/L	0.050	104	95	105			
Vanadium		1.04	mg/L	0.10	104	95	105			
Sample ID: ICSA	8	Interference Check Sample A								11/07/12 14:31
Aluminum		536	mg/L	0.10	107	80	120			
Beryllium		ND	mg/L	0.010						
Cadmium		-0.00270	mg/L	0.010						
Cobalt		-0.00280	mg/L	0.010						
Manganese		-0.00290	mg/L	0.010						
Molybdenum		-0.0198	mg/L	0.10						
Nickel		-0.00310	mg/L	0.050						
Vanadium		0.0128	mg/L	0.10						
Sample ID: ICSAB	8	Interference Check Sample AB								11/07/12 14:35
Aluminum		530	mg/L	0.10	106	80	120			
Beryllium		0.519	mg/L	0.010	104	80	120			
Cadmium		0.998	mg/L	0.010	100	80	120			
Cobalt		0.494	mg/L	0.010	99	80	120			
Manganese		0.508	mg/L	0.010	102	80	120			
Molybdenum		-0.0213	mg/L	0.10						
Nickel		0.988	mg/L	0.050	99	80	120			
Vanadium		0.539	mg/L	0.10	108	80	120			
Method: E200.7										Batch: 35483
Sample ID: MB-35483	8	Method Blank				Run: ICP2-C_121107A				11/07/12 21:35
Aluminum		ND	mg/L	0.10						
Beryllium		ND	mg/L	0.0010						
Cadmium		ND	mg/L	0.0050						
Cobalt		ND	mg/L	0.010						
Manganese		ND	mg/L	0.010						
Molybdenum		ND	mg/L	0.10						
Nickel		ND	mg/L	0.050						
Vanadium		ND	mg/L	0.10						
Sample ID: LCS3-35483	8	Laboratory Control Sample				Run: ICP2-C_121107A				11/07/12 22:20
Aluminum		2.52	mg/L	0.030	101	85	115			
Beryllium		0.259	mg/L	0.0010	104	85	115			
Cadmium		0.254	mg/L	0.0010	102	85	115			
Cobalt		0.507	mg/L	0.0050	101	85	115			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-3 **Work Order:** C12100835

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7										Batch: 35483
Sample ID: LCS3-35483	8	Laboratory Control Sample				Run: ICP2-C_121107A				11/07/12 22:20
Manganese		2.56	mg/L	0.0010	102	85	115			
Molybdenum		0.520	mg/L	0.0023	104	85	115			
Nickel		0.513	mg/L	0.0050	103	85	115			
Vanadium		0.515	mg/L	0.014	103	85	115			
Sample ID: C12100835-006DMS3	8	Sample Matrix Spike				Run: ICP2-C_121107A				11/07/12 22:28
Aluminum		3.16	mg/L	0.030	117	70	130			
Beryllium		0.254	mg/L	0.0010	101	70	130			
Cadmium		0.245	mg/L	0.0010	98	70	130			
Cobalt		0.528	mg/L	0.0050	101	70	130			
Manganese		4.11	mg/L	0.0010	100	70	130			
Molybdenum		1.38	mg/L	0.0023	98	70	130			
Nickel		0.527	mg/L	0.0050	100	70	130			
Vanadium		0.521	mg/L	0.014	104	70	130			
Sample ID: C12100835-006DMSD	8	Sample Matrix Spike Duplicate				Run: ICP2-C_121107A				11/07/12 22:32
Aluminum		3.19	mg/L	0.030	118	70	130	1.0	20	
Beryllium		0.255	mg/L	0.0010	102	70	130	0.5	20	
Cadmium		0.251	mg/L	0.0010	100	70	130	2.5	20	
Cobalt		0.533	mg/L	0.0050	102	70	130	0.9	20	
Manganese		4.14	mg/L	0.0010	102	70	130	0.8	20	
Molybdenum		1.41	mg/L	0.0023	106	70	130	2.7	20	
Nickel		0.535	mg/L	0.0050	102	70	130	1.5	20	
Vanadium		0.527	mg/L	0.014	105	70	130	1.1	20	
Sample ID: C12100835-022DMS3	8	Sample Matrix Spike				Run: ICP2-C_121107A				11/08/12 00:09
Aluminum		2.60	mg/L	0.030	104	70	130			
Beryllium		0.259	mg/L	0.0010	104	70	130			
Cadmium		0.255	mg/L	0.0011	102	70	130			
Cobalt		0.638	mg/L	0.0050	105	70	130			
Manganese		6.69	mg/L	0.0010	107	70	130			
Molybdenum		5.01	mg/L	0.0045		70	130			A
Nickel		0.669	mg/L	0.0050	106	70	130			
Vanadium		0.518	mg/L	0.028	104	70	130			
Sample ID: C12100835-022DMSD	8	Sample Matrix Spike Duplicate				Run: ICP2-C_121107A				11/08/12 00:13
Aluminum		2.60	mg/L	0.030	104	70	130	0.2	20	
Beryllium		0.259	mg/L	0.0010	104	70	130	0.1	20	
Cadmium		0.256	mg/L	0.0011	102	70	130	0.5	20	
Cobalt		0.643	mg/L	0.0050	106	70	130	0.8	20	
Manganese		6.70	mg/L	0.0010	107	70	130	0.0	20	
Molybdenum		5.11	mg/L	0.0045		70	130	2.1	20	A
Nickel		0.672	mg/L	0.0050	106	70	130	0.4	20	
Vanadium		0.516	mg/L	0.028	103	70	130	0.4	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

MDC - Minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-3 **Work Order:** C12100835

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-C_121109B	
Sample ID: ICV	4	Initial Calibration Verification Standard							11/09/12 13:45	
Calcium		50.0	mg/L	0.50	100	95	105			
Magnesium		51.5	mg/L	0.50	103	95	105			
Potassium		49.4	mg/L	2.7	99	95	105			
Sodium		52.7	mg/L	0.50	105	95	105			
Sample ID: ICSA	4	Interference Check Sample A							11/09/12 14:25	
Calcium		503	mg/L	0.50	101	80	120			
Magnesium		535	mg/L	0.50	107	80	120			
Potassium		-0.00200	mg/L	0.50						
Sodium		-0.0409	mg/L	0.50						
Sample ID: ICSAB	4	Interference Check Sample AB							11/09/12 14:29	
Calcium		504	mg/L	0.50	101	80	120			
Magnesium		545	mg/L	0.50	109	80	120			
Potassium		-0.00180	mg/L	0.50						
Sodium		0.102	mg/L	0.50						
Method: E200.7									Batch: R167033	
Sample ID: MB-121109A	4	Method Blank				Run: ICP2-C_121109B			11/09/12 14:53	
Calcium		ND	mg/L	0.06						
Magnesium		ND	mg/L	0.03						
Potassium		ND	mg/L	0.06						
Sodium		ND	mg/L	0.03						
Sample ID: LFB-121109A	4	Laboratory Fortified Blank				Run: ICP2-C_121109B			11/09/12 14:58	
Calcium		48.2	mg/L	0.50	96	85	115			
Magnesium		48.4	mg/L	0.50	97	85	115			
Potassium		44.5	mg/L	0.50	89	85	115			
Sodium		47.6	mg/L	0.50	95	85	115			
Sample ID: C12100835-001CMS2	4	Sample Matrix Spike				Run: ICP2-C_121109B			11/09/12 21:29	
Calcium		702	mg/L	1.0	96	70	130			
Magnesium		716	mg/L	1.0	93	70	130			
Potassium		246	mg/L	1.0	92	70	130			
Sodium		406	mg/L	1.6	100	70	130			
Sample ID: C12100835-001CMSD	4	Sample Matrix Spike Duplicate				Run: ICP2-C_121109B			11/09/12 21:33	
Calcium		699	mg/L	1.0	95	70	130	0.4	20	
Magnesium		708	mg/L	1.0	90	70	130	1.1	20	
Potassium		241	mg/L	1.0	90	70	130	1.8	20	
Sodium		410	mg/L	1.6	101	70	130	0.8	20	
Sample ID: C12100835-010CMS2	4	Sample Matrix Spike				Run: ICP2-C_121109B			11/09/12 22:58	
Calcium		759	mg/L	1.0	90	70	130			
Magnesium		590	mg/L	1.0	87	70	130			
Potassium		241	mg/L	1.0	89	70	130			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-3 **Work Order:** C12100835

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7										Batch: R167033
Sample ID: C12100835-010CMS2	4	Sample Matrix Spike				Run: ICP2-C_121109B				11/09/12 22:58
Sodium		391	mg/L	1.6	99	70	130			
Sample ID: C12100835-010CMSD	4	Sample Matrix Spike Duplicate				Run: ICP2-C_121109B				11/09/12 23:14
Calcium		774	mg/L	1.0	95	70	130	1.9	20	
Magnesium		611	mg/L	1.0	95	70	130	3.6	20	
Potassium		241	mg/L	1.0	90	70	130	0.2	20	
Sodium		392	mg/L	1.6	100	70	130	0.3	20	
Sample ID: C12100835-019CMS2	4	Sample Matrix Spike				Run: ICP2-C_121109B				11/10/12 00:11
Calcium		51.9	mg/L	1.0	101	70	130			
Magnesium		49.4	mg/L	1.0	97	70	130			
Potassium		47.5	mg/L	1.0	93	70	130			
Sodium		54.5	mg/L	1.0	98	70	130			
Sample ID: C12100835-019CMSD	4	Sample Matrix Spike Duplicate				Run: ICP2-C_121109B				11/10/12 00:15
Calcium		52.1	mg/L	1.0	101	70	130	0.4	20	
Magnesium		48.4	mg/L	1.0	95	70	130	2.1	20	
Potassium		46.8	mg/L	1.0	92	70	130	1.5	20	
Sodium		54.6	mg/L	1.0	98	70	130	0.2	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-3 **Work Order:** C12100835

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS2-C_121107A	
Sample ID: ICV	10	Initial Calibration Verification Standard								11/07/12 10:33
Aluminum		0.0515	mg/L	0.0010	103	90	110			
Beryllium		0.0496	mg/L	0.0010	99	90	110			
Cadmium		0.0502	mg/L	0.0010	100	90	110			
Cobalt		0.0519	mg/L	0.0010	104	90	110			
Lead		0.0487	mg/L	0.0010	97	90	110			
Manganese		0.0502	mg/L	0.0010	100	90	110			
Molybdenum		0.0502	mg/L	0.0010	100	90	110			
Nickel		0.0506	mg/L	0.0010	101	90	110			
Uranium		0.0488	mg/L	0.00030	98	90	110			
Vanadium		0.0499	mg/L	0.0010	100	90	110			
Method: E200.8										Batch: 35483
Sample ID: MB-35483	10	Method Blank				Run: ICPMS2-C_121107A				11/07/12 11:31
Aluminum		0.003	mg/L	0.0007						
Beryllium		4E-05	mg/L	3E-05						
Cadmium		ND	mg/L	4E-05						
Cobalt		ND	mg/L	0.0001						
Lead		3E-05	mg/L	2E-05						
Manganese		ND	mg/L	7E-05						
Molybdenum		ND	mg/L	6E-05						
Nickel		0.0002	mg/L	5E-05						
Uranium		ND	mg/L	1E-05						
Vanadium		0.009	mg/L	0.0001						
Sample ID: LCS3-35483	10	Laboratory Control Sample				Run: ICPMS2-C_121107A				11/07/12 11:33
Aluminum		2.45	mg/L	0.030	98	85	115			
Beryllium		0.272	mg/L	0.0010	109	85	115			
Cadmium		0.253	mg/L	0.0010	101	85	115			
Cobalt		0.480	mg/L	0.0050	96	85	115			
Lead		0.511	mg/L	0.0010	102	85	115			
Manganese		2.38	mg/L	0.0010	95	85	115			
Molybdenum		0.512	mg/L	0.0010	102	85	115			
Nickel		0.507	mg/L	0.0050	101	85	115			
Uranium		0.528	mg/L	0.00030	106	85	115			
Vanadium		0.486	mg/L	0.010	95	85	115			
Sample ID: C12100835-006DMS3	10	Sample Matrix Spike				Run: ICPMS2-C_121107A				11/07/12 11:41
Aluminum		3.09	mg/L	0.030	114	70	130			
Beryllium		0.252	mg/L	0.0010	101	70	130			
Cadmium		0.233	mg/L	0.0010	93	70	130			
Cobalt		0.472	mg/L	0.0050	90	70	130			
Lead		0.508	mg/L	0.0010	101	70	130			
Manganese		3.65	mg/L	0.0010	89	70	130			
Molybdenum		1.42	mg/L	0.0010	103	70	130			
Nickel		0.511	mg/L	0.0050	94	70	130			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-3 **Work Order:** C12100835

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8										Batch: 35483
Sample ID: C12100835-006DMS3	10	Sample Matrix Spike				Run: ICPMS2-C_121107A			11/07/12 11:41	
Uranium		0.937	mg/L	0.00030	110	70	130			
Vanadium		0.463	mg/L	0.010	91	70	130			
Sample ID: C12100835-006DMSD	10	Sample Matrix Spike Duplicate				Run: ICPMS2-C_121107A			11/07/12 11:43	
Aluminum		3.13	mg/L	0.030	115	70	130	1.4	20	
Beryllium		0.260	mg/L	0.0010	104	70	130	2.8	20	
Cadmium		0.236	mg/L	0.0010	94	70	130	1.2	20	
Cobalt		0.481	mg/L	0.0050	92	70	130	1.9	20	
Lead		0.519	mg/L	0.0010	104	70	130	2.2	20	
Manganese		3.70	mg/L	0.0010	91	70	130	1.4	20	
Molybdenum		1.43	mg/L	0.0010	104	70	130	0.6	20	
Nickel		0.516	mg/L	0.0050	95	70	130	0.9	20	
Uranium		0.950	mg/L	0.00030	112	70	130	1.4	20	
Vanadium		0.471	mg/L	0.010	93	70	130	1.7	20	
Sample ID: C12100835-022DMS3	10	Sample Matrix Spike				Run: ICPMS2-C_121107A			11/07/12 12:52	
Aluminum		2.59	mg/L	0.030	102	70	130			
Beryllium		0.258	mg/L	0.0010	103	70	130			
Cadmium		0.246	mg/L	0.0010	98	70	130			
Cobalt		0.589	mg/L	0.0050	95	70	130			
Lead		0.533	mg/L	0.0010	107	70	130			
Manganese		6.16	mg/L	0.0010	93	70	130			
Molybdenum		5.09	mg/L	0.0010		70	130			A
Nickel		0.657	mg/L	0.0050	101	70	130			
Uranium		0.679	mg/L	0.00030	110	70	130			
Vanadium		0.496	mg/L	0.010	99	70	130			
Sample ID: C12100835-022DMSD	10	Sample Matrix Spike Duplicate				Run: ICPMS2-C_121107A			11/07/12 12:54	
Aluminum		2.58	mg/L	0.030	102	70	130	0.5	20	
Beryllium		0.261	mg/L	0.0010	104	70	130	1.0	20	
Cadmium		0.247	mg/L	0.0010	98	70	130	0.4	20	
Cobalt		0.593	mg/L	0.0050	96	70	130	0.6	20	
Lead		0.532	mg/L	0.0010	106	70	130	0.2	20	
Manganese		6.18	mg/L	0.0010	94	70	130	0.4	20	
Molybdenum		5.17	mg/L	0.0010		70	130	1.6	20	A
Nickel		0.653	mg/L	0.0050	100	70	130	0.6	20	
Uranium		0.692	mg/L	0.00030	113	70	130	1.8	20	
Vanadium		0.495	mg/L	0.010	99	70	130	0.2	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

MDC - Minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-3 **Work Order:** C12100835

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS2-C_121112A	
Sample ID: ICV	2	Initial Calibration Verification Standard							11/12/12 12:32	
Lead		0.0506	mg/L	0.0010	101	90	110			
Uranium		0.0496	mg/L	0.00030	99	90	110			
Method: E200.8									Batch: 35483	
Sample ID: MB-35483	2	Method Blank				Run: ICPMS2-C_121112A			11/12/12 22:33	
Lead		3E-05	mg/L	2E-05						
Uranium		2E-05	mg/L	1E-05						
Sample ID: LCS3-35483	2	Laboratory Control Sample				Run: ICPMS2-C_121112A			11/12/12 22:46	
Lead		0.503	mg/L	0.0010	101	85	115			
Uranium		0.527	mg/L	0.00030	105	85	115			
Sample ID: C12100835-006DMS3	2	Sample Matrix Spike				Run: ICPMS2-C_121112A			11/12/12 22:56	
Lead		0.500	mg/L	0.0010	100	70	130			
Uranium		0.927	mg/L	0.00030	107	70	130			
Sample ID: C12100835-006DMSD	2	Sample Matrix Spike Duplicate				Run: ICPMS2-C_121112A			11/12/12 22:58	
Lead		0.508	mg/L	0.0010	102	70	130	1.7	20	
Uranium		0.951	mg/L	0.00030	112	70	130	2.6	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-3 **Work Order:** C12100835

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS4-C_121026A	
Sample ID: ICV	10	Initial Calibration Verification Standard							10/26/12 11:50	
Aluminum		0.0512	mg/L	0.0010	102	90	110			
Beryllium		0.0508	mg/L	0.0010	102	90	110			
Cadmium		0.0503	mg/L	0.0010	101	90	110			
Cobalt		0.0533	mg/L	0.0010	107	90	110			
Lead		0.0506	mg/L	0.0010	101	90	110			
Manganese		0.0518	mg/L	0.0010	104	90	110			
Molybdenum		0.0515	mg/L	0.0010	103	90	110			
Nickel		0.0523	mg/L	0.0010	105	90	110			
Uranium		0.0522	mg/L	0.00030	104	90	110			
Vanadium		0.0524	mg/L	0.0010	105	90	110			
Method: E200.8									Batch: 35482	
Sample ID: MB-35482	10	Method Blank				Run: ICPMS4-C_121026A			10/26/12 20:26	
Aluminum		0.003	mg/L	0.001						
Beryllium		ND	mg/L	5E-05						
Cadmium		ND	mg/L	3E-05						
Cobalt		ND	mg/L	4E-05						
Lead		1E-05	mg/L	1E-05						
Manganese		6E-05	mg/L	4E-05						
Molybdenum		0.0004	mg/L	4E-05						
Nickel		0.0002	mg/L	4E-05						
Uranium		1E-05	mg/L	8E-06						
Vanadium		0.006	mg/L	8E-05						
Sample ID: LCS3-35482	10	Laboratory Control Sample				Run: ICPMS4-C_121026A			10/26/12 20:31	
Aluminum		2.31	mg/L	0.030	92	85	115			
Beryllium		0.247	mg/L	0.0010	99	85	115			
Cadmium		0.244	mg/L	0.0010	98	85	115			
Cobalt		0.458	mg/L	0.0050	92	85	115			
Lead		0.473	mg/L	0.0010	95	85	115			
Manganese		2.33	mg/L	0.0010	93	85	115			
Molybdenum		0.479	mg/L	0.0010	96	85	115			
Nickel		0.465	mg/L	0.0050	93	85	115			
Uranium		0.531	mg/L	0.00030	106	85	115			
Vanadium		0.467	mg/L	0.010	92	85	115			
Sample ID: C12100835-002DMS3	10	Sample Matrix Spike				Run: ICPMS4-C_121026A			10/26/12 21:23	
Aluminum		36.8	mg/L	0.030		70	130			A
Beryllium		0.279	mg/L	0.0010	94	70	130			
Cadmium		0.247	mg/L	0.0010	98	70	130			
Cobalt		1.02	mg/L	0.0050	85	70	130			
Lead		0.505	mg/L	0.0010	100	70	130			
Manganese		15.3	mg/L	0.0010		70	130			A
Molybdenum		0.508	mg/L	0.0010	101	70	130			
Nickel		1.31	mg/L	0.0050	99	70	130			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

MDC - Minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-3 **Work Order:** C12100835

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8										Batch: 35482
Sample ID: C12100835-002DMS3	10	Sample Matrix Spike				Run: ICPMS4-C_121026A			10/26/12 21:23	
Uranium		0.651	mg/L	0.00030	109	70	130			
Vanadium		0.534	mg/L	0.010	106	70	130			
Sample ID: C12100835-002DMSD	10	Sample Matrix Spike Duplicate				Run: ICPMS4-C_121026A			10/26/12 21:27	
Aluminum		39.8	mg/L	0.030		70	130	7.9	20	A
Beryllium		0.299	mg/L	0.0010	102	70	130	6.9	20	
Cadmium		0.275	mg/L	0.0010	110	70	130	11	20	
Cobalt		1.10	mg/L	0.0050	101	70	130	7.8	20	
Lead		0.540	mg/L	0.0010	107	70	130	6.8	20	
Manganese		16.4	mg/L	0.0010		70	130	6.4	20	A
Molybdenum		0.545	mg/L	0.0010	108	70	130	7.1	20	
Nickel		1.36	mg/L	0.0050	107	70	130	3.1	20	
Uranium		0.708	mg/L	0.00030	120	70	130	8.5	20	
Vanadium		0.541	mg/L	0.010	107	70	130	1.2	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

MDC - Minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-3 **Work Order:** C12100835

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0									Analytical Run: IC1-C_121018A	
Sample ID: ICV-101812-10	2	Initial Calibration Verification Standard							10/18/12 10:35	
Chloride		10.00	mg/L	1.0	100	90	110			
Sulfate		40.1	mg/L	1.0	100	90	110			
Method: E300.0									Batch: R166101	
Sample ID: ICB-101812-11	2	Method Blank				Run: IC1-C_121018A			10/18/12 10:53	
Chloride		ND	mg/L	0.04						
Sulfate		0.1	mg/L	0.1						
Sample ID: LFB-101812-12	2	Laboratory Fortified Blank				Run: IC1-C_121018A			10/18/12 11:10	
Chloride		9.76	mg/L	1.0	98	90	110			
Sulfate		39.1	mg/L	1.0	97	90	110			
Sample ID: C12100835-008AMS	2	Sample Matrix Spike				Run: IC1-C_121018A			10/20/12 01:56	
Chloride		267	mg/L	4.2	100	90	110			
Sulfate		5310	mg/L	17		90	110			A
Sample ID: C12100835-008AMSD	2	Sample Matrix Spike Duplicate				Run: IC1-C_121018A			10/20/12 02:14	
Chloride		267	mg/L	4.2	100	90	110	0.3	10	
Sulfate		5100	mg/L	17		90	110	3.9	10	A
Sample ID: C12100835-018AMS	2	Sample Matrix Spike				Run: IC1-C_121018A			10/20/12 06:17	
Chloride		324	mg/L	4.2	102	90	110			
Sulfate		4680	mg/L	17		90	110			A
Sample ID: C12100835-018AMSD	2	Sample Matrix Spike Duplicate				Run: IC1-C_121018A			10/20/12 06:35	
Chloride		319	mg/L	4.2	100	90	110	1.3	10	
Sulfate		4660	mg/L	17		90	110	0.5	10	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

MDC - Minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-3 **Work Order:** C12100835

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0									Analytical Run: IC1-C_121022A	
Sample ID: ICV-102212-10		Initial Calibration Verification Standard							10/22/12 14:10	
Sulfate		40.4	mg/L	1.0	101	90	110			
Method: E300.0									Batch: R166176	
Sample ID: ICB-102212-11		Method Blank				Run: IC1-C_121022A			10/22/12 14:27	
Sulfate		0.1	mg/L	0.1						
Sample ID: LFB-102212-12		Laboratory Fortified Blank				Run: IC1-C_121022A			10/22/12 14:45	
Sulfate		40.7	mg/L	1.0	101	90	110			
Sample ID: C12100861-001AMS		Sample Matrix Spike				Run: IC1-C_121022A			10/22/12 15:20	
Sulfate		221	mg/L	1.7	101	90	110			
Sample ID: C12100861-001AMSD		Sample Matrix Spike Duplicate				Run: IC1-C_121022A			10/22/12 15:37	
Sulfate		221	mg/L	1.7	101	90	110	0.0	10	
Sample ID: C12100835-007AMS		Sample Matrix Spike				Run: IC1-C_121022A			10/22/12 19:23	
Sulfate		6170	mg/L	42	87	90	110			S
- Matrix spike recoveries outside the acceptance range are considered matrix-related.										
Sample ID: C12100835-007AMSD		Sample Matrix Spike Duplicate				Run: IC1-C_121022A			10/22/12 19:41	
Sulfate		6190	mg/L	42	88	90	110	0.2	10	S
- Matrix spike recoveries outside the acceptance range are considered matrix-related.										
Sample ID: C12100836-005BMS		Sample Matrix Spike				Run: IC1-C_121022A			10/22/12 23:27	
Sulfate		1450	mg/L	4.2		90	110			A
Sample ID: C12100836-005BMSD		Sample Matrix Spike Duplicate				Run: IC1-C_121022A			10/22/12 23:45	
Sulfate		1450	mg/L	4.2		90	110	0.0	10	A
Method: E300.0									Analytical Run: IC1-C_121113A	
Sample ID: ICV-111312-10		Initial Calibration Verification Standard							11/13/12 11:14	
Sulfate		39.7	mg/L	1.0	99	90	110			
Method: E300.0									Batch: R167163	
Sample ID: ICB-111312-11		Method Blank				Run: IC1-C_121113A			11/13/12 11:32	
Sulfate		0.2	mg/L	0.1						
Sample ID: LFB-111312-13		Laboratory Fortified Blank				Run: IC1-C_121113A			11/13/12 12:06	
Sulfate		39.9	mg/L	1.0	99	90	110			
Sample ID: LFBD-111312-14		Laboratory Fortified Blank Duplicate				Run: IC1-C_121113A			11/13/12 12:24	
Sulfate		39.8	mg/L	1.0	99	90	110	0.3	10	
Sample ID: C12100836-003BMS		Sample Matrix Spike				Run: IC1-C_121113A			11/13/12 13:16	
Sulfate		710	mg/L	4.2	101	90	110			
Sample ID: C12100836-003BMSD		Sample Matrix Spike Duplicate				Run: IC1-C_121113A			11/13/12 13:33	
Sulfate		704	mg/L	4.2	98	90	110	0.9	10	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

MDC - Minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3

Report Date: 11/20/12
Work Order: C12100835

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E353.2										Batch: R166136
Sample ID: MBLK-1		Method Blank				Run: TECHNICON_121022A				10/22/12 10:51
Nitrogen, Nitrate+Nitrite as N		ND	mg/L	0.003						
Sample ID: LCS-2		Laboratory Control Sample				Run: TECHNICON_121022A				10/22/12 10:54
Nitrogen, Nitrate+Nitrite as N		2.56	mg/L	0.10	102	90	110			
Sample ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_121022A				10/22/12 10:56
Nitrogen, Nitrate+Nitrite as N		1.99	mg/L	0.10	102	90	110			
Sample ID: C12100872-001DMS		Sample Matrix Spike				Run: TECHNICON_121022A				10/22/12 13:26
Nitrogen, Nitrate+Nitrite as N		2.35	mg/L	0.10	106	90	110			
Sample ID: C12100872-001DMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_121022A				10/22/12 13:29
Nitrogen, Nitrate+Nitrite as N		2.34	mg/L	0.10	106	90	110	0.4	10	
Sample ID: C12100835-005EMS		Sample Matrix Spike				Run: TECHNICON_121022A				10/22/12 14:09
Nitrogen, Nitrate+Nitrite as N		1.90	mg/L	0.10	94	90	110			
Sample ID: C12100835-005EMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_121022A				10/22/12 14:11
Nitrogen, Nitrate+Nitrite as N		1.92	mg/L	0.10	95	90	110	1.0	10	
Method: E353.2										Batch: R166338
Sample ID: MBLK-1		Method Blank				Run: TECHNICON_121025A				10/25/12 11:44
Nitrogen, Nitrate+Nitrite as N		ND	mg/L	0.003						
Sample ID: LCS-2		Laboratory Control Sample				Run: TECHNICON_121025A				10/25/12 11:47
Nitrogen, Nitrate+Nitrite as N		2.55	mg/L	0.10	102	90	110			
Sample ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_121025A				10/25/12 11:49
Nitrogen, Nitrate+Nitrite as N		2.05	mg/L	0.10	105	90	110			
Sample ID: C12100835-001EMS		Sample Matrix Spike				Run: TECHNICON_121025A				10/25/12 11:54
Nitrogen, Nitrate+Nitrite as N		13.4	mg/L	1.0	68	90	110			S
- Matrix spike recoveries outside the acceptance range are considered matrix-related.										
Sample ID: C12100835-001EMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_121025A				10/25/12 11:57
Nitrogen, Nitrate+Nitrite as N		13.5	mg/L	1.0	68	90	110	0.7	10	S
- Matrix spike recoveries outside the acceptance range are considered matrix-related.										
Sample ID: C12100835-016EMS		Sample Matrix Spike				Run: TECHNICON_121025A				10/25/12 12:52
Nitrogen, Nitrate+Nitrite as N		1.46	mg/L	0.10	74	90	110			S
- Matrix spike recoveries outside the acceptance range are considered matrix-related.										
Sample ID: C12100835-016EMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_121025A				10/25/12 12:54
Nitrogen, Nitrate+Nitrite as N		1.47	mg/L	0.10	75	90	110	0.7	10	S
- Matrix spike recoveries outside the acceptance range are considered matrix-related.										

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.
S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-3 **Work Order:** C12100835

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624									Analytical Run: R166291	
Sample ID: 24-Oct-12_CCV_3	9	Continuing Calibration Verification Standard							10/24/12 11:48	
Bromodichloromethane		12.2	ug/L	1.0	122	70	130			
Bromoform		10.8	ug/L	1.0	108	70	130			
Chlorodibromomethane		10.7	ug/L	1.0	107	70	130			
Chloroform		11.6	ug/L	1.0	116	70	130			
Trihalomethanes, Total		45.3	ug/L	1.0	113	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	102	80	120			
Surr: Dibromofluoromethane				1.0	117	80	120			
Surr: p-Bromofluorobenzene				1.0	107	80	120			
Surr: Toluene-d8				1.0	112	80	120			
Sample ID: 24-Oct-12_CCV_19	9	Continuing Calibration Verification Standard							10/24/12 21:37	
Bromodichloromethane		13.0	ug/L	1.0	130	70	130			
Bromoform		10.3	ug/L	1.0	103	70	130			
Chlorodibromomethane		10.8	ug/L	1.0	108	70	130			
Chloroform		13.6	ug/L	1.0	136	70	130			S
Trihalomethanes, Total		47.8	ug/L	1.0	120	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	102	80	120			
Surr: Dibromofluoromethane				1.0	133	80	120			S
Surr: p-Bromofluorobenzene				1.0	112	80	120			
Surr: Toluene-d8				1.0	112	80	120			
Method: E624									Batch: R166291	
Sample ID: 24-Oct-12_LCS_4	9	Laboratory Control Sample				Run: 5975VOC1_121024B			10/24/12 12:24	
Bromodichloromethane		11.1	ug/L	1.0	111	72.3	123			
Bromoform		10.7	ug/L	1.0	107	70.3	128			
Chlorodibromomethane		9.88	ug/L	1.0	99	69.1	123			
Chloroform		11.9	ug/L	1.0	119	72.9	130			
Trihalomethanes, Total		43.6	ug/L	1.0	109	75.7	121			
Surr: 1,2-Dichlorobenzene-d4				1.0	102	82	118			
Surr: Dibromofluoromethane				1.0	116	74.8	123			
Surr: p-Bromofluorobenzene				1.0	107	82.4	121			
Surr: Toluene-d8				1.0	110	76.4	125			
Sample ID: 24-Oct-12_MBLK_6	9	Method Blank				Run: 5975VOC1_121024B			10/24/12 13:34	
Bromodichloromethane		ND	ug/L	1.0						
Bromoform		ND	ug/L	1.0						
Chlorodibromomethane		ND	ug/L	1.0						
Chloroform		ND	ug/L	1.0						
Trihalomethanes, Total		ND	ug/L	1.0						
Surr: 1,2-Dichlorobenzene-d4				1.0	104	80	120			
Surr: Dibromofluoromethane				1.0	120	80	120			
Surr: p-Bromofluorobenzene				1.0	110	80	120			
Surr: Toluene-d8				1.0	108	80	120			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-3 **Work Order:** C12100835

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624									Batch: R166291	
Sample ID: C12100836-001JMS	9	Sample Matrix Spike				Run: 5975VOC1_121024B			10/24/12 19:52	
Bromodichloromethane		206	ug/L	10	103	72.3	123			
Bromoform		183	ug/L	10	92	70.3	128			
Chlorodibromomethane		176	ug/L	10	88	69.1	123			
Chloroform		244	ug/L	10	122	72.9	130			
Trihalomethanes, Total		810	ug/L	10	101	75.7	121			
Surr: 1,2-Dichlorobenzene-d4				1.0	103	82	118			
Surr: Dibromofluoromethane				1.0	131	74.8	123			S
Surr: p-Bromofluorobenzene				1.0	111	82.4	121			
Surr: Toluene-d8				1.0	111	76.4	125			
Sample ID: C12100836-001JMSD	9	Sample Matrix Spike Duplicate				Run: 5975VOC1_121024B			10/24/12 20:27	
Bromodichloromethane		232	ug/L	10	116	72.3	123	12	20	
Bromoform		202	ug/L	10	101	70.3	128	10.0	20	
Chlorodibromomethane		200	ug/L	10	100	69.1	123	13	20	
Chloroform		266	ug/L	10	133	72.9	130	8.5	20	S
Trihalomethanes, Total		900	ug/L	10	113	75.7	121	11	20	
Surr: 1,2-Dichlorobenzene-d4				1.0	101	82	118			
Surr: Dibromofluoromethane				1.0	129	74.8	123			S
Surr: p-Bromofluorobenzene				1.0	110	82.4	121			
Surr: Toluene-d8				1.0	111	76.4	125			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-3 **Work Order:** C12100835

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624									Analytical Run: R166353	
Sample ID: 25-Oct-12_CCV_3	9	Continuing Calibration Verification Standard							10/25/12 12:48	
Bromodichloromethane		12.1	ug/L	1.0	121	70	130			
Bromoform		11.0	ug/L	1.0	110	70	130			
Chlorodibromomethane		10.8	ug/L	1.0	108	70	130			
Chloroform		12.1	ug/L	1.0	121	70	130			
Trihalomethanes, Total		46.0	ug/L	1.0	115	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	102	80	120			
Surr: Dibromofluoromethane				1.0	123	80	120			S
Surr: p-Bromofluorobenzene				1.0	111	80	120			
Surr: Toluene-d8				1.0	111	80	120			
Sample ID: 25-Oct-12_CCV_19	9	Continuing Calibration Verification Standard							10/25/12 22:09	
Bromodichloromethane		12.8	ug/L	1.0	128	70	130			
Bromoform		10.3	ug/L	1.0	103	70	130			
Chlorodibromomethane		10.8	ug/L	1.0	108	70	130			
Chloroform		13.4	ug/L	1.0	134	70	130			S
Trihalomethanes, Total		47.2	ug/L	1.0	118	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	103	80	120			
Surr: Dibromofluoromethane				1.0	142	80	120			S
Surr: p-Bromofluorobenzene				1.0	115	80	120			
Surr: Toluene-d8				1.0	114	80	120			
Method: E624									Batch: R166353	
Sample ID: 25-Oct-12_LCS_4	9	Laboratory Control Sample				Run: 5975VOC1_121025A			10/25/12 13:23	
Bromodichloromethane		10.9	ug/L	1.0	109	72.3	123			
Bromoform		10.5	ug/L	1.0	105	70.3	128			
Chlorodibromomethane		9.68	ug/L	1.0	97	69.1	123			
Chloroform		11.6	ug/L	1.0	116	72.9	130			
Trihalomethanes, Total		42.7	ug/L	1.0	107	75.7	121			
Surr: 1,2-Dichlorobenzene-d4				1.0	102	82	118			
Surr: Dibromofluoromethane				1.0	119	74.8	123			
Surr: p-Bromofluorobenzene				1.0	110	82.4	121			
Surr: Toluene-d8				1.0	111	76.4	125			
Sample ID: 25-Oct-12_MBLK_6	9	Method Blank				Run: 5975VOC1_121025A			10/25/12 14:34	
Bromodichloromethane		ND	ug/L	1.0						
Bromoform		ND	ug/L	1.0						
Chlorodibromomethane		ND	ug/L	1.0						
Chloroform		ND	ug/L	1.0						
Trihalomethanes, Total		ND	ug/L	1.0						
Surr: 1,2-Dichlorobenzene-d4				1.0	104	80	120			
Surr: Dibromofluoromethane				1.0	123	80	120			S
Surr: p-Bromofluorobenzene				1.0	115	80	120			
Surr: Toluene-d8				1.0	109	80	120			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-3 **Work Order:** C12100835

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624										Batch: R166353
Sample ID: C12100791-001EMS	9	Sample Matrix Spike				Run: 5975VOC1_121025A			10/25/12 20:24	
Bromodichloromethane		258	ug/L	10	129	72.3	123			S
Bromoform		224	ug/L	10	112	70.3	128			
Chlorodibromomethane		221	ug/L	10	110	69.1	123			
Chloroform		285	ug/L	10	142	72.9	130			S
Trihalomethanes, Total		987	ug/L	10	123	75.7	121			S
Surr: 1,2-Dichlorobenzene-d4				1.0	104	82	118			
Surr: Dibromofluoromethane				1.0	139	74.8	123			S
Surr: p-Bromofluorobenzene				1.0	116	82.4	121			
Surr: Toluene-d8				1.0	112	76.4	125			
Sample ID: C12100791-001EMSD	9	Sample Matrix Spike Duplicate				Run: 5975VOC1_121025A			10/25/12 20:59	
Bromodichloromethane		238	ug/L	10	119	72.3	123	7.7	20	
Bromoform		213	ug/L	10	106	70.3	128	5.1	20	
Chlorodibromomethane		205	ug/L	10	102	69.1	123	7.5	20	
Chloroform		259	ug/L	10	130	72.9	130	9.4	20	
Trihalomethanes, Total		915	ug/L	10	114	75.7	121	7.6	20	
Surr: 1,2-Dichlorobenzene-d4				1.0	102	82	118			
Surr: Dibromofluoromethane				1.0	134	74.8	123			S
Surr: p-Bromofluorobenzene				1.0	115	82.4	121			
Surr: Toluene-d8				1.0	112	76.4	125			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-3 **Work Order:** C12100835

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624									Analytical Run: R166419	
Sample ID: 26-Oct-12_CCV_3	9	Continuing Calibration Verification Standard							10/26/12 12:47	
Bromodichloromethane		15.3	ug/L	1.0	153	70	130			S
Bromoform		12.2	ug/L	1.0	122	70	130			
Chlorodibromomethane		12.6	ug/L	1.0	126	70	130			
Chloroform		15.1	ug/L	1.0	151	70	130			S
Trihalomethanes, Total		55.1	ug/L	1.0	138	70	130			S
Surr: 1,2-Dichlorobenzene-d4				1.0	102	80	120			
Surr: Dibromofluoromethane				1.0	140	80	120			S
Surr: p-Bromofluorobenzene				1.0	116	80	120			
Surr: Toluene-d8				1.0	115	80	120			
Sample ID: 26-Oct-12_CCV_18	9	Continuing Calibration Verification Standard							10/26/12 22:08	
Bromodichloromethane		13.5	ug/L	1.0	135	70	130			S
Bromoform		10.6	ug/L	1.0	106	70	130			
Chlorodibromomethane		11.3	ug/L	1.0	113	70	130			
Chloroform		14.2	ug/L	1.0	142	70	130			S
Trihalomethanes, Total		49.7	ug/L	1.0	124	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	103	80	120			
Surr: Dibromofluoromethane				1.0	144	80	120			S
Surr: p-Bromofluorobenzene				1.0	118	80	120			
Surr: Toluene-d8				1.0	114	80	120			
Method: E624									Batch: R166419	
Sample ID: 26-Oct-12_LCS_4	9	Laboratory Control Sample				Run: 5975VOC1_121026A			10/26/12 13:21	
Bromodichloromethane		14.7	ug/L	1.0	147	72.3	123			S
Bromoform		12.4	ug/L	1.0	124	70.3	128			
Chlorodibromomethane		12.2	ug/L	1.0	122	69.1	123			
Chloroform		16.1	ug/L	1.0	161	72.9	130			S
Trihalomethanes, Total		55.4	ug/L	1.0	138	75.7	121			S
Surr: 1,2-Dichlorobenzene-d4				1.0	103	82	118			
Surr: Dibromofluoromethane				1.0	139	74.8	123			S
Surr: p-Bromofluorobenzene				1.0	116	82.4	121			
Surr: Toluene-d8				1.0	114	76.4	125			
Sample ID: 26-Oct-12_MBLK_6	9	Method Blank				Run: 5975VOC1_121026A			10/26/12 14:32	
Bromodichloromethane		ND	ug/L	1.0						
Bromoform		ND	ug/L	1.0						
Chlorodibromomethane		ND	ug/L	1.0						
Chloroform		ND	ug/L	1.0						
Trihalomethanes, Total		ND	ug/L	1.0						
Surr: 1,2-Dichlorobenzene-d4				1.0	104	80	120			
Surr: Dibromofluoromethane				1.0	138	80	120			S
Surr: p-Bromofluorobenzene				1.0	124	80	120			S
Surr: Toluene-d8				1.0	110	80	120			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-3 **Work Order:** C12100835

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624										Batch: R166419
Sample ID: C12100798-035AMS	9	Sample Matrix Spike				Run: 5975VOC1_121026A			10/26/12 20:22	
Bromodichloromethane		270	ug/L	10	135	72.3	123			S
Bromoform		218	ug/L	10	109	70.3	128			
Chlorodibromomethane		219	ug/L	10	110	69.1	123			
Chloroform		300	ug/L	10	150	72.9	130			S
Trihalomethanes, Total		1010	ug/L	10	126	75.7	121			S
Surr: 1,2-Dichlorobenzene-d4				1.0	101	82	118			
Surr: Dibromofluoromethane				1.0	148	74.8	123			S
Surr: p-Bromofluorobenzene				1.0	116	82.4	121			
Surr: Toluene-d8				1.0	115	76.4	125			
Sample ID: C12100798-035AMSD	9	Sample Matrix Spike Duplicate				Run: 5975VOC1_121026A			10/26/12 20:57	
Bromodichloromethane		260	ug/L	10	130	72.3	123	3.9	20	S
Bromoform		205	ug/L	10	102	70.3	128	6.4	20	
Chlorodibromomethane		218	ug/L	10	109	69.1	123	0.4	20	
Chloroform		293	ug/L	10	146	72.9	130	2.4	20	S
Trihalomethanes, Total		976	ug/L	10	122	75.7	121	3.2	20	S
Surr: 1,2-Dichlorobenzene-d4				1.0	104	82	118			
Surr: Dibromofluoromethane				1.0	144	74.8	123			S
Surr: p-Bromofluorobenzene				1.0	116	82.4	121			
Surr: Toluene-d8				1.0	113	76.4	125			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-3 **Work Order:** C12100835

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E900.1										Batch: GA-0623
Sample ID: LCS-GA-0609		Laboratory Control Sample				Run: TENNELEC-3_121022B				11/19/12 23:35
Gross Alpha minus Rn & U		19.4	pCi/L		94	80	120			
Sample ID: MB-GA-0609	3	Method Blank				Run: TENNELEC-3_121022B				11/19/12 23:35
Gross Alpha minus Rn & U		0.2	pCi/L							U
Gross Alpha minus Rn & U Precision (±)		0.2	pCi/L							
Gross Alpha minus Rn & U MDC		0.3	pCi/L							
Sample ID: C12100835-001GMS		Sample Matrix Spike				Run: TENNELEC-3_121022B				11/19/12 23:35
Gross Alpha minus Rn & U		49.0	pCi/L		101	70	130			
Sample ID: C12100835-001GMSD		Sample Matrix Spike Duplicate				Run: TENNELEC-3_121022B				11/19/12 23:35
Gross Alpha minus Rn & U		47.0	pCi/L		95	70	130	4.2	20.2	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3

Report Date: 11/20/12
Work Order: C12100835

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E903.0									Batch: RA226-6349	
Sample ID: C12100891-001EMS		Sample Matrix Spike				Run: BERTHOLD 770-1_121025B			11/08/12 03:30	
Radium 226		13	pCi/L		99	70	130			
Sample ID: C12100891-001EMSD		Sample Matrix Spike Duplicate				Run: BERTHOLD 770-1_121025B			11/08/12 06:30	
Radium 226		14	pCi/L		106	70	130	6.2	20.8	
Sample ID: MB-RA226-6328	3	Method Blank				Run: BERTHOLD 770-1_121025B			11/08/12 06:30	
Radium 226		-0.04	pCi/L							U
Radium 226 precision (±)		0.07	pCi/L							
Radium 226 MDC		0.1	pCi/L							
Sample ID: LCS-RA226-6328		Laboratory Control Sample				Run: BERTHOLD 770-1_121025B			11/08/12 06:30	
Radium 226		6.6	pCi/L		105	80	120			
Method: E903.0									Batch: RA226-6327	
Sample ID: C12100835-001GMS		Sample Matrix Spike				Run: BERTHOLD 770-2_121025A			11/05/12 13:13	
Radium 226		17	pCi/L		81	70	130			
Sample ID: C12100835-001GMSD		Sample Matrix Spike Duplicate				Run: BERTHOLD 770-2_121025A			11/05/12 13:13	
Radium 226		16	pCi/L		78	70	130	2.4	23	
Sample ID: MB-RA226-6327	3	Method Blank				Run: BERTHOLD 770-2_121025A			11/05/12 17:05	
Radium 226		-0.2	pCi/L							U
Radium 226 precision (±)		0.1	pCi/L							
Radium 226 MDC		0.3	pCi/L							
Sample ID: LCS-RA226-6327		Laboratory Control Sample				Run: BERTHOLD 770-2_121025A			11/05/12 17:05	
Radium 226		5.9	pCi/L		95	80	120			

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-3 **Work Order:** C12100835

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E908.0									Batch: RA-TH-ISO-1728	
Sample ID: LCS-RA-TH-ISO-1728		Laboratory Control Sample				Run: ALPHANALYST_121029A			11/01/12 13:57	
Thorium 230		4.8	pCi/L		93	80	120			
Sample ID: C12100835-021GMS		Sample Matrix Spike				Run: ALPHANALYST_121029A			11/01/12 13:58	
Thorium 230		13.1	pCi/L		108	70	130			
Sample ID: C12100835-021GMSD		Sample Matrix Spike Duplicate				Run: ALPHANALYST_121029A			11/01/12 13:58	
Thorium 230		13.0	pCi/L		107	70	130	0.6	45.3	
Sample ID: MB-RA-TH-ISO-1728	3	Method Blank				Run: ALPHANALYST_121029A			11/01/12 13:58	
Thorium 230		0.08	pCi/L							U
Thorium 230 precision (±)		0.09	pCi/L							
Thorium 230 MDC		0.2	pCi/L							
Method: E908.0									Batch: RA-TH-ISO-1727	
Sample ID: LCS-RA-TH-ISO-1727		Laboratory Control Sample				Run: ALPHANALYST_121029B			11/01/12 08:57	
Thorium 230		5.1	pCi/L		99	80	120			
Sample ID: C12100911-001DMS		Sample Matrix Spike				Run: ALPHANALYST_121029B			11/01/12 08:57	
Thorium 230		11.9	pCi/L		98	70	130			
Sample ID: C12100911-001DMSD		Sample Matrix Spike Duplicate				Run: ALPHANALYST_121029B			11/01/12 08:57	
Thorium 230		11.8	pCi/L		97	70	130	0.8	46.2	
Sample ID: MB-RA-TH-ISO-1727	3	Method Blank				Run: ALPHANALYST_121029B			11/01/12 08:57	
Thorium 230		0.009	pCi/L							U
Thorium 230 precision (±)		0.06	pCi/L							
Thorium 230 MDC		0.2	pCi/L							
Method: E908.0									Batch: RA-TH-ISO-1731	
Sample ID: LCS-RA-TH-ISO-1731		Laboratory Control Sample				Run: ALPHANALYST_121102A			11/06/12 14:36	
Thorium 230		4.6	pCi/L		89	80	120			
Sample ID: C12101141-003AMS		Sample Matrix Spike				Run: ALPHANALYST_121102A			11/06/12 14:36	
Thorium 230		12.2	pCi/L		107	70	130			
Sample ID: C12101141-003AMSD		Sample Matrix Spike Duplicate				Run: ALPHANALYST_121102A			11/06/12 14:36	
Thorium 230		11.0	pCi/L		96	70	130	10	46.9	
Sample ID: MB-RA-TH-ISO-1731	3	Method Blank				Run: ALPHANALYST_121102A			11/06/12 14:36	
Thorium 230		0.02	pCi/L							U
Thorium 230 precision (±)		0.08	pCi/L							
Thorium 230 MDC		0.2	pCi/L							

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-3 **Work Order:** C12100835

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E909.0									Batch: T_PB-210-0300	
Sample ID: MB-PB-210-0300	3	Method Blank				Run: SUB-T48102			11/13/12 22:29	
Lead 210		0.3	pCi/L							U
Lead 210 precision (±)		0.3	pCi/L							
Lead 210 MDC		0.5	pCi/L							
Sample ID: LCS-PB-210-0300		Laboratory Control Sample				Run: SUB-T48102			11/14/12 07:21	
Lead 210		100	pCi/L		100	70	130			
Sample ID: TAP WATERMS		Sample Matrix Spike				Run: SUB-T48102			11/14/12 16:12	
Lead 210		100	pCi/L		100	70	130			
Sample ID: TAP WATERMSD		Sample Matrix Spike Duplicate				Run: SUB-T48102			11/14/12 20:37	
Lead 210		100	pCi/L		99	70	130	1.4	12.2	
Method: E909.0									Batch: T_PB-210-0306	
Sample ID: MB-PB-210-0306	3	Method Blank				Run: SUB-T48121			11/17/12 19:06	
Lead 210		-0.02	pCi/L							U
Lead 210 precision (±)		0.6	pCi/L							
Lead 210 MDC		1.0	pCi/L							
Sample ID: LCS-PB-210-0306		Laboratory Control Sample				Run: SUB-T48121			11/17/12 20:05	
Lead 210		94	pCi/L		93	70	130			
Sample ID: T12100078-003BMS		Sample Matrix Spike				Run: SUB-T48121			11/18/12 16:34	
Lead 210		250	pCi/L		94	70	130			
Sample ID: T12100078-003BMSD		Sample Matrix Spike Duplicate				Run: SUB-T48121			11/18/12 17:32	
Lead 210		250	pCi/L		92	70	130	2.4	14.9	
Method: E909.0									Batch: T_PB-210-0307	
Sample ID: MB-PB-210-0307	3	Method Blank				Run: SUB-T48125			11/18/12 22:37	
Lead 210		0.2	pCi/L							U
Lead 210 precision (±)		0.6	pCi/L							
Lead 210 MDC		1	pCi/L							
Sample ID: LCS-PB-210-0307		Laboratory Control Sample				Run: SUB-T48125			11/18/12 23:36	
Lead 210		93	pCi/L		91	70	130			
Sample ID: T12100082-008FMS		Sample Matrix Spike				Run: SUB-T48125			11/19/12 11:18	
Lead 210		190	pCi/L		96	70	130			
Sample ID: T12100082-008FMSD		Sample Matrix Spike Duplicate				Run: SUB-T48125			11/19/12 12:16	
Lead 210		190	pCi/L		96	70	130	0.7	14.9	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/20/12

Project: Zone-3 **Work Order:** C12100835

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: RA-05										Batch: RA228-4258
Sample ID: LCS-228-RA226-6327		Laboratory Control Sample				Run: TENNELEC-3_121025A			10/31/12 18:03	
Radium 228		6.5	pCi/L		97	80	120			
Sample ID: MB-RA226-6327	3	Method Blank				Run: TENNELEC-3_121025A			10/31/12 18:03	
Radium 228		2	pCi/L							
Radium 228 precision (±)		1	pCi/L							
Radium 228 MDC		2	pCi/L							
Sample ID: C12100835-019GMS		Sample Matrix Spike				Run: TENNELEC-3_121025A			10/31/12 18:03	
Radium 228		17	pCi/L		166	70	130			S
- Spike response is outside of the acceptance range for this analysis. Since the LCS, MSD, and RPD for the MS MSD pair are acceptable the batch is approved.										
Sample ID: C12100835-019GMSD		Sample Matrix Spike Duplicate				Run: TENNELEC-3_121025A			10/31/12 18:03	
Radium 228		13	pCi/L		120	70	130	29	44.5	
Method: RA-05										Batch: RA228-4259
Sample ID: LCS-228-RA226-6328		Laboratory Control Sample				Run: TENNELEC-3_121025B			10/31/12 21:12	
Radium 228		5.8	pCi/L		116	80	120			
Sample ID: MB-RA226-6328	3	Method Blank				Run: TENNELEC-3_121025B			10/31/12 21:12	
Radium 228		0.4	pCi/L							U
Radium 228 precision (±)		1.0	pCi/L							
Radium 228 MDC		2	pCi/L							
Sample ID: C12100891-002EMS		Sample Matrix Spike				Run: TENNELEC-3_121025B			10/31/12 21:12	
Radium 228		14	pCi/L		124	70	130			
Sample ID: C12100891-002EMSD		Sample Matrix Spike Duplicate				Run: TENNELEC-3_121025B			10/31/12 21:12	
Radium 228		14	pCi/L		123	70	130	1.2	42.4	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

ANALYTICAL SUMMARY REPORT

November 19, 2012

United Nuclear Corporation
21 Miles NE of Gallup
Gallup, NM 87305

Workorder No.: C12100871 Quote ID: C129 - Quarterly Long List

Project Name: Zone-3

Energy Laboratories, Inc. Casper WY received the following 5 samples for United Nuclear Corporation on 10/19/2012 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C12100871-001	NW-1	10/16/12 13:15	10/19/12	Aqueous	Alkalinity E300.0 Anions pH Solids, Total Dissolved
C12100871-002	NW-4	10/16/12 13:30	10/19/12	Aqueous	Same As Above
C12100871-003	NW-2	10/16/12 13:40	10/19/12	Aqueous	Same As Above
C12100871-004	NW-5	10/16/12 13:55	10/19/12	Aqueous	Same As Above
C12100871-005	NW-3	10/16/12 14:05	10/19/12	Aqueous	Same As Above

The results as reported relate only to the item(s) submitted for testing. The analyses presented in this report were performed at Energy Laboratories, Inc., 2393 Salt Creek Hwy., Casper, WY 82601, unless otherwise noted. Radiochemistry analyses were performed at Energy Laboratories, Inc., 2325 Kerzell Lane, Casper, WY 82601, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

If you have any questions regarding these test results, please call.

Report Approved By:

Stephanie D Waldrop
Reporting Supervisor

Digitally signed by
Stephanie Waldrop
Date: 2012.11.19 15:43:39 -07:00

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/19/12

Project: Zone-3 **Work Order:** C12100871

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2320 B									Batch: R166144	
Sample ID: MBLK	2	Method Blank				Run: MANTECH_121022B			10/22/12 15:13	
Alkalinity, Total as CaCO3		ND	mg/L	3						
Bicarbonate as HCO3		2	mg/L	1						
Sample ID: LCS_121003		Laboratory Control Sample				Run: MANTECH_121022B			10/22/12 15:26	
Alkalinity, Total as CaCO3		207	mg/L	5.0	103	90	110			
Sample ID: C12100849-001ADUP	2	Sample Duplicate				Run: MANTECH_121022B			10/22/12 15:47	
Alkalinity, Total as CaCO3		836	mg/L	5.0				0.6	10	
Bicarbonate as HCO3		1020	mg/L	5.0				0.6	10	
Sample ID: C12100849-002AMS		Sample Matrix Spike				Run: MANTECH_121022B			10/22/12 16:06	
Alkalinity, Total as CaCO3		288	mg/L	5.0	105	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3

Report Date: 11/19/12
Work Order: C12100871

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C									Batch: TDS121022B	
Sample ID: MB-1_121022B		Method Blank				Run: BAL-1_121022B			10/22/12 16:33	
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	4						
Sample ID: LCS-2_121022B		Laboratory Control Sample				Run: BAL-1_121022B			10/22/12 16:33	
Solids, Total Dissolved TDS @ 180 C		1080	mg/L	10	97	90	110			
Sample ID: C12100808-001A DUP		Sample Duplicate				Run: BAL-1_121022B			10/22/12 16:33	
Solids, Total Dissolved TDS @ 180 C		2060	mg/L	10				1.0	5	
Sample ID: C12100849-003A MS		Sample Matrix Spike				Run: BAL-1_121022B			10/22/12 16:40	
Solids, Total Dissolved TDS @ 180 C		7710	mg/L	10	94	90	110			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/19/12

Project: Zone-3 **Work Order:** C12100871

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-H B								Analytical Run: PHSC_101-C_121022A		
Sample ID: pH 6.86		Initial Calibration Verification Standard							10/22/12 09:24	
pH		6.83	s.u.	0.010	100	98	102			
Method: A4500-H B									Batch: R166104	
Sample ID: C12100849-009ADUP		Sample Duplicate				Run: PHSC_101-C_121022A			10/22/12 10:12	
pH		7.32	s.u.	0.010				0.1	3	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 11/19/12

Project: Zone-3 **Work Order:** C12100871

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0									Analytical Run: IC2-C_121022A	
Sample ID: ICV-102212-10		Initial Calibration Verification Standard							10/22/12 17:36	
Chloride		10.0	mg/L	1.0	100	90	110			
Method: E300.0									Batch: R166214	
Sample ID: ICB-102212-11		Method Blank				Run: IC2-C_121022A			10/22/12 17:52	
Chloride		ND	mg/L	0.03						
Sample ID: LFB-102212-12		Laboratory Fortified Blank				Run: IC2-C_121022A			10/22/12 18:07	
Chloride		9.81	mg/L	1.0	98	90	110			
Sample ID: C12100864-005AMS		Sample Matrix Spike				Run: IC2-C_121022A			10/23/12 08:30	
Chloride		24.7	mg/L	1.0	100	90	110			
Sample ID: C12100864-005AMSD		Sample Matrix Spike Duplicate				Run: IC2-C_121022A			10/23/12 08:45	
Chloride		24.9	mg/L	1.0	101	90	110	0.7	10	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.