SEMI-ANNUAL GROUND WATER QUALITY ASSURANCE REPORT

FIRST HALF OF 2014
(JANUARY THRU JUNE)

SEMI – ANNUAL QUALITY ASSURANCE

CHURCH ROCK SITE

JANUARY TO JUNE OF 2014 SAMPLING EVENTS

AUGUST – 2014

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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 addresses 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 2014 quarterly (1st and 2nd) field low flow purging and sampling data sheets are included in Appendix A. These sheets indicate the field parameter of pH, temperature, conductivity 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	4.01	1-6-14/0845	[illegible]
7-Buffer	7.06	1-6-14/0846	[illegible]

(Quar. Performance Monitoring – Pg. 1 of 7)
GROUND WATER MONITORING FIELD DATA SHEET
First QUARTER 2014
SAMPLING

Cond. Standard Verification Check

STD. µS/cm	Reading	Date/Time	Initial
1413 µS/cm	1467	1-6-14/0847	[illegible]

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
1-6-14	509-D	81.60'	81.68'	1st Cond. 3,460	2nd Cond. 3,950	Stable Cond. 5,560	Ending Cond. 6,280
	Time	Bubbler Start	Bubbler End	1st pH 5.79	2nd pH 6.04	Stable pH 6.20	Ending pH 6.64
	0935	0.212'	0.224'	1st Temp. 8.0	2nd Temp. 8.2	Stable Temp. 8.6	Ending Temp. 10.7
				Comments: Conductivity is in uS/cm; Temperature is in °C; pH is in std. units			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
1-6-14	EPA-23	58.19'	58.47'	1st Cond. 3,940	2nd Cond. 4,280	Stable Cond. 4,220	Ending Cond. 4,370
	Time	Bubbler Start	Bubbler End	1st pH 7.24	2nd pH 7.17	Stable pH 7.11	Ending pH 6.89
	1025	3.214'	3.480'	1st Temp. 9.0	2nd Temp. 9.1	Stable Temp. 9.3	Ending Temp. 10.7
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
1-6-14	803	64.91'	65.02'	1st Cond. 2,560	2nd Cond. 5,840	Stable Cond. 5,860	Ending Cond. 5,970
	Time	Bubbler Start	Bubbler End	1st pH 6.90	2nd pH 6.82	Stable pH 6.79	Ending pH 6.65
	1110	10.680'	11.764'	1st Temp. 10.7	2nd Temp. 10.8	Stable Temp. 10.9	Ending Temp. 11.9
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
1-6-14	808	52.21'	52.37'	1st Cond. 4,560	2nd Cond. 5,260	Stable Cond. 5,470	Ending Cond. 6,490
	Time	Bubbler Start	Bubbler End	1st pH 7.73	2nd pH 7.53	Stable pH 7.31	Ending pH 6.65
	1155	10.602'	10.337'	1st Temp. 10.6	2nd Temp. 10.7	Stable Temp. 10.9	Ending Temp. 12.4
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
1-6-14	802	50.31'	50.38'	1st Cond. 2,560	2nd Cond. 5,610	Stable Cond. 5,870	Ending Cond. 6,580
	Time	Bubbler Start	Bubbler End	1st pH 7.09	2nd pH 6.96	Stable pH 6.89	Ending pH 6.70
	1240	15.725'	16.016'	1st Temp. 10.7	2nd Temp. 10.8	Stable Temp. 10.9	Ending Temp. 12.1
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
1-6-14	801	54.12'	55.60'	1st Cond. 2,590	2nd Cond. 5,810	Stable Cond. 6,210	Ending Cond. 6,260
	Time	Bubbler Start	Bubbler End	1st pH 6.83	2nd pH 6.82	Stable pH 6.80	Ending pH 6.73
	1325	7.645'	5.243'	1st Temp. 10.7	2nd Temp. 10.8	Stable Temp. 10.9	Ending Temp. 12.0
				Comments:			

PH Standard Verification Check

STD.	PH Reading	Date/Time	Initial
4-Buffer	4.02	1-7-14/0832	[illegible]
7-Buffer	7.04	1-7-14/0831	[illegible]

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GROUND WATER MONITORING FIELD DATA SHEET

First QUARTER 2014 SAMPLING

Cond. Standard Verification Check

STD. µS/cm Reading	Date/Time	Initial
1413 µS/cm 1497	1-7-14/0833	[illegible]

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
1-6-14	GW-1	63.79'	63.85'	1st Cond. 4,560	2nd Cond. 5,010	Stable Cond. 5,260	Ending Cond. 6,220
	Time	Bubbler Start	Bubbler End	1st pH 7.58	2nd pH 7.55	Stable pH 7.47	Ending pH 6.82
	1415	6.555'	6.924'	1st Temp. 11.0	2nd Temp. 11.1	Stable Temp. 11.1	Ending Temp. 12.0
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
1-6-14	GW-2	58.21'	59.19'	1st Cond. 6,240	2nd Cond. 6,520	Stable Cond. 6,750	Ending Cond. 7,750
	Time	Bubbler Start	Bubbler End	1st pH 7.67	2nd pH 7.53	Stable pH 7.43	Ending pH 6.57
	1525	11.980'	11.656'	1st Temp. 6.6	2nd Temp. 6.7	Stable Temp. 6.7	Ending Temp. 9.2
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
1-6-14	632	46.90'	51.51'	1st Cond. 5,700	2nd Cond. 6,330	Stable Cond. 6,440	Ending Cond. 6,860
	Time	Bubbler Start	Bubbler End	1st pH 7.12	2nd pH 7.07	Stable pH 6.98	Ending pH 6.70
	1615	10.113'	5.749'	1st Temp. 10.4	2nd Temp. 10.5	Stable Temp. 10.7	Ending Temp. 10.5
				Comments: Water level dropped 4.61' during sample & has consistently dropped / decreased >4' during past sampling events.			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
1-7-14	624	52.47'	52.50'	1st Cond. 4,180	2nd Cond. 4,290	Stable Cond. 4,410	Ending Cond. 5,330
	Time	Bubbler Start	Bubbler End	1st pH 7.44	2nd pH 7.49	Stable pH 7.49	Ending pH 6.82
	0920	8.831'	8.801'	1st Temp. 9.7	2nd Temp. 9.9	Stable Temp. 10.1	Ending Temp. 10.5
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
1-7-14	SBL-1	50.85'	51.88'	1st Cond. 7,130	2nd Cond. 7,170	Stable Cond. 7,220	Ending Cond. 7,360
	Time	Bubbler Start	Bubbler End	1st pH 7.07	2nd pH 7.05	Stable pH 7.03	Ending pH 6.84
	1010	3.876'	2.893'	1st Temp. 9.0	2nd Temp. 9.2	Stable Temp. 9.4	Ending Temp. 10.0
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
1-7-14	EPA-28	64.89'	65.32'	1st Cond. 4,560	2nd Cond. 4,700	Stable Cond. 4,740	Ending Cond. 4,750
	Time	Bubbler Start	Bubbler End	1st pH 7.32	2nd pH 7.26	Stable pH 7.19	Ending pH 7.06
	1100	5.543'	5.136'	1st Temp. 9.2	2nd Temp. 9.5	Stable Temp. 9.6	Ending Temp. 10.7
				Comments:			

PH Standard Verification Check

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

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GROUND WATER MONITORING FIELD DATA SHEET

First QUARTER 2014

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
1-7-14	EPA-28 DUPLICATE	65.32'	65.35'	1st Cond. 4,770	2nd Cond. 4,780	Stable Cond. 4,760	Ending Cond. 4,740
	Time	Bubbler Start	Bubbler End	1st pH 7.05	2nd pH 7.05	Stable pH 7.04	Ending pH 7.03
	1145	5.136'	5.044'	1st Temp. 10.7	2nd Temp. 10.6	Stable Temp. 10.6	Ending Temp. 10.7
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
1-7-14	613	79.63'	80.69'	1st Cond. 8,270	2nd Cond. 8,640	Stable Cond. 8,800	Ending Cond. 9,030
	Time	Bubbler Start	Bubbler End	1st pH 3.06	2nd pH 3.06	Stable pH 3.05	Ending pH 3.05
	1242	5.181'	4.157'	1st Temp. 10.2	2nd Temp. 10.2	Stable Temp. 10.4	Ending Temp. 11.2
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
1-7-14	517	104.79'	111.36'	1st Cond. 5,230	2nd Cond. 5,380	Stable Cond. 5,430	Ending Cond. 5,430
	Time	Bubbler Start	Bubbler End	1st pH 3.07	2nd pH 3.04	Stable pH 3.01	Ending pH 3.01
	1330	1.851'	0.322'	1st Temp. 10.7	2nd Temp. 10.7	Stable Temp. 10.8	Ending Temp. 10.8
				Comments: Water level dropped 6.57' during sample & has consistently dropped/decreased > 6' during past sampling events.			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
1-7-14	627	60.09'	60.15'	1st Cond. 4,260	2nd Cond. 4,440	Stable Cond. 4,540	Ending Cond. 4,500
	Time	Bubbler Start	Bubbler End	1st pH 7.04	2nd pH 7.06	Stable pH 7.07	Ending pH 7.09
	1432	2.482'	2.441'	1st Temp. 11.1	2nd Temp. 11.2	Stable Temp. 11.4	Ending Temp. 12.5
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
1-7-14	EPA-25	55.41'	55.51'	1st Cond. 3,640	2nd Cond. 3,910	Stable Cond. 4,050	Ending Cond. 4,540
	Time	Bubbler Start	Bubbler End	1st pH 7.11	2nd pH 7.09	Stable pH 7.09	Ending pH 7.03
	1535	5.510'	5.415'	1st Temp. 10.9	2nd Temp. 11.0	Stable Temp. 11.1	Ending Temp. 11.1
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
1-7-14	GW-3	55.18'	56.92'	1st Cond. 4,870	2nd Cond. 5,240	Stable Cond. 5,320	Ending Cond. 5,390
	Time	Bubbler Start	Bubbler End	1st pH 6.90	2nd pH 6.88	Stable pH 6.86	Ending pH 6.84
	1630	0.483'	0.184'	1st Temp. 9.9	2nd Temp. 10.0	Stable Temp. 10.0	Ending Temp. 10.0
				Comments: Water volume runs out prior to full collection 1st day and have to wait the next day for remainder.			

PH Standard Verification Check

STD.	PH Reading	Date/Time	Initial
4-Buffer	4.03	1-8-14/0838	MC
7-Buffer	7.00	1-8-14/0836	MC

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GROUND WATER MONITORING FIELD DATA SHEET

First QUARTER 2014 SAMPLING

Cond. Standard Verification Check

STD. µS/cm	Reading	Date/Time	Initial
1413 µS/cm	1496	1-8-14/0837	MC

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
1-8-14	614	104.91'	105.71'	1st Cond. 5,630	2nd Cond. 6,050	Stable Cond. 7,280	Ending Cond. 7,920
	Time 0930	Bubbler Start 1.530'	Bubbler End 0.834'	1st pH 7.41	2nd pH 7.44	Stable pH 7.47	Ending pH 6.73
				1st Temp. 10.2	2nd Temp. 10.2	Stable Temp. 10.3	Ending Temp. 10.0
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
1-8-14	515-A	105.58'	113.07'	1st Cond. 5,770	2nd Cond. 7,930	Stable Cond. 8,360	Ending Cond. 8,630
	Time 1050	Bubbler Start 7.420'	Bubbler End 0.282'	1st pH 7.84	2nd pH 7.84	Stable pH 7.84	Ending pH 6.17
				1st Temp. 9.7	2nd Temp. 9.8	Stable Temp. 10.0	Ending Temp. 11.9
				Comments: water level dropped 7.49' during sample & has consistently dropped/decreased >6.5' during past sampling events.			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
1-8-14	604	104.54'	105.39'	1st Cond. 5,600	2nd Cond. 5,890	Stable Cond. 6,030	Ending Cond. 5,980
	Time 1135	Bubbler Start 4.888'	Bubbler End 4.100'	1st pH 6.50	2nd pH 6.48	Stable pH 6.47	Ending pH 5.53
				1st Temp. 10.6	2nd Temp. 10.7	Stable Temp. 10.8	Ending Temp. 11.9
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
1-8-14	RINSATE			1st Cond. 5	2nd Cond.	Stable Cond.	Ending Cond.
	Time 1215	Bubbler Start	Bubbler End	1st pH 6.57	2nd pH	Stable pH	Ending pH
				1st Temp. 9.6	2nd Temp.	Stable Temp.	Ending Temp.
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
1-8-14	FIELD BLANK			1st Cond. 5	2nd Cond.	Stable Cond.	Ending Cond.
	Time 1245	Bubbler Start	Bubbler End	1st pH 6.16	2nd pH	Stable pH	Ending pH
				1st Temp. 16.7	2nd Temp.	Stable Temp.	Ending Temp.
				Comments:			

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
	Time	Bubbler Start	Bubbler End	1st Temp.	2nd Temp.	Stable Temp.	Ending Temp.
				Comments:			

PH Standard Verification Check

STD.	PH Reading	Date/Time	Initial
4-Buffer	4.03	1-13-14/0825	[illegible]
7-Buffer	7.03	1-13-14/0823	[illegible]

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SAMPLING

Cond. Standard Verification Check

STD. µS/cm	Reading	Date/Time	Initial
1413 µS/cm	1447	1-13-14/0824	[illegible]

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
1-13-14	EPA-4	208.05'	208.57'	1st Cond. 3,700	2nd Cond. 3,890	Stable Cond. 3,970	Ending Cond. 4,080
				1st pH 6.94	2nd pH 7.04	Stable pH 7.12	Ending pH 6.90
				1st Temp. 10.4	2nd Temp. 10.4	Stable Temp. 10.3	Ending Temp. 11.1
	Time 0903	Bubbler Start 14.909'	Bubbler End 14.302'	Comments:			
Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
1-13-14	EPA-5	126.57'	127.28'	1st Cond. 3,860	2nd Cond. 3,920	Stable Cond. 3,990	Ending Cond. 4,000
				1st pH 6.69	2nd pH 6.68	Stable pH 6.67	Ending pH 6.11
				1st Temp. 11.2	2nd Temp. 11.1	Stable Temp. 11.2	Ending Temp. 12.0
	Time 1005	Bubbler Start 4.176'	Bubbler End 3.494'	Comments:			
Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
1-13-14	EPA-7	116.23'	118.23'	1st Cond. 6,520	2nd Cond. 6,700	Stable Cond. 6,770	Ending Cond. 6,630
				1st pH 7.81	2nd pH 7.84	Stable pH 7.86	Ending pH 6.29
				1st Temp. 10.0	2nd Temp. 10.1	Stable Temp. 10.2	Ending Temp. 11.8
	Time 1055	Bubbler Start 10.768'	Bubbler End 8.680'	Comments:			
Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
1-13-14	EPA-2	174.34'	175.11'	1st Cond. 2,540	2nd Cond. 2,850	Stable Cond. 2,910	Ending Cond. 2,900
				1st pH 7.38	2nd pH 7.44	Stable pH 7.45	Ending pH 7.03
				1st Temp. 11.3	2nd Temp. 11.3	Stable Temp. 11.4	Ending Temp. 12.2
	Time 1200	Bubbler Start 7.109'	Bubbler End 6.383'	Comments:			
Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
1-13-14	EPA-2 DUPLICATE	175.11'	175.25'	1st Cond. 2,910	2nd Cond. 2,910	Stable Cond. 2,920	Ending Cond. 3,000
				1st pH 7.02	2nd pH 7.02	Stable pH 7.01	Ending pH 6.98
				1st Temp. 12.2	2nd Temp. 12.2	Stable Temp. 12.2	Ending Temp. 12.3
	Time 1235	Bubbler Start 6.383'	Bubbler End 6.243'	Comments:			
Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
1-13-14	708	156.35'	157.51'	1st Cond. 4,750	2nd Cond. 5,290	Stable Cond. 5,420	Ending Cond. 5,010
				1st pH 2.80	2nd pH 2.78	Stable pH 2.78	Ending pH 3.46
				1st Temp. 11.1	2nd Temp. 11.2	Stable Temp. 11.3	Ending Temp. 11.7
	Time 1320	Bubbler Start 2.142'	Bubbler End 1.011'	Comments:			

PH Standard Verification Check

STD.	PH Reading	Date/Time	Initial
4-Buffer	4.05	1-14-14/0817	MC
7-Buffer	7.06	1-14-14/0815	MC

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Cond. Standard Verification Check

STD. µS/cm	Reading	Date/Time	Initial
1413 µS/cm	1451	1-14-14/0816	MC

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
1-13-14	EPA-13	168.47'	169.71'	1st Cond. 2,540	2nd Cond. 5,280	Stable Cond. 5,530	Ending Cond. 5780
	Time	Bubbler Start	Bubbler End	1st pH 6.24	2nd pH 6.30	Stable pH 6.35	Ending pH 6.12
	1447	3.187'	1.998'	1st Temp. 11.7	2nd Temp. 11.8	Stable Temp. 11.8	Ending Temp. 11.9
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
1-13-14	719	169.92'	170.41'	1st Cond. 4,580	2nd Cond. 4,630	Stable Cond. 4,760	Ending Cond. 5,050
	Time	Bubbler Start	Bubbler End	1st pH 5.72	2nd pH 5.72	Stable pH 5.71	Ending pH 5.28
	1534	0.324'	0.383'	1st Temp. 10.7	2nd Temp. 10.7	Stable Temp. 10.7	Ending Temp. 9.0
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
1-13-14	420	154.28'	155.02'	1st Cond. 2,870	2nd Cond. 2,960	Stable Cond. 3,000	Ending Cond. 3,200
	Time	Bubbler Start	Bubbler End	1st pH 6.84	2nd pH 6.86	Stable pH 6.87	Ending pH 6.88
	1700	0.290'	0.343'	1st Temp. 9.0	2nd Temp. 9.0	Stable Temp. 9.2	Ending Temp. 9.3
				Comments: Extended line by 5' due to decreasing water head/volume in October 2013.			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
1-14-14	717	132.65'	132.84	1st Cond. 4,670	2nd Cond. 5,150	Stable Cond. 5,250	Ending Cond. 5,180
	Time	Bubbler Start	Bubbler End	1st pH 4.28	2nd pH 4.29	Stable pH 4.29	Ending pH 4.15
	0915	0.189'	0.294'	1st Temp. 9.5	2nd Temp. 9.7	Stable Temp. 9.7	Ending Temp. 12.4
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
1-14-14	717 DUPLICATE	132.84'	132.87'	1st Cond. 5,230	2nd Cond. 5,300	Stable Cond. 5,300	Ending Cond. 5,330
	Time	Bubbler Start	Bubbler End	1st pH 4.15	2nd pH 4.15	Stable pH 4.16	Ending pH 4.13
	1005	0.294'	0.265'	1st Temp. 12.4	2nd Temp. 12.2	Stable Temp. 12.2	Ending Temp. 12.1
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
1-14-14	EPA-14	123.89'	124.75'	1st Cond. 2,960	2nd Cond. 3,140	Stable Cond. 4,320	Ending Cond. 4,450
	Time	Bubbler Start	Bubbler End	1st pH 5.19	2nd pH 5.18	Stable pH 5.18	Ending pH 4.97
	1035	0.221'	0.234'	1st Temp. 11.0	2nd Temp. 11.0	Stable Temp. 11.1	Ending Temp. 11.8
				Comments:			

PH Standard Verification Check

STD.	PH Reading	Date/Time	Initial
4-Buffer	4.02	1-15-14/1107	MC
7-Buffer	7.02	1-15-14/1105	MC

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First QUARTER 2014 SAMPLING

Cond. Standard Verification Check

STD. µS/cm	Reading	Date/Time	Initial
1413 µS/cm	1433	1-15-14/1106	MC

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
1-14-14	TWQ-142	201.93'	202.67'	1st Cond. 1,700	2nd Cond. 1,758	Stable Cond. 1,814	Ending Cond. 1,854
	Time	Bubbler Start	Bubbler End	1st pH 7.72	2nd pH 7.73	Stable pH 7.74	Ending pH 8.10
	1205	18.937'	18.197'	1st Temp. 10.4	2nd Temp. 10.5	Stable Temp. 10.6	Ending Temp. 12.1
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
1-14-14	RINSATE			1st Cond. 2	2nd Cond.	Stable Cond.	Ending Cond.
	Time	Bubbler Start	Bubbler End	1st pH 6.50	2nd pH	Stable pH	Ending pH
	1530			1st Temp. 13.6	2nd Temp.	Stable Temp.	Ending Temp.
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
1-14-14	FIELD BLANK			1st Cond. 2	2nd Cond.	Stable Cond.	Ending Cond.
	Time	Bubbler Start	Bubbler End	1st pH 7.34	2nd pH	Stable pH	Ending pH
	1615			1st Temp. 12.4	2nd Temp.	Stable Temp.	Ending Temp.
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
1-15-14	711	183.22'	184.53'	1st Cond. 2,530	2nd Cond. 2,740	Stable Cond. 3,000	Ending Cond. 4,120
	Time	Bubbler Start	Bubbler End	1st pH 6.07	2nd pH 6.01	Stable pH 5.95	Ending pH 5.57
	1210	8.696'	7.540'	1st Temp. 11.3	2nd Temp. 11.3	Stable Temp. 11.3	Ending Temp. 11.2
				Comments: Installed 36" pump (older model) and set PSI @ 90 to collect full sample (bottom check valve problem).			

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
	Time	Bubbler Start	Bubbler End	1st Temp.	2nd Temp.	Stable Temp.	Ending Temp.
				Comments:			

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
	Time	Bubbler Start	Bubbler End	1st Temp.	2nd Temp.	Stable Temp.	Ending Temp.
				Comments:			

PH Standard Verification Check

STD.	PH Reading	Date/Time	Initial
4-Buffer	4.05	1-14-14/0817	MC
7-Buffer	7.06	1-14-14/0815	MC

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First QUARTER 2014 SAMPLING

Cond. Standard Verification Check

STD. µS/cm	Reading	Date/Time	Initial
1413 µS/cm	1451	1-14-14/0816	MC

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	NBL-2	165.59'	165.92'	1st Cond. 2,890	2nd Cond. 3,050	Stable Cond. 3,100	Ending Cond. 3,430
1-14-14	Time	Bubbler Start	Bubbler End	1st pH 6.59	2nd pH 6.64	Stable pH 6.65	Ending pH 6.73
	1135	0.358'	0.360'	1st Temp. 11.3	2nd Temp. 11.4	Stable Temp. 11.5	Ending Temp. 12.4
				Comments: Extended line by 5' due to decreasing water head/volume in October 2013.			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	MW-7	191.92'	192.06'	1st Cond. 3,500	2nd Cond. 3,520	Stable Cond. 3,540	Ending Cond. 3,540
1-14-14	Time	Bubbler Start	Bubbler End	1st pH 7.85	2nd pH 7.86	Stable pH 7.87	Ending pH 6.81
	1250			1st Temp. 11.0	2nd Temp. 11.0	Stable Temp. 11.1	Ending Temp. 12.5
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	PB-3	188.74'	189.06'	1st Cond. 5,040	2nd Cond. 5,070	Stable Cond. 5,080	Ending Cond. 5,100
1-14-14	Time	Bubbler Start	Bubbler End	1st pH 2.85	2nd pH 2.83	Stable pH 2.83	Ending pH 2.83
	1355			1st Temp. 10.8	2nd Temp. 10.9	Stable Temp. 10.9	Ending Temp. 10.9
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	PB-4	188.05'	188.32'	1st Cond. 5,210	2nd Cond. 5,320	Stable Cond. 5,410	Ending Cond. 5,450
1-14-14	Time	Bubbler Start	Bubbler End	1st pH 2.84	2nd pH 2.83	Stable pH 2.80	Ending pH 2.80
	1425			1st Temp. 10.2	2nd Temp. 10.3	Stable Temp. 10.3	Ending Temp. 10.3
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	NW-1	198.18'		1st Cond. 3,510	2nd Cond. 3,560	Stable Cond. 3,560	Ending Cond. 3,580
1-14-14	Time	Bubbler Start	Bubbler End	1st pH 6.03	2nd pH 6.28	Stable pH 6.54	Ending pH 6.89
	1228			1st Temp. 7.0	2nd Temp. 6.9	Stable Temp. 6.8	Ending Temp. 6.5
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	NW-4	197.98'		1st Cond. 3,680	2nd Cond. 3,680	Stable Cond. 3,670	Ending Cond. 3,670
1-14-14	Time	Bubbler Start	Bubbler End	1st pH 7.22	2nd pH 7.14	Stable pH 7.07	Ending pH 7.00
	1248			1st Temp. 12.0	2nd Temp. 12.2	Stable Temp. 12.2	Ending Temp. 12.3
				Comments:			

PH Standard Verification Check

STD.	PH Reading	Date/Time	Initial
4-Buffer	4.02	1-15-14/1107	[illegible]
7-Buffer	7.02	1-15-14/1105	[illegible]

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First QUARTER 2014 SAMPLING

Cond. Standard Verification Check

STD. µS/cm	Reading	Date/Time	Initial
1413 µS/cm	1433	1-15-14/1106	[illegible]

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
1-14-14	RW-A	171.79'		1st Cond. 3,790	2nd Cond. 3,810	Stable Cond. 3,810	Ending Cond. 3,870
	Time	Bubbler Start	Bubbler End	1st pH 6.57	2nd pH 6.42	Stable pH 6.38	Ending pH 6.36
	1308			1st Temp. 7.2	2nd Temp. 7.2	Stable Temp. 7.1	Ending Temp. 7.1
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
1-14-14	NW-3	185.87'		1st Cond. 3,560	2nd Cond. 3,630	Stable Cond. 3,650	Ending Cond. 3,650
	Time	Bubbler Start	Bubbler End	1st pH 6.87	2nd pH 6.84	Stable pH 6.81	Ending pH 6.79
	1329			1st Temp. 11.9	2nd Temp. 11.9	Stable Temp. 11.8	Ending Temp. 11.9
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
1-14-14	NW-5	185.57'		1st Cond.	2nd Cond.	Stable Cond.	Ending Cond.
	Time	Bubbler Start	Bubbler End	1st pH	2nd pH	Stable pH	Ending pH
	1500			1st Temp.	2nd Temp.	Stable Temp.	Ending Temp.
				Comments: No sample due to pump failure.			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
1-14-14	NW-2	193.09'		1st Cond. 3,940	2nd Cond. 3950	Stable Cond. 3,940	Ending Cond. 3,970
	Time	Bubbler Start	Bubbler End	1st pH 6.63	2nd pH 6.57	Stable pH 6.53	Ending pH 6.48
	1411			1st Temp. 13.6	2nd Temp. 13.4	Stable Temp. 13.4	Ending Temp. 13.6
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
1-15-14	MW-6	195.88'	196.48'	1st Cond. 3,190	2nd Cond. 3,270	Stable Cond. 3,360	Ending Cond. 4,260
	Time	Bubbler Start	Bubbler End	1st pH 6.61	2nd pH 6.61	Stable pH 6.61	Ending pH 6.83
	1240			1st Temp. 12.3	2nd Temp. 12.4	Stable Temp. 12.4	Ending Temp. 12.4
				Comments:			

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	4.00	3-31-14/0817	[illegible]
7-Buffer	7.03	3-31-14/0815	[illegible]

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Second QUARTER 2014 SAMPLING

Cond. Standard Verification Check

STD. µS/cm	Reading	Date/Time	Initial
1413 µS/cm	1429	3-31-14/0816	[illegible]

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
3-31-14	509-D	81.63'	81.69'	1st Cond. 5,710	2nd Cond. 5,890	Stable Cond. 6,010	Ending Cond. 6,120
	Time	Bubbler Start	Bubbler End	1st pH 7.09	2nd pH 7.01	Stable pH 6.96	Ending pH 6.60
	0850	0.201'	0.136'	1st Temp. 11.1	2nd Temp. 11.2	Stable Temp. 11.3	Ending Temp. 11.8
				Comments: Conductivity is in uS/cm Temperature is in °C pH is in std. units			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
3-31-14	EPA-23	58.15'	58.48'	1st Cond. 3,620	2nd Cond. 3,760	Stable Cond. 3,820	Ending Cond. 4,100
	Time	Bubbler Start	Bubbler End	1st pH 7.31	2nd pH 7.30	Stable pH 7.29	Ending pH 6.84
	0950	3.748'	3.418'	1st Temp. 11.4	2nd Temp. 11.4	Stable Temp. 11.4	Ending Temp. 12.9
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
3-31-14	803	64.88'	64.99'	1st Cond. 5,450	2nd Cond. 5,620	Stable Cond. 5,710	Ending Cond. 5,770
	Time	Bubbler Start	Bubbler End	1st pH 6.69	2nd pH 6.69	Stable pH 6.69	Ending pH 6.67
	1037	11.864'	11.775'	1st Temp. 12.1	2nd Temp. 12.2	Stable Temp. 12.2	Ending Temp. 13.3
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
3-31-14	808	52.14'	52.32'	1st Cond. 4,490	2nd Cond. 5,240	Stable Cond. 5,510	Ending Cond. 6,150
	Time	Bubbler Start	Bubbler End	1st pH 7.17	2nd pH 7.07	Stable pH 6.97	Ending pH 6.61
	1125	11.469'	11.309'	1st Temp. 12.1	2nd Temp. 12.2	Stable Temp. 12.2	Ending Temp. 13.5
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
3-31-14	802	50.37'	50.43'	1st Cond. 5,530	2nd Cond. 5,780	Stable Cond. 5,950	Ending Cond. 6,230
	Time	Bubbler Start	Bubbler End	1st pH 6.78	2nd pH 6.77	Stable pH 6.76	Ending pH 6.67
	1210	17.322'	15.764'	1st Temp. 12.9	2nd Temp. 13.0	Stable Temp. 13.0	Ending Temp. 13.7
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
3-31-14	801	54.18'	55.64'	1st Cond. 4,820	2nd Cond. 5,750	Stable Cond. 5,950	Ending Cond. 6,180
	Time	Bubbler Start	Bubbler End	1st pH 7.03	2nd pH 7.01	Stable pH 6.97	Ending pH 6.70
	1300	7.529'	6.060'	1st Temp. 12.3	2nd Temp. 12.3	Stable Temp. 12.3	Ending Temp. 13.3
				Comments:			

PH Standard Verification Check

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

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Second QUARTER 20 14 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
	632			1st Cond. 6,110	2nd Cond. 6,140	Stable Cond. 6,190	Ending Cond. 6,170
				1st pH 6.98	2nd pH 6.94	Stable pH 6.88	Ending pH 6.59
		46.95'	51.19'	1st Temp. 12.6	2nd Temp. 12.6	Stable Temp. 12.7	Ending Temp. 13.0
3-31-14	Time	Bubbler Start	Bubbler End	Comments: water level dropped 4.24' during sample & has consistently			
	1350	10.047'	5.769'	dropped/decreased >4' during past sampling events.			

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. 6,980	Stable Cond. 6,950	Ending Cond. 7,390
				1st pH 6.92	2nd pH 6.88	Stable pH 6.85	Ending pH 6.47
		58.18'	59.05'	1st Temp. 10.0	2nd Temp. 10.0	Stable Temp. 10.1	Ending Temp. 12.0
3-31-14	Time	Bubbler Start	Bubbler End	Comments:			
	1435	12.572'	11.744'				

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	GW-1			1st Cond. 4,160	2nd Cond. 4,960	Stable Cond. 5,050	Ending Cond. 5,930
				1st pH 7.56	2nd pH 7.58	Stable pH 7.54	Ending pH 6.79
		63.86'	63.93'	1st Temp. 12.9	2nd Temp. 12.7	Stable Temp. 12.7	Ending Temp. 13.7
3-31-14	Time	Bubbler Start	Bubbler End	Comments:			
	1540	6.881'	6.866'				

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	EPA-28			1st Cond. 4,240	2nd Cond. 4,260	Stable Cond. 4,310	Ending Cond. 4,440
				1st pH 7.47	2nd pH 7.33	Stable pH 7.24	Ending pH 6.97
		64.92'	65.41'	1st Temp. 13.7	2nd Temp. 13.7	Stable Temp. 13.5	Ending Temp. 13.9
3-31-14	Time	Bubbler Start	Bubbler End	Comments:			
	1635	5.489'	5.031'				

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	EPA-28 DUPLICATE			1st Cond. 4,440	2nd Cond. 4,520	Stable Cond. 4,510	Ending Cond. 4,470
				1st pH 6.97	2nd pH 6.96	Stable pH 6.96	Ending pH 6.98
		65.41'	65.48'	1st Temp. 13.9	2nd Temp. 13.5	Stable Temp. 13.6	Ending Temp. 13.5
3-31-14	Time	Bubbler Start	Bubbler End	Comments:			
	1720	5.031'	4.952'				

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	624			1st Cond. 4,300	2nd Cond. 4,430	Stable Cond. 4,710	Ending Cond. 5,000
				1st pH 7.50	2nd pH 7.25	Stable pH 7.08	Ending pH 6.72
		52.68'	52.73'	1st Temp. 11.6	2nd Temp. 11.5	Stable Temp. 11.5	Ending Temp. 12.9
4-1-14	Time	Bubbler Start	Bubbler End	Comments:			
	0905	9.811'	9.772'				

PH Standard Verification Check

STD.	PH Reading	Date/Time	Initial
4-Buffer	4.03	4-1-14/0820	[illegible]
7-Buffer	7.00	4-1-14/0817	[illegible]

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Second QUARTER 2014 SAMPLING

Cond. Standard Verification Check

STD. µS/cm Reading	Date/Time	Initial
1413 µS/cm 1450	4-1-14/0818	[illegible]

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
4-1-14	SBL-1	50.84'	51.75'	1st Cond. 5,960	2nd Cond. 6,390	Stable Cond. 6,600	Ending Cond. 6,750
	Time	Bubbler Start	Bubbler End	1st pH 7.62	2nd pH 7.58	Stable pH 7.54	Ending pH 6.80
	0950	3.926'	2.971'	1st Temp. 11.9	2nd Temp. 11.9	Stable Temp. 11.8	Ending Temp. 12.7
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
4-1-14	627	60.08'	60.15'	1st Cond. 3,810	2nd Cond. 4,070	Stable Cond. 4,120	Ending Cond. 4,200
	Time	Bubbler Start	Bubbler End	1st pH 7.17	2nd pH 7.16	Stable pH 7.10	Ending pH 7.08
	1102	2.506'	2.461'	1st Temp. 13.5	2nd Temp. 13.3	Stable Temp. 13.3	Ending Temp. 13.8
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
4-1-14	EPA-25	55.54'	55.63'	1st Cond. 3,590	2nd Cond. 3,720	Stable Cond. 3,780	Ending Cond. 4,050
	Time	Bubbler Start	Bubbler End	1st pH 7.11	2nd pH 7.08	Stable pH 7.01	Ending pH 6.91
	1205	5.363'	5.298'	1st Temp. 12.9	2nd Temp. 12.9	Stable Temp. 13.0	Ending Temp. 13.6
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
4-1-14	GW-3	55.21'	56.49'	1st Cond. 4,820	2nd Cond. 4,940	Stable Cond. 5,020	Ending Cond. 5,020
	Time	Bubbler Start	Bubbler End	1st pH 6.74	2nd pH 6.71	Stable pH 6.71	Ending pH 6.71
	1305	0.410'	0.000'	1st Temp. 13.0	2nd Temp. 13.1	Stable Temp. 13.1	Ending Temp. 13.1
				Comments: Water volume runs out prior to full collection 1st day and have to wait/sample the 2nd day (recharge) for remainder.			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
4-1-14	614	104.78'	105.63'	1st Cond. 6,290	2nd Cond. 6,870	Stable Cond. 7,040	Ending Cond. 7,300
	Time	Bubbler Start	Bubbler End	1st pH 7.36	2nd pH 7.38	Stable pH 7.40	Ending pH 6.58
	1430	1.629'	0.838'	1st Temp. 13.0	2nd Temp. 13.1	Stable Temp. 13.2	Ending Temp. 13.9
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
4-1-14	515-A	105.47'	112.84'	1st Cond. 7,860	2nd Cond. 8,350	Stable Cond. 8,530	Ending Cond. 8,460
	Time	Bubbler Start	Bubbler End	1st pH 7.44	2nd pH 7.44	Stable pH 7.44	Ending pH 6.13
	1535	7.559'	0.261'	1st Temp. 13.3	2nd Temp. 13.1	Stable Temp. 13.2	Ending Temp. 13.7
				Comments: Water level dropped 7.37' during sample & has consistently dropped/decreased >6.5' during past sampling events.			

PH Standard Verification Check

STD.	PH Reading	Date/Time	Initial
4-Buffer	3.99	4-2-14/0831	[illegible]
7-Buffer	7.02	4-2-14/0829	[illegible]

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Second QUARTER 20 14 SAMPLING

Cond. Standard Verification Check

STD. µS/cm	Reading	Date/Time	Initial
1413 µS/cm	1455	4-2-14/0830	[illegible]

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	604	104.45'	105.35'	1st Cond. 5,040	2nd Cond. 5,600	Stable Cond. 5,660	Ending Cond. 5,770
4-1-14	Time	Bubbler Start	Bubbler End	1st pH 6.03	2nd pH 5.97	Stable pH 5.92	Ending pH 5.73
	1625	4.545'	4.119'	1st Temp. 13.1	2nd Temp. 13.0	Stable Temp. 13.0	Ending Temp. 13.6
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	EPA-7	115.95'	117.74'	1st Cond. 6,470	2nd Cond. 6,540	Stable Cond. 6,630	Ending Cond. 6,670
4-1-14	Time	Bubbler Start	Bubbler End	1st pH 7.57	2nd pH 7.56	Stable pH 7.56	Ending pH 6.26
	1715	10.322'	9.376'	1st Temp. 12.8	2nd Temp. 12.8	Stable Temp. 12.8	Ending Temp. 13.1
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	EPA-5	126.25'	126.90'	1st Cond. 3,660	2nd Cond. 3,750	Stable Cond. 3,850	Ending Cond. 3,930
4-1-14	Time	Bubbler Start	Bubbler End	1st pH 6.64	2nd pH 6.61	Stable pH 6.56	Ending pH 6.23
	1800	4.575'	3.965'	1st Temp. 12.6	2nd Temp. 12.6	Stable Temp. 12.7	Ending Temp. 13.1
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	EPA-4	207.66'	208.11'	1st Cond. 3,350	2nd Cond. 3,730	Stable Cond. 3,810	Ending Cond. 4,040
4-1-14	Time	Bubbler Start	Bubbler End	1st pH 6.72	2nd pH 6.76	Stable pH 6.81	Ending pH 6.91
	0905	15.301'	14.850'	1st Temp. 11.7	2nd Temp. 11.7	Stable Temp. 11.6	Ending Temp. 12.5
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	EPA-2	173.96'	174.76'	1st Cond. 2,480	2nd Cond. 2,900	Stable Cond. 2,900	Ending Cond. 2,890
4-2-14	Time	Bubbler Start	Bubbler End	1st pH 7.13	2nd pH 7.14	Stable pH 7.15	Ending pH 7.08
	1040	7.488'	6.688'	1st Temp. 12.2	2nd Temp. 12.2	Stable Temp. 12.2	Ending Temp. 12.4
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	EPA-2 DUPLICATE	174.76'	174.88'	1st Cond. 2,910	2nd Cond. 2,910	Stable Cond. 2,930	Ending Cond. 2,860
4-2-14	Time	Bubbler Start	Bubbler End	1st pH 7.06	2nd pH 7.05	Stable pH 7.04	Ending pH 7.02
	1120	6.728'	6.533'	1st Temp. 12.5	2nd Temp. 12.3	Stable Temp. 12.5	Ending Temp. 12.6
				Comments:			

PH Standard Verification Check

STD.	PH Reading	Date/Time	Initial
4-Buffer	4.05	4-7-14/0829	[illegible]
7-Buffer	7.04	4-7-14/0827	[illegible]

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Second QUARTER 20 14 SAMPLING

Cond. Standard Verification Check

STD. µS/cm	Reading	Date/Time	Initial
1413 µS/cm	1432	4-7-14/0828	[illegible]

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	TWQ-142	201.44'	202.21'	1st Cond. 1,730	2nd Cond. 1,759	Stable Cond. 1,766	Ending Cond. 1,792
4-2-14	Time	Bubbler Start	Bubbler End	1st pH 7.82	2nd pH 7.83	Stable pH 7.83	Ending pH 8.11
	1205	19.329'	18.559	1st Temp. 11.8	2nd Temp. 11.9	Stable Temp. 11.8	Ending Temp. 13.4
				Comments:			

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.
4-2-14	Time	Bubbler Start	Bubbler End	1st pH 7.25	2nd pH	Stable pH	Ending pH
	1300			1st Temp. 15.6	2nd Temp.	Stable Temp.	Ending Temp.
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	FIELD BLANK			1st Cond. 5	2nd Cond.	Stable Cond.	Ending Cond.
4-2-14	Time	Bubbler Start	Bubbler End	1st pH 7.18	2nd pH	Stable pH	Ending pH
	1200			1st Temp. 16.6	2nd Temp.	Stable Temp.	Ending Temp.
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	613	79.81'	80.90'	1st Cond. 7,590	2nd Cond. 8,130	Stable Cond. 8,370	Ending Cond. 8,380
4-7-14	Time	Bubbler Start	Bubbler End	1st pH 3.05	2nd pH 3.06	Stable pH 3.02	Ending pH 3.01
	0858	4.988'	3.914'	1st Temp. 10.8	2nd Temp. 10.9	Stable Temp. 10.9	Ending Temp. 11.8
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	517	104.84'	111.440'	1st Cond. 4,090	2nd Cond. 4,760	Stable Cond. 5,000	Ending Cond. 5,000
4-7-14	Time	Bubbler Start	Bubbler End	1st pH 2.84	2nd pH 2.84	Stable pH 2.82	Ending pH 2.82
	0942	1.757'	0.313'	1st Temp. 11.4	2nd Temp. 11.5	Stable Temp. 11.5	Ending Temp. 11.5
				Comments: Water level dropped 6.60' during sampling & has consistently dropped/decreased >6' during past sampling events.			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	708	156.47'	157.68'	1st Cond. 4,890	2nd Cond. 5,050	Stable Cond. 5,120	Ending Cond. 4,800
4-7-14	Time	Bubbler Start	Bubbler End	1st pH 2.76	2nd pH 2.76	Stable pH 2.75	Ending pH 3.52
	1055	2.068'	0.530'	1st Temp. 11.5	2nd Temp. 11.6	Stable Temp. 11.6	Ending Temp. 12.2
				Comments:			

PH Standard Verification Check

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

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

GROUND WATER MONITORING FIELD DATA SHEET

Second QUARTER 20 14 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
4-7-14	711	183.34'	184.61'	1st Cond. 4,120	2nd Cond. 4,130	Stable Cond. 4,170	Ending Cond. 3,880
				1st pH 3.25	2nd pH 3.24	Stable pH 3.24	Ending pH 4.87
	Time	Bubbler Start	Bubbler End	1st Temp. 12.2	2nd Temp. 12.2	Stable Temp. 12.3	Ending Temp. 13.4
	1205	8.698'	7.529'	Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
4-7-14	EPA-13	168.60'	169.78'	1st Cond. 5,300	2nd Cond. 5,440	Stable Cond. 5,540	Ending Cond. 5,550
				1st pH 6.34	2nd pH 6.38	Stable pH 6.41	Ending pH 6.12
	Time	Bubbler Start	Bubbler End	1st Temp. 12.6	2nd Temp. 12.4	Stable Temp. 12.6	Ending Temp. 13.2
	1245	2.963'	1.924'	Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
4-7-14	719	170.04'	170.51'	1st Cond. 4,470	2nd Cond. 4,640	Stable Cond. 4,720	Ending Cond. 4,680
				1st pH 5.55	2nd pH 5.55	Stable pH 5.54	Ending pH 5.10
	Time	Bubbler Start	Bubbler End	1st Temp. 13.1	2nd Temp. 13.2	Stable Temp. 13.3	Ending Temp. 13.9
	1335	0.334'	0.367'	Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
4-7-14	420	154.58'	156.32'	1st Cond. 2,870	2nd Cond. 2,990	Stable Cond. 3,090	Ending Cond. 3,360
				1st pH 7.23	2nd pH 7.27	Stable pH 7.30	Ending pH 6.80
	Time	Bubbler Start	Bubbler End	1st Temp. 12.6	2nd Temp. 12.5	Stable Temp. 12.6	Ending Temp. 14.7
	1500	0.325'	0.345'	Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
4-7-14	717	132.74'	132.98'	1st Cond. 4,960	2nd Cond. 5,010	Stable Cond. 5,080	Ending Cond. 5,050
				1st pH 4.20	2nd pH 4.19	Stable pH 4.17	Ending pH 4.06
	Time	Bubbler Start	Bubbler End	1st Temp. 13.8	2nd Temp. 14.0	Stable Temp. 13.8	Ending Temp. 14.2
	1600	0.262'	0.280'	Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
4-7-14	717 DUPLICATE	132.98'	132.99'	1st Cond. 5,090	2nd Cond. 5,130	Stable Cond. 5,110	Ending Cond. 5,100
				1st pH 4.06	2nd pH 4.06	Stable pH 4.06	Ending pH 4.06
	Time	Bubbler Start	Bubbler End	1st Temp. 14.2	2nd Temp. 14.2	Stable Temp. 14.0	Ending Temp. 13.7
	1630	0.280'	0.268'	Comments:			

PH Standard Verification Check

STD.	PH Reading	Date/Time	Initial
4-Buffer	4.05	4-8-14/0822	✓
7-Buffer	7.03	4-8-14/0820	✓

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

GROUND WATER MONITORING FIELD DATA SHEET

Second QUARTER 20 14 SAMPLING

Cond. Standard Verification Check

STD.	µS/cm Reading	Date/Time	Initial
1413 µS/cm	1418	4-8-14/0821	✓

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
4-7-14	EPA-14	124.60'	124.87'	1st Cond. 3,730	2nd Cond. 4,180	Stable Cond. 4,260	Ending Cond. 4,300
				1st pH 4.77	2nd pH 4.76	Stable pH 4.79	Ending pH 5.04
				1st Temp. 13.7	2nd Temp. 13.6	Stable Temp. 13.6	Ending Temp. 13.7
Time 1700		Bubbler Start 0.209'	Bubbler End 0.226'	Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
4-8-14	RINSATE			1st Cond. 4	2nd Cond.	Stable Cond.	Ending Cond.
				1st pH 5.10	2nd pH	Stable pH	Ending pH
				1st Temp. 25.8	2nd Temp.	Stable Temp.	Ending Temp.
Time 1430		Bubbler Start	Bubbler End	Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
4-8-14	FIELD BLANK			1st Cond. 5	2nd Cond.	Stable Cond.	Ending Cond.
				1st pH 5.35	2nd pH	Stable pH	Ending pH
				1st Temp. 19.6	2nd Temp.	Stable Temp.	Ending Temp.
Time 1520		Bubbler Start	Bubbler End	Comments:			

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:			

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:			

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	4-9-14/0854	[illegible]
7-Buffer	7.02	4-9-14/0852	[illegible]

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GROUND WATER MONITORING FIELD DATA SHEET

Second QUARTER 2014 SAMPLING

Cond. Standard Verification Check

STD. µS/cm	Reading	Date/Time	Initial
1413 µS/cm	1417	4-9-14/0853	[illegible]

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
4-8-14	MW-6	196.83	197.51	1st Cond. 3,710	2nd Cond. 3,750	Stable Cond. 3,770	Ending Cond. 3,980
	Time	Bubbler Start	Bubbler End	1st pH 7.11	2nd pH 7.11	Stable pH 7.12	Ending pH 6.48
	0900			1st Temp. 14.2	2nd Temp. 14.1	Stable Temp. 14.2	Ending Temp. 19.6
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
4-8-14	MW-7	193.72'	193.87'	1st Cond. 2,480	2nd Cond. 3,700	Stable Cond. 3,240	Ending Cond. 3,080
	Time	Bubbler Start	Bubbler End	1st pH 7.42	2nd pH 7.43	Stable pH 7.45	Ending pH 6.75
	1150			1st Temp. 15.6	2nd Temp. 15.4	Stable Temp. 15.2	Ending Temp. 16.3
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
4-8-14	NBL-2	165.80'	166.28'	1st Cond. 2,830	2nd Cond. 3,070	Stable Cond. 3,120	Ending Cond. 3,200
	Time	Bubbler Start	Bubbler End	1st pH 6.92	2nd pH 6.92	Stable pH 6.92	Ending pH 6.75
	1252	0.315'	0.327'	1st Temp. 14.3	2nd Temp. 14.1	Stable Temp. 14.1	Ending Temp. 13.8
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
4-8-14	PB-4	188.47'	188.94'	1st Cond. 4,530	2nd Cond. 4,580	Stable Cond. 4,590	Ending Cond. 4,680
	Time	Bubbler Start	Bubbler End	1st pH 2.98	2nd pH 2.95	Stable pH 2.93	Ending pH 2.98
	1309			1st Temp. 18.1	2nd Temp. 17.4	Stable Temp. 17.0	Ending Temp. 15.6
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
4-8-14	PB-3	189.19'	189.59'	1st Cond. 4,880	2nd Cond. 4,930	Stable Cond. 4,950	Ending Cond. 4,960
	Time	Bubbler Start	Bubbler End	1st pH 2.85	2nd pH 2.81	Stable pH 2.73	Ending pH 2.83
	1340			1st Temp. 20.1	2nd Temp. 20.1	Stable Temp. 20.1	Ending Temp. 21.5
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
4-9-14	NW-1	198.62'	198.80'	1st Cond. 3,630	2nd Cond. 3,730	Stable Cond. 3,750	Ending Cond. 3,760
	Time	Bubbler Start	Bubbler End	1st pH 5.59	2nd pH 6.17	Stable pH 6.48	Ending pH 6.80
	0920			1st Temp. 8.7	2nd Temp. 8.6	Stable Temp. 8.5	Ending Temp. 8.4
				Comments:			

PH Standard Verification Check

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

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GROUND WATER MONITORING FIELD DATA SHEET

Second QUARTER 2014

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
	NW-3	186.51'	186.63'	1st Cond. 3,580	2nd Cond. 3,650	Stable Cond. 3,660	Ending Cond. 3,650
4-9-14	Time	Bubbler Start	Bubbler End	1st pH 6.90	2nd pH 6.86	Stable pH 6.85	Ending pH 6.85
	0940			1st Temp. 10.5	2nd Temp. 10.5	Stable Temp. 10.5	Ending Temp. 10.5
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	NW-5	186.26'	186.34'	1st Cond. 3,660	2nd Cond. 4,080	Stable Cond. 4,120	Ending Cond. 4,130
4-9-14	Time	Bubbler Start	Bubbler End	1st pH 7.17	2nd pH 7.07	Stable pH 7.03	Ending pH 7.01
	1000			1st Temp. 11.9	2nd Temp. 11.9	Stable Temp. 11.9	Ending Temp. 11.8
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	NW-2	196.14'	196.19'	1st Cond. 3,900	2nd Cond. 3,940	Stable Cond. 3,950	Ending Cond. 3,950
4-9-14	Time	Bubbler Start	Bubbler End	1st pH 4.13	2nd pH 4.86	Stable pH 5.29	Ending pH 5.75
	1020			1st Temp. 13.9	2nd Temp. 14.0	Stable Temp. 14.0	Ending Temp. 14.0
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	NW-4	200.75'		1st Cond.	2nd Cond.	Stable Cond.	Ending Cond.
4-9-14	Time	Bubbler Start	Bubbler End	1st pH	2nd pH	Stable pH	Ending pH
	1030			1st Temp.	2nd Temp.	Stable Temp.	Ending Temp.
				Comments: NW-4 is going dry – No sample			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	AW-A	173.95'	174.15'	1st Cond. 3,790	2nd Cond. 3,940	Stable Cond. 3,960	Ending Cond. 3,990
4-9-14	Time	Bubbler Start	Bubbler End	1st pH 5.84	2nd pH 5.97	Stable pH 6.03	Ending pH 6.10
	1043			1st Temp. 15.8	2nd Temp. 15.7	Stable Temp. 15.6	Ending Temp. 15.4
				Comments:			

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
	Time	Bubbler Start	Bubbler End	1st Temp.	2nd Temp.	Stable Temp.	Ending Temp.
				Comments:			

APPENDIX B

QUARTERLY SAMPLING

SEMI-ANNUAL GROUND WATER MONITORING REPORT

JANUARY TO JUNE OF 2014

QA/QC CONTROLS

FIELD BLANKS
RINSATES

EPA-28 AND EPA-28 DUPLICATES FOR SW ALLUVIUM

EPA-2 AND EPA-2 DUPLICATES FOR ZONE 1

717 AND 717 DUPLICATES FOR ZONE 3

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C14010262-005
Client Sample ID: Field Blank

Report Date: 02/25/14
Collection Date: 01/08/14 12:45
DateReceived: 01/10/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	01/10/14 20:45 / jba
Calcium	ND	mg/L		1		E200.7	01/13/14 18:32 / sf
Chloride	ND	mg/L		1		E300.0	01/11/14 13:12 / wc
Magnesium	ND	mg/L		1		E200.7	01/13/14 18:32 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	01/14/14 13:57 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	01/13/14 16:24 / lr
Potassium	ND	mg/L		1		E200.7	01/13/14 18:32 / sf
Sodium	ND	mg/L		1		E200.7	01/13/14 18:32 / sf
Sulfate	ND	mg/L		1		E300.0	01/11/14 13:12 / wc
PHYSICAL PROPERTIES							
pH	5.80	s.u.	H	0.01		A4500-H B	01/10/14 15:38 / alp
Solids, Total Dissolved TDS @ 180 C	ND	mg/L		10		A2540 C	01/10/14 15:22 / tmm
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	01/15/14 23:45 / clm
Beryllium	ND	mg/L		0.001		E200.8	01/15/14 23:45 / clm
Cadmium	ND	mg/L		0.005		E200.8	01/15/14 23:45 / clm
Cobalt	ND	mg/L		0.01		E200.8	01/15/14 23:45 / clm
Lead	ND	mg/L		0.001		E200.8	01/15/14 23:45 / clm
Manganese	ND	mg/L		0.01		E200.8	01/15/14 23:45 / clm
Molybdenum	ND	mg/L		0.1		E200.8	01/15/14 23:45 / clm
Nickel	ND	mg/L		0.05		E200.8	01/15/14 23:45 / clm
Uranium	ND	mg/L		0.0003		E200.8	01/15/14 23:45 / clm
Vanadium	ND	mg/L		0.1		E200.8	01/15/14 23:45 / clm
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/27/14 14:57 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	01/13/14 11:20 / kja
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	-0.4	pCi/L	U			E900.1	01/20/14 06:50 / lbb
Gross Alpha minus Rn & U Precision (±)	0.3	pCi/L				E900.1	01/20/14 06:50 / lbb
Gross Alpha minus Rn & U MDC	0.7	pCi/L				E900.1	01/20/14 06:50 / lbb
Lead 210	0.1	pCi/L	U			E909.0	01/25/14 03:17 / eli-cs
Lead 210 precision (±)	0.5	pCi/L				E909.0	01/25/14 03:17 / eli-cs
Lead 210 MDC	0.8	pCi/L				E909.0	01/25/14 03:17 / eli-cs
Radium 226	0.07	pCi/L	U			E903.0	01/27/14 08:45 / lmc
Radium 226 precision (±)	0.12	pCi/L				E903.0	01/27/14 08:45 / lmc
Radium 226 MDC	0.19	pCi/L				E903.0	01/27/14 08:45 / lmc
Radium 228	1.4	pCi/L	U			RA-05	01/20/14 11:31 / plj
Radium 228 precision (±)	1.2	pCi/L				RA-05	01/20/14 11:31 / plj
Radium 228 MDC	1.9	pCi/L				RA-05	01/20/14 11:31 / plj
Thorium 230	0.08	pCi/L	U			E908.0	01/16/14 10:06 / dmf
Thorium 230 precision (±)	0.08	pCi/L				E908.0	01/16/14 10:06 / dmf
Thorium 230 MDC	0.1	pCi/L				E908.0	01/16/14 10:06 / dmf

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: C14010262-005
Client Sample ID: Field Blank

Report Date: 02/25/14
Collection Date: 01/08/14 12:45
DateReceived: 01/10/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	-22.6	%				A1030 E	01/16/14 07:55 / kbh
Anions	0.0146	meq/L				A1030 E	01/16/14 07:55 / kbh
Cations	0.00922	meq/L				A1030 E	01/16/14 07:55 / kbh
- The ion balance is not appropriate for samples having a conductivity less than 300 umhos/cm.							
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	2.71	ug/L		0.50		E624	01/20/14 23:06 / jld
Bromoform	1.67	ug/L		0.50		E624	01/20/14 23:06 / jld
Chlorodibromomethane	2.76	ug/L		0.50		E624	01/20/14 23:06 / jld
Chloroform	4.00	ug/L		0.50		E624	01/20/14 23:06 / jld
Trihalomethanes, Total	11.1	ug/L		0.50		E624	01/20/14 23:06 / jld
Surr: 1,2-Dichlorobenzene-d4	107	%REC		73.7-126		E624	01/20/14 23:06 / jld
Surr: Dibromofluoromethane	56.0	%REC	S	64.4-131		E624	01/20/14 23:06 / jld
Surr: p-Bromofluorobenzene	104	%REC		67.1-133		E624	01/20/14 23:06 / jld
Surr: Toluene-d8	103	%REC		79.7-125		E624	01/20/14 23:06 / jld

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
S - Spike recovery outside of advisory limits.
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: C14010521-010
Client Sample ID: Field Blank

Report Date: 02/27/14
Collection Date: 01/14/14 16:15
DateReceived: 01/17/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	01/17/14 21:38 / jba
Calcium	ND	mg/L		1		E200.7	01/22/14 19:57 / sf
Chloride	ND	mg/L		1		E300.0	01/21/14 03:37 / wc
Magnesium	ND	mg/L		1		E200.7	01/22/14 19:57 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	01/21/14 15:19 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	01/17/14 15:20 / lr
Potassium	ND	mg/L		1		E200.7	01/22/14 19:57 / sf
Sodium	ND	mg/L		1		E200.7	01/22/14 19:57 / sf
Sulfate	ND	mg/L		1		E300.0	01/21/14 03:37 / wc
PHYSICAL PROPERTIES							
pH	5.68	s.u.	H	0.01		A4500-H B	01/17/14 15:27 / alp
Solids, Total Dissolved TDS @ 180 C	ND	mg/L		10		A2540 C	01/20/14 14:42 / alp
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	01/23/14 21:07 / sf
Beryllium	ND	mg/L		0.001		E200.7	01/23/14 21:07 / sf
Cadmium	ND	mg/L		0.005		E200.7	01/23/14 21:07 / sf
Cobalt	ND	mg/L		0.01		E200.7	01/23/14 21:07 / sf
Lead	ND	mg/L		0.001		E200.8	02/10/14 22:00 / cp
Manganese	ND	mg/L		0.01		E200.7	01/23/14 21:07 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/23/14 21:07 / sf
Nickel	ND	mg/L		0.05		E200.7	01/23/14 21:07 / sf
Uranium	ND	mg/L		0.0003		E200.8	02/10/14 22:00 / cp
Vanadium	ND	mg/L		0.1		E200.7	01/23/14 21:07 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/28/14 13:52 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	01/22/14 16:04 / kja
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.3	pCi/L	U			E900.1	01/27/14 07:11 / lbb
Gross Alpha minus Rn & U Precision (±)	0.3	pCi/L				E900.1	01/27/14 07:11 / lbb
Gross Alpha minus Rn & U MDC	0.5	pCi/L				E900.1	01/27/14 07:11 / lbb
Lead 210	-0.09	pCi/L	U			E909.0	02/06/14 16:04 / eli-cs
Lead 210 precision (±)	0.5	pCi/L				E909.0	02/06/14 16:04 / eli-cs
Lead 210 MDC	0.9	pCi/L				E909.0	02/06/14 16:04 / eli-cs
Radium 226	0.006	pCi/L	U			E903.0	02/03/14 09:34 / trs
Radium 226 precision (±)	0.08	pCi/L				E903.0	02/03/14 09:34 / trs
Radium 226 MDC	0.15	pCi/L				E903.0	02/03/14 09:34 / trs
Radium 228	1.2	pCi/L				RA-05	01/28/14 14:26 / plj
Radium 228 precision (±)	0.65	pCi/L				RA-05	01/28/14 14:26 / plj
Radium 228 MDC	0.99	pCi/L				RA-05	01/28/14 14:26 / plj
Thorium 230	0.04	pCi/L	U			E908.0	02/08/14 17:39 / trs
Thorium 230 precision (±)	0.05	pCi/L				E908.0	02/08/14 17:39 / trs
Thorium 230 MDC	0.09	pCi/L				E908.0	02/08/14 17:39 / trs

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: C14010521-010
Client Sample ID: Field Blank

Report Date: 02/27/14
Collection Date: 01/14/14 16:15
DateReceived: 01/17/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	13.8	%				A1030 E	01/23/14 12:43 / kbh
Anions	0.0300	meq/L				A1030 E	01/23/14 12:43 / kbh
Cations	0.0397	meq/L				A1030 E	01/23/14 12:43 / kbh
- The ion balance is not appropriate for samples having a conductivity less than 300 umhos/cm.							
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	1.40	ug/L		0.50		E624	01/28/14 02:40 / jld
Bromoform	1.18	ug/L		0.50		E624	01/28/14 02:40 / jld
Chlorodibromomethane	1.68	ug/L		0.50		E624	01/28/14 02:40 / jld
Chloroform	2.22	ug/L		0.50		E624	01/28/14 02:40 / jld
Trihalomethanes, Total	6.49	ug/L		0.50		E624	01/28/14 02:40 / jld
Surr: 1,2-Dichlorobenzene-d4	112	%REC		73.7-126		E624	01/28/14 02:40 / jld
Surr: Dibromofluoromethane	62.0	%REC	S	64.4-131		E624	01/28/14 02:40 / jld
Surr: p-Bromofluorobenzene	116	%REC		67.1-133		E624	01/28/14 02:40 / jld
Surr: Toluene-d8	102	%REC		79.7-125		E624	01/28/14 02:40 / jld

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
S - Spike recovery outside of advisory limits.
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-1 TE-5-4-2014
Lab ID: C14040183-011
Client Sample ID: Field Blank

Report Date: 05/19/14
Collection Date: 04/02/14 12:00
DateReceived: 04/04/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	04/04/14 16:49 / jba
Calcium	ND	mg/L		1		E200.7	04/22/14 19:09 / sf
Chloride	ND	mg/L		1		E300.0	04/05/14 07:29 / wc
Magnesium	ND	mg/L		1		E200.7	04/22/14 19:09 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	04/09/14 15:03 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	04/04/14 14:51 / alp
Potassium	ND	mg/L		1		E200.7	04/22/14 19:09 / sf
Sodium	ND	mg/L		1		E200.7	04/22/14 19:09 / sf
Sulfate	ND	mg/L		1		E300.0	04/05/14 07:29 / wc
PHYSICAL PROPERTIES							
pH	5.43	s.u.	H	0.01		A4500-H B	04/04/14 14:31 / tmm
Solids, Total Dissolved TDS @ 180 C	ND	mg/L	D	10		A2540 C	04/04/14 15:47 / tmm
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	04/09/14 22:32 / clm
Beryllium	ND	mg/L		0.001		E200.8	04/09/14 22:32 / clm
Cadmium	ND	mg/L		0.005		E200.8	04/09/14 22:32 / clm
Cobalt	ND	mg/L		0.01		E200.8	04/09/14 22:32 / clm
Lead	ND	mg/L		0.001		E200.8	04/09/14 22:32 / clm
Manganese	ND	mg/L		0.01		E200.8	04/09/14 22:32 / clm
Molybdenum	ND	mg/L		0.1		E200.8	04/09/14 22:32 / clm
Nickel	ND	mg/L		0.05		E200.8	04/09/14 22:32 / clm
Uranium	ND	mg/L		0.0003		E200.8	04/09/14 22:32 / clm
Vanadium	ND	mg/L		0.1		E200.8	04/09/14 22:32 / clm
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/18/14 15:07 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	04/22/14 16:56 / kja
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.4	pCi/L	U			E900.1	04/12/14 05:52 / lbb
Gross Alpha minus Rn & U Precision (±)	0.3	pCi/L				E900.1	04/12/14 05:52 / lbb
Gross Alpha minus Rn & U MDC	0.4	pCi/L				E900.1	04/12/14 05:52 / lbb
Lead 210	0.5	pCi/L	U			E909.0	04/17/14 13:53 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	04/17/14 13:53 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	04/17/14 13:53 / eli-cs
Radium 226	-0.05	pCi/L	U			E903.0	04/21/14 09:51 / lmc
Radium 226 precision (±)	0.1	pCi/L				E903.0	04/21/14 09:51 / lmc
Radium 226 MDC	0.19	pCi/L				E903.0	04/21/14 09:51 / lmc
Radium 228	1.1	pCi/L	U			RA-05	04/15/14 13:36 / plj
Radium 228 precision (±)	1.0	pCi/L				RA-05	04/15/14 13:36 / plj
Radium 228 MDC	1.6	pCi/L				RA-05	04/15/14 13:36 / plj
Thorium 230	0.1	pCi/L	U			E908.0	04/16/14 08:57 / dmf
Thorium 230 precision (±)	0.1	pCi/L				E908.0	04/16/14 08:57 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	04/16/14 08:57 / dmf

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 TE-5-4-2014
Lab ID: C14040183-011
Client Sample ID: Field Blank

Report Date: 05/19/14
Collection Date: 04/02/14 12:00
DateReceived: 04/04/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	-44.8	%				A1030 E	04/23/14 11:21 / kbh
Anions	0	meq/L				A1030 E	04/23/14 11:21 / kbh
Cations	0	meq/L				A1030 E	04/23/14 11:21 / kbh
- The ion balance is not appropriate for samples having a conductivity less than 300 umhos/cm.							
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	4.04	ug/L		0.50		E624	04/08/14 03:42 / jld
Bromoform	1.57	ug/L		0.50		E624	04/08/14 03:42 / jld
Chlorodibromomethane	2.82	ug/L		0.50		E624	04/08/14 03:42 / jld
Chloroform	6.24	ug/L		0.50		E624	04/08/14 03:42 / jld
Trihalomethanes, Total	14.7	ug/L		0.50		E624	04/08/14 03:42 / jld
Surr: 1,2-Dichlorobenzene-d4	116	%REC		73.7-126		E624	04/08/14 03:42 / jld
Surr: Dibromofluoromethane	114	%REC		64.4-131		E624	04/08/14 03:42 / jld
Surr: p-Bromofluorobenzene	126	%REC		67.1-133		E624	04/08/14 03:42 / jld
Surr: Toluene-d8	96.0	%REC		79.7-125		E624	04/08/14 03:42 / jld
- 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.
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 TE-7-4-2014
Lab ID: C14040436-004
Client Sample ID: Field Blank

Report Date: 05/19/14
Collection Date: 04/08/14 15:20
DateReceived: 04/14/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	04/14/14 19:08 / jba
Calcium	ND	mg/L		1		E200.7	04/30/14 17:20 / sf
Chloride	ND	mg/L		1		E300.0	04/17/14 10:12 / wc
Magnesium	ND	mg/L		1		E200.7	04/30/14 17:20 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	04/18/14 12:17 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	04/21/14 13:09 / lr
Potassium	ND	mg/L		1		E200.7	04/30/14 17:20 / sf
Sodium	ND	mg/L		1		E200.7	04/30/14 17:20 / sf
Sulfate	ND	mg/L		1		E300.0	04/15/14 07:07 / wc
PHYSICAL PROPERTIES							
pH	5.32	s.u.	H	0.01		A4500-H B	04/16/14 14:33 / alp
Solids, Total Dissolved TDS @ 180 C	ND	mg/L	H	10		A2540 C	04/16/14 14:57 / alp
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	04/23/14 21:17 / cp
Beryllium	ND	mg/L		0.001		E200.8	04/23/14 21:17 / cp
Cadmium	ND	mg/L		0.005		E200.8	04/23/14 21:17 / cp
Cobalt	ND	mg/L		0.01		E200.8	04/23/14 21:17 / cp
Lead	ND	mg/L		0.001		E200.8	04/23/14 21:17 / cp
Manganese	ND	mg/L		0.01		E200.8	04/23/14 21:17 / cp
Molybdenum	ND	mg/L		0.1		E200.8	04/23/14 21:17 / cp
Nickel	ND	mg/L		0.05		E200.8	04/23/14 21:17 / cp
Uranium	ND	mg/L		0.0003		E200.8	04/23/14 21:17 / cp
Vanadium	ND	mg/L		0.1		E200.8	04/23/14 21:17 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	05/01/14 14:39 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	04/22/14 17:47 / kja
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	-0.1	pCi/L	U			E900.1	04/21/14 06:34 / lbb
Gross Alpha minus Rn & U Precision (±)	0.3	pCi/L				E900.1	04/21/14 06:34 / lbb
Gross Alpha minus Rn & U MDC	0.5	pCi/L				E900.1	04/21/14 06:34 / lbb
Lead 210	0.0	pCi/L	U			E909.0	05/04/14 20:37 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	05/04/14 20:37 / eli-cs
Lead 210 MDC	1.1	pCi/L				E909.0	05/04/14 20:37 / eli-cs
Radium 226	0.07	pCi/L	U			E903.0	04/29/14 06:09 / lmc
Radium 226 precision (±)	0.11	pCi/L				E903.0	04/29/14 06:09 / lmc
Radium 226 MDC	0.17	pCi/L				E903.0	04/29/14 06:09 / lmc
Radium 228	-0.2	pCi/L	U			RA-05	04/24/14 10:03 / plj
Radium 228 precision (±)	0.78	pCi/L				RA-05	04/24/14 10:03 / plj
Radium 228 MDC	1.3	pCi/L				RA-05	04/24/14 10:03 / plj
Thorium 230	0.05	pCi/L	U			E908.0	04/23/14 09:01 / dmf
Thorium 230 precision (±)	0.09	pCi/L				E908.0	04/23/14 09:01 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	04/23/14 09:01 / dmf

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 TE-7-4-2014
Lab ID: C14040436-004
Client Sample ID: Field Blank

Report Date: 05/19/14
Collection Date: 04/08/14 15:20
DateReceived: 04/14/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	25.3	%				A1030 E	05/05/14 08:02 / kbh
Anions	0.01	meq/L				A1030 E	05/05/14 08:02 / kbh
Cations	0.02	meq/L				A1030 E	05/05/14 08:02 / kbh
- The ion balance is not appropriate for samples having a conductivity less than 300 umhos/cm.							
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	4.00	ug/L		0.50		E624	04/15/14 20:10 / jlr
Bromoform	1.07	ug/L		0.50		E624	04/15/14 20:10 / jlr
Chlorodibromomethane	2.51	ug/L		0.50		E624	04/15/14 20:10 / jlr
Chloroform	5.84	ug/L		0.50		E624	04/15/14 20:10 / jlr
Trihalomethanes, Total	13.4	ug/L		0.50		E624	04/15/14 20:10 / jlr
Surr: 1,2-Dichlorobenzene-d4	100	%REC		73.7-126		E624	04/15/14 20:10 / jlr
Surr: Dibromofluoromethane	129	%REC		64.4-131		E624	04/15/14 20:10 / jlr
Surr: p-Bromofluorobenzene	100	%REC		67.1-133		E624	04/15/14 20:10 / jlr
Surr: Toluene-d8	92.0	%REC		79.7-125		E624	04/15/14 20:10 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 5.							

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
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-1
Lab ID: C14010262-004
Client Sample ID: Rinsate

Report Date: 02/25/14
Collection Date: 01/08/14 12:15
DateReceived: 01/10/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	01/10/14 20:39 / jba
Calcium	ND	mg/L		1		E200.7	01/13/14 17:48 / sf
Chloride	ND	mg/L		1		E300.0	01/11/14 12:54 / wc
Magnesium	ND	mg/L		1		E200.7	01/13/14 17:48 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	01/16/14 13:03 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	01/13/14 16:21 / lr
Potassium	ND	mg/L		1		E200.7	01/13/14 17:48 / sf
Sodium	ND	mg/L		1		E200.7	01/13/14 17:48 / sf
Sulfate	1	mg/L		1		E300.0	01/11/14 12:54 / wc
PHYSICAL PROPERTIES							
pH	5.94	s.u.	H	0.01		A4500-H B	01/10/14 15:34 / alp
Solids, Total Dissolved TDS @ 180 C	ND	mg/L		10		A2540 C	01/10/14 15:21 / tmm
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	01/15/14 23:41 / clm
Beryllium	ND	mg/L		0.001		E200.8	01/15/14 23:41 / clm
Cadmium	ND	mg/L		0.005		E200.8	01/15/14 23:41 / clm
Cobalt	ND	mg/L		0.01		E200.8	01/15/14 23:41 / clm
Lead	ND	mg/L		0.001		E200.8	01/15/14 23:41 / clm
Manganese	ND	mg/L		0.01		E200.8	01/15/14 23:41 / clm
Molybdenum	ND	mg/L		0.1		E200.8	01/15/14 23:41 / clm
Nickel	ND	mg/L		0.05		E200.8	01/15/14 23:41 / clm
Uranium	ND	mg/L		0.0003		E200.8	01/15/14 23:41 / clm
Vanadium	ND	mg/L		0.1		E200.8	01/15/14 23:41 / clm
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/27/14 14:49 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	01/13/14 11:18 / kja
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	-0.3	pCi/L	U			E900.1	01/20/14 06:50 / lbb
Gross Alpha minus Rn & U Precision (±)	0.3	pCi/L				E900.1	01/20/14 06:50 / lbb
Gross Alpha minus Rn & U MDC	0.7	pCi/L				E900.1	01/20/14 06:50 / lbb
Lead 210	-0.4	pCi/L	U			E909.0	01/25/14 01:01 / eli-cs
Lead 210 precision (±)	0.4	pCi/L				E909.0	01/25/14 01:01 / eli-cs
Lead 210 MDC	0.8	pCi/L				E909.0	01/25/14 01:01 / eli-cs
Radium 226	0.14	pCi/L	U			E903.0	01/27/14 07:11 / lmc
Radium 226 precision (±)	0.11	pCi/L				E903.0	01/27/14 07:11 / lmc
Radium 226 MDC	0.16	pCi/L				E903.0	01/27/14 07:11 / lmc
Radium 228	-0.1	pCi/L	U			RA-05	01/20/14 13:04 / plj
Radium 228 precision (±)	1.1	pCi/L				RA-05	01/20/14 13:04 / plj
Radium 228 MDC	1.8	pCi/L				RA-05	01/20/14 13:04 / plj
Thorium 230	0.07	pCi/L	U			E908.0	01/16/14 10:06 / dmf
Thorium 230 precision (±)	0.1	pCi/L				E908.0	01/16/14 10:06 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	01/16/14 10:06 / dmf

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: C14010262-004
Client Sample ID: Rinsate

Report Date: 02/25/14
Collection Date: 01/08/14 12:15
DateReceived: 01/10/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	-25.2	%				A1030 E	01/16/14 07:55 / kbh
Anions	0.0594	meq/L				A1030 E	01/16/14 07:55 / kbh
Cations	0.0355	meq/L				A1030 E	01/16/14 07:55 / kbh
- The ion balance is not appropriate for samples having a conductivity less than 300 umhos/cm.							
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	2.75	ug/L		0.50		E624	01/21/14 01:26 / jld
Bromoform	1.81	ug/L		0.50		E624	01/21/14 01:26 / jld
Chlorodibromomethane	2.87	ug/L		0.50		E624	01/21/14 01:26 / jld
Chloroform	3.98	ug/L		0.50		E624	01/21/14 01:26 / jld
Trihalomethanes, Total	11.4	ug/L		0.50		E624	01/21/14 01:26 / jld
Surr: 1,2-Dichlorobenzene-d4	110	%REC		73.7-126		E624	01/21/14 01:26 / jld
Surr: Dibromofluoromethane	55.0	%REC	S	64.4-131		E624	01/21/14 01:26 / jld
Surr: p-Bromofluorobenzene	107	%REC		67.1-133		E624	01/21/14 01:26 / jld
Surr: Toluene-d8	103	%REC		79.7-125		E624	01/21/14 01:26 / jld

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
S - Spike recovery outside of advisory limits.
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: C14010521-009
Client Sample ID: Rinsate

Report Date: 02/27/14
Collection Date: 01/14/14 15:30
DateReceived: 01/17/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	01/17/14 21:33 / jba
Calcium	ND	mg/L		1		E200.7	01/22/14 19:54 / sf
Chloride	ND	mg/L		1		E300.0	01/21/14 03:19 / wc
Magnesium	ND	mg/L		1		E200.7	01/22/14 19:54 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	01/21/14 15:17 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	01/17/14 15:18 / lr
Potassium	ND	mg/L		1		E200.7	01/22/14 19:54 / sf
Sodium	1	mg/L		1		E200.7	01/22/14 19:54 / sf
Sulfate	ND	mg/L		1		E300.0	01/21/14 03:19 / wc
PHYSICAL PROPERTIES							
pH	6.04	s.u.	H	0.01		A4500-H B	01/17/14 14:55 / alp
Solids, Total Dissolved TDS @ 180 C	ND	mg/L		10		A2540 C	01/20/14 14:42 / alp
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	01/23/14 20:23 / sf
Beryllium	ND	mg/L		0.001		E200.7	01/23/14 20:23 / sf
Cadmium	ND	mg/L		0.005		E200.7	01/23/14 20:23 / sf
Cobalt	ND	mg/L		0.01		E200.7	01/23/14 20:23 / sf
Lead	ND	mg/L		0.001		E200.8	02/10/14 21:56 / cp
Manganese	ND	mg/L		0.01		E200.7	01/23/14 20:23 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/23/14 20:23 / sf
Nickel	ND	mg/L		0.05		E200.7	01/23/14 20:23 / sf
Uranium	ND	mg/L		0.0003		E200.8	02/10/14 21:56 / cp
Vanadium	ND	mg/L		0.1		E200.7	01/23/14 20:23 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/28/14 13:44 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	01/22/14 16:02 / kja
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.2	pCi/L	U			E900.1	01/27/14 07:11 / lbb
Gross Alpha minus Rn & U Precision (±)	0.3	pCi/L				E900.1	01/27/14 07:11 / lbb
Gross Alpha minus Rn & U MDC	0.5	pCi/L				E900.1	01/27/14 07:11 / lbb
Lead 210	-0.09	pCi/L	U			E909.0	02/06/14 14:54 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	02/06/14 14:54 / eli-cs
Lead 210 MDC	0.9	pCi/L				E909.0	02/06/14 14:54 / eli-cs
Radium 226	0.12	pCi/L	U			E903.0	02/03/14 09:34 / trs
Radium 226 precision (±)	0.11	pCi/L				E903.0	02/03/14 09:34 / trs
Radium 226 MDC	0.15	pCi/L				E903.0	02/03/14 09:34 / trs
Radium 228	0.33	pCi/L	U			RA-05	01/28/14 14:26 / plj
Radium 228 precision (±)	0.63	pCi/L				RA-05	01/28/14 14:26 / plj
Radium 228 MDC	1.0	pCi/L				RA-05	01/28/14 14:26 / plj
Thorium 230	0.2	pCi/L				E908.0	02/08/14 17:39 / trs
Thorium 230 precision (±)	0.08	pCi/L				E908.0	02/08/14 17:39 / trs
Thorium 230 MDC	0.09	pCi/L				E908.0	02/08/14 17:39 / trs

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: C14010521-009
Client Sample ID: Rinsate

Report Date: 02/27/14
Collection Date: 01/14/14 15:30
DateReceived: 01/17/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	-0.444	%				A1030 E	01/23/14 12:43 / kbh
Anions	0.0697	meq/L				A1030 E	01/23/14 12:43 / kbh
Cations	0.0691	meq/L				A1030 E	01/23/14 12:43 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	1.05	ug/L		0.50		E624	01/28/14 02:05 / jld
Bromoform	1.14	ug/L		0.50		E624	01/28/14 02:05 / jld
Chlorodibromomethane	1.45	ug/L		0.50		E624	01/28/14 02:05 / jld
Chloroform	1.21	ug/L		0.50		E624	01/28/14 02:05 / jld
Trihalomethanes, Total	4.85	ug/L		0.50		E624	01/28/14 02:05 / jld
Surr: 1,2-Dichlorobenzene-d4	112	%REC		73.7-126		E624	01/28/14 02:05 / jld
Surr: Dibromofluoromethane	63.0	%REC	S	64.4-131		E624	01/28/14 02:05 / jld
Surr: p-Bromofluorobenzene	116	%REC		67.1-133		E624	01/28/14 02:05 / jld
Surr: Toluene-d8	102	%REC		79.7-125		E624	01/28/14 02:05 / jld

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
S - Spike recovery outside of advisory limits.
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-1 TE-5-4-2014
Lab ID: C14040183-010
Client Sample ID: Rinsate

Report Date: 05/19/14
Collection Date: 04/02/14 13:00
DateReceived: 04/04/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	04/04/14 16:43 / jba
Calcium	ND	mg/L		1		E200.7	04/22/14 19:05 / sf
Chloride	ND	mg/L		1		E300.0	04/05/14 06:37 / wc
Magnesium	ND	mg/L		1		E200.7	04/22/14 19:05 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	04/09/14 14:58 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	04/04/14 14:44 / alp
Potassium	3	mg/L		1		E200.7	04/22/14 19:05 / sf
Sodium	5	mg/L		1		E200.7	04/22/14 19:05 / sf
Sulfate	ND	mg/L		1		E300.0	04/05/14 06:37 / wc
PHYSICAL PROPERTIES							
pH	5.86	s.u.	H	0.01		A4500-H B	04/04/14 14:27 / tmm
Solids, Total Dissolved TDS @ 180 C	ND	mg/L		10		A2540 C	04/04/14 15:46 / tmm
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	04/09/14 22:29 / clm
Beryllium	ND	mg/L		0.001		E200.8	04/09/14 22:29 / clm
Cadmium	ND	mg/L		0.005		E200.8	04/09/14 22:29 / clm
Cobalt	ND	mg/L		0.01		E200.8	04/09/14 22:29 / clm
Lead	ND	mg/L		0.001		E200.8	04/09/14 22:29 / clm
Manganese	ND	mg/L		0.01		E200.8	04/09/14 22:29 / clm
Molybdenum	ND	mg/L		0.1		E200.8	04/09/14 22:29 / clm
Nickel	ND	mg/L		0.05		E200.8	04/09/14 22:29 / clm
Uranium	ND	mg/L		0.0003		E200.8	04/09/14 22:29 / clm
Vanadium	ND	mg/L		0.1		E200.8	04/09/14 22:29 / clm
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/18/14 14:55 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	04/22/14 16:55 / kja
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.4	pCi/L	U			E900.1	04/12/14 05:52 / lbb
Gross Alpha minus Rn & U Precision (±)	0.3	pCi/L				E900.1	04/12/14 05:52 / lbb
Gross Alpha minus Rn & U MDC	0.4	pCi/L				E900.1	04/12/14 05:52 / lbb
Lead 210	0.08	pCi/L	U			E909.0	04/17/14 12:33 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	04/17/14 12:33 / eli-cs
Lead 210 MDC	1.1	pCi/L				E909.0	04/17/14 12:33 / eli-cs
Radium 226	0.04	pCi/L	U			E903.0	04/21/14 09:51 / lmc
Radium 226 precision (±)	0.1	pCi/L				E903.0	04/21/14 09:51 / lmc
Radium 226 MDC	0.16	pCi/L				E903.0	04/21/14 09:51 / lmc
Radium 228	0.55	pCi/L	U			RA-05	04/15/14 13:36 / plj
Radium 228 precision (±)	0.82	pCi/L				RA-05	04/15/14 13:36 / plj
Radium 228 MDC	1.3	pCi/L				RA-05	04/15/14 13:36 / plj
Thorium 230	0.05	pCi/L	U			E908.0	04/16/14 08:57 / dmf
Thorium 230 precision (±)	0.06	pCi/L				E908.0	04/16/14 08:57 / dmf
Thorium 230 MDC	0.1	pCi/L				E908.0	04/16/14 08:57 / dmf

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 TE-5-4-2014
Lab ID: C14040183-010
Client Sample ID: Rinsate

Report Date: 05/19/14
Collection Date: 04/02/14 13:00
DateReceived: 04/04/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	83.6	%				A1030 E	04/25/14 10:03 / kbh
Anions	0.03	meq/L				A1030 E	04/25/14 10:03 / kbh
Cations	0.34	meq/L				A1030 E	04/25/14 10:03 / kbh
- The ion balance is not appropriate for samples having a conductivity less than 300 umhos/cm.							
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	2.76	ug/L		0.50		E624	04/08/14 03:07 / jld
Bromoform	1.18	ug/L		0.50		E624	04/08/14 03:07 / jld
Chlorodibromomethane	2.08	ug/L		0.50		E624	04/08/14 03:07 / jld
Chloroform	4.04	ug/L		0.50		E624	04/08/14 03:07 / jld
Trihalomethanes, Total	10.1	ug/L		0.50		E624	04/08/14 03:07 / jld
Surr: 1,2-Dichlorobenzene-d4	117	%REC		73.7-126		E624	04/08/14 03:07 / jld
Surr: Dibromofluoromethane	118	%REC		64.4-131		E624	04/08/14 03:07 / jld
Surr: p-Bromofluorobenzene	128	%REC		67.1-133		E624	04/08/14 03:07 / jld
Surr: Toluene-d8	96.0	%REC		79.7-125		E624	04/08/14 03:07 / jld
- 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.
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 TE-7-4-2014
Lab ID: C14040436-003
Client Sample ID: Rinsate

Report Date: 05/19/14
Collection Date: 04/08/14 14:30
DateReceived: 04/14/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	04/14/14 19:03 / jba
Calcium	ND	mg/L		1		E200.7	04/30/14 16:29 / sf
Chloride	ND	mg/L		1		E300.0	04/15/14 06:11 / wc
Magnesium	ND	mg/L		1		E200.7	04/30/14 16:29 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	04/18/14 12:16 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	04/21/14 13:01 / lr
Potassium	ND	mg/L		1		E200.7	04/30/14 16:29 / sf
Sodium	ND	mg/L		1		E200.7	04/30/14 16:29 / sf
Sulfate	ND	mg/L		1		E300.0	04/15/14 06:11 / wc
PHYSICAL PROPERTIES							
pH	5.46	s.u.	H	0.01		A4500-H B	04/16/14 14:30 / alp
Solids, Total Dissolved TDS @ 180 C	ND	mg/L	H	10		A2540 C	04/16/14 14:57 / alp
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	04/23/14 21:13 / cp
Beryllium	ND	mg/L		0.001		E200.8	04/23/14 21:13 / cp
Cadmium	ND	mg/L		0.005		E200.8	04/23/14 21:13 / cp
Cobalt	ND	mg/L		0.01		E200.8	04/23/14 21:13 / cp
Lead	ND	mg/L		0.001		E200.8	04/23/14 21:13 / cp
Manganese	ND	mg/L		0.01		E200.8	04/23/14 21:13 / cp
Molybdenum	ND	mg/L		0.1		E200.8	04/23/14 21:13 / cp
Nickel	ND	mg/L		0.05		E200.8	04/23/14 21:13 / cp
Uranium	ND	mg/L		0.0003		E200.8	04/23/14 21:13 / cp
Vanadium	ND	mg/L		0.1		E200.8	04/23/14 21:13 / cp
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	05/01/14 14:03 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	04/22/14 17:43 / kja
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	-0.2	pCi/L	U			E900.1	04/21/14 06:34 / lbb
Gross Alpha minus Rn & U Precision (±)	0.2	pCi/L				E900.1	04/21/14 06:34 / lbb
Gross Alpha minus Rn & U MDC	0.5	pCi/L				E900.1	04/21/14 06:34 / lbb
Lead 210	-0.1	pCi/L	U			E909.0	05/04/14 19:06 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	05/04/14 19:06 / eli-cs
Lead 210 MDC	1.1	pCi/L				E909.0	05/04/14 19:06 / eli-cs
Radium 226	0.26	pCi/L				E903.0	04/29/14 06:09 / lmc
Radium 226 precision (±)	0.14	pCi/L				E903.0	04/29/14 06:09 / lmc
Radium 226 MDC	0.17	pCi/L				E903.0	04/29/14 06:09 / lmc
Radium 228	1.1	pCi/L	U			RA-05	04/24/14 10:03 / plj
Radium 228 precision (±)	0.86	pCi/L				RA-05	04/24/14 10:03 / plj
Radium 228 MDC	1.3	pCi/L				RA-05	04/24/14 10:03 / plj
Thorium 230	0.06	pCi/L	U			E908.0	04/23/14 09:01 / dmf
Thorium 230 precision (±)	0.09	pCi/L				E908.0	04/23/14 09:01 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	04/23/14 09:01 / dmf

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 TE-7-4-2014
Lab ID: C14040436-003
Client Sample ID: Rinsate

Report Date: 05/19/14
Collection Date: 04/08/14 14:30
DateReceived: 04/14/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	12.9	%				A1030 E	05/05/14 08:01 / kbh
Anions	0.04	meq/L				A1030 E	05/05/14 08:01 / kbh
Cations	0.05	meq/L				A1030 E	05/05/14 08:01 / kbh
- The ion balance is not appropriate for samples having a conductivity less than 300 umhos/cm.							
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	3.00	ug/L		0.50		E624	04/15/14 19:36 / jlr
Bromoform	1.06	ug/L		0.50		E624	04/15/14 19:36 / jlr
Chlorodibromomethane	2.28	ug/L		0.50		E624	04/15/14 19:36 / jlr
Chloroform	3.48	ug/L		0.50		E624	04/15/14 19:36 / jlr
Trihalomethanes, Total	9.82	ug/L		0.50		E624	04/15/14 19:36 / jlr
Surr: 1,2-Dichlorobenzene-d4	100	%REC		73.7-126		E624	04/15/14 19:36 / jlr
Surr: Dibromofluoromethane	122	%REC		64.4-131		E624	04/15/14 19:36 / jlr
Surr: p-Bromofluorobenzene	100	%REC		67.1-133		E624	04/15/14 19:36 / jlr
Surr: Toluene-d8	93.0	%REC		79.7-125		E624	04/15/14 19:36 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 5.							

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
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:		EPA-28	EPA-28	EPA-28	EPA-28
Collection Date:		3/31/2014	1/7/2014	10/1/2013	7/9/2013
Receive Date:		4/3/2014	1/10/2014	10/7/2013	7/12/2013
Report Date:		6/19/2014	2/18/2014	11/26/2013	8/26/2013
Analyte	RUnits	C14040132-010	C14010260-012	C13100210-012	C13070481-012
Bicarbonate as HCO3	mg/L	777	793	817	808
Calcium	mg/L	566	505	518	523
Chloride	mg/L	119	118	117	117
Magnesium	mg/L	515	460	479	476
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	29	24	26	25
Potassium	mg/L	12	11	11	11
Sodium	mg/L	247	225	228	230
Sulfate	mg/L	2720	2760	2790	2790
pH	s.u.	6.78	6.81	6.82	6.92
Solids, Total Dissolved TDS @ 180 C	mg/L	5000	5090	5060	5120
Aluminum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	0.82	0.79	0.74	0.74
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
Uranium	mg/L	0.0526	0.0499	0.0490	0.0481
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	0.8	0.8	0.2	0.6
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.4	0.5	0.3	0.4
Gross Alpha minus Rn & U MDC	pCi/L	0.5	0.6	0.5	0.6
Lead 210	pCi/L	0.05	0.2	0.09	-0.1
Lead 210 precision (±)	pCi/L	0.9	0.5	0.6	0.6
Lead 210 MDC	pCi/L	1.4	0.8	1.1	1.0
Radium 226	pCi/L	0.59	0.59	0.49	0.27
Radium 226 precision (±)	pCi/L	0.18	0.17	0.12	0.13
Radium 226 MDC	pCi/L	0.18	0.17	0.09	0.15
Radium 228	pCi/L	0.29	2.6	1.9	0.80
Radium 228 precision (±)	pCi/L	1.5	1.4	0.79	0.70
Radium 228 MDC	pCi/L	2.5	2.1	1.2	1.1
Thorium 230	pCi/L	0.04	-0.009	0.1	0.001
Thorium 230 precision (±)	pCi/L	0.08	0.06	0.1	0.08
Thorium 230 MDC	pCi/L	0.2	0.2	0.2	0.2
A/C Balance (± 5)	%	4.62	-1.76	-0.824	-0.730
Anions	meq/L	74.5	75.8	76.8	76.6
Cations	meq/L	81.7	73.2	75.5	75.5
Solids, Total Dissolved Calculated	mg/L	4700	4600	4700	4700
TDS Balance (0.80 - 1.20)		1.07	1.10	1.08	1.09
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

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

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:		3/31/2014	1/7/2014	10/1/2013	7/9/2013
Receive Date:		4/3/2014	1/10/2014	10/7/2013	7/12/2013
Report Date:		6/19/2014	2/18/2014	11/26/2013	8/26/2013
Analyte	**RUnits**	**C14040132-011**	**C14010260-013**	**C13100210-013**	**C13070481-013**
Bicarbonate as HCO3	mg/L	665	641	707	641
Calcium	mg/L	520	506	514	535
Chloride	mg/L	117	128	110	109
Magnesium	mg/L	494	457	466	471
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	22	20	23	21
Potassium	mg/L	11	11	11	11
Sodium	mg/L	241	234	231	240
Sulfate	mg/L	2840	2870	2810	2860
pH	s.u.	6.81	6.81	6.84	6.94
Solids, Total Dissolved TDS @ 180 C	mg/L	5020	5030	4870	5090
Aluminum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	0.001
Manganese	mg/L	0.68	0.65	0.67	0.60
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	0.0450	0.0374	0.0446	0.0357
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	0.7	0.7	0.7	1.0
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.4	0.5	0.4	0.5
Gross Alpha minus Rn & U MDC	pCi/L	0.5	0.6	0.5	0.6
Lead 210	pCi/L	-1	0.5	0.08	0.6
Lead 210 precision (±)	pCi/L	0.8	0.5	0.7	0.6
Lead 210 MDC	pCi/L	1.46	0.8	1.1	1.0
Radium 226	pCi/L	0.65	0.66	0.57	0.37
Radium 226 precision (±)	pCi/L	0.19	0.17	0.13	0.14
Radium 226 MDC	pCi/L	0.17	0.16	0.09	0.15
Radium 228	pCi/L	0.61	1.8	1.4	0.51
Radium 228 precision (±)	pCi/L	1.6	1.3	0.75	0.67
Radium 228 MDC	pCi/L	2.6	2.0	1.1	1.1
Thorium 230	pCi/L	0.07	0.02	0.04	0.03
Thorium 230 precision (±)	pCi/L	0.08	0.05	0.07	0.05
Thorium 230 MDC	pCi/L	0.2	0.1	0.2	0.09
A/C Balance (± 5)	%	1.72	-1.46	-0.311	1.08
Anions	meq/L	74.7	75.4	74.8	74.6
Cations	meq/L	77.3	73.3	74.3	76.2
Solids, Total Dissolved Calculated	mg/L	4600	4600	4600	4600
TDS Balance (0.80 - 1.20)		1.08	1.09	1.06	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: SW Alluvium
Lab ID: C14010260-013
Client Sample ID: EPA-28 Duplicate

Report Date: 02/18/14
Collection Date: 01/07/14 11:45
DateReceived: 01/10/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	641	mg/L		5		A2320 B	01/10/14 19:25 / jba
Calcium	506	mg/L		1		E200.7	01/14/14 16:40 / sf
Chloride	128	mg/L	D	4		E300.0	01/11/14 09:13 / wc
Magnesium	457	mg/L		1		E200.7	01/14/14 16:40 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	01/14/14 13:33 / lr
Nitrogen, Nitrate+Nitrite as N	20	mg/L	D	2		E353.2	01/13/14 15:49 / lr
Potassium	11	mg/L		1		E200.7	01/14/14 16:40 / sf
Sodium	234	mg/L		1		E200.7	01/14/14 16:40 / sf
Sulfate	2870	mg/L	D	20		E300.0	01/11/14 09:13 / wc
PHYSICAL PROPERTIES							
pH	6.81	s.u.	H	0.01		A4500-H B	01/10/14 14:49 / alp
Solids, Total Dissolved TDS @ 180 C	5030	mg/L		40		A2540 C	01/10/14 15:16 / tmm
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	01/20/14 17:20 / sf
Beryllium	ND	mg/L		0.001		E200.7	01/22/14 15:51 / sf
Cadmium	ND	mg/L		0.005		E200.7	01/20/14 17:20 / sf
Cobalt	ND	mg/L		0.01		E200.7	01/20/14 17:20 / sf
Lead	ND	mg/L		0.001		E200.8	01/28/14 01:20 / clm
Manganese	0.65	mg/L		0.01		E200.7	01/20/14 17:20 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/20/14 17:20 / sf
Nickel	ND	mg/L		0.05		E200.7	01/20/14 17:20 / sf
Uranium	0.0374	mg/L		0.0003		E200.8	01/28/14 01:20 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/22/14 15:51 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/27/14 13:03 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	01/13/14 10:49 / kja
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.7	pCi/L				E900.1	01/16/14 07:00 / lbb
Gross Alpha minus Rn & U Precision (±)	0.5	pCi/L				E900.1	01/16/14 07:00 / lbb
Gross Alpha minus Rn & U MDC	0.6	pCi/L				E900.1	01/16/14 07:00 / lbb
Lead 210	0.5	pCi/L	U			E909.0	01/26/14 08:35 / eli-cs
Lead 210 precision (±)	0.5	pCi/L				E909.0	01/26/14 08:35 / eli-cs
Lead 210 MDC	0.8	pCi/L				E909.0	01/26/14 08:35 / eli-cs
Radium 226	0.66	pCi/L				E903.0	01/20/14 13:02 / lmc
Radium 226 precision (±)	0.17	pCi/L				E903.0	01/20/14 13:02 / lmc
Radium 226 MDC	0.16	pCi/L				E903.0	01/20/14 13:02 / lmc
Radium 228	1.8	pCi/L	U			RA-05	01/16/14 15:51 / plj
Radium 228 precision (±)	1.3	pCi/L				RA-05	01/16/14 15:51 / plj
Radium 228 MDC	2.0	pCi/L				RA-05	01/16/14 15:51 / plj
Thorium 230	0.02	pCi/L	U			E908.0	01/16/14 16:33 / dmf
Thorium 230 precision (±)	0.05	pCi/L				E908.0	01/16/14 16:33 / dmf
Thorium 230 MDC	0.1	pCi/L				E908.0	01/16/14 16:33 / dmf

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: C14010260-013
Client Sample ID: EPA-28 Duplicate

Report Date: 02/18/14
Collection Date: 01/07/14 11:45
DateReceived: 01/10/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	-1.46	%				A1030 E	01/16/14 07:54 / kbh
Anions	75.4	meq/L				A1030 E	01/16/14 07:54 / kbh
Cations	73.3	meq/L				A1030 E	01/16/14 07:54 / kbh
Solids, Total Dissolved Calculated	4600	mg/L				A1030 E	01/16/14 07:54 / kbh
TDS Balance (0.80 - 1.20)	1.09					A1030 E	01/16/14 07:54 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/14/14 04:24 / jld
Bromoform	ND	ug/L		0.50		E624	01/14/14 04:24 / jld
Chlorodibromomethane	ND	ug/L		0.50		E624	01/14/14 04:24 / jld
Chloroform	ND	ug/L		0.50		E624	01/15/14 00:55 / jld
Trihalomethanes, Total	ND	ug/L		0.50		E624	01/14/14 04:24 / jld
Surr: 1,2-Dichlorobenzene-d4	124	%REC		73.7-126		E624	01/14/14 04:24 / jld
Surr: Dibromofluoromethane	150	%REC	S	64.4-131		E624	01/14/14 04:24 / jld
Surr: p-Bromofluorobenzene	136	%REC	S	67.1-133		E624	01/14/14 04:24 / jld
Surr: Toluene-d8	106	%REC		79.7-125		E624	01/14/14 04:24 / jld

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

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Allluvium
Lab ID: C14040132-011
Client Sample ID: EPA-28 Duplicate

Revised Date: 06/19/14
Report Date: 05/16/14
Collection Date: 03/31/14 17:20
DateReceived: 04/03/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	665	mg/L		5		A2320 B	04/03/14 19:35 / jba
Calcium	520	mg/L		1		E200.7	04/24/14 14:32 / sf
Chloride	117	mg/L	D	2		E300.0	04/04/14 14:56 / wc
Magnesium	494	mg/L		1		E200.7	04/24/14 14:32 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	04/09/14 13:19 / lr
Nitrogen, Nitrate+Nitrite as N	22	mg/L	D	2		E353.2	04/05/14 16:18 / ljl
Potassium	11	mg/L		1		E200.7	04/24/14 14:32 / sf
Sodium	241	mg/L	D	2		E200.7	04/24/14 14:32 / sf
Sulfate	2840	mg/L	D	8		E300.0	04/04/14 14:56 / wc
PHYSICAL PROPERTIES							
pH	6.81	s.u.	H	0.01		A4500-H B	04/03/14 15:27 / tmm
Solids, Total Dissolved TDS @ 180 C	5020	mg/L		28		A2540 C	04/03/14 16:12 / alp
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	04/15/14 19:40 / clm
Beryllium	ND	mg/L		0.001		E200.8	04/15/14 19:40 / clm
Cadmium	ND	mg/L		0.005		E200.7	04/08/14 18:56 / sf
Cobalt	ND	mg/L		0.01		E200.7	04/08/14 18:56 / sf
Lead	ND	mg/L		0.001		E200.8	04/15/14 19:40 / clm
Manganese	0.68	mg/L		0.01		E200.7	04/08/14 18:56 / sf
Molybdenum	ND	mg/L		0.1		E200.7	04/08/14 18:56 / sf
Nickel	ND	mg/L		0.05		E200.7	04/08/14 18:56 / sf
Uranium	0.0450	mg/L		0.0003		E200.8	04/15/14 19:40 / clm
Vanadium	ND	mg/L		0.1		E200.7	04/08/14 18:56 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/17/14 14:39 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	04/18/14 15:16 / kja
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.7	pCi/L				E900.1	04/12/14 05:29 / lbb
Gross Alpha minus Rn & U Precision (±)	0.4	pCi/L				E900.1	04/12/14 05:29 / lbb
Gross Alpha minus Rn & U MDC	0.5	pCi/L				E900.1	04/12/14 05:29 / lbb
Lead 210	-1	pCi/L	U			E909.0	04/16/14 15:57 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	04/16/14 15:57 / eli-cs
Lead 210 MDC	1.46	pCi/L				E909.0	04/16/14 15:57 / eli-cs
Radium 226	0.65	pCi/L				E903.0	04/14/14 11:37 / trs
Radium 226 precision (±)	0.19	pCi/L				E903.0	04/14/14 11:37 / trs
Radium 226 MDC	0.17	pCi/L				E903.0	04/14/14 11:37 / trs
Radium 228	0.61	pCi/L	U			RA-05	06/19/14 11:45 / plj
Radium 228 precision (±)	1.6	pCi/L				RA-05	06/19/14 11:45 / plj
Radium 228 MDC	2.6	pCi/L				RA-05	06/19/14 11:45 / plj
Thorium 230	0.07	pCi/L	U			E908.0	04/11/14 16:02 / dmf
Thorium 230 precision (±)	0.08	pCi/L				E908.0	04/11/14 16:02 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	04/11/14 16:02 / dmf

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 Allluvium
Lab ID: C14040132-011
Client Sample ID: EPA-28 Duplicate

Revised Date: 06/19/14
Report Date: 05/16/14
Collection Date: 03/31/14 17:20
DateReceived: 04/03/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	1.72	%				A1030 E	04/25/14 09:48 / kbh
Anions	74.7	meq/L				A1030 E	04/25/14 09:48 / kbh
Cations	77.3	meq/L				A1030 E	04/25/14 09:48 / kbh
Solids, Total Dissolved Calculated	4600	mg/L				A1030 E	04/25/14 09:48 / kbh
TDS Balance (0.80 - 1.20)	1.08					A1030 E	04/25/14 09:48 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/07/14 16:33 / jld
Bromoform	ND	ug/L		0.50		E624	04/07/14 16:33 / jld
Chlorodibromomethane	ND	ug/L		0.50		E624	04/07/14 16:33 / jld
Chloroform	ND	ug/L		0.50		E624	04/07/14 16:33 / jld
Trihalomethanes, Total	ND	ug/L		0.50		E624	04/07/14 16:33 / jld
Surr: 1,2-Dichlorobenzene-d4	120	%REC		73.7-126		E624	04/07/14 16:33 / jld
Surr: Dibromofluoromethane	116	%REC		64.4-131		E624	04/07/14 16:33 / jld
Surr: p-Bromofluorobenzene	127	%REC		67.1-133		E624	04/07/14 16:33 / jld
Surr: Toluene-d8	97.0	%REC		79.7-125		E624	04/07/14 16:33 / jld

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

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 1 Monitor Wells					
Well ID:		EPA-2	EPA-2	EPA-2	EPA-2
Collection Date:		4/2/2014	1/13/2014	10/7/2013	7/15/2013
Receive Date:		4/4/2014	1/17/2014	10/11/2013	7/19/2013
Report Date:		5/19/2014	2/27/2014	11/25/2013	8/27/2013
Analyte	RUnits	C14040183-007	C14010520-004	C13100453-004	C13070742-003
Bicarbonate as HCO3	mg/L	323	319	312	302
Calcium	mg/L	392	386	377	386
Chloride	mg/L	23	22	23	25
Magnesium	mg/L	175	172	171	176
Nitrogen, Ammonia as N	mg/L	0.18	0.42	0.38	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	7	7	6
Sodium	mg/L	219	206	208	204
Sulfate	mg/L	1790	1860	1860	1780
pH	s.u.	6.77	6.92	6.91	7.11
Solids, Total Dissolved TDS @ 180 C	mg/L	2990	2980	2970	3000
Aluminum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
Lead	mg/L	ND(0.001)	ND(0.001)	0.002	ND(0.001)
Manganese	mg/L	1.62	1.53	1.51	1.59
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	0.0016	0.0021	0.0016	0.0015
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	2.7	1.2	1.6	1.5
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.6	0.4	0.4	0.5
Gross Alpha minus Rn & U MDC	pCi/L	0.4	0.4	0.3	0.4
Lead 210	pCi/L	0.2	0.3	0.4	1.0
Lead 210 precision (±)	pCi/L	0.6	0.6	0.6	0.8
Lead 210 MDC	pCi/L	1.0	0.9	1	1.2
Radium 226	pCi/L	1.3	1.0	1.6	1.4
Radium 226 precision (±)	pCi/L	0.22	0.19	0.25	0.23
Radium 226 MDC	pCi/L	0.14	0.14	0.12	0.15
Radium 228	pCi/L	3.2	1.9	2.5	4.0
Radium 228 precision (±)	pCi/L	0.75	0.67	0.90	1.1
Radium 228 MDC	pCi/L	0.99	0.96	1.3	1.6
Thorium 230	pCi/L	0.04	0.07	0.03	0.09
Thorium 230 precision (±)	pCi/L	0.09	0.08	0.07	0.1
Thorium 230 MDC	pCi/L	0.2	0.1	0.1	0.2
A/C Balance (± 5)	%	0.53	-2.38	-2.81	0.0559
Anions	meq/L	43.2	44.7	44.6	42.8
Cations	meq/L	43.6	42.6	42.1	42.8
Solids, Total Dissolved Calculated	mg/L	2800	2800	2800	2800
TDS Balance (0.80 - 1.20)		1.07	1.05	1.05	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.

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:		4/2/2014	1/13/2014	10/7/2013	7/15/2013
Receive Date:		4/4/2014	1/17/2014	10/11/2013	7/19/2013
Report Date:		5/19/2014	2/27/2014	11/25/2013	8/27/2013
Analyte	RUnits	C14040183-008	C14010520-005	C13100453-005	C13070742-004
Bicarbonate as HCO3	mg/L	329	319	343	317
Calcium	mg/L	396	396	381	388
Chloride	mg/L	23	23	22	26
Magnesium	mg/L	179	182	176	179
Nitrogen, Ammonia as N	mg/L	0.42	0.42	0.41	0.42
Nitrogen, Nitrate+Nitrite as N	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Potassium	mg/L	7	7	7	7
Sodium	mg/L	216	211	210	205
Sulfate	mg/L	1820	1780	1800	1830
pH	s.u.	6.73	6.78	6.79	6.84
Solids, Total Dissolved TDS @ 180 C	mg/L	3010	2950	2950	2990
Aluminum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	0.003
Manganese	mg/L	1.54	1.60	1.55	1.55
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	0.0016	0.0020	0.0022	0.0015
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	2.4	1.0	1.4	1.5
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.5	0.4	0.3	0.5
Gross Alpha minus Rn & U MDC	pCi/L	0.4	0.4	0.3	0.4
Lead 210	pCi/L	0.4	0.3	-0.02	1.1
Lead 210 precision (±)	pCi/L	0.6	0.6	0.6	0.8
Lead 210 MDC	pCi/L	1.1	0.9	1	1.2
Radium 226	pCi/L	1.1	1.2	1.9	1.4
Radium 226 precision (±)	pCi/L	0.21	0.28	0.26	0.23
Radium 226 MDC	pCi/L	0.15	0.29	0.12	0.15
Radium 228	pCi/L	3.7	2.2	3.6	3.8
Radium 228 precision (±)	pCi/L	0.79	0.68	0.93	0.95
Radium 228 MDC	pCi/L	1.0	0.95	1.3	1.3
Thorium 230	pCi/L	0.04	0.1	0.07	0.08
Thorium 230 precision (±)	pCi/L	0.06	0.1	0.09	0.09
Thorium 230 MDC	pCi/L	0.1	0.1	0.2	0.2
A/C Balance (± 5)	%	0.31	1.46	-1.07	-0.916
Anions	meq/L	43.8	42.9	43.7	44.0
Cations	meq/L	44.1	44.1	42.8	43.2
Solids, Total Dissolved Calculated	mg/L	2800	2800	2800	2800
TDS Balance (0.80 - 1.20)		1.06	1.06	1.05	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: C14010520-005
Client Sample ID: EPA-2 Duplicate

Report Date: 02/27/14
Collection Date: 01/13/14 12:35
DateReceived: 01/17/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	319	mg/L		5		A2320 B	01/17/14 19:57 / jba
Calcium	396	mg/L		1		E200.7	01/22/14 18:15 / sf
Chloride	23	mg/L	D	2		E300.0	01/20/14 22:41 / wc
Magnesium	182	mg/L		1		E200.7	01/22/14 18:15 / sf
Nitrogen, Ammonia as N	0.42	mg/L		0.05		A4500-NH3 G	01/21/14 14:16 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	01/17/14 14:38 / lr
Potassium	7	mg/L		1		E200.7	01/22/14 18:15 / sf
Sodium	211	mg/L		1		E200.7	01/22/14 18:15 / sf
Sulfate	1780	mg/L	D	8		E300.0	01/20/14 22:41 / wc
PHYSICAL PROPERTIES							
pH	6.78	s.u.	H	0.01		A4500-H B	01/17/14 14:21 / alp
Solids, Total Dissolved TDS @ 180 C	2950	mg/L		20		A2540 C	01/17/14 15:14 / alp
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	01/23/14 19:25 / sf
Beryllium	ND	mg/L		0.001		E200.7	01/23/14 19:25 / sf
Cadmium	ND	mg/L		0.005		E200.7	01/23/14 19:25 / sf
Cobalt	ND	mg/L		0.01		E200.7	01/23/14 19:25 / sf
Lead	ND	mg/L		0.001		E200.8	02/10/14 20:52 / cp
Manganese	1.60	mg/L		0.01		E200.7	01/23/14 19:25 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/23/14 19:25 / sf
Nickel	ND	mg/L		0.05		E200.7	01/23/14 19:25 / sf
Uranium	0.0020	mg/L		0.0003		E200.8	02/10/14 20:52 / cp
Vanadium	ND	mg/L		0.1		E200.7	01/23/14 19:25 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/27/14 16:09 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	01/22/14 15:38 / kja
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	1.0	pCi/L				E900.1	02/14/14 15:30 / lbb
Gross Alpha minus Rn & U Precision (±)	0.4	pCi/L				E900.1	02/14/14 15:30 / lbb
Gross Alpha minus Rn & U MDC	0.4	pCi/L				E900.1	02/14/14 15:30 / lbb
Lead 210	0.3	pCi/L	U			E909.0	02/06/14 03:20 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	02/06/14 03:20 / eli-cs
Lead 210 MDC	0.9	pCi/L				E909.0	02/06/14 03:20 / eli-cs
Radium 226	1.2	pCi/L				E903.0	02/26/14 10:51 / lmc
Radium 226 precision (±)	0.28	pCi/L				E903.0	02/26/14 10:51 / lmc
Radium 226 MDC	0.29	pCi/L				E903.0	02/26/14 10:51 / lmc
Radium 228	2.2	pCi/L				RA-05	01/28/14 14:26 / plj
Radium 228 precision (±)	0.68	pCi/L				RA-05	01/28/14 14:26 / plj
Radium 228 MDC	0.95	pCi/L				RA-05	01/28/14 14:26 / plj
Thorium 230	0.1	pCi/L				E908.0	02/09/14 12:32 / trs
Thorium 230 precision (±)	0.1	pCi/L				E908.0	02/09/14 12:32 / trs
Thorium 230 MDC	0.1	pCi/L				E908.0	02/09/14 12:32 / trs

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: C14010520-005
Client Sample ID: EPA-2 Duplicate

Report Date: 02/27/14
Collection Date: 01/13/14 12:35
DateReceived: 01/17/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	1.46	%				A1030 E	01/23/14 12:42 / kbh
Anions	42.9	meq/L				A1030 E	01/23/14 12:42 / kbh
Cations	44.1	meq/L				A1030 E	01/23/14 12:42 / kbh
Solids, Total Dissolved Calculated	2800	mg/L				A1030 E	01/23/14 12:42 / kbh
TDS Balance (0.80 - 1.20)	1.06					A1030 E	01/23/14 12:42 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/24/14 19:58 / jlr
Bromoform	ND	ug/L		0.50		E624	01/24/14 19:58 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	01/24/14 19:58 / jlr
Chloroform	ND	ug/L		0.50		E624	01/24/14 19:58 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	01/24/14 19:58 / jlr
Surr: 1,2-Dichlorobenzene-d4	117	%REC		73.7-126		E624	01/24/14 19:58 / jlr
Surr: Dibromofluoromethane	103	%REC		64.4-131		E624	01/24/14 19:58 / jlr
Surr: p-Bromofluorobenzene	130	%REC		67.1-133		E624	01/24/14 19:58 / jlr
Surr: Toluene-d8	121	%REC		79.7-125		E624	01/24/14 19:58 / 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.
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-1 TE-5-4-2014
Lab ID: C14040183-008
Client Sample ID: EPA-2 Duplicate

Report Date: 05/19/14
Collection Date: 04/02/14 11:20
DateReceived: 04/04/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	329	mg/L		5		A2320 B	04/04/14 16:29 / jba
Calcium	396	mg/L		1		E200.7	04/22/14 18:53 / sf
Chloride	23	mg/L		1		E300.0	04/05/14 05:27 / wc
Magnesium	179	mg/L		1		E200.7	04/22/14 18:53 / sf
Nitrogen, Ammonia as N	0.42	mg/L		0.05		A4500-NH3 G	04/09/14 14:49 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	04/07/14 14:58 / lr
Potassium	7	mg/L		1		E200.7	04/22/14 18:53 / sf
Sodium	216	mg/L	D	2		E200.7	04/22/14 18:53 / sf
Sulfate	1820	mg/L	D	4		E300.0	04/05/14 05:27 / wc
PHYSICAL PROPERTIES							
pH	6.73	s.u.	H	0.01		A4500-H B	04/04/14 14:01 / tmm
Solids, Total Dissolved TDS @ 180 C	3010	mg/L		21		A2540 C	04/04/14 15:46 / tmm
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	04/09/14 22:22 / clm
Beryllium	ND	mg/L		0.001		E200.8	04/09/14 22:22 / clm
Cadmium	ND	mg/L		0.005		E200.8	04/09/14 22:22 / clm
Cobalt	ND	mg/L		0.01		E200.8	04/09/14 22:22 / clm
Lead	ND	mg/L		0.001		E200.8	04/09/14 22:22 / clm
Manganese	1.54	mg/L		0.01		E200.8	04/09/14 22:22 / clm
Molybdenum	ND	mg/L		0.1		E200.8	04/09/14 22:22 / clm
Nickel	ND	mg/L		0.05		E200.8	04/09/14 22:22 / clm
Uranium	0.0016	mg/L		0.0003		E200.8	04/09/14 22:22 / clm
Vanadium	ND	mg/L		0.1		E200.8	04/09/14 22:22 / clm
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/18/14 14:07 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	04/22/14 16:52 / kja
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	2.4	pCi/L				E900.1	04/12/14 05:52 / lbb
Gross Alpha minus Rn & U Precision (±)	0.5	pCi/L				E900.1	04/12/14 05:52 / lbb
Gross Alpha minus Rn & U MDC	0.4	pCi/L				E900.1	04/12/14 05:52 / lbb
Lead 210	0.4	pCi/L	U			E909.0	04/17/14 09:52 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	04/17/14 09:52 / eli-cs
Lead 210 MDC	1.1	pCi/L				E909.0	04/17/14 09:52 / eli-cs
Radium 226	1.1	pCi/L				E903.0	04/21/14 08:17 / lmc
Radium 226 precision (±)	0.21	pCi/L				E903.0	04/21/14 08:17 / lmc
Radium 226 MDC	0.15	pCi/L				E903.0	04/21/14 08:17 / lmc
Radium 228	3.7	pCi/L				RA-05	04/15/14 12:01 / plj
Radium 228 precision (±)	0.79	pCi/L				RA-05	04/15/14 12:01 / plj
Radium 228 MDC	1.0	pCi/L				RA-05	04/15/14 12:01 / plj
Thorium 230	0.04	pCi/L	U			E908.0	04/16/14 08:57 / dmf
Thorium 230 precision (±)	0.06	pCi/L				E908.0	04/16/14 08:57 / dmf
Thorium 230 MDC	0.1	pCi/L				E908.0	04/16/14 08:57 / dmf

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 TE-5-4-2014
Lab ID: C14040183-008
Client Sample ID: EPA-2 Duplicate

Report Date: 05/19/14
Collection Date: 04/02/14 11:20
DateReceived: 04/04/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	0.31	%				A1030 E	04/23/14 11:20 / kbh
Anions	43.8	meq/L				A1030 E	04/23/14 11:20 / kbh
Cations	44.1	meq/L				A1030 E	04/23/14 11:20 / kbh
Solids, Total Dissolved Calculated	2800	mg/L				A1030 E	04/23/14 11:20 / kbh
TDS Balance (0.80 - 1.20)	1.06					A1030 E	04/23/14 11:20 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/08/14 01:57 / jld
Bromoform	ND	ug/L		0.50		E624	04/08/14 01:57 / jld
Chlorodibromomethane	ND	ug/L		0.50		E624	04/08/14 01:57 / jld
Chloroform	ND	ug/L		0.50		E624	04/08/14 01:57 / jld
Trihalomethanes, Total	ND	ug/L		0.50		E624	04/08/14 01:57 / jld
Surr: 1,2-Dichlorobenzene-d4	123	%REC		73.7-126		E624	04/08/14 01:57 / jld
Surr: Dibromofluoromethane	132	%REC	S	64.4-131		E624	04/08/14 01:57 / jld
Surr: p-Bromofluorobenzene	130	%REC		67.1-133		E624	04/08/14 01:57 / jld
Surr: Toluene-d8	95.0	%REC		79.7-125		E624	04/08/14 01:57 / jld

- 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.
S - Spike recovery outside of advisory limits.
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:		717	717	717	717
Collection Date:		4/7/2014	1/14/2014	10/7/2013	7/16/2013
Receive Date:		4/10/2014	1/17/2014	10/11/2013	7/19/2013
Report Date:		5/19/2014	2/27/2014	11/26/2013	8/27/2013
Analyte	**RUnits**	**C14040377-008**	**C14010521-005**	**C13100459-002**	**C13070735-004**
Bicarbonate as HCO3	mg/L	ND(5)	ND(5)	ND(5)	ND(5)
Calcium	mg/L	466	473	464	470
Chloride	mg/L	69	64	66	66
Magnesium	mg/L	500	486	501	502
Nitrogen, Ammonia as N	mg/L	47	50	53	56
Nitrogen, Nitrate+Nitrite as N	mg/L	27	30	28	28
Potassium	mg/L	11	12	13	13
Sodium	mg/L	178	171	177	175
Sulfate	mg/L	4680	4480	4450	4370
pH	s.u.	3.92	3.95	4.00	4.03
Solids, Total Dissolved TDS @ 180 C	mg/L	6250	6230	6150	6330
Aluminum	mg/L	157	151	140	129
Beryllium	mg/L	0.120	0.129	0.114	0.110
Cadmium	mg/L	0.018	0.013	0.018	0.012
Cobalt	mg/L	0.94	0.91	0.97	0.90
Lead	mg/L	0.015	0.013	0.010	0.011
Manganese	mg/L	19.3	19.8	20.3	20.1
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	0.89	0.90	0.90	0.82
Uranium	mg/L	0.0484	0.0398	0.0310	0.0267
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	13.4	28.2	13.2	13.9
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.9	1.7	1	1.1
Gross Alpha minus Rn & U MDC	pCi/L	0.3	0.5	0.3	0.4
Lead 210	pCi/L	2.6	2.4	1.7	2.4
Lead 210 precision (±)	pCi/L	0.8	0.6	0.6	0.8
Lead 210 MDC	pCi/L	1.1	0.9	1	1.2
Radium 226	pCi/L	19	15	21	13
Radium 226 precision (±)	pCi/L	0.80	0.66	1.0	0.62
Radium 226 MDC	pCi/L	0.16	0.19	0.22	0.13
Radium 228	pCi/L	34	27	29	44
Radium 228 precision (±)	pCi/L	2.3	1.5	1.6	2.9
Radium 228 MDC	pCi/L	1.8	0.96	1.1	2.0
Thorium 230	pCi/L	0.4	0.4	0.5	0.6
Thorium 230 precision (±)	pCi/L	0.4	0.2	0.4	0.7
Thorium 230 MDC	pCi/L	0.7	0.2	0.5	1.2
A/C Balance (± 5)	%	-3.75	1.44	-0.358	1.67
Anions	meq/L	102	97.4	97.1	95.2
Cations	meq/L	94.5	100	96.4	98.4
Solids, Total Dissolved Calculated	mg/L	6100	5900	5900	5800
TDS Balance (0.80 - 1.20)		1.02	1.06	1.05	1.10
Trihalomethanes, Total	ug/L	3.65	4.24	2.85	3.20

**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:		717 Duplicate	717 Duplicate	717 Duplicate	717 Duplicate
Collection Date:		4/7/2014	1/14/2014	10/7/2013	7/16/2013
Receive Date:		4/10/2014	1/17/2014	10/11/2013	7/19/2013
Report Date:		5/19/2014	2/27/2014	11/26/2013	8/27/2013
Analyte	RUnits	C14040377-009	C14010521-006	C13100459-003	C13070735-005
Bicarbonate as HCO3	mg/L	ND(5)	ND(5)	ND(5)	ND(5)
Calcium	mg/L	458	472	474	474
Chloride	mg/L	69	64	65	65
Magnesium	mg/L	506	485	508	508
Nitrogen, Ammonia as N	mg/L	46	51	51	54
Nitrogen, Nitrate+Nitrite as N	mg/L	26	31	28	28
Potassium	mg/L	11	12	13	13
Sodium	mg/L	178	170	180	179
Sulfate	mg/L	4730	4500	4460	4460
pH	s.u.	3.90	3.92	3.99	3.98
Solids, Total Dissolved TDS @ 180 C	mg/L	6230	6440	6230	6270
Aluminum	mg/L	158	149	137	133
Beryllium	mg/L	0.120	0.129	0.109	0.112
Cadmium	mg/L	0.018	0.010	0.018	0.008
Cobalt	mg/L	0.94	0.91	0.96	0.91
Lead	mg/L	0.012	0.011	0.011	0.010
Manganese	mg/L	18.9	19.6	20.4	20.0
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	0.89	0.90	0.90	0.86
Uranium	mg/L	0.0521	0.0417	0.0304	0.0292
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	13.7	27.9	15.6	13.9
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.9	1.7	1.0	1.1
Gross Alpha minus Rn & U MDC	pCi/L	0.3	0.5	0.3	0.4
Lead 210	pCi/L	2.1	2.0	2.5	2.3
Lead 210 precision (±)	pCi/L	0.7	0.6	0.7	0.8
Lead 210 MDC	pCi/L	1.1	0.9	1	1.2
Radium 226	pCi/L	22	15	21	13
Radium 226 precision (±)	pCi/L	0.85	0.56	1.0	0.62
Radium 226 MDC	pCi/L	0.16	0.14	0.22	0.13
Radium 228	pCi/L	39	28	29	43
Radium 228 precision (±)	pCi/L	2.4	1.5	1.8	2.9
Radium 228 MDC	pCi/L	1.8	0.96	1.4	2.0
Thorium 230	pCi/L	0.5	0.6	0.3	0.6
Thorium 230 precision (±)	pCi/L	0.3	0.4	0.3	0.6
Thorium 230 MDC	pCi/L	0.5	0.5	0.5	1.1
A/C Balance (± 5)	%	-4.14	0.892	0.913	1.85
Anions	meq/L	103	98.0	97.2	97.1
Cations	meq/L	94.7	99.8	99.0	101
Solids, Total Dissolved Calculated	mg/L	6200	5900	5900	5900
TDS Balance (0.80 - 1.20)		1.01	1.09	1.06	1.07
Trihalomethanes, Total	ug/L	3.96	5.00	3.94	5.04

**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: C14010521-006
Client Sample ID: 717 Duplicate

Report Date: 02/27/14
Collection Date: 01/14/14 10:05
DateReceived: 01/17/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	01/17/14 21:04 / jba
Calcium	472	mg/L		1		E200.7	01/22/14 19:02 / sf
Chloride	64	mg/L	D	4		E300.0	01/21/14 01:17 / wc
Magnesium	485	mg/L		1		E200.7	01/22/14 19:02 / sf
Nitrogen, Ammonia as N	51	mg/L	D	2		A4500-NH3 G	01/21/14 15:34 / lr
Nitrogen, Nitrate+Nitrite as N	31	mg/L	D	2		E353.2	01/17/14 15:05 / lr
Potassium	12	mg/L		1		E200.7	01/22/14 19:02 / sf
Sodium	170	mg/L		1		E200.7	01/22/14 19:02 / sf
Sulfate	4500	mg/L	D	20		E300.0	01/21/14 01:17 / wc
PHYSICAL PROPERTIES							
pH	3.92	s.u.	H	0.01		A4500-H B	01/17/14 14:46 / alp
Solids, Total Dissolved TDS @ 180 C	6440	mg/L		40		A2540 C	01/20/14 14:41 / alp
METALS - TOTAL							
Aluminum	149	mg/L		0.1		E200.7	01/23/14 20:05 / sf
Beryllium	0.129	mg/L		0.001		E200.7	01/23/14 20:05 / sf
Cadmium	0.010	mg/L		0.005		E200.7	01/23/14 20:05 / sf
Cobalt	0.91	mg/L		0.01		E200.7	01/23/14 20:05 / sf
Lead	0.011	mg/L		0.001		E200.8	02/10/14 22:13 / cp
Manganese	19.6	mg/L		0.01		E200.7	01/23/14 20:05 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/23/14 20:05 / sf
Nickel	0.90	mg/L		0.05		E200.7	01/23/14 20:05 / sf
Uranium	0.0417	mg/L		0.0003		E200.8	02/10/14 22:13 / cp
Vanadium	ND	mg/L		0.1		E200.7	01/23/14 20:05 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/28/14 13:20 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	01/22/14 15:55 / kja
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	27.9	pCi/L				E900.1	01/27/14 07:11 / lbb
Gross Alpha minus Rn & U Precision (±)	1.7	pCi/L				E900.1	01/27/14 07:11 / lbb
Gross Alpha minus Rn & U MDC	0.5	pCi/L				E900.1	01/27/14 07:11 / lbb
Lead 210	2.0	pCi/L				E909.0	02/06/14 11:26 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	02/06/14 11:26 / eli-cs
Lead 210 MDC	0.9	pCi/L				E909.0	02/06/14 11:26 / eli-cs
Radium 226	15	pCi/L				E903.0	02/26/14 10:51 / lmc
Radium 226 precision (±)	0.56	pCi/L				E903.0	02/26/14 10:51 / lmc
Radium 226 MDC	0.14	pCi/L				E903.0	02/26/14 10:51 / lmc
Radium 228	28	pCi/L				RA-05	01/28/14 14:26 / plj
Radium 228 precision (±)	1.5	pCi/L				RA-05	01/28/14 14:26 / plj
Radium 228 MDC	0.96	pCi/L				RA-05	01/28/14 14:26 / plj
Thorium 230	0.6	pCi/L				E908.0	02/08/14 17:39 / trs
Thorium 230 precision (±)	0.4	pCi/L				E908.0	02/08/14 17:39 / trs
Thorium 230 MDC	0.5	pCi/L				E908.0	02/08/14 17:39 / trs

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: C14010521-006
Client Sample ID: 717 Duplicate

Report Date: 02/27/14
Collection Date: 01/14/14 10:05
DateReceived: 01/17/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	0.892	%				A1030 E	01/23/14 12:43 / kbh
Anions	98.0	meq/L				A1030 E	01/23/14 12:43 / kbh
Cations	99.8	meq/L				A1030 E	01/23/14 12:43 / kbh
Solids, Total Dissolved Calculated	5900	mg/L				A1030 E	01/23/14 12:43 / kbh
TDS Balance (0.80 - 1.20)	1.09					A1030 E	01/23/14 12:43 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/27/14 18:28 / jld
Bromoform	ND	ug/L		0.50		E624	01/27/14 18:28 / jld
Chlorodibromomethane	ND	ug/L		0.50		E624	01/27/14 18:28 / jld
Chloroform	5.00	ug/L		0.50		E624	01/27/14 18:28 / jld
Trihalomethanes, Total	5.00	ug/L		0.50		E624	01/27/14 18:28 / jld
Surr: 1,2-Dichlorobenzene-d4	117	%REC		73.7-126		E624	01/27/14 18:28 / jld
Surr: Dibromofluoromethane	72.0	%REC		64.4-131		E624	01/27/14 18:28 / jld
Surr: p-Bromofluorobenzene	117	%REC		67.1-133		E624	01/27/14 18:28 / jld
Surr: Toluene-d8	102	%REC		79.7-125		E624	01/27/14 18:28 / jld

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
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: C14040377-009
Client Sample ID: 717 Duplicate

Report Date: 05/19/14
Collection Date: 04/07/14 16:30
DateReceived: 04/10/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	04/10/14 22:37 / jba
Calcium	458	mg/L		1		E200.7	04/24/14 17:53 / sf
Chloride	69	mg/L	D	2		E300.0	04/11/14 20:43 / wc
Magnesium	506	mg/L		1		E200.7	04/24/14 17:53 / sf
Nitrogen, Ammonia as N	46	mg/L	D	5		A4500-NH3 G	04/18/14 12:07 / lr
Nitrogen, Nitrate+Nitrite as N	26	mg/L	D	2		E353.2	04/15/14 16:45 / lr
Potassium	11	mg/L		1		E200.7	04/24/14 17:53 / sf
Sodium	178	mg/L	D	2		E200.7	04/24/14 17:53 / sf
Sulfate	4730	mg/L	D	8		E300.0	04/11/14 20:43 / wc
PHYSICAL PROPERTIES							
pH	3.90	s.u.	H	0.01		A4500-H B	04/11/14 11:05 / tmm
Solids, Total Dissolved TDS @ 180 C	6230	mg/L		33		A2540 C	04/11/14 16:31 / alp
METALS - TOTAL							
Aluminum	158	mg/L		0.1		E200.7	04/25/14 19:59 / sf
Beryllium	0.120	mg/L		0.001		E200.8	04/24/14 17:34 / clm
Cadmium	0.018	mg/L		0.005		E200.8	04/24/14 17:34 / clm
Cobalt	0.94	mg/L		0.01		E200.8	04/24/14 17:34 / clm
Lead	0.012	mg/L		0.001		E200.8	04/24/14 17:34 / clm
Manganese	18.9	mg/L		0.01		E200.8	04/25/14 20:39 / clm
Molybdenum	ND	mg/L		0.1		E200.8	04/24/14 17:34 / clm
Nickel	0.89	mg/L		0.05		E200.8	04/24/14 17:34 / clm
Uranium	0.0521	mg/L		0.0003		E200.8	04/24/14 17:34 / clm
Vanadium	ND	mg/L		0.1		E200.8	04/24/14 17:34 / clm
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	05/01/14 12:51 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	04/22/14 17:33 / kja
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	13.7	pCi/L				E900.1	05/09/14 15:01 / lbb
Gross Alpha minus Rn & U Precision (±)	0.9	pCi/L				E900.1	05/09/14 15:01 / lbb
Gross Alpha minus Rn & U MDC	0.3	pCi/L				E900.1	05/09/14 15:01 / lbb
Lead 210	2.1	pCi/L				E909.0	05/04/14 00:49 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	05/04/14 00:49 / eli-cs
Lead 210 MDC	1.1	pCi/L				E909.0	05/04/14 00:49 / eli-cs
Radium 226	22	pCi/L				E903.0	04/21/14 12:06 / trs
Radium 226 precision (±)	0.85	pCi/L				E903.0	04/21/14 12:06 / trs
Radium 226 MDC	0.16	pCi/L				E903.0	04/21/14 12:06 / trs
Radium 228	39	pCi/L				RA-05	04/16/14 17:05 / plj
Radium 228 precision (±)	2.4	pCi/L				RA-05	04/16/14 17:05 / plj
Radium 228 MDC	1.8	pCi/L				RA-05	04/16/14 17:05 / plj
Thorium 230	0.5	pCi/L				E908.0	04/24/14 16:35 / dmf
Thorium 230 precision (±)	0.3	pCi/L				E908.0	04/24/14 16:35 / dmf
Thorium 230 MDC	0.5	pCi/L				E908.0	04/24/14 16:35 / dmf

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: C14040377-009
Client Sample ID: 717 Duplicate

Report Date: 05/19/14
Collection Date: 04/07/14 16:30
DateReceived: 04/10/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	-4.14	%				A1030 E	04/28/14 13:35 / kbh
Anions	103	meq/L				A1030 E	04/28/14 13:35 / kbh
Cations	94.7	meq/L				A1030 E	04/28/14 13:35 / kbh
Solids, Total Dissolved Calculated	6200	mg/L				A1030 E	04/28/14 13:35 / kbh
TDS Balance (0.80 - 1.20)	1.01					A1030 E	04/28/14 13:35 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/12/14 01:29 / jlr
Bromoform	ND	ug/L		0.50		E624	04/12/14 01:29 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/12/14 01:29 / jlr
Chloroform	3.96	ug/L		0.50		E624	04/12/14 01:29 / jlr
Trihalomethanes, Total	3.96	ug/L		0.50		E624	04/12/14 01:29 / jlr
Surr: 1,2-Dichlorobenzene-d4	102	%REC		73.7-126		E624	04/12/14 01:29 / jlr
Surr: Dibromofluoromethane	114	%REC		64.4-131		E624	04/12/14 01:29 / jlr
Surr: p-Bromofluorobenzene	91.0	%REC		67.1-133		E624	04/12/14 01:29 / jlr
Surr: Toluene-d8	92.0	%REC		79.7-125		E624	04/12/14 01:29 / 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.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

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- 1-1-2014 (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	1-6-14	0935	✓ (80z.) MC	✓ MC	✓ MC	✓ MC	✓ MC		M. Chischilly	As, Be, Ca, Cd, Cl, HCO_3,
EPA-23		1025								K, Mg, Mn, Na, NH_4, Ni,
803		1110								NO_3, Pb, Pb-210, pH, Se,
808		1155								SO_4, TDS, Th-230, U, V,
802		1240								Chloroform, Gross
801		1325								Alpha (-) U & Rn,
GW-1		1415								Combined Ra-226 & Ra-228, Al,
GW-2		1525								Co, Mo & Total Trihalomethanes (TTHMs)
632	↓	1615								
624	1-7-14	0920								
SBL-1		1010								
EPA-28		1100								
EPA-28 DUPLICATE		1145								
627		1432								
EPA-25		1535								
GW-3	↓	1630	↓	↓	↓	↓	↓		↓	

Sampled by: Mel Chischilly Jr.

Dispatched by: UPS Driver

Carrier: UPS-Ground

9 iced cooler
Method of Shipment

Received by: Fred Clark
1-8-2014 1400
Date Time

1-6-14 & 1-7-14 @ 1700 & 1730
Date Time

Lab Receipt Signature

1-10-14 915
Date Time

The above analysis to be performed is authorized by:

Mel Chischilly Jr.
Signature

1-8-2014
Date

C14010260

Workorder Receipt Checklist

United Nuclear Corporation

C14010260

Login completed by: Debra Williams
Date Received: 1/10/2014

Reviewed by: Kathy Hamre
Received by: dw

Reviewed Date: 1/13/2014
Carrier name: Ground

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all 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 in all shipping container(s)/cooler(s)?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	2.0°C On Ice		
Water - VOA vials have zero headspace?	Yes ☐	No ☑	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	Not Applicable ☐

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.

Contact and Corrective Action Comments:

Sample 803 had 1 vial with larger than acceptable headspace.

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- 1-1-2014 (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	1-7-14	1242	✓ (8oz.) mc	✓ mc	✓ mc	✓ mc	✓ mc		M. Chischilly	As, Be, Ca, Cd, Cl, HCO_3,
517	1-7-14	1330	✓ (8oz.) mc	✓ mc	✓ mc	✓ mc	✓ mc		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)
										C14010261

Sampled by: Mel Chischilly Jr.
Dispatched by: [signature]
Carrier: UPS-Ground
9 iced cooler
Method of Shipment

Received by: [signature] 1-7-14 1730
Date Time
1-8-2014 1400
Date Time
Lab Receipt Signature
1-10-14 915
Date Time

The above analysis to be performed is authorized by:
Mel Chischilly Jr.
Signature
1-8-2014
Date

Workorder Receipt Checklist

United Nuclear Corporation

C14010261

Login completed by: Dorian Quis
Date Received: 1/10/2014

Reviewed by: Kathy Hamre
Received by: dw

Reviewed Date: 1/13/2014
Carrier name: Ground

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all 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 in all shipping container(s)/cooler(s)?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	2.0°C No Ice		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	Not Applicable ☐

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.

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- 1-1-2014 (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	1-8-14	0930	✓ (8oz.) m	✓ m	✓ m	✓ m	✓ m		M. Chischilly	As, Be, Ca, Cd, Cl, HCO_3,
604	1-8-14	1135	↓	↓	↓	↓	↓		↓	K, Mg, Mn, Na, NH_4, Ni,
515-A	1-8-14	1050	↓	↓	↓	↓	↓		↓	NO_3, Pb, Pb-210, pH, Se,
RINSATE	1-8-14	1215	↓	↓	↓	↓	↓		↓	SO_4, TDS, Th-230, U, V,
FIELD BLANK	1-8-14	1245	↓	↓	↓	↓	↓		↓	Chloroform, Gross
										Alpha (-) U & Rn,
										Combined Ra-226 & Ra-228, Al,
										Co, Mo & Total Trihalomethanes (TTHMs)
										C14010262

Sampled by: M. Chischilly Jr.

Dispatched by: [signature]

1-8-2014 1400
Date Time

Carrier: UPS- Ground

9 iced cooler
Method of Shipment

Received by: [signature]

1-9-14 1245
Date Time

[signature]
Lab Receipt Signature

1-10-14 915
Date Time

The above analysis to be performed is authorized by:

M. Chischilly Jr.
Signature

1-8-2014
Date

Workorder Receipt Checklist

United Nuclear Corporation

C14010262

Login completed by: Dorian Quis
Date Received: 1/10/2014
Reviewed by: Kathy Hamre
Received by: dw
Reviewed Date: 1/13/2014
Carrier name: Ground

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all 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 in all shipping container(s)/cooler(s)?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	2.0°C On Ice		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	Not Applicable ☐

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.

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

UPS-G
5.6°C

CHAIN OF CUSTODY

ZONE – 1

Energy Laboratories, Inc.
Laboratory

2393 N. Salt Creek Highway
Address

Casper WY 82601
City State Zip

307-235-0515
Phone No.

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

UNC Submittal No. TE- 2-1-2014 (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	1-13-14	0903	✓(8oz.) mc	✓ mc	✓ mc	✓ mc	✓ mc		M. Chischilly	As, Be, Ca, Cd, Cl, HCO_3,
EPA-5	1-13-14	1005	↓	↓	↓	↓	↓		↓	K, Mg, Mn, Na, NH_4, Ni,
EPA-7	1-13-14	1055	↓	↓	↓	↓	↓		↓	NO_3, Pb, Pb-210, pH, Se,
EPA-2	1-13-14	1200	↓	↓	↓	↓	↓		↓	SO_4, TDS, Th-230, U, V,
EPA-2 DUPLICATE	1-13-14	1235	↓	↓	↓	↓	↓		↓	Chloroform, Gross
TWQ-142	1-14-14	1205	↓	↓	↓	↓	↓		↓	Alpha (-) U & Rn,
										Combined Ra-226 & Ra-228, Al,
										Co, Mo & Total Trihalomethanes (TTHMs)
										C14010520

Sampled by: Maf Chischilly Jr.
Dispatched by: Maf Chischilly Jr.
Carrier: UPS - Ground
7 iced cooler
Method of Shipment

Received by Jerd Clark
1-15-14 1710
Date Time

1-13-14 & 1-14-14 @ 1730
Date Time
Lab Receipt Signature
1-17-14 915
Date Time

The above analysis to be performed is authorized by:
Maf Chischilly Jr.
Signature
1-15-2014
Date

Workorder Receipt Checklist

United Nuclear Corporation

C14010520

Login completed by: Dorian Quis
Date Received: 1/17/2014
Reviewed by: Kathy Hamre
Received by: th
Reviewed Date: 1/20/2014
Carrier name: Ground

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all 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 in all shipping container(s)/cooler(s)?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	5.6°C On Ice		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	Not Applicable ☐

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.

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 - 3

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

UNC Submittal No. TE- 2-1-2014 (PG. 2 OF 2)

Sample Description	Date	Time	PRESERVATION: Filter 0.45u	plain	HNO_3	H_2SO_4	$Na_2S_2O_3$	HCl	Preserved By	Analysis Required (For all samples listed)
708	1-13-14	1320	✓ (8oz.) ME	✓ ME	✓ ME	✓ ME	✓ ME		M. Chischilly	As, Be, Ca, Cd, Cl, HCO_3,
EPA-13	1-13-14	1447								K, Mg, Mn, Na, NH_4, Ni,
719	1-13-14	1534								NO_3, Pb, Pb-210, pH, Se,
420	1-13-14	1700								SO_4, TDS, Th-230, U, V,
717	1-14-14	0915								Chloroform, Gross
717 DUPLICATE	1-14-14	1005								Alpha (-) U & Rn,
EPA-14	1-14-14	1035								Combined Ra-226 & Ra-228, Al,
MW-7	1-14-14	1250								Co, Ho & Total Trihalomethanes (TTHMs)
RINSATE	1-14-14	1530								
FIELD BLANK	1-14-14	1615								
711	1-15-14	1210								
MW-6	1-15-14	1240	↓	↓	↓	↓	↓		↓	

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

Received by Fred Chischilly
1-15-14 1710
Date Time

1-13-14 & 1-14-14 & 1-15-14
Date @ 1730 & 1710 Time
Lab Receipt Signature
1-17-14 9:15
Date Time

The above analysis to be performed is authorized by:
Mel Chischilly Jr.
Signature
1-15-2014
Date

C14010521

Workorder Receipt Checklist

United Nuclear Corporation

C14010521

Login completed by: Debra Williams
Date Received: 1/17/2014

Reviewed by: Kathy Hamre
Received by: dw

Reviewed Date: 1/20/2014
Carrier name: Ground

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all 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 in all shipping container(s)/cooler(s)?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	4.8°C On Ice		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	Not Applicable ☐

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.

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-3-1-2014

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	1-28-14	1235						✓ MC	M. Chischilly	As, Be, Ca, Cd, Cl, HCO_3,
515-A	1-28-14	1245						✓ MC	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)
										Note: Resamples for TTHMs

Sampled by: Mel Chischilly Jr.
Dispatched by:
Carrier: Fed Ex - Ground
1 iced cooler
Method of Shipment

Received by Mel Chischilly Jr.
1-28-14 2:41
Date Time

1-28-14 1300
Date Time
Lab Receipt Signature
1-31-14 840
Date Time

The above analysis to be performed is authorized by:
Mel Chischilly Jr.
Signature
1-28-2014
Date

6.6°C
C14010872

Workorder Receipt Checklist

United Nuclear Corporation

C14010872

Login completed by: Debra Williams
Date Received: 1/31/2014

Reviewed by: BL2000\khelm
Received by: dw

Reviewed Date: 2/3/2014
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all 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 in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	6.6°C On Ice		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

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.

Contact and Corrective Action Comments:

Re-sample for C14010262.

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

UPS-G
6.2°C

Energy Laboratories, Inc.
Laboratory
2393 N. Salt Creek Highway
Address
Casper WY 82601
City State Zip
(307) 235-0515
Phone No.

CHAIN OF CUSTODY

ZONE - 3

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

UNC Submittal No. EW- 1-1-2014

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	1-14-14	1135		✓					M. Chischilly	Bicarbonate (HCO_3), Chloride (Cl), pH, TDS
PB-3		1355								
PB-4		1425								
NW-1		1228								
NW-4		1248								
RW-A		1308								
NW-3		1329								
NW-2		1411								
									C14010518	

Sampled By: Mel Chischilly Jr.
Dispatched By: Mel Chischilly Jr. 1-15-14 1710
Date Time
Carrier: UPS- Ground
7 iced cooler
Method of Shipment

Received By: [signature] 1-14-14 1615
Date Time
Lab Receipt Signature
1-17-14 / 915
Date Time

The above analysis to be performed is authorized by:
Mel Chischilly Jr.
Signature
1-15-2014
Date

Workorder Receipt Checklist

United Nuclear Corporation

C14010518

Login completed by: Dorian Quis
Date Received: 1/17/2014

Reviewed by: Kathy Hamre
Received by: th

Reviewed Date: 1/20/2014
Carrier name: Ground

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all 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 in all shipping container(s)/cooler(s)?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	6.2°C On Ice		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	Not Applicable ☐

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.

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- 4-4-2014

C1404 0132

Sample Description	Date	Time	PRESERVATION: Filter 0.45u	plain	HNO_3	H_2SO_4	$Na_2S_2O_3$	HCl	Preserved By	Analysis Required (For all samples listed)
509-D	3-31-14	0850	✓(8oz.) MC	✓ MC	✓ MC	✓ MC	✓ MC		M. Chischilly	As, Be, Ca, Cd, Cl, HCO_3,
EPA-23		0950								K, Mg, Mn, Na, NH_4, Ni,
803		1037								NO_3, Pb, Pb-210, pH, Se,
808		1125								SO_4, TDS, Th-230, U, V,
802		1210								Chloroform, Gross
801		1300								Alpha (-) U & Rn,
632		1350								Combined Ra-226 & Ra-228, Al,
GW-2		1435								Co, Mo & Total Trihalomethanes (TTHMs)
GW-1		1540								
EPA-28		1635								
EPA-28 DUPLICATE	↓	1720	↓	↓	↓	↓	↓		↓	

Sampled by: Mark Chischilly Jr.
Dispatched by: [signature]
Carrier: UPS-Ground
4 iced cooler
Method of Shipment

Received by Fred Clark
4-1-14 Date
8:34 Time

3-31-14 Date 1730 Time
[signature]
Lab Receipt Signature
4-3-14 Date 930 Time

The above analysis to be performed is authorized by:
Mark Chischilly Jr.
Signature
4-1-2014
Date

Workorder Receipt Checklist

United Nuclear Corporation

C14040132

Login completed by: Debra Williams
Date Received: 4/3/2014

Reviewed by: BL2000\khelm
Received by: dw

Reviewed Date: 4/4/2014
Carrier name: Ground

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all 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 in all shipping container(s)/cooler(s)?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	9.4°C On Ice		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	Not Applicable ☐

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.

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- 5-4-2014 (Pg. 1 of 2)

C14040184

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)
SBL-1	4-1-14	0950	✓ (8oz.) ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓		M. Chischilly	As, Be, Ca, Cd, Cl, HCO_3,
624	↓	0905	↓	↓	↓	↓	↓		↓	K, Mg, Mn, Na, NH_4, Ni,
627	↓	1102	↓	↓	↓	↓	↓		↓	NO_3, Pb, Pb-210, pH, Se,
EPA-25	↓	1205	↓	↓	↓	↓	↓		↓	SO_4, TDS, Th-230, U, V,
GW-3	↓	1305	↓	↓	↓	↓	↓		↓	Chloroform, Gross
										Alpha (-) U & Rn,
										Combined Ra-226 & Ra-228, Al,
										Co, Mo & Total Trihalomethanes (TTHMs)

Sampled by: Max Chischilly Jr.
Dispatched by: Doris Younger ~~UPS Ground~~

Carrier: UPS-Ground

7 iced cooler
Method of Shipment

Received by: Francheska Hillreath 4-1-14 1800
Date Time

4-2-14 2:35
Date Time

Lab Receipt Signature: [signature]
4/4/14 940
Date Time

The above analysis to be performed is authorized by:
Signature: Max Chischilly Jr.
Date: 4-2-14

Workorder Receipt Checklist

United Nuclear Corporation

C14040184

Login completed by: Debra Williams
Date Received: 4/4/2014
Reviewed by: BL2000\khelm
Received by: dw
Reviewed Date: 4/7/2014
Carrier name: Ground

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all 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 in all shipping container(s)/cooler(s)?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	4.8°C On Ice		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	Not Applicable ☐

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.

Contact and Corrective Action Comments:

The following bottles are missing: Sample SBL-1 - 250mL HNO3 bottle for dissolved metals, 250mL raw for speciated arsenic. Sample 624 - 500mL raw bottle. Sample 627 - 250ml filtered HNO3 for dissolved metals, 250mL unfiltered HNO3 for total metals, 250mL raw for speciated arsenic, 500mL H2SO4 for nitrate and ammonia. Sample EPA-25 - 250ml filtered HNO3 for dissolved metals, 250mL unfiltered HNO3 for total metals, 500mL raw, 500 H2SO4 for nitrate and ammonia, 2 liter HNO3 bottle for Pb210. ** Received missing bottles 4/23/14. All bottles have collection date of 4/21/14.

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

ZONE - 1

Energy Laboratories, Inc.
Laboratory

2393 N. Salt Creek Highway
Address

Casper WY 82601
City State Zip

307-235-0515
Phone No.

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

UNC Submittal No. TE- 5-4-2014 (PG. 2 OF 2)

C14040183

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	4-1-14	1430	✓(8oz.) m	✓ m	✓ m	✓ m	✓ m		m. chischilly	As, Be, Ca, Cd, Cl, HCO_3,
515-A	↓	1535	↓	↓	↓	↓	↓		↓	K, Mg, Mn, Na, NH_4, Ni,
604	↓	1625	↓	↓	↓	↓	↓		↓	NO_3, Pb, Pb-210, pH, Se,
EPA-7	↓	1715	↓	↓	↓	↓	↓		↓	SO_4, TDS, Th-230, U, V,
EPA-5	↓	1800	↓	↓	↓	↓	↓		↓	Chloroform, Gross
EPA-4	4-2-14	0905	↓	↓	↓	↓	↓		↓	Alpha (-) U & Rn,
EPA-2	↓	1040	↓	↓	↓	↓	↓		↓	Combined Ra-226 & Ra-228, Al,
EPA-2 DUPLICATE	↓	1120	↓	↓	↓	↓	↓		↓	Co, Mo & Total Trihalomethanes (TTHMs)
TWQ-142	↓	1205	↓	↓	↓	↓	↓		↓	
RINSATE	↓	1300	↓	↓	↓	↓	↓		↓	
FIELD BLANK	↓	1200	↓	↓	↓	↓	↓		↓	

Sampled by: [signature] Received by: [signature] 4-1-14 1800 / 4-2-14 1300
Date Time

Dispatched by: [signature] 4-2-14 2:35
Date Time

Carrier: UPS - Ground

7 iced cooler
Method of Shipment

[signature]
Lab Receipt Signature

4-4-14 946
Date Time

4.8 on ice

The above analysis to be performed is authorized by:

[signature]
Signature

4-2-14
Date

Workorder Receipt Checklist

United Nuclear Corporation

C14040183

Login completed by: Debra Williams
Date Received: 4/4/2014

Reviewed by: BL2000\khelm
Received by: dw

Reviewed Date: 4/7/2014
Carrier name: Ground

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all 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 in all shipping container(s)/cooler(s)?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	4.8°C On Ice		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	Not Applicable ☐

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.

Contact and Corrective Action Comments:

Sample 604 is missing a 500mL raw bottle, sample EPA-5 is missing a 250mL filtered HNO3 bottle for dissolved metals and a 250mL raw for speciated arsenic.
Received the missings samples on 4/23/14.

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- 6-4-2014

C14040377

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	4-7-14	0858	✓ (8oz) NC	✓ NC	✓ NC	✓ NC	✓ NC		M. Chischilly	As, Be, Ca, Cd, Cl, HCO_3,
517		0942								K, Mg, Mn, Na, NH_4, Ni,
708		1055								NO_3, Pb, Pb-210, pH, Se,
711		1205								SO_4, TDS, Th-230, U, V,
EPA-13		1245								Chloroform, Gross
719		1335								Alpha (-) U & Rn,
420		1500								Combined Ra-226 & Ra-228, Al,
717		1600								Co, Mo & Total Trihalomethanes (TTHMs)
717 DUPLICATE		1630								
EPA-14	↓	1700	↓	↓	↓	↓	↓		↓	

Sampled by: M. Chischilly Jr.
Dispatched by:
Carrier: UPS-Ground
4 iced cooler
Method of Shipment

Received by: Laura McCain
4-8-14 Date
5:30 Time

4-7-14 Date 1800 Time
Laura McCain
Lab Receipt Signature
4-10-14 Date 13:00 Time
09:25

The above analysis to be performed is authorized by:
M. Chischilly Jr.
Signature
4-8-2014
Date

Workorder Receipt Checklist

United Nuclear Corporation

C14040377

Login completed by: Debra Williams
Date Received: 4/10/2014
Reviewed by: BL2000\khelm
Received by: lmc
Reviewed Date: 4/11/2014
Carrier name: Ground

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all 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 in all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Applicable ☑
Container/Temp Blank temperature:	7.0°C On Ice		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	Not Applicable ☐

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.

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 - 3

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

UNC Submittal No. TE- 7-4-2014

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)
mw-6	4-8-14	0900	✓(8oz.) ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓		M. Chischilly	As, Be, Ca, Cd, Cl, HCO_3,
mw-7	4-8-14	1150	✓(8oz.) ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓		M. Chischilly	K, Mg, Mn, Na, NH_4, Ni,
										NO_3, Pb, Pb-210, pH, Se,
Rinsate	4-8-14	1430	—	—	—	—	—		→	SO_4, TDS, Th-230, U, V,
										Chloroform, Gross
FieldBlank	4-8-14	1520	—	—	—	—	—		→	Alpha (-) U & Rn,
										Combined Ra-226 & Ra-228, Al,
										Co, Mo & Total Trihalomethanes (TTHMs)

Sampled by: [signature]
Dispatched by: [signature]
Carrier: UPS- Ground
3 iced cooler
Method of Shipment

Received by [signature]
4-9-14 11:53
Date Time

4-8-14 1500
Date Time
[signature]
Lab Receipt Signature
4-14-14 840
Date Time

The above analysis to be performed is authorized by:
[signature]
Signature
4-9-2014
Date

Workorder Receipt Checklist

United Nuclear Corporation

C14040436

Login completed by: Debra Williams
Date Received: 4/14/2014

Reviewed by: BL2000\khelm
Received by: dw

Reviewed Date: 4/15/2014
Carrier name: Ground

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all 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 in all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Applicable ☑
Container/Temp Blank temperature:	9.6°C On Ice		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	Not Applicable ☐

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.

Contact and Corrective Action Comments:

Samples Rinsate and Field Blank were not listed on the COC. These samples were put on hold until client returns phone call from 04-14-14. Per phone call with client on 04-16-14 at 11:10, remove hold and continue with analysis.

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

UNC Submittal No. EW-2-4-2014

Energy Laboratories, Inc.
Laboratory
2393 N. Salt Creek Highway
Address
Casper WY 82601
City State Zip
(307) 235-0515
Phone No.

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	4-8-14	1252		✓					M. Chischilly	Bicarbonate (HCO_3), Chloride (Cl), pH, TDS
PB-4	4-8-14	1309								
PB-3	4-8-14	1340								
NW-1	4-9-14	0920								
NW-3	4-9-14	0940								
NW-5	4-9-14	1000								
NW-2	4-9-14	1020								
RW-A	4-9-14	1043		↓					↓	

Sampled By: [signature] Received By: Mel Chischilly Jr. 4-8-14 @ 1500
4-9-14 @ 1200
Date Time

Dispatched By: Dorie Young 4-9-14 11:52
Date Time

Lab Receipt Signature 935

Carrier: UPS-Ground 4-11-14 UPS-G
Date Time

3 iced cooler
Method of Shipment

The above analysis to be performed is authorized by:
Mel Chischilly Jr.
Signature
4-9-2014
Date

13.2

Workorder Receipt Checklist

United Nuclear Corporation

C14040424

Login completed by: Tessa Parke
Date Received: 4/11/2014

Reviewed by: BL2000\khelm
Received by: dw

Reviewed Date: 4/17/2014
Carrier name: Ground

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all 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 in all shipping container(s)/cooler(s)?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	13.2°C On Ice		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	Not Applicable ☐

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.

Contact and Corrective Action Comments:

None

APPENDIX – D (1 OF 2)

FIRST QUARTER

LABORATORY QUALITY CONTROL AND

PERFORMANCE REPORT

ANALYTICAL SUMMARY REPORT

February 18, 2014

United Nuclear Corporation
21 Miles NE of Gallup
Gallup, NM 87305

Workorder No.: C14010260 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 1/10/2014 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C14010260-001	509-D	01/06/14 9:35	01/10/14	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Total Alkalinity Anion - Cation Balance Arsenic Speciation, Total 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
C14010260-002	EPA-23	01/06/14 10:25	01/10/14	Aqueous	Same As Above
C14010260-003	803	01/06/14 11:10	01/10/14	Aqueous	Same As Above
C14010260-004	808	01/06/14 11:55	01/10/14	Aqueous	Same As Above
C14010260-005	802	01/06/14 12:40	01/10/14	Aqueous	Same As Above
C14010260-006	801	01/06/14 13:25	01/10/14	Aqueous	Same As Above
C14010260-007	GW-1	01/06/14 14:15	01/10/14	Aqueous	Same As Above
C14010260-008	GW-2	01/06/14 15:25	01/10/14	Aqueous	Same As Above
C14010260-009	632	01/06/14 16:15	01/10/14	Aqueous	Same As Above
C14010260-010	624	01/07/14 9:20	01/10/14	Aqueous	Same As Above
C14010260-011	SBL-1	01/07/14 10:10	01/10/14	Aqueous	Same As Above
C14010260-012	EPA-28	01/07/14 11:00	01/10/14	Aqueous	Same As Above
C14010260-013	EPA-28 Duplicate	01/07/14 11:45	01/10/14	Aqueous	Same As Above
C14010260-014	627	01/07/14 14:32	01/10/14	Aqueous	Same As Above
C14010260-015	EPA-25	01/07/14 15:35	01/10/14	Aqueous	Same As Above
C14010260-016	GW-3	01/07/14 16:30	01/10/14	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:

Report Proofing Specialist

Digitally signed by
Sheri M. Mead
Date: 2014.02.18 15:28:08 -07:00

CLIENT: United Nuclear Corporation
Project: SW Alluvium
Sample Delivery Group: C14010260

Report Date: 02/18/14

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:** 02/18/14

Project: SW Alluvium **Work Order:** C14010260

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2320 B										Batch: R182501
Sample ID: MBLK	2	Method Blank				Run: MANTECH_140110A				01/10/14 14:12
Alkalinity, Total as CaCO3		0.9	mg/L	0.6						
Bicarbonate as HCO3		1	mg/L	1						
Sample ID: LCS_131219		Laboratory Control Sample				Run: MANTECH_140110A				01/10/14 14:29
Alkalinity, Total as CaCO3		257	mg/L	5.0	102	90	110			
Sample ID: C14010231-001ADUP	2	Sample Duplicate				Run: MANTECH_140110A				01/10/14 14:45
Alkalinity, Total as CaCO3		218	mg/L	5.0				0.6	10	
Bicarbonate as HCO3		265	mg/L	5.0				0.6	10	
Sample ID: C14010231-002AMS		Sample Matrix Spike				Run: MANTECH_140110A				01/10/14 15:04
Alkalinity, Total as CaCO3		477	mg/L	5.0	98	80	120			
Sample ID: C14010260-011AMS		Sample Matrix Spike				Run: MANTECH_140110A				01/10/14 19:09
Alkalinity, Total as CaCO3		634	mg/L	5.0	106	80	120			
Sample ID: C14010262-002ADUP	2	Sample Duplicate				Run: MANTECH_140110A				01/10/14 20:26
Alkalinity, Total as CaCO3		20.8	mg/L	5.0				1.3	10	
Bicarbonate as HCO3		25.4	mg/L	5.0				1.3	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: 02/18/14
Project: SW Alluvium
Work Order: C14010260

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C										Batch: TDS140110A
Sample ID: MB-1_140110A		Method Blank				Run: BAL-19_140110B				01/10/14 15:00
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	7						
Sample ID: LCS-2_140110A		Laboratory Control Sample				Run: BAL-19_140110B				01/10/14 15:00
Solids, Total Dissolved TDS @ 180 C		1980	mg/L	20	99	90	110			
Sample ID: C14010258-005A MS		Sample Matrix Spike				Run: BAL-19_140110B				01/10/14 15:10
Solids, Total Dissolved TDS @ 180 C		7360	mg/L	40	98	90	110			
Sample ID: C14010260-009A DUP		Sample Duplicate				Run: BAL-19_140110B				01/10/14 15:14
Solids, Total Dissolved TDS @ 180 C		6890	mg/L	100				0.1	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:** 02/18/14

Project: SW Alluvium **Work Order:** C14010260

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A3114 B									Analytical Run: CVAA-C202_140113A	
Sample ID: ICV		Initial Calibration Verification Standard							01/13/14 10:15	
Selenium-IV		0.0270	mg/L	0.0010	108	90	110			
Sample ID: CCV		Continuing Calibration Verification Standard							01/13/14 10:33	
Selenium-IV		0.0273	mg/L	0.0010	109	90	110			
Method: A3114 B									Batch: 40319	
Sample ID: MB-40319		Method Blank				Run: CVAA-C202_140113A			01/13/14 10:18	
Selenium-IV		ND	mg/L	0.0005						
Sample ID: LCS-40319		Laboratory Control Sample				Run: CVAA-C202_140113A			01/13/14 10:20	
Selenium-IV		0.0270	mg/L	0.0010	108	90	110			
Sample ID: C14010260-001CMS		Sample Matrix Spike				Run: CVAA-C202_140113A			01/13/14 10:23	
Selenium-IV		0.0246	mg/L	0.0010	99	85	115			
Sample ID: C14010260-001CMSD		Sample Matrix Spike Duplicate				Run: CVAA-C202_140113A			01/13/14 10:24	
Selenium-IV		0.0247	mg/L	0.0010	99	85	115	0.1	10	
Sample ID: C14010260-011CMS		Sample Matrix Spike				Run: CVAA-C202_140113A			01/13/14 10:44	
Selenium-IV		0.0267	mg/L	0.0010	107	85	115			
Sample ID: C14010260-011CMSD		Sample Matrix Spike Duplicate				Run: CVAA-C202_140113A			01/13/14 10:45	
Selenium-IV		0.0270	mg/L	0.0010	108	85	115	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:** 02/18/14

Project: SW Alluvium **Work Order:** C14010260

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **A4500-H B**									Analytical Run: PHSC_101-C_140110A	
Sample ID: **pH 6.86**	Initial Calibration Verification Standard								01/10/14 08:28	
pH		6.85	s.u.	0.010	100	98	102			
Sample ID: **CCV - pH 7**	Continuing Calibration Verification Standard								01/10/14 11:17	
pH		6.98	s.u.	0.010	100	98	102			
Method: **A4500-H B**									Batch: R182457	
Sample ID: **C14010260-005ADUP**	Sample Duplicate					Run: PHSC_101-C_140110A			01/10/14 14:19	
pH		6.56	s.u.	0.010				0.3	3	
Sample ID: **C14010260-015ADUP**	Sample Duplicate					Run: PHSC_101-C_140110A			01/10/14 15:00	
pH		6.85	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: 02/18/14
Project: SW Alluvium
Work Order: C14010260

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-NH3 G									Analytical Run: TECHNICON_140114A	
Sample ID: CCV-16		Continuing Calibration Verification Standard							01/14/14 13:13	
Nitrogen, Ammonia as N		1.01	mg/L	0.050	101	90	110			
Sample ID: CCV-30		Continuing Calibration Verification Standard							01/14/14 13:37	
Nitrogen, Ammonia as N		1.08	mg/L	0.050	108	90	110			
Method: A4500-NH3 G									Batch: R182599	
Sample ID: MBLK-1		Method Blank				Run: TECHNICON_140114A			01/14/14 12:48	
Nitrogen, Ammonia as N		ND	mg/L	0.006						
Sample ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_140114A			01/14/14 12:52	
Nitrogen, Ammonia as N		1.90	mg/L	0.050	97	90	110			
Sample ID: C14010260-005DMS		Sample Matrix Spike				Run: TECHNICON_140114A			01/14/14 13:18	
Nitrogen, Ammonia as N		1.71	mg/L	0.050	87	90	110			S
- Matrix spike recoveries outside the acceptance range are considered matrix-related.										
Sample ID: C14010260-005DMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_140114A			01/14/14 13:20	
Nitrogen, Ammonia as N		1.70	mg/L	0.050	87	90	110	0.6	10	S
- Matrix spike recoveries outside the acceptance range are considered matrix-related.										
Sample ID: C14010260-015DMS		Sample Matrix Spike				Run: TECHNICON_140114A			01/14/14 13:42	
Nitrogen, Ammonia as N		1.75	mg/L	0.050	89	90	110			S
- Matrix spike recoveries outside the acceptance range are considered matrix-related.										
Sample ID: C14010260-015DMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_140114A			01/14/14 13:43	
Nitrogen, Ammonia as N		1.74	mg/L	0.050	89	90	110	0.6	10	S
- Matrix spike recoveries outside the acceptance range are considered matrix-related.										
Method: A4500-NH3 G									Batch: R182638	
Sample ID: MBLK-1		Method Blank				Run: TECHNICON_140115A			01/15/14 15:03	
Nitrogen, Ammonia as N		ND	mg/L	0.006						
Sample ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_140115A			01/15/14 15:06	
Nitrogen, Ammonia as N		1.81	mg/L	0.050	92	90	110			
Sample ID: C14010260-005DMS		Sample Matrix Spike				Run: TECHNICON_140115A			01/15/14 15:20	
Nitrogen, Ammonia as N		1.78	mg/L	0.050	91	90	110			
Sample ID: C14010260-005DMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_140115A			01/15/14 15:21	
Nitrogen, Ammonia as N		1.81	mg/L	0.050	92	90	110	1.7	10	
Sample ID: C14010260-015DMS		Sample Matrix Spike				Run: TECHNICON_140115A			01/15/14 15:25	
Nitrogen, Ammonia as N		1.79	mg/L	0.050	91	90	110			
Sample ID: C14010260-015DMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_140115A			01/15/14 15:26	
Nitrogen, Ammonia as N		1.80	mg/L	0.050	91	90	110	0.6	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:** 02/18/14

Project: SW Alluvium **Work Order:** C14010260

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E1632AM									Analytical Run: SUB-H94478	
Sample ID: AS-ICV 25ppb-1/24/20		Initial Calibration Verification Standard							01/24/14 13:25	
Arsenic-III		25.6	ug/L	5.0	103	87.6	114			
Sample ID: AS-50.0-1/24/2014		Continuing Calibration Verification Standard							01/24/14 13:32	
Arsenic-III		49.6	ug/L	5.0	99	85	115			
Sample ID: AS-50.0-1/24/2014		Continuing Calibration Verification Standard							01/24/14 14:55	
Arsenic-III		49.7	ug/L	5.0	99	85	115			
Method: E1632AM									Batch: H_R94478	
Sample ID: AS-LFB 50ppb-1/24/20		Laboratory Fortified Blank				Run: SUB-H94478			01/24/14 13:47	
Arsenic-III		49.4	ug/L	5.0	99	55	146			
Sample ID: ICB		Method Blank				Run: SUB-H94478			01/24/14 13:55	
Arsenic-III		ND	ug/L	0.4						
Sample ID: C14010260-003E		Sample Matrix Spike				Run: SUB-H94478			01/24/14 14:25	
Arsenic-III		49.5	ug/L	5.0	99	55	146			
Sample ID: C14010260-003E		Sample Matrix Spike Duplicate				Run: SUB-H94478			01/24/14 14:32	
Arsenic-III		52.6	ug/L	5.0	105	55	146	6.1	20	
Method: E1632AM									Analytical Run: SUB-H94562	
Sample ID: AS-ICV 25ppb-1/27/20		Initial Calibration Verification Standard							01/27/14 11:51	
Arsenic-III		24.2	ug/L	5.0	97	87.6	114			
Sample ID: AS-50.0-1/27/2014		Continuing Calibration Verification Standard							01/27/14 11:59	
Arsenic-III		48.3	ug/L	5.0	97	85	115			
Sample ID: AS-50.0-1/27/2014		Continuing Calibration Verification Standard							01/27/14 13:27	
Arsenic-III		49.7	ug/L	5.0	99	85	115			
Method: E1632AM									Batch: H_R94562	
Sample ID: AS-LFB 50ppb-1/27/20		Laboratory Fortified Blank				Run: SUB-H94562			01/27/14 12:15	
Arsenic-III		49.8	ug/L	5.0	100	55	146			
Sample ID: ICB		Method Blank				Run: SUB-H94562			01/27/14 12:23	
Arsenic-III		ND	ug/L	0.4						
Sample ID: H14010209-011E MS		Sample Matrix Spike				Run: SUB-H94562			01/27/14 12:39	
Arsenic-III		52.7	ug/L	5.0	104	55	146			
Sample ID: H14010209-011E MSD		Sample Matrix Spike Duplicate				Run: SUB-H94562			01/27/14 12:47	
Arsenic-III		53.0	ug/L	5.0	105	55	146	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:** 02/18/14

Project: SW Alluvium **Work Order:** C14010260

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-C_140120A	
Sample ID: ICV	7	Initial Calibration Verification Standard							01/20/14 10:50	
Aluminum		5.04	mg/L	0.10	101	95	105			
Cadmium		0.500	mg/L	0.010	100	95	105			
Cobalt		0.994	mg/L	0.010	99	95	105			
Manganese		5.09	mg/L	0.010	102	95	105			
Molybdenum		1.05	mg/L	0.10	105	95	105			
Nickel		1.00	mg/L	0.050	100	95	105			
Vanadium		0.998	mg/L	0.10	100	95	105			
Sample ID: ICSA	7	Interference Check Sample A							01/20/14 11:18	
Aluminum		514	mg/L	0.10	103	80	120			
Cadmium		0.00280	mg/L	0.010						
Cobalt		-0.00300	mg/L	0.010						
Manganese		0.000400	mg/L	0.010						
Molybdenum		-0.0180	mg/L	0.10						
Nickel		-0.00340	mg/L	0.050						
Vanadium		0.0122	mg/L	0.10						
Sample ID: ICSAB	7	Interference Check Sample AB							01/20/14 11:22	
Aluminum		518	mg/L	0.10	104	80	120			
Cadmium		1.02	mg/L	0.010	102	80	120			
Cobalt		0.490	mg/L	0.010	98	80	120			
Manganese		0.523	mg/L	0.010	105	80	120			
Molybdenum		-0.0169	mg/L	0.10						
Nickel		0.990	mg/L	0.050	99	80	120			
Vanadium		0.529	mg/L	0.10	106	80	120			
Method: E200.7									Batch: 40326	
Sample ID: MB-40326	7	Method Blank				Run: ICP2-C_140120A			01/20/14 14:43	
Aluminum		ND	mg/L	0.009						
Cadmium		ND	mg/L	0.0006						
Cobalt		ND	mg/L	0.002						
Manganese		ND	mg/L	0.0002						
Molybdenum		ND	mg/L	0.002						
Nickel		ND	mg/L	0.002						
Vanadium		ND	mg/L	0.01						
Sample ID: LCS3-40326	7	Laboratory Control Sample				Run: ICP2-C_140120A			01/20/14 14:47	
Aluminum		2.52	mg/L	0.030	101	85	115			
Cadmium		0.266	mg/L	0.0010	106	85	115			
Cobalt		0.516	mg/L	0.0050	103	85	115			
Manganese		2.66	mg/L	0.0010	106	85	115			
Molybdenum		0.533	mg/L	0.0023	107	85	115			
Nickel		0.525	mg/L	0.0050	105	85	115			
Vanadium		0.515	mg/L	0.014	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:** 02/18/14

Project: SW Alluvium **Work Order:** C14010260

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7										Batch: 40326
Sample ID: C14010260-003CMS3	7	Sample Matrix Spike				Run: ICP2-C_140120A				01/20/14 15:56
Aluminum		2.58	mg/L	0.047	101	70	130			
Cadmium		0.252	mg/L	0.0028	101	70	130			
Cobalt		0.525	mg/L	0.0081	105	70	130			
Manganese		5.36	mg/L	0.0011	102	70	130			
Molybdenum		0.565	mg/L	0.011	107	70	130			
Nickel		0.528	mg/L	0.012	106	70	130			
Vanadium		0.571	mg/L	0.069	114	70	130			
Sample ID: C14010260-003CMSD3	7	Sample Matrix Spike Duplicate				Run: ICP2-C_140120A				01/20/14 16:00
Aluminum		2.50	mg/L	0.047	98	70	130	3.1	20	
Cadmium		0.252	mg/L	0.0028	101	70	130	0.2	20	
Cobalt		0.524	mg/L	0.0081	105	70	130	0.2	20	
Manganese		5.36	mg/L	0.0011	101	70	130	0.2	20	
Molybdenum		0.555	mg/L	0.011	105	70	130	1.9	20	
Nickel		0.522	mg/L	0.012	104	70	130	1.1	20	
Vanadium		0.576	mg/L	0.069	115	70	130	0.8	20	
Sample ID: C14010260-012CMS3	7	Sample Matrix Spike				Run: ICP2-C_140120A				01/20/14 17:08
Aluminum		2.49	mg/L	0.047	99	70	130			
Cadmium		0.251	mg/L	0.0028	100	70	130			
Cobalt		0.515	mg/L	0.0081	103	70	130			
Manganese		3.36	mg/L	0.0011	103	70	130			
Molybdenum		0.559	mg/L	0.011	109	70	130			
Nickel		0.522	mg/L	0.012	104	70	130			
Vanadium		0.570	mg/L	0.069	114	70	130			
Sample ID: C14010260-012CMSD3	7	Sample Matrix Spike Duplicate				Run: ICP2-C_140120A				01/20/14 17:12
Aluminum		2.58	mg/L	0.047	103	70	130	3.7	20	
Cadmium		0.253	mg/L	0.0028	101	70	130	0.8	20	
Cobalt		0.520	mg/L	0.0081	104	70	130	1.0	20	
Manganese		3.36	mg/L	0.0011	103	70	130	0.0	20	
Molybdenum		0.556	mg/L	0.011	108	70	130	0.6	20	
Nickel		0.528	mg/L	0.012	105	70	130	1.0	20	
Vanadium		0.560	mg/L	0.069	112	70	130	1.8	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: 02/18/14
Project: SW Alluvium
Work Order: C14010260

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP4-C_140114A	
Sample ID: ICV	4	Initial Calibration Verification Standard							01/14/14 12:22	
Calcium		49.6	mg/L	0.50	99	95	105			
Magnesium		49.3	mg/L	0.50	99	95	105			
Potassium		48.2	mg/L	0.50	96	95	105			
Sodium		49.1	mg/L	0.50	98	95	105			
Sample ID: ICSA	4	Interference Check Sample A							01/14/14 12:36	
Calcium		465	mg/L	0.50	93	80	120			
Magnesium		498	mg/L	0.50	100	80	120			
Potassium		0.0214	mg/L	0.50						
Sodium		-0.00758	mg/L	0.50						
Sample ID: ICSAB	4	Interference Check Sample AB							01/14/14 12:40	
Calcium		462	mg/L	0.50	92	80	120			
Magnesium		496	mg/L	0.50	99	80	120			
Potassium		0.0212	mg/L	0.50						
Sodium		-0.180	mg/L	0.50						
Method: E200.7									Batch: R182612	
Sample ID: MB-140114A	4	Method Blank				Run: ICP4-C_140114A			01/14/14 12:59	
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-140114A	4	Laboratory Fortified Blank				Run: ICP4-C_140114A			01/14/14 13:02	
Calcium		46.8	mg/L	0.50	94	85	115			
Magnesium		46.6	mg/L	0.50	93	85	115			
Potassium		45.9	mg/L	0.50	92	85	115			
Sodium		46.6	mg/L	0.50	93	85	115			
Sample ID: C14010260-003BMS2	4	Sample Matrix Spike				Run: ICP4-C_140114A			01/14/14 14:58	
Calcium		794	mg/L	1.0	79	70	130			
Magnesium		917	mg/L	1.0	82	70	130			
Potassium		233	mg/L	1.0	86	70	130			
Sodium		486	mg/L	1.0	85	70	130			
Sample ID: C14010260-003BMSD2	4	Sample Matrix Spike Duplicate				Run: ICP4-C_140114A			01/14/14 15:02	
Calcium		807	mg/L	1.0	83	70	130	1.5	20	
Magnesium		935	mg/L	1.0	89	70	130	1.9	20	
Potassium		238	mg/L	1.0	88	70	130	2.1	20	
Sodium		497	mg/L	1.0	89	70	130	2.3	20	
Sample ID: C14010260-012BMS2	4	Sample Matrix Spike				Run: ICP4-C_140114A			01/14/14 16:33	
Calcium		736	mg/L	1.0	90	70	130			
Magnesium		698	mg/L	1.0	93	70	130			
Potassium		251	mg/L	1.0	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:** 02/18/14

Project: SW Alluvium **Work Order:** C14010260

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7										Batch: R182612
Sample ID: C14010260-012BMS2	4	Sample Matrix Spike				Run: ICP4-C_140114A				01/14/14 16:33
Sodium		463	mg/L	1.0	93	70	130			
Sample ID: C14010260-012BMSD2	4	Sample Matrix Spike Duplicate				Run: ICP4-C_140114A				01/14/14 16:36
Calcium		729	mg/L	1.0	88	70	130	0.9	20	
Magnesium		693	mg/L	1.0	91	70	130	0.7	20	
Potassium		248	mg/L	1.0	93	70	130	1.2	20	
Sodium		457	mg/L	1.0	91	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:** 02/18/14

Project: SW Alluvium **Work Order:** C14010260

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP4-C_140121A	
Sample ID: ICV	3	Initial Calibration Verification Standard							01/22/14 10:52	
Aluminum		4.80	mg/L	0.10	96	95	105			
Beryllium		0.507	mg/L	0.010	101	95	105			
Vanadium		0.984	mg/L	0.10	98	95	105			
Sample ID: ICSA	3	Interference Check Sample A							01/22/14 11:06	
Aluminum		461	mg/L	0.10	92	80	120			
Beryllium		2.00E-05	mg/L	0.010						
Vanadium		0.00523	mg/L	0.10						
Sample ID: ICSAB	3	Interference Check Sample AB							01/22/14 11:10	
Aluminum		462	mg/L	0.10	92	80	120			
Beryllium		0.458	mg/L	0.010	92	80	120			
Vanadium		0.451	mg/L	0.10	90	80	120			
Method: E200.7									Batch: 40326	
Sample ID: MB-40326	3	Method Blank				Run: ICP4-C_140121A			01/22/14 14:17	
Aluminum		ND	mg/L	0.01						
Beryllium		ND	mg/L	5E-05						
Vanadium		ND	mg/L	0.005						
Sample ID: LCS3-40326	3	Laboratory Control Sample				Run: ICP4-C_140121A			01/22/14 14:21	
Aluminum		2.67	mg/L	0.030	107	85	115			
Beryllium		0.264	mg/L	0.0010	105	85	115			
Vanadium		0.527	mg/L	0.010	105	85	115			
Sample ID: C14010260-003CMS3	3	Sample Matrix Spike				Run: ICP4-C_140121A			01/22/14 14:35	
Aluminum		2.79	mg/L	0.060	95	70	130			
Beryllium		0.254	mg/L	0.0010	101	70	130			
Vanadium		0.534	mg/L	0.026	107	70	130			
Sample ID: C14010260-003CMSD3	3	Sample Matrix Spike Duplicate				Run: ICP4-C_140121A			01/22/14 14:39	
Aluminum		2.81	mg/L	0.060	96	70	130	0.6	20	
Beryllium		0.255	mg/L	0.0010	102	70	130	0.4	20	
Vanadium		0.535	mg/L	0.026	107	70	130	0.3	20	
Sample ID: C14010260-012CMS3	3	Sample Matrix Spike				Run: ICP4-C_140121A			01/22/14 15:29	
Aluminum		2.72	mg/L	0.060	109	70	130			
Beryllium		0.248	mg/L	0.0010	99	70	130			
Vanadium		0.513	mg/L	0.026	103	70	130			
Sample ID: C14010260-012CMSD3	3	Sample Matrix Spike Duplicate				Run: ICP4-C_140121A			01/22/14 15:33	
Aluminum		2.70	mg/L	0.060	108	70	130	0.7	20	
Beryllium		0.250	mg/L	0.0010	100	70	130	0.6	20	
Vanadium		0.531	mg/L	0.026	106	70	130	3.3	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:** 02/18/14

Project: SW Alluvium **Work Order:** C14010260

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS4-C_140127A	
Sample ID: ICV	2	Initial Calibration Verification Standard							01/27/14 15:10	
Lead		0.0499	mg/L	0.0010	100	90	110			
Uranium		0.0481	mg/L	0.00030	96	90	110			
Method: E200.8									Batch: 40326	
Sample ID: MB-40326	2	Method Blank				Run: ICPMS4-C_140127A			01/27/14 23:00	
Lead		ND	mg/L	4E-05						
Uranium		8E-05	mg/L	4E-05						
Sample ID: LCS3-40326	2	Laboratory Control Sample				Run: ICPMS4-C_140127A			01/27/14 23:21	
Lead		0.509	mg/L	0.0010	102	85	115			
Uranium		0.546	mg/L	0.00030	109	85	115			
Sample ID: C14010260-003CMS3	2	Sample Matrix Spike				Run: ICPMS4-C_140127A			01/27/14 23:42	
Lead		0.530	mg/L	0.0010	106	70	130			
Uranium		0.661	mg/L	0.00030	114	70	130			
Sample ID: C14010260-003CMSD3	2	Sample Matrix Spike Duplicate				Run: ICPMS4-C_140127A			01/27/14 23:46	
Lead		0.534	mg/L	0.0010	107	70	130	0.8	20	
Uranium		0.670	mg/L	0.00030	115	70	130	1.2	20	
Sample ID: C14010260-012CMS3	2	Sample Matrix Spike				Run: ICPMS4-C_140127A			01/28/14 00:51	
Lead		0.520	mg/L	0.0010	104	70	130			
Uranium		0.603	mg/L	0.00030	111	70	130			
Sample ID: C14010260-012CMSD3	2	Sample Matrix Spike Duplicate				Run: ICPMS4-C_140127A			01/28/14 01:12	
Lead		0.524	mg/L	0.0010	105	70	130	0.8	20	
Uranium		0.612	mg/L	0.00030	112	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: 02/18/14
Project: SW Alluvium
Work Order: C14010260

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0									Analytical Run: IC2-C_140110A	
Sample ID: CCV-011014-04	2	Continuing Calibration Verification Standard							01/11/14 01:51	
Chloride		9.86	mg/L	1.0	99	90	110			
Sulfate		40.2	mg/L	1.0	100	90	110			
Sample ID: CCV-011014-05	2	Continuing Calibration Verification Standard							01/11/14 06:27	
Chloride		9.80	mg/L	1.0	98	90	110			
Sulfate		40.0	mg/L	1.0	100	90	110			
Sample ID: CCV-011014-06	2	Continuing Calibration Verification Standard							01/11/14 10:45	
Chloride		9.91	mg/L	1.0	99	90	110			
Sulfate		40.4	mg/L	1.0	101	90	110			
Method: E300.0									Batch: R182508	
Sample ID: ICB-011014	2	Method Blank				Run: IC2-C_140110A			01/10/14 12:02	
Chloride		0.08	mg/L	0.01						
Sulfate		0.07	mg/L	0.03						
Sample ID: LFB-011014-01	2	Laboratory Fortified Blank				Run: IC2-C_140110A			01/10/14 12:39	
Chloride		10.4	mg/L	1.0	104	90	110			
Sulfate		41.6	mg/L	1.0	104	90	110			
Sample ID: LFBD-011014-01	2	Laboratory Fortified Blank Duplicate				Run: IC2-C_140110A			01/10/14 12:57	
Chloride		10.3	mg/L	1.0	103	90	110	0.7	20	
Sulfate		41.8	mg/L	1.0	104	90	110	0.5	20	
Sample ID: C14010258-003AMS	2	Sample Matrix Spike				Run: IC2-C_140110A			01/11/14 03:05	
Chloride		5490	mg/L	21		90	110			A
Sulfate		5550	mg/L	83	102	90	110			
Sample ID: C14010258-003AMSD	2	Sample Matrix Spike Duplicate				Run: IC2-C_140110A			01/11/14 03:23	
Chloride		5740	mg/L	21		90	110	4.3	20	A
Sulfate		5630	mg/L	83	104	90	110	1.5	20	
Sample ID: C14010260-008AMS	2	Sample Matrix Spike				Run: IC2-C_140110A			01/11/14 07:22	
Chloride		693	mg/L	10	97	90	110			
Sulfate		6580	mg/L	42	99	90	110			
Sample ID: C14010260-008AMSD	2	Sample Matrix Spike Duplicate				Run: IC2-C_140110A			01/11/14 07:41	
Chloride		700	mg/L	10	99	90	110	1.0	20	
Sulfate		6620	mg/L	42	101	90	110	0.7	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:** 02/18/14

Project: SW Alluvium **Work Order:** C14010260

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0									Analytical Run: IC2-C_140113A	
Sample ID: CCV-011414-01	2	Continuing Calibration Verification Standard							01/13/14 15:34	
Chloride		9.90	mg/L	1.0	99	90	110			
Sulfate		39.7	mg/L	1.0	99	90	110			
Method: E300.0									Batch: R182600	
Sample ID: ICB-011414	2	Method Blank				Run: IC2-C_140113A			01/13/14 14:20	
Chloride		ND	mg/L	0.01						
Sulfate		ND	mg/L	0.03						
Sample ID: LFB-011414-01	2	Laboratory Fortified Blank				Run: IC2-C_140113A			01/13/14 14:57	
Chloride		9.45	mg/L	1.0	95	90	110			
Sulfate		37.9	mg/L	1.0	95	90	110			
Sample ID: LFBD-011414-01	2	Laboratory Fortified Blank Duplicate				Run: IC2-C_140113A			01/13/14 15:15	
Chloride		9.71	mg/L	1.0	97	90	110	2.7	20	
Sulfate		39.0	mg/L	1.0	97	90	110	2.7	20	
Sample ID: C14010288-001AMS	2	Sample Matrix Spike				Run: IC2-C_140113A			01/13/14 17:43	
Chloride		22.3	mg/L	1.0	99	90	110			
Sulfate		145	mg/L	1.7	95	90	110			
Sample ID: C14010288-001AMSD	2	Sample Matrix Spike Duplicate				Run: IC2-C_140113A			01/13/14 18:01	
Chloride		22.8	mg/L	1.0	102	90	110	2.2	20	
Sulfate		148	mg/L	1.7	98	90	110	1.8	20	
Method: E300.0									Batch: R182763	
Sample ID: ICB-011813	2	Method Blank				Run: IC2-C_140118A			01/18/14 20:14	
Chloride		0.02	mg/L	0.01						
Sulfate		0.10	mg/L	0.03						
Sample ID: LFB-011813-1	2	Laboratory Fortified Blank				Run: IC2-C_140118A			01/18/14 20:32	
Chloride		9.78	mg/L	1.0	98	90	110			
Sulfate		38.7	mg/L	1.0	96	90	110			
Sample ID: C14010260-006AMS	2	Sample Matrix Spike				Run: IC2-C_140118A			01/18/14 21:09	
Chloride		712	mg/L	10	100	90	110			
Sulfate		5560	mg/L	42	94	90	110			
Sample ID: C14010260-006AMSD	2	Sample Matrix Spike Duplicate				Run: IC2-C_140118A			01/18/14 21:27	
Chloride		720	mg/L	10	102	90	110	1.1	20	
Sulfate		5620	mg/L	42	98	90	110	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:** 02/18/14

Project: SW Alluvium **Work Order:** C14010260

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E353.2									Analytical Run: TECHNICON_140113A	
Sample ID: CCV-16		Continuing Calibration Verification Standard							01/13/14 15:29	
Nitrogen, Nitrate+Nitrite as N		0.955	mg/L	0.10	96	90	110			
Method: E353.2									Batch: R182549	
Sample ID: MBLK-1		Method Blank				Run: TECHNICON_140113A			01/13/14 14:51	
Nitrogen, Nitrate+Nitrite as N		ND	mg/L	0.05						
Sample ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_140113A			01/13/14 14:57	
Nitrogen, Nitrate+Nitrite as N		1.96	mg/L	0.10	100	90	110			
Sample ID: C14010242-001AMS		Sample Matrix Spike				Run: TECHNICON_140113A			01/13/14 15:01	
Nitrogen, Nitrate+Nitrite as N		1.75	mg/L	0.10	89	90	110			S
- Matrix spike recoveries outside the acceptance range are considered matrix-related.										
Sample ID: C14010242-001AMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_140113A			01/13/14 15:04	
Nitrogen, Nitrate+Nitrite as N		1.76	mg/L	0.10	90	90	110	0.6	10	
- Matrix spike recoveries outside the acceptance range are considered matrix-related.										
Sample ID: C14010260-009DMS		Sample Matrix Spike				Run: TECHNICON_140113A			01/13/14 15:37	
Nitrogen, Nitrate+Nitrite as N		167	mg/L	5.0	108	90	110			
Sample ID: C14010260-009DMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_140113A			01/13/14 15:39	
Nitrogen, Nitrate+Nitrite as N		166	mg/L	5.0	107	90	110	0.6	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: 02/18/14
Project: SW Alluvium
Work Order: C14010260

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624									Analytical Run: R182569	
Sample ID: 13-Jan-14_CCV_3	9	Continuing Calibration Verification Standard							01/13/14 11:54	
Bromodichloromethane		8.92	ug/L	1.0	89	70	130			
Bromoform		9.68	ug/L	1.0	97	70	130			
Chlorodibromomethane		10.1	ug/L	1.0	101	70	130			
Chloroform		7.60	ug/L	1.0	76	70	130			
Trihalomethanes, Total		36.3	ug/L	1.0	91	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	112	70	130			
Surr: Dibromofluoromethane				1.0	99	70	130			
Surr: p-Bromofluorobenzene				1.0	101	70	130			
Surr: Toluene-d8				1.0	113	70	130			
Sample ID: 13-Jan-14_CCV_19	9	Continuing Calibration Verification Standard							01/13/14 21:22	
Bromodichloromethane		9.20	ug/L	1.0	92	70	130			
Bromoform		10.2	ug/L	1.0	102	70	130			
Chlorodibromomethane		11.2	ug/L	1.0	112	70	130			
Chloroform		5.56	ug/L	1.0	56	70	130			S
Trihalomethanes, Total		36.2	ug/L	1.0	90	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	108	70	130			
Surr: Dibromofluoromethane				1.0	71	70	130			
Surr: p-Bromofluorobenzene				1.0	99	70	130			
Surr: Toluene-d8				1.0	110	70	130			
Method: E624									Batch: R182569	
Sample ID: 13-Jan-14_LCS_4	9	Laboratory Control Sample				Run: 5975VOC1_140113A			01/13/14 12:29	
Bromodichloromethane		9.40	ug/L	1.0	94	65.2	130			
Bromoform		10.4	ug/L	1.0	104	71.5	130			
Chlorodibromomethane		10.7	ug/L	1.0	107	64.6	127			
Chloroform		8.12	ug/L	1.0	81	65	136			
Trihalomethanes, Total		38.6	ug/L	1.0	97	71.1	127			
Surr: 1,2-Dichlorobenzene-d4				1.0	114	73.7	126			
Surr: Dibromofluoromethane				1.0	95	64.4	131			
Surr: p-Bromofluorobenzene				1.0	98	67.1	133			
Surr: Toluene-d8				1.0	111	79.7	125			
Sample ID: 13-Jan-14_MBLK_6	9	Method Blank				Run: 5975VOC1_140113A			01/13/14 13:39	
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	120	73.7	126			
Surr: Dibromofluoromethane				1.0	93	64.4	131			
Surr: p-Bromofluorobenzene				1.0	130	67.1	133			
Surr: Toluene-d8				1.0	106	79.7	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:** 02/18/14

Project: SW Alluvium **Work Order:** C14010260

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624									Batch: R182569	
Sample ID: C13120959-003BMS	9	Sample Matrix Spike				Run: 5975VOC1_140113A			01/13/14 19:37	
Bromodichloromethane		173	ug/L	10	86	65.2	130			
Bromoform		196	ug/L	10	98	71.5	130			
Chlorodibromomethane		201	ug/L	10	100	64.6	127			
Chloroform		188	ug/L	10	94	65	136			
Trihalomethanes, Total		758	ug/L	10	95	71.1	127			
Surr: 1,2-Dichlorobenzene-d4				1.0	118	73.7	126			
Surr: Dibromofluoromethane				1.0	129	64.4	131			
Surr: p-Bromofluorobenzene				1.0	99	67.1	133			
Surr: Toluene-d8				1.0	114	79.7	125			
Sample ID: C13120959-003BMSD	9	Sample Matrix Spike Duplicate				Run: 5975VOC1_140113A			01/13/14 20:12	
Bromodichloromethane		148	ug/L	10	74	65.2	130	15	20	
Bromoform		174	ug/L	10	87	71.5	130	12	20	
Chlorodibromomethane		168	ug/L	10	84	64.6	127	18	20	
Chloroform		128	ug/L	10	64	65	136	38	20	SR
Trihalomethanes, Total		618	ug/L	10	77	71.1	127	20	20	R
Surr: 1,2-Dichlorobenzene-d4				1.0	117	73.7	126			
Surr: Dibromofluoromethane				1.0	87	64.4	131			
Surr: p-Bromofluorobenzene				1.0	99	67.1	133			
Surr: Toluene-d8				1.0	115	79.7	125			

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:** 02/18/14

Project: SW Alluvium **Work Order:** C14010260

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624									Analytical Run: R182607	
Sample ID: 14-Jan-14_CCV_2	5	Continuing Calibration Verification Standard							01/14/14 09:36	
Chloroform		12.4	ug/L	1.0	124	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	114	70	130			
Surr: Dibromofluoromethane				1.0	132	70	130			S
Surr: p-Bromofluorobenzene				1.0	99	70	130			
Surr: Toluene-d8				1.0	115	70	130			
Sample ID: 14-Jan-14_CCV_19	5	Continuing Calibration Verification Standard							01/14/14 19:39	
Chloroform		8.88	ug/L	1.0	89	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	115	70	130			
Surr: Dibromofluoromethane				1.0	128	70	130			
Surr: p-Bromofluorobenzene				1.0	97	70	130			
Surr: Toluene-d8				1.0	113	70	130			
Method: E624									Batch: R182607	
Sample ID: 14-Jan-14_MBLK_9	5	Method Blank				Run: 5975VOC1_140114A			01/14/14 13:41	
Chloroform		ND	ug/L	1.0						
Surr: 1,2-Dichlorobenzene-d4				1.0	120	73.7	126			
Surr: Dibromofluoromethane				1.0	86	64.4	131			
Surr: p-Bromofluorobenzene				1.0	128	67.1	133			
Surr: Toluene-d8				1.0	105	79.7	125			
Sample ID: C14010261-001HMS	5	Sample Matrix Spike				Run: 5975VOC1_140114A			01/14/14 17:54	
Chloroform		170	ug/L	5.0	103	65	136			
Surr: 1,2-Dichlorobenzene-d4				1.0	110	73.7	126			
Surr: Dibromofluoromethane				1.0	130	64.4	131			
Surr: p-Bromofluorobenzene				1.0	100	67.1	133			
Surr: Toluene-d8				1.0	110	79.7	125			
Sample ID: C14010261-001HMSD	5	Sample Matrix Spike Duplicate				Run: 5975VOC1_140114A			01/14/14 18:29	
Chloroform		158	ug/L	5.0	90	65	136	7.6	20	
Surr: 1,2-Dichlorobenzene-d4				1.0	112	73.7	126			
Surr: Dibromofluoromethane				1.0	129	64.4	131			
Surr: p-Bromofluorobenzene				1.0	98	67.1	133			
Surr: Toluene-d8				1.0	108	79.7	125			
Sample ID: 14-Jan-14_LCS_33	5	Laboratory Control Sample				Run: 5975VOC1_140114A			01/15/14 08:33	
Chloroform		8.32	ug/L	1.0	83	65	136			
Surr: 1,2-Dichlorobenzene-d4				1.0	110	73.7	126			
Surr: Dibromofluoromethane				1.0	134	64.4	131			S
Surr: p-Bromofluorobenzene				1.0	94	67.1	133			
Surr: Toluene-d8				1.0	112	79.7	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: 02/18/14
Project: SW Alluvium
Work Order: C14010260

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E900.1										Batch: GA-0750
Sample ID: LCS-GA-0750		Laboratory Control Sample				Run: BERTHOLD 770-1_140114A				01/16/14 05:14
Gross Alpha minus Rn & U		38.4	pCi/L		104	80	120			
Sample ID: MB-GA-0750	3	Method Blank				Run: BERTHOLD 770-1_140114A				01/16/14 05:14
Gross Alpha minus Rn & U		-0.1	pCi/L							U
Gross Alpha minus Rn & U Precision (±)		0.3	pCi/L							
Gross Alpha minus Rn & U MDC		0.6	pCi/L							
Sample ID: C14010260-016GMS		Sample Matrix Spike				Run: BERTHOLD 770-1_140114A				01/16/14 07:00
Gross Alpha minus Rn & U		73.8	pCi/L		99	70	130			
Sample ID: C14010260-016GMSD		Sample Matrix Spike Duplicate				Run: BERTHOLD 770-1_140114A				01/16/14 08:30
Gross Alpha minus Rn & U		70.7	pCi/L		94	70	130	4.3	23	

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: 02/18/14
Project: SW Alluvium
Work Order: C14010260

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E903.0										Batch: RA226-7029
Sample ID: C14010260-013GMS		Sample Matrix Spike				Run: G542M_140113B				01/20/14 13:02
Radium 226		20	pCi/L		85	70	130			
Sample ID: C14010260-013GMSD		Sample Matrix Spike Duplicate				Run: G542M_140113B				01/20/14 13:02
Radium 226		19	pCi/L		81	70	130	5.0	22	
Sample ID: MB-RA226-7029	3	Method Blank				Run: G542M_140113B				01/20/14 14:40
Radium 226		0.1	pCi/L							U
Radium 226 precision (±)		0.2	pCi/L							
Radium 226 MDC		0.2	pCi/L							
Sample ID: LCS-RA226-7029		Laboratory Control Sample				Run: G542M_140113B				01/20/14 14:40
Radium 226		12	pCi/L		107	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: 02/18/14
Project: SW Alluvium
Work Order: C14010260

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E908.0									Batch: RA-TH-ISO-1988	
Sample ID: LCS-RA-TH-ISO-1988		Laboratory Control Sample				Run: ALPHANALYST_140115A			01/16/14 16:32	
Thorium 230		6.4	pCi/L		98	80	120			
Sample ID: C14010260-006GMS		Sample Matrix Spike				Run: ALPHANALYST_140115A			01/16/14 16:33	
Thorium 230		14.3	pCi/L		106	70	130			
Sample ID: C14010260-006GMSD		Sample Matrix Spike Duplicate				Run: ALPHANALYST_140115A			01/16/14 16:33	
Thorium 230		13.2	pCi/L		98	70	130	7.7	41.3	
Sample ID: MB-RA-TH-ISO-1988	3	Method Blank				Run: ALPHANALYST_140115A			01/17/14 09:01	
Thorium 230		0.08	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 **Report Date:** 02/18/14

Project: SW Alluvium **Work Order:** C14010260

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E909.0										Batch: T_PB-210-0443R
Sample ID: MB-PB-210-0443R	3	Method Blank				Run: SUB-T55067				01/24/14 13:45
Lead 210		-0.4	pCi/L							U
Lead 210 precision (±)		0.4	pCi/L							
Lead 210 MDC		0.8	pCi/L							
Sample ID: LCS-PB-210-0443R		Laboratory Control Sample				Run: SUB-T55067				01/24/14 16:01
Lead 210		21	pCi/L		103	80	120			
Sample ID: C14010260-015F		Sample Matrix Spike				Run: SUB-T55067				01/26/14 15:21
Lead 210		45	pCi/L		98	70	130			
Sample ID: C14010260-015F		Sample Matrix Spike Duplicate				Run: SUB-T55067				01/26/14 17:36
Lead 210		44	pCi/L		96	70	130	2.0	18.5	
Method: E909.0										Batch: T_PB-210-0444
Sample ID: MB-PB-210-0444	3	Method Blank				Run: SUB-T55151				01/29/14 18:42
Lead 210		-0.3	pCi/L							U
Lead 210 precision (±)		0.6	pCi/L							
Lead 210 MDC		1.0	pCi/L							
Sample ID: LCS-PB-210-0444		Laboratory Control Sample				Run: SUB-T55151				01/29/14 19:51
Lead 210		19	pCi/L		93	80	120			
Sample ID: C14010469-009BMS		Sample Matrix Spike				Run: SUB-T55151				01/30/14 20:09
Lead 210		41	pCi/L		87	70	130			
Sample ID: C14010469-009BMSD		Sample Matrix Spike Duplicate				Run: SUB-T55151				01/30/14 21:19
Lead 210		40	pCi/L		85	70	130	2.3	22.3	

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: 02/18/14
Project: SW Alluvium
Work Order: C14010260

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: RA-05									Batch: RA228-4589	
Sample ID: LCS-228-RA226-7029		Laboratory Control Sample				Run: TENNELEC-3_140113B			01/16/14 14:19	
Radium 228		8.2	pCi/L		114	80	120			
Sample ID: MB-RA226-7029	3	Method Blank				Run: TENNELEC-3_140113B			01/16/14 14:19	
Radium 228		-0.2	pCi/L							U
Radium 228 precision (±)		2	pCi/L							
Radium 228 MDC		3	pCi/L							
Sample ID: C14010260-001GMS		Sample Matrix Spike				Run: TENNELEC-3_140113B			01/16/14 14:19	
Radium 228		15	pCi/L		104	70	130			
Sample ID: C14010260-001GMSD		Sample Matrix Spike Duplicate				Run: TENNELEC-3_140113B			01/16/14 14:19	
Radium 228		15	pCi/L		100	70	130	3.8	48.4	

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

February 25, 2014

United Nuclear Corporation
21 Miles NE of Gallup
Gallup, NM 87305

Workorder No.: C14010262 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 1/10/2014 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C14010262-001	614	01/08/14 9:30	01/10/14	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Total Alkalinity Anion - Cation Balance Cancelled Sample Arsenic Speciation, Total 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
C14010262-002	604	01/08/14 11:35	01/10/14	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Total Alkalinity Anion - Cation Balance Arsenic Speciation, Total 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

ANALYTICAL SUMMARY REPORT

C14010262-003	515-A	01/08/14 10:50 01/10/14	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Total Alkalinity Anion - Cation Balance Cancelled Sample Arsenic Speciation, Total 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
C14010262-004	Rinsate	01/08/14 12:15 01/10/14	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Total Alkalinity Anion - Cation Balance Arsenic Speciation, Total 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
C14010262-005	Field Blank	01/08/14 12:45 01/10/14	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:

Report Proofing Specialist

Digitally signed by
Sheri M. Mead
Date: 2014.02.25 11:04:51 -07:00

CLIENT: United Nuclear Corporation
Project: Zone-1
Sample Delivery Group: C14010262

Report Date: 02/25/14

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:** 02/25/14

Project: Zone-1 **Work Order:** C14010262

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2320 B										Batch: R182501
Sample ID: MBLK	2	Method Blank				Run: MANTECH_140110A				01/10/14 14:12
Alkalinity, Total as CaCO3		0.9	mg/L	0.6						
Bicarbonate as HCO3		1	mg/L	1						
Sample ID: LCS_131219		Laboratory Control Sample				Run: MANTECH_140110A				01/10/14 14:29
Alkalinity, Total as CaCO3		257	mg/L	5.0	102	90	110			
Sample ID: C14010231-001ADUP	2	Sample Duplicate				Run: MANTECH_140110A				01/10/14 14:45
Alkalinity, Total as CaCO3		218	mg/L	5.0				0.6	10	
Bicarbonate as HCO3		265	mg/L	5.0				0.6	10	
Sample ID: C14010231-002AMS		Sample Matrix Spike				Run: MANTECH_140110A				01/10/14 15:04
Alkalinity, Total as CaCO3		477	mg/L	5.0	98	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: 02/25/14
Project: Zone-1
Work Order: C14010262

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **A2540 C**									Batch: TDS140110A	
Sample ID: **MB-1_140110A**		Method Blank				Run: BAL-19_140110B			01/10/14 15:00	
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	7						
Sample ID: **LCS-2_140110A**		Laboratory Control Sample				Run: BAL-19_140110B			01/10/14 15:00	
Solids, Total Dissolved TDS @ 180 C		1980	mg/L	20	99	90	110			
Sample ID: **C14010262-001A DUP**		Sample Duplicate				Run: BAL-19_140110B			01/10/14 15:20	
Solids, Total Dissolved TDS @ 180 C		7000	mg/L	100				1.0	5	
Sample ID: **C14010262-002A MS**		Sample Matrix Spike				Run: BAL-19_140110B			01/10/14 15:21	
Solids, Total Dissolved TDS @ 180 C		16800	mg/L	100	99	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: 02/25/14
Project: Zone-1
Work Order: C14010262

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A3114 B									Analytical Run: CVAA-C202_140113A	
Sample ID: ICV		Initial Calibration Verification Standard							01/13/14 10:15	
Selenium-IV		0.0270	mg/L	0.0010	108	90	110			
Sample ID: CCV		Continuing Calibration Verification Standard							01/13/14 10:33	
Selenium-IV		0.0273	mg/L	0.0010	109	90	110			
Method: A3114 B									Batch: 40320	
Sample ID: MB-40320		Method Blank				Run: CVAA-C202_140113A			01/13/14 10:58	
Selenium-IV		ND	mg/L	0.0005						
Sample ID: LCS-40320		Laboratory Control Sample				Run: CVAA-C202_140113A			01/13/14 10:59	
Selenium-IV		0.0276	mg/L	0.0010	110	90	110			
Sample ID: C14010261-001CMS		Sample Matrix Spike				Run: CVAA-C202_140113A			01/13/14 11:04	
Selenium-IV		0.0256	mg/L	0.0010	102	85	115			
Sample ID: C14010261-001CMSD		Sample Matrix Spike Duplicate				Run: CVAA-C202_140113A			01/13/14 11:21	
Selenium-IV		0.0240	mg/L	0.0010	96	85	115	6.5	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:** 02/25/14

Project: Zone-1 **Work Order:** C14010262

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-H B									Analytical Run: PHSC_101-C_140110A	
Sample ID: pH 6.86	Initial Calibration Verification Standard								01/10/14 08:28	
pH		6.85	s.u.	0.010	100	98	102			
Sample ID: CCV - pH 7	Continuing Calibration Verification Standard								01/10/14 10:27	
pH		6.98	s.u.	0.010	100	98	102			
Method: A4500-H B									Batch: R182457	
Sample ID: C14010231-006ADUP	Sample Duplicate					Run: PHSC_101-C_140110A			01/10/14 09:56	
pH		7.79	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:** 02/25/14

Project: Zone-1 **Work Order:** C14010262

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-NH3 G									Analytical Run: TECHNICON_140114A	
Sample ID: CCV-30		Continuing Calibration Verification Standard							01/14/14 13:37	
Nitrogen, Ammonia as N		1.08	mg/L	0.050	108	90	110			
Method: A4500-NH3 G									Batch: R182599	
Sample ID: MBLK-1		Method Blank				Run: TECHNICON_140114A			01/14/14 12:48	
Nitrogen, Ammonia as N		ND	mg/L	0.006						
Sample ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_140114A			01/14/14 12:52	
Nitrogen, Ammonia as N		1.90	mg/L	0.050	97	90	110			
Sample ID: C14010260-015DMS		Sample Matrix Spike				Run: TECHNICON_140114A			01/14/14 13:42	
Nitrogen, Ammonia as N		1.75	mg/L	0.050	89	90	110			S
- Matrix spike recoveries outside the acceptance range are considered matrix-related.										
Sample ID: C14010260-015DMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_140114A			01/14/14 13:43	
Nitrogen, Ammonia as N		1.74	mg/L	0.050	89	90	110	0.6	10	S
- Matrix spike recoveries outside the acceptance range are considered matrix-related.										
Method: A4500-NH3 G									Batch: R182681	
Sample ID: MBLK-1		Method Blank				Run: TECHNICON_140116A			01/16/14 12:58	
Nitrogen, Ammonia as N		ND	mg/L	0.006						
Sample ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_140116A			01/16/14 13:02	
Nitrogen, Ammonia as N		2.00	mg/L	0.050	102	90	110			
Sample ID: C14010262-004DMS		Sample Matrix Spike				Run: TECHNICON_140116A			01/16/14 13:05	
Nitrogen, Ammonia as N		2.03	mg/L	0.050	104	90	110			
Sample ID: C14010262-004DMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_140116A			01/16/14 13:07	
Nitrogen, Ammonia as N		2.04	mg/L	0.050	104	90	110	0.5	10	
Method: A4500-NH3 G									Batch: R182839	
Sample ID: MBLK-1		Method Blank				Run: TECHNICON_140121A			01/21/14 13:56	
Nitrogen, Ammonia as N		ND	mg/L	0.006						
Sample ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_140121A			01/21/14 14:00	
Nitrogen, Ammonia as N		1.96	mg/L	0.050	100	90	110			
Sample ID: C14010356-004AMS		Sample Matrix Spike				Run: TECHNICON_140121A			01/21/14 14:03	
Nitrogen, Ammonia as N		29.8	mg/L	0.50	95	90	110			
Sample ID: C14010356-004AMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_140121A			01/21/14 14:05	
Nitrogen, Ammonia as N		30.5	mg/L	0.50	98	90	110	2.3	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:** 02/25/14

Project: Zone-1 **Work Order:** C14010262

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E1632AM									Analytical Run: SUB-H94562	
Sample ID: AS-ICV 25ppb-1/27/20		Initial Calibration Verification Standard							01/27/14 11:51	
Arsenic-III		24.2	ug/L	5.0	97	87.6	114			
Sample ID: AS-50.0-1/27/2014		Continuing Calibration Verification Standard							01/27/14 13:27	
Arsenic-III		49.7	ug/L	5.0	99	85	115			
Sample ID: AS-50.0-1/27/2014		Continuing Calibration Verification Standard							01/27/14 14:23	
Arsenic-III		47.0	ug/L	5.0	94	85	115			
Method: E1632AM									Batch: H_R94562	
Sample ID: AS-LFB 50ppb-1/27/20		Laboratory Fortified Blank				Run: SUB-H94562			01/27/14 12:15	
Arsenic-III		49.8	ug/L	5.0	100	55	146			
Sample ID: ICB		Method Blank				Run: SUB-H94562			01/27/14 12:23	
Arsenic-III		ND	ug/L	0.4						
Sample ID: H14010209-011E MS		Sample Matrix Spike				Run: SUB-H94562			01/27/14 12:39	
Arsenic-III		52.7	ug/L	5.0	104	55	146			
Sample ID: H14010209-011E MSD		Sample Matrix Spike Duplicate				Run: SUB-H94562			01/27/14 12:47	
Arsenic-III		53.0	ug/L	5.0	105	55	146	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:** 02/25/14

Project: Zone-1 **Work Order:** C14010262

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP4-C_140113A	
Sample ID: ICV	4	Initial Calibration Verification Standard							01/13/14 15:09	
Calcium		49.8	mg/L	0.50	100	95	105			
Magnesium		49.6	mg/L	0.50	99	95	105			
Potassium		47.9	mg/L	0.50	96	95	105			
Sodium		49.1	mg/L	0.50	98	95	105			
Sample ID: ICSA	4	Interference Check Sample A							01/13/14 15:23	
Calcium		460	mg/L	0.50	92	80	120			
Magnesium		495	mg/L	0.50	99	80	120			
Potassium		0.0392	mg/L	0.50						
Sodium		-0.0606	mg/L	0.50						
Sample ID: ICSAB	4	Interference Check Sample AB							01/13/14 15:27	
Calcium		459	mg/L	0.50	92	80	120			
Magnesium		494	mg/L	0.50	99	80	120			
Potassium		0.00849	mg/L	0.50						
Sodium		0.120	mg/L	0.50						
Method: E200.7										Batch: R182563
Sample ID: MB-140113A	4	Method Blank				Run: ICP4-C_140113A			01/13/14 15:45	
Calcium		ND	mg/L	0.02						
Magnesium		0.04	mg/L	0.01						
Potassium		ND	mg/L	0.04						
Sodium		ND	mg/L	0.2						
Sample ID: LFB-140113A	4	Laboratory Fortified Blank				Run: ICP4-C_140113A			01/13/14 15:49	
Calcium		45.3	mg/L	0.50	91	85	115			
Magnesium		45.4	mg/L	0.50	91	85	115			
Potassium		43.0	mg/L	0.50	86	85	115			
Sodium		44.3	mg/L	0.50	89	85	115			
Sample ID: C14010258-005BMS2	4	Sample Matrix Spike				Run: ICP4-C_140113A			01/13/14 17:23	
Calcium		625	mg/L	1.0	85	70	130			
Magnesium		276	mg/L	1.0	90	70	130			
Potassium		260	mg/L	1.0	86	70	130			
Sodium		775	mg/L	1.0	82	70	130			
Sample ID: C14010258-005BMSD2	4	Sample Matrix Spike Duplicate				Run: ICP4-C_140113A			01/13/14 17:27	
Calcium		628	mg/L	1.0	86	70	130	0.5	20	
Magnesium		277	mg/L	1.0	90	70	130	0.3	20	
Potassium		259	mg/L	1.0	85	70	130	0.2	20	
Sodium		777	mg/L	1.0	82	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 **Report Date:** 02/25/14

Project: Zone-1 **Work Order:** C14010262

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP4-C_140116A	
Sample ID: ICV	4	Initial Calibration Verification Standard							01/16/14 13:14	
Cobalt		0.966	mg/L	0.010	97	95	105			
Manganese		4.91	mg/L	0.010	98	95	105			
Nickel		0.948	mg/L	0.050	95	95	105			
Vanadium		0.998	mg/L	0.10	100	95	105			
Sample ID: ICSA	4	Interference Check Sample A							01/16/14 13:29	
Cobalt		-0.0106	mg/L	0.010						
Manganese		-0.00648	mg/L	0.010						
Nickel		0.00409	mg/L	0.050						
Vanadium		0.00554	mg/L	0.10						
Sample ID: ICSAB	4	Interference Check Sample AB							01/16/14 13:33	
Cobalt		0.446	mg/L	0.010	89	80	120			
Manganese		0.454	mg/L	0.010	91	80	120			
Nickel		0.880	mg/L	0.050	88	80	120			
Vanadium		0.474	mg/L	0.10	95	80	120			
Method: E200.7									Batch: 40327	
Sample ID: MB-40327	4	Method Blank				Run: ICP4-C_140116A			01/16/14 17:00	
Cobalt		ND	mg/L	0.002						
Manganese		0.0003	mg/L	0.0002						
Nickel		0.002	mg/L	0.001						
Vanadium		ND	mg/L	0.005						
Sample ID: LCS3-40327	4	Laboratory Control Sample				Run: ICP4-C_140116A			01/16/14 17:04	
Cobalt		0.498	mg/L	0.0050	100	85	115			
Manganese		2.54	mg/L	0.0010	101	85	115			
Nickel		0.504	mg/L	0.0050	100	85	115			
Vanadium		0.514	mg/L	0.010	103	85	115			
Sample ID: C14010262-001CMS3	4	Sample Matrix Spike				Run: ICP4-C_140116A			01/16/14 17:26	
Cobalt		0.452	mg/L	0.016	90	70	130			
Manganese		2.98	mg/L	0.0016	98	70	130			
Nickel		0.499	mg/L	0.015	92	70	130			
Vanadium		0.453	mg/L	0.051	91	70	130			
Sample ID: C14010262-001CMSD3	4	Sample Matrix Spike Duplicate				Run: ICP4-C_140116A			01/16/14 17:29	
Cobalt		0.494	mg/L	0.016	99	70	130	8.8	20	
Manganese		2.93	mg/L	0.0016	96	70	130	1.7	20	
Nickel		0.540	mg/L	0.015	100	70	130	7.9	20	
Vanadium		0.477	mg/L	0.051	95	70	130	5.2	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:** 02/25/14

Project: Zone-1 **Work Order:** C14010262

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS2-C_140220A	
Sample ID: ICV		Initial Calibration Verification Standard							02/20/14 14:45	
Uranium		0.0501	mg/L	0.00030	100	90	110			
Method: E200.8									Batch: 40327	
Sample ID: MB-40327		Method Blank				Run: ICPMS2-C_140220A			02/20/14 18:44	
Uranium		ND	mg/L	9E-06						
Sample ID: LCS3-40327		Laboratory Control Sample				Run: ICPMS2-C_140220A			02/20/14 18:47	
Uranium		0.565	mg/L	0.00030	113	85	115			
Sample ID: C14010262-001CMS3		Sample Matrix Spike				Run: ICPMS2-C_140220A			02/20/14 18:57	
Uranium		0.630	mg/L	0.00030	117	70	130			
Sample ID: C14010262-001CMSD3		Sample Matrix Spike Duplicate				Run: ICPMS2-C_140220A			02/20/14 19:00	
Uranium		0.634	mg/L	0.00030	117	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: 02/25/14
Project: Zone-1
Work Order: C14010262

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS4-C_140115A	
Sample ID: ICV	10	Initial Calibration Verification Standard							01/15/14 14:09	
Aluminum		0.0502	mg/L	0.0010	100	90	110			
Beryllium		0.0519	mg/L	0.0010	104	90	110			
Cadmium		0.0492	mg/L	0.0010	98	90	110			
Cobalt		0.0500	mg/L	0.0010	100	90	110			
Lead		0.0502	mg/L	0.0010	100	90	110			
Manganese		0.0500	mg/L	0.0010	100	90	110			
Molybdenum		0.0503	mg/L	0.0010	101	90	110			
Nickel		0.0501	mg/L	0.0010	100	90	110			
Uranium		0.0498	mg/L	0.00030	100	90	110			
Vanadium		0.0502	mg/L	0.0010	100	90	110			
Method: E200.8									Batch: 40327	
Sample ID: C14010262-001CMS3	10	Sample Matrix Spike				Run: ICPMS4-C_140115A			01/15/14 23:22	
Aluminum		2.21	mg/L	0.030	88	70	130			
Beryllium		0.183	mg/L	0.0010	73	70	130			
Cadmium		0.218	mg/L	0.0010	87	70	130			
Cobalt		0.516	mg/L	0.0050	102	70	130			
Lead		0.560	mg/L	0.0010	112	70	130			
Manganese		3.33	mg/L	0.0010	108	70	130			
Molybdenum		0.538	mg/L	0.0010	107	70	130			
Nickel		0.485	mg/L	0.0050	95	70	130			
Uranium		0.717	mg/L	0.00030	132	70	130			S
Vanadium		0.573	mg/L	0.010	110	70	130			
Sample ID: C14010262-001CMSD3	10	Sample Matrix Spike Duplicate				Run: ICPMS4-C_140115A			01/15/14 23:25	
Aluminum		2.25	mg/L	0.030	90	70	130	1.7	20	
Beryllium		0.188	mg/L	0.0010	75	70	130	2.5	20	
Cadmium		0.222	mg/L	0.0010	89	70	130	1.9	20	
Cobalt		0.526	mg/L	0.0050	104	70	130	2.0	20	
Lead		0.574	mg/L	0.0010	114	70	130	2.4	20	
Manganese		3.41	mg/L	0.0010	111	70	130	2.2	20	
Molybdenum		0.554	mg/L	0.0010	111	70	130	3.0	20	
Nickel		0.490	mg/L	0.0050	96	70	130	1.0	20	
Uranium		0.739	mg/L	0.00030	136	70	130	3.0	20	S
Vanadium		0.579	mg/L	0.010	112	70	130	1.1	20	
Sample ID: MB-40327	10	Method Blank				Run: ICPMS4-C_140115A			01/15/14 22:24	
Aluminum		0.001	mg/L	0.0007						
Beryllium		ND	mg/L	1E-05						
Cadmium		9E-05	mg/L	2E-05						
Cobalt		ND	mg/L	1E-05						
Lead		5E-05	mg/L	4E-05						
Manganese		0.0004	mg/L	0.0001						
Molybdenum		ND	mg/L	0.0002						
Nickel		ND	mg/L	0.0001						

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: 02/25/14
Project: Zone-1
Work Order: C14010262

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8										Batch: 40327
Sample ID: MB-40327	10	Method Blank				Run: ICPMS4-C_140115A				01/15/14 22:24
Uranium		ND	mg/L	4E-05						
Vanadium		0.02	mg/L	0.001						
Sample ID: LCS3-40327	10	Laboratory Control Sample				Run: ICPMS4-C_140115A				01/15/14 22:29
Aluminum		2.42	mg/L	0.030	97	85	115			
Beryllium		0.251	mg/L	0.0010	100	85	115			
Cadmium		0.260	mg/L	0.0010	104	85	115			
Cobalt		0.500	mg/L	0.0050	100	85	115			
Lead		0.513	mg/L	0.0010	103	85	115			
Manganese		2.52	mg/L	0.0010	101	85	115			
Molybdenum		0.505	mg/L	0.0010	101	85	115			
Nickel		0.518	mg/L	0.0050	104	85	115			
Uranium		0.551	mg/L	0.00030	110	85	115			
Vanadium		0.520	mg/L	0.010	100	85	115			

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:** 02/25/14

Project: Zone-1 **Work Order:** C14010262

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS4-C_140117A	
Sample ID: ICV	3	Initial Calibration Verification Standard							01/17/14 15:19	
Cobalt		0.0491	mg/L	0.0010	98	90	110			
Lead		0.0492	mg/L	0.0010	98	90	110			
Uranium		0.0490	mg/L	0.00030	98	90	110			
Sample ID: ICV	3	Initial Calibration Verification Standard							01/17/14 17:07	
Cobalt		0.0502	mg/L	0.0010	100	90	110			
Lead		0.0492	mg/L	0.0010	98	90	110			
Uranium		0.0485	mg/L	0.00030	97	90	110			
Sample ID: ICV	3	Initial Calibration Verification Standard							01/17/14 17:15	
Cobalt		0.0500	mg/L	0.0010	100	90	110			
Lead		0.0491	mg/L	0.0010	98	90	110			
Uranium		0.0479	mg/L	0.00030	96	90	110			
Method: E200.8									Batch: 40327	
Sample ID: MB-40327	3	Method Blank				Run: ICPMS4-C_140117A			01/18/14 07:48	
Cobalt		ND	mg/L	1E-05						
Lead		5E-05	mg/L	4E-05						
Uranium		ND	mg/L	4E-05						
Sample ID: LCS3-40327	3	Laboratory Control Sample				Run: ICPMS4-C_140117A			01/18/14 07:53	
Cobalt		0.514	mg/L	0.0050	103	85	115			
Lead		0.518	mg/L	0.0010	104	85	115			
Uranium		0.561	mg/L	0.00030	112	85	115			
Sample ID: C14010262-001CMS3	3	Sample Matrix Spike				Run: ICPMS4-C_140117A			01/18/14 08:05	
Cobalt		0.516	mg/L	0.0050	102	70	130			
Lead		0.535	mg/L	0.0010	107	70	130			
Uranium		0.640	mg/L	0.00030	118	70	130			
Sample ID: C14010262-001CMSD3	3	Sample Matrix Spike Duplicate				Run: ICPMS4-C_140117A			01/18/14 08:09	
Cobalt		0.522	mg/L	0.0050	103	70	130	1.3	20	
Lead		0.540	mg/L	0.0010	108	70	130	0.9	20	
Uranium		0.650	mg/L	0.00030	120	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:** 02/25/14

Project: Zone-1 **Work Order:** C14010262

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0									Analytical Run: IC2-C_140110A	
Sample ID: CCV-011014-06	2	Continuing Calibration Verification Standard							01/11/14 10:45	
Chloride		9.91	mg/L	1.0	99	90	110			
Sulfate		40.4	mg/L	1.0	101	90	110			
Method: E300.0									Batch: R182508	
Sample ID: ICB-011014	2	Method Blank				Run: IC2-C_140110A			01/10/14 12:02	
Chloride		0.08	mg/L	0.01						
Sulfate		0.07	mg/L	0.03						
Sample ID: LFB-011014-01	2	Laboratory Fortified Blank				Run: IC2-C_140110A			01/10/14 12:39	
Chloride		10.4	mg/L	1.0	104	90	110			
Sulfate		41.6	mg/L	1.0	104	90	110			
Sample ID: LFBD-011014-01	2	Laboratory Fortified Blank Duplicate				Run: IC2-C_140110A			01/10/14 12:57	
Chloride		10.3	mg/L	1.0	103	90	110	0.7	20	
Sulfate		41.8	mg/L	1.0	104	90	110	0.5	20	
Sample ID: C14010262-001AMS	2	Sample Matrix Spike				Run: IC2-C_140110A			01/11/14 11:40	
Chloride		753	mg/L	10	99	90	110			
Sulfate		5700	mg/L	42	98	90	110			
Sample ID: C14010262-001AMSD	2	Sample Matrix Spike Duplicate				Run: IC2-C_140110A			01/11/14 11:59	
Chloride		761	mg/L	10	101	90	110	1.0	20	
Sulfate		5720	mg/L	42	100	90	110	0.4	20	
Method: E300.0									Batch: R182763	
Sample ID: ICB-011813	2	Method Blank				Run: IC2-C_140118A			01/18/14 20:14	
Chloride		0.02	mg/L	0.01						
Sulfate		0.10	mg/L	0.03						
Sample ID: LFB-011813-1	2	Laboratory Fortified Blank				Run: IC2-C_140118A			01/18/14 20:32	
Chloride		9.78	mg/L	1.0	98	90	110			
Sulfate		38.7	mg/L	1.0	96	90	110			
Sample ID: C14010260-006AMS	2	Sample Matrix Spike				Run: IC2-C_140118A			01/18/14 21:09	
Chloride		712	mg/L	10	100	90	110			
Sulfate		5560	mg/L	42	94	90	110			
Sample ID: C14010260-006AMSD	2	Sample Matrix Spike Duplicate				Run: IC2-C_140118A			01/18/14 21:27	
Chloride		720	mg/L	10	102	90	110	1.1	20	
Sulfate		5620	mg/L	42	98	90	110	1.2	20	
Sample ID: LFB-011813-2	2	Laboratory Fortified Blank				Run: IC2-C_140118A			01/19/14 18:38	
Chloride		9.87	mg/L	1.0	99	90	110			
Sulfate		39.0	mg/L	1.0	97	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:** 02/25/14

Project: Zone-1 **Work Order:** C14010262

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E353.2									Analytical Run: TECHNICON_140113A	
Sample ID: CCV-30		Continuing Calibration Verification Standard							01/13/14 16:04	
Nitrogen, Nitrate+Nitrite as N		0.929	mg/L	0.10	93	90	110			
Method: E353.2									Batch: R182549	
Sample ID: MBLK-1		Method Blank				Run: TECHNICON_140113A			01/13/14 14:51	
Nitrogen, Nitrate+Nitrite as N		ND	mg/L	0.05						
Sample ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_140113A			01/13/14 14:57	
Nitrogen, Nitrate+Nitrite as N		1.96	mg/L	0.10	100	90	110			
Sample ID: C14010262-001DMS		Sample Matrix Spike				Run: TECHNICON_140113A			01/13/14 16:12	
Nitrogen, Nitrate+Nitrite as N		341	mg/L	10	107	90	110			
Sample ID: C14010262-001DMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_140113A			01/13/14 16:14	
Nitrogen, Nitrate+Nitrite as N		337	mg/L	10	105	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:** 02/25/14

Project: Zone-1 **Work Order:** C14010262

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624									Analytical Run: R182805	
Sample ID: 20-Jan-14_CCV_19	9	Continuing Calibration Verification Standard							01/20/14 21:56	
Bromodichloromethane		10.5	ug/L	1.0	105	70	130			
Bromoform		10.7	ug/L	1.0	107	70	130			
Chlorodibromomethane		11.0	ug/L	1.0	110	70	130			
Chloroform		10.1	ug/L	1.0	101	70	130			
Trihalomethanes, Total		42.3	ug/L	1.0	106	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	108	70	130			
Surr: Dibromofluoromethane				1.0	54	70	130			S
Surr: p-Bromofluorobenzene				1.0	106	70	130			
Surr: Toluene-d8				1.0	106	70	130			
Method: E624									Batch: R182805	
Sample ID: 20-Jan-14_LCS_4	9	Laboratory Control Sample				Run: 5975VOC1_140120D			01/20/14 11:44	
Bromodichloromethane		9.16	ug/L	1.0	92	65.2	130			
Bromoform		10.1	ug/L	1.0	101	71.5	130			
Chlorodibromomethane		10.9	ug/L	1.0	109	64.6	127			
Chloroform		10.1	ug/L	1.0	101	65	136			
Trihalomethanes, Total		40.2	ug/L	1.0	101	71.1	127			
Surr: 1,2-Dichlorobenzene-d4				1.0	105	73.7	126			
Surr: Dibromofluoromethane				1.0	54	64.4	131			S
Surr: p-Bromofluorobenzene				1.0	104	67.1	133			
Surr: Toluene-d8				1.0	106	79.7	125			
Sample ID: 20-Jan-14_MBLK_7	9	Method Blank				Run: 5975VOC1_140120D			01/20/14 14:21	
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	106	73.7	126			
Surr: Dibromofluoromethane				1.0	57	64.4	131			S
Surr: p-Bromofluorobenzene				1.0	108	67.1	133			
Surr: Toluene-d8				1.0	102	79.7	125			
Sample ID: C14010431-001EMS	9	Sample Matrix Spike				Run: 5975VOC1_140120D			01/20/14 20:11	
Bromodichloromethane		165	ug/L	10	82	65.2	130			
Bromoform		177	ug/L	10	88	71.5	130			
Chlorodibromomethane		181	ug/L	10	90	64.6	127			
Chloroform		168	ug/L	10	84	65	136			
Trihalomethanes, Total		690	ug/L	10	86	71.1	127			
Surr: 1,2-Dichlorobenzene-d4				1.0	105	73.7	126			
Surr: Dibromofluoromethane				1.0	54	64.4	131			S
Surr: p-Bromofluorobenzene				1.0	104	67.1	133			
Surr: Toluene-d8				1.0	106	79.7	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:** 02/25/14

Project: Zone-1 **Work Order:** C14010262

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624										Batch: R182805
Sample ID: C14010431-001EMSD	9	Sample Matrix Spike Duplicate				Run: 5975VOC1_140120D				01/20/14 20:46
Bromodichloromethane		187	ug/L	10	94	65.2	130	13	20	
Bromoform		202	ug/L	10	101	71.5	130	14	20	
Chlorodibromomethane		203	ug/L	10	102	64.6	127	12	20	
Chloroform		190	ug/L	10	95	65	136	12	20	
Trihalomethanes, Total		783	ug/L	10	98	71.1	127	13	20	
Surr: 1,2-Dichlorobenzene-d4				1.0	106	73.7	126			
Surr: Dibromofluoromethane				1.0	56	64.4	131			S
Surr: p-Bromofluorobenzene				1.0	105	67.1	133			
Surr: Toluene-d8				1.0	106	79.7	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:** 02/25/14

Project: Zone-1 **Work Order:** C14010262

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E900.1										Batch: GA-0751
Sample ID: LCS-GA-0751		Laboratory Control Sample				Run: BERTHOLD 770-1_140117A				01/20/14 06:50
Gross Alpha minus Rn & U		41.3	pCi/L		113	80	120			
Sample ID: MB-GA-0751	3	Method Blank				Run: BERTHOLD 770-1_140117A				01/20/14 06:50
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: C14010295-005CMS		Sample Matrix Spike				Run: BERTHOLD 770-1_140117A				01/20/14 08:28
Gross Alpha minus Rn & U		93.5	pCi/L		120	70	130			
Sample ID: C14010295-005CMSD		Sample Matrix Spike Duplicate				Run: BERTHOLD 770-1_140117A				01/20/14 08:28
Gross Alpha minus Rn & U		84.6	pCi/L		106	70	130	10.0	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: 02/25/14
Project: Zone-1
Work Order: C14010262

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E903.0										Batch: RA226-7031
Sample ID: C14010262-004GMS		Sample Matrix Spike				Run: G5000W_140114D				01/27/14 07:11
Radium 226		21	pCi/L		92	70	130			
Sample ID: C14010262-004GMSD		Sample Matrix Spike Duplicate				Run: G5000W_140114D				01/27/14 08:45
Radium 226		22	pCi/L		97	70	130	5.1	21.3	
Sample ID: MB-RA226-7031	3	Method Blank				Run: G5000W_140114D				01/27/14 08:45
Radium 226		0.1	pCi/L							U
Radium 226 precision (±)		0.1	pCi/L							
Radium 226 MDC		0.2	pCi/L							
Sample ID: LCS-RA226-7031		Laboratory Control Sample				Run: G5000W_140114D				01/27/14 08:45
Radium 226		10	pCi/L		88	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: 02/25/14
Project: Zone-1
Work Order: C14010262

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E908.0									Batch: RA-TH-ISO-1986	
Sample ID: LCS-RA-TH-ISO-1986		Laboratory Control Sample				Run: ALPHANALYST_140113A			01/16/14 10:06	
Thorium 230		5.6	pCi/L		86	80	120			
Sample ID: C14010181-002DMS		Sample Matrix Spike				Run: ALPHANALYST_140113A			01/16/14 10:06	
Thorium 230		13	pCi/L		101	70	130			
Sample ID: C14010181-002DMSD		Sample Matrix Spike Duplicate				Run: ALPHANALYST_140113A			01/16/14 10:06	
Thorium 230		13	pCi/L		99	70	130	2.9	37.1	
Sample ID: MB-RA-TH-ISO-1986	3	Method Blank				Run: ALPHANALYST_140113A			01/16/14 10:06	
Thorium 230		0.07	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
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:** 02/25/14

Project: Zone-1 **Work Order:** C14010262

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E909.0									Batch: T_PB-210-0443R	
Sample ID: MB-PB-210-0443R	3	Method Blank				Run: SUB-T55067			01/24/14 13:45	
Lead 210		-0.4	pCi/L							U
Lead 210 precision (±)		0.4	pCi/L							
Lead 210 MDC		0.8	pCi/L							
Sample ID: LCS-PB-210-0443R		Laboratory Control Sample				Run: SUB-T55067			01/24/14 16:01	
Lead 210		21	pCi/L		103	80	120			
Sample ID: C14010260-015F		Sample Matrix Spike				Run: SUB-T55067			01/26/14 15:21	
Lead 210		45	pCi/L		98	70	130			
Sample ID: C14010260-015F		Sample Matrix Spike Duplicate				Run: SUB-T55067			01/26/14 17:36	
Lead 210		44	pCi/L		96	70	130	2.0	18.5	

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
Report Date: 02/25/14
Project: Zone-1
Work Order: C14010262

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: RA-05										Batch: RA228-4590
Sample ID: LCS-228-RA226-7031		Laboratory Control Sample				Run: TENNELEC-3_140114A				01/20/14 11:31
Radium 228		8.6	pCi/L		99	80	120			
Sample ID: MB-RA226-7031	3	Method Blank				Run: TENNELEC-3_140114A				01/20/14 11:31
Radium 228		1	pCi/L							U
Radium 228 precision (±)		1	pCi/L							
Radium 228 MDC		2	pCi/L							
Sample ID: C14010262-005GMS		Sample Matrix Spike				Run: TENNELEC-3_140114A				01/20/14 11:31
Radium 228		17	pCi/L		109	70	130			
Sample ID: C14010262-005GMSD		Sample Matrix Spike Duplicate				Run: TENNELEC-3_140114A				01/20/14 11:31
Radium 228		15	pCi/L		95	70	130	12	38.7	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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ANALYTICAL SUMMARY REPORT

February 25, 2014

United Nuclear Corporation
21 Miles NE of Gallup
Gallup, NM 87305

Workorder No.: C14010872 Quote ID: C129 - Quarterly Long List

Project Name: Zone-1

Energy Laboratories, Inc. Casper WY received the following 2 samples for United Nuclear Corporation on 1/31/2014 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C14010872-001	614	01/28/14 12:35	01/31/14	Aqueous	E624 Purgeable Organics
C14010872-002	515-A	01/28/14 12:45	01/31/14	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:

Report Proofing Specialist

Digitally signed by
Sheri M. Mead
Date: 2014.02.25 10:48:08 -07:00

CLIENT: United Nuclear Corporation
Project: Zone-1
Sample Delivery Group: C14010872

Report Date: 02/25/14

CASE NARRATIVE

COMMENTS
Tracker sheets for samples 614 and 515-A are included in the report for work order C14010262.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/25/14

Project: Zone-1 **Work Order:** C14010872

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624										Analytical Run: R183286
Sample ID: 31-Jan-14_CCV_19	7	Continuing Calibration Verification Standard								01/31/14 21:33
Bromodichloromethane		8.20	ug/L	1.0	82	70	130			
Bromoform		9.76	ug/L	1.0	98	70	130			
Chlorodibromomethane		8.92	ug/L	1.0	89	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	107	70	130			
Surr: Dibromofluoromethane				1.0	77	70	130			
Surr: p-Bromofluorobenzene				1.0	100	70	130			
Surr: Toluene-d8				1.0	95	70	130			
Method: E624										Batch: R183286
Sample ID: 31-Jan-14_LCS_4	7	Laboratory Control Sample				Run: 5975VOC1_140131E				01/31/14 11:43
Bromodichloromethane		10.6	ug/L	1.0	106	65.2	130			
Bromoform		10.5	ug/L	1.0	105	71.5	130			
Chlorodibromomethane		10.6	ug/L	1.0	106	64.6	127			
Surr: 1,2-Dichlorobenzene-d4				1.0	106	73.7	126			
Surr: Dibromofluoromethane				1.0	99	64.4	131			
Surr: p-Bromofluorobenzene				1.0	103	67.1	133			
Surr: Toluene-d8				1.0	97	79.7	125			
Sample ID: 31-Jan-14_MBLK_6	7	Method Blank				Run: 5975VOC1_140131E				01/31/14 12:53
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	108	73.7	126			
Surr: Dibromofluoromethane				1.0	98	64.4	131			
Surr: p-Bromofluorobenzene				1.0	118	67.1	133			
Surr: Toluene-d8				1.0	94	79.7	125			
Sample ID: C14010872-002AMS	7	Sample Matrix Spike				Run: 5975VOC1_140131E				02/01/14 05:12
Bromodichloromethane		182	ug/L	10	91	65.2	130			
Bromoform		210	ug/L	10	105	71.5	130			
Chlorodibromomethane		200	ug/L	10	100	64.6	127			
Surr: 1,2-Dichlorobenzene-d4				1.0	107	73.7	126			
Surr: Dibromofluoromethane				1.0	90	64.4	131			
Surr: p-Bromofluorobenzene				1.0	104	67.1	133			
Surr: Toluene-d8				1.0	96	79.7	125			
Sample ID: C14010872-002AMSD	7	Sample Matrix Spike Duplicate				Run: 5975VOC1_140131E				02/01/14 05:47
Bromodichloromethane		170	ug/L	10	85	65.2	130	6.8	20	
Bromoform		190	ug/L	10	95	71.5	130	9.6	20	
Chlorodibromomethane		181	ug/L	10	90	64.6	127	10	20	
Surr: 1,2-Dichlorobenzene-d4				1.0	106	73.7	126			
Surr: Dibromofluoromethane				1.0	92	64.4	131			
Surr: p-Bromofluorobenzene				1.0	102	67.1	133			
Surr: Toluene-d8				1.0	96	79.7	125			

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:** 02/25/14

Project: Zone-1 **Work Order:** C14010872

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624										Analytical Run: R183324
Sample ID: 03-Feb-14_CCV_2	9	Continuing Calibration Verification Standard								02/04/14 08:26
Bromodichloromethane		10.2	ug/L	1.0	102	70	130			
Bromoform		12.4	ug/L	1.0	124	70	130			
Chlorodibromomethane		11.4	ug/L	1.0	114	70	130			
Chloroform		7.84	ug/L	1.0	78	70	130			
Trihalomethanes, Total		41.8	ug/L	1.0	104	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	109	70	130			
Surr: Dibromofluoromethane				1.0	78	70	130			
Surr: p-Bromofluorobenzene				1.0	106	70	130			
Surr: Toluene-d8				1.0	98	70	130			
Method: E624										Batch: R183324
Sample ID: 04-Feb-14_LCS_13	9	Laboratory Control Sample				Run: 5975VOC1_140204A				02/04/14 15:30
Bromodichloromethane		8.20	ug/L	1.0	82	65.2	130			
Bromoform		9.84	ug/L	1.0	98	71.5	130			
Chlorodibromomethane		9.16	ug/L	1.0	92	64.6	127			
Chloroform		7.24	ug/L	1.0	72	65	136			
Trihalomethanes, Total		34.4	ug/L	1.0	86	71.1	127			
Surr: 1,2-Dichlorobenzene-d4				1.0	89	73.7	126			
Surr: Dibromofluoromethane				1.0	71	64.4	131			
Surr: p-Bromofluorobenzene				1.0	84	67.1	133			
Surr: Toluene-d8				1.0	81	79.7	125			
Sample ID: 04-Feb-14_MBLK_15	9	Method Blank				Run: 5975VOC1_140204A				02/04/14 16:40
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	106	73.7	126			
Surr: Dibromofluoromethane				1.0	82	64.4	131			
Surr: p-Bromofluorobenzene				1.0	106	67.1	133			
Surr: Toluene-d8				1.0	91	79.7	125			
Sample ID: C14010872-002AMS	9	Sample Matrix Spike				Run: 5975VOC1_140204A				02/04/14 18:26
Bromodichloromethane		90.0	ug/L	5.0	90	65.2	130			
Bromoform		102	ug/L	5.0	102	71.5	130			
Chlorodibromomethane		96.4	ug/L	5.0	96	64.6	127			
Chloroform		124	ug/L	5.0	73	65	136			
Trihalomethanes, Total		413	ug/L	5.0	90	71.1	127			
Surr: 1,2-Dichlorobenzene-d4				1.0	97	73.7	126			
Surr: Dibromofluoromethane				1.0	77	64.4	131			
Surr: p-Bromofluorobenzene				1.0	98	67.1	133			
Surr: Toluene-d8				1.0	89	79.7	125			

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:** 02/25/14

Project: Zone-1 **Work Order:** C14010872

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624									Batch: R183324	
Sample ID: C14010872-002AMSD	9	Sample Matrix Spike Duplicate				Run: 5975VOC1_140204A			02/04/14 19:01	
Bromodichloromethane		92.4	ug/L	5.0	92	65.2	130	2.6	20	
Bromoform		104	ug/L	5.0	104	71.5	130	2.3	20	
Chlorodibromomethane		99.2	ug/L	5.0	99	64.6	127	2.9	20	
Chloroform		135	ug/L	5.0	84	65	136	8.3	20	
Trihalomethanes, Total		431	ug/L	5.0	95	71.1	127	4.4	20	
Surr: 1,2-Dichlorobenzene-d4				1.0	104	73.7	126			
Surr: Dibromofluoromethane				1.0	89	64.4	131			
Surr: p-Bromofluorobenzene				1.0	104	67.1	133			
Surr: Toluene-d8				1.0	95	79.7	125			

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:** 02/25/14

Project: Zone-1 **Work Order:** C14010872

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624										Analytical Run: R183429
Sample ID: 06-Feb-14_CCV_3	7	Continuing Calibration Verification Standard								02/06/14 14:14
Bromodichloromethane		10.2	ug/L	1.0	102	70	130			
Bromoform		10.8	ug/L	1.0	108	70	130			
Chlorodibromomethane		10.5	ug/L	1.0	105	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	116	70	130			
Surr: Dibromofluoromethane				1.0	105	70	130			
Surr: p-Bromofluorobenzene				1.0	117	70	130			
Surr: Toluene-d8				1.0	105	70	130			
Method: E624										Batch: R183429
Sample ID: 06-Feb-14_LCS_4	7	Laboratory Control Sample				Run: 5975VOC1_140206B				02/06/14 14:50
Bromodichloromethane		10.8	ug/L	1.0	108	65.2	130			
Bromoform		11.2	ug/L	1.0	112	71.5	130			
Chlorodibromomethane		11.1	ug/L	1.0	111	64.6	127			
Surr: 1,2-Dichlorobenzene-d4				1.0	109	73.7	126			
Surr: Dibromofluoromethane				1.0	100	64.4	131			
Surr: p-Bromofluorobenzene				1.0	111	67.1	133			
Surr: Toluene-d8				1.0	100	79.7	125			
Sample ID: 06-Feb-14_MBLK_6	7	Method Blank				Run: 5975VOC1_140206B				02/06/14 16:00
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	109	73.7	126			
Surr: Dibromofluoromethane				1.0	96	64.4	131			
Surr: p-Bromofluorobenzene				1.0	122	67.1	133			
Surr: Toluene-d8				1.0	92	79.7	125			
Sample ID: C14020050-001JMS	7	Sample Matrix Spike				Run: 5975VOC1_140206B				02/06/14 23:38
Bromodichloromethane		4980	ug/L	250	100	65.2	130			
Bromoform		5100	ug/L	250	102	71.5	130			
Chlorodibromomethane		4920	ug/L	250	98	64.6	127			
Surr: 1,2-Dichlorobenzene-d4				1.0	106	73.7	126			
Surr: Dibromofluoromethane				1.0	87	64.4	131			
Surr: p-Bromofluorobenzene				1.0	106	67.1	133			
Surr: Toluene-d8				1.0	94	79.7	125			
Sample ID: C14020050-001JMSD	7	Sample Matrix Spike Duplicate				Run: 5975VOC1_140206B				02/07/14 00:14
Bromodichloromethane		4620	ug/L	250	92	65.2	130	7.5	20	
Bromoform		4740	ug/L	250	95	71.5	130	7.3	20	
Chlorodibromomethane		4500	ug/L	250	90	64.6	127	8.9	20	
Surr: 1,2-Dichlorobenzene-d4				1.0	107	73.7	126			
Surr: Dibromofluoromethane				1.0	99	64.4	131			
Surr: p-Bromofluorobenzene				1.0	109	67.1	133			
Surr: Toluene-d8				1.0	97	79.7	125			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

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ANALYTICAL SUMMARY REPORT

February 27, 2014

United Nuclear Corporation
21 Miles NE of Gallup
Gallup, NM 87305

Workorder No.: C14010520 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 1/17/2014 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C14010520-001	EPA-4	01/13/14 9:03	01/17/14	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Total Alkalinity Anion - Cation Balance Arsenic Speciation, Total 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
C14010520-002	EPA-5	01/13/14 10:05	01/17/14	Aqueous	Same As Above
C14010520-003	EPA-7	01/13/14 10:55	01/17/14	Aqueous	Same As Above
C14010520-004	EPA-2	01/13/14 12:00	01/17/14	Aqueous	Same As Above
C14010520-005	EPA-2 Duplicate	01/13/14 12:35	01/17/14	Aqueous	Same As Above
C14010520-006	TWQ-142	01/14/14 12:05	01/17/14	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:

Report Proofing Specialist

Digitally signed by
Sheri M. Mead
Date: 2014.02.27 16:01:41 -07:00

CLIENT: United Nuclear Corporation
Project: Zone-1
Sample Delivery Group: C14010520

Report Date: 02/27/14

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: 02/27/14
Project: Zone-1
Work Order: C14010520

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2320 B										Batch: R182740
Sample ID: MBLK	2	Method Blank				Run: MANTECH_140117B				01/17/14 14:23
Alkalinity, Total as CaCO3		0.6	mg/L	0.6						
Bicarbonate as HCO3		ND	mg/L	1						
Sample ID: LCS_131219		Laboratory Control Sample				Run: MANTECH_140117B				01/17/14 14:36
Alkalinity, Total as CaCO3		257	mg/L	5.0	103	90	110			
Sample ID: C14010470-001ADUP	2	Sample Duplicate				Run: MANTECH_140117B				01/17/14 14:52
Alkalinity, Total as CaCO3		255	mg/L	5.0				0.1	10	
Bicarbonate as HCO3		312	mg/L	5.0				0.1	10	
Sample ID: C14010484-001AMS		Sample Matrix Spike				Run: MANTECH_140117B				01/17/14 15:07
Alkalinity, Total as CaCO3		252	mg/L	5.0	96	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:** 02/27/14

Project: Zone-1 **Work Order:** C14010520

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C									Batch: TDS140117A	
Sample ID: MB-1_140117A		Method Blank				Run: BAL-19_140117B			01/17/14 14:53	
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	7						
Sample ID: LCS-2_140117A		Laboratory Control Sample				Run: BAL-19_140117B			01/17/14 14:58	
Solids, Total Dissolved TDS @ 180 C		1960	mg/L	20	98	90	110			
Sample ID: C14010461-001A MS		Sample Matrix Spike				Run: BAL-19_140117B			01/17/14 15:01	
Solids, Total Dissolved TDS @ 180 C		1480	mg/L	11	99	90	110			
Sample ID: C14010515-008A DUP		Sample Duplicate				Run: BAL-19_140117B			01/17/14 15:09	
Solids, Total Dissolved TDS @ 180 C		52700	mg/L	500				0.5	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: 02/27/14
Project: Zone-1
Work Order: C14010520

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A3114 B									Analytical Run: CVAA-C202_140122A	
Sample ID: ICV		Initial Calibration Verification Standard							01/22/14 15:21	
Selenium-IV		0.0266	mg/L	0.0010	107	90	110			
Sample ID: CCV		Continuing Calibration Verification Standard							01/22/14 15:41	
Selenium-IV		0.0266	mg/L	0.0010	107	90	110			
Method: A3114 B									Batch: 40424	
Sample ID: MB-40424		Method Blank				Run: CVAA-C202_140122A			01/22/14 15:26	
Selenium-IV		ND	mg/L	0.0005						
Sample ID: LCS-40424		Laboratory Control Sample				Run: CVAA-C202_140122A			01/22/14 15:27	
Selenium-IV		0.0261	mg/L	0.0010	104	90	110			
Sample ID: C14010520-001CMS		Sample Matrix Spike				Run: CVAA-C202_140122A			01/22/14 15:30	
Selenium-IV		0.0248	mg/L	0.0010	97	85	115			
Sample ID: C14010520-001CMSD		Sample Matrix Spike Duplicate				Run: CVAA-C202_140122A			01/22/14 15:32	
Selenium-IV		0.0243	mg/L	0.0010	94	85	115	2.2	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: 02/27/14
Project: Zone-1
Work Order: C14010520

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-H B									Analytical Run: PHSC_101-C_140117A	
Sample ID: pH 6.86	Initial Calibration Verification Standard								01/17/14 08:32	
pH		6.85	s.u.	0.010	100	98	102			
Sample ID: CCV - pH 7	Continuing Calibration Verification Standard								01/17/14 11:05	
pH		6.98	s.u.	0.010	100	98	102			
Method: A4500-H B									Batch: R182707	
Sample ID: C14010520-005ADUP	Sample Duplicate					Run: PHSC_101-C_140117A			01/17/14 14:24	
pH		6.77	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: 02/27/14
Project: Zone-1
Work Order: C14010520

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-NH3 G										Batch: R182839
Sample ID: MBLK-1		Method Blank				Run: TECHNICON_140121A				01/21/14 13:56
Nitrogen, Ammonia as N		ND	mg/L	0.006						
Sample ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_140121A				01/21/14 14:00
Nitrogen, Ammonia as N		1.96	mg/L	0.050	100	90	110			
Sample ID: C14010356-004AMS		Sample Matrix Spike				Run: TECHNICON_140121A				01/21/14 14:03
Nitrogen, Ammonia as N		29.8	mg/L	0.50	95	90	110			
Sample ID: C14010356-004AMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_140121A				01/21/14 14:05
Nitrogen, Ammonia as N		30.5	mg/L	0.50	98	90	110	2.3	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: 02/27/14
Project: Zone-1
Work Order: C14010520

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **E1632AM**									Analytical Run: SUB-H94562	
Sample ID: **AS-ICV 25ppb-1/27/20**		Initial Calibration Verification Standard							01/27/14 11:51	
Arsenic-III		24.2	ug/L	5.0	97	87.6	114			
Sample ID: **AS-50.0-1/27/2014**		Continuing Calibration Verification Standard							01/27/14 15:37	
Arsenic-III		48.7	ug/L	5.0	97	85	115			
Method: **E1632AM**									Batch: H_R94562	
Sample ID: **AS-LFB 50ppb-1/27/20**		Laboratory Fortified Blank				Run: SUB-H94562			01/27/14 12:15	
Arsenic-III		49.8	ug/L	5.0	100	55	146			
Sample ID: **ICB**		Method Blank				Run: SUB-H94562			01/27/14 12:23	
Arsenic-III		ND	ug/L	0.4						
Sample ID: **H14010209-011E MS**		Sample Matrix Spike				Run: SUB-H94562			01/27/14 12:39	
Arsenic-III		52.7	ug/L	5.0	104	55	146			
Sample ID: **H14010209-011E MSD**		Sample Matrix Spike Duplicate				Run: SUB-H94562			01/27/14 12:47	
Arsenic-III		53.0	ug/L	5.0	105	55	146	0.4	20	

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: 02/27/14
Project: Zone-1
Work Order: C14010520

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP4-C_140121A	
Sample ID: ICV	4	Initial Calibration Verification Standard							01/22/14 10:52	
Calcium		51.2	mg/L	0.50	102	95	105			
Magnesium		50.0	mg/L	0.50	100	95	105			
Potassium		48.2	mg/L	0.50	96	95	105			
Sodium		49.8	mg/L	0.50	100	95	105			
Sample ID: ICSA	4	Interference Check Sample A							01/22/14 11:06	
Calcium		455	mg/L	0.50	91	80	120			
Magnesium		492	mg/L	0.50	99	80	120			
Potassium		-0.0106	mg/L	0.50						
Sodium		-0.0743	mg/L	0.50						
Sample ID: ICSAB	4	Interference Check Sample AB							01/22/14 11:10	
Calcium		455	mg/L	0.50	91	80	120			
Magnesium		491	mg/L	0.50	98	80	120			
Potassium		0.00376	mg/L	0.50						
Sodium		-0.251	mg/L	0.50						
Method: E200.7									Batch: R182893	
Sample ID: MB-140121A	4	Method Blank				Run: ICP4-C_140121A			01/22/14 11:28	
Calcium		ND	mg/L	0.02						
Magnesium		0.07	mg/L	0.01						
Potassium		ND	mg/L	0.04						
Sodium		ND	mg/L	0.2						
Sample ID: LFB-140121A	4	Laboratory Fortified Blank				Run: ICP4-C_140121A			01/22/14 11:32	
Calcium		47.2	mg/L	0.50	94	85	115			
Magnesium		46.0	mg/L	0.50	92	85	115			
Potassium		43.3	mg/L	0.50	87	85	115			
Sodium		45.4	mg/L	0.50	91	85	115			
Sample ID: C14010519-004BMS2	4	Sample Matrix Spike				Run: ICP4-C_140121A			01/22/14 17:50	
Calcium		383	mg/L	1.0	96	70	130			
Magnesium		253	mg/L	1.0	94	70	130			
Potassium		263	mg/L	1.0	93	70	130			
Sodium		915	mg/L	1.0	83	70	130			
Sample ID: C14010519-004BMSD2	4	Sample Matrix Spike Duplicate				Run: ICP4-C_140121A			01/22/14 17:54	
Calcium		386	mg/L	1.0	97	70	130	0.7	20	
Magnesium		254	mg/L	1.0	94	70	130	0.4	20	
Potassium		266	mg/L	1.0	94	70	130	0.9	20	
Sodium		921	mg/L	1.0	86	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: 02/27/14
Project: Zone-1
Work Order: C14010520

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7								Analytical Run: ICP4-C_140123A		
Sample ID: ICV	8	Initial Calibration Verification Standard								01/23/14 14:56
Aluminum		5.03	mg/L	0.10	101	95	105			
Beryllium		0.511	mg/L	0.010	102	95	105			
Cadmium		0.479	mg/L	0.010	96	95	105			
Cobalt		0.966	mg/L	0.010	97	95	105			
Manganese		4.94	mg/L	0.010	99	95	105			
Molybdenum		0.985	mg/L	0.10	98	95	105			
Nickel		0.946	mg/L	0.050	95	95	105			
Vanadium		1.00	mg/L	0.10	100	95	105			
Sample ID: ICSA	8	Interference Check Sample A								01/23/14 15:11
Aluminum		490	mg/L	0.10	98	80	120			
Beryllium		-3.00E-05	mg/L	0.010						
Cadmium		0.000200	mg/L	0.010						
Cobalt		-0.00828	mg/L	0.010						
Manganese		-0.00224	mg/L	0.010						
Molybdenum		0.00116	mg/L	0.10						
Nickel		-0.00267	mg/L	0.050						
Vanadium		0.00134	mg/L	0.10						
Sample ID: ICSAB	8	Interference Check Sample AB								01/23/14 15:15
Aluminum		498	mg/L	0.10	100	80	120			
Beryllium		0.484	mg/L	0.010	97	80	120			
Cadmium		0.877	mg/L	0.010	88	80	120			
Cobalt		0.437	mg/L	0.010	87	80	120			
Manganese		0.454	mg/L	0.010	91	80	120			
Molybdenum		0.000890	mg/L	0.10						
Nickel		0.879	mg/L	0.050	88	80	120			
Vanadium		0.474	mg/L	0.10	95	80	120			
Method: E200.7										Batch: 40393
Sample ID: MB-40393	8	Method Blank				Run: ICP4-C_140123A				01/23/14 18:42
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		0.003	mg/L	0.001						
Vanadium		ND	mg/L	0.005						
Sample ID: LCS3-40393	8	Laboratory Control Sample				Run: ICP4-C_140123A				01/23/14 18:45
Aluminum		2.53	mg/L	0.030	101	85	115			
Beryllium		0.256	mg/L	0.0010	102	85	115			
Cadmium		0.243	mg/L	0.0010	97	85	115			
Cobalt		0.483	mg/L	0.0050	97	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:** 02/27/14

Project: Zone-1 **Work Order:** C14010520

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7										Batch: 40393
Sample ID: LCS3-40393	8	Laboratory Control Sample				Run: ICP4-C_140123A				01/23/14 18:45
Manganese		2.48	mg/L	0.0010	99	85	115			
Molybdenum		0.488	mg/L	0.0028	98	85	115			
Nickel		0.481	mg/L	0.0050	96	85	115			
Vanadium		0.508	mg/L	0.010	102	85	115			
Sample ID: C14010520-004CMS3	8	Sample Matrix Spike				Run: ICP4-C_140123A				01/23/14 19:18
Aluminum		2.49	mg/L	0.030	98	70	130			
Beryllium		0.243	mg/L	0.0010	97	70	130			
Cadmium		0.231	mg/L	0.0010	93	70	130			
Cobalt		0.457	mg/L	0.0050	91	70	130			
Manganese		3.88	mg/L	0.0010	94	70	130			
Molybdenum		0.467	mg/L	0.0056	93	70	130			
Nickel		0.460	mg/L	0.0050	91	70	130			
Vanadium		0.494	mg/L	0.010	99	70	130			
Sample ID: C14010520-004CMSD3	8	Sample Matrix Spike Duplicate				Run: ICP4-C_140123A				01/23/14 19:22
Aluminum		2.47	mg/L	0.030	97	70	130	1.0	20	
Beryllium		0.239	mg/L	0.0010	95	70	130	1.7	20	
Cadmium		0.227	mg/L	0.0010	91	70	130	2.0	20	
Cobalt		0.451	mg/L	0.0050	90	70	130	1.4	20	
Manganese		3.84	mg/L	0.0010	92	70	130	1.2	20	
Molybdenum		0.480	mg/L	0.0056	96	70	130	2.7	20	
Nickel		0.459	mg/L	0.0050	91	70	130	0.2	20	
Vanadium		0.477	mg/L	0.010	95	70	130	3.4	20	

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:** 02/27/14

Project: Zone-1 **Work Order:** C14010520

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS4-C_140210A	
Sample ID: ICV	2	Initial Calibration Verification Standard							02/10/14 17:05	
Lead		0.0484	mg/L	0.0010	97	90	110			
Uranium		0.0495	mg/L	0.00030	99	90	110			
Method: E200.8									Batch: 40393	
Sample ID: MB-40393	2	Method Blank				Run: ICPMS4-C_140210A			02/10/14 19:46	
Lead		ND	mg/L	4E-05						
Uranium		ND	mg/L	4E-05						
Sample ID: LCS3-40393	2	Laboratory Control Sample				Run: ICPMS4-C_140210A			02/10/14 19:50	
Lead		0.501	mg/L	0.0010	100	85	115			
Uranium		0.535	mg/L	0.00030	107	85	115			
Sample ID: C14010520-004CMS3	2	Sample Matrix Spike				Run: ICPMS4-C_140210A			02/10/14 20:02	
Lead		0.504	mg/L	0.0010	101	70	130			
Uranium		0.563	mg/L	0.00030	112	70	130			
Sample ID: C14010520-004CMSD3	2	Sample Matrix Spike Duplicate				Run: ICPMS4-C_140210A			02/10/14 20:06	
Lead		0.504	mg/L	0.0010	101	70	130	0.0	20	
Uranium		0.559	mg/L	0.00030	111	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:** 02/27/14

Project: Zone-1 **Work Order:** C14010520

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0									Analytical Run: IC1-C_140120A	
Sample ID: CCV-012014-02	2	Continuing Calibration Verification Standard							01/20/14 21:31	
Chloride		19.7	mg/L	1.0	98	90	110			
Sulfate		78.7	mg/L	1.0	98	90	110			
Method: E300.0									Batch: R182850	
Sample ID: ICB-012014	2	Method Blank				Run: IC1-C_140120A			01/20/14 17:10	
Chloride		0.04	mg/L	0.04						
Sulfate		0.2	mg/L	0.1						
Sample ID: LFB-012014-01	2	Laboratory Fortified Blank				Run: IC1-C_140120A			01/20/14 17:27	
Chloride		9.80	mg/L	1.0	98	90	110			
Sulfate		39.1	mg/L	1.0	97	90	110			
Sample ID: C14010520-005AMS	2	Sample Matrix Spike				Run: IC1-C_140120A			01/20/14 22:58	
Chloride		124	mg/L	2.1	101	90	110			
Sulfate		2180	mg/L	8.3		90	110			A
Sample ID: C14010520-005AMSD	2	Sample Matrix Spike Duplicate				Run: IC1-C_140120A			01/20/14 23:16	
Chloride		125	mg/L	2.1	102	90	110	0.3	20	
Sulfate		2160	mg/L	8.3		90	110	1.2	20	A
Method: E300.0									Analytical Run: IC2-C_140118A	
Sample ID: CCV-011813-6	2	Continuing Calibration Verification Standard							01/19/14 22:38	
Chloride		9.86	mg/L	1.0	99	90	110			
Sulfate		39.2	mg/L	1.0	98	90	110			
Method: E300.0									Batch: R182763	
Sample ID: ICB-011813	2	Method Blank				Run: IC2-C_140118A			01/18/14 20:14	
Chloride		0.02	mg/L	0.01						
Sulfate		0.10	mg/L	0.03						
Sample ID: LFB-011813-1	2	Laboratory Fortified Blank				Run: IC2-C_140118A			01/18/14 20:32	
Chloride		9.78	mg/L	1.0	98	90	110			
Sulfate		38.7	mg/L	1.0	96	90	110			
Sample ID: C14010518-008AMS	2	Sample Matrix Spike				Run: IC2-C_140118A			01/19/14 23:33	
Chloride		236	mg/L	4.2	100	90	110			
Sulfate		3680	mg/L	17	94	90	110			
Sample ID: C14010518-008AMSD	2	Sample Matrix Spike Duplicate				Run: IC2-C_140118A			01/19/14 23:51	
Chloride		237	mg/L	4.2	101	90	110	0.6	20	
Sulfate		3680	mg/L	17	94	90	110	0.1	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: 02/27/14
Project: Zone-1
Work Order: C14010520

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E353.2									Analytical Run: TECHNICON_140117A	
Sample ID: CCV-16		Continuing Calibration Verification Standard							01/17/14 14:08	
Nitrogen, Nitrate+Nitrite as N		1.02	mg/L	0.10	102	90	110			
Method: E353.2									Batch: R182736	
Sample ID: MBLK-1		Method Blank				Run: TECHNICON_140117A			01/17/14 13:30	
Nitrogen, Nitrate+Nitrite as N		ND	mg/L	0.05						
Sample ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_140117A			01/17/14 13:35	
Nitrogen, Nitrate+Nitrite as N		2.12	mg/L	0.10	108	90	110			
Sample ID: C14010470-001CMS		Sample Matrix Spike				Run: TECHNICON_140117A			01/17/14 14:15	
Nitrogen, Nitrate+Nitrite as N		2.01	mg/L	0.10	103	90	110			
Sample ID: C14010470-001CMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_140117A			01/17/14 14:18	
Nitrogen, Nitrate+Nitrite as N		2.04	mg/L	0.10	104	90	110	1.5	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:** 02/27/14

Project: Zone-1 **Work Order:** C14010520

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624									Analytical Run: R182889	
Sample ID: 22-Jan-14_CCV_19	9	Continuing Calibration Verification Standard							01/22/14 19:57	
Bromodichloromethane		10.6	ug/L	1.0	106	70	130			
Bromoform		11.2	ug/L	1.0	112	70	130			
Chlorodibromomethane		11.2	ug/L	1.0	112	70	130			
Chloroform		11.1	ug/L	1.0	111	70	130			
Trihalomethanes, Total		44.0	ug/L	1.0	110	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	104	70	130			
Surr: Dibromofluoromethane				1.0	59	70	130			S
Surr: p-Bromofluorobenzene				1.0	107	70	130			
Surr: Toluene-d8				1.0	106	70	130			
Method: E624									Batch: R182889	
Sample ID: 22-Jan-14_LCS_4	9	Laboratory Control Sample				Run: 5975VOC1_140122B			01/22/14 11:08	
Bromodichloromethane		9.04	ug/L	1.0	90	65.2	130			
Bromoform		9.96	ug/L	1.0	100	71.5	130			
Chlorodibromomethane		9.52	ug/L	1.0	95	64.6	127			
Chloroform		10.2	ug/L	1.0	102	65	136			
Trihalomethanes, Total		38.8	ug/L	1.0	97	71.1	127			
Surr: 1,2-Dichlorobenzene-d4				1.0	104	73.7	126			
Surr: Dibromofluoromethane				1.0	61	64.4	131			S
Surr: p-Bromofluorobenzene				1.0	108	67.1	133			
Surr: Toluene-d8				1.0	105	79.7	125			
Sample ID: 22-Jan-14_MBLK_6	9	Method Blank				Run: 5975VOC1_140122B			01/22/14 12:22	
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	108	73.7	126			
Surr: Dibromofluoromethane				1.0	57	64.4	131			S
Surr: p-Bromofluorobenzene				1.0	112	67.1	133			
Surr: Toluene-d8				1.0	102	79.7	125			
Sample ID: C14010463-002AMS	9	Sample Matrix Spike				Run: 5975VOC1_140122B			01/22/14 18:12	
Bromodichloromethane		102	ug/L	5.0	88	65.2	130			
Bromoform		91.2	ug/L	5.0	91	71.5	130			
Chlorodibromomethane		98.8	ug/L	5.0	87	64.6	127			
Chloroform		112	ug/L	5.0	95	65	136			
Trihalomethanes, Total		405	ug/L	5.0	90	71.1	127			
Surr: 1,2-Dichlorobenzene-d4				1.0	104	73.7	126			
Surr: Dibromofluoromethane				1.0	58	64.4	131			S
Surr: p-Bromofluorobenzene				1.0	106	67.1	133			
Surr: Toluene-d8				1.0	105	79.7	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: 02/27/14
Project: Zone-1
Work Order: C14010520

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624									Batch: R182889	
Sample ID: C14010463-002AMSD	9	Sample Matrix Spike Duplicate				Run: 5975VOC1_140122B			01/22/14 18:47	
Bromodichloromethane		108	ug/L	5.0	93	65.2	130	5.0	20	
Bromoform		98.0	ug/L	5.0	98	71.5	130	7.2	20	
Chlorodibromomethane		107	ug/L	5.0	95	64.6	127	7.8	20	
Chloroform		118	ug/L	5.0	101	65	136	5.2	20	
Trihalomethanes, Total		431	ug/L	5.0	97	71.1	127	6.2	20	
Surr: 1,2-Dichlorobenzene-d4				1.0	103	73.7	126			
Surr: Dibromofluoromethane				1.0	55	64.4	131			S
Surr: p-Bromofluorobenzene				1.0	106	67.1	133			
Surr: Toluene-d8				1.0	104	79.7	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:** 02/27/14

Project: Zone-1 **Work Order:** C14010520

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624									Analytical Run: R182982	
Sample ID: 24-Jan-14_CCV_8	9	Continuing Calibration Verification Standard							01/24/14 17:06	
Bromodichloromethane		13.2	ug/L	1.0	132	70	130			S
Bromoform		7.80	ug/L	1.0	78	70	130			
Chlorodibromomethane		7.36	ug/L	1.0	74	70	130			
Chloroform		12.4	ug/L	1.0	124	70	130			
Trihalomethanes, Total		40.7	ug/L	1.0	102	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	90	70	130			
Surr: Dibromofluoromethane				1.0	90	70	130			
Surr: p-Bromofluorobenzene				1.0	94	70	130			
Surr: Toluene-d8				1.0	122	70	130			
Method: E624									Batch: R182982	
Sample ID: 24-Jan-14_LCS_4	9	Laboratory Control Sample				Run: GCMS2_140124A			01/24/14 14:41	
Bromodichloromethane		12.7	ug/L	1.0	127	65.2	130			
Bromoform		7.44	ug/L	1.0	74	71.5	130			
Chlorodibromomethane		7.40	ug/L	1.0	74	64.6	127			
Chloroform		12.1	ug/L	1.0	121	65	136			
Trihalomethanes, Total		39.6	ug/L	1.0	99	71.1	127			
Surr: 1,2-Dichlorobenzene-d4				1.0	89	73.7	126			
Surr: Dibromofluoromethane				1.0	88	64.4	131			
Surr: p-Bromofluorobenzene				1.0	95	67.1	133			
Surr: Toluene-d8				1.0	92	79.7	125			
Sample ID: 24-Jan-14_MBLK_10	9	Method Blank				Run: GCMS2_140124A			01/24/14 18:15	
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	115	73.7	126			
Surr: Dibromofluoromethane				1.0	91	64.4	131			
Surr: p-Bromofluorobenzene				1.0	134	67.1	133			S
Surr: Toluene-d8				1.0	122	79.7	125			
Sample ID: C14010521-004HMS	9	Sample Matrix Spike				Run: GCMS2_140124A			01/24/14 23:24	
Bromodichloromethane		137	ug/L	5.0	137	65.2	130			S
Bromoform		77.6	ug/L	5.0	78	71.5	130			
Chlorodibromomethane		76.4	ug/L	5.0	76	64.6	127			
Chloroform		139	ug/L	5.0	139	65	136			S
Trihalomethanes, Total		430	ug/L	5.0	108	71.1	127			
Surr: 1,2-Dichlorobenzene-d4				1.0	91	73.7	126			
Surr: Dibromofluoromethane				1.0	100	64.4	131			
Surr: p-Bromofluorobenzene				1.0	98	67.1	133			
Surr: Toluene-d8				1.0	92	79.7	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:** 02/27/14

Project: Zone-1 **Work Order:** C14010520

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624									Batch: R182982	
Sample ID: C14010521-004HMSD	9	Sample Matrix Spike Duplicate				Run: GCMS2_140124A			01/24/14 23:58	
Bromodichloromethane		130	ug/L	5.0	130	65.2	130	5.4	20	
Bromoform		80.8	ug/L	5.0	81	71.5	130	4.0	20	
Chlorodibromomethane		75.2	ug/L	5.0	75	64.6	127	1.6	20	
Chloroform		135	ug/L	5.0	135	65	136	3.2	20	
Trihalomethanes, Total		421	ug/L	5.0	105	71.1	127	2.3	20	
Surr: 1,2-Dichlorobenzene-d4				1.0	93	73.7	126			
Surr: Dibromofluoromethane				1.0	96	64.4	131			
Surr: p-Bromofluorobenzene				1.0	101	67.1	133			
Surr: Toluene-d8				1.0	90	79.7	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:** 02/27/14

Project: Zone-1 **Work Order:** C14010520

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624									Analytical Run: R183043	
Sample ID: 27-Jan-14_CCV_3	9	Continuing Calibration Verification Standard							01/27/14 14:58	
Bromodichloromethane		8.92	ug/L	1.0	89	70	130			
Bromoform		10.3	ug/L	1.0	103	70	130			
Chlorodibromomethane		10.0	ug/L	1.0	100	70	130			
Chloroform		9.80	ug/L	1.0	98	70	130			
Trihalomethanes, Total		39.0	ug/L	1.0	98	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	104	70	130			
Surr: Dibromofluoromethane				1.0	62	70	130			S
Surr: p-Bromofluorobenzene				1.0	107	70	130			
Surr: Toluene-d8				1.0	106	70	130			
Method: E624									Batch: R183043	
Sample ID: 27-Jan-14_LCS_4	9	Laboratory Control Sample				Run: 5975VOC1_140127A			01/27/14 15:33	
Bromodichloromethane		9.12	ug/L	1.0	91	65.2	130			
Bromoform		11.0	ug/L	1.0	110	71.5	130			
Chlorodibromomethane		10.2	ug/L	1.0	102	64.6	127			
Chloroform		10.4	ug/L	1.0	104	65	136			
Trihalomethanes, Total		40.7	ug/L	1.0	102	71.1	127			
Surr: 1,2-Dichlorobenzene-d4				1.0	106	73.7	126			
Surr: Dibromofluoromethane				1.0	58	64.4	131			S
Surr: p-Bromofluorobenzene				1.0	110	67.1	133			
Surr: Toluene-d8				1.0	106	79.7	125			
Sample ID: 27-Jan-14_MBLK_6	9	Method Blank				Run: 5975VOC1_140127A			01/27/14 16:43	
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	112	73.7	126			
Surr: Dibromofluoromethane				1.0	60	64.4	131			S
Surr: p-Bromofluorobenzene				1.0	114	67.1	133			
Surr: Toluene-d8				1.0	100	79.7	125			
Sample ID: C14010520-001HMS	9	Sample Matrix Spike				Run: 5975VOC1_140127A			01/27/14 22:34	
Bromodichloromethane		166	ug/L	10	83	65.2	130			
Bromoform		208	ug/L	10	104	71.5	130			
Chlorodibromomethane		187	ug/L	10	94	64.6	127			
Chloroform		174	ug/L	10	87	65	136			
Trihalomethanes, Total		735	ug/L	10	92	71.1	127			
Surr: 1,2-Dichlorobenzene-d4				1.0	109	73.7	126			
Surr: Dibromofluoromethane				1.0	53	64.4	131			S
Surr: p-Bromofluorobenzene				1.0	110	67.1	133			
Surr: Toluene-d8				1.0	106	79.7	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:** 02/27/14

Project: Zone-1 **Work Order:** C14010520

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624										Batch: R183043
Sample ID: C14010520-001HMSD	9	Sample Matrix Spike Duplicate				Run: 5975VOC1_140127A				01/27/14 23:09
Bromodichloromethane		191	ug/L	10	96	65.2	130	14	20	
Bromoform		236	ug/L	10	118	71.5	130	13	20	
Chlorodibromomethane		210	ug/L	10	105	64.6	127	12	20	
Chloroform		198	ug/L	10	99	65	136	13	20	
Trihalomethanes, Total		836	ug/L	10	104	71.1	127	13	20	
Surr: 1,2-Dichlorobenzene-d4				1.0	109	73.7	126			
Surr: Dibromofluoromethane				1.0	52	64.4	131			S
Surr: p-Bromofluorobenzene				1.0	110	67.1	133			
Surr: Toluene-d8				1.0	106	79.7	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: 02/27/14
Project: Zone-1
Work Order: C14010520

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E900.1										Batch: GA-0754R
Sample ID: LCS-GA-0754		Laboratory Control Sample				Run: BERTHOLD 770-2_140124B				02/14/14 15:30
Gross Alpha minus Rn & U		38.7	pCi/L		104	80	120			
Sample ID: MB-GA-0754	3	Method Blank				Run: BERTHOLD 770-2_140124B				02/14/14 15:30
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		0.4	pCi/L							
Sample ID: C14010523-012HMS		Sample Matrix Spike				Run: BERTHOLD 770-2_140124B				02/14/14 22:00
Gross Alpha minus Rn & U		73.0	pCi/L		97	70	130			
Sample ID: C14010523-012HMSD		Sample Matrix Spike Duplicate				Run: BERTHOLD 770-2_140124B				02/14/14 22:00
Gross Alpha minus Rn & U		79.4	pCi/L		107	70	130	8.4	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: 02/27/14
Project: Zone-1
Work Order: C14010520

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E903.0										Batch: RA226-7076R
Sample ID: C14010520-005GMS		Sample Matrix Spike				Run: BERTHOLD 770-1_140220A				02/26/14 10:51
Radium 226		49	pCi/L		106	70	130			
Sample ID: C14010521-006GDUP	3	Sample Duplicate				Run: BERTHOLD 770-1_140220A				02/26/14 10:51
Radium 226		15	pCi/L					1.7	17.7	
Radium 226 precision (±)		0.57	pCi/L							
Radium 226 MDC		0.15	pCi/L							
Sample ID: MB-RA226-7076	3	Method Blank				Run: BERTHOLD 770-1_140220A				02/26/14 10:51
Radium 226		-0.1	pCi/L							U
Radium 226 precision (±)		0.08	pCi/L							
Radium 226 MDC		0.2	pCi/L							
Sample ID: LCS-RA226-7076		Laboratory Control Sample				Run: BERTHOLD 770-1_140220A				02/26/14 14:02
Radium 226		12	pCi/L		108	80	120			
Method: E903.0										Batch: RA226-7042
Sample ID: C14010520-001GMS		Sample Matrix Spike				Run: G5000W_140120B				02/03/14 07:57
Radium 226		20	pCi/L		84	70	130			
Sample ID: C14010520-001GMSD		Sample Matrix Spike Duplicate				Run: G5000W_140120B				02/03/14 07:57
Radium 226		21	pCi/L		86	70	130	1.9	20.6	
Sample ID: MB-RA226-7042	3	Method Blank				Run: G5000W_140120B				02/03/14 09:34
Radium 226		0.1	pCi/L							U
Radium 226 precision (±)		0.1	pCi/L							
Radium 226 MDC		0.2	pCi/L							
Sample ID: LCS-RA226-7042		Laboratory Control Sample				Run: G5000W_140120B				02/03/14 09:34
Radium 226		12	pCi/L		108	80	120			

Qualifiers:

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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:** 02/27/14

Project: Zone-1 **Work Order:** C14010520

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E908.0									Batch: RA-TH-ISO-1995	
Sample ID: C14010520-004GMS		Sample Matrix Spike				Run: ALPHANALYST_140128D			02/09/14 12:32	
Thorium 230		13.4	pCi/L		93	70	130			
Sample ID: C14010520-004GMSD		Sample Matrix Spike Duplicate				Run: ALPHANALYST_140128D			02/09/14 12:32	
Thorium 230		13.3	pCi/L		93	70	130	0.7	39	
Sample ID: MB-RA-TH-ISO-1995	3	Method Blank				Run: ALPHANALYST_140128D			02/09/14 12:32	
Thorium 230		0.06	pCi/L							U
Thorium 230 precision (±)		0.08	pCi/L							
Thorium 230 MDC		0.2	pCi/L							
Sample ID: LCS-RA-TH-ISO-1995		Laboratory Control Sample				Run: ALPHANALYST_140128D			02/09/14 12:32	
Thorium 230		5.2	pCi/L		89	80	120			

Qualifiers:

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U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 02/27/14
Project: Zone-1
Work Order: C14010520

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E909.0										Batch: T_PB-210-0445R
Sample ID: MB-PB-210-0445R	3	Method Blank				Run: SUB-T55166				01/31/14 11:06
Lead 210		0.01	pCi/L							U
Lead 210 precision (±)		0.6	pCi/L							
Lead 210 MDC		0.9	pCi/L							
Sample ID: LCS-PB-210-0445R		Laboratory Control Sample				Run: SUB-T55166				01/31/14 12:16
Lead 210		18	pCi/L		89	80	120			
Sample ID: C14010520-003FMS		Sample Matrix Spike				Run: SUB-T55166				02/01/14 12:38
Lead 210		42	pCi/L		95	70	130			
Sample ID: C14010520-003FMSD		Sample Matrix Spike Duplicate				Run: SUB-T55166				02/01/14 13:48
Lead 210		38	pCi/L		86	70	130	9.4	21.6	
Method: E909.0										Batch: T_PB-210-0446
Sample ID: MB-PB-210-0446	3	Method Blank				Run: SUB-T55245				02/05/14 18:05
Lead 210		0.2	pCi/L							U
Lead 210 precision (±)		0.6	pCi/L							
Lead 210 MDC		0.9	pCi/L							
Sample ID: LCS-PB-210-0446		Laboratory Control Sample				Run: SUB-T55245				02/05/14 19:14
Lead 210		19	pCi/L		89	80	120			
Sample ID: C14010521-012FMS		Sample Matrix Spike				Run: SUB-T55245				02/06/14 19:32
Lead 210		43	pCi/L		95	70	130			
Sample ID: C14010521-012FMSD		Sample Matrix Spike Duplicate				Run: SUB-T55245				02/06/14 20:41
Lead 210		41	pCi/L		90	70	130	4.9	21.3	

Qualifiers:

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MDC - Minimum detectable concentration
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U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/14

Project: Zone-1 **Work Order:** C14010520

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: RA-05										Batch: RA228-4595
Sample ID: LCS-228-RA226-7042		Laboratory Control Sample				Run: TENNELEC-3_140120C				01/28/14 12:50
Radium 228		8.0	pCi/L		92	80	120			
Sample ID: MB-RA226-7042	3	Method Blank				Run: TENNELEC-3_140120C				01/28/14 12:50
Radium 228		1	pCi/L							
Radium 228 precision (±)		0.6	pCi/L							
Radium 228 MDC		0.9	pCi/L							
Sample ID: C14010521-001GMS		Sample Matrix Spike				Run: TENNELEC-3_140120C				01/28/14 12:50
Radium 228		17	pCi/L		88	70	130			
Sample ID: C14010521-001GMSD		Sample Matrix Spike Duplicate				Run: TENNELEC-3_140120C				01/28/14 12:50
Radium 228		17	pCi/L		85	70	130	2.5	29.8	

Qualifiers:

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MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

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ANALYTICAL SUMMARY REPORT

February 18, 2014

United Nuclear Corporation
21 Miles NE of Gallup
Gallup, NM 87305

Workorder No.: C14010261 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 1/10/2014 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C14010261-001	613	01/07/14 12:42	01/10/14	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Total Alkalinity Anion - Cation Balance Arsenic Speciation, Total 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
C14010261-002	517	01/07/14 13:30	01/10/14	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:

Report Proofing Specialist

Digitally signed by
Sheri M. Mead
Date: 2014.02.18 16:01:40 -07:00

CLIENT: United Nuclear Corporation
Project: Zone-3
Sample Delivery Group: C14010261

Report Date: 02/18/14

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: 02/18/14
Project: Zone-3
Work Order: C14010261

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2320 B										Batch: R182501
Sample ID: MBLK	2	Method Blank				Run: MANTECH_140110A				01/10/14 14:12
Alkalinity, Total as CaCO3		0.9	mg/L	0.6						
Bicarbonate as HCO3		1	mg/L	1						
Sample ID: LCS_131219		Laboratory Control Sample				Run: MANTECH_140110A				01/10/14 14:29
Alkalinity, Total as CaCO3		257	mg/L	5.0	102	90	110			
Sample ID: C14010231-001ADUP	2	Sample Duplicate				Run: MANTECH_140110A				01/10/14 14:45
Alkalinity, Total as CaCO3		218	mg/L	5.0				0.6	10	
Bicarbonate as HCO3		265	mg/L	5.0				0.6	10	
Sample ID: C14010231-002AMS		Sample Matrix Spike				Run: MANTECH_140110A				01/10/14 15:04
Alkalinity, Total as CaCO3		477	mg/L	5.0	98	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: 02/18/14
Project: Zone-3
Work Order: C14010261

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C										Batch: TDS140110A
Sample ID: MB-1_140110A		Method Blank				Run: BAL-19_140110B				01/10/14 15:00
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	7						
Sample ID: LCS-2_140110A		Laboratory Control Sample				Run: BAL-19_140110B				01/10/14 15:00
Solids, Total Dissolved TDS @ 180 C		1980	mg/L	20	99	90	110			
Sample ID: C14010262-001A DUP		Sample Duplicate				Run: BAL-19_140110B				01/10/14 15:20
Solids, Total Dissolved TDS @ 180 C		7000	mg/L	100				1.0	5	
Sample ID: C14010262-002A MS		Sample Matrix Spike				Run: BAL-19_140110B				01/10/14 15:21
Solids, Total Dissolved TDS @ 180 C		16800	mg/L	100	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: 02/18/14
Project: Zone-3
Work Order: C14010261

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A3114 B									Analytical Run: CVAA-C202_140113A	
Sample ID: ICV		Initial Calibration Verification Standard							01/13/14 10:15	
Selenium-IV		0.0270	mg/L	0.0010	108	90	110			
Sample ID: CCV		Continuing Calibration Verification Standard							01/13/14 10:33	
Selenium-IV		0.0273	mg/L	0.0010	109	90	110			
Method: A3114 B									Batch: 40320	
Sample ID: MB-40320		Method Blank				Run: CVAA-C202_140113A			01/13/14 10:58	
Selenium-IV		ND	mg/L	0.0005						
Sample ID: LCS-40320		Laboratory Control Sample				Run: CVAA-C202_140113A			01/13/14 10:59	
Selenium-IV		0.0276	mg/L	0.0010	110	90	110			
Sample ID: C14010261-001CMS		Sample Matrix Spike				Run: CVAA-C202_140113A			01/13/14 11:04	
Selenium-IV		0.0256	mg/L	0.0010	102	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
Project: Zone-3

Report Date: 02/18/14
Work Order: C14010261

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-H B									Analytical Run: PHSC_101-C_140110A	
Sample ID: pH 6.86		Initial Calibration Verification Standard							01/10/14 08:28	
pH		6.85	s.u.	0.010	100	98	102			
Sample ID: CCV - pH 7		Continuing Calibration Verification Standard							01/10/14 10:27	
pH		6.98	s.u.	0.010	100	98	102			
Method: A4500-H B									Batch: R182457	
Sample ID: C14010231-006ADUP		Sample Duplicate				Run: PHSC_101-C_140110A			01/10/14 09:56	
pH		7.79	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: 02/18/14
Project: Zone-3
Work Order: C14010261

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-NH3 G										Batch: R182681
Sample ID: MBLK-1		Method Blank				Run: TECHNICON_140116A				01/16/14 12:58
Nitrogen, Ammonia as N		ND	mg/L	0.006						
Sample ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_140116A				01/16/14 13:02
Nitrogen, Ammonia as N		2.00	mg/L	0.050	102	90	110			
Sample ID: C14010262-004DMS		Sample Matrix Spike				Run: TECHNICON_140116A				01/16/14 13:05
Nitrogen, Ammonia as N		2.03	mg/L	0.050	104	90	110			
Sample ID: C14010262-004DMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_140116A				01/16/14 13:07
Nitrogen, Ammonia as N		2.04	mg/L	0.050	104	90	110	0.5	10	
Method: A4500-NH3 G										Batch: R182839
Sample ID: MBLK-1		Method Blank				Run: TECHNICON_140121A				01/21/14 13:56
Nitrogen, Ammonia as N		ND	mg/L	0.006						
Sample ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_140121A				01/21/14 14:00
Nitrogen, Ammonia as N		1.96	mg/L	0.050	100	90	110			
Sample ID: C14010356-004AMS		Sample Matrix Spike				Run: TECHNICON_140121A				01/21/14 14:03
Nitrogen, Ammonia as N		29.8	mg/L	0.50	95	90	110			
Sample ID: C14010356-004AMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_140121A				01/21/14 14:05
Nitrogen, Ammonia as N		30.5	mg/L	0.50	98	90	110	2.3	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:** 02/18/14

Project: Zone-3 **Work Order:** C14010261

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **E1632AM**									Analytical Run: SUB-H94562	
Sample ID: **AS-ICV 25ppb-1/27/20**		Initial Calibration Verification Standard							01/27/14 11:51	
Arsenic-III		24.2	ug/L	5.0	97	87.6	114			
Sample ID: **AS-50.0-1/27/2014**		Continuing Calibration Verification Standard							01/27/14 13:27	
Arsenic-III		49.7	ug/L	5.0	99	85	115			
Method: **E1632AM**									Batch: H_R94562	
Sample ID: **AS-LFB 50ppb-1/27/20**		Laboratory Fortified Blank				Run: SUB-H94562			01/27/14 12:15	
Arsenic-III		49.8	ug/L	5.0	100	55	146			
Sample ID: **ICB**		Method Blank				Run: SUB-H94562			01/27/14 12:23	
Arsenic-III		ND	ug/L	0.4						
Sample ID: **H14010209-011E MS**		Sample Matrix Spike				Run: SUB-H94562			01/27/14 12:39	
Arsenic-III		52.7	ug/L	5.0	104	55	146			
Sample ID: **H14010209-011E MSD**		Sample Matrix Spike Duplicate				Run: SUB-H94562			01/27/14 12:47	
Arsenic-III		53.0	ug/L	5.0	105	55	146	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: 02/18/14
Project: Zone-3
Work Order: C14010261

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-C_140120A	
Sample ID: ICV	8	Initial Calibration Verification Standard							01/20/14 10:50	
Aluminum		5.04	mg/L	0.10	101	95	105			
Beryllium		0.511	mg/L	0.010	102	95	105			
Cadmium		0.500	mg/L	0.010	100	95	105			
Cobalt		0.994	mg/L	0.010	99	95	105			
Manganese		5.09	mg/L	0.010	102	95	105			
Molybdenum		1.05	mg/L	0.10	105	95	105			
Nickel		1.00	mg/L	0.050	100	95	105			
Vanadium		0.998	mg/L	0.10	100	95	105			
Sample ID: ICSA	8	Interference Check Sample A							01/20/14 11:18	
Aluminum		514	mg/L	0.10	103	80	120			
Beryllium		0.000100	mg/L	0.010						
Cadmium		0.00280	mg/L	0.010						
Cobalt		-0.00300	mg/L	0.010						
Manganese		0.000400	mg/L	0.010						
Molybdenum		-0.0180	mg/L	0.10						
Nickel		-0.00340	mg/L	0.050						
Vanadium		0.0122	mg/L	0.10						
Sample ID: ICSAB	8	Interference Check Sample AB							01/20/14 11:22	
Aluminum		518	mg/L	0.10	104	80	120			
Beryllium		0.502	mg/L	0.010	100	80	120			
Cadmium		1.02	mg/L	0.010	102	80	120			
Cobalt		0.490	mg/L	0.010	98	80	120			
Manganese		0.523	mg/L	0.010	105	80	120			
Molybdenum		-0.0169	mg/L	0.10						
Nickel		0.990	mg/L	0.050	99	80	120			
Vanadium		0.529	mg/L	0.10	106	80	120			
Method: E200.7									Batch: 40326	
Sample ID: MB-40326	8	Method Blank				Run: ICP2-C_140120A			01/20/14 14:43	
Aluminum		ND	mg/L	0.009						
Beryllium		ND	mg/L	0.0002						
Cadmium		ND	mg/L	0.0006						
Cobalt		ND	mg/L	0.002						
Manganese		ND	mg/L	0.0002						
Molybdenum		ND	mg/L	0.002						
Nickel		ND	mg/L	0.002						
Vanadium		ND	mg/L	0.01						
Sample ID: LCS3-40326	8	Laboratory Control Sample				Run: ICP2-C_140120A			01/20/14 14:47	
Aluminum		2.52	mg/L	0.030	101	85	115			
Beryllium		0.254	mg/L	0.0010	102	85	115			
Cadmium		0.266	mg/L	0.0010	106	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: 02/18/14
Project: Zone-3
Work Order: C14010261

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7										Batch: 40326
Sample ID: LCS3-40326	8	Laboratory Control Sample				Run: ICP2-C_140120A				01/20/14 14:47
Manganese		2.66	mg/L	0.0010	106	85	115			
Molybdenum		0.533	mg/L	0.0023	107	85	115			
Nickel		0.525	mg/L	0.0050	105	85	115			
Vanadium		0.515	mg/L	0.014	103	85	115			
Sample ID: C14010260-012CMS3	8	Sample Matrix Spike				Run: ICP2-C_140120A				01/20/14 17:08
Aluminum		2.49	mg/L	0.047	99	70	130			
Beryllium		0.253	mg/L	0.0011	101	70	130			
Cadmium		0.251	mg/L	0.0028	100	70	130			
Cobalt		0.515	mg/L	0.0081	103	70	130			
Manganese		3.36	mg/L	0.0011	103	70	130			
Molybdenum		0.559	mg/L	0.011	109	70	130			
Nickel		0.522	mg/L	0.012	104	70	130			
Vanadium		0.570	mg/L	0.069	114	70	130			
Sample ID: C14010260-012CMSD3	8	Sample Matrix Spike Duplicate				Run: ICP2-C_140120A				01/20/14 17:12
Aluminum		2.58	mg/L	0.047	103	70	130	3.7	20	
Beryllium		0.257	mg/L	0.0011	103	70	130	1.4	20	
Cadmium		0.253	mg/L	0.0028	101	70	130	0.8	20	
Cobalt		0.520	mg/L	0.0081	104	70	130	1.0	20	
Manganese		3.36	mg/L	0.0011	103	70	130	0.0	20	
Molybdenum		0.556	mg/L	0.011	108	70	130	0.6	20	
Nickel		0.528	mg/L	0.012	105	70	130	1.0	20	
Vanadium		0.560	mg/L	0.069	112	70	130	1.8	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:** 02/18/14

Project: Zone-3 **Work Order:** C14010261

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP4-C_140113A	
Sample ID: ICV	4	Initial Calibration Verification Standard							01/13/14 15:09	
Calcium		49.8	mg/L	0.50	100	95	105			
Magnesium		49.6	mg/L	0.50	99	95	105			
Potassium		47.9	mg/L	0.50	96	95	105			
Sodium		49.1	mg/L	0.50	98	95	105			
Sample ID: ICSA	4	Interference Check Sample A							01/13/14 15:23	
Calcium		460	mg/L	0.50	92	80	120			
Magnesium		495	mg/L	0.50	99	80	120			
Potassium		0.0392	mg/L	0.50						
Sodium		-0.0606	mg/L	0.50						
Sample ID: ICSAB	4	Interference Check Sample AB							01/13/14 15:27	
Calcium		459	mg/L	0.50	92	80	120			
Magnesium		494	mg/L	0.50	99	80	120			
Potassium		0.00849	mg/L	0.50						
Sodium		0.120	mg/L	0.50						
Method: E200.7										Batch: R182563
Sample ID: MB-140113A	4	Method Blank				Run: ICP4-C_140113A			01/13/14 15:45	
Calcium		ND	mg/L	0.02						
Magnesium		0.04	mg/L	0.01						
Potassium		ND	mg/L	0.04						
Sodium		ND	mg/L	0.2						
Sample ID: LFB-140113A	4	Laboratory Fortified Blank				Run: ICP4-C_140113A			01/13/14 15:49	
Calcium		45.3	mg/L	0.50	91	85	115			
Magnesium		45.4	mg/L	0.50	91	85	115			
Potassium		43.0	mg/L	0.50	86	85	115			
Sodium		44.3	mg/L	0.50	89	85	115			
Sample ID: C14010258-005BMS2	4	Sample Matrix Spike				Run: ICP4-C_140113A			01/13/14 17:23	
Calcium		625	mg/L	1.0	85	70	130			
Magnesium		276	mg/L	1.0	90	70	130			
Potassium		260	mg/L	1.0	86	70	130			
Sodium		775	mg/L	1.0	82	70	130			
Sample ID: C14010258-005BMSD2	4	Sample Matrix Spike Duplicate				Run: ICP4-C_140113A			01/13/14 17:27	
Calcium		628	mg/L	1.0	86	70	130	0.5	20	
Magnesium		277	mg/L	1.0	90	70	130	0.3	20	
Potassium		259	mg/L	1.0	85	70	130	0.2	20	
Sodium		777	mg/L	1.0	82	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 **Report Date:** 02/18/14

Project: Zone-3 **Work Order:** C14010261

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP4-C_140121A	
Sample ID: ICV	2	Initial Calibration Verification Standard							01/22/14 10:52	
Cadmium		0.490	mg/L	0.010	98	95	105			
Vanadium		0.984	mg/L	0.10	98	95	105			
Sample ID: ICSA	2	Interference Check Sample A							01/22/14 11:06	
Cadmium		-0.00131	mg/L	0.010						
Vanadium		0.00523	mg/L	0.10						
Sample ID: ICSAB	2	Interference Check Sample AB							01/22/14 11:10	
Cadmium		0.850	mg/L	0.010	85	80	120			
Vanadium		0.451	mg/L	0.10	90	80	120			
Method: E200.7										Batch: 40326
Sample ID: MB-40326	2	Method Blank				Run: ICP4-C_140121A			01/22/14 14:17	
Cadmium		ND	mg/L	0.0003						
Vanadium		ND	mg/L	0.005						
Sample ID: LCS3-40326	2	Laboratory Control Sample				Run: ICP4-C_140121A			01/22/14 14:21	
Cadmium		0.254	mg/L	0.0010	102	85	115			
Vanadium		0.527	mg/L	0.010	105	85	115			
Sample ID: C14010260-012CMS3	2	Sample Matrix Spike				Run: ICP4-C_140121A			01/22/14 15:29	
Cadmium		0.239	mg/L	0.0017	95	70	130			
Vanadium		0.513	mg/L	0.026	103	70	130			
Sample ID: C14010260-012CMSD3	2	Sample Matrix Spike Duplicate				Run: ICP4-C_140121A			01/22/14 15:33	
Cadmium		0.246	mg/L	0.0017	98	70	130	2.9	20	
Vanadium		0.531	mg/L	0.026	106	70	130	3.3	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:** 02/18/14

Project: Zone-3 **Work Order:** C14010261

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS4-C_140127A	
Sample ID: ICV	2	Initial Calibration Verification Standard							01/27/14 15:10	
Lead		0.0499	mg/L	0.0010	100	90	110			
Uranium		0.0481	mg/L	0.00030	96	90	110			
Method: E200.8									Batch: 40326	
Sample ID: MB-40326	2	Method Blank				Run: ICPMS4-C_140127A			01/27/14 23:00	
Lead		ND	mg/L	4E-05						
Uranium		8E-05	mg/L	4E-05						
Sample ID: LCS3-40326	2	Laboratory Control Sample				Run: ICPMS4-C_140127A			01/27/14 23:21	
Lead		0.509	mg/L	0.0010	102	85	115			
Uranium		0.546	mg/L	0.00030	109	85	115			
Sample ID: C14010260-012CMS3	2	Sample Matrix Spike				Run: ICPMS4-C_140127A			01/28/14 00:51	
Lead		0.520	mg/L	0.0010	104	70	130			
Uranium		0.603	mg/L	0.00030	111	70	130			
Sample ID: C14010260-012CMSD3	2	Sample Matrix Spike Duplicate				Run: ICPMS4-C_140127A			01/28/14 01:12	
Lead		0.524	mg/L	0.0010	105	70	130	0.8	20	
Uranium		0.612	mg/L	0.00030	112	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: 02/18/14
Project: Zone-3
Work Order: C14010261

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0									Analytical Run: IC2-C_140110A	
Sample ID: CCV-011014-05	2	Continuing Calibration Verification Standard							01/11/14 06:27	
Chloride		9.80	mg/L	1.0	98	90	110			
Sulfate		40.0	mg/L	1.0	100	90	110			
Method: E300.0									Batch: R182508	
Sample ID: ICB-011014	2	Method Blank				Run: IC2-C_140110A			01/10/14 12:02	
Chloride		0.08	mg/L	0.01						
Sulfate		0.07	mg/L	0.03						
Sample ID: LFB-011014-01	2	Laboratory Fortified Blank				Run: IC2-C_140110A			01/10/14 12:39	
Chloride		10.4	mg/L	1.0	104	90	110			
Sulfate		41.6	mg/L	1.0	104	90	110			
Sample ID: LFBD-011014-01	2	Laboratory Fortified Blank Duplicate				Run: IC2-C_140110A			01/10/14 12:57	
Chloride		10.3	mg/L	1.0	103	90	110	0.7	20	
Sulfate		41.8	mg/L	1.0	104	90	110	0.5	20	
Sample ID: C14010262-001AMS	2	Sample Matrix Spike				Run: IC2-C_140110A			01/11/14 11:40	
Chloride		753	mg/L	10	99	90	110			
Sulfate		5700	mg/L	42	98	90	110			
Sample ID: C14010262-001AMSD	2	Sample Matrix Spike Duplicate				Run: IC2-C_140110A			01/11/14 11:59	
Chloride		761	mg/L	10	101	90	110	1.0	20	
Sulfate		5720	mg/L	42	100	90	110	0.4	20	
Method: E300.0									Batch: R182763	
Sample ID: ICB-011813	2	Method Blank				Run: IC2-C_140118A			01/18/14 20:14	
Chloride		0.02	mg/L	0.01						
Sulfate		0.10	mg/L	0.03						
Sample ID: LFB-011813-1	2	Laboratory Fortified Blank				Run: IC2-C_140118A			01/18/14 20:32	
Chloride		9.78	mg/L	1.0	98	90	110			
Sulfate		38.7	mg/L	1.0	96	90	110			
Sample ID: C14010260-006AMS	2	Sample Matrix Spike				Run: IC2-C_140118A			01/18/14 21:09	
Chloride		712	mg/L	10	100	90	110			
Sulfate		5560	mg/L	42	94	90	110			
Sample ID: C14010260-006AMSD	2	Sample Matrix Spike Duplicate				Run: IC2-C_140118A			01/18/14 21:27	
Chloride		720	mg/L	10	102	90	110	1.1	20	
Sulfate		5620	mg/L	42	98	90	110	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: 02/18/14
Project: Zone-3
Work Order: C14010261

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E353.2									Analytical Run: TECHNICON_140113A	
Sample ID: CCV-16		Continuing Calibration Verification Standard							01/13/14 15:29	
Nitrogen, Nitrate+Nitrite as N		0.955	mg/L	0.10	96	90	110			
Method: E353.2									Batch: R182549	
Sample ID: MBLK-1		Method Blank				Run: TECHNICON_140113A			01/13/14 14:51	
Nitrogen, Nitrate+Nitrite as N		ND	mg/L	0.05						
Sample ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_140113A			01/13/14 14:57	
Nitrogen, Nitrate+Nitrite as N		1.96	mg/L	0.10	100	90	110			
Sample ID: C14010262-001DMS		Sample Matrix Spike				Run: TECHNICON_140113A			01/13/14 16:12	
Nitrogen, Nitrate+Nitrite as N		341	mg/L	10	107	90	110			
Sample ID: C14010262-001DMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_140113A			01/13/14 16:14	
Nitrogen, Nitrate+Nitrite as N		337	mg/L	10	105	90	110	1.2	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:** 02/18/14

Project: Zone-3 **Work Order:** C14010261

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624									Analytical Run: R182569	
Sample ID: 13-Jan-14_CCV_19	9	Continuing Calibration Verification Standard							01/13/14 21:22	
Bromodichloromethane		9.20	ug/L	1.0	92	70	130			
Bromoform		10.2	ug/L	1.0	102	70	130			
Chlorodibromomethane		11.2	ug/L	1.0	112	70	130			
Chloroform		5.56	ug/L	1.0	56	70	130			S
Trihalomethanes, Total		36.2	ug/L	1.0	90	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	108	70	130			
Surr: Dibromofluoromethane				1.0	71	70	130			
Surr: p-Bromofluorobenzene				1.0	99	70	130			
Surr: Toluene-d8				1.0	110	70	130			
Method: E624									Batch: R182569	
Sample ID: 13-Jan-14_LCS_4	9	Laboratory Control Sample				Run: 5975VOC1_140113A			01/13/14 12:29	
Bromodichloromethane		9.40	ug/L	1.0	94	65.2	130			
Bromoform		10.4	ug/L	1.0	104	71.5	130			
Chlorodibromomethane		10.7	ug/L	1.0	107	64.6	127			
Chloroform		8.12	ug/L	1.0	81	65	136			
Trihalomethanes, Total		38.6	ug/L	1.0	97	71.1	127			
Surr: 1,2-Dichlorobenzene-d4				1.0	114	73.7	126			
Surr: Dibromofluoromethane				1.0	95	64.4	131			
Surr: p-Bromofluorobenzene				1.0	98	67.1	133			
Surr: Toluene-d8				1.0	111	79.7	125			
Sample ID: 13-Jan-14_MBLK_6	9	Method Blank				Run: 5975VOC1_140113A			01/13/14 13:39	
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	120	73.7	126			
Surr: Dibromofluoromethane				1.0	93	64.4	131			
Surr: p-Bromofluorobenzene				1.0	130	67.1	133			
Surr: Toluene-d8				1.0	106	79.7	125			
Sample ID: C13120959-003BMS	9	Sample Matrix Spike				Run: 5975VOC1_140113A			01/13/14 19:37	
Bromodichloromethane		173	ug/L	10	86	65.2	130			
Bromoform		196	ug/L	10	98	71.5	130			
Chlorodibromomethane		201	ug/L	10	100	64.6	127			
Chloroform		188	ug/L	10	94	65	136			
Trihalomethanes, Total		758	ug/L	10	95	71.1	127			
Surr: 1,2-Dichlorobenzene-d4				1.0	118	73.7	126			
Surr: Dibromofluoromethane				1.0	129	64.4	131			
Surr: p-Bromofluorobenzene				1.0	99	67.1	133			
Surr: Toluene-d8				1.0	114	79.7	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:** 02/18/14

Project: Zone-3 **Work Order:** C14010261

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624									Batch: R182569	
Sample ID: C13120959-003BMSD	9	Sample Matrix Spike Duplicate				Run: 5975VOC1_140113A			01/13/14 20:12	
Bromodichloromethane		148	ug/L	10	74	65.2	130	15	20	
Bromoform		174	ug/L	10	87	71.5	130	12	20	
Chlorodibromomethane		168	ug/L	10	84	64.6	127	18	20	
Chloroform		128	ug/L	10	64	65	136	38	20	SR
Trihalomethanes, Total		618	ug/L	10	77	71.1	127	20	20	R
Surr: 1,2-Dichlorobenzene-d4				1.0	117	73.7	126			
Surr: Dibromofluoromethane				1.0	87	64.4	131			
Surr: p-Bromofluorobenzene				1.0	99	67.1	133			
Surr: Toluene-d8				1.0	115	79.7	125			

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:** 02/18/14

Project: Zone-3 **Work Order:** C14010261

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624									Analytical Run: R182607	
Sample ID: 14-Jan-14_CCV_2	5	Continuing Calibration Verification Standard							01/14/14 09:36	
Chloroform		12.4	ug/L	1.0	124	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	114	70	130			
Surr: Dibromofluoromethane				1.0	132	70	130			S
Surr: p-Bromofluorobenzene				1.0	99	70	130			
Surr: Toluene-d8				1.0	115	70	130			
Sample ID: 14-Jan-14_CCV_19	5	Continuing Calibration Verification Standard							01/14/14 19:39	
Chloroform		8.88	ug/L	1.0	89	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	115	70	130			
Surr: Dibromofluoromethane				1.0	128	70	130			
Surr: p-Bromofluorobenzene				1.0	97	70	130			
Surr: Toluene-d8				1.0	113	70	130			
Method: E624									Batch: R182607	
Sample ID: 14-Jan-14_MBLK_9	5	Method Blank				Run: 5975VOC1_140114A			01/14/14 13:41	
Chloroform		ND	ug/L	1.0						
Surr: 1,2-Dichlorobenzene-d4				1.0	120	73.7	126			
Surr: Dibromofluoromethane				1.0	86	64.4	131			
Surr: p-Bromofluorobenzene				1.0	128	67.1	133			
Surr: Toluene-d8				1.0	105	79.7	125			
Sample ID: C14010261-001HMS	5	Sample Matrix Spike				Run: 5975VOC1_140114A			01/14/14 17:54	
Chloroform		170	ug/L	5.0	103	65	136			
Surr: 1,2-Dichlorobenzene-d4				1.0	110	73.7	126			
Surr: Dibromofluoromethane				1.0	130	64.4	131			
Surr: p-Bromofluorobenzene				1.0	100	67.1	133			
Surr: Toluene-d8				1.0	110	79.7	125			
Sample ID: C14010261-001HMSD	5	Sample Matrix Spike Duplicate				Run: 5975VOC1_140114A			01/14/14 18:29	
Chloroform		158	ug/L	5.0	90	65	136	7.6	20	
Surr: 1,2-Dichlorobenzene-d4				1.0	112	73.7	126			
Surr: Dibromofluoromethane				1.0	129	64.4	131			
Surr: p-Bromofluorobenzene				1.0	98	67.1	133			
Surr: Toluene-d8				1.0	108	79.7	125			
Sample ID: 14-Jan-14_LCS_33	5	Laboratory Control Sample				Run: 5975VOC1_140114A			01/15/14 08:33	
Chloroform		8.32	ug/L	1.0	83	65	136			
Surr: 1,2-Dichlorobenzene-d4				1.0	110	73.7	126			
Surr: Dibromofluoromethane				1.0	134	64.4	131			S
Surr: p-Bromofluorobenzene				1.0	94	67.1	133			
Surr: Toluene-d8				1.0	112	79.7	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:** 02/18/14

Project: Zone-3 **Work Order:** C14010261

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E900.1										Batch: GA-0751
Sample ID: LCS-GA-0751		Laboratory Control Sample				Run: BERTHOLD 770-1_140117A				01/20/14 06:50
Gross Alpha minus Rn & U		41.3	pCi/L		113	80	120			
Sample ID: MB-GA-0751	3	Method Blank				Run: BERTHOLD 770-1_140117A				01/20/14 06:50
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: C14010295-005CMS		Sample Matrix Spike				Run: BERTHOLD 770-1_140117A				01/20/14 08:28
Gross Alpha minus Rn & U		93.5	pCi/L		120	70	130			
Sample ID: C14010295-005CMSD		Sample Matrix Spike Duplicate				Run: BERTHOLD 770-1_140117A				01/20/14 08:28
Gross Alpha minus Rn & U		84.6	pCi/L		106	70	130	10.0	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:** 02/18/14

Project: Zone-3 **Work Order:** C14010261

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E903.0										Batch: RA226-7031
Sample ID: C14010262-004GMS		Sample Matrix Spike				Run: G5000W_140114D				01/27/14 07:11
Radium 226		21	pCi/L		92	70	130			
Sample ID: C14010262-004GMSD		Sample Matrix Spike Duplicate				Run: G5000W_140114D				01/27/14 08:45
Radium 226		22	pCi/L		97	70	130	5.1	21.3	
Sample ID: MB-RA226-7031	3	Method Blank				Run: G5000W_140114D				01/27/14 08:45
Radium 226		0.1	pCi/L							U
Radium 226 precision (±)		0.1	pCi/L							
Radium 226 MDC		0.2	pCi/L							
Sample ID: LCS-RA226-7031		Laboratory Control Sample				Run: G5000W_140114D				01/27/14 08:45
Radium 226		10	pCi/L		88	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:** 02/18/14

Project: Zone-3 **Work Order:** C14010261

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E908.0									Batch: RA-TH-ISO-1987	
Sample ID: LCS-RA-TH-ISO-1987		Laboratory Control Sample				Run: ALPHANALYST_140113B			01/17/14 14:16	
Thorium 230		6.9	pCi/L		103	80	120			
Sample ID: C14010295-002CMS		Sample Matrix Spike				Run: ALPHANALYST_140113B			01/17/14 14:17	
Thorium 230		23	pCi/L		98	70	130			
Sample ID: C14010295-002CMSD		Sample Matrix Spike Duplicate				Run: ALPHANALYST_140113B			01/17/14 14:17	
Thorium 230		24	pCi/L		103	70	130	4.8	31.6	
Sample ID: MB-RA-TH-ISO-1987	3	Method Blank				Run: ALPHANALYST_140113B			01/17/14 14:17	
Thorium 230		0.08	pCi/L							
Thorium 230 precision (±)		0.05	pCi/L							
Thorium 230 MDC		0.06	pCi/L							

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: 02/18/14
Project: Zone-3
Work Order: C14010261

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E909.0									Batch: T_PB-210-0444	
Sample ID: MB-PB-210-0444	3	Method Blank				Run: SUB-T55151			01/29/14 18:42	
Lead 210		-0.3	pCi/L							U
Lead 210 precision (±)		0.6	pCi/L							
Lead 210 MDC		1.0	pCi/L							
Sample ID: LCS-PB-210-0444		Laboratory Control Sample				Run: SUB-T55151			01/29/14 19:51	
Lead 210		19	pCi/L		93	80	120			
Sample ID: C14010469-009BMS		Sample Matrix Spike				Run: SUB-T55151			01/30/14 20:09	
Lead 210		41	pCi/L		87	70	130			
Sample ID: C14010469-009BMSD		Sample Matrix Spike Duplicate				Run: SUB-T55151			01/30/14 21:19	
Lead 210		40	pCi/L		85	70	130	2.3	22.3	

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: 02/18/14
Project: Zone-3
Work Order: C14010261

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: RA-05										Batch: RA228-4590
Sample ID: LCS-228-RA226-7031		Laboratory Control Sample				Run: TENNELEC-3_140114A				01/20/14 11:31
Radium 228		8.6	pCi/L		99	80	120			
Sample ID: MB-RA226-7031	3	Method Blank				Run: TENNELEC-3_140114A				01/20/14 11:31
Radium 228		1	pCi/L							U
Radium 228 precision (±)		1	pCi/L							
Radium 228 MDC		2	pCi/L							
Sample ID: C14010262-005GMS		Sample Matrix Spike				Run: TENNELEC-3_140114A				01/20/14 11:31
Radium 228		17	pCi/L		109	70	130			
Sample ID: C14010262-005GMSD		Sample Matrix Spike Duplicate				Run: TENNELEC-3_140114A				01/20/14 11:31
Radium 228		15	pCi/L		95	70	130	12	38.7	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

ENERGY LABORATORIES
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ANALYTICAL SUMMARY REPORT

February 27, 2014

United Nuclear Corporation
21 Miles NE of Gallup
Gallup, NM 87305

Workorder No.: C14010521 Quote ID: C129 - Quarterly Long List

Project Name: Zone-3

Energy Laboratories, Inc. Casper WY received the following 12 samples for United Nuclear Corporation on 1/17/2014 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C14010521-001	708	01/13/14 13:20	01/17/14	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Total Alkalinity Anion - Cation Balance Arsenic Speciation, Total 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
C14010521-002	EPA-13	01/13/14 14:47	01/17/14	Aqueous	Same As Above
C14010521-003	719	01/13/14 15:34	01/17/14	Aqueous	Same As Above
C14010521-004	420	01/13/14 17:00	01/17/14	Aqueous	Same As Above
C14010521-005	717	01/14/14 9:15	01/17/14	Aqueous	Same As Above
C14010521-006	717 Duplicate	01/14/14 10:05	01/17/14	Aqueous	Same As Above
C14010521-007	EPA-14	01/14/14 10:35	01/17/14	Aqueous	Same As Above
C14010521-008	MW-7	01/14/14 12:50	01/17/14	Aqueous	Same As Above

ANALYTICAL SUMMARY REPORT

C14010521-009	Rinsate	01/14/14 15:30 01/17/14	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Total Alkalinity Anion - Cation Balance Arsenic Speciation, Total 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
C14010521-010	Field Blank	01/14/14 16:15 01/17/14	Aqueous	Same As Above
C14010521-011	711	01/15/14 12:10 01/17/14	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Total Alkalinity Anion - Cation Balance Arsenic Speciation, Total 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
C14010521-012	MW-6	01/15/14 12:40 01/17/14	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:

Report Proofing Specialist

Digitally signed by
Sheri M. Mead
Date: 2014.02.27 16:40:18 -07:00

CLIENT: United Nuclear Corporation
Project: Zone-3
Sample Delivery Group: C14010521

Report Date: 02/27/14

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.

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.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/14

Project: Zone-3 **Work Order:** C14010521

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2320 B										Batch: R182740
Sample ID: MBLK	2	Method Blank				Run: MANTECH_140117B				01/17/14 14:23
Alkalinity, Total as CaCO3		0.6	mg/L	0.6						
Bicarbonate as HCO3		ND	mg/L	1						
Sample ID: LCS_131219		Laboratory Control Sample				Run: MANTECH_140117B				01/17/14 14:36
Alkalinity, Total as CaCO3		257	mg/L	5.0	103	90	110			
Sample ID: C14010470-001ADUP	2	Sample Duplicate				Run: MANTECH_140117B				01/17/14 14:52
Alkalinity, Total as CaCO3		255	mg/L	5.0				0.1	10	
Bicarbonate as HCO3		312	mg/L	5.0				0.1	10	
Sample ID: C14010484-001AMS		Sample Matrix Spike				Run: MANTECH_140117B				01/17/14 15:07
Alkalinity, Total as CaCO3		252	mg/L	5.0	96	80	120			
Sample ID: C14010518-003ADUP	2	Sample Duplicate				Run: MANTECH_140117B				01/17/14 17:46
Alkalinity, Total as CaCO3		ND	mg/L	5.0					10	
Bicarbonate as HCO3		ND	mg/L	5.0					10	
Sample ID: C14010518-004AMS		Sample Matrix Spike				Run: MANTECH_140117B				01/17/14 18:02
Alkalinity, Total as CaCO3		556	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:** 02/27/14

Project: Zone-3 **Work Order:** C14010521

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C										Batch: TDS140117A
Sample ID: MB-1_140117A		Method Blank				Run: BAL-19_140117B				01/17/14 14:53
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	7						
Sample ID: LCS-2_140117A		Laboratory Control Sample				Run: BAL-19_140117B				01/17/14 14:58
Solids, Total Dissolved TDS @ 180 C		1960	mg/L	20	98	90	110			
Sample ID: C14010515-009A MS		Sample Matrix Spike				Run: BAL-19_140117B				01/17/14 15:12
Solids, Total Dissolved TDS @ 180 C		184000	mg/L	1000	125	90	110			S
- Matrix spike recoveries outside the acceptance range are considered matrix-related.										
Sample ID: C14010521-001A DUP		Sample Duplicate				Run: BAL-19_140117B				01/17/14 15:14
Solids, Total Dissolved TDS @ 180 C		6200	mg/L	40				1.0	5	
Method: A2540 C										Batch: TDS140120A
Sample ID: MB-1_140120A		Method Blank				Run: BAL-19_140120A				01/20/14 14:28
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	7						
Sample ID: LCS-2_140120A		Laboratory Control Sample				Run: BAL-19_140120A				01/20/14 14:28
Solids, Total Dissolved TDS @ 180 C		1970	mg/L	20	99	90	110			
Sample ID: C14010518-008A MS		Sample Matrix Spike				Run: BAL-19_140120A				01/20/14 14:38
Solids, Total Dissolved TDS @ 180 C		8440	mg/L	40	97	90	110			
Sample ID: C14010521-008A DUP		Sample Duplicate				Run: BAL-19_140120A				01/20/14 14:42
Solids, Total Dissolved TDS @ 180 C		3840	mg/L	40				0.4	5	

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:** 02/27/14

Project: Zone-3 **Work Order:** C14010521

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A3114 B									Analytical Run: CVAA-C202_140122A	
Sample ID: ICV		Initial Calibration Verification Standard							01/22/14 15:21	
Selenium-IV		0.0266	mg/L	0.0010	107	90	110			
Sample ID: CCV		Continuing Calibration Verification Standard							01/22/14 15:41	
Selenium-IV		0.0266	mg/L	0.0010	107	90	110			
Method: A3114 B									Batch: 40424	
Sample ID: MB-40424		Method Blank				Run: CVAA-C202_140122A			01/22/14 15:26	
Selenium-IV		ND	mg/L	0.0005						
Sample ID: LCS-40424		Laboratory Control Sample				Run: CVAA-C202_140122A			01/22/14 15:27	
Selenium-IV		0.0261	mg/L	0.0010	104	90	110			
Sample ID: C14010520-001CMS		Sample Matrix Spike				Run: CVAA-C202_140122A			01/22/14 15:30	
Selenium-IV		0.0248	mg/L	0.0010	97	85	115			
Sample ID: C14010520-001CMSD		Sample Matrix Spike Duplicate				Run: CVAA-C202_140122A			01/22/14 15:32	
Selenium-IV		0.0243	mg/L	0.0010	94	85	115	2.2	10	
Sample ID: C14010521-003CMS		Sample Matrix Spike				Run: CVAA-C202_140122A			01/22/14 15:49	
Selenium-IV		0.0246	mg/L	0.0010	99	85	115			
Sample ID: C14010521-003CMSD		Sample Matrix Spike Duplicate				Run: CVAA-C202_140122A			01/22/14 15:50	
Selenium-IV		0.0247	mg/L	0.0010	99	85	115	0.2	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: 02/27/14
Project: Zone-3
Work Order: C14010521

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-H B									Analytical Run: PHSC_101-C_140117A	
Sample ID: pH 6.86		Initial Calibration Verification Standard							01/17/14 08:32	
pH		6.85	s.u.	0.010	100	98	102			
Sample ID: CCV - pH 7		Continuing Calibration Verification Standard							01/17/14 11:05	
pH		6.98	s.u.	0.010	100	98	102			
Method: A4500-H B									Batch: R182707	
Sample ID: C14010521-009ADUP		Sample Duplicate				Run: PHSC_101-C_140117A			01/17/14 14:58	
pH		5.87	s.u.	0.010				2.9	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: 02/27/14
Project: Zone-3
Work Order: C14010521

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-NH3 G								Analytical Run: TECHNICON_140121A		
Sample ID: CCV-16		Continuing Calibration Verification Standard							01/21/14 14:21	
Nitrogen, Ammonia as N		1.07	mg/L	0.050	107	90	110			
Sample ID: CCV-32		Continuing Calibration Verification Standard							01/21/14 15:22	
Nitrogen, Ammonia as N		1.04	mg/L	0.050	104	90	110			
Method: A4500-NH3 G									Batch: R182839	
Sample ID: MBLK-1		Method Blank				Run: TECHNICON_140121A			01/21/14 13:56	
Nitrogen, Ammonia as N		ND	mg/L	0.006						
Sample ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_140121A			01/21/14 14:00	
Nitrogen, Ammonia as N		1.96	mg/L	0.050	100	90	110			
Sample ID: C14010521-002DMS		Sample Matrix Spike				Run: TECHNICON_140121A			01/21/14 15:04	
Nitrogen, Ammonia as N		2.14	mg/L	0.050	99	90	110			
Sample ID: C14010521-002DMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_140121A			01/21/14 15:06	
Nitrogen, Ammonia as N		2.11	mg/L	0.050	98	90	110	1.4	10	
Sample ID: C14010521-012DMS		Sample Matrix Spike				Run: TECHNICON_140121A			01/21/14 15:27	
Nitrogen, Ammonia as N		2.44	mg/L	0.050	105	90	110			
Sample ID: C14010521-012DMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_140121A			01/21/14 15:29	
Nitrogen, Ammonia as N		2.42	mg/L	0.050	104	90	110	0.8	10	
Method: A4500-NH3 G								Analytical Run: TECHNICON_140128A		
Sample ID: CCV-14		Continuing Calibration Verification Standard							01/28/14 14:52	
Nitrogen, Ammonia as N		1.03	mg/L	0.050	103	90	110			
Method: A4500-NH3 G									Batch: R183074	
Sample ID: MBLK-1		Method Blank				Run: TECHNICON_140128A			01/28/14 14:30	
Nitrogen, Ammonia as N		ND	mg/L	0.006						
Sample ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_140128A			01/28/14 14:34	
Nitrogen, Ammonia as N		1.89	mg/L	0.050	96	90	110			
Sample ID: C14010521-008DMS		Sample Matrix Spike				Run: TECHNICON_140128A			01/28/14 14:57	
Nitrogen, Ammonia as N		2.34	mg/L	0.050	97	90	110			
Sample ID: C14010521-008DMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_140128A			01/28/14 14:59	
Nitrogen, Ammonia as N		2.33	mg/L	0.050	96	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:** 02/27/14

Project: Zone-3 **Work Order:** C14010521

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **E1632AM**									Analytical Run: SUB-H94563	
Sample ID: **AS-ICV 25ppb-1/28/20**		Initial Calibration Verification Standard							01/28/14 11:27	
Arsenic-III		26.2	ug/L	5.0	105	87.6	114			
Sample ID: **AS-50.0-1/28/2014**		Continuing Calibration Verification Standard							01/28/14 11:35	
Arsenic-III		48.4	ug/L	5.0	97	85	115			
Method: **E1632AM**									Batch: H_R94563	
Sample ID: **AS-LFB 50ppb-1/28/20**		Laboratory Fortified Blank				Run: SUB-H94563			01/28/14 11:51	
Arsenic-III		45.8	ug/L	5.0	92	55	146			
Sample ID: **ICB**		Method Blank				Run: SUB-H94563			01/28/14 11:59	
Arsenic-III		ND	ug/L	0.4						
Sample ID: **C14010521-005E**		Sample Matrix Spike				Run: SUB-H94563			01/28/14 12:47	
Arsenic-III		52.3	ug/L	5.0	105	55	146			
Sample ID: **C14010521-005E**		Sample Matrix Spike Duplicate				Run: SUB-H94563			01/28/14 12:55	
Arsenic-III		52.2	ug/L	5.0	104	55	146	0.2	20	
Sample ID: **C14010521-011E**		Sample Matrix Spike				Run: SUB-H94563			01/28/14 14:24	
Arsenic-III		47.4	ug/L	5.0	85	55	146			
Sample ID: **C14010521-011E**		Sample Matrix Spike Duplicate				Run: SUB-H94563			01/28/14 14:32	
Arsenic-III		51.0	ug/L	5.0	92	55	146	7.3	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:** 02/27/14

Project: Zone-3 **Work Order:** C14010521

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP4-C_140121A	
Sample ID: ICV	4	Initial Calibration Verification Standard							01/22/14 10:52	
Calcium		51.2	mg/L	0.50	102	95	105			
Magnesium		50.0	mg/L	0.50	100	95	105			
Potassium		48.2	mg/L	0.50	96	95	105			
Sodium		49.8	mg/L	0.50	100	95	105			
Sample ID: ICSA	4	Interference Check Sample A							01/22/14 11:06	
Calcium		455	mg/L	0.50	91	80	120			
Magnesium		492	mg/L	0.50	99	80	120			
Potassium		-0.0106	mg/L	0.50						
Sodium		-0.0743	mg/L	0.50						
Sample ID: ICSAB	4	Interference Check Sample AB							01/22/14 11:10	
Calcium		455	mg/L	0.50	91	80	120			
Magnesium		491	mg/L	0.50	98	80	120			
Potassium		0.00376	mg/L	0.50						
Sodium		-0.251	mg/L	0.50						
Method: E200.7										Batch: R182893
Sample ID: MB-140121A	4	Method Blank				Run: ICP4-C_140121A			01/22/14 11:28	
Calcium		ND	mg/L	0.02						
Magnesium		0.07	mg/L	0.01						
Potassium		ND	mg/L	0.04						
Sodium		ND	mg/L	0.2						
Sample ID: LFB-140121A	4	Laboratory Fortified Blank				Run: ICP4-C_140121A			01/22/14 11:32	
Calcium		47.2	mg/L	0.50	94	85	115			
Magnesium		46.0	mg/L	0.50	92	85	115			
Potassium		43.3	mg/L	0.50	87	85	115			
Sodium		45.4	mg/L	0.50	91	85	115			
Sample ID: C14010521-002BMS2	4	Sample Matrix Spike				Run: ICP4-C_140121A			01/22/14 18:44	
Calcium		726	mg/L	1.0	85	70	130			
Magnesium		1140	mg/L	1.0	84	70	130			
Potassium		253	mg/L	1.0	94	70	130			
Sodium		401	mg/L	1.0	90	70	130			
Sample ID: C14010521-002BMSD2	4	Sample Matrix Spike Duplicate				Run: ICP4-C_140121A			01/22/14 18:48	
Calcium		716	mg/L	1.0	81	70	130	1.4	20	
Magnesium		1130	mg/L	1.0	81	70	130	0.7	20	
Potassium		250	mg/L	1.0	93	70	130	1.0	20	
Sodium		396	mg/L	1.0	88	70	130	1.3	20	
Sample ID: C14010526-001BMS2	4	Sample Matrix Spike				Run: ICP4-C_140121A			01/22/14 20:12	
Calcium		148	mg/L	1.0	99	70	130			
Magnesium		108	mg/L	1.0	98	70	130			
Potassium		103	mg/L	1.0	98	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: 02/27/14
Project: Zone-3
Work Order: C14010521

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7										Batch: R182893
Sample ID: C14010526-001BMS2	4	Sample Matrix Spike				Run: ICP4-C_140121A				01/22/14 20:12
Sodium		184	mg/L	1.0	95	70	130			
Sample ID: C14010526-001BMSD2	4	Sample Matrix Spike Duplicate				Run: ICP4-C_140121A				01/22/14 20:15
Calcium		146	mg/L	1.0	97	70	130	1.0	20	
Magnesium		106	mg/L	1.0	96	70	130	1.6	20	
Potassium		102	mg/L	1.0	97	70	130	1.3	20	
Sodium		182	mg/L	1.0	94	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: 02/27/14
Project: Zone-3
Work Order: C14010521

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP4-C_140123A	
Sample ID: ICV	8	Initial Calibration Verification Standard							01/23/14 14:56	
Aluminum		5.03	mg/L	0.10	101	95	105			
Beryllium		0.511	mg/L	0.010	102	95	105			
Cadmium		0.479	mg/L	0.010	96	95	105			
Cobalt		0.966	mg/L	0.010	97	95	105			
Manganese		4.94	mg/L	0.010	99	95	105			
Molybdenum		0.985	mg/L	0.10	98	95	105			
Nickel		0.946	mg/L	0.050	95	95	105			
Vanadium		1.00	mg/L	0.10	100	95	105			
Sample ID: ICSA	8	Interference Check Sample A							01/23/14 15:11	
Aluminum		490	mg/L	0.10	98	80	120			
Beryllium		-3.00E-05	mg/L	0.010						
Cadmium		0.000200	mg/L	0.010						
Cobalt		-0.00828	mg/L	0.010						
Manganese		-0.00224	mg/L	0.010						
Molybdenum		0.00116	mg/L	0.10						
Nickel		-0.00267	mg/L	0.050						
Vanadium		0.00134	mg/L	0.10						
Sample ID: ICSAB	8	Interference Check Sample AB							01/23/14 15:15	
Aluminum		498	mg/L	0.10	100	80	120			
Beryllium		0.484	mg/L	0.010	97	80	120			
Cadmium		0.877	mg/L	0.010	88	80	120			
Cobalt		0.437	mg/L	0.010	87	80	120			
Manganese		0.454	mg/L	0.010	91	80	120			
Molybdenum		0.000890	mg/L	0.10						
Nickel		0.879	mg/L	0.050	88	80	120			
Vanadium		0.474	mg/L	0.10	95	80	120			
Method: E200.7									Batch: 40393	
Sample ID: MB-40393	8	Method Blank				Run: ICP4-C_140123A			01/23/14 18:42	
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		0.003	mg/L	0.001						
Vanadium		ND	mg/L	0.005						
Sample ID: LCS3-40393	8	Laboratory Control Sample				Run: ICP4-C_140123A			01/23/14 18:45	
Aluminum		2.53	mg/L	0.030	101	85	115			
Beryllium		0.256	mg/L	0.0010	102	85	115			
Cadmium		0.243	mg/L	0.0010	97	85	115			
Cobalt		0.483	mg/L	0.0050	97	85	115			

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:** 02/27/14

Project: Zone-3 **Work Order:** C14010521

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Batch: 40393	
Sample ID: LCS3-40393	8	Laboratory Control Sample				Run: ICP4-C_140123A			01/23/14 18:45	
Manganese		2.48	mg/L	0.0010	99	85	115			
Molybdenum		0.488	mg/L	0.0028	98	85	115			
Nickel		0.481	mg/L	0.0050	96	85	115			
Vanadium		0.508	mg/L	0.010	102	85	115			
Sample ID: C14010520-004CMS3	8	Sample Matrix Spike				Run: ICP4-C_140123A			01/23/14 19:18	
Aluminum		2.49	mg/L	0.030	98	70	130			
Beryllium		0.243	mg/L	0.0010	97	70	130			
Cadmium		0.231	mg/L	0.0010	93	70	130			
Cobalt		0.457	mg/L	0.0050	91	70	130			
Manganese		3.88	mg/L	0.0010	94	70	130			
Molybdenum		0.467	mg/L	0.0056	93	70	130			
Nickel		0.460	mg/L	0.0050	91	70	130			
Vanadium		0.494	mg/L	0.010	99	70	130			
Sample ID: C14010520-004CMSD3	8	Sample Matrix Spike Duplicate				Run: ICP4-C_140123A			01/23/14 19:22	
Aluminum		2.47	mg/L	0.030	97	70	130	1.0	20	
Beryllium		0.239	mg/L	0.0010	95	70	130	1.7	20	
Cadmium		0.227	mg/L	0.0010	91	70	130	2.0	20	
Cobalt		0.451	mg/L	0.0050	90	70	130	1.4	20	
Manganese		3.84	mg/L	0.0010	92	70	130	1.2	20	
Molybdenum		0.480	mg/L	0.0056	96	70	130	2.7	20	
Nickel		0.459	mg/L	0.0050	91	70	130	0.2	20	
Vanadium		0.477	mg/L	0.010	95	70	130	3.4	20	
Sample ID: C14010521-006CMS3	8	Sample Matrix Spike				Run: ICP4-C_140123A			01/23/14 20:09	
Aluminum		156	mg/L	0.060		70	130			A
Beryllium		0.382	mg/L	0.0010	101	70	130			
Cadmium		0.248	mg/L	0.0017	95	70	130			
Cobalt		1.41	mg/L	0.0082	100	70	130			
Manganese		22.4	mg/L	0.0010		70	130			A
Molybdenum		0.490	mg/L	0.014	98	70	130			
Nickel		1.40	mg/L	0.0073	99	70	130			
Vanadium		0.518	mg/L	0.026	104	70	130			
Sample ID: C14010521-006CMSD3	8	Sample Matrix Spike Duplicate				Run: ICP4-C_140123A			01/23/14 20:12	
Aluminum		153	mg/L	0.060		70	130	2.4	20	A
Beryllium		0.379	mg/L	0.0010	100	70	130	0.9	20	
Cadmium		0.245	mg/L	0.0017	94	70	130	1.1	20	
Cobalt		1.39	mg/L	0.0082	97	70	130	1.1	20	
Manganese		22.1	mg/L	0.0010		70	130	1.7	20	A
Molybdenum		0.467	mg/L	0.014	93	70	130	4.7	20	
Nickel		1.36	mg/L	0.0073	92	70	130	2.7	20	
Vanadium		0.489	mg/L	0.026	98	70	130	5.7	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:** 02/27/14

Project: Zone-3 **Work Order:** C14010521

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS4-C_140210A	
Sample ID: ICV	2	Initial Calibration Verification Standard							02/10/14 17:05	
Lead		0.0484	mg/L	0.0010	97	90	110			
Uranium		0.0495	mg/L	0.00030	99	90	110			
Method: E200.8									Batch: 40393	
Sample ID: MB-40393	2	Method Blank				Run: ICPMS4-C_140210A			02/10/14 19:46	
Lead		ND	mg/L	4E-05						
Uranium		ND	mg/L	4E-05						
Sample ID: LCS3-40393	2	Laboratory Control Sample				Run: ICPMS4-C_140210A			02/10/14 19:50	
Lead		0.501	mg/L	0.0010	100	85	115			
Uranium		0.535	mg/L	0.00030	107	85	115			
Sample ID: C14010520-004CMS3	2	Sample Matrix Spike				Run: ICPMS4-C_140210A			02/10/14 20:02	
Lead		0.504	mg/L	0.0010	101	70	130			
Uranium		0.563	mg/L	0.00030	112	70	130			
Sample ID: C14010520-004CMSD3	2	Sample Matrix Spike Duplicate				Run: ICPMS4-C_140210A			02/10/14 20:06	
Lead		0.504	mg/L	0.0010	101	70	130	0.0	20	
Uranium		0.559	mg/L	0.00030	111	70	130	0.7	20	
Sample ID: C14010521-006CMS3	2	Sample Matrix Spike				Run: ICPMS4-C_140210A			02/10/14 22:43	
Lead		0.524	mg/L	0.0010	103	70	130			
Uranium		0.585	mg/L	0.00030	109	70	130			
Sample ID: C14010521-006CMSD3	2	Sample Matrix Spike Duplicate				Run: ICPMS4-C_140210A			02/10/14 22:47	
Lead		0.542	mg/L	0.0010	106	70	130	3.3	20	
Uranium		0.608	mg/L	0.00030	113	70	130	3.9	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:** 02/27/14

Project: Zone-3 **Work Order:** C14010521

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0									Analytical Run: IC1-C_140120A	
Sample ID: CCV-012014-02	2	Continuing Calibration Verification Standard							01/20/14 21:31	
Chloride		19.7	mg/L	1.0	98	90	110			
Sulfate		78.7	mg/L	1.0	98	90	110			
Sample ID: CCV-012014-03	2	Continuing Calibration Verification Standard							01/21/14 01:35	
Chloride		19.8	mg/L	1.0	99	90	110			
Sulfate		79.4	mg/L	1.0	99	90	110			
Method: E300.0									Batch: R182850	
Sample ID: ICB-012014	2	Method Blank				Run: IC1-C_140120A			01/20/14 17:10	
Chloride		0.04	mg/L	0.04						
Sulfate		0.2	mg/L	0.1						
Sample ID: LFB-012014-01	2	Laboratory Fortified Blank				Run: IC1-C_140120A			01/20/14 17:27	
Chloride		9.80	mg/L	1.0	98	90	110			
Sulfate		39.1	mg/L	1.0	97	90	110			
Sample ID: C14010520-005AMS	2	Sample Matrix Spike				Run: IC1-C_140120A			01/20/14 22:58	
Chloride		124	mg/L	2.1	101	90	110			
Sulfate		2180	mg/L	8.3		90	110			A
Sample ID: C14010520-005AMSD	2	Sample Matrix Spike Duplicate				Run: IC1-C_140120A			01/20/14 23:16	
Chloride		125	mg/L	2.1	102	90	110	0.3	20	
Sulfate		2160	mg/L	8.3		90	110	1.2	20	A
Sample ID: C14010521-007AMS	2	Sample Matrix Spike				Run: IC1-C_140120A			01/21/14 02:27	
Chloride		265	mg/L	4.2	101	90	110			
Sulfate		4250	mg/L	17		90	110			A
Sample ID: C14010521-007AMSD	2	Sample Matrix Spike Duplicate				Run: IC1-C_140120A			01/21/14 02:44	
Chloride		262	mg/L	4.2	99	90	110	1.2	20	
Sulfate		4190	mg/L	17		90	110	1.2	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: 02/27/14
Project: Zone-3
Work Order: C14010521

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E353.2									Analytical Run: TECHNICON_140117A	
Sample ID: CCV-30	Continuing Calibration Verification Standard								01/17/14 14:43	
Nitrogen, Nitrate+Nitrite as N		1.08	mg/L	0.10	108	90	110			
Sample ID: CCV-46	Continuing Calibration Verification Standard								01/17/14 15:23	
Nitrogen, Nitrate+Nitrite as N		1.07	mg/L	0.10	107	90	110			
Method: E353.2									Batch: R182736	
Sample ID: MBLK-1	Method Blank					Run: TECHNICON_140117A			01/17/14 13:30	
Nitrogen, Nitrate+Nitrite as N		ND	mg/L	0.05						
Sample ID: LFB-3	Laboratory Fortified Blank					Run: TECHNICON_140117A			01/17/14 13:35	
Nitrogen, Nitrate+Nitrite as N		2.12	mg/L	0.10	108	90	110			
Sample ID: C14010521-001DMS	Sample Matrix Spike					Run: TECHNICON_140117A			01/17/14 14:50	
Nitrogen, Nitrate+Nitrite as N		1.45	mg/L	0.10	70	90	110			S
- Matrix spike recoveries outside the acceptance range are considered matrix-related.										
Sample ID: C14010521-001DMSD	Sample Matrix Spike Duplicate					Run: TECHNICON_140117A			01/17/14 14:53	
Nitrogen, Nitrate+Nitrite as N		1.45	mg/L	0.10	70	90	110	0.0	10	S
- Matrix spike recoveries outside the acceptance range are considered matrix-related.										
Sample ID: C14010521-007DMS	Sample Matrix Spike					Run: TECHNICON_140117A			01/17/14 15:10	
Nitrogen, Nitrate+Nitrite as N		1.80	mg/L	0.10	92	90	110			
Sample ID: C14010521-007DMSD	Sample Matrix Spike Duplicate					Run: TECHNICON_140117A			01/17/14 15:13	
Nitrogen, Nitrate+Nitrite as N		1.79	mg/L	0.10	91	90	110	0.6	10	
Sample ID: C14010521-011DMS	Sample Matrix Spike					Run: TECHNICON_140117A			01/17/14 15:30	
Nitrogen, Nitrate+Nitrite as N		1.49	mg/L	0.10	73	90	110			S
- Matrix spike recoveries outside the acceptance range are considered matrix-related.										
Sample ID: C14010521-011DMSD	Sample Matrix Spike Duplicate					Run: TECHNICON_140117A			01/17/14 15:33	
Nitrogen, Nitrate+Nitrite as N		1.51	mg/L	0.10	74	90	110	1.3	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:** 02/27/14

Project: Zone-3 **Work Order:** C14010521

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624									Analytical Run: R182982	
Sample ID: 24-Jan-14_CCV_8	9	Continuing Calibration Verification Standard							01/24/14 17:06	
Bromodichloromethane		13.2	ug/L	1.0	132	70	130			S
Bromoform		7.80	ug/L	1.0	78	70	130			
Chlorodibromomethane		7.36	ug/L	1.0	74	70	130			
Chloroform		12.4	ug/L	1.0	124	70	130			
Trihalomethanes, Total		40.7	ug/L	1.0	102	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	90	70	130			
Surr: Dibromofluoromethane				1.0	90	70	130			
Surr: p-Bromofluorobenzene				1.0	94	70	130			
Surr: Toluene-d8				1.0	122	70	130			
Method: E624									Batch: R182982	
Sample ID: 24-Jan-14_LCS_4	9	Laboratory Control Sample				Run: GCMS2_140124A			01/24/14 14:41	
Bromodichloromethane		12.7	ug/L	1.0	127	65.2	130			
Bromoform		7.44	ug/L	1.0	74	71.5	130			
Chlorodibromomethane		7.40	ug/L	1.0	74	64.6	127			
Chloroform		12.1	ug/L	1.0	121	65	136			
Trihalomethanes, Total		39.6	ug/L	1.0	99	71.1	127			
Surr: 1,2-Dichlorobenzene-d4				1.0	89	73.7	126			
Surr: Dibromofluoromethane				1.0	88	64.4	131			
Surr: p-Bromofluorobenzene				1.0	95	67.1	133			
Surr: Toluene-d8				1.0	92	79.7	125			
Sample ID: 24-Jan-14_MBLK_10	9	Method Blank				Run: GCMS2_140124A			01/24/14 18:15	
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	115	73.7	126			
Surr: Dibromofluoromethane				1.0	91	64.4	131			
Surr: p-Bromofluorobenzene				1.0	134	67.1	133			S
Surr: Toluene-d8				1.0	122	79.7	125			
Sample ID: C14010521-004HMS	9	Sample Matrix Spike				Run: GCMS2_140124A			01/24/14 23:24	
Bromodichloromethane		137	ug/L	5.0	137	65.2	130			S
Bromoform		77.6	ug/L	5.0	78	71.5	130			
Chlorodibromomethane		76.4	ug/L	5.0	76	64.6	127			
Chloroform		139	ug/L	5.0	139	65	136			S
Trihalomethanes, Total		430	ug/L	5.0	108	71.1	127			
Surr: 1,2-Dichlorobenzene-d4				1.0	91	73.7	126			
Surr: Dibromofluoromethane				1.0	100	64.4	131			
Surr: p-Bromofluorobenzene				1.0	98	67.1	133			
Surr: Toluene-d8				1.0	92	79.7	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: 02/27/14
Project: Zone-3
Work Order: C14010521

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624										Batch: R182982
Sample ID: C14010521-004HMSD	9	Sample Matrix Spike Duplicate				Run: GCMS2_140124A				01/24/14 23:58
Bromodichloromethane		130	ug/L	5.0	130	65.2	130	5.4	20	
Bromoform		80.8	ug/L	5.0	81	71.5	130	4.0	20	
Chlorodibromomethane		75.2	ug/L	5.0	75	64.6	127	1.6	20	
Chloroform		135	ug/L	5.0	135	65	136	3.2	20	
Trihalomethanes, Total		421	ug/L	5.0	105	71.1	127	2.3	20	
Surr: 1,2-Dichlorobenzene-d4				1.0	93	73.7	126			
Surr: Dibromofluoromethane				1.0	96	64.4	131			
Surr: p-Bromofluorobenzene				1.0	101	67.1	133			
Surr: Toluene-d8				1.0	90	79.7	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:** 02/27/14

Project: Zone-3 **Work Order:** C14010521

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624									Analytical Run: R183043	
Sample ID: 27-Jan-14_CCV_3	9	Continuing Calibration Verification Standard							01/27/14 14:58	
Bromodichloromethane		8.92	ug/L	1.0	89	70	130			
Bromoform		10.3	ug/L	1.0	103	70	130			
Chlorodibromomethane		10.0	ug/L	1.0	100	70	130			
Chloroform		9.80	ug/L	1.0	98	70	130			
Trihalomethanes, Total		39.0	ug/L	1.0	98	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	104	70	130			
Surr: Dibromofluoromethane				1.0	62	70	130			S
Surr: p-Bromofluorobenzene				1.0	107	70	130			
Surr: Toluene-d8				1.0	106	70	130			
Sample ID: 27-Jan-14_CCV_19	9	Continuing Calibration Verification Standard							01/28/14 00:19	
Bromodichloromethane		9.68	ug/L	1.0	97	70	130			
Bromoform		12.0	ug/L	1.0	120	70	130			
Chlorodibromomethane		10.8	ug/L	1.0	108	70	130			
Chloroform		10.5	ug/L	1.0	105	70	130			
Trihalomethanes, Total		43.1	ug/L	1.0	108	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	107	70	130			
Surr: Dibromofluoromethane				1.0	56	70	130			S
Surr: p-Bromofluorobenzene				1.0	112	70	130			
Surr: Toluene-d8				1.0	106	70	130			
Method: E624									Batch: R183043	
Sample ID: 27-Jan-14_LCS_4	9	Laboratory Control Sample				Run: 5975VOC1_140127A			01/27/14 15:33	
Bromodichloromethane		9.12	ug/L	1.0	91	65.2	130			
Bromoform		11.0	ug/L	1.0	110	71.5	130			
Chlorodibromomethane		10.2	ug/L	1.0	102	64.6	127			
Chloroform		10.4	ug/L	1.0	104	65	136			
Trihalomethanes, Total		40.7	ug/L	1.0	102	71.1	127			
Surr: 1,2-Dichlorobenzene-d4				1.0	106	73.7	126			
Surr: Dibromofluoromethane				1.0	58	64.4	131			S
Surr: p-Bromofluorobenzene				1.0	110	67.1	133			
Surr: Toluene-d8				1.0	106	79.7	125			
Sample ID: 27-Jan-14_MBLK_6	9	Method Blank				Run: 5975VOC1_140127A			01/27/14 16:43	
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	112	73.7	126			
Surr: Dibromofluoromethane				1.0	60	64.4	131			S
Surr: p-Bromofluorobenzene				1.0	114	67.1	133			
Surr: Toluene-d8				1.0	100	79.7	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: 02/27/14
Project: Zone-3
Work Order: C14010521

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624										Batch: R183043
Sample ID: C14010520-001HMS	9	Sample Matrix Spike				Run: 5975VOC1_140127A				01/27/14 22:34
Bromodichloromethane		166	ug/L	10	83	65.2	130			
Bromoform		208	ug/L	10	104	71.5	130			
Chlorodibromomethane		187	ug/L	10	94	64.6	127			
Chloroform		174	ug/L	10	87	65	136			
Trihalomethanes, Total		735	ug/L	10	92	71.1	127			
Surr: 1,2-Dichlorobenzene-d4				1.0	109	73.7	126			
Surr: Dibromofluoromethane				1.0	53	64.4	131			S
Surr: p-Bromofluorobenzene				1.0	110	67.1	133			
Surr: Toluene-d8				1.0	106	79.7	125			
Sample ID: C14010520-001HMSD	9	Sample Matrix Spike Duplicate				Run: 5975VOC1_140127A				01/27/14 23:09
Bromodichloromethane		191	ug/L	10	96	65.2	130	14	20	
Bromoform		236	ug/L	10	118	71.5	130	13	20	
Chlorodibromomethane		210	ug/L	10	105	64.6	127	12	20	
Chloroform		198	ug/L	10	99	65	136	13	20	
Trihalomethanes, Total		836	ug/L	10	104	71.1	127	13	20	
Surr: 1,2-Dichlorobenzene-d4				1.0	109	73.7	126			
Surr: Dibromofluoromethane				1.0	52	64.4	131			S
Surr: p-Bromofluorobenzene				1.0	110	67.1	133			
Surr: Toluene-d8				1.0	106	79.7	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:** 02/27/14

Project: Zone-3 **Work Order:** C14010521

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E900.1										Batch: GA-0765
Sample ID: LCS-GA-0765		Laboratory Control Sample				Run: BERTHOLD 770-2_140225A				02/27/14 09:00
Gross Alpha minus Rn & U		37.0	pCi/L		99	80	120			
Sample ID: MB-GA-0765	3	Method Blank				Run: BERTHOLD 770-2_140225A				02/27/14 09:00
Gross Alpha minus Rn & U		-0.09	pCi/L							U
Gross Alpha minus Rn & U Precision (±)		0.2	pCi/L							
Gross Alpha minus Rn & U MDC		0.4	pCi/L							
Sample ID: C14010599-005DMS		Sample Matrix Spike				Run: BERTHOLD 770-2_140225A				02/27/14 09:00
Gross Alpha minus Rn & U		61.3	pCi/L		81	70	130			
Sample ID: C14010599-005DMSD		Sample Matrix Spike Duplicate				Run: BERTHOLD 770-2_140225A				02/27/14 09:00
Gross Alpha minus Rn & U		64.4	pCi/L		86	70	130	4.9	19.4	
Method: E900.1										Batch: GA-0753
Sample ID: LCS-GA-0753		Laboratory Control Sample				Run: G542M_140123A				01/27/14 07:11
Gross Alpha minus Rn & U		38.5	pCi/L		102	80	120			
Sample ID: MB-GA-0753	3	Method Blank				Run: G542M_140123A				01/27/14 07:11
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: C14010522-005CMS		Sample Matrix Spike				Run: G542M_140123A				01/27/14 08:43
Gross Alpha minus Rn & U		74.9	pCi/L		100	70	130			
Sample ID: C14010522-005CMSD		Sample Matrix Spike Duplicate				Run: G542M_140123A				01/27/14 08:43
Gross Alpha minus Rn & U		76.9	pCi/L		102	70	130	2.5	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 **Report Date:** 02/27/14

Project: Zone-3 **Work Order:** C14010521

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E903.0										Batch: RA226-7076R
Sample ID: C14010520-005GMS		Sample Matrix Spike				Run: BERTHOLD 770-1_140220A			02/26/14 10:51	
Radium 226		49	pCi/L		106	70	130			
Sample ID: C14010521-006GDUP	3	Sample Duplicate				Run: BERTHOLD 770-1_140220A			02/26/14 10:51	
Radium 226		15	pCi/L					1.7	17.7	
Radium 226 precision (±)		0.57	pCi/L							
Radium 226 MDC		0.15	pCi/L							
Sample ID: MB-RA226-7076	3	Method Blank				Run: BERTHOLD 770-1_140220A			02/26/14 10:51	
Radium 226		-0.1	pCi/L							U
Radium 226 precision (±)		0.08	pCi/L							
Radium 226 MDC		0.2	pCi/L							
Sample ID: LCS-RA226-7076		Laboratory Control Sample				Run: BERTHOLD 770-1_140220A			02/26/14 14:02	
Radium 226		12	pCi/L		108	80	120			
Method: E903.0										Batch: RA226-7042
Sample ID: C14010520-001GMS		Sample Matrix Spike				Run: G5000W_140120B			02/03/14 07:57	
Radium 226		20	pCi/L		84	70	130			
Sample ID: C14010520-001GMSD		Sample Matrix Spike Duplicate				Run: G5000W_140120B			02/03/14 07:57	
Radium 226		21	pCi/L		86	70	130	1.9	20.6	
Sample ID: MB-RA226-7042	3	Method Blank				Run: G5000W_140120B			02/03/14 09:34	
Radium 226		0.1	pCi/L							U
Radium 226 precision (±)		0.1	pCi/L							
Radium 226 MDC		0.2	pCi/L							
Sample ID: LCS-RA226-7042		Laboratory Control Sample				Run: G5000W_140120B			02/03/14 09:34	
Radium 226		12	pCi/L		108	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:** 02/27/14

Project: Zone-3 **Work Order:** C14010521

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E908.0										Batch: RA-TH-ISO-1991
Sample ID: LCS-RA-TH-ISO-1991		Laboratory Control Sample				Run: ALPHANALYST_140124A				01/29/14 16:34
Thorium 230		6.6	pCi/L		98	80	120			
Sample ID: C14010424-002CMS		Sample Matrix Spike				Run: ALPHANALYST_140124A				01/29/14 16:34
Thorium 230		21	pCi/L		92	70	130			
Sample ID: C14010424-002CMSD		Sample Matrix Spike Duplicate				Run: ALPHANALYST_140124A				01/29/14 16:34
Thorium 230		24	pCi/L		104	70	130	12	34.2	
Sample ID: MB-RA-TH-ISO-1991	3	Method Blank				Run: ALPHANALYST_140124A				01/29/14 16:34
Thorium 230		0.1	pCi/L							
Thorium 230 precision (±)		0.06	pCi/L							
Thorium 230 MDC		0.08	pCi/L							
Method: E908.0										Batch: RA-TH-ISO-1996R
Sample ID: LCS-RA-TH-ISO-1996		Laboratory Control Sample				Run: ALPHANALYST_140128B				02/08/14 17:39
Thorium 230		5.8	pCi/L		97	80	120			
Sample ID: C14010521-005GMS		Sample Matrix Spike				Run: ALPHANALYST_140128B				02/08/14 17:39
Thorium 230		9.9	pCi/L		67	70	130			S
- Spike response is outside of the acceptance range for this analysis. Since the LCS and the RPD for the MS/MSD pair are acceptable, the response is considered to be matrix related. The batch is approved.										
Sample ID: C14010521-005GMSD		Sample Matrix Spike Duplicate				Run: ALPHANALYST_140128B				02/08/14 17:39
Thorium 230		11.3	pCi/L		77	70	130	13	36.5	
Sample ID: MB-RA-TH-ISO-1996	3	Method Blank				Run: ALPHANALYST_140128B				02/08/14 17:39
Thorium 230		0.2	pCi/L							
Thorium 230 precision (±)		0.08	pCi/L							
Thorium 230 MDC		0.07	pCi/L							
Method: E908.0										Batch: RA-TH-ISO-2001
Sample ID: LCS-RA-TH-ISO-2001		Laboratory Control Sample				Run: ALPHANALYST_140204B				02/10/14 11:28
Thorium 230		6.2	pCi/L		94	80	120			
Sample ID: C14010599-001DMS		Sample Matrix Spike				Run: ALPHANALYST_140204B				02/10/14 11:28
Thorium 230		12	pCi/L		88	70	130			
Sample ID: C14010599-001DMSD		Sample Matrix Spike Duplicate				Run: ALPHANALYST_140204B				02/10/14 11:28
Thorium 230		11	pCi/L		85	70	130	3.3	29.4	
Sample ID: MB-RA-TH-ISO-2001	3	Method Blank				Run: ALPHANALYST_140204B				02/10/14 16:38
Thorium 230		0.06	pCi/L							U
Thorium 230 precision (±)		0.05	pCi/L							
Thorium 230 MDC		0.07	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:** 02/27/14

Project: Zone-3 **Work Order:** C14010521

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E908.0										Batch: RA-TH-ISO-2003
Sample ID: LCS-RA-TH-ISO-2003		Laboratory Control Sample				Run: ALPHANALYST_140210A				02/13/14 10:19
Thorium 230		7.0	pCi/L		107	80	120			
Sample ID: MB-RA-TH-ISO-2003	3	Method Blank				Run: ALPHANALYST_140210A				02/13/14 10:19
Thorium 230		0.05	pCi/L							U
Thorium 230 precision (±)		0.07	pCi/L							
Thorium 230 MDC		0.2	pCi/L							
Sample ID: TAPWATER-MS		Sample Matrix Spike				Run: ALPHANALYST_140210A				02/13/14 10:19
Thorium 230		6.2	pCi/L		92	70	130			
Sample ID: TAPWATER-MSD		Sample Matrix Spike Duplicate				Run: ALPHANALYST_140210A				02/13/14 10:19
Thorium 230		7.5	pCi/L		112	70	130	19	45.9	
Method: E908.0										Batch: RA-TH-ISO-2009
Sample ID: LCS-RA-TH-ISO-2009		Laboratory Control Sample				Run: EGG-ORTEC_140220A				02/24/14 10:38
Thorium 230		6.1	pCi/L		92	80	120			
Sample ID: C14010521-008GMS		Sample Matrix Spike				Run: EGG-ORTEC_140220A				02/24/14 10:38
Thorium 230		12.2	pCi/L		91	70	130			
Sample ID: C14010521-008GMSD		Sample Matrix Spike Duplicate				Run: EGG-ORTEC_140220A				02/25/14 08:54
Thorium 230		11.8	pCi/L		88	70	130	3.5	31.1	
Sample ID: MB-RA-TH-ISO-2009	3	Method Blank				Run: EGG-ORTEC_140220A				02/24/14 10:38
Thorium 230		0.07	pCi/L							U
Thorium 230 precision (±)		0.07	pCi/L							
Thorium 230 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:** 02/27/14

Project: Zone-3 **Work Order:** C14010521

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E909.0									Batch: T_PB-210-0446	
Sample ID: MB-PB-210-0446	3	Method Blank				Run: SUB-T55245			02/05/14 18:05	
Lead 210		0.2	pCi/L							U
Lead 210 precision (±)		0.6	pCi/L							
Lead 210 MDC		0.9	pCi/L							
Sample ID: LCS-PB-210-0446		Laboratory Control Sample				Run: SUB-T55245			02/05/14 19:14	
Lead 210		19	pCi/L		89	80	120			
Sample ID: C14010521-012FMS		Sample Matrix Spike				Run: SUB-T55245			02/06/14 19:32	
Lead 210		43	pCi/L		95	70	130			
Sample ID: C14010521-012FMSD		Sample Matrix Spike Duplicate				Run: SUB-T55245			02/06/14 20:41	
Lead 210		41	pCi/L		90	70	130	4.9	21.3	

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:** 02/27/14

Project: Zone-3 **Work Order:** C14010521

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: RA-05										Batch: RA228-4595
Sample ID: LCS-228-RA226-7042		Laboratory Control Sample				Run: TENNELEC-3_140120C				01/28/14 12:50
Radium 228		8.0	pCi/L		92	80	120			
Sample ID: MB-RA226-7042	3	Method Blank				Run: TENNELEC-3_140120C				01/28/14 12:50
Radium 228		1	pCi/L							
Radium 228 precision (±)		0.6	pCi/L							
Radium 228 MDC		0.9	pCi/L							
Sample ID: C14010521-001GMS		Sample Matrix Spike				Run: TENNELEC-3_140120C				01/28/14 12:50
Radium 228		17	pCi/L		88	70	130			
Sample ID: C14010521-001GMSD		Sample Matrix Spike Duplicate				Run: TENNELEC-3_140120C				01/28/14 12:50
Radium 228		17	pCi/L		85	70	130	2.5	29.8	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

ENERGY LABORATORIES
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Gillette, WY 866-686-7175 • Rapid City, SD 888-672-1225 • College Station, TX 888-690-2218

ANALYTICAL SUMMARY REPORT

February 11, 2014

United Nuclear Corporation
21 Miles NE of Gallup
Gallup, NM 87305

Workorder No.: C14010518 Quote ID: C129 - Quarterly Long List

Project Name: Zone-3

Energy Laboratories, Inc. Casper WY received the following 8 samples for United Nuclear Corporation on 1/17/2014 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C14010518-001	NBL-2	01/14/14 11:35	01/17/14	Aqueous	Alkalinity E300.0 Anions pH Solids, Total Dissolved
C14010518-002	PB-3	01/14/14 13:55	01/17/14	Aqueous	Same As Above
C14010518-003	PB-4	01/14/14 14:25	01/17/14	Aqueous	Same As Above
C14010518-004	NW-1	01/14/14 12:28	01/17/14	Aqueous	Same As Above
C14010518-005	NW-4	01/14/14 12:48	01/17/14	Aqueous	Same As Above
C14010518-006	RW-A	01/14/14 13:08	01/17/14	Aqueous	Same As Above
C14010518-007	NW-3	01/14/14 13:29	01/17/14	Aqueous	Same As Above
C14010518-008	NW-2	01/14/14 14:11	01/17/14	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:

Report Proofing Specialist

Digitally signed by
Sheri M. Mead
Date: 2014.02.11 10:33:15 -07:00

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/11/14

Project: Zone-3 **Work Order:** C14010518

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2320 B										Batch: R182740
Sample ID: MBLK	2	Method Blank				Run: MANTECH_140117B				01/17/14 14:23
Alkalinity, Total as CaCO3		0.6	mg/L	0.6						
Bicarbonate as HCO3		ND	mg/L	1						
Sample ID: LCS_131219		Laboratory Control Sample				Run: MANTECH_140117B				01/17/14 14:36
Alkalinity, Total as CaCO3		257	mg/L	5.0	103	90	110			
Sample ID: C14010470-001ADUP	2	Sample Duplicate				Run: MANTECH_140117B				01/17/14 14:52
Alkalinity, Total as CaCO3		255	mg/L	5.0				0.1	10	
Bicarbonate as HCO3		312	mg/L	5.0				0.1	10	
Sample ID: C14010484-001AMS		Sample Matrix Spike				Run: MANTECH_140117B				01/17/14 15:07
Alkalinity, Total as CaCO3		252	mg/L	5.0	96	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 **Report Date:** 02/11/14

Project: Zone-3 **Work Order:** C14010518

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C										Batch: TDS140120A
Sample ID: MB-1_140120A		Method Blank				Run: BAL-19_140120A				01/20/14 14:28
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	7						
Sample ID: LCS-2_140120A		Laboratory Control Sample				Run: BAL-19_140120A				01/20/14 14:28
Solids, Total Dissolved TDS @ 180 C		1970	mg/L	20	99	90	110			
Sample ID: C14010518-007A DUP		Sample Duplicate				Run: BAL-19_140120A				01/20/14 14:38
Solids, Total Dissolved TDS @ 180 C		4040	mg/L	40				1.6	5	
Sample ID: C14010518-008A MS		Sample Matrix Spike				Run: BAL-19_140120A				01/20/14 14:38
Solids, Total Dissolved TDS @ 180 C		8440	mg/L	40	97	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: 02/11/14
Project: Zone-3
Work Order: C14010518

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **A4500-H B**									Analytical Run: PHSC_101-C_140117A	
Sample ID: **pH 6.86**		Initial Calibration Verification Standard							01/17/14 08:32	
pH		6.85	s.u.	0.010	100	98	102			
Sample ID: **CCV - pH 7**		Continuing Calibration Verification Standard							01/17/14 11:05	
pH		6.98	s.u.	0.010	100	98	102			
Method: **A4500-H B**									Batch: R182707	
Sample ID: **C14010518-008ADUP**		Sample Duplicate				Run: PHSC_101-C_140117A			01/17/14 13:42	
pH		6.32	s.u.	0.010				0.3	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:** 02/11/14

Project: Zone-3 **Work Order:** C14010518

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0									Analytical Run: IC2-C_140118A	
Sample ID: CCV-011813-5		Continuing Calibration Verification Standard							01/19/14 18:01	
Chloride		9.87	mg/L	1.0	99	90	110			
Sample ID: CCV-011813-6		Continuing Calibration Verification Standard							01/19/14 22:38	
Chloride		9.86	mg/L	1.0	99	90	110			
Method: E300.0									Batch: R182763	
Sample ID: ICB-011813		Method Blank				Run: IC2-C_140118A			01/18/14 20:14	
Chloride		0.02	mg/L	0.01						
Sample ID: LFB-011813-1		Laboratory Fortified Blank				Run: IC2-C_140118A			01/18/14 20:32	
Chloride		9.78	mg/L	1.0	98	90	110			
Sample ID: C14010518-001AMS		Sample Matrix Spike				Run: IC2-C_140118A			01/19/14 20:10	
Chloride		153	mg/L	2.1	102	90	110			
Sample ID: C14010518-001AMSD		Sample Matrix Spike Duplicate				Run: IC2-C_140118A			01/19/14 20:29	
Chloride		155	mg/L	2.1	104	90	110	1.5	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

APPENDIX – D (2 OF 2)

SECOND QUARTER

LABORATORY QUALITY CONTROL AND

PERFORMANCE REPORT

ANALYTICAL SUMMARY REPORT

May 16, 2014

United Nuclear Corporation
21 Miles NE of Gallup
Gallup, NM 87305

Work Order: C14040132 Quote ID: C129 - Quarterly Long List

Project Name: SW Allluvium

Energy Laboratories, Inc. Casper WY received the following 11 samples for United Nuclear Corporation on 4/3/2014 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C14040132-001	509-D	03/31/14 8:50	04/03/14	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Total Alkalinity Anion - Cation Balance Arsenic Speciation, Total 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
C14040132-002	EPA-23	03/31/14 9:50	04/03/14	Aqueous	Same As Above
C14040132-003	803	03/31/14 10:37	04/03/14	Aqueous	Same As Above
C14040132-004	808	03/31/14 11:25	04/03/14	Aqueous	Same As Above
C14040132-005	802	03/31/14 12:10	04/03/14	Aqueous	Same As Above
C14040132-006	801	03/31/14 13:00	04/03/14	Aqueous	Same As Above
C14040132-007	632	03/31/14 13:50	04/03/14	Aqueous	Same As Above
C14040132-008	GW-2	03/31/14 14:35	04/03/14	Aqueous	Same As Above
C14040132-009	GW-1	03/31/14 15:40	04/03/14	Aqueous	Same As Above
C14040132-010	EPA-28	03/31/14 16:35	04/03/14	Aqueous	Same As Above
C14040132-011	EPA-28 Duplicate	03/31/14 17:20	04/03/14	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:

Report Proofing Specialist

Digitally signed by
Sheri M. Mead
Date: 2014.05.19 13:52:16 -06:00

CLIENT: United Nuclear Corporation
Project: SW Allluvium
Sample Delivery Group: C14040132

Report Date: 05/16/14

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: 05/16/14
Project: SW Alluvium
Work Order: C14040132

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **A2320 B**										Batch: R185114
Lab ID: **MBLK**	2	Method Blank				Run: MANTECH_140403A				04/03/14 16:13
Alkalinity, Total as CaCO3		0.6	mg/L	0.6						
Bicarbonate as HCO3		ND	mg/L	1						
Lab ID: **LCS_131219**		Laboratory Control Sample				Run: MANTECH_140403A				04/03/14 16:26
Alkalinity, Total as CaCO3		261	mg/L	5.0	104	90	110			
Lab ID: **C14040105-001ADUP**	2	Sample Duplicate				Run: MANTECH_140403A				04/03/14 16:45
Alkalinity, Total as CaCO3		653	mg/L	5.0				1.8	10	
Bicarbonate as HCO3		796	mg/L	5.0				1.8	10	
Lab ID: **C14040120-001AMS**		Sample Matrix Spike				Run: MANTECH_140403A				04/03/14 17:02
Alkalinity, Total as CaCO3		504	mg/L	5.0	101	80	120			
Lab ID: **C14040136-004ADUP**	2	Sample Duplicate				Run: MANTECH_140403A				04/03/14 20:54
Alkalinity, Total as CaCO3		176	mg/L	5.0				3.6	10	
Bicarbonate as HCO3		214	mg/L	5.0				3.6	10	
Lab ID: **C14040136-005AMS**		Sample Matrix Spike				Run: MANTECH_140403A				04/03/14 21:11
Alkalinity, Total as CaCO3		551	mg/L	5.0	96	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 **Report Date:** 05/16/14
Project: SW Alluvium **Work Order:** C14040132

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C										Batch: TDS140403A
Lab ID: MB-1_140403A		Method Blank				Run: BAL-19_140403B				04/03/14 15:58
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	7						
Lab ID: LCS-2_140403A		Laboratory Control Sample				Run: BAL-19_140403B				04/03/14 15:58
Solids, Total Dissolved TDS @ 180 C		1980	mg/L	20	99	90	110			
Lab ID: C14040132-004A DUP		Sample Duplicate				Run: BAL-19_140403B				04/03/14 16:08
Solids, Total Dissolved TDS @ 180 C		6890	mg/L	100				0.4	5	
Lab ID: C14040132-005A MS		Sample Matrix Spike				Run: BAL-19_140403B				04/03/14 16:10
Solids, Total Dissolved TDS @ 180 C		16900	mg/L	100	102	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: SW Allluvium

Report Date: 05/16/14
Work Order: C14040132

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A3114 B									Analytical Run: CVAA-C202_140418B	
Lab ID: ICV		Initial Calibration Verification Standard							04/18/14 14:47	
Selenium-IV		0.0240	mg/L	0.0010	96	90	110			
Lab ID: CCV		Continuing Calibration Verification Standard							04/18/14 15:05	
Selenium-IV		0.0256	mg/L	0.0010	102	90	110			
Method: A3114 B									Batch: 41157	
Lab ID: MB-41157		Method Blank				Run: CVAA-C202_140418B			04/18/14 14:50	
Selenium-IV		ND	mg/L	0.0005						
Lab ID: LCS-41157		Laboratory Control Sample				Run: CVAA-C202_140418B			04/18/14 14:51	
Selenium-IV		0.0236	mg/L	0.0010	95	90	110			
Lab ID: C14040132-002CMS		Sample Matrix Spike				Run: CVAA-C202_140418B			04/18/14 14:56	
Selenium-IV		0.0264	mg/L	0.0010	106	85	115			
Lab ID: C14040132-002CMSD		Sample Matrix Spike Duplicate				Run: CVAA-C202_140418B			04/18/14 14:58	
Selenium-IV		0.0263	mg/L	0.0010	105	85	115	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: SW Allluvium

Report Date: 05/16/14
Work Order: C14040132

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **A4500-H B**									Analytical Run: PHSC_101-C_140403A	
Lab ID: **pH 6.86**	Initial Calibration Verification Standard								04/03/14 08:41	
pH		6.88	s.u.	0.010	100	98	102			
Lab ID: **CCV - pH 7**	Continuing Calibration Verification Standard								04/03/14 10:41	
pH		7.00	s.u.	0.010	100	98	102			
Method: **A4500-H B**									Batch: R185070	
Lab ID: **C14040132-011ADUP**	Sample Duplicate					Run: PHSC_101-C_140403A			04/03/14 15:30	
pH		6.83	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: SW Allluvium

Report Date: 05/16/14
Work Order: C14040132

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-NH3 G									Analytical Run: TECHNICON_140408A	
Lab ID: CCV-17	Continuing Calibration Verification Standard								04/08/14 15:18	
Nitrogen, Ammonia as N		0.998	mg/L	0.050	100	90	110			
Method: A4500-NH3 G									Batch: R185252	
Lab ID: MBLK-1	Method Blank					Run: TECHNICON_140408A			04/08/14 14:51	
Nitrogen, Ammonia as N		ND	mg/L	0.006						
Lab ID: LFB-3	Laboratory Fortified Blank					Run: TECHNICON_140408A			04/08/14 14:55	
Nitrogen, Ammonia as N		1.89	mg/L	0.050	96	90	110			
Lab ID: C14040053-003CMS	Sample Matrix Spike					Run: TECHNICON_140408A			04/08/14 14:58	
Nitrogen, Ammonia as N		2.03	mg/L	0.050	104	90	110			
Lab ID: C14040053-003CMSD	Sample Matrix Spike Duplicate					Run: TECHNICON_140408A			04/08/14 15:00	
Nitrogen, Ammonia as N		2.02	mg/L	0.050	103	90	110	0.5	10	
Method: A4500-NH3 G									Analytical Run: TECHNICON_140409A	
Lab ID: CCV-18	Continuing Calibration Verification Standard								04/09/14 13:08	
Nitrogen, Ammonia as N		0.981	mg/L	0.050	98	90	110			
Method: A4500-NH3 G									Batch: R185288	
Lab ID: MBLK-1	Method Blank					Run: TECHNICON_140409A			04/09/14 12:39	
Nitrogen, Ammonia as N		ND	mg/L	0.006						
Lab ID: LFB-3	Laboratory Fortified Blank					Run: TECHNICON_140409A			04/09/14 12:43	
Nitrogen, Ammonia as N		1.89	mg/L	0.050	96	90	110			
Lab ID: C14040189-001BMS	Sample Matrix Spike					Run: TECHNICON_140409A			04/09/14 12:46	
Nitrogen, Ammonia as N		1.80	mg/L	0.050	92	90	110			
Lab ID: C14040189-001BMSD	Sample Matrix Spike Duplicate					Run: TECHNICON_140409A			04/09/14 12:48	
Nitrogen, Ammonia as N		1.93	mg/L	0.050	98	90	110	7.0	10	
Lab ID: C14040196-001EMS	Sample Matrix Spike					Run: TECHNICON_140409A			04/09/14 13:16	
Nitrogen, Ammonia as N		1.79	mg/L	0.050	91	90	110			
Lab ID: C14040196-001EMSD	Sample Matrix Spike Duplicate					Run: TECHNICON_140409A			04/09/14 13:18	
Nitrogen, Ammonia as N		1.82	mg/L	0.050	93	90	110	1.7	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
Project: SW Alluvium

Report Date: 05/16/14
Work Order: C14040132

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E1632AM									Analytical Run: SUB-H96349	
Lab ID: AS-ICV 25ppb-4/16/20		Initial Calibration Verification Standard							04/16/14 12:11	
Arsenic-III		28.0	ug/L	5.0	112	87.6	114			
Lab ID: AS-ICV 25ppb-4/16/20		Initial Calibration Verification Standard							04/16/14 12:25	
Arsenic-III		26.5	ug/L	5.0	106	87.6	114			
Lab ID: AS-50.0-4/16/2014		Continuing Calibration Verification Standard							04/16/14 12:38	
Arsenic-III		49.9	ug/L	5.0	100	85	115			
Lab ID: AS-50.0-4/16/2014		Continuing Calibration Verification Standard							04/16/14 14:50	
Arsenic-III		48.0	ug/L	5.0	96	85	115			
Method: E1632AM									Batch: H_R96349	
Lab ID: AS-LFB 50ppb-4/16/2		Laboratory Fortified Blank				Run: SUB-H96349			04/16/14 13:02	
Arsenic-III		50.5	ug/L	5.0	101	55	146			
Lab ID: ICB		Method Blank				Run: SUB-H96349			04/16/14 13:14	
Arsenic-III		ND	ug/L	0.4						
Lab ID: C14040132-001D		Sample Matrix Spike				Run: SUB-H96349			04/16/14 13:38	
Arsenic-III		51.4	ug/L	5.0	103	55	146			
Lab ID: C14040132-001D		Sample Matrix Spike Duplicate				Run: SUB-H96349			04/16/14 13:50	
Arsenic-III		49.2	ug/L	5.0	98	55	146	4.3	20	
Method: E1632AM									Analytical Run: SUB-H96407	
Lab ID: AS-ICV 25ppb-4/17/20		Initial Calibration Verification Standard							04/17/14 13:39	
Arsenic-III		25.8	ug/L	5.0	103	87.6	114			
Lab ID: AS-50.0-4/17/2014		Continuing Calibration Verification Standard							04/17/14 13:51	
Arsenic-III		48.8	ug/L	5.0	98	85	115			
Method: E1632AM									Batch: H_R96407	
Lab ID: AS-LFB 50ppb-4/17/2		Laboratory Fortified Blank				Run: SUB-H96407			04/17/14 14:15	
Arsenic-III		46.2	ug/L	5.0	92	55	146			
Lab ID: ICB		Method Blank				Run: SUB-H96407			04/17/14 14:27	
Arsenic-III		ND	ug/L	0.4						
Lab ID: H14040103-001C MS		Sample Matrix Spike				Run: SUB-H96407			04/17/14 15:03	
Arsenic-III		45.3	ug/L	5.0	91	55	146			
Lab ID: H14040103-001C MSD		Sample Matrix Spike Duplicate				Run: SUB-H96407			04/17/14 15:15	
Arsenic-III		49.3	ug/L	5.0	99	55	146	8.5	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:** 05/16/14

Project: SW Alluvium **Work Order:** C14040132

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-C_140408A	
Lab ID: ICV	6	Initial Calibration Verification Standard							04/08/14 13:13	
Cadmium		0.504	mg/L	0.010	101	95	105			
Cobalt		1.01	mg/L	0.010	101	95	105			
Manganese		5.07	mg/L	0.010	101	95	105			
Molybdenum		1.02	mg/L	0.10	102	95	105			
Nickel		1.02	mg/L	0.050	102	95	105			
Vanadium		1.03	mg/L	0.10	103	95	105			
Lab ID: ICSA	6	Interference Check Sample A							04/08/14 13:41	
Cadmium		0.000900	mg/L	0.010						
Cobalt		-0.00350	mg/L	0.010						
Manganese		ND	mg/L	0.010						
Molybdenum		-0.0200	mg/L	0.10						
Nickel		-0.00380	mg/L	0.050						
Vanadium		0.0174	mg/L	0.10						
Lab ID: ICSAB	6	Interference Check Sample AB							04/08/14 13:45	
Cadmium		0.988	mg/L	0.010	99	80	120			
Cobalt		0.479	mg/L	0.010	96	80	120			
Manganese		0.515	mg/L	0.010	103	80	120			
Molybdenum		-0.0235	mg/L	0.10						
Nickel		0.986	mg/L	0.050	99	80	120			
Vanadium		0.535	mg/L	0.10	107	80	120			
Method: E200.7									Batch: 41029	
Lab ID: MB-41029	6	Method Blank				Run: ICP2-C_140408A			04/08/14 17:23	
Cadmium		ND	mg/L	0.0006						
Cobalt		ND	mg/L	0.002						
Manganese		ND	mg/L	0.0002						
Molybdenum		0.004	mg/L	0.002						
Nickel		ND	mg/L	0.002						
Vanadium		ND	mg/L	0.01						
Lab ID: LCS3-41029	6	Laboratory Control Sample				Run: ICP2-C_140408A			04/08/14 17:27	
Cadmium		0.251	mg/L	0.0010	100	85	115			
Cobalt		0.498	mg/L	0.0050	100	85	115			
Manganese		2.46	mg/L	0.0010	98	85	115			
Molybdenum		0.505	mg/L	0.0023	100	85	115			
Nickel		0.495	mg/L	0.0050	99	85	115			
Vanadium		0.491	mg/L	0.014	98	85	115			
Lab ID: C14040132-001CMS3	6	Sample Matrix Spike				Run: ICP2-C_140408A			04/08/14 17:39	
Cadmium		0.255	mg/L	0.0028	102	70	130			
Cobalt		0.515	mg/L	0.0081	103	70	130			
Manganese		6.41	mg/L	0.0011	101	70	130			
Molybdenum		0.502	mg/L	0.011	101	70	130			
Nickel		0.508	mg/L	0.012	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: 05/16/14
Project: SW Alluvium
Work Order: C14040132

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7										Batch: 41029
Lab ID: C14040132-001CMS3	6	Sample Matrix Spike				Run: ICP2-C_140408A				04/08/14 17:39
Vanadium		0.491	mg/L	0.069	98	70	130			
Lab ID: C14040132-001CMSD	6	Sample Matrix Spike Duplicate				Run: ICP2-C_140408A				04/08/14 17:43
Cadmium		0.255	mg/L	0.0028	102	70	130	0.2	20	
Cobalt		0.519	mg/L	0.0081	104	70	130	0.8	20	
Manganese		6.34	mg/L	0.0011	98	70	130	1.2	20	
Molybdenum		0.502	mg/L	0.011	100	70	130	0.2	20	
Nickel		0.512	mg/L	0.012	102	70	130	0.9	20	
Vanadium		0.488	mg/L	0.069	98	70	130	0.6	20	
Lab ID: C14040135-001DMS3	6	Sample Matrix Spike				Run: ICP2-C_140408A				04/08/14 19:28
Cadmium		0.250	mg/L	0.0010	100	70	130			
Cobalt		0.496	mg/L	0.0050	99	70	130			
Manganese		2.49	mg/L	0.0010	98	70	130			
Molybdenum		0.480	mg/L	0.0023	96	70	130			
Nickel		0.494	mg/L	0.0050	99	70	130			
Vanadium		0.494	mg/L	0.014	99	70	130			
Lab ID: C14040135-001DMSD	6	Sample Matrix Spike Duplicate				Run: ICP2-C_140408A				04/08/14 19:32
Cadmium		0.252	mg/L	0.0010	101	70	130	0.7	20	
Cobalt		0.502	mg/L	0.0050	100	70	130	1.2	20	
Manganese		2.50	mg/L	0.0010	99	70	130	0.4	20	
Molybdenum		0.517	mg/L	0.0023	103	70	130	7.4	20	
Nickel		0.501	mg/L	0.0050	100	70	130	1.4	20	
Vanadium		0.494	mg/L	0.014	99	70	130	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
Project: SW Allluvium

Report Date: 05/16/14
Work Order: C14040132

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-C_140424A	
Lab ID: ICV	3	Initial Calibration Verification Standard							04/24/14 11:38	
Calcium		49.3	mg/L	0.50	99	95	105			
Magnesium		49.1	mg/L	0.50	98	95	105			
Sodium		52.2	mg/L	0.50	104	95	105			
Lab ID: ICV		Initial Calibration Verification Standard							04/24/14 11:50	
Potassium		48.9	mg/L	0.50	98	95	105			
Lab ID: ICSA	4	Interference Check Sample A							04/24/14 12:19	
Calcium		489	mg/L	0.50	98	80	120			
Magnesium		495	mg/L	0.50	99	80	120			
Potassium		-0.00200	mg/L	0.50						
Sodium		0.0434	mg/L	0.50						
Lab ID: ICSAB	4	Interference Check Sample AB							04/24/14 12:23	
Calcium		486	mg/L	0.50	97	80	120			
Magnesium		504	mg/L	0.50	101	80	120			
Potassium		-0.00220	mg/L	0.50						
Sodium		0.00260	mg/L	0.50						
Method: E200.7										Batch: R185852
Lab ID: MB-140424A	4	Method Blank				Run: ICP2-C_140424A			04/24/14 12:47	
Calcium		ND	mg/L	0.06						
Magnesium		ND	mg/L	0.03						
Potassium		ND	mg/L	0.06						
Sodium		ND	mg/L	0.03						
Lab ID: LFB-140424A	4	Laboratory Fortified Blank				Run: ICP2-C_140424A			04/24/14 12:51	
Calcium		49.7	mg/L	0.50	99	85	115			
Magnesium		47.6	mg/L	0.50	95	85	115			
Potassium		44.0	mg/L	0.50	88	85	115			
Sodium		50.3	mg/L	0.50	101	85	115			
Lab ID: C14040365-001CMS2	4	Sample Matrix Spike				Run: ICP2-C_140424A			04/24/14 15:52	
Calcium		228	mg/L	1.0	88	70	130			
Magnesium		115	mg/L	1.0	101	70	130			
Potassium		96.0	mg/L	1.0	91	70	130			
Sodium		145	mg/L	1.0	100	70	130			
Lab ID: C14040365-001CMSD	4	Sample Matrix Spike Duplicate				Run: ICP2-C_140424A			04/24/14 15:56	
Calcium		233	mg/L	1.0	94	70	130	2.3	20	
Magnesium		111	mg/L	1.0	97	70	130	3.6	20	
Potassium		94.4	mg/L	1.0	89	70	130	1.7	20	
Sodium		145	mg/L	1.0	100	70	130	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
Project: SW Alluvium

Report Date: 05/16/14
Work Order: C14040132

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-C_140428A	
Lab ID: ICV	3	Initial Calibration Verification Standard							04/28/14 11:16	
Calcium		51.1	mg/L	0.50	102	95	105			
Magnesium		51.6	mg/L	0.50	103	95	105			
Potassium		52.3	mg/L	0.50	105	95	105			
Lab ID: ICSA	3	Interference Check Sample A							04/28/14 11:44	
Calcium		495	mg/L	0.50	99	80	120			
Magnesium		527	mg/L	0.50	105	80	120			
Potassium		0.000800	mg/L	0.50						
Lab ID: ICSAB	3	Interference Check Sample AB							04/28/14 11:49	
Calcium		504	mg/L	0.50	101	80	120			
Magnesium		524	mg/L	0.50	105	80	120			
Potassium		-0.000500	mg/L	0.50						
Method: E200.7										Batch: R185955
Lab ID: MB-140428A	3	Method Blank				Run: ICP2-C_140428A			04/28/14 12:13	
Calcium		ND	mg/L	0.06						
Magnesium		ND	mg/L	0.03						
Potassium		ND	mg/L	0.06						
Lab ID: LFB-140428A	3	Laboratory Fortified Blank				Run: ICP2-C_140428A			04/28/14 12:17	
Calcium		48.0	mg/L	0.50	96	85	115			
Magnesium		49.5	mg/L	0.50	99	85	115			
Potassium		44.8	mg/L	0.50	90	85	115			
Lab ID: C14040132-006BMS2	3	Sample Matrix Spike				Run: ICP2-C_140428A			04/28/14 20:25	
Calcium		802	mg/L	1.0	92	70	130			
Magnesium		1060	mg/L	1.0	96	70	130			
Potassium		244	mg/L	1.0	90	70	130			
Lab ID: C14040132-006BMSD	3	Sample Matrix Spike Duplicate				Run: ICP2-C_140428A			04/28/14 20:29	
Calcium		807	mg/L	1.0	94	70	130	0.6	20	
Magnesium		1060	mg/L	1.0	95	70	130	0.3	20	
Potassium		248	mg/L	1.0	92	70	130	1.8	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:** 05/16/14

Project: SW Allluvium **Work Order:** C14040132

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP4-C_140407A	
Lab ID: ICSA	2	Interference Check Sample A							04/07/14 13:20	
Calcium		473	mg/L	0.50	95	80	120			
Magnesium		500	mg/L	0.50	100	80	120			
Lab ID: ICSAB	2	Interference Check Sample AB							04/07/14 13:24	
Calcium		471	mg/L	0.50	94	80	120			
Magnesium		498	mg/L	0.50	100	80	120			
Lab ID: ICV	2	Initial Calibration Verification Standard							04/07/14 13:07	
Calcium		50.3	mg/L	0.50	101	95	105			
Magnesium		50.1	mg/L	0.50	100	95	105			
Method: E200.7									Batch: R185225	
Lab ID: MB-140407A	2	Method Blank				Run: ICP4-C_140407A			04/07/14 13:42	
Calcium		ND	mg/L	0.02						
Magnesium		0.05	mg/L	0.01						
Lab ID: LFB-140407A	2	Laboratory Fortified Blank				Run: ICP4-C_140407A			04/07/14 13:46	
Calcium		49.1	mg/L	0.50	98	85	115			
Magnesium		49.0	mg/L	0.50	98	85	115			
Lab ID: C14040132-006BMS2	2	Sample Matrix Spike				Run: ICP4-C_140407A			04/07/14 20:03	
Calcium		712	mg/L	1.0	102	70	130			
Magnesium		967	mg/L	1.0	113	70	130			
Lab ID: C14040132-006BMSD	2	Sample Matrix Spike Duplicate				Run: ICP4-C_140407A			04/07/14 20:06	
Calcium		643	mg/L	1.0	75	70	130	10	20	
Magnesium		873	mg/L	1.0	76	70	130	10	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:** 05/16/14

Project: SW Alluvium **Work Order:** C14040132

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP4-C_140416A	
Lab ID: ICV	4	Initial Calibration Verification Standard							04/16/14 14:02	
Calcium		50.3	mg/L	0.50	101	95	105			
Magnesium		50.2	mg/L	0.50	100	95	105			
Potassium		49.6	mg/L	0.50	99	95	105			
Sodium		49.9	mg/L	0.50	100	95	105			
Lab ID: ICSA	4	Interference Check Sample A							04/16/14 14:16	
Calcium		453	mg/L	0.50	91	80	120			
Magnesium		489	mg/L	0.50	98	80	120			
Potassium		-0.00472	mg/L	0.50						
Sodium		-0.158	mg/L	0.50						
Lab ID: ICSAB	4	Interference Check Sample AB							04/16/14 14:20	
Calcium		468	mg/L	0.50	94	80	120			
Magnesium		501	mg/L	0.50	100	80	120			
Potassium		-0.0513	mg/L	0.50						
Sodium		-0.137	mg/L	0.50						
Method: E200.7									Batch: R185561	
Lab ID: MB-140416A	4	Method Blank				Run: ICP4-C_140416A			04/16/14 14:38	
Calcium		0.03	mg/L	0.02						
Magnesium		0.06	mg/L	0.01						
Potassium		ND	mg/L	0.04						
Sodium		ND	mg/L	0.2						
Lab ID: LFB-140416A	4	Laboratory Fortified Blank				Run: ICP4-C_140416A			04/16/14 14:42	
Calcium		48.6	mg/L	0.50	97	85	115			
Magnesium		48.1	mg/L	0.50	96	85	115			
Potassium		49.1	mg/L	0.50	98	85	115			
Sodium		48.7	mg/L	0.50	97	85	115			
Lab ID: C14040132-010BMS2	4	Sample Matrix Spike				Run: ICP4-C_140416A			04/16/14 19:19	
Calcium		829	mg/L	1.0	103	70	130			
Magnesium		779	mg/L	1.0	104	70	130			
Potassium		283	mg/L	1.0	106	70	130			
Sodium		512	mg/L	1.0	104	70	130			
Lab ID: C14040132-010BMSD	4	Sample Matrix Spike Duplicate				Run: ICP4-C_140416A			04/16/14 19:22	
Calcium		814	mg/L	1.0	97	70	130	1.9	20	
Magnesium		765	mg/L	1.0	98	70	130	1.8	20	
Potassium		277	mg/L	1.0	104	70	130	2.0	20	
Sodium		497	mg/L	1.0	98	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: 05/16/14
Project: SW Allluvium
Work Order: C14040132

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS2-C_140415A	
Lab ID: ICV	4	Initial Calibration Verification Standard							04/15/14 12:51	
Aluminum		0.0496	mg/L	0.0010	99	90	110			
Beryllium		0.0476	mg/L	0.0010	95	90	110			
Lead		0.0494	mg/L	0.0010	99	90	110			
Uranium		0.0479	mg/L	0.00030	96	90	110			
Method: E200.8									Batch: 41029	
Lab ID: MB-41029	4	Method Blank				Run: ICPMS2-C_140415A			04/15/14 18:39	
Aluminum		0.001	mg/L	0.0005						
Beryllium		ND	mg/L	4E-05						
Lead		ND	mg/L	3E-05						
Uranium		ND	mg/L	9E-06						
Lab ID: LCS3-41029	4	Laboratory Control Sample				Run: ICPMS2-C_140415A			04/15/14 18:42	
Aluminum		2.34	mg/L	0.030	94	85	115			
Beryllium		0.259	mg/L	0.0010	104	85	115			
Lead		0.483	mg/L	0.0010	97	85	115			
Uranium		0.538	mg/L	0.00030	108	85	115			
Lab ID: C14040132-001CMS3	4	Sample Matrix Spike				Run: ICPMS2-C_140415A			04/15/14 18:51	
Aluminum		2.33	mg/L	0.030	93	70	130			
Beryllium		0.232	mg/L	0.0010	93	70	130			
Lead		0.522	mg/L	0.0010	104	70	130			
Uranium		0.841	mg/L	0.00030	111	70	130			
Lab ID: C14040132-001CMSD	4	Sample Matrix Spike Duplicate				Run: ICPMS2-C_140415A			04/15/14 18:54	
Aluminum		2.29	mg/L	0.030	91	70	130	1.4	20	
Beryllium		0.229	mg/L	0.0010	92	70	130	1.3	20	
Lead		0.518	mg/L	0.0010	104	70	130	0.9	20	
Uranium		0.831	mg/L	0.00030	109	70	130	1.3	20	
Lab ID: C14040135-001DMS3	4	Sample Matrix Spike				Run: ICPMS2-C_140415A			04/15/14 19:59	
Aluminum		2.36	mg/L	0.030	93	70	130			
Beryllium		0.241	mg/L	0.0010	97	70	130			
Lead		0.487	mg/L	0.0010	97	70	130			
Uranium		0.554	mg/L	0.00030	108	70	130			
Lab ID: C14040135-001DMSD	4	Sample Matrix Spike Duplicate				Run: ICPMS2-C_140415A			04/15/14 20:02	
Aluminum		2.34	mg/L	0.030	93	70	130	0.6	20	
Beryllium		0.237	mg/L	0.0010	95	70	130	1.8	20	
Lead		0.487	mg/L	0.0010	97	70	130	0.1	20	
Uranium		0.558	mg/L	0.00030	109	70	130	0.8	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: SW Allluvium

Report Date: 05/16/14
Work Order: C14040132

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS2-C_140507A	
Lab ID: ICV		Initial Calibration Verification Standard							05/07/14 16:27	
Lead		0.0498	mg/L	0.0010	100	90	110			
Method: E200.8									Batch: 41029	
Lab ID: MB-41029		Method Blank				Run: ICPMS2-C_140507A			05/07/14 20:38	
Lead		ND	mg/L	3E-05						
Lab ID: LCS3-41029		Laboratory Control Sample				Run: ICPMS2-C_140507A			05/07/14 20:41	
Lead		0.491	mg/L	0.0010	98	85	115			
Lab ID: C14040132-001CMS3		Sample Matrix Spike				Run: ICPMS2-C_140507A			05/07/14 20:54	
Lead		0.508	mg/L	0.0010	102	70	130			
Lab ID: C14040132-001CMSD		Sample Matrix Spike Duplicate				Run: ICPMS2-C_140507A			05/07/14 20:57	
Lead		0.512	mg/L	0.0010	102	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:** 05/16/14

Project: SW Allluvium **Work Order:** C14040132

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0									Analytical Run: IC2-C_140404A	
Lab ID: CCV-040414-01	2	Continuing Calibration Verification Standard							04/04/14 09:43	
Chloride		9.71	mg/L	1.0	97	90	110			
Sulfate		39.5	mg/L	1.0	99	90	110			
Lab ID: CCV-040414-02	2	Continuing Calibration Verification Standard							04/04/14 13:29	
Chloride		9.74	mg/L	1.0	97	90	110			
Sulfate		39.5	mg/L	1.0	99	90	110			
Method: E300.0									Batch: R185171	
Lab ID: ICB	2	Method Blank				Run: IC2-C_140404A			04/04/14 09:08	
Chloride		ND	mg/L	0.04						
Sulfate		ND	mg/L	0.04						
Lab ID: LFB-040414	2	Laboratory Fortified Blank				Run: IC2-C_140404A			04/04/14 09:25	
Chloride		9.96	mg/L	1.0	100	90	110			
Sulfate		40.4	mg/L	1.0	101	90	110			
Lab ID: C14040131-001AMS	2	Sample Matrix Spike				Run: IC2-C_140404A			04/04/14 10:18	
Chloride		228000	mg/L	500	86	90	110			S
Sulfate		193000	mg/L	2000	100	90	110			
- Matrix spike recoveries outside the acceptance range are considered matrix-related.										
Lab ID: C14040131-001AMSD	2	Sample Matrix Spike Duplicate				Run: IC2-C_140404A			04/04/14 10:35	
Chloride		228000	mg/L	500	85	90	110	0.3	20	S
Sulfate		193000	mg/L	2000	100	90	110	0.0	20	
- Matrix spike recoveries outside the acceptance range are considered matrix-related.										
Lab ID: C14040132-010AMS	2	Sample Matrix Spike				Run: IC2-C_140404A			04/04/14 14:22	
Chloride		323	mg/L	2.1	102	90	110			
Sulfate		3590	mg/L	8.3	109	90	110			
Lab ID: C14040132-010AMSD	2	Sample Matrix Spike Duplicate				Run: IC2-C_140404A			04/04/14 14:39	
Chloride		319	mg/L	2.1	100	90	110	1.4	20	
Sulfate		3530	mg/L	8.3	102	90	110	1.7	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 Allluvium

Report Date: 05/16/14
Work Order: C14040132

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E353.2									Analytical Run: TECHNICON_140405A	
Lab ID: CCV-16		Continuing Calibration Verification Standard							04/05/14 15:51	
Nitrogen, Nitrate+Nitrite as N		0.921	mg/L	0.10	92	90	110			
Lab ID: CCV-28		Continuing Calibration Verification Standard							04/05/14 16:21	
Nitrogen, Nitrate+Nitrite as N		0.950	mg/L	0.10	95	90	110			
Lab ID: CCV-31		Continuing Calibration Verification Standard							04/05/14 16:28	
Nitrogen, Nitrate+Nitrite as N		0.935	mg/L	0.10	94	90	110			
Method: E353.2									Batch: R185155	
Lab ID: MBLK-1		Method Blank				Run: TECHNICON_140405A			04/05/14 15:14	
Nitrogen, Nitrate+Nitrite as N		ND	mg/L	0.05						
Lab ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_140405A			04/05/14 15:18	
Nitrogen, Nitrate+Nitrite as N		2.00	mg/L	0.10	102	90	110			
Lab ID: C14040132-004EMS		Sample Matrix Spike				Run: TECHNICON_140405A			04/05/14 15:58	
Nitrogen, Nitrate+Nitrite as N		143	mg/L	5.0	100	90	110			
Lab ID: C14040132-004EMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_140405A			04/05/14 16:01	
Nitrogen, Nitrate+Nitrite as N		144	mg/L	5.0	101	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:** 05/16/14

Project: SW Allluvium **Work Order:** C14040132

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624									Analytical Run: R185178	
Lab ID: 04-Apr-14_CCV_20	9	Continuing Calibration Verification Standard							04/04/14 20:54	
Bromodichloromethane		10.2	ug/L	1.0	102	70	130			
Bromoform		9.04	ug/L	1.0	90	70	130			
Chlorodibromomethane		10.0	ug/L	1.0	100	70	130			
Chloroform		11.4	ug/L	1.0	114	70	130			
Trihalomethanes, Total		40.6	ug/L	1.0	101	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	100	70	130			
Surr: Dibromofluoromethane				1.0	110	70	130			
Surr: p-Bromofluorobenzene				1.0	88	70	130			
Surr: Toluene-d8				1.0	100	70	130			
Method: E624									Batch: R185178	
Lab ID: 04-Apr-14_LCS_4	9	Laboratory Control Sample				Run: GCMS2_140404C			04/04/14 11:47	
Bromodichloromethane		9.60	ug/L	1.0	96	60	130			
Bromoform		8.60	ug/L	1.0	86	60	142			
Chlorodibromomethane		9.44	ug/L	1.0	94	67	134			
Chloroform		9.72	ug/L	1.0	97	56	135			
Trihalomethanes, Total		37.4	ug/L	1.0	93	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	99	70	130			
Surr: Dibromofluoromethane				1.0	99	43	142			
Surr: p-Bromofluorobenzene				1.0	89	70	130			
Surr: Toluene-d8				1.0	96	70	130			
Lab ID: 04-Apr-14_MBLK_6	9	Method Blank				Run: GCMS2_140404C			04/04/14 12:55	
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	73.7	126			
Surr: Dibromofluoromethane				1.0	102	64.4	131			
Surr: p-Bromofluorobenzene				1.0	90	67.1	133			
Surr: Toluene-d8				1.0	100	79.7	125			
Lab ID: C14030815-004GMS	9	Sample Matrix Spike				Run: GCMS2_140404C			04/04/14 19:12	
Bromodichloromethane		206	ug/L	10	103	60	130			
Bromoform		178	ug/L	10	89	60	142			
Chlorodibromomethane		202	ug/L	10	101	67	134			
Chloroform		229	ug/L	10	114	56	135			
Trihalomethanes, Total		815	ug/L	10	102	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	101	70	130			
Surr: Dibromofluoromethane				1.0	112	43	142			
Surr: p-Bromofluorobenzene				1.0	88	70	130			
Surr: Toluene-d8				1.0	98	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:** 05/16/14

Project: SW Alluvium **Work Order:** C14040132

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624										Batch: R185178
Lab ID: C14030815-004GMSD	9	Sample Matrix Spike Duplicate				Run: GCMS2_140404C				04/04/14 19:46
Bromodichloromethane		205	ug/L	10	102	60	130	0.8	20	
Bromoform		178	ug/L	10	89	60	142	0.0	20	
Chlorodibromomethane		205	ug/L	10	102	67	134	1.2	20	
Chloroform		222	ug/L	10	111	56	135	2.8	20	
Trihalomethanes, Total		810	ug/L	10	101	70	130	0.7	20	
Surr: 1,2-Dichlorobenzene-d4				1.0	100	70	130			
Surr: Dibromofluoromethane				1.0	109	43	142			
Surr: p-Bromofluorobenzene				1.0	88	70	130			
Surr: Toluene-d8				1.0	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: 05/16/14
Project: SW Allluvium
Work Order: C14040132

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624										Analytical Run: R185220
Lab ID: 07-Apr-14_CCV_3	9	Continuing Calibration Verification Standard								04/07/14 11:18
Bromodichloromethane		11.2	ug/L	1.0	112	70	130			
Bromoform		11.0	ug/L	1.0	110	70	130			
Chlorodibromomethane		11.4	ug/L	1.0	114	70	130			
Chloroform		11.2	ug/L	1.0	112	70	130			
Trihalomethanes, Total		44.8	ug/L	1.0	112	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	106	70	130			
Surr: Dibromofluoromethane				1.0	104	70	130			
Surr: p-Bromofluorobenzene				1.0	105	70	130			
Surr: Toluene-d8				1.0	103	70	130			
Method: E624										Batch: R185220
Lab ID: 07-Apr-14_LCS_4	9	Laboratory Control Sample				Run: 5975VOC1_140407A				04/07/14 11:53
Bromodichloromethane		10.8	ug/L	1.0	108	60	130			
Bromoform		10.8	ug/L	1.0	108	60	142			
Chlorodibromomethane		11.1	ug/L	1.0	111	67	134			
Chloroform		10.6	ug/L	1.0	106	56	135			
Trihalomethanes, Total		43.3	ug/L	1.0	108	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	104	70	130			
Surr: Dibromofluoromethane				1.0	102	43	142			
Surr: p-Bromofluorobenzene				1.0	106	70	130			
Surr: Toluene-d8				1.0	102	70	130			
Lab ID: 07-Apr-14_MBLK_6	9	Method Blank				Run: 5975VOC1_140407A				04/07/14 13:03
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	112	73.7	126			
Surr: Dibromofluoromethane				1.0	102	64.4	131			
Surr: p-Bromofluorobenzene				1.0	119	67.1	133			
Surr: Toluene-d8				1.0	94	79.7	125			
Lab ID: C14040145-001AMS	9	Sample Matrix Spike				Run: 5975VOC1_140407A				04/07/14 18:54
Bromodichloromethane		230	ug/L	10	115	60	130			
Bromoform		212	ug/L	10	106	60	142			
Chlorodibromomethane		227	ug/L	10	114	67	134			
Chloroform		169	ug/L	10	84	56	135			
Trihalomethanes, Total		838	ug/L	10	105	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	105	70	130			
Surr: Dibromofluoromethane				1.0	90	43	142			
Surr: p-Bromofluorobenzene				1.0	104	70	130			
Surr: Toluene-d8				1.0	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: 05/16/14
Project: SW Allluvium
Work Order: C14040132

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624										Batch: R185220
Lab ID: C14040145-001AMSD	9	Sample Matrix Spike Duplicate				Run: 5975VOC1_140407A				04/07/14 19:29
Bromodichloromethane		197	ug/L	10	98	60	130	16	20	
Bromoform		183	ug/L	10	92	60	142	15	20	
Chlorodibromomethane		191	ug/L	10	96	67	134	17	20	
Chloroform		143	ug/L	10	72	56	135	16	20	
Trihalomethanes, Total		714	ug/L	10	89	70	130	16	20	
Surr: 1,2-Dichlorobenzene-d4				1.0	106	70	130			
Surr: Dibromofluoromethane				1.0	84	43	142			
Surr: p-Bromofluorobenzene				1.0	106	70	130			
Surr: Toluene-d8				1.0	103	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: 05/16/14
Project: SW Alluvium
Work Order: C14040132

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E900.1										Batch: GA-0777
Lab ID: LCS-GA-0777		Laboratory Control Sample				Run: BERTHOLD 770-1_140405A				04/07/14 06:43
Gross Alpha minus Rn & U		38.9	pCi/L		103	80	120			
Lab ID: MB-GA-0777	3	Method Blank				Run: BERTHOLD 770-1_140405A				04/07/14 06:43
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		0.6	pCi/L							
Lab ID: C14040132-007GMS		Sample Matrix Spike				Run: BERTHOLD 770-1_140405A				04/07/14 08:20
Gross Alpha minus Rn & U		73.1	pCi/L		95	70	130			
Lab ID: C14040132-007GMSD		Sample Matrix Spike Duplicate				Run: BERTHOLD 770-1_140405A				04/07/14 08:20
Gross Alpha minus Rn & U		73.5	pCi/L		100	70	130	0.6	22.3	
Method: E900.1										Batch: GA-0778
Lab ID: LCS-GA-0778		Laboratory Control Sample				Run: BERTHOLD 770-2_140408A				04/12/14 05:29
Gross Alpha minus Rn & U		41.5	pCi/L		110	80	120			
Lab ID: MB-GA-0778	3	Method Blank				Run: BERTHOLD 770-2_140408A				04/12/14 05:29
Gross Alpha minus Rn & U		-0.07	pCi/L							U
Gross Alpha minus Rn & U Precision (±)		0.3	pCi/L							
Gross Alpha minus Rn & U MDC		0.5	pCi/L							
Lab ID: C14040137-007GMS		Sample Matrix Spike				Run: BERTHOLD 770-2_140408A				04/12/14 07:02
Gross Alpha minus Rn & U		75.1	pCi/L		99	70	130			
Lab ID: C14040137-007GMSD		Sample Matrix Spike Duplicate				Run: BERTHOLD 770-2_140408A				04/12/14 07:02
Gross Alpha minus Rn & U		77.5	pCi/L		105	70	130	3.2	21.1	

Qualifiers:

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

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/16/14
Project: SW Allluvium
Work Order: C14040132

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E903.0									Batch: RA226-7132	
Lab ID: C14040132-006GMS		Sample Matrix Spike				Run: BERTHOLD 770-1_140407A			04/14/14 10:06	
Radium 226		23	pCi/L		99	70	130			
Lab ID: C14040132-006GMSD		Sample Matrix Spike Duplicate				Run: BERTHOLD 770-1_140407A			04/14/14 10:06	
Radium 226		21	pCi/L		91	70	130	8.1	22.2	
Lab ID: MB-RA226-7132	3	Method Blank				Run: BERTHOLD 770-1_140407A			04/14/14 13:08	
Radium 226		-0.07	pCi/L							U
Radium 226 precision (±)		0.1	pCi/L							
Radium 226 MDC		0.2	pCi/L							
Lab ID: LCS-RA226-7132		Laboratory Control Sample				Run: BERTHOLD 770-1_140407A			04/14/14 13:08	
Radium 226		11	pCi/L		94	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:** 05/16/14

Project: SW Allluvium **Work Order:** C14040132

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E908.0									Batch: RA-TH-ISO-2023	
Lab ID: LCS-RA-TH-ISO-2023		Laboratory Control Sample				Run: ALPHANALYST_140409A			04/11/14 16:01	
Thorium 230		6.2	pCi/L		94	80	120			
Lab ID: C14040184-003GMS		Sample Matrix Spike				Run: ALPHANALYST_140409A			04/11/14 16:02	
Thorium 230		10.8	pCi/L		83	70	130			
Lab ID: C14040184-003GMSD		Sample Matrix Spike Duplicate				Run: ALPHANALYST_140409A			04/11/14 16:02	
Thorium 230		13.2	pCi/L		101	70	130	20	44.2	
Lab ID: MB-RA-TH-ISO-2023	3	Method Blank				Run: ALPHANALYST_140409A			04/12/14 13:56	
Thorium 230		0.07	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
Report Date: 05/16/14
Project: SW Alluvium
Work Order: C14040132

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E909.0									Batch: T_PB-210-0455	
Lab ID: MB-PB-210-0455	3	Method Blank				Run: SUB-T56414			04/16/14 15:57	
Lead 210		-0.4	pCi/L							U
Lead 210 precision (±)		0.8	pCi/L							
Lead 210 MDC		1	pCi/L							
Lab ID: LCS-PB-210-0455		Laboratory Control Sample				Run: SUB-T56414			04/16/14 15:57	
Lead 210		21	pCi/L		106	80	120			
Lab ID: T14040042-011FMS		Sample Matrix Spike				Run: SUB-T56414			04/20/14 08:36	
Lead 210		50	pCi/L		115	70	130			
Lab ID: T14040042-011FMSD		Sample Matrix Spike Duplicate				Run: SUB-T56414			04/20/14 08:36	
Lead 210		46	pCi/L		108	70	130	6.9	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:** 05/16/14

Project: SW Allluvium **Work Order:** C14040132

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **RA-05**									Batch: RA228-4637	
Lab ID: **LCS-228-RA226-7132**		Laboratory Control Sample				Run: TENNELEC-3_140407B			04/10/14 11:36	
Radium 228		8.4	pCi/L		111	80	120			
Lab ID: **MB-RA226-7132**	3	Method Blank				Run: TENNELEC-3_140407B			04/10/14 11:36	
Radium 228		0.5	pCi/L							U
Radium 228 precision (±)		0.8	pCi/L							
Radium 228 MDC		1	pCi/L							
Lab ID: **C14040134-001FMS**		Sample Matrix Spike				Run: TENNELEC-3_140407B			04/10/14 11:36	
Radium 228		16	pCi/L		103	70	130			
Lab ID: **C14040134-001FMSD**		Sample Matrix Spike Duplicate				Run: TENNELEC-3_140407B			04/10/14 11:36	
Radium 228		15	pCi/L		96	70	130	5.5	36.2	

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

May 19, 2014

United Nuclear Corporation
21 Miles NE of Gallup
Gallup, NM 87305

Work Order: C14040184 Quote ID: C129 - Quarterly Long List

Project Name: SW Alluvium TE-5-4-2014

Energy Laboratories, Inc. Casper WY received the following 5 samples for United Nuclear Corporation on 4/4/2014 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C14040184-001	SBL-1	04/01/14 9:50	04/04/14	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Total Alkalinity Anion - Cation Balance Arsenic Speciation, Total 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
C14040184-002	624	04/01/14 9:05	04/04/14	Aqueous	Same As Above
C14040184-003	627	04/01/14 11:02	04/04/14	Aqueous	Same As Above
C14040184-004	EPA-25	04/01/14 12:05	04/04/14	Aqueous	Same As Above
C14040184-005	GW-3	04/01/14 13:05	04/04/14	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: Report Proofing Specialist

Digitally signed by
Sheri M. Mead
Date: 2014.05.19 12:20:06 -06:00

CLIENT: United Nuclear Corporation
Project: SW Alluvium TE-5-4-2014
Sample Delivery Group: C14040184

Report Date: 05/19/14

CASE NARRATIVE

COLLECTION DATES
The following analyses have a sample collection date of 4/21/14, which is different than what is on the analytical report. This is due to some sample bottles being received at a later date. See the Workorder Receipt Checklist for details.

Sample -001 (SBL-1) - Calcium, Magnesium, Potassium, Sodium, and Arsenic-III.
Sample -002 (624) - Bicarbonate, Chloride, Sulfate, pH, and TDS.
Sample -003 (627) - Nitrate, Ammonia, Calcium, Magnesium, Potassium, Sodium, Total Metals, and Arsenic-III.
Sample -004 (EPA-25) - Bicarbonate, Chloride, Sulfate, Nitrate, Ammonia, Calcium, Magnesium, Potassium, Sodium, pH, TDS, Total Metals, and Lead 210.

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.

Tests associated with analyst identified as ELI-B were subcontracted to Energy Laboratories, 1120 S. 27th St., Billings, MT, EPA Number MT00005.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/19/14
Project: SW Alluvium TE-5-4-2014
Work Order: C14040184

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2320 B										Batch: R185161
Lab ID: MBLK	2	Method Blank				Run: MANTECH_140404B				04/04/14 14:39
Alkalinity, Total as CaCO3		0.6	mg/L	0.6						
Bicarbonate as HCO3		ND	mg/L	1						
Lab ID: LCS_131219		Laboratory Control Sample				Run: MANTECH_140404B				04/04/14 14:53
Alkalinity, Total as CaCO3		257	mg/L	5.0	103	90	110			
Lab ID: C14040183-001AMS		Sample Matrix Spike				Run: MANTECH_140404B				04/04/14 15:33
Alkalinity, Total as CaCO3		1330	mg/L	5.0	101	80	120			
Lab ID: C14040183-002ADUP	2	Sample Duplicate				Run: MANTECH_140404B				04/04/14 15:51
Alkalinity, Total as CaCO3		752	mg/L	5.0				1.2	10	
Bicarbonate as HCO3		917	mg/L	5.0				1.2	10	
Method: A2320 B										Batch: R185835
Lab ID: MBLK	2	Method Blank				Run: MANTECH_140424B				04/24/14 16:12
Alkalinity, Total as CaCO3		0.6	mg/L	0.6						
Bicarbonate as HCO3		ND	mg/L	1						
Lab ID: LCS_131219		Laboratory Control Sample				Run: MANTECH_140424B				04/24/14 16:26
Alkalinity, Total as CaCO3		261	mg/L	5.0	104	90	110			
Lab ID: C14040716-001ADUP	2	Sample Duplicate				Run: MANTECH_140424B				04/24/14 17:09
Alkalinity, Total as CaCO3		111	mg/L	5.0				0.5	10	
Bicarbonate as HCO3		135	mg/L	5.0				0.5	10	
Lab ID: C14040716-002AMS		Sample Matrix Spike				Run: MANTECH_140424B				04/24/14 17:25
Alkalinity, Total as CaCO3		381	mg/L	5.0	96	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
Project: SW Alluvium TE-5-4-2014

Report Date: 05/19/14
Work Order: C14040184

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C										Batch: TDS140404A
Lab ID: MB-1_140404A		Method Blank				Run: BAL-19_140404B				04/04/14 15:30
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	7						
Lab ID: LCS-2_140404A		Laboratory Control Sample				Run: BAL-19_140404B				04/04/14 15:30
Solids, Total Dissolved TDS @ 180 C		2000	mg/L	20	100	90	110			
Lab ID: C14040185-003B DUP		Sample Duplicate				Run: BAL-19_140404B				04/04/14 15:51
Solids, Total Dissolved TDS @ 180 C		870	mg/L	10				1.1	5	
Lab ID: C14040185-004B MS		Sample Matrix Spike				Run: BAL-19_140404B				04/04/14 15:52
Solids, Total Dissolved TDS @ 180 C		4170	mg/L	20	97	90	110			
Method: A2540 C										Batch: TDS140424A
Lab ID: MB-1_140424A		Method Blank				Run: BAL-19_140424B				04/24/14 15:54
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	7						
Lab ID: LCS-2_140424A		Laboratory Control Sample				Run: BAL-19_140424B				04/24/14 15:54
Solids, Total Dissolved TDS @ 180 C		2000	mg/L	20	100	90	110			
Lab ID: C14040183-003A DUP		Sample Duplicate				Run: BAL-19_140424B				04/24/14 15:55
Solids, Total Dissolved TDS @ 180 C		7180	mg/L	100				0.8	5	
Lab ID: C14040184-002A MS		Sample Matrix Spike				Run: BAL-19_140424B				04/24/14 15:55
Solids, Total Dissolved TDS @ 180 C		9220	mg/L	40	100	90	110			
Method: A2540 C										Batch: TDS140425B
Lab ID: MB-1_140425B		Method Blank				Run: BAL-19_140425B				04/25/14 15:32
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	7						
Lab ID: LCS-2_140425B		Laboratory Control Sample				Run: BAL-19_140425B				04/25/14 15:33
Solids, Total Dissolved TDS @ 180 C		2040	mg/L	20	102	90	110			
Lab ID: C14040184-004A DUP		Sample Duplicate				Run: BAL-19_140425B				04/25/14 15:33
Solids, Total Dissolved TDS @ 180 C		4230	mg/L	41				0.7	5	
Lab ID: C14040731-001A MS		Sample Matrix Spike				Run: BAL-19_140425B				04/25/14 15:34
Solids, Total Dissolved TDS @ 180 C		7880	mg/L	40	99	90	110			

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QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium TE-5-4-2014

Report Date: 05/19/14
Work Order: C14040184

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A3114 B									Analytical Run: CVAA-C202_140422A	
Lab ID: ICV		Initial Calibration Verification Standard							04/22/14 16:30	
Selenium-IV		0.0247	mg/L	0.0010	99	90	110			
Lab ID: CCV		Continuing Calibration Verification Standard							04/22/14 16:50	
Selenium-IV		0.0250	mg/L	0.0010	100	90	110			
Method: A3114 B									Batch: 41158	
Lab ID: MB-41158		Method Blank				Run: CVAA-C202_140422A			04/22/14 17:07	
Selenium-IV		ND	mg/L	0.0005						
Lab ID: LCS-41158		Laboratory Control Sample				Run: CVAA-C202_140422A			04/22/14 17:08	
Selenium-IV		0.0241	mg/L	0.0010	96	90	110			
Lab ID: C14040184-002CMS		Sample Matrix Spike				Run: CVAA-C202_140422A			04/22/14 17:13	
Selenium-IV		0.0238	mg/L	0.0010	95	85	115			
Lab ID: C14040184-002CMSD		Sample Matrix Spike Duplicate				Run: CVAA-C202_140422A			04/22/14 17:15	
Selenium-IV		0.0238	mg/L	0.0010	95	85	115	0.0	10	
Method: A3114 B									Analytical Run: CVAA-C202_140428A	
Lab ID: ICV		Initial Calibration Verification Standard							04/28/14 14:24	
Selenium-IV		0.0250	mg/L	0.0010	100	90	110			
Lab ID: CCV		Continuing Calibration Verification Standard							04/28/14 14:39	
Selenium-IV		0.0268	mg/L	0.0010	107	90	110			
Method: A3114 B									Batch: 41238	
Lab ID: MB-41238		Method Blank				Run: CVAA-C202_140428A			04/28/14 14:27	
Selenium-IV		ND	mg/L	0.0005						
Lab ID: LCS-41238		Laboratory Control Sample				Run: CVAA-C202_140428A			04/28/14 14:29	
Selenium-IV		0.0266	mg/L	0.0010	106	90	110			
Lab ID: C14040184-004CMS		Sample Matrix Spike				Run: CVAA-C202_140428A			04/28/14 14:33	
Selenium-IV		0.0264	mg/L	0.0010	106	85	115			
Lab ID: C14040184-004CMSD		Sample Matrix Spike Duplicate				Run: CVAA-C202_140428A			04/28/14 14:36	
Selenium-IV		0.0274	mg/L	0.0010	110	85	115	3.6	10	

Qualifiers:

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QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium TE-5-4-2014

Report Date: 05/19/14
Work Order: C14040184

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **A4500-H B**									Analytical Run: PHSC_101-C_140404A	
Lab ID: **pH 6.86**	Initial Calibration Verification Standard								04/04/14 09:24	
pH		6.87	s.u.	0.010	100	98	102			
Lab ID: **CCV - pH 7**	Continuing Calibration Verification Standard								04/04/14 12:01	
pH		6.99	s.u.	0.010	100	98	102			
Method: **A4500-H B**									Batch: R185119	
Lab ID: **C14040148-001ADUP**	Sample Duplicate					Run: PHSC_101-C_140404A			04/04/14 11:40	
pH		7.44	s.u.	0.010				0.0	3	
Method: **A4500-H B**									Analytical Run: PHSC_101-C_140424A	
Lab ID: **pH 6.86**	Initial Calibration Verification Standard								04/24/14 08:32	
pH		6.85	s.u.	0.010	100	98	102			
Lab ID: **CCV - pH 7**	Continuing Calibration Verification Standard								04/24/14 10:12	
pH		6.97	s.u.	0.010	100	98	102			
Method: **A4500-H B**									Batch: R185796	
Lab ID: **C14040716-004ADUP**	Sample Duplicate					Run: PHSC_101-C_140424A			04/24/14 09:49	
pH		8.17	s.u.	0.010				0.0	3	

Qualifiers:

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QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium TE-5-4-2014

Report Date: 05/19/14
Work Order: C14040184

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-NH3 G									Analytical Run: TECHNICON_140409A	
Lab ID: CCV-35		Continuing Calibration Verification Standard							04/09/14 13:36	
Nitrogen, Ammonia as N		1.06	mg/L	0.050	106	90	110			
Lab ID: CCV-82		Continuing Calibration Verification Standard							04/09/14 14:54	
Nitrogen, Ammonia as N		1.10	mg/L	0.050	110	90	110			
Method: A4500-NH3 G									Batch: R185288	
Lab ID: MBLK-1		Method Blank				Run: TECHNICON_140409A			04/09/14 12:39	
Nitrogen, Ammonia as N		ND	mg/L	0.006						
Lab ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_140409A			04/09/14 12:43	
Nitrogen, Ammonia as N		1.89	mg/L	0.050	96	90	110			
Lab ID: C14040196-002EMS		Sample Matrix Spike				Run: TECHNICON_140409A			04/09/14 13:44	
Nitrogen, Ammonia as N		1.84	mg/L	0.050	94	90	110			
Lab ID: C14040196-002EMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_140409A			04/09/14 13:46	
Nitrogen, Ammonia as N		1.87	mg/L	0.050	95	90	110	1.6	10	
Method: A4500-NH3 G									Batch: R185824	
Lab ID: MBLK-1		Method Blank				Run: TECHNICON_140424A			04/24/14 12:05	
Nitrogen, Ammonia as N		ND	mg/L	0.006						
Lab ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_140424A			04/24/14 12:09	
Nitrogen, Ammonia as N		1.85	mg/L	0.050	94	90	110			
Lab ID: C14040184-003DMS		Sample Matrix Spike				Run: TECHNICON_140424A			04/24/14 12:12	
Nitrogen, Ammonia as N		1.79	mg/L	0.050	91	90	110			
Lab ID: C14040184-003DMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_140424A			04/24/14 12:14	
Nitrogen, Ammonia as N		1.80	mg/L	0.050	92	90	110	0.6	10	

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QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium TE-5-4-2014

Report Date: 05/19/14
Work Order: C14040184

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E1632AM									Analytical Run: SUB-H96430	
Lab ID: AS-ICV 25ppb-4/18/20		Initial Calibration Verification Standard							04/18/14 11:54	
Arsenic-III		28.0	ug/L	5.0	112	87.6	114			
Lab ID: AS-ICV 25ppb-4/18/20		Initial Calibration Verification Standard							04/18/14 12:19	
Arsenic-III		27.2	ug/L	5.0	109	87.6	114			
Lab ID: AS-50.0-4/18/2014		Continuing Calibration Verification Standard							04/18/14 14:31	
Arsenic-III		45.7	ug/L	5.0	91	85	115			
Method: E1632AM									Batch: H_R96430	
Lab ID: AS-LFB 50ppb-4/18/2		Laboratory Fortified Blank				Run: SUB-H96430			04/18/14 12:43	
Arsenic-III		54.5	ug/L	5.0	109	55	146			
Lab ID: ICB		Method Blank				Run: SUB-H96430			04/18/14 12:55	
Arsenic-III		ND	ug/L	0.4						
Lab ID: C14040183-007E		Sample Matrix Spike				Run: SUB-H96430			04/18/14 13:43	
Arsenic-III		48.9	ug/L	5.0	96	55	146			
Lab ID: C14040183-007E		Sample Matrix Spike Duplicate				Run: SUB-H96430			04/18/14 13:55	
Arsenic-III		51.7	ug/L	5.0	101	55	146	5.5	20	
Method: E1632AM									Analytical Run: SUB-H96865	
Lab ID: AS-ICV 25ppb-5/7/201		Initial Calibration Verification Standard							05/07/14 12:05	
Arsenic-III		26.6	ug/L	5.0	107	87.6	114			
Lab ID: AS-50.0-5/7/2014		Continuing Calibration Verification Standard							05/07/14 12:17	
Arsenic-III		48.6	ug/L	5.0	97	85	115			
Method: E1632AM									Batch: H_R96865	
Lab ID: AS-LFB 50ppb-5/7/20		Laboratory Fortified Blank				Run: SUB-H96865			05/07/14 12:41	
Arsenic-III		49.7	ug/L	5.0	99	55	146			
Lab ID: ICB		Method Blank				Run: SUB-H96865			05/07/14 12:53	
Arsenic-III		ND	ug/L	0.6						
Lab ID: C14040184-003E		Sample Matrix Spike				Run: SUB-H96865			05/07/14 13:29	
Arsenic-III		49.5	ug/L	5.0	99	55	146			
Lab ID: C14040184-003E		Sample Matrix Spike Duplicate				Run: SUB-H96865			05/07/14 13:41	
Arsenic-III		49.2	ug/L	5.0	98	55	146	0.5	20	

Qualifiers:

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QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 05/19/14

Project: SW Alluvium TE-5-4-2014 **Work Order:** C14040184

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-C_140422A	
Lab ID: ICV	4	Initial Calibration Verification Standard							04/22/14 12:30	
Aluminum		4.95	mg/L	0.10	99	95	105			
Calcium		51.6	mg/L	0.50	103	95	105			
Magnesium		47.4	mg/L	0.50	95	95	105			
Sodium		52.2	mg/L	0.50	104	95	105			
Lab ID: ICV		Initial Calibration Verification Standard							04/22/14 12:42	
Potassium		49.6	mg/L	0.50	99	95	105			
Lab ID: ICSA	5	Interference Check Sample A							04/22/14 13:11	
Aluminum		487	mg/L	0.10	97	80	120			
Calcium		495	mg/L	0.50	99	80	120			
Magnesium		481	mg/L	0.50	96	80	120			
Potassium		0.00230	mg/L	0.50						
Sodium		0.0812	mg/L	0.50						
Lab ID: ICSAB	5	Interference Check Sample AB							04/22/14 13:15	
Aluminum		488	mg/L	0.10	98	80	120			
Calcium		503	mg/L	0.50	101	80	120			
Magnesium		484	mg/L	0.50	97	80	120			
Potassium		0.00200	mg/L	0.50						
Sodium		0.0959	mg/L	0.50						
Method: E200.7									Batch: 41052	
Lab ID: MB-41052		Method Blank				Run: ICP2-C_140422A			04/22/14 22:03	
Aluminum		ND	mg/L	0.009						
Lab ID: LCS3-41052		Laboratory Control Sample				Run: ICP2-C_140422A			04/22/14 22:07	
Aluminum		2.49	mg/L	0.030	99	85	115			
Lab ID: C14040190-002DMS3		Sample Matrix Spike				Run: ICP2-C_140422A			04/22/14 22:51	
Aluminum		2.51	mg/L	0.030	99	70	130			
Lab ID: C14040190-002DMSD		Sample Matrix Spike Duplicate				Run: ICP2-C_140422A			04/22/14 22:56	
Aluminum		2.47	mg/L	0.030	98	70	130	1.3	20	
Method: E200.7									Batch: R185763	
Lab ID: MB-140422A	4	Method Blank				Run: ICP2-C_140422A			04/22/14 13:39	
Calcium		ND	mg/L	0.06						
Magnesium		ND	mg/L	0.03						
Potassium		ND	mg/L	0.06						
Sodium		ND	mg/L	0.03						
Lab ID: LFB-140422A	4	Laboratory Fortified Blank				Run: ICP2-C_140422A			04/22/14 13:43	
Calcium		49.8	mg/L	0.50	100	85	115			
Magnesium		46.4	mg/L	0.50	93	85	115			
Potassium		44.4	mg/L	0.50	89	85	115			
Sodium		50.7	mg/L	0.50	101	85	115			

Qualifiers:

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QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/19/14
Project: SW Alluvium TE-5-4-2014
Work Order: C14040184

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7										Batch: R185763
Lab ID: LFB-140422A	4	Laboratory Fortified Blank				Run: ICP2-C_140422A				04/22/14 13:43
Lab ID: C14040183-011BMS2	4	Sample Matrix Spike				Run: ICP2-C_140422A				04/22/14 19:13
Calcium		102	mg/L	1.0	100	70	130			
Magnesium		99.0	mg/L	1.0	97	70	130			
Potassium		94.2	mg/L	1.0	92	70	130			
Sodium		101	mg/L	1.0	99	70	130			
Lab ID: C14040183-011BMSD	4	Sample Matrix Spike Duplicate				Run: ICP2-C_140422A				04/22/14 19:18
Calcium		103	mg/L	1.0	101	70	130	1.0	20	
Magnesium		99.2	mg/L	1.0	97	70	130	0.3	20	
Potassium		91.4	mg/L	1.0	90	70	130	3.1	20	
Sodium		103	mg/L	1.0	101	70	130	1.2	20	

Qualifiers:

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QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium TE-5-4-2014

Report Date: 05/19/14
Work Order: C14040184

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-C_140424A	
Lab ID: ICV	3	Initial Calibration Verification Standard							04/24/14 11:38	
Calcium		49.3	mg/L	0.50	99	95	105			
Magnesium		49.1	mg/L	0.50	98	95	105			
Sodium		52.2	mg/L	0.50	104	95	105			
Lab ID: ICV		Initial Calibration Verification Standard							04/24/14 11:50	
Potassium		48.9	mg/L	0.50	98	95	105			
Lab ID: ICSA	4	Interference Check Sample A							04/24/14 12:19	
Calcium		489	mg/L	0.50	98	80	120			
Magnesium		495	mg/L	0.50	99	80	120			
Potassium		-0.00200	mg/L	0.50						
Sodium		0.0434	mg/L	0.50						
Lab ID: ICSAB	4	Interference Check Sample AB							04/24/14 12:23	
Calcium		486	mg/L	0.50	97	80	120			
Magnesium		504	mg/L	0.50	101	80	120			
Potassium		-0.00220	mg/L	0.50						
Sodium		0.00260	mg/L	0.50						
Method: E200.7									Batch: R185852	
Lab ID: MB-140424A	4	Method Blank				Run: ICP2-C_140424A			04/24/14 12:47	
Calcium		ND	mg/L	0.06						
Magnesium		ND	mg/L	0.03						
Potassium		ND	mg/L	0.06						
Sodium		ND	mg/L	0.03						
Lab ID: LFB-140424A	4	Laboratory Fortified Blank				Run: ICP2-C_140424A			04/24/14 12:51	
Calcium		49.7	mg/L	0.50	99	85	115			
Magnesium		47.6	mg/L	0.50	95	85	115			
Potassium		44.0	mg/L	0.50	88	85	115			
Sodium		50.3	mg/L	0.50	101	85	115			
Lab ID: C14040365-001CMS2	4	Sample Matrix Spike				Run: ICP2-C_140424A			04/24/14 15:52	
Calcium		228	mg/L	1.0	88	70	130			
Magnesium		115	mg/L	1.0	101	70	130			
Potassium		96.0	mg/L	1.0	91	70	130			
Sodium		145	mg/L	1.0	100	70	130			
Lab ID: C14040365-001CMSD	4	Sample Matrix Spike Duplicate				Run: ICP2-C_140424A			04/24/14 15:56	
Calcium		233	mg/L	1.0	94	70	130	2.3	20	
Magnesium		111	mg/L	1.0	97	70	130	3.6	20	
Potassium		94.4	mg/L	1.0	89	70	130	1.7	20	
Sodium		145	mg/L	1.0	100	70	130	0.1	20	

Qualifiers:

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QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/19/14
Project: SW Alluvium TE-5-4-2014
Work Order: C14040184

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-C_140428A	
Lab ID: ICV	8	Initial Calibration Verification Standard							04/28/14 11:16	
Aluminum		4.74	mg/L	0.10	95	95	105			
Beryllium		0.513	mg/L	0.010	103	95	105			
Cadmium		0.510	mg/L	0.010	102	95	105			
Cobalt		1.01	mg/L	0.010	101	95	105			
Manganese		5.09	mg/L	0.010	102	95	105			
Molybdenum		1.04	mg/L	0.10	104	95	105			
Nickel		1.01	mg/L	0.050	101	95	105			
Vanadium		1.02	mg/L	0.10	102	95	105			
Lab ID: ICSA	8	Interference Check Sample A							04/28/14 11:44	
Aluminum		499	mg/L	0.10	100	80	120			
Beryllium		0.000100	mg/L	0.010						
Cadmium		0.00200	mg/L	0.010						
Cobalt		-0.00340	mg/L	0.010						
Manganese		0.000100	mg/L	0.010						
Molybdenum		-0.0221	mg/L	0.10						
Nickel		-0.00310	mg/L	0.050						
Vanadium		0.0127	mg/L	0.10						
Lab ID: ICSAB	8	Interference Check Sample AB							04/28/14 11:49	
Aluminum		501	mg/L	0.10	100	80	120			
Beryllium		0.503	mg/L	0.010	101	80	120			
Cadmium		0.997	mg/L	0.010	100	80	120			
Cobalt		0.480	mg/L	0.010	96	80	120			
Manganese		0.511	mg/L	0.010	102	80	120			
Molybdenum		-0.0230	mg/L	0.10						
Nickel		0.968	mg/L	0.050	97	80	120			
Vanadium		0.522	mg/L	0.10	104	80	120			
Method: E200.7									Batch: 41208	
Lab ID: MB-41208	8	Method Blank				Run: ICP2-C_140428A			04/28/14 20:37	
Aluminum		ND	mg/L	0.009						
Beryllium		ND	mg/L	0.0002						
Cadmium		ND	mg/L	0.0006						
Cobalt		ND	mg/L	0.002						
Manganese		ND	mg/L	0.0002						
Molybdenum		ND	mg/L	0.002						
Nickel		ND	mg/L	0.002						
Vanadium		ND	mg/L	0.01						
Lab ID: LCS3-41208	8	Laboratory Control Sample				Run: ICP2-C_140428A			04/28/14 20:41	
Aluminum		2.51	mg/L	0.030	100	85	115			
Beryllium		0.257	mg/L	0.0010	103	85	115			
Cadmium		0.247	mg/L	0.0010	99	85	115			
Cobalt		0.500	mg/L	0.0050	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: 05/19/14
Project: SW Alluvium TE-5-4-2014
Work Order: C14040184

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7										Batch: 41208
Lab ID: LCS3-41208	8	Laboratory Control Sample				Run: ICP2-C_140428A				04/28/14 20:41
Manganese		2.52	mg/L	0.0010	101	85	115			
Molybdenum		0.508	mg/L	0.0023	102	85	115			
Nickel		0.499	mg/L	0.0050	100	85	115			
Vanadium		0.504	mg/L	0.014	101	85	115			
Lab ID: C14040716-003CMS3	8	Sample Matrix Spike				Run: ICP2-C_140428A				04/28/14 21:21
Aluminum		3.14	mg/L	0.030	109	70	130			
Beryllium		0.255	mg/L	0.0010	102	70	130			
Cadmium		0.247	mg/L	0.0010	98	70	130			
Cobalt		0.502	mg/L	0.0050	100	70	130			
Manganese		2.55	mg/L	0.0010	100	70	130			
Molybdenum		0.507	mg/L	0.0023	101	70	130			
Nickel		0.495	mg/L	0.0050	99	70	130			
Vanadium		0.503	mg/L	0.014	101	70	130			
Lab ID: C14040716-003CMSD	8	Sample Matrix Spike Duplicate				Run: ICP2-C_140428A				04/28/14 21:25
Aluminum		3.19	mg/L	0.030	110	70	130	1.3	20	
Beryllium		0.254	mg/L	0.0010	102	70	130	0.1	20	
Cadmium		0.244	mg/L	0.0010	97	70	130	1.1	20	
Cobalt		0.498	mg/L	0.0050	100	70	130	0.7	20	
Manganese		2.57	mg/L	0.0010	100	70	130	0.9	20	
Molybdenum		0.515	mg/L	0.0023	103	70	130	1.6	20	
Nickel		0.498	mg/L	0.0050	100	70	130	0.5	20	
Vanadium		0.502	mg/L	0.014	100	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:** 05/19/14

Project: SW Alluvium TE-5-4-2014 **Work Order:** C14040184

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS2-C_140409A	
Lab ID: ICV	9	Initial Calibration Verification Standard							04/09/14 12:51	
Beryllium		0.0500	mg/L	0.0010	100	90	110			
Cadmium		0.0498	mg/L	0.0010	100	90	110			
Cobalt		0.0547	mg/L	0.0010	109	90	110			
Lead		0.0523	mg/L	0.0010	105	90	110			
Manganese		0.0508	mg/L	0.0010	102	90	110			
Molybdenum		0.0499	mg/L	0.0010	100	90	110			
Nickel		0.0498	mg/L	0.0010	100	90	110			
Uranium		0.0511	mg/L	0.00030	102	90	110			
Vanadium		0.0541	mg/L	0.0010	108	90	110			
Method: E200.8									Batch: 41052	
Lab ID: MB-41052	9	Method Blank				Run: ICPMS2-C_140409A			04/09/14 21:27	
Beryllium		ND	mg/L	4E-05						
Cadmium		ND	mg/L	2E-05						
Cobalt		ND	mg/L	1E-05						
Lead		ND	mg/L	3E-05						
Manganese		ND	mg/L	7E-05						
Molybdenum		ND	mg/L	8E-05						
Nickel		ND	mg/L	9E-05						
Uranium		ND	mg/L	9E-06						
Vanadium		ND	mg/L	0.002						
Lab ID: LCS3-41052	9	Laboratory Control Sample				Run: ICPMS2-C_140409A			04/09/14 21:31	
Beryllium		0.266	mg/L	0.0010	106	85	115			
Cadmium		0.247	mg/L	0.0010	99	85	115			
Cobalt		0.461	mg/L	0.0050	92	85	115			
Lead		0.482	mg/L	0.0010	96	85	115			
Manganese		2.30	mg/L	0.0010	92	85	115			
Molybdenum		0.486	mg/L	0.0010	97	85	115			
Nickel		0.448	mg/L	0.0050	90	85	115			
Uranium		0.534	mg/L	0.00030	107	85	115			
Vanadium		0.474	mg/L	0.010	95	85	115			
Lab ID: C14040190-002DMS3	9	Sample Matrix Spike				Run: ICPMS2-C_140409A			04/09/14 23:01	
Beryllium		0.260	mg/L	0.0010	104	70	130			
Cadmium		0.246	mg/L	0.0010	98	70	130			
Cobalt		0.454	mg/L	0.0050	91	70	130			
Lead		0.482	mg/L	0.0010	96	70	130			
Manganese		2.30	mg/L	0.0010	91	70	130			
Molybdenum		0.490	mg/L	0.0010	97	70	130			
Nickel		0.452	mg/L	0.0050	90	70	130			
Uranium		0.552	mg/L	0.00030	108	70	130			
Vanadium		0.476	mg/L	0.010	95	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: SW Alluvium TE-5-4-2014

Report Date: 05/19/14
Work Order: C14040184

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8										Batch: 41052
Lab ID: C14040190-002DMSD	9	Sample Matrix Spike Duplicate				Run: ICPMS2-C_140409A				04/09/14 23:04
Beryllium		0.262	mg/L	0.0010	105	70	130	0.7	20	
Cadmium		0.245	mg/L	0.0010	98	70	130	0.4	20	
Cobalt		0.460	mg/L	0.0050	92	70	130	1.1	20	
Lead		0.487	mg/L	0.0010	97	70	130	1.0	20	
Manganese		2.34	mg/L	0.0010	93	70	130	1.9	20	
Molybdenum		0.494	mg/L	0.0010	98	70	130	0.7	20	
Nickel		0.453	mg/L	0.0050	90	70	130	0.2	20	
Uranium		0.557	mg/L	0.00030	109	70	130	0.9	20	
Vanadium		0.480	mg/L	0.010	96	70	130	1.0	20	
Method: E200.8										Analytical Run: ICPMS4-C_140430A
Lab ID: ICV	2	Initial Calibration Verification Standard								04/30/14 17:48
Lead		0.0491	mg/L	0.0010	98	90	110			
Uranium		0.0486	mg/L	0.00030	97	90	110			
Method: E200.8										Batch: 41208
Lab ID: MB-41208	2	Method Blank				Run: ICPMS4-C_140430A				04/30/14 21:07
Lead		ND	mg/L	4E-05						
Uranium		ND	mg/L	4E-05						
Lab ID: LCS3-41208	2	Laboratory Control Sample				Run: ICPMS4-C_140430A				04/30/14 21:11
Lead		0.497	mg/L	0.0010	99	85	115			
Uranium		0.512	mg/L	0.00030	102	85	115			
Lab ID: C14040721-001BMS3	2	Sample Matrix Spike				Run: ICPMS4-C_140430A				04/30/14 21:23
Lead		0.511	mg/L	0.0010	102	70	130			
Uranium		0.534	mg/L	0.00030	107	70	130			
Lab ID: C14040721-001BMSD	2	Sample Matrix Spike Duplicate				Run: ICPMS4-C_140430A				04/30/14 21:26
Lead		0.496	mg/L	0.0010	99	70	130	3.1	20	
Uranium		0.527	mg/L	0.00030	105	70	130	1.3	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:** 05/19/14

Project: SW Alluvium TE-5-4-2014 **Work Order:** C14040184

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0									Analytical Run: IC2-C_140404A	
Lab ID: CCV-040414-06	2	Continuing Calibration Verification Standard							04/05/14 06:02	
Chloride		9.73	mg/L	1.0	97	90	110			
Sulfate		39.4	mg/L	1.0	99	90	110			
Method: E300.0									Batch: R185171	
Lab ID: ICB	2	Method Blank				Run: IC2-C_140404A			04/04/14 09:08	
Chloride		ND	mg/L	0.04						
Sulfate		ND	mg/L	0.04						
Lab ID: LFB-040414	2	Laboratory Fortified Blank				Run: IC2-C_140404A			04/04/14 09:25	
Chloride		9.96	mg/L	1.0	100	90	110			
Sulfate		40.4	mg/L	1.0	101	90	110			
Lab ID: C14040183-010AMS	2	Sample Matrix Spike				Run: IC2-C_140404A			04/05/14 06:55	
Chloride		10.4	mg/L	1.0	101	90	110			
Sulfate		40.2	mg/L	1.0	100	90	110			
Lab ID: C14040183-010AMSD	2	Sample Matrix Spike Duplicate				Run: IC2-C_140404A			04/05/14 07:12	
Chloride		10.4	mg/L	1.0	101	90	110	0.1	20	
Sulfate		40.3	mg/L	1.0	100	90	110	0.3	20	
Method: E300.0									Analytical Run: IC2-C_140501A	
Lab ID: CCV-050114-01	2	Continuing Calibration Verification Standard							05/01/14 11:37	
Chloride		9.76	mg/L	1.0	98	90	110			
Sulfate		39.1	mg/L	1.0	98	90	110			
Method: E300.0									Batch: R186139	
Lab ID: ICB	2	Method Blank				Run: IC2-C_140501A			05/01/14 10:45	
Chloride		ND	mg/L	0.01						
Sulfate		0.1	mg/L	0.03						
Lab ID: LFB-050114-01	2	Laboratory Fortified Blank				Run: IC2-C_140501A			05/01/14 11:02	
Chloride		9.98	mg/L	1.0	100	90	110			
Sulfate		39.8	mg/L	1.0	99	90	110			
Lab ID: LFBD-050114-01	2	Laboratory Fortified Blank				Run: IC2-C_140501A			05/01/14 11:19	
Chloride		9.76	mg/L	1.0	98	90	110			
Sulfate		39.2	mg/L	1.0	98	90	110			
Lab ID: C14040184-004AMS	2	Sample Matrix Spike				Run: IC2-C_140501A			05/01/14 12:12	
Chloride		332	mg/L	2.1	105	90	110			
Sulfate		2670	mg/L	8.3	106	90	110			
Lab ID: C14040184-004AMSD	2	Sample Matrix Spike Duplicate				Run: IC2-C_140501A			05/01/14 12:29	
Chloride		331	mg/L	2.1	105	90	110	0.2	20	
Sulfate		2670	mg/L	8.3	105	90	110	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
Project: SW Alluvium TE-5-4-2014

Report Date: 05/19/14
Work Order: C14040184

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0									Analytical Run: SUB-B222906	
Lab ID: ICV	2	Initial Calibration Verification Standard							04/28/14 12:31	
Chloride		25.4	mg/L	1.0	102	90	110			
Sulfate		104	mg/L	1.0	104	90	110			
Method: E300.0									Batch: B_R222906	
Lab ID: ICB	2	Method Blank				Run: SUB-B222906			04/28/14 12:46	
Chloride		0.2	mg/L	0.02						
Sulfate		ND	mg/L	0.07						
Lab ID: LFB	2	Laboratory Fortified Blank				Run: SUB-B222906			04/28/14 13:01	
Chloride		25.6	mg/L	1.0	102	90	110			
Sulfate		105	mg/L	1.1	105	90	110			
Lab ID: B14041968-006AMS	2	Sample Matrix Spike				Run: SUB-B222906			04/29/14 16:28	
Chloride		27.6	mg/L	1.0	100	90	110			
Sulfate		111	mg/L	1.1	103	90	110			
Lab ID: B14041968-006AMSD	2	Sample Matrix Spike Duplicate				Run: SUB-B222906			04/29/14 16:43	
Chloride		28.1	mg/L	1.0	102	90	110	1.9	20	
Sulfate		113	mg/L	1.1	106	90	110	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: 05/19/14
Project: SW Alluvium TE-5-4-2014
Work Order: C14040184

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E353.2									Analytical Run: TECHNICON_140404A	
Lab ID: CCV-58		Continuing Calibration Verification Standard							04/04/14 14:39	
Nitrogen, Nitrate+Nitrite as N		0.915	mg/L	0.10	92	90	110			
Method: E353.2									Batch: R185148	
Lab ID: MBLK-1		Method Blank				Run: TECHNICON_140404A			04/04/14 12:16	
Nitrogen, Nitrate+Nitrite as N		ND	mg/L	0.05						
Lab ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_140404A			04/04/14 12:21	
Nitrogen, Nitrate+Nitrite as N		1.96	mg/L	0.10	100	90	110			
Lab ID: C14040183-010DMS		Sample Matrix Spike				Run: TECHNICON_140404A			04/04/14 14:46	
Nitrogen, Nitrate+Nitrite as N		1.83	mg/L	0.10	93	90	110			
Lab ID: C14040183-010DMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_140404A			04/04/14 14:49	
Nitrogen, Nitrate+Nitrite as N		1.99	mg/L	0.10	102	90	110	8.4	10	
Method: E353.2									Batch: R185933	
Lab ID: MBLK-1		Method Blank				Run: TECHNICON_140428A			04/28/14 11:54	
Nitrogen, Nitrate+Nitrite as N		ND	mg/L	0.05						
Lab ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_140428A			04/28/14 11:59	
Nitrogen, Nitrate+Nitrite as N		1.97	mg/L	0.10	101	90	110			
Lab ID: C14040691-003DMS		Sample Matrix Spike				Run: TECHNICON_140428A			04/28/14 12:04	
Nitrogen, Nitrate+Nitrite as N		1.99	mg/L	0.10	102	90	110			
Lab ID: C14040691-003DMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_140428A			04/28/14 12:07	
Nitrogen, Nitrate+Nitrite as N		2.00	mg/L	0.10	102	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: SW Alluvium TE-5-4-2014

Report Date: 05/19/14
Work Order: C14040184

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624									Analytical Run: R185313	
Lab ID: 09-Apr-14_CCV_19	9	Continuing Calibration Verification Standard							04/09/14 19:15	
Bromodichloromethane		10.8	ug/L	1.0	108	70	130			
Bromoform		9.36	ug/L	1.0	94	70	130			
Chlorodibromomethane		10.0	ug/L	1.0	100	70	130			
Chloroform		13.6	ug/L	1.0	136	70	130			S
Trihalomethanes, Total		43.8	ug/L	1.0	109	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	101	70	130			
Surr: Dibromofluoromethane				1.0	135	70	130			S
Surr: p-Bromofluorobenzene				1.0	125	70	130			
Surr: Toluene-d8				1.0	110	70	130			
Method: E624									Batch: R185313	
Lab ID: 09-Apr-14_LCS_4	9	Laboratory Control Sample				Run: 5975VOC1_140409C			04/09/14 10:30	
Bromodichloromethane		9.76	ug/L	1.0	98	60	130			
Bromoform		8.96	ug/L	1.0	90	60	142			
Chlorodibromomethane		9.12	ug/L	1.0	91	67	134			
Chloroform		10.8	ug/L	1.0	108	56	135			
Trihalomethanes, Total		38.7	ug/L	1.0	97	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	102	70	130			
Surr: Dibromofluoromethane				1.0	116	43	142			
Surr: p-Bromofluorobenzene				1.0	121	70	130			
Surr: Toluene-d8				1.0	108	70	130			
Lab ID: 09-Apr-14_MBLK_6	9	Method Blank				Run: 5975VOC1_140409C			04/09/14 11:40	
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	111	73.7	126			
Surr: Dibromofluoromethane				1.0	113	64.4	131			
Surr: p-Bromofluorobenzene				1.0	140	67.1	133			S
Surr: Toluene-d8				1.0	103	79.7	125			
Lab ID: C14040193-001AMS	9	Sample Matrix Spike				Run: 5975VOC1_140409C			04/10/14 02:53	
Bromodichloromethane		203	ug/L	10	102	60	130			
Bromoform		160	ug/L	10	80	60	142			
Chlorodibromomethane		178	ug/L	10	89	67	134			
Chloroform		190	ug/L	10	95	56	135			
Trihalomethanes, Total		730	ug/L	10	91	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	102	70	130			
Surr: Dibromofluoromethane				1.0	105	43	142			
Surr: p-Bromofluorobenzene				1.0	123	70	130			
Surr: Toluene-d8				1.0	110	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: 05/19/14
Project: SW Alluvium TE-5-4-2014
Work Order: C14040184

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624									Batch: R185313	
Lab ID: C14040193-001AMSD	9	Sample Matrix Spike Duplicate				Run: 5975VOC1_140409C			04/10/14 03:28	
Bromodichloromethane		229	ug/L	10	114	60	130	12	20	
Bromoform		184	ug/L	10	92	60	142	14	20	
Chlorodibromomethane		200	ug/L	10	100	67	134	12	20	
Chloroform		270	ug/L	10	135	56	135	35	20	R
Trihalomethanes, Total		883	ug/L	10	110	70	130	19	20	
Surr: 1,2-Dichlorobenzene-d4				1.0	104	70	130			
Surr: Dibromofluoromethane				1.0	135	43	142			
Surr: p-Bromofluorobenzene				1.0	123	70	130			
Surr: Toluene-d8				1.0	111	70	130			

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
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: 05/19/14
Project: SW Alluvium TE-5-4-2014
Work Order: C14040184

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E900.1										Batch: GA-0780
Lab ID: LCS-GA-0780		Laboratory Control Sample				Run: BERTHOLD 770-1_140412A				04/14/14 06:53
Gross Alpha minus Rn & U		41.4	pCi/L		110	80	120			
Lab ID: MB-GA-0780	3	Method Blank				Run: BERTHOLD 770-1_140412A				04/14/14 06:53
Gross Alpha minus Rn & U		0.1	pCi/L							U
Gross Alpha minus Rn & U Precision (±)		0.3	pCi/L							
Gross Alpha minus Rn & U MDC		0.5	pCi/L							
Lab ID: C14040185-006DMS		Sample Matrix Spike				Run: BERTHOLD 770-1_140412A				04/14/14 08:30
Gross Alpha minus Rn & U		79.3	pCi/L		100	70	130			
Lab ID: C14040185-006DMSD		Sample Matrix Spike Duplicate				Run: BERTHOLD 770-1_140412A				04/14/14 08:30
Gross Alpha minus Rn & U		84.0	pCi/L		107	70	130	5.7	20.6	

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: 05/19/14
Project: SW Alluvium TE-5-4-2014
Work Order: C14040184

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E903.0										Batch: RA226-7134
Lab ID: C14040190-002HMS		Sample Matrix Spike				Run: G542M_140408C				04/21/14 08:49
Radium 226		18	pCi/L		76	70	130			
Lab ID: C14040190-002HMSD		Sample Matrix Spike Duplicate				Run: G542M_140408C				04/21/14 08:49
Radium 226		21	pCi/L		92	70	130	19	21	
Lab ID: MB-RA226-7134	3	Method Blank				Run: G542M_140408C				04/21/14 08:49
Radium 226		0.05	pCi/L							U
Radium 226 precision (±)		0.1	pCi/L							
Radium 226 MDC		0.2	pCi/L							
Lab ID: LCS-RA226-7134		Laboratory Control Sample				Run: G542M_140408C				04/21/14 08:49
Radium 226		12	pCi/L		103	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: 05/19/14
Project: SW Alluvium TE-5-4-2014
Work Order: C14040184

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E908.0									Batch: RA-TH-ISO-2023	
Lab ID: LCS-RA-TH-ISO-2023		Laboratory Control Sample				Run: ALPHANALYST_140409A			04/11/14 16:01	
Thorium 230		6.2	pCi/L		94	80	120			
Lab ID: C14040184-003GMS		Sample Matrix Spike				Run: ALPHANALYST_140409A			04/11/14 16:02	
Thorium 230		10.8	pCi/L		83	70	130			
Lab ID: C14040184-003GMSD		Sample Matrix Spike Duplicate				Run: ALPHANALYST_140409A			04/11/14 16:02	
Thorium 230		13.2	pCi/L		101	70	130	20	44.2	
Lab ID: MB-RA-TH-ISO-2023	3	Method Blank				Run: ALPHANALYST_140409A			04/12/14 13:56	
Thorium 230		0.07	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 **Report Date:** 05/19/14

Project: SW Alluvium TE-5-4-2014 **Work Order:** C14040184

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E909.0										Batch: T_PB-210-0458
Lab ID: MB-PB-210-0458	3	Method Blank				Run: SUB-T56574				04/27/14 16:13
Lead 210		0.3	pCi/L							U
Lead 210 precision (±)		0.6	pCi/L							
Lead 210 MDC		1.0	pCi/L							
Lab ID: LCS-PB-210-0458		Laboratory Control Sample				Run: SUB-T56574				04/27/14 17:34
Lead 210		15	pCi/L		71	80	120			S
- LCS response is outside of the acceptance range for this analysis. Since the MB, MS, and MSD are acceptable the batch is approved.										
Lab ID: T14040069-005FMS		Sample Matrix Spike				Run: SUB-T56574				04/28/14 21:45
Lead 210		49	pCi/L		107	70	130			
Lab ID: T14040069-005FMSD		Sample Matrix Spike Duplicate				Run: SUB-T56574				04/28/14 23:06
Lead 210		47	pCi/L		103	70	130	4.1	20.5	
Method: E909.0										Batch: T_PB-210-0461
Lab ID: MB-PB-210-0461	3	Method Blank				Run: SUB-T56833				05/13/14 19:22
Lead 210		-0.4	pCi/L							U
Lead 210 precision (±)		0.6	pCi/L							
Lead 210 MDC		1	pCi/L							
Lab ID: LCS-PB-210-0461		Laboratory Control Sample				Run: SUB-T56833				05/13/14 20:53
Lead 210		21	pCi/L		107	80	120			
Lab ID: C14040895-002B		Sample Matrix Spike				Run: SUB-T56833				05/15/14 04:48
Lead 210		54	pCi/L		111	70	130			
Lab ID: C14040895-002B		Sample Matrix Spike Duplicate				Run: SUB-T56833				05/15/14 06:19
Lead 210		51	pCi/L		105	70	130	5.4	20.6	

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: 05/19/14
Project: SW Alluvium TE-5-4-2014
Work Order: C14040184

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: RA-05										Batch: RA228-4638
Lab ID: LCS-228-RA226-7134		Laboratory Control Sample				Run: TENNELEC-3_140408B				04/14/14 15:32
Radium 228		7.3	pCi/L		94	80	120			
Lab ID: MB-RA226-7134	3	Method Blank				Run: TENNELEC-3_140408B				04/14/14 15:32
Radium 228		0.6	pCi/L							U
Radium 228 precision (±)		0.9	pCi/L							
Radium 228 MDC		1	pCi/L							
Lab ID: C14040135-001FMS		Sample Matrix Spike				Run: TENNELEC-3_140408B				04/14/14 15:32
Radium 228		15.5	pCi/L		107	70	130			
Lab ID: C14040135-001FMSD		Sample Matrix Spike Duplicate				Run: TENNELEC-3_140408B				04/14/14 15:32
Radium 228		16.6	pCi/L		114	70	130	6.7	37.5	

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

May 19, 2014

United Nuclear Corporation
21 Miles NE of Gallup
Gallup, NM 87305

Work Order: C14040183 Quote ID: C129 - Quarterly Long List

Project Name: Zone-1 TE-5-4-2014

Energy Laboratories, Inc. Casper WY received the following 11 samples for United Nuclear Corporation on 4/4/2014 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C14040183-001	614	04/01/14 14:30	04/04/14	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Total Alkalinity Anion - Cation Balance Arsenic Speciation, Total 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
C14040183-002	515-A	04/01/14 15:35	04/04/14	Aqueous	Same As Above
C14040183-003	604	04/01/14 16:25	04/04/14	Aqueous	Same As Above
C14040183-004	EPA-7	04/01/14 17:15	04/04/14	Aqueous	Same As Above
C14040183-005	EPA-5	04/01/14 18:00	04/04/14	Aqueous	Same As Above
C14040183-006	EPA-4	04/02/14 9:05	04/04/14	Aqueous	Same As Above
C14040183-007	EPA-2	04/02/14 10:40	04/04/14	Aqueous	Same As Above
C14040183-008	EPA-2 Duplicate	04/02/14 11:20	04/04/14	Aqueous	Same As Above
C14040183-009	TWQ-142	04/02/14 12:05	04/04/14	Aqueous	Same As Above

ANALYTICAL SUMMARY REPORT

C14040183-010	Rinsate	04/02/14 13:00 04/04/14	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Total Alkalinity Anion - Cation Balance Arsenic Speciation, Total 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
C14040183-011	Field Blank	04/02/14 12:00 04/04/14	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:

Report Proofing Specialist

Digitally signed by
Sheri M. Mead
Date: 2014.05.19 15:32:56 -06:00

CLIENT: United Nuclear Corporation
Project: Zone-1 TE-5-4-2014
Sample Delivery Group: C14040183

Report Date: 05/19/14

CASE NARRATIVE

VOC ANALYSIS
Chloroform is reported with an E flag on samples -001 (614) and -002 (515-A). The E flag indicates that the analyte is over the calibration range of the instrument and is considered an estimated result. At the time this was noticed, the sample hold time had already expired. The samples were reanalyzed within calibration range, however these results are H flagged. The following are the out of hold results:

614: Chloroform = 125.6
515-A: Chloroform = 328

The laboratory apologizes for any inconvenience this may have caused.

COLLECTION DATES
The following analyses have a sample collection date of 4/21/14, which is different than what is on the analytical report. This is due to some sample bottles being received at a later date. See the Workorder Receipt Checklist for details.

Sample -003 (604) - Bicarbonate, Chloride, Sulfate, pH, and TDS.
Sample -005 (EPA-5) - Calcium, Magnesium, Potassium, Sodium, and Arsenic-III.

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.

Tests associated with analyst identified as ELI-B were subcontracted to Energy Laboratories, 1120 S. 27th St., Billings, MT, EPA Number MT00005.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 05/19/14

Project: Zone-1 TE-5-4-2014 **Work Order:** C14040183

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2320 B										Batch: R185161
Lab ID: MBLK	2	Method Blank				Run: MANTECH_140404B			04/04/14 14:39	
Alkalinity, Total as CaCO3		0.6	mg/L	0.6						
Bicarbonate as HCO3		ND	mg/L	1						
Lab ID: LCS_131219		Laboratory Control Sample				Run: MANTECH_140404B			04/04/14 14:53	
Alkalinity, Total as CaCO3		257	mg/L	5.0	103	90	110			
Lab ID: C14040183-002ADUP	2	Sample Duplicate				Run: MANTECH_140404B			04/04/14 15:51	
Alkalinity, Total as CaCO3		752.04	mg/L					0.0120395	10	
Bicarbonate as HCO3		917	mg/L	5.0				1.2	10	
Lab ID: C14040183-011ADUP	2	Sample Duplicate				Run: MANTECH_140404B			04/04/14 16:54	
Alkalinity, Total as CaCO3		ND	mg/L						10	
Bicarbonate as HCO3		ND	mg/L	5.0					10	
Method: A2320 B										Batch: R185835
Lab ID: MBLK	2	Method Blank				Run: MANTECH_140424B			04/24/14 16:12	
Alkalinity, Total as CaCO3		0.6	mg/L	0.6						
Bicarbonate as HCO3		ND	mg/L	1						
Lab ID: LCS_131219		Laboratory Control Sample				Run: MANTECH_140424B			04/24/14 16:26	
Alkalinity, Total as CaCO3		261	mg/L	5.0	104	90	110			
Lab ID: C14040716-001ADUP	2	Sample Duplicate				Run: MANTECH_140424B			04/24/14 17:09	
Alkalinity, Total as CaCO3		111	mg/L	5.0				0.5	10	
Bicarbonate as HCO3		135	mg/L	5.0				0.5	10	
Lab ID: C14040716-002AMS		Sample Matrix Spike				Run: MANTECH_140424B			04/24/14 17:25	
Alkalinity, Total as CaCO3		381	mg/L	5.0	96	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: 05/19/14
Project: Zone-1 TE-5-4-2014
Work Order: C14040183

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **A2540 C**										Batch: TDS140404A
Lab ID: **MB-1_140404A**		Method Blank				Run: BAL-19_140404B				04/04/14 15:30
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	7						
Lab ID: **LCS-2_140404A**		Laboratory Control Sample				Run: BAL-19_140404B				04/04/14 15:30
Solids, Total Dissolved TDS @ 180 C		2000	mg/L	20	100	90	110			
Lab ID: **C14040141-002A MS**		Sample Matrix Spike				Run: BAL-19_140404B				04/04/14 15:43
Solids, Total Dissolved TDS @ 180 C		3500	mg/L	20	99	90	110			
Lab ID: **C14040183-007A DUP**		Sample Duplicate				Run: BAL-19_140404B				04/04/14 15:46
Solids, Total Dissolved TDS @ 180 C		2990	mg/L	20				0.0	5	
Method: **A2540 C**										Batch: TDS140424A
Lab ID: **MB-1_140424A**		Method Blank				Run: BAL-19_140424B				04/24/14 15:54
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	7						
Lab ID: **LCS-2_140424A**		Laboratory Control Sample				Run: BAL-19_140424B				04/24/14 15:54
Solids, Total Dissolved TDS @ 180 C		2000	mg/L	20	100	90	110			
Lab ID: **C14040183-003A DUP**		Sample Duplicate				Run: BAL-19_140424B				04/24/14 15:55
Solids, Total Dissolved TDS @ 180 C		7180	mg/L	100				0.8	5	
Lab ID: **C14040184-002A MS**		Sample Matrix Spike				Run: BAL-19_140424B				04/24/14 15:55
Solids, Total Dissolved TDS @ 180 C		9220	mg/L	40	100	90	110			

Qualifiers:

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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:** 05/19/14

Project: Zone-1 TE-5-4-2014 **Work Order:** C14040183

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A3114 B									Analytical Run: CVAA-C202_140418B	
Lab ID: ICV		Initial Calibration Verification Standard							04/18/14 14:47	
Selenium-IV		0.0240	mg/L	0.0010	96	90	110			
Lab ID: CCV		Continuing Calibration Verification Standard							04/18/14 15:05	
Selenium-IV		0.0256	mg/L	0.0010	102	90	110			
Method: A3114 B									Batch: 41157	
Lab ID: MB-41157		Method Blank				Run: CVAA-C202_140418B			04/18/14 14:50	
Selenium-IV		ND	mg/L	0.0005						
Lab ID: LCS-41157		Laboratory Control Sample				Run: CVAA-C202_140418B			04/18/14 14:51	
Selenium-IV		0.0236	mg/L	0.0010	95	90	110			
Lab ID: C14040183-001CMS		Sample Matrix Spike				Run: CVAA-C202_140418B			04/18/14 15:23	
Selenium-IV		0.0261	mg/L	0.0010	104	85	115			
Lab ID: C14040183-001CMSD		Sample Matrix Spike Duplicate				Run: CVAA-C202_140418B			04/18/14 15:25	
Selenium-IV		0.0252	mg/L	0.0010	101	85	115	3.3	10	
Method: A3114 B									Analytical Run: CVAA-C202_140422A	
Lab ID: ICV		Initial Calibration Verification Standard							04/22/14 16:30	
Selenium-IV		0.0247	mg/L	0.0010	99	90	110			
Method: A3114 B									Batch: 41160	
Lab ID: MB-41160		Method Blank				Run: CVAA-C202_140422A			04/22/14 16:35	
Selenium-IV		ND	mg/L	0.0005						
Lab ID: LCS-41160		Laboratory Control Sample				Run: CVAA-C202_140422A			04/22/14 16:36	
Selenium-IV		0.0237	mg/L	0.0010	95	90	110			
Lab ID: C14040183-003CMS		Sample Matrix Spike				Run: CVAA-C202_140422A			04/22/14 16:39	
Selenium-IV		0.0251	mg/L	0.0010	100	85	115			
Lab ID: C14040183-003CMSD		Sample Matrix Spike Duplicate				Run: CVAA-C202_140422A			04/22/14 16:41	
Selenium-IV		0.0245	mg/L	0.0010	98	85	115	2.3	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:** 05/19/14

Project: Zone-1 TE-5-4-2014 **Work Order:** C14040183

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-H B									Analytical Run: PHSC_101-C_140404A	
Lab ID: pH 6.86		Initial Calibration Verification Standard							04/04/14 09:24	
pH		6.87	s.u.	0.010	100	98	102			
Lab ID: CCV - pH 7		Continuing Calibration Verification Standard							04/04/14 12:01	
pH		6.99	s.u.	0.010	100	98	102			
Method: A4500-H B									Batch: R185119	
Lab ID: C14040183-008ADUP		Sample Duplicate				Run: PHSC_101-C_140404A			04/04/14 14:05	
pH		6.77	s.u.	*0.010*				0.6	3	
Method: A4500-H B									Analytical Run: PHSC_101-C_140424A	
Lab ID: pH 6.86		Initial Calibration Verification Standard							04/24/14 08:32	
pH		6.85	s.u.	0.010	100	98	102			
Lab ID: CCV - pH 7		Continuing Calibration Verification Standard							04/24/14 10:12	
pH		6.97	s.u.	0.010	100	98	102			
Method: A4500-H B									Batch: R185796	
Lab ID: C14040716-004ADUP		Sample Duplicate				Run: PHSC_101-C_140424A			04/24/14 09:49	
pH		8.17	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:** 05/19/14

Project: Zone-1 TE-5-4-2014 **Work Order:** C14040183

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-NH3 G									Analytical Run: TECHNICON_140409A	
Lab ID: CCV-18		Continuing Calibration Verification Standard							04/09/14 13:08	
Nitrogen, Ammonia as N		0.981	mg/L	0.050	98	90	110			
Lab ID: CCV-35		Continuing Calibration Verification Standard							04/09/14 13:36	
Nitrogen, Ammonia as N		1.06	mg/L	0.050	106	90	110			
Lab ID: CCV-67		Continuing Calibration Verification Standard							04/09/14 14:30	
Nitrogen, Ammonia as N		1.06	mg/L	0.050	106	90	110			
Lab ID: CCV-82		Continuing Calibration Verification Standard							04/09/14 14:54	
Nitrogen, Ammonia as N		1.10	mg/L	0.050	110	90	110			
Method: A4500-NH3 G									Batch: R185288	
Lab ID: MBLK-1		Method Blank				Run: TECHNICON_140409A			04/09/14 12:39	
Nitrogen, Ammonia as N		ND	mg/L	0.006						
Lab ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_140409A			04/09/14 12:43	
Nitrogen, Ammonia as N		1.89	mg/L	0.050	96	90	110			
Lab ID: C14040196-001EMS		Sample Matrix Spike				Run: TECHNICON_140409A			04/09/14 13:16	
Nitrogen, Ammonia as N		1.79	mg/L	0.050	91	90	110			
Lab ID: C14040196-001EMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_140409A			04/09/14 13:18	
Nitrogen, Ammonia as N		1.82	mg/L	0.050	93	90	110	1.7	10	
Lab ID: C14040183-010DMS		Sample Matrix Spike				Run: TECHNICON_140409A			04/09/14 15:00	
Nitrogen, Ammonia as N		1.96	mg/L	0.050	100	90	110			
Lab ID: C14040183-010DMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_140409A			04/09/14 15:01	
Nitrogen, Ammonia as N		1.93	mg/L	0.050	98	90	110	1.5	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:** 05/19/14

Project: Zone-1 TE-5-4-2014 **Work Order:** C14040183

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E1632AM									Analytical Run: SUB-H96407	
Lab ID: AS-ICV 25ppb-4/17/20	Initial Calibration Verification Standard								04/17/14 13:39	
Arsenic-III		25.8	ug/L	5.0	103	87.6	114			
Lab ID: AS-50.0-4/17/2014	Continuing Calibration Verification Standard								04/17/14 13:51	
Arsenic-III		48.8	ug/L	5.0	98	85	115			
Method: E1632AM									Batch: H_R96407	
Lab ID: AS-LFB 50ppb-4/17/2	Laboratory Fortified Blank					Run: SUB-H96407			04/17/14 14:15	
Arsenic-III		46.2	ug/L	5.0	92	55	146			
Lab ID: ICB	Method Blank					Run: SUB-H96407			04/17/14 14:27	
Arsenic-III		ND	ug/L	0.4						
Lab ID: H14040103-001C MS	Sample Matrix Spike					Run: SUB-H96407			04/17/14 15:03	
Arsenic-III		45.3	ug/L	5.0	91	55	146			
Lab ID: H14040103-001C MSD	Sample Matrix Spike Duplicate					Run: SUB-H96407			04/17/14 15:15	
Arsenic-III		49.3	ug/L	5.0	99	55	146	8.5	20	
Method: E1632AM									Analytical Run: SUB-H96430	
Lab ID: AS-ICV 25ppb-4/18/20	Initial Calibration Verification Standard								04/18/14 11:54	
Arsenic-III		28.0	ug/L	5.0	112	87.6	114			
Lab ID: AS-50.0-4/18/2014	Continuing Calibration Verification Standard								04/18/14 12:06	
Arsenic-III		51.0	ug/L	5.0	102	85	115			
Lab ID: AS-ICV 25ppb-4/18/20	Initial Calibration Verification Standard								04/18/14 12:19	
Arsenic-III		27.2	ug/L	5.0	109	87.6	114			
Lab ID: AS-50.0-4/18/2014	Continuing Calibration Verification Standard								04/18/14 14:31	
Arsenic-III		45.7	ug/L	5.0	91	85	115			
Method: E1632AM									Batch: H_R96430	
Lab ID: AS-LFB 50ppb-4/18/2	Laboratory Fortified Blank					Run: SUB-H96430			04/18/14 12:43	
Arsenic-III		54.5	ug/L	5.0	109	55	146			
Lab ID: ICB	Method Blank					Run: SUB-H96430			04/18/14 12:55	
Arsenic-III		ND	ug/L	0.4						
Lab ID: C14040183-007E	Sample Matrix Spike					Run: SUB-H96430			04/18/14 13:43	
Arsenic-III		48.9	ug/L	5.0	96	55	146			
Lab ID: C14040183-007E	Sample Matrix Spike Duplicate					Run: SUB-H96430			04/18/14 13:55	
Arsenic-III		51.7	ug/L	5.0	101	55	146	5.5	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:** 05/19/14

Project: Zone-1 TE-5-4-2014 **Work Order:** C14040183

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E1632AM									Analytical Run: SUB-H96520	
Lab ID: AS-ICV 25ppb-4/22/20		Initial Calibration Verification Standard							04/22/14 14:22	
Arsenic-III		24.1	ug/L	5.0	97	87.6	114			
Lab ID: AS-50.0-4/22/2014		Continuing Calibration Verification Standard							04/22/14 14:34	
Arsenic-III		49.2	ug/L	5.0	98	85	115			
Method: E1632AM									Batch: H_R96520	
Lab ID: AS-LFB 50ppb-4/22/2		Laboratory Fortified Blank				Run: SUB-H96520			04/22/14 14:58	
Arsenic-III		48.3	ug/L	5.0	97	55	146			
Lab ID: ICB		Method Blank				Run: SUB-H96520			04/22/14 15:10	
Arsenic-III		ND	ug/L	0.4						
Lab ID: H14040265-001E MS		Sample Matrix Spike				Run: SUB-H96520			04/22/14 15:58	
Arsenic-III		47.8	ug/L	5.0	96	55	146			
Lab ID: H14040265-001E MSD		Sample Matrix Spike Duplicate				Run: SUB-H96520			04/22/14 16:10	
Arsenic-III		49.1	ug/L	5.0	98	55	146	2.7	20	
Method: E1632AM									Analytical Run: SUB-H97100	
Lab ID: AS-ICV 25ppb-5/14/20		Initial Calibration Verification Standard							05/14/14 13:19	
Arsenic-III		27.8	ug/L	5.0	111	87.6	114			
Lab ID: AS-50.0-5/14/2014		Continuing Calibration Verification Standard							05/14/14 13:31	
Arsenic-III		50.8	ug/L	5.0	102	85	115			
Method: E1632AM									Batch: H_R97100	
Lab ID: AS-LFB 50ppb-5/14/2		Laboratory Fortified Blank				Run: SUB-H97100			05/14/14 13:55	
Arsenic-III		51.2	ug/L	5.0	102	55	146			
Lab ID: ICB		Method Blank				Run: SUB-H97100			05/14/14 14:07	
Arsenic-III		ND	ug/L	0.6						
Lab ID: C14040183-005E		Sample Matrix Spike				Run: SUB-H97100			05/14/14 14:31	
Arsenic-III		52.1	ug/L	5.0	104	55	146			
Lab ID: C14040183-005E		Sample Matrix Spike Duplicate				Run: SUB-H97100			05/14/14 14:43	
Arsenic-III		48.9	ug/L	5.0	98	55	146	6.5	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:** 05/19/14

Project: Zone-1 TE-5-4-2014 **Work Order:** C14040183

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-C_140422A	
Lab ID: ICV	3	Initial Calibration Verification Standard							04/22/14 12:30	
Calcium		51.6	mg/L	0.50	103	95	105			
Magnesium		47.4	mg/L	0.50	95	95	105			
Sodium		52.2	mg/L	0.50	104	95	105			
Lab ID: ICV		Initial Calibration Verification Standard							04/22/14 12:42	
Potassium		49.6	mg/L	0.50	99	95	105			
Lab ID: ICSA	4	Interference Check Sample A							04/22/14 13:11	
Calcium		495	mg/L	0.50	99	80	120			
Magnesium		481	mg/L	0.50	96	80	120			
Potassium		0.00230	mg/L	0.50						
Sodium		0.0812	mg/L	0.50						
Lab ID: ICSAB	4	Interference Check Sample AB							04/22/14 13:15	
Calcium		503	mg/L	0.50	101	80	120			
Magnesium		484	mg/L	0.50	97	80	120			
Potassium		0.00200	mg/L	0.50						
Sodium		0.0959	mg/L	0.50						
Method: E200.7										Batch: R185763
Lab ID: MB-140422A	4	Method Blank				Run: ICP2-C_140422A			04/22/14 13:39	
Calcium		ND	mg/L	0.06						
Magnesium		ND	mg/L	0.03						
Potassium		ND	mg/L	0.06						
Sodium		ND	mg/L	0.03						
Lab ID: LFB-140422A	4	Laboratory Fortified Blank				Run: ICP2-C_140422A			04/22/14 13:43	
Calcium		49.8	mg/L	0.50	100	85	115			
Magnesium		46.4	mg/L	0.50	93	85	115			
Potassium		44.4	mg/L	0.50	89	85	115			
Sodium		50.7	mg/L	0.50	101	85	115			
Lab ID: C14040183-001BMS2	4	Sample Matrix Spike				Run: ICP2-C_140422A			04/22/14 18:01	
Calcium		1040	mg/L	1.0	92	70	130			
Magnesium		1210	mg/L	1.0	94	70	130			
Potassium		472	mg/L	1.0	89	70	130			
Sodium		1010	mg/L	3.2	99	70	130			
Lab ID: C14040183-001BMSD	4	Sample Matrix Spike Duplicate				Run: ICP2-C_140422A			04/22/14 18:05	
Calcium		1070	mg/L	1.0	99	70	130	3.2	20	
Magnesium		1210	mg/L	1.0	95	70	130	0.5	20	
Potassium		477	mg/L	1.0	90	70	130	0.9	20	
Sodium		1010	mg/L	3.2	98	70	130	0.1	20	
Lab ID: C14040183-011BMS2	4	Sample Matrix Spike				Run: ICP2-C_140422A			04/22/14 19:13	
Calcium		102	mg/L	1.0	100	70	130			
Magnesium		99.0	mg/L	1.0	97	70	130			

Qualifiers:

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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: 05/19/14
Project: Zone-1 TE-5-4-2014
Work Order: C14040183

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Batch: R185763	
Lab ID: C14040183-011BMS2	4	Sample Matrix Spike				Run: ICP2-C_140422A			04/22/14 19:13	
Potassium		94.2	mg/L	1.0	92	70	130			
Sodium		101	mg/L	1.0	99	70	130			
Lab ID: C14040183-011BMSD	4	Sample Matrix Spike Duplicate				Run: ICP2-C_140422A			04/22/14 19:18	
Calcium		103	mg/L	1.0	101	70	130	1.0	20	
Magnesium		99.2	mg/L	1.0	97	70	130	0.3	20	
Potassium		91.4	mg/L	1.0	90	70	130	3.1	20	
Sodium		103	mg/L	1.0	101	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: 05/19/14
Project: Zone-1 TE-5-4-2014
Work Order: C14040183

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-C_140424A	
Lab ID: ICV	3	Initial Calibration Verification Standard							04/24/14 11:38	
Calcium		49.3	mg/L	0.50	99	95	105			
Magnesium		49.1	mg/L	0.50	98	95	105			
Sodium		52.2	mg/L	0.50	104	95	105			
Lab ID: ICV		Initial Calibration Verification Standard							04/24/14 11:50	
Potassium		48.9	mg/L	0.50	98	95	105			
Lab ID: ICSA	4	Interference Check Sample A							04/24/14 12:19	
Calcium		489	mg/L	0.50	98	80	120			
Magnesium		495	mg/L	0.50	99	80	120			
Potassium		-0.00200	mg/L	0.50						
Sodium		0.0434	mg/L	0.50						
Lab ID: ICSAB	4	Interference Check Sample AB							04/24/14 12:23	
Calcium		486	mg/L	0.50	97	80	120			
Magnesium		504	mg/L	0.50	101	80	120			
Potassium		-0.00220	mg/L	0.50						
Sodium		0.00260	mg/L	0.50						
Method: E200.7										Batch: R185852
Lab ID: MB-140424A	4	Method Blank				Run: ICP2-C_140424A			04/24/14 12:47	
Calcium		ND	mg/L	0.06						
Magnesium		ND	mg/L	0.03						
Potassium		ND	mg/L	0.06						
Sodium		ND	mg/L	0.03						
Lab ID: LFB-140424A	4	Laboratory Fortified Blank				Run: ICP2-C_140424A			04/24/14 12:51	
Calcium		49.7	mg/L	0.50	99	85	115			
Magnesium		47.6	mg/L	0.50	95	85	115			
Potassium		44.0	mg/L	0.50	88	85	115			
Sodium		50.3	mg/L	0.50	101	85	115			
Lab ID: C14040365-001CMS2	4	Sample Matrix Spike				Run: ICP2-C_140424A			04/24/14 15:52	
Calcium		228	mg/L	1.0	88	70	130			
Magnesium		115	mg/L	1.0	101	70	130			
Potassium		96.0	mg/L	1.0	91	70	130			
Sodium		145	mg/L	1.0	100	70	130			
Lab ID: C14040365-001CMSD	4	Sample Matrix Spike Duplicate				Run: ICP2-C_140424A			04/24/14 15:56	
Calcium		233	mg/L	1.0	94	70	130	2.3	20	
Magnesium		111	mg/L	1.0	97	70	130	3.6	20	
Potassium		94.4	mg/L	1.0	89	70	130	1.7	20	
Sodium		145	mg/L	1.0	100	70	130	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: 05/19/14
Project: Zone-1 TE-5-4-2014
Work Order: C14040183

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS2-C_140409A	
Lab ID: ICV	10	Initial Calibration Verification Standard							04/09/14 12:51	
Aluminum		0.0519	mg/L	0.0010	104	90	110			
Beryllium		0.0500	mg/L	0.0010	100	90	110			
Cadmium		0.0498	mg/L	0.0010	100	90	110			
Cobalt		0.0547	mg/L	0.0010	109	90	110			
Lead		0.0523	mg/L	0.0010	105	90	110			
Manganese		0.0508	mg/L	0.0010	102	90	110			
Molybdenum		0.0499	mg/L	0.0010	100	90	110			
Nickel		0.0498	mg/L	0.0010	100	90	110			
Uranium		0.0511	mg/L	0.00030	102	90	110			
Vanadium		0.0541	mg/L	0.0010	108	90	110			
Method: E200.8									Batch: 41052	
Lab ID: MB-41052	10	Method Blank				Run: ICPMS2-C_140409A			04/09/14 21:27	
Aluminum		0.001	mg/L	0.0005						
Beryllium		ND	mg/L	4E-05						
Cadmium		ND	mg/L	2E-05						
Cobalt		ND	mg/L	1E-05						
Lead		ND	mg/L	3E-05						
Manganese		ND	mg/L	7E-05						
Molybdenum		ND	mg/L	8E-05						
Nickel		ND	mg/L	9E-05						
Uranium		ND	mg/L	9E-06						
Vanadium		ND	mg/L	0.002						
Lab ID: LCS3-41052	10	Laboratory Control Sample				Run: ICPMS2-C_140409A			04/09/14 21:31	
Aluminum		2.32	mg/L	0.030	93	85	115			
Beryllium		0.266	mg/L	0.0010	106	85	115			
Cadmium		0.247	mg/L	0.0010	99	85	115			
Cobalt		0.461	mg/L	0.0050	92	85	115			
Lead		0.482	mg/L	0.0010	96	85	115			
Manganese		2.30	mg/L	0.0010	92	85	115			
Molybdenum		0.486	mg/L	0.0010	97	85	115			
Nickel		0.448	mg/L	0.0050	90	85	115			
Uranium		0.534	mg/L	0.00030	107	85	115			
Vanadium		0.474	mg/L	0.010	95	85	115			
Lab ID: C14040183-005CMS3	10	Sample Matrix Spike				Run: ICPMS2-C_140409A			04/09/14 22:06	
Aluminum		2.33	mg/L	0.030	91	70	130			
Beryllium		0.244	mg/L	0.0010	97	70	130			
Cadmium		0.244	mg/L	0.0010	97	70	130			
Cobalt		0.566	mg/L	0.0050	94	70	130			
Lead		0.510	mg/L	0.0010	102	70	130			
Manganese		3.26	mg/L	0.0010	94	70	130			
Molybdenum		0.524	mg/L	0.0010	105	70	130			
Nickel		0.580	mg/L	0.0050	96	70	130			

Qualifiers:

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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:** 05/19/14

Project: Zone-1 TE-5-4-2014 **Work Order:** C14040183

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8										Batch: 41052
Lab ID: C14040183-005CMS3	10	Sample Matrix Spike				Run: ICPMS2-C_140409A				04/09/14 22:06
Uranium		0.526	mg/L	0.00030	105	70	130			
Vanadium		0.500	mg/L	0.010	100	70	130			
Lab ID: C14040183-005CMSD	10	Sample Matrix Spike Duplicate				Run: ICPMS2-C_140409A				04/09/14 22:09
Aluminum		2.30	mg/L	0.030	90	70	130	1.3	20	
Beryllium		0.241	mg/L	0.0010	96	70	130	1.2	20	
Cadmium		0.243	mg/L	0.0010	97	70	130	0.1	20	
Cobalt		0.565	mg/L	0.0050	94	70	130	0.2	20	
Lead		0.507	mg/L	0.0010	101	70	130	0.7	20	
Manganese		3.22	mg/L	0.0010	92	70	130	1.2	20	
Molybdenum		0.532	mg/L	0.0010	106	70	130	1.4	20	
Nickel		0.573	mg/L	0.0050	95	70	130	1.3	20	
Uranium		0.532	mg/L	0.00030	106	70	130	1.2	20	
Vanadium		0.502	mg/L	0.010	101	70	130	0.5	20	
Method: E200.8										Analytical Run: ICPMS2-C_140507A
Lab ID: ICV	3	Initial Calibration Verification Standard								05/07/14 16:27
Beryllium		0.0497	mg/L	0.0010	99	90	110			
Cobalt		0.0500	mg/L	0.0010	100	90	110			
Nickel		0.0502	mg/L	0.0010	100	90	110			
Method: E200.8										Batch: 41052
Lab ID: MB-41052	3	Method Blank				Run: ICPMS2-C_140507A				05/07/14 21:13
Beryllium		ND	mg/L	4E-05						
Cobalt		ND	mg/L	1E-05						
Nickel		ND	mg/L	9E-05						
Lab ID: LCS3-41052	3	Laboratory Control Sample				Run: ICPMS2-C_140507A				05/07/14 21:16
Beryllium		0.276	mg/L	0.0010	110	85	115			
Cobalt		0.465	mg/L	0.0050	93	85	115			
Nickel		0.456	mg/L	0.0050	91	85	115			
Lab ID: C14040183-005CMS3	3	Sample Matrix Spike				Run: ICPMS2-C_140507A				05/07/14 21:32
Beryllium		0.247	mg/L	0.0010	99	70	130			
Cobalt		0.553	mg/L	0.0050	94	70	130			
Nickel		0.572	mg/L	0.0050	95	70	130			
Lab ID: C14040183-005CMSD	3	Sample Matrix Spike Duplicate				Run: ICPMS2-C_140507A				05/07/14 21:35
Beryllium		0.244	mg/L	0.0010	97	70	130	1.5	20	
Cobalt		0.545	mg/L	0.0050	92	70	130	1.5	20	
Nickel		0.571	mg/L	0.0050	95	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:** 05/19/14

Project: Zone-1 TE-5-4-2014 **Work Order:** C14040183

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0									Analytical Run: IC2-C_140404A	
Lab ID: CCV-040414-05	2	Continuing Calibration Verification Standard							04/05/14 01:58	
Chloride		9.65	mg/L	1.0	97	90	110			
Sulfate		39.3	mg/L	1.0	98	90	110			
Lab ID: CCV-040414-06	2	Continuing Calibration Verification Standard							04/05/14 06:02	
Chloride		9.73	mg/L	1.0	97	90	110			
Sulfate		39.4	mg/L	1.0	99	90	110			
Method: E300.0									Batch: R185171	
Lab ID: ICB	2	Method Blank				Run: IC2-C_140404A			04/04/14 09:08	
Chloride		ND	mg/L	0.04						
Sulfate		ND	mg/L	0.04						
Lab ID: LFB-040414	2	Laboratory Fortified Blank				Run: IC2-C_140404A			04/04/14 09:25	
Chloride		9.96	mg/L	1.0	100	90	110			
Sulfate		40.4	mg/L	1.0	101	90	110			
Lab ID: C14040176-001AMS	2	Sample Matrix Spike				Run: IC2-C_140404A			04/05/14 02:51	
Chloride		13600	mg/L	52	99	90	110			
Sulfate		19900	mg/L	210	98	90	110			
Lab ID: C14040176-001AMSD	2	Sample Matrix Spike Duplicate				Run: IC2-C_140404A			04/05/14 03:08	
Chloride		13700	mg/L	52	101	90	110	0.7	20	
Sulfate		20400	mg/L	210	100	90	110	2.3	20	
Method: E300.0									Analytical Run: SUB-B222906	
Lab ID: ICV	2	Initial Calibration Verification Standard							04/28/14 12:31	
Chloride		25.4	mg/L	1.0	102	90	110			
Sulfate		104	mg/L	1.0	104	90	110			
Method: E300.0									Batch: B_R222906	
Lab ID: ICB	2	Method Blank				Run: SUB-B222906			04/28/14 12:46	
Chloride		0.2	mg/L	0.02						
Sulfate		ND	mg/L	0.07						
Lab ID: LFB	2	Laboratory Fortified Blank				Run: SUB-B222906			04/28/14 13:01	
Chloride		25.6	mg/L	1.0	102	90	110			
Sulfate		105	mg/L	1.1	105	90	110			
Lab ID: B14041894-001AMS	2	Sample Matrix Spike				Run: SUB-B222906			04/28/14 23:21	
Chloride		144	mg/L	1.3	105	90	110			
Sulfate		1350	mg/L	5.3	110	90	110			
Lab ID: B14041894-001AMSD	2	Sample Matrix Spike Duplicate				Run: SUB-B222906			04/28/14 23:36	
Chloride		142	mg/L	1.3	104	90	110	1.0	20	
Sulfate		1340	mg/L	5.3	108	90	110	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: 05/19/14
Project: Zone-1 TE-5-4-2014
Work Order: C14040183

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E353.2									Analytical Run: TECHNICON_140404A	
Lab ID: CCV-58		Continuing Calibration Verification Standard							04/04/14 14:39	
Nitrogen, Nitrate+Nitrite as N		0.915	mg/L	0.10	92	90	110			
Method: E353.2									Batch: R185148	
Lab ID: MBLK-1		Method Blank				Run: TECHNICON_140404A			04/04/14 12:16	
Nitrogen, Nitrate+Nitrite as N		ND	mg/L	0.05						
Lab ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_140404A			04/04/14 12:21	
Nitrogen, Nitrate+Nitrite as N		1.96	mg/L	0.10	100	90	110			
Lab ID: C14040183-010DMS		Sample Matrix Spike				Run: TECHNICON_140404A			04/04/14 14:46	
Nitrogen, Nitrate+Nitrite as N		1.83	mg/L	0.10	93	90	110			
Lab ID: C14040183-010DMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_140404A			04/04/14 14:49	
Nitrogen, Nitrate+Nitrite as N		1.99	mg/L	0.10	102	90	110	8.4	10	
Method: E353.2									Analytical Run: TECHNICON_140407A	
Lab ID: CCV-27		Continuing Calibration Verification Standard							04/07/14 14:28	
Nitrogen, Nitrate+Nitrite as N		1.09	mg/L	0.10	109	90	110			
Method: E353.2									Batch: R185210	
Lab ID: MBLK-1		Method Blank				Run: TECHNICON_140407A			04/07/14 13:23	
Nitrogen, Nitrate+Nitrite as N		ND	mg/L	0.05						
Lab ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_140407A			04/07/14 13:28	
Nitrogen, Nitrate+Nitrite as N		2.15	mg/L	0.10	110	90	110			
Lab ID: C14040196-005EMS		Sample Matrix Spike				Run: TECHNICON_140407A			04/07/14 14:35	
Nitrogen, Nitrate+Nitrite as N		2.25	mg/L	0.10	110	90	110			
Lab ID: C14040196-005EMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_140407A			04/07/14 14:38	
Nitrogen, Nitrate+Nitrite as N		2.19	mg/L	0.10	107	90	110	2.7	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: 05/19/14
Project: Zone-1 TE-5-4-2014
Work Order: C14040183

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624										Analytical Run: R185220
Lab ID: 07-Apr-14_CCV_19	9	Continuing Calibration Verification Standard								04/07/14 20:39
Bromodichloromethane		10.6	ug/L	1.0	106	70	130			
Bromoform		10.0	ug/L	1.0	100	70	130			
Chlorodibromomethane		10.4	ug/L	1.0	104	70	130			
Chloroform		8.04	ug/L	1.0	80	70	130			
Trihalomethanes, Total		39.0	ug/L	1.0	98	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	104	70	130			
Surr: Dibromofluoromethane				1.0	87	70	130			
Surr: p-Bromofluorobenzene				1.0	108	70	130			
Surr: Toluene-d8				1.0	104	70	130			
Method: E624										Batch: R185220
Lab ID: 07-Apr-14_LCS_4	9	Laboratory Control Sample				Run: 5975VOC1_140407A				04/07/14 11:53
Bromodichloromethane		10.8	ug/L	1.0	108	60	130			
Bromoform		10.8	ug/L	1.0	108	60	142			
Chlorodibromomethane		11.1	ug/L	1.0	111	67	134			
Chloroform		10.6	ug/L	1.0	106	56	135			
Trihalomethanes, Total		43.3	ug/L	1.0	108	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	104	70	130			
Surr: Dibromofluoromethane				1.0	102	43	142			
Surr: p-Bromofluorobenzene				1.0	106	70	130			
Surr: Toluene-d8				1.0	102	70	130			
Lab ID: 07-Apr-14_MBLK_6	9	Method Blank				Run: 5975VOC1_140407A				04/07/14 13:03
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	112	73.7	126			
Surr: Dibromofluoromethane				1.0	102	64.4	131			
Surr: p-Bromofluorobenzene				1.0	119	67.1	133			
Surr: Toluene-d8				1.0	94	79.7	125			
Lab ID: C14040145-001AMS	9	Sample Matrix Spike				Run: 5975VOC1_140407A				04/07/14 18:54
Bromodichloromethane		230	ug/L	10	115	60	130			
Bromoform		212	ug/L	10	106	60	142			
Chlorodibromomethane		227	ug/L	10	114	67	134			
Chloroform		169	ug/L	10	84	56	135			
Trihalomethanes, Total		838	ug/L	10	105	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	105	70	130			
Surr: Dibromofluoromethane				1.0	90	43	142			
Surr: p-Bromofluorobenzene				1.0	104	70	130			
Surr: Toluene-d8				1.0	105	70	130			

Qualifiers:

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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:** 05/19/14

Project: Zone-1 TE-5-4-2014 **Work Order:** C14040183

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624										Batch: R185220
Lab ID: C14040145-001AMSD	9	Sample Matrix Spike Duplicate				Run: 5975VOC1_140407A				04/07/14 19:29
Bromodichloromethane		197	ug/L	10	98	60	130	16	20	
Bromoform		183	ug/L	10	92	60	142	15	20	
Chlorodibromomethane		191	ug/L	10	96	67	134	17	20	
Chloroform		143	ug/L	10	72	56	135	16	20	
Trihalomethanes, Total		714	ug/L	10	89	70	130	16	20	
Surr: 1,2-Dichlorobenzene-d4				1.0	106	70	130			
Surr: Dibromofluoromethane				1.0	84	43	142			
Surr: p-Bromofluorobenzene				1.0	106	70	130			
Surr: Toluene-d8				1.0	103	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: 05/19/14
Project: Zone-1 TE-5-4-2014
Work Order: C14040183

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E900.1										Batch: GA-0779
Lab ID: LCS-GA-0779		Laboratory Control Sample				Run: TENNELEC-3_140409A				04/12/14 05:52
Gross Alpha minus Rn & U		37.8	pCi/L		100	80	120			
Lab ID: MB-GA-0779	3	Method Blank				Run: TENNELEC-3_140409A				04/12/14 05:52
Gross Alpha minus Rn & U		0.5	pCi/L							
Gross Alpha minus Rn & U Precision (±)		0.3	pCi/L							
Gross Alpha minus Rn & U MDC		0.4	pCi/L							
Lab ID: C14040183-011GMS		Sample Matrix Spike				Run: TENNELEC-3_140409A				04/12/14 05:52
Gross Alpha minus Rn & U		76.3	pCi/L		103	70	130			
Lab ID: C14040183-011GMSD		Sample Matrix Spike Duplicate				Run: TENNELEC-3_140409A				04/12/14 07:25
Gross Alpha minus Rn & U		81.4	pCi/L		108	70	130	6.5	20.3	

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:** 05/19/14

Project: Zone-1 TE-5-4-2014 **Work Order:** C14040183

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E903.0										Batch: RA226-7135
Lab ID: C14040183-011GMS		Sample Matrix Spike				Run: BERTHOLD 770-2_140408B				04/21/14 09:51
Radium 226		23	pCi/L		100	70	130			
Lab ID: C14040183-011GMSD		Sample Matrix Spike Duplicate				Run: BERTHOLD 770-2_140408B				04/21/14 09:51
Radium 226		22	pCi/L		98	70	130	3.0	21.4	
Lab ID: MB-RA226-7135	3	Method Blank				Run: BERTHOLD 770-2_140408B				04/21/14 09:51
Radium 226		-0.04	pCi/L							U
Radium 226 precision (±)		0.09	pCi/L							
Radium 226 MDC		0.2	pCi/L							
Lab ID: LCS-RA226-7135		Laboratory Control Sample				Run: BERTHOLD 770-2_140408B				04/21/14 11:30
Radium 226		11	pCi/L		101	80	120			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

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U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/19/14
Project: Zone-1 TE-5-4-2014
Work Order: C14040183

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E908.0									Batch: RA-TH-ISO-2026	
Lab ID: LCS-RA-TH-ISO-2026		Laboratory Control Sample				Run: ALPHANALYST_140411A			04/16/14 08:57	
Thorium 230		6.3	pCi/L		95	80	120			
Lab ID: C14040183-003GMS		Sample Matrix Spike				Run: ALPHANALYST_140411A			04/16/14 08:57	
Thorium 230		13.3	pCi/L		102	70	130			
Lab ID: C14040183-003GMSD		Sample Matrix Spike Duplicate				Run: ALPHANALYST_140411A			04/16/14 08:57	
Thorium 230		11.5	pCi/L		88	70	130	15	36.7	
Lab ID: MB-RA-TH-ISO-2026	3	Method Blank				Run: ALPHANALYST_140411A			04/16/14 08:57	
Thorium 230		0.1	pCi/L							U
Thorium 230 precision (±)		0.10	pCi/L							
Thorium 230 MDC		0.2	pCi/L							

Qualifiers:

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QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/19/14
Project: Zone-1 TE-5-4-2014
Work Order: C14040183

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E909.0									Batch: T_PB-210-0457	
Lab ID: MB-PB-210-0457	3	Method Blank				Run: SUB-T56400			04/16/14 17:49	
Lead 210		0.7	pCi/L							U
Lead 210 precision (±)		0.6	pCi/L							
Lead 210 MDC		1	pCi/L							
Lab ID: LCS-PB-210-0457		Laboratory Control Sample				Run: SUB-T56400			04/16/14 19:09	
Lead 210		24	pCi/L		114	80	120			
Lab ID: C14040185-006GMS		Sample Matrix Spike				Run: SUB-T56400			04/17/14 23:16	
Lead 210		69	pCi/L		115	70	130			
Lab ID: C14040185-006GMSD		Sample Matrix Spike Duplicate				Run: SUB-T56400			04/18/14 00:37	
Lead 210		63	pCi/L		105	70	130	8.7	20.6	
Lab ID: MB-PB-210-0457	3	Method Blank				Run: SUB-T56400			04/16/14 17:49	
Lead 210		0.7	pCi/L							U
Lead 210 precision (±)		0.6	pCi/L							
Lead 210 MDC		1	pCi/L							
Lab ID: LCS-PB-210-0457		Laboratory Control Sample				Run: SUB-T56400			04/16/14 19:09	
Lead 210		24	pCi/L		114	80	120			
Lab ID: T14040040-006GMS		Sample Matrix Spike				Run: SUB-T56400			04/17/14 23:16	
Lead 210		69	pCi/L		115	70	130			
Lab ID: T14040040-006GMSD		Sample Matrix Spike Duplicate				Run: SUB-T56400			04/18/14 00:37	
Lead 210		63	pCi/L		105	70	130	8.7	20.6	

Qualifiers:

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ND - Not detected at the reporting limit.
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QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/19/14
Project: Zone-1 TE-5-4-2014
Work Order: C14040183

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **RA-05**										Batch: RA228-4639
Lab ID: **LCS-228-RA226-7135**		Laboratory Control Sample				Run: TENNELEC-3_140408C				04/15/14 12:01
Radium 228		7.7	pCi/L		98	80	120			
Lab ID: **MB-RA226-7135**	3	Method Blank				Run: TENNELEC-3_140408C				04/15/14 12:01
Radium 228		0.7	pCi/L							U
Radium 228 precision (±)		0.7	pCi/L							
Radium 228 MDC		1	pCi/L							
Lab ID: **C14040196-005DMS**		Sample Matrix Spike				Run: TENNELEC-3_140408C				04/15/14 12:01
Radium 228		24	pCi/L		111	70	130			
Lab ID: **C14040196-005DMSD**		Sample Matrix Spike Duplicate				Run: TENNELEC-3_140408C				04/15/14 12:01
Radium 228		24	pCi/L		105	70	130	3.4	28.7	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.
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ANALYTICAL SUMMARY REPORT

May 19, 2014

United Nuclear Corporation
21 Miles NE of Gallup
Gallup, NM 87305

Work Order: C14040377 Quote ID: C129 - Quarterly Long List

Project Name: Zone-3

Energy Laboratories, Inc. Casper WY received the following 10 samples for United Nuclear Corporation on 4/10/2014 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C14040377-001	613	04/07/14 8:58	04/10/14	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Total Alkalinity Anion - Cation Balance Arsenic Speciation, Total 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
C14040377-002	517	04/07/14 9:42	04/10/14	Aqueous	Same As Above
C14040377-003	708	04/07/14 10:55	04/10/14	Aqueous	Same As Above
C14040377-004	711	04/07/14 12:05	04/10/14	Aqueous	Same As Above
C14040377-005	EPA-13	04/07/14 12:45	04/10/14	Aqueous	Same As Above
C14040377-006	719	04/07/14 13:35	04/10/14	Aqueous	Same As Above
C14040377-007	420	04/07/14 15:00	04/10/14	Aqueous	Same As Above
C14040377-008	717	04/07/14 16:00	04/10/14	Aqueous	Same As Above
C14040377-009	717 Duplicate	04/07/14 16:30	04/10/14	Aqueous	Same As Above
C14040377-010	EPA-14	04/07/14 17:00	04/10/14	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:

Report Proofing Specialist

Digitally signed by
Sheri M. Mead
Date: 2014.05.19 14:29:48 -06:00

CLIENT: United Nuclear Corporation
Project: Zone-3
Sample Delivery Group: C14040377

Report Date: 05/19/14

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: 05/19/14
Project: Zone-3
Work Order: C14040377

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2320 B										Batch: R185344
Lab ID: MBLK	2	Method Blank				Run: MANTECH_140410B				04/10/14 16:34
Alkalinity, Total as CaCO3		0.8	mg/L	0.6						
Bicarbonate as HCO3		ND	mg/L	1						
Lab ID: LCS_131219		Laboratory Control Sample				Run: MANTECH_140410B				04/10/14 16:48
Alkalinity, Total as CaCO3		259	mg/L	5.0	103	90	110			
Lab ID: C14040313-001ADUP	2	Sample Duplicate				Run: MANTECH_140410B				04/10/14 17:04
Alkalinity, Total as CaCO3		171	mg/L	5.0				0.4	10	
Bicarbonate as HCO3		208	mg/L	5.0				0.4	10	
Lab ID: C14040313-002AMS		Sample Matrix Spike				Run: MANTECH_140410B				04/10/14 17:19
Alkalinity, Total as CaCO3		261	mg/L	5.0	103	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: 05/19/14
Project: Zone-3
Work Order: C14040377

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C										Batch: TDS140411A
Lab ID: MB-1_140411A		Method Blank				Run: BAL-19_140411A				04/11/14 16:22
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	7						
Lab ID: LCS-2_140411A		Laboratory Control Sample				Run: BAL-19_140411A				04/11/14 16:22
Solids, Total Dissolved TDS @ 180 C		1940	mg/L	20	97	90	110			
Lab ID: C14040377-006A DUP		Sample Duplicate				Run: BAL-19_140411A				04/11/14 16:30
Solids, Total Dissolved TDS @ 180 C		5830	mg/L	26				1.5	5	
Lab ID: C14040377-007A MS		Sample Matrix Spike				Run: BAL-19_140411A				04/11/14 16:31
Solids, Total Dissolved TDS @ 180 C		7680	mg/L	40	97	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:** 05/19/14

Project: Zone-3 **Work Order:** C14040377

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A3114 B									Analytical Run: CVAA-C202_140422A	
Lab ID: ICV		Initial Calibration Verification Standard							04/22/14 16:30	
Selenium-IV		0.0247	mg/L	0.0010	99	90	110			
Method: A3114 B									Batch: 41158	
Lab ID: MB-41158		Method Blank				Run: CVAA-C202_140422A			04/22/14 17:07	
Selenium-IV		ND	mg/L	0.0005						
Lab ID: LCS-41158		Laboratory Control Sample				Run: CVAA-C202_140422A			04/22/14 17:08	
Selenium-IV		0.0241	mg/L	0.0010	96	90	110			
Lab ID: C14040184-002CMS		Sample Matrix Spike				Run: CVAA-C202_140422A			04/22/14 17:13	
Selenium-IV		0.0238	mg/L	0.0010	95	85	115			
Lab ID: C14040184-002CMSD		Sample Matrix Spike Duplicate				Run: CVAA-C202_140422A			04/22/14 17:15	
Selenium-IV		0.0238	mg/L	0.0010	95	85	115	0.0	10	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

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QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 05/19/14

Project: Zone-3 **Work Order:** C14040377

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **A4500-H B**								Analytical Run: PHSC_101-C_140411A		
Lab ID: **pH 6.86**	Initial Calibration Verification Standard								04/11/14 08:42	
pH		6.88	s.u.	0.010	100	98	102			
Lab ID: **CCV - pH 7**	Continuing Calibration Verification Standard								04/11/14 11:17	
pH		7.01	s.u.	0.010	100	98	102			
Method: **A4500-H B**									Batch: R185345	
Lab ID: **C14040377-002ADUP**	Sample Duplicate					Run: PHSC_101-C_140411A			04/11/14 10:43	
pH		3.01	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: 05/19/14
Work Order: C14040377

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-NH3 G									Analytical Run: TECHNICON_140417A	
Lab ID: CCV-16		Continuing Calibration Verification Standard							04/17/14 11:59	
Nitrogen, Ammonia as N		1.02	mg/L	0.050	102	90	110			
Lab ID: CCV-32		Continuing Calibration Verification Standard							04/17/14 12:25	
Nitrogen, Ammonia as N		1.02	mg/L	0.050	102	90	110			
Method: A4500-NH3 G									Batch: R185582	
Lab ID: MBLK-1		Method Blank				Run: TECHNICON_140417A			04/17/14 11:34	
Nitrogen, Ammonia as N		ND	mg/L	0.006						
Lab ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_140417A			04/17/14 11:37	
Nitrogen, Ammonia as N		1.86	mg/L	0.050	95	90	110			
Lab ID: C14040404-001EMS		Sample Matrix Spike				Run: TECHNICON_140417A			04/17/14 12:31	
Nitrogen, Ammonia as N		2.56	mg/L	0.050	100	90	110			
Lab ID: C14040404-001EMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_140417A			04/17/14 12:32	
Nitrogen, Ammonia as N		2.53	mg/L	0.050	98	90	110	1.2	10	
Method: A4500-NH3 G									Analytical Run: TECHNICON_140418A	
Lab ID: CCV-14		Continuing Calibration Verification Standard							04/18/14 11:54	
Nitrogen, Ammonia as N		0.956	mg/L	0.050	96	90	110			
Method: A4500-NH3 G									Batch: R185630	
Lab ID: MBLK-1		Method Blank				Run: TECHNICON_140418A			04/18/14 11:32	
Nitrogen, Ammonia as N		ND	mg/L	0.006						
Lab ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_140418A			04/18/14 11:35	
Nitrogen, Ammonia as N		1.88	mg/L	0.050	96	90	110			
Lab ID: C14040466-001EMS		Sample Matrix Spike				Run: TECHNICON_140418A			04/18/14 11:59	
Nitrogen, Ammonia as N		4.32	mg/L	0.050	100	90	110			
Lab ID: C14040466-001EMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_140418A			04/18/14 12:01	
Nitrogen, Ammonia as N		4.47	mg/L	0.050	107	90	110	3.4	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:** 05/19/14

Project: Zone-3 **Work Order:** C14040377

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E1632AM									Analytical Run: SUB-H96520	
Lab ID: AS-ICV 25ppb-4/22/20		Initial Calibration Verification Standard							04/22/14 14:22	
Arsenic-III		24.1	ug/L	5.0	97	87.6	114			
Lab ID: AS-50.0-4/22/2014		Continuing Calibration Verification Standard							04/22/14 14:34	
Arsenic-III		49.2	ug/L	5.0	98	85	115			
Method: E1632AM									Batch: H_R96520	
Lab ID: AS-LFB 50ppb-4/22/2		Laboratory Fortified Blank				Run: SUB-H96520			04/22/14 14:58	
Arsenic-III		48.3	ug/L	5.0	97	55	146			
Lab ID: ICB		Method Blank				Run: SUB-H96520			04/22/14 15:10	
Arsenic-III		ND	ug/L	0.4						
Lab ID: H14040265-001E MS		Sample Matrix Spike				Run: SUB-H96520			04/22/14 15:58	
Arsenic-III		47.8	ug/L	5.0	96	55	146			
Lab ID: H14040265-001E MSD		Sample Matrix Spike Duplicate				Run: SUB-H96520			04/22/14 16:10	
Arsenic-III		49.1	ug/L	5.0	98	55	146	2.7	20	
Method: E1632AM									Analytical Run: SUB-H96680	
Lab ID: AS-50.0-4/28/2014		Continuing Calibration Verification Standard							04/28/14 14:43	
Arsenic-III		47.3	ug/L	5.0	95	85	115			
Lab ID: AS-ICV 25ppb-4/28/20		Initial Calibration Verification Standard							04/28/14 15:03	
Arsenic-III		24.3	ug/L	5.0	97	87.6	114			
Method: E1632AM									Batch: H_R96680	
Lab ID: AS-LFB 50ppb-4/28/2		Laboratory Fortified Blank				Run: SUB-H96680			04/28/14 15:32	
Arsenic-III		48.8	ug/L	5.0	98	55	146			
Lab ID: ICB		Method Blank				Run: SUB-H96680			04/28/14 15:44	
Arsenic-III		ND	ug/L	0.6						
Lab ID: C14040377-005E		Sample Matrix Spike				Run: SUB-H96680			04/28/14 16:21	
Arsenic-III		52.3	ug/L	5.0	95	55	146			
Lab ID: C14040377-005E		Sample Matrix Spike Duplicate				Run: SUB-H96680			04/28/14 16:33	
Arsenic-III		52.0	ug/L	5.0	95	55	146	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:** 05/19/14

Project: Zone-3 **Work Order:** C14040377

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E1632AM									Analytical Run: SUB-H96731	
Lab ID: AS-ICV 25ppb-5/1/201		Initial Calibration Verification Standard							05/01/14 11:51	
Arsenic-III		25.7	ug/L	5.0	103	87.6	114			
Lab ID: AS-50.0-5/1/2014		Continuing Calibration Verification Standard							05/01/14 12:03	
Arsenic-III		49.0	ug/L	5.0	98	85	115			
Method: E1632AM									Batch: H_R96731	
Lab ID: AS-LFB 50ppb-5/1/20		Laboratory Fortified Blank				Run: SUB-H96731			05/01/14 12:27	
Arsenic-III		47.3	ug/L	5.0	95	55	146			
Lab ID: ICB		Method Blank				Run: SUB-H96731			05/01/14 12:39	
Arsenic-III		ND	ug/L	0.6						
Lab ID: C14040436-001E		Sample Matrix Spike				Run: SUB-H96731			05/01/14 13:27	
Arsenic-III		48.1	ug/L	5.0	96	55	146			
Lab ID: C14040436-001E		Sample Matrix Spike Duplicate				Run: SUB-H96731			05/01/14 13:39	
Arsenic-III		47.6	ug/L	5.0	95	55	146	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:** 05/19/14

Project: Zone-3 **Work Order:** C14040377

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-C_140424A	
Lab ID: ICV	3	Initial Calibration Verification Standard							04/24/14 11:38	
Calcium		49.3	mg/L	0.50	99	95	105			
Magnesium		49.1	mg/L	0.50	98	95	105			
Sodium		52.2	mg/L	0.50	104	95	105			
Lab ID: ICV		Initial Calibration Verification Standard							04/24/14 11:50	
Potassium		48.9	mg/L	0.50	98	95	105			
Lab ID: ICSA	4	Interference Check Sample A							04/24/14 12:19	
Calcium		489	mg/L	0.50	98	80	120			
Magnesium		495	mg/L	0.50	99	80	120			
Potassium		-0.00200	mg/L	0.50						
Sodium		0.0434	mg/L	0.50						
Lab ID: ICSAB	4	Interference Check Sample AB							04/24/14 12:23	
Calcium		486	mg/L	0.50	97	80	120			
Magnesium		504	mg/L	0.50	101	80	120			
Potassium		-0.00220	mg/L	0.50						
Sodium		0.00260	mg/L	0.50						
Method: E200.7										Batch: R185852
Lab ID: MB-140424A	4	Method Blank				Run: ICP2-C_140424A			04/24/14 12:47	
Calcium		ND	mg/L	0.06						
Magnesium		ND	mg/L	0.03						
Potassium		ND	mg/L	0.06						
Sodium		ND	mg/L	0.03						
Lab ID: LFB-140424A	4	Laboratory Fortified Blank				Run: ICP2-C_140424A			04/24/14 12:51	
Calcium		49.7	mg/L	0.50	99	85	115			
Magnesium		47.6	mg/L	0.50	95	85	115			
Potassium		44.0	mg/L	0.50	88	85	115			
Sodium		50.3	mg/L	0.50	101	85	115			
Lab ID: C14040377-003BMS2	4	Sample Matrix Spike				Run: ICP2-C_140424A			04/24/14 17:01	
Calcium		672	mg/L	1.0	89	70	130			
Magnesium		832	mg/L	1.0	99	70	130			
Potassium		241	mg/L	1.0	89	70	130			
Sodium		378	mg/L	1.6	99	70	130			
Lab ID: C14040377-003BMSD	4	Sample Matrix Spike Duplicate				Run: ICP2-C_140424A			04/24/14 17:05	
Calcium		665	mg/L	1.0	86	70	130	1.1	20	
Magnesium		851	mg/L	1.0	107	70	130	2.2	20	
Potassium		243	mg/L	1.0	90	70	130	0.9	20	
Sodium		381	mg/L	1.6	100	70	130	0.8	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:** 05/19/14

Project: Zone-3 **Work Order:** C14040377

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-C_140425A	
Lab ID: ICV	2	Initial Calibration Verification Standard							04/25/14 10:39	
Aluminum		5.00	mg/L	0.10	100	95	105			
Manganese		5.05	mg/L	0.010	101	95	105			
Lab ID: ICSA	2	Interference Check Sample A							04/25/14 11:19	
Aluminum		492	mg/L	0.10	98	80	120			
Manganese		ND	mg/L	0.010						
Lab ID: ICSAB	2	Interference Check Sample AB							04/25/14 11:23	
Aluminum		499	mg/L	0.10	100	80	120			
Manganese		0.503	mg/L	0.010	101	80	120			
Method: E200.7									Batch: 41110	
Lab ID: MB-41110	2	Method Blank				Run: ICP2-C_140425A			04/25/14 18:38	
Aluminum		ND	mg/L	0.009						
Manganese		ND	mg/L	0.0002						
Lab ID: LCS3-41110	2	Laboratory Control Sample				Run: ICP2-C_140425A			04/25/14 18:42	
Aluminum		2.44	mg/L	0.030	97	85	115			
Manganese		2.46	mg/L	0.0010	98	85	115			
Lab ID: C14040377-005CMS3	2	Sample Matrix Spike				Run: ICP2-C_140425A			04/25/14 19:15	
Aluminum		2.47	mg/L	0.047	95	70	130			
Manganese		9.60	mg/L	0.0011	94	70	130			
Lab ID: C14040377-005CMSD	2	Sample Matrix Spike Duplicate				Run: ICP2-C_140425A			04/25/14 19:19	
Aluminum		2.46	mg/L	0.047	94	70	130	0.5	20	
Manganese		9.72	mg/L	0.0011	99	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:** 05/19/14

Project: Zone-3 **Work Order:** C14040377

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-C_140429A	
Lab ID: ICV	3	Initial Calibration Verification Standard							04/29/14 12:03	
Calcium		51.3	mg/L	0.50	103	95	105			
Magnesium		50.3	mg/L	0.50	101	95	105			
Sodium		51.7	mg/L	0.50	103	95	105			
Lab ID: ICV		Initial Calibration Verification Standard							04/29/14 12:17	
Potassium		49.3	mg/L	0.50	99	95	105			
Lab ID: ICSA	4	Interference Check Sample A							04/29/14 12:41	
Calcium		500	mg/L	0.50	100	80	120			
Magnesium		496	mg/L	0.50	99	80	120			
Potassium		-0.000300	mg/L	0.50						
Sodium		0.192	mg/L	0.50						
Lab ID: ICSAB	4	Interference Check Sample AB							04/29/14 12:45	
Calcium		499	mg/L	0.50	100	80	120			
Magnesium		510	mg/L	0.50	102	80	120			
Potassium		0.00110	mg/L	0.50						
Sodium		0.156	mg/L	0.50						
Method: E200.7										Batch: R186013
Lab ID: MB-140429A	4	Method Blank				Run: ICP2-C_140429A			04/29/14 13:09	
Calcium		ND	mg/L	0.06						
Magnesium		ND	mg/L	0.03						
Potassium		ND	mg/L	0.06						
Sodium		ND	mg/L	0.3						
Lab ID: LFB-140429A	4	Laboratory Fortified Blank				Run: ICP2-C_140429A			04/29/14 13:13	
Calcium		50.7	mg/L	0.50	101	85	115			
Magnesium		50.3	mg/L	0.50	101	85	115			
Potassium		45.2	mg/L	0.50	90	85	115			
Sodium		50.7	mg/L	0.50	101	85	115			
Lab ID: C14040585-013BMS2	4	Sample Matrix Spike				Run: ICP2-C_140429A			04/29/14 13:29	
Calcium		367	mg/L	1.0	85	70	130			
Magnesium		167	mg/L	1.0	99	70	130			
Potassium		102	mg/L	1.0	89	70	130			
Sodium		433	mg/L	1.0	87	70	130			
Lab ID: C14040585-013BMSD	4	Sample Matrix Spike Duplicate				Run: ICP2-C_140429A			04/29/14 13:33	
Calcium		372	mg/L	1.0	90	70	130	1.4	20	
Magnesium		167	mg/L	1.0	99	70	130	0.0	20	
Potassium		101	mg/L	1.0	89	70	130	0.8	20	
Sodium		436	mg/L	1.0	89	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:** 05/19/14

Project: Zone-3 **Work Order:** C14040377

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8								Analytical Run: ICPMS2-C_140424A		
Lab ID: ICV	10	Initial Calibration Verification Standard							04/24/14 14:12	
Aluminum		0.0497	mg/L	0.0010	99	90	110			
Beryllium		0.0502	mg/L	0.0010	100	90	110			
Cadmium		0.0501	mg/L	0.0010	100	90	110			
Cobalt		0.0501	mg/L	0.0010	100	90	110			
Lead		0.0501	mg/L	0.0010	100	90	110			
Manganese		0.0487	mg/L	0.0010	97	90	110			
Molybdenum		0.0504	mg/L	0.0010	101	90	110			
Nickel		0.0496	mg/L	0.0010	99	90	110			
Uranium		0.0515	mg/L	0.00030	103	90	110			
Vanadium		0.0482	mg/L	0.0010	96	90	110			
Method: E200.8									Batch: 41110	
Lab ID: MB-41110	10	Method Blank				Run: ICPMS2-C_140424A			04/24/14 16:30	
Aluminum		0.005	mg/L	0.0005						
Beryllium		0.0003	mg/L	4E-05						
Cadmium		0.0004	mg/L	2E-05						
Cobalt		0.0008	mg/L	1E-05						
Lead		0.0009	mg/L	3E-05						
Manganese		0.004	mg/L	7E-05						
Molybdenum		0.0010	mg/L	8E-05						
Nickel		0.0004	mg/L	9E-05						
Uranium		0.0010	mg/L	9E-06						
Vanadium		ND	mg/L	0.002						
Lab ID: LCS3-41110	10	Laboratory Control Sample				Run: ICPMS2-C_140424A			04/24/14 16:43	
Aluminum		2.25	mg/L	0.030	90	85	115			
Beryllium		0.250	mg/L	0.0010	100	85	115			
Cadmium		0.250	mg/L	0.0010	100	85	115			
Cobalt		0.467	mg/L	0.0050	93	85	115			
Lead		0.498	mg/L	0.0010	99	85	115			
Manganese		2.37	mg/L	0.0010	95	85	115			
Molybdenum		0.516	mg/L	0.0010	103	85	115			
Nickel		0.472	mg/L	0.0050	94	85	115			
Uranium		0.521	mg/L	0.00030	104	85	115			
Vanadium		0.478	mg/L	0.010	96	85	115			
Lab ID: C14040377-005CMS3	10	Sample Matrix Spike				Run: ICPMS2-C_140424A			04/24/14 17:05	
Aluminum		2.24	mg/L	0.030	83	70	130			
Beryllium		0.217	mg/L	0.0010	86	70	130			
Cadmium		0.242	mg/L	0.0010	97	70	130			
Cobalt		0.577	mg/L	0.0050	97	70	130			
Lead		0.510	mg/L	0.0010	102	70	130			
Manganese		9.10	mg/L	0.0010	99	70	130			
Molybdenum		0.710	mg/L	0.0010	103	70	130			
Nickel		0.704	mg/L	0.0050	93	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: 05/19/14
Project: Zone-3
Work Order: C14040377

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8										Batch: 41110
Lab ID: C14040377-005CMS3	10	Sample Matrix Spike				Run: ICPMS2-C_140424A				04/24/14 17:05
Uranium		0.529	mg/L	0.00030	103	70	130			
Vanadium		0.506	mg/L	0.010	101	70	130			
Lab ID: C14040377-005CMSD	10	Sample Matrix Spike Duplicate				Run: ICPMS2-C_140424A				04/24/14 17:08
Aluminum		2.18	mg/L	0.030	81	70	130	2.9	20	
Beryllium		0.210	mg/L	0.0010	84	70	130	3.2	20	
Cadmium		0.238	mg/L	0.0010	95	70	130	1.7	20	
Cobalt		0.569	mg/L	0.0050	95	70	130	1.3	20	
Lead		0.497	mg/L	0.0010	99	70	130	2.7	20	
Manganese		9.00	mg/L	0.0010	95	70	130	1.2	20	
Molybdenum		0.713	mg/L	0.0010	104	70	130	0.4	20	
Nickel		0.693	mg/L	0.0050	91	70	130	1.5	20	
Uranium		0.518	mg/L	0.00030	101	70	130	2.1	20	
Vanadium		0.500	mg/L	0.010	100	70	130	1.3	20	

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:** 05/19/14

Project: Zone-3 **Work Order:** C14040377

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS2-C_140425A	
Lab ID: ICV	5	Initial Calibration Verification Standard							04/25/14 14:53	
Beryllium		0.0493	mg/L	0.0010	99	90	110			
Cobalt		0.0493	mg/L	0.0010	99	90	110			
Manganese		0.0488	mg/L	0.0010	98	90	110			
Nickel		0.0489	mg/L	0.0010	98	90	110			
Vanadium		0.0494	mg/L	0.0010	99	90	110			
Method: E200.8									Batch: 41110	
Lab ID: MB-41110	5	Method Blank				Run: ICPMS2-C_140425A			04/25/14 19:52	
Beryllium		ND	mg/L	4E-05						
Cobalt		ND	mg/L	1E-05						
Manganese		0.0002	mg/L	7E-05						
Nickel		ND	mg/L	9E-05						
Vanadium		ND	mg/L	0.002						
Lab ID: LCS3-41110	5	Laboratory Control Sample				Run: ICPMS2-C_140425A			04/25/14 19:55	
Beryllium		0.268	mg/L	0.0010	107	85	115			
Cobalt		0.457	mg/L	0.0050	91	85	115			
Manganese		2.30	mg/L	0.0010	92	85	115			
Nickel		0.476	mg/L	0.0050	95	85	115			
Vanadium		0.478	mg/L	0.010	96	85	115			
Lab ID: C14040377-005CMS3	5	Sample Matrix Spike				Run: ICPMS2-C_140425A			04/25/14 20:20	
Beryllium		0.249	mg/L	0.0010	99	70	130			
Cobalt		0.580	mg/L	0.0050	97	70	130			
Manganese		9.05	mg/L	0.0010	103	70	130			
Nickel		0.744	mg/L	0.0050	99	70	130			
Vanadium		0.510	mg/L	0.019	102	70	130			
Lab ID: C14040377-005CMSD	5	Sample Matrix Spike Duplicate				Run: ICPMS2-C_140425A			04/25/14 20:23	
Beryllium		0.239	mg/L	0.0010	95	70	130	4.4	20	
Cobalt		0.573	mg/L	0.0050	96	70	130	1.3	20	
Manganese		8.97	mg/L	0.0010	99	70	130	0.9	20	
Nickel		0.739	mg/L	0.0050	98	70	130	0.7	20	
Vanadium		0.500	mg/L	0.019	100	70	130	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: 05/19/14
Project: Zone-3
Work Order: C14040377

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E300.0**									Analytical Run: IC2-C_140411A	
Lab ID:	**CCV-041114-02**	2	Continuing Calibration Verification Standard							04/11/14 14:19	
Chloride			9.79	mg/L	1.0	98	90	110			
Sulfate			39.4	mg/L	1.0	98	90	110			
Lab ID:	**CCV-041114-03**	2	Continuing Calibration Verification Standard							04/11/14 18:23	
Chloride			9.93	mg/L	1.0	99	90	110			
Sulfate			39.8	mg/L	1.0	99	90	110			
Method:	**E300.0**									Batch: R185393	
Lab ID:	**ICB**	2	Method Blank				Run: IC2-C_140411A			04/11/14 09:58	
Chloride			0.07	mg/L	0.04						
Sulfate			0.09	mg/L	0.04						
Lab ID:	**LFB**	2	Laboratory Fortified Blank				Run: IC2-C_140411A			04/11/14 10:16	
Chloride			9.93	mg/L	1.0	99	90	110			
Sulfate			39.7	mg/L	1.0	99	90	110			
Lab ID:	**C14040377-005AMS**	2	Sample Matrix Spike				Run: IC2-C_140411A			04/11/14 19:16	
Chloride			246	mg/L	2.1	100	90	110			
Sulfate			5670	mg/L	8.3		90	110			A
Lab ID:	**C14040377-005AMSD**	2	Sample Matrix Spike Duplicate				Run: IC2-C_140411A			04/11/14 19:33	
Chloride			248	mg/L	2.1	101	90	110	0.8	20	
Sulfate			5670	mg/L	8.3		90	110	0.1	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: 05/19/14
Project: Zone-3
Work Order: C14040377

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E353.2									Analytical Run: TECHNICON_140415A	
Lab ID: CCV-60		Continuing Calibration Verification Standard							04/15/14 16:15	
Nitrogen, Nitrate+Nitrite as N		1.10	mg/L	0.10	110	90	110			
Lab ID: CCV-77		Continuing Calibration Verification Standard							04/15/14 16:57	
Nitrogen, Nitrate+Nitrite as N		1.09	mg/L	0.10	109	90	110			
Method: E353.2									Batch: R185498	
Lab ID: MBLK-1		Method Blank				Run: TECHNICON_140415A			04/15/14 13:47	
Nitrogen, Nitrate+Nitrite as N		ND	mg/L	0.05						
Lab ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_140415A			04/15/14 13:52	
Nitrogen, Nitrate+Nitrite as N		1.83	mg/L	0.10	93	90	110			
Lab ID: C14040377-010DMS		Sample Matrix Spike				Run: TECHNICON_140415A			04/15/14 16:50	
Nitrogen, Nitrate+Nitrite as N		1.76	mg/L	0.10	90	90	110			
Lab ID: C14040377-010DMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_140415A			04/15/14 16:52	
Nitrogen, Nitrate+Nitrite as N		1.86	mg/L	0.10	95	90	110	5.5	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:** 05/19/14

Project: Zone-3 **Work Order:** C14040377

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624									Analytical Run: R185410	
Lab ID: 11-Apr-14_CCV_20	9	Continuing Calibration Verification Standard							04/11/14 22:04	
Bromodichloromethane		10.6	ug/L	1.0	106	70	130			
Bromoform		10.0	ug/L	1.0	100	70	130			
Chlorodibromomethane		10.6	ug/L	1.0	106	70	130			
Chloroform		10.1	ug/L	1.0	101	70	130			
Trihalomethanes, Total		41.3	ug/L	1.0	103	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	97	70	130			
Surr: Dibromofluoromethane				1.0	105	70	130			
Surr: p-Bromofluorobenzene				1.0	92	70	130			
Surr: Toluene-d8				1.0	93	70	130			
Method: E624									Batch: R185410	
Lab ID: 11-Apr-14_LCS_4	9	Laboratory Control Sample				Run: GCMS2_140411C			04/11/14 12:56	
Bromodichloromethane		9.76	ug/L	1.0	98	60	130			
Bromoform		9.56	ug/L	1.0	96	60	142			
Chlorodibromomethane		10.4	ug/L	1.0	104	67	134			
Chloroform		8.84	ug/L	1.0	88	56	135			
Trihalomethanes, Total		38.5	ug/L	1.0	96	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	97	70	130			
Surr: Dibromofluoromethane				1.0	98	43	142			
Surr: p-Bromofluorobenzene				1.0	91	70	130			
Surr: Toluene-d8				1.0	95	70	130			
Lab ID: 11-Apr-14_MBLK_6	9	Method Blank				Run: GCMS2_140411C			04/11/14 14:04	
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	98	73.7	126			
Surr: Dibromofluoromethane				1.0	101	64.4	131			
Surr: p-Bromofluorobenzene				1.0	92	67.1	133			
Surr: Toluene-d8				1.0	94	79.7	125			
Lab ID: C14040377-001HMS	9	Sample Matrix Spike				Run: GCMS2_140411C			04/11/14 20:21	
Bromodichloromethane		102	ug/L	5.0	102	60	130			
Bromoform		91.2	ug/L	5.0	91	60	142			
Chlorodibromomethane		108	ug/L	5.0	108	67	134			
Chloroform		186	ug/L	5.0	102	56	135			
Trihalomethanes, Total		488	ug/L	5.0	101	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	98	70	130			
Surr: Dibromofluoromethane				1.0	110	43	142			
Surr: p-Bromofluorobenzene				1.0	87	70	130			
Surr: Toluene-d8				1.0	95	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: 05/19/14
Project: Zone-3
Work Order: C14040377

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624										Batch: R185410
Lab ID: C14040377-001HMSD	9	Sample Matrix Spike Duplicate				Run: GCMS2_140411C				04/11/14 20:55
Bromodichloromethane		103	ug/L	5.0	103	60	130	1.2	20	
Bromoform		97.2	ug/L	5.0	97	60	142	6.4	20	
Chlorodibromomethane		111	ug/L	5.0	111	67	134	2.9	20	
Chloroform		189	ug/L	5.0	104	56	135	1.3	20	
Trihalomethanes, Total		500	ug/L	5.0	104	70	130	2.6	20	
Surr: 1,2-Dichlorobenzene-d4				1.0	98	70	130			
Surr: Dibromofluoromethane				1.0	109	43	142			
Surr: p-Bromofluorobenzene				1.0	89	70	130			
Surr: Toluene-d8				1.0	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:** 05/19/14

Project: Zone-3 **Work Order:** C14040377

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E900.1										Batch: GA-0782R
Lab ID: LCS-GA-0782		Laboratory Control Sample				Run: G542M_140414B				05/09/14 15:00
Gross Alpha minus Rn & U		38.2	pCi/L		101	80	120			
Lab ID: MB-GA-0782	3	Method Blank				Run: G542M_140414B				05/09/14 15:00
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							
Lab ID: C14040377-010GMS		Sample Matrix Spike				Run: G542M_140414B				05/09/14 15:01
Gross Alpha minus Rn & U		79.6	pCi/L		93	70	130			
Lab ID: C14040377-010GMSD		Sample Matrix Spike Duplicate				Run: G542M_140414B				05/09/14 15:01
Gross Alpha minus Rn & U		72.3	pCi/L		84	70	130	9.5	18.1	

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: 05/19/14
Project: Zone-3
Work Order: C14040377

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E903.0										Batch: RA226-7142
Lab ID: C14040375-001GMS		Sample Matrix Spike				Run: G542M_140411A				04/21/14 10:31
Radium 226		22	pCi/L		94	70	130			
Lab ID: C14040375-001GMSD		Sample Matrix Spike Duplicate				Run: G542M_140411A				04/21/14 10:31
Radium 226		22	pCi/L		97	70	130	2.3	21.5	
Lab ID: MB-RA226-7142	3	Method Blank				Run: G542M_140411A				04/21/14 12:06
Radium 226		0.06	pCi/L							U
Radium 226 precision (±)		0.10	pCi/L							
Radium 226 MDC		0.2	pCi/L							
Lab ID: LCS-RA226-7142		Laboratory Control Sample				Run: G542M_140411A				04/21/14 12:06
Radium 226		11	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
Report Date: 05/19/14
Project: Zone-3
Work Order: C14040377

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E908.0										Batch: RA-TH-ISO-2034
Lab ID: LCS-RA-TH-ISO-2030		Laboratory Control Sample				Run: ALPHANALYST_140423B				04/24/14 16:35
Thorium 230		11	pCi/L		97	80	120			
Lab ID: C14040408-008GMS		Sample Matrix Spike				Run: ALPHANALYST_140423B				04/24/14 16:35
Thorium 230		24	pCi/L		103	70	130			
Lab ID: C14040408-008GMSD		Sample Matrix Spike Duplicate				Run: ALPHANALYST_140423B				04/24/14 16:35
Thorium 230		22	pCi/L		95	70	130	7.7	30.4	
Lab ID: MB-RA-TH-ISO-2030	3	Method Blank				Run: ALPHANALYST_140423B				04/25/14 08:52
Thorium 230		0.2	pCi/L							
Thorium 230 precision (±)		0.1	pCi/L							
Thorium 230 MDC		0.1	pCi/L							
Method: E908.0										Batch: RA-TH-ISO-2029
Lab ID: LCS-RA-TH-ISO-2029		Laboratory Control Sample				Run: EGG-ORTEC_140416A				04/21/14 10:04
Thorium 230		11.5	pCi/L		101	80	120			
Lab ID: C14040377-006GMS		Sample Matrix Spike				Run: EGG-ORTEC_140416A				04/21/14 10:04
Thorium 230		24.5	pCi/L		102	70	130			
Lab ID: C14040377-006GMSD		Sample Matrix Spike Duplicate				Run: EGG-ORTEC_140416A				04/21/14 10:04
Thorium 230		26.6	pCi/L		111	70	130	8.0	43.4	
Lab ID: MB-RA-TH-ISO-2029	3	Method Blank				Run: EGG-ORTEC_140416A				04/21/14 10:04
Thorium 230		0.1	pCi/L							U
Thorium 230 precision (±)		0.2	pCi/L							
Thorium 230 MDC		0.3	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:** 05/19/14

Project: Zone-3 **Work Order:** C14040377

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E909.0										Batch: T_PB-210-0458
Lab ID: MB-PB-210-0458	3	Method Blank				Run: SUB-T56574				04/27/14 16:13
Lead 210		0.3	pCi/L							U
Lead 210 precision (±)		0.6	pCi/L							
Lead 210 MDC		1.0	pCi/L							
Lab ID: LCS-PB-210-0458		Laboratory Control Sample				Run: SUB-T56574				04/27/14 17:34
Lead 210		15	pCi/L		71	80	120			S
- LCS response is outside of the acceptance range for this analysis. Since the MB, MS, and MSD are acceptable the batch is approved.										
Lab ID: T14040069-005FMS		Sample Matrix Spike				Run: SUB-T56574				04/28/14 21:45
Lead 210		49	pCi/L		107	70	130			
Lab ID: T14040069-005FMSD		Sample Matrix Spike Duplicate				Run: SUB-T56574				04/28/14 23:06
Lead 210		47	pCi/L		103	70	130	4.1	20.5	
Method: E909.0										Batch: T_PB-210-0459
Lab ID: MB-PB-210-0459	3	Method Blank				Run: SUB-T56675				05/03/14 17:13
Lead 210		-0.3	pCi/L							U
Lead 210 precision (±)		0.7	pCi/L							
Lead 210 MDC		1	pCi/L							
Lab ID: LCS-PB-210-0459		Laboratory Control Sample				Run: SUB-T56675				05/03/14 18:44
Lead 210		20	pCi/L		97	80	120			
Lab ID: T14040071-004FMS		Sample Matrix Spike				Run: SUB-T56675				05/04/14 22:09
Lead 210		43	pCi/L		100	70	130			
Lab ID: T14040071-004FMSD		Sample Matrix Spike Duplicate				Run: SUB-T56675				05/04/14 23:40
Lead 210		47	pCi/L		111	70	130	11	21.1	

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: 05/19/14
Project: Zone-3
Work Order: C14040377

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: RA-05										Batch: RA228-4644
Lab ID: LCS-228-RA226-7142		Laboratory Control Sample				Run: TENNELEC-3_140411D			04/16/14 15:29	
Radium 228		7.3	pCi/L		105	80	120			
Lab ID: MB-RA226-7142	3	Method Blank				Run: TENNELEC-3_140411D			04/16/14 15:29	
Radium 228		-0.2	pCi/L							U
Radium 228 precision (±)		0.8	pCi/L							
Radium 228 MDC		1	pCi/L							
Lab ID: C14040376-001EMS		Sample Matrix Spike				Run: TENNELEC-3_140411D			04/16/14 15:29	
Radium 228		17	pCi/L		109	70	130			
Lab ID: C14040376-001EMSD		Sample Matrix Spike Duplicate				Run: TENNELEC-3_140411D			04/16/14 15:29	
Radium 228		17	pCi/L		110	70	130	0.9	37.4	

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

May 19, 2014

United Nuclear Corporation
21 Miles NE of Gallup
Gallup, NM 87305

Work Order: C14040436 Quote ID: C129 - Quarterly Long List

Project Name: Zone-3 TE-7-4-2014

Energy Laboratories, Inc. Casper WY received the following 4 samples for United Nuclear Corporation on 4/14/2014 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C14040436-001	MW-6	04/08/14 9:00	04/14/14	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Total Alkalinity Anion - Cation Balance Arsenic Speciation, Total 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
C14040436-002	MW-7	04/08/14 11:50	04/14/14	Aqueous	Same As Above
C14040436-003	Rinsate	04/08/14 14:30	04/14/14	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Total Alkalinity Anion - Cation Balance Arsenic Speciation, Total 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
C14040436-004	Field Blank	04/08/14 15:20	04/14/14	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:

Report Proofing Specialist

Digitally signed by
Sheri M. Mead
Date: 2014.05.19 12:33:08 -06:00

CLIENT: United Nuclear Corporation
Project: Zone-3 TE-7-4-2014
Sample Delivery Group: C14040436

Report Date: 05/19/14

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:** 05/19/14

Project: Zone-3 TE-7-4-2014 **Work Order:** C14040436

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2320 B										Batch: R185439
Lab ID: MBLK	2	Method Blank				Run: MANTECH_140414B				04/14/14 14:53
Alkalinity, Total as CaCO3		0.7	mg/L	0.6						
Bicarbonate as HCO3		ND	mg/L	1						
Lab ID: LCS_131219		Laboratory Control Sample				Run: MANTECH_140414B				04/14/14 15:07
Alkalinity, Total as CaCO3		258	mg/L	5.0	103	90	110			
Lab ID: C14040384-001ADUP	2	Sample Duplicate				Run: MANTECH_140414B				04/14/14 15:24
Alkalinity, Total as CaCO3		250	mg/L	5.0				0.1	10	
Bicarbonate as HCO3		284	mg/L	5.0				0.4	10	
Lab ID: C14040404-001AMS		Sample Matrix Spike				Run: MANTECH_140414B				04/14/14 15:42
Alkalinity, Total as CaCO3		939	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: 05/19/14
Project: Zone-3 TE-7-4-2014
Work Order: C14040436

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C										Batch: TDS140414A
Lab ID: MB-1_140414A		Method Blank				Run: BAL-19_140414B				04/14/14 14:44
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	7						
Lab ID: LCS-2_140414A		Laboratory Control Sample				Run: BAL-19_140414B				04/14/14 14:44
Solids, Total Dissolved TDS @ 180 C		1990	mg/L	20	100	90	110			
Lab ID: C14040418-001A MS		Sample Matrix Spike				Run: BAL-19_140414B				04/14/14 14:52
Solids, Total Dissolved TDS @ 180 C		1690	mg/L	11	99	90	110			
Lab ID: C14040424-007A DUP		Sample Duplicate				Run: BAL-19_140414B				04/14/14 14:57
Solids, Total Dissolved TDS @ 180 C		4520	mg/L	37				0.0	5	
Method: A2540 C										Batch: TDS140416A
Lab ID: MB-1_140416A		Method Blank				Run: BAL-19_140416B				04/16/14 14:56
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	7						
Lab ID: LCS-2_140416A		Laboratory Control Sample				Run: BAL-19_140416B				04/16/14 14:57
Solids, Total Dissolved TDS @ 180 C		1970	mg/L	20	98	90	110			
Lab ID: C14040436-003A DUP		Sample Duplicate				Run: BAL-19_140416B				04/16/14 14:57
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	10					5	
Lab ID: C14040436-004A MS		Sample Matrix Spike				Run: BAL-19_140416B				04/16/14 14:58
Solids, Total Dissolved TDS @ 180 C		1100	mg/L	11	99	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: 05/19/14
Project: Zone-3 TE-7-4-2014
Work Order: C14040436

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A3114 B									Analytical Run: CVAA-C202_140422A	
Lab ID: ICV		Initial Calibration Verification Standard							04/22/14 16:30	
Selenium-IV		0.0247	mg/L	0.0010	99	90	110			
Lab ID: CCV		Continuing Calibration Verification Standard							04/22/14 16:50	
Selenium-IV		0.0250	mg/L	0.0010	100	90	110			
Method: A3114 B									Batch: 41158	
Lab ID: MB-41158		Method Blank				Run: CVAA-C202_140422A			04/22/14 17:07	
Selenium-IV		ND	mg/L	0.0005						
Lab ID: LCS-41158		Laboratory Control Sample				Run: CVAA-C202_140422A			04/22/14 17:08	
Selenium-IV		0.0241	mg/L	0.0010	96	90	110			
Lab ID: C14040436-003CMS		Sample Matrix Spike				Run: CVAA-C202_140422A			04/22/14 17:44	
Selenium-IV		0.0226	mg/L	0.0010	90	85	115			
Lab ID: C14040436-003CMSD		Sample Matrix Spike Duplicate				Run: CVAA-C202_140422A			04/22/14 17:46	
Selenium-IV		0.0230	mg/L	0.0010	92	85	115	1.8	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:** 05/19/14

Project: Zone-3 TE-7-4-2014 **Work Order:** C14040436

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **A4500-H B**									Analytical Run: PHSC_101-C_140414A	
Lab ID: **pH 6.86**	Initial Calibration Verification Standard								04/14/14 09:03	
pH		6.87	s.u.	0.010	100	98	102			
Lab ID: **CCV - pH 7**	Continuing Calibration Verification Standard								04/14/14 10:33	
pH		6.99	s.u.	0.010	100	98	102			
Method: **A4500-H B**									Batch: R185401	
Lab ID: **C14040424-008ADUP**	Sample Duplicate					Run: PHSC_101-C_140414A			04/14/14 10:29	
pH		6.29	s.u.	0.010				0.2	3	
Method: **A4500-H B**									Analytical Run: PHSC_101-C_140416A	
Lab ID: **pH 6.86**	Initial Calibration Verification Standard								04/16/14 08:39	
pH		6.88	s.u.	0.010	100	98	102			
Lab ID: **CCV - pH 7**	Continuing Calibration Verification Standard								04/16/14 11:11	
pH		7.01	s.u.	0.010	100	98	102			
Method: **A4500-H B**									Batch: R185508	
Lab ID: **C14040487-003ADUP**	Sample Duplicate					Run: PHSC_101-C_140416A			04/16/14 11:04	
pH		7.71	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: 05/19/14
Project: Zone-3 TE-7-4-2014
Work Order: C14040436

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-NH3 G									Analytical Run: TECHNICON_140418A	
Lab ID: CCV-14		Continuing Calibration Verification Standard							04/18/14 11:54	
Nitrogen, Ammonia as N		0.956	mg/L	0.050	96	90	110			
Method: A4500-NH3 G									Batch: R185630	
Lab ID: MBLK-1		Method Blank				Run: TECHNICON_140418A			04/18/14 11:32	
Nitrogen, Ammonia as N		ND	mg/L	0.006						
Lab ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_140418A			04/18/14 11:35	
Nitrogen, Ammonia as N		1.88	mg/L	0.050	96	90	110			
Lab ID: C14040466-001EMS		Sample Matrix Spike				Run: TECHNICON_140418A			04/18/14 11:59	
Nitrogen, Ammonia as N		4.32	mg/L	0.050	100	90	110			
Lab ID: C14040466-001EMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_140418A			04/18/14 12:01	
Nitrogen, Ammonia as N		4.47	mg/L	0.050	107	90	110	3.4	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: 05/19/14
Project: Zone-3 TE-7-4-2014
Work Order: C14040436

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **E1632AM**									Analytical Run: SUB-H96731	
Lab ID: **AS-ICV 25ppb-5/1/201**		Initial Calibration Verification Standard							05/01/14 11:51	
Arsenic-III		25.7	ug/L	5.0	103	87.6	114			
Lab ID: **AS-50.0-5/1/2014**		Continuing Calibration Verification Standard							05/01/14 12:03	
Arsenic-III		49.0	ug/L	5.0	98	85	115			
Lab ID: **AS-50.0-4/30/2014**		Continuing Calibration Verification Standard							05/01/14 14:15	
Arsenic-III		47.1	ug/L	5.0	94	85	115			
Method: **E1632AM**									Batch: H_R96731	
Lab ID: **AS-LFB 50ppb-5/1/20**		Laboratory Fortified Blank				Run: SUB-H96731			05/01/14 12:27	
Arsenic-III		47.3	ug/L	5.0	95	55	146			
Lab ID: **ICB**		Method Blank				Run: SUB-H96731			05/01/14 12:39	
Arsenic-III		ND	ug/L	0.6						
Lab ID: **C14040436-001E**		Sample Matrix Spike				Run: SUB-H96731			05/01/14 13:27	
Arsenic-III		48.1	ug/L	5.0	96	55	146			
Lab ID: **C14040436-001E**		Sample Matrix Spike Duplicate				Run: SUB-H96731			05/01/14 13:39	
Arsenic-III		47.6	ug/L	5.0	95	55	146	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:** 05/19/14

Project: Zone-3 TE-7-4-2014 **Work Order:** C14040436

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP4-C_140430A	
Lab ID: ICV	4	Initial Calibration Verification Standard							04/30/14 13:57	
Calcium		49.0	mg/L	0.50	98	95	105			
Magnesium		48.9	mg/L	0.50	98	95	105			
Potassium		48.7	mg/L	0.50	97	95	105			
Sodium		48.8	mg/L	0.50	98	95	105			
Lab ID: ICSA	4	Interference Check Sample A							04/30/14 14:11	
Calcium		473	mg/L	0.50	95	80	120			
Magnesium		499	mg/L	0.50	100	80	120			
Potassium		0.0449	mg/L	0.50						
Sodium		-0.239	mg/L	0.50						
Lab ID: ICSAB	4	Interference Check Sample AB							04/30/14 14:15	
Calcium		481	mg/L	0.50	96	80	120			
Magnesium		510	mg/L	0.50	102	80	120			
Potassium		0.0293	mg/L	0.50						
Sodium		-0.423	mg/L	0.50						
Method: E200.7										Batch: R186071
Lab ID: MB-140430A	4	Method Blank				Run: ICP4-C_140430A			04/30/14 14:33	
Calcium		ND	mg/L	0.02						
Magnesium		ND	mg/L	0.02						
Potassium		ND	mg/L	0.04						
Sodium		ND	mg/L	0.2						
Lab ID: LFB-140430A	4	Laboratory Fortified Blank				Run: ICP4-C_140430A			04/30/14 14:37	
Calcium		47.4	mg/L	0.50	95	85	115			
Magnesium		47.1	mg/L	0.50	94	85	115			
Potassium		48.1	mg/L	0.50	96	85	115			
Sodium		48.1	mg/L	0.50	96	85	115			
Lab ID: C14040436-003BMS2	4	Sample Matrix Spike				Run: ICP4-C_140430A			04/30/14 16:33	
Calcium		84.9	mg/L	1.0	83	70	130			
Magnesium		84.8	mg/L	1.0	83	70	130			
Potassium		84.2	mg/L	1.0	82	70	130			
Sodium		85.0	mg/L	1.0	83	70	130			
Lab ID: C14040436-003BMSD	4	Sample Matrix Spike Duplicate				Run: ICP4-C_140430A			04/30/14 16:36	
Calcium		86.8	mg/L	1.0	85	70	130	2.2	20	
Magnesium		86.6	mg/L	1.0	85	70	130	2.1	20	
Potassium		86.3	mg/L	1.0	84	70	130	2.4	20	
Sodium		86.6	mg/L	1.0	84	70	130	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:** 05/19/14

Project: Zone-3 TE-7-4-2014 **Work Order:** C14040436

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP4-C_140506A	
Lab ID: ICV	4	Initial Calibration Verification Standard							05/06/14 15:54	
Calcium		50.1	mg/L	0.50	100	95	105			
Magnesium		50.0	mg/L	0.50	100	95	105			
Potassium		49.4	mg/L	0.50	99	95	105			
Sodium		50.1	mg/L	0.50	100	95	105			
Lab ID: ICSA	4	Interference Check Sample A							05/06/14 16:08	
Calcium		459	mg/L	0.50	92	80	120			
Magnesium		496	mg/L	0.50	99	80	120			
Potassium		-0.00929	mg/L	0.50						
Sodium		-0.262	mg/L	0.50						
Lab ID: ICSAB	4	Interference Check Sample AB							05/06/14 16:12	
Calcium		462	mg/L	0.50	92	80	120			
Magnesium		504	mg/L	0.50	101	80	120			
Potassium		-0.0133	mg/L	0.50						
Sodium		-0.305	mg/L	0.50						
Method: E200.7									Batch: R186254	
Lab ID: MB-140506A	4	Method Blank				Run: ICP4-C_140506A			05/06/14 16:31	
Calcium		ND	mg/L	0.02						
Magnesium		ND	mg/L	0.02						
Potassium		ND	mg/L	0.04						
Sodium		ND	mg/L	0.2						
Lab ID: LFB-140506A	4	Laboratory Fortified Blank				Run: ICP4-C_140506A			05/06/14 16:35	
Calcium		48.2	mg/L	0.50	96	85	115			
Magnesium		48.0	mg/L	0.50	96	85	115			
Potassium		51.4	mg/L	0.50	103	85	115			
Sodium		49.6	mg/L	0.50	99	85	115			
Lab ID: C14040293-007BMS2	4	Sample Matrix Spike				Run: ICP4-C_140506A			05/06/14 17:20	
Calcium		204	mg/L	1.0	91	70	130			
Magnesium		129	mg/L	1.0	95	70	130			
Potassium		103	mg/L	1.0	98	70	130			
Sodium		151	mg/L	1.0	94	70	130			
Lab ID: C14040293-007BMSD	4	Sample Matrix Spike Duplicate				Run: ICP4-C_140506A			05/06/14 17:23	
Calcium		202	mg/L	1.0	90	70	130	0.9	20	
Magnesium		128	mg/L	1.0	94	70	130	0.7	20	
Potassium		99.7	mg/L	1.0	94	70	130	3.5	20	
Sodium		147	mg/L	1.0	91	70	130	2.3	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:** 05/19/14

Project: Zone-3 TE-7-4-2014 **Work Order:** C14040436

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS2-C_140424A	
Lab ID: ICV	9	Initial Calibration Verification Standard							04/24/14 14:12	
Aluminum		0.0497	mg/L	0.0010	99	90	110			
Beryllium		0.0502	mg/L	0.0010	100	90	110			
Cadmium		0.0501	mg/L	0.0010	100	90	110			
Cobalt		0.0501	mg/L	0.0010	100	90	110			
Lead		0.0501	mg/L	0.0010	100	90	110			
Molybdenum		0.0504	mg/L	0.0010	101	90	110			
Nickel		0.0496	mg/L	0.0010	99	90	110			
Uranium		0.0515	mg/L	0.00030	103	90	110			
Vanadium		0.0482	mg/L	0.0010	96	90	110			
Method: E200.8									Batch: 41110	
Lab ID: MB-41110	9	Method Blank				Run: ICPMS2-C_140424A			04/24/14 16:30	
Aluminum		0.005	mg/L	0.0005						
Beryllium		0.0003	mg/L	4E-05						
Cadmium		0.0004	mg/L	2E-05						
Cobalt		0.0008	mg/L	1E-05						
Lead		0.0009	mg/L	3E-05						
Molybdenum		0.0010	mg/L	8E-05						
Nickel		0.0004	mg/L	9E-05						
Uranium		0.0010	mg/L	9E-06						
Vanadium		ND	mg/L	0.002						
Lab ID: LCS3-41110	9	Laboratory Control Sample				Run: ICPMS2-C_140424A			04/24/14 16:43	
Aluminum		2.25	mg/L	0.030	90	85	115			
Beryllium		0.250	mg/L	0.0010	100	85	115			
Cadmium		0.250	mg/L	0.0010	100	85	115			
Cobalt		0.467	mg/L	0.0050	93	85	115			
Lead		0.498	mg/L	0.0010	99	85	115			
Molybdenum		0.516	mg/L	0.0010	103	85	115			
Nickel		0.472	mg/L	0.0050	94	85	115			
Uranium		0.521	mg/L	0.00030	104	85	115			
Vanadium		0.478	mg/L	0.010	96	85	115			
Lab ID: C14040436-002CMS3	9	Sample Matrix Spike				Run: ICPMS2-C_140424A			04/24/14 17:46	
Aluminum		2.24	mg/L	0.030	89	70	130			
Beryllium		0.225	mg/L	0.0010	90	70	130			
Cadmium		0.238	mg/L	0.0010	95	70	130			
Cobalt		0.509	mg/L	0.0050	93	70	130			
Lead		0.511	mg/L	0.0010	102	70	130			
Molybdenum		1.23	mg/L	0.0010	101	70	130			
Nickel		0.527	mg/L	0.0050	93	70	130			
Uranium		0.711	mg/L	0.00030	107	70	130			
Vanadium		0.495	mg/L	0.010	99	70	130			

Qualifiers:

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QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/19/14
Project: Zone-3 TE-7-4-2014
Work Order: C14040436

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8										Batch: 41110
Lab ID: C14040436-002CMSD	9	Sample Matrix Spike Duplicate				Run: ICPMS2-C_140424A				04/24/14 17:59
Aluminum		2.27	mg/L	0.030	90	70	130	1.2	20	
Beryllium		0.223	mg/L	0.0010	89	70	130	0.5	20	
Cadmium		0.233	mg/L	0.0010	93	70	130	2.1	20	
Cobalt		0.494	mg/L	0.0050	90	70	130	3.0	20	
Lead		0.497	mg/L	0.0010	99	70	130	2.9	20	
Molybdenum		1.22	mg/L	0.0010	98	70	130	1.0	20	
Nickel		0.508	mg/L	0.0050	89	70	130	3.7	20	
Uranium		0.692	mg/L	0.00030	103	70	130	2.8	20	
Vanadium		0.481	mg/L	0.010	96	70	130	2.8	20	
Method: E200.8										Analytical Run: ICPMS2-C_140425A
Lab ID: ICV		Initial Calibration Verification Standard								04/25/14 14:53
Manganese		0.0488	mg/L	0.0010	98	90	110			
Method: E200.8										Batch: 41110
Lab ID: MB-41110		Method Blank				Run: ICPMS2-C_140425A				04/25/14 19:52
Manganese		0.0002	mg/L	7E-05						
Lab ID: LCS3-41110		Laboratory Control Sample				Run: ICPMS2-C_140425A				04/25/14 19:55
Manganese		2.30	mg/L	0.0010	92	85	115			
Lab ID: C14040436-002CMS3		Sample Matrix Spike				Run: ICPMS2-C_140425A				04/25/14 21:02
Manganese		5.19	mg/L	0.0010	94	70	130			
Lab ID: C14040436-002CMSD		Sample Matrix Spike Duplicate				Run: ICPMS2-C_140425A				04/25/14 21:05
Manganese		5.15	mg/L	0.0010	92	70	130	0.7	20	

Qualifiers:

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QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/19/14
Project: Zone-3 TE-7-4-2014
Work Order: C14040436

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS4-C_140424A	
Lab ID: ICV	10	Initial Calibration Verification Standard							04/23/14 12:39	
Aluminum		0.0510	mg/L	0.0010	102	90	110			
Beryllium		0.0522	mg/L	0.0010	104	90	110			
Cadmium		0.0503	mg/L	0.0010	101	90	110			
Cobalt		0.0517	mg/L	0.0010	103	90	110			
Lead		0.0506	mg/L	0.0010	101	90	110			
Manganese		0.0508	mg/L	0.0010	102	90	110			
Molybdenum		0.0478	mg/L	0.0010	96	90	110			
Nickel		0.0508	mg/L	0.0010	102	90	110			
Uranium		0.0515	mg/L	0.00030	103	90	110			
Vanadium		0.0516	mg/L	0.0010	103	90	110			
Method: E200.8									Batch: 41148	
Lab ID: MB-41148	10	Method Blank				Run: ICPMS4-C_140424A			04/23/14 20:57	
Aluminum		0.001	mg/L	0.0007						
Beryllium		ND	mg/L	1E-05						
Cadmium		7E-05	mg/L	2E-05						
Cobalt		ND	mg/L	1E-05						
Lead		ND	mg/L	4E-05						
Manganese		0.0003	mg/L	0.0001						
Molybdenum		ND	mg/L	0.0002						
Nickel		ND	mg/L	0.0001						
Uranium		ND	mg/L	4E-05						
Vanadium		0.01	mg/L	0.001						
Lab ID: LCS3-41148	10	Laboratory Control Sample				Run: ICPMS4-C_140424A			04/23/14 21:01	
Aluminum		2.34	mg/L	0.030	94	85	115			
Beryllium		0.237	mg/L	0.0010	95	85	115			
Cadmium		0.261	mg/L	0.0010	104	85	115			
Cobalt		0.502	mg/L	0.0050	100	85	115			
Lead		0.507	mg/L	0.0010	101	85	115			
Manganese		2.55	mg/L	0.0010	102	85	115			
Molybdenum		0.505	mg/L	0.0010	101	85	115			
Nickel		0.496	mg/L	0.0050	99	85	115			
Uranium		0.540	mg/L	0.00030	108	85	115			
Vanadium		0.485	mg/L	0.010	95	85	115			
Lab ID: C14040436-004CMS3	10	Sample Matrix Spike				Run: ICPMS4-C_140424A			04/23/14 21:21	
Aluminum		2.34	mg/L	0.030	94	70	130			
Beryllium		0.236	mg/L	0.0010	95	70	130			
Cadmium		0.260	mg/L	0.0010	104	70	130			
Cobalt		0.495	mg/L	0.0050	99	70	130			
Lead		0.506	mg/L	0.0010	101	70	130			
Manganese		2.54	mg/L	0.0010	102	70	130			
Molybdenum		0.514	mg/L	0.0010	103	70	130			
Nickel		0.505	mg/L	0.0050	101	70	130			

Qualifiers:

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QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/19/14
Project: Zone-3 TE-7-4-2014
Work Order: C14040436

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8										Batch: 41148
Lab ID: C14040436-004CMS3	10	Sample Matrix Spike				Run: ICPMS4-C_140424A				04/23/14 21:21
Uranium		0.538	mg/L	0.00030	108	70	130			
Vanadium		0.488	mg/L	0.010	95	70	130			
Lab ID: C14040436-004CMSD	10	Sample Matrix Spike Duplicate				Run: ICPMS4-C_140424A				04/23/14 21:25
Aluminum		2.26	mg/L	0.030	90	70	130	3.8	20	
Beryllium		0.220	mg/L	0.0010	88	70	130	7.2	20	
Cadmium		0.257	mg/L	0.0010	103	70	130	1.4	20	
Cobalt		0.501	mg/L	0.0050	100	70	130	1.3	20	
Lead		0.507	mg/L	0.0010	101	70	130	0.2	20	
Manganese		2.57	mg/L	0.0010	103	70	130	1.1	20	
Molybdenum		0.498	mg/L	0.0010	100	70	130	3.2	20	
Nickel		0.505	mg/L	0.0050	101	70	130	0.1	20	
Uranium		0.550	mg/L	0.00030	110	70	130	2.2	20	
Vanadium		0.487	mg/L	0.010	95	70	130	0.3	20	

Qualifiers:

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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:** 05/19/14

Project: Zone-3 TE-7-4-2014 **Work Order:** C14040436

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0								Analytical Run: IC1-C_140414A		
Lab ID: CCV-041414-04	2	Continuing Calibration Verification Standard							04/15/14 00:40	
Chloride		10.2	mg/L	1.0	102	90	110			
Sulfate		41.0	mg/L	1.0	102	90	110			
Lab ID: CCV-041414-05	2	Continuing Calibration Verification Standard							04/15/14 04:58	
Chloride		10.3	mg/L	1.0	103	90	110			
Sulfate		41.1	mg/L	1.0	103	90	110			
Method: E300.0									Batch: R185467	
Lab ID: ICB	2	Method Blank				Run: IC1-C_140414A			04/14/14 11:28	
Chloride		ND	mg/L	0.04						
Sulfate		0.2	mg/L	0.1						
Lab ID: LFB-041414-01	2	Laboratory Fortified Blank				Run: IC1-C_140414A			04/14/14 11:47	
Chloride		10.4	mg/L	1.0	104	90	110			
Sulfate		41.6	mg/L	1.0	104	90	110			
Lab ID: C14040424-007AMS	2	Sample Matrix Spike				Run: IC1-C_140414A			04/15/14 01:35	
Chloride		249	mg/L	2.1	106	90	110			
Sulfate		3810	mg/L	8.3	98	90	110			
Lab ID: C14040424-007AMSD	2	Sample Matrix Spike Duplicate				Run: IC1-C_140414A			04/15/14 01:54	
Chloride		251	mg/L	2.1	107	90	110	0.8	20	
Sulfate		3830	mg/L	8.3	101	90	110	0.5	20	
Method: E300.0								Analytical Run: IC2-C_140418A		
Lab ID: CCV-041714-01		Continuing Calibration Verification Standard							04/17/14 09:55	
Chloride		9.63	mg/L	1.0	96	90	110			
Method: E300.0									Batch: R185605	
Lab ID: ICB		Method Blank				Run: IC2-C_140418A			04/17/14 09:20	
Chloride		ND	mg/L	0.04						
Lab ID: LFB-041714		Laboratory Fortified Blank				Run: IC2-C_140418A			04/17/14 09:38	
Chloride		10.2	mg/L	1.0	102	90	110			
Lab ID: C14040467-005AMS		Sample Matrix Spike				Run: IC2-C_140418A			04/17/14 11:05	
Chloride		303	mg/L	1.0	103	90	110			
Lab ID: C14040467-005AMSD		Sample Matrix Spike Duplicate				Run: IC2-C_140418A			04/17/14 11:22	
Chloride		303	mg/L	1.0	103	90	110	0.0	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:** 05/19/14

Project: Zone-3 TE-7-4-2014 **Work Order:** C14040436

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E353.2									Analytical Run: TECHNICON_140415A	
Lab ID: CCV-77	Continuing Calibration Verification Standard								04/15/14 16:57	
Nitrogen, Nitrate+Nitrite as N		1.09	mg/L	0.10	109	90	110			
Method: E353.2									Batch: R185498	
Lab ID: MBLK-1	Method Blank					Run: TECHNICON_140415A			04/15/14 13:47	
Nitrogen, Nitrate+Nitrite as N		ND	mg/L	0.05						
Lab ID: LFB-3	Laboratory Fortified Blank					Run: TECHNICON_140415A			04/15/14 13:52	
Nitrogen, Nitrate+Nitrite as N		1.83	mg/L	0.10	93	90	110			
Lab ID: C14040465-001CMS	Sample Matrix Spike					Run: TECHNICON_140415A			04/15/14 17:10	
Nitrogen, Nitrate+Nitrite as N		2.39	mg/L	0.10	113	90	110			S
- Matrix spike recoveries outside the acceptance range are considered matrix-related.										
Lab ID: C14040465-001CMSD	Sample Matrix Spike Duplicate					Run: TECHNICON_140415A			04/15/14 17:12	
Nitrogen, Nitrate+Nitrite as N		2.43	mg/L	0.10	115	90	110	1.7	10	S
- Matrix spike recoveries outside the acceptance range are considered matrix-related.										
Method: E353.2									Batch: R185702	
Lab ID: MBLK-1	Method Blank					Run: TECHNICON_140421A			04/21/14 12:54	
Nitrogen, Nitrate+Nitrite as N		ND	mg/L	0.05						
Lab ID: LFB-3	Laboratory Fortified Blank					Run: TECHNICON_140421A			04/21/14 12:59	
Nitrogen, Nitrate+Nitrite as N		1.90	mg/L	0.10	97	90	110			
Lab ID: C14040436-003DMS	Sample Matrix Spike					Run: TECHNICON_140421A			04/21/14 13:04	
Nitrogen, Nitrate+Nitrite as N		1.89	mg/L	0.10	96	90	110			
Lab ID: C14040436-003DMSD	Sample Matrix Spike Duplicate					Run: TECHNICON_140421A			04/21/14 13:06	
Nitrogen, Nitrate+Nitrite as N		1.91	mg/L	0.10	97	90	110	1.1	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:** 05/19/14

Project: Zone-3 TE-7-4-2014 **Work Order:** C14040436

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624										Batch: R185518
Lab ID: 15-Apr-14_LCS_4	9	Laboratory Control Sample				Run: GCMS2_140415C				04/15/14 14:48
Bromodichloromethane		11.6	ug/L	1.0	116	60	130			
Bromoform		10.3	ug/L	1.0	103	60	142			
Chlorodibromomethane		11.8	ug/L	1.0	118	67	134			
Chloroform		12.0	ug/L	1.0	120	56	135			
Trihalomethanes, Total		45.7	ug/L	1.0	114	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	97	70	130			
Surr: Dibromofluoromethane				1.0	117	43	142			
Surr: p-Bromofluorobenzene				1.0	96	70	130			
Surr: Toluene-d8				1.0	88	70	130			
Lab ID: 15-Apr-14_MBLK_6	9	Method Blank				Run: GCMS2_140415C				04/15/14 15:56
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	97	73.7	126			
Surr: Dibromofluoromethane				1.0	116	64.4	131			
Surr: p-Bromofluorobenzene				1.0	100	67.1	133			
Surr: Toluene-d8				1.0	86	79.7	125			
Lab ID: C14040354-001AMS	9	Sample Matrix Spike				Run: GCMS2_140415C				04/15/14 22:27
Bromodichloromethane		247	ug/L	10	124	60	130			
Bromoform		206	ug/L	10	103	60	142			
Chlorodibromomethane		243	ug/L	10	122	67	134			
Chloroform		262	ug/L	10	131	56	135			
Trihalomethanes, Total		959	ug/L	10	120	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	98	70	130			
Surr: Dibromofluoromethane				1.0	129	43	142			
Surr: p-Bromofluorobenzene				1.0	97	70	130			
Surr: Toluene-d8				1.0	87	70	130			
Lab ID: C14040354-001AMSD	9	Sample Matrix Spike Duplicate				Run: GCMS2_140415C				04/15/14 23:02
Bromodichloromethane		259	ug/L	10	130	60	130	4.7	20	
Bromoform		206	ug/L	10	103	60	142	0.0	20	
Chlorodibromomethane		248	ug/L	10	124	67	134	2.0	20	
Chloroform		246	ug/L	10	123	56	135	6.3	20	
Trihalomethanes, Total		960	ug/L	10	120	70	130	0.1	20	
Surr: 1,2-Dichlorobenzene-d4				1.0	98	70	130			
Surr: Dibromofluoromethane				1.0	122	43	142			
Surr: p-Bromofluorobenzene				1.0	98	70	130			
Surr: Toluene-d8				1.0	95	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: 05/19/14
Project: Zone-3 TE-7-4-2014
Work Order: C14040436

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E900.1										Batch: GA-0784
Lab ID: LCS-GA-0784		Laboratory Control Sample				Run: BERTHOLD 770-1_140417A				04/21/14 06:34
Gross Alpha minus Rn & U		38.5	pCi/L		102	80	120			
Lab ID: MB-GA-0784	3	Method Blank				Run: BERTHOLD 770-1_140417A				04/21/14 06:34
Gross Alpha minus Rn & U		0.07	pCi/L							U
Gross Alpha minus Rn & U Precision (±)		0.3	pCi/L							
Gross Alpha minus Rn & U MDC		0.5	pCi/L							
Lab ID: C14040436-004GMS		Sample Matrix Spike				Run: BERTHOLD 770-1_140417A				04/21/14 06:34
Gross Alpha minus Rn & U		87.4	pCi/L		119	70	130			
Lab ID: C14040436-004GMSD		Sample Matrix Spike Duplicate				Run: BERTHOLD 770-1_140417A				04/21/14 06:34
Gross Alpha minus Rn & U		84.1	pCi/L		112	70	130	3.9	20.9	
Method: E900.1										Batch: GA-0783R
Lab ID: LCS-GA-0783		Laboratory Control Sample				Run: BERTHOLD 770-2_140416A				05/01/14 06:27
Gross Alpha minus Rn & U		37.7	pCi/L		102	80	120			
Lab ID: MB-GA-0783	3	Method Blank				Run: BERTHOLD 770-2_140416A				05/01/14 06:27
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		0.4	pCi/L							
Lab ID: C14040436-002GMS		Sample Matrix Spike				Run: BERTHOLD 770-2_140416A				05/01/14 08:24
Gross Alpha minus Rn & U		83.6	pCi/L		103	70	130			
Lab ID: C14040436-002GMSD		Sample Matrix Spike Duplicate				Run: BERTHOLD 770-2_140416A				05/01/14 08:24
Gross Alpha minus Rn & U		89.2	pCi/L		110	70	130	6.5	18.9	

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: 05/19/14
Project: Zone-3 TE-7-4-2014
Work Order: C14040436

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E903.0										Batch: RA226-7152
Lab ID: C14040519-001GMS		Sample Matrix Spike				Run: G5000W_140418A				04/29/14 06:10
Radium 226		25	pCi/L		109	70	130			
Lab ID: C14040519-001GMSD		Sample Matrix Spike Duplicate				Run: G5000W_140418A				04/29/14 07:45
Radium 226		23	pCi/L		100	70	130	7.8	21.6	
Lab ID: MB-RA226-7152	3	Method Blank				Run: G5000W_140418A				04/29/14 07:45
Radium 226		0.003	pCi/L							U
Radium 226 precision (±)		0.1	pCi/L							
Radium 226 MDC		0.2	pCi/L							
Lab ID: LCS-RA226-7152		Laboratory Control Sample				Run: G5000W_140418A				04/29/14 07:45
Radium 226		12	pCi/L		108	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: 05/19/14
Project: Zone-3 TE-7-4-2014
Work Order: C14040436

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E908.0										Batch: RA-TH-ISO-2032
Lab ID: LCS-RA-TH-ISO-2032		Laboratory Control Sample				Run: ALPHANALYST_140421B				04/23/14 09:01
Thorium 230		6.5	pCi/L		98	80	120			
Lab ID: C14040518-001CMS		Sample Matrix Spike				Run: ALPHANALYST_140421B				04/23/14 09:01
Thorium 230		13	pCi/L		102	70	130			
Lab ID: C14040518-001CMSD		Sample Matrix Spike Duplicate				Run: ALPHANALYST_140421B				04/23/14 09:01
Thorium 230		13	pCi/L		103	70	130	0.3	44.3	
Lab ID: MB-RA-TH-ISO-2032	3	Method Blank				Run: ALPHANALYST_140421B				04/23/14 09:01
Thorium 230		0.05	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: 05/19/14
Project: Zone-3 TE-7-4-2014
Work Order: C14040436

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **E909.0**										Batch: T_PB-210-0459
Lab ID: **MB-PB-210-0459**	3	Method Blank				Run: SUB-T56675				05/03/14 17:13
Lead 210		-0.3	pCi/L							U
Lead 210 precision (±)		0.7	pCi/L							
Lead 210 MDC		1	pCi/L							
Lab ID: **LCS-PB-210-0459**		Laboratory Control Sample				Run: SUB-T56675				05/03/14 18:44
Lead 210		20	pCi/L		97	80	120			
Lab ID: **T14040071-004FMS**		Sample Matrix Spike				Run: SUB-T56675				05/04/14 22:09
Lead 210		43	pCi/L		100	70	130			
Lab ID: **T14040071-004FMSD**		Sample Matrix Spike Duplicate				Run: SUB-T56675				05/04/14 23:40
Lead 210		47	pCi/L		111	70	130	11	21.1	

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:** 05/19/14

Project: Zone-3 TE-7-4-2014 **Work Order:** C14040436

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: RA-05										Batch: RA228-4650
Lab ID: LCS-228-RA226-7152		Laboratory Control Sample				Run: TENNELEC-3_140418C				04/24/14 10:03
Radium 228		8.3	pCi/L		112	80	120			
Lab ID: MB-RA226-7152	3	Method Blank				Run: TENNELEC-3_140418C				04/24/14 10:03
Radium 228		0.4	pCi/L							U
Radium 228 precision (±)		0.9	pCi/L							
Radium 228 MDC		1	pCi/L							
Lab ID: C14040436-004GMS		Sample Matrix Spike				Run: TENNELEC-3_140418C				04/24/14 10:03
Radium 228		17	pCi/L		123	70	130			
Lab ID: C14040436-004GMSD		Sample Matrix Spike Duplicate				Run: TENNELEC-3_140418C				04/24/14 10:03
Radium 228		18	pCi/L		126	70	130	2.1	36.1	

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

May 16, 2014

United Nuclear Corporation
21 Miles NE of Gallup
Gallup, NM 87305

Work Order: C14040424 Quote ID: C129 - Quarterly Long List

Project Name: Zone - 3 EW-2-4-2014

Energy Laboratories, Inc. Casper WY received the following 8 samples for United Nuclear Corporation on 4/11/2014 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C14040424-001	NBL-2	04/08/14 12:52	04/11/14	Aqueous	Alkalinity E300.0 Anions pH Solids, Total Dissolved
C14040424-002	PB-4	04/08/14 13:09	04/11/14	Aqueous	Same As Above
C14040424-003	PB-3	04/08/14 13:40	04/11/14	Aqueous	Same As Above
C14040424-004	NW-1	04/09/14 9:20	04/11/14	Aqueous	Same As Above
C14040424-005	NW-3	04/09/14 9:40	04/11/14	Aqueous	Same As Above
C14040424-006	NW-5	04/09/14 10:00	04/11/14	Aqueous	Same As Above
C14040424-007	NW-2	04/09/14 10:20	04/11/14	Aqueous	Same As Above
C14040424-008	RW-A	04/09/14 10:43	04/11/14	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:

Report Proofing Specialist

Digitally signed by
Sheri M. Mead
Date: 2014.05.16 16:49:23 -06:00

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/16/14
Project: Zone - 3 EW-2-4-2014
Work Order: C14040424

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2320 B										Batch: R185439
Lab ID: MBLK	2	Method Blank				Run: MANTECH_140414B				04/14/14 14:53
Alkalinity, Total as CaCO3		0.7	mg/L	0.6						
Bicarbonate as HCO3		ND	mg/L	1						
Lab ID: LCS_131219		Laboratory Control Sample				Run: MANTECH_140414B				04/14/14 15:07
Alkalinity, Total as CaCO3		258	mg/L	5.0	103	90	110			
Lab ID: C14040384-001ADUP	2	Sample Duplicate				Run: MANTECH_140414B				04/14/14 15:24
Alkalinity, Total as CaCO3		250	mg/L	5.0				0.1	10	
Bicarbonate as HCO3		284	mg/L	5.0				0.4	10	
Lab ID: C14040404-001AMS		Sample Matrix Spike				Run: MANTECH_140414B				04/14/14 15:42
Alkalinity, Total as CaCO3		939	mg/L	5.0	97	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
Report Date: 05/16/14
Project: Zone - 3 EW-2-4-2014
Work Order: C14040424

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C										Batch: TDS140414A
Lab ID: MB-1_140414A		Method Blank				Run: BAL-19_140414B				04/14/14 14:44
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	7						
Lab ID: LCS-2_140414A		Laboratory Control Sample				Run: BAL-19_140414B				04/14/14 14:44
Solids, Total Dissolved TDS @ 180 C		1990	mg/L	20	100	90	110			
Lab ID: C14040418-001A MS		Sample Matrix Spike				Run: BAL-19_140414B				04/14/14 14:52
Solids, Total Dissolved TDS @ 180 C		1690	mg/L	11	99	90	110			
Lab ID: C14040424-007A DUP		Sample Duplicate				Run: BAL-19_140414B				04/14/14 14:57
Solids, Total Dissolved TDS @ 180 C		4520	mg/L	37				0.0	5	

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: 05/16/14
Project: Zone - 3 EW-2-4-2014
Work Order: C14040424

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **A4500-H B**									Analytical Run: PHSC_101-C_140414A	
Lab ID: **pH 6.86**		Initial Calibration Verification Standard							04/14/14 09:03	
pH		6.87	s.u.	0.010	100	98	102			
Lab ID: **CCV - pH 7**		Continuing Calibration Verification Standard							04/14/14 10:33	
pH		6.99	s.u.	0.010	100	98	102			
Method: **A4500-H B**									Batch: R185401	
Lab ID: **C14040424-008ADUP**		Sample Duplicate				Run: PHSC_101-C_140414A			04/14/14 10:29	
pH		6.29	s.u.	0.010				0.2	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:** 05/16/14

Project: Zone - 3 EW-2-4-2014 **Work Order:** C14040424

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0									Analytical Run: IC1-C_140414A	
Lab ID: CCV-041414-03		Continuing Calibration Verification Standard							04/14/14 20:22	
Chloride		10.3	mg/L	1.0	103	90	110			
Lab ID: CCV-041414-04		Continuing Calibration Verification Standard							04/15/14 00:40	
Chloride		10.2	mg/L	1.0	102	90	110			
Method: E300.0									Batch: R185467	
Lab ID: ICB		Method Blank				Run: IC1-C_140414A			04/14/14 11:28	
Chloride		ND	mg/L	0.04						
Lab ID: LFB-041414-01		Laboratory Fortified Blank				Run: IC1-C_140414A			04/14/14 11:47	
Chloride		10.4	mg/L	1.0	104	90	110			
Lab ID: C14040417-007AMS		Sample Matrix Spike				Run: IC1-C_140414A			04/14/14 21:17	
Chloride		255	mg/L	1.0		90	110			A
Lab ID: C14040417-007AMSD		Sample Matrix Spike Duplicate				Run: IC1-C_140414A			04/14/14 21:36	
Chloride		254	mg/L	1.0		90	110	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.