

SEMI-ANNUAL GROUND WATER
AND ENVIRONMENTAL
MONITORING REPORT

FIRST HALF OF 2022
(JANUARY THRU JUNE)

QUARTERLY SAMPLING
SEMI-ANNUAL GROUND WATER MONITORING REPORT
JANUARY TO JUNE OF 2022
FIELD DATA SHEET OF
FIRST AND SECOND QUARTER

CONTROLS

SW ALLUVIUM

ZONE – 1

ZONE – 3

GROUND WATER FIELD MONITORING WATER ELEVATIONS, pH, CONDUCTIVITY AND TEMPERATURE

MONTH: January QUARTER: First YEAR: 2022

SOUTHWEST ALLUVIUM

WELL NO.	DEPTH SAMPLE DATE/TIME	DEPTH TO WATER (FT)	REF. ELEV.	TOP OF WATER ELEV.	FIELD COND. (US/CM)	FIELD pH (UNITS)	FIELD TEMP. (°C)
509-D	1-18 0922	87.73	6949.44	6861.71	6,520	6.29	11.7
624	1-17 1319	58.56	6898.57	6840.01	5,580	6.48	12.0
627	1-18 1250	64.85	6892.22	6827.37	4,320	6.89	12.6
632	1-17 1116	52.44	6903.49	6851.05	6,400	6.44	12.0
801	1-17 1158	59.84	6904.32	6844.48	5,530	6.85	11.1
802	1-17 1031	55.98	6907.10	6851.12	6,390	6.44	11.8
803	1-17 0914	70.53	6922.58	6852.05	6,190	6.42	11.6
808	1-17 0948	57.79	6910.67	6852.88	6,580	6.03	11.5
GW-1	1-17 1408	69.74	6916.46	6846.72	6,030	6.62	12.1
GW-2			6912.88	6912.88			
GW-3			6910.04	6910.04			
EPA-23	1-14 1051	64.31	6926.31	6862.00	6,000	6.50	13.0
EPA-25	1-18 1348	61.16	6903.38	6842.22	4,800	6.58	11.9
EPA-28	1-18 1036	70.54	6917.86	6847.32	4,610	6.41	12.3
EPA-28 DUP (QA/QC)	1-18 1106	71.15	6917.86	6846.71	4,560	6.62	13.0
SBL-1	1-18 1146	51.71	6896.31	6844.60	7,770	6.52	12.0
805	1-21 1100	62.27	6915.65	6853.38			
807	1-21 1053	66.81	6923.39	6856.58			
RINSATE	1-18 1435				3	7.62	14.6
FIELD BLANK	1-18 1510				2	6.95	17.2

COMMENTS: No sample or measurement for well GW-2 and GW-3 due to unsafe ground conditions. Well 632 water level dropped 4.77' during sample, Wells 624, 632, 801, 802, 803, 808, 509-D, EPA-23, EPA-25 and GW-1 samples were sent to Energy Lab as possible 11 (e) 2 by product material. Adjusted reference elevation figures to conform to historical well statistics & annual GW corrective action reports.

GROUND WATER FIELD MONITORING

WATER ELEVATIONS, pH, CONDUCTIVITY AND TEMPERATURE

MONTH: January

QUARTER: First

YEAR: 2022

ZONE - 1

WELL NO.	DEPTH SAMPLE DATE/TIME	DEPTH TO WATER (FT)	REF. ELEV.	TOP OF WATER ELEV.	FIELD COND. (US/CM)	FIELD pH (UNITS)	FIELD TEMP. (°C)
515-A	12-10 1115	109.45	7008.68	6899.23	9,000	5.93	12.8
604	1-10 1226	108.64	7006.40	6897.76	6,170	5.16	12.1
614	1-10 0908	107.90	7011.91	6904.01	6,680	6.71	7.9
142	1-13 1252	205.42	6983.40	6777.98	1,956	7.75	13.3
EPA-2	1-13 1140	177.01	7019.49	6842.48	3,750	6.76	13.0
EPA-2 DUP (QA/QC)	1-13 1210	177.81	7019.49	6841.68	3,800	6.72	13.0
EPA-4	1-13 0927	210.89	7069.80	6858.91	4,410	5.71	12.7
EPA-5	1-13 1033	129.87	7011.44	6881.57	4,700	6.14	13.7
EPA-7	1-10 1324	119.81	7011.66	6891.85	6,650	5.98	12.9
Rinsate (QA/QC)	1-12 1355				3	5.61	13.2
Field Blank (QA/QC)	1-12 1400				2	6.04	15.4
143	1-24 1010	211.43	6989.60	6778.17			
EPA-8	1-13 1020	218.42	7076.40	6857.98			
505-A	1-21 1138	124.36	6963.10	6838.74			
502-A	1-21 1151	197.94	7025.30	6827.36			
501-A	1-21 1159	214.19	7048.04	6833.85			
504-A	1-21 1236	202.25	7001.37	6799.12			
412	1-21 1248	188.25	6979.41	6791.16			

COMMENTS: Well 515-A water level dropped 2.19' during sample. Well 143 is measured to top oil layer not water level. Wells 515-A, 604, 614 and EPA-7 were sent to Energy Lab as possible 11 (e) 2 by product material.

Adjusted reference elevation figures to conform to historical well statistics & Annual GW Corretive Action Reports.

GROUND WATER FIELD MONITORING

WATER ELEVATIONS, pH, CONDUCTIVITY AND TEMPERATURE

MONTH: January QUARTER: First YEAR: 2022
ZONE - 3

WELL NO.	DEPTH SAMPLE DATE/TIME	DEPTH TO WATER (FT)	REF. ELEV.	TOP OF WATER ELEV.	FIELD COND. (US/CM)	FIELD pH (UNITS)	FIELD TEMP. (°C)
504-B		DRY	7001.71				
517	1-11 0925	109.92	6971.29	6861.37	6,190	2.62	9.6
EPA-14	1-11 1047	128.15	6963.88	6835.73	3,530	5.76	12.3
420	1-21 1253	159.16	6982.48	6823.32			
711	1-11 1233	186.89	7042.60	6855.71	4,150	3.46	13.0
613	1-10 1412	80.89	6960.89	6880.00	8,450	3.05	11.7
708	1-11 1133	161.97	7011.73	6849.76	5,170	3.71	13.0
NBL-1	1-21 1331	Mud @ 197.43	6991.96				
EPA-9	1-13 1012	171.12	7076.60	6905.48			
EPA-13	1-11 1416	171.27	7031.66	6860.39	6,520	5.82	9.9
702	1-21 1125	84.63	6974.25	6889.62			
710	1-21 1214	168.38	7016.36	6847.98			
712	1-21 1219	178.37	7022.16	6843.79			
713	1-21 1228	169.91	7024.19	6854.28			
714	1-21 1143	110.12	6962.54	6852.42			
701	1-21 1136	85.87	6961.28	6875.41			
706	1-21 1146	118.37	6972.12	6853.75			
707	1-21 1210	165.02	7005.21	6840.19			
717	1-10 1500	138.10	6972.07	6833.97	4,900	3.38	12.1
717 DUPL (QA/QC)	1-10 1533	139.18	6972.07	6832.89	4,930	3.38	11.8
719	1-13 1342	171.43	7001.48	6830.05	5,200	5.60	13.5
402	1-21 1305	139.82	6968.23	6828.41			
446	1-24 1045	158.99	6998.31	6839.32			
424**	1-24 1412	145.73	6972.62	6826.89			

COMMENTS: Wells EPA-14, 613, 708, 717, 517, 711, 719 and EPA-13 were sent to Energy Lab as possible 11 (e) 2

by product material. Well 446 is measured to top layer oil level not water level. Unable to sample well 420 due to pump stuck in well with disconnected lines. Well 517 required 8 hr. recharge to resume/collect full sample. No WL measurement for well 504-B due to unsafe condition (i.e. unknown gas emission from well) and dry @171'. Adjusted reference elevation figures to conform to historical well statistics and Annual GW Corrective Action Reports.

GROUND WATER FIELD MONITORING

WATER ELEVATIONS, pH, CONDUCTIVITY AND TEMPERATURE

MONTH: January QUARTER: First YEAR: 2022

SUPPLEMENTAL

ZONE -3

WELL NO.	DEPTH SAMPLE DATE/TIME	DEPTH TO WATER (FT)	REF. ELEV.	TOP OF WATER ELEV.	FIELD COND. (US/CM)	FIELD pH (UNITS)	FIELD TEMP. (°C)
PB-2	1-20 1215	dry @189.95	6989.70				
PB-3	1-20 1220	dry @ 193.35	6990.23				
NBL-2	1-13 1440	176.12	6975.61	6799.49	3,400	6.87	12.9
RW-A	1-14 0950	198.68	6983.23	6784.55	5,420	5.44	12.3
RW-11			6983.73	6983.73			
NW-1	1-21 1312	198.68	6997.11	6798.43			
NW-2	1-21 1331	200.90	6989.65	6788.75			
NW-3	1-12 1230	195.57	6985.44	6789.87	4,670	6.49	12.1
NW-4	1-14 0935	198.27	6990.01	6791.74	4,060	5.32	13.0
NW-5	1-21 1324	195.03	6985.76	6790.73			
PB-4	1-20 1217	mud @ 193.15	6990.18				
MW-6	1-20 1225	mud @ 200.15	6990.94				
MW-7	1-12 1112	200.86	6988.82	6787.96	5,570	2.67	10.7
IW-A	1-21 1316	202.08	6992.77	6790.69			
SW-1B	1-18 1436	212.31	6976.69	6764.38	3,430	6.85	11.9
SW-3B	1-18 1100	290.68	7030.82	6740.14	1,158	7.75	11.3

COMMENTS: Wells MW-7, NW-4, NW-5, RW-A were sent to Energy Lab as possible

11 (e) 2 by product material. Sentinel wells SW-1B and SW-3B are located within the Navajo Reservation.

GROUND WATER FIELD MONITORING WATER ELEVATIONS, pH, CONDUCTIVITY AND TEMPERATURE

MONTH: April QUARTER: Second YEAR: 2022

SOUTHWEST ALLUVIUM

WELL NO.	DEPTH SAMPLE DATE/TIME	DEPTH TO WATER (FT)	REF. ELEV.	TOP OF WATER ELEV.	FIELD COND. (US/CM)	FIELD pH (UNITS)	FIELD TEMP. (°C)
509-D	4-7 0912	88.24	6949.44	6861.20	6,250	6.44	12.4
624	4-8 1035	58.70	6898.57	6839.87	5,490	6.42	13.6
627	4-8 1136	64.99	6892.22	6827.23	4,330	6.94	14.6
632	4-7 1345	52.57	6903.49	6850.92	6,500	6.42	13.7
801	4-7 1425	59.97	6904.32	6844.35	6,070	6.67	13.5
802	4-7 1305	56.10	6907.10	6851.00	6,430	6.44	13.6
803	4-7 1118	70.86	6922.58	6851.72	6,180	6.48	13.2
808	4-7 1220	58.13	6910.67	6852.54	6,560	6.42	13.9
GW-1	4-7 1530	69.86	6916.46	6846.60	6,030	6.62	13.6
GW-2			6912.88				
GW-3			6910.04				
EPA-23	4-7 1035	64.75	6926.31	6861.56	5,580	6.54	13.3
EPA-25	4-8 1233	61.38	6903.38	6842.00	4,780	6.58	14.9
EPA-28	4-8 0927	70.83	6917.86	6847.03	4,680	6.86	13.6
EPA-28 DUP (QA/QC)	4-8 0956	71.52	6917.86	6846.34	4,600	6.77	14.0
SBL-1	4-5 1348	51.72	6896.31	6844.59	7,750	6.54	14.8
805	4-12 1320	62.21	6915.65	6853.44			
807	4-12 1310	66.75	6923.39	6856.64			
RINSATE	4-8 1315				3	6.80	25.4
FIELD BLANK	4-8 1345				3	6.70	22.5

COMMENTS: No sample or measurement for well GW-2 and GW-3 due to unsafe ground conditions.

Well 632 water level dropped 4.62' during sample. Wells 624, 632, 801, 802, 803, 808, 509-D, EPA-23, EPA-25 and

GW-1 samples were sent to Energy Lab as possible 11 (e) 2 By product material.

GROUND WATER FIELD MONITORING WATER ELEVATIONS, pH, CONDUCTIVITY AND TEMPERATURE

MONTH: April QUARTER: Second YEAR: 2022

ZONE - 1

WELL NO.	DEPTH SAMPLE DATE/TIME	DEPTH TO WATER (FT)	REF. ELEV.	TOP OF WATER ELEV.	FIELD COND. (US/CM)	FIELD pH (UNITS)	FIELD TEMP. (°C)
515-A	3-31 1042	108.94	7008.68	6899.74	8,360	5.97	12.3
604	3-31 1146	108.20	7006.40	6898.20	6,030	5.15	13.0
614	3-31 0908	107.35	7011.91	6904.56	7,300	6.41	11.6
142	4-4 1422	205.25	6983.40	6778.15	1,901	7.60	15.0
EPA-2	4-4 1050	176.73	7019.49	6842.76	3,860	6.77	13.3
EPA-2 DUP (QA/QC)	4-4 1120	177.55	7019.49	6841.94	3,440	6.79	13.6
EPA-4	4-5 1125	210.54	7069.80	6859.26	4,280	6.57	14.6
EPA-5	4-5 1227	129.55	7011.44	6881.89	3,980	6.38	16.3
EPA-7	3-31 1240	119.30	7011.66	6892.36	6,710	5.88	13.7
Rinsate (QA/QC)	4-5 1430				8	6.76	26.2
Field Blank (QA/QC)	4-5 1530				3	6.42	26.7
143	4-13 1353	210.99	6989.60	6778.61			
EPA-8	4-5 1216	218.11	7076.40	6858.29			
505-A	4-12 1352	124.21	6963.10	6838.89			
502-A	4-12 1438	197.73	7025.30	6827.57			
501-A	4-12 1431	214.00	7048.04	6834.04			
504-A	4-12 1425	202.05	7001.37	6799.32			
412	4-12 1500	188.20	6979.41	6791.21			

COMMENTS: Well 515-A water level dropped 3.75' during sample. Well 143 is measured to top layer oil level not water level. Wells 515-A, 604, 614 and EPA-7 were sent to Energy Lab as possible 11 (e) 2 By product material.

GROUND WATER FIELD MONITORING

WATER ELEVATIONS, pH, CONDUCTIVITY AND TEMPERATURE

MONTH: April QUARTER: Second YEAR: 2022
ZONE - 3

WELL NO.	DEPTH SAMPLE DATE/TIME	DEPTH TO WATER (FT)	REF. ELEV.	TOP OF WATER ELEV.	FIELD COND. (US/CM)	FIELD pH (UNITS)	FIELD TEMP. (°C)
504-B		Dry & unsafe	7001.71				
517	4-4 0928	109.62	6971.29	6861.67	6,030	2.76	12.7
EPA-14	3-31 1413	127.76	6963.88	6836.12	3,540	5.76	12.5
420	4-12 1536	159.16	6982.48	6823.32			
711	4-1 1145	186.51	7042.60	6856.09	4,900	3.67	13.7
613	3-31 1331	80.55	6960.89	6880.34	8,100	2.98	14.0
708	4-1 1052	161.69	7011.73	6850.04	5,160	3.88	12.6
NBL-1	4-13 1520	mud @ 198.00	6991.96				
EPA-9	4-5 1212	171.27	7076.60	6905.33			
EPA-13	4-1 1306	171.09	7031.66	6860.57	5,910	5.75	14.5
702	4-12 1337	84.62	6974.25	6889.63			
710	4-12 1412	168.35	7016.36	6848.01			
712	4-12 1415	178.21	7022.16	6843.95			
713	4-12 1508	169.78	7024.19	6854.41			
714	4-12 1358	110.04	6962.54	6852.50			
701	4-12 1347	85.90	6961.28	6875.38			
706	4-12 1405	118.43	6972.12	6853.69			
707	4-12 1417	164.95	7005.21	6840.26			
717	4-1 0922	137.71	6972.07	6834.36	4,830	3.67	12.5
717 DUPL (QA/QC)	4-1 1013	138.61	6972.07	6833.46	4,780	3.58	13.0
719	4-1 1423	171.35	7001.48	6830.13	5,220	5.03	14.7
402	4-12 1446	139.72	6968.23	6828.51			
446	4-13 1416	159.04	6998.31	6839.27			
424**	4-12 1452	145.72	6972.62	6826.90			

COMMENTS: Wells EPA-14, 613, 708, 717, 517, 711, 719 and EPA-13 were sent to Energy Lab as

possible 11 (e) 2 By product material. Well 446 is measured to top layer oil level not water level. Unable to sample well

420 due to pump stuck in well with disconnected lines. Well 517 required 24 hr. recharge to resume/collect full sample.

GROUND WATER FIELD MONITORING

WATER ELEVATIONS, pH, CONDUCTIVITY AND TEMPERATURE

MONTH: April QUARTER: Second YEAR: 2022

SUPPLEMENTAL

ZONE -3

WELL NO.	DEPTH SAMPLE DATE/TIME	DEPTH TO WATER (FT)	REF. ELEV.	TOP OF WATER ELEV.	FIELD COND. (US/CM)	FIELD pH (UNITS)	FIELD TEMP. (°C)
PB-2		DRY	6989.70				
PB-3		DRY	6990.23				
NBL-2	4-5 1010	176.01	6975.61	6799.6	3,480	6.47	12.1
RW-A	4-5 1052		6983.23		5,340	5.50	12.4
RW-11			6983.73				
NW-1	4-12 1431	198.66	6997.11	6798.45			
NW-2	4-12 1427	200.84	6989.65	6788.81			
NW-3	4-4 1351	195.49	6985.44	6789.95	4,700	6.94	13.2
NW-4	4-5 1039	198.35	6990.01	6791.66	3,950	5.81	10.8
NW-5	4-12 1418	195.11	6985.76	6790.65			
PB-4	4-12 1538	mud @ 193.27	6990.18				
MW-6	4-12 1540	mud @ 200.40	6990.94				
MW-7	4-4 1210	200.78	6988.82	6788.04	5,170	2.89	15.4
IW-A	4-12 1440	202.08	6992.77	6790.69			
SW-1B	4-11 1015	212.73	6976.69	6763.96	3,410	6.81	13.5
SW-3B	4-11 1120	290.73	7030.82	6740.09	1,172	8.06	14.1

COMMENTS: Wells MW-7, NW-4, NW-5 and RW-A were sent to Energy Lab as possible 11 (e) 2 By product material. Sentinel Wells SW-1B and SW-3B are located within the Navajo Reservation.

NBL-1, NBL-2, RW-A & PB WELL GROUND WATER MONITORING

WATER ELEVATIONS, pH, CONDUCTIVITY, TITRATION AND TEMPERATURE

MONTH: January, February & March

QUARTER: First

YEAR: 2022

ZONE - 3

WELL NO.	DEPTH SAMPLE DATE/TIME	DEPTH TO WATER (FT)	REF. ELEV.	TOP OF WATER ELEV.	FIELD COND. (US/CM)	FIELD pH (UNITS)	FIELD TEMP. (°C)	HCO3 mg/l	Chl mg/l
NBL-1	1-21 1336	mud @ 197.43	6991.96						
NBL-2	1-13 1440	176.12	6975.61	6799.49	3,400	6.87	12.9	280	37
PB-2	1-20 1215	dry @ 189.95	7989.72						
PB-3	1-20 1220	dry @ 193.35	6990.23						
PB-4	1-20 1217	mud @ 193.15	6990.18						
RW-A	1-14 0950		6983.23	6983.23	5,420	5.44	12.3	30	30
NBL-1			6991.96						
NBL-2	2-25 0946	176.19	6975.61	6799.42	2,980	7.07	7.8	287	37
PB-2		DRY	7989.72						
PB-3		DRY	6990.23						
PB-4	3-1 1435	mud @ 193.27	6990.18						
RW-A	2-24 1147		6983.23	6983.23	5,320	5.57	11.0	24	30
NBL-1			6991.96						
NBL-2	3-23 1000	176.43	6975.61	6799.18	3,500	6.50	10.7	287	37
PB-2		DRY	7989.72						
PB-3		DRY	6990.23						
PB-4	3-23 1040	mud @ 193.27	6990.18						
RW-A	3-23 1248		6983.23	6983.23	5,380	5.59	9.6	30	30
NBL-1			6991.96						
NBL-2			6975.61						
PB-2			7989.72						
PB-3			6990.23						
PB-4			6990.18						
RW-A			6983.23						

COMMENTS: _____

MW & NW WELL GROUND WATER MONITORING

WATER ELEVATIONS, pH, CONDUCTIVITY, TITRATION AND TEMPERATURE

MONTH: January, February & March QUARTER: First YEAR: 2022

ZONE - 3

WELL NO.	DEPTH SAMPLE DATE/TIME	DEPTH TO WATER (FT)	REF. ELEV.	TOP OF WATER ELEV.	FIELD COND. (US/CM)	FIELD pH (UNITS)	FIELD TEMP. (°C)	HCO ₃ mg/l	Chl mg/l
NW-1	1-21 1312	198.68	6997.11	6798.43					
NW-2	1-21 1331	200.90	6989.65	6788.75					
NW-3	1-12 1230	195.57	6985.44	6789.87	4,670	6.49	12.1	328	36
NW-4	1-14 0935	198.27	6990.01	6791.74	4,060	5.32	13	12	20
NW-5	1-21 1324	195.03	6985.76	6790.73					
MW-6	1-20 1225	mud @ 200.15	6990.94						
MW-7	1-12 1112	200.86	6988.82	6787.96	5,570	2.67	10.7	ND	34
NW-1	2-23 1054	198.64	6997.11	6798.47					
NW-2	2-23 1010	200.83	6989.65	6788.82					
NW-3	2-24 1102	195.55	6985.44	6789.89	4,560	6.87	11.2	317	36
NW-4	2-24 1120	198.07	6990.01	6791.94	3,960	5.47	12.3	12	20
NW-5	2-23 1000	195.07	6985.76	6790.69					
MW-6	3-1 1422	mud @ 200.40	6990.94						
MW-7	2-25 1038	200.85	6988.82	6787.97	5,610	2.62	11.7	ND	31
NW-1	3-23 1151	198.67	6997.11	6798.44					
NW-2	3-23 1158	201.01	6989.65	6788.64					
NW-3	3-23 1208	195.60	6985.44	6789.84	4,720	6.84	11.6	323	35
NW-4	3-23 1233	198.23	6990.01	6791.78	4,030	5.73	10.9	9	20
NW-5	3-23 1222	195.28	6985.76	6790.48					
MW-6	3-23 1036	mud @ 200.40	6990.94						
MW-7	3-23 1103	200.90	6988.82	6787.92	5,240	2.97	9.2	ND	31
NW-1			6997.11						
NW-2			6989.65						
NW-3			6985.44						
NW-4			6990.01						
NW-5			6985.85						
MW-6			6990.94						
MW-7			6988.82						

COMMENTS: No sample collected for well NW-5 on 1-21-22 due to pump pending replacement
r repair. ND= not detected

NBL-1, NBL-2, RW-A & PB WELL GROUND WATER MONITORING
WATER ELEVATIONS, pH, CONDUCTIVITY, TITRATION AND TEMPERATURE

MONTH: April, May & June QUARTER: Second YEAR: 2022

ZONE - 3

WELL NO.	DEPTH SAMPLE DATE/TIME	DEPTH TO WATER (FT)	REF. ELEV.	TOP OF WATER ELEV.	FIELD COND. (US/CM)	FIELD pH (UNITS)	FIELD TEMP. (°C)	HCO3 mg/l	Chl mg/l
NBL-1	4-13 1520	mud @ 198.00	6991.96						
NBL-2	4-5 1010	176.01	6975.61	6799.60	3,480	6.47	12.1	287	37
PB-2		DRY	6989.70						
PB-3		DRY	6990.23						
PB-4	4-12 1538	mud @ 193.27	6990.18						
RW-A	4-5 1052		6983.23	6983.23	5,340	5.50	12.4	24	30
NBL-1			6991.96						
NBL-2	5-23 1108	176.18	6975.61	6799.43	3,600	7.52	20.6	274	35
PB-2		DRY	7989.72						
PB-3		DRY	6990.23						
PB-4	5-25 1520	mud @ 193.27	6990.18						
RW-A	5-23 1036		6983.23	6983.23	5,290	5.29	13.6	24	29
NBL-1			6991.96						
NBL-2	6-22 1129	176.39	6975.61	6799.22	3,570	7.64	19.9	335	35
PB-2		Dry	7989.72						
PB-3		Dry	6990.23						
PB-4	6-24 1220	mud @ 193.27	6990.18						
RW-A	6-22 1108	178.38	6983.23	6804.85	5,280	5.23	18.6	25	29
NBL-1			6991.96						
NBL-2			6975.61						
PB-2			7989.72						
PB-3			6990.23						
PB-4			6990.18						
RW-A			6983.23						

COMMENTS: _____

MW & NW WELL GROUND WATER MONITORING

WATER ELEVATIONS, pH, CONDUCTIVITY, TITRATION AND TEMPERATURE

MONTH: April, May & June QUARTER: Second YEAR: 2022

ZONE - 3

WELL NO.	DEPTH SAMPLE DATE/TIME	DEPTH TO WATER (FT)	REF. ELEV.	TOP OF WATER ELEV.	FIELD COND. (US/CM)	FIELD pH (UNITS)	FIELD TEMP. (°C)	HCO3 mg/l	Chl mg/l
NW-1	4-12 1431	198.66	6997.11	6798.45					
NW-2	4-12 1427	200.84	6989.65	6788.81					
NW-3	4-4 1351	195.49	6985.44	6789.95	4,700	6.94	13.2	268	39
NW-4	4-5 1039	198.35	6990.01	6791.66	3,950	5.81	10.8	9	20
NW-5	4-12 1418	195.11	6985.76	6790.65					
MW-6	4-12 1540	mud @ 200.40	6990.94						
MW-7	4-4 1210	200.78	6988.82	6788.04	5,170	2.89	15.4	ND	31
NW-1	5-23 1000	198.69	6997.11	6798.42					
NW-2	5-23 1012	201.11	6989.65	6788.54					
NW-3	5-23 0934	195.71	6985.44	6789.73	4,600	6.85	11.6	375	35
NW-4	5-23 0950	196.27	6990.01	6793.74	4,120	4.70	13.7	6	20
NW-5	5-23 1017	195.65	6985.76	6790.11	5,020	5.28	12.7	24	28
MW-6	5-25 1510	mud @ 200.20	6990.94						
MW-7	5-23 1312	200.86	6988.82	6787.96	5,400	3.36	17.7	ND	27
NW-1	6-22 1020	198.70	6997.11	6798.41					
NW-2	6-22 1025	201.19	6989.65	6788.46					
NW-3	6-22 1030	195.80	6985.44	6789.64	4,560	6.88	13.0	354	35
NW-4	6-22 1056	197.91	6990.01	6792.1	4,020	4.93	13.6	6	18
NW-5	6-22 1043	196.24	6985.76	6789.52	5,050	5.48	17.7	24	28
MW-6	6-24 1216	mud @ 200.20	6990.94						
MW-7	6-22 1218	201.05	6988.82	6787.77	5,330	2.98	18.9	ND	27
NW-1			6997.11						
NW-2			6989.65						
NW-3			6985.44						
NW-4			6990.01						
NW-5			6985.85						
MW-6			6990.94						
MW-7			6988.82						

COMMENTS: No Sample for well NW-5 on 4-12-22 due to pump failure

QUARTERLY SAMPLING
SEMI-ANNUAL GROUND WATER MONITORING REPORT

JANUARY TO JUNE OF 2022

SOUTH WEST ALLUVIUM

*509-D

624

627

*632

801

802

803

808

*GW-1

*EPA-23

EPA-25

*EPA-28

SBL-1

LEVELS ONLY

805

807

**NOTE: *POINT OF COMPLIANCE WELLS
WATER LEVEL ONLY IS IN FIELD DATA SHEET**

QUARTERLY SAMPLING
SEMI-ANNUAL GROUND WATER MONITORING REPORT

JANUARY TO JUNE OF 2022

SOUTH WEST ALLUVIUM

*509-D

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*EPA-23

EPA-25

*EPA-28

SBL-1

LEVELS ONLY

805

807

**NOTE: *POINT OF COMPLIANCE WELLS
WATER LEVEL ONLY IS IN FIELD DATA SHEET**

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-SW ALLUVIUM
Lab ID: C22010739-007
Client Sample ID: 509-D

Report Date: 03/07/22
Collection Date: 01/18/22 09:22
Date Received: 01/25/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	2150	mg/L		5		A2320 B	01/25/22 13:05 / kjp
Chloride	334	mg/L	D	2		E300.0	01/28/22 09:49 / dmb
Sulfate	2120	mg/L	D	8		E300.0	01/28/22 09:49 / dmb
Calcium	611	mg/L	D	3		E200.8	02/02/22 01:48 / jcg
Magnesium	358	mg/L		1		E200.8	02/02/22 01:48 / jcg
Potassium	11	mg/L		1		E200.8	02/02/22 01:48 / jcg
Sodium	387	mg/L	D	2		E200.8	02/02/22 01:48 / jcg
PHYSICAL PROPERTIES							
pH	6.7	s.u.	H	0.1		A4500-H B	01/25/22 12:01 / mnm
pH Measurement Temp	15.4	°C				A4500-H B	01/25/22 12:01 / mnm
Solids, Total Dissolved TDS @ 180 C	5520	mg/L	D	40		A2540 C	01/25/22 10:37 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	8.7	mg/L	D	0.1		E353.2	01/25/22 14:30 / nts
Nitrogen, Ammonia as N	ND	mg/L		0.05		E350.1	01/27/22 15:20 / dmb
METALS, TOTAL							
Aluminum	ND	mg/L		0.03		E200.8	02/08/22 17:21 / jcg
Arsenic	0.001	mg/L		0.001		E200.8	01/27/22 18:40 / jcg
Beryllium	ND	mg/L		0.001		E200.8	01/27/22 18:40 / jcg
Cadmium	ND	mg/L		0.001		E200.8	01/27/22 18:40 / jcg
Cobalt	0.006	mg/L		0.005		E200.8	01/27/22 18:40 / jcg
Lead	ND	mg/L		0.001		E200.8	01/27/22 18:40 / jcg
Manganese	1.25	mg/L		0.001		E200.8	01/27/22 18:40 / jcg
Molybdenum	ND	mg/L		0.001		E200.8	02/08/22 17:21 / jcg
Nickel	0.006	mg/L		0.005		E200.8	02/08/22 17:21 / jcg
Selenium	ND	mg/L		0.001		E200.8	01/27/22 18:40 / jcg
Uranium	0.239	mg/L	D	0.0005		E200.8	01/27/22 18:40 / jcg
Vanadium	ND	mg/L		0.01		E200.8	01/27/22 18:40 / jcg
DATA QUALITY							
Solids, Total Dissolved - Calculated	4870	mg/L		1.00		A1030 E	02/09/22 11:50 / jlw
A/C Balance	-6.97	%				A1030 E	02/09/22 11:50 / jlw
Anions	88.7	meq/L				A1030 E	02/09/22 11:50 / jlw
Cations	77.1	meq/L				A1030 E	02/09/22 11:50 / jlw
TDS Ratio	1.13	unitless				A1030 E	02/09/22 11:50 / jlw
Cation/Anion Balance includes selected metals							
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	0.5	pCi/L				E900.1	01/31/22 10:28 / trs
Gross Alpha minus Rn & U Precision (±)	0.4	pCi/L				E900.1	01/31/22 10:28 / trs
Gross Alpha minus Rn & U MDC	0.5	pCi/L				E900.1	01/31/22 10:28 / trs
Lead 210	-0.8	pCi/L	U			E909.0	02/02/22 18:29 / sec

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
H - Analysis performed past the method holding time



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-SW ALLUVIUM
Lab ID: C22010739-007
Client Sample ID: 509-D

Report Date: 03/07/22
Collection Date: 01/18/22 09:22
Date Received: 01/25/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Lead 210 precision (±)	0.5	pCi/L				E909.0	02/02/22 18:29 / sec
Lead 210 MDC	0.9	pCi/L				E909.0	02/02/22 18:29 / sec
Radium 226	0.3	pCi/L				E903.0	02/08/22 12:24 / trs
Radium 226 precision (±)	0.1	pCi/L				E903.0	02/08/22 12:24 / trs
Radium 226 MDC	0.1	pCi/L				E903.0	02/08/22 12:24 / trs
Radium 228	1.1	pCi/L				RA-05	02/02/22 15:59 / hat
Radium 228 precision (±)	0.6	pCi/L				RA-05	02/02/22 15:59 / hat
Radium 228 MDC	0.8	pCi/L				RA-05	02/02/22 15:59 / hat
Radium 226 + Radium 228	1.3	pCi/L				A7500-RA	02/08/22 14:30 / dmf
Radium 226 + Radium 228 precision (±)	0.6	pCi/L				A7500-RA	02/08/22 14:30 / dmf
Radium 226 + Radium 228 MDC	0.8	pCi/L				A7500-RA	02/08/22 14:30 / dmf
Thorium 230	0.08	pCi/L	U			A7500-U C	02/03/22 16:01 / sec
Thorium 230 precision (±)	0.08	pCi/L				A7500-U C	02/03/22 16:01 / sec
Thorium 230 MDC	0.1	pCi/L				A7500-U C	02/03/22 16:01 / sec
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		1.0		E624.1	01/28/22 01:42 / etad
Bromoform	ND	ug/L		2.0		E624.1	01/28/22 01:42 / etad
Chlorodibromomethane	ND	ug/L		1.0		E624.1	01/28/22 01:42 / etad
Chloroform	ND	ug/L		0.50		E624.1	01/28/22 01:42 / etad
Trihalomethanes, Total	ND	ug/L		0.50		E624.1	03/01/22 18:20 / tlf
Surr: 1,2-Dichloroethane-d4	95.0	%REC		73-122		E624.1	01/28/22 01:42 / etad
Surr: p-Bromofluorobenzene	87.0	%REC		79-119		E624.1	01/28/22 01:42 / etad
Surr: Toluene-d8	96.0	%REC		80-120		E624.1	01/28/22 01:42 / etad

Report Definitions:
RL - Analyte Reporting Limit
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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-SW Alluvium
Lab ID: C22040413-001
Client Sample ID: 509-D

Report Date: 06/18/22
Collection Date: 04/07/22 09:12
Date Received: 04/12/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	1970	mg/L		5		A2320 B	04/13/22 19:53 / nts
Chloride	340	mg/L	D	2		E300.0	04/15/22 10:47 / dmb
Sulfate	2390	mg/L	D	8		E300.0	04/15/22 10:47 / dmb
Calcium	783	mg/L	D	3		E200.7	05/31/22 09:56 / jcg
Magnesium	378	mg/L		1		E200.8	04/23/22 02:12 / jcg
Potassium	15	mg/L	D	5		E200.7	05/31/22 09:56 / jcg
Sodium	377	mg/L	D	3		E200.8	04/23/22 02:12 / jcg
PHYSICAL PROPERTIES							
pH	6.8	s.u.	H	0.1		A4500-H B	04/14/22 11:23 / mnm
pH Measurement Temp	11.8	°C				A4500-H B	04/14/22 11:23 / mnm
Solids, Total Dissolved TDS @ 180 C	5770	mg/L	D	40		A2540 C	04/14/22 12:31 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	11.8	mg/L	D	0.1		E353.2	04/14/22 14:49 / nts
Nitrogen, Ammonia as N	0.10	mg/L		0.05		E350.1	04/15/22 11:42 / nts
METALS, TOTAL							
Aluminum	ND	mg/L	D	0.09		E200.8	06/14/22 02:47 / jcg
Arsenic	ND	mg/L		0.001		E200.8	04/27/22 05:44 / jcg
Beryllium	ND	mg/L	D	0.002		E200.8	04/25/22 14:51 / jcg
Cadmium	ND	mg/L		0.001		E200.8	04/25/22 14:51 / jcg
Cobalt	0.006	mg/L		0.005		E200.8	04/25/22 14:51 / jcg
Lead	ND	mg/L		0.001		E200.8	04/25/22 14:51 / jcg
Manganese	1.57	mg/L	D	0.007		E200.8	04/25/22 14:51 / jcg
Molybdenum	ND	mg/L		0.001		E200.8	04/25/22 14:51 / jcg
Nickel	0.009	mg/L		0.005		E200.8	04/25/22 14:51 / jcg
Selenium	ND	mg/L		0.001		E200.8	04/27/22 05:44 / jcg
Uranium	0.226	mg/L	D	0.003		E200.8	04/25/22 14:51 / jcg
Vanadium	ND	mg/L		0.01		E200.8	04/25/22 14:51 / jcg
DATA QUALITY							
Solids, Total Dissolved - Calculated	5320	mg/L		1.00		A1030 E	06/17/22 17:46 / tlf
A/C Balance	-3.02	%				A1030 E	06/17/22 17:46 / tlf
Anions	92.4	meq/L				A1030 E	06/17/22 17:46 / tlf
Cations	87.0	meq/L				A1030 E	06/17/22 17:46 / tlf
TDS Ratio	1.08	unitless				A1030 E	06/17/22 17:46 / tlf
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	0.6	pCi/L	U			E900.1	04/25/22 14:36 / kdk
Gross Alpha minus Rn & U Precision (±)	0.5	pCi/L				E900.1	04/25/22 14:36 / kdk
Gross Alpha minus Rn & U MDC	0.7	pCi/L				E900.1	04/25/22 14:36 / kdk
Lead 210	-3	pCi/L	U			E909.0	04/21/22 16:21 / hat
Lead 210 precision (±)	0.7	pCi/L				E909.0	04/21/22 16:21 / hat

Report Definitions:
 RL - Analyte Reporting Limit
 QCL - Quality Control Limit
 D - Reporting Limit (RL) increased due to sample matrix
 U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-SW Alluvium
Lab ID: C22040413-001
Client Sample ID: 509-D

Report Date: 06/18/22
Collection Date: 04/07/22 09:12
Date Received: 04/12/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Lead 210 MDC	1.2	pCi/L			E909.0		04/21/22 16:21 / hat
Radium 226	0.4	pCi/L			E903.0		04/29/22 16:54 / trs
Radium 226 precision (±)	0.09	pCi/L			E903.0		04/29/22 16:54 / trs
Radium 226 MDC	0.1	pCi/L			E903.0		04/29/22 16:54 / trs
Radium 228	0.9	pCi/L	U		RA-05		05/05/22 12:30 / trs
Radium 228 precision (±)	0.9	pCi/L			RA-05		05/05/22 12:30 / trs
Radium 228 MDC	1.4	pCi/L			RA-05		05/05/22 12:30 / trs
Radium 226 + Radium 228	1.3	pCi/L	U		A7500-RA		05/09/22 12:33 / dmf
Radium 226 + Radium 228 precision (±)	0.9	pCi/L			A7500-RA		05/09/22 12:33 / dmf
Radium 226 + Radium 228 MDC	1.4	pCi/L			A7500-RA		05/09/22 12:33 / dmf
Thorium 230	0.2	pCi/L			A7500-U C		04/21/22 13:52 / sec
Thorium 230 precision (±)	0.1	pCi/L			A7500-U C		04/21/22 13:52 / sec
Thorium 230 MDC	0.2	pCi/L			A7500-U C		04/21/22 13:52 / sec
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		1.0	E624.1		04/21/22 10:17 / etad
Bromoform	ND	ug/L		1.0	E624.1		04/21/22 10:17 / etad
Chlorodibromomethane	ND	ug/L		2.0	E624.1		04/21/22 10:17 / etad
Chloroform	ND	ug/L		1.0	E624.1		04/21/22 10:17 / etad
Trihalomethanes, Total	ND	ug/L		0.50	E624.1		04/27/22 18:25 / tlf
Surr: 1,2-Dichloroethane-d4	95.0	%REC		73-122	E624.1		04/21/22 10:17 / etad
Surr: p-Bromofluorobenzene	96.0	%REC		79-119	E624.1		04/21/22 10:17 / etad
Surr: Toluene-d8	101	%REC		80-120	E624.1		04/21/22 10:17 / etad

Report RL - Analyte Reporting Limit
Definitions: QCL - Quality Control Limit
U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

United Nuclear Corp					
Guideline 8: Sweetwater					
Well ID:		509-D	509-D	509-D	509-D
Collection Date:		4/7/2022	1/18/2022	10/8/2021	7/19/2021
Receive Date:		4/12/2022	1/25/2022	10/12/2021	7/21/2021
Report Date:		6/18/2022	3/7/2022	11/28/2021	8/27/2021
Analyte	RUnits	C22040413-001	C22010739-007	C21100467-003	C21070842-001
Bicarbonate as HCO ₃	mg/L	1970	2150	2140	2160
Calcium	mg/L	775	611	748	878
Chloride	mg/L	340	334	331	345
Magnesium	mg/L	378	358	400	398
Potassium	mg/L	13	11	13	13
Sodium	mg/L	377	387	390	414
Sulfate	mg/L	2390	2120	2230	2300
pH	s.u.	6.8	6.7	6.6	6.6
pH Measurement Temp	°C	11.8	15.4	13.1	13.8
Solids, Total Dissolved TDS @ 180 C	mg/L	5770	5520	5670	5830
Solids, Total Dissolved - Calculated	mg/L	5310	4870	5210	5460
Nitrogen, Ammonia as N	mg/L	0.10	ND(0.05)	ND(0.05)	ND(0.05)
Nitrogen, Nitrate+Nitrite as N	mg/L	11.8	8.7	12.0	12.0
Aluminum	mg/L	ND(0.09)	ND(0.03)	ND(0.04)	ND(0.03)
Arsenic	mg/L	ND(0.001)	0.001	ND(0.001)	ND(0.001)
Beryllium	mg/L	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cobalt	mg/L	0.006	0.006	0.007	0.009
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	1.57	1.25	2.15	2.70
Molybdenum	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Nickel	mg/L	0.009	0.006	ND(0.005)	0.005
Selenium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Uranium	mg/L	0.226	0.239	0.232	0.240
Vanadium	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
A/C Balance	%	-3.30	-6.97	-2.25	0.65
Anions	meq/L	92.4	88.7	91.5	93.7
Cations	meq/L	86.5	77.1	87.5	94.9
TDS Ratio	unitless	1.09	1.13	1.09	1.07
Gross Alpha minus Rn & U	pCi/L	0.6	0.5	0.9	0.06
Gross Alpha minus Rn & U MDC	pCi/L	0.7	0.5	1.1	0.8
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.5	0.4	0.8	0.4
Lead 210	pCi/L	-3	-0.8	0.6	0.09
Lead 210 MDC	pCi/L	1.2	0.9	0.9	0.9
Lead 210 precision (±)	pCi/L	0.7	0.5	0.6	0.5
Radium 226	pCi/L	0.4	0.3	0.2	0.4
Radium 226 MDC	pCi/L	0.1	0.1	0.2	0.2
Radium 226 precision (±)	pCi/L	0.09	0.1	0.2	0.2
Radium 228	pCi/L	0.9	1.1	0.6	0.4
Radium 228 MDC	pCi/L	1.4	0.8	1	1.5
Radium 228 precision (±)	pCi/L	0.9	0.6	0.6	0.9
Thorium 230	pCi/L	0.2	0.08	-0.03	0.008
Thorium 230 MDC	pCi/L	0.2	0.1	0.2	0.1
Thorium 230 precision (±)	pCi/L	0.1	0.08	0.07	0.06
Bromodichloromethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.50)
Bromoform	ug/L	ND(1.0)	ND(2.0)	ND(2.0)	ND(0.50)
Chlorodibromomethane	ug/L	ND(2.0)	ND(1.0)	ND(1.0)	ND(0.50)
Chloroform	ug/L	ND(1.0)	ND(0.50)	ND(1.0)	ND(0.50)
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 3 & SW Alluvium, UNC - Zone1, UNC - Zone3
Lab ID: C22010583-008
Client Sample ID: 624

Report Date: 02/16/22
Collection Date: 01/17/22 13:19
Date Received: 01/19/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	1670	mg/L		5		A2320 B	01/20/22 16:49 / kjp
Chloride	232	mg/L	D	2		E300.0	01/21/22 21:02 / dmb
Sulfate	2350	mg/L	D	8		E300.0	01/21/22 21:02 / dmb
Calcium	700	mg/L	D	3		E200.8	01/21/22 16:04 / jcg
Magnesium	470	mg/L		1		E200.8	01/21/22 16:04 / jcg
Potassium	6	mg/L		1		E200.8	01/21/22 16:04 / jcg
Sodium	363	mg/L	D	2		E200.8	01/21/22 16:04 / jcg
PHYSICAL PROPERTIES							
pH	6.6	s.u.	H	0.1		A4500-H B	01/20/22 11:01 / mnmm
pH Measurement Temp	14.0	°C				A4500-H B	01/20/22 11:01 / mnmm
Solids, Total Dissolved TDS @ 180 C	5350	mg/L	D	40		A2540 C	01/20/22 15:25 / mnmm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	84.8	mg/L	D	0.5		E353.2	01/20/22 13:01 / nts
Nitrogen, Ammonia as N	ND	mg/L		0.05		E350.1	01/27/22 14:17 / dmb
METALS, TOTAL							
Aluminum	ND	mg/L		0.03		E200.8	02/02/22 05:07 / jcg
Arsenic	ND	mg/L		0.001		E200.8	02/01/22 04:04 / jcg
Beryllium	ND	mg/L		0.001		E200.8	02/01/22 04:04 / jcg
Cadmium	ND	mg/L		0.001		E200.8	02/01/22 04:04 / jcg
Cobalt	ND	mg/L		0.005		E200.8	02/01/22 04:04 / jcg
Lead	ND	mg/L		0.001		E200.8	02/02/22 05:07 / jcg
Manganese	0.168	mg/L	D	0.004		E200.8	02/01/22 04:04 / jcg
Molybdenum	ND	mg/L		0.001		E200.8	02/01/22 04:04 / jcg
Nickel	ND	mg/L		0.005		E200.8	02/01/22 04:04 / jcg
Selenium	ND	mg/L		0.001		E200.8	02/01/22 04:04 / jcg
Uranium	0.0441	mg/L		0.0003		E200.8	02/02/22 05:07 / jcg
Vanadium	ND	mg/L		0.01		E200.8	02/01/22 04:04 / jcg
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	1.2	pCi/L				E900.1	01/24/22 11:57 / amm
Gross Alpha minus Rn & U Precision (±)	0.7	pCi/L				E900.1	01/24/22 11:57 / amm
Gross Alpha minus Rn & U MDC	0.9	pCi/L				E900.1	01/24/22 11:57 / amm
Lead 210	0.6	pCi/L	U			E909.0	01/30/22 17:42 / hat
Lead 210 precision (±)	0.5	pCi/L				E909.0	01/30/22 17:42 / hat
Lead 210 MDC	0.8	pCi/L				E909.0	01/30/22 17:42 / hat
Radium 226	0.4	pCi/L				E903.0	02/01/22 14:39 / kdk
Radium 226 precision (±)	0.2	pCi/L				E903.0	02/01/22 14:39 / kdk
Radium 226 MDC	0.2	pCi/L				E903.0	02/01/22 14:39 / kdk
Radium 228	0.07	pCi/L	U			RA-05	01/27/22 16:15 / trs
Radium 228 precision (±)	1.0	pCi/L				RA-05	01/27/22 16:15 / trs
Radium 228 MDC	1.7	pCi/L				RA-05	01/27/22 16:15 / trs

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
H - Analysis performed past the method holding time



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 3 & SW Alluvium, UNC - Zone1, UNC - Zone3
Lab ID: C22010583-008
Client Sample ID: 624

Report Date: 02/16/22
Collection Date: 01/17/22 13:19
Date Received: 01/19/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Radium 226 + Radium 228	0.5	pCi/L	U			A7500-RA	02/02/22 15:40 / dmf
Radium 226 + Radium 228 precision (±)	1.0	pCi/L				A7500-RA	02/02/22 15:40 / dmf
Radium 226 + Radium 228 MDC	1.8	pCi/L				A7500-RA	02/02/22 15:40 / dmf
Thorium 230	0.02	pCi/L	U			A7500-U C	01/26/22 13:49 / sec
Thorium 230 precision (±)	0.07	pCi/L				A7500-U C	01/26/22 13:49 / sec
Thorium 230 MDC	0.1	pCi/L				A7500-U C	01/26/22 13:49 / sec
DATA QUALITY							
Solids, Total Dissolved - Calculated	5320	mg/L		1.00		A1030 E	01/24/22 16:22 / jlw
A/C Balance	0.28	%				A1030 E	01/24/22 16:22 / jlw
Anions	89.0	meq/L				A1030 E	01/24/22 16:22 / jlw
Cations	89.5	meq/L				A1030 E	01/24/22 16:22 / jlw
TDS Ratio	1.01	unitless				A1030 E	01/24/22 16:22 / jlw
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		1.0		E624.1	01/25/22 16:23 / etad
Bromoform	ND	ug/L		2.0		E624.1	01/25/22 16:23 / etad
Chlorodibromomethane	ND	ug/L		1.0		E624.1	01/25/22 16:23 / etad
Chloroform	ND	ug/L		1.0		E624.1	01/25/22 16:23 / etad
Trihalomethanes, Total	ND	ug/L		0.50		E624.1	02/16/22 14:49 / tlf
Surr: 1,2-Dichloroethane-d4	102	%REC		73-122		E624.1	01/25/22 16:23 / etad
Surr: p-Bromofluorobenzene	103	%REC		79-119		E624.1	01/25/22 16:23 / etad
Surr: Toluene-d8	103	%REC		80-120		E624.1	01/25/22 16:23 / etad

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-SW Alluvium
Lab ID: C22040413-009
Client Sample ID: 624

Report Date: 06/18/22
Collection Date: 04/08/22 10:35
Date Received: 04/12/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	1640	mg/L		5		A2320 B	04/13/22 21:20 / nts
Chloride	228	mg/L	D	2		E300.0	04/15/22 13:58 / dmb
Sulfate	2320	mg/L	D	8		E300.0	04/15/22 13:58 / dmb
Calcium	660	mg/L	D	3		E200.8	04/22/22 05:15 / jcg
Magnesium	388	mg/L		1		E200.8	04/22/22 05:15 / jcg
Potassium	7	mg/L	D	2		E200.7	05/30/22 01:43 / jcg
Sodium	301	mg/L	D	3		E200.8	04/22/22 05:15 / jcg
PHYSICAL PROPERTIES							
pH	6.7	s.u.	H	0.1		A4500-H B	04/14/22 11:49 / mnm
pH Measurement Temp	13.3	°C				A4500-H B	04/14/22 11:49 / mnm
Solids, Total Dissolved TDS @ 180 C	5410	mg/L	D	40		A2540 C	04/14/22 12:35 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	73	mg/L	D	1		E353.2	04/14/22 15:01 / nts
Nitrogen, Ammonia as N	ND	mg/L		0.05		E350.1	04/15/22 11:57 / nts
METALS, TOTAL							
Aluminum	ND	mg/L	D	0.09		E200.8	06/14/22 04:20 / jcg
Arsenic	ND	mg/L		0.001		E200.8	04/29/22 03:23 / jcg
Beryllium	ND	mg/L		0.001		E200.7	05/06/22 13:06 / erc
Cadmium	ND	mg/L		0.001		E200.8	04/25/22 16:00 / jcg
Cobalt	ND	mg/L		0.005		E200.8	04/25/22 16:00 / jcg
Lead	ND	mg/L		0.001		E200.8	04/29/22 03:23 / jcg
Manganese	0.151	mg/L	D	0.007		E200.8	04/25/22 16:00 / jcg
Molybdenum	ND	mg/L		0.001		E200.8	04/25/22 16:00 / jcg
Nickel	ND	mg/L		0.005		E200.8	05/07/22 03:15 / jcg
Selenium	ND	mg/L		0.001		E200.8	04/29/22 03:23 / jcg
Uranium	0.048	mg/L	D	0.003		E200.8	04/25/22 16:00 / jcg
Vanadium	ND	mg/L		0.01		E200.8	04/25/22 16:00 / jcg
DATA QUALITY							
Solids, Total Dissolved - Calculated	5050	mg/L		1.00		A1030 E	06/17/22 17:55 / tlf
A/C Balance	-5.22	%				A1030 E	06/17/22 17:55 / tlf
Anions	86.7	meq/L				A1030 E	06/17/22 17:55 / tlf
Cations	78.1	meq/L				A1030 E	06/17/22 17:55 / tlf
TDS Ratio	1.07	unitless				A1030 E	06/17/22 17:55 / tlf
Cation/Anion Balance includes selected metals							
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	0.3	pCi/L	U			E900.1	04/25/22 16:19 / kdk
Gross Alpha minus Rn & U Precision (±)	0.4	pCi/L				E900.1	04/25/22 16:19 / kdk
Gross Alpha minus Rn & U MDC	0.7	pCi/L				E900.1	04/25/22 16:19 / kdk
Lead 210	-2	pCi/L	U			E909.0	04/21/22 16:21 / hat

Report RL - Analyte Reporting Limit

Definitions: QCL - Quality Control Limit

D - Reporting Limit (RL) increased due to sample matrix

U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level

ND - Not detected at the Reporting Limit (RL)

H - Analysis performed past the method holding time



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-SW Alluvium
Lab ID: C22040413-009
Client Sample ID: 624

Report Date: 06/18/22
Collection Date: 04/08/22 10:35
Date Received: 04/12/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Lead 210 precision (±)	0.7	pCi/L				E909.0	04/21/22 16:21 / hat
Lead 210 MDC	1.2	pCi/L				E909.0	04/21/22 16:21 / hat
Radium 226	0.4	pCi/L				E903.0	04/27/22 11:27 / kdk
Radium 226 precision (±)	0.2	pCi/L				E903.0	04/27/22 11:27 / kdk
Radium 226 MDC	0.2	pCi/L				E903.0	04/27/22 11:27 / kdk
Radium 228	2.4	pCi/L				RA-05	05/05/22 14:13 / trs
Radium 228 precision (±)	1.2	pCi/L				RA-05	05/05/22 14:13 / trs
Radium 228 MDC	1.8	pCi/L				RA-05	05/05/22 14:13 / trs
Radium 226 + Radium 228	2.8	pCi/L				A7500-RA	05/09/22 12:33 / dmf
Radium 226 + Radium 228 precision (±)	1.2	pCi/L				A7500-RA	05/09/22 12:33 / dmf
Radium 226 + Radium 228 MDC	1.8	pCi/L				A7500-RA	05/09/22 12:33 / dmf
Thorium 230	0.1	pCi/L	U			A7500-U C	04/25/22 14:02 / sec
Thorium 230 precision (±)	0.1	pCi/L				A7500-U C	04/25/22 14:02 / sec
Thorium 230 MDC	0.2	pCi/L				A7500-U C	04/25/22 14:02 / sec
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		1.0		E624.1	04/21/22 13:09 / etad
Bromoform	ND	ug/L		2.0		E624.1	04/21/22 13:09 / etad
Chlorodibromomethane	ND	ug/L		1.0		E624.1	04/21/22 13:09 / etad
Chloroform	ND	ug/L		1.0		E624.1	04/21/22 13:09 / etad
Trihalomethanes, Total	ND	ug/L		0.50		E624.1	04/27/22 18:25 / tlf
Surr: 1,2-Dichloroethane-d4	99.0	%REC		73-122		E624.1	04/21/22 13:09 / etad
Surr: p-Bromofluorobenzene	97.0	%REC		79-119		E624.1	04/21/22 13:09 / etad
Surr: Toluene-d8	100	%REC		80-120		E624.1	04/21/22 13:09 / etad

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

United Nuclear Corp					
Guideline 8: Sweetwater					
Well ID:		624	624	624	624
Collection Date:		4/8/2022	1/17/2022	10/11/2021	7/20/2021
Receive Date:		4/12/2022	1/19/2022	10/14/2022	7/22/2021
Report Date:		6/18/2022	2/16/2022	12/3/2021	8/27/2021
Analyte	Units	C22040413-009	C22010583-008	C21100526-005	C21070886-002
Bicarbonate as HCO ₃	mg/L	1640	1670	1680	1660
Calcium	mg/L	660	700	679	708
Chloride	mg/L	228	232	227	234
Magnesium	mg/L	388	470	414	435
Potassium	mg/L	6	6	6	7
Sodium	mg/L	301	363	333	331
Sulfate	mg/L	2320	2350	2320	2370
pH	s.u.	6.7	6.6	6.6	6.6
pH Measurement Temp	°C	13.3	14.0	12.3	16.1
Solids, Total Dissolved TDS @ 180 C	mg/L	5410	5350	5450	5430
Solids, Total Dissolved - Calculated	mg/L	4730	5320	5120	5230
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	73	84.8	69.8	74
Aluminum	mg/L	ND(0.09)	ND(0.03)	0.19	0.06
Arsenic	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Beryllium	mg/L	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cobalt	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	0.151	0.168	0.118	0.128
Molybdenum	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Nickel	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Selenium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Uranium	mg/L	0.048	0.0441	0.043	0.0474
Vanadium	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
A/C Balance	%	-2.14	0.28	-2.77	-1.58
Anions	meq/L	81.5	89.0	87.3	88.5
Cations	meq/L	78.1	89.5	82.6	85.7
TDS Ratio	unitless	1.14	1.01	1.06	1.04
Gross Alpha minus Rn & U	pCi/L	0.3	1.2	1.2	-0.01
Gross Alpha minus Rn & U MDC	pCi/L	0.7	0.9	0.7	0.8
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.4	0.7	0.6	0.5
Lead 210	pCi/L	-2	0.6	1.2	0.02
Lead 210 MDC	pCi/L	1.2	0.8	1	0.8
Lead 210 precision (±)	pCi/L	0.7	0.5	0.7	0.5
Radium 226	pCi/L	0.4	0.4	0.3	0.4
Radium 226 MDC	pCi/L	0.2	0.2	0.2	0.1
Radium 226 precision (±)	pCi/L	0.2	0.2	0.2	0.1
Radium 228	pCi/L	2.4	0.07	0.2	0.5
Radium 228 MDC	pCi/L	1.8	1.7	1.1	1.2
Radium 228 precision (±)	pCi/L	1.2	1.0	0.7	0.7
Thorium 230	pCi/L	0.1	0.02	0.04	-0.02
Thorium 230 MDC	pCi/L	0.2	0.1	0.1	0.1
Thorium 230 precision (±)	pCi/L	0.1	0.07	0.07	0.06
Bromodichloromethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.50)
Bromoform	ug/L	ND(2.0)	ND(2.0)	ND(2.0)	ND(0.50)
Chlorodibromomethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.50)
Chloroform	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.50)
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-SW ALLUVIUM
Lab ID: C22010739-004
Client Sample ID: 627

Report Date: 03/07/22
Collection Date: 01/18/22 12:50
Date Received: 01/25/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	517	mg/L		5		A2320 B	01/25/22 12:59 / kjp
Chloride	44	mg/L	D	2		E300.0	01/28/22 08:14 / dmb
Sulfate	2300	mg/L	D	10		E300.0	01/28/22 08:14 / dmb
Calcium	546	mg/L	D	3		E200.8	02/02/22 01:11 / jcg
Magnesium	227	mg/L		1		E200.8	02/02/22 01:11 / jcg
Potassium	5	mg/L		1		E200.8	02/02/22 01:11 / jcg
Sodium	375	mg/L	D	2		E200.8	02/02/22 01:11 / jcg
PHYSICAL PROPERTIES							
pH	7.0	s.u.	H	0.1		A4500-H B	01/25/22 11:53 / mnm
pH Measurement Temp	15.7	°C				A4500-H B	01/25/22 11:53 / mnm
Solids, Total Dissolved TDS @ 180 C	4200	mg/L	D	40		A2540 C	01/25/22 10:06 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	77.2	mg/L	D	0.5		E353.2	01/25/22 14:26 / nts
Nitrogen, Ammonia as N	ND	mg/L		0.05		E350.1	01/27/22 15:16 / dmb
METALS, TOTAL							
Aluminum	ND	mg/L		0.03		E200.8	02/08/22 16:48 / jcg
Arsenic	ND	mg/L		0.001		E200.8	01/27/22 18:15 / jcg
Beryllium	ND	mg/L		0.001		E200.8	01/27/22 18:15 / jcg
Cadmium	ND	mg/L		0.001		E200.8	01/27/22 18:15 / jcg
Cobalt	ND	mg/L		0.005		E200.8	01/27/22 18:15 / jcg
Lead	ND	mg/L		0.001		E200.8	01/27/22 18:15 / jcg
Manganese	0.028	mg/L		0.001		E200.8	01/27/22 18:15 / jcg
Molybdenum	ND	mg/L		0.001		E200.8	02/08/22 16:48 / jcg
Nickel	ND	mg/L		0.005		E200.8	02/08/22 16:48 / jcg
Selenium	0.019	mg/L		0.001		E200.8	01/27/22 18:15 / jcg
Uranium	0.0195	mg/L	D	0.0005		E200.8	01/27/22 18:15 / jcg
Vanadium	ND	mg/L		0.01		E200.8	01/27/22 18:15 / jcg
DATA QUALITY							
Solids, Total Dissolved - Calculated	4120	mg/L		1.00		A1030 E	02/02/22 16:59 / jlw
A/C Balance	-0.62	%				A1030 E	02/02/22 16:59 / jlw
Anions	63.2	meq/L				A1030 E	02/02/22 16:59 / jlw
Cations	62.4	meq/L				A1030 E	02/02/22 16:59 / jlw
TDS Ratio	1.02	unitless				A1030 E	02/02/22 16:59 / jlw
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	0.1	pCi/L	U			E900.1	01/31/22 08:28 / trs
Gross Alpha minus Rn & U Precision (±)	0.3	pCi/L				E900.1	01/31/22 08:28 / trs
Gross Alpha minus Rn & U MDC	0.5	pCi/L				E900.1	01/31/22 08:28 / trs
Lead 210	-0.08	pCi/L	U			E909.0	02/02/22 05:43 / sec
Lead 210 precision (±)	0.5	pCi/L				E909.0	02/02/22 05:43 / sec

Report Definitions:
 RL - Analyte Reporting Limit
 QCL - Quality Control Limit
 D - Reporting Limit (RL) increased due to sample matrix
 U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
 ND - Not detected at the Reporting Limit (RL)
 H - Analysis performed past the method holding time



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-SW ALLUVIUM
Lab ID: C22010739-004
Client Sample ID: 627

Report Date: 03/07/22
Collection Date: 01/18/22 12:50
Date Received: 01/25/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Lead 210 MDC	0.9	pCi/L				E909.0	02/02/22 05:43 / sec
Radium 226	0.1	pCi/L	U			E903.0	02/08/22 12:24 / trs
Radium 226 precision (±)	0.1	pCi/L				E903.0	02/08/22 12:24 / trs
Radium 226 MDC	0.1	pCi/L				E903.0	02/08/22 12:24 / trs
Radium 228	0.6	pCi/L	U			RA-05	02/02/22 15:59 / hat
Radium 228 precision (±)	0.5	pCi/L				RA-05	02/02/22 15:59 / hat
Radium 228 MDC	0.8	pCi/L				RA-05	02/02/22 15:59 / hat
Radium 226 + Radium 228	0.8	pCi/L	U			A7500-RA	02/08/22 14:30 / dmf
Radium 226 + Radium 228 precision (±)	0.5	pCi/L				A7500-RA	02/08/22 14:30 / dmf
Radium 226 + Radium 228 MDC	0.8	pCi/L				A7500-RA	02/08/22 14:30 / dmf
Thorium 230	0.008	pCi/L	U			A7500-U C	02/03/22 16:01 / sec
Thorium 230 precision (±)	0.03	pCi/L				A7500-U C	02/03/22 16:01 / sec
Thorium 230 MDC	0.07	pCi/L				A7500-U C	02/03/22 16:01 / sec
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		1.0		E624.1	01/28/22 00:38 / etad
Bromoform	ND	ug/L		2.0		E624.1	01/28/22 00:38 / etad
Chlorodibromomethane	ND	ug/L		1.0		E624.1	01/28/22 00:38 / etad
Chloroform	ND	ug/L		1.0		E624.1	01/28/22 00:38 / etad
Trihalomethanes, Total	ND	ug/L		0.50		E624.1	03/01/22 18:20 / tif
Surr: 1,2-Dichloroethane-d4	95.0	%REC		73-122		E624.1	01/28/22 00:38 / etad
Surr: p-Bromofluorobenzene	86.0	%REC		79-119		E624.1	01/28/22 00:38 / etad
Surr: Toluene-d8	98.0	%REC		80-120		E624.1	01/28/22 00:38 / etad

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-SW Alluvium
Lab ID: C22040390-003
Client Sample ID: 627

Report Date: 06/18/22
Collection Date: 04/08/22 11:36
Date Received: 04/12/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	521	mg/L		5		A2320 B	04/13/22 19:07 / nts
Chloride	33	mg/L	D	2		E300.0	04/15/22 08:32 / dmb
Sulfate	2240	mg/L	D	8		E300.0	04/15/22 08:32 / dmb
Calcium	504	mg/L		1		E200.8	04/26/22 20:25 / jcg
Magnesium	207	mg/L		1		E200.8	04/26/22 20:25 / jcg
Potassium	6	mg/L		1		E200.8	04/28/22 20:14 / jcg
Sodium	338	mg/L		1		E200.8	04/26/22 20:25 / jcg
PHYSICAL PROPERTIES							
pH	7.1	s.u.	H	0.1		A4500-H B	04/14/22 11:14 / mnm
pH Measurement Temp	11.2	°C				A4500-H B	04/14/22 11:14 / mnm
Solids, Total Dissolved TDS @ 180 C	4170	mg/L	D	40		A2540 C	04/14/22 12:30 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	80	mg/L	D	1		E353.2	04/14/22 14:41 / nts
Nitrogen, Ammonia as N	ND	mg/L		0.05		E350.1	04/15/22 11:39 / nts
METALS, TOTAL							
Aluminum	ND	mg/L	D	0.09		E200.8	06/14/22 02:36 / jcg
Arsenic	ND	mg/L		0.001		E200.8	04/25/22 14:37 / jcg
Beryllium	ND	mg/L		0.001		E200.8	04/25/22 14:37 / jcg
Cadmium	ND	mg/L		0.001		E200.8	04/25/22 14:37 / jcg
Cobalt	ND	mg/L		0.005		E200.8	04/25/22 14:37 / jcg
Lead	ND	mg/L		0.001		E200.8	04/25/22 14:37 / jcg
Manganese	0.098	mg/L	D	0.003		E200.8	04/25/22 14:37 / jcg
Molybdenum	ND	mg/L		0.001		E200.8	04/25/22 14:37 / jcg
Nickel	ND	mg/L		0.005		E200.8	04/25/22 14:37 / jcg
Selenium	0.019	mg/L		0.001		E200.8	04/27/22 05:31 / jcg
Uranium	0.022	mg/L	D	0.001		E200.8	04/25/22 14:37 / jcg
Vanadium	ND	mg/L		0.01		E200.8	04/25/22 14:37 / jcg
DATA QUALITY							
Solids, Total Dissolved - Calculated	3960	mg/L		1.00		A1030 E	04/29/22 13:32 / dmb
A/C Balance	-4.11	%				A1030 E	04/29/22 13:32 / dmb
Anions	61.9	meq/L				A1030 E	04/29/22 13:32 / dmb
Cations	57.0	meq/L				A1030 E	04/29/22 13:32 / dmb
TDS Ratio	1.05	unitless				A1030 E	04/29/22 13:32 / dmb
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	0.07	pCi/L	U			E900.1	04/26/22 20:44 / kdk
Gross Alpha minus Rn & U Precision (±)	0.3	pCi/L				E900.1	04/26/22 20:44 / kdk
Gross Alpha minus Rn & U MDC	0.6	pCi/L				E900.1	04/26/22 20:44 / kdk
Lead 210	0.3	pCi/L	U			E909.0	04/21/22 16:21 / hat
Lead 210 precision (±)	0.7	pCi/L				E909.0	04/21/22 16:21 / hat

Report RL - Analyte Reporting Limit
Definitions: QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-SW Alluvium
Lab ID: C22040390-003
Client Sample ID: 627

Report Date: 06/18/22
Collection Date: 04/08/22 11:36
Date Received: 04/12/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Lead 210 MDC	1.2	pCi/L			E909.0		04/21/22 16:21 / hat
Radium 226	0.4	pCi/L			E903.0		05/16/22 14:26 / trs
Radium 226 precision (±)	0.2	pCi/L			E903.0		05/16/22 14:26 / trs
Radium 226 MDC	0.2	pCi/L			E903.0		05/16/22 14:26 / trs
Radium 228	0.3	pCi/L	U		RA-05		05/05/22 12:30 / trs
Radium 228 precision (±)	1	pCi/L			RA-05		05/05/22 12:30 / trs
Radium 228 MDC	1.6	pCi/L			RA-05		05/05/22 12:30 / trs
Radium 226 + Radium 228	0.7	pCi/L	U		A7500-RA		05/17/22 16:50 / dmf
Radium 226 + Radium 228 precision (±)	1	pCi/L			A7500-RA		05/17/22 16:50 / dmf
Radium 226 + Radium 228 MDC	1.6	pCi/L			A7500-RA		05/17/22 16:50 / dmf
Thorium 230	0.08	pCi/L	U		A7500-U C		04/21/22 13:52 / sec
Thorium 230 precision (±)	0.05	pCi/L			A7500-U C		04/21/22 13:52 / sec
Thorium 230 MDC	0.08	pCi/L			A7500-U C		04/21/22 13:52 / sec
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50	E624.1		04/17/22 18:18 / eli-b
Bromoform	ND	ug/L		0.50	E624.1		04/17/22 18:18 / eli-b
Chlorodibromomethane	ND	ug/L		0.50	E624.1		04/17/22 18:18 / eli-b
Chloroform	ND	ug/L		0.50	E624.1		04/17/22 18:18 / eli-b
Trihalomethanes, Total	ND	ug/L		0.50	E624.1		04/27/22 18:25 / tlf
Surr: 1,2-Dichloroethane-d4	101	%REC		71-139	E624.1		04/17/22 18:18 / eli-b
Surr: p-Bromofluorobenzene	106	%REC		80-127	E624.1		04/17/22 18:18 / eli-b
Surr: Toluene-d8	107	%REC		80-123	E624.1		04/17/22 18:18 / eli-b

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

United Nuclear Corp					
Guideline 8: Sweetwater					
Well ID:		627	627	627	627
Collection Date:		4/8/2022	1/18/2022	10/11/2021	7/20/2021
Receive Date:		4/12/2022	1/25/2022	10/14/2021	7/22/2021
Report Date:		6/18/2022	3/27/2022	12/3/2021	6/18/2022
Analyte	Units	C22040390-003	C22010739-004	C21100526-013	C21070886-004
Bicarbonate as HCO ₃	mg/L	521	517	540	527
Calcium	mg/L	504	546	520	543
Chloride	mg/L	33	44	34	35
Magnesium	mg/L	207	227	226	234
Potassium	mg/L	6	5	6	6
Sodium	mg/L	338	375	370	373
Sulfate	mg/L	2240	2300	2340	2330
pH	s.u.	7.1	7.0	7.0	6.9
pH Measurement Temp	°C	11.2	15.7	13.8	16.5
Solids, Total Dissolved TDS @ 180 C	mg/L	4170	4200	4200	4140
Solids, Total Dissolved - Calculated	mg/L	3960	4120	4090	4130
Nitrogen, Ammonia as N	mg/L	ND(0.05)	ND(0.05)	0.09	ND(0.05)
Nitrogen, Nitrate+Nitrite as N	mg/L	80	77.2	75.0	78
Aluminum	mg/L	ND(0.09)	ND(0.03)	ND(0.09)	ND(0.03)
Arsenic	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cobalt	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	0.098	0.028	0.088	0.028
Molybdenum	mg/L	ND(0.001)	ND(0.001)	ND(0.003)	ND(0.001)
Nickel	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Selenium	mg/L	0.019	0.019	0.017	0.016
Uranium	mg/L	0.022	0.0195	0.018	0.0184
Vanadium	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
A/C Balance	%	-4.11	-0.62	-2.48	-0.79
Anions	meq/L	61.9	63.2	63.8	63.7
Cations	meq/L	57.0	62.4	60.7	62.7
TDS Ratio	unitless	1.05	1.02	1.03	1.00
Gross Alpha minus Rn & U	pCi/L	0.07	0.1	0.4	-0.2
Gross Alpha minus Rn & U MDC	pCi/L	0.6	0.5	0.7	0.7
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.3	0.3	0.6	0.4
Lead 210	pCi/L	0.3	-0.08	1.1	0.3
Lead 210 MDC	pCi/L	1.2	0.9	1.2	0.8
Lead 210 precision (±)	pCi/L	0.7	0.5	0.8	0.5
Radium 226	pCi/L	0.4	0.1	0.3	0.4
Radium 226 MDC	pCi/L	0.2	0.1	0.2	0.1
Radium 226 precision (±)	pCi/L	0.2	0.1	0.1	0.1
Radium 228	pCi/L	0.3	0.6	-0.2	0.2
Radium 228 MDC	pCi/L	1.6	0.8	1.8	1.2
Radium 228 precision (±)	pCi/L	1	0.5	1.1	0.7
Thorium 230	pCi/L	0.08	0.008	0.05	0.007
Thorium 230 MDC	pCi/L	0.08	0.07	0.1	0.1
Thorium 230 precision (±)	pCi/L	0.05	0.03	0.08	0.05
Bromodichloromethane	ug/L	ND(0.50)	ND(1.0)	ND(0.50)	ND(0.50)
Bromoform	ug/L	ND(0.50)	ND(2.0)	ND(0.50)	ND(0.50)
Chlorodibromomethane	ug/L	ND(0.50)	ND(1.0)	ND(0.50)	ND(0.50)
Chloroform	ug/L	ND(0.50)	ND(1.0)	ND(0.50)	ND(0.50)
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 3 & SW Alluvium, UNC - Zone1, UNC - Zone3
Lab ID: C22010583-006
Client Sample ID: 632

Report Date: 02/16/22
Collection Date: 01/17/22 11:16
Date Received: 01/19/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	1700	mg/L		5		A2320 B	01/20/22 16:28 / kjp
Chloride	247	mg/L	D	2		E300.0	01/21/22 20:23 / dmb
Sulfate	3370	mg/L	D	8		E300.0	01/21/22 20:23 / dmb
Calcium	582	mg/L	D	3		E200.8	01/21/22 15:54 / jcg
Magnesium	782	mg/L		1		E200.8	01/21/22 15:54 / jcg
Potassium	9	mg/L		1		E200.8	01/21/22 15:54 / jcg
Sodium	400	mg/L	D	2		E200.8	01/21/22 15:54 / jcg
PHYSICAL PROPERTIES							
pH	6.6	s.u.	H	0.1		A4500-H B	01/20/22 10:55 / mnm
pH Measurement Temp	14.0	°C				A4500-H B	01/20/22 10:55 / mnm
Solids, Total Dissolved TDS @ 180 C	6910	mg/L	D	100		A2540 C	01/20/22 15:23 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	37.5	mg/L	D	0.5		E353.2	01/20/22 12:56 / nts
Nitrogen, Ammonia as N	ND	mg/L		0.05		E350.1	01/27/22 14:14 / dmb
METALS, TOTAL							
Aluminum	0.05	mg/L	D	0.04		E200.8	02/08/22 14:39 / jcg
Arsenic	ND	mg/L		0.001		E200.8	02/01/22 03:54 / jcg
Beryllium	ND	mg/L		0.001		E200.8	02/01/22 03:54 / jcg
Cadmium	ND	mg/L		0.001		E200.8	02/01/22 03:54 / jcg
Cobalt	ND	mg/L		0.005		E200.8	02/01/22 03:54 / jcg
Lead	ND	mg/L		0.001		E200.8	02/02/22 04:57 / jcg
Manganese	3.08	mg/L	D	0.004		E200.8	02/01/22 03:54 / jcg
Molybdenum	ND	mg/L		0.001		E200.8	02/01/22 03:54 / jcg
Nickel	0.014	mg/L		0.005		E200.8	02/01/22 03:54 / jcg
Selenium	0.001	mg/L		0.001		E200.8	02/01/22 03:54 / jcg
Uranium	0.0707	mg/L	D	0.0005		E200.8	02/02/22 04:57 / jcg
Vanadium	ND	mg/L		0.01		E200.8	02/01/22 03:54 / jcg
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	1.9	pCi/L				E900.1	01/24/22 11:57 / amm
Gross Alpha minus Rn & U Precision (±)	0.8	pCi/L				E900.1	01/24/22 11:57 / amm
Gross Alpha minus Rn & U MDC	0.9	pCi/L				E900.1	01/24/22 11:57 / amm
Lead 210	1.7	pCi/L				E909.0	01/30/22 11:41 / hat
Lead 210 precision (±)	0.8	pCi/L				E909.0	01/30/22 11:41 / hat
Lead 210 MDC	0.9	pCi/L				E909.0	01/30/22 11:41 / hat
Radium 226	0.7	pCi/L				E903.0	02/01/22 11:19 / kdk
Radium 226 precision (±)	0.2	pCi/L				E903.0	02/01/22 11:19 / kdk
Radium 226 MDC	0.2	pCi/L				E903.0	02/01/22 11:19 / kdk
Radium 228	1.2	pCi/L	U			RA-05	01/27/22 14:42 / trs
Radium 228 precision (±)	0.9	pCi/L				RA-05	01/27/22 14:42 / trs
Radium 228 MDC	1.3	pCi/L				RA-05	01/27/22 14:42 / trs

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
H - Analysis performed past the method holding time



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 3 & SW Alluvium, UNC - Zone1, UNC - Zone3
Lab ID: C22010583-006
Client Sample ID: 632

Report Date: 02/16/22
Collection Date: 01/17/22 11:16
DateReceived: 01/19/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Radium 226 + Radium 228	1.9	pCi/L				A7500-RA	02/02/22 15:40 / dmf
Radium 226 + Radium 228 precision (±)	0.9	pCi/L				A7500-RA	02/02/22 15:40 / dmf
Radium 226 + Radium 228 MDC	1.3	pCi/L				A7500-RA	02/02/22 15:40 / dmf
Thorium 230	0.06	pCi/L	U			A7500-U C	01/26/22 13:49 / sec
Thorium 230 precision (±)	0.06	pCi/L				A7500-U C	01/26/22 13:49 / sec
Thorium 230 MDC	0.09	pCi/L				A7500-U C	01/26/22 13:49 / sec
DATA QUALITY							
Solids, Total Dissolved - Calculated	6390	mg/L		1.00		A1030 E	01/24/22 16:22 / jlw
A/C Balance	1.55	%				A1030 E	01/24/22 16:22 / jlw
Anions	108	meq/L				A1030 E	01/24/22 16:22 / jlw
Cations	111	meq/L				A1030 E	01/24/22 16:22 / jlw
TDS Ratio	1.08	unitless				A1030 E	01/24/22 16:22 / jlw
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		1.0		E624.1	01/25/22 15:40 / etad
Bromoform	ND	ug/L		2.0		E624.1	01/25/22 15:40 / etad
Chlorodibromomethane	ND	ug/L		1.0		E624.1	01/25/22 15:40 / etad
Chloroform	0.47	ug/L	J	1.0		E624.1	01/25/22 15:40 / etad
Trihalomethanes, Total	0.47	ug/L	J	0.50		E624.1	02/16/22 14:49 / tif
Surr: 1,2-Dichloroethane-d4	105	%REC		73-122		E624.1	01/25/22 15:40 / etad
Surr: p-Bromofluorobenzene	107	%REC		79-119		E624.1	01/25/22 15:40 / etad
Surr: Toluene-d8	100	%REC		80-120		E624.1	01/25/22 15:40 / etad

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
U - Not detected at Minimum Detectable Concentration (MDC)



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-SW Alluvium
Lab ID: C22040413-006
Client Sample ID: 632

Report Date: 06/18/22
Collection Date: 04/07/22 13:45
Date Received: 04/12/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	1640	mg/L		5		A2320 B	04/13/22 20:49 / nts
Chloride	238	mg/L	D	2		E300.0	04/15/22 12:23 / dmb
Sulfate	3250	mg/L	D	8		E300.0	04/15/22 12:23 / dmb
Calcium	575	mg/L	D	3		E200.8	04/22/22 04:19 / jcg
Magnesium	673	mg/L		1		E200.8	04/22/22 04:19 / jcg
Potassium	10	mg/L	D	2		E200.7	05/30/22 01:20 / jcg
Sodium	337	mg/L	D	3		E200.8	04/22/22 04:19 / jcg
PHYSICAL PROPERTIES							
pH	6.7	s.u.	H	0.1		A4500-H B	04/14/22 11:37 / mnm
pH Measurement Temp	12.7	°C				A4500-H B	04/14/22 11:37 / mnm
Solids, Total Dissolved TDS @ 180 C	6800	mg/L	D	100		A2540 C	04/14/22 12:34 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	33.5	mg/L	D	0.2		E353.2	04/14/22 14:55 / nts
Nitrogen, Ammonia as N	ND	mg/L		0.05		E350.1	04/15/22 11:51 / nts
METALS, TOTAL							
Aluminum	0.13	mg/L	D	0.09		E200.8	04/27/22 06:21 / jcg
Arsenic	ND	mg/L		0.001		E200.8	04/27/22 06:21 / jcg
Beryllium	ND	mg/L		0.001		E200.7	05/06/22 12:50 / erc
Cadmium	ND	mg/L		0.001		E200.8	04/27/22 06:21 / jcg
Cobalt	ND	mg/L		0.005		E200.8	04/25/22 15:46 / jcg
Lead	0.001	mg/L		0.001		E200.8	04/27/22 06:21 / jcg
Manganese	3.37	mg/L	D	0.007		E200.8	04/25/22 15:46 / jcg
Molybdenum	ND	mg/L		0.001		E200.8	05/07/22 02:25 / jcg
Nickel	0.015	mg/L		0.005		E200.8	05/07/22 02:25 / jcg
Selenium	ND	mg/L		0.001		E200.8	04/27/22 06:21 / jcg
Uranium	0.069	mg/L	D	0.001		E200.8	04/27/22 06:21 / jcg
Vanadium	ND	mg/L		0.01		E200.8	04/25/22 15:46 / jcg
DATA QUALITY							
Solids, Total Dissolved - Calculated	6060	mg/L		1.00		A1030 E	06/17/22 17:49 / tlf
A/C Balance	-2.26	%				A1030 E	06/17/22 17:49 / tlf
Anions	104	meq/L				A1030 E	06/17/22 17:49 / tlf
Cations	99.0	meq/L				A1030 E	06/17/22 17:49 / tlf
TDS Ratio	1.12	unitless				A1030 E	06/17/22 17:49 / tlf
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	1.4	pCi/L				E900.1	04/25/22 14:36 / kdk
Gross Alpha minus Rn & U Precision (±)	0.6	pCi/L				E900.1	04/25/22 14:36 / kdk
Gross Alpha minus Rn & U MDC	0.7	pCi/L				E900.1	04/25/22 14:36 / kdk
Lead 210	1.7	pCi/L				E909.0	04/21/22 16:21 / hat
Lead 210 precision (±)	0.9	pCi/L				E909.0	04/21/22 16:21 / hat

Report RL - Analyte Reporting Limit
Definitions: QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
H - Analysis performed past the method holding time



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-SW Alluvium
Lab ID: C22040413-006
Client Sample ID: 632

Report Date: 06/18/22
Collection Date: 04/07/22 13:45
Date Received: 04/12/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Lead 210 MDC	1.2	pCi/L				E909.0	04/21/22 16:21 / hat
Radium 226	0.9	pCi/L				E903.0	04/27/22 11:27 / kdk
Radium 226 precision (±)	0.2	pCi/L				E903.0	04/27/22 11:27 / kdk
Radium 226 MDC	0.2	pCi/L				E903.0	04/27/22 11:27 / kdk
Radium 228	2.6	pCi/L				RA-05	05/05/22 12:30 / trs
Radium 228 precision (±)	1.0	pCi/L				RA-05	05/05/22 12:30 / trs
Radium 228 MDC	1.4	pCi/L				RA-05	05/05/22 12:30 / trs
Radium 226 + Radium 228	3.5	pCi/L				A7500-RA	05/09/22 12:33 / dmf
Radium 226 + Radium 228 precision (±)	1.0	pCi/L				A7500-RA	05/09/22 12:33 / dmf
Radium 226 + Radium 228 MDC	1.5	pCi/L				A7500-RA	05/09/22 12:33 / dmf
Thorium 230	0.2	pCi/L				A7500-U C	04/25/22 14:02 / sec
Thorium 230 precision (±)	0.1	pCi/L				A7500-U C	04/25/22 14:02 / sec
Thorium 230 MDC	0.2	pCi/L				A7500-U C	04/25/22 14:02 / sec
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		1.0		E624.1	04/21/22 12:04 / etad
Bromoform	ND	ug/L		2.0		E624.1	04/21/22 12:04 / etad
Chlorodibromomethane	ND	ug/L		1.0		E624.1	04/21/22 12:04 / etad
Chloroform	0.52	ug/L	J	1.0		E624.1	04/21/22 12:04 / etad
Trihalomethanes, Total	0.52	ug/L		0.50		E624.1	04/27/22 18:25 / tlf
Surr: 1,2-Dichloroethane-d4	95.0	%REC		73-122		E624.1	04/21/22 12:04 / etad
Surr: p-Bromofluorobenzene	93.0	%REC		79-119		E624.1	04/21/22 12:04 / etad
Surr: Toluene-d8	101	%REC		80-120		E624.1	04/21/22 12:04 / etad

Report
Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

United Nuclear Corp					
Guideline 8: Sweetwater					
Well ID:		632	632	632	632
Collection Date:		4/7/2022	1/17/2022	10/7/2021	7/19/2021
Receive Date:		4/12/2022	1/19/2022	10/12/2021	7/21/2021
Report Date:		6/18/2022	2/16/2022	11/28/2021	8/27/2021
Analyte	Units	C22040413-006	C22010583-006	C21100467-002	C21070842-006
Bicarbonate as HCO ₃	mg/L	1640	1700	1670	1680
Calcium	mg/L	575	582	506	591
Chloride	mg/L	238	247	247	255
Magnesium	mg/L	673	782	721	784
Potassium	mg/L	8	9	9	10
Sodium	mg/L	337	400	364	403
Sulfate	mg/L	3250	3370	3430	3490
pH	s.u.	6.7	6.6	6.6	6.6
pH Measurement Temp	°C	12.7	14.0	13.4	14.7
Solids, Total Dissolved TDS @ 180 C	mg/L	6800	6910	6880	6900
Solids, Total Dissolved - Calculated	mg/L	6050	6390	6240	6500
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	33.5	37.5	31.7	33.0
Aluminum	mg/L	0.13	0.05	0.06	0.06
Arsenic	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cobalt	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Lead	mg/L	0.001	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	3.37	3.08	2.37	2.18
Molybdenum	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Nickel	mg/L	0.015	0.014	0.010	0.010
Selenium	mg/L	ND(0.001)	0.001	ND(0.001)	ND(0.001)
Uranium	mg/L	0.079	0.0707	0.0708	0.0754
Vanadium	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
A/C Balance	%	-2.29	1.55	-3.59	0.93
Anions	meq/L	104	108	108	110
Cations	meq/L	98.9	111	101	112
TDS Ratio	unitless	1.12	1.08	1.10	1.06
Gross Alpha minus Rn & U	pCi/L	1.4	1.9	2.0	0.5
Gross Alpha minus Rn & U MDC	pCi/L	0.7	0.9	1.1	0.8
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.6	0.8	0.9	0.5
Lead 210	pCi/L	1.7	1.7	3.0	1.6
Lead 210 MDC	pCi/L	1.2	0.9	1.1	1
Lead 210 precision (±)	pCi/L	0.9	0.8	1.1	0.8
Radium 226	pCi/L	0.9	0.7	0.8	0.8
Radium 226 MDC	pCi/L	0.2	0.2	0.2	0.3
Radium 226 precision (±)	pCi/L	0.2	0.2	0.2	0.2
Radium 228	pCi/L	2.6	1.2	1.9	0.9
Radium 228 MDC	pCi/L	1.4	1.3	0.9	1.8
Radium 228 precision (±)	pCi/L	1.0	0.9	0.8	1.1
Thorium 230	pCi/L	0.2	0.06	-0.1	0.05
Thorium 230 MDC	pCi/L	0.2	0.09	0.5	0.1
Thorium 230 precision (±)	pCi/L	0.1	0.06	0.2	0.08
Bromodichloromethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.50)
Bromoform	ug/L	ND(2.0)	ND(2.0)	ND(2.0)	ND(0.50)
Chlorodibromomethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.50)
Chloroform	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	0.51
Trihalomethanes, Total	ug/L	0.52	ND(0.50)	0.51	0.51

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 3 & SW Alluvium, UNC - Zone1, UNC - Zone3
Lab ID: C22010583-007
Client Sample ID: 801

Report Date: 02/16/22
Collection Date: 01/17/22 11:58
Date Received: 01/19/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	1470	mg/L		5		A2320 B	01/20/22 16:38 / kjp
Chloride	220	mg/L	D	2		E300.0	01/21/22 20:43 / dmb
Sulfate	3190	mg/L	D	8		E300.0	01/21/22 20:43 / dmb
Calcium	508	mg/L	D	3		E200.8	01/21/22 15:59 / jcg
Magnesium	687	mg/L		1		E200.8	01/21/22 15:59 / jcg
Potassium	11	mg/L		1		E200.8	01/21/22 15:59 / jcg
Sodium	363	mg/L	D	2		E200.8	01/21/22 15:59 / jcg
PHYSICAL PROPERTIES							
pH	6.7	s.u.	H	0.1		A4500-H B	01/20/22 10:58 / mnm
pH Measurement Temp	13.7	°C				A4500-H B	01/20/22 10:58 / mnm
Solids, Total Dissolved TDS @ 180 C	6350	mg/L	D	100		A2540 C	01/20/22 15:24 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	20.6	mg/L	D	0.5		E353.2	01/20/22 13:00 / nts
Nitrogen, Ammonia as N	0.84	mg/L		0.05		E350.1	01/27/22 14:15 / dmb
METALS, TOTAL							
Aluminum	ND	mg/L		0.03		E200.8	02/08/22 14:44 / jcg
Arsenic	ND	mg/L		0.001		E200.8	02/01/22 03:59 / jcg
Beryllium	ND	mg/L		0.001		E200.8	02/01/22 03:59 / jcg
Cadmium	ND	mg/L		0.001		E200.8	02/01/22 03:59 / jcg
Cobalt	ND	mg/L		0.005		E200.8	02/01/22 03:59 / jcg
Lead	ND	mg/L		0.001		E200.8	02/02/22 05:02 / jcg
Manganese	2.74	mg/L	D	0.004		E200.8	02/01/22 03:59 / jcg
Molybdenum	0.001	mg/L		0.001		E200.8	02/01/22 03:59 / jcg
Nickel	0.012	mg/L		0.005		E200.8	02/01/22 03:59 / jcg
Selenium	0.001	mg/L		0.001		E200.8	02/01/22 03:59 / jcg
Uranium	0.0355	mg/L		0.0003		E200.8	02/02/22 05:02 / jcg
Vanadium	ND	mg/L		0.01		E200.8	02/01/22 03:59 / jcg
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	0.7	pCi/L	U			E900.1	01/24/22 11:57 / amm
Gross Alpha minus Rn & U Precision (±)	0.7	pCi/L				E900.1	01/24/22 11:57 / amm
Gross Alpha minus Rn & U MDC	0.9	pCi/L				E900.1	01/24/22 11:57 / amm
Lead 210	0.8	pCi/L	U			E909.0	01/30/22 14:31 / hat
Lead 210 precision (±)	0.5	pCi/L				E909.0	01/30/22 14:31 / hat
Lead 210 MDC	0.9	pCi/L				E909.0	01/30/22 14:31 / hat
Radium 226	0.5	pCi/L				E903.0	02/01/22 14:39 / kdk
Radium 226 precision (±)	0.1	pCi/L				E903.0	02/01/22 14:39 / kdk
Radium 226 MDC	0.2	pCi/L				E903.0	02/01/22 14:39 / kdk
Radium 228	0.4	pCi/L	U			RA-05	01/27/22 14:42 / trs
Radium 228 precision (±)	0.8	pCi/L				RA-05	01/27/22 14:42 / trs
Radium 228 MDC	1.2	pCi/L				RA-05	01/27/22 14:42 / trs

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
H - Analysis performed past the method holding time



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 3 & SW Alluvium, UNC - Zone1, UNC - Zone3
Lab ID: C22010583-007
Client Sample ID: 801

Report Date: 02/16/22
Collection Date: 01/17/22 11:58
Date Received: 01/19/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Radium 226 + Radium 228	0.8	pCi/L	U			A7500-RA	02/02/22 15:40 / dmf
Radium 226 + Radium 228 precision (±)	0.8	pCi/L				A7500-RA	02/02/22 15:40 / dmf
Radium 226 + Radium 228 MDC	1.2	pCi/L				A7500-RA	02/02/22 15:40 / dmf
Thorium 230	0.06	pCi/L	U			A7500-U C	01/26/22 13:49 / sec
Thorium 230 precision (±)	0.07	pCi/L				A7500-U C	01/26/22 13:49 / sec
Thorium 230 MDC	0.1	pCi/L				A7500-U C	01/26/22 13:49 / sec
DATA QUALITY							
Solids, Total Dissolved - Calculated	5800	mg/L		1.00		A1030 E	01/24/22 16:22 / jlw
A/C Balance	-0.17	%				A1030 E	01/24/22 16:22 / jlw
Anions	98.3	meq/L				A1030 E	01/24/22 16:22 / jlw
Cations	97.9	meq/L				A1030 E	01/24/22 16:22 / jlw
TDS Ratio	1.09	unitless				A1030 E	01/24/22 16:22 / jlw
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		1.0		E624.1	01/25/22 16:01 / etad
Bromoform	ND	ug/L		2.0		E624.1	01/25/22 16:01 / etad
Chlorodibromomethane	ND	ug/L		1.0		E624.1	01/25/22 16:01 / etad
Chloroform	0.25	ug/L	J	1.0		E624.1	01/25/22 16:01 / etad
Trihalomethanes, Total	0.25	ug/L	J	0.50		E624.1	02/16/22 14:49 / tif
Surr: 1,2-Dichloroethane-d4	102	%REC		73-122		E624.1	01/25/22 16:01 / etad
Surr: p-Bromofluorobenzene	105	%REC		79-119		E624.1	01/25/22 16:01 / etad
Surr: Toluene-d8	100	%REC		80-120		E624.1	01/25/22 16:01 / etad

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
U - Not detected at Minimum Detectable Concentration (MDC)



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-SW Alluvium
Lab ID: C22040413-007
Client Sample ID: 801

Report Date: 06/18/22
Collection Date: 04/07/22 14:25
Date Received: 04/12/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	1440	mg/L		5		A2320 B	04/13/22 20:59 / nts
Chloride	211	mg/L	D	2		E300.0	04/15/22 12:42 / dmb
Sulfate	3130	mg/L	D	8		E300.0	04/15/22 12:42 / dmb
Calcium	578	mg/L	D	3		E200.8	04/22/22 04:44 / jcg
Magnesium	624	mg/L		1		E200.8	04/22/22 04:44 / jcg
Potassium	15	mg/L	D	5		E200.7	05/30/22 01:24 / jcg
Sodium	318	mg/L	D	3		E200.8	04/22/22 04:44 / jcg
PHYSICAL PROPERTIES							
pH	6.8	s.u.	H	0.1		A4500-H B	04/14/22 11:43 / mnm
pH Measurement Temp	13.1	°C				A4500-H B	04/14/22 11:43 / mnm
Solids, Total Dissolved TDS @ 180 C	6230	mg/L	D	40		A2540 C	04/14/22 12:34 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	19.5	mg/L	D	0.2		E353.2	04/14/22 14:56 / nts
Nitrogen, Ammonia as N	1.35	mg/L		0.05		E350.1	04/15/22 11:54 / nts
METALS, TOTAL							
Aluminum	ND	mg/L	D	0.09		E200.8	06/14/22 03:42 / jcg
Arsenic	ND	mg/L		0.001		E200.8	04/29/22 02:55 / jcg
Beryllium	ND	mg/L		0.001		E200.7	05/06/22 12:55 / erc
Cadmium	ND	mg/L		0.001		E200.8	04/25/22 15:51 / jcg
Cobalt	0.006	mg/L		0.005		E200.8	04/25/22 15:51 / jcg
Lead	ND	mg/L		0.001		E200.8	04/29/22 02:55 / jcg
Manganese	4.82	mg/L	D	0.007		E200.8	04/25/22 15:51 / jcg
Molybdenum	0.001	mg/L		0.001		E200.8	05/07/22 02:41 / jcg
Nickel	0.014	mg/L		0.005		E200.8	05/07/22 02:41 / jcg
Selenium	ND	mg/L		0.001		E200.8	04/29/22 02:55 / jcg
Uranium	0.0377	mg/L	D	0.0005		E200.8	04/29/22 02:55 / jcg
Vanadium	ND	mg/L		0.01		E200.8	04/25/22 15:51 / jcg
DATA QUALITY							
Solids, Total Dissolved - Calculated	5710	mg/L		1.00		A1030 E	06/17/22 17:49 / tlf
A/C Balance	-0.76	%				A1030 E	06/17/22 17:49 / tlf
Anions	96.0	meq/L				A1030 E	06/17/22 17:49 / tlf
Cations	94.6	meq/L				A1030 E	06/17/22 17:49 / tlf
TDS Ratio	1.09	unitless				A1030 E	06/17/22 17:49 / tlf
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	0.7	pCi/L	U			E900.1	04/25/22 14:36 / kdk
Gross Alpha minus Rn & U Precision (±)	0.5	pCi/L				E900.1	04/25/22 14:36 / kdk
Gross Alpha minus Rn & U MDC	0.7	pCi/L				E900.1	04/25/22 14:36 / kdk
Lead 210	-4	pCi/L	U			E909.0	04/21/22 16:21 / hat
Lead 210 precision (±)	0.7	pCi/L				E909.0	04/21/22 16:21 / hat

Report RL - Analyte Reporting Limit
Definitions: QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
H - Analysis performed past the method holding time



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-SW Alluvium
Lab ID: C22040413-007
Client Sample ID: 801

Report Date: 06/18/22
Collection Date: 04/07/22 14:25
Date Received: 04/12/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Lead 210 MDC	1.2	pCi/L				E909.0	04/21/22 16:21 / hat
Radium 226	0.6	pCi/L				E903.0	04/27/22 11:27 / kdk
Radium 226 precision (±)	0.2	pCi/L				E903.0	04/27/22 11:27 / kdk
Radium 226 MDC	0.2	pCi/L				E903.0	04/27/22 11:27 / kdk
Radium 228	1.8	pCi/L	U			RA-05	05/05/22 14:13 / trs
Radium 228 precision (±)	1.2	pCi/L				RA-05	05/05/22 14:13 / trs
Radium 228 MDC	1.8	pCi/L				RA-05	05/05/22 14:13 / trs
Radium 226 + Radium 228	2.4	pCi/L				A7500-RA	05/09/22 12:33 / dmf
Radium 226 + Radium 228 precision (±)	1.3	pCi/L				A7500-RA	05/09/22 12:33 / dmf
Radium 226 + Radium 228 MDC	1.8	pCi/L				A7500-RA	05/09/22 12:33 / dmf
Thorium 230	0.2	pCi/L				A7500-U C	04/25/22 14:02 / sec
Thorium 230 precision (±)	0.1	pCi/L				A7500-U C	04/25/22 14:02 / sec
Thorium 230 MDC	0.2	pCi/L				A7500-U C	04/25/22 14:02 / sec
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		1.0		E624.1	04/21/22 12:26 / etad
Bromoform	ND	ug/L		2.0		E624.1	04/21/22 12:26 / etad
Chlorodibromomethane	ND	ug/L		1.0		E624.1	04/21/22 12:26 / etad
Chloroform	0.34	ug/L	J	1.0		E624.1	04/21/22 12:26 / etad
Trihalomethanes, Total	0.34	ug/L	J	0.50		E624.1	04/27/22 18:25 / tlf
Surr: 1,2-Dichloroethane-d4	97.0	%REC		73-122		E624.1	04/21/22 12:26 / etad
Surr: p-Bromofluorobenzene	96.0	%REC		79-119		E624.1	04/21/22 12:26 / etad
Surr: Toluene-d8	102	%REC		80-120		E624.1	04/21/22 12:26 / etad

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
U - Not detected at Minimum Detectable Concentration (MDC)

United Nuclear Corp					
Guideline 8: Sweetwater					
Well ID:		801	801	801	801
Collection Date:		4/7/2022	1/17/2022	10/7/2021	7/19/2021
Receive Date:		4/12/2022	1/19/2022	10/12/2021	7/21/2021
Report Date:		6/18/2022	2/16/2022	11/28/2021	8/27/2021
Analyte	Units	C22040413-007	C22010583-007	C21100467-001	C21070842-007
Bicarbonate as HCO ₃	mg/L	1440	1470	1470	1470
Calcium	mg/L	578	508	488	616
Chloride	mg/L	211	220	216	216
Magnesium	mg/L	624	687	610	676
Potassium	mg/L	10	11	11	13
Sodium	mg/L	318	363	310	369
Sulfate	mg/L	3130	3190	3140	3110
pH	s.u.	6.8	6.7	6.7	6.7
pH Measurement Temp	°C	13.1	13.7	13.2	14.9
Solids, Total Dissolved TDS @ 180 C	mg/L	6230	6350	6250	6150
Solids, Total Dissolved - Calculated	mg/L	5700	5800	5580	5800
Nitrogen, Ammonia as N	mg/L	1.35	0.84	0.83	0.84
Nitrogen, Nitrate+Nitrite as N	mg/L	19.5	20.6	18.7	16.6
Aluminum	mg/L	ND(0.09)	ND(0.03)	ND(0.03)	0.07
Arsenic	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	0.001
Beryllium	mg/L	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cobalt	mg/L	0.006	ND(0.005)	ND(0.005)	ND(0.005)
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	0.001
Manganese	mg/L	4.82	2.74	3.31	3.40
Molybdenum	mg/L	0.001	0.001	0.001	0.003
Nickel	mg/L	0.014	0.012	0.012	0.013
Selenium	mg/L	ND(0.001)	0.001	ND(0.001)	ND(0.001)
Uranium	mg/L	0.042	0.0355	0.037	0.0397
Vanadium	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
A/C Balance	%	-0.83	-0.17	-4.59	3.36
Anions	meq/L	96.0	98.3	96.9	96.1
Cations	meq/L	94.4	97.9	88.4	103
TDS Ratio	unitless	1.09	1.09	1.12	1.06
Gross Alpha minus Rn & U	pCi/L	0.7	0.7	2.0	0.2
Gross Alpha minus Rn & U MDC	pCi/L	0.7	0.9	1.1	0.8
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.5	0.7	0.8	0.5
Lead 210	pCi/L	-4	0.8	1.4	0.8
Lead 210 MDC	pCi/L	1.2	0.9	1	0.9
Lead 210 precision (±)	pCi/L	0.7	0.5	0.7	0.6
Radium 226	pCi/L	0.6	0.5	0.3	0.5
Radium 226 MDC	pCi/L	0.2	0.2	0.2	0.2
Radium 226 precision (±)	pCi/L	0.2	0.1	0.2	0.2
Radium 228	pCi/L	1.8	0.4	0.5	0.8
Radium 228 MDC	pCi/L	1.8	1.2	0.9	1.7
Radium 228 precision (±)	pCi/L	1.2	0.8	0.6	1.0
Thorium 230	pCi/L	0.2	0.06	0.009	0.04
Thorium 230 MDC	pCi/L	0.2	0.1	0.2	0.1
Thorium 230 precision (±)	pCi/L	0.1	0.07	0.09	0.07
Bromodichloromethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.50)
Bromoform	ug/L	ND(2.0)	ND(2.0)	ND(2.0)	ND(0.50)
Chlorodibromomethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.50)
Chloroform	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.50)
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 3 & SW Alluvium, UNC - Zone1, UNC - Zone3
Lab ID: C22010583-005
Client Sample ID: 802

Report Date: 02/16/22
Collection Date: 01/17/22 10:31
Date Received: 01/19/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	1920	mg/L		5		A2320 B	01/20/22 16:17 / kjp
Chloride	191	mg/L	D	2		E300.0	01/21/22 20:04 / dmb
Sulfate	2940	mg/L	D	8		E300.0	01/21/22 20:04 / dmb
Calcium	690	mg/L	D	3		E200.8	01/21/22 15:50 / jcg
Magnesium	722	mg/L		1		E200.8	01/21/22 15:50 / jcg
Potassium	5	mg/L		1		E200.8	01/21/22 15:50 / jcg
Sodium	327	mg/L	D	2		E200.8	01/21/22 15:50 / jcg
PHYSICAL PROPERTIES							
pH	6.6	s.u.	H	0.1		A4500-H B	01/20/22 10:53 / mnm
pH Measurement Temp	14.4	°C				A4500-H B	01/20/22 10:53 / mnm
Solids, Total Dissolved TDS @ 180 C	6620	mg/L	D	100		A2540 C	01/20/22 15:22 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	77.0	mg/L	D	0.5		E353.2	01/20/22 12:53 / nts
Nitrogen, Ammonia as N	ND	mg/L		0.05		E350.1	01/27/22 14:13 / dmb
METALS, TOTAL							
Aluminum	ND	mg/L		0.03		E200.8	02/03/22 14:00 / jcg
Arsenic	ND	mg/L		0.001		E200.8	02/01/22 03:50 / jcg
Beryllium	ND	mg/L		0.001		E200.8	02/01/22 03:50 / jcg
Cadmium	0.001	mg/L		0.001		E200.8	02/01/22 03:50 / jcg
Cobalt	ND	mg/L		0.005		E200.8	02/01/22 03:50 / jcg
Lead	ND	mg/L		0.001		E200.8	02/02/22 04:53 / jcg
Manganese	1.32	mg/L	D	0.004		E200.8	02/01/22 03:50 / jcg
Molybdenum	ND	mg/L		0.001		E200.8	02/01/22 03:50 / jcg
Nickel	0.007	mg/L		0.005		E200.8	02/01/22 03:50 / jcg
Selenium	ND	mg/L		0.001		E200.8	02/02/22 04:53 / jcg
Uranium	0.137	mg/L		0.0003		E200.8	02/02/22 04:53 / jcg
Vanadium	ND	mg/L		0.01		E200.8	02/01/22 03:50 / jcg
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	1.6	pCi/L				E900.1	01/24/22 11:57 / amm
Gross Alpha minus Rn & U Precision (±)	0.7	pCi/L				E900.1	01/24/22 11:57 / amm
Gross Alpha minus Rn & U MDC	0.9	pCi/L				E900.1	01/24/22 11:57 / amm
Lead 210	0.5	pCi/L	U			E909.0	01/30/22 08:24 / hat
Lead 210 precision (±)	0.5	pCi/L				E909.0	01/30/22 08:24 / hat
Lead 210 MDC	0.8	pCi/L				E909.0	01/30/22 08:24 / hat
Radium 226	0.4	pCi/L				E903.0	02/01/22 11:19 / kdk
Radium 226 precision (±)	0.2	pCi/L				E903.0	02/01/22 11:19 / kdk
Radium 226 MDC	0.2	pCi/L				E903.0	02/01/22 11:19 / kdk
Radium 228	0.6	pCi/L	U			RA-05	01/27/22 14:42 / trs
Radium 228 precision (±)	0.9	pCi/L				RA-05	01/27/22 14:42 / trs
Radium 228 MDC	1.5	pCi/L				RA-05	01/27/22 14:42 / trs

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
H - Analysis performed past the method holding time



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 3 & SW Alluvium, UNC - Zone1, UNC - Zone3
Lab ID: C22010583-005
Client Sample ID: 802

Report Date: 02/16/22
Collection Date: 01/17/22 10:31
Date Received: 01/19/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Radium 226 + Radium 228	1.1	pCi/L	U			A7500-RA	02/02/22 15:40 / dmf
Radium 226 + Radium 228 precision (±)	0.9	pCi/L				A7500-RA	02/02/22 15:40 / dmf
Radium 226 + Radium 228 MDC	1.5	pCi/L				A7500-RA	02/02/22 15:40 / dmf
Thorium 230	0.01	pCi/L	U			A7500-U C	01/26/22 13:49 / sec
Thorium 230 precision (±)	0.09	pCi/L				A7500-U C	01/26/22 13:49 / sec
Thorium 230 MDC	0.2	pCi/L				A7500-U C	01/26/22 13:49 / sec
DATA QUALITY							
Solids, Total Dissolved - Calculated	6160	mg/L		1.00		A1030 E	01/24/22 16:22 / jlw
A/C Balance	2.20	%				A1030 E	01/24/22 16:22 / jlw
Anions	104	meq/L				A1030 E	01/24/22 16:22 / jlw
Cations	108	meq/L				A1030 E	01/24/22 16:22 / jlw
TDS Ratio	1.07	unitless				A1030 E	01/24/22 16:22 / jlw
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		1.0		E624.1	01/25/22 15:18 / etad
Bromoform	ND	ug/L		2.0		E624.1	01/25/22 15:18 / etad
Chlorodibromomethane	ND	ug/L		1.0		E624.1	01/25/22 15:18 / etad
Chloroform	0.88	ug/L	J	1.0		E624.1	01/25/22 15:18 / etad
Trihalomethanes, Total	0.88	ug/L		0.50		E624.1	02/16/22 14:49 / tif
Surr: 1,2-Dichloroethane-d4	101	%REC		73-122		E624.1	01/25/22 15:18 / etad
Surr: p-Bromofluorobenzene	104	%REC		79-119		E624.1	01/25/22 15:18 / etad
Surr: Toluene-d8	102	%REC		80-120		E624.1	01/25/22 15:18 / etad

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
U - Not detected at Minimum Detectable Concentration (MDC)



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-SW Alluvium
Lab ID: C22040413-005
Client Sample ID: 802

Report Date: 06/18/22
Collection Date: 04/07/22 13:05
Date Received: 04/12/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	1900	mg/L		5		A2320 B	04/13/22 20:38 / nts
Chloride	189	mg/L	D	2		E300.0	04/15/22 12:03 / dmb
Sulfate	2890	mg/L	D	8		E300.0	04/15/22 12:03 / dmb
Calcium	649	mg/L	D	3		E200.8	04/22/22 04:13 / jcg
Magnesium	642	mg/L		1		E200.8	04/22/22 04:13 / jcg
Potassium	6	mg/L	D	2		E200.7	05/31/22 10:21 / jcg
Sodium	297	mg/L	D	3		E200.8	04/22/22 04:13 / jcg
PHYSICAL PROPERTIES							
pH	6.7	s.u.	H	0.1		A4500-H B	04/14/22 11:34 / mnm
pH Measurement Temp	12.6	°C				A4500-H B	04/14/22 11:34 / mnm
Solids, Total Dissolved TDS @ 180 C	6630	mg/L	D	100		A2540 C	04/14/22 12:34 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	74.5	mg/L	D	0.5		E353.2	04/14/22 14:54 / nts
Nitrogen, Ammonia as N	ND	mg/L		0.05		E350.1	04/15/22 11:47 / nts
METALS, TOTAL							
Aluminum	ND	mg/L	D	0.09		E200.8	06/14/22 03:20 / jcg
Arsenic	ND	mg/L		0.001		E200.8	04/27/22 06:03 / jcg
Beryllium	ND	mg/L		0.001		E200.7	05/06/22 11:39 / erc
Cadmium	ND	mg/L		0.001		E200.8	04/25/22 15:10 / jcg
Cobalt	ND	mg/L		0.005		E200.8	04/25/22 15:10 / jcg
Lead	ND	mg/L		0.001		E200.8	04/25/22 15:10 / jcg
Manganese	1.57	mg/L	D	0.007		E200.8	04/25/22 15:10 / jcg
Molybdenum	ND	mg/L		0.001		E200.8	04/25/22 15:10 / jcg
Nickel	0.007	mg/L		0.005		E200.8	05/07/22 02:08 / jcg
Selenium	ND	mg/L		0.001		E200.8	04/29/22 02:46 / jcg
Uranium	0.148	mg/L	D	0.003		E200.8	04/25/22 15:10 / jcg
Vanadium	ND	mg/L		0.01		E200.8	04/25/22 15:10 / jcg
DATA QUALITY							
Solids, Total Dissolved - Calculated	5960	mg/L		1.00		A1030 E	06/17/22 17:48 / tlf
A/C Balance	-1.84	%				A1030 E	06/17/22 17:48 / tlf
Anions	102	meq/L				A1030 E	06/17/22 17:48 / tlf
Cations	98.3	meq/L				A1030 E	06/17/22 17:48 / tlf
TDS Ratio	1.11	unitless				A1030 E	06/17/22 17:48 / tlf
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	0.5	pCi/L	U			E900.1	04/25/22 14:36 / kdk
Gross Alpha minus Rn & U Precision (±)	0.5	pCi/L				E900.1	04/25/22 14:36 / kdk
Gross Alpha minus Rn & U MDC	0.7	pCi/L				E900.1	04/25/22 14:36 / kdk
Lead 210	-3	pCi/L	U			E909.0	04/21/22 16:21 / hat
Lead 210 precision (±)	0.7	pCi/L				E909.0	04/21/22 16:21 / hat

Report Definitions:
 RL - Analyte Reporting Limit
 QCL - Quality Control Limit
 D - Reporting Limit (RL) increased due to sample matrix
 U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-SW Alluvium
Lab ID: C22040413-005
Client Sample ID: 802

Report Date: 06/18/22
Collection Date: 04/07/22 13:05
Date Received: 04/12/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Lead 210 MDC	1.2	pCi/L				E909.0	04/21/22 16:21 / hat
Radium 226	0.2	pCi/L				E903.0	04/29/22 16:53 / trs
Radium 226 precision (±)	0.07	pCi/L				E903.0	04/29/22 16:53 / trs
Radium 226 MDC	0.1	pCi/L				E903.0	04/29/22 16:53 / trs
Radium 228	1.6	pCi/L				RA-05	05/05/22 12:30 / trs
Radium 228 precision (±)	1.1	pCi/L				RA-05	05/05/22 12:30 / trs
Radium 228 MDC	1.5	pCi/L				RA-05	05/05/22 12:30 / trs
Radium 226 + Radium 228	1.8	pCi/L				A7500-RA	05/09/22 12:33 / dmf
Radium 226 + Radium 228 precision (±)	1.1	pCi/L				A7500-RA	05/09/22 12:33 / dmf
Radium 226 + Radium 228 MDC	1.5	pCi/L				A7500-RA	05/09/22 12:33 / dmf
Thorium 230	0.3	pCi/L				A7500-U C	04/25/22 14:02 / sec
Thorium 230 precision (±)	0.1	pCi/L				A7500-U C	04/25/22 14:02 / sec
Thorium 230 MDC	0.1	pCi/L				A7500-U C	04/25/22 14:02 / sec
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		1.0		E624.1	04/21/22 11:43 / etad
Bromoform	ND	ug/L		2.0		E624.1	04/21/22 11:43 / etad
Chlorodibromomethane	ND	ug/L		1.0		E624.1	04/21/22 11:43 / etad
Chloroform	0.98	ug/L	J	1.0		E624.1	04/21/22 11:43 / etad
Trihalomethanes, Total	0.98	ug/L		0.50		E624.1	04/27/22 18:25 / tif
Surr: 1,2-Dichloroethane-d4	99.0	%REC		73-122		E624.1	04/21/22 11:43 / etad
Surr: p-Bromofluorobenzene	95.0	%REC		79-119		E624.1	04/21/22 11:43 / etad
Surr: Toluene-d8	103	%REC		80-120		E624.1	04/21/22 11:43 / etad

**Report
Definitions:**

RL - Analyte Reporting Limit
QCL - Quality Control Limit
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

United Nuclear Corp					
Guideline 8: Sweetwater					
Well ID:		802	802	802	802
Collection Date:		4/7/2022	1/17/2022	10/11/2021	7/19/2021
Receive Date:		4/12/2022	1/19/2022	10/14/2021	7/21/2021
Report Date:		6/18/2022	2/16/2022	12/3/2021	8/27/2021
Analyte	Units	C22040413-005	C22010583-005	C21100526-003	C21070842-005
Bicarbonate as HCO ₃	mg/L	1900	1920	1910	1930
Calcium	mg/L	649	690	629	648
Chloride	mg/L	189	191	201	197
Magnesium	mg/L	642	722	655	700
Potassium	mg/L	4	5	6	6
Sodium	mg/L	297	327	325	328
Sulfate	mg/L	2890	2940	3140	3050
pH	s.u.	6.7	6.6	6.6	6.6
pH Measurement Temp	°C	12.6	14.4	12.2	14.3
Solids, Total Dissolved TDS @ 180 C	mg/L	6630	6620	6650	6690
Solids, Total Dissolved - Calculated	mg/L	5960	6160	6210	6210
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	74.5	77.0	71.0	74.0
Aluminum	mg/L	ND(0.09)	ND(0.03)	ND(0.04)	ND(0.03)
Arsenic	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Beryllium	mg/L	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.001)	0.001	ND(0.001)	ND(0.001)
Cobalt	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	1.57	1.32	1.43	1.34
Molybdenum	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Nickel	mg/L	0.007	0.007	0.008	0.007
Selenium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Uranium	mg/L	0.148	0.137	0.128	0.138
Vanadium	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
A/C Balance	%	-1.87	2.20	-3.77	-0.76
Anions	meq/L	102	104	107	106
Cations	meq/L	98.2	108	99.6	104
TDS Ratio	unitless	1.11	1.07	1.07	1.08
Gross Alpha minus Rn & U	pCi/L	0.5	1.6	1.2	0.5
Gross Alpha minus Rn & U MDC	pCi/L	0.7	0.9	1.1	0.8
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.5	0.7	0.5	0.5
Lead 210	pCi/L	-3	0.5	0.8	0.3
Lead 210 MDC	pCi/L	1.2	0.8	0.9	0.9
Lead 210 precision (±)	pCi/L	0.7	0.5	0.6	0.5
Radium 226	pCi/L	0.2	0.4	0.4	0.4
Radium 226 MDC	pCi/L	0.1	0.2	0.2	0.2
Radium 226 precision (±)	pCi/L	0.07	0.2	0.2	0.2
Radium 228	pCi/L	1.6	0.6	0.6	0.2
Radium 228 MDC	pCi/L	1.5	1.5	1.0	1.6
Radium 228 precision (±)	pCi/L	1.1	0.9	0.6	1
Thorium 230	pCi/L	0.3	0.01	0.07	-0.03
Thorium 230 MDC	pCi/L	0.1	0.2	0.1	0.2
Thorium 230 precision (±)	pCi/L	0.1	0.09	0.07	0.07
Bromodichloromethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.50)
Bromoform	ug/L	ND(2.0)	ND(2.0)	ND(2.0)	ND(0.50)
Chlorodibromomethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.50)
Chloroform	ug/L	ND(1.0)	ND(1.0)	1.0	1.0
Trihalomethanes, Total	ug/L	0.98	0.88	1.0	1.0

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 3 & SW Alluvium, UNC - Zone1, UNC - Zone3
Lab ID: C22010583-003
Client Sample ID: 803

Report Date: 02/16/22
Collection Date: 01/17/22 09:14
Date Received: 01/19/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	1760	mg/L		5		A2320 B	01/20/22 15:54 / kjp
Chloride	182	mg/L	D	2		E300.0	01/21/22 18:09 / dmb
Sulfate	3260	mg/L	D	8		E300.0	01/21/22 18:09 / dmb
Calcium	643	mg/L	D	3		E200.7	01/27/22 21:06 / srm
Magnesium	661	mg/L		1		E200.7	01/26/22 21:54 / srm
Potassium	ND	mg/L	D	10		E200.7	01/31/22 19:22 / srm
Sodium	290	mg/L	D	5		E200.7	01/27/22 21:06 / srm
PHYSICAL PROPERTIES							
pH	6.6	s.u.	H	0.1		A4500-H B	01/20/22 10:44 / mnm
pH Measurement Temp	12.7	°C				A4500-H B	01/20/22 10:44 / mnm
Solids, Total Dissolved TDS @ 180 C	6670	mg/L	D	100		A2540 C	01/20/22 15:16 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	28.9	mg/L	D	0.2		E353.2	01/20/22 12:50 / nts
Nitrogen, Ammonia as N	6.0	mg/L	D	0.2		E350.1	01/27/22 14:19 / dmb
METALS, TOTAL							
Aluminum	ND	mg/L		0.03		E200.8	02/03/22 13:51 / jcg
Arsenic	ND	mg/L		0.001		E200.8	02/01/22 03:26 / jcg
Beryllium	ND	mg/L		0.001		E200.8	02/01/22 03:26 / jcg
Cadmium	ND	mg/L		0.001		E200.8	02/01/22 03:26 / jcg
Cobalt	0.005	mg/L		0.005		E200.8	02/01/22 03:26 / jcg
Lead	ND	mg/L		0.001		E200.8	02/02/22 04:44 / jcg
Manganese	2.22	mg/L	D	0.004		E200.8	02/01/22 03:26 / jcg
Molybdenum	0.001	mg/L		0.001		E200.8	02/01/22 03:26 / jcg
Nickel	0.007	mg/L		0.005		E200.8	02/01/22 03:26 / jcg
Selenium	0.002	mg/L		0.001		E200.8	02/01/22 03:26 / jcg
Uranium	0.0821	mg/L		0.0003		E200.8	02/02/22 04:44 / jcg
Vanadium	ND	mg/L		0.01		E200.8	02/01/22 03:26 / jcg
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	1.6	pCi/L				E900.1	01/24/22 11:57 / ammm
Gross Alpha minus Rn & U Precision (±)	0.8	pCi/L				E900.1	01/24/22 11:57 / ammm
Gross Alpha minus Rn & U MDC	0.9	pCi/L				E900.1	01/24/22 11:57 / ammm
Lead 210	0.1	pCi/L	U			E909.0	01/30/22 01:32 / hat
Lead 210 precision (±)	0.5	pCi/L				E909.0	01/30/22 01:32 / hat
Lead 210 MDC	0.8	pCi/L				E909.0	01/30/22 01:32 / hat
Radium 226	0.2	pCi/L				E903.0	02/01/22 11:19 / kdk
Radium 226 precision (±)	0.1	pCi/L				E903.0	02/01/22 11:19 / kdk
Radium 226 MDC	0.2	pCi/L				E903.0	02/01/22 11:19 / kdk
Radium 228	0.09	pCi/L	U			RA-05	01/27/22 14:42 / trs
Radium 228 precision (±)	0.8	pCi/L				RA-05	01/27/22 14:42 / trs
Radium 228 MDC	1.3	pCi/L				RA-05	01/27/22 14:42 / trs

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
H - Analysis performed past the method holding time



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 3 & SW Alluvium, UNC - Zone1, UNC - Zone3
Lab ID: C22010583-003
Client Sample ID: 803

Report Date: 02/16/22
Collection Date: 01/17/22 09:14
Date Received: 01/19/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Radium 226 + Radium 228	0.3	pCi/L	U			A7500-RA	02/02/22 15:40 / dmf
Radium 226 + Radium 228 precision (±)	0.8	pCi/L				A7500-RA	02/02/22 15:40 / dmf
Radium 226 + Radium 228 MDC	1.4	pCi/L				A7500-RA	02/02/22 15:40 / dmf
Thorium 230	-0.03	pCi/L	U			A7500-U C	01/26/22 13:49 / sec
Thorium 230 precision (±)	0.05	pCi/L				A7500-U C	01/26/22 13:49 / sec
Thorium 230 MDC	0.1	pCi/L				A7500-U C	01/26/22 13:49 / sec
DATA QUALITY							
Solids, Total Dissolved - Calculated	6050	mg/L		1.00		A1030 E	02/02/22 17:05 / jlw
A/C Balance	-2.19	%				A1030 E	02/02/22 17:05 / jlw
Anions	104	meq/L				A1030 E	02/02/22 17:05 / jlw
Cations	99.5	meq/L				A1030 E	02/02/22 17:05 / jlw
TDS Ratio	1.10	unitless				A1030 E	02/02/22 17:05 / jlw
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		1.0		E624.1	01/25/22 14:35 / etad
Bromoform	ND	ug/L		2.0		E624.1	01/25/22 14:35 / etad
Chlorodibromomethane	ND	ug/L		1.0		E624.1	01/25/22 14:35 / etad
Chloroform	0.27	ug/L	J	1.0		E624.1	01/25/22 14:35 / etad
Trihalomethanes, Total	0.27	ug/L	J	0.50		E624.1	02/16/22 14:49 / tif
Surr: 1,2-Dichloroethane-d4	105	%REC		73-122		E624.1	01/25/22 14:35 / etad
Surr: p-Bromofluorobenzene	103	%REC		79-119		E624.1	01/25/22 14:35 / etad
Surr: Toluene-d8	101	%REC		80-120		E624.1	01/25/22 14:35 / etad

Report Definitions:

RL - Analyte Reporting Limit
QCL - Quality Control Limit
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
U - Not detected at Minimum Detectable Concentration (MDC)



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-SW Alluvium
Lab ID: C22040413-003
Client Sample ID: 803

Report Date: 06/18/22
Collection Date: 04/07/22 11:18
Date Received: 04/12/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	1750	mg/L		5		A2320 B	04/13/22 20:15 / nts
Chloride	173	mg/L	D	2		E300.0	04/15/22 11:25 / dmb
Sulfate	3120	mg/L	D	8		E300.0	04/15/22 11:25 / dmb
Calcium	609	mg/L	D	3		E200.8	04/22/22 04:03 / jcg
Magnesium	659	mg/L		1		E200.8	04/22/22 04:03 / jcg
Potassium	14	mg/L	D	5		E200.7	05/31/22 10:04 / jcg
Sodium	258	mg/L	D	3		E200.8	04/22/22 04:03 / jcg
PHYSICAL PROPERTIES							
pH	6.7	s.u.	H	0.1		A4500-H B	04/14/22 11:29 / mnm
pH Measurement Temp	12.4	°C				A4500-H B	04/14/22 11:29 / mnm
Solids, Total Dissolved TDS @ 180 C	6640	mg/L	D	100		A2540 C	04/14/22 12:33 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	30.4	mg/L	D	0.2		E353.2	04/14/22 14:52 / nts
Nitrogen, Ammonia as N	2.3	mg/L	D	0.2		E350.1	04/15/22 11:45 / nts
METALS, TOTAL							
Aluminum	ND	mg/L	D	0.2		E200.8	05/13/22 20:10 / jcg
Arsenic	ND	mg/L		0.001		E200.8	04/27/22 05:54 / jcg
Beryllium	ND	mg/L		0.001		E200.7	05/06/22 11:28 / erc
Cadmium	ND	mg/L		0.001		E200.8	04/25/22 15:00 / jcg
Cobalt	0.006	mg/L		0.005		E200.8	04/25/22 15:00 / jcg
Lead	ND	mg/L		0.001		E200.8	04/25/22 15:00 / jcg
Manganese	2.58	mg/L	D	0.007		E200.8	04/25/22 15:00 / jcg
Molybdenum	ND	mg/L		0.001		E200.8	04/25/22 15:00 / jcg
Nickel	0.007	mg/L		0.005		E200.8	05/13/22 20:10 / jcg
Selenium	ND	mg/L		0.001		E200.8	04/29/22 02:36 / jcg
Uranium	0.089	mg/L	D	0.003		E200.8	04/25/22 15:00 / jcg
Vanadium	ND	mg/L		0.01		E200.8	04/25/22 15:00 / jcg
DATA QUALITY							
Solids, Total Dissolved - Calculated	5850	mg/L		1.00		A1030 E	06/17/22 17:47 / tlf
A/C Balance	-2.21	%				A1030 E	06/17/22 17:47 / tlf
Anions	101	meq/L				A1030 E	06/17/22 17:47 / tlf
Cations	96.4	meq/L				A1030 E	06/17/22 17:47 / tlf
TDS Ratio	1.14	unitless				A1030 E	06/17/22 17:47 / tlf
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	0.5	pCi/L	U			E900.1	04/25/22 14:36 / kdk
Gross Alpha minus Rn & U Precision (±)	0.5	pCi/L				E900.1	04/25/22 14:36 / kdk
Gross Alpha minus Rn & U MDC	0.7	pCi/L				E900.1	04/25/22 14:36 / kdk
Lead 210	-5	pCi/L	U			E909.0	04/21/22 16:21 / hat
Lead 210 precision (±)	0.7	pCi/L				E909.0	04/21/22 16:21 / hat

Report Definitions:
 RL - Analyte Reporting Limit
 QCL - Quality Control Limit
 D - Reporting Limit (RL) increased due to sample matrix
 U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-SW Alluvium
Lab ID: C22040413-003
Client Sample ID: 803

Report Date: 06/18/22
Collection Date: 04/07/22 11:18
Date Received: 04/12/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Lead 210 MDC	1.2	pCi/L				E909.0	04/21/22 16:21 / hat
Radium 226	0.3	pCi/L				E903.0	04/29/22 16:54 / trs
Radium 226 precision (±)	0.08	pCi/L				E903.0	04/29/22 16:54 / trs
Radium 226 MDC	0.1	pCi/L				E903.0	04/29/22 16:54 / trs
Radium 228	1.9	pCi/L				RA-05	05/05/22 12:30 / trs
Radium 228 precision (±)	1.1	pCi/L				RA-05	05/05/22 12:30 / trs
Radium 228 MDC	1.5	pCi/L				RA-05	05/05/22 12:30 / trs
Radium 226 + Radium 228	2.2	pCi/L				A7500-RA	05/09/22 12:33 / dmf
Radium 226 + Radium 228 precision (±)	1.1	pCi/L				A7500-RA	05/09/22 12:33 / dmf
Radium 226 + Radium 228 MDC	1.6	pCi/L				A7500-RA	05/09/22 12:33 / dmf
Thorium 230	0.2	pCi/L				A7500-U C	04/25/22 14:02 / sec
Thorium 230 precision (±)	0.1	pCi/L				A7500-U C	04/25/22 14:02 / sec
Thorium 230 MDC	0.2	pCi/L				A7500-U C	04/25/22 14:02 / sec
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		1.0		E624.1	04/21/22 11:00 / etad
Bromoform	ND	ug/L		2.0		E624.1	04/21/22 11:00 / etad
Chlorodibromomethane	ND	ug/L		1.0		E624.1	04/21/22 11:00 / etad
Chloroform	0.28	ug/L	J	1.0		E624.1	04/21/22 11:00 / etad
Trihalomethanes, Total	0.28	ug/L	J	0.50		E624.1	04/27/22 18:25 / tif
Surr: 1,2-Dichloroethane-d4	96.0	%REC		73-122		E624.1	04/21/22 11:00 / etad
Surr: p-Bromofluorobenzene	94.0	%REC		79-119		E624.1	04/21/22 11:00 / etad
Surr: Toluene-d8	101	%REC		80-120		E624.1	04/21/22 11:00 / etad

**Report
Definitions:**

RL - Analyte Reporting Limit
QCL - Quality Control Limit
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

United Nuclear Corp					
Guideline 8: Sweetwater					
Well ID:		803	803	803	803
Collection Date:		4/7/2022	1/17/2022	10/11/2021	7/19/2021
Receive Date:		4/12/2022	1/19/2022	10/14/2021	7/21/2021
Report Date:		6/18/2022	2/16/2022	12/3/2021	8/27/2021
Analyte	Units	C22040413-003	C22010583-003	C21100526-001	C21070842-003
Bicarbonate as HCO ₃	mg/L	1750	1760	1620	1770
Calcium	mg/L	609	643	607	668
Chloride	mg/L	173	182	174	188
Magnesium	mg/L	659	661	651	763
Potassium	mg/L	13	ND(10)	12	16
Sodium	mg/L	258	290	265	308
Sulfate	mg/L	3120	3260	3340	3350
pH	s.u.	6.7	6.6	6.6	6.6
pH Measurement Temp	°C	12.4	12.7	12.7	14.5
Solids, Total Dissolved TDS @ 180 C	mg/L	6640	6670	6410	6630
Solids, Total Dissolved - Calculated	mg/L	5850	6050	5960	6290
Nitrogen, Ammonia as N	mg/L	2.3	6.0	0.59	0.67
Nitrogen, Nitrate+Nitrite as N	mg/L	30.4	28.9	26.4	29.4
Aluminum	mg/L	ND(0.2)	ND(0.03)	ND(0.03)	ND(0.03)
Arsenic	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Beryllium	mg/L	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cobalt	mg/L	0.006	0.005	0.006	ND(0.005)
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	2.58	2.22	2.81	1.44
Molybdenum	mg/L	ND(0.001)	0.001	ND(0.001)	ND(0.001)
Nickel	mg/L	0.007	0.007	0.005	ND(0.005)
Selenium	mg/L	ND(0.001)	0.002	ND(0.001)	ND(0.001)
Uranium	mg/L	0.089	0.0821	0.0685	0.0823
Vanadium	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
A/C Balance	%	-2.23	-2.19	-3.56	1.77
Anions	meq/L	101	104	103	106
Cations	meq/L	96.3	99.5	95.7	110
TDS Ratio	unitless	1.14	1.10	1.08	1.05
Gross Alpha minus Rn & U	pCi/L	0.5	1.6	0.6	0.3
Gross Alpha minus Rn & U MDC	pCi/L	0.7	0.9	1.1	0.8
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.5	0.8	0.7	0.5
Lead 210	pCi/L	-5	0.1	0.6	-0.03
Lead 210 MDC	pCi/L	1.2	0.8	0.9	0.9
Lead 210 precision (±)	pCi/L	0.7	0.5	0.6	0.5
Radium 226	pCi/L	0.3	0.2	0.3	0.3
Radium 226 MDC	pCi/L	0.1	0.2	0.2	0.2
Radium 226 precision (±)	pCi/L	0.08	0.1	0.2	0.2
Radium 228	pCi/L	1.9	0.09	0.7	-0.6
Radium 228 MDC	pCi/L	1.5	1.3	1	1.5
Radium 228 precision (±)	pCi/L	1.1	0.8	0.6	0.9
Thorium 230	pCi/L	0.2	-0.03	-0.003	0.04
Thorium 230 MDC	pCi/L	0.2	0.1	0.2	0.1
Thorium 230 precision (±)	pCi/L	0.1	0.05	0.1	0.06
Bromodichloromethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.50)
Bromoform	ug/L	ND(2.0)	ND(2.0)	ND(2.0)	ND(0.50)
Chlorodibromomethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.50)
Chloroform	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.50)
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 3 & SW Alluvium, UNC - Zone1, UNC - Zone3
Lab ID: C22010583-004
Client Sample ID: 808

Report Date: 02/16/22
Collection Date: 01/17/22 09:48
Date Received: 01/19/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	1930	mg/L		5		A2320 B	01/20/22 16:05 / kjp
Chloride	197	mg/L	D	2		E300.0	01/21/22 19:07 / dmb
Sulfate	3330	mg/L	D	8		E300.0	01/21/22 19:07 / dmb
Calcium	612	mg/L	D	3		E200.8	01/21/22 15:08 / jcg
Magnesium	722	mg/L		1		E200.8	01/21/22 15:08 / jcg
Potassium	10	mg/L		1		E200.8	01/21/22 15:08 / jcg
Sodium	311	mg/L	D	2		E200.8	01/21/22 15:08 / jcg
PHYSICAL PROPERTIES							
pH	6.6	s.u.	H	0.1		A4500-H B	01/20/22 10:47 / mnm
pH Measurement Temp	13.4	°C				A4500-H B	01/20/22 10:47 / mnm
Solids, Total Dissolved TDS @ 180 C	6980	mg/L	D	100		A2540 C	01/20/22 15:17 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	39.8	mg/L	D	0.5		E353.2	01/20/22 12:52 / nts
Nitrogen, Ammonia as N	0.39	mg/L		0.05		E350.1	01/27/22 14:12 / dmb
METALS, TOTAL							
Aluminum	0.03	mg/L		0.03		E200.8	02/03/22 13:56 / jcg
Arsenic	ND	mg/L		0.001		E200.8	02/01/22 03:31 / jcg
Beryllium	ND	mg/L		0.001		E200.8	02/01/22 03:31 / jcg
Cadmium	ND	mg/L		0.001		E200.8	02/01/22 03:31 / jcg
Cobalt	ND	mg/L		0.005		E200.8	02/01/22 03:31 / jcg
Lead	ND	mg/L		0.001		E200.8	02/02/22 04:48 / jcg
Manganese	1.91	mg/L	D	0.004		E200.8	02/01/22 03:31 / jcg
Molybdenum	ND	mg/L		0.001		E200.8	02/01/22 03:31 / jcg
Nickel	ND	mg/L		0.005		E200.8	02/01/22 03:31 / jcg
Selenium	0.002	mg/L		0.001		E200.8	02/01/22 03:31 / jcg
Uranium	0.0921	mg/L		0.0003		E200.8	02/02/22 04:48 / jcg
Vanadium	ND	mg/L		0.01		E200.8	02/01/22 03:31 / jcg
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	1.0	pCi/L				E900.1	01/24/22 11:57 / amm
Gross Alpha minus Rn & U Precision (±)	0.6	pCi/L				E900.1	01/24/22 11:57 / amm
Gross Alpha minus Rn & U MDC	0.9	pCi/L				E900.1	01/24/22 11:57 / amm
Lead 210	0.2	pCi/L	U			E909.0	01/30/22 04:59 / hat
Lead 210 precision (±)	0.5	pCi/L				E909.0	01/30/22 04:59 / hat
Lead 210 MDC	0.8	pCi/L				E909.0	01/30/22 04:59 / hat
Radium 226	0.2	pCi/L				E903.0	02/01/22 11:19 / kdk
Radium 226 precision (±)	0.1	pCi/L				E903.0	02/01/22 11:19 / kdk
Radium 226 MDC	0.2	pCi/L				E903.0	02/01/22 11:19 / kdk
Radium 228	0.1	pCi/L	U			RA-05	01/27/22 14:42 / trs
Radium 228 precision (±)	0.8	pCi/L				RA-05	01/27/22 14:42 / trs
Radium 228 MDC	1.3	pCi/L				RA-05	01/27/22 14:42 / trs

Report Definitions:
 RL - Analyte Reporting Limit
 QCL - Quality Control Limit
 D - Reporting Limit (RL) increased due to sample matrix
 U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
 ND - Not detected at the Reporting Limit (RL)
 H - Analysis performed past the method holding time



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 3 & SW Alluvium, UNC - Zone1, UNC - Zone3
Lab ID: C22010583-004
Client Sample ID: 808

Report Date: 02/16/22
Collection Date: 01/17/22 09:48
Date Received: 01/19/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Radium 226 + Radium 228	0.3	pCi/L	U			A7500-RA	02/02/22 15:40 / dmf
Radium 226 + Radium 228 precision (±)	0.8	pCi/L				A7500-RA	02/02/22 15:40 / dmf
Radium 226 + Radium 228 MDC	1.3	pCi/L				A7500-RA	02/02/22 15:40 / dmf
Thorium 230	0.08	pCi/L	U			A7500-U C	01/26/22 13:49 / sec
Thorium 230 precision (±)	0.08	pCi/L				A7500-U C	01/26/22 13:49 / sec
Thorium 230 MDC	0.1	pCi/L				A7500-U C	01/26/22 13:49 / sec
DATA QUALITY							
Solids, Total Dissolved - Calculated	6310	mg/L		1.00		A1030 E	01/24/22 16:21 / jlw
A/C Balance	-2.62	%				A1030 E	01/24/22 16:21 / jlw
Anions	109	meq/L				A1030 E	01/24/22 16:21 / jlw
Cations	104	meq/L				A1030 E	01/24/22 16:21 / jlw
TDS Ratio	1.11	unitless				A1030 E	01/24/22 16:21 / jlw
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624.1	01/25/22 14:57 / etad
Bromoform	ND	ug/L		0.50		E624.1	01/25/22 14:57 / etad
Chlorodibromomethane	ND	ug/L		0.50		E624.1	01/25/22 14:57 / etad
Chloroform	0.37	ug/L	J	0.50		E624.1	01/25/22 14:57 / etad
Trihalomethanes, Total	0.37	ug/L	J	0.50		E624.1	02/16/22 14:49 / tlf
Surr: 1,2-Dichloroethane-d4	101	%REC		73-122		E624.1	01/25/22 14:57 / etad
Surr: p-Bromofluorobenzene	105	%REC		79-119		E624.1	01/25/22 14:57 / etad
Surr: Toluene-d8	103	%REC		80-120		E624.1	01/25/22 14:57 / etad

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
U - Not detected at Minimum Detectable Concentration (MDC)



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-SW Alluvium
Lab ID: C22040413-004
Client Sample ID: 808

Report Date: 06/18/22
Collection Date: 04/07/22 12:20
Date Received: 04/12/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	1930	mg/L		5		A2320 B	04/13/22 20:27 / nts
Chloride	191	mg/L	D	2		E300.0	04/15/22 11:44 / dmb
Sulfate	3280	mg/L	D	8		E300.0	04/15/22 11:44 / dmb
Calcium	611	mg/L	D	3		E200.8	04/22/22 04:08 / jcg
Magnesium	715	mg/L		1		E200.8	04/22/22 04:08 / jcg
Potassium	11	mg/L	D	5		E200.7	05/31/22 10:08 / jcg
Sodium	298	mg/L	D	3		E200.8	04/22/22 04:08 / jcg
PHYSICAL PROPERTIES							
pH	6.6	s.u.	H	0.1		A4500-H B	04/14/22 11:32 / mnm
pH Measurement Temp	12.4	°C				A4500-H B	04/14/22 11:32 / mnm
Solids, Total Dissolved TDS @ 180 C	7040	mg/L	D	100		A2540 C	04/14/22 12:33 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	42.4	mg/L	D	0.2		E353.2	04/14/22 14:53 / nts
Nitrogen, Ammonia as N	0.21	mg/L		0.05		E350.1	04/15/22 11:46 / nts
METALS, TOTAL							
Aluminum	ND	mg/L	D	0.09		E200.8	06/14/22 03:09 / jcg
Arsenic	ND	mg/L		0.001		E200.8	04/27/22 05:58 / jcg
Beryllium	ND	mg/L		0.001		E200.7	05/06/22 11:34 / erc
Cadmium	ND	mg/L		0.001		E200.8	04/25/22 15:05 / jcg
Cobalt	ND	mg/L		0.005		E200.8	04/25/22 15:05 / jcg
Lead	ND	mg/L		0.001		E200.8	04/27/22 05:58 / jcg
Manganese	1.83	mg/L	D	0.007		E200.8	04/25/22 15:05 / jcg
Molybdenum	ND	mg/L		0.001		E200.8	04/25/22 15:05 / jcg
Nickel	0.007	mg/L		0.005		E200.8	04/25/22 15:05 / jcg
Selenium	ND	mg/L		0.001		E200.8	04/29/22 02:41 / jcg
Uranium	0.107	mg/L	D	0.003		E200.8	04/25/22 15:05 / jcg
Vanadium	ND	mg/L		0.01		E200.8	04/25/22 15:05 / jcg
DATA QUALITY							
Solids, Total Dissolved - Calculated	6260	mg/L		1.00		A1030 E	06/17/22 17:48 / tlf
A/C Balance	-2.69	%				A1030 E	06/17/22 17:48 / tlf
Anions	108	meq/L				A1030 E	06/17/22 17:48 / tlf
Cations	103	meq/L				A1030 E	06/17/22 17:48 / tlf
TDS Ratio	1.12	unitless				A1030 E	06/17/22 17:48 / tlf
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	-0.2	pCi/L	U			E900.1	04/25/22 14:36 / kdk
Gross Alpha minus Rn & U Precision (±)	0.4	pCi/L				E900.1	04/25/22 14:36 / kdk
Gross Alpha minus Rn & U MDC	0.7	pCi/L				E900.1	04/25/22 14:36 / kdk
Lead 210	-3	pCi/L	U			E909.0	04/21/22 16:21 / hat
Lead 210 precision (±)	0.7	pCi/L				E909.0	04/21/22 16:21 / hat

Report RL - Analyte Reporting Limit
Definitions: QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
H - Analysis performed past the method holding time



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-SW Alluvium
Lab ID: C22040413-004
Client Sample ID: 808

Report Date: 06/18/22
Collection Date: 04/07/22 12:20
Date Received: 04/12/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Lead 210 MDC	1.2	pCi/L				E909.0	04/21/22 16:21 / hat
Radium 226	0.2	pCi/L				E903.0	04/29/22 16:53 / trs
Radium 226 precision (±)	0.08	pCi/L				E903.0	04/29/22 16:53 / trs
Radium 226 MDC	0.1	pCi/L				E903.0	04/29/22 16:53 / trs
Radium 228	1.9	pCi/L				RA-05	05/05/22 12:30 / trs
Radium 228 precision (±)	1.1	pCi/L				RA-05	05/05/22 12:30 / trs
Radium 228 MDC	1.6	pCi/L				RA-05	05/05/22 12:30 / trs
Radium 226 + Radium 228	2.1	pCi/L				A7500-RA	05/09/22 12:33 / dmf
Radium 226 + Radium 228 precision (±)	1.1	pCi/L				A7500-RA	05/09/22 12:33 / dmf
Radium 226 + Radium 228 MDC	1.6	pCi/L				A7500-RA	05/09/22 12:33 / dmf
Thorium 230	0.2	pCi/L				A7500-U C	04/25/22 14:02 / sec
Thorium 230 precision (±)	0.1	pCi/L				A7500-U C	04/25/22 14:02 / sec
Thorium 230 MDC	0.1	pCi/L				A7500-U C	04/25/22 14:02 / sec
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		1.0		E624.1	04/21/22 11:21 / etad
Bromoform	ND	ug/L		2.0		E624.1	04/21/22 11:21 / etad
Chlorodibromomethane	ND	ug/L		1.0		E624.1	04/21/22 11:21 / etad
Chloroform	0.51	ug/L	J	1.0		E624.1	04/21/22 11:21 / etad
Trihalomethanes, Total	0.51	ug/L		0.50		E624.1	04/27/22 18:25 / tif
Surr: 1,2-Dichloroethane-d4	99.0	%REC		73-122		E624.1	04/21/22 11:21 / etad
Surr: p-Bromofluorobenzene	96.0	%REC		79-119		E624.1	04/21/22 11:21 / etad
Surr: Toluene-d8	100	%REC		80-120		E624.1	04/21/22 11:21 / etad

**Report
Definitions:**

RL - Analyte Reporting Limit
QCL - Quality Control Limit
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

United Nuclear Corp					
Guideline 8: Sweetwater					
Well ID:		808	808	808	808
Collection Date:		4/7/2022	1/17/2022	10/11/2021	7/19/2021
Receive Date:		4/12/2022	1/19/2022	10/14/2021	7/21/2021
Report Date:		6/18/2022	2/16/2022	12/3/2021	8/27/2021
Analyte	Units	C22040413-004	C22010583-004	C21100526-002	C21070842-004
Bicarbonate as HCO ₃	mg/L	1930	1930	1840	1890
Calcium	mg/L	611	612	615	690
Chloride	mg/L	191	197	185	193
Magnesium	mg/L	715	722	621	760
Potassium	mg/L	9	10	11	11
Sodium	mg/L	298	311	338	368
Sulfate	mg/L	3280	3330	3270	3330
pH	s.u.	6.6	6.6	6.6	6.6
pH Measurement Temp	°C	12.4	13.4	12.3	14.4
Solids, Total Dissolved TDS @ 180 C	mg/L	7040	6980	6540	6720
Solids, Total Dissolved - Calculated	mg/L	6260	6310	6010	6410
Nitrogen, Ammonia as N	mg/L	0.21	0.39	1.13	0.57
Nitrogen, Nitrate+Nitrite as N	mg/L	42.4	39.8	15.3	26.8
Aluminum	mg/L	ND(0.09)	0.03	ND(0.04)	ND(0.03)
Arsenic	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Beryllium	mg/L	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cobalt	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	1.83	1.91	2.47	2.05
Molybdenum	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Nickel	mg/L	0.007	ND(0.005)	ND(0.005)	ND(0.005)
Selenium	mg/L	ND(0.001)	0.002	ND(0.001)	ND(0.001)
Uranium	mg/L	0.107	0.0921	0.0682	0.0835
Vanadium	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
A/C Balance	%	-2.72	-2.62	-3.83	2.50
Anions	meq/L	108	109	105	108
Cations	meq/L	103	104	96.9	113
TDS Ratio	unitless	1.12	1.11	1.09	1.05
Gross Alpha minus Rn & U	pCi/L	-0.2	1.0	0.5	1
Gross Alpha minus Rn & U MDC	pCi/L	0.7	0.9	1.1	0.8
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.4	0.6	0.9	0.6
Lead 210	pCi/L	-3	0.2	0.6	-0.1
Lead 210 MDC	pCi/L	1.2	0.8	0.9	0.9
Lead 210 precision (±)	pCi/L	0.7	0.5	0.6	0.5
Radium 226	pCi/L	0.2	0.2	0.3	0.2
Radium 226 MDC	pCi/L	0.1	0.2	0.2	0.3
Radium 226 precision (±)	pCi/L	0.08	0.1	0.2	0.2
Radium 228	pCi/L	1.9	0.1	0.6	0.9
Radium 228 MDC	pCi/L	1.6	1.3	1	1.7
Radium 228 precision (±)	pCi/L	1.1	0.8	0.6	1.0
Thorium 230	pCi/L	0.2	0.08	0.07	0.01
Thorium 230 MDC	pCi/L	0.1	0.1	0.5	0.1
Thorium 230 precision (±)	pCi/L	0.1	0.08	0.2	0.07
Bromodichloromethane	ug/L	ND(1.0)	ND(0.50)	ND(1.0)	ND(0.50)
Bromoform	ug/L	ND(2.0)	ND(0.50)	ND(2.0)	ND(0.50)
Chlorodibromomethane	ug/L	ND(1.0)	ND(0.50)	ND(1.0)	ND(0.50)
Chloroform	ug/L	ND(1.0)	ND(0.50)	ND(1.0)	ND(0.50)
Trihalomethanes, Total	ug/L	0.51	ND(0.50)	ND(0.50)	ND(0.50)

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 3 & SW Alluvium, UNC - Zone1, UNC - Zone3
Lab ID: C22010583-009
Client Sample ID: GW-1

Report Date: 02/16/22
Collection Date: 01/17/22 14:08
Date Received: 01/19/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	1340	mg/L		5		A2320 B	01/20/22 17:20 / kjp
Chloride	243	mg/L	D	2		E300.0	01/21/22 21:21 / dmb
Sulfate	2710	mg/L	D	8		E300.0	01/21/22 21:21 / dmb
Calcium	548	mg/L	D	3		E200.8	01/21/22 16:08 / jcg
Magnesium	545	mg/L		1		E200.8	01/21/22 16:08 / jcg
Potassium	9	mg/L		1		E200.8	01/21/22 16:08 / jcg
Sodium	409	mg/L	D	2		E200.8	01/21/22 16:08 / jcg
PHYSICAL PROPERTIES							
pH	7.0	s.u.	H	0.1		A4500-H B	01/20/22 11:04 / mnm
pH Measurement Temp	14.2	°C				A4500-H B	01/20/22 11:04 / mnm
Solids, Total Dissolved TDS @ 180 C	5720	mg/L	D	40		A2540 C	01/20/22 15:26 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	63.8	mg/L	D	0.5		E353.2	01/20/22 13:02 / nts
Nitrogen, Ammonia as N	ND	mg/L		0.05		E350.1	01/27/22 14:18 / dmb
METALS, TOTAL							
Aluminum	ND	mg/L		0.03		E200.8	02/02/22 05:11 / jcg
Arsenic	ND	mg/L		0.001		E200.8	02/01/22 04:08 / jcg
Beryllium	ND	mg/L		0.001		E200.8	02/01/22 04:08 / jcg
Cadmium	ND	mg/L		0.001		E200.8	02/01/22 04:08 / jcg
Cobalt	ND	mg/L		0.005		E200.8	02/01/22 04:08 / jcg
Lead	ND	mg/L		0.001		E200.8	02/02/22 05:11 / jcg
Manganese	0.002	mg/L		0.001		E200.8	02/15/22 10:45 / jcg
Molybdenum	ND	mg/L		0.001		E200.8	02/01/22 04:08 / jcg
Nickel	ND	mg/L		0.005		E200.8	02/01/22 04:08 / jcg
Selenium	0.001	mg/L		0.001		E200.8	02/01/22 04:08 / jcg
Uranium	0.109	mg/L		0.0003		E200.8	02/02/22 05:11 / jcg
Vanadium	ND	mg/L		0.01		E200.8	02/01/22 04:08 / jcg
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	0.7	pCi/L	U			E900.1	01/24/22 14:38 / amm
Gross Alpha minus Rn & U Precision (±)	0.6	pCi/L				E900.1	01/24/22 14:38 / amm
Gross Alpha minus Rn & U MDC	0.9	pCi/L				E900.1	01/24/22 14:38 / amm
Lead 210	0.6	pCi/L	U			E909.0	01/30/22 20:55 / hat
Lead 210 precision (±)	0.5	pCi/L				E909.0	01/30/22 20:55 / hat
Lead 210 MDC	0.8	pCi/L				E909.0	01/30/22 20:55 / hat
Radium 226	0.2	pCi/L				E903.0	02/01/22 14:39 / kdk
Radium 226 precision (±)	0.1	pCi/L				E903.0	02/01/22 14:39 / kdk
Radium 226 MDC	0.2	pCi/L				E903.0	02/01/22 14:39 / kdk
Radium 228	-0.5	pCi/L	U			RA-05	01/27/22 16:15 / trs
Radium 228 precision (±)	0.9	pCi/L				RA-05	01/27/22 16:15 / trs
Radium 228 MDC	1.6	pCi/L				RA-05	01/27/22 16:15 / trs

Report	RL - Analyte Reporting Limit	MCL - Maximum Contaminant Level
Definitions:	QCL - Quality Control Limit	ND - Not detected at the Reporting Limit (RL)
	D - Reporting Limit (RL) increased due to sample matrix	H - Analysis performed past the method holding time
	U - Not detected at Minimum Detectable Concentration (MDC)	



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 3 & SW Alluvium, UNC - Zone1, UNC - Zone3
Lab ID: C22010583-009
Client Sample ID: GW-1

Report Date: 02/16/22
Collection Date: 01/17/22 14:08
Date Received: 01/19/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Radium 226 + Radium 228	-0.3	pCi/L	U			A7500-RA	02/02/22 15:40 / dmf
Radium 226 + Radium 228 precision (±)	0.9	pCi/L				A7500-RA	02/02/22 15:40 / dmf
Radium 226 + Radium 228 MDC	1.6	pCi/L				A7500-RA	02/02/22 15:40 / dmf
Thorium 230	0.03	pCi/L	U			A7500-U C	01/26/22 13:49 / sec
Thorium 230 precision (±)	0.06	pCi/L				A7500-U C	01/26/22 13:49 / sec
Thorium 230 MDC	0.1	pCi/L				A7500-U C	01/26/22 13:49 / sec
DATA QUALITY							
Solids, Total Dissolved - Calculated	5410	mg/L		1.00		A1030 E	01/24/22 16:22 / jlw
A/C Balance	0.24	%				A1030 E	01/24/22 16:22 / jlw
Anions	89.8	meq/L				A1030 E	01/24/22 16:22 / jlw
Cations	90.2	meq/L				A1030 E	01/24/22 16:22 / jlw
TDS Ratio	1.06	unitless				A1030 E	01/24/22 16:22 / jlw
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		1.0		E624.1	01/25/22 16:44 / etad
Bromoform	ND	ug/L		2.0		E624.1	01/25/22 16:44 / etad
Chlorodibromomethane	ND	ug/L		1.0		E624.1	01/25/22 16:44 / etad
Chloroform	0.28	ug/L	J	1.0		E624.1	01/25/22 16:44 / etad
Trihalomethanes, Total	0.28	ug/L	J	0.50		E624.1	02/16/22 14:49 / tlf
Surr: 1,2-Dichloroethane-d4	103	%REC		73-122		E624.1	01/25/22 16:44 / etad
Surr: p-Bromofluorobenzene	106	%REC		79-119		E624.1	01/25/22 16:44 / etad
Surr: Toluene-d8	103	%REC		80-120		E624.1	01/25/22 16:44 / etad

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
U - Not detected at Minimum Detectable Concentration (MDC)



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-SW Alluvium
Lab ID: C22040413-008
Client Sample ID: GW-1

Report Date: 06/18/22
Collection Date: 04/07/22 15:30
Date Received: 04/12/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	1390	mg/L		5		A2320 B	04/13/22 21:09 / nts
Chloride	246	mg/L	D	2		E300.0	04/15/22 13:01 / dmb
Sulfate	2770	mg/L	D	8		E300.0	04/15/22 13:01 / dmb
Calcium	582	mg/L	D	3		E200.8	04/22/22 05:09 / jcg
Magnesium	460	mg/L		1		E200.8	04/22/22 05:09 / jcg
Potassium	12	mg/L	D	2		E200.7	05/30/22 01:29 / jcg
Sodium	350	mg/L	D	3		E200.8	04/22/22 05:09 / jcg
PHYSICAL PROPERTIES							
pH	7.0	s.u.	H	0.1		A4500-H B	04/14/22 11:46 / mnm
pH Measurement Temp	13.1	°C				A4500-H B	04/14/22 11:46 / mnm
Solids, Total Dissolved TDS @ 180 C	5850	mg/L	D	40		A2540 C	04/14/22 12:34 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	73.5	mg/L	D	0.5		E353.2	04/14/22 17:25 / nts
Nitrogen, Ammonia as N	ND	mg/L		0.05		E350.1	04/15/22 11:56 / nts
METALS, TOTAL							
Aluminum	ND	mg/L	D	0.09		E200.8	06/14/22 04:09 / jcg
Arsenic	ND	mg/L		0.001		E200.8	04/29/22 02:59 / jcg
Beryllium	ND	mg/L		0.001		E200.7	05/06/22 13:00 / erc
Cadmium	ND	mg/L		0.001		E200.8	04/25/22 15:56 / jcg
Cobalt	ND	mg/L		0.005		E200.8	04/25/22 15:56 / jcg
Lead	ND	mg/L		0.001		E200.8	04/29/22 02:59 / jcg
Manganese	ND	mg/L	D	0.003		E200.8	06/02/22 05:22 / jcg
Molybdenum	ND	mg/L		0.001		E200.8	04/25/22 15:56 / jcg
Nickel	ND	mg/L		0.005		E200.8	05/07/22 02:58 / jcg
Selenium	ND	mg/L		0.001		E200.8	04/29/22 02:59 / jcg
Uranium	0.123	mg/L	D	0.003		E200.8	04/25/22 15:56 / jcg
Vanadium	ND	mg/L		0.01		E200.8	04/25/22 15:56 / jcg
DATA QUALITY							
Solids, Total Dissolved - Calculated	5450	mg/L		1.00		A1030 E	06/17/22 17:53 / tlf
A/C Balance	-5.90	%				A1030 E	06/17/22 17:53 / tlf
Anions	92.7	meq/L				A1030 E	06/17/22 17:53 / tlf
Cations	82.4	meq/L				A1030 E	06/17/22 17:53 / tlf
TDS Ratio	1.07	unitless				A1030 E	06/17/22 17:53 / tlf
Cation/Anion Balance includes selected metals							
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	0.3	pCi/L	U			E900.1	04/25/22 14:36 / kdk
Gross Alpha minus Rn & U Precision (±)	0.5	pCi/L				E900.1	04/25/22 14:36 / kdk
Gross Alpha minus Rn & U MDC	0.7	pCi/L				E900.1	04/25/22 14:36 / kdk
Lead 210	-5	pCi/L	U			E909.0	04/21/22 16:21 / hat

Report Definitions:
 RL - Analyte Reporting Limit
 QCL - Quality Control Limit
 D - Reporting Limit (RL) increased due to sample matrix
 U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
 ND - Not detected at the Reporting Limit (RL)
 H - Analysis performed past the method holding time



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-SW Alluvium
Lab ID: C22040413-008
Client Sample ID: GW-1

Report Date: 06/18/22
Collection Date: 04/07/22 15:30
Date Received: 04/12/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Lead 210 precision (±)	0.7	pCi/L				E909.0	04/21/22 16:21 / hat
Lead 210 MDC	1.2	pCi/L				E909.0	04/21/22 16:21 / hat
Radium 226	0.2	pCi/L	U			E903.0	04/27/22 11:27 / kdk
Radium 226 precision (±)	0.2	pCi/L				E903.0	04/27/22 11:27 / kdk
Radium 226 MDC	0.2	pCi/L				E903.0	04/27/22 11:27 / kdk
Radium 228	1.5	pCi/L	U			RA-05	05/05/22 14:13 / trs
Radium 228 precision (±)	1.2	pCi/L				RA-05	05/05/22 14:13 / trs
Radium 228 MDC	1.8	pCi/L				RA-05	05/05/22 14:13 / trs
Radium 226 + Radium 228	1.7	pCi/L	U			A7500-RA	05/09/22 12:33 / dmf
Radium 226 + Radium 228 precision (±)	1.2	pCi/L				A7500-RA	05/09/22 12:33 / dmf
Radium 226 + Radium 228 MDC	1.9	pCi/L				A7500-RA	05/09/22 12:33 / dmf
Thorium 230	0.2	pCi/L				A7500-U C	04/25/22 14:02 / sec
Thorium 230 precision (±)	0.1	pCi/L				A7500-U C	04/25/22 14:02 / sec
Thorium 230 MDC	0.1	pCi/L				A7500-U C	04/25/22 14:02 / sec
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		1.0		E624.1	04/21/22 12:47 / etad
Bromoform	ND	ug/L		2.0		E624.1	04/21/22 12:47 / etad
Chlorodibromomethane	ND	ug/L		1.0		E624.1	04/21/22 12:47 / etad
Chloroform	0.29	ug/L	J	1.0		E624.1	04/21/22 12:47 / etad
Trihalomethanes, Total	0.29	ug/L	J	0.50		E624.1	04/27/22 18:25 / tlf
Surr: 1,2-Dichloroethane-d4	98.0	%REC		73-122		E624.1	04/21/22 12:47 / etad
Surr: p-Bromofluorobenzene	95.0	%REC		79-119		E624.1	04/21/22 12:47 / etad
Surr: Toluene-d8	101	%REC		80-120		E624.1	04/21/22 12:47 / etad

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
U - Not detected at Minimum Detectable Concentration (MDC)

United Nuclear Corp					
Guideline 8: Sweetwater					
Well ID:		GW-1	GW-1	GW-1	GW-1
Collection Date:		4/7/2022	1/17/2021	10/11/2021	7/20/2021
Receive Date:		4/12/2022	1/19/2021	10/14/2021	7/22/2021
Report Date:		6/18/2022	2/16/2022	12/3/2021	8/27/2021
Analyte	Units	C22040413-008	C22010583-009	C21100526-004	C21070886-001
Bicarbonate as HCO ₃	mg/L	1390	1340	1510	1490
Calcium	mg/L	582	548	619	579
Chloride	mg/L	246	243	257	260
Magnesium	mg/L	460	545	514	554
Potassium	mg/L	8	9	9	11
Sodium	mg/L	350	409	402	400
Sulfate	mg/L	2770	2710	2930	2920
pH	s.u.	7.0	7.0	6.8	6.8
pH Measurement Temp	°C	13.1	14.2	12.3	16.8
Solids, Total Dissolved TDS @ 180 C	mg/L	5850	5720	6010	5890
Solids, Total Dissolved - Calculated	mg/L	5120	5410	5740	5740
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	73.5	63.8	60.0	66
Aluminum	mg/L	ND(0.09)	ND(0.03)	ND(0.04)	ND(0.03)
Arsenic	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Beryllium	mg/L	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cobalt	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	ND(0.003)	0.002	0.004	0.007
Molybdenum	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	0.001
Nickel	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Selenium	mg/L	ND(0.001)	0.001	ND(0.001)	ND(0.001)
Uranium	mg/L	0.123	0.109	0.102	0.100
Vanadium	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
A/C Balance	%	-3.05	0.24	-3.40	-2.64
Anions	meq/L	87.4	89.8	97.2	97.1
Cations	meq/L	82.3	90.2	90.8	92.1
TDS Ratio	unitless	1.14	1.06	1.05	1.03
Gross Alpha minus Rn & U	pCi/L	0.3	0.7	0.6	-0.02
Gross Alpha minus Rn & U MDC	pCi/L	0.7	0.9	1.1	0.8
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.5	0.6	0.8	0.5
Lead 210	pCi/L	-5	0.6	0.5	0.5
Lead 210 MDC	pCi/L	1.2	0.8	0.9	0.8
Lead 210 precision (±)	pCi/L	0.7	0.5	0.6	0.5
Radium 226	pCi/L	0.2	0.2	0.3	0.3
Radium 226 MDC	pCi/L	0.2	0.2	0.2	0.1
Radium 226 precision (±)	pCi/L	0.2	0.1	0.2	0.1
Radium 228	pCi/L	1.5	-0.5	0.4	-0.004
Radium 228 MDC	pCi/L	1.8	1.6	1.2	1.2
Radium 228 precision (±)	pCi/L	1.2	0.9	0.7	0.7
Thorium 230	pCi/L	0.2	0.03	0.05	0.04
Thorium 230 MDC	pCi/L	0.1	0.1	0.1	0.1
Thorium 230 precision (±)	pCi/L	0.1	0.06	0.06	0.07
Bromodichloromethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.50)
Bromoform	ug/L	ND(2.0)	ND(2.0)	ND(2.0)	ND(0.50)
Chlorodibromomethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.50)
Chloroform	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.50)
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 3 & SW Alluvium, UNC - Zone1, UNC - Zone3
Lab ID: C22010583-002
Client Sample ID: EPA-23

Report Date: 02/16/22
Collection Date: 01/14/22 10:51
Date Received: 01/19/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	1560	mg/L		5		A2320 B	01/20/22 15:43 / kjp
Chloride	179	mg/L	D	2		E300.0	01/21/22 17:50 / dmb
Sulfate	2820	mg/L	D	8		E300.0	01/21/22 17:50 / dmb
Calcium	608	mg/L	D	3		E200.8	01/21/22 14:44 / jcg
Magnesium	507	mg/L		1		E200.8	01/21/22 14:44 / jcg
Potassium	14	mg/L		1		E200.8	01/21/22 14:44 / jcg
Sodium	240	mg/L	D	2		E200.8	01/21/22 14:44 / jcg
PHYSICAL PROPERTIES							
pH	6.6	s.u.	H	0.1		A4500-H B	01/20/22 10:41 / mnm
pH Measurement Temp	12.6	°C				A4500-H B	01/20/22 10:41 / mnm
Solids, Total Dissolved TDS @ 180 C	6010	mg/L	D	100		A2540 C	01/20/22 15:05 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	78.8	mg/L	D	0.5		E353.2	01/20/22 12:49 / nts
Nitrogen, Ammonia as N	7.2	mg/L	D	0.2		E350.1	01/27/22 14:10 / dmb
METALS, TOTAL							
Aluminum	ND	mg/L		0.03		E200.8	02/03/22 13:46 / jcg
Arsenic	0.001	mg/L		0.001		E200.8	02/15/22 10:41 / jcg
Beryllium	ND	mg/L		0.001		E200.8	02/01/22 03:22 / jcg
Cadmium	ND	mg/L		0.001		E200.8	02/15/22 10:41 / jcg
Cobalt	0.007	mg/L		0.005		E200.8	02/01/22 03:22 / jcg
Lead	ND	mg/L		0.001		E200.8	02/03/22 13:46 / jcg
Manganese	2.38	mg/L	D	0.004		E200.8	02/01/22 03:22 / jcg
Molybdenum	ND	mg/L		0.001		E200.8	02/15/22 10:41 / jcg
Nickel	ND	mg/L		0.005		E200.8	02/15/22 10:41 / jcg
Selenium	ND	mg/L		0.001		E200.8	02/15/22 10:41 / jcg
Uranium	0.0554	mg/L		0.0003		E200.8	02/03/22 13:46 / jcg
Vanadium	ND	mg/L		0.01		E200.8	02/01/22 03:22 / jcg
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	0.5	pCi/L	U			E900.1	01/24/22 11:57 / amm
Gross Alpha minus Rn & U Precision (±)	0.7	pCi/L				E900.1	01/24/22 11:57 / amm
Gross Alpha minus Rn & U MDC	0.9	pCi/L				E900.1	01/24/22 11:57 / amm
Lead 210	1	pCi/L				E909.0	01/29/22 22:26 / hat
Lead 210 precision (±)	0.5	pCi/L				E909.0	01/29/22 22:26 / hat
Lead 210 MDC	0.9	pCi/L				E909.0	01/29/22 22:26 / hat
Radium 226	0.2	pCi/L				E903.0	02/01/22 11:19 / kdk
Radium 226 precision (±)	0.1	pCi/L				E903.0	02/01/22 11:19 / kdk
Radium 226 MDC	0.2	pCi/L				E903.0	02/01/22 11:19 / kdk
Radium 228	0.2	pCi/L	U			RA-05	01/27/22 14:42 / trs
Radium 228 precision (±)	0.8	pCi/L				RA-05	01/27/22 14:42 / trs
Radium 228 MDC	1.3	pCi/L				RA-05	01/27/22 14:42 / trs

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
H - Analysis performed past the method holding time



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 3 & SW Alluvium, UNC - Zone1, UNC - Zone3
Lab ID: C22010583-002
Client Sample ID: EPA-23

Report Date: 02/16/22
Collection Date: 01/14/22 10:51
Date Received: 01/19/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Radium 226 + Radium 228	0.5	pCi/L	U			A7500-RA	02/02/22 15:40 / dmf
Radium 226 + Radium 228 precision (±)	0.8	pCi/L				A7500-RA	02/02/22 15:40 / dmf
Radium 226 + Radium 228 MDC	1.4	pCi/L				A7500-RA	02/02/22 15:40 / dmf
Thorium 230	0.03	pCi/L	U			A7500-U C	01/26/22 13:49 / sec
Thorium 230 precision (±)	0.06	pCi/L				A7500-U C	01/26/22 13:49 / sec
Thorium 230 MDC	0.1	pCi/L				A7500-U C	01/26/22 13:49 / sec
DATA QUALITY							
Solids, Total Dissolved - Calculated	5150	mg/L		1.00		A1030 E	01/24/22 17:20 / jlw
A/C Balance	-3.87	%				A1030 E	01/24/22 17:20 / jlw
Anions	89.5	meq/L				A1030 E	01/24/22 17:20 / jlw
Cations	82.8	meq/L				A1030 E	01/24/22 17:20 / jlw
TDS Ratio	1.17	unitless				A1030 E	01/24/22 17:20 / jlw
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		1.0		E624.1	01/25/22 14:14 / etad
Bromoform	ND	ug/L		2.0		E624.1	01/25/22 14:14 / etad
Chlorodibromomethane	ND	ug/L		1.0		E624.1	01/25/22 14:14 / etad
Chloroform	1.4	ug/L		1.0		E624.1	01/25/22 14:14 / etad
Trihalomethanes, Total	1.4	ug/L		0.50		E624.1	02/16/22 14:49 / tlf
Surr: 1,2-Dichloroethane-d4	100	%REC		73-122		E624.1	01/25/22 14:14 / etad
Surr: p-Bromofluorobenzene	105	%REC		79-119		E624.1	01/25/22 14:14 / etad
Surr: Toluene-d8	101	%REC		80-120		E624.1	01/25/22 14:14 / etad

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-SW Alluvium
Lab ID: C22040413-002
Client Sample ID: EPA-23

Report Date: 06/18/22
Collection Date: 04/07/22 10:35
Date Received: 04/12/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	1500	mg/L		5		A2320 B	04/13/22 20:03 / nts
Chloride	163	mg/L	D	2		E300.0	04/15/22 11:06 / dmb
Sulfate	2660	mg/L	D	8		E300.0	04/15/22 11:06 / dmb
Calcium	600	mg/L	D	3		E200.8	04/22/22 03:58 / jcg
Magnesium	472	mg/L		1		E200.8	04/22/22 03:58 / jcg
Potassium	16	mg/L	D	5		E200.7	05/31/22 10:00 / jcg
Sodium	204	mg/L	D	3		E200.8	04/22/22 03:58 / jcg
PHYSICAL PROPERTIES							
pH	6.7	s.u.	H	0.1		A4500-H B	04/14/22 11:26 / mnm
pH Measurement Temp	12.3	°C				A4500-H B	04/14/22 11:26 / mnm
Solids, Total Dissolved TDS @ 180 C	5650	mg/L	D	40		A2540 C	04/14/22 12:33 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	44.4	mg/L	D	0.2		E353.2	04/14/22 14:50 / nts
Nitrogen, Ammonia as N	14.3	mg/L	D	0.5		E350.1	04/15/22 13:05 / nts
METALS, TOTAL							
Aluminum	ND	mg/L	D	0.09		E200.8	06/14/22 02:58 / jcg
Arsenic	0.001	mg/L		0.001		E200.8	04/27/22 05:49 / jcg
Beryllium	ND	mg/L		0.001		E200.7	05/06/22 11:23 / erc
Cadmium	ND	mg/L		0.001		E200.8	04/25/22 14:56 / jcg
Cobalt	0.010	mg/L		0.005		E200.8	04/25/22 14:56 / jcg
Lead	ND	mg/L		0.001		E200.8	04/25/22 14:56 / jcg
Manganese	3.82	mg/L	D	0.007		E200.8	04/25/22 14:56 / jcg
Molybdenum	ND	mg/L		0.001		E200.8	04/25/22 14:56 / jcg
Nickel	0.010	mg/L		0.005		E200.8	04/25/22 14:56 / jcg
Selenium	ND	mg/L		0.001		E200.8	04/27/22 05:49 / jcg
Uranium	0.061	mg/L	D	0.003		E200.8	04/25/22 14:56 / jcg
Vanadium	ND	mg/L		0.01		E200.8	04/25/22 14:56 / jcg
DATA QUALITY							
Solids, Total Dissolved - Calculated	5060	mg/L		1.00		A1030 E	06/17/22 17:52 / tlf
A/C Balance	-4.35	%				A1030 E	06/17/22 17:52 / tlf
Anions	87.6	meq/L				A1030 E	06/17/22 17:52 / tlf
Cations	80.3	meq/L				A1030 E	06/17/22 17:52 / tlf
TDS Ratio	1.12	unitless				A1030 E	06/17/22 17:52 / tlf
Cation/Anion Balance includes selected metals							
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	0.3	pCi/L	U			E900.1	04/25/22 14:36 / kdk
Gross Alpha minus Rn & U Precision (±)	0.5	pCi/L				E900.1	04/25/22 14:36 / kdk
Gross Alpha minus Rn & U MDC	0.7	pCi/L				E900.1	04/25/22 14:36 / kdk
Lead 210	-4	pCi/L	U			E909.0	04/21/22 16:21 / hat

Report RL - Analyte Reporting Limit
Definitions: QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
H - Analysis performed past the method holding time



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-SW Alluvium
Lab ID: C22040413-002
Client Sample ID: EPA-23

Report Date: 06/18/22
Collection Date: 04/07/22 10:35
Date Received: 04/12/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Lead 210 precision (±)	0.7	pCi/L				E909.0	04/21/22 16:21 / hat
Lead 210 MDC	1.2	pCi/L				E909.0	04/21/22 16:21 / hat
Radium 226	0.4	pCi/L				E903.0	04/29/22 16:54 / trs
Radium 226 precision (±)	0.09	pCi/L				E903.0	04/29/22 16:54 / trs
Radium 226 MDC	0.1	pCi/L				E903.0	04/29/22 16:54 / trs
Radium 228	1.3	pCi/L	U			RA-05	05/05/22 12:30 / trs
Radium 228 precision (±)	0.8	pCi/L				RA-05	05/05/22 12:30 / trs
Radium 228 MDC	1.4	pCi/L				RA-05	05/05/22 12:30 / trs
Radium 226 + Radium 228	1.7	pCi/L				A7500-RA	05/09/22 12:33 / dmf
Radium 226 + Radium 228 precision (±)	0.8	pCi/L				A7500-RA	05/09/22 12:33 / dmf
Radium 226 + Radium 228 MDC	1.4	pCi/L				A7500-RA	05/09/22 12:33 / dmf
Thorium 230	0.2	pCi/L				A7500-U C	04/21/22 13:52 / sec
Thorium 230 precision (±)	0.08	pCi/L				A7500-U C	04/21/22 13:52 / sec
Thorium 230 MDC	0.1	pCi/L				A7500-U C	04/21/22 13:52 / sec
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		1.0		E624.1	04/21/22 10:39 / etad
Bromoform	ND	ug/L		2.0		E624.1	04/21/22 10:39 / etad
Chlorodibromomethane	ND	ug/L		1.0		E624.1	04/21/22 10:39 / etad
Chloroform	0.72	ug/L	J	1.0		E624.1	04/21/22 10:39 / etad
Trihalomethanes, Total	0.72	ug/L		0.50		E624.1	04/27/22 18:25 / tlf
Surr: 1,2-Dichloroethane-d4	97.0	%REC		73-122		E624.1	04/21/22 10:39 / etad
Surr: p-Bromofluorobenzene	94.0	%REC		79-119		E624.1	04/21/22 10:39 / etad
Surr: Toluene-d8	102	%REC		80-120		E624.1	04/21/22 10:39 / etad

**Report
Definitions:**

RL - Analyte Reporting Limit
QCL - Quality Control Limit
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
U - Not detected at Minimum Detectable Concentration (MDC)

United Nuclear Corp					
Guideline 8: Sweetwater					
Well ID:		EPA-23	EPA-23	EPA-23	EPA-23
Collection Date:		4/7/2022	1/14/2022	10/8/2021	7/19/2021
Receive Date:		4/12/2022	1/19/2022	10/12/2021	7/21/2021
Report Date:		6/18/2022	2/16/2022	11/28/2021	8/27/2021
Analyte	Units	C22040413-002	C22010583-002	C21100467-004	C21070842-002
Bicarbonate as HCO ₃	mg/L	1500	1560	1410	1540
Calcium	mg/L	600	608	630	713
Chloride	mg/L	163	179	154	174
Magnesium	mg/L	472	507	468	578
Potassium	mg/L	13	14	12	15
Sodium	mg/L	204	240	188	260
Sulfate	mg/L	2660	2820	2580	2820
pH	s.u.	6.7	6.6	6.7	6.6
pH Measurement Temp	°C	12.3	12.6	13.2	14.2
Solids, Total Dissolved TDS @ 180 C	mg/L	5650	6010	5270	5770
Solids, Total Dissolved - Calculated	mg/L	4860	5150	4870	5540
Nitrogen, Ammonia as N	mg/L	14.3	7.2	5.4	14.1
Nitrogen, Nitrate+Nitrite as N	mg/L	44.4	78.8	33.8	49.7
Aluminum	mg/L	ND(0.09)	ND(0.03)	ND(0.04)	ND(0.03)
Arsenic	mg/L	0.001	0.001	ND(0.001)	ND(0.001)
Beryllium	mg/L	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cobalt	mg/L	0.010	0.007	0.007	0.008
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	3.82	2.38	3.34	3.23
Molybdenum	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Nickel	mg/L	0.010	ND(0.005)	ND(0.005)	ND(0.005)
Selenium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Uranium	mg/L	0.061	0.0554	0.0478	0.0521
Vanadium	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
A/C Balance	%	-3.37	-3.87	-2.94	1.27
Anions	meq/L	84.4	89.5	83.6	92.5
Cations	meq/L	78.9	82.8	78.8	94.8
TDS Ratio	unitless	1.16	1.17	1.08	1.04
Gross Alpha minus Rn & U	pCi/L	0.3	0.5	0.5	0.3
Gross Alpha minus Rn & U MDC	pCi/L	0.7	0.9	1.1	0.8
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.5	0.7	0.7	0.5
Lead 210	pCi/L	-4	1	0.4	-0.2
Lead 210 MDC	pCi/L	1.2	0.9	0.9	0.9
Lead 210 precision (±)	pCi/L	0.7	0.5	0.6	0.5
Radium 226	pCi/L	0.4	0.2	0.3	0.2
Radium 226 MDC	pCi/L	0.1	0.2	0.2	0.2
Radium 226 precision (±)	pCi/L	0.09	0.1	0.2	0.2
Radium 228	pCi/L	1.3	0.2	1.1	0.2
Radium 228 MDC	pCi/L	1.4	1.3	1	1.5
Radium 228 precision (±)	pCi/L	0.8	0.8	0.6	0.9
Thorium 230	pCi/L	0.2	0.03	0.1	0.009
Thorium 230 MDC	pCi/L	0.1	0.1	0.2	0.09
Thorium 230 precision (±)	pCi/L	0.08	0.06	0.1	0.04
Bromodichloromethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.50)
Bromoform	ug/L	ND(2.0)	ND(2.0)	ND(2.0)	ND(0.50)
Chlorodibromomethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.50)
Chloroform	ug/L	ND(1.0)	1.4	ND(1.0)	0.54
Trihalomethanes, Total	ug/L	0.72	1.4	ND(0.50)	0.54

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-SW ALLUVIUM
Lab ID: C22010739-008
Client Sample ID: EPA-25

Report Date: 03/07/22
Collection Date: 01/18/22 13:48
Date Received: 01/25/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	1420	mg/L		5		A2320 B	01/25/22 13:10 / kjp
Chloride	166	mg/L	D	2		E300.0	02/03/22 20:02 / dmb
Sulfate	1920	mg/L	D	8		E300.0	02/03/22 20:02 / dmb
Calcium	629	mg/L		1		E200.7	02/03/22 17:10 / srm
Magnesium	267	mg/L		1		E200.7	02/03/22 17:10 / srm
Potassium	8	mg/L		1		E200.7	02/03/22 17:10 / srm
Sodium	238	mg/L	D	3		E200.7	02/03/22 17:10 / srm
PHYSICAL PROPERTIES							
pH	6.8	s.u.	H	0.1		A4500-H B	01/25/22 12:07 / mnm
pH Measurement Temp	16.0	°C				A4500-H B	01/25/22 12:07 / mnm
Solids, Total Dissolved TDS @ 180 C	4560	mg/L	D	40		A2540 C	01/25/22 10:46 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	54.5	mg/L	D	0.5		E353.2	01/25/22 14:31 / nts
Nitrogen, Ammonia as N	ND	mg/L		0.05		E350.1	01/27/22 15:21 / dmb
METALS, TOTAL							
Aluminum	ND	mg/L		0.03		E200.8	02/08/22 17:25 / jcg
Arsenic	ND	mg/L		0.001		E200.8	01/27/22 19:01 / jcg
Beryllium	ND	mg/L		0.001		E200.8	01/27/22 19:01 / jcg
Cadmium	ND	mg/L		0.001		E200.8	01/27/22 19:01 / jcg
Cobalt	ND	mg/L		0.005		E200.8	01/27/22 19:01 / jcg
Lead	ND	mg/L		0.001		E200.8	01/27/22 19:01 / jcg
Manganese	1.24	mg/L		0.001		E200.8	01/27/22 19:01 / jcg
Molybdenum	ND	mg/L		0.001		E200.8	02/08/22 17:25 / jcg
Nickel	ND	mg/L		0.005		E200.8	01/27/22 19:01 / jcg
Selenium	ND	mg/L		0.001		E200.8	01/27/22 19:01 / jcg
Uranium	0.132	mg/L	D	0.0005		E200.8	01/27/22 19:01 / jcg
Vanadium	ND	mg/L		0.01		E200.8	01/27/22 19:01 / jcg
DATA QUALITY							
Solids, Total Dissolved - Calculated	3940	mg/L		1.00		A1030 E	02/09/22 11:51 / jlw
A/C Balance	-2.97	%				A1030 E	02/09/22 11:51 / jlw
Anions	67.9	meq/L				A1030 E	02/09/22 11:51 / jlw
Cations	64.0	meq/L				A1030 E	02/09/22 11:51 / jlw
TDS Ratio	1.16	unitless				A1030 E	02/09/22 11:51 / jlw
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	0.1	pCi/L	U			E900.1	01/31/22 10:28 / trs
Gross Alpha minus Rn & U Precision (±)	0.3	pCi/L				E900.1	01/31/22 10:28 / trs
Gross Alpha minus Rn & U MDC	0.5	pCi/L				E900.1	01/31/22 10:28 / trs
Lead 210	-0.3	pCi/L	U			E909.0	02/02/22 21:54 / sec
Lead 210 precision (±)	0.5	pCi/L				E909.0	02/02/22 21:54 / sec

Report RL - Analyte Reporting Limit
Definitions: QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
H - Analysis performed past the method holding time



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-SW ALLUVIUM
Lab ID: C22010739-008
Client Sample ID: EPA-25

Report Date: 03/07/22
Collection Date: 01/18/22 13:48
Date Received: 01/25/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Lead 210 MDC	0.9	pCi/L				E909.0	02/02/22 21:54 / sec
Radium 226	0.04	pCi/L	U			E903.0	02/08/22 12:24 / trs
Radium 226 precision (±)	0.1	pCi/L				E903.0	02/08/22 12:24 / trs
Radium 226 MDC	0.1	pCi/L				E903.0	02/08/22 12:24 / trs
Radium 228	0.5	pCi/L	U			RA-05	02/02/22 15:59 / hat
Radium 228 precision (±)	0.5	pCi/L				RA-05	02/02/22 15:59 / hat
Radium 228 MDC	0.8	pCi/L				RA-05	02/02/22 15:59 / hat
Radium 226 + Radium 228	0.5	pCi/L	U			A7500-RA	02/08/22 14:30 / dmf
Radium 226 + Radium 228 precision (±)	0.5	pCi/L				A7500-RA	02/08/22 14:30 / dmf
Radium 226 + Radium 228 MDC	0.8	pCi/L				A7500-RA	02/08/22 14:30 / dmf
Thorium 230	0.01	pCi/L	U			A7500-U C	02/03/22 16:01 / sec
Thorium 230 precision (±)	0.04	pCi/L				A7500-U C	02/03/22 16:01 / sec
Thorium 230 MDC	0.08	pCi/L				A7500-U C	02/03/22 16:01 / sec
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		1.0		E624.1	01/28/22 02:03 / etad
Bromoform	ND	ug/L		2.0		E624.1	01/28/22 02:03 / etad
Chlorodibromomethane	ND	ug/L		1.0		E624.1	01/28/22 02:03 / etad
Chloroform	ND	ug/L		1.0		E624.1	01/28/22 02:03 / etad
Trihalomethanes, Total	ND	ug/L		0.50		E624.1	03/01/22 18:20 / tlf
Surr: 1,2-Dichloroethane-d4	96.0	%REC		73-122		E624.1	01/28/22 02:03 / etad
Surr: p-Bromofluorobenzene	87.0	%REC		79-119		E624.1	01/28/22 02:03 / etad
Surr: Toluene-d8	98.0	%REC		80-120		E624.1	01/28/22 02:03 / etad

Report Definitions:
 RL - Analyte Reporting Limit
 QCL - Quality Control Limit
 U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
 ND - Not detected at the Reporting Limit (RL)



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-SW Alluvium
Lab ID: C22040413-010
Client Sample ID: EPA-25

Report Date: 06/18/22
Collection Date: 04/08/22 12:33
Date Received: 04/12/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	1500	mg/L		5		A2320 B	04/13/22 21:41 / nts
Chloride	159	mg/L	D	2		E300.0	04/15/22 14:56 / dmb
Sulfate	1860	mg/L	D	8		E300.0	04/15/22 14:56 / dmb
Calcium	724	mg/L		1		E200.8	04/22/22 05:20 / jcg
Magnesium	227	mg/L		1		E200.8	04/22/22 05:20 / jcg
Potassium	10	mg/L	D	2		E200.7	05/30/22 01:48 / jcg
Sodium	199	mg/L		1		E200.8	04/22/22 05:20 / jcg
PHYSICAL PROPERTIES							
pH	6.8	s.u.	H	0.1		A4500-H B	04/14/22 11:52 / mnm
pH Measurement Temp	13.5	°C				A4500-H B	04/14/22 11:52 / mnm
Solids, Total Dissolved TDS @ 180 C	4610	mg/L	D	40		A2540 C	04/14/22 12:35 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	61.0	mg/L	D	0.5		E353.2	04/14/22 15:05 / nts
Nitrogen, Ammonia as N	ND	mg/L		0.05		E350.1	04/15/22 11:58 / nts
METALS, TOTAL							
Aluminum	ND	mg/L	D	0.09		E200.8	06/14/22 04:30 / jcg
Arsenic	ND	mg/L		0.001		E200.8	04/25/22 16:05 / jcg
Beryllium	ND	mg/L		0.001		E200.8	04/25/22 16:05 / jcg
Cadmium	ND	mg/L		0.001		E200.8	04/25/22 16:05 / jcg
Cobalt	ND	mg/L		0.005		E200.8	04/25/22 16:05 / jcg
Lead	0.001	mg/L		0.001		E200.8	04/29/22 03:27 / jcg
Manganese	2.27	mg/L	D	0.003		E200.8	04/25/22 16:05 / jcg
Molybdenum	ND	mg/L		0.001		E200.8	04/25/22 16:05 / jcg
Nickel	ND	mg/L		0.005		E200.8	05/07/22 03:31 / jcg
Selenium	ND	mg/L		0.001		E200.8	04/29/22 03:27 / jcg
Uranium	0.146	mg/L	D	0.001		E200.8	04/25/22 16:05 / jcg
Vanadium	ND	mg/L		0.01		E200.8	04/25/22 16:05 / jcg
DATA QUALITY							
Solids, Total Dissolved - Calculated	4200	mg/L		1.00		A1030 E	06/17/22 17:56 / tlf
A/C Balance	-6.08	%				A1030 E	06/17/22 17:56 / tlf
Anions	72.0	meq/L				A1030 E	06/17/22 17:56 / tlf
Cations	63.8	meq/L				A1030 E	06/17/22 17:56 / tlf
TDS Ratio	1.10	unitless				A1030 E	06/17/22 17:56 / tlf
Cation/Anion Balance includes selected metals							
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	-0.05	pCi/L	U			E900.1	04/25/22 16:19 / kdk
Gross Alpha minus Rn & U Precision (±)	0.4	pCi/L				E900.1	04/25/22 16:19 / kdk
Gross Alpha minus Rn & U MDC	0.7	pCi/L				E900.1	04/25/22 16:19 / kdk
Lead 210	-0.9	pCi/L	U			E909.0	04/21/22 16:21 / hat

Report Definitions:
 RL - Analyte Reporting Limit
 QCL - Quality Control Limit
 D - Reporting Limit (RL) increased due to sample matrix
 U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
 ND - Not detected at the Reporting Limit (RL)
 H - Analysis performed past the method holding time



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-SW Alluvium
Lab ID: C22040413-010
Client Sample ID: EPA-25

Report Date: 06/18/22
Collection Date: 04/08/22 12:33
Date Received: 04/12/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Lead 210 precision (±)	0.7	pCi/L			E909.0		04/21/22 16:21 / hat
Lead 210 MDC	1.2	pCi/L			E909.0		04/21/22 16:21 / hat
Radium 226	0.1	pCi/L			E903.0		04/29/22 16:54 / trs
Radium 226 precision (±)	0.08	pCi/L			E903.0		04/29/22 16:54 / trs
Radium 226 MDC	0.1	pCi/L			E903.0		04/29/22 16:54 / trs
Radium 228	1.6	pCi/L	U		RA-05		05/05/22 14:13 / trs
Radium 228 precision (±)	1.1	pCi/L			RA-05		05/05/22 14:13 / trs
Radium 228 MDC	1.9	pCi/L			RA-05		05/05/22 14:13 / trs
Radium 226 + Radium 228	1.8	pCi/L	U		A7500-RA		05/09/22 12:33 / dmf
Radium 226 + Radium 228 precision (±)	1.1	pCi/L			A7500-RA		05/09/22 12:33 / dmf
Radium 226 + Radium 228 MDC	1.9	pCi/L			A7500-RA		05/09/22 12:33 / dmf
Thorium 230	0.07	pCi/L			A7500-U C		04/25/22 14:02 / sec
Thorium 230 precision (±)	0.05	pCi/L			A7500-U C		04/25/22 14:02 / sec
Thorium 230 MDC	0.07	pCi/L			A7500-U C		04/25/22 14:02 / sec
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		1.0	E624.1		04/21/22 13:30 / etad
Bromoform	ND	ug/L		2.0	E624.1		04/21/22 13:30 / etad
Chlorodibromomethane	ND	ug/L		1.0	E624.1		04/21/22 13:30 / etad
Chloroform	ND	ug/L		1.0	E624.1		04/21/22 13:30 / etad
Trihalomethanes, Total	ND	ug/L		0.50	E624.1		04/27/22 18:25 / tlf
Surr: 1,2-Dichloroethane-d4	97.0	%REC		73-122	E624.1		04/21/22 13:30 / etad
Surr: p-Bromofluorobenzene	95.0	%REC		79-119	E624.1		04/21/22 13:30 / etad
Surr: Toluene-d8	99.0	%REC		80-120	E624.1		04/21/22 13:30 / etad

**Report
Definitions:**

RL - Analyte Reporting Limit
QCL - Quality Control Limit
U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

United Nuclear Corp					
Guideline 8: Sweetwater					
Well ID:		EPA-25	EPA-25	EPA-25	EPA-25
Collection Date:		4/8/2022	1/18/2022	10/12/2021	7/20/2021
Receive Date:		4/12/2022	1/25/2022	10/14/2021	7/22/2021
Report Date:		6/18/2022	3/7/2022	12/3/2021	8/27/2021
Analyte	Units	C22040413-010	C22010739-008	C21100526-006	C21070886-005
Bicarbonate as HCO ₃	mg/L	1500	1420	1340	1380
Calcium	mg/L	724	629	684	749
Chloride	mg/L	159	166	162	161
Magnesium	mg/L	227	267	238	264
Potassium	mg/L	8	8	8	9
Sodium	mg/L	199	238	221	231
Sulfate	mg/L	1860	1920	1920	1960
pH	s.u.	6.8	6.8	6.8	6.8
pH Measurement Temp	°C	13.5	16.0	12.8	16.7
Solids, Total Dissolved TDS @ 180 C	mg/L	4610	4560	4460	4470
Solids, Total Dissolved - Calculated	mg/L	3930	3940	3890	4340
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	61.0	54.5	58.0	64.0
Aluminum	mg/L	ND(0.09)	ND(0.03)	ND(0.09)	0.63
Arsenic	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	0.001
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cobalt	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Lead	mg/L	0.001	ND(0.001)	ND(0.001)	0.001
Manganese	mg/L	2.27	1.24	0.640	1.20
Molybdenum	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Nickel	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Selenium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Uranium	mg/L	0.146	0.132	0.121	0.131
Vanadium	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
A/C Balance	%	-3.08	-2.97	-2.19	-2.25
Anions	meq/L	67.7	67.9	66.4	72.5
Cations	meq/L	63.6	64.0	63.6	69.3
TDS Ratio	unitless	1.17	1.16	1.15	1.03
Gross Alpha minus Rn & U	pCi/L	-0.05	0.1	1.4	0.04
Gross Alpha minus Rn & U MDC	pCi/L	0.7	0.5	0.7	0.7
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.4	0.3	0.6	0.4
Lead 210	pCi/L	-0.9	-0.3	0.7	0.7
Lead 210 MDC	pCi/L	1.2	0.9	0.9	0.8
Lead 210 precision (±)	pCi/L	0.7	0.5	0.6	0.5
Radium 226	pCi/L	0.1	0.04	0.06	0.2
Radium 226 MDC	pCi/L	0.1	0.1	0.2	0.1
Radium 226 precision (±)	pCi/L	0.08	0.1	0.1	0.09
Radium 228	pCi/L	1.6	0.5	0.07	-0.8
Radium 228 MDC	pCi/L	1.9	0.8	1.1	2.7
Radium 228 precision (±)	pCi/L	1.1	0.5	0.7	1.6
Thorium 230	pCi/L	0.07	0.01	-0.0002	0.02
Thorium 230 MDC	pCi/L	0.07	0.08	0.2	0.09
Thorium 230 precision (±)	pCi/L	0.05	0.04	0.08	0.05
Bromodichloromethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.50)
Bromoform	ug/L	ND(2.0)	ND(2.0)	ND(2.0)	ND(0.50)
Chlorodibromomethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.50)
Chloroform	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.50)
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-SW ALLUVIUM
Lab ID: C22010739-001
Client Sample ID: EPA-28

Report Date: 03/07/22
Collection Date: 01/18/22 10:36
Date Received: 01/25/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	448	mg/L		5		A2320 B	01/25/22 12:42 / kjp
Chloride	98	mg/L	D	2		E300.0	01/28/22 07:16 / dmb
Sulfate	3160	mg/L	D	10		E300.0	01/28/22 07:16 / dmb
Calcium	500	mg/L	D	3		E200.8	01/31/22 22:45 / jcg
Magnesium	458	mg/L		1		E200.8	01/31/22 22:45 / jcg
Potassium	10	mg/L		1		E200.8	01/31/22 22:45 / jcg
Sodium	234	mg/L	D	2		E200.8	02/02/22 01:02 / jcg
PHYSICAL PROPERTIES							
pH	7.0	s.u.	H	0.1		A4500-H B	01/25/22 11:41 / mnm
pH Measurement Temp	15.7	°C				A4500-H B	01/25/22 11:41 / mnm
Solids, Total Dissolved TDS @ 180 C	5030	mg/L	D	40		A2540 C	01/25/22 10:02 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	0.53	mg/L		0.05		E353.2	01/25/22 14:23 / nts
Nitrogen, Ammonia as N	ND	mg/L		0.05		E350.1	01/27/22 15:08 / dmb
METALS, TOTAL							
Aluminum	ND	mg/L		0.03		E200.8	02/08/22 16:34 / jcg
Arsenic	ND	mg/L		0.001		E200.8	01/27/22 18:00 / jcg
Beryllium	ND	mg/L		0.001		E200.8	01/27/22 18:00 / jcg
Cadmium	ND	mg/L		0.001		E200.8	01/27/22 18:00 / jcg
Cobalt	ND	mg/L		0.005		E200.8	01/27/22 18:00 / jcg
Lead	ND	mg/L		0.001		E200.8	01/27/22 18:00 / jcg
Manganese	0.162	mg/L		0.001		E200.8	01/27/22 18:00 / jcg
Molybdenum	ND	mg/L		0.001		E200.8	02/08/22 16:34 / jcg
Nickel	ND	mg/L		0.005		E200.8	02/08/22 16:34 / jcg
Selenium	ND	mg/L		0.001		E200.8	01/27/22 18:00 / jcg
Uranium	0.0142	mg/L	D	0.0005		E200.8	01/27/22 18:00 / jcg
Vanadium	ND	mg/L		0.01		E200.8	01/27/22 18:00 / jcg
DATA QUALITY							
Solids, Total Dissolved - Calculated	4700	mg/L		1.00		A1030 E	02/02/22 16:58 / jlw
A/C Balance	-1.90	%				A1030 E	02/02/22 16:58 / jlw
Anions	75.9	meq/L				A1030 E	02/02/22 16:58 / jlw
Cations	73.1	meq/L				A1030 E	02/02/22 16:58 / jlw
TDS Ratio	1.07	unitless				A1030 E	02/02/22 16:58 / jlw
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	0.3	pCi/L	U			E900.1	01/31/22 08:28 / trs
Gross Alpha minus Rn & U Precision (±)	0.3	pCi/L				E900.1	01/31/22 08:28 / trs
Gross Alpha minus Rn & U MDC	0.5	pCi/L				E900.1	01/31/22 08:28 / trs
Lead 210	-0.5	pCi/L	U			E909.0	02/01/22 20:06 / sec
Lead 210 precision (±)	0.5	pCi/L				E909.0	02/01/22 20:06 / sec

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
H - Analysis performed past the method holding time



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-SW ALLUVIUM
Lab ID: C22010739-001
Client Sample ID: EPA-28

Report Date: 03/07/22
Collection Date: 01/18/22 10:36
Date Received: 01/25/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Lead 210 MDC	0.9	pCi/L				E909.0	02/01/22 20:06 / sec
Radium 226	0.2	pCi/L				E903.0	02/07/22 12:03 / kdk
Radium 226 precision (±)	0.1	pCi/L				E903.0	02/07/22 12:03 / kdk
Radium 226 MDC	0.2	pCi/L				E903.0	02/07/22 12:03 / kdk
Radium 228	1.4	pCi/L	U			RA-05	02/01/22 16:25 / trs
Radium 228 precision (±)	1.1	pCi/L				RA-05	02/01/22 16:25 / trs
Radium 228 MDC	1.7	pCi/L				RA-05	02/01/22 16:25 / trs
Radium 226 + Radium 228	1.6	pCi/L	U			A7500-RA	02/08/22 14:30 / dmf
Radium 226 + Radium 228 precision (±)	1.1	pCi/L				A7500-RA	02/08/22 14:30 / dmf
Radium 226 + Radium 228 MDC	1.7	pCi/L				A7500-RA	02/08/22 14:30 / dmf
Thorium 230	-0.03	pCi/L	U			A7500-U C	02/03/22 16:01 / sec
Thorium 230 precision (±)	0.06	pCi/L				A7500-U C	02/03/22 16:01 / sec
Thorium 230 MDC	0.1	pCi/L				A7500-U C	02/03/22 16:01 / sec
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		1.0		E624.1	01/27/22 23:33 / etad
Bromoform	ND	ug/L		2.0		E624.1	01/27/22 23:33 / etad
Chlorodibromomethane	ND	ug/L		1.0		E624.1	01/27/22 23:33 / etad
Chloroform	ND	ug/L		1.0		E624.1	01/27/22 23:33 / etad
Trihalomethanes, Total	ND	ug/L		0.50		E624.1	03/01/22 18:20 / tlf
Surr: 1,2-Dichloroethane-d4	96.0	%REC		73-122		E624.1	01/27/22 23:33 / etad
Surr: p-Bromofluorobenzene	85.0	%REC		79-119		E624.1	01/27/22 23:33 / etad
Surr: Toluene-d8	98.0	%REC		80-120		E624.1	01/27/22 23:33 / etad

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-SW Alluvium
Lab ID: C22040390-001
Client Sample ID: EPA-28

Report Date: 06/18/22
Collection Date: 04/08/22 09:27
Date Received: 04/12/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	454	mg/L		5		A2320 B	04/13/22 18:51 / nts
Chloride	91	mg/L	D	2		E300.0	04/15/22 07:54 / dmb
Sulfate	2950	mg/L	D	8		E300.0	04/15/22 07:54 / dmb
Calcium	490	mg/L		1		E200.7	05/31/22 09:52 / jcg
Magnesium	451	mg/L		1		E200.7	05/31/22 09:52 / jcg
Potassium	12	mg/L	D	2		E200.7	05/31/22 09:52 / jcg
Sodium	236	mg/L	D	2		E200.7	05/30/22 00:42 / jcg
PHYSICAL PROPERTIES							
pH	7.0	s.u.	H	0.1		A4500-H B	04/14/22 11:05 / mnm
pH Measurement Temp	10.7	°C				A4500-H B	04/14/22 11:05 / mnm
Solids, Total Dissolved TDS @ 180 C	5010	mg/L	D	40		A2540 C	04/14/22 12:30 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	0.12	mg/L		0.05		E353.2	04/14/22 14:38 / nts
Nitrogen, Ammonia as N	ND	mg/L		0.05		E350.1	04/15/22 11:34 / nts
METALS, TOTAL							
Aluminum	0.21	mg/L	D	0.09		E200.8	06/14/22 01:48 / jcg
Arsenic	ND	mg/L		0.001		E200.8	04/25/22 13:56 / jcg
Beryllium	ND	mg/L		0.001		E200.8	04/25/22 13:56 / jcg
Cadmium	ND	mg/L		0.001		E200.8	04/25/22 13:56 / jcg
Cobalt	ND	mg/L		0.005		E200.8	04/27/22 05:21 / jcg
Lead	ND	mg/L		0.001		E200.8	04/25/22 13:56 / jcg
Manganese	0.740	mg/L	D	0.006		E200.8	04/27/22 05:21 / jcg
Molybdenum	ND	mg/L		0.001		E200.8	04/29/22 01:55 / jcg
Nickel	0.009	mg/L		0.005		E200.8	04/29/22 01:55 / jcg
Selenium	ND	mg/L		0.001		E200.8	04/27/22 05:21 / jcg
Uranium	0.013	mg/L	D	0.001		E200.8	04/27/22 05:21 / jcg
Vanadium	ND	mg/L		0.01		E200.8	04/29/22 01:55 / jcg
DATA QUALITY							
Solids, Total Dissolved - Calculated	4470	mg/L		1.00		A1030 E	06/03/22 22:14 / tlf
A/C Balance	0.45	%				A1030 E	06/03/22 22:14 / tlf
Anions	71.5	meq/L				A1030 E	06/03/22 22:14 / tlf
Cations	72.1	meq/L				A1030 E	06/03/22 22:14 / tlf
TDS Ratio	1.12	unitless				A1030 E	06/03/22 22:14 / tlf
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	0.6	pCi/L				E900.1	04/26/22 16:41 / kdk
Gross Alpha minus Rn & U Precision (±)	0.4	pCi/L				E900.1	04/26/22 16:41 / kdk
Gross Alpha minus Rn & U MDC	0.6	pCi/L				E900.1	04/26/22 16:41 / kdk
Lead 210	1.8	pCi/L				E909.0	04/21/22 16:21 / hat
Lead 210 precision (±)	0.9	pCi/L				E909.0	04/21/22 16:21 / hat

Report RL - Analyte Reporting Limit
Definitions: QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
H - Analysis performed past the method holding time



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-SW Alluvium
Lab ID: C22040390-001
Client Sample ID: EPA-28

Report Date: 06/18/22
Collection Date: 04/08/22 09:27
Date Received: 04/12/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Lead 210 MDC	1.2	pCi/L				E909.0	04/21/22 16:21 / hat
Radium 226	0.4	pCi/L				E903.0	04/28/22 21:19 / trs
Radium 226 precision (±)	0.1	pCi/L				E903.0	04/28/22 21:19 / trs
Radium 226 MDC	0.2	pCi/L				E903.0	04/28/22 21:19 / trs
Radium 228	0.5	pCi/L	U			RA-05	05/05/22 12:30 / trs
Radium 228 precision (±)	1	pCi/L				RA-05	05/05/22 12:30 / trs
Radium 228 MDC	1.6	pCi/L				RA-05	05/05/22 12:30 / trs
Radium 226 + Radium 228	0.9	pCi/L	U			A7500-RA	05/09/22 12:33 / dmf
Radium 226 + Radium 228 precision (±)	1	pCi/L				A7500-RA	05/09/22 12:33 / dmf
Radium 226 + Radium 228 MDC	1.6	pCi/L				A7500-RA	05/09/22 12:33 / dmf
Thorium 230	0.3	pCi/L				A7500-U C	04/21/22 13:52 / sec
Thorium 230 precision (±)	0.1	pCi/L				A7500-U C	04/21/22 13:52 / sec
Thorium 230 MDC	0.1	pCi/L				A7500-U C	04/21/22 13:52 / sec
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624.1	04/17/22 15:34 / eli-b
Bromoform	ND	ug/L		0.50		E624.1	04/17/22 15:34 / eli-b
Chlorodibromomethane	ND	ug/L		0.50		E624.1	04/17/22 15:34 / eli-b
Chloroform	ND	ug/L		0.50		E624.1	04/17/22 15:34 / eli-b
Trihalomethanes, Total	ND	ug/L		0.50		E624.1	04/27/22 18:25 / tlf
Surr: 1,2-Dichloroethane-d4	105	%REC		71-139		E624.1	04/17/22 15:34 / eli-b
Surr: p-Bromofluorobenzene	106	%REC		80-127		E624.1	04/17/22 15:34 / eli-b
Surr: Toluene-d8	105	%REC		80-123		E624.1	04/17/22 15:34 / eli-b

**Report
Definitions:**

RL - Analyte Reporting Limit
QCL - Quality Control Limit
U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

6/18/2022					
Guideline 8: Sweetwater					
Well ID:		EPA-28	EPA-28	EPA-28	EPA-28
Collection Date:		4/8/2022	1/18/2022	10/11/2021	7/19/2021
Receive Date:		4/12/2022	1/25/2022	10/14/2021	7/21/2021
Report Date:		6/18/2022	3/7/2022	12/3/2021	8/27/2021
Analyte	Units	C22040390-001	C22010739-001	C21100526-010	C21070842-008
Bicarbonate as HCO ₃	mg/L	454	448	457	483
Calcium	mg/L	498	500	509	505
Chloride	mg/L	91	98	100	101
Magnesium	mg/L	448	458	447	457
Potassium	mg/L	11	10	11	12
Sodium	mg/L	226	234	235	235
Sulfate	mg/L	2950	3160	3240	3210
pH	s.u.	7.0	7.0	7.0	6.9
pH Measurement Temp	°C	10.7	15.7	13.5	14.8
Solids, Total Dissolved TDS @ 180 C	mg/L	5010	5030	5060	5070
Solids, Total Dissolved - Calculated	mg/L	4470	4700	4780	4760
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	0.12	0.53	0.53	0.38
Aluminum	mg/L	0.18	ND(0.03)	ND(0.09)	0.45
Arsenic	mg/L	ND(0.001)	ND(0.001)	ND(0.02)	ND(0.001)
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cobalt	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	0.001
Manganese	mg/L	0.740	0.162	0.346	0.453
Molybdenum	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	0.001
Nickel	mg/L	0.009	ND(0.005)	0.007	0.007
Selenium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Uranium	mg/L	0.015	0.0142	0.014	0.0155
Vanadium	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
A/C Balance	%	0.26	-1.90	-3.35	-2.86
Anions	meq/L	71.5	75.9	77.7	77.6
Cations	meq/L	71.9	73.1	72.7	73.3
TDS Ratio	unitless	1.12	1.07	1.06	1.07
Gross Alpha minus Rn & U	pCi/L	0.6	0.3	0.7	0.3
Gross Alpha minus Rn & U MDC	pCi/L	0.6	0.5	0.7	0.8
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.4	0.3	0.6	0.5
Lead 210	pCi/L	1.8	-0.5	-0.07	-0.4
Lead 210 MDC	pCi/L	1.2	0.9	1.1	0.9
Lead 210 precision (±)	pCi/L	0.9	0.5	0.7	0.5
Radium 226	pCi/L	0.4	0.2	0.1	0.4
Radium 226 MDC	pCi/L	0.2	0.2	0.2	0.2
Radium 226 precision (±)	pCi/L	0.1	0.1	0.2	0.2
Radium 228	pCi/L	0.5	1.4	0.8	1.8
Radium 228 MDC	pCi/L	1.6	1.7	1.1	1.5
Radium 228 precision (±)	pCi/L	1	1.1	0.7	1.0
Thorium 230	pCi/L	0.3	-0.03	0.1	0.1
Thorium 230 MDC	pCi/L	0.1	0.1	0.1	0.1
Thorium 230 precision (±)	pCi/L	0.1	0.06	0.08	0.08
Bromodichloromethane	ug/L	ND(0.50)	ND(1.0)	ND(0.50)	ND(0.50)
Bromoform	ug/L	ND(0.50)	ND(2.0)	ND(0.50)	ND(0.50)
Chlorodibromomethane	ug/L	ND(0.50)	ND(1.0)	ND(0.50)	ND(0.50)
Chloroform	ug/L	ND(0.50)	ND(1.0)	ND(0.50)	ND(0.50)
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-SW ALLUVIUM
Lab ID: C22010739-003
Client Sample ID: SBL-1

Report Date: 03/07/22
Collection Date: 01/18/22 11:46
Date Received: 01/25/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	465	mg/L		5		A2320 B	01/25/22 12:53 / kjp
Chloride	84	mg/L	D	5		E300.0	01/28/22 07:55 / dmb
Sulfate	6260	mg/L	D	20		E300.0	01/28/22 07:55 / dmb
Calcium	489	mg/L	D	3		E200.8	01/31/22 22:54 / jcg
Magnesium	1220	mg/L		1		E200.8	01/31/22 22:54 / jcg
Potassium	14	mg/L		1		E200.8	01/31/22 22:54 / jcg
Sodium	289	mg/L	D	2		E200.8	01/31/22 22:54 / jcg
PHYSICAL PROPERTIES							
pH	6.8	s.u.	H	0.1		A4500-H B	01/25/22 11:50 / mnm
pH Measurement Temp	15.5	°C				A4500-H B	01/25/22 11:50 / mnm
Solids, Total Dissolved TDS @ 180 C	9840	mg/L	D	100		A2540 C	01/25/22 10:05 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	34.2	mg/L	D	0.5		E353.2	01/25/22 14:25 / nts
Nitrogen, Ammonia as N	ND	mg/L		0.05		E350.1	01/27/22 15:13 / dmb
METALS, TOTAL							
Aluminum	0.20	mg/L	D	0.04		E200.8	01/27/22 18:10 / jcg
Arsenic	ND	mg/L		0.001		E200.8	01/27/22 18:10 / jcg
Beryllium	ND	mg/L		0.001		E200.8	01/27/22 18:10 / jcg
Cadmium	ND	mg/L		0.001		E200.8	01/27/22 18:10 / jcg
Cobalt	0.026	mg/L		0.005		E200.8	01/27/22 18:10 / jcg
Lead	ND	mg/L		0.001		E200.8	01/27/22 18:10 / jcg
Manganese	4.16	mg/L		0.001		E200.8	01/27/22 18:10 / jcg
Molybdenum	0.001	mg/L		0.001		E200.8	02/08/22 16:44 / jcg
Nickel	0.078	mg/L		0.005		E200.8	02/08/22 16:44 / jcg
Selenium	0.012	mg/L		0.001		E200.8	01/27/22 18:10 / jcg
Uranium	0.0087	mg/L	D	0.0005		E200.8	01/27/22 18:10 / jcg
Vanadium	ND	mg/L		0.01		E200.8	01/27/22 18:10 / jcg
DATA QUALITY							
Solids, Total Dissolved - Calculated	8760	mg/L		1.00		A1030 E	02/02/22 16:59 / jlw
A/C Balance	-1.75	%				A1030 E	02/02/22 16:59 / jlw
Anions	143	meq/L				A1030 E	02/02/22 16:59 / jlw
Cations	138	meq/L				A1030 E	02/02/22 16:59 / jlw
TDS Ratio	1.12	unitless				A1030 E	02/02/22 16:59 / jlw
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	0.7	pCi/L				E900.1	01/31/22 08:28 / trs
Gross Alpha minus Rn & U Precision (±)	0.4	pCi/L				E900.1	01/31/22 08:28 / trs
Gross Alpha minus Rn & U MDC	0.5	pCi/L				E900.1	01/31/22 08:28 / trs
Lead 210	-0.2	pCi/L	U			E909.0	02/02/22 02:34 / sec
Lead 210 precision (±)	0.5	pCi/L				E909.0	02/02/22 02:34 / sec

Report RL - Analyte Reporting Limit
Definitions: QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
H - Analysis performed past the method holding time



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-SW ALLUVIUM
Lab ID: C22010739-003
Client Sample ID: SBL-1

Report Date: 03/07/22
Collection Date: 01/18/22 11:46
Date Received: 01/25/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Lead 210 MDC	0.9	pCi/L				E909.0	02/02/22 02:34 / sec
Radium 226	0.4	pCi/L				E903.0	03/03/22 16:32 / kdk
Radium 226 precision (±)	0.1	pCi/L				E903.0	03/03/22 16:32 / kdk
Radium 226 MDC	0.1	pCi/L				E903.0	03/03/22 16:32 / kdk
Radium 228	3.7	pCi/L				RA-05	02/01/22 16:25 / trs
Radium 228 precision (±)	1.2	pCi/L				RA-05	02/01/22 16:25 / trs
Radium 228 MDC	1.7	pCi/L				RA-05	02/01/22 16:25 / trs
Radium 226 + Radium 228	4.1	pCi/L				A7500-RA	03/04/22 11:00 / dmf
Radium 226 + Radium 228 precision (±)	1.2	pCi/L				A7500-RA	03/04/22 11:00 / dmf
Radium 226 + Radium 228 MDC	1.7	pCi/L				A7500-RA	03/04/22 11:00 / dmf
Thorium 230	0.1	pCi/L	U			A7500-U C	02/03/22 16:01 / sec
Thorium 230 precision (±)	0.09	pCi/L				A7500-U C	02/03/22 16:01 / sec
Thorium 230 MDC	0.1	pCi/L				A7500-U C	02/03/22 16:01 / sec
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		1.0		E624.1	01/28/22 00:16 / etad
Bromoform	ND	ug/L		2.0		E624.1	01/28/22 00:16 / etad
Chlorodibromomethane	ND	ug/L		1.0		E624.1	01/28/22 00:16 / etad
Chloroform	ND	ug/L		1.0		E624.1	01/28/22 00:16 / etad
Trihalomethanes, Total	ND	ug/L		0.50		E624.1	03/01/22 18:20 / tif
Surr: 1,2-Dichloroethane-d4	93.0	%REC		73-122		E624.1	01/28/22 00:16 / etad
Surr: p-Bromofluorobenzene	88.0	%REC		79-119		E624.1	01/28/22 00:16 / etad
Surr: Toluene-d8	97.0	%REC		80-120		E624.1	01/28/22 00:16 / etad

**Report
Definitions:**

RL - Analyte Reporting Limit
QCL - Quality Control Limit
U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 3, Swalluvium
Lab ID: C22040256-003
Client Sample ID: SBL-1

Report Date: 05/04/22
Collection Date: 04/05/22 13:48
Date Received: 04/07/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	455	mg/L		5		A2320 B	04/11/22 13:31 / nts
Chloride	84	mg/L	D	5		E300.0	04/11/22 17:35 / dmb
Sulfate	6190	mg/L	D	20		E300.0	04/11/22 17:35 / dmb
Calcium	494	mg/L	D	3		E200.7	04/21/22 20:18 / erc
Magnesium	1300	mg/L		1		E200.7	04/21/22 20:18 / erc
Potassium	13	mg/L		1		E200.8	04/19/22 04:21 / jcg
Sodium	299	mg/L	D	5		E200.7	04/21/22 20:18 / erc
PHYSICAL PROPERTIES							
pH	6.8	s.u.	H	0.1		A4500-H B	04/08/22 12:15 / mnm
pH Measurement Temp	16.8	°C				A4500-H B	04/08/22 12:15 / mnm
Solids, Total Dissolved TDS @ 180 C	9870	mg/L	D	100		A2540 C	04/08/22 14:45 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	31.0	mg/L	D	0.2		E353.2	04/08/22 12:21 / nts
Nitrogen, Ammonia as N	ND	mg/L		0.05		E350.1	04/13/22 10:49 / nts
METALS, TOTAL							
Aluminum	0.12	mg/L	D	0.04		E200.8	04/20/22 05:20 / jcg
Arsenic	ND	mg/L		0.001		E200.8	04/20/22 05:20 / jcg
Beryllium	ND	mg/L		0.001		E200.8	04/20/22 05:20 / jcg
Cadmium	ND	mg/L		0.001		E200.8	04/20/22 05:20 / jcg
Cobalt	0.024	mg/L		0.005		E200.8	04/20/22 05:20 / jcg
Lead	ND	mg/L		0.001		E200.8	04/20/22 05:20 / jcg
Manganese	3.71	mg/L		0.001		E200.8	04/20/22 05:20 / jcg
Molybdenum	0.001	mg/L		0.001		E200.8	04/23/22 00:53 / jcg
Nickel	0.079	mg/L		0.005		E200.8	04/20/22 05:20 / jcg
Selenium	0.011	mg/L		0.001		E200.8	04/20/22 05:20 / jcg
Uranium	0.0088	mg/L	D	0.0005		E200.8	04/23/22 00:53 / jcg
Vanadium	ND	mg/L		0.01		E200.8	04/20/22 05:20 / jcg
DATA QUALITY							
Solids, Total Dissolved - Calculated	8650	mg/L		1.00		A1030 E	04/22/22 18:48 / tlf
A/C Balance	-1.65	%				A1030 E	04/22/22 18:48 / tlf
Anions	141	meq/L				A1030 E	04/22/22 18:48 / tlf
Cations	136	meq/L				A1030 E	04/22/22 18:48 / tlf
TDS Ratio	1.14	unitless				A1030 E	04/22/22 18:48 / tlf
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	0.6	pCi/L	U			E900.1	04/15/22 13:24 / kdk
Gross Alpha minus Rn & U Precision (±)	0.7	pCi/L				E900.1	04/15/22 13:24 / kdk
Gross Alpha minus Rn & U MDC	1	pCi/L				E900.1	04/15/22 13:24 / kdk
Lead 210	0.6	pCi/L	U			E909.0	04/16/22 09:25 / hat
Lead 210 precision (±)	0.5	pCi/L				E909.0	04/16/22 09:25 / hat

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 3, Swalluvium
Lab ID: C22040256-003
Client Sample ID: SBL-1

Report Date: 05/04/22
Collection Date: 04/05/22 13:48
Date Received: 04/07/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Lead 210 MDC	0.9	pCi/L			E909.0		04/16/22 09:25 / hat
Radium 226	0.6	pCi/L			E903.0		04/19/22 14:16 / kdk
Radium 226 precision (±)	0.2	pCi/L			E903.0		04/19/22 14:16 / kdk
Radium 226 MDC	0.2	pCi/L			E903.0		04/19/22 14:16 / kdk
Radium 228	2.4	pCi/L			RA-05		04/14/22 15:29 / trs
Radium 228 precision (±)	0.9	pCi/L			RA-05		04/14/22 15:29 / trs
Radium 228 MDC	1.0	pCi/L			RA-05		04/14/22 15:29 / trs
Radium 226 + Radium 228	3.0	pCi/L			A7500-RA		04/20/22 14:59 / dmf
Radium 226 + Radium 228 precision (±)	0.9	pCi/L			A7500-RA		04/20/22 14:59 / dmf
Radium 226 + Radium 228 MDC	1.1	pCi/L			A7500-RA		04/20/22 14:59 / dmf
Thorium 230	0.2	pCi/L			A7500-U C		04/14/22 15:55 / sec
Thorium 230 precision (±)	0.1	pCi/L			A7500-U C		04/14/22 15:55 / sec
Thorium 230 MDC	0.2	pCi/L			A7500-U C		04/14/22 15:55 / sec
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50	E624.1		04/11/22 15:47 / eli-b
Bromoform	ND	ug/L		0.50	E624.1		04/11/22 15:47 / eli-b
Chlorodibromomethane	ND	ug/L		0.50	E624.1		04/11/22 15:47 / eli-b
Chloroform	ND	ug/L		0.50	E624.1		04/11/22 15:47 / eli-b
Trihalomethanes, Total	ND	ug/L		0.50	E624.1		04/27/22 18:25 / tif
Surr: 1,2-Dichloroethane-d4	108	%REC		71-139	E624.1		04/11/22 15:47 / eli-b
Surr: p-Bromofluorobenzene	105	%REC		80-127	E624.1		04/11/22 15:47 / eli-b
Surr: Toluene-d8	109	%REC		80-123	E624.1		04/11/22 15:47 / eli-b

Report RL - Analyte Reporting Limit
Definitions: QCL - Quality Control Limit

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)



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Guideline 8: Sweetwater					
Well ID:		SBL-1	SBL-1	SBL-1	SBL-1
Collection Date:		4/5/2021	1/18/2022	10/11/2021	7/21/2021
Receive Date:		4/7/2021	1/25/2022	10/14/2021	7/22/2021
Report Date:		5/4/2022	3/7/2022	12/3/2021	8/27/2021
Analyte	Units	C22040256-003	C22010739-003	C21100526-012	C21070886-003
Bicarbonate as HCO ₃	mg/L	455	465	449	454
Calcium	mg/L	494	489	477	474
Chloride	mg/L	84	84	86	84
Magnesium	mg/L	1300	1220	1230	1230
Potassium	mg/L	13	14	14	14
Sodium	mg/L	299	289	284	281
Sulfate	mg/L	6190	6260	6360	6340
pH	S.U.	6.8	6.8	6.7	6.7
pH Measurement Temp	°C	16.8	15.5	13.8	16.3
Solids, Total Dissolved TDS @ 180 C	mg/L	9870	9840	9600	9560
Solids, Total Dissolved - Calculated	mg/L	8650	8760	8820	8800
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	31.0	34.2	29.5	34
Aluminum	mg/L	0.12	0.20	0.13	0.18
Arsenic	mg/L	ND(0.001)	ND(0.001)	ND(0.02)	ND(0.001)
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cobalt	mg/L	0.024	0.026	0.025	0.021
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	3.71	4.16	3.76	2.93
Molybdenum	mg/L	0.001	0.001	ND(0.001)	0.001
Nickel	mg/L	0.079	0.078	0.094	0.079
Selenium	mg/L	0.011	0.012	0.012	0.014
Uranium	mg/L	0.0088	0.0087	0.008	0.0079
Vanadium	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
A/C Balance	%	-1.65	-1.75	-2.19	-2.37
Anions	meq/L	141	143	144	144
Cations	meq/L	136	138	138	138
TDS Ratio	unitless	1.14	1.12	1.09	1.09
Gross Alpha minus Rn & U	pCi/L	0.6	0.7	0.8	0.8
Gross Alpha minus Rn & U MDC	pCi/L	1	0.5	0.7	0.8
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.7	0.4	0.6	0.6
Lead 210	pCi/L	0.6	-0.2	0.2	0.2
Lead 210 MDC	pCi/L	0.9	0.9	1.1	0.8
Lead 210 precision (±)	pCi/L	0.5	0.5	0.7	0.5
Radium 226	pCi/L	0.6	0.4	0.5	0.7
Radium 226 MDC	pCi/L	0.2	0.1	0.2	0.1
Radium 226 precision (±)	pCi/L	0.2	0.1	0.2	0.1
Radium 228	pCi/L	2.4	3.7	2.3	2.8
Radium 228 MDC	pCi/L	1.0	1.7	1.9	1.2
Radium 228 precision (±)	pCi/L	0.9	1.2	1.3	1
Thorium 230	pCi/L	0.2	0.1	0.03	-0.07
Thorium 230 MDC	pCi/L	0.2	0.1	0.3	0.2
Thorium 230 precision (±)	pCi/L	0.1	0.09	0.1	0.1
Bromodichloromethane	ug/L	ND(0.50)	ND(1.0)	ND(0.50)	ND(0.50)
Bromoform	ug/L	ND(0.50)	ND(2.0)	ND(0.50)	ND(0.50)
Chlorodibromomethane	ug/L	ND(0.50)	ND(1.0)	ND(0.50)	ND(0.50)
Chloroform	ug/L	ND(0.50)	ND(1.0)	ND(0.50)	ND(0.50)
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

QUARTERLY SAMPLING
SEMI-ANNUAL GROUND WATER MONITORING REPORT

JANUARY TO JUNE OF 2022

ZONE – 1

515-A

*604

*614

142

EPA-2

*EPA-4

*EPA-5

*EPA-7

LEVELS ONLY

143

EPA-8

505-A

502-A

501-A

504-A

412

**NOTE: *POINT OF COMPLIANCE WELLS
WATER LEVEL ONLY IS IN FIELD DATA SHEET**

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC- Zone 1 & Zone 3
Lab ID: C22010406-001
Client Sample ID: 515-A

Report Date: 02/16/22
Collection Date: 01/10/22 11:15
Date Received: 01/13/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	783	mg/L		5		A2320 B	01/17/22 14:12 / kjp
Chloride	392	mg/L	D	5		E300.0	01/14/22 20:49 / dmb
Sulfate	6320	mg/L	D	20		E300.0	01/14/22 20:49 / dmb
Calcium	389	mg/L		1		E200.7	01/17/22 14:50 / srm
Magnesium	1200	mg/L		1		E200.8	01/17/22 18:38 / jcg
Potassium	16	mg/L		1		E200.7	01/14/22 19:10 / srm
Sodium	548	mg/L	D	2		E200.8	01/17/22 18:38 / jcg
PHYSICAL PROPERTIES							
pH	6.2	s.u.	H	0.1		A4500-H B	01/14/22 11:07 / kjp
pH Measurement Temp	10.8	°C				A4500-H B	01/14/22 11:07 / kjp
Solids, Total Dissolved TDS @ 180 C	10800	mg/L	D	100		A2540 C	01/14/22 12:21 / kjp
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	40	mg/L	D	1		E353.2	01/14/22 16:22 / nts
Nitrogen, Ammonia as N	10.3	mg/L	D	0.5		E350.1	01/14/22 14:20 / nts
METALS, TOTAL							
Aluminum	0.23	mg/L	D	0.09		E200.8	01/21/22 19:13 / jcg
Arsenic	ND	mg/L		0.001		E200.8	01/21/22 19:13 / jcg
Beryllium	ND	mg/L		0.001		E200.8	01/21/22 19:13 / jcg
Cadmium	ND	mg/L		0.001		E200.8	01/21/22 19:13 / jcg
Cobalt	0.022	mg/L		0.005		E200.8	01/21/22 19:13 / jcg
Lead	ND	mg/L		0.001		E200.8	01/21/22 19:13 / jcg
Manganese	5.56	mg/L	D	0.004		E200.8	01/21/22 19:13 / jcg
Molybdenum	ND	mg/L		0.001		E200.8	01/21/22 19:13 / jcg
Nickel	0.092	mg/L		0.005		E200.8	01/21/22 19:13 / jcg
Selenium	0.060	mg/L		0.001		E200.8	01/20/22 02:09 / jcg
Uranium	0.008	mg/L	D	0.001		E200.8	01/25/22 11:59 / jcg
Vanadium	ND	mg/L		0.01		E200.8	01/21/22 19:13 / jcg
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	4.0	pCi/L				E900.1	01/21/22 09:12 / trs
Gross Alpha minus Rn & U Precision (±)	1.2	pCi/L				E900.1	01/21/22 09:12 / trs
Gross Alpha minus Rn & U MDC	1	pCi/L				E900.1	01/21/22 09:12 / trs
Lead 210	1.1	pCi/L				E909.0	01/20/22 22:11 / hat
Lead 210 precision (±)	0.7	pCi/L				E909.0	01/20/22 22:11 / hat
Lead 210 MDC	0.9	pCi/L				E909.0	01/20/22 22:11 / hat
Radium 226	2.3	pCi/L				E903.0	01/26/22 11:30 / kdk
Radium 226 precision (±)	0.5	pCi/L				E903.0	01/26/22 11:30 / kdk
Radium 226 MDC	0.2	pCi/L				E903.0	01/26/22 11:30 / kdk
Radium 228	4.5	pCi/L				RA-05	01/20/22 12:15 / trs
Radium 228 precision (±)	1.2	pCi/L				RA-05	01/20/22 12:15 / trs
Radium 228 MDC	1.2	pCi/L				RA-05	01/20/22 12:15 / trs

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
H - Analysis performed past the method holding time



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC- Zone 1 & Zone 3
Lab ID: C22010406-001
Client Sample ID: 515-A

Report Date: 02/16/22
Collection Date: 01/10/22 11:15
Date Received: 01/13/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Radium 226 + Radium 228	6.7	pCi/L				A7500-RA	01/27/22 15:26 / dmf
Radium 226 + Radium 228 precision (±)	1.3	pCi/L				A7500-RA	01/27/22 15:26 / dmf
Radium 226 + Radium 228 MDC	1.2	pCi/L				A7500-RA	01/27/22 15:26 / dmf
Thorium 230	-0.01	pCi/L	U			A7500-U C	01/19/22 14:02 / sec
Thorium 230 precision (±)	0.1	pCi/L				A7500-U C	01/19/22 14:02 / sec
Thorium 230 MDC	0.3	pCi/L				A7500-U C	01/19/22 14:02 / sec
DATA QUALITY							
Solids, Total Dissolved - Calculated	9440	mg/L		1.00		A1030 E	01/19/22 07:39 / tlf
A/C Balance	-5.12	%				A1030 E	01/19/22 07:39 / tlf
Anions	158	meq/L				A1030 E	01/19/22 07:39 / tlf
Cations	143	meq/L				A1030 E	01/19/22 07:39 / tlf
TDS Ratio	1.14	unitless				A1030 E	01/19/22 07:39 / tlf
Cation/Anion Balance includes selected metals							
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		10		E624.1	01/20/22 19:28 / etad
Bromoform	ND	ug/L		20		E624.1	01/20/22 19:28 / etad
Chlorodibromomethane	ND	ug/L		10		E624.1	01/20/22 19:28 / etad
Chloroform	310	ug/L		10		E624.1	01/20/22 19:28 / etad
Trihalomethanes, Total	310	ug/L		0.50		E624.1	02/03/22 09:28 / jlw
Surr: 1,2-Dichloroethane-d4	100	%REC		73-122		E624.1	01/20/22 19:28 / etad
Surr: p-Bromofluorobenzene	102	%REC		79-119		E624.1	01/20/22 19:28 / etad
Surr: Toluene-d8	98.0	%REC		80-120		E624.1	01/20/22 19:28 / etad

**Report
Definitions:**

RL - Analyte Reporting Limit
QCL - Quality Control Limit
U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 1 and Zone 3
Lab ID: C22040142-002
Client Sample ID: 515-A

Report Date: 06/03/22
Collection Date: 03/31/22 10:42
Date Received: 04/05/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	787	mg/L		5		A2320 B	04/07/22 16:10 / nts
Chloride	390	mg/L	D	5		E300.0	04/09/22 15:52 / dmb
Sulfate	6490	mg/L	D	20		E300.0	04/09/22 15:52 / dmb
Calcium	454	mg/L	D	3		E200.7	04/08/22 19:39 / erc
Magnesium	1420	mg/L		1		E200.7	04/08/22 19:39 / erc
Potassium	17	mg/L	D	2		E200.7	04/08/22 19:39 / erc
Sodium	610	mg/L	D	5		E200.7	04/08/22 19:39 / erc
PHYSICAL PROPERTIES							
pH	6.1	s.u.	H	0.1		A4500-H B	04/06/22 11:51 / mnm
pH Measurement Temp	15.2	°C				A4500-H B	04/06/22 11:51 / mnm
Solids, Total Dissolved TDS @ 180 C	10900	mg/L	D	100		A2540 C	04/06/22 14:58 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	45.8	mg/L	D	0.5		E353.2	04/06/22 12:13 / nts
Nitrogen, Ammonia as N	11.8	mg/L	D	0.5		E350.1	04/07/22 15:33 / nts
METALS, TOTAL							
Aluminum	0.3	mg/L	D	0.2		E200.8	04/16/22 06:10 / jcg
Arsenic	ND	mg/L	D	0.003		E200.8	04/16/22 06:10 / jcg
Beryllium	ND	mg/L	D	0.002		E200.8	04/16/22 06:10 / jcg
Cadmium	0.001	mg/L		0.001		E200.8	04/16/22 06:10 / jcg
Cobalt	0.023	mg/L		0.005		E200.8	04/16/22 06:10 / jcg
Lead	0.001	mg/L		0.001		E200.8	04/16/22 06:10 / jcg
Manganese	5.64	mg/L	D	0.007		E200.8	04/16/22 06:10 / jcg
Molybdenum	ND	mg/L		0.001		E200.8	04/16/22 06:10 / jcg
Nickel	0.101	mg/L		0.005		E200.8	04/16/22 06:10 / jcg
Selenium	0.063	mg/L	D	0.001		E200.8	04/16/22 06:10 / jcg
Uranium	0.008	mg/L	D	0.003		E200.8	04/16/22 06:10 / jcg
Vanadium	ND	mg/L		0.01		E200.8	04/16/22 06:10 / jcg
DATA QUALITY							
Solids, Total Dissolved - Calculated	9970	mg/L		1.00		A1030 E	04/11/22 20:55 / tif
A/C Balance	1.42	%				A1030 E	04/11/22 20:55 / tif
Anions	162	meq/L				A1030 E	04/11/22 20:55 / tif
Cations	167	meq/L				A1030 E	04/11/22 20:55 / tif
TDS Ratio	1.09	unitless				A1030 E	04/11/22 20:55 / tif
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	3.1	pCi/L				E900.1	04/12/22 15:02 / kdk
Gross Alpha minus Rn & U Precision (±)	0.9	pCi/L				E900.1	04/12/22 15:02 / kdk
Gross Alpha minus Rn & U MDC	0.7	pCi/L				E900.1	04/12/22 15:02 / kdk
Lead 210	-0.3	pCi/L	U			E909.0	04/10/22 11:27 / hat
Lead 210 precision (±)	0.6	pCi/L				E909.0	04/10/22 11:27 / hat

Report Definitions:
 RL - Analyte Reporting Limit
 QCL - Quality Control Limit
 D - Reporting Limit (RL) increased due to sample matrix
 U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
 ND - Not detected at the Reporting Limit (RL)
 H - Analysis performed past the method holding time



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 1 and Zone 3
Lab ID: C22040142-002
Client Sample ID: 515-A

Report Date: 06/03/22
Collection Date: 03/31/22 10:42
Date Received: 04/05/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Lead 210 MDC	1	pCi/L				E909.0	04/10/22 11:27 / hat
Radium 226	2.1	pCi/L				E903.0	04/17/22 10:41 / trs
Radium 226 precision (±)	0.5	pCi/L				E903.0	04/17/22 10:41 / trs
Radium 226 MDC	0.2	pCi/L				E903.0	04/17/22 10:41 / trs
Radium 228	3.5	pCi/L				RA-05	04/12/22 14:41 / trs
Radium 228 precision (±)	1.1	pCi/L				RA-05	04/12/22 14:41 / trs
Radium 228 MDC	1.2	pCi/L				RA-05	04/12/22 14:41 / trs
Radium 226 + Radium 228	5.7	pCi/L				A7500-RA	04/18/22 11:57 / dmf
Radium 226 + Radium 228 precision (±)	1.2	pCi/L				A7500-RA	04/18/22 11:57 / dmf
Radium 226 + Radium 228 MDC	1.2	pCi/L				A7500-RA	04/18/22 11:57 / dmf
Thorium 230	-0.09	pCi/L	U			A7500-U C	04/13/22 13:44 / sec
Thorium 230 precision (±)	0.2	pCi/L				A7500-U C	04/13/22 13:44 / sec
Thorium 230 MDC	0.3	pCi/L				A7500-U C	04/13/22 13:44 / sec
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		4.0		E624.1	04/13/22 15:14 / etad
Bromoform	ND	ug/L		8.0		E624.1	04/13/22 15:14 / etad
Chlorodibromomethane	ND	ug/L		4.0		E624.1	04/13/22 15:14 / etad
Chloroform	320	ug/L		4.0		E624.1	04/13/22 15:14 / etad
Trihalomethanes, Total	320	ug/L		0.50		E624.1	04/27/22 18:25 / tlf
Surr: 1,2-Dichloroethane-d4	90.0	%REC		73-122		E624.1	04/13/22 15:14 / etad
Surr: p-Bromofluorobenzene	96.0	%REC		79-119		E624.1	04/13/22 15:14 / etad
Surr: Toluene-d8	99.0	%REC		80-120		E624.1	04/13/22 15:14 / etad

Report Definitions:
 RL - Analyte Reporting Limit
 QCL - Quality Control Limit
 U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
 ND - Not detected at the Reporting Limit (RL)



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Guideline 8: Sweetwater

Well ID:		515-A	515-A	515-A	515-A
Collection Date:		3/31/2022	1/10/2022	10/4/2021	7/6/2021
Receive Date:		4/5/2022	1/13/2022	10/6/2021	7/8/2021
Report Date:		6/3/2022	2/16/2022	1/19/2021	8/13/2021
Analyte	Units	C22040142-002	C22010406-001	C21100250-002	C21070280-001
Bicarbonate as HCO ₃	mg/L	787	783	796	792
Calcium	mg/L	454	389	393	446
Chloride	mg/L	390	392	396	435
Magnesium	mg/L	1420	1200	1250	1340
Potassium	mg/L	17	16	17	17
Sodium	mg/L	610	548	517	599
Sulfate	mg/L	6490	6320	6410	7090
pH	s.u.	6.1	6.2	6.1	6.2
pH Measurement Temp	°C	15.2	10.8	15.7	12.6
Solids, Total Dissolved TDS @ 180 C	mg/L	10900	10800	10600	10800
Solids, Total Dissolved - Calculated	mg/L	9970	9440	9550	10500
Nitrogen, Ammonia as N	mg/L	11.8	10.3	13	14
Nitrogen, Nitrate+Nitrite as N	mg/L	45.8	40	40.2	41.4
Aluminum	mg/L	0.3	0.23	0.38	0.45
Arsenic	mg/L	ND(0.003)	ND(0.001)	ND(0.001)	ND(0.001)
Beryllium	mg/L	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	0.001	ND(0.001)	0.001	0.001
Cobalt	mg/L	0.023	0.022	0.022	0.019
Lead	mg/L	0.001	ND(0.001)	0.001	0.001
Manganese	mg/L	5.64	5.56	6.35	6.26
Molybdenum	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Nickel	mg/L	0.101	0.092	0.091	0.087
Selenium	mg/L	0.063	0.060	0.074	0.071
Uranium	mg/L	0.008	0.008	0.008	0.0075
Vanadium	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
A/C Balance	%	1.42	-5.12	-4.79	-4.58
Anions	meq/L	162	158	161	176
Cations	meq/L	167	143	146	160
TDS Ratio	unitless	1.09	1.14	1.11	1.03
Gross Alpha minus Rn & U	pCi/L	3.1	4.0	4.0	3.9
Gross Alpha minus Rn & U MDC	pCi/L	0.7	1	0.9	1.4
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.9	1.2	1.2	1.4
Lead 210	pCi/L	-0.3	1.1	0.7	0.6
Lead 210 MDC	pCi/L	1	0.9	1.0	1
Lead 210 precision (±)	pCi/L	0.6	0.7	0.6	0.6
Radium 226	pCi/L	2.1	2.3	2.2	2.5
Radium 226 MDC	pCi/L	0.2	0.2	0.2	0.2
Radium 226 precision (±)	pCi/L	0.5	0.5	0.5	0.6
Radium 228	pCi/L	3.5	4.5	2.2	3.3
Radium 228 MDC	pCi/L	1.2	1.2	1.6	0.9
Radium 228 precision (±)	pCi/L	1.1	1.2	1.1	0.8
Thorium 230	pCi/L	-0.09	-0.01	0.01	0
Thorium 230 MDC	pCi/L	0.3	0.3	0.2	0.2
Thorium 230 precision (±)	pCi/L	0.2	0.1	0.1	0.08
Bromodichloromethane	ug/L	ND(4.0)	ND(10)	ND(4.0)	ND(4.0)
Bromoform	ug/L	ND(8.0)	ND(20)	ND(8.0)	ND(8.0)
Chlorodibromomethane	ug/L	ND(4.0)	ND(10)	ND(4.0)	ND(4.0)
Chloroform	ug/L	320	310	380	380
Trihalomethanes, Total	ug/L	320	310	380	380

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

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC- Zone 1 & Zone 3
Lab ID: C22010406-002
Client Sample ID: 604

Report Date: 02/16/22
Collection Date: 01/10/22 12:26
Date Received: 01/13/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	15	mg/L		5		A2320 B	01/17/22 14:25 / kjp
Chloride	131	mg/L	D	2		E300.0	01/14/22 21:47 / dmb
Sulfate	4510	mg/L	D	8		E300.0	01/14/22 21:47 / dmb
Calcium	463	mg/L	D	6		E200.8	01/19/22 17:37 / jcg
Magnesium	774	mg/L		1		E200.7	01/14/22 19:17 / srm
Potassium	11	mg/L		1		E200.7	01/14/22 19:17 / srm
Sodium	282	mg/L	D	2		E200.8	01/17/22 18:43 / jcg
PHYSICAL PROPERTIES							
pH	5.5	s.u.	H	0.1		A4500-H B	01/14/22 11:10 / kjp
pH Measurement Temp	11.1	°C				A4500-H B	01/14/22 11:10 / kjp
Solids, Total Dissolved TDS @ 180 C	7070	mg/L	D	100		A2540 C	01/14/22 12:21 / kjp
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	66	mg/L	D	1		E353.2	01/14/22 16:26 / nts
Nitrogen, Ammonia as N	ND	mg/L		0.05		E350.1	01/14/22 14:21 / nts
METALS, TOTAL							
Aluminum	1.10	mg/L	D	0.09		E200.8	01/21/22 19:17 / jcg
Arsenic	0.002	mg/L		0.001		E200.8	01/21/22 19:17 / jcg
Beryllium	0.002	mg/L		0.001		E200.8	01/21/22 19:17 / jcg
Cadmium	0.002	mg/L		0.001		E200.8	01/20/22 02:41 / jcg
Cobalt	0.119	mg/L		0.005		E200.8	01/20/22 02:41 / jcg
Lead	ND	mg/L		0.001		E200.8	01/20/22 02:41 / jcg
Manganese	5.26	mg/L	D	0.004		E200.8	01/20/22 02:41 / jcg
Molybdenum	ND	mg/L		0.001		E200.8	01/21/22 19:17 / jcg
Nickel	0.198	mg/L		0.005		E200.8	01/20/22 02:41 / jcg
Selenium	0.059	mg/L		0.001		E200.8	01/20/22 02:41 / jcg
Uranium	0.0004	mg/L		0.0003		E200.8	01/25/22 12:04 / jcg
Vanadium	ND	mg/L		0.01		E200.8	01/20/22 02:41 / jcg
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	2.9	pCi/L				E900.1	01/21/22 09:12 / trs
Gross Alpha minus Rn & U Precision (±)	1.1	pCi/L				E900.1	01/21/22 09:12 / trs
Gross Alpha minus Rn & U MDC	1	pCi/L				E900.1	01/21/22 09:12 / trs
Lead 210	0.9	pCi/L	U			E909.0	01/21/22 01:09 / hat
Lead 210 precision (±)	0.6	pCi/L				E909.0	01/21/22 01:09 / hat
Lead 210 MDC	0.9	pCi/L				E909.0	01/21/22 01:09 / hat
Radium 226	1.7	pCi/L				E903.0	01/26/22 11:30 / kdk
Radium 226 precision (±)	0.4	pCi/L				E903.0	01/26/22 11:30 / kdk
Radium 226 MDC	0.2	pCi/L				E903.0	01/26/22 11:30 / kdk
Radium 228	3.2	pCi/L				RA-05	01/20/22 12:15 / trs
Radium 228 precision (±)	1.0	pCi/L				RA-05	01/20/22 12:15 / trs
Radium 228 MDC	1.2	pCi/L				RA-05	01/20/22 12:15 / trs

Report Definitions:
 RL - Analyte Reporting Limit
 QCL - Quality Control Limit
 D - Reporting Limit (RL) increased due to sample matrix
 U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
 ND - Not detected at the Reporting Limit (RL)
 H - Analysis performed past the method holding time



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC- Zone 1 & Zone 3
Lab ID: C22010406-002
Client Sample ID: 604

Report Date: 02/16/22
Collection Date: 01/10/22 12:26
Date Received: 01/13/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Radium 226 + Radium 228	5.0	pCi/L				A7500-RA	01/27/22 15:26 / dmf
Radium 226 + Radium 228 precision (±)	1.1	pCi/L				A7500-RA	01/27/22 15:26 / dmf
Radium 226 + Radium 228 MDC	1.2	pCi/L				A7500-RA	01/27/22 15:26 / dmf
Thorium 230	-0.002	pCi/L	U			A7500-U C	01/19/22 14:02 / sec
Thorium 230 precision (±)	0.07	pCi/L				A7500-U C	01/19/22 14:02 / sec
Thorium 230 MDC	0.1	pCi/L				A7500-U C	01/19/22 14:02 / sec
DATA QUALITY							
Solids, Total Dissolved - Calculated	6500	mg/L		1.00		A1030 E	01/21/22 08:47 / jlw
A/C Balance	-1.64	%				A1030 E	01/21/22 08:47 / jlw
Anions	103	meq/L				A1030 E	01/21/22 08:47 / jlw
Cations	99.3	meq/L				A1030 E	01/21/22 08:47 / jlw
TDS Ratio	1.09	unitless				A1030 E	01/21/22 08:47 / jlw
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		1.0		E624.1	01/19/22 17:29 / etad
Bromoform	ND	ug/L		2.0		E624.1	01/19/22 17:29 / etad
Chlorodibromomethane	ND	ug/L		1.0		E624.1	01/19/22 17:29 / etad
Chloroform	10	ug/L		1.0		E624.1	01/19/22 17:29 / etad
Trihalomethanes, Total	10	ug/L		0.50		E624.1	02/03/22 09:28 / jlw
Surr: 1,2-Dichloroethane-d4	101	%REC		73-122		E624.1	01/19/22 17:29 / etad
Surr: p-Bromofluorobenzene	100	%REC		79-119		E624.1	01/19/22 17:29 / etad
Surr: Toluene-d8	98.0	%REC		80-120		E624.1	01/19/22 17:29 / etad

Report Definitions:
 RL - Analyte Reporting Limit
 QCL - Quality Control Limit
 U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
 ND - Not detected at the Reporting Limit (RL)



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 1 and Zone 3
Lab ID: C22040142-003
Client Sample ID: 604

Report Date: 06/03/22
Collection Date: 03/31/22 11:46
Date Received: 04/05/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	14	mg/L		5		A2320 B	04/07/22 16:15 / nts
Chloride	138	mg/L	D	2		E300.0	04/09/22 16:11 / dmb
Sulfate	4690	mg/L	D	8		E300.0	04/09/22 16:11 / dmb
Calcium	440	mg/L	D	3		E200.7	04/08/22 19:44 / erc
Magnesium	832	mg/L		1		E200.7	04/08/22 19:44 / erc
Potassium	11	mg/L	D	2		E200.7	04/08/22 19:44 / erc
Sodium	301	mg/L	D	5		E200.7	04/08/22 19:44 / erc
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.1		A4500-H B	04/06/22 11:54 / mnm
pH Measurement Temp	15.2	°C				A4500-H B	04/06/22 11:54 / mnm
Solids, Total Dissolved TDS @ 180 C	7100	mg/L	D	100		A2540 C	04/06/22 14:58 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	66.2	mg/L	D	0.5		E353.2	04/06/22 12:14 / nts
Nitrogen, Ammonia as N	ND	mg/L		0.05		E350.1	04/07/22 15:35 / nts
METALS, TOTAL							
Aluminum	1.8	mg/L	D	0.2		E200.8	04/16/22 06:16 / jcg
Arsenic	0.002	mg/L		0.001		E200.8	04/22/22 21:39 / jcg
Beryllium	0.002	mg/L		0.001		E200.8	04/20/22 00:30 / jcg
Cadmium	0.002	mg/L		0.001		E200.8	04/16/22 06:16 / jcg
Cobalt	0.148	mg/L		0.005		E200.8	04/16/22 06:16 / jcg
Lead	ND	mg/L		0.001		E200.8	04/20/22 00:30 / jcg
Manganese	6.16	mg/L	D	0.007		E200.8	04/16/22 06:16 / jcg
Molybdenum	ND	mg/L		0.001		E200.8	04/22/22 21:39 / jcg
Nickel	0.223	mg/L		0.005		E200.8	04/16/22 06:16 / jcg
Selenium	0.070	mg/L		0.001		E200.8	04/20/22 00:30 / jcg
Uranium	0.0005	mg/L		0.0003		E200.8	04/26/22 18:35 / jcg
Vanadium	ND	mg/L		0.01		E200.8	04/16/22 06:16 / jcg
DATA QUALITY							
Solids, Total Dissolved - Calculated	6720	mg/L		1.00		A1030 E	04/11/22 20:56 / tif
A/C Balance	-1.32	%				A1030 E	04/11/22 20:56 / tif
Anions	107	meq/L				A1030 E	04/11/22 20:56 / tif
Cations	104	meq/L				A1030 E	04/11/22 20:56 / tif
TDS Ratio	1.06	unitless				A1030 E	04/11/22 20:56 / tif
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	2.8	pCi/L				E900.1	04/12/22 15:02 / kdk
Gross Alpha minus Rn & U Precision (±)	0.8	pCi/L				E900.1	04/12/22 15:02 / kdk
Gross Alpha minus Rn & U MDC	0.7	pCi/L				E900.1	04/12/22 15:02 / kdk
Lead 210	-0.2	pCi/L	U			E909.0	04/10/22 14:45 / hat
Lead 210 precision (±)	0.6	pCi/L				E909.0	04/10/22 14:45 / hat

Report Definitions:
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MCL - Maximum Contaminant Level
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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 1 and Zone 3
Lab ID: C22040142-003
Client Sample ID: 604

Report Date: 06/03/22
Collection Date: 03/31/22 11:46
Date Received: 04/05/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Lead 210 MDC	1	pCi/L				E909.0	04/10/22 14:45 / hat
Radium 226	1.5	pCi/L				E903.0	04/17/22 10:41 / trs
Radium 226 precision (±)	0.4	pCi/L				E903.0	04/17/22 10:41 / trs
Radium 226 MDC	0.2	pCi/L				E903.0	04/17/22 10:41 / trs
Radium 228	3.9	pCi/L				RA-05	04/12/22 14:41 / trs
Radium 228 precision (±)	1.1	pCi/L				RA-05	04/12/22 14:41 / trs
Radium 228 MDC	1.2	pCi/L				RA-05	04/12/22 14:41 / trs
Radium 226 + Radium 228	5.4	pCi/L				A7500-RA	04/18/22 11:57 / dmf
Radium 226 + Radium 228 precision (±)	1.2	pCi/L				A7500-RA	04/18/22 11:57 / dmf
Radium 226 + Radium 228 MDC	1.2	pCi/L				A7500-RA	04/18/22 11:57 / dmf
Thorium 230	0.02	pCi/L	U			A7500-U C	04/13/22 13:44 / sec
Thorium 230 precision (±)	0.06	pCi/L				A7500-U C	04/13/22 13:44 / sec
Thorium 230 MDC	0.1	pCi/L				A7500-U C	04/13/22 13:44 / sec
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		1.0		E624.1	04/13/22 15:36 / etad
Bromoform	ND	ug/L		2.0		E624.1	04/13/22 15:36 / etad
Chlorodibromomethane	ND	ug/L		1.0		E624.1	04/13/22 15:36 / etad
Chloroform	9.4	ug/L		1.0		E624.1	04/13/22 15:36 / etad
Trihalomethanes, Total	9.4	ug/L		0.50		E624.1	04/27/22 18:25 / tif
Surr: 1,2-Dichloroethane-d4	90.0	%REC		73-122		E624.1	04/13/22 15:36 / etad
Surr: p-Bromofluorobenzene	99.0	%REC		79-119		E624.1	04/13/22 15:36 / etad
Surr: Toluene-d8	100	%REC		80-120		E624.1	04/13/22 15:36 / etad

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
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Guideline 8: Sweetwater					
Well ID:		604	604	604	604
Collection Date:		3/31/2022	1/10/2022	10/4/2021	7/5/2021
Receive Date:		4/5/2022	1/13/2022	10/6/2021	7/7/2021
Report Date:		6/3/2022	2/16/2022	11/19/2021	8/13/2021
Analyte	Units	C22040142-003	C22010406-002	C21100250-003	C21070218-006
Bicarbonate as HCO ₃	mg/L	14	15	16	13
Calcium	mg/L	440	463	407	426
Chloride	mg/L	138	131	133	131
Magnesium	mg/L	832	774	723	804
Potassium	mg/L	11	11	12	10
Sodium	mg/L	301	282	273	292
Sulfate	mg/L	4690	4510	4610	4650
pH	s.u.	5.4	5.5	5.4	5.5
pH Measurement Temp	°C	15.2	11.1	15.9	16.2
Solids, Total Dissolved TDS @ 180 C	mg/L	7100	7070	6980	7200
Solids, Total Dissolved - Calculated	mg/L	6720	6500	6160	6580
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	66.2	66	58.2	60
Aluminum	mg/L	1.8	1.10	0.81	0.85
Arsenic	mg/L	0.002	0.002	0.001	0.001
Beryllium	mg/L	0.002	0.002	0.002	0.001
Cadmium	mg/L	0.002	0.002	0.002	0.002
Cobalt	mg/L	0.148	0.119	0.122	0.108
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	6.16	5.26	5.37	4.79
Molybdenum	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Nickel	mg/L	0.223	0.198	0.203	0.183
Selenium	mg/L	0.070	0.059	0.065	0.060
Uranium	mg/L	0.0005	0.0004	ND(0.001)	ND(0.0003)
Vanadium	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
A/C Balance	%	-1.32	-1.64	-4.11	-2.23
Anions	meq/L	107	103	99.9	105
Cations	meq/L	104	99.3	92.0	100
TDS Ratio	unitless	1.06	1.09	1.13	1.09
Gross Alpha minus Rn & U	pCi/L	2.8	2.9	4.0	2.9
Gross Alpha minus Rn & U MDC	pCi/L	0.7	1	0.9	1.4
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.8	1.1	1.1	1.1
Lead 210	pCi/L	-0.2	0.9	0.6	0.5
Lead 210 MDC	pCi/L	1	0.9	1.0	1
Lead 210 precision (±)	pCi/L	0.6	0.6	0.6	0.6
Radium 226	pCi/L	1.5	1.7	1.7	1.7
Radium 226 MDC	pCi/L	0.2	0.2	0.2	0.1
Radium 226 precision (±)	pCi/L	0.4	0.4	0.4	0.4
Radium 228	pCi/L	3.9	3.2	4.1	3.5
Radium 228 MDC	pCi/L	1.2	1.2	1.6	1
Radium 228 precision (±)	pCi/L	1.1	1.0	1.4	0.9
Thorium 230	pCi/L	0.02	-0.002	0.04	0.4
Thorium 230 MDC	pCi/L	0.1	0.1	0.2	0.6
Thorium 230 precision (±)	pCi/L	0.06	0.07	0.09	0.4
Bromodichloromethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromoform	ug/L	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)
Chlorodibromomethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloroform	ug/L	9.4	10	13	7.2
Trihalomethanes, Total	ug/L	9.4	10	13	7.2

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC
Lab ID: C22010408-001
Client Sample ID: 614

Report Date: 02/16/22
Collection Date: 01/10/22 09:08
Date Received: 01/13/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	1350	mg/L		5		A2320 B	01/17/22 14:53 / kjp
Chloride	342	mg/L	D	5		E300.0	01/14/22 23:23 / dmb
Sulfate	3310	mg/L	D	20		E300.0	01/14/22 23:23 / dmb
Calcium	541	mg/L	D	3		E200.8	01/17/22 19:20 / jcg
Magnesium	712	mg/L		1		E200.7	01/14/22 20:22 / srm
Potassium	15	mg/L		1		E200.7	01/14/22 20:22 / srm
Sodium	433	mg/L	D	2		E200.8	01/17/22 19:20 / jcg
PHYSICAL PROPERTIES							
pH	6.6	s.u.	H	0.1		A4500-H B	01/14/22 11:27 / kjp
pH Measurement Temp	13.3	°C				A4500-H B	01/14/22 11:27 / kjp
Solids, Total Dissolved TDS @ 180 C	6620	mg/L	D	100		A2540 C	01/14/22 12:23 / kjp
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	178	mg/L	D	1		E353.2	01/14/22 16:32 / nts
Nitrogen, Ammonia as N	35	mg/L	D	2		E350.1	01/14/22 14:30 / nts
METALS, TOTAL							
Aluminum	ND	mg/L	D	0.09		E200.8	01/20/22 03:13 / jcg
Arsenic	ND	mg/L		0.001		E200.8	01/20/22 03:13 / jcg
Beryllium	ND	mg/L		0.001		E200.8	01/20/22 03:13 / jcg
Cadmium	ND	mg/L		0.001		E200.8	01/20/22 03:13 / jcg
Cobalt	ND	mg/L		0.005		E200.8	01/20/22 03:13 / jcg
Lead	0.001	mg/L		0.001		E200.8	01/20/22 03:13 / jcg
Manganese	0.688	mg/L	D	0.004		E200.8	01/20/22 03:13 / jcg
Molybdenum	0.004	mg/L	D	0.003		E200.8	01/20/22 03:13 / jcg
Nickel	0.015	mg/L		0.005		E200.8	01/20/22 03:13 / jcg
Selenium	0.068	mg/L		0.001		E200.8	01/20/22 03:13 / jcg
Uranium	0.040	mg/L	D	0.001		E200.8	01/20/22 03:13 / jcg
Vanadium	ND	mg/L		0.01		E200.8	01/20/22 03:13 / jcg
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	2.0	pCi/L				E900.1	01/21/22 09:12 / trs
Gross Alpha minus Rn & U Precision (±)	0.9	pCi/L				E900.1	01/21/22 09:12 / trs
Gross Alpha minus Rn & U MDC	1	pCi/L				E900.1	01/21/22 09:12 / trs
Lead 210	0.6	pCi/L	U			E909.0	01/21/22 15:47 / hat
Lead 210 precision (±)	0.6	pCi/L				E909.0	01/21/22 15:47 / hat
Lead 210 MDC	0.9	pCi/L				E909.0	01/21/22 15:47 / hat
Radium 226	0.8	pCi/L				E903.0	01/26/22 13:39 / kdk
Radium 226 precision (±)	0.2	pCi/L				E903.0	01/26/22 13:39 / kdk
Radium 226 MDC	0.2	pCi/L				E903.0	01/26/22 13:39 / kdk
Radium 228	2.6	pCi/L				RA-05	01/20/22 13:49 / trs
Radium 228 precision (±)	1.0	pCi/L				RA-05	01/20/22 13:49 / trs
Radium 228 MDC	1.4	pCi/L				RA-05	01/20/22 13:49 / trs

Report Definitions:
 RL - Analyte Reporting Limit
 QCL - Quality Control Limit
 D - Reporting Limit (RL) increased due to sample matrix
 U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
 ND - Not detected at the Reporting Limit (RL)
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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC
Lab ID: C22010408-001
Client Sample ID: 614

Report Date: 02/16/22
Collection Date: 01/10/22 09:08
Date Received: 01/13/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Radium 226 + Radium 228	3.3	pCi/L				A7500-RA	01/27/22 15:26 / dmf
Radium 226 + Radium 228 precision (±)	1.0	pCi/L				A7500-RA	01/27/22 15:26 / dmf
Radium 226 + Radium 228 MDC	1.4	pCi/L				A7500-RA	01/27/22 15:26 / dmf
Thorium 230	-0.04	pCi/L	U			A7500-U C	01/19/22 14:02 / sec
Thorium 230 precision (±)	0.1	pCi/L				A7500-U C	01/19/22 14:02 / sec
Thorium 230 MDC	0.2	pCi/L				A7500-U C	01/19/22 14:02 / sec
DATA QUALITY							
Solids, Total Dissolved - Calculated	6800	mg/L		1.00		A1030 E	01/19/22 07:32 / tlf
A/C Balance	-2.71	%				A1030 E	01/19/22 07:32 / tlf
Anions	113	meq/L				A1030 E	01/19/22 07:32 / tlf
Cations	107	meq/L				A1030 E	01/19/22 07:32 / tlf
TDS Ratio	0.97	unitless				A1030 E	01/19/22 07:32 / tlf
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		1.0		E624.1	01/19/22 13:11 / etad
Bromoform	ND	ug/L		2.0		E624.1	01/19/22 13:11 / etad
Chlorodibromomethane	ND	ug/L		1.0		E624.1	01/19/22 13:11 / etad
Chloroform	34	ug/L		1.0		E624.1	01/19/22 13:11 / etad
Trihalomethanes, Total	34	ug/L		0.50		E624.1	02/03/22 09:28 / jlw
Surr: 1,2-Dichloroethane-d4	99.0	%REC		73-122		E624.1	01/19/22 13:11 / etad
Surr: p-Bromofluorobenzene	102	%REC		79-119		E624.1	01/19/22 13:11 / etad
Surr: Toluene-d8	99.0	%REC		80-120		E624.1	01/19/22 13:11 / etad

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 1 and Zone 3
Lab ID: C22040142-001
Client Sample ID: 614

Report Date: 06/03/22
Collection Date: 03/31/22 09:08
Date Received: 04/05/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	1470	mg/L		5		A2320 B	04/07/22 15:51 / nts
Chloride	353	mg/L	D	5		E300.0	04/09/22 15:32 / dmb
Sulfate	3240	mg/L	D	20		E300.0	04/09/22 15:32 / dmb
Calcium	578	mg/L	D	3		E200.7	04/08/22 19:34 / erc
Magnesium	677	mg/L		1		E200.7	04/08/22 19:34 / erc
Potassium	14	mg/L	D	2		E200.7	04/08/22 19:34 / erc
Sodium	472	mg/L	D	5		E200.7	04/08/22 19:34 / erc
PHYSICAL PROPERTIES							
pH	6.5	s.u.	H	0.1		A4500-H B	04/06/22 11:49 / mnm
pH Measurement Temp	15.1	°C				A4500-H B	04/06/22 11:49 / mnm
Solids, Total Dissolved TDS @ 180 C	6620	mg/L	D	100		A2540 C	04/06/22 14:57 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	134	mg/L	D	2		E353.2	04/06/22 12:24 / nts
Nitrogen, Ammonia as N	54	mg/L	D	2		E350.1	04/07/22 16:22 / nts
METALS, TOTAL							
Aluminum	ND	mg/L	D	0.2		E200.8	04/16/22 06:04 / jcg
Arsenic	ND	mg/L	D	0.003		E200.8	04/16/22 06:04 / jcg
Beryllium	ND	mg/L	D	0.002		E200.8	04/16/22 06:04 / jcg
Cadmium	ND	mg/L		0.001		E200.8	04/16/22 06:04 / jcg
Cobalt	ND	mg/L		0.005		E200.8	04/16/22 06:04 / jcg
Lead	0.002	mg/L		0.001		E200.8	04/16/22 06:04 / jcg
Manganese	0.752	mg/L	D	0.007		E200.8	04/16/22 06:04 / jcg
Molybdenum	ND	mg/L		0.001		E200.8	04/16/22 06:04 / jcg
Nickel	0.016	mg/L		0.005		E200.8	04/16/22 06:04 / jcg
Selenium	0.074	mg/L	D	0.001		E200.8	04/16/22 06:04 / jcg
Uranium	0.044	mg/L	D	0.003		E200.8	04/16/22 06:04 / jcg
Vanadium	ND	mg/L		0.01		E200.8	04/16/22 06:04 / jcg
DATA QUALITY							
Solids, Total Dissolved - Calculated	6650	mg/L		1.00		A1030 E	04/11/22 20:55 / tif
A/C Balance	-0.86	%				A1030 E	04/11/22 20:55 / tif
Anions	111	meq/L				A1030 E	04/11/22 20:55 / tif
Cations	109	meq/L				A1030 E	04/11/22 20:55 / tif
TDS Ratio	1.00	unitless				A1030 E	04/11/22 20:55 / tif
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	1.3	pCi/L				E900.1	04/12/22 13:19 / kdk
Gross Alpha minus Rn & U Precision (±)	0.6	pCi/L				E900.1	04/12/22 13:19 / kdk
Gross Alpha minus Rn & U MDC	0.7	pCi/L				E900.1	04/12/22 13:19 / kdk
Lead 210	-0.9	pCi/L	U			E909.0	04/10/22 07:53 / hat
Lead 210 precision (±)	0.5	pCi/L				E909.0	04/10/22 07:53 / hat

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
H - Analysis performed past the method holding time



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 1 and Zone 3
Lab ID: C22040142-001
Client Sample ID: 614

Report Date: 06/03/22
Collection Date: 03/31/22 09:08
Date Received: 04/05/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Lead 210 MDC	0.9	pCi/L				E909.0	04/10/22 07:53 / hat
Radium 226	0.5	pCi/L				E903.0	04/17/22 10:41 / trs
Radium 226 precision (±)	0.2	pCi/L				E903.0	04/17/22 10:41 / trs
Radium 226 MDC	0.2	pCi/L				E903.0	04/17/22 10:41 / trs
Radium 228	4.1	pCi/L				RA-05	04/12/22 14:41 / trs
Radium 228 precision (±)	1.2	pCi/L				RA-05	04/12/22 14:41 / trs
Radium 228 MDC	1.2	pCi/L				RA-05	04/12/22 14:41 / trs
Radium 226 + Radium 228	4.6	pCi/L				A7500-RA	04/18/22 11:57 / dmf
Radium 226 + Radium 228 precision (±)	1.2	pCi/L				A7500-RA	04/18/22 11:57 / dmf
Radium 226 + Radium 228 MDC	1.2	pCi/L				A7500-RA	04/18/22 11:57 / dmf
Thorium 230	0.06	pCi/L	U			A7500-U C	04/13/22 13:44 / sec
Thorium 230 precision (±)	0.09	pCi/L				A7500-U C	04/13/22 13:44 / sec
Thorium 230 MDC	0.2	pCi/L				A7500-U C	04/13/22 13:44 / sec
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		1.0		E624.1	04/13/22 14:53 / etad
Bromoform	ND	ug/L		2.0		E624.1	04/13/22 14:53 / etad
Chlorodibromomethane	ND	ug/L		1.0		E624.1	04/13/22 14:53 / etad
Chloroform	99	ug/L		1.0		E624.1	04/13/22 14:53 / etad
Trihalomethanes, Total	99	ug/L		0.50		E624.1	04/27/22 18:25 / tif
Surr: 1,2-Dichloroethane-d4	98.0	%REC		73-122		E624.1	04/13/22 14:53 / etad
Surr: p-Bromofluorobenzene	74.0	%REC	S	79-119		E624.1	04/13/22 14:53 / etad
Surr: Toluene-d8	100	%REC		80-120		E624.1	04/13/22 14:53 / etad

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 (RL)
U - Not detected at Minimum Detectable Concentration (MDC)



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Guideline 8: Sweetwater					
Well ID:		614	614	614	614
Collection Date:		3/31/2022	1/10/2022	10/4/2021	7/6/2021
Receive Date:		4/5/2022	1/13/2022	10/6/2021	7/8/2021
Report Date:		6/3/2022	2/16/2022	11/19/2021	8/13/2021
Analyte	Units	C22040142-001	C22010408-001	C21100250-001	C21070280-002
Bicarbonate as HCO ₃	mg/L	1470	1350	1200	1270
Calcium	mg/L	578	541	488	557
Chloride	mg/L	353	342	348	378
Magnesium	mg/L	677	712	558	642
Potassium	mg/L	14	15	13	13
Sodium	mg/L	472	433	400	462
Sulfate	mg/L	3240	3310	3330	3700
pH	s.u.	6.5	6.6	6.6	6.6
pH Measurement Temp	°C	15.1	13.3	15.8	13.6
Solids, Total Dissolved TDS @ 180 °C	mg/L	6620	6620	6480	6760
Solids, Total Dissolved - Calculated	mg/L	6650	6800	5730	6850
Nitrogen, Ammonia as N	mg/L	54	35	72	75
Nitrogen, Nitrate+Nitrite as N	mg/L	134	178	108	106
Aluminum	mg/L	ND(0.2)	ND(0.09)	ND(0.2)	0.03
Arsenic	mg/L	ND(0.003)	ND(0.001)	ND(0.003)	ND(0.001)
Beryllium	mg/L	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cobalt	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Lead	mg/L	0.002	0.001	0.002	0.002
Manganese	mg/L	0.752	0.688	0.863	0.832
Molybdenum	mg/L	ND(0.001)	0.004	0.003	ND(0.001)
Nickel	mg/L	0.016	0.015	0.015	0.014
Selenium	mg/L	0.074	0.068	0.078	0.074
Uranium	mg/L	0.044	0.040	0.0371	0.0449
Vanadium	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
A/C Balance	%	-0.86	-2.71	-2.91	-4.38
Anions	meq/L	111	113	98.8	116
Cations	meq/L	109	107	93.2	106
TDS Ratio	unitless	1.00	0.97	1.13	0.99
Gross Alpha minus Rn & U	pCi/L	1.3	2.0	1.5	1.1
Gross Alpha minus Rn & U MDC	pCi/L	0.7	1	0.9	1.3
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.6	0.9	0.8	0.9
Lead 210	pCi/L	-0.9	0.6	0.5	0.5
Lead 210 MDC	pCi/L	0.9	0.9	1.0	0.9
Lead 210 precision (±)	pCi/L	0.5	0.6	0.6	0.6
Radium 226	pCi/L	0.5	0.8	0.8	0.9
Radium 226 MDC	pCi/L	0.2	0.2	0.2	0.2
Radium 226 precision (±)	pCi/L	0.2	0.2	0.2	0.2
Radium 228	pCi/L	4.1	2.6	1.8	2.9
Radium 228 MDC	pCi/L	1.2	1.4	1.5	0.8
Radium 228 precision (±)	pCi/L	1.2	1.0	1.1	0.8
Thorium 230	pCi/L	0.06	-0.04	0.05	-0.08
Thorium 230 MDC	pCi/L	0.2	0.2	0.1	0.2
Thorium 230 precision (±)	pCi/L	0.09	0.1	0.06	0.08
Bromodichloromethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromoform	ug/L	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)
Chlorodibromomethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloroform	ug/L	99	34	110	64
Trihalomethanes, Total	ug/L	99	34	110	64

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 3 & SW Alluvium, UNC - Zone1, UNC - Zone3
Lab ID: C22010583-014
Client Sample ID: 142

Report Date: 02/16/22
Collection Date: 01/13/22 12:52
Date Received: 01/19/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	306	mg/L		5		A2320 B	01/20/22 18:06 / kjp
Chloride	17	mg/L		1		E300.0	01/21/22 23:35 / dmb
Sulfate	711	mg/L	D	2		E300.0	01/21/22 23:35 / dmb
Calcium	73	mg/L		1		E200.8	01/21/22 16:54 / jcg
Magnesium	37	mg/L		1		E200.8	01/21/22 16:54 / jcg
Potassium	4	mg/L		1		E200.8	01/21/22 16:54 / jcg
Sodium	336	mg/L		1		E200.8	01/21/22 16:54 / jcg
PHYSICAL PROPERTIES							
pH	7.5	s.u.	H	0.1		A4500-H B	01/20/22 11:27 / mnm
pH Measurement Temp	16.5	°C				A4500-H B	01/20/22 11:27 / mnm
Solids, Total Dissolved TDS @ 180 C	1350	mg/L		20		A2540 C	01/20/22 15:49 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	0.45	mg/L		0.05		E353.2	01/20/22 13:08 / nts
Nitrogen, Ammonia as N	0.05	mg/L		0.05		E350.1	01/27/22 14:30 / dmb
METALS, TOTAL							
Aluminum	0.16	mg/L	D	0.04		E200.8	02/01/22 04:56 / jcg
Arsenic	0.002	mg/L		0.001		E200.8	02/01/22 04:56 / jcg
Beryllium	ND	mg/L		0.001		E200.8	02/01/22 04:56 / jcg
Cadmium	ND	mg/L		0.001		E200.8	02/01/22 04:56 / jcg
Cobalt	ND	mg/L		0.005		E200.8	02/01/22 04:56 / jcg
Lead	ND	mg/L		0.001		E200.8	02/02/22 06:16 / jcg
Manganese	0.033	mg/L		0.001		E200.8	02/02/22 06:16 / jcg
Molybdenum	0.005	mg/L		0.001		E200.8	02/01/22 04:56 / jcg
Nickel	ND	mg/L		0.005		E200.8	02/01/22 04:56 / jcg
Selenium	ND	mg/L		0.001		E200.8	02/01/22 04:56 / jcg
Uranium	0.0003	mg/L		0.0003		E200.8	02/08/22 16:05 / jcg
Vanadium	ND	mg/L		0.01		E200.8	02/01/22 04:56 / jcg
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	1.3	pCi/L				E900.1	01/24/22 14:38 / amm
Gross Alpha minus Rn & U Precision (±)	0.7	pCi/L				E900.1	01/24/22 14:38 / amm
Gross Alpha minus Rn & U MDC	0.9	pCi/L				E900.1	01/24/22 14:38 / amm
Lead 210	0.1	pCi/L	U			E909.0	01/28/22 11:22 / hat
Lead 210 precision (±)	0.5	pCi/L				E909.0	01/28/22 11:22 / hat
Lead 210 MDC	0.9	pCi/L				E909.0	01/28/22 11:22 / hat
Radium 226	0.6	pCi/L				E903.0	02/01/22 13:02 / kdk
Radium 226 precision (±)	0.2	pCi/L				E903.0	02/01/22 13:02 / kdk
Radium 226 MDC	0.2	pCi/L				E903.0	02/01/22 13:02 / kdk
Radium 228	0.1	pCi/L	U			RA-05	01/27/22 16:15 / trs
Radium 228 precision (±)	1.0	pCi/L				RA-05	01/27/22 16:15 / trs
Radium 228 MDC	1.7	pCi/L				RA-05	01/27/22 16:15 / trs

Report Definitions:
 RL - Analyte Reporting Limit
 QCL - Quality Control Limit
 D - Reporting Limit (RL) increased due to sample matrix
 U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
 ND - Not detected at the Reporting Limit (RL)
 H - Analysis performed past the method holding time



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 3 & SW Alluvium, UNC - Zone1, UNC - Zone3
Lab ID: C22010583-014
Client Sample ID: 142

Report Date: 02/16/22
Collection Date: 01/13/22 12:52
Date Received: 01/19/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Radium 226 + Radium 228	0.7	pCi/L	U			A7500-RA	02/02/22 15:40 / dmf
Radium 226 + Radium 228 precision (±)	1.0	pCi/L				A7500-RA	02/02/22 15:40 / dmf
Radium 226 + Radium 228 MDC	1.7	pCi/L				A7500-RA	02/02/22 15:40 / dmf
Thorium 230	0.04	pCi/L	U			A7500-U C	01/26/22 13:49 / sec
Thorium 230 precision (±)	0.03	pCi/L				A7500-U C	01/26/22 13:49 / sec
Thorium 230 MDC	0.04	pCi/L				A7500-U C	01/26/22 13:49 / sec
DATA QUALITY							
Solids, Total Dissolved - Calculated	1340	mg/L		1.00		A1030 E	01/24/22 16:24 / jlw
A/C Balance	2.44	%				A1030 E	01/24/22 16:24 / jlw
Anions	20.4	meq/L				A1030 E	01/24/22 16:24 / jlw
Cations	21.4	meq/L				A1030 E	01/24/22 16:24 / jlw
TDS Ratio	1.01	unitless				A1030 E	01/24/22 16:24 / jlw
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		1.0		E624.1	01/25/22 18:32 / etad
Bromoform	ND	ug/L		2.0		E624.1	01/25/22 18:32 / etad
Chlorodibromomethane	ND	ug/L		1.0		E624.1	01/25/22 18:32 / etad
Chloroform	ND	ug/L		1.0		E624.1	01/25/22 18:32 / etad
Trihalomethanes, Total	ND	ug/L		0.50		E624.1	02/16/22 14:49 / tlf
Surr: 1,2-Dichloroethane-d4	100	%REC		73-122		E624.1	01/25/22 18:32 / etad
Surr: p-Bromofluorobenzene	103	%REC		79-119		E624.1	01/25/22 18:32 / etad
Surr: Toluene-d8	103	%REC		80-120		E624.1	01/25/22 18:32 / etad

Report Definitions:
 RL - Analyte Reporting Limit
 QCL - Quality Control Limit
 U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
 ND - Not detected at the Reporting Limit (RL)



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 1, Zone 3
Lab ID: C22040181-003
Client Sample ID: 142

Report Date: 04/29/22
Collection Date: 04/04/22 14:22
Date Received: 04/06/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	304	mg/L		5		A2320 B	04/07/22 17:47 / nts
Chloride	17	mg/L		1		E300.0	04/10/22 00:30 / dmb
Sulfate	719	mg/L	D	2		E300.0	04/10/22 00:30 / dmb
Calcium	64	mg/L		1		E200.7	04/17/22 04:02 / erc
Magnesium	33	mg/L		1		E200.8	04/15/22 21:46 / jcg
Potassium	4	mg/L		1		E200.8	04/15/22 21:46 / jcg
Sodium	291	mg/L		1		E200.8	04/15/22 21:46 / jcg
PHYSICAL PROPERTIES							
pH	7.6	s.u.	H	0.1		A4500-H B	04/08/22 10:17 / mnm
pH Measurement Temp	11.2	°C				A4500-H B	04/08/22 10:17 / mnm
Solids, Total Dissolved TDS @ 180 C	1360	mg/L		20		A2540 C	04/08/22 14:31 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	0.37	mg/L		0.05		E353.2	04/08/22 11:41 / nts
Nitrogen, Ammonia as N	0.08	mg/L		0.05		E350.1	04/07/22 15:59 / nts
METALS, TOTAL							
Aluminum	0.04	mg/L	D	0.04		E200.8	04/20/22 02:10 / jcg
Arsenic	ND	mg/L		0.001		E200.8	04/22/22 22:39 / jcg
Beryllium	ND	mg/L		0.001		E200.8	04/20/22 02:10 / jcg
Cadmium	ND	mg/L		0.001		E200.8	04/20/22 02:10 / jcg
Cobalt	ND	mg/L		0.005		E200.8	04/20/22 02:10 / jcg
Lead	ND	mg/L		0.001		E200.8	04/20/22 02:10 / jcg
Manganese	0.024	mg/L		0.001		E200.8	04/20/22 02:10 / jcg
Molybdenum	0.004	mg/L		0.001		E200.8	04/22/22 22:39 / jcg
Nickel	ND	mg/L		0.005		E200.8	04/20/22 02:10 / jcg
Selenium	ND	mg/L		0.001		E200.8	04/20/22 02:10 / jcg
Uranium	ND	mg/L	D	0.0005		E200.8	04/20/22 02:10 / jcg
Vanadium	ND	mg/L		0.01		E200.8	04/20/22 02:10 / jcg
DATA QUALITY							
Solids, Total Dissolved - Calculated	1290	mg/L		1.00		A1030 E	04/19/22 12:18 / tif
A/C Balance	-4.41	%				A1030 E	04/19/22 12:18 / tif
Anions	20.5	meq/L				A1030 E	04/19/22 12:18 / tif
Cations	18.7	meq/L				A1030 E	04/19/22 12:18 / tif
TDS Ratio	1.05	unitless				A1030 E	04/19/22 12:18 / tif
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	0.6	pCi/L	U			E900.1	04/15/22 11:08 / kdk
Gross Alpha minus Rn & U Precision (±)	0.7	pCi/L				E900.1	04/15/22 11:08 / kdk
Gross Alpha minus Rn & U MDC	1	pCi/L				E900.1	04/15/22 11:08 / kdk
Lead 210	2.0	pCi/L				E909.0	04/14/22 21:16 / hat
Lead 210 precision (±)	0.8	pCi/L				E909.0	04/14/22 21:16 / hat

Report Definitions:
 RL - Analyte Reporting Limit
 QCL - Quality Control Limit
 D - Reporting Limit (RL) increased due to sample matrix
 U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
 ND - Not detected at the Reporting Limit (RL)
 H - Analysis performed past the method holding time



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 1, Zone 3
Lab ID: C22040181-003
Client Sample ID: 142

Report Date: 04/29/22
Collection Date: 04/04/22 14:22
Date Received: 04/06/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Lead 210 MDC	0.9	pCi/L				E909.0	04/14/22 21:16 / hat
Radium 226	1	pCi/L				E903.0	04/19/22 18:11 / kdk
Radium 226 precision (±)	0.2	pCi/L				E903.0	04/19/22 18:11 / kdk
Radium 226 MDC	0.2	pCi/L				E903.0	04/19/22 18:11 / kdk
Radium 228	1.6	pCi/L				RA-05	04/14/22 13:49 / trs
Radium 228 precision (±)	0.8	pCi/L				RA-05	04/14/22 13:49 / trs
Radium 228 MDC	1.2	pCi/L				RA-05	04/14/22 13:49 / trs
Radium 226 + Radium 228	2.6	pCi/L				A7500-RA	04/21/22 10:26 / dmf
Radium 226 + Radium 228 precision (±)	0.8	pCi/L				A7500-RA	04/21/22 10:26 / dmf
Radium 226 + Radium 228 MDC	1.2	pCi/L				A7500-RA	04/21/22 10:26 / dmf
Thorium 230	0.1	pCi/L				A7500-U C	04/14/22 15:55 / sec
Thorium 230 precision (±)	0.06	pCi/L				A7500-U C	04/14/22 15:55 / sec
Thorium 230 MDC	0.09	pCi/L				A7500-U C	04/14/22 15:55 / sec
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624.1	04/11/22 18:05 / eli-b
Bromoform	ND	ug/L		0.50		E624.1	04/11/22 18:05 / eli-b
Chlorodibromomethane	ND	ug/L		0.50		E624.1	04/11/22 18:05 / eli-b
Chloroform	ND	ug/L		0.50		E624.1	04/11/22 18:05 / eli-b
Trihalomethanes, Total	ND	ug/L		0.50		E624.1	04/27/22 18:25 / tlf
Surr: 1,2-Dichloroethane-d4	98.0	%REC		71-139		E624.1	04/11/22 18:05 / eli-b
Surr: p-Bromofluorobenzene	101	%REC		80-127		E624.1	04/11/22 18:05 / eli-b
Surr: Toluene-d8	106	%REC		80-123		E624.1	04/11/22 18:05 / eli-b

Report Definitions: RL - Analyte Reporting Limit
QCL - Quality Control Limit

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)



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Guideline 8: Sweetwater					
Well ID:		142	142	TWQ-142	TWQ-142
Collection Date:		4/4/2022	1/13/2022	10/6/2021	7/12/2021
Receive Date:		4/6/2022	1/19/2022	10/7/2021	7/14/2021
Report Date:		4/29/2022	2/16/2022	11/27/2021	8/13/2021
Analyte	Units	C22040181-003	C22010583-014	C21100328-008	C21070550-006
Bicarbonate as HCO ₃	mg/L	304	306	308	306
Calcium	mg/L	64	73	63	69
Chloride	mg/L	17	17	17	17
Magnesium	mg/L	33	37	34	37
Potassium	mg/L	4	4	4	4
Sodium	mg/L	291	336	303	330
Sulfate	mg/L	719	711	728	709
pH	s.u.	7.6	7.5	7.5	7.5
pH Measurement Temp	°C	11.2	16.5	14.3	13.3
Solids, Total Dissolved TDS @ 180 C	mg/L	1360	1350	1360	1370
Solids, Total Dissolved - Calculated	mg/L	1290	1340	1300	1320
Nitrogen, Ammonia as N	mg/L	0.08	0.05	0.08	0.07
Nitrogen, Nitrate+Nitrite as N	mg/L	0.37	0.45	0.35	0.42
Aluminum	mg/L	0.04	0.16	0.17	0.33
Arsenic	mg/L	ND(0.001)	0.002	0.004	0.002
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cobalt	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	0.024	0.033	0.073	0.082
Molybdenum	mg/L	0.004	0.005	0.005	0.006
Nickel	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Selenium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Uranium	mg/L	ND(0.0005)	0.0003	ND(0.0005)	0.0003
Vanadium	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
A/C Balance	%	-4.41	2.44	-3.77	1.48
Anions	meq/L	20.5	20.4	20.7	20.3
Cations	meq/L	18.7	21.4	19.2	20.9
TDS Ratio	unitless	1.05	1.01	1.05	1.04
Gross Alpha minus Rn & U	pCi/L	0.6	1.3	1.8	0.4
Gross Alpha minus Rn & U MDC	pCi/L	1	0.9	0.9	1.1
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.7	0.7	0.7	0.7
Lead 210	pCi/L	2.0	0.1	1	0.6
Lead 210 MDC	pCi/L	0.9	0.9	1.0	0.8
Lead 210 precision (±)	pCi/L	0.8	0.5	0.6	0.5
Radium 226	pCi/L	1	0.6	0.7	1.1
Radium 226 MDC	pCi/L	0.2	0.2	0.2	0.2
Radium 226 precision (±)	pCi/L	0.2	0.2	0.2	0.3
Radium 228	pCi/L	1.6	0.1	3.7	0.4
Radium 228 MDC	pCi/L	1.2	1.7	1.3	1.4
Radium 228 precision (±)	pCi/L	0.8	1.0	1.0	0.9
Thorium 230	pCi/L	0.1	0.04	0.1	0.04
Thorium 230 MDC	pCi/L	0.09	0.04	0.07	0.07
Thorium 230 precision (±)	pCi/L	0.06	0.03	0.05	0.04
Bromodichloromethane	ug/L	ND(0.50)	ND(1.0)	ND(0.50)	ND(0.50)
Bromoform	ug/L	ND(0.50)	ND(2.0)	ND(0.50)	ND(0.50)
Chlorodibromomethane	ug/L	ND(0.50)	ND(1.0)	ND(0.50)	ND(0.50)
Chloroform	ug/L	ND(0.50)	ND(1.0)	ND(0.50)	ND(0.50)
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 3 & SW Alluvium, UNC - Zone1, UNC - Zone3
Lab ID: C22010583-012
Client Sample ID: EPA-2

Report Date: 02/16/22
Collection Date: 01/13/22 11:40
Date Received: 01/19/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	246	mg/L		5		A2320 B	01/20/22 17:51 / kjp
Chloride	28	mg/L		1		E300.0	01/21/22 22:19 / dmb
Sulfate	2420	mg/L	D	4		E300.0	01/21/22 22:19 / dmb
Calcium	512	mg/L		1		E200.8	01/21/22 16:31 / jcg
Magnesium	244	mg/L		1		E200.8	01/21/22 16:31 / jcg
Potassium	8	mg/L		1		E200.8	01/21/22 16:31 / jcg
Sodium	234	mg/L		1		E200.8	01/21/22 16:31 / jcg
PHYSICAL PROPERTIES							
pH	6.9	s.u.	H	0.1		A4500-H B	01/20/22 11:13 / mnm
pH Measurement Temp	14.8	°C				A4500-H B	01/20/22 11:13 / mnm
Solids, Total Dissolved TDS @ 180 C	3900	mg/L	D	40		A2540 C	01/20/22 15:47 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	0.41	mg/L		0.05		E353.2	01/20/22 13:06 / nts
Nitrogen, Ammonia as N	0.20	mg/L		0.05		E350.1	01/27/22 14:27 / dmb
METALS, TOTAL							
Aluminum	ND	mg/L		0.03		E200.8	02/02/22 06:07 / jcg
Arsenic	ND	mg/L		0.001		E200.8	02/02/22 06:07 / jcg
Beryllium	ND	mg/L		0.001		E200.8	02/01/22 04:32 / jcg
Cadmium	0.001	mg/L		0.001		E200.8	02/01/22 04:32 / jcg
Cobalt	ND	mg/L		0.005		E200.8	02/01/22 04:32 / jcg
Lead	ND	mg/L		0.001		E200.8	02/02/22 06:07 / jcg
Manganese	1.67	mg/L		0.001		E200.8	02/01/22 04:32 / jcg
Molybdenum	0.001	mg/L		0.001		E200.8	02/01/22 04:32 / jcg
Nickel	ND	mg/L		0.005		E200.8	02/01/22 04:32 / jcg
Selenium	ND	mg/L		0.001		E200.8	02/01/22 04:32 / jcg
Uranium	0.0016	mg/L		0.0003		E200.8	02/02/22 06:07 / jcg
Vanadium	ND	mg/L		0.01		E200.8	02/01/22 04:32 / jcg
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	2.7	pCi/L				E900.1	01/24/22 14:38 / amm
Gross Alpha minus Rn & U Precision (±)	1	pCi/L				E900.1	01/24/22 14:38 / amm
Gross Alpha minus Rn & U MDC	0.9	pCi/L				E900.1	01/24/22 14:38 / amm
Lead 210	0.1	pCi/L	U			E909.0	01/28/22 04:54 / hat
Lead 210 precision (±)	0.5	pCi/L				E909.0	01/28/22 04:54 / hat
Lead 210 MDC	0.9	pCi/L				E909.0	01/28/22 04:54 / hat
Radium 226	1.3	pCi/L				E903.0	02/01/22 14:39 / kdk
Radium 226 precision (±)	0.3	pCi/L				E903.0	02/01/22 14:39 / kdk
Radium 226 MDC	0.2	pCi/L				E903.0	02/01/22 14:39 / kdk
Radium 228	3.9	pCi/L				RA-05	01/27/22 16:15 / trs
Radium 228 precision (±)	1.3	pCi/L				RA-05	01/27/22 16:15 / trs
Radium 228 MDC	1.6	pCi/L				RA-05	01/27/22 16:15 / trs

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
H - Analysis performed past the method holding time



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 3 & SW Alluvium, UNC - Zone1, UNC - Zone3
Lab ID: C22010583-012
Client Sample ID: EPA-2

Report Date: 02/16/22
Collection Date: 01/13/22 11:40
Date Received: 01/19/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Radium 226 + Radium 228	5.2	pCi/L				A7500-RA	02/02/22 15:40 / dmf
Radium 226 + Radium 228 precision (±)	1.4	pCi/L				A7500-RA	02/02/22 15:40 / dmf
Radium 226 + Radium 228 MDC	1.7	pCi/L				A7500-RA	02/02/22 15:40 / dmf
Thorium 230	0.01	pCi/L	U			A7500-U C	01/26/22 13:49 / sec
Thorium 230 precision (±)	0.03	pCi/L				A7500-U C	01/26/22 13:49 / sec
Thorium 230 MDC	0.07	pCi/L				A7500-U C	01/26/22 13:49 / sec
DATA QUALITY							
Solids, Total Dissolved - Calculated	3570	mg/L		1.00		A1030 E	01/24/22 16:23 / jlw
A/C Balance	0.67	%				A1030 E	01/24/22 16:23 / jlw
Anions	55.2	meq/L				A1030 E	01/24/22 16:23 / jlw
Cations	56.0	meq/L				A1030 E	01/24/22 16:23 / jlw
TDS Ratio	1.09	unitless				A1030 E	01/24/22 16:23 / jlw
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		1.0		E624.1	01/25/22 17:49 / etad
Bromoform	ND	ug/L		2.0		E624.1	01/25/22 17:49 / etad
Chlorodibromomethane	ND	ug/L		1.0		E624.1	01/25/22 17:49 / etad
Chloroform	ND	ug/L		1.0		E624.1	01/25/22 17:49 / etad
Trihalomethanes, Total	ND	ug/L		0.50		E624.1	02/16/22 14:49 / tif
Surr: 1,2-Dichloroethane-d4	104	%REC		73-122		E624.1	01/25/22 17:49 / etad
Surr: p-Bromofluorobenzene	104	%REC		79-119		E624.1	01/25/22 17:49 / etad
Surr: Toluene-d8	101	%REC		80-120		E624.1	01/25/22 17:49 / etad

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 1, Zone 3
Lab ID: C22040181-001
Client Sample ID: EPA-2

Report Date: 04/29/22
Collection Date: 04/04/22 10:50
Date Received: 04/06/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	240	mg/L		5		A2320 B	04/07/22 17:33 / nts
Chloride	29	mg/L		1		E300.0	04/09/22 22:16 / dmb
Sulfate	2480	mg/L	D	4		E300.0	04/19/22 19:52 / dmb
Calcium	492	mg/L		1		E200.7	04/17/22 03:52 / erc
Magnesium	226	mg/L		1		E200.8	04/15/22 21:15 / jcg
Potassium	8	mg/L		1		E200.8	04/15/22 21:15 / jcg
Sodium	210	mg/L		1		E200.8	04/15/22 21:15 / jcg
PHYSICAL PROPERTIES							
pH	6.9	s.u.	H	0.1		A4500-H B	04/08/22 10:11 / mnm
pH Measurement Temp	10.6	°C				A4500-H B	04/08/22 10:11 / mnm
Solids, Total Dissolved TDS @ 180 C	4030	mg/L	D	40		A2540 C	04/08/22 14:30 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	0.42	mg/L		0.05		E353.2	04/08/22 11:39 / nts
Nitrogen, Ammonia as N	0.09	mg/L		0.05		E350.1	04/07/22 15:56 / nts
METALS, TOTAL							
Aluminum	ND	mg/L		0.03		E200.8	04/22/22 22:30 / jcg
Arsenic	0.002	mg/L		0.001		E200.8	04/22/22 22:30 / jcg
Beryllium	ND	mg/L		0.001		E200.8	04/20/22 01:38 / jcg
Cadmium	ND	mg/L		0.001		E200.8	04/20/22 01:38 / jcg
Cobalt	ND	mg/L		0.005		E200.8	04/20/22 01:38 / jcg
Lead	ND	mg/L		0.001		E200.8	04/20/22 01:38 / jcg
Manganese	1.84	mg/L	D	0.002		E200.7	04/19/22 17:35 / erc
Molybdenum	ND	mg/L		0.001		E200.8	04/22/22 22:30 / jcg
Nickel	ND	mg/L		0.005		E200.8	04/20/22 01:38 / jcg
Selenium	ND	mg/L		0.001		E200.8	04/20/22 01:38 / jcg
Uranium	0.0020	mg/L	D	0.0005		E200.8	04/20/22 01:38 / jcg
Vanadium	ND	mg/L		0.01		E200.8	04/20/22 01:38 / jcg
DATA QUALITY							
Solids, Total Dissolved - Calculated	3560	mg/L		1.00		A1030 E	04/20/22 15:19 / tif
A/C Balance	-3.56	%				A1030 E	04/20/22 15:19 / tif
Anions	56.4	meq/L				A1030 E	04/20/22 15:19 / tif
Cations	52.5	meq/L				A1030 E	04/20/22 15:19 / tif
TDS Ratio	1.13	unitless				A1030 E	04/20/22 15:19 / tif
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	2.6	pCi/L				E900.1	04/15/22 11:08 / kdk
Gross Alpha minus Rn & U Precision (±)	0.9	pCi/L				E900.1	04/15/22 11:08 / kdk
Gross Alpha minus Rn & U MDC	1	pCi/L				E900.1	04/15/22 11:08 / kdk
Lead 210	1	pCi/L				E909.0	04/14/22 14:28 / hat
Lead 210 precision (±)	0.6	pCi/L				E909.0	04/14/22 14:28 / hat

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
H - Analysis performed past the method holding time



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 1, Zone 3
Lab ID: C22040181-001
Client Sample ID: EPA-2

Report Date: 04/29/22
Collection Date: 04/04/22 10:50
Date Received: 04/06/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Lead 210 MDC	0.9	pCi/L				E909.0	04/14/22 14:28 / hat
Radium 226	1.2	pCi/L				E903.0	04/19/22 18:11 / kdk
Radium 226 precision (±)	0.3	pCi/L				E903.0	04/19/22 18:11 / kdk
Radium 226 MDC	0.2	pCi/L				E903.0	04/19/22 18:11 / kdk
Radium 228	3.2	pCi/L				RA-05	04/14/22 13:49 / trs
Radium 228 precision (±)	0.9	pCi/L				RA-05	04/14/22 13:49 / trs
Radium 228 MDC	1.2	pCi/L				RA-05	04/14/22 13:49 / trs
Radium 226 + Radium 228	4.5	pCi/L				A7500-RA	04/21/22 10:26 / dmf
Radium 226 + Radium 228 precision (±)	0.9	pCi/L				A7500-RA	04/21/22 10:26 / dmf
Radium 226 + Radium 228 MDC	1.2	pCi/L				A7500-RA	04/21/22 10:26 / dmf
Thorium 230	0.2	pCi/L				A7500-U C	04/14/22 15:55 / sec
Thorium 230 precision (±)	0.07	pCi/L				A7500-U C	04/14/22 15:55 / sec
Thorium 230 MDC	0.08	pCi/L				A7500-U C	04/14/22 15:55 / sec
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624.1	04/11/22 17:09 / eli-b
Bromoform	ND	ug/L		0.50		E624.1	04/11/22 17:09 / eli-b
Chlorodibromomethane	ND	ug/L		0.50		E624.1	04/11/22 17:09 / eli-b
Chloroform	ND	ug/L		0.50		E624.1	04/11/22 17:09 / eli-b
Trihalomethanes, Total	ND	ug/L		0.50		E624.1	04/27/22 18:25 / tlf
Surr: 1,2-Dichloroethane-d4	102	%REC		71-139		E624.1	04/11/22 17:09 / eli-b
Surr: p-Bromofluorobenzene	104	%REC		80-127		E624.1	04/11/22 17:09 / eli-b
Surr: Toluene-d8	106	%REC		80-123		E624.1	04/11/22 17:09 / eli-b

Report RL - Analyte Reporting Limit
Definitions: QCL - Quality Control Limit

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)



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Guideline 8: Sweetwater

Well ID:		EPA-2	EPA-2	EPA-2	EPA-2
Collection Date:		4/4/2022	1/13/2022	10/8/2021	7/12/2021
Receive Date:		4/6/2022	1/19/2022	10/12/2021	7/14/2021
Report Date:		4/29/2022	2/16/2022	11/28/2021	8/13/2022
Analyte	Units	C22040181-001	C22010583-012	C21100467-007	C21070550-004
Bicarbonate as HCO ₃	mg/L	240	246	238	254
Calcium	mg/L	492	512	480	508
Chloride	mg/L	29	28	29	26
Magnesium	mg/L	226	244	231	248
Potassium	mg/L	8	8	8	9
Sodium	mg/L	210	234	228	240
Sulfate	mg/L	2480	2420	2510	2240
pH	s.u.	6.9	6.9	7.0	6.9
pH Measurement Temp	°C	10.6	14.8	14.0	13.1
Solids, Total Dissolved TDS @ 180 C	mg/L	4030	3900	3870	3820
Solids, Total Dissolved - Calculated	mg/L	3560	3570	3610	3390
Nitrogen, Ammonia as N	mg/L	0.09	0.20	0.25	0.19
Nitrogen, Nitrate+Nitrite as N	mg/L	0.42	0.41	0.33	0.26
Aluminum	mg/L	ND(0.03)	ND(0.03)	ND(0.03)	ND(0.03)
Arsenic	mg/L	0.002	ND(0.001)	0.002	ND(0.001)
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.001)	0.001	ND(0.001)	ND(0.001)
Cobalt	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	0.001
Manganese	mg/L	1.84	1.67	1.84	2.10
Molybdenum	mg/L	ND(0.001)	0.001	ND(0.001)	ND(0.001)
Nickel	mg/L	ND(0.005)	ND(0.005)	0.008	ND(0.005)
Selenium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Uranium	mg/L	0.0020	0.0016	0.0014	0.0013
Vanadium	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
A/C Balance	%	-3.56	0.67	-3.58	4.62
Anions	meq/L	56.4	55.2	57.1	51.5
Cations	meq/L	52.5	56.0	53.1	56.5
TDS Ratio	unitless	1.13	1.09	1.07	1.13
Gross Alpha minus Rn & U	pCi/L	2.6	2.7	1.7	3.0
Gross Alpha minus Rn & U MDC	pCi/L	1	0.9	1.1	1.1
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.9	1	0.8	1.0
Lead 210	pCi/L	1	0.1	0.8	0.3
Lead 210 MDC	pCi/L	0.9	0.9	0.9	0.8
Lead 210 precision (±)	pCi/L	0.6	0.5	0.6	0.5
Radium 226	pCi/L	1.2	1.3	1.7	2.3
Radium 226 MDC	pCi/L	0.2	0.2	0.2	0.2
Radium 226 precision (±)	pCi/L	0.3	0.3	0.4	0.5
Radium 228	pCi/L	3.2	3.9	4.2	2.5
Radium 228 MDC	pCi/L	1.2	1.6	1	1.2
Radium 228 precision (±)	pCi/L	0.9	1.3	1.1	0.9
Thorium 230	pCi/L	0.2	0.01	0.009	0.004
Thorium 230 MDC	pCi/L	0.08	0.07	0.08	0.06
Thorium 230 precision (±)	pCi/L	0.07	0.03	0.04	0.03
Bromodichloromethane	ug/L	ND(0.50)	ND(1.0)	ND(0.50)	ND(0.50)
Bromoform	ug/L	ND(0.50)	ND(2.0)	ND(0.50)	ND(0.50)
Chlorodibromomethane	ug/L	ND(0.50)	ND(1.0)	ND(0.50)	ND(0.50)
Chloroform	ug/L	ND(0.50)	ND(1.0)	ND(0.50)	ND(0.50)
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 3 & SW Alluvium, UNC - Zone1, UNC - Zone3
Lab ID: C22010583-010
Client Sample ID: EPA-4

Report Date: 02/16/22
Collection Date: 01/13/22 09:27
Date Received: 01/19/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	175	mg/L		5		A2320 B	01/20/22 17:37 / kjp
Chloride	39	mg/L	D	2		E300.0	01/21/22 21:40 / dmb
Sulfate	3030	mg/L	D	8		E300.0	01/21/22 21:40 / dmb
Calcium	533	mg/L	D	3		E200.8	01/21/22 16:13 / jcg
Magnesium	425	mg/L		1		E200.8	01/21/22 16:13 / jcg
Potassium	8	mg/L		1		E200.8	01/21/22 16:13 / jcg
Sodium	187	mg/L	D	2		E200.8	01/21/22 16:13 / jcg
PHYSICAL PROPERTIES							
pH	6.8	s.u.	H	0.1		A4500-H B	01/20/22 11:07 / mnm
pH Measurement Temp	14.2	°C				A4500-H B	01/20/22 11:07 / mnm
Solids, Total Dissolved TDS @ 180 C	4680	mg/L	D	40		A2540 C	01/20/22 15:46 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	0.30	mg/L		0.05		E353.2	01/20/22 13:04 / nts
Nitrogen, Ammonia as N	0.32	mg/L		0.05		E350.1	01/27/22 14:23 / dmb
METALS, TOTAL							
Aluminum	ND	mg/L		0.03		E200.8	02/02/22 05:16 / jcg
Arsenic	ND	mg/L		0.001		E200.8	02/01/22 04:13 / jcg
Beryllium	ND	mg/L		0.001		E200.8	02/01/22 04:13 / jcg
Cadmium	ND	mg/L		0.001		E200.8	02/01/22 04:13 / jcg
Cobalt	ND	mg/L		0.005		E200.8	02/01/22 04:13 / jcg
Lead	ND	mg/L		0.001		E200.8	02/02/22 05:16 / jcg
Manganese	3.34	mg/L	D	0.004		E200.8	02/01/22 04:13 / jcg
Molybdenum	ND	mg/L		0.001		E200.8	02/01/22 04:13 / jcg
Nickel	ND	mg/L		0.005		E200.8	02/01/22 04:13 / jcg
Selenium	ND	mg/L		0.001		E200.8	02/01/22 04:13 / jcg
Uranium	0.0004	mg/L		0.0003		E200.8	02/02/22 05:16 / jcg
Vanadium	ND	mg/L		0.01		E200.8	02/01/22 04:13 / jcg
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	2.9	pCi/L				E900.1	01/24/22 14:38 / amm
Gross Alpha minus Rn & U Precision (±)	1	pCi/L				E900.1	01/24/22 14:38 / amm
Gross Alpha minus Rn & U MDC	0.9	pCi/L				E900.1	01/24/22 14:38 / amm
Lead 210	0.6	pCi/L	U			E909.0	01/31/22 00:10 / hat
Lead 210 precision (±)	0.5	pCi/L				E909.0	01/31/22 00:10 / hat
Lead 210 MDC	0.8	pCi/L				E909.0	01/31/22 00:10 / hat
Radium 226	1.2	pCi/L				E903.0	02/01/22 14:39 / kdk
Radium 226 precision (±)	0.3	pCi/L				E903.0	02/01/22 14:39 / kdk
Radium 226 MDC	0.2	pCi/L				E903.0	02/01/22 14:39 / kdk
Radium 228	2.6	pCi/L				RA-05	01/27/22 16:15 / trs
Radium 228 precision (±)	1.1	pCi/L				RA-05	01/27/22 16:15 / trs
Radium 228 MDC	1.5	pCi/L				RA-05	01/27/22 16:15 / trs

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
H - Analysis performed past the method holding time



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 3 & SW Alluvium, UNC - Zone1, UNC - Zone3
Lab ID: C22010583-010
Client Sample ID: EPA-4

Report Date: 02/16/22
Collection Date: 01/13/22 09:27
Date Received: 01/19/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Radium 226 + Radium 228	3.8	pCi/L				A7500-RA	02/02/22 15:40 / dmf
Radium 226 + Radium 228 precision (±)	1.1	pCi/L				A7500-RA	02/02/22 15:40 / dmf
Radium 226 + Radium 228 MDC	1.6	pCi/L				A7500-RA	02/02/22 15:40 / dmf
Thorium 230	-0.02	pCi/L	U			A7500-U C	01/26/22 13:49 / sec
Thorium 230 precision (±)	0.03	pCi/L				A7500-U C	01/26/22 13:49 / sec
Thorium 230 MDC	0.07	pCi/L				A7500-U C	01/26/22 13:49 / sec
DATA QUALITY							
Solids, Total Dissolved - Calculated	4310	mg/L		1.00		A1030 E	01/24/22 16:23 / jlw
A/C Balance	2.09	%				A1030 E	01/24/22 16:23 / jlw
Anions	67.0	meq/L				A1030 E	01/24/22 16:23 / jlw
Cations	69.9	meq/L				A1030 E	01/24/22 16:23 / jlw
TDS Ratio	1.09	unitless				A1030 E	01/24/22 16:23 / jlw
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		1.0		E624.1	01/25/22 17:06 / etad
Bromoform	ND	ug/L		2.0		E624.1	01/25/22 17:06 / etad
Chlorodibromomethane	ND	ug/L		1.0		E624.1	01/25/22 17:06 / etad
Chloroform	ND	ug/L		1.0		E624.1	01/25/22 17:06 / etad
Trihalomethanes, Total	ND	ug/L		0.50		E624.1	02/16/22 14:49 / tlf
Surr: 1,2-Dichloroethane-d4	103	%REC		73-122		E624.1	01/25/22 17:06 / etad
Surr: p-Bromofluorobenzene	103	%REC		79-119		E624.1	01/25/22 17:06 / etad
Surr: Toluene-d8	100	%REC		80-120		E624.1	01/25/22 17:06 / etad

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 3, Swalluvium
Lab ID: C22040256-001
Client Sample ID: EPA-4

Report Date: 05/04/22
Collection Date: 04/05/22 11:25
Date Received: 04/07/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	167	mg/L		5		A2320 B	04/11/22 13:15 / nts
Chloride	38	mg/L	D	2		E300.0	04/11/22 15:40 / dmb
Sulfate	3080	mg/L	D	8		E300.0	04/11/22 15:40 / dmb
Calcium	512	mg/L		1		E200.7	04/21/22 20:08 / erc
Magnesium	395	mg/L		1		E200.7	04/21/22 20:08 / erc
Potassium	8	mg/L		1		E200.8	04/19/22 04:12 / jcg
Sodium	182	mg/L	D	2		E200.7	04/21/22 20:08 / erc
PHYSICAL PROPERTIES							
pH	6.8	s.u.	H	0.1		A4500-H B	04/08/22 12:10 / mnm
pH Measurement Temp	16.3	°C				A4500-H B	04/08/22 12:10 / mnm
Solids, Total Dissolved TDS @ 180 C	4670	mg/L	D	40		A2540 C	04/08/22 14:44 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	0.43	mg/L		0.05		E353.2	04/08/22 12:16 / nts
Nitrogen, Ammonia as N	0.14	mg/L		0.05		E350.1	04/13/22 10:44 / nts
METALS, TOTAL							
Aluminum	ND	mg/L	D	0.04		E200.8	04/20/22 05:09 / jcg
Arsenic	ND	mg/L		0.001		E200.8	04/20/22 05:09 / jcg
Beryllium	ND	mg/L		0.001		E200.8	04/20/22 05:09 / jcg
Cadmium	ND	mg/L		0.001		E200.8	04/20/22 05:09 / jcg
Cobalt	ND	mg/L		0.005		E200.8	04/20/22 05:09 / jcg
Lead	ND	mg/L		0.001		E200.8	04/20/22 05:09 / jcg
Manganese	3.22	mg/L	D	0.002		E200.8	04/23/22 00:44 / jcg
Molybdenum	ND	mg/L		0.001		E200.8	04/23/22 00:44 / jcg
Nickel	ND	mg/L		0.005		E200.8	04/20/22 05:09 / jcg
Selenium	ND	mg/L		0.001		E200.8	04/20/22 05:09 / jcg
Uranium	ND	mg/L		0.0003		E200.8	04/27/22 04:07 / jcg
Vanadium	ND	mg/L		0.01		E200.8	04/20/22 05:09 / jcg
DATA QUALITY							
Solids, Total Dissolved - Calculated	4300	mg/L		1.00		A1030 E	04/22/22 18:47 / tlf
A/C Balance	-2.46	%				A1030 E	04/22/22 18:47 / tlf
Anions	67.9	meq/L				A1030 E	04/22/22 18:47 / tlf
Cations	64.6	meq/L				A1030 E	04/22/22 18:47 / tlf
TDS Ratio	1.09	unitless				A1030 E	04/22/22 18:47 / tlf
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	1.8	pCi/L				E900.1	04/15/22 13:24 / kdk
Gross Alpha minus Rn & U Precision (±)	0.8	pCi/L				E900.1	04/15/22 13:24 / kdk
Gross Alpha minus Rn & U MDC	1	pCi/L				E900.1	04/15/22 13:24 / kdk
Lead 210	0.6	pCi/L	U			E909.0	04/16/22 02:45 / hat
Lead 210 precision (±)	0.5	pCi/L				E909.0	04/16/22 02:45 / hat

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
H - Analysis performed past the method holding time



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 3, Swallowium
Lab ID: C22040256-001
Client Sample ID: EPA-4

Report Date: 05/04/22
Collection Date: 04/05/22 11:25
Date Received: 04/07/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Lead 210 MDC	0.9	pCi/L			E909.0		04/16/22 02:45 / hat
Radium 226	1.7	pCi/L			E903.0		04/19/22 12:41 / kdk
Radium 226 precision (±)	0.4	pCi/L			E903.0		04/19/22 12:41 / kdk
Radium 226 MDC	0.2	pCi/L			E903.0		04/19/22 12:41 / kdk
Radium 228	3.3	pCi/L			RA-05		04/14/22 15:28 / trs
Radium 228 precision (±)	1	pCi/L			RA-05		04/14/22 15:28 / trs
Radium 228 MDC	1.0	pCi/L			RA-05		04/14/22 15:28 / trs
Radium 226 + Radium 228	5.0	pCi/L			A7500-RA		04/20/22 14:59 / dmf
Radium 226 + Radium 228 precision (±)	1.0	pCi/L			A7500-RA		04/20/22 14:59 / dmf
Radium 226 + Radium 228 MDC	1.1	pCi/L			A7500-RA		04/20/22 14:59 / dmf
Thorium 230	0.1	pCi/L			A7500-U C		04/14/22 15:55 / sec
Thorium 230 precision (±)	0.05	pCi/L			A7500-U C		04/14/22 15:55 / sec
Thorium 230 MDC	0.06	pCi/L			A7500-U C		04/14/22 15:55 / sec
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50	E624.1		04/11/22 13:19 / eli-b
Bromoform	ND	ug/L		0.50	E624.1		04/11/22 13:19 / eli-b
Chlorodibromomethane	ND	ug/L		0.50	E624.1		04/11/22 13:19 / eli-b
Chloroform	ND	ug/L		0.50	E624.1		04/11/22 13:19 / eli-b
Trihalomethanes, Total	ND	ug/L		0.50	E624.1		04/27/22 18:25 / tlf
Surr: 1,2-Dichloroethane-d4	103	%REC		71-139	E624.1		04/11/22 13:19 / eli-b
Surr: p-Bromofluorobenzene	104	%REC		80-127	E624.1		04/11/22 13:19 / eli-b
Surr: Toluene-d8	105	%REC		80-123	E624.1		04/11/22 13:19 / eli-b

Report RL - Analyte Reporting Limit
Definitions: QCL - Quality Control Limit

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)



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Guideline 8: Sweetwater					
Well ID:		EPA-4	EPA-4	EPA-4	EPA-4
Collection Date:		4/5/2022	1/13/2022	10/8/2021	7/12/2021
Receive Date:		4/7/2022	1/19/2022	10/12/2021	7/14/2021
Report Date:		5/4/2022	2/16/2022	11/28/2021	8/13/2021
Analyte	Units	C22040256-001	C22010583-010	C21100467-006	C21070550-003
Bicarbonate as HCO ₃	mg/L	167	175	167	163
Calcium	mg/L	512	533	514	538
Chloride	mg/L	38	39	42	40
Magnesium	mg/L	395	425	386	403
Potassium	mg/L	8	8	9	9
Sodium	mg/L	182	187	175	181
Sulfate	mg/L	3080	3030	3090	3110
pH	s.u.	6.8	6.8	6.8	6.8
pH Measurement Temp	°C	16.3	14.2	13.6	13.0
Solids, Total Dissolved TDS @ 180 C	mg/L	4670	4680	4680	4670
Solids, Total Dissolved - Calculated	mg/L	4300	4310	4300	4370
Nitrogen, Ammonia as N	mg/L	0.14	0.32	0.33	0.21
Nitrogen, Nitrate+Nitrite as N	mg/L	0.43	0.30	0.30	0.31
Aluminum	mg/L	ND(0.04)	ND(0.03)	ND(0.03)	ND(0.03)
Arsenic	mg/L	ND(0.001)	ND(0.001)	ND(0.003)	ND(0.001)
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cobalt	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	3.22	3.34	3.27	3.02
Molybdenum	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Nickel	mg/L	ND(0.005)	ND(0.005)	0.008	ND(0.005)
Selenium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Uranium	mg/L	ND(0.0003)	0.0004	0.0003	0.0003
Vanadium	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
A/C Balance	%	-2.46	2.09	-2.25	-0.38
Anions	meq/L	67.9	67.0	68.3	68.6
Cations	meq/L	64.6	69.9	65.3	68.1
TDS Ratio	unitless	1.09	1.09	1.09	1.07
Gross Alpha minus Rn & U	pCi/L	1.8	2.9	2.4	2.1
Gross Alpha minus Rn & U MDC	pCi/L	1	0.9	1.1	1.1
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.8	1	1	1.0
Lead 210	pCi/L	0.6	0.6	0.6	0.02
Lead 210 MDC	pCi/L	0.9	0.8	0.9	0.8
Lead 210 precision (±)	pCi/L	0.5	0.5	0.6	0.5
Radium 226	pCi/L	1.7	1.2	1.6	2.5
Radium 226 MDC	pCi/L	0.2	0.2	0.2	0.2
Radium 226 precision (±)	pCi/L	0.4	0.3	0.4	0.6
Radium 228	pCi/L	3.3	2.6	3.3	2.5
Radium 228 MDC	pCi/L	1.0	1.5	1	1.2
Radium 228 precision (±)	pCi/L	1	1.1	1	1
Thorium 230	pCi/L	0.1	-0.02	0.02	0.005
Thorium 230 MDC	pCi/L	0.06	0.07	0.1	0.09
Thorium 230 precision (±)	pCi/L	0.05	0.03	0.07	0.04
Bromodichloromethane	ug/L	ND(0.50)	ND(1.0)	ND(0.50)	ND(0.50)
Bromoform	ug/L	ND(0.50)	ND(2.0)	ND(0.50)	ND(0.50)
Chlorodibromomethane	ug/L	ND(0.50)	ND(1.0)	ND(0.50)	ND(0.50)
Chloroform	ug/L	ND(0.50)	ND(1.0)	ND(0.50)	ND(0.50)
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 3 & SW Alluvium, UNC - Zone1, UNC - Zone3
Lab ID: C22010583-011
Client Sample ID: EPA-5

Report Date: 02/16/22
Collection Date: 01/13/22 10:33
Date Received: 01/19/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	265	mg/L		5		A2320 B	01/20/22 17:44 / kjp
Chloride	87	mg/L	D	2		E300.0	01/21/22 22:00 / dmb
Sulfate	3270	mg/L	D	8		E300.0	01/21/22 22:00 / dmb
Calcium	505	mg/L	D	3		E200.8	01/21/22 16:27 / jcg
Magnesium	596	mg/L		1		E200.8	01/21/22 16:27 / jcg
Potassium	12	mg/L		1		E200.8	01/21/22 16:27 / jcg
Sodium	160	mg/L	D	2		E200.8	01/21/22 16:27 / jcg
PHYSICAL PROPERTIES							
pH	6.5	s.u.	H	0.1		A4500-H B	01/20/22 11:10 / mnm
pH Measurement Temp	14.7	°C				A4500-H B	01/20/22 11:10 / mnm
Solids, Total Dissolved TDS @ 180 C	5150	mg/L	D	40		A2540 C	01/20/22 15:47 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	12.0	mg/L	D	0.1		E353.2	01/20/22 13:05 / nts
Nitrogen, Ammonia as N	20	mg/L	D	1		E350.1	01/27/22 14:26 / dmb
METALS, TOTAL							
Aluminum	0.06	mg/L		0.03		E200.8	02/08/22 15:07 / jcg
Arsenic	ND	mg/L		0.001		E200.8	02/01/22 04:18 / jcg
Beryllium	ND	mg/L		0.001		E200.8	02/01/22 04:18 / jcg
Cadmium	ND	mg/L	D	0.1		E200.7	01/25/22 21:51 / srm
Cobalt	0.022	mg/L		0.005		E200.8	02/01/22 04:18 / jcg
Lead	ND	mg/L		0.001		E200.8	02/02/22 05:21 / jcg
Manganese	0.420	mg/L	D	0.006		E200.7	01/25/22 21:51 / srm
Molybdenum	ND	mg/L		0.001		E200.8	02/01/22 04:18 / jcg
Nickel	0.015	mg/L		0.005		E200.8	02/01/22 04:18 / jcg
Selenium	0.002	mg/L		0.001		E200.8	02/01/22 04:18 / jcg
Uranium	0.0158	mg/L	D	0.0005		E200.8	02/02/22 05:21 / jcg
Vanadium	ND	mg/L		0.01		E200.8	02/01/22 04:18 / jcg
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	2.6	pCi/L				E900.1	01/24/22 14:38 / amm
Gross Alpha minus Rn & U Precision (±)	0.9	pCi/L				E900.1	01/24/22 14:38 / amm
Gross Alpha minus Rn & U MDC	0.9	pCi/L				E900.1	01/24/22 14:38 / amm
Lead 210	0.3	pCi/L	U			E909.0	01/28/22 01:48 / hat
Lead 210 precision (±)	0.6	pCi/L				E909.0	01/28/22 01:48 / hat
Lead 210 MDC	0.9	pCi/L				E909.0	01/28/22 01:48 / hat
Radium 226	1.1	pCi/L				E903.0	02/01/22 14:39 / kdk
Radium 226 precision (±)	0.3	pCi/L				E903.0	02/01/22 14:39 / kdk
Radium 226 MDC	0.2	pCi/L				E903.0	02/01/22 14:39 / kdk
Radium 228	0.8	pCi/L	U			RA-05	01/27/22 16:15 / trs
Radium 228 precision (±)	1	pCi/L				RA-05	01/27/22 16:15 / trs
Radium 228 MDC	1.5	pCi/L				RA-05	01/27/22 16:15 / trs

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
H - Analysis performed past the method holding time



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 3 & SW Alluvium, UNC - Zone1, UNC - Zone3
Lab ID: C22010583-011
Client Sample ID: EPA-5

Report Date: 02/16/22
Collection Date: 01/13/22 10:33
Date Received: 01/19/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Radium 226 + Radium 228	1.9	pCi/L				A7500-RA	02/02/22 15:40 / dmf
Radium 226 + Radium 228 precision (±)	1.0	pCi/L				A7500-RA	02/02/22 15:40 / dmf
Radium 226 + Radium 228 MDC	1.5	pCi/L				A7500-RA	02/02/22 15:40 / dmf
Thorium 230	0.02	pCi/L	U			A7500-U C	01/26/22 13:49 / sec
Thorium 230 precision (±)	0.08	pCi/L				A7500-U C	01/26/22 13:49 / sec
Thorium 230 MDC	0.2	pCi/L				A7500-U C	01/26/22 13:49 / sec
DATA QUALITY							
Solids, Total Dissolved - Calculated	4820	mg/L		1.00		A1030 E	01/24/22 16:23 / jlw
A/C Balance	3.61	%				A1030 E	01/24/22 16:23 / jlw
Anions	75.8	meq/L				A1030 E	01/24/22 16:23 / jlw
Cations	81.5	meq/L				A1030 E	01/24/22 16:23 / jlw
TDS Ratio	1.07	unitless				A1030 E	01/24/22 16:23 / jlw
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		1.0		E624.1	01/25/22 17:28 / etad
Bromoform	ND	ug/L		2.0		E624.1	01/25/22 17:28 / etad
Chlorodibromomethane	ND	ug/L		1.0		E624.1	01/25/22 17:28 / etad
Chloroform	ND	ug/L		1.0		E624.1	01/25/22 17:28 / etad
Trihalomethanes, Total	ND	ug/L		0.50		E624.1	02/16/22 14:49 / tlf
Surr: 1,2-Dichloroethane-d4	104	%REC		73-122		E624.1	01/25/22 17:28 / etad
Surr: p-Bromofluorobenzene	103	%REC		79-119		E624.1	01/25/22 17:28 / etad
Surr: Toluene-d8	101	%REC		80-120		E624.1	01/25/22 17:28 / etad

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 3, Swallowium
Lab ID: C22040256-002
Client Sample ID: EPA-5

Report Date: 05/04/22
Collection Date: 04/05/22 12:27
Date Received: 04/07/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	211	mg/L		5		A2320 B	04/11/22 13:22 / nts
Chloride	100	mg/L	D	2		E300.0	04/11/22 16:38 / dmb
Sulfate	3460	mg/L	D	8		E300.0	04/11/22 16:38 / dmb
Calcium	502	mg/L		1		E200.8	04/21/22 19:52 / jcg
Magnesium	562	mg/L		1		E200.7	04/21/22 20:13 / erc
Potassium	11	mg/L		1		E200.8	04/19/22 04:16 / jcg
Sodium	161	mg/L	D	2		E200.7	04/21/22 20:13 / erc
PHYSICAL PROPERTIES							
pH	6.5	s.u.	H	0.1		A4500-H B	04/08/22 12:12 / mnm
pH Measurement Temp	16.5	°C				A4500-H B	04/08/22 12:12 / mnm
Solids, Total Dissolved TDS @ 180 C	5270	mg/L	D	40		A2540 C	04/08/22 14:45 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	4.9	mg/L	D	0.1		E353.2	04/08/22 12:17 / nts
Nitrogen, Ammonia as N	23	mg/L	D	1		E350.1	04/13/22 10:48 / nts
METALS, TOTAL							
Aluminum	ND	mg/L	D	0.04		E200.8	04/23/22 00:49 / jcg
Arsenic	0.002	mg/L		0.001		E200.8	04/20/22 05:14 / jcg
Beryllium	ND	mg/L		0.001		E200.8	04/20/22 05:14 / jcg
Cadmium	ND	mg/L		0.001		E200.8	04/20/22 05:14 / jcg
Cobalt	0.023	mg/L		0.005		E200.8	04/20/22 05:14 / jcg
Lead	ND	mg/L		0.001		E200.8	04/20/22 05:14 / jcg
Manganese	0.437	mg/L	D	0.002		E200.8	04/23/22 00:49 / jcg
Molybdenum	ND	mg/L		0.001		E200.8	04/23/22 00:49 / jcg
Nickel	0.015	mg/L		0.005		E200.8	04/20/22 05:14 / jcg
Selenium	0.001	mg/L		0.001		E200.8	04/20/22 05:14 / jcg
Uranium	0.0221	mg/L	D	0.0005		E200.8	04/23/22 00:49 / jcg
Vanadium	ND	mg/L		0.01		E200.8	04/20/22 05:14 / jcg
DATA QUALITY							
Solids, Total Dissolved - Calculated	4880	mg/L		1.00		A1030 E	04/22/22 18:48 / tlf
A/C Balance	-1.63	%				A1030 E	04/22/22 18:48 / tlf
Anions	78.7	meq/L				A1030 E	04/22/22 18:48 / tlf
Cations	76.2	meq/L				A1030 E	04/22/22 18:48 / tlf
TDS Ratio	1.08	unitless				A1030 E	04/22/22 18:48 / tlf
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	0.6	pCi/L	U			E900.1	04/15/22 13:24 / kdk
Gross Alpha minus Rn & U Precision (±)	0.6	pCi/L				E900.1	04/15/22 13:24 / kdk
Gross Alpha minus Rn & U MDC	1	pCi/L				E900.1	04/15/22 13:24 / kdk
Lead 210	0.8	pCi/L	U			E909.0	04/16/22 06:07 / hat
Lead 210 precision (±)	0.5	pCi/L				E909.0	04/16/22 06:07 / hat

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
H - Analysis performed past the method holding time



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 3, Swalluvium
Lab ID: C22040256-002
Client Sample ID: EPA-5

Report Date: 05/04/22
Collection Date: 04/05/22 12:27
Date Received: 04/07/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Lead 210 MDC	0.9	pCi/L				E909.0	04/16/22 06:07 / hat
Radium 226	1.4	pCi/L				E903.0	04/19/22 14:16 / kdk
Radium 226 precision (±)	0.4	pCi/L				E903.0	04/19/22 14:16 / kdk
Radium 226 MDC	0.2	pCi/L				E903.0	04/19/22 14:16 / kdk
Radium 228	0.4	pCi/L	U			RA-05	04/14/22 15:29 / trs
Radium 228 precision (±)	0.6	pCi/L				RA-05	04/14/22 15:29 / trs
Radium 228 MDC	1.1	pCi/L				RA-05	04/14/22 15:29 / trs
Radium 226 + Radium 228	1.8	pCi/L				A7500-RA	04/20/22 14:59 / dmf
Radium 226 + Radium 228 precision (±)	0.7	pCi/L				A7500-RA	04/20/22 14:59 / dmf
Radium 226 + Radium 228 MDC	1.1	pCi/L				A7500-RA	04/20/22 14:59 / dmf
Thorium 230	0.3	pCi/L				A7500-U C	04/14/22 15:55 / sec
Thorium 230 precision (±)	0.1	pCi/L				A7500-U C	04/14/22 15:55 / sec
Thorium 230 MDC	0.2	pCi/L				A7500-U C	04/14/22 15:55 / sec
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624.1	04/11/22 15:20 / eli-b
Bromoform	ND	ug/L		0.50		E624.1	04/11/22 15:20 / eli-b
Chlorodibromomethane	ND	ug/L		0.50		E624.1	04/11/22 15:20 / eli-b
Chloroform	0.21	ug/L	J	0.50		E624.1	04/11/22 15:20 / eli-b
Trihalomethanes, Total	0.21	ug/L	J	0.50		E624.1	04/27/22 18:25 / tlf
Surr: 1,2-Dichloroethane-d4	102	%REC		71-139		E624.1	04/11/22 15:20 / eli-b
Surr: p-Bromofluorobenzene	106	%REC		80-127		E624.1	04/11/22 15:20 / eli-b
Surr: Toluene-d8	107	%REC		80-123		E624.1	04/11/22 15:20 / eli-b

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
U - Not detected at Minimum Detectable Concentration (MDC)



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Guideline 8: Sweetwater					
Well ID:		EPA-5	EPA-5	EPA-5	EPA-5
Collection Date:		4/5/2022	1/13/2022	10/8/2021	7/12/2021
Receive Date:		4/7/2022	1/19/2022	10/12/2021	7/14/2021
Report Date:		5/4/2022	2/16/2022	1/28/2021	8/13/2021
Analyte	Units	C22040256-002	C22010583-011	C21100467-005	C21070550-002
Bicarbonate as HCO ₃	mg/L	211	265	110	124
Calcium	mg/L	502	505	447	480
Chloride	mg/L	100	87	51	75
Magnesium	mg/L	562	596	459	510
Potassium	mg/L	11	12	12	13
Sodium	mg/L	161	160	108	133
Sulfate	mg/L	3460	3270	3280	3370
pH	s.u.	6.5	6.5	6.4	6.5
pH Measurement Temp	°C	16.5	14.7	13.4	12.1
Solids, Total Dissolved TDS @ 180 C	mg/L	5270	5150	4820	5040
Solids, Total Dissolved - Calculated	mg/L	4880	4820	4480	4710
Nitrogen, Ammonia as N	mg/L	23	20	21	19
Nitrogen, Nitrate+Nitrite as N	mg/L	4.9	12.0	16.6	16.6
Aluminum	mg/L	ND(0.04)	0.06	0.13	0.04
Arsenic	mg/L	0.002	ND(0.001)	ND(0.003)	ND(0.001)
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.001)	ND(0.1)	ND(0.001)	ND(0.001)
Cobalt	mg/L	0.023	0.022	0.026	0.025
Lead	mg/L	ND(0.001)	ND(0.001)	0.004	ND(0.001)
Manganese	mg/L	0.437	0.420	0.287	0.321
Molybdenum	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Nickel	mg/L	0.015	0.015	0.026	0.019
Selenium	mg/L	0.001	0.002	ND(0.001)	0.002
Uranium	mg/L	0.0221	0.0158	0.0088	0.0127
Vanadium	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
A/C Balance	%	-1.63	3.61	-4.35	-1.37
Anions	meq/L	78.7	75.8	72.7	75.5
Cations	meq/L	76.2	81.5	66.6	73.4
TDS Ratio	unitless	1.08	1.07	1.08	1.07
Gross Alpha minus Rn & U	pCi/L	0.6	2.6	2.4	3.5
Gross Alpha minus Rn & U MDC	pCi/L	1	0.9	1.1	1.1
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.6	0.9	1.0	1.1
Lead 210	pCi/L	0.8	0.3	0.3	0.2
Lead 210 MDC	pCi/L	0.9	0.9	0.9	0.8
Lead 210 precision (±)	pCi/L	0.5	0.6	0.5	0.5
Radium 226	pCi/L	1.4	1.1	1.8	2.4
Radium 226 MDC	pCi/L	0.2	0.2	0.2	0.2
Radium 226 precision (±)	pCi/L	0.4	0.3	0.4	0.5
Radium 228	pCi/L	0.4	0.8	1.6	0.4
Radium 228 MDC	pCi/L	1.1	1.5	1.0	1.2
Radium 228 precision (±)	pCi/L	0.6	1	0.8	0.7
Thorium 230	pCi/L	0.3	0.02	0.03	0.08
Thorium 230 MDC	pCi/L	0.2	0.2	0.1	0.1
Thorium 230 precision (±)	pCi/L	0.1	0.08	0.07	0.09
Bromodichloromethane	ug/L	ND(0.50)	ND(1.0)	ND(0.50)	ND(0.50)
Bromoform	ug/L	ND(0.50)	ND(2.0)	ND(0.50)	ND(0.50)
Chlorodibromomethane	ug/L	ND(0.50)	ND(1.0)	ND(0.50)	ND(0.50)
Chloroform	ug/L	ND(0.50)	ND(1.0)	ND(0.50)	ND(0.50)
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC- Zone 1 & Zone 3
Lab ID: C22010406-003
Client Sample ID: EPA-7

Report Date: 02/16/22
Collection Date: 01/10/22 13:24
Date Received: 01/13/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	412	mg/L		5		A2320 B	01/17/22 14:33 / kjp
Chloride	219	mg/L	D	5		E300.0	01/14/22 22:06 / dmb
Sulfate	4310	mg/L	D	20		E300.0	01/14/22 22:06 / dmb
Calcium	512	mg/L	D	6		E200.8	01/19/22 17:42 / jcg
Magnesium	826	mg/L		1		E200.7	01/14/22 19:37 / srm
Potassium	10	mg/L		1		E200.7	01/14/22 19:37 / srm
Sodium	310	mg/L	D	2		E200.8	01/17/22 18:47 / jcg
PHYSICAL PROPERTIES							
pH	6.3	s.u.	H	0.1		A4500-H B	01/14/22 11:16 / kjp
pH Measurement Temp	11.8	°C				A4500-H B	01/14/22 11:16 / kjp
Solids, Total Dissolved TDS @ 180 C	7460	mg/L	D	100		A2540 C	01/14/22 12:21 / kjp
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	88	mg/L	D	1		E353.2	01/14/22 16:27 / nts
Nitrogen, Ammonia as N	ND	mg/L		0.05		E350.1	01/14/22 14:22 / nts
METALS, TOTAL							
Aluminum	0.30	mg/L	D	0.09		E200.8	01/21/22 19:22 / jcg
Arsenic	ND	mg/L		0.001		E200.8	01/21/22 19:22 / jcg
Beryllium	ND	mg/L		0.001		E200.8	01/21/22 19:22 / jcg
Cadmium	0.001	mg/L		0.001		E200.8	01/20/22 02:46 / jcg
Cobalt	0.215	mg/L		0.005		E200.8	01/21/22 19:22 / jcg
Lead	ND	mg/L		0.001		E200.8	01/20/22 02:46 / jcg
Manganese	5.30	mg/L	D	0.004		E200.8	01/21/22 19:22 / jcg
Molybdenum	ND	mg/L		0.001		E200.8	01/21/22 19:22 / jcg
Nickel	0.248	mg/L		0.005		E200.8	01/21/22 19:22 / jcg
Selenium	0.069	mg/L		0.001		E200.8	01/20/22 02:46 / jcg
Uranium	0.0012	mg/L	D	0.0005		E200.8	01/25/22 12:09 / jcg
Vanadium	ND	mg/L		0.01		E200.8	01/21/22 19:22 / jcg
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	2.3	pCi/L				E900.1	01/21/22 09:12 / trs
Gross Alpha minus Rn & U Precision (±)	1	pCi/L				E900.1	01/21/22 09:12 / trs
Gross Alpha minus Rn & U MDC	1	pCi/L				E900.1	01/21/22 09:12 / trs
Lead 210	0.5	pCi/L	U			E909.0	01/21/22 04:10 / hat
Lead 210 precision (±)	0.5	pCi/L				E909.0	01/21/22 04:10 / hat
Lead 210 MDC	0.9	pCi/L				E909.0	01/21/22 04:10 / hat
Radium 226	1.0	pCi/L				E903.0	01/26/22 11:30 / kdk
Radium 226 precision (±)	0.3	pCi/L				E903.0	01/26/22 11:30 / kdk
Radium 226 MDC	0.2	pCi/L				E903.0	01/26/22 11:30 / kdk
Radium 228	2.2	pCi/L				RA-05	01/20/22 12:15 / trs
Radium 228 precision (±)	0.8	pCi/L				RA-05	01/20/22 12:15 / trs
Radium 228 MDC	1.2	pCi/L				RA-05	01/20/22 12:15 / trs

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
H - Analysis performed past the method holding time



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC- Zone 1 & Zone 3
Lab ID: C22010406-003
Client Sample ID: EPA-7

Report Date: 02/16/22
Collection Date: 01/10/22 13:24
Date Received: 01/13/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Radium 226 + Radium 228	3.3	pCi/L				A7500-RA	01/27/22 15:26 / dmf
Radium 226 + Radium 228 precision (±)	0.9	pCi/L				A7500-RA	01/27/22 15:26 / dmf
Radium 226 + Radium 228 MDC	1.2	pCi/L				A7500-RA	01/27/22 15:26 / dmf
Thorium 230	-0.05	pCi/L	U			A7500-U C	01/19/22 14:02 / sec
Thorium 230 precision (±)	0.08	pCi/L				A7500-U C	01/19/22 14:02 / sec
Thorium 230 MDC	0.2	pCi/L				A7500-U C	01/19/22 14:02 / sec
DATA QUALITY							
Solids, Total Dissolved - Calculated	6790	mg/L		1.00		A1030 E	01/21/22 08:47 / jlw
A/C Balance	-0.83	%				A1030 E	01/21/22 08:47 / jlw
Anions	109	meq/L				A1030 E	01/21/22 08:47 / jlw
Cations	107	meq/L				A1030 E	01/21/22 08:47 / jlw
TDS Ratio	1.10	unitless				A1030 E	01/21/22 08:47 / jlw
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		1.0		E624.1	01/19/22 17:51 / etad
Bromoform	ND	ug/L		2.0		E624.1	01/19/22 17:51 / etad
Chlorodibromomethane	ND	ug/L		1.0		E624.1	01/19/22 17:51 / etad
Chloroform	1.5	ug/L		1.0		E624.1	01/19/22 17:51 / etad
Trihalomethanes, Total	1.5	ug/L		0.50		E624.1	02/03/22 09:28 / jlw
Surr: 1,2-Dichloroethane-d4	101	%REC		73-122		E624.1	01/19/22 17:51 / etad
Surr: p-Bromofluorobenzene	102	%REC		79-119		E624.1	01/19/22 17:51 / etad
Surr: Toluene-d8	98.0	%REC		80-120		E624.1	01/19/22 17:51 / etad

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 1 and Zone 3
Lab ID: C22040142-004
Client Sample ID: EPA-7

Report Date: 06/03/22
Collection Date: 03/31/22 12:40
Date Received: 04/05/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	397	mg/L		5		A2320 B	04/07/22 16:22 / nts
Chloride	212	mg/L	D	5		E300.0	04/09/22 16:30 / dmb
Sulfate	4350	mg/L	D	20		E300.0	04/09/22 16:30 / dmb
Calcium	478	mg/L	D	3		E200.7	04/08/22 19:49 / erc
Magnesium	895	mg/L		1		E200.7	04/08/22 19:49 / erc
Potassium	10	mg/L	D	2		E200.7	04/08/22 19:49 / erc
Sodium	319	mg/L	D	5		E200.7	04/08/22 19:49 / erc
PHYSICAL PROPERTIES							
pH	6.2	s.u.	H	0.1		A4500-H B	04/06/22 11:57 / mnm
pH Measurement Temp	15.3	°C				A4500-H B	04/06/22 11:57 / mnm
Solids, Total Dissolved TDS @ 180 C	7430	mg/L	D	100		A2540 C	04/06/22 14:59 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	83.2	mg/L	D	0.5		E353.2	04/06/22 12:15 / nts
Nitrogen, Ammonia as N	ND	mg/L		0.05		E350.1	04/07/22 16:19 / nts
METALS, TOTAL							
Aluminum	0.42	mg/L	D	0.04		E200.8	04/20/22 00:35 / jcg
Arsenic	ND	mg/L	D	0.003		E200.8	04/16/22 06:22 / jcg
Beryllium	ND	mg/L		0.001		E200.8	04/20/22 00:35 / jcg
Cadmium	0.002	mg/L		0.001		E200.8	04/16/22 06:22 / jcg
Cobalt	0.228	mg/L		0.005		E200.8	04/20/22 00:35 / jcg
Lead	ND	mg/L		0.001		E200.8	04/20/22 00:35 / jcg
Manganese	6.27	mg/L	D	0.007		E200.8	04/16/22 06:22 / jcg
Molybdenum	ND	mg/L		0.001		E200.8	04/16/22 06:22 / jcg
Nickel	0.257	mg/L		0.005		E200.8	04/20/22 00:35 / jcg
Selenium	0.073	mg/L	D	0.001		E200.8	04/16/22 06:22 / jcg
Uranium	ND	mg/L	D	0.003		E200.8	04/16/22 06:22 / jcg
Vanadium	ND	mg/L		0.01		E200.8	04/16/22 06:22 / jcg
DATA QUALITY							
Solids, Total Dissolved - Calculated	6830	mg/L		1.00		A1030 E	04/11/22 20:56 / tif
A/C Balance	1.20	%				A1030 E	04/11/22 20:56 / tif
Anions	109	meq/L				A1030 E	04/11/22 20:56 / tif
Cations	112	meq/L				A1030 E	04/11/22 20:56 / tif
TDS Ratio	1.09	unitless				A1030 E	04/11/22 20:56 / tif
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	2.0	pCi/L				E900.1	04/12/22 15:02 / kdk
Gross Alpha minus Rn & U Precision (±)	0.7	pCi/L				E900.1	04/12/22 15:02 / kdk
Gross Alpha minus Rn & U MDC	0.7	pCi/L				E900.1	04/12/22 15:02 / kdk
Lead 210	-0.9	pCi/L	U			E909.0	04/10/22 18:01 / hat
Lead 210 precision (±)	0.5	pCi/L				E909.0	04/10/22 18:01 / hat

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
H - Analysis performed past the method holding time



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 1 and Zone 3
Lab ID: C22040142-004
Client Sample ID: EPA-7

Report Date: 06/03/22
Collection Date: 03/31/22 12:40
Date Received: 04/05/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Lead 210 MDC	0.9	pCi/L				E909.0	04/10/22 18:01 / hat
Radium 226	0.9	pCi/L				E903.0	04/17/22 10:41 / trs
Radium 226 precision (±)	0.2	pCi/L				E903.0	04/17/22 10:41 / trs
Radium 226 MDC	0.2	pCi/L				E903.0	04/17/22 10:41 / trs
Radium 228	1.9	pCi/L				RA-05	04/12/22 14:41 / trs
Radium 228 precision (±)	1	pCi/L				RA-05	04/12/22 14:41 / trs
Radium 228 MDC	1.2	pCi/L				RA-05	04/12/22 14:41 / trs
Radium 226 + Radium 228	2.8	pCi/L				A7500-RA	04/18/22 11:57 / dmf
Radium 226 + Radium 228 precision (±)	1	pCi/L				A7500-RA	04/18/22 11:57 / dmf
Radium 226 + Radium 228 MDC	1.2	pCi/L				A7500-RA	04/18/22 11:57 / dmf
Thorium 230	-0.01	pCi/L		U		A7500-U C	04/13/22 13:44 / sec
Thorium 230 precision (±)	0.07	pCi/L				A7500-U C	04/13/22 13:44 / sec
Thorium 230 MDC	0.1	pCi/L				A7500-U C	04/13/22 13:44 / sec
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		1.0		E624.1	04/13/22 15:58 / etad
Bromoform	ND	ug/L		2.0		E624.1	04/13/22 15:58 / etad
Chlorodibromomethane	ND	ug/L		1.0		E624.1	04/13/22 15:58 / etad
Chloroform	0.63	ug/L		1.0		E624.1	04/13/22 15:58 / etad
Trihalomethanes, Total	0.63	ug/L		0.50		E624.1	04/27/22 18:25 / tlf
Surr: 1,2-Dichloroethane-d4	98.0	%REC		73-122		E624.1	04/13/22 15:58 / etad
Surr: p-Bromofluorobenzene	96.0	%REC		79-119		E624.1	04/13/22 15:58 / etad
Surr: Toluene-d8	99.0	%REC		80-120		E624.1	04/13/22 15:58 / etad

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
U - Not detected at Minimum Detectable Concentration (MDC)



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Guideline 8: Sweetwater					
Well ID:		EPA-7	EPA-7	EPA-7	EPA-7
Collection Date:		3/31/2022	1/10/2022	10/4/2021	7/12/2021
Receive Date:		4/5/2022	1/13/2022	10/6/2021	7/14/2021
Report Date:		6/3/2022	2/16/2022	11/19/2021	8/13/2021
Analyte	Units	C22040142-004	C22010406-003	C21100250-004	C21070550-001
Bicarbonate as HCO ₃	mg/L	397	412	422	441
Calcium	mg/L	478	512	443	499
Chloride	mg/L	212	219	238	249
Magnesium	mg/L	895	826	775	886
Potassium	mg/L	10	10	12	11
Sodium	mg/L	319	310	295	343
Sulfate	mg/L	4350	4310	4700	4630
pH	s.u.	6.2	6.3	6.2	6.2
pH Measurement Temp	°C	15.3	11.8	16.7	12.6
Solids, Total Dissolved TDS @ 180 C	mg/L	7430	7460	7300	7390
Solids, Total Dissolved - Calculated	mg/L	6830	6790	6670	7250
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	83.2	88	83.0	91.0
Aluminum	mg/L	0.42	0.30	0.23	0.40
Arsenic	mg/L	ND(0.003)	ND(0.001)	ND(0.001)	ND(0.001)
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	0.002	0.001	0.001	0.001
Cobalt	mg/L	0.247	0.215	0.202	0.173
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	6.27	5.30	5.40	4.74
Molybdenum	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Nickel	mg/L	0.287	0.248	0.228	0.204
Selenium	mg/L	0.073	0.069	0.086	0.090
Uranium	mg/L	ND(0.003)	0.0012	0.0013	0.0013
Vanadium	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
A/C Balance	%	1.20	-0.83	-5.89	-1.81
Anions	meq/L	109	109	111	117
Cations	meq/L	112	107	99.0	113
TDS Ratio	unitless	1.09	1.10	1.09	1.02
Gross Alpha minus Rn & U	pCi/L	2.0	2.3	1.1	1.8
Gross Alpha minus Rn & U MDC	pCi/L	0.7	1	0.9	1.1
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.7	1	0.4	0.8
Lead 210	pCi/L	-0.9	0.5	0.5	0.3
Lead 210 MDC	pCi/L	0.9	0.9	1.0	0.8
Lead 210 precision (±)	pCi/L	0.5	0.5	0.6	0.5
Radium 226	pCi/L	0.9	1.0	1	2.1
Radium 226 MDC	pCi/L	0.2	0.2	0.2	0.1
Radium 226 precision (±)	pCi/L	0.2	0.3	0.2	0.5
Radium 228	pCi/L	1.9	2.2	1.4	0.5
Radium 228 MDC	pCi/L	1.2	1.2	1.6	1.1
Radium 228 precision (±)	pCi/L	1	0.8	1.1	0.7
Thorium 230	pCi/L	-0.01	-0.05	0.04	-0.01
Thorium 230 MDC	pCi/L	0.1	0.2	0.1	0.1
Thorium 230 precision (±)	pCi/L	0.07	0.08	0.06	0.06
Bromodichloromethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.50)
Bromoform	ug/L	ND(2.0)	ND(2.0)	ND(2.0)	ND(0.50)
Chlorodibromomethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.50)
Chloroform	ug/L	ND(1.0)	1.5	1.7	ND(0.50)
Trihalomethanes, Total	ug/L	0.63	1.5	1.7	ND(0.50)

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

QUARTERLY SAMPLING
SEMI-ANNUAL GROUND WATER MONITORING REPORT
JANUARY TO JUNE OF 2022

ZONE-3

*517

EPA-14

*711

*613

*708

EPA-13

717

719

LEVELS ONLY

EPA-9

702

710

712

713

714

701

706

707

402

446

424

420

NOTE: *POINT OF COMPLIANCE WELLS
WATER LEVEL ONLY IS IN FIELD DATA SHEET

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC
Lab ID: C22010408-006
Client Sample ID: 517

Report Date: 02/16/22
Collection Date: 01/11/22 09:25
Date Received: 01/13/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Acidity, Total as CaCO ₃	608	mg/L				A2310 B	01/24/22 10:51 / nts
Bicarbonate as HCO ₃	ND	mg/L		5		A2320 B	01/17/22 15:24 / kjp
Chloride	26	mg/L	D	2		E300.0	01/15/22 02:16 / dmb
Sulfate	4200	mg/L	D	8		E300.0	01/15/22 02:16 / dmb
Calcium	425	mg/L	D	3		E200.8	01/17/22 19:56 / jcg
Magnesium	540	mg/L		1		E200.8	01/17/22 19:56 / jcg
Potassium	7	mg/L		1		E200.8	01/17/22 19:56 / jcg
Sodium	135	mg/L	D	2		E200.8	01/17/22 19:56 / jcg
PHYSICAL PROPERTIES							
pH	3.1	s.u.	H	0.1		A4500-H B	01/14/22 11:50 / kjp
pH Measurement Temp	15.2	°C				A4500-H B	01/14/22 11:50 / kjp
Solids, Total Dissolved TDS @ 180 C	6290	mg/L	D	40		A2540 C	01/14/22 12:24 / kjp
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.05		E353.2	01/14/22 16:43 / nts
Nitrogen, Ammonia as N	5.6	mg/L	D	0.2		E350.1	01/14/22 14:38 / nts
METALS, TOTAL							
Aluminum	20.0	mg/L	D	0.09		E200.8	01/20/22 04:05 / jcg
Arsenic	0.004	mg/L		0.001		E200.8	01/20/22 04:05 / jcg
Beryllium	0.019	mg/L		0.001		E200.8	01/20/22 04:05 / jcg
Cadmium	0.005	mg/L		0.001		E200.8	01/20/22 04:05 / jcg
Cobalt	0.763	mg/L		0.005		E200.8	01/20/22 04:05 / jcg
Lead	0.023	mg/L		0.001		E200.8	01/20/22 04:05 / jcg
Manganese	12.3	mg/L	D	0.006		E200.8	01/20/22 04:05 / jcg
Molybdenum	ND	mg/L		0.001		E200.8	01/21/22 20:22 / jcg
Nickel	0.730	mg/L		0.005		E200.8	01/20/22 04:05 / jcg
Selenium	0.001	mg/L		0.001		E200.8	01/20/22 04:05 / jcg
Uranium	0.362	mg/L	D	0.001		E200.8	01/20/22 04:05 / jcg
Vanadium	ND	mg/L		0.01		E200.8	01/20/22 04:05 / jcg
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	20.3	pCi/L				E900.1	01/21/22 11:05 / trs
Gross Alpha minus Rn & U Precision (±)	4.2	pCi/L				E900.1	01/21/22 11:05 / trs
Gross Alpha minus Rn & U MDC	1	pCi/L				E900.1	01/21/22 11:05 / trs
Lead 210	1.1	pCi/L				E909.0	01/22/22 06:47 / hat
Lead 210 precision (±)	0.7	pCi/L				E909.0	01/22/22 06:47 / hat
Lead 210 MDC	0.9	pCi/L				E909.0	01/22/22 06:47 / hat
Radium 226	4.4	pCi/L				E903.0	01/26/22 13:40 / kdk
Radium 226 precision (±)	0.9	pCi/L				E903.0	01/26/22 13:40 / kdk
Radium 226 MDC	0.2	pCi/L				E903.0	01/26/22 13:40 / kdk
Radium 228	6.8	pCi/L				RA-05	01/20/22 13:49 / trs
Radium 228 precision (±)	1.6	pCi/L				RA-05	01/20/22 13:49 / trs

Report RL - Analyte Reporting Limit
Definitions: QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
H - Analysis performed past the method holding time



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC
Lab ID: C22010408-006
Client Sample ID: 517

Report Date: 02/16/22
Collection Date: 01/11/22 09:25
Date Received: 01/13/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Radium 228 MDC	1.4	pCi/L				RA-05	01/20/22 13:49 / trs
Radium 226 + Radium 228	11.2	pCi/L				A7500-RA	01/27/22 15:26 / dmf
Radium 226 + Radium 228 precision (±)	1.8	pCi/L				A7500-RA	01/27/22 15:26 / dmf
Radium 226 + Radium 228 MDC	1.4	pCi/L				A7500-RA	01/27/22 15:26 / dmf
Thorium 230	12.7	pCi/L				A7500-U C	01/20/22 14:21 / sec
Thorium 230 precision (±)	2.4	pCi/L				A7500-U C	01/20/22 14:21 / sec
Thorium 230 MDC	0.3	pCi/L				A7500-U C	01/20/22 14:21 / sec
DATA QUALITY							
Solids, Total Dissolved - Calculated	5360	mg/L		1.00		A1030 E	01/24/22 16:16 / jlw
A/C Balance	-2.47	%				A1030 E	01/24/22 16:16 / jlw
Anions	88.5	meq/L				A1030 E	01/24/22 16:16 / jlw
Cations	84.2	meq/L				A1030 E	01/24/22 16:16 / jlw
TDS Ratio	1.17	unitless				A1030 E	01/24/22 16:16 / jlw
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		1.0		E624.1	01/19/22 14:58 / etad
Bromoform	ND	ug/L		2.0		E624.1	01/19/22 14:58 / etad
Chlorodibromomethane	ND	ug/L		1.0		E624.1	01/19/22 14:58 / etad
Chloroform	4.9	ug/L		1.0		E624.1	01/19/22 14:58 / etad
Trihalomethanes, Total	4.9	ug/L		0.50		E624.1	02/03/22 09:28 / jlw
Surr: 1,2-Dichloroethane-d4	102	%REC		73-122		E624.1	01/19/22 14:58 / etad
Surr: p-Bromofluorobenzene	99.0	%REC		79-119		E624.1	01/19/22 14:58 / etad
Surr: Toluene-d8	98.0	%REC		80-120		E624.1	01/19/22 14:58 / etad

Report
Definitions: RL - Analyte Reporting Limit
QCL - Quality Control Limit

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 3
Lab ID: C22040188-001
Client Sample ID: 517

Report Date: 04/29/22
Collection Date: 04/04/22 09:28
Date Received: 04/06/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Acidity, Total as CaCO ₃	625	mg/L				A2310 B	04/13/22 14:27 / nts
Bicarbonate as HCO ₃	ND	mg/L		5		A2320 B	04/07/22 17:58 / nts
Chloride	26	mg/L	D	2		E300.0	04/10/22 01:08 / dmb
Sulfate	4140	mg/L	D	8		E300.0	04/10/22 01:08 / dmb
Calcium	401	mg/L		1		E200.8	04/19/22 02:30 / jcg
Magnesium	546	mg/L		1		E200.8	04/15/22 21:56 / jcg
Potassium	8	mg/L		1		E200.8	04/15/22 21:56 / jcg
Sodium	137	mg/L		1		E200.8	04/15/22 21:56 / jcg
PHYSICAL PROPERTIES							
pH	3.0	s.u.	H	0.1		A4500-H B	04/08/22 10:23 / mnm
pH Measurement Temp	11.5	°C				A4500-H B	04/08/22 10:23 / mnm
Solids, Total Dissolved TDS @ 180 C	6250	mg/L	D	40		A2540 C	04/08/22 14:32 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.05		E353.2	04/08/22 11:47 / nts
Nitrogen, Ammonia as N	5.6	mg/L	D	0.2		E350.1	04/07/22 16:06 / nts
METALS, TOTAL							
Aluminum	19	mg/L	D	2		E200.8	04/22/22 22:48 / jcg
Arsenic	0.008	mg/L		0.001		E200.8	04/20/22 02:41 / jcg
Beryllium	0.021	mg/L		0.001		E200.8	04/20/22 02:41 / jcg
Cadmium	0.004	mg/L		0.001		E200.8	04/20/22 02:41 / jcg
Cobalt	0.784	mg/L		0.005		E200.8	04/20/22 02:41 / jcg
Lead	0.014	mg/L		0.001		E200.8	04/20/22 02:41 / jcg
Manganese	13.3	mg/L	D	0.002		E200.7	04/19/22 17:56 / erc
Molybdenum	ND	mg/L		0.001		E200.8	04/22/22 22:53 / jcg
Nickel	0.75	mg/L	D	0.05		E200.7	04/19/22 17:56 / erc
Selenium	0.001	mg/L		0.001		E200.8	04/20/22 02:41 / jcg
Uranium	0.360	mg/L	D	0.0005		E200.8	04/20/22 02:41 / jcg
Vanadium	ND	mg/L		0.01		E200.8	04/20/22 02:41 / jcg
DATA QUALITY							
Solids, Total Dissolved - Calculated	5260	mg/L		1.00		A1030 E	04/19/22 14:04 / tlf
A/C Balance	-1.88	%				A1030 E	04/19/22 14:04 / tlf
Anions	87.2	meq/L				A1030 E	04/19/22 14:04 / tlf
Cations	84.0	meq/L				A1030 E	04/19/22 14:04 / tlf
TDS Ratio	1.19	unitless				A1030 E	04/19/22 14:04 / tlf
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	21.4	pCi/L				E900.1	04/15/22 11:08 / kdk
Gross Alpha minus Rn & U Precision (±)	4.4	pCi/L				E900.1	04/15/22 11:08 / kdk
Gross Alpha minus Rn & U MDC	1	pCi/L				E900.1	04/15/22 11:08 / kdk
Lead 210	1.4	pCi/L				E909.0	04/15/22 03:21 / hat

Report RL - Analyte Reporting Limit
Definitions: QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
H - Analysis performed past the method holding time



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 3
Lab ID: C22040188-001
Client Sample ID: 517

Report Date: 04/29/22
Collection Date: 04/04/22 09:28
Date Received: 04/06/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Lead 210 precision (±)	0.7	pCi/L				E909.0	04/15/22 03:21 / hat
Lead 210 MDC	0.9	pCi/L				E909.0	04/15/22 03:21 / hat
Radium 226	7.2	pCi/L				E903.0	04/19/22 18:11 / kdk
Radium 226 precision (±)	1.4	pCi/L				E903.0	04/19/22 18:11 / kdk
Radium 226 MDC	0.2	pCi/L				E903.0	04/19/22 18:11 / kdk
Radium 228	6.0	pCi/L				RA-05	04/14/22 13:49 / trs
Radium 228 precision (±)	1.3	pCi/L				RA-05	04/14/22 13:49 / trs
Radium 228 MDC	1.1	pCi/L				RA-05	04/14/22 13:49 / trs
Radium 226 + Radium 228	13.2	pCi/L				A7500-RA	04/21/22 10:26 / dmf
Radium 226 + Radium 228 precision (±)	2.0	pCi/L				A7500-RA	04/21/22 10:26 / dmf
Radium 226 + Radium 228 MDC	1.2	pCi/L				A7500-RA	04/21/22 10:26 / dmf
Thorium 230	15.5	pCi/L				A7500-U C	04/18/22 13:49 / sec
Thorium 230 precision (±)	2.9	pCi/L				A7500-U C	04/18/22 13:49 / sec
Thorium 230 MDC	0.2	pCi/L				A7500-U C	04/18/22 13:49 / sec
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		1.0		E624.1	04/15/22 21:34 / etad
Bromoform	ND	ug/L		2.0		E624.1	04/15/22 21:34 / etad
Chlorodibromomethane	ND	ug/L		1.0		E624.1	04/15/22 21:34 / etad
Chloroform	3.4	ug/L		1.0		E624.1	04/15/22 21:34 / etad
Trihalomethanes, Total	3.4	ug/L		0.50		E624.1	04/27/22 18:25 / tlf
Surr: 1,2-Dichloroethane-d4	106	%REC		73-122		E624.1	04/15/22 21:34 / etad
Surr: p-Bromofluorobenzene	101	%REC		79-119		E624.1	04/15/22 21:34 / etad
Surr: Toluene-d8	103	%REC		80-120		E624.1	04/15/22 21:34 / etad

Report RL - Analyte Reporting Limit
Definitions: QCL - Quality Control Limit

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)



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Guideline 8: Sweetwater

Well ID:		517	517	517	517
Collection Date:		4/4/2022	1/11/2022	10/5/2021	7/13/2021
Receive Date:		4/6/2022	1/13/2022	10/7/2021	7/15/2021
Report Date:		4/29/2022	2/16/2022	11/27/2021	8/13/2021
Analyte	Units	C22040188-001	C22010408-006	C21100328-001	C21070606-001
Acidity, Total as CaCO ₃	mg/L	625	608	670	650
Bicarbonate as HCO ₃	mg/L	ND(5)	ND(5)	ND(5)	ND(5)
Calcium	mg/L	401	425	453	464
Chloride	mg/L	26	26	31	32
Magnesium	mg/L	546	540	629	616
Potassium	mg/L	8	7	10	12
Sodium	mg/L	137	135	151	151
Sulfate	mg/L	4140	4200	4340	4480
pH	s.u.	3.0	3.1	3.0	3.1
pH Measurement Temp	°C	11.5	15.2	14.1	11.7
Solids, Total Dissolved TDS @ 180 C	mg/L	6250	6290	6280	6420
Solids, Total Dissolved - Calculated	mg/L	5260	5360	5610	5770
Nitrogen, Ammonia as N	mg/L	5.6	5.6	5.9	5.9
Nitrogen, Nitrate+Nitrite as N	mg/L	ND(0.05)	ND(0.05)	0.06	0.01
Aluminum	mg/L	19	20.0	22.1	18.6
Arsenic	mg/L	0.008	0.004	0.005	0.004
Beryllium	mg/L	0.021	0.019	0.022	0.023
Cadmium	mg/L	0.004	0.005	0.005	0.004
Cobalt	mg/L	0.784	0.763	0.775	0.750
Lead	mg/L	0.014	0.023	0.013	0.015
Manganese	mg/L	13.3	12.3	12.7	12.4
Molybdenum	mg/L	ND(0.001)	ND(0.001)	0.001	ND(0.001)
Nickel	mg/L	0.75	0.730	0.673	0.677
Selenium	mg/L	0.001	0.001	ND(0.002)	ND(0.001)
Uranium	mg/L	0.360	0.362	0.430	0.400
Vanadium	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
A/C Balance	%	-1.88	-2.47	1.86	0
Anions	meq/L	87.2	88.5	91.5	94.2
Cations	meq/L	84.0	84.2	94.9	94.2
TDS Ratio	unitless	1.19	1.17	1.12	1.11
Gross Alpha minus Rn & U	pCi/L	21.4	20.3	28.2	29.1
Gross Alpha minus Rn & U MDC	pCi/L	1	1	0.9	1.3
Gross Alpha minus Rn & U Precision (±)	pCi/L	4.4	4.2	5.7	6.0
Lead 210	pCi/L	1.4	1.1	1.4	2.3
Lead 210 MDC	pCi/L	0.9	0.9	1.1	0.9
Lead 210 precision (±)	pCi/L	0.7	0.7	0.8	0.9
Radium 226	pCi/L	7.2	4.4	7.5	6.3
Radium 226 MDC	pCi/L	0.2	0.2	0.2	0.2
Radium 226 precision (±)	pCi/L	1.4	0.9	1.5	1.3
Radium 228	pCi/L	6.0	6.8	8.4	6.0
Radium 228 MDC	pCi/L	1.1	1.4	1	0.9
Radium 228 precision (±)	pCi/L	1.3	1.6	1.7	1.3
Thorium 230	pCi/L	15.5	12.7	14.2	16.4
Thorium 230 MDC	pCi/L	0.2	0.3	0.6	0.2
Thorium 230 precision (±)	pCi/L	2.9	2.4	2.7	3.1
Bromodichloromethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.50)
Bromoform	ug/L	ND(2.0)	ND(2.0)	ND(2.0)	ND(0.50)
Chlorodibromomethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.50)
Chloroform	ug/L	3.4	4.9	4.1	2.7
Trihalomethanes, Total	ug/L	3.4	4.9	4.1	2.7

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC
Lab ID: C22010408-002
Client Sample ID: EPA-14

Report Date: 02/16/22
Collection Date: 01/11/22 10:47
Date Received: 01/13/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	120	mg/L		5		A2320 B	01/17/22 15:01 / kjp
Chloride	45	mg/L		1		E300.0	01/14/22 23:42 / dmb
Sulfate	2400	mg/L	D	4		E300.0	01/14/22 23:42 / dmb
Calcium	469	mg/L		1		E200.8	01/17/22 19:38 / jcg
Magnesium	255	mg/L		1		E200.7	01/14/22 20:29 / srm
Potassium	9	mg/L		1		E200.7	01/14/22 20:29 / srm
Sodium	125	mg/L		1		E200.8	01/17/22 19:38 / jcg
PHYSICAL PROPERTIES							
pH	6.0	s.u.	H	0.1		A4500-H B	01/14/22 11:30 / kjp
pH Measurement Temp	13.4	°C				A4500-H B	01/14/22 11:30 / kjp
Solids, Total Dissolved TDS @ 180 C	3770	mg/L	D	40		A2540 C	01/14/22 12:23 / kjp
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	0.11	mg/L		0.05		E353.2	01/14/22 16:33 / nts
Nitrogen, Ammonia as N	6.1	mg/L	D	0.5		E350.1	01/14/22 14:33 / nts
METALS, TOTAL							
Aluminum	0.23	mg/L	D	0.09		E200.8	01/20/22 03:46 / jcg
Arsenic	ND	mg/L		0.001		E200.8	01/20/22 03:46 / jcg
Beryllium	0.001	mg/L		0.001		E200.8	01/20/22 03:46 / jcg
Cadmium	0.002	mg/L		0.001		E200.8	01/20/22 03:46 / jcg
Cobalt	0.218	mg/L		0.005		E200.8	01/20/22 03:46 / jcg
Lead	ND	mg/L		0.001		E200.8	01/20/22 03:46 / jcg
Manganese	3.91	mg/L	D	0.004		E200.8	01/20/22 03:46 / jcg
Molybdenum	0.025	mg/L	D	0.003		E200.8	01/20/22 03:46 / jcg
Nickel	0.164	mg/L		0.005		E200.8	01/20/22 03:46 / jcg
Selenium	ND	mg/L		0.001		E200.8	01/20/22 03:46 / jcg
Uranium	0.025	mg/L	D	0.001		E200.8	01/20/22 03:46 / jcg
Vanadium	ND	mg/L		0.01		E200.8	01/20/22 03:46 / jcg
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	6.2	pCi/L				E900.1	01/21/22 09:12 / trs
Gross Alpha minus Rn & U Precision (±)	1.6	pCi/L				E900.1	01/21/22 09:12 / trs
Gross Alpha minus Rn & U MDC	1	pCi/L				E900.1	01/21/22 09:12 / trs
Lead 210	0.9	pCi/L	U			E909.0	01/21/22 18:54 / hat
Lead 210 precision (±)	0.6	pCi/L				E909.0	01/21/22 18:54 / hat
Lead 210 MDC	0.9	pCi/L				E909.0	01/21/22 18:54 / hat
Radium 226	4.4	pCi/L				E903.0	01/26/22 13:39 / kdk
Radium 226 precision (±)	0.9	pCi/L				E903.0	01/26/22 13:39 / kdk
Radium 226 MDC	0.2	pCi/L				E903.0	01/26/22 13:39 / kdk
Radium 228	7.4	pCi/L				RA-05	01/20/22 13:49 / trs
Radium 228 precision (±)	1.7	pCi/L				RA-05	01/20/22 13:49 / trs
Radium 228 MDC	1.4	pCi/L				RA-05	01/20/22 13:49 / trs

Report Definitions:
 RL - Analyte Reporting Limit
 QCL - Quality Control Limit
 D - Reporting Limit (RL) increased due to sample matrix
 U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
 ND - Not detected at the Reporting Limit (RL)
 H - Analysis performed past the method holding time



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC
Lab ID: C22010408-002
Client Sample ID: EPA-14

Report Date: 02/16/22
Collection Date: 01/11/22 10:47
Date Received: 01/13/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Radium 226 + Radium 228	11.8	pCi/L				A7500-RA	01/27/22 15:26 / dmf
Radium 226 + Radium 228 precision (±)	1.9	pCi/L				A7500-RA	01/27/22 15:26 / dmf
Radium 226 + Radium 228 MDC	1.4	pCi/L				A7500-RA	01/27/22 15:26 / dmf
Thorium 230	0.008	pCi/L	U			A7500-U C	01/19/22 14:02 / sec
Thorium 230 precision (±)	0.03	pCi/L				A7500-U C	01/19/22 14:02 / sec
Thorium 230 MDC	0.06	pCi/L				A7500-U C	01/19/22 14:02 / sec
DATA QUALITY							
Solids, Total Dissolved - Calculated	3370	mg/L		1.00		A1030 E	01/19/22 07:32 / tlf
A/C Balance	-2.65	%				A1030 E	01/19/22 07:32 / tlf
Anions	53.2	meq/L				A1030 E	01/19/22 07:32 / tlf
Cations	50.5	meq/L				A1030 E	01/19/22 07:32 / tlf
TDS Ratio	1.12	unitless				A1030 E	01/19/22 07:32 / tlf
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		1.0		E624.1	01/19/22 13:33 / etad
Bromoform	ND	ug/L		2.0		E624.1	01/19/22 13:33 / etad
Chlorodibromomethane	ND	ug/L		1.0		E624.1	01/19/22 13:33 / etad
Chloroform	0.33	ug/L	J	1.0		E624.1	01/19/22 13:33 / etad
Trihalomethanes, Total	0.33	ug/L	J	0.50		E624.1	02/03/22 09:28 / jlw
Surr: 1,2-Dichloroethane-d4	100	%REC		73-122		E624.1	01/19/22 13:33 / etad
Surr: p-Bromofluorobenzene	101	%REC		79-119		E624.1	01/19/22 13:33 / etad
Surr: Toluene-d8	99.0	%REC		80-120		E624.1	01/19/22 13:33 / etad

**Report
Definitions:**

RL - Analyte Reporting Limit
QCL - Quality Control Limit
J - Estimated value - analyte was present but less than the Reporting Limit (RL)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
U - Not detected at Minimum Detectable Concentration (MDC)



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 1 and Zone 3
Lab ID: C22040142-006
Client Sample ID: EPA-14

Report Date: 06/03/22
Collection Date: 03/31/22 14:13
Date Received: 04/05/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	112	mg/L		5		A2320 B	04/07/22 16:32 / nts
Chloride	48	mg/L		1		E300.0	04/09/22 17:47 / dmb
Sulfate	2480	mg/L	D	4		E300.0	04/09/22 17:47 / dmb
Calcium	479	mg/L		1		E200.7	04/08/22 19:58 / erc
Magnesium	265	mg/L		1		E200.7	04/08/22 19:58 / erc
Potassium	9	mg/L		1		E200.7	04/08/22 19:58 / erc
Sodium	139	mg/L	D	3		E200.7	04/08/22 19:58 / erc
PHYSICAL PROPERTIES							
pH	6.0	s.u.	H	0.1		A4500-H B	04/06/22 12:03 / mnm
pH Measurement Temp	15.8	°C				A4500-H B	04/06/22 12:03 / mnm
Solids, Total Dissolved TDS @ 180 C	3790	mg/L	D	40		A2540 C	04/06/22 14:59 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.05		E353.2	04/06/22 12:18 / nts
Nitrogen, Ammonia as N	7.4	mg/L	D	0.2		E350.1	04/07/22 15:38 / nts
METALS, TOTAL							
Aluminum	1.09	mg/L	D	0.09		E200.8	04/16/22 06:33 / jcg
Arsenic	ND	mg/L		0.001		E200.8	04/16/22 06:33 / jcg
Beryllium	0.003	mg/L		0.001		E200.8	04/16/22 06:33 / jcg
Cadmium	0.002	mg/L		0.001		E200.8	04/16/22 06:33 / jcg
Cobalt	0.284	mg/L		0.005		E200.8	04/16/22 06:33 / jcg
Lead	0.004	mg/L		0.001		E200.8	04/16/22 06:33 / jcg
Manganese	4.67	mg/L	D	0.003		E200.8	04/16/22 06:33 / jcg
Molybdenum	0.029	mg/L		0.001		E200.8	04/16/22 06:33 / jcg
Nickel	0.204	mg/L		0.005		E200.8	04/16/22 06:33 / jcg
Selenium	ND	mg/L		0.001		E200.8	04/16/22 06:33 / jcg
Uranium	0.031	mg/L	D	0.001		E200.8	04/16/22 06:33 / jcg
Vanadium	ND	mg/L		0.01		E200.8	04/16/22 06:33 / jcg
DATA QUALITY							
Solids, Total Dissolved - Calculated	3480	mg/L		1.00		A1030 E	04/11/22 20:56 / tlf
A/C Balance	-2.22	%				A1030 E	04/11/22 20:56 / tlf
Anions	54.9	meq/L				A1030 E	04/11/22 20:56 / tlf
Cations	52.5	meq/L				A1030 E	04/11/22 20:56 / tlf
TDS Ratio	1.09	unitless				A1030 E	04/11/22 20:56 / tlf
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	5.3	pCi/L				E900.1	04/12/22 15:02 / kdk
Gross Alpha minus Rn & U Precision (±)	1.3	pCi/L				E900.1	04/12/22 15:02 / kdk
Gross Alpha minus Rn & U MDC	0.7	pCi/L				E900.1	04/12/22 15:02 / kdk
Lead 210	0.3	pCi/L	U			E909.0	04/11/22 00:39 / hat
Lead 210 precision (±)	0.6	pCi/L				E909.0	04/11/22 00:39 / hat

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
H - Analysis performed past the method holding time



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 1 and Zone 3
Lab ID: C22040142-006
Client Sample ID: EPA-14

Report Date: 06/03/22
Collection Date: 03/31/22 14:13
Date Received: 04/05/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Lead 210 MDC	1.0	pCi/L				E909.0	04/11/22 00:39 / hat
Radium 226	2.5	pCi/L				E903.0	04/17/22 10:41 / trs
Radium 226 precision (±)	0.6	pCi/L				E903.0	04/17/22 10:41 / trs
Radium 226 MDC	0.2	pCi/L				E903.0	04/17/22 10:41 / trs
Radium 228	5.9	pCi/L				RA-05	04/12/22 14:41 / trs
Radium 228 precision (±)	1.4	pCi/L				RA-05	04/12/22 14:41 / trs
Radium 228 MDC	1.2	pCi/L				RA-05	04/12/22 14:41 / trs
Radium 226 + Radium 228	8.5	pCi/L				A7500-RA	04/18/22 11:57 / dmf
Radium 226 + Radium 228 precision (±)	1.5	pCi/L				A7500-RA	04/18/22 11:57 / dmf
Radium 226 + Radium 228 MDC	1.2	pCi/L				A7500-RA	04/18/22 11:57 / dmf
Thorium 230	0.5	pCi/L				A7500-U C	04/19/22 13:07 / sec
Thorium 230 precision (±)	0.2	pCi/L				A7500-U C	04/19/22 13:07 / sec
Thorium 230 MDC	0.1	pCi/L				A7500-U C	04/19/22 13:07 / sec
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		1.0		E624.1	04/13/22 16:41 / etad
Bromoform	ND	ug/L		2.0		E624.1	04/13/22 16:41 / etad
Chlorodibromomethane	ND	ug/L		1.0		E624.1	04/13/22 16:41 / etad
Chloroform	0.73	ug/L	J	1.0		E624.1	04/13/22 16:41 / etad
Trihalomethanes, Total	0.73	ug/L		0.50		E624.1	04/27/22 18:25 / tlf
Surr: 1,2-Dichloroethane-d4	91.0	%REC		73-122		E624.1	04/13/22 16:41 / etad
Surr: p-Bromofluorobenzene	94.0	%REC		79-119		E624.1	04/13/22 16:41 / etad
Surr: Toluene-d8	100	%REC		80-120		E624.1	04/13/22 16:41 / etad

**Report
Definitions:**

RL - Analyte Reporting Limit

QCL - Quality Control Limit

J - Estimated value - analyte was present but less than the Reporting Limit (RL)

MCL - Maximum Contaminant Level

ND - Not detected at the Reporting Limit (RL)



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Guideline 8: Sweetwater

Well ID:		EPA-14	EPA-14	EPA-14	EPA-14
Collection Date:		3/31/2022	1/11/2022	10/4/2021	7/5/2021
Receive Date:		4/5/2022	1/13/2022	10/6/2021	7/7/2021
Report Date:		6/3/2022	2/16/2022	11/19/2021	8/13/2021
Analyte	Units	C22040142-006	C22010408-002	C21100250-006	C21070218-004
Bicarbonate as HCO ₃	mg/L	112	120	102	111
Calcium	mg/L	479	469	443	506
Chloride	mg/L	48	45	45	47
Magnesium	mg/L	265	255	236	290
Potassium	mg/L	9	9	10	9
Sodium	mg/L	139	125	124	146
Sulfate	mg/L	2480	2400	2420	2470
pH	s.u.	6.0	6.0	6.0	5.9
pH Measurement Temp	°C	15.8	13.4	16.3	16.1
Solids, Total Dissolved TDS @ 180 C	mg/L	3790	3770	3710	3770
Solids, Total Dissolved - Calculated	mg/L	3480	3370	3330	3520
Nitrogen, Ammonia as N	mg/L	7.4	6.1	6.6	7.6
Nitrogen, Nitrate+Nitrite as N	mg/L	ND(0.05)	0.11	0.13	0.12
Aluminum	mg/L	1.09	0.23	1.14	2.64
Arsenic	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	0.001
Beryllium	mg/L	0.003	0.001	0.002	0.004
Cadmium	mg/L	0.002	0.002	0.002	0.002
Cobalt	mg/L	0.284	0.218	0.240	0.250
Lead	mg/L	0.004	ND(0.001)	0.003	0.006
Manganese	mg/L	4.67	3.91	4.35	4.56
Molybdenum	mg/L	0.029	0.025	0.030	0.030
Nickel	mg/L	0.204	0.164	0.173	0.188
Selenium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Uranium	mg/L	0.031	0.025	0.0332	0.0362
Vanadium	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
A/C Balance	%	-2.22	-2.65	-5.58	1.46
Anions	meq/L	54.9	53.2	53.3	54.6
Cations	meq/L	52.5	50.5	47.6	56.2
TDS Ratio	unitless	1.09	1.12	1.11	1.07
Gross Alpha minus Rn & U	pCi/L	5.3	6.2	8.5	5.9
Gross Alpha minus Rn & U MDC	pCi/L	0.7	1	0.9	1.4
Gross Alpha minus Rn & U Precision (±)	pCi/L	1.3	1.6	2.0	1.7
Lead 210	pCi/L	0.3	0.9	0.8	1.4
Lead 210 MDC	pCi/L	1.0	0.9	1.0	1
Lead 210 precision (±)	pCi/L	0.6	0.6	0.6	0.8
Radium 226	pCi/L	2.5	4.4	4.1	5.6
Radium 226 MDC	pCi/L	0.2	0.2	0.2	0.2
Radium 226 precision (±)	pCi/L	0.6	0.9	0.9	1.1
Radium 228	pCi/L	5.9	7.4	4.8	6.2
Radium 228 MDC	pCi/L	1.2	1.4	1.7	1
Radium 228 precision (±)	pCi/L	1.4	1.7	1.4	1.4
Thorium 230	pCi/L	0.5	0.008	0.09	0.1
Thorium 230 MDC	pCi/L	0.1	0.06	0.4	0.2
Thorium 230 precision (±)	pCi/L	0.2	0.03	0.2	0.1
Bromodichloromethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromoform	ug/L	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)
Chlorodibromomethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloroform	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trihalomethanes, Total	ug/L	0.73	ND(0.50)	0.89	ND(0.50)

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

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC
Lab ID: C22010408-004
Client Sample ID: 711

Report Date: 02/16/22
Collection Date: 01/11/22 12:33
Date Received: 01/13/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Acidity, Total as CaCO ₃	625	mg/L				A2310 B	01/24/22 10:50 / nts
Bicarbonate as HCO ₃	ND	mg/L		5		A2320 B	01/17/22 15:07 / kjp
Chloride	26	mg/L	D	2		E300.0	01/15/22 00:21 / dmb
Sulfate	4280	mg/L	D	8		E300.0	01/15/22 00:21 / dmb
Calcium	431	mg/L	D	3		E200.8	01/17/22 19:47 / jcg
Magnesium	504	mg/L		1		E200.8	01/17/22 19:47 / jcg
Potassium	9	mg/L		1		E200.8	01/17/22 19:47 / jcg
Sodium	108	mg/L	D	2		E200.8	01/17/22 19:47 / jcg
PHYSICAL PROPERTIES							
pH	3.2	s.u.	H	0.1		A4500-H B	01/14/22 11:36 / kjp
pH Measurement Temp	13.9	°C				A4500-H B	01/14/22 11:36 / kjp
Solids, Total Dissolved TDS @ 180 C	5930	mg/L	D	40		A2540 C	01/14/22 12:23 / kjp
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.05		E353.2	01/14/22 16:36 / nts
Nitrogen, Ammonia as N	1.25	mg/L		0.05		E350.1	01/14/22 14:36 / nts
METALS, TOTAL							
Aluminum	77	mg/L	D	2		E200.8	01/25/22 12:32 / jcg
Arsenic	0.007	mg/L		0.001		E200.8	01/20/22 03:55 / jcg
Beryllium	0.075	mg/L		0.001		E200.8	01/20/22 03:55 / jcg
Cadmium	0.001	mg/L		0.001		E200.8	01/20/22 03:55 / jcg
Cobalt	1.09	mg/L		0.005		E200.8	01/20/22 03:55 / jcg
Lead	0.008	mg/L		0.001		E200.8	01/20/22 03:55 / jcg
Manganese	11.2	mg/L	D	0.004		E200.8	01/20/22 03:55 / jcg
Molybdenum	0.021	mg/L	D	0.003		E200.8	01/20/22 03:55 / jcg
Nickel	1.40	mg/L		0.005		E200.8	01/20/22 03:55 / jcg
Selenium	0.001	mg/L		0.001		E200.8	01/20/22 03:55 / jcg
Uranium	0.790	mg/L	D	0.001		E200.8	01/20/22 03:55 / jcg
Vanadium	ND	mg/L		0.01		E200.8	01/20/22 03:55 / jcg
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	18.2	pCi/L				E900.1	01/21/22 09:12 / trs
Gross Alpha minus Rn & U Precision (±)	3.8	pCi/L				E900.1	01/21/22 09:12 / trs
Gross Alpha minus Rn & U MDC	1	pCi/L				E900.1	01/21/22 09:12 / trs
Lead 210	1.4	pCi/L				E909.0	01/22/22 00:54 / hat
Lead 210 precision (±)	0.7	pCi/L				E909.0	01/22/22 00:54 / hat
Lead 210 MDC	1	pCi/L				E909.0	01/22/22 00:54 / hat
Radium 226	9.9	pCi/L				E903.0	01/26/22 13:40 / kdk
Radium 226 precision (±)	1.9	pCi/L				E903.0	01/26/22 13:40 / kdk
Radium 226 MDC	0.2	pCi/L				E903.0	01/26/22 13:40 / kdk
Radium 228	11.0	pCi/L				RA-05	01/20/22 13:49 / trs
Radium 228 precision (±)	2.2	pCi/L				RA-05	01/20/22 13:49 / trs

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
H - Analysis performed past the method holding time



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC
Lab ID: C22010408-004
Client Sample ID: 711

Report Date: 02/16/22
Collection Date: 01/11/22 12:33
Date Received: 01/13/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Radium 228 MDC	1.4	pCi/L				RA-05	01/20/22 13:49 / trs
Radium 226 + Radium 228	20.9	pCi/L				A7500-RA	01/27/22 15:26 / dmf
Radium 226 + Radium 228 precision (±)	3.0	pCi/L				A7500-RA	01/27/22 15:26 / dmf
Radium 226 + Radium 228 MDC	1.4	pCi/L				A7500-RA	01/27/22 15:26 / dmf
Thorium 230	0.5	pCi/L				A7500-U C	01/19/22 14:02 / sec
Thorium 230 precision (±)	0.2	pCi/L				A7500-U C	01/19/22 14:02 / sec
Thorium 230 MDC	0.2	pCi/L				A7500-U C	01/19/22 14:02 / sec
DATA QUALITY							
Solids, Total Dissolved - Calculated	5400	mg/L		1.00		A1030 E	01/24/22 16:35 / jlw
A/C Balance	-0.31	%				A1030 E	01/24/22 16:35 / jlw
Anions	90.1	meq/L				A1030 E	01/24/22 16:35 / jlw
Cations	89.5	meq/L				A1030 E	01/24/22 16:35 / jlw
TDS Ratio	1.10	unitless				A1030 E	01/24/22 16:35 / jlw
Cation/Anion Balance includes selected metals							
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		1.0		E624.1	01/19/22 14:16 / etad
Bromoform	ND	ug/L		2.0		E624.1	01/19/22 14:16 / etad
Chlorodibromomethane	ND	ug/L		1.0		E624.1	01/19/22 14:16 / etad
Chloroform	0.22	ug/L	J	1.0		E624.1	01/19/22 14:16 / etad
Trihalomethanes, Total	0.22	ug/L	J	0.50		E624.1	02/03/22 09:28 / jlw
Surr: 1,2-Dichloroethane-d4	100	%REC		73-122		E624.1	01/19/22 14:16 / etad
Surr: p-Bromofluorobenzene	100	%REC		79-119		E624.1	01/19/22 14:16 / etad
Surr: Toluene-d8	100	%REC		80-120		E624.1	01/19/22 14:16 / etad

**Report
Definitions:**

RL - Analyte Reporting Limit

QCL - Quality Control Limit

J - Estimated value - analyte was present but less than the Reporting Limit (RL)

MCL - Maximum Contaminant Level

ND - Not detected at the Reporting Limit (RL)



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 1 and Zone 3
Lab ID: C22040142-010
Client Sample ID: 711

Report Date: 06/03/22
Collection Date: 04/01/22 11:45
Date Received: 04/05/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Acidity, Total as CaCO ₃	635	mg/L				A2310 B	04/13/22 14:21 / nts
Bicarbonate as HCO ₃	ND	mg/L		5		A2320 B	04/07/22 16:47 / nts
Chloride	25	mg/L	D	2		E300.0	04/09/22 19:42 / dmb
Sulfate	4240	mg/L	D	8		E300.0	04/09/22 19:42 / dmb
Calcium	431	mg/L		1		E200.7	04/17/22 03:32 / erc
Magnesium	547	mg/L		1		E200.7	04/17/22 03:32 / erc
Potassium	10	mg/L		1		E200.7	04/17/22 03:32 / erc
Sodium	111	mg/L	D	3		E200.7	04/17/22 03:32 / erc
PHYSICAL PROPERTIES							
pH	3.3	s.u.	H	0.1		A4500-H B	04/06/22 12:14 / mnm
pH Measurement Temp	16.3	°C				A4500-H B	04/06/22 12:14 / mnm
Solids, Total Dissolved TDS @ 180 C	5950	mg/L	D	40		A2540 C	04/06/22 15:02 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.05		E353.2	04/06/22 12:22 / nts
Nitrogen, Ammonia as N	1.41	mg/L		0.05		E350.1	04/07/22 15:51 / nts
METALS, TOTAL							
Aluminum	78	mg/L	D	2		E200.8	04/22/22 22:21 / jcg
Arsenic	0.006	mg/L		0.001		E200.8	04/16/22 07:37 / jcg
Beryllium	0.083	mg/L		0.001		E200.8	04/16/22 07:37 / jcg
Cadmium	0.001	mg/L		0.001		E200.8	04/16/22 07:37 / jcg
Cobalt	1.27	mg/L		0.005		E200.8	04/16/22 07:37 / jcg
Lead	0.012	mg/L		0.001		E200.8	04/20/22 01:22 / jcg
Manganese	12.7	mg/L	D	0.006		E200.8	04/16/22 07:37 / jcg
Molybdenum	0.002	mg/L		0.001		E200.8	04/16/22 07:37 / jcg
Nickel	1.59	mg/L		0.005		E200.8	04/16/22 07:37 / jcg
Selenium	0.002	mg/L		0.001		E200.8	04/16/22 07:37 / jcg
Uranium	0.888	mg/L	D	0.001		E200.8	04/16/22 07:37 / jcg
Vanadium	ND	mg/L		0.01		E200.8	04/16/22 07:37 / jcg
DATA QUALITY							
Solids, Total Dissolved - Calculated	5410	mg/L		1.00		A1030 E	04/19/22 18:38 / tlf
A/C Balance	-2.82	%				A1030 E	04/19/22 18:38 / tlf
Anions	89.3	meq/L				A1030 E	04/19/22 18:38 / tlf
Cations	84.4	meq/L				A1030 E	04/19/22 18:38 / tlf
TDS Ratio	1.10	unitless				A1030 E	04/19/22 18:38 / tlf
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	17.2	pCi/L				E900.1	04/12/22 15:02 / kdk
Gross Alpha minus Rn & U Precision (±)	3.5	pCi/L				E900.1	04/12/22 15:02 / kdk
Gross Alpha minus Rn & U MDC	0.7	pCi/L				E900.1	04/12/22 15:02 / kdk
Lead 210	0.4	pCi/L	U			E909.0	04/11/22 12:41 / hat

Report Definitions:
 RL - Analyte Reporting Limit
 QCL - Quality Control Limit
 D - Reporting Limit (RL) increased due to sample matrix
 U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
 ND - Not detected at the Reporting Limit (RL)
 H - Analysis performed past the method holding time



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 1 and Zone 3
Lab ID: C22040142-010
Client Sample ID: 711

Report Date: 06/03/22
Collection Date: 04/01/22 11:45
Date Received: 04/05/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Lead 210 precision (±)	0.6	pCi/L				E909.0	04/11/22 12:41 / hat
Lead 210 MDC	1.0	pCi/L				E909.0	04/11/22 12:41 / hat
Radium 226	8.8	pCi/L				E903.0	04/17/22 12:30 / trs
Radium 226 precision (±)	1.7	pCi/L				E903.0	04/17/22 12:30 / trs
Radium 226 MDC	0.2	pCi/L				E903.0	04/17/22 12:30 / trs
Radium 228	13.2	pCi/L				RA-05	04/12/22 16:15 / trs
Radium 228 precision (±)	2.7	pCi/L				RA-05	04/12/22 16:15 / trs
Radium 228 MDC	1.4	pCi/L				RA-05	04/12/22 16:15 / trs
Radium 226 + Radium 228	22.0	pCi/L				A7500-RA	04/18/22 11:57 / dmf
Radium 226 + Radium 228 precision (±)	3.2	pCi/L				A7500-RA	04/18/22 11:57 / dmf
Radium 226 + Radium 228 MDC	1.4	pCi/L				A7500-RA	04/18/22 11:57 / dmf
Thorium 230	0.5	pCi/L				A7500-U C	04/13/22 13:44 / sec
Thorium 230 precision (±)	0.2	pCi/L				A7500-U C	04/13/22 13:44 / sec
Thorium 230 MDC	0.2	pCi/L				A7500-U C	04/13/22 13:44 / sec
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		1.0		E624.1	04/14/22 03:47 / etad
Bromoform	ND	ug/L		2.0		E624.1	04/14/22 03:47 / etad
Chlorodibromomethane	ND	ug/L		1.0		E624.1	04/14/22 03:47 / etad
Chloroform	ND	ug/L		1.0		E624.1	04/14/22 03:47 / etad
Trihalomethanes, Total	ND	ug/L		0.50		E624.1	04/27/22 18:25 / tlf
Surr: 1,2-Dichloroethane-d4	105	%REC		73-122		E624.1	04/14/22 03:47 / etad
Surr: p-Bromofluorobenzene	97.0	%REC		79-119		E624.1	04/14/22 03:47 / etad
Surr: Toluene-d8	96.0	%REC		80-120		E624.1	04/14/22 03:47 / etad

Report RL - Analyte Reporting Limit
Definitions: QCL - Quality Control Limit

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)



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Guideline 8: Sweetwater					
Well ID:		711	711	711	711
Collection Date:		4/1/2022	1/11/2022	10/5/2021	7/6/2021
Receive Date:		4/5/2022	1/13/2022	10/7/2021	7/8/2021
Report Date:		6/3/2022	2/16/2022	11/27/2021	8/13/2021
Analyte	Units	C22040142-010	C22010408-004	C21100328-003	C21070279-001
Bicarbonate as HCO ₃	mg/L	ND(5)	ND(5)	ND(5)	ND(5)
Calcium	mg/L	431	431	437	435
Chloride	mg/L	25	26	29	28
Magnesium	mg/L	547	504	503	537
Potassium	mg/L	10	9	10	10
Sodium	mg/L	111	108	120	114
Sulfate	mg/L	4240	4280	4470	4150
pH	s.u.	3.3	3.2	3.4	3.2
pH Measurement Temp	°C	16.3	13.9	13.8	11.8
Solids, Total Dissolved TDS @ 180 C	mg/L	5950	5930	5910	5860
Nitrogen, Ammonia as N	mg/L	1.41	1.25	1.28	1.25
Nitrogen, Nitrate+Nitrite as N	mg/L	ND(0.05)	ND(0.05)	0.02	0.06
Aluminum	mg/L	78	77	84.0	61.0
Arsenic	mg/L	0.006	0.007	0.005	0.009
Beryllium	mg/L	0.083	0.075	0.069	0.068
Cadmium	mg/L	0.001	0.001	0.001	ND(0.001)
Cobalt	mg/L	1.27	1.09	1.08	1.06
Lead	mg/L	0.013	0.008	0.007	0.009
Manganese	mg/L	12.7	11.2	11.7	11.1
Molybdenum	mg/L	0.002	0.021	0.005	0.023
Nickel	mg/L	1.59	1.40	1.25	1.25
Selenium	mg/L	0.002	0.001	ND(0.001)	0.001
Uranium	mg/L	0.888	0.790	0.797	0.736
Vanadium	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.02)
A/C Balance	%	-2.82	-0.31	-1.68	-1.93
Anions	meq/L	89.3	90.1	94.1	87.5
Cations	meq/L	84.4	89.5	91.0	84.2
Solids, Total Dissolved - Calculated	mg/L	5410	5400	5570	5280
TDS Ratio	unitless	1.10	1.10	1.06	1.11
Gross Alpha minus Rn & U	pCi/L	17.2	18.2	18.4	7.4
Gross Alpha minus Rn & U MDC	pCi/L	0.7	1	0.9	0.6
Gross Alpha minus Rn & U Precision (±)	pCi/L	3.5	3.8	3.8	1.6
Lead 210	pCi/L	0.4	1.4	1.6	1.0
Lead 210 MDC	pCi/L	1.0	1	1.1	1
Lead 210 precision (±)	pCi/L	0.6	0.7	0.8	0.7
Radium 226	pCi/L	8.8	9.9	8.2	10.9
Radium 226 MDC	pCi/L	0.2	0.2	0.2	0.2
Radium 226 precision (±)	pCi/L	1.7	1.9	1.6	2.1
Radium 228	pCi/L	13.2	11.0	11.0	9.4
Radium 228 MDC	pCi/L	1.4	1.4	1	0.8
Radium 228 precision (±)	pCi/L	2.7	2.2	2.2	1.8
Thorium 230	pCi/L	0.5	0.5	0.7	0.5
Thorium 230 MDC	pCi/L	0.2	0.2	0.2	0.1
Thorium 230 precision (±)	pCi/L	0.2	0.2	0.2	0.1
Bromodichloromethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.50)
Bromoform	ug/L	ND(2.0)	ND(2.0)	ND(2.0)	ND(0.50)
Chlorodibromomethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.50)
Chloroform	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	5.7
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	5.7

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

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC- Zone 1 & Zone 3
Lab ID: C22010406-004
Client Sample ID: 613

Report Date: 02/16/22
Collection Date: 01/10/22 14:12
Date Received: 01/13/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Acidity, Total as CaCO ₃	3040	mg/L				A2310 B	01/24/22 10:41 / nts
Bicarbonate as HCO ₃	ND	mg/L		5		A2320 B	01/17/22 14:37 / kjp
Chloride	104	mg/L	D	5		E300.0	01/14/22 22:25 / dmb
Sulfate	8030	mg/L	D	20		E300.0	01/14/22 22:25 / dmb
Calcium	425	mg/L		1		E200.7	01/19/22 19:04 / srm
Magnesium	692	mg/L		1		E200.7	01/19/22 19:04 / srm
Potassium	1	mg/L		1		E200.7	01/14/22 19:43 / srm
Sodium	225	mg/L	D	3		E200.7	01/19/22 19:04 / srm
PHYSICAL PROPERTIES							
pH	3.0	s.u.	H	0.1		A4500-H B	01/14/22 11:19 / kjp
pH Measurement Temp	12.3	°C				A4500-H B	01/14/22 11:19 / kjp
Solids, Total Dissolved TDS @ 180 C	10600	mg/L	D	100		A2540 C	01/14/22 12:21 / kjp
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	1.15	mg/L		0.05		E353.2	01/14/22 16:28 / nts
Nitrogen, Ammonia as N	123	mg/L	D	5		E350.1	01/14/22 14:24 / nts
METALS, TOTAL							
Aluminum	486	mg/L	D	20		E200.8	01/25/22 12:13 / jcg
Arsenic	0.010	mg/L		0.001		E200.8	01/20/22 02:50 / jcg
Beryllium	0.132	mg/L		0.001		E200.8	01/21/22 19:54 / jcg
Cadmium	0.039	mg/L		0.001		E200.8	01/20/22 02:50 / jcg
Cobalt	1.60	mg/L		0.005		E200.8	01/20/22 02:50 / jcg
Lead	0.015	mg/L		0.001		E200.8	01/20/22 02:50 / jcg
Manganese	42.1	mg/L	D	0.7		E200.8	01/25/22 12:13 / jcg
Molybdenum	0.009	mg/L	D	0.003		E200.8	01/20/22 02:50 / jcg
Nickel	1.63	mg/L		0.005		E200.8	01/20/22 02:50 / jcg
Selenium	0.016	mg/L		0.001		E200.8	01/20/22 02:50 / jcg
Uranium	0.481	mg/L	D	0.001		E200.8	01/20/22 02:50 / jcg
Vanadium	0.30	mg/L		0.01		E200.8	01/20/22 02:50 / jcg
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	31.0	pCi/L				E900.1	01/21/22 09:12 / trs
Gross Alpha minus Rn & U Precision (±)	6.2	pCi/L				E900.1	01/21/22 09:12 / trs
Gross Alpha minus Rn & U MDC	1	pCi/L				E900.1	01/21/22 09:12 / trs
Lead 210	1.2	pCi/L				E909.0	01/21/22 07:21 / hat
Lead 210 precision (±)	0.7	pCi/L				E909.0	01/21/22 07:21 / hat
Lead 210 MDC	0.9	pCi/L				E909.0	01/21/22 07:21 / hat
Radium 226	6.2	pCi/L				E903.0	01/26/22 11:30 / kdk
Radium 226 precision (±)	1.2	pCi/L				E903.0	01/26/22 11:30 / kdk
Radium 226 MDC	0.2	pCi/L				E903.0	01/26/22 11:30 / kdk
Radium 228	1.2	pCi/L	U			RA-05	01/20/22 13:49 / trs
Radium 228 precision (±)	0.9	pCi/L				RA-05	01/20/22 13:49 / trs

Report RL - Analyte Reporting Limit
Definitions: QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
H - Analysis performed past the method holding time



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC- Zone 1 & Zone 3
Lab ID: C22010406-004
Client Sample ID: 613

Report Date: 02/16/22
Collection Date: 01/10/22 14:12
Date Received: 01/13/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Radium 228 MDC	1.4	pCi/L				RA-05	01/20/22 13:49 / trs
Radium 226 + Radium 228	7.4	pCi/L				A7500-RA	01/27/22 15:26 / dmf
Radium 226 + Radium 228 precision (±)	1.5	pCi/L				A7500-RA	01/27/22 15:26 / dmf
Radium 226 + Radium 228 MDC	1.5	pCi/L				A7500-RA	01/27/22 15:26 / dmf
Thorium 230	516	pCi/L				A7500-U C	01/20/22 14:21 / sec
Thorium 230 precision (±)	98.1	pCi/L				A7500-U C	01/20/22 14:21 / sec
Thorium 230 MDC	8.4	pCi/L				A7500-U C	01/20/22 14:21 / sec
DATA QUALITY							
Solids, Total Dissolved - Calculated	9500	mg/L		1.00		A1030 E	01/24/22 16:31 / jlw
A/C Balance	-4.07	%				A1030 E	01/24/22 16:31 / jlw
Anions	171	meq/L				A1030 E	01/24/22 16:31 / jlw
Cations	157	meq/L				A1030 E	01/24/22 16:31 / jlw
TDS Ratio	1.12	unitless				A1030 E	01/24/22 16:31 / jlw
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		1.0		E624.1	01/19/22 18:12 / etad
Bromoform	ND	ug/L		2.0		E624.1	01/19/22 18:12 / etad
Chlorodibromomethane	ND	ug/L		1.0		E624.1	01/19/22 18:12 / etad
Chloroform	58	ug/L		1.0		E624.1	01/19/22 18:12 / etad
Trihalomethanes, Total	58	ug/L		0.50		E624.1	02/03/22 09:28 / jlw
Surr: 1,2-Dichloroethane-d4	102	%REC		73-122		E624.1	01/19/22 18:12 / etad
Surr: p-Bromofluorobenzene	100	%REC		79-119		E624.1	01/19/22 18:12 / etad
Surr: Toluene-d8	98.0	%REC		80-120		E624.1	01/19/22 18:12 / etad

Report RL - Analyte Reporting Limit
Definitions: QCL - Quality Control Limit

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 1 and Zone 3
Lab ID: C22040142-005
Client Sample ID: 613

Report Date: 06/03/22
Collection Date: 03/31/22 13:31
Date Received: 04/05/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Acidity, Total as CaCO ₃	3160	mg/L				A2310 B	04/13/22 13:52 / nts
Bicarbonate as HCO ₃	ND	mg/L		5		A2320 B	04/07/22 16:26 / nts
Chloride	94	mg/L	D	5		E300.0	04/09/22 16:49 / dmb
Sulfate	7580	mg/L	D	20		E300.0	04/09/22 16:49 / dmb
Calcium	411	mg/L	D	3		E200.7	04/08/22 19:53 / erc
Magnesium	709	mg/L		1		E200.7	04/08/22 19:53 / erc
Potassium	3	mg/L	D	2		E200.7	04/08/22 19:53 / erc
Sodium	218	mg/L	D	5		E200.7	04/08/22 19:53 / erc
PHYSICAL PROPERTIES							
pH	3.0	s.u.	H	0.1		A4500-H B	04/06/22 12:00 / mnm
pH Measurement Temp	15.7	°C				A4500-H B	04/06/22 12:00 / mnm
Solids, Total Dissolved TDS @ 180 C	10600	mg/L	D	100		A2540 C	04/06/22 14:59 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	1.10	mg/L		0.05		E353.2	04/06/22 12:16 / nts
Nitrogen, Ammonia as N	136	mg/L	D	5		E350.1	04/07/22 15:37 / nts
METALS, TOTAL							
Aluminum	485	mg/L	D	20		E200.8	04/29/22 11:49 / jcg
Arsenic	0.015	mg/L	D	0.003		E200.8	04/16/22 06:28 / jcg
Beryllium	0.142	mg/L	D	0.002		E200.8	04/16/22 06:28 / jcg
Cadmium	0.044	mg/L		0.001		E200.8	04/16/22 06:28 / jcg
Cobalt	1.90	mg/L		0.005		E200.8	04/16/22 06:28 / jcg
Lead	0.005	mg/L		0.001		E200.8	04/20/22 00:40 / jcg
Manganese	41.4	mg/L	D	0.7		E200.8	04/29/22 11:49 / jcg
Molybdenum	0.014	mg/L		0.001		E200.8	04/16/22 06:28 / jcg
Nickel	1.81	mg/L		0.005		E200.8	04/16/22 06:28 / jcg
Selenium	0.019	mg/L	D	0.001		E200.8	04/16/22 06:28 / jcg
Uranium	0.525	mg/L	D	0.003		E200.8	04/16/22 06:28 / jcg
Vanadium	0.26	mg/L	D	0.03		E200.8	04/16/22 06:28 / jcg
DATA QUALITY							
Solids, Total Dissolved - Calculated	9030	mg/L		1.00		A1030 E	04/13/22 16:50 / tlf
A/C Balance	0.01	%				A1030 E	04/13/22 16:50 / tlf
Anions	161	meq/L				A1030 E	04/13/22 16:50 / tlf
Cations	161	meq/L				A1030 E	04/13/22 16:50 / tlf
TDS Ratio	1.17	unitless				A1030 E	04/13/22 16:50 / tlf
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	13.6	pCi/L				E900.1	04/12/22 15:02 / kdk
Gross Alpha minus Rn & U Precision (±)	2.9	pCi/L				E900.1	04/12/22 15:02 / kdk
Gross Alpha minus Rn & U MDC	0.7	pCi/L				E900.1	04/12/22 15:02 / kdk
Lead 210	0.4	pCi/L	U			E909.0	04/10/22 21:36 / hat

Report Definitions:
 RL - Analyte Reporting Limit
 QCL - Quality Control Limit
 D - Reporting Limit (RL) increased due to sample matrix
 U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
 ND - Not detected at the Reporting Limit (RL)
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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 1 and Zone 3
Lab ID: C22040142-005
Client Sample ID: 613

Report Date: 06/03/22
Collection Date: 03/31/22 13:31
Date Received: 04/05/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Lead 210 precision (±)	0.6	pCi/L				E909.0	04/10/22 21:36 / hat
Lead 210 MDC	1.0	pCi/L				E909.0	04/10/22 21:36 / hat
Radium 226	8.7	pCi/L				E903.0	04/17/22 10:41 / trs
Radium 226 precision (±)	1.7	pCi/L				E903.0	04/17/22 10:41 / trs
Radium 226 MDC	0.2	pCi/L				E903.0	04/17/22 10:41 / trs
Radium 228	0.8	pCi/L	U			RA-05	04/12/22 14:41 / trs
Radium 228 precision (±)	0.7	pCi/L				RA-05	04/12/22 14:41 / trs
Radium 228 MDC	1.2	pCi/L				RA-05	04/12/22 14:41 / trs
Radium 226 + Radium 228	9.5	pCi/L				A7500-RA	04/18/22 11:57 / dmf
Radium 226 + Radium 228 precision (±)	1.9	pCi/L				A7500-RA	04/18/22 11:57 / dmf
Radium 226 + Radium 228 MDC	1.2	pCi/L				A7500-RA	04/18/22 11:57 / dmf
Thorium 230	539	pCi/L				A7500-U C	04/18/22 13:49 / sec
Thorium 230 precision (±)	102	pCi/L				A7500-U C	04/18/22 13:49 / sec
Thorium 230 MDC	6.5	pCi/L				A7500-U C	04/18/22 13:49 / sec
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		1.0		E624.1	04/13/22 16:19 / etad
Bromoform	ND	ug/L		2.0		E624.1	04/13/22 16:19 / etad
Chlorodibromomethane	ND	ug/L		1.0		E624.1	04/13/22 16:19 / etad
Chloroform	39	ug/L		1.0		E624.1	04/13/22 16:19 / etad
Trihalomethanes, Total	39	ug/L		0.50		E624.1	04/27/22 18:25 / tlf
Surr: 1,2-Dichloroethane-d4	92.0	%REC		73-122		E624.1	04/13/22 16:19 / etad
Surr: p-Bromofluorobenzene	89.0	%REC		79-119		E624.1	04/13/22 16:19 / etad
Surr: Toluene-d8	96.0	%REC		80-120		E624.1	04/13/22 16:19 / etad

Report Definitions:
 RL - Analyte Reporting Limit
 QCL - Quality Control Limit
 U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
 ND - Not detected at the Reporting Limit (RL)



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Guideline 8: Sweetwater

Well ID:		613	613	613	613
Collection Date:		3/31/2022	1/10/2022	10/4/2021	7/5/2021
Receive Date:		4/5/2021	1/13/2022	10/6/2021	7/7/2021
Report Date:		6/3/2022	2/16/2022	11/19/2021	8/13/2021
Analyte	Units	C22040142-005	C22010406-004	C21100250-005	C21070218-001
Bicarbonate as HCO ₃	mg/L	ND(5)	ND(5)	ND(5)	ND(5)
Calcium	mg/L	411	425	389	429
Chloride	mg/L	94	104	112	122
Magnesium	mg/L	709	692	637	735
Potassium	mg/L	3	1	3	2
Sodium	mg/L	218	225	200	226
Sulfate	mg/L	7580	8030	8290	8630
pH	s.u.	3.0	3.0	3.0	3.0
pH Measurement Temp	°C	15.7	12.3	16.0	15.8
Solids, Total Dissolved TDS @ 180 C	mg/L	10600	10600	10500	10800
Solids, Total Dissolved - Calculated	mg/L	9030	9500	9650	10200
Nitrogen, Ammonia as N	mg/L	136	123	125	130
Nitrogen, Nitrate+Nitrite as N	mg/L	1.10	1.15	1.18	1.22
Aluminum	mg/L	485	486	474	463
Arsenic	mg/L	0.015	0.010	0.010	0.011
Beryllium	mg/L	0.142	0.132	0.142	0.108
Cadmium	mg/L	0.044	0.039	0.041	0.038
Cobalt	mg/L	1.90	1.60	1.77	1.9
Lead	mg/L	0.005	0.015	0.012	0.004
Manganese	mg/L	41.4	42.1	40.7	41.8
Molybdenum	mg/L	0.014	0.009	0.008	0.014
Nickel	mg/L	1.81	1.63	1.61	1.50
Selenium	mg/L	0.019	0.016	0.019	0.020
Uranium	mg/L	0.525	0.481	0.537	0.476
Vanadium	mg/L	0.26	0.30	0.47	0.5
A/C Balance	%	0.01	-4.07	-6.07	-4.69
Anions	meq/L	161	171	176	184
Cations	meq/L	161	157	156	168
TDS Ratio	unitless	1.17	1.12	1.09	1.06
Gross Alpha minus Rn & U	pCi/L	13.6	31.0	29.7	34.8
Gross Alpha minus Rn & U MDC	pCi/L	0.7	1	0.9	1.4
Gross Alpha minus Rn & U Precision (±)	pCi/L	2.9	6.2	6.0	7.1
Lead 210	pCi/L	0.4	1.2	1.1	1.2
Lead 210 MDC	pCi/L	1.0	0.9	1.1	1
Lead 210 precision (±)	pCi/L	0.6	0.7	0.7	0.7
Radium 226	pCi/L	8.7	6.2	6.0	5.9
Radium 226 MDC	pCi/L	0.2	0.2	0.3	0.2
Radium 226 precision (±)	pCi/L	1.7	1.2	1.2	1.2
Radium 228	pCi/L	0.8	1.2	0.1	0.2
Radium 228 MDC	pCi/L	1.2	1.4	1.8	1.0
Radium 228 precision (±)	pCi/L	0.7	0.9	1.1	0.6
Thorium 230	pCi/L	539	516	476	440
Thorium 230 MDC	pCi/L	6.5	8.4	4.1	12.2
Thorium 230 precision (±)	pCi/L	102	98.1	90.3	83.5
Bromodichloromethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromoform	ug/L	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)
Chlorodibromomethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloroform	ug/L	39	58	61	66
Trihalomethanes, Total	ug/L	39	58	61	66

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC
Lab ID: C22010408-003
Client Sample ID: 708

Report Date: 02/16/22
Collection Date: 01/11/22 11:33
Date Received: 01/13/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Acidity, Total as CaCO ₃	692	mg/L				A2310 B	01/24/22 10:48 / nts
Bicarbonate as HCO ₃	ND	mg/L		5		A2320 B	01/17/22 15:04 / kjp
Chloride	27	mg/L	D	2		E300.0	01/15/22 00:02 / dmb
Sulfate	4170	mg/L	D	8		E300.0	01/15/22 00:02 / dmb
Calcium	432	mg/L	D	3		E200.8	01/17/22 19:43 / jcg
Magnesium	510	mg/L		1		E200.7	01/14/22 20:36 / srm
Potassium	12	mg/L		1		E200.7	01/14/22 20:36 / srm
Sodium	109	mg/L	D	2		E200.8	01/17/22 19:43 / jcg
PHYSICAL PROPERTIES							
pH	3.6	s.u.	H	0.1		A4500-H B	01/14/22 11:33 / kjp
pH Measurement Temp	13.5	°C				A4500-H B	01/14/22 11:33 / kjp
Solids, Total Dissolved TDS @ 180 C	6160	mg/L	D	40		A2540 C	01/14/22 12:23 / kjp
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.05		E353.2	01/14/22 16:34 / nts
Nitrogen, Ammonia as N	0.82	mg/L		0.05		E350.1	01/14/22 14:34 / nts
METALS, TOTAL							
Aluminum	22.4	mg/L	D	0.09		E200.8	01/20/22 03:51 / jcg
Arsenic	0.003	mg/L		0.001		E200.8	01/20/22 03:51 / jcg
Beryllium	0.040	mg/L		0.001		E200.8	01/20/22 03:51 / jcg
Cadmium	ND	mg/L		0.001		E200.8	01/20/22 03:51 / jcg
Cobalt	0.447	mg/L		0.005		E200.8	01/20/22 03:51 / jcg
Lead	0.010	mg/L		0.001		E200.8	01/20/22 03:51 / jcg
Manganese	11.5	mg/L	D	0.006		E200.8	01/20/22 03:51 / jcg
Molybdenum	0.009	mg/L	D	0.003		E200.8	01/20/22 03:51 / jcg
Nickel	0.498	mg/L		0.005		E200.8	01/20/22 03:51 / jcg
Selenium	ND	mg/L		0.001		E200.8	01/20/22 03:51 / jcg
Uranium	0.061	mg/L	D	0.001		E200.8	01/20/22 03:51 / jcg
Vanadium	ND	mg/L		0.01		E200.8	01/20/22 03:51 / jcg
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	14.1	pCi/L				E900.1	01/21/22 09:12 / trs
Gross Alpha minus Rn & U Precision (±)	3.1	pCi/L				E900.1	01/21/22 09:12 / trs
Gross Alpha minus Rn & U MDC	1	pCi/L				E900.1	01/21/22 09:12 / trs
Lead 210	1.1	pCi/L				E909.0	01/21/22 21:56 / hat
Lead 210 precision (±)	0.7	pCi/L				E909.0	01/21/22 21:56 / hat
Lead 210 MDC	0.9	pCi/L				E909.0	01/21/22 21:56 / hat
Radium 226	8.1	pCi/L				E903.0	01/26/22 13:39 / kdk
Radium 226 precision (±)	1.6	pCi/L				E903.0	01/26/22 13:39 / kdk
Radium 226 MDC	0.2	pCi/L				E903.0	01/26/22 13:39 / kdk
Radium 228	4.4	pCi/L				RA-05	01/20/22 13:49 / trs
Radium 228 precision (±)	1.2	pCi/L				RA-05	01/20/22 13:49 / trs

Report RL - Analyte Reporting Limit
Definitions: QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
H - Analysis performed past the method holding time



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC
Lab ID: C22010408-003
Client Sample ID: 708

Report Date: 02/16/22
Collection Date: 01/11/22 11:33
Date Received: 01/13/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Radium 228 MDC	1.3	pCi/L				RA-05	01/20/22 13:49 / trs
Radium 226 + Radium 228	12.5	pCi/L				A7500-RA	01/27/22 15:26 / dmf
Radium 226 + Radium 228 precision (±)	2.0	pCi/L				A7500-RA	01/27/22 15:26 / dmf
Radium 226 + Radium 228 MDC	1.4	pCi/L				A7500-RA	01/27/22 15:26 / dmf
Thorium 230	-0.03	pCi/L	U			A7500-U C	01/19/22 14:02 / sec
Thorium 230 precision (±)	0.3	pCi/L				A7500-U C	01/19/22 14:02 / sec
Thorium 230 MDC	0.7	pCi/L				A7500-U C	01/19/22 14:02 / sec
DATA QUALITY							
Solids, Total Dissolved - Calculated	5300	mg/L		1.00		A1030 E	01/24/22 16:16 / jlw
A/C Balance	-3.31	%				A1030 E	01/24/22 16:16 / jlw
Anions	88.2	meq/L				A1030 E	01/24/22 16:16 / jlw
Cations	82.5	meq/L				A1030 E	01/24/22 16:16 / jlw
TDS Ratio	1.16	unitless				A1030 E	01/24/22 16:16 / jlw
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		1.0		E624.1	01/19/22 13:54 / etad
Bromoform	ND	ug/L		2.0		E624.1	01/19/22 13:54 / etad
Chlorodibromomethane	ND	ug/L		1.0		E624.1	01/19/22 13:54 / etad
Chloroform	ND	ug/L		1.0		E624.1	01/19/22 13:54 / etad
Trihalomethanes, Total	ND	ug/L		0.50		E624.1	02/03/22 09:28 / jlw
Surr: 1,2-Dichloroethane-d4	102	%REC		73-122		E624.1	01/19/22 13:54 / etad
Surr: p-Bromofluorobenzene	101	%REC		79-119		E624.1	01/19/22 13:54 / etad
Surr: Toluene-d8	98.0	%REC		80-120		E624.1	01/19/22 13:54 / etad

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 1 and Zone 3
Lab ID: C22040142-009
Client Sample ID: 708

Report Date: 06/03/22
Collection Date: 04/01/22 10:52
Date Received: 04/05/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Acidity, Total as CaCO ₃	730	mg/L				A2310 B	04/13/22 14:17 / nts
Bicarbonate as HCO ₃	ND	mg/L		5		A2320 B	04/07/22 16:43 / nts
Chloride	26	mg/L	D	2		E300.0	04/09/22 19:23 / dmb
Sulfate	4280	mg/L	D	8		E300.0	04/09/22 19:23 / dmb
Calcium	425	mg/L		1		E200.7	04/17/22 03:27 / erc
Magnesium	490	mg/L		1		E200.7	04/15/22 02:36 / erc
Potassium	13	mg/L		1		E200.7	04/17/22 03:27 / erc
Sodium	116	mg/L	D	3		E200.7	04/17/22 03:27 / erc
PHYSICAL PROPERTIES							
pH	3.6	s.u.	H	0.1		A4500-H B	04/06/22 12:12 / mnm
pH Measurement Temp	16.0	°C				A4500-H B	04/06/22 12:12 / mnm
Solids, Total Dissolved TDS @ 180 C	6160	mg/L	D	40		A2540 C	04/06/22 15:00 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.05		E353.2	04/06/22 12:21 / nts
Nitrogen, Ammonia as N	1.38	mg/L		0.05		E350.1	04/07/22 15:48 / nts
METALS, TOTAL							
Aluminum	22	mg/L	D	2		E200.8	04/22/22 21:58 / jcg
Arsenic	0.003	mg/L		0.001		E200.8	04/16/22 07:32 / jcg
Beryllium	0.041	mg/L		0.001		E200.8	04/16/22 07:32 / jcg
Cadmium	ND	mg/L		0.001		E200.8	04/16/22 07:32 / jcg
Cobalt	0.516	mg/L		0.005		E200.8	04/16/22 07:32 / jcg
Lead	0.006	mg/L		0.001		E200.8	04/20/22 00:56 / jcg
Manganese	13.1	mg/L	D	0.006		E200.8	04/16/22 07:32 / jcg
Molybdenum	0.008	mg/L		0.001		E200.8	04/16/22 07:32 / jcg
Nickel	0.534	mg/L		0.005		E200.8	04/16/22 07:32 / jcg
Selenium	ND	mg/L		0.001		E200.8	04/16/22 07:32 / jcg
Uranium	0.064	mg/L	D	0.001		E200.8	04/16/22 07:32 / jcg
Vanadium	ND	mg/L		0.01		E200.8	04/16/22 07:32 / jcg
DATA QUALITY							
Solids, Total Dissolved - Calculated	5390	mg/L		1.00		A1030 E	04/19/22 13:49 / tif
A/C Balance	-4.76	%				A1030 E	04/19/22 13:49 / tif
Anions	90.2	meq/L				A1030 E	04/19/22 13:49 / tif
Cations	82.0	meq/L				A1030 E	04/19/22 13:49 / tif
TDS Ratio	1.14	unitless				A1030 E	04/19/22 13:49 / tif
Cation/Anion Balance includes selected metals							
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	11.2	pCi/L				E900.1	04/12/22 15:02 / kdk
Gross Alpha minus Rn & U Precision (±)	2.4	pCi/L				E900.1	04/12/22 15:02 / kdk
Gross Alpha minus Rn & U MDC	0.7	pCi/L				E900.1	04/12/22 15:02 / kdk

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
H - Analysis performed past the method holding time



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 1 and Zone 3
Lab ID: C22040142-009
Client Sample ID: 708

Report Date: 06/03/22
Collection Date: 04/01/22 10:52
Date Received: 04/05/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Lead 210	0.07	pCi/L	U			E909.0	04/11/22 09:31 / hat
Lead 210 precision (±)	0.6	pCi/L				E909.0	04/11/22 09:31 / hat
Lead 210 MDC	1	pCi/L				E909.0	04/11/22 09:31 / hat
Radium 226	7.1	pCi/L				E903.0	04/17/22 12:30 / trs
Radium 226 precision (±)	1.4	pCi/L				E903.0	04/17/22 12:30 / trs
Radium 226 MDC	0.2	pCi/L				E903.0	04/17/22 12:30 / trs
Radium 228	4.6	pCi/L				RA-05	04/12/22 16:15 / trs
Radium 228 precision (±)	1.3	pCi/L				RA-05	04/12/22 16:15 / trs
Radium 228 MDC	1.4	pCi/L				RA-05	04/12/22 16:15 / trs
Radium 226 + Radium 228	11.7	pCi/L				A7500-RA	04/18/22 11:57 / dmf
Radium 226 + Radium 228 precision (±)	1.9	pCi/L				A7500-RA	04/18/22 11:57 / dmf
Radium 226 + Radium 228 MDC	1.4	pCi/L				A7500-RA	04/18/22 11:57 / dmf
Thorium 230	-0.003	pCi/L	U			A7500-U C	04/13/22 13:44 / sec
Thorium 230 precision (±)	0.09	pCi/L				A7500-U C	04/13/22 13:44 / sec
Thorium 230 MDC	0.2	pCi/L				A7500-U C	04/13/22 13:44 / sec
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		1.0		E624.1	04/14/22 03:26 / etad
Bromoform	ND	ug/L		2.0		E624.1	04/14/22 03:26 / etad
Chlorodibromomethane	ND	ug/L		1.0		E624.1	04/14/22 03:26 / etad
Chloroform	ND	ug/L		1.0		E624.1	04/14/22 03:26 / etad
Trihalomethanes, Total	ND	ug/L		0.50		E624.1	04/27/22 18:25 / tif
Surr: 1,2-Dichloroethane-d4	102	%REC		73-122		E624.1	04/14/22 03:26 / etad
Surr: p-Bromofluorobenzene	97.0	%REC		79-119		E624.1	04/14/22 03:26 / etad
Surr: Toluene-d8	98.0	%REC		80-120		E624.1	04/14/22 03:26 / etad

Report Definitions:
 RL - Analyte Reporting Limit
 QCL - Quality Control Limit
 U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
 ND - Not detected at the Reporting Limit (RL)



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Guideline 8: Sweetwater					
Well ID:		708	708	708	708
Collection Date:		4/1/2022	1/11/2022	10/5/2021	7/5/2021
Receive Date:		4/5/2022	1/13/2022	10/7/2021	7/7/2021
Report Date:		6/3/2022	2/16/2022	11/27/2021	8/13/2021
Analyte	Units	C22040142-009	C22010408-003	C21100328-002	C21070218-005
Bicarbonate as HCO ₃	mg/L	ND(5)	ND(5)	ND(5)	ND(5)
Calcium	mg/L	425	432	463	446
Chloride	mg/L	26	27	27	28
Magnesium	mg/L	490	510	551	598
Potassium	mg/L	13	12	14	13
Sodium	mg/L	116	109	131	125
Sulfate	mg/L	4280	4170	4400	4260
pH	s.u.	3.6	3.6	3.6	3.7
pH Measurement Temp	°C	16.0	13.5	13.8	17.3
Solids, Total Dissolved TDS @ 180 C	mg/L	6160	6160	6210	6250
Nitrogen, Ammonia as N	mg/L	1.38	0.82	0.84	0.79
Nitrogen, Nitrate+Nitrite as N	mg/L	ND(0.05)	ND(0.05)	ND(0.01)	0.04
Aluminum	mg/L	22	22.4	26.0	25.5
Arsenic	mg/L	0.003	0.003	0.006	0.003
Beryllium	mg/L	0.041	0.040	0.043	0.045
Cadmium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cobalt	mg/L	0.516	0.447	0.485	0.445
Lead	mg/L	0.006	0.010	0.010	0.006
Manganese	mg/L	13.1	11.5	12.8	13.1
Molybdenum	mg/L	0.008	0.009	0.015	0.008
Nickel	mg/L	0.534	0.498	0.495	0.473
Selenium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Uranium	mg/L	0.064	0.061	0.0753	0.0742
Vanadium	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.02)
A/C Balance	%	-4.76	-3.31	-1.62	1.96
Anions	meq/L	90.2	88.2	92.9	90.1
Cations	meq/L	82.0	82.5	89.9	93.7
Solids, Total Dissolved - Calculated	mg/L	5390	5300	5630	5480
TDS Ratio	unitless	1.14	1.16	1.10	1.14
Gross Alpha minus Rn & U	pCi/L	11.2	14.1	15.9	17.4
Gross Alpha minus Rn & U MDC	pCi/L	0.7	1	0.9	1.4
Gross Alpha minus Rn & U Precision (±)	pCi/L	2.4	3.1	3.4	3.8
Lead 210	pCi/L	0.07	1.1	1	1.0
Lead 210 MDC	pCi/L	1	0.9	1.0	1
Lead 210 precision (±)	pCi/L	0.6	0.7	0.6	0.7
Radium 226	pCi/L	7.1	8.1	7.4	8.9
Radium 226 MDC	pCi/L	0.2	0.2	0.2	0.1
Radium 226 precision (±)	pCi/L	1.4	1.6	1.5	1.7
Radium 228	pCi/L	4.6	4.4	4.9	5.1
Radium 228 MDC	pCi/L	1.4	1.3	1	1
Radium 228 precision (±)	pCi/L	1.3	1.2	1.2	1.2
Thorium 230	pCi/L	-0.003	-0.03	-0.09	0.07
Thorium 230 MDC	pCi/L	0.2	0.7	0.6	0.2
Thorium 230 precision (±)	pCi/L	0.09	0.3	0.3	0.09
Bromodichloromethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromoform	ug/L	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)
Chlorodibromomethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloroform	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
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 only. Laboratory approved data is contained within the database reports.

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC
Lab ID: C22010408-005
Client Sample ID: EPA-13

Report Date: 02/16/22
Collection Date: 01/11/22 14:16
Date Received: 01/13/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	50	mg/L		5		A2320 B	01/17/22 15:14 / kjp
Chloride	42	mg/L	D	2		E300.0	01/15/22 01:18 / dmb
Sulfate	5410	mg/L	D	8		E300.0	01/15/22 01:18 / dmb
Calcium	437	mg/L	D	3		E200.8	01/17/22 19:52 / jcg
Magnesium	911	mg/L		1		E200.8	01/17/22 19:52 / jcg
Potassium	13	mg/L		1		E200.8	01/17/22 19:52 / jcg
Sodium	171	mg/L	D	2		E200.8	01/17/22 19:52 / jcg
PHYSICAL PROPERTIES							
pH	6.2	s.u.	H	0.1		A4500-H B	01/14/22 11:39 / kjp
pH Measurement Temp	14.6	°C				A4500-H B	01/14/22 11:39 / kjp
Solids, Total Dissolved TDS @ 180 C	7690	mg/L	D	100		A2540 C	01/14/22 12:24 / kjp
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	0.05	mg/L		0.05		E353.2	01/14/22 16:39 / nts
Nitrogen, Ammonia as N	0.06	mg/L		0.05		E350.1	01/14/22 14:37 / nts
METALS, TOTAL							
Aluminum	0.05	mg/L	D	0.04		E200.8	01/25/22 12:36 / jcg
Arsenic	0.442	mg/L		0.001		E200.8	01/20/22 04:00 / jcg
Beryllium	0.002	mg/L		0.001		E200.8	01/20/22 04:00 / jcg
Cadmium	ND	mg/L		0.001		E200.8	01/20/22 04:00 / jcg
Cobalt	0.125	mg/L		0.005		E200.8	01/20/22 04:00 / jcg
Lead	ND	mg/L		0.001		E200.8	01/20/22 04:00 / jcg
Manganese	6.24	mg/L	D	0.004		E200.8	01/20/22 04:00 / jcg
Molybdenum	0.283	mg/L	D	0.003		E200.8	01/20/22 04:00 / jcg
Nickel	0.321	mg/L		0.005		E200.8	01/20/22 04:00 / jcg
Selenium	ND	mg/L		0.001		E200.8	01/20/22 04:00 / jcg
Uranium	0.008	mg/L	D	0.001		E200.8	01/20/22 04:00 / jcg
Vanadium	ND	mg/L		0.01		E200.8	01/20/22 04:00 / jcg
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	7.1	pCi/L				E900.1	01/21/22 09:12 / trs
Gross Alpha minus Rn & U Precision (±)	1.8	pCi/L				E900.1	01/21/22 09:12 / trs
Gross Alpha minus Rn & U MDC	1	pCi/L				E900.1	01/21/22 09:12 / trs
Lead 210	0.7	pCi/L	U			E909.0	01/22/22 03:44 / hat
Lead 210 precision (±)	0.6	pCi/L				E909.0	01/22/22 03:44 / hat
Lead 210 MDC	0.9	pCi/L				E909.0	01/22/22 03:44 / hat
Radium 226	5.2	pCi/L				E903.0	01/26/22 13:40 / kdk
Radium 226 precision (±)	1.0	pCi/L				E903.0	01/26/22 13:40 / kdk
Radium 226 MDC	0.2	pCi/L				E903.0	01/26/22 13:40 / kdk
Radium 228	7.3	pCi/L				RA-05	01/20/22 13:49 / trs
Radium 228 precision (±)	1.7	pCi/L				RA-05	01/20/22 13:49 / trs
Radium 228 MDC	1.4	pCi/L				RA-05	01/20/22 13:49 / trs

Report Definitions:
 RL - Analyte Reporting Limit
 QCL - Quality Control Limit
 D - Reporting Limit (RL) increased due to sample matrix
 U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
 ND - Not detected at the Reporting Limit (RL)
 H - Analysis performed past the method holding time



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC
Lab ID: C22010408-005
Client Sample ID: EPA-13

Report Date: 02/16/22
Collection Date: 01/11/22 14:16
Date Received: 01/13/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Radium 226 + Radium 228	12.5	pCi/L				A7500-RA	01/27/22 15:26 / dmf
Radium 226 + Radium 228 precision (±)	2.0	pCi/L				A7500-RA	01/27/22 15:26 / dmf
Radium 226 + Radium 228 MDC	1.4	pCi/L				A7500-RA	01/27/22 15:26 / dmf
Thorium 230	0.08	pCi/L	U			A7500-U C	01/19/22 14:02 / sec
Thorium 230 precision (±)	0.09	pCi/L				A7500-U C	01/19/22 14:02 / sec
Thorium 230 MDC	0.2	pCi/L				A7500-U C	01/19/22 14:02 / sec
DATA QUALITY							
Solids, Total Dissolved - Calculated	7010	mg/L		1.00		A1030 E	01/19/22 07:32 / tlf
A/C Balance	-4.66	%				A1030 E	01/19/22 07:32 / tlf
Anions	115	meq/L				A1030 E	01/19/22 07:32 / tlf
Cations	105	meq/L				A1030 E	01/19/22 07:32 / tlf
TDS Ratio	1.10	unitless				A1030 E	01/19/22 07:32 / tlf
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		1.0		E624.1	01/19/22 14:37 / etad
Bromoform	ND	ug/L		2.0		E624.1	01/19/22 14:37 / etad
Chlorodibromomethane	ND	ug/L		1.0		E624.1	01/19/22 14:37 / etad
Chloroform	ND	ug/L		1.0		E624.1	01/19/22 14:37 / etad
Trihalomethanes, Total	ND	ug/L		0.50		E624.1	02/03/22 09:28 / jlw
Surr: 1,2-Dichloroethane-d4	102	%REC		73-122		E624.1	01/19/22 14:37 / etad
Surr: p-Bromofluorobenzene	102	%REC		79-119		E624.1	01/19/22 14:37 / etad
Surr: Toluene-d8	97.0	%REC		80-120		E624.1	01/19/22 14:37 / etad

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 1 and Zone 3
Lab ID: C22040142-011
Client Sample ID: EPA-13

Report Date: 06/03/22
Collection Date: 04/01/22 13:06
Date Received: 04/05/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	49	mg/L		5		A2320 B	04/07/22 17:13 / nts
Chloride	45	mg/L	D	2		E300.0	04/09/22 20:01 / dmb
Sulfate	5790	mg/L	D	8		E300.0	04/09/22 20:01 / dmb
Calcium	438	mg/L	D	3		E200.7	04/17/22 03:37 / erc
Magnesium	985	mg/L		1		E200.7	04/17/22 03:37 / erc
Potassium	14	mg/L	D	2		E200.7	04/17/22 03:37 / erc
Sodium	179	mg/L	D	5		E200.7	04/17/22 03:37 / erc
PHYSICAL PROPERTIES							
pH	5.9	s.u.	H	0.1		A4500-H B	04/06/22 12:20 / mnm
pH Measurement Temp	16.3	°C				A4500-H B	04/06/22 12:20 / mnm
Solids, Total Dissolved TDS @ 180 C	7810	mg/L	D	100		A2540 C	04/06/22 15:02 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.05		E353.2	04/06/22 12:30 / nts
Nitrogen, Ammonia as N	0.10	mg/L		0.05		E350.1	04/07/22 15:53 / nts
METALS, TOTAL							
Aluminum	0.3	mg/L	D	0.2		E200.8	04/16/22 07:43 / jcg
Arsenic	2.44	mg/L	D	0.003		E200.8	04/16/22 07:43 / jcg
Beryllium	0.006	mg/L	D	0.002		E200.8	04/16/22 07:43 / jcg
Cadmium	ND	mg/L		0.001		E200.8	04/16/22 07:43 / jcg
Cobalt	0.155	mg/L		0.005		E200.8	04/16/22 07:43 / jcg
Lead	ND	mg/L		0.001		E200.8	04/16/22 07:43 / jcg
Manganese	7.09	mg/L	D	0.007		E200.8	04/16/22 07:43 / jcg
Molybdenum	0.449	mg/L		0.001		E200.8	04/16/22 07:43 / jcg
Nickel	0.376	mg/L		0.005		E200.8	04/16/22 07:43 / jcg
Selenium	ND	mg/L	D	0.001		E200.8	04/16/22 07:43 / jcg
Uranium	0.024	mg/L	D	0.003		E200.8	04/16/22 07:43 / jcg
Vanadium	ND	mg/L		0.01		E200.8	04/16/22 07:43 / jcg
DATA QUALITY							
Solids, Total Dissolved - Calculated	7470	mg/L		1.00		A1030 E	04/19/22 18:38 / tlf
A/C Balance	-4.93	%				A1030 E	04/19/22 18:38 / tlf
Anions	123	meq/L				A1030 E	04/19/22 18:38 / tlf
Cations	111	meq/L				A1030 E	04/19/22 18:38 / tlf
TDS Ratio	1.05	unitless				A1030 E	04/19/22 18:38 / tlf
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	9.5	pCi/L				E900.1	04/12/22 15:03 / kdk
Gross Alpha minus Rn & U Precision (±)	2.1	pCi/L				E900.1	04/12/22 15:03 / kdk
Gross Alpha minus Rn & U MDC	0.7	pCi/L				E900.1	04/12/22 15:03 / kdk
Lead 210	1.1	pCi/L				E909.0	04/14/22 08:03 / hat
Lead 210 precision (±)	0.7	pCi/L				E909.0	04/14/22 08:03 / hat

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
H - Analysis performed past the method holding time



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 1 and Zone 3
Lab ID: C22040142-011
Client Sample ID: EPA-13

Report Date: 06/03/22
Collection Date: 04/01/22 13:06
Date Received: 04/05/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Lead 210 MDC	0.9	pCi/L				E909.0	04/14/22 08:03 / hat
Radium 226	5.1	pCi/L				E903.0	04/17/22 12:30 / trs
Radium 226 precision (±)	1.0	pCi/L				E903.0	04/17/22 12:30 / trs
Radium 226 MDC	0.2	pCi/L				E903.0	04/17/22 12:30 / trs
Radium 228	8.8	pCi/L				RA-05	04/12/22 16:15 / trs
Radium 228 precision (±)	2.0	pCi/L				RA-05	04/12/22 16:15 / trs
Radium 228 MDC	1.5	pCi/L				RA-05	04/12/22 16:15 / trs
Radium 226 + Radium 228	13.9	pCi/L				A7500-RA	04/18/22 11:57 / dmf
Radium 226 + Radium 228 precision (±)	2.3	pCi/L				A7500-RA	04/18/22 11:57 / dmf
Radium 226 + Radium 228 MDC	1.5	pCi/L				A7500-RA	04/18/22 11:57 / dmf
Thorium 230	0.08	pCi/L		U		A7500-U C	04/13/22 13:44 / sec
Thorium 230 precision (±)	0.1	pCi/L				A7500-U C	04/13/22 13:44 / sec
Thorium 230 MDC	0.2	pCi/L				A7500-U C	04/13/22 13:44 / sec
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		1.0		E624.1	04/14/22 04:09 / etad
Bromoform	ND	ug/L		2.0		E624.1	04/14/22 04:09 / etad
Chlorodibromomethane	ND	ug/L		1.0		E624.1	04/14/22 04:09 / etad
Chloroform	ND	ug/L		1.0		E624.1	04/14/22 04:09 / etad
Trihalomethanes, Total	ND	ug/L		0.50		E624.1	04/27/22 18:25 / tlf
Surr: 1,2-Dichloroethane-d4	105	%REC		73-122		E624.1	04/14/22 04:09 / etad
Surr: p-Bromofluorobenzene	98.0	%REC		79-119		E624.1	04/14/22 04:09 / etad
Surr: Toluene-d8	98.0	%REC		80-120		E624.1	04/14/22 04:09 / etad

**Report
Definitions:**

RL - Analyte Reporting Limit
QCL - Quality Control Limit
U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)



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Guideline 8: Sweetwater

Well ID:		EPA-13	EPA-13	EPA-13	EPA-13
Collection Date:		4/1/2022	1/11/2022	10/4/2021	7/6/2021
Receive Date:		4/5/2022	1/13/2022	10/6/2021	7/8/2021
Report Date:		6/3/2022	2/16/2022	11/19/2021	8/13/2021
Analyte	Units	C22040142-011	C22010408-005	C21100250-009	C21070279-002
Bicarbonate as HCO ₃	mg/L	49	50	54	58
Calcium	mg/L	438	437	418	429
Chloride	mg/L	45	42	45	45
Magnesium	mg/L	985	911	913	991
Potassium	mg/L	14	13	16	14
Sodium	mg/L	179	171	190	179
Sulfate	mg/L	5790	5410	5540	5470
pH	s.u.	5.9	6.2	6.1	6.0
pH Measurement Temp	°C	16.3	14.6	16.4	12.7
Solids, Total Dissolved TDS @ 180 C	mg/L	7810	7690	7650	7840
Solids, Total Dissolved - Calculated	mg/L	7470	7010	7150	7160
Nitrogen, Ammonia as N	mg/L	0.10	0.06	ND(0.05)	0.07
Nitrogen, Nitrate+Nitrite as N	mg/L	ND(0.05)	0.05	0.11	0.08
Aluminum	mg/L	0.3	0.05	ND(0.09)	0.05
Arsenic	mg/L	2.44	0.442	0.488	0.449
Beryllium	mg/L	0.006	0.002	0.001	0.001
Cadmium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cobalt	mg/L	0.155	0.125	0.132	0.123
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	7.09	6.24	6.90	6.27
Molybdenum	mg/L	0.449	0.283	0.348	0.360
Nickel	mg/L	0.376	0.321	0.326	0.280
Selenium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Uranium	mg/L	0.024	0.008	0.0079	0.0080
Vanadium	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
A/C Balance	%	-4.93	-4.66	-5.78	-2.26
Anions	meq/L	123	115	117	116
Cations	meq/L	111	105	105	111
TDS Ratio	unitless	1.05	1.10	1.07	1.09
Gross Alpha minus Rn & U	pCi/L	9.5	7.1	10.9	8.3
Gross Alpha minus Rn & U MDC	pCi/L	0.7	1	0.9	1.4
Gross Alpha minus Rn & U Precision (±)	pCi/L	2.1	1.8	2.4	2.1
Lead 210	pCi/L	1.1	0.7	1.2	0.7
Lead 210 MDC	pCi/L	0.9	0.9	1.1	1
Lead 210 precision (±)	pCi/L	0.7	0.6	0.7	0.6
Radium 226	pCi/L	5.1	5.2	5.5	6.7
Radium 226 MDC	pCi/L	0.2	0.2	0.2	0.3
Radium 226 precision (±)	pCi/L	1.0	1.0	1.1	1.4
Radium 228	pCi/L	8.8	7.3	3.0	5.3
Radium 228 MDC	pCi/L	1.5	1.4	1.6	1.0
Radium 228 precision (±)	pCi/L	2.0	1.7	1.2	1.2
Thorium 230	pCi/L	0.08	0.08	0.2	0.03
Thorium 230 MDC	pCi/L	0.2	0.2	0.1	0.2
Thorium 230 precision (±)	pCi/L	0.1	0.09	0.1	0.08
Bromodichloromethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.50)
Bromoform	ug/L	ND(2.0)	ND(2.0)	ND(2.0)	ND(0.50)
Chlorodibromomethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.50)
Chloroform	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	1.2
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	1.2

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

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC- Zone 1 & Zone 3
Lab ID: C22010406-005
Client Sample ID: 717

Report Date: 02/16/22
Collection Date: 01/10/22 15:00
Date Received: 01/13/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Acidity, Total as CaCO ₃	1090	mg/L				A2310 B	01/24/22 10:44 / nts
Bicarbonate as HCO ₃	ND	mg/L		5		A2320 B	01/17/22 14:41 / kjp
Chloride	39	mg/L	D	2		E300.0	01/14/22 22:45 / dmb
Sulfate	4260	mg/L	D	8		E300.0	01/14/22 22:45 / dmb
Calcium	453	mg/L	D	6		E200.8	01/19/22 18:14 / jcg
Magnesium	373	mg/L		1		E200.7	01/14/22 20:10 / srm
Potassium	8	mg/L		1		E200.7	01/14/22 20:10 / srm
Sodium	130	mg/L	D	2		E200.8	01/17/22 18:56 / jcg
PHYSICAL PROPERTIES							
pH	3.3	s.u.	H	0.1		A4500-H B	01/14/22 11:21 / kjp
pH Measurement Temp	12.5	°C				A4500-H B	01/14/22 11:21 / kjp
Solids, Total Dissolved TDS @ 180 C	5760	mg/L	D	40		A2540 C	01/14/22 12:22 / kjp
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.05		E353.2	01/14/22 16:30 / nts
Nitrogen, Ammonia as N	13	mg/L	D	1		E350.1	01/14/22 14:25 / nts
METALS, TOTAL							
Aluminum	179	mg/L	D	20		E200.8	01/25/22 12:18 / jcg
Arsenic	0.009	mg/L		0.001		E200.8	01/20/22 02:55 / jcg
Beryllium	0.127	mg/L		0.001		E200.8	01/20/22 02:55 / jcg
Cadmium	0.011	mg/L		0.001		E200.8	01/20/22 02:55 / jcg
Cobalt	0.780	mg/L		0.005		E200.8	01/20/22 02:55 / jcg
Lead	0.025	mg/L		0.001		E200.8	01/20/22 02:55 / jcg
Manganese	12.2	mg/L	D	0.006		E200.8	01/20/22 02:55 / jcg
Molybdenum	ND	mg/L		0.001		E200.8	01/21/22 19:59 / jcg
Nickel	0.930	mg/L		0.005		E200.8	01/20/22 02:55 / jcg
Selenium	0.005	mg/L		0.001		E200.8	01/20/22 02:55 / jcg
Uranium	0.541	mg/L	D	0.001		E200.8	01/20/22 02:55 / jcg
Vanadium	ND	mg/L		0.01		E200.8	01/20/22 02:55 / jcg
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	22.4	pCi/L				E900.1	01/21/22 09:12 / trs
Gross Alpha minus Rn & U Precision (±)	4.6	pCi/L				E900.1	01/21/22 09:12 / trs
Gross Alpha minus Rn & U MDC	1	pCi/L				E900.1	01/21/22 09:12 / trs
Lead 210	1.5	pCi/L				E909.0	01/21/22 10:14 / hat
Lead 210 precision (±)	0.7	pCi/L				E909.0	01/21/22 10:14 / hat
Lead 210 MDC	0.9	pCi/L				E909.0	01/21/22 10:14 / hat
Radium 226	10.5	pCi/L				E903.0	01/26/22 11:30 / kdk
Radium 226 precision (±)	2.0	pCi/L				E903.0	01/26/22 11:30 / kdk
Radium 226 MDC	0.2	pCi/L				E903.0	01/26/22 11:30 / kdk
Radium 228	17.6	pCi/L				RA-05	01/20/22 13:49 / trs
Radium 228 precision (±)	3.4	pCi/L				RA-05	01/20/22 13:49 / trs

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
H - Analysis performed past the method holding time



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC- Zone 1 & Zone 3
Lab ID: C22010406-005
Client Sample ID: 717

Report Date: 02/16/22
Collection Date: 01/10/22 15:00
Date Received: 01/13/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Radium 228 MDC	1.4	pCi/L				RA-05	01/20/22 13:49 / trs
Radium 226 + Radium 228	28.1	pCi/L				A7500-RA	01/27/22 15:26 / dmf
Radium 226 + Radium 228 precision (±)	3.9	pCi/L				A7500-RA	01/27/22 15:26 / dmf
Radium 226 + Radium 228 MDC	1.4	pCi/L				A7500-RA	01/27/22 15:26 / dmf
Thorium 230	3.4	pCi/L				A7500-U C	01/24/22 12:42 / sec
Thorium 230 precision (±)	0.7	pCi/L				A7500-U C	01/24/22 12:42 / sec
Thorium 230 MDC	0.6	pCi/L				A7500-U C	01/24/22 12:42 / sec
DATA QUALITY							
Solids, Total Dissolved - Calculated	5270	mg/L		1.00		A1030 E	01/24/22 16:15 / jlw
A/C Balance	-4.87	%				A1030 E	01/24/22 16:15 / jlw
Anions	90.2	meq/L				A1030 E	01/24/22 16:15 / jlw
Cations	81.8	meq/L				A1030 E	01/24/22 16:15 / jlw
TDS Ratio	1.09	unitless				A1030 E	01/24/22 16:15 / jlw
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		1.0		E624.1	01/19/22 18:34 / etad
Bromoform	ND	ug/L		2.0		E624.1	01/19/22 18:34 / etad
Chlorodibromomethane	ND	ug/L		1.0		E624.1	01/19/22 18:34 / etad
Chloroform	1.2	ug/L		1.0		E624.1	01/19/22 18:34 / etad
Trihalomethanes, Total	1.2	ug/L		0.50		E624.1	02/03/22 09:28 / jlw
Surr: 1,2-Dichloroethane-d4	100	%REC		73-122		E624.1	01/19/22 18:34 / etad
Surr: p-Bromofluorobenzene	101	%REC		79-119		E624.1	01/19/22 18:34 / etad
Surr: Toluene-d8	99.0	%REC		80-120		E624.1	01/19/22 18:34 / etad

Report RL - Analyte Reporting Limit
Definitions: QCL - Quality Control Limit

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 1 and Zone 3
Lab ID: C22040142-007
Client Sample ID: 717

Report Date: 06/03/22
Collection Date: 04/01/22 09:22
Date Received: 04/05/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Acidity, Total as CaCO ₃	1100	mg/L				A2310 B	04/13/22 14:07 / nts
Bicarbonate as HCO ₃	ND	mg/L		5		A2320 B	04/07/22 16:36 / nts
Chloride	33	mg/L	D	2		E300.0	04/14/22 11:07 / dmb
Sulfate	3910	mg/L	D	8		E300.0	04/14/22 11:07 / dmb
Calcium	431	mg/L		1		E200.7	04/17/22 03:07 / erc
Magnesium	356	mg/L		1		E200.8	04/15/22 20:34 / jcg
Potassium	8	mg/L		1		E200.8	04/15/22 20:34 / jcg
Sodium	125	mg/L		1		E200.8	04/15/22 20:34 / jcg
PHYSICAL PROPERTIES							
pH	3.5	s.u.	H	0.1		A4500-H B	04/06/22 12:06 / mnm
pH Measurement Temp	15.6	°C				A4500-H B	04/06/22 12:06 / mnm
Solids, Total Dissolved TDS @ 180 C	5740	mg/L	D	40		A2540 C	04/06/22 14:59 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.05		E353.2	04/06/22 12:19 / nts
Nitrogen, Ammonia as N	13.2	mg/L	D	0.5		E350.1	04/07/22 15:39 / nts
METALS, TOTAL							
Aluminum	164	mg/L	D	20		E200.8	04/29/22 11:54 / jcg
Arsenic	0.013	mg/L		0.001		E200.8	04/16/22 06:39 / jcg
Beryllium	0.132	mg/L		0.001		E200.8	04/16/22 06:39 / jcg
Cadmium	0.012	mg/L		0.001		E200.8	04/16/22 06:39 / jcg
Cobalt	0.898	mg/L		0.005		E200.8	04/16/22 06:39 / jcg
Lead	0.034	mg/L		0.001		E200.8	04/20/22 00:45 / jcg
Manganese	13.6	mg/L	D	0.006		E200.8	04/16/22 06:39 / jcg
Molybdenum	ND	mg/L		0.001		E200.8	04/16/22 06:39 / jcg
Nickel	0.988	mg/L		0.005		E200.8	04/16/22 06:39 / jcg
Selenium	0.006	mg/L		0.001		E200.8	04/20/22 00:45 / jcg
Uranium	0.576	mg/L	D	0.001		E200.8	04/16/22 06:39 / jcg
Vanadium	ND	mg/L		0.01		E200.8	04/16/22 06:39 / jcg
DATA QUALITY							
Solids, Total Dissolved - Calculated	4870	mg/L		1.00		A1030 E	04/19/22 12:17 / tif
A/C Balance	-2.03	%				A1030 E	04/19/22 12:17 / tif
Anions	82.7	meq/L				A1030 E	04/19/22 12:17 / tif
Cations	79.4	meq/L				A1030 E	04/19/22 12:17 / tif
TDS Ratio	1.18	unitless				A1030 E	04/19/22 12:17 / tif
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	20.1	pCi/L				E900.1	04/12/22 15:02 / kdk
Gross Alpha minus Rn & U Precision (±)	4.1	pCi/L				E900.1	04/12/22 15:02 / kdk
Gross Alpha minus Rn & U MDC	0.7	pCi/L				E900.1	04/12/22 15:02 / kdk
Lead 210	1.1	pCi/L				E909.0	04/11/22 03:45 / hat

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
H - Analysis performed past the method holding time



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 1 and Zone 3
Lab ID: C22040142-007
Client Sample ID: 717

Report Date: 06/03/22
Collection Date: 04/01/22 09:22
Date Received: 04/05/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Lead 210 precision (±)	0.7	pCi/L				E909.0	04/11/22 03:45 / hat
Lead 210 MDC	1.0	pCi/L				E909.0	04/11/22 03:45 / hat
Radium 226	7.6	pCi/L				E903.0	04/17/22 10:41 / trs
Radium 226 precision (±)	1.5	pCi/L				E903.0	04/17/22 10:41 / trs
Radium 226 MDC	0.2	pCi/L				E903.0	04/17/22 10:41 / trs
Radium 228	17.9	pCi/L				RA-05	04/25/22 15:57 / trs
Radium 228 precision (±)	3.4	pCi/L				RA-05	04/25/22 15:57 / trs
Radium 228 MDC	1.0	pCi/L				RA-05	04/25/22 15:57 / trs
Radium 226 + Radium 228	25.5	pCi/L				A7500-RA	04/26/22 11:12 / dmf
Radium 226 + Radium 228 precision (±)	3.7	pCi/L				A7500-RA	04/26/22 11:12 / dmf
Radium 226 + Radium 228 MDC	1.0	pCi/L				A7500-RA	04/26/22 11:12 / dmf
Thorium 230	4.4	pCi/L				A7500-U C	04/18/22 13:49 / sec
Thorium 230 precision (±)	0.8	pCi/L				A7500-U C	04/18/22 13:49 / sec
Thorium 230 MDC	0.8	pCi/L				A7500-U C	04/18/22 13:49 / sec
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		1.0		E624.1	04/13/22 17:02 / etad
Bromoform	ND	ug/L		2.0		E624.1	04/13/22 17:02 / etad
Chlorodibromomethane	ND	ug/L		1.0		E624.1	04/13/22 17:02 / etad
Chloroform	ND	ug/L		1.0		E624.1	04/13/22 17:02 / etad
Trihalomethanes, Total	ND	ug/L		0.50		E624.1	04/27/22 18:25 / tlf
Surr: 1,2-Dichloroethane-d4	109	%REC		73-122		E624.1	04/13/22 17:02 / etad
Surr: p-Bromofluorobenzene	95.0	%REC		79-119		E624.1	04/13/22 17:02 / etad
Surr: Toluene-d8	80.0	%REC		80-120		E624.1	04/13/22 17:02 / etad

Report RL - Analyte Reporting Limit
Definitions: QCL - Quality Control Limit

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)



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Guideline 8: Sweetwater					
Well ID:		717	717	717	717
Collection Date:		4/1/2022	1/10/2022	10/4/2021	7/12/2021
Receive Date:		4/5/2022	1/13/2022	10/6/2021	7/14/2021
Report Date:		6/3/2022	2/16/2022	11/19/2021	8/13/2021
Analyte	Units	C22040142-007	C22010406-005	C21100250-007	C21070218-002
Bicarbonate as HCO ₃	mg/L	ND(5)	ND(5)	ND(5)	ND(5)
Calcium	mg/L	431	453	406	455
Chloride	mg/L	33	39	41	43
Magnesium	mg/L	356	373	361	414
Potassium	mg/L	8	8	9	7
Sodium	mg/L	125	130	126	141
Sulfate	mg/L	3910	4260	4380	4260
pH	s.u.	3.5	3.3	3.4	3.4
pH Measurement Temp	°C	15.6	12.5	16.1	15.5
Solids, Total Dissolved TDS @ 180 C	mg/L	5740	5760	5790	5950
Solids, Total Dissolved - Calculated	mg/L	4870	5270	5330	5330
Nitrogen, Ammonia as N	mg/L	13.2	13	15	14
Nitrogen, Nitrate+Nitrite as N	mg/L	ND(0.05)	ND(0.05)	0.03	0.02
Aluminum	mg/L	164	179	161	156
Arsenic	mg/L	0.013	0.009	0.008	0.009
Beryllium	mg/L	0.132	0.127	0.131	0.122
Cadmium	mg/L	0.012	0.011	0.012	0.011
Cobalt	mg/L	0.898	0.780	0.870	0.87
Lead	mg/L	0.036	0.025	0.030	0.028
Manganese	mg/L	13.6	12.2	13.1	12.0
Molybdenum	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Nickel	mg/L	0.988	0.930	0.911	0.876
Selenium	mg/L	0.007	0.005	0.006	0.007
Uranium	mg/L	0.576	0.541	0.591	0.555
Vanadium	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.2)
A/C Balance	%	-2.03	-4.87	-6.47	-1.67
Anions	meq/L	82.7	90.2	92.7	90.3
Cations	meq/L	79.4	81.8	81.4	87.4
TDS Ratio	unitless	1.18	1.09	1.09	1.12
Gross Alpha minus Rn & U	pCi/L	20.1	22.4	28.0	26.8
Gross Alpha minus Rn & U MDC	pCi/L	0.7	1	0.9	1.4
Gross Alpha minus Rn & U Precision (±)	pCi/L	4.1	4.6	5.7	5.6
Lead 210	pCi/L	1.1	1.5	1.1	2.0
Lead 210 MDC	pCi/L	1.0	0.9	1.0	1.0
Lead 210 precision (±)	pCi/L	0.7	0.7	0.7	0.9
Radium 226	pCi/L	7.6	10.5	11.7	13.9
Radium 226 MDC	pCi/L	0.2	0.2	0.2	0.1
Radium 226 precision (±)	pCi/L	1.5	2.0	2.3	2.6
Radium 228	pCi/L	17.9	17.6	16.5	14.5
Radium 228 MDC	pCi/L	1.0	1.4	1.6	0.9
Radium 228 precision (±)	pCi/L	3.4	3.4	3.3	2.7
Thorium 230	pCi/L	4.4	3.4	2.0	0.8
Thorium 230 MDC	pCi/L	0.8	0.6	0.4	1.3
Thorium 230 precision (±)	pCi/L	0.8	0.7	0.4	0.8
Bromodichloromethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromoform	ug/L	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)
Chlorodibromomethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloroform	ug/L	ND(1.0)	1.2	1.1	ND(1.0)
Trihalomethanes, Total	ug/L	ND(0.50)	1.2	1.1	0.53

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 3 & SW Alluvium, UNC - Zone1, UNC - Zone3
Lab ID: C22010583-001
Client Sample ID: 719

Report Date: 02/16/22
Collection Date: 01/13/22 13:42
Date Received: 01/19/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	34	mg/L		5		A2320 B	01/20/22 15:32 / kjp
Chloride	30	mg/L	D	2		E300.0	01/21/22 17:31 / dmb
Sulfate	4260	mg/L	D	8		E300.0	01/21/22 17:31 / dmb
Calcium	468	mg/L	D	3		E200.7	01/27/22 21:00 / srm
Magnesium	630	mg/L		1		E200.7	01/26/22 21:47 / srm
Potassium	11	mg/L		1		E200.8	01/31/22 18:31 / jcg
Sodium	144	mg/L	D	5		E200.7	01/27/22 21:00 / srm
PHYSICAL PROPERTIES							
pH	5.7	s.u.	H	0.1		A4500-H B	01/20/22 10:38 / mnm
pH Measurement Temp	13.3	°C				A4500-H B	01/20/22 10:38 / mnm
Solids, Total Dissolved TDS @ 180 C	6060	mg/L	D	40		A2540 C	01/20/22 15:05 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.05		E353.2	01/20/22 12:48 / nts
Nitrogen, Ammonia as N	0.44	mg/L		0.05		E350.1	01/27/22 14:08 / dmb
METALS, TOTAL							
Aluminum	2.07	mg/L		0.03		E200.8	02/03/22 13:42 / jcg
Arsenic	0.003	mg/L		0.001		E200.8	02/01/22 03:03 / jcg
Beryllium	0.003	mg/L		0.001		E200.8	02/10/22 12:43 / jcg
Cadmium	ND	mg/L		0.001		E200.8	02/01/22 03:03 / jcg
Cobalt	0.177	mg/L		0.005		E200.8	02/03/22 13:42 / jcg
Lead	0.001	mg/L		0.001		E200.8	02/02/22 04:20 / jcg
Manganese	5.32	mg/L	D	0.004		E200.8	02/01/22 03:03 / jcg
Molybdenum	0.422	mg/L		0.001		E200.8	02/03/22 13:42 / jcg
Nickel	0.281	mg/L		0.005		E200.8	02/01/22 03:03 / jcg
Selenium	0.003	mg/L		0.001		E200.8	02/01/22 03:03 / jcg
Uranium	0.078	mg/L	D	0.001		E200.8	02/02/22 04:20 / jcg
Vanadium	ND	mg/L		0.01		E200.8	02/01/22 03:03 / jcg
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	9.7	pCi/L				E900.1	01/24/22 11:57 / ammm
Gross Alpha minus Rn & U Precision (±)	2.3	pCi/L				E900.1	01/24/22 11:57 / ammm
Gross Alpha minus Rn & U MDC	0.9	pCi/L				E900.1	01/24/22 11:57 / ammm
Lead 210	-0.02	pCi/L	U			E909.0	01/29/22 18:54 / hat
Lead 210 precision (±)	0.5	pCi/L				E909.0	01/29/22 18:54 / hat
Lead 210 MDC	0.8	pCi/L				E909.0	01/29/22 18:54 / hat
Radium 226	3.4	pCi/L				E903.0	02/02/22 13:44 / kdk
Radium 226 precision (±)	0.7	pCi/L				E903.0	02/02/22 13:44 / kdk
Radium 226 MDC	0.2	pCi/L				E903.0	02/02/22 13:44 / kdk
Radium 228	12.9	pCi/L				RA-05	01/28/22 15:28 / trs
Radium 228 precision (±)	2.8	pCi/L				RA-05	01/28/22 15:28 / trs
Radium 228 MDC	2.0	pCi/L				RA-05	01/28/22 15:28 / trs

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
H - Analysis performed past the method holding time



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 3 & SW Alluvium, UNC - Zone1, UNC - Zone3
Lab ID: C22010583-001
Client Sample ID: 719

Report Date: 02/16/22
Collection Date: 01/13/22 13:42
Date Received: 01/19/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Radium 226 + Radium 228	16.3	pCi/L				A7500-RA	02/03/22 14:47 / dmf
Radium 226 + Radium 228 precision (±)	2.9	pCi/L				A7500-RA	02/03/22 14:47 / dmf
Radium 226 + Radium 228 MDC	2.1	pCi/L				A7500-RA	02/03/22 14:47 / dmf
Thorium 230	0.5	pCi/L				A7500-U C	01/27/22 20:04 / sec
Thorium 230 precision (±)	0.2	pCi/L				A7500-U C	01/27/22 20:04 / sec
Thorium 230 MDC	0.2	pCi/L				A7500-U C	01/27/22 20:04 / sec
DATA QUALITY							
Solids, Total Dissolved - Calculated	5580	mg/L		1.00		A1030 E	02/02/22 16:52 / jlw
A/C Balance	-4.87	%				A1030 E	02/02/22 16:52 / jlw
Anions	90.2	meq/L				A1030 E	02/02/22 16:52 / jlw
Cations	81.8	meq/L				A1030 E	02/02/22 16:52 / jlw
TDS Ratio	1.09	unitless				A1030 E	02/02/22 16:52 / jlw
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		1.0		E624.1	01/25/22 13:52 / etad
Bromoform	ND	ug/L		2.0		E624.1	01/25/22 13:52 / etad
Chlorodibromomethane	ND	ug/L		1.0		E624.1	01/25/22 13:52 / etad
Chloroform	ND	ug/L		1.0		E624.1	01/25/22 13:52 / etad
Trihalomethanes, Total	ND	ug/L		0.50		E624.1	02/16/22 14:49 / tlf
Surr: 1,2-Dichloroethane-d4	102	%REC		73-122		E624.1	01/25/22 13:52 / etad
Surr: p-Bromofluorobenzene	102	%REC		79-119		E624.1	01/25/22 13:52 / etad
Surr: Toluene-d8	100	%REC		80-120		E624.1	01/25/22 13:52 / etad

Report RL - Analyte Reporting Limit
Definitions: QCL - Quality Control Limit

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 1 and Zone 3
Lab ID: C22040142-012
Client Sample ID: 719

Report Date: 06/03/22
Collection Date: 04/01/22 14:23
Date Received: 04/05/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	12	mg/L		5		A2320 B	04/07/22 17:25 / nts
Chloride	29	mg/L	D	2		E300.0	04/09/22 20:20 / dmb
Sulfate	4420	mg/L	D	8		E300.0	04/09/22 20:20 / dmb
Calcium	490	mg/L	D	3		E200.8	04/21/22 18:29 / jcg
Magnesium	658	mg/L		1		E200.7	04/17/22 03:42 / erc
Potassium	11	mg/L	D	2		E200.7	04/21/22 19:27 / erc
Sodium	131	mg/L	D	5		E200.7	04/17/22 03:42 / erc
PHYSICAL PROPERTIES							
pH	5.6	s.u.	H	0.1		A4500-H B	04/06/22 12:23 / mnm
pH Measurement Temp	16.4	°C				A4500-H B	04/06/22 12:23 / mnm
Solids, Total Dissolved TDS @ 180 C	6100	mg/L	D	40		A2540 C	04/06/22 15:03 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.05		E353.2	04/06/22 12:33 / nts
Nitrogen, Ammonia as N	0.43	mg/L		0.05		E350.1	04/07/22 15:54 / nts
METALS, TOTAL							
Aluminum	1.2	mg/L	D	0.2		E200.8	04/16/22 07:49 / jcg
Arsenic	0.021	mg/L	D	0.003		E200.8	04/16/22 07:49 / jcg
Beryllium	ND	mg/L	D	0.002		E200.8	04/16/22 07:49 / jcg
Cadmium	ND	mg/L		0.001		E200.8	04/16/22 07:49 / jcg
Cobalt	0.183	mg/L		0.005		E200.8	04/16/22 07:49 / jcg
Lead	0.001	mg/L		0.001		E200.8	04/16/22 07:49 / jcg
Manganese	5.33	mg/L	D	0.007		E200.8	04/16/22 07:49 / jcg
Molybdenum	0.265	mg/L		0.001		E200.8	04/16/22 07:49 / jcg
Nickel	0.278	mg/L		0.005		E200.8	04/16/22 07:49 / jcg
Selenium	ND	mg/L	D	0.001		E200.8	04/16/22 07:49 / jcg
Uranium	0.040	mg/L	D	0.003		E200.8	04/16/22 07:49 / jcg
Vanadium	ND	mg/L	D	0.03		E200.8	04/16/22 07:49 / jcg
DATA QUALITY							
Solids, Total Dissolved - Calculated	5760	mg/L		1.00		A1030 E	04/24/22 13:40 / tlf
A/C Balance	-4.80	%				A1030 E	04/24/22 13:40 / tlf
Anions	93.1	meq/L				A1030 E	04/24/22 13:40 / tlf
Cations	84.5	meq/L				A1030 E	04/24/22 13:40 / tlf
TDS Ratio	1.06	unitless				A1030 E	04/24/22 13:40 / tlf
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	9.6	pCi/L				E900.1	04/12/22 15:03 / kdk
Gross Alpha minus Rn & U Precision (±)	2.1	pCi/L				E900.1	04/12/22 15:03 / kdk
Gross Alpha minus Rn & U MDC	0.7	pCi/L				E900.1	04/12/22 15:03 / kdk
Lead 210	1	pCi/L				E909.0	04/14/22 11:13 / hat
Lead 210 precision (±)	0.6	pCi/L				E909.0	04/14/22 11:13 / hat

Report RL - Analyte Reporting Limit
Definitions: QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
H - Analysis performed past the method holding time



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 1 and Zone 3
Lab ID: C22040142-012
Client Sample ID: 719

Report Date: 06/03/22
Collection Date: 04/01/22 14:23
Date Received: 04/05/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Lead 210 MDC	0.9	pCi/L				E909.0	04/14/22 11:13 / hat
Radium 226	4.6	pCi/L				E903.0	04/17/22 12:30 / trs
Radium 226 precision (±)	0.9	pCi/L				E903.0	04/17/22 12:30 / trs
Radium 226 MDC	0.2	pCi/L				E903.0	04/17/22 12:30 / trs
Radium 228	11.9	pCi/L				RA-05	04/12/22 16:15 / trs
Radium 228 precision (±)	2.4	pCi/L				RA-05	04/12/22 16:15 / trs
Radium 228 MDC	1.4	pCi/L				RA-05	04/12/22 16:15 / trs
Radium 226 + Radium 228	16.5	pCi/L				A7500-RA	04/18/22 11:57 / dmf
Radium 226 + Radium 228 precision (±)	2.6	pCi/L				A7500-RA	04/18/22 11:57 / dmf
Radium 226 + Radium 228 MDC	1.4	pCi/L				A7500-RA	04/18/22 11:57 / dmf
Thorium 230	1.4	pCi/L				A7500-U C	04/18/22 13:49 / sec
Thorium 230 precision (±)	0.3	pCi/L				A7500-U C	04/18/22 13:49 / sec
Thorium 230 MDC	0.2	pCi/L				A7500-U C	04/18/22 13:49 / sec
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		1.0		E624.1	04/14/22 04:30 / etad
Bromoform	ND	ug/L		2.0		E624.1	04/14/22 04:30 / etad
Chlorodibromomethane	ND	ug/L		1.0		E624.1	04/14/22 04:30 / etad
Chloroform	ND	ug/L		1.0		E624.1	04/14/22 04:30 / etad
Trihalomethanes, Total	ND	ug/L		0.50		E624.1	04/27/22 18:25 / tlf
Surr: 1,2-Dichloroethane-d4	105	%REC		73-122		E624.1	04/14/22 04:30 / etad
Surr: p-Bromofluorobenzene	98.0	%REC		79-119		E624.1	04/14/22 04:30 / etad
Surr: Toluene-d8	102	%REC		80-120		E624.1	04/14/22 04:30 / etad

Report RL - Analyte Reporting Limit
Definitions: QCL - Quality Control Limit

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)



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Guideline 8: Sweetwater					
Well ID:		719	719	719	719
Collection Date:		4/1/2022	1/13/2022	10/5/2021	7/13/2021
Receive Date:		4/5/2022	1/19/2022	10/7/2021	7/15/2021
Report Date:		6/3/2022	2/16/2022	11/27/2021	8/13/2021
Analyte	Units	C22040142-012	C22010583-001	C21100328-004	C21070606-002
Bicarbonate as HCO ₃	mg/L	12	34	13	11
Calcium	mg/L	490	468	436	495
Chloride	mg/L	29	30	30	30
Magnesium	mg/L	658	630	726	726
Potassium	mg/L	11	11	11	12
Sodium	mg/L	131	144	138	151
Sulfate	mg/L	4420	4260	4590	4510
pH	s.u.	5.6	5.7	5.5	5.6
pH Measurement Temp	°C	16.4	13.3	13.9	12.0
Solids, Total Dissolved TDS @ 180 C	mg/L	6100	6060	6170	6420
Solids, Total Dissolved - Calculated	mg/L	5760	5580	5960	5930
Nitrogen, Ammonia as N	mg/L	0.43	0.44	0.36	0.42
Nitrogen, Nitrate+Nitrite as N	mg/L	ND(0.05)	ND(0.05)	0.05	0.04
Aluminum	mg/L	1.2	2.07	3.17	4.10
Arsenic	mg/L	0.021	0.003	0.005	0.003
Beryllium	mg/L	ND(0.002)	0.003	0.004	0.005
Cadmium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cobalt	mg/L	0.183	0.177	0.188	0.188
Lead	mg/L	0.001	0.001	0.001	0.002
Manganese	mg/L	5.33	5.32	5.38	5.57
Molybdenum	mg/L	0.265	0.422	0.547	0.340
Nickel	mg/L	0.278	0.281	0.277	0.290
Selenium	mg/L	ND(0.001)	0.003	ND(0.001)	ND(0.001)
Uranium	mg/L	0.040	0.078	0.0910	0.105
Vanadium	mg/L	ND(0.03)	ND(0.01)	ND(0.01)	ND(0.01)
A/C Balance	%	-4.80	-4.87	-4.84	-1.93
Anions	meq/L	93.1	90.2	96.7	94.9
Cations	meq/L	84.5	81.8	87.8	91.3
TDS Ratio	unitless	1.06	1.09	1.04	1.08
Gross Alpha minus Rn & U	pCi/L	9.6	9.7	7.8	10.6
Gross Alpha minus Rn & U MDC	pCi/L	0.7	0.9	0.9	1.3
Gross Alpha minus Rn & U Precision (±)	pCi/L	2.1	2.3	1.8	2.6
Lead 210	pCi/L	1	-0.02	1	1.4
Lead 210 MDC	pCi/L	0.9	0.8	1.0	0.8
Lead 210 precision (±)	pCi/L	0.6	0.5	0.6	0.7
Radium 226	pCi/L	4.6	3.4	3.5	6.0
Radium 226 MDC	pCi/L	0.2	0.2	0.2	0.2
Radium 226 precision (±)	pCi/L	0.9	0.7	0.7	1.2
Radium 228	pCi/L	11.9	12.9	9.6	9.4
Radium 228 MDC	pCi/L	1.4	2.0	0.9	0.9
Radium 228 precision (±)	pCi/L	2.4	2.8	1.9	1.9
Thorium 230	pCi/L	1.4	0.5	0.6	2.6
Thorium 230 MDC	pCi/L	0.2	0.2	0.2	0.2
Thorium 230 precision (±)	pCi/L	0.3	0.2	0.2	0.5
Bromodichloromethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.50)
Bromoform	ug/L	ND(2.0)	ND(2.0)	ND(2.0)	ND(0.50)
Chlorodibromomethane	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.50)
Chloroform	ug/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.50)
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 only. Laboratory approved data is contained within the database reports.

SEMI-ANNUAL GROUND WATER MONITORING REPORT
SUPPLEMENTAL QUARTERLY/ MONTHLY SAMPLING
JANUARY TO JUNE OF 2022

ZONE-3

NBL-2
RW-A
NW-3
NW-4
NW-5 (No sample in Jan & April)
MW-7
SW-1B
SW-3B

LEVELS ONLY

PB-2 (DRY)
PB-3 (DRY)
PB-4
MW-6
IW-A
NW-1
NW-2
NW-5

NOTE: WATER LEVEL ONLY IS IN FIELD DATA SHEET

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 3 & SW Alluvium, UNC - Zone1, UNC - Zone3
Lab ID: C22010583-015
Client Sample ID: NBL-2

Report Date: 02/16/22
Collection Date: 01/13/22 14:40
Date Received: 01/19/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	338	mg/L		5		A2320 B	01/20/22 18:14 / kjp
Chloride	38	mg/L		1		E300.0	01/22/22 00:33 / dmb
PHYSICAL PROPERTIES							
pH	7.2	s.u.	H	0.1		A4500-H B	01/20/22 11:33 / mnm
pH Measurement Temp	15.8	°C				A4500-H B	01/20/22 11:33 / mnm
Solids, Total Dissolved TDS @ 180 C	3640	mg/L	D	40		A2540 C	01/20/22 15:50 / mnm

Report Definitions:
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QCL - Quality Control Limit
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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 3, Swalluvium
Lab ID: C22040256-008
Client Sample ID: NBL-2

Report Date: 05/04/22
Collection Date: 04/05/22 10:10
Date Received: 04/07/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	330	mg/L		5		A2320 B	04/11/22 12:57 / nts
Chloride	36	mg/L		1		E300.0	04/11/22 14:43 / dmb
PHYSICAL PROPERTIES							
pH	6.9	s.u.	H	0.1		A4500-H B	04/08/22 12:01 / mnm
pH Measurement Temp	15.9	°C				A4500-H B	04/08/22 12:01 / mnm
Solids, Total Dissolved TDS @ 180 C	3720	mg/L	D	20		A2540 C	04/08/22 14:43 / mnm

**Report
Definitions:**

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 3 & SW Alluvium, UNC - Zone1, UNC - Zone3
Lab ID: C22010583-017
Client Sample ID: RW-A

Report Date: 02/16/22
Collection Date: 01/14/22 09:50
Date Received: 01/19/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	26	mg/L		5		A2320 B	01/20/22 18:26 / kjp
Chloride	27	mg/L	D	2		E300.0	01/22/22 01:11 / dmb
PHYSICAL PROPERTIES							
pH	5.6	s.u.	H	0.1		A4500-H B	01/20/22 11:38 / mnm
pH Measurement Temp	16.0	°C				A4500-H B	01/20/22 11:38 / mnm
Solids, Total Dissolved TDS @ 180 C	6180	mg/L	D	40		A2540 C	01/20/22 15:51 / mnm

Report Definitions:
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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 3, Swalluvium
Lab ID: C22040256-010
Client Sample ID: RW-A

Report Date: 05/04/22
Collection Date: 04/05/22 10:52
Date Received: 04/07/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	25	mg/L		5		A2320 B	04/11/22 13:08 / nts
Chloride	29	mg/L	D	2		E300.0	04/11/22 15:21 / dmb
PHYSICAL PROPERTIES							
pH	5.5	s.u.	H	0.1		A4500-H B	04/08/22 12:07 / mnm
pH Measurement Temp	16.2	°C				A4500-H B	04/08/22 12:07 / mnm
Solids, Total Dissolved TDS @ 180 C	6190	mg/L	D	40		A2540 C	04/08/22 14:44 / mnm

**Report
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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC
Lab ID: C22010408-008
Client Sample ID: NW-3

Report Date: 02/16/22
Collection Date: 01/12/22 12:30
Date Received: 01/13/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	279	mg/L		5		A2320 B	01/17/22 15:35 / kjp
Chloride	35	mg/L	D	2		E300.0	01/15/22 02:54 / dmb
Sulfate	3290	mg/L	D	8		E300.0	01/15/22 02:54 / dmb
Calcium	630	mg/L		1		E200.7	01/18/22 14:20 / srm
Magnesium	390	mg/L		1		E200.7	01/18/22 14:20 / srm
Potassium	9	mg/L		1		E200.7	01/18/22 14:20 / srm
Sodium	158	mg/L	D	2		E200.7	01/18/22 14:20 / srm
PHYSICAL PROPERTIES							
pH	6.8	s.u.	H	0.1		A4500-H B	01/14/22 11:59 / kjp
pH Measurement Temp	14.3	°C				A4500-H B	01/14/22 11:59 / kjp
Solids, Total Dissolved TDS @ 180 C	5010	mg/L	D	40		A2540 C	01/14/22 14:43 / kjp
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.05		E353.2	01/14/22 16:45 / nts
Nitrogen, Ammonia as N	0.52	mg/L		0.05		E350.1	01/14/22 14:40 / nts
METALS, TOTAL							
Aluminum	0.15	mg/L	D	0.09		E200.8	01/20/22 04:14 / jcg
Arsenic	5.98	mg/L		0.001		E200.8	01/20/22 04:14 / jcg
Beryllium	ND	mg/L		0.001		E200.8	01/20/22 04:14 / jcg
Cadmium	ND	mg/L		0.001		E200.8	01/20/22 04:14 / jcg
Cobalt	0.054	mg/L		0.005		E200.8	01/20/22 04:14 / jcg
Lead	ND	mg/L		0.001		E200.8	01/20/22 04:14 / jcg
Manganese	5.04	mg/L	D	0.004		E200.8	01/20/22 04:14 / jcg
Molybdenum	0.328	mg/L	D	0.003		E200.8	01/20/22 04:14 / jcg
Nickel	ND	mg/L		0.005		E200.8	01/20/22 04:14 / jcg
Selenium	ND	mg/L		0.001		E200.8	01/20/22 04:14 / jcg
Uranium	0.062	mg/L	D	0.001		E200.8	01/20/22 04:14 / jcg
Vanadium	ND	mg/L		0.01		E200.8	01/20/22 04:14 / jcg
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	25.0	pCi/L				E900.1	01/21/22 11:05 / trs
Gross Alpha minus Rn & U Precision (±)	5.1	pCi/L				E900.1	01/21/22 11:05 / trs
Gross Alpha minus Rn & U MDC	1	pCi/L				E900.1	01/21/22 11:05 / trs
Lead 210	0.9	pCi/L				E909.0	01/22/22 10:58 / hat
Lead 210 precision (±)	0.5	pCi/L				E909.0	01/22/22 10:58 / hat
Lead 210 MDC	0.9	pCi/L				E909.0	01/22/22 10:58 / hat
Radium 226	18.8	pCi/L				E903.0	01/26/22 13:40 / kdk
Radium 226 precision (±)	3.6	pCi/L				E903.0	01/26/22 13:40 / kdk
Radium 226 MDC	0.2	pCi/L				E903.0	01/26/22 13:40 / kdk
Radium 228	16.5	pCi/L				RA-05	01/20/22 13:49 / trs
Radium 228 precision (±)	3.2	pCi/L				RA-05	01/20/22 13:49 / trs
Radium 228 MDC	1.4	pCi/L				RA-05	01/20/22 13:49 / trs

Report Definitions:
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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC
Lab ID: C22010408-008
Client Sample ID: NW-3

Report Date: 02/16/22
Collection Date: 01/12/22 12:30
Date Received: 01/13/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Radium 226 + Radium 228	35.4	pCi/L				A7500-RA	01/27/22 15:26 / dmf
Radium 226 + Radium 228 precision (±)	4.8	pCi/L				A7500-RA	01/27/22 15:26 / dmf
Radium 226 + Radium 228 MDC	1.4	pCi/L				A7500-RA	01/27/22 15:26 / dmf
Thorium 230	0.04	pCi/L	U			A7500-U C	01/20/22 07:27 / sec
Thorium 230 precision (±)	0.09	pCi/L				A7500-U C	01/20/22 07:27 / sec
Thorium 230 MDC	0.2	pCi/L				A7500-U C	01/20/22 07:27 / sec
DATA QUALITY							
Solids, Total Dissolved - Calculated	4640	mg/L		1.00		A1030 E	01/20/22 08:51 / jlw
A/C Balance	-2.29	%				A1030 E	01/20/22 08:51 / jlw
Anions	74.0	meq/L				A1030 E	01/20/22 08:51 / jlw
Cations	70.7	meq/L				A1030 E	01/20/22 08:51 / jlw
TDS Ratio	1.08	unitless				A1030 E	01/20/22 08:51 / jlw
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624.1	01/21/22 15:54 / eli-b
Bromoform	ND	ug/L		0.50		E624.1	01/21/22 15:54 / eli-b
Chlorodibromomethane	ND	ug/L		0.50		E624.1	01/21/22 15:54 / eli-b
Chloroform	ND	ug/L		0.50		E624.1	01/21/22 15:54 / eli-b
Trihalomethanes, Total	ND	ug/L		0.50		E624.1	02/03/22 09:28 / jlw
Surr: 1,2-Dichloroethane-d4	112	%REC		71-139		E624.1	01/21/22 15:54 / eli-b
Surr: p-Bromofluorobenzene	103	%REC		80-127		E624.1	01/21/22 15:54 / eli-b
Surr: Toluene-d8	102	%REC		80-123		E624.1	01/21/22 15:54 / eli-b

Report
Definitions: RL - Analyte Reporting Limit
QCL - Quality Control Limit
U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 1, Zone 3
Lab ID: C22040181-004
Client Sample ID: NW-3

Report Date: 04/29/22
Collection Date: 04/04/22 13:51
Date Received: 04/06/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	230	mg/L	H	5		A2320 B	04/20/22 16:53 / dmb
Chloride	35	mg/L	D	2		E300.0	04/10/22 00:49 / dmb
Sulfate	3270	mg/L	D	8		E300.0	04/10/22 00:49 / dmb
Calcium	628	mg/L		1		E200.7	04/21/22 19:42 / erc
Magnesium	343	mg/L		1		E200.8	04/15/22 21:51 / jcg
Potassium	9	mg/L		1		E200.8	04/15/22 21:51 / jcg
Sodium	135	mg/L		1		E200.8	04/15/22 21:51 / jcg
- H - Original analysis was done within hold time. Data is from recheck analysis.							
PHYSICAL PROPERTIES							
pH	6.8	s.u.	H	0.1		A4500-H B	04/08/22 10:20 / mnm
pH Measurement Temp	11.3	°C				A4500-H B	04/08/22 10:20 / mnm
Solids, Total Dissolved TDS @ 180 C	5050	mg/L	D	40		A2540 C	04/08/22 14:31 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.05		E353.2	04/08/22 11:42 / nts
Nitrogen, Ammonia as N	0.63	mg/L		0.05		E350.1	04/07/22 16:00 / nts
METALS, TOTAL							
Aluminum	0.11	mg/L	D	0.04		E200.8	04/20/22 02:36 / jcg
Arsenic	5.89	mg/L		0.001		E200.8	04/20/22 02:36 / jcg
Beryllium	ND	mg/L		0.001		E200.8	04/20/22 02:36 / jcg
Cadmium	ND	mg/L		0.001		E200.8	04/20/22 02:36 / jcg
Cobalt	0.067	mg/L		0.005		E200.8	04/20/22 02:36 / jcg
Lead	ND	mg/L		0.001		E200.8	04/20/22 02:36 / jcg
Manganese	5.72	mg/L	D	0.002		E200.7	04/19/22 17:51 / erc
Molybdenum	0.333	mg/L		0.001		E200.8	04/22/22 22:44 / jcg
Nickel	ND	mg/L		0.005		E200.8	04/20/22 02:36 / jcg
Selenium	ND	mg/L		0.001		E200.8	04/20/22 02:36 / jcg
Uranium	0.0648	mg/L	D	0.0005		E200.8	04/20/22 02:36 / jcg
Vanadium	ND	mg/L		0.01		E200.8	04/20/22 02:36 / jcg
DATA QUALITY							
Solids, Total Dissolved - Calculated	4570	mg/L		1.00		A1030 E	04/25/22 15:33 / jlw
A/C Balance	-2.04	%				A1030 E	04/25/22 15:33 / jlw
Anions	72.9	meq/L				A1030 E	04/25/22 15:33 / jlw
Cations	70.0	meq/L				A1030 E	04/25/22 15:33 / jlw
TDS Ratio	1.11	unitless				A1030 E	04/25/22 15:33 / jlw
Cation/Anion Balance includes selected metals							
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	23.1	pCi/L				E900.1	04/15/22 11:08 / kdk
Gross Alpha minus Rn & U Precision (±)	4.7	pCi/L				E900.1	04/15/22 11:08 / kdk
Gross Alpha minus Rn & U MDC	1	pCi/L				E900.1	04/15/22 11:08 / kdk
Lead 210	1.1	pCi/L				E909.0	04/15/22 00:10 / hat

Report RL - Analyte Reporting Limit
Definitions: QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
H - Analysis performed past the method holding time



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 1, Zone 3
Lab ID: C22040181-004
Client Sample ID: NW-3

Report Date: 04/29/22
Collection Date: 04/04/22 13:51
Date Received: 04/06/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Lead 210 precision (±)	0.6	pCi/L				E909.0	04/15/22 00:10 / hat
Lead 210 MDC	0.9	pCi/L				E909.0	04/15/22 00:10 / hat
Radium 226	15.3	pCi/L				E903.0	04/19/22 18:11 / kdk
Radium 226 precision (±)	2.9	pCi/L				E903.0	04/19/22 18:11 / kdk
Radium 226 MDC	0.2	pCi/L				E903.0	04/19/22 18:11 / kdk
Radium 228	8.6	pCi/L				RA-05	04/14/22 13:49 / trs
Radium 228 precision (±)	1.7	pCi/L				RA-05	04/14/22 13:49 / trs
Radium 228 MDC	1.1	pCi/L				RA-05	04/14/22 13:49 / trs
Radium 226 + Radium 228	23.8	pCi/L				A7500-RA	04/21/22 10:26 / dmf
Radium 226 + Radium 228 precision (±)	3.4	pCi/L				A7500-RA	04/21/22 10:26 / dmf
Radium 226 + Radium 228 MDC	1.1	pCi/L				A7500-RA	04/21/22 10:26 / dmf
Thorium 230	0.2	pCi/L				A7500-U C	04/14/22 15:55 / sec
Thorium 230 precision (±)	0.1	pCi/L				A7500-U C	04/14/22 15:55 / sec
Thorium 230 MDC	0.1	pCi/L				A7500-U C	04/14/22 15:55 / sec
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624.1	04/11/22 18:32 / eli-b
Bromoform	ND	ug/L		0.50		E624.1	04/11/22 18:32 / eli-b
Chlorodibromomethane	ND	ug/L		0.50		E624.1	04/11/22 18:32 / eli-b
Chloroform	ND	ug/L		0.50		E624.1	04/11/22 18:32 / eli-b
Trihalomethanes, Total	ND	ug/L		0.50		E624.1	04/27/22 18:25 / tlf
Surr: 1,2-Dichloroethane-d4	101	%REC		71-139		E624.1	04/11/22 18:32 / eli-b
Surr: p-Bromofluorobenzene	106	%REC		80-127		E624.1	04/11/22 18:32 / eli-b
Surr: Toluene-d8	105	%REC		80-123		E624.1	04/11/22 18:32 / eli-b

Report RL - Analyte Reporting Limit
Definitions: QCL - Quality Control Limit

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)



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Guideline 8: Sweetwater					
Well ID:		NW-3	NW-3	NW-3	NW-3
Collection Date:		4/4/2022	1/12/2022	10/5/2021	7/7/2021
Receive Date:		4/6/2022	1/13/2022	10/7/2021	7/8/2021
Report Date:		4/29/2022	2/16/2022	11/27/2021	8/13/2021
Analyte	Units	C22040181-004	C22010408-008	C21100328-007	C21070279-004
Bicarbonate as HCO ₃	mg/L	230	279	271	342
Calcium	mg/L	628	630	608	621
Chloride	mg/L	35	35	36	37
Magnesium	mg/L	343	390	357	353
Potassium	mg/L	9	9	10	9
Sodium	mg/L	135	158	151	149
Sulfate	mg/L	3270	3290	3160	3120
pH	s.u.	6.8	6.8	6.7	6.8
pH Measurement Temp	°C	11.3	14.3	14.2	12.6
Solids, Total Dissolved TDS @ 180 C	mg/L	5050	5010	4810	4900
Solids, Total Dissolved - Calculated	mg/L	4570	4640	4450	4460
Nitrogen, Ammonia as N	mg/L	0.63	0.52	0.61	0.49
Nitrogen, Nitrate+Nitrite as N	mg/L	ND(0.05)	ND(0.05)	0.03	0.03
Aluminum	mg/L	0.11	0.15	0.20	0.22
Arsenic	mg/L	5.89	5.98	6.17	7.15
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cobalt	mg/L	0.067	0.054	0.027	0.046
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	5.72	5.04	4.99	4.70
Molybdenum	mg/L	0.333	0.328	0.342	0.264
Nickel	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	0.007
Selenium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Uranium	mg/L	0.0648	0.062	0.0761	0.0768
Vanadium	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
A/C Balance	%	-2.04	-2.29	-3.33	-3.50
Anions	meq/L	72.9	74.0	71.2	71.6
Cations	meq/L	70.0	70.7	66.6	66.8
TDS Ratio	unitless	1.11	1.08	1.08	1.10
Gross Alpha minus Rn & U	pCi/L	23.1	25.0	23.1	20.9
Gross Alpha minus Rn & U MDC	pCi/L	1	1	0.9	1.4
Gross Alpha minus Rn & U Precision (±)	pCi/L	4.7	5.1	4.7	4.5
Lead 210	pCi/L	1.1	0.9	1	0.7
Lead 210 MDC	pCi/L	0.9	0.9	1.0	1
Lead 210 precision (±)	pCi/L	0.6	0.5	0.6	0.6
Radium 226	pCi/L	15.3	18.8	14.6	17.8
Radium 226 MDC	pCi/L	0.2	0.2	0.2	0.2
Radium 226 precision (±)	pCi/L	2.9	3.6	2.8	3.4
Radium 228	pCi/L	8.6	16.5	18.3	11.9
Radium 228 MDC	pCi/L	1.1	1.4	1.1	0.9
Radium 228 precision (±)	pCi/L	1.7	3.2	3.5	2.3
Thorium 230	pCi/L	0.2	0.04	0.03	0.07
Thorium 230 MDC	pCi/L	0.1	0.2	0.05	0.1
Thorium 230 precision (±)	pCi/L	0.1	0.09	0.03	0.07
Bromodichloromethane	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Bromoform	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Chlorodibromomethane	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Chloroform	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
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 only. Laboratory approved data is contained within the database reports.

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 3 & SW Alluvium, UNC - Zone1, UNC - Zone3
Lab ID: C22010583-016
Client Sample ID: NW-4

Report Date: 02/16/22
Collection Date: 01/14/22 09:35
Date Received: 01/19/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	9	mg/L		5		A2320 B	01/20/22 18:20 / kjp
Chloride	18	mg/L	D	2		E300.0	01/22/22 00:52 / dmb
PHYSICAL PROPERTIES							
pH	5.7	s.u.	H	0.1		A4500-H B	01/20/22 11:35 / mnm
pH Measurement Temp	16.0	°C				A4500-H B	01/20/22 11:35 / mnm
Solids, Total Dissolved TDS @ 180 C	4340	mg/L	D	40		A2540 C	01/20/22 15:50 / mnm

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
H - Analysis performed past the method holding time



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 3, Swalluvium
Lab ID: C22040256-009
Client Sample ID: NW-4

Report Date: 05/04/22
Collection Date: 04/05/22 10:39
Date Received: 04/07/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	10	mg/L		5		A2320 B	04/11/22 13:02 / nts
Chloride	16	mg/L		1		E300.0	04/11/22 15:02 / dmb
PHYSICAL PROPERTIES							
pH	5.7	s.u.	H	0.1		A4500-H B	04/08/22 12:04 / mnm
pH Measurement Temp	16.2	°C				A4500-H B	04/08/22 12:04 / mnm
Solids, Total Dissolved TDS @ 180 C	4400	mg/L	D	40		A2540 C	04/08/22 14:43 / mnm

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
H - Analysis performed past the method holding time



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC
Lab ID: C22010408-007
Client Sample ID: MW-7

Report Date: 02/16/22
Collection Date: 01/12/22 11:12
Date Received: 01/13/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Acidity, Total as CaCO ₃	420	mg/L				A2310 B	01/24/22 10:53 / nts
Bicarbonate as HCO ₃	ND	mg/L		5		A2320 B	01/17/22 15:28 / kjp
Chloride	25	mg/L	D	2		E300.0	01/15/22 02:35 / dmb
Sulfate	4060	mg/L	D	8		E300.0	01/15/22 02:35 / dmb
Calcium	440	mg/L	D	3		E200.8	01/17/22 20:01 / jcg
Magnesium	494	mg/L		1		E200.8	01/17/22 20:01 / jcg
Potassium	10	mg/L		1		E200.8	01/17/22 20:01 / jcg
Sodium	141	mg/L	D	2		E200.8	01/17/22 20:01 / jcg
PHYSICAL PROPERTIES							
pH	3.0	s.u.	H	0.1		A4500-H B	01/14/22 11:56 / kjp
pH Measurement Temp	14.2	°C				A4500-H B	01/14/22 11:56 / kjp
Solids, Total Dissolved TDS @ 180 C	5740	mg/L	D	40		A2540 C	01/14/22 12:24 / kjp
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.05		E353.2	01/14/22 16:44 / nts
Nitrogen, Ammonia as N	0.81	mg/L		0.05		E350.1	01/14/22 14:39 / nts
METALS, TOTAL							
Aluminum	0.52	mg/L	D	0.09		E200.8	01/20/22 04:09 / jcg
Arsenic	0.028	mg/L		0.001		E200.8	01/20/22 04:09 / jcg
Beryllium	0.010	mg/L		0.001		E200.8	01/20/22 04:09 / jcg
Cadmium	0.001	mg/L		0.001		E200.8	01/20/22 04:09 / jcg
Cobalt	0.604	mg/L		0.005		E200.8	01/20/22 04:09 / jcg
Lead	0.048	mg/L		0.001		E200.8	01/20/22 04:09 / jcg
Manganese	7.35	mg/L	D	0.004		E200.8	01/20/22 04:09 / jcg
Molybdenum	0.005	mg/L	D	0.003		E200.8	01/20/22 04:09 / jcg
Nickel	0.712	mg/L		0.005		E200.8	01/20/22 04:09 / jcg
Selenium	ND	mg/L		0.001		E200.8	01/20/22 04:09 / jcg
Uranium	0.009	mg/L	D	0.001		E200.8	01/20/22 04:09 / jcg
Vanadium	ND	mg/L		0.01		E200.8	01/20/22 04:09 / jcg
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	20.9	pCi/L				E900.1	01/21/22 11:05 / trs
Gross Alpha minus Rn & U Precision (±)	4.3	pCi/L				E900.1	01/21/22 11:05 / trs
Gross Alpha minus Rn & U MDC	1	pCi/L				E900.1	01/21/22 11:05 / trs
Lead 210	0.4	pCi/L	U			E909.0	01/22/22 07:39 / hat
Lead 210 precision (±)	0.5	pCi/L				E909.0	01/22/22 07:39 / hat
Lead 210 MDC	0.8	pCi/L				E909.0	01/22/22 07:39 / hat
Radium 226	12.4	pCi/L				E903.0	01/26/22 13:40 / kdk
Radium 226 precision (±)	2.4	pCi/L				E903.0	01/26/22 13:40 / kdk
Radium 226 MDC	0.2	pCi/L				E903.0	01/26/22 13:40 / kdk
Radium 228	13.0	pCi/L				RA-05	01/20/22 13:49 / trs
Radium 228 precision (±)	2.6	pCi/L				RA-05	01/20/22 13:49 / trs

Report Definitions:
 RL - Analyte Reporting Limit
 QCL - Quality Control Limit
 D - Reporting Limit (RL) increased due to sample matrix
 U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
 ND - Not detected at the Reporting Limit (RL)
 H - Analysis performed past the method holding time



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC
Lab ID: C22010408-007
Client Sample ID: MW-7

Report Date: 02/16/22
Collection Date: 01/12/22 11:12
Date Received: 01/13/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Radium 228 MDC	1.4	pCi/L				RA-05	01/20/22 13:49 / trs
Radium 226 + Radium 228	25.4	pCi/L				A7500-RA	01/27/22 15:26 / dmf
Radium 226 + Radium 228 precision (±)	3.5	pCi/L				A7500-RA	01/27/22 15:26 / dmf
Radium 226 + Radium 228 MDC	1.4	pCi/L				A7500-RA	01/27/22 15:26 / dmf
Thorium 230	0.2	pCi/L	U			A7500-U C	01/20/22 14:21 / sec
Thorium 230 precision (±)	0.1	pCi/L				A7500-U C	01/20/22 14:21 / sec
Thorium 230 MDC	0.2	pCi/L				A7500-U C	01/20/22 14:21 / sec
DATA QUALITY							
Solids, Total Dissolved - Calculated	5170	mg/L		1.00		A1030 E	01/24/22 16:16 / jlw
A/C Balance	-4.75	%				A1030 E	01/24/22 16:16 / jlw
Anions	85.2	meq/L				A1030 E	01/24/22 16:16 / jlw
Cations	77.5	meq/L				A1030 E	01/24/22 16:16 / jlw
TDS Ratio	1.11	unitless				A1030 E	01/24/22 16:16 / jlw
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		1.0		E624.1	01/20/22 17:40 / etad
Bromoform	ND	ug/L		2.0		E624.1	01/20/22 17:40 / etad
Chlorodibromomethane	ND	ug/L		1.0		E624.1	01/20/22 17:40 / etad
Chloroform	1.1	ug/L		1.0		E624.1	01/20/22 17:40 / etad
Trihalomethanes, Total	1.1	ug/L		0.50		E624.1	02/03/22 09:28 / jlw
Surr: 1,2-Dichloroethane-d4	102	%REC		73-122		E624.1	01/20/22 17:40 / etad
Surr: p-Bromofluorobenzene	100	%REC		79-119		E624.1	01/20/22 17:40 / etad
Surr: Toluene-d8	99.0	%REC		80-120		E624.1	01/20/22 17:40 / etad

Report Definitions:
 RL - Analyte Reporting Limit
 QCL - Quality Control Limit
 U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
 ND - Not detected at the Reporting Limit (RL)



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 3
Lab ID: C22040188-002
Client Sample ID: MW-7

Report Date: 04/29/22
Collection Date: 04/04/22 12:10
Date Received: 04/06/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Acidity, Total as CaCO ₃	455	mg/L				A2310 B	04/13/22 14:33 / nts
Bicarbonate as HCO ₃	ND	mg/L		5		A2320 B	04/07/22 18:02 / nts
Chloride	25	mg/L	D	2		E300.0	04/10/22 01:28 / dmb
Sulfate	3930	mg/L	D	8		E300.0	04/10/22 01:28 / dmb
Calcium	486	mg/L		1		E200.8	04/19/22 02:35 / jcg
Magnesium	471	mg/L		1		E200.8	04/15/22 22:01 / jcg
Potassium	11	mg/L		1		E200.8	04/15/22 22:01 / jcg
Sodium	140	mg/L		1		E200.8	04/19/22 02:35 / jcg
PHYSICAL PROPERTIES							
pH	3.1	s.u.	H	0.1		A4500-H B	04/08/22 10:26 / mnm
pH Measurement Temp	11.8	°C				A4500-H B	04/08/22 10:26 / mnm
Solids, Total Dissolved TDS @ 180 C	5710	mg/L	D	40		A2540 C	04/08/22 14:32 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.05		E353.2	04/08/22 11:51 / nts
Nitrogen, Ammonia as N	0.85	mg/L		0.05		E350.1	04/07/22 16:09 / nts
METALS, TOTAL							
Aluminum	2.24	mg/L	D	0.04		E200.8	04/20/22 02:47 / jcg
Arsenic	0.017	mg/L		0.001		E200.8	04/20/22 02:47 / jcg
Beryllium	0.027	mg/L		0.001		E200.8	04/20/22 02:47 / jcg
Cadmium	ND	mg/L		0.001		E200.8	04/20/22 02:47 / jcg
Cobalt	0.577	mg/L		0.005		E200.8	04/20/22 02:47 / jcg
Lead	0.045	mg/L		0.001		E200.8	04/20/22 02:47 / jcg
Manganese	8.15	mg/L	D	0.002		E200.7	04/19/22 18:02 / erc
Molybdenum	0.002	mg/L		0.001		E200.8	04/22/22 22:58 / jcg
Nickel	0.73	mg/L	D	0.05		E200.7	04/19/22 18:02 / erc
Selenium	ND	mg/L		0.001		E200.8	04/20/22 02:47 / jcg
Uranium	0.0127	mg/L	D	0.0005		E200.8	04/20/22 02:47 / jcg
Vanadium	ND	mg/L		0.01		E200.8	04/20/22 02:47 / jcg
DATA QUALITY							
Solids, Total Dissolved - Calculated	5070	mg/L		1.00		A1030 E	04/19/22 14:04 / tlf
A/C Balance	-2.64	%				A1030 E	04/19/22 14:04 / tlf
Anions	82.7	meq/L				A1030 E	04/19/22 14:04 / tlf
Cations	78.5	meq/L				A1030 E	04/19/22 14:04 / tlf
TDS Ratio	1.13	unitless				A1030 E	04/19/22 14:04 / tlf
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	19.3	pCi/L				E900.1	04/15/22 11:08 / kdk
Gross Alpha minus Rn & U Precision (±)	4.0	pCi/L				E900.1	04/15/22 11:08 / kdk
Gross Alpha minus Rn & U MDC	1	pCi/L				E900.1	04/15/22 11:08 / kdk
Lead 210	0.7	pCi/L	U			E909.0	04/15/22 06:26 / hat

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
H - Analysis performed past the method holding time



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Zone 3
Lab ID: C22040188-002
Client Sample ID: MW-7

Report Date: 04/29/22
Collection Date: 04/04/22 12:10
Date Received: 04/06/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Lead 210 precision (±)	0.5	pCi/L				E909.0	04/15/22 06:26 / hat
Lead 210 MDC	0.9	pCi/L				E909.0	04/15/22 06:26 / hat
Radium 226	12.5	pCi/L				E903.0	04/19/22 18:11 / kdk
Radium 226 precision (±)	2.4	pCi/L				E903.0	04/19/22 18:11 / kdk
Radium 226 MDC	0.2	pCi/L				E903.0	04/19/22 18:11 / kdk
Radium 228	11.1	pCi/L				RA-05	04/14/22 13:49 / trs
Radium 228 precision (±)	2.2	pCi/L				RA-05	04/14/22 13:49 / trs
Radium 228 MDC	1.2	pCi/L				RA-05	04/14/22 13:49 / trs
Radium 226 + Radium 228	23.6	pCi/L				A7500-RA	04/21/22 10:26 / dmf
Radium 226 + Radium 228 precision (±)	3.3	pCi/L				A7500-RA	04/21/22 10:26 / dmf
Radium 226 + Radium 228 MDC	1.2	pCi/L				A7500-RA	04/21/22 10:26 / dmf
Thorium 230	0.4	pCi/L				A7500-U C	04/18/22 13:49 / sec
Thorium 230 precision (±)	0.2	pCi/L				A7500-U C	04/18/22 13:49 / sec
Thorium 230 MDC	0.2	pCi/L				A7500-U C	04/18/22 13:49 / sec
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		1.0		E624.1	04/15/22 21:55 / etad
Bromoform	ND	ug/L		2.0		E624.1	04/15/22 21:55 / etad
Chlorodibromomethane	ND	ug/L		1.0		E624.1	04/15/22 21:55 / etad
Chloroform	ND	ug/L		1.0		E624.1	04/15/22 21:55 / etad
Trihalomethanes, Total	ND	ug/L		0.50		E624.1	04/27/22 18:25 / tlf
Surr: 1,2-Dichloroethane-d4	108	%REC		73-122		E624.1	04/15/22 21:55 / etad
Surr: p-Bromofluorobenzene	104	%REC		79-119		E624.1	04/15/22 21:55 / etad
Surr: Toluene-d8	104	%REC		80-120		E624.1	04/15/22 21:55 / etad

Report RL - Analyte Reporting Limit
Definitions: QCL - Quality Control Limit

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)



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Guideline 8: Sweetwater					
Well ID:		MW-7	MW-7	MW-7	MW-7
Collection Date:		4/4/2022	1/12/2022	10/5/2021	7/7/2021
Receive Date:		4/6/2022	1/13/2022	10/7/2021	7/8/2021
Report Date:		4/29/2022	2/16/2022	11/27/2021	8/13/2021
Analyte	Units	C22040188-002	C22010408-007	C21100328-005	C21070279-003
Acidity, Total as CaCO ₃	mg/L	455	420	340	300
Bicarbonate as HCO ₃	mg/L	ND(5)	ND(5)	ND(5)	ND(5)
Calcium	mg/L	486	440	424	457
Chloride	mg/L	25	25	30	34
Magnesium	mg/L	471	494	541	532
Potassium	mg/L	11	10	11	10
Sodium	mg/L	140	141	145	149
Sulfate	mg/L	3930	4060	4110	3850
pH	s.u.	3.1	3.0	3.2	3.4
pH Measurement Temp	°C	11.8	14.2	13.9	12.8
Solids, Total Dissolved TDS @ 180 C	mg/L	5710	5740	5610	5650
Solids, Total Dissolved - Calculated	mg/L	5070	5170	5310	5030
Nitrogen, Ammonia as N	mg/L	0.85	0.81	0.86	0.79
Nitrogen, Nitrate+Nitrite as N	mg/L	ND(0.05)	ND(0.05)	0.04	0.05
Aluminum	mg/L	2.24	0.52	0.05	ND(0.03)
Arsenic	mg/L	0.017	0.028	0.046	0.065
Beryllium	mg/L	0.027	0.010	0.003	0.002
Cadmium	mg/L	ND(0.001)	0.001	ND(0.001)	ND(0.001)
Cobalt	mg/L	0.577	0.604	0.692	0.611
Lead	mg/L	0.045	0.048	0.019	0.014
Manganese	mg/L	8.15	7.35	8.14	7.39
Molybdenum	mg/L	0.002	0.005	0.010	0.015
Nickel	mg/L	0.73	0.712	0.687	0.575
Selenium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Uranium	mg/L	0.0127	0.009	0.0143	0.0193
Vanadium	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
A/C Balance	%	-2.64	-4.75	-4.37	-1.12
Anions	meq/L	82.7	85.2	86.3	81.1
Cations	meq/L	78.5	77.5	79.1	79.3
TDS Ratio	unitless	1.13	1.11	1.06	1.12
Gross Alpha minus Rn & U	pCi/L	19.3	20.9	21.1	17.2
Gross Alpha minus Rn & U MDC	pCi/L	1	1	0.9	1.4
Gross Alpha minus Rn & U Precision (±)	pCi/L	4.0	4.3	4.4	3.8
Lead 210	pCi/L	0.7	0.4	0.9	0.2
Lead 210 MDC	pCi/L	0.9	0.8	1.0	0.9
Lead 210 precision (±)	pCi/L	0.5	0.5	0.6	0.6
Radium 226	pCi/L	12.5	12.4	9.8	10.7
Radium 226 MDC	pCi/L	0.2	0.2	0.2	0.3
Radium 226 precision (±)	pCi/L	2.4	2.4	1.9	2.1
Radium 228	pCi/L	11.1	13.0	15.2	8.9
Radium 228 MDC	pCi/L	1.2	1.4	1.2	0.9
Radium 228 precision (±)	pCi/L	2.2	2.6	3.0	1.8
Thorium 230	pCi/L	0.4	0.2	0.1	-0.02
Thorium 230 MDC	pCi/L	0.2	0.2	0.2	0.5
Thorium 230 precision (±)	pCi/L	0.2	0.1	0.1	0.2
Bromodichloromethane	ug/L	ND(1.0)	ND	ND(1.0)	ND(0.50)
Bromoform	ug/L	ND(2.0)	ND	ND(2.0)	ND(0.50)
Chlorodibromomethane	ug/L	ND(1.0)	ND	ND(1.0)	ND(0.50)
Chloroform	ug/L	ND(1.0)	1.1	ND(1.0)	1.3
Trihalomethanes, Total	ug/L	ND(0.50)	1.1	ND(0.50)	1.3

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC- Sentinel Wells
Lab ID: C22010715-002
Client Sample ID: SW-1B

Report Date: 02/16/22
Collection Date: 01/19/22 14:36
Date Received: 01/21/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	438	mg/L		5		A2320 B	01/24/22 18:48 / kjp
Chloride	29	mg/L		1		E300.0	01/28/22 03:07 / dmb
Sulfate	2120	mg/L	D	4		E300.0	01/28/22 03:07 / dmb
Calcium	546	mg/L		1		E200.8	01/31/22 21:45 / jcg
Magnesium	184	mg/L		1		E200.8	01/31/22 21:45 / jcg
Potassium	9	mg/L		1		E200.7	02/02/22 03:46 / srm
Sodium	156	mg/L		1		E200.8	01/31/22 21:45 / jcg
PHYSICAL PROPERTIES							
pH	7.0	s.u.	H	0.1		A4500-H B	01/24/22 10:23 / mnm
pH Measurement Temp	11.2	°C				A4500-H B	01/24/22 10:23 / mnm
Solids, Total Dissolved TDS @ 180 C	3480	mg/L	D	40		A2540 C	01/24/22 12:53 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	0.05	mg/L		0.05		E353.2	01/25/22 14:01 / nts
Nitrogen, Ammonia as N	2.5	mg/L	D	0.2		E350.1	01/27/22 15:49 / dmb
METALS, TOTAL							
Aluminum	0.05	mg/L	D	0.04		E200.8	02/02/22 07:48 / jcg
Arsenic	ND	mg/L		0.001		E200.8	02/02/22 07:48 / jcg
Beryllium	ND	mg/L		0.001		E200.8	02/02/22 07:48 / jcg
Cadmium	ND	mg/L		0.001		E200.8	02/02/22 07:48 / jcg
Cobalt	ND	mg/L		0.005		E200.8	02/02/22 07:48 / jcg
Lead	ND	mg/L		0.001		E200.8	02/02/22 07:48 / jcg
Manganese	3.23	mg/L		0.001		E200.8	02/02/22 07:48 / jcg
Molybdenum	0.029	mg/L		0.001		E200.8	02/02/22 07:48 / jcg
Nickel	ND	mg/L		0.005		E200.8	02/02/22 07:48 / jcg
Selenium	ND	mg/L		0.001		E200.8	02/02/22 07:48 / jcg
Uranium	ND	mg/L	D	0.0005		E200.8	02/02/22 07:48 / jcg
Vanadium	ND	mg/L		0.01		E200.8	02/02/22 07:48 / jcg
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	3.1	pCi/L				E900.1	01/31/22 08:28 / trs
Gross Alpha minus Rn & U Precision (±)	0.8	pCi/L				E900.1	01/31/22 08:28 / trs
Gross Alpha minus Rn & U MDC	0.5	pCi/L				E900.1	01/31/22 08:28 / trs
Lead 210	-0.2	pCi/L	U			E909.0	02/01/22 04:14 / sec
Lead 210 precision (±)	0.5	pCi/L				E909.0	02/01/22 04:14 / sec
Lead 210 MDC	0.9	pCi/L				E909.0	02/01/22 04:14 / sec
Radium 226	1.8	pCi/L				E903.0	02/07/22 12:03 / kdk
Radium 226 precision (±)	0.4	pCi/L				E903.0	02/07/22 12:03 / kdk
Radium 226 MDC	0.2	pCi/L				E903.0	02/07/22 12:03 / kdk
Radium 228	5.6	pCi/L				RA-05	02/14/22 16:15 / hat
Radium 228 precision (±)	1.4	pCi/L				RA-05	02/14/22 16:15 / hat
Radium 228 MDC	1.2	pCi/L				RA-05	02/14/22 16:15 / hat

Report Definitions:
 RL - Analyte Reporting Limit
 QCL - Quality Control Limit
 D - Reporting Limit (RL) increased due to sample matrix
 U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
 ND - Not detected at the Reporting Limit (RL)
 H - Analysis performed past the method holding time



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC- Sentinel Wells
Lab ID: C22010715-002
Client Sample ID: SW-1B

Report Date: 02/16/22
Collection Date: 01/19/22 14:36
Date Received: 01/21/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Radium 226 + Radium 228	7.5	pCi/L				A7500-RA	02/15/22 10:45 / dmf
Radium 226 + Radium 228 precision (±)	1.5	pCi/L				A7500-RA	02/15/22 10:45 / dmf
Radium 226 + Radium 228 MDC	1.3	pCi/L				A7500-RA	02/15/22 10:45 / dmf
Thorium 230	0.007	pCi/L	U			A7500-U C	01/31/22 13:30 / sec
Thorium 230 precision (±)	0.03	pCi/L				A7500-U C	01/31/22 13:30 / sec
Thorium 230 MDC	0.06	pCi/L				A7500-U C	01/31/22 13:30 / sec
DATA QUALITY							
Solids, Total Dissolved - Calculated	3260	mg/L		1.00		A1030 E	02/02/22 16:57 / jlw
A/C Balance	-2.66	%				A1030 E	02/02/22 16:57 / jlw
Anions	52.2	meq/L				A1030 E	02/02/22 16:57 / jlw
Cations	49.5	meq/L				A1030 E	02/02/22 16:57 / jlw
TDS Ratio	1.07	unitless				A1030 E	02/02/22 16:57 / jlw
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624.1	01/26/22 18:16 / eli-b
Bromoform	ND	ug/L		0.50		E624.1	01/26/22 18:16 / eli-b
Chlorodibromomethane	ND	ug/L		0.50		E624.1	01/26/22 18:16 / eli-b
Chloroform	ND	ug/L		0.50		E624.1	01/26/22 18:16 / eli-b
Trihalomethanes, Total	ND	ug/L		0.50		E624.1	02/16/22 00:00 / atd
Surr: 1,2-Dichloroethane-d4	105	%REC		71-139		E624.1	01/26/22 18:16 / eli-b
Surr: p-Bromofluorobenzene	121	%REC		80-127		E624.1	01/26/22 18:16 / eli-b
Surr: Toluene-d8	101	%REC		80-123		E624.1	01/26/22 18:16 / eli-b

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Sentinel Wells
Lab ID: C22040416-001
Client Sample ID: SW-1B

Report Date: 06/18/22
Collection Date: 04/11/22 10:15
Date Received: 04/12/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	446	mg/L		5		A2320 B	04/13/22 21:49 / nts
Chloride	27	mg/L		1		E300.0	04/15/22 15:15 / dmb
Sulfate	2030	mg/L	D	4		E300.0	04/15/22 15:15 / dmb
Calcium	564	mg/L		1		E200.7	04/28/22 10:30 / erc
Magnesium	201	mg/L		1		E200.7	04/28/22 10:30 / erc
Potassium	7	mg/L		1		E200.7	04/28/22 10:30 / erc
Sodium	169	mg/L	D	5		E200.7	04/28/22 10:30 / erc
PHYSICAL PROPERTIES							
pH	7.0	s.u.	H	0.1		A4500-H B	04/14/22 11:54 / mnm
pH Measurement Temp	13.7	°C				A4500-H B	04/14/22 11:54 / mnm
Solids, Total Dissolved TDS @ 180 C	3490	mg/L		20		A2540 C	04/14/22 12:35 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.05		E353.2	04/14/22 15:07 / nts
Nitrogen, Ammonia as N	2.1	mg/L	D	0.2		E350.1	04/15/22 11:59 / nts
METALS, TOTAL							
Aluminum	ND	mg/L	D	0.09		E200.8	04/25/22 16:09 / jcg
Arsenic	ND	mg/L		0.001		E200.8	04/25/22 16:09 / jcg
Beryllium	ND	mg/L		0.001		E200.8	04/25/22 16:09 / jcg
Cadmium	ND	mg/L		0.001		E200.8	04/25/22 16:09 / jcg
Cobalt	ND	mg/L		0.005		E200.8	04/25/22 16:09 / jcg
Lead	ND	mg/L		0.001		E200.8	04/29/22 04:04 / jcg
Manganese	3.57	mg/L	D	0.003		E200.8	04/25/22 16:09 / jcg
Molybdenum	0.031	mg/L		0.001		E200.8	04/25/22 16:09 / jcg
Nickel	ND	mg/L		0.005		E200.8	04/29/22 04:04 / jcg
Selenium	ND	mg/L		0.001		E200.8	04/29/22 04:04 / jcg
Uranium	ND	mg/L	D	0.0005		E200.8	04/29/22 04:04 / jcg
Vanadium	ND	mg/L		0.01		E200.8	04/25/22 16:09 / jcg
DATA QUALITY							
Solids, Total Dissolved - Calculated	3240	mg/L		1.00		A1030 E	05/02/22 14:26 / dmb
A/C Balance	2.04	%				A1030 E	05/02/22 14:26 / dmb
Anions	50.3	meq/L				A1030 E	05/02/22 14:26 / dmb
Cations	52.4	meq/L				A1030 E	05/02/22 14:26 / dmb
TDS Ratio	1.08	unitless				A1030 E	05/02/22 14:26 / dmb
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	3.2	pCi/L				E900.1	04/25/22 16:19 / kdk
Gross Alpha minus Rn & U Precision (±)	0.9	pCi/L				E900.1	04/25/22 16:19 / kdk
Gross Alpha minus Rn & U MDC	0.7	pCi/L				E900.1	04/25/22 16:19 / kdk
Lead 210	-0.6	pCi/L	U			E909.0	04/21/22 16:21 / hat
Lead 210 precision (±)	0.7	pCi/L				E909.0	04/21/22 16:21 / hat

Report RL - Analyte Reporting Limit
Definitions: QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
U - Not detected at Minimum Detectable Concentration (MDC)

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Sentinel Wells
Lab ID: C22040416-001
Client Sample ID: SW-1B

Report Date: 06/18/22
Collection Date: 04/11/22 10:15
Date Received: 04/12/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Lead 210 MDC	1.2	pCi/L				E909.0	04/21/22 16:21 / hat
Radium 226	2.8	pCi/L				E903.0	04/27/22 13:19 / kdk
Radium 226 precision (±)	0.6	pCi/L				E903.0	04/27/22 13:19 / kdk
Radium 226 MDC	0.2	pCi/L				E903.0	04/27/22 13:19 / kdk
Radium 228	-0.3	pCi/L	U			RA-05	05/17/22 16:09 / trs
Radium 228 precision (±)	0.8	pCi/L				RA-05	05/17/22 16:09 / trs
Radium 228 MDC	1.4	pCi/L				RA-05	05/17/22 16:09 / trs
Radium 226 + Radium 228	2.5	pCi/L				A7500-RA	05/19/22 10:36 / dmf
Radium 226 + Radium 228 precision (±)	1.0	pCi/L				A7500-RA	05/19/22 10:36 / dmf
Radium 226 + Radium 228 MDC	1.4	pCi/L				A7500-RA	05/19/22 10:36 / dmf
Thorium 230	0.1	pCi/L				A7500-U C	04/25/22 14:02 / sec
Thorium 230 precision (±)	0.05	pCi/L				A7500-U C	04/25/22 14:02 / sec
Thorium 230 MDC	0.06	pCi/L				A7500-U C	04/25/22 14:02 / sec
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624.1	04/17/22 14:40 / eli-b
Bromoform	ND	ug/L		0.50		E624.1	04/17/22 14:40 / eli-b
Chlorodibromomethane	ND	ug/L		0.50		E624.1	04/17/22 14:40 / eli-b
Chloroform	ND	ug/L		0.50		E624.1	04/17/22 14:40 / eli-b
Trihalomethanes, Total	ND	ug/L		0.50		E624.1	04/27/22 18:25 / tif
Surr: 1,2-Dichloroethane-d4	104	%REC		71-139		E624.1	04/17/22 14:40 / eli-b
Surr: p-Bromofluorobenzene	103	%REC		80-127		E624.1	04/17/22 14:40 / eli-b
Surr: Toluene-d8	106	%REC		80-123		E624.1	04/17/22 14:40 / eli-b

**Report
Definitions:**

RL - Analyte Reporting Limit
QCL - Quality Control Limit
U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

United Nuclear Corp				
Guideline 8: Sweetwater				
Well ID:		SW-1B	SW-1B	SW-1B
Collection Date:		4/11/2022	1/19/2022	10/12/2021
Receive Date:		4/12/2022	1/21/2022	10/14/2021
Report Date:		6/18/2022	2/16/2022	12/3/2021
Analyte	Units	C22040416-001	C22010715-002	C21100534-002
Bicarbonate as HCO ₃	mg/L	446	438	436
Calcium	mg/L	564	546	549
Chloride	mg/L	27	29	28
Magnesium	mg/L	201	184	192
Potassium	mg/L	7	9	7
Sodium	mg/L	169	156	165
Sulfate	mg/L	2030	2120	2140
pH	s.u.	7.0	7.0	7.0
pH Measurement Temp	°C	13.7	11.2	15.0
Solids, Total Dissolved TDS @ 180 C	mg/L	3490	3480	3510
Solids, Total Dissolved - Calculated	mg/L	3240	3260	3330
Nitrogen, Ammonia as N	mg/L	2.1	2.5	1.70
Nitrogen, Nitrate+Nitrite as N	mg/L	ND(0.05)	0.05	0.07
Aluminum	mg/L	ND(0.09)	0.05	0.56
Arsenic	mg/L	ND(0.001)	ND(0.001)	0.001
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)
Cobalt	mg/L	ND(0.005)	ND(0.005)	0.009
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	3.57	3.23	3.32
Molybdenum	mg/L	0.031	0.029	0.027
Nickel	mg/L	ND(0.005)	ND(0.005)	ND(0.005)
Selenium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)
Uranium	mg/L	ND(0.0005)	ND(0.0005)	0.0005
Vanadium	mg/L	ND(0.01)	ND(0.01)	ND(0.01)
A/C Balance	%	2.04	-2.66	-1.79
Anions	meq/L	50.3	52.2	52.6
Cations	meq/L	52.4	49.5	50.7
TDS Ratio	unitless	1.08	1.07	1.05
Gross Alpha minus Rn & U	pCi/L	3.2	3.1	5.0
Gross Alpha minus Rn & U MDC	pCi/L	0.7	0.5	0.7
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.9	0.8	1.3
Lead 210	pCi/L	-0.6	-0.2	-0.2
Lead 210 MDC	pCi/L	1.2	0.9	1.1
Lead 210 precision (±)	pCi/L	0.7	0.5	0.6
Radium 226	pCi/L	2.8	1.8	2.5
Radium 226 MDC	pCi/L	0.2	0.2	0.2
Radium 226 precision (±)	pCi/L	0.6	0.4	0.5
Radium 228	pCi/L	-0.3	5.6	2.4
Radium 228 MDC	pCi/L	1.4	1.2	1.8
Radium 228 precision (±)	pCi/L	0.8	1.4	1.3
Thorium 230	pCi/L	0.1	0.007	0.02
Thorium 230 MDC	pCi/L	0.06	0.06	0.2
Thorium 230 precision (±)	pCi/L	0.05	0.03	0.08
Bromodichloromethane	ug/L	ND(0.50)	ND(0.50)	ND(0.50)
Bromoform	ug/L	ND(0.50)	ND(0.50)	ND(0.50)
Chlorodibromomethane	ug/L	ND(0.50)	ND(0.50)	ND(0.50)
Chloroform	ug/L	ND(0.50)	ND(0.50)	ND(0.50)

United Nuclear Corp				
Guideline 8: Sweetwater				
Well ID:		SW-1B	SW-1B	SW-1B
Collection Date:		4/11/2022	1/19/2022	10/12/2021
Receive Date:		4/12/2022	1/21/2022	10/14/2021
Report Date:		6/18/2022	2/16/2022	12/3/2021
Analyte	Units	C22040416-001	C22010715-002	C21100534-002
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC- Sentinel Wells
Lab ID: C22010715-001
Client Sample ID: SW-3B

Report Date: 02/16/22
Collection Date: 01/19/22 11:00
Date Received: 01/21/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	243	mg/L		5		A2320 B	01/24/22 18:40 / kjp
Chloride	7	mg/L		1		E300.0	01/28/22 02:48 / dmb
Sulfate	384	mg/L	D	2		E300.0	01/28/22 02:48 / dmb
Calcium	27	mg/L		1		E200.8	01/31/22 21:40 / jcg
Magnesium	12	mg/L		1		E200.8	01/31/22 21:40 / jcg
Potassium	3	mg/L		1		E200.8	01/31/22 21:40 / jcg
Sodium	211	mg/L		1		E200.8	01/31/22 21:40 / jcg
PHYSICAL PROPERTIES							
pH	7.8	s.u.	H	0.1		A4500-H B	01/24/22 10:20 / mnm
pH Measurement Temp	10.9	°C				A4500-H B	01/24/22 10:20 / mnm
Solids, Total Dissolved TDS @ 180 C	781	mg/L		20		A2540 C	01/24/22 12:52 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.05		E353.2	01/25/22 13:58 / nts
Nitrogen, Ammonia as N	ND	mg/L		0.05		E350.1	01/27/22 15:01 / dmb
METALS, TOTAL							
Aluminum	ND	mg/L	D	0.04		E200.8	02/02/22 07:44 / jcg
Arsenic	0.001	mg/L		0.001		E200.8	02/02/22 07:44 / jcg
Beryllium	ND	mg/L		0.001		E200.8	02/02/22 07:44 / jcg
Cadmium	ND	mg/L		0.001		E200.8	02/02/22 07:44 / jcg
Cobalt	ND	mg/L		0.005		E200.8	02/02/22 07:44 / jcg
Lead	ND	mg/L		0.001		E200.8	02/02/22 07:44 / jcg
Manganese	0.042	mg/L		0.001		E200.8	02/02/22 07:44 / jcg
Molybdenum	0.002	mg/L		0.001		E200.8	02/02/22 07:44 / jcg
Nickel	ND	mg/L		0.005		E200.8	02/02/22 07:44 / jcg
Selenium	ND	mg/L		0.001		E200.8	02/02/22 07:44 / jcg
Uranium	0.0006	mg/L	D	0.0005		E200.8	02/02/22 07:44 / jcg
Vanadium	ND	mg/L		0.01		E200.8	02/02/22 07:44 / jcg
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	0.5	pCi/L				E900.1	01/31/22 08:28 / trs
Gross Alpha minus Rn & U Precision (±)	0.4	pCi/L				E900.1	01/31/22 08:28 / trs
Gross Alpha minus Rn & U MDC	0.5	pCi/L				E900.1	01/31/22 08:28 / trs
Lead 210	-0.2	pCi/L	U			E909.0	02/01/22 01:05 / sec
Lead 210 precision (±)	0.5	pCi/L				E909.0	02/01/22 01:05 / sec
Lead 210 MDC	0.9	pCi/L				E909.0	02/01/22 01:05 / sec
Radium 226	0.4	pCi/L				E903.0	02/07/22 12:03 / kdk
Radium 226 precision (±)	0.2	pCi/L				E903.0	02/07/22 12:03 / kdk
Radium 226 MDC	0.2	pCi/L				E903.0	02/07/22 12:03 / kdk
Radium 228	1.9	pCi/L				RA-05	02/01/22 16:25 / trs
Radium 228 precision (±)	1.2	pCi/L				RA-05	02/01/22 16:25 / trs
Radium 228 MDC	1.8	pCi/L				RA-05	02/01/22 16:25 / trs

Report RL - Analyte Reporting Limit
Definitions: QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
H - Analysis performed past the method holding time



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC- Sentinel Wells
Lab ID: C22010715-001
Client Sample ID: SW-3B

Report Date: 02/16/22
Collection Date: 01/19/22 11:00
Date Received: 01/21/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Radium 226 + Radium 228	2.2	pCi/L				A7500-RA	02/08/22 14:30 / dmf
Radium 226 + Radium 228 precision (±)	1.2	pCi/L				A7500-RA	02/08/22 14:30 / dmf
Radium 226 + Radium 228 MDC	1.8	pCi/L				A7500-RA	02/08/22 14:30 / dmf
Thorium 230	0.03	pCi/L	U			A7500-U C	01/31/22 13:30 / sec
Thorium 230 precision (±)	0.04	pCi/L				A7500-U C	01/31/22 13:30 / sec
Thorium 230 MDC	0.06	pCi/L				A7500-U C	01/31/22 13:30 / sec
DATA QUALITY							
Solids, Total Dissolved - Calculated	783	mg/L		1.00		A1030 E	02/02/22 16:57 / jlw
A/C Balance	-2.51	%				A1030 E	02/02/22 16:57 / jlw
Anions	12.2	meq/L				A1030 E	02/02/22 16:57 / jlw
Cations	11.6	meq/L				A1030 E	02/02/22 16:57 / jlw
TDS Ratio	1.00	unitless				A1030 E	02/02/22 16:57 / jlw
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624.1	01/26/22 17:48 / eli-b
Bromoform	ND	ug/L		0.50		E624.1	01/26/22 17:48 / eli-b
Chlorodibromomethane	ND	ug/L		0.50		E624.1	01/26/22 17:48 / eli-b
Chloroform	ND	ug/L		0.50		E624.1	01/26/22 17:48 / eli-b
Trihalomethanes, Total	ND	ug/L		0.50		E624.1	02/16/22 00:00 / atd
Surr: 1,2-Dichloroethane-d4	103	%REC		71-139		E624.1	01/26/22 17:48 / eli-b
Surr: p-Bromofluorobenzene	122	%REC		80-127		E624.1	01/26/22 17:48 / eli-b
Surr: Toluene-d8	98.0	%REC		80-123		E624.1	01/26/22 17:48 / eli-b

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)



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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Sentinel Wells
Lab ID: C22040416-002
Client Sample ID: SW-3B

Report Date: 06/18/22
Collection Date: 04/11/22 11:20
Date Received: 04/12/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO ₃	244	mg/L		5		A2320 B	04/13/22 21:57 / nts
Chloride	7	mg/L		1		E300.0	04/15/22 15:34 / dmb
Sulfate	368	mg/L	D	2		E300.0	04/15/22 15:34 / dmb
Calcium	29	mg/L		1		E200.8	04/22/22 05:30 / jcg
Magnesium	13	mg/L		1		E200.8	04/22/22 05:30 / jcg
Potassium	3	mg/L		1		E200.7	05/30/22 01:53 / jcg
Sodium	199	mg/L		1		E200.8	04/22/22 05:30 / jcg
PHYSICAL PROPERTIES							
pH	7.8	s.u.	H	0.1		A4500-H B	04/14/22 11:58 / mnm
pH Measurement Temp	13.7	°C				A4500-H B	04/14/22 11:58 / mnm
Solids, Total Dissolved TDS @ 180 C	784	mg/L		20		A2540 C	04/14/22 12:36 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.05		E353.2	04/14/22 15:08 / nts
Nitrogen, Ammonia as N	0.06	mg/L		0.05		E350.1	04/15/22 12:00 / nts
METALS, TOTAL							
Aluminum	ND	mg/L	D	0.09		E200.8	04/25/22 16:14 / jcg
Arsenic	ND	mg/L		0.001		E200.8	04/25/22 16:14 / jcg
Beryllium	ND	mg/L		0.001		E200.8	04/25/22 16:14 / jcg
Cadmium	ND	mg/L		0.001		E200.8	04/25/22 16:14 / jcg
Cobalt	ND	mg/L		0.005		E200.8	04/25/22 16:14 / jcg
Lead	ND	mg/L		0.001		E200.8	04/29/22 04:09 / jcg
Manganese	0.038	mg/L	D	0.003		E200.8	04/25/22 16:14 / jcg
Molybdenum	0.001	mg/L		0.001		E200.8	04/25/22 16:14 / jcg
Nickel	ND	mg/L		0.005		E200.8	05/07/22 04:05 / jcg
Selenium	ND	mg/L		0.001		E200.8	04/29/22 04:09 / jcg
Uranium	ND	mg/L	D	0.0005		E200.8	04/29/22 04:09 / jcg
Vanadium	ND	mg/L		0.01		E200.8	04/25/22 16:14 / jcg
DATA QUALITY							
Solids, Total Dissolved - Calculated	756	mg/L		1.00		A1030 E	04/25/22 15:15 / jlw
A/C Balance	-2.74	%				A1030 E	04/25/22 15:15 / jlw
Anions	11.9	meq/L				A1030 E	04/25/22 15:15 / jlw
Cations	11.2	meq/L				A1030 E	04/25/22 15:15 / jlw
TDS Ratio	1.04	unitless				A1030 E	04/25/22 15:15 / jlw
RADIONUCLIDES, TOTAL							
Gross Alpha minus Rn & U	0.7	pCi/L				E900.1	04/25/22 16:19 / kdk
Gross Alpha minus Rn & U Precision (±)	0.5	pCi/L				E900.1	04/25/22 16:19 / kdk
Gross Alpha minus Rn & U MDC	0.7	pCi/L				E900.1	04/25/22 16:19 / kdk
Lead 210	-2	pCi/L	U			E909.0	04/21/22 16:21 / hat
Lead 210 precision (±)	0.7	pCi/L				E909.0	04/21/22 16:21 / hat

Report RL - Analyte Reporting Limit
Definitions: QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: UNC-Sentinel Wells
Lab ID: C22040416-002
Client Sample ID: SW-3B

Report Date: 06/18/22
Collection Date: 04/11/22 11:20
Date Received: 04/12/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Lead 210 MDC	1.2	pCi/L				E909.0	04/21/22 16:21 / hat
Radium 226	0.5	pCi/L				E903.0	04/27/22 13:19 / kdk
Radium 226 precision (±)	0.2	pCi/L				E903.0	04/27/22 13:19 / kdk
Radium 226 MDC	0.3	pCi/L				E903.0	04/27/22 13:19 / kdk
Radium 228	0.5	pCi/L	U			RA-05	05/17/22 16:09 / trs
Radium 228 precision (±)	1.0	pCi/L				RA-05	05/17/22 16:09 / trs
Radium 228 MDC	1.7	pCi/L				RA-05	05/17/22 16:09 / trs
Radium 226 + Radium 228	0.9	pCi/L	U			A7500-RA	05/19/22 10:36 / dmf
Radium 226 + Radium 228 precision (±)	1.0	pCi/L				A7500-RA	05/19/22 10:36 / dmf
Radium 226 + Radium 228 MDC	1.7	pCi/L				A7500-RA	05/19/22 10:36 / dmf
Thorium 230	0.1	pCi/L				A7500-U C	04/25/22 14:02 / sec
Thorium 230 precision (±)	0.06	pCi/L				A7500-U C	04/25/22 14:02 / sec
Thorium 230 MDC	0.08	pCi/L				A7500-U C	04/25/22 14:02 / sec
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624.1	04/17/22 15:07 / eli-b
Bromoform	ND	ug/L		0.50		E624.1	04/17/22 15:07 / eli-b
Chlorodibromomethane	ND	ug/L		0.50		E624.1	04/17/22 15:07 / eli-b
Chloroform	ND	ug/L		0.50		E624.1	04/17/22 15:07 / eli-b
Trihalomethanes, Total	ND	ug/L		0.50		E624.1	04/27/22 18:25 / tif
Surr: 1,2-Dichloroethane-d4	101	%REC		71-139		E624.1	04/17/22 15:07 / eli-b
Surr: p-Bromofluorobenzene	104	%REC		80-127		E624.1	04/17/22 15:07 / eli-b
Surr: Toluene-d8	109	%REC		80-123		E624.1	04/17/22 15:07 / eli-b

**Report
Definitions:**

RL - Analyte Reporting Limit
QCL - Quality Control Limit
U - Not detected at Minimum Detectable Concentration (MDC)

MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

United Nuclear Corp				
Guideline 8: Sweetwater				
Well ID:		SW-3B	SW-3B	SW-3B
Collection Date:		4/11/2022	1/19/2022	10/12/2021
Receive Date:		4/12/2022	1/21/2022	10/14/2021
Report Date:		6/18/2022	2/16/2022	12/3/2021
Analyte	Units	C22040416-002	C22010715-001	C21100534-001
Bicarbonate as HCO ₃	mg/L	244	243	245
Calcium	mg/L	29	27	25
Chloride	mg/L	7	7	9
Magnesium	mg/L	13	12	13
Potassium	mg/L	3	3	3
Sodium	mg/L	199	211	219
Sulfate	mg/L	368	384	382
pH	s.u.	7.8	7.8	8.0
pH Measurement Temp	°C	13.7	10.9	14.6
Solids, Total Dissolved TDS @ 180 C	mg/L	784	781	798
Solids, Total Dissolved - Calculated	mg/L	756	783	791
Nitrogen, Ammonia as N	mg/L	0.06	ND(0.05)	0.22
Nitrogen, Nitrate+Nitrite as N	mg/L	ND(0.05)	ND(0.05)	0.06
Aluminum	mg/L	ND(0.09)	ND(0.04)	ND(0.03)
Arsenic	mg/L	ND(0.001)	0.001	ND(0.001)
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)
Cobalt	mg/L	ND(0.005)	ND(0.005)	ND(0.005)
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	0.038	0.042	0.047
Molybdenum	mg/L	0.001	0.002	0.004
Nickel	mg/L	ND(0.005)	ND(0.005)	ND(0.005)
Selenium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)
Uranium	mg/L	ND(0.0005)	0.0006	0.0005
Vanadium	mg/L	ND(0.01)	ND(0.01)	ND(0.01)
A/C Balance	%	-2.74	-2.51	-1.37
Anions	meq/L	11.9	12.2	12.2
Cations	meq/L	11.2	11.6	11.9
TDS Ratio	unitless	1.04	1.00	1.01
Gross Alpha minus Rn & U	pCi/L	0.7	0.5	1
Gross Alpha minus Rn & U MDC	pCi/L	0.7	0.5	0.7
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.5	0.4	0.6
Lead 210	pCi/L	-2	-0.2	0.2
Lead 210 MDC	pCi/L	1.2	0.9	1.1
Lead 210 precision (±)	pCi/L	0.7	0.5	0.7
Radium 226	pCi/L	0.5	0.4	0.4
Radium 226 MDC	pCi/L	0.3	0.2	0.2
Radium 226 precision (±)	pCi/L	0.2	0.2	0.2
Radium 228	pCi/L	0.5	1.9	-0.8
Radium 228 MDC	pCi/L	1.7	1.8	2.0
Radium 228 precision (±)	pCi/L	1.0	1.2	1.2
Thorium 230	pCi/L	0.1	0.03	0.09
Thorium 230 MDC	pCi/L	0.08	0.06	0.2
Thorium 230 precision (±)	pCi/L	0.06	0.04	0.1
Bromodichloromethane	ug/L	ND(0.50)	ND(0.50)	ND(0.50)
Bromoform	ug/L	ND(0.50)	ND(0.50)	ND(0.50)
Chlorodibromomethane	ug/L	ND(0.50)	ND(0.50)	ND(0.50)
Chloroform	ug/L	ND(0.50)	ND(0.50)	ND(0.50)

United Nuclear Corp				
Guideline 8: Sweetwater				
Well ID:		SW-3B	SW-3B	SW-3B
Collection Date:		4/11/2022	1/19/2022	10/12/2021
Receive Date:		4/12/2022	1/21/2022	10/14/2021
Report Date:		6/18/2022	2/16/2022	12/3/2021
Analyte	Units	C22040416-002	C22010715-001	C21100534-001
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)

**SEMI-ANNUAL
ENVIRONMENTAL MONITORING REPORT
JANUARY TO JUNE OF 2022**

AVAILABLE MONITORING DATA

- **ENVIRONMENTAL INSPECTION REPORT (continued this procedure to show and maintain the integrity of the tailings area).**

ENVIRONMENTAL INSPECTION REPORTS

ENVIRONMENTAL INSPECTION

DATE: 1-27-22

TIME START: 1317

INSPECTOR: Map Churchill J.

TIME END: 1456

TAILINGS AREA:

	<u>OKAY</u>	<u>PROBLEM</u>	<u>COMMENTS</u>
1. Fences	<u>✓</u>	<u></u>	<u></u>
2. Air Monitors	<u>—</u>	<u>NA</u>	<u>Under RWP</u>
3. Radiation Warning Signs	<u>✓</u>	<u></u>	<u></u>
4. Locked Gates	<u></u>	<u>✓</u>	<u>See below</u>

ACTION TAKEN: Re-locked perimeter fence line gate at South end tailings area
and reminded worker to fully engage chain lock after exiting.

OTHER COMMENTS: Domestic water is currently being discharged into
both North and South Evaporation Ponds. North Pond wet sediment/
water depth is 1.40', South Pond is 1.49' and both ponds bottom
liner areas are fully covered with water.

Weekly Evaporation pond inspection

Month:	January	Date:	1-7-22	Inspected by:	M. Chischilly Jr.	
North pond water level:		South Pond water level:				
Extraction wells GPM:	0.14	Domestic well GPM:	31.21	Flow		North pond/South pond
Liner Inspected	Yes	Comments:				

Weekly Evaporation pond inspection

Month:	January	Date:	1-14-22	Inspected by:	M. Chischilly Jr.	
North pond water level:		South Pond water level:				
Extraction wells GPM:	0.11	Domestic well GPM:		Flow		North pond/South pond
Liner Inspected	Yes	Comments:				

Weekly Evaporation pond inspection

Month:	January	Date:	1-20-22	Inspected by:	M. Chischilly Jr.	
North pond water level:		South Pond water level:				
Extraction wells GPM:	0.13	Domestic well GPM:	30.03	Flow		North pond/South pond
Liner Inspected	Yes	Comments:				

Weekly Evaporation pond inspection

Month:	January	Date:	1-27-22	Inspected by:	M. Chischilly Jr.	
North pond water level:	1.46'	South Pond water level:	1.49'			
Extraction wells GPM:	0.14	Domestic well GPM:	27.07	Flow		North pond/South pond
Liner Inspected	Yes	Comments:				

ENVIRONMENTAL INSPECTION

DATE: 2-24-22

TIME START: 1340

INSPECTOR: Map Chusally J.

TIME END: 1445

<u>TAILINGS AREA:</u>	<u>OKAY</u>	<u>PROBLEM</u>	<u>COMMENTS</u>
1. Fences	<u>✓</u>	<u> </u>	<u> </u>
2. Air Monitors	<u>—</u>	<u>NA —</u>	<u>Under RWP</u>
3. Radiation Warning Signs	<u>✓</u>	<u> </u>	<u> </u>
4. Locked Gates	<u>✓</u>	<u> </u>	<u> </u>

ACTION TAKEN: OTHER COMMENT: Domestic water is currently being
discharged into both North and South Evaporation Ponds. North
Pond wet sediment/water depth is 1.45', South Pond is 1.56' and
both ponds bottom liner areas are fully covered with water.
Also, extraction wells in Zone 3 area is being discharged
into North Pond.

Weekly Evaporation pond inspection

Month:	February	Date:	2-3-22	Inspected by:	M. Chischilly Jr.	re
North pond water level:		South Pond water level:				
Extraction wells GPM:	0.17	Domestic well GPM:	25.40	Flow		North pond/South pond
Liner Inspected	Yes	Comments:				

Weekly Evaporation pond inspection

Month:	February	Date:	2-10-22	Inspected by:	M. Chischilly Jr.	re
North pond water level:		South Pond water level:				
Extraction wells GPM:	0.15	Domestic well GPM:		Flow		North pond/South pond
Liner Inspected	Yes	Comments:				
Domestic water well pump station badger meter GPM discharge readings to tailings is malfunctioning.						

Weekly Evaporation pond inspection

Month:	February	Date:	2-18-22	Inspected by:	M. Chischilly Jr.	re
North pond water level:		South Pond water level:				
Extraction wells GPM:	0.13	Domestic well GPM:		Flow		North pond/South pond
Liner Inspected	Yes	Comments:				
Snowy conditions						

Weekly Evaporation pond inspection

Month:	February	Date:	2-24-22	Inspected by:	M. Chischilly Jr.	re
North pond water level:	1.45'	South Pond water level:	1.56'			
Extraction wells GPM:	0.17	Domestic well GPM:		Flow		North pond/South pond
Liner Inspected	Yes	Comments:				
Snow on ground						

ENVIRONMENTAL INSPECTION

DATE: 3-30-22

TIME START: 1054

INSPECTOR: Marj Chischley J.

TIME END: 1245

<u>TAILINGS AREA:</u>	<u>OKAY</u>	<u>PROBLEM</u>	<u>COMMENTS</u>
1. Fences	<u>✓</u>	<u> </u>	<u> </u>
2. Air Monitors	<u>-</u>	<u>NA</u>	<u>Under RWP</u>
3. Radiation Warning Signs	<u> </u>	<u>✓</u>	<u>See below</u>
4. Locked Gates	<u>✓</u>	<u> </u>	<u> </u>

ACTION TAKEN: Due to recent high winds one "No Trespassing
Authorized Personnel Only" sign needs to be resecured, repositioned
@ So. end tailings perimeter fenceline and one windblown "Caution
Radioactive Material" sign needs to be reinstalled on post @
So. perimeter edge of South Evaporation Pond and informed
maintenance workers of this problem. The above "No Trespassing Authorized
Personnel Only" and "Caution Radioactive Material" signs were reinstalled/resecured on 4-6-22.

OTHER COMMENTS: Only the extraction wells in Zone 3 is being
discharged into North Evaporation Pond. North Pond wet sediment
water depth is approximately 1.38', South Pond is approximately 1.44'
and both ponds bottom liners are about fully covered with water.

Weekly Evaporation pond inspection

Month:	March	Date:	3-4-22	Inspected by:	M. Chischilly	MC
North pond water level:		South Pond water level:				
Extraction wells GPM:	0.20	Domestic well GPM:		Flow	North pond/South pond	
Liner Inspected	Yes	Comments:				

Weekly Evaporation pond inspection

Month:	March	Date:	3-10-22	Inspected by:	M. Chischilly	MC
North pond water level:		South Pond water level:				
Extraction wells GPM:	0.21	Domestic well GPM:		Flow	North pond/South pond	
Liner Inspected	Yes	Comments:				

Weekly Evaporation pond inspection

Month:	March	Date:	3-17-22	Inspected by:	M. Chischilly	MC
North pond water level:		South Pond water level:				
Extraction wells GPM:	0.21	Domestic well GPM:	OFF	Flow	North pond/South pond	
Liner Inspected	Yes	Comments:				
Domestic water well pump discharge to North & South						
evaporation ponds was shut off on 3-16-22.						

Weekly Evaporation pond inspection

Month:	March	Date:	3-24-22	Inspected by:	M. Chischilly	MC
North pond water level:		South Pond water level:				
Extraction wells GPM:	0.13	Domestic well GPM:	OFF	Flow	North pond/South pond	
Liner Inspected	Yes	Comments:				

Weekly Evaporation pond inspection

Month:	march	Date:	3-30-22	Inspected by:	M. Chischilly	
North pond water level:	1.30'	South Pond water level:	1.44'			
Extraction wells GPM:	0.20	Domestic well GPM:	OFF	Flow		North pond/South pond
Liner Inspected	Yes	Comments:				

Weekly Evaporation pond inspection

Month:		Date:		Inspected by:		
North pond water level:		South Pond water level:				
Extraction wells GPM:		Domestic well GPM:		Flow		North pond/South pond
Liner Inspected		Comments:				

Weekly Evaporation pond inspection

Month:		Date:		Inspected by:		
North pond water level:		South Pond water level:				
Extraction wells GPM:		Domestic well GPM:		Flow		North pond/South pond
Liner Inspected		Comments:				

Weekly Evaporation pond inspection

Month:		Date:		Inspected by:		
North pond water level:		South Pond water level:				
Extraction wells GPM:		Domestic well GPM:		Flow		North pond/South pond
Liner Inspected		Comments:				

ENVIRONMENTAL INSPECTION

DATE: 4-28-22

TIME START: 1320

INSPECTOR: Map Chischley Jr.

TIME END: 1508

TAILINGS AREA:	OKAY	PROBLEM	COMMENTS
1. Fences	<u>✓</u>	<u> </u>	<u> </u>
2. Air Monitors	<u>—</u>	<u>NA —</u>	<u>Under RWP</u>
3. Radiation Warning Signs	<u> </u>	<u>✓</u>	<u>See below</u>
4. Locked Gates	<u>✓</u>	<u> </u>	<u> </u>

ACTION TAKEN: Due to recent high winds one wind blown "Caution Radioactive Material"
sign needs to be reinstalled on post at East perimeter hill area of North Evaporation
Pond (this sign was reinstalled on 5-4-22). OTHER COMMENTS: Only the extraction
wells in Zone 3 is being discharged into North Evaporation Pond, North Pond wet
Sediment/water depth is approximately 0.89', South Pond is approximately 1.15'
and both ponds bottom liners are about 3/4 covered with water.

Weekly Evaporation pond inspection

Month:	April	Date:	4-6-22	Inspected by:	M. Chischilly	re
North pond water level:		South Pond water level:				
Extraction wells GPM:	0.15	Domestic well GPM:	OFF	Flow		North pond/South pond
Liner Inspected	Yes	Comments:				

Weekly Evaporation pond inspection

Month:	April	Date:	4-14-22	Inspected by:	M. Chischilly	re
North pond water level:		South Pond water level:				
Extraction wells GPM:	0.13	Domestic well GPM:	OFF	Flow		North pond/South pond
Liner Inspected	Yes	Comments:				

Weekly Evaporation pond inspection

Month:	April	Date:	4-21-22	Inspected by:	M. Chischilly	re
North pond water level:		South Pond water level:				
Extraction wells GPM:	0.29	Domestic well GPM:	OFF	Flow		North pond/South pond
Liner Inspected	Yes	Comments:	Well NW-5 discharging to N. pond.			
Extraction well NW-5 pump is running on 4-20-22 after new 3/4 hp motor is installed & other parts rebuilt and function checked.						

Weekly Evaporation pond inspection

Month:	April	Date:	4-28-22	Inspected by:	M. Chischilly	re
North pond water level:	0.89'	South Pond water level:	1.15'			
Extraction wells GPM:	0.47	Domestic well GPM:	OFF	Flow		North pond/South pond
Liner Inspected	Yes	Comments:				
Extraction well RW-16 pump is running on 4-22-22 after 1/2 hp motor, 12 stage parts are rebuilt and function checked. Also RW-17 pump is restarted on 4-19-22 after trouble shooting.						

ENVIRONMENTAL INSPECTION

DATE: 5-26-22

TIME START: 1032

INSPECTOR: Map Chischilly J.

TIME END: 1300

<u>TAILINGS AREA:</u>	<u>OKAY</u>	<u>PROBLEM</u>	<u>COMMENTS</u>
1. Fences	<u>✓</u>	<u> </u>	<u> </u>
2. Air Monitors	<u>- NA</u>	<u>-</u>	<u> </u>
3. Radiation Warning Signs	<u>✓</u>	<u> </u>	<u> </u>
4. Locked Gates	<u>✓</u>	<u> </u>	<u> </u>

ACTION TAKEN: OTHER COMMENT: Domestic well pump was initially shut off
on 3-16-22 but unable to be restarted due to a malfunction during the
1st week of April to collect sample for 2nd quarter 2022. Pump is
still down until replaced or repaired and only extraction wells in
Zone 3 is being discharged into North Evaporation Pond. N. Pond
wet sediment depth is approximately 0.20' (bottom liner ~ 1/2 covered
with water) and S. Pond wet sediment/water depth is approximately
0.52' (bottom liner ~ 3/4 covered with water).

Weekly Evaporation pond inspection

Month:	May	Date:	5-4-22	Inspected by:	M. Chischilly	MC
North pond water level:		South Pond water level:				
Extraction wells GPM:	0.38	Domestic well GPM:	OFF	Flow		North pond/South pond
Liner Inspected	Yes	Comments:				

Weekly Evaporation pond inspection

Month:	May	Date:	5-11-22	Inspected by:	M. Chischilly	MC
North pond water level:		South Pond water level:				
Extraction wells GPM:	0.34	Domestic well GPM:	OFF	Flow		North pond/South pond
Liner Inspected	Yes	Comments:				
F. Gillreath resecured caution red sign which was reinstalled on post at E. perimeter hill area of North Evaporation Pond on 5-4-22.						

Weekly Evaporation pond inspection

Month:	May	Date:	5-18-22	Inspected by:	M. Chischilly	MC
North pond water level:		South Pond water level:				
Extraction wells GPM:	0.47	Domestic well GPM:	OFF	Flow		North pond/South pond
Liner Inspected	Yes	Comments:				

Weekly Evaporation pond inspection

Month:	May	Date:	5-26-22	Inspected by:	M. Chischilly	MC
North pond water level:	0.20'	South Pond water level:	0.52'			
Extraction wells GPM:	0.39	Domestic well GPM:	OFF	Flow		North pond/South pond
Liner Inspected	Yes	Comments:	Domestic water well pump is still down/off due to a malfunction which occurred when R. Spitz tried to restart it during 1st week of April to collect sample for 2nd quarter 2022.			

ENVIRONMENTAL INSPECTION

DATE: 6-30-22

TIME START: 1005

INSPECTOR: Map Churchill Jr.

TIME END: 1230

TAILINGS AREA:	OKAY	PROBLEM	COMMENTS
1. Fences	✓		
2. Air Monitors	-	NA	Under RWP
3. Radiation Warning Signs	✓		
4. Locked Gates	✓		

ACTION TAKEN: OTHER COMMENT: Domestic water is being discharged into North and South Evaporation Pond after pump and motor was replaced on 6-1-22. North Pond wet sediment/water depth is approximately 0.58' (bottom liner ~ 3/4 covered with water) and South Pond wet sediment is approximately 0.30' deep (bottom liner ~ 1/2 covered with water).

Tailings perimeter gamma exposure rate survey for in-house information are as follows:

(N.end)	(E.end)
Site F = 21 μ R/hr	Site C = 19 μ R/hr
(S.end)	
Site E = 15 μ R/hr	Site D (Background) = 17 μ R/hr.

Weekly Evaporation pond inspection

Month:	June	Date:	6-2-22	Inspected by:	M. Chischilly	MC
North pond water level:		South Pond water level:				
Extraction wells GPM:	0.37	Domestic well GPM:	OFF	Flow	North pond/South pond	
Liner Inspected	Yes	Comments:				

Weekly Evaporation pond inspection

Month:	June	Date:	6-9-22	Inspected by:	M. Chischilly	MC
North pond water level:		South Pond water level:				
Extraction wells GPM:	0.30	Domestic well GPM:	39.44	Flow	North pond/South pond	
Liner Inspected	Yes	Comments:				
Domestic water is being discharged to North Evaporation Pond						
after pump & motor was replaced on 6-1-22.						

Weekly Evaporation pond inspection

Month:	June	Date:	6-16-22	Inspected by:	M. Chischilly	MC
North pond water level:		South Pond water level:				
Extraction wells GPM:	0.38	Domestic well GPM:	37.47	Flow	North pond/South pond	
Liner Inspected	Yes	Comments:				

Weekly Evaporation pond inspection

Month:	June	Date:	6-23-22	Inspected by:	M. Chischilly	MC
North pond water level:		South Pond water level:				
Extraction wells GPM:	0.40	Domestic well GPM:	36.44	Flow	North pond/South pond	
Liner Inspected	Yes	Comments:				
Domestic water is being discharged into North and South Evaporation						
Pond.						

Weekly Evaporation pond inspection

Month:	June	Date:	6-30-22	Inspected by:	M. Chischilly	
North pond water level:	0.58'	South Pond water level:	0.30'			
Extraction wells GPM:	0.43	Domestic well GPM:	28.76	Flow		North pond/South pond
Liner Inspected	YES	Comments:				

Weekly Evaporation pond inspection

Month:		Date:		Inspected by:		
North pond water level:		South Pond water level:				
Extraction wells GPM:		Domestic well GPM:		Flow		North pond/South pond
Liner Inspected		Comments:				

Weekly Evaporation pond inspection

Month:		Date:		Inspected by:		
North pond water level:		South Pond water level:				
Extraction wells GPM:		Domestic well GPM:		Flow		North pond/South pond
Liner Inspected		Comments:				

Weekly Evaporation pond inspection

Month:		Date:		Inspected by:		
North pond water level:		South Pond water level:				
Extraction wells GPM:		Domestic well GPM:		Flow		North pond/South pond
Liner Inspected		Comments:				