

# Surveillance Network Program Report Hay River Harbour Remediation Project July 2024

Date: September 9, 2024

To: MVLWB

From: Jamie Young, Outcome Consultants Inc

**Copy:** Kenneth Akerenwi Seh

This Surveillance Network Program (SNP) Report for July 2024 is being submitted in accordance with the requirements of the Type B Water Licence MV2023L8-0005 issued to the Government of the Northwest Territories – Department of Infrastructure for the Hay River Harbour Remediation Project.

# **Summary of Activities in July 2024**

Dredging commenced on June 9, 2024 and continued over the entire month of July. Over that period, sediment was dredged from the area just offshore of the mouth of Hay River (Area A) and from the fingers of Hay River (Area B) and was placed in the Sediment Deposit Areas 1-7. Dredgate from Area A was found predominantly to be coarse-grained sand and was free draining and stackable. Area A dredging was completed on July 2, 2024. The dredgate from Area B and Area C was found to be a mixture of fine and coarse-grained material ranging from sandy loam to loam. Area B dredgate was found to be highly saturated and required containment. Stacking of Area B and Area C dredgate was not possible.

Activities completed in Sediment Deposit Areas were as follows:

Sediment Deposit Area 2 has two monitoring wells which were protected with jersey barriers and berms. Area B dredgate was stockpiled in Sediment Deposit Area 2

Sediment Deposit Area 3 has five monitoring wells. Area A dredgate was placed on the north western side until dredging of Area A was completed on July 2, 2024. Area B dredgate was stored in the eastern side. Soils from Area B and C were stockpiled in the same area on July 3, 2024 due to Area C having the same soil classifications as Area B and relatively small quantity.

Sediment Deposit Area 4 was used to stockpile Area B and Area C dredgate. Soils from Area B and C were stockpiled in the same area on July 4, 2024 due to Area C having the same soil classification and relatively small quantity. Stockpiling started on July 4, 2024 and finished on the July 7, 2024. A silt fence was installed on the July 11, 2024, when potential infiltration through the surrounding berm was noted.

Sediment Deposit Area 5 has one monitoring well in the containment berm. Area B dredgate was stockpiled in Sediment Deposit Area 5. Hauling was complicated in wet conditions as its entrance made haul roads messy and grader and skid steer cleaning was required. Area B dredgate stockpiling in this area stopped on July 23, 2024.

Sediment Deposit Area 6 was used to stockpile Area B Dredgate. Sediment Deposit Area 6 was prepared for dredgate stockpiling with topsoil stripped from July 10 to 12 and berms completed and survey between July 12 and 13, 2024. Stockpiling started on July 14, 2024 and finished on the July 17, 2024.

Sediment Deposit Area 7 was used to stockpile Area B Dredgate. Sediment Deposit Area 7 was prepared for dredgate stockpiling with topsoil stripped between July 4 and 6 and berms completed and surveyed July 7, 2024. Stockpiling started on July 9, 2024 and finished on the July 13, 2024.

While placing material during the month of July, pore water did not drain and accumulate in the defined or attempted sump locations due to the lack of shaping ability of the material. Generally speaking, the pore water from Area A dredgate simply evaporated and Area B dredgate remained saturated. As a result, the sumps in most of the Sediment Deposit Areas accumulated little to no water. Only in Sediment Deposit Areas 3, 5 and 7 was Outcome able to shape sumps to collect water samples for lab analysis. Water samples from dredgate Areas B were collected on July 20, 2024 at Sediment Deposit Area #3. As of the end of July, no water from the dredgate has been discharged or disposed of.

The following information is provided as required in Schedule 1 of the Water Licence.

# A Tabular Summaries of all data and information generated under the SNP for the month being reported

The results of water samples from dredgate from Areas A and B have been compared to the CCME Water Quality Guideline Protection Freshwater Aquatic Life (short and long-term exposure criteria), and are attached in Appendix A.

Water samples were collected in the Sediment Deposit Areas on the dates indicated in the table below. If no sample was collected on a given date, there was no water available to sample.

Doto			Sedin	nent Deposi	t Area		
Date	1	2	3	4	5	6	7
July 2			✓				
July 16		✓	✓	✓	✓		
July 18							✓
July 30			✓		✓		

A summary of the interpretation of water analytical results in Sediment Deposit Area is as follows:

# <u>Sediment Deposit Area 2 had the following exceedances:</u>

### 2024/07/16

- Total Iron (concentration 3.2 mg/L compared to 0.3 mg/L for long-term exposure)
- Total Manganese (concentration 0.55 mg/L compared to 0.26 mg/L for short-term exposure)
- Total Selenium (concentration 0.0022 compared to 0.001 for long-term exposure)

# **Sediment Deposit Area 3 had the following exceedances:**

### 2024/07/02

- Total Iron (concentration 3.0 mg/L compared to 0.3 mg/L for long-term exposure)
- Total Lead (concentration 0.046 mg/L compared to 0.004 mg/L for long-term exposure)
- Total Manganese (concentration 0.85 mg/L compared to 0.26 mg/L for short-term Dissolved Manganese (concentration 0.87 mg/L compared to 0.26 for short-term exposure)
- Total Selenium (concentration 0.0013 compared to 0.001 for long-term exposure)

## 2024/07/16

Total Iron (concentration 2.2 mg/L compared to 0.3 mg/L for long-term exposure)

# <u>Sediment Deposit Area 4 had the following exceedances:</u>

2024/07/16

- Total Iron (concentration 0.92 mg/L compared to 0.3 mg/L for long-term exposure)
- Total Manganese (concentration 0.30 mg/L compared to 0.26 mg/L for short-term exposure)

# **Sediment Deposit Area 5 had the following exceedances:**

### 2024/07/16

- Total Iron (concentration 1.6 mg/L compared to 0.3 mg/L for long-term exposure)
- Total Selenium (concentration 0.0026 mg/L compared to 0.0001 mg/L for short-term exposure)

## 2024/07/30

- Total Arsenic (concentration 0.0056 mg/L compared to 0.005 mg/L for long-term exposure)
- Total Iron (concentration 6.6 mg/L compared to 0.3 mg/L for long-term exposure)
- Total Manganese (concentration 0.28 mg/L compared to 0.26 mg/L for short-term exposure)

# **Sediment Deposit Area 7 had the following exceedances:**

### 2024/07/18

- Total Arsenic (concentration 0.0051 mg/L compared to 0.005 mg/L for long-term exposure)
- Total Iron (concentration 3.2 mg/L compared to 0.3 mg/L for long-term exposure)
- Total Manganese (concentration 0.38 mg/L compared to 0.26 mg/L for Long-term exposure)

### B Information regarding the calibration and status of the meters and device

The calibration date and information for the field instrument is provided in Appendix B

### C The coordinates of all SNP sites

Sump location in Sediment Deposit Area 2

- 568780.49m E
- 6747431.30m N

Sump location in Sediment Deposit Area 3

- 568633.987m E
- 6747424.537m N

Sump location in Sediment Deposit Area 4

- 568802.965m E
- 6746846.413m N

Sump location in Sediment Deposit Area 5

- 568810.002m E
- 6747306.394m N

Sump location in Sediment Deposit Area 7

- 568263.20m E
- 6747670.84m N

Water samples from the remaining areas was collected from the point it naturally accumulated due to lack of ability to form sumps.

### D A tabular summary of cumulative water use

There was no water used.

E Tabular summaries of all data and information generated under the Supplementary Measurement Requirements referred to in Part C

There were no supplementary measurements referred to in Part C of the Water Licence

# Appendix A

**Interpreted Analytica Data from Sumps** 

Water Quality Monitoring



Report Date: 2024/07/09

Bureau Veritas Job Number: C449515

OUTCOME CONSULTANTS INC. Client Project #: 2024 HREDP

					uality Guideline hwater Aquatic fe
	UNITS	HR24-SP03-(07-02)-SUMP-1		Short-Term	Long-Term
Bureau Veritas ID		CQN275		Exposure	Exposure
Sampling Date		2024/07/02 13:38	+		
COC Number		1/1			
	UNITS	HR24-SP03-(07-02)-SUMP-1			
Ext. Pet. Hydrocarbon					
F2 (C10-C16 Hydrocarbons)	mg/L	<0.10			
F3 (C16-C34 Hydrocarbons)	mg/L	<0.10			
F4 (C34-C50 Hydrocarbons)	mg/L	<0.20			
Volatiles					
Benzene	ug/L	<0.40			370
Toluene	ug/L	<0.40			2
Ethylbenzene	ug/L	<0.40			90
m & p-Xylene	ug/L	<0.80			
o-Xylene	ug/L	<0.40			
Xylenes (Total)	ug/L	<0.89			
F1 (C6-C10) - BTEX	ug/L	<100			
F1 (C6-C10)	ug/L	<100			
Surrogate Recovery (%)					
1,4-Difluorobenzene (sur.)	%	104			
4-Bromofluorobenzene (sur.)	%	99			
D4-1,2-Dichloroethane (sur.)	%	100			
O-TERPHENYL (sur.)	%	104			
	•				
Bureau Veritas ID		CQN275			
Sampling Date		2024/07/02 13:38			
COC Number		1/1			
	UNITS	HR24-SP03-(07-02)-SUMP-1			
Calculated Parameters					
Anion Sum	meq/L	11			
Cation Sum	meq/L	10			
Hardness (CaCO3)	mg/L	460			
Ion Balance (% Difference)	%	3.1			
Nitrate (N)	mg/L	0.55		550	13
Nitrate (NO3)	mg/L	2.4			
Nitrite (NO2)	mg/L	0.59			
Calculated Total Dissolved Solids	mg/L				
Elements					

	UNITS	HR24-SP03-(07-02)-SUMP-1	Short-Term Exposure	Long-Term Exposure
Dissolved Cadmium (Cd)	ug/L	<0.020		
Misc. Inorganics				
Conductivity	uS/cm	990		
рН	рН	8.06		6.5 to 9.0
Anions				
Alkalinity (PP as CaCO3)	mg/L	<1.0		
Alkalinity (Total as CaCO3)	mg/L	260		
Bicarbonate (HCO3)	mg/L	310		
Carbonate (CO3)	mg/L	<1.0		
Hydroxide (OH)	mg/L	<1.0		
Chloride (CI)	mg/L	30	640	120
Sulphate (SO4)	mg/L	250		
Nutrients				
Nitrite (N)	mg/L	0.18		
Nitrate plus Nitrite (N)	mg/L	0.73		
Dissolved Metals (Lab Filtered Elements)				
Dissolved Aluminum (AI)	mg/L	0.0091		5
Dissolved Antimony (Sb)	mg/L	0.00076		
Dissolved Arsenic (As)	mg/L	0.0020		5
Dissolved Barium (Ba)	mg/L	0.16		
Dissolved Beryllium (Be)	mg/L	<0.0010		
Dissolved Boron (B)	mg/L	0.15	29	1.5
Dissolved Calcium (Ca)	mg/L	130		
Dissolved Chromium (Cr)	mg/L	<0.0010		
Dissolved Cobalt (Co)	mg/L	0.00092		
Dissolved Copper (Cu)	mg/L	0.0033		2.57
Dissolved Iron (Fe)	mg/L	<0.060		300
Dissolved Lead (Pb)	mg/L	<0.00020		0.004
Dissolved Lithium (Li)	mg/L	0.048		0.004
Dissolved Magnesium (Mg)	mg/L	34		
Dissolved Manganese (Mn)	mg/L	0.054	0.26	
Dissolved Molybdenum (Mo)	mg/L	0.012	0.20	73
Dissolved Nickel (Ni)	mg/L	0.0054		0.1
Dissolved Phosphorus (P)	mg/L	<0.10		0.1
Dissolved Potassium (K)	mg/L	9.8		
Dissolved Selenium (Se)	mg/L	0.00093		1
Dissolved Silicon (Si)	mg/L	3.3		
Dissolved Silver (Ag)	mg/L	<0.00010		0.25
Dissolved Sodium (Na)	mg/L	26		0.23
Dissolved Strontium (Sr)	mg/L	0.40		
Dissolved Sulphur (S)	mg/L	77	<del>                                     </del>	
Dissolved Thallium (TI)	mg/L	<0.00020	<del>                                     </del>	0.8
Dissolved Tin (Sn)	mg/L	<0.0010	<del>                                     </del>	0.8
Dissolved Titr (511)  Dissolved Titanium (Ti)	mg/L	<0.0010	<del>                                     </del>	1
Dissolved Tranium (TI)  Dissolved Uranium (U)	mg/L	0.0079	33	15
Dissolved Vanadium (V)	mg/L	<0.0010	33	15
Dissolved Zinc (Zn)	_	<0.0010	a 1a	
Dissulved Zilic (ZII)	mg/L		equation(1	equation(1)

	UNITS	HR24-SP03-(07-02)-SUMP-1	Short-Term Exposure	Long-Term Exposure
Bureau Veritas ID		CQN275		
Sampling Date		2024/07/02 13:38		
COC Number		1/1		
	UNITS	HR24-SP03-(07-02)-SUMP-1		
Total Metals				
Total Cadmium (Cd)	ug/L	0.14	7.7	0.37
Total Aluminum (Al)	mg/L	0.86		5
Total Antimony (Sb)	mg/L	0.0010		
Total Arsenic (As)	mg/L	0.0041		0.005
Total Barium (Ba)	mg/L	0.22		
Total Beryllium (Be)	mg/L	<0.0010		
Total Boron (B)	mg/L	0.15	29	1.5
Total Calcium (Ca)	mg/L	140		
Total Chromium (Cr)	mg/L	0.0017		
Total Cobalt (Co)	mg/L	0.0033		
Total Copper (Cu)	mg/L	0.0085		2.57
Total Iron (Fe)	mg/L	3.0		0.3
Total Lead (Pb)	mg/L	0.0046		0.004
Total Lithium (Li)	mg/L	0.021		
Total Magnesium (Mg)	mg/L	38		
Total Manganese (Mn)	mg/L	0.85	0.26	
Total Molybdenum (Mo)	mg/L	0.016		0.073
Total Nickel (Ni)	mg/L	0.010		0.1
Total Phosphorus (P)	mg/L	0.21		
Total Potassium (K)	mg/L	11		
Total Selenium (Se)	mg/L	0.0013		0.001
Total Silicon (Si)	mg/L	4.9		
Total Silver (Ag)	mg/L	0.00011		0.00025
Total Sodium (Na)	mg/L	28		
Total Strontium (Sr)	mg/L	0.49		
Total Sulphur (S)	mg/L	81		
Total Thallium (TI)	mg/L	<0.00020		0.0008
Total Tin (Sn)	mg/L	0.0028		
Total Titanium (Ti)	mg/L	0.016		
Total Uranium (U)	mg/L	0.010	0.033	0.015
Total Vanadium (V)	mg/L	0.0036		
Total Zinc (Zn)	mg/L	0.044	equation(1)	equation(1)
Bureau Veritas ID		CQN275		
Sampling Date		2024/07/02 13:38		
COC Number		1/1		
	UNITS	HR24-SP03-(07-02)-SUMP-1		
Misc. Inorganics				
Total Dissolved Solids	mg/L	690		
Total Suspended Solids	mg/L	54		



Bureau Veritas Job Number: C446253 Report Date: 2024/06/27 OUTCOME CONSULTANTS INC. Client Project #: 2024 HREDP

						Protection Fre	uality Guideline shwater Aquatic ife
AT1 BTEX AND F1-F4 IN WATER (WAT	TER)					Short-Term Exposure	Long-Term Exposure
Bureau Veritas ID	,	CRK707	CRK708	CRK709	CRK710	Exposure	Exposure
Sampling Date		2024/07/16 12:23	2024/07/16 12:36	2024/07/16 12:41	2024/07/16 12:54		
COC Number		1/1	1/1	1/1	1/1		
	UNITS	HR24-SV02-001	HR24-SV03-001	HR24-SV04-001	HR24-SV05-001		
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/L	<0.10	<0.10	<0.10	<0.10		
F3 (C16-C34 Hydrocarbons)	mg/L	<0.10	<0.10	<0.10	<0.10		
F4 (C34-C50 Hydrocarbons)	mg/L	<0.20	<0.20	<0.20	<0.20		
Volatiles							
Benzene	ug/L	<0.40	<0.40	<0.40	<0.40		37
Toluene	ug/L	<0.40	<0.40	<0.40	<0.40		
Ethylbenzene	ug/L	<0.40	<0.40	<0.40 <0.80	<0.40		9
m & p-Xylene	ug/L	<0.80 <0.40	<0.80 <0.40	0.50	<0.80 <0.40		
o-Xylene Xylenes (Total)	ug/L ug/L	<0.89	<0.89	<0.89	<0.89		
F1 (C6-C10) - BTEX	ug/L	<100	<100	<100	<100		
F1 (C6-C10)	ug/L	<100	<100	<100	<100		
Surrogate Recovery (%)							
1,4-Difluorobenzene (sur.)	%	101	102	104	101		
4-Bromofluorobenzene (sur.)	%	98	101	104	103		
D4-1,2-Dichloroethane (sur.)	%	90	96	99	96		
O-TERPHENYL (sur.)	%	108	98	98	97	_	<b></b>
ROUTINE + DISS. REG. METALS - LAB	FILT (W.		CRK708	CRK709	CRK710	-	
Bureau Veritas ID Sampling Date	1	CRK707 2024/07/16 12:23	CRK708 2024/07/16 12:36	CRK709 2024/07/16 12:41	CRK710 2024/07/16 12:54	-	<b>-</b>
COC Number	<del>                                     </del>	1/1	1/1	2024/07/16 12:41	1/1	+	-
	UNITS	HR24-SV02-001	HR24-SV03-001	HR24-SV04-001	HR24-SV05-001	+	<b> </b>
Calculated Parameters						+	<del>                                     </del>
Anion Sum	meq/L	31	4.7	10	32		
Cation Sum	meq/L	31	4.8	11	32		1
Hardness (CaCO3)	mg/L	1400	200	470	1500		
Ion Balance (% Difference)	%	0.044	1.1	2.8	1.1		
Nitrate (N)	mg/L	0.79	0.17	1.3	7.5	550	1
Nitrate (NO3)	mg/L	3.5	0.77	5.8	33		
Nitrite (NO2)	mg/L	1.9	0.16	0.62	2.0		
Elements	6	0.00	0.000	0.000	0.045		
Dissolved Cadmium (Cd)	ug/L	0.049	<0.020	<0.020	0.045		
Misc. Inorganics Conductivity	uS/cm	2900	430	870	2600		
pH	pH	8.11	8.40	8.44	7.70		6.5 to 9.
Anions	ŕ	-		-			0.5 to 5.
Alkalinity (PP as CaCO3)	mg/L	<1.0	3.1	5.2	<1.0		
Alkalinity (Total as CaCO3)	mg/L	130	150	240	69		
Bicarbonate (HCO3)	mg/L	160	170	280	84		
Carbonate (CO3)	mg/L	<1.0	3.7	6.2	<1.0		
Hydroxide (OH)	mg/L	<1.0	<1.0	<1.0	<1.0		
Chloride (CI)	mg/L	600	19	19	290	640	12
Sulphate (SO4)	mg/L	540	56	220	1100		
Nutrients Nitrite (N)	mg/L	0.57	0.049	0.19	0.61		
Nitrate plus Nitrite (N)	mg/L	1.4	0.22	1.5	8.1		
Dissolved Metals (Lab Filtered Elements)							
Dissolved Aluminum (Al)	mg/L	0.0053	0.019	0.014			
Dissolved Antimony (Sb)					0.011		
	mg/L	0.00069	<0.00060	<0.00060	0.011		
Dissolved Arsenic (As)		0.0014	0.0012		<0.00060 0.0011		
Dissolved Arsenic (As) Dissolved Barium (Ba)	mg/L	0.0014 0.21	0.0012 0.067	<0.00060 0.0020 0.13	<0.00060 0.0011 0.074		
Dissolved Barium (Ba) Dissolved Beryllium (Be)	mg/L mg/L mg/L mg/L	0.0014 0.21 <0.0010	0.0012 0.067 <0.0010	<0.00060 0.0020 0.13 <0.0010	<0.00060 0.0011 0.074 <0.0010		
Dissolved Barium (Ba) Dissolved Beryllium (Be) Dissolved Boron (B)	mg/L mg/L mg/L mg/L	0.0014 0.21 <0.0010 0.19	0.0012 0.067 <0.0010 0.058	<0.00060 0.0020 0.13 <0.0010 0.087	<0.00060 0.0011 0.074 <0.0010 0.084	29	1.
Dissolved Barium (Ba) Dissolved Beryllium (Be) Dissolved Boron (B) Dissolved Calcium (Ca)	mg/L mg/L mg/L mg/L mg/L	0.0014 0.21 <0.0010 0.19 400	0.0012 0.067 <0.0010 0.058 52	<0.00060 0.0020 0.13 <0.0010 0.087 120	<0.00060 0.0011 0.074 <0.0010 0.084 430	29	1.
Dissolved Barium (Ba) Dissolved Beryllium (Be) Dissolved Boron (B) Dissolved Calcium (Ca) Dissolved Chromium (Cr)	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	0.0014 0.21 <0.0010 0.19 400 <0.0010	0.0012 0.067 <0.0010 0.058 52 <0.0010	<0.00060 0.0020 0.13 <0.0010 0.087 120 <0.0010	<0.00060 0.0011 0.074 <0.0010 0.084 430 <0.0010	29	1.
Dissolved Barium (Ba) Dissolved Beryllium (Be) Dissolved Boron (B) Dissolved Calcium (Ca) Dissolved Chromium (Cr) Dissolved Chobalt (Co)	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	0.0014 0.21 <0.0010 0.19 400 <0.0010 0.0010	0.0012 0.067 -0.0010 0.058 52 -0.0010 0.0050	<0.00060 0.0020 0.13 <0.0010 0.087 120 <0.0010 0.0085	<0.00060 0.0011 0.074 <0.0010 0.084 430 <0.0010 0.0046	29	
Dissolved Barium (Ba) Dissolved Beryllium (Be) Dissolved Boron (B) Dissolved Calcium (Ca) Dissolved Chromium (Cr) Dissolved Cobalt (Co) Dissolved Copper (Cu)	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	0.0014 0.21 0.0010 0.19 400 <0.0010 0.0011 0.0040	0.0012 0.067 <0.0010 0.058 52 <0.0010 0.00050 0.00050	<0.00060 0.0020 0.13 <0.0010 0.087 120 <0.0010 0.00085 0.0041	<0.00060 0.0011 0.074 <0.0010 0.084 430 <0.0010 0.00046 0.00046 0.0035	29	2.5
Dissolved Barium (Ba) Dissolved Beryllium (Be) Dissolved Beryllium (Be) Dissolved Calcium (Ca) Dissolved Chromium (Cr) Dissolved Chopalt (Co) Dissolved Copper (Cu) Dissolved Copper (Fe)	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	0.0014 0.21 <0.0010 0.19 400 <0.0010 0.0011 0.0040 <0.0060	0.0012 0.067 <0.0010 0.058 52 <0.0010 0.00050 0.00050 <0.0039 <0.060	<0.00060 0.0020 0.13 <0.0010 0.087 120 <0.0010 0.0005 0.0005 0.00041 <0.0060	<0.00060 0.0011 0.074 <0.0010 0.084 430 <0.0010 0.0004 0.00046 0.00035 <0.0060	29	2.5
Dissolved Barium (Ba) Dissolved Beryllium (Be) Dissolved Beron (B) Dissolved Calcium (Ca) Dissolved Chromium (Cr) Dissolved Cobalt (Co) Dissolved Copper (Cu) Dissolved Cropper (Cu) Dissolved Iron (Fe) Dissolved Lead (Pb)	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	0.0014 0.21 <0.0010 0.19 400 -0.0010 0.0011 0.0011 0.0040 -0.00000 -0.000000	0.0012 0.067 <0.0010 0.058 52 <0.0010 0.00050 0.00050	<0.00060 0.0020 0.13 <0.0010 0.087 120 <0.0010 0.00085 0.0041	<0.00060 0.0011 0.074 <0.0010 0.084 430 <0.0010 0.00046 0.00046 0.0035	29	2.5
Dissolved Barium (Ba) Dissolved Beryllium (Be) Dissolved Beryllium (Be) Dissolved Calcium (Ca) Dissolved Chromium (Cr) Dissolved Chobalt (Co) Dissolved Copper (Cu) Dissolved Iron (Fe)	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	0.0014 0.21 <0.0010 0.19 400 <0.0010 0.0011 0.0040 <0.0060	0.0012 0.067 <0.0010 0.058 52 <0.0010 0.00050 0.00050 0.0039 <0.00000	<0.00060 0.0020 0.13 <0.0010 0.087 120 <0.0010 0.00085 0.0041 <0.0060 <0.00020	<0.00060 0.0011 0.074 <0.0010 0.084 430 <0.0010 0.0046 0.0035 <0.0006 0.00060 <0.00000	29	2.5
Dissolved Barium (Ba) Dissolved Beryllium (Be) Dissolved Boron (B) Dissolved Boron (B) Dissolved Calcium (Ca) Dissolved Cobalt (Co) Dissolved Cobalt (Co) Dissolved Copper (Cu) Dissolved Iron (Fe) Dissolved Lead (Pb) Dissolved Lithium (Li)	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	0.0014 0.21 -(0.0010 0.19 400 -(0.0010 0.0011 0.00011 0.0040 -(0.0060 -(0.00010 0.0036	0.0012 0.067 0.0010 0.058 52 0.0010 0.00050 0.0039 0.0060 0.0039 0.0060 0.00000 0.00000	<0.00060 0.0020 0.13 <0.0010 0.087 120 <0.0010 0.0085 0.0041 <0.060 <0.060 <0.0600 <0.00020 0.0021	<0.00060 0.0011 0.074 <0.0010 0.084 430 -0.0010 0.0046 0.0035 <0.060 <0.060 <0.0006 <0.00006 <0.0000000000	29	2.5
Dissolved Barium (Ba) Dissolved Beryllium (Be) Dissolved Boron (B) Dissolved Calcium (Ca) Dissolved Chromium (Cr) Dissolved Cobalt (Co) Dissolved Copper (Cu) Dissolved Copper (Cu) Dissolved Lead (Pb) Dissolved Lithium (Li) Dissolved Magnesium (Mg)	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	0.0014 0.21 <0.0010 0.19 400 <0.0010 0.0011 0.0001 0.0001 0.0004 <0.0060 <0.00020 0.036 88	0.0012 0.067 <0.0010 0.058 52 <0.0010 0.00050 0.00050 0.0039 <0.060 <0.00020 <0.00020	<0.00060 0.0020 0.13 <0.0010 0.087 120 <0.0010 0.00085 0.00041 <0.0060 <0.00020 0.0021 43	<0.00060 0.0011 0.074 <0.0010 0.084 430 <0.0010 0.0004 0.00046 0.00035 <0.0060 <0.00020 <0.0200		2.5
Dissolved Barium (Ba) Dissolved Beryllium (Be) Dissolved Boron (B) Dissolved Calcium (Ca) Dissolved Cabati (Co) Dissolved Cabati (Co) Dissolved Cobati (Co) Dissolved Copper (Cu) Dissolved I Copper (Cu) Dissolved I Copper (Cu) Dissolved I I Copper (Cu) Dissolved Magnesium (Mg) Dissolved Manganese (Mn) Dissolved Molydenum (Mo) Dissolved Molydenum (Mo)	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	0.0014 0.21 -(0.0010 0.19 400 -(0.0010 0.0011 0.0040 -(0.0060 -(0.	0.0012 0.067 -(0.0010 0.058 52 -(0.0010 0.00050 0.00039 -(0.060 -(0.00020 -(0.0020 -(0.0020 -(0.0020 -(0.0040 -(0.0040 0.0096 0.0030	<0.00060 0.0020 0.13 <0.0010 0.087 120 0.00085 0.0041 <0.0060 <0.00020 0.021 43 0.017 0.0095 0.0095 0.0057	<0.00060 0.0011 0.074 <0.0010 0.084 430 <0.0010 0.00046 0.0035 <0.0006 <0.00020 <0.0020 91 0.0045 0.00053 0.00053 0.00053 0.00053 0.00077		2.5
Dissolved Barium (Ba) Dissolved Beryllium (Be) Dissolved Beryllium (Be) Dissolved Calcium (Ca) Dissolved Calcium (Cr) Dissolved Chromium (Cr) Dissolved Copber (Cu) Dissolved Copper (Cu) Dissolved Lead (Pb) Dissolved Lithium (Li) Dissolved Magnesium (Mg) Dissolved Magnesium (Mg) Dissolved Molybdenum (Mo) Dissolved Molybdenum (Mo) Dissolved Nickel (Ni) Dissolved Phosphorus (P)	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	0.0014 0.21 <0.0010 0.19 400 <0.0010 0.0011 0.0040 <0.0000 <0.00000 0.036 88 0.13 0.0096 0.00056 <0.00056	0.0012 0.067 <0.0010 0.058 52 <0.0010 0.00050 0.00050 0.00039 <0.0000 <0.00020 <0.00020 <0.00020 <0.00020 <0.00040 <0.00060 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.000000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.000000 <0.000000 <0.000000 <0.0000000 <0.00000000 <0.0000000000	<0.00060 0.0020 0.13 <-0.0010 0.087 120 <-0.0010 0.0005 0.0005 0.00041 <-0.0060 <-0.00020 0.021 43 0.017 0.0095 -0.0057 <-0.10	<0.00060 0.0011 0.004 <0.0010 0.084 430 <0.0010 0.0046 0.0035 <0.0060 <0.00020 <0.0020 <0.0020 <0.0020 <0.0035 <0.0035 <0.0035 <0.0035 <0.0035 <0.0037 <0.0037 <0.0037		2.5 30 0.00
Dissolved Barium (Ba) Dissolved Beryllium (Be) Dissolved Beryllium (Be) Dissolved Content (Ca) Dissolved Chromium (Cr) Dissolved Cobalt (Co) Dissolved Cobalt (Co) Dissolved Copper (Cu) Dissolved Localt (Co) Dissolved Local (Pe) Dissolved Local (Pe) Dissolved Local (Pe) Dissolved Magnesium (Mg) Dissolved Magnesium (Mg) Dissolved Manganese (Mn) Dissolved Molybdenum (Mo) Dissolved Molybdenum (Mo) Dissolved Molybdenum (Po) Dissolved Phosphorus (P) Dissolved Photasium (K)	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	0.0014 0.21 0.0010 0.19 400 0.0010 0.0011 0.0001 0.0001 0.0001 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	0.0012 0.067 -(0.0010 0.058 52 -(0.0010 0.0050 0.0039 -(0.060 -(0.0020 -(0.0020 -(0.0020 -(0.0040 0.0096 0.0030 -(0.0040 0.0040 0.0030 -(0.0040 0.0040 0.0040 0.0040 -(0.0040 0.0040 0.0040 0.0040 -(0.0040 0.0040 0.0040 0.0040 0.0040 0.0040 0.0040 0.0040 0.0040	<0.00060 0.0020 0.13 <0.0010 0.087 120 <0.0010 0.00085 0.0041 <0.060 <0.00020 0.021 43 0.017 0.0095 0.0095 0.0057 0.010 8.0	<0.00060 0.0011 0.074 <0.0010 0.084 430 <0.0010 0.0046 0.0035 <0.060 <0.00020 <0.0020 <0.0020 91 0.00045 0.00053 0.00053 0.0007		2.5 30 0.00
Dissolved Barium (Ba) Dissolved Beryllium (Be) Dissolved Beryllium (Be) Dissolved Soron (B) Dissolved Calcium (Ca) Dissolved Cobati (Co) Dissolved Cobati (Co) Dissolved Copper (Cu) Dissolved Copper (Cu) Dissolved Lithium (Li) Dissolved Lithium (Li) Dissolved Lithium (Li) Dissolved Magnesium (Mg) Dissolved Magnesium (Mg) Dissolved Minganese (Mn) Dissolved Minganese (Mn) Dissolved Michael (Ni) Dissolved Michael (Ni) Dissolved Phosphorus (P) Dissolved Phosphorus (P) Dissolved Phosphorus (P)	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	0.0014 0.21 0.0010 0.19 400 0.0010 0.0011 0.0001 0.0001 0.00001 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	0.0012 0.067 -(0.0010 0.058 52 -(0.0010 0.00050 0.0039 -(0.060 -(0.0020 -(0.020 -(0.0040 0.0096 0.0030 -(0.10 -(0.0030 -(0.10 -(0.0070	<0.00060 0.0020 0.13 <0.0010 0.087 120 <0.0010 0.00085 0.0041 <0.060 <0.00020 0.021 43 0.017 0.0095 0.0057 <0.10 8.0 0.00066	<0.00060 0.0011 0.074 <0.0010 0.084 430 <0.0010 0.0046 0.0035 <0.060 <0.00020 <0.020 91 0.0045 0.0037 <0.010 0.0037 <0.100 0.0021		2.5 30 0.00
Dissolved Barium (Ba) Dissolved Beryllium (Be) Dissolved Boron (B) Dissolved Calcium (Ca) Dissolved Calcium (Ca) Dissolved Chromium (Cr) Dissolved Copper (Cu) Dissolved Copper (Cu) Dissolved Libium (Li) Dissolved Libium (Li) Dissolved Hopping Dissolved Highium (Mg) Dissolved Magnases (Mn) Dissolved Magnases (Mn) Dissolved Molybdenum (Mo) Dissolved Molybdenum (Mo) Dissolved Molybdenum (Mo) Dissolved Phosphorus (P) Dissolved Phosphorus (P) Dissolved Phosphorus (P) Dissolved Phosphorus (P) Dissolved Seelmium (Se) Dissolved Seelmium (Se)	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	0.0014 0.21 <-0.0010 0.19 400 <-0.0010 0.0011 0.0001 0.0001 0.0001 0.0000 <-0.0000 <-0.0000 0.0006 0.00006 0.00096 0.00056 <-0.10 22 0.0018 <-0.0018	0.0012 0.067 -(0.0010 0.058 52 -(0.0010 0.0050 0.00050 0.00039 -(0.060 -(0.00020 -(0.0020 -(0.0020 -(0.00000 -(0.00000 -(0.00000 -(0.00000 -(0.00000 -(0.00000 -(0.00000 -(0.00000 -(0.00000 -(0.00000 -(0.00000 -(0.00000 -(0.00000 -(0.00000 -(0.00000 -(0.00000 -(0.000000 -(0.000000 -(0.000000 -(0.000000 -(0.000000 -(0.000000 -(0.000000 -(0.000000 -(0.000000 -(0.000000 -(0.000000 -(0.000000 -(0.000000 -(0.000000 -(0.000000 -(0.000000 -(0.0000000 -(0.0000000 -(0.000000000 -(0.0000000000	<0.00060 0.0020 0.13 <0.0010 0.087 120 <0.0010 0.0005 0.0041 <0.0060 <0.00020 0.021 43 0.017 0.0095 <0.0057 <0.10 8.0 0.0066 0.0066 0.67	<0.00060 0.0011 0.074 <0.0010 0.084 430 <0.0010 0.0046 0.0035 <0.0060 <0.00020 <0.0020 <0.0020 <0.0035 <0.0053 0.0045 0.0065 0.00037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <0.0037 <		2.5 30 0.00 7 7
Dissolved Barium (Ba) Dissolved Beryllium (Be) Dissolved Beryllium (Be) Dissolved Content (Ca) Dissolved Calcium (Ca) Dissolved Calcium (Ca) Dissolved Cobalt (Co) Dissolved Copper (Cu) Dissolved Copper (Cu) Dissolved Lord (Pe) Dissolved Lord (Pe) Dissolved Lithium (Li) Dissolved Magnesium (Mg) Dissolved Manganese (Mn) Dissolved Manganese (Mn) Dissolved Molybdenum (Mo) Dissolved Molybdenum (Fe) Dissolved Potassium (K) Dissolved Potassium (K) Dissolved Selenium (Se) Dissolved Silver (Ag)	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	0.0014 0.21 0.0010 0.19 400 0.0010 0.0011 0.0001 0.0001 0.0001 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.00000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.00000 0.0000 0.0000 0.0000 0.0000 0.0000	0.0012 0.067 0.0010 0.058 52 -0.0010 0.00050 0.0039 -0.060 -0.00020 -0.020 16 -0.0040 0.0096 0.0030 -0.10 4.3 0.00070 1.1	<ul> <li>&lt;0.00060</li> <li>&lt;0.0020</li> <li>&lt;0.013</li> <li>&lt;0.0010</li> <li>&lt;0.087</li> <li>&lt;120</li> <li>&lt;0.0010</li> <li>&lt;0.00085</li> <li>&lt;0.0041</li> <li>&lt;0.060</li> <li>&lt;0.00020</li> <li>&lt;0.021</li> <li>&lt;0.07</li> <li>&lt;0.095</li> <li>&lt;0.0057</li> <li>&lt;0.10</li> <li>&lt;0.0066</li> <li>&lt;0.0066</li> <li>&lt;0.67</li> <li>&lt;0.00010</li> </ul>	<0.00060 0.0011 0.074 <0.0010 0.084 430 <0.0010 0.0046 0.0035 <0.0060 <0.0020 <0.0020 <0.0020 91 0.0045 0.0037 <0.0037 <0.001 0.00047 0.0007 0		2.5 30 0.00
Dissolved Barium (Ba) Dissolved Beryllium (Be) Dissolved Boron (B) Dissolved Boron (B) Dissolved Calcium (Ca) Dissolved Cobalt (Co) Dissolved Copper (Cu) Dissolved Copper (Cu) Dissolved Lithium (Li) Dissolved Lithium (Li) Dissolved Hagnesium (Mg) Dissolved Magnesium (Mg) Dissolved Nagnesium (Mg) Dissolved Nickel (Ni) Dissolved Potassium (Mo) Dissolved Solium (No) Dissolved Solium (S) Dissolved Silicon (S) Dissolved Silicon (Si) Dissolved Silicon (Si) Dissolved Solium (Na)	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	0.0014 0.21 0.20 0.0010 0.19 400 0.0011 0.0001 0.0001 0.0001 0.0006 0.0060 0.0036 88 0.13 0.0096 0.0056 0.010 22 0.0018 0.50 0.0018 0.500 0.0010 70	0.0012 0.067 -(0.0010 0.058 52 -(0.0010 0.0050 0.0039 -(0.060 -(0.0020 -(0.0020 -(0.0040 0.0096 0.0030 -(0.10 4.3 0.00070 1.1 -(0.0010 17	<ul> <li>&lt;0.00060</li> <li>0.0020</li> <li>0.013</li> <li>&lt;0.0010</li> <li>0.087</li> <li>120</li> <li>&lt;0.0010</li> <li>0.00085</li> <li>0.0041</li> <li>&lt;0.060</li> <li>&lt;0.00020</li> <li>0.021</li> <li>43</li> <li>0.017</li> <li>0.0095</li> <li>0.0057</li> <li>&lt;0.10</li> <li>8.0</li> <li>0.00066</li> <li>0.67</li> <li>&lt;0.00010</li> <li>23</li> </ul>	<0.00060 0.0011 0.074 <0.0010 0.084 430 <0.0010 0.0046 0.0035 <0.060 <0.00020 <0.020 91 0.0045 0.0053 0.0037 <0.10 7.0 0.0021 <0.50 <0.0021 <0.0001 54		2.5 33 0.00 7 0
Dissolved Barium (Ba) Dissolved Beryllium (Be) Dissolved Beryllium (Be) Dissolved Calcium (Ca) Dissolved Calcium (Ca) Dissolved Cobalt (Co) Dissolved Cobalt (Co) Dissolved Copper (Cu) Dissolved Lobalt (Co) Dissolved Intervent (Mg) Dissolved Lobalt (Co) Dissolved Intitum (Li) Dissolved Magnesium (Mg) Dissolved Magnesium (Mg) Dissolved Manganese (Mn) Dissolved Molybdenum (Mo) Dissolved Molybdenum (Mo) Dissolved Molybdenum (Mo) Dissolved Potassium (K) Dissolved Potassium (K) Dissolved Potassium (K) Dissolved Soldium (Na)	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	0.0014 0.21 -(0.0010 0.19 400 -(0.0010 0.0011 0.0040 -(0.0060 -(0.00020 0.036 88 0.13 0.0096 0.0096 0.0006 -(0.10 22 0.0018 -(0.50 -(0.0010 -(0.50 -(0.0010 -(0.50 -(0.0010 -(0.50 -(0.0010 -(0.	0.0012 0.067 0.0010 0.058 52 -0.0010 0.00050 0.0039 -0.060 -0.00020 -0.020 16 -0.0040 0.0096 0.0030 -0.10 4.3 0.00070 1.1	<ul> <li>&lt;0.00060</li> <li>&lt;0.0020</li> <li>&lt;0.013</li> <li>&lt;0.0010</li> <li>&lt;0.087</li> <li>&lt;120</li> <li>&lt;0.0010</li> <li>&lt;0.00085</li> <li>&lt;0.0041</li> <li>&lt;0.060</li> <li>&lt;0.00020</li> <li>&lt;0.021</li> <li>&lt;0.07</li> <li>&lt;0.095</li> <li>&lt;0.0057</li> <li>&lt;0.10</li> <li>&lt;0.0066</li> <li>&lt;0.0066</li> <li>&lt;0.67</li> <li>&lt;0.00010</li> </ul>	<0.00060 0.0011 0.074 <0.0010 0.084 430 <0.0010 0.0004 0.00035 <0.0060 <0.00020 <0.0020 <0.0020 0.0033 0.00037 <0.10 0.0037 <0.10 0.0031 <0.0001 0.00031 <0.0001 0.00031 <0.0001 0.00031 <0.0001 0.00010 0		2.5 33 0.00 7 0
Dissolved Barium (Ba) Dissolved Beryllium (Be) Dissolved Beryllium (Be) Dissolved Control (B) Dissolved Calicium (Ca) Dissolved Color (Co) Dissolved Copper (Cu) Dissolved Copper (Cu) Dissolved Lithium (Li) Dissolved Lithium (Li) Dissolved Lithium (Li) Dissolved Lithium (Li) Dissolved Magnesium (Mg) Dissolved Magnesium (Mg) Dissolved Magnesium (Mg) Dissolved Mickel (Mi) Dissolved Mickel (Mi) Dissolved Phosphorus (P) Dissolved Potassium (K) Dissolved Selenium (Se) Dissolved Selenium (Se) Dissolved Silicon (Si) Dissolved Silicon (Si) Dissolved Silicon (Si) Dissolved Solium (Na) Dissolved Strontium (Sr) Dissolved Solium (Na) Dissolved Solium (Na) Dissolved Strontium (Sr)	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	0.0014 0.21 -(0.0010 0.19 400 -(0.0010 0.0011 0.0001 0.0001 0.0001 -(0.00000 0.00000 0.006 0.00000 0.006 0.00000 0.006 0.0000000 0.001 0.00000 0.001 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.000000	0.0012 0.067 -(0.0010 0.058 52 -(0.0010 0.00050 0.00039 -(0.0060 -(0.00020 -(0.0020 -(0.0020 -(0.0040	<ul> <li>&lt;0.00060</li> <li>0.0020</li> <li>0.13</li> <li>&lt;0.0010</li> <li>0.087</li> <li>120</li> <li>&lt;0.0010</li> <li>0.00085</li> <li>&lt;0.0041</li> <li>&lt;0.060</li> <li>&lt;0.00020</li> <li>&lt;0.021</li> <li>43</li> <li>&lt;0.017</li> <li>&lt;0.0055</li> <li>&lt;0.0057</li> <li>&lt;0.10</li> <li>&lt;0.0057</li> <li>&lt;0.10</li> <li>&lt;0.0066</li> <li>&lt;0.67</li> <li>&lt;0.00010</li> <li>&lt;0.074</li> </ul>	<0.00060 0.0011 0.074 <0.0010 0.084 430 <0.0010 0.0046 0.0035 <0.060 <0.00020 <0.020 91 0.0045 0.0053 0.0037 <0.10 7.0 0.0021 <0.50 <0.0021 <0.0001 54		2.3 33 0.00 7 0
Dissolved Barium (Ba) Dissolved Beryllium (Be) Dissolved Boron (B) Dissolved Content (Ca) Dissolved Charlet (Ca) Dissolved Charlet (Ca) Dissolved Copper (Cu) Dissolved Copper (Cu) Dissolved Copper (Cu) Dissolved Logolet (Co) Dissolved Logolet (Co) Dissolved Logolet (Co) Dissolved Magnesium (Mg) Dissolved Magnesium (Mg) Dissolved Manganese (Mn) Dissolved Molybdenum (Mo) Dissolved Molybdenum (Mo) Dissolved Molybdenum (Mo) Dissolved Stotastium (Ko) Dissolved Stotastium (K)	me/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg	0.0014 0.21 -(0.0010 0.19 400 -(0.0010 0.0011 0.0040 -(0.0060 -(0.00020 0.036 88 0.13 0.0096 0.0096 0.0006 -(0.10 22 0.0018 -(0.50 -(0.0010 -(0.50 -(0.0010 -(0.50 -(0.0010 -(0.50 -(0.0010 -(0.	0.0012 0.067 -(0.0010 0.058 52 -(0.0010 0.00050 0.0039 -(0.000 -(0.00020 -(0.0020 -(0.00000 0.0030 -(0.00000 0.0030 -(0.00000 0.0030 -(0.10 -(0.10 -(0.000000 0.00000 0.0030 -(0.10 -(0.10 -(0.0000000 0.000000 0.000000 0.000000 0.000000	<ul> <li>&lt;0.00060</li> <li>&lt;0.0020</li> <li>&lt;0.013</li> <li>&lt;0.0010</li> <li>&lt;0.087</li> <li>&lt;0.0010</li> <li>&lt;0.00085</li> <li>&lt;0.0041</li> <li>&lt;0.060</li> <li>&lt;0.00020</li> <li>&lt;0.021</li> <li>&lt;0.07</li> <li>&lt;0.095</li> <li>&lt;0.0057</li> <li>&lt;0.00</li> <li>&lt;0.0066</li> <li>&lt;0.00066</li> <li>&lt;0.00010</li> <li>&lt;0.00010</li> <li>&lt;0.00010</li> <li>&lt;0.00010</li> <li>&lt;0.00010</li> <li>&lt;0.00010</li> <li>&lt;0.47</li> <li>&lt;0.47</li> <li>&lt;0.04</li> </ul>	<0.00060 0.0011 0.004 <-0.0010 0.084 430 <-0.0010 0.0046 0.0035 <-0.0060 <-0.0020 <-0.0020 <-0.0020 <-0.0037 <-0.0010 0.0045 0.0037 <-0.0010 0.0021 <-0.000 -0.0020 <-0.0020 -0.0037 -0.0000 -0.0037 -0.0000 -0.0000 -0.0000 -0.00000 -0.00000 -0.00000 -0.000000 -0.00000000		2.5 33 0.00 7 0
Dissolved Barium (Ba) Dissolved Beryllium (Be) Dissolved Beryllium (Be) Dissolved Control (B) Dissolved Calicium (Ca) Dissolved Color (Co) Dissolved Copper (Cu) Dissolved Copper (Cu) Dissolved Lithium (Li) Dissolved Lithium (Li) Dissolved Lithium (Li) Dissolved Lithium (Li) Dissolved Magnesium (Mg) Dissolved Magnesium (Mg) Dissolved Magnesium (Mg) Dissolved Mickel (Mi) Dissolved Mickel (Mi) Dissolved Phosphorus (P) Dissolved Potassium (K) Dissolved Selenium (Se) Dissolved Selenium (Se) Dissolved Silicon (Si) Dissolved Silicon (Si) Dissolved Silicon (Si) Dissolved Solium (Na) Dissolved Strontium (Sr) Dissolved Solium (Na) Dissolved Solium (Na) Dissolved Strontium (Sr)	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	0.0014 0.21 0.20 0.0010 0.19 400 0.0011 0.0001 0.0001 0.0001 0.0000 0.0001 0.0006 0.0006 0.0006 0.0006 0.0006 0.0006 0.0006 0.0006 0.0006 0.0006 0.0006 0.0006 0.0006 0.0006 0.0006 0.0001	0.0012 0.067 -0.0010 0.058 52 -0.0010 0.0099 -0.060 -0.0039 -0.060 -0.0020 -0.020 16 -0.0040 0.0096 0.0030 -0.10 4.3 0.00070 1.1 -0.00010 17 0.18	<ul> <li>&lt;0.00060</li> <li>&lt;0.0020</li> <li>&lt;0.013</li> <li>&lt;0.0010</li> <li>&lt;0.087</li> <li>&lt;0.0010</li> <li>&lt;0.00085</li> <li>&lt;0.0041</li> <li>&lt;0.060</li> <li>&lt;0.00020</li> <li>&lt;0.021</li> <li>&lt;0.017</li> <li>&lt;0.095</li> <li>&lt;0.057</li> <li>&lt;0.10</li> <li>&lt;0.0057</li> <li>&lt;0.10</li> <li>&lt;0.0066</li> <li>&lt;0.67</li> <li>&lt;0.00010</li> <li>&lt;0.47</li> <li>&lt;0.00020</li> <li>&lt;0.00020</li> <li>&lt;0.0020</li> <li>&lt;0.0021</li> <li>&lt;0.00020</li> <li>&lt;0.00020</li> <li>&lt;0.00020</li> </ul>	<0.00060 0.0011 0.074 <0.0010 0.084 430 <0.0010 0.0046 0.0035 <0.060 <0.00020 <0.020 91 0.0045 0.0033 0.0037 0.010 7.0 0.0021 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50		2.5 33 0.00 7 0
Dissolved Barium (Ba) Dissolved Beryllium (Be) Dissolved Beryllium (Be) Dissolved Boron (B) Dissolved Calcium (Ca) Dissolved Cobati (Co) Dissolved Cobati (Co) Dissolved Cobati (Co) Dissolved Copper (Cu) Dissolved Copper (Cu) Dissolved Lithium (Li) Dissolved Lithium (Li) Dissolved Magnesium (Mg) Dissolved Magnesium (Mg) Dissolved Manganese (Mn) Dissolved Minybdenum (Mo) Dissolved Minybdenum (Mo) Dissolved Mickel (Ni) Dissolved Potassium (K) Dissolved Soldium (S) Dissolved Soldium (S) Dissolved Soldium (Ns) Dissolved Soldium (Ns) Dissolved Soldium (Ns) Dissolved Strontium (Sr)	me/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg	0.0014 0.21 0.21 0.0010 0.19 400 0.0011 0.0001 0.0001 0.0001 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000	0.0012 0.067 -(0.0010 0.058 52 -(0.0010 0.00050 0.0039 -(0.0060 -(0.00000 -(0.000000 -(0.0000000000000	<ul> <li>&lt;0.00060</li> <li>&lt;0.0020</li> <li>&lt;0.013</li> <li>&lt;0.0010</li> <li>&lt;0.087</li> <li>&lt;120</li> <li>&lt;0.0010</li> <li>&lt;0.00085</li> <li>&lt;0.0041</li> <li>&lt;0.060</li> <li>&lt;0.00020</li> <li>&lt;0.021</li> <li>&lt;13</li> <li>&lt;0.07</li> <li>&lt;0.0055</li> <li>&lt;0.0057</li> <li>&lt;0.10</li> <li>&lt;0.0057</li> <li>&lt;0.10</li> <li>&lt;0.0066</li> <li>&lt;0.67</li> <li>&lt;0.00010</li> <li>&lt;0.07</li> <li>&lt;0.00010</li> <li>&lt;0.07</li> <li>&lt;0.00010</li> <li>&lt;0.07</li> <li>&lt;0.00010</li> <li>&lt;0.00020</li> <li>&lt;0.00020</li> <li>&lt;0.00010</li> </ul>	<0.00060 0.0011 0.0014 0.0010 0.084 430 0.0010 0.00046 0.00035 0.0060 0.00020 0.0020 0.0033 0.0053 0		2.5 33 0.000
Dissolved Barium (Ba) Dissolved Beryllium (Be) Dissolved Boron (B) Dissolved Boron (B) Dissolved Calcium (Ca) Dissolved Chromium (Cr) Dissolved Copper (Cu) Dissolved Copper (Cu) Dissolved Copper (Cu) Dissolved Lithium (Li) Dissolved Lithium (Li) Dissolved Magnesium (Mg) Dissolved Minganese (Mn) Dissolved Manganese (Mn) Dissolved Molybedrum (Mo) Dissolved Molybedrum (Mo) Dissolved Molybedrum (Mo) Dissolved Phosphorus (P) Dissolved Selenium (Se) Dissolved Selenium (Se) Dissolved Solium (Na) Dissolved Sulphur (S) Dissolved Titanium (Ti)	me/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg	0.0014 0.21 0.21 0.0010 0.19 400 0.0010 0.0011 0.0040 0.0060 0.0060 0.0036 88 0.13 0.0096 0.0056 0.010 22 0.0018 0.50 0.0018 0.50 0.0010 0.00020 0.00020 0.00020 0.00020 0.00020 0.00020 0.00020 0.00020 0.00020 0.00020 0.00010 0.00078	0.0012 0.067 -(0.0010 0.058 52 -(0.0010 0.0059 -(0.0050 0.0039 -(0.0060 -(0.0020 -(0.0040 0.0096 0.0030 -(0.10 4.3 0.00070 1.1 -(0.0010 17 0.18 19 -(0.00020 -(0.0010	<ul> <li>&lt;0.00060</li> <li>&lt;0.0020</li> <li>&lt;0.013</li> <li>&lt;0.0010</li> <li>&lt;0.087</li> <li>&lt;120</li> <li>&lt;0.0010</li> <li>&lt;0.00085</li> <li>&lt;0.00041</li> <li>&lt;0.060</li> <li>&lt;0.00020</li> <li>&lt;0.021</li> <li>&lt;13</li> <li>&lt;0.07</li> <li>&lt;0.0055</li> <li>&lt;0.0057</li> <li>&lt;0.10</li> <li>&lt;0.005</li> <li>&lt;0.0066</li> <li>&lt;0.67</li> <li>&lt;0.00010</li> <li>&lt;0.00020</li> <li>&lt;0.0010</li> <li>&lt;0.0010<!--</td--><td>&lt;0.00060 0.0011 0.004 0.0010 0.084 430 &lt;0.0010 0.0004 0.00006 0.00020 &lt;0.0020 0.0053 0.00037 0.010 0.0021 0.0001 0.0021 0.0001 0.0021 0.0001</td><td>0.26</td><td>2.5 30 0.00 7 7 0.</td></li></ul>	<0.00060 0.0011 0.004 0.0010 0.084 430 <0.0010 0.0004 0.00006 0.00020 <0.0020 0.0053 0.00037 0.010 0.0021 0.0001 0.0021 0.0001 0.0021 0.0001	0.26	2.5 30 0.00 7 7 0.
Dissolved Barium (Ba) Dissolved Beryllium (Be) Dissolved Boron (B) Dissolved Calcium (Ca) Dissolved Calcium (Ca) Dissolved Chromium (Cr) Dissolved Copper (Cu) Dissolved Copper (Cu) Dissolved Copper (Cu) Dissolved Load (Pb) Dissolved Load (Pb) Dissolved Load (Pb) Dissolved Molybdenum (Mg) Dissolved Molybdenum (Mg) Dissolved Molybdenum (Mo) Dissolved Molybdenum (Mo) Dissolved Molybdenum (Mo) Dissolved Possphorus (P) Dissolved Possphorus (P) Dissolved Solium (Na) Dissolved Tin (Sn) Dissolved Vanadium (U) Dissolved Vanadium (U) Dissolved Vanadium (V)	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	0.0014 0.21 0.20 0.0010 0.19 400 0.0011 0.0011 0.0040 0.0060 0.0036 88 0.13 0.0096 0.0056 0.10 22 0.0018 0.50 0.0018 0.50 0.70 1.7 210 0.00020 0.0010 0.00020 0.00010 0.0000000000	0.0012 0.067 -0.0010 0.058 52 -0.0010 0.0050 0.0039 -0.060 -0.0030 -0.0020 -0.0040 0.0096 0.0030 -0.10 4.3 0.00070 1.1 -0.00010 1.7 0.18 19 -0.00020 -0.0010	<ul> <li>&lt;0.00060</li> <li>&lt;0.0020</li> <li>&lt;0.013</li> <li>&lt;0.0010</li> <li>&lt;0.087</li> <li>&lt;120</li> <li>&lt;0.0010</li> <li>&lt;0.00085</li> <li>&lt;0.0041</li> <li>&lt;0.060</li> <li>&lt;0.00020</li> <li>&lt;0.021</li> <li>&lt;0.007</li> <li>&lt;0.0095</li> <li>&lt;0.0057</li> <li>&lt;0.00</li> <li>&lt;0.00066</li> <li>&lt;0.00066</li> <li>&lt;0.07</li> <li>&lt;0.00010</li> <li>&lt;0.00020</li> <li>&lt;0.0010</li> <li>&lt;0.00020</li> <li>&lt;0.00020</li> <li>&lt;0.00010</li> </ul>	<ul> <li>&lt;0.00060</li> <li>&lt;0.0011</li> <li>&lt;0.074</li> <li>&lt;0.0010</li> <li>&lt;0.084</li> <li>&lt;0.0010</li> <li>&lt;0.0046</li> <li>&lt;0.0035</li> <li>&lt;0.060</li> <li>&lt;0.0020</li> <li>&lt;0.0020</li> <li>&lt;0.0020</li> <li>&lt;0.0033</li> <li>&lt;0.00053</li> <li>&lt;0.00053</li> <li>&lt;0.0007</li> <li>&lt;0.0001</li> <li>&lt;0.0002</li> <li>&lt;0.0002</li> <li>&lt;0.0003</li> <li>&lt;0.0004</li> <li>&lt;0.00053</li> <li>&lt;0.0007</li> <li>&lt;0.0007</li> <li>&lt;0.0001</li> <li>&lt;0.0001</li> <li>&lt;0.0001</li> <li>&lt;0.0001</li> <li>&lt;0.00010</li> <li>&lt;0.00010<td>0.26</td><td>2.5 30 0.00 7 7</td></li></ul>	0.26	2.5 30 0.00 7 7
Dissolved Barium (Ba) Dissolved Beryllium (Be) Dissolved Beryllium (Be) Dissolved Boron (B) Dissolved Calcium (Ca) Dissolved Cobati (Co) Dissolved Cobati (Co) Dissolved Cobati (Co) Dissolved Copper (Cu) Dissolved Lord (Pb) Dissolved Lithium (Li) Dissolved Lithium (Li) Dissolved Magnesium (Mg) Dissolved Magnesium (Mg) Dissolved Minglanese (Mn) Dissolved Solium (Si) Dissolved Solium (Si) Dissolved Solium (Si) Dissolved Solium (Si) Dissolved Silver (Ag) Dissolved Solium (Na) Dissolved Silver (Si) Dissolved Silver (Si) Dissolved Solium (Na) Dissolved Tinnium (Ti) Dissolved Tinnium (Ti) Dissolved Vanadium (V)	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	0.0014 0.21 0.21 0.0010 0.19 400 0.0010 0.0011 0.0040 0.0060 0.0060 0.0036 88 0.13 0.0096 0.0056 0.010 22 0.0018 0.50 0.0018 0.50 0.0010 0.00020 0.00020 0.00020 0.00020 0.00020 0.00020 0.00020 0.00020 0.00020 0.00020 0.00010 0.00078	0.0012 0.067 -(0.0010 0.058 52 -(0.0010 0.0059 -(0.0050 0.0039 -(0.0060 -(0.0020 -(0.0040 0.0096 0.0030 -(0.10 4.3 0.00070 1.1 -(0.0010 17 0.18 19 -(0.00020 -(0.0010	<ul> <li>&lt;0.00060</li> <li>&lt;0.0020</li> <li>&lt;0.013</li> <li>&lt;0.0010</li> <li>&lt;0.087</li> <li>&lt;120</li> <li>&lt;0.0010</li> <li>&lt;0.00085</li> <li>&lt;0.00041</li> <li>&lt;0.060</li> <li>&lt;0.00020</li> <li>&lt;0.021</li> <li>&lt;13</li> <li>&lt;0.07</li> <li>&lt;0.0055</li> <li>&lt;0.0057</li> <li>&lt;0.10</li> <li>&lt;0.005</li> <li>&lt;0.0066</li> <li>&lt;0.67</li> <li>&lt;0.00010</li> <li>&lt;0.00020</li> <li>&lt;0.0010</li> <li>&lt;0.0010<!--</td--><td>&lt;0.00060 0.0011 0.004 0.0010 0.084 430 &lt;0.0010 0.0044 0.0010 0.00046 0.00020 &lt;0.0020 &lt;0.0020 0.0053 0.0063 0.00037 0.010 0.0021 0.0001 0.0021 0.0001 0.0021 0.0001 0.0021 0.0001</td><td>0.26</td><td>2.3 33 0.00</td></li></ul>	<0.00060 0.0011 0.004 0.0010 0.084 430 <0.0010 0.0044 0.0010 0.00046 0.00020 <0.0020 <0.0020 0.0053 0.0063 0.00037 0.010 0.0021 0.0001 0.0021 0.0001 0.0021 0.0001 0.0021 0.0001	0.26	2.3 33 0.00

### Emergency Dredging Project, Hay River, NT Water Quality Monitoring

AT1 BTEX AND F1-F4 IN WATE	R (WATER)					Short-Term	Long-Term
Sampling Date	IN (WATER)	2024/07/16 12:23	2024/07/16 12:36	2024/07/16 12:41	2024/07/16 12:54	Exposure	Exposure
COC Number		1/1	1/1	1/1	1/1		
	UNITS	HR24-SV02-001	HR24-SV03-001	HR24-SV04-001	HR24-SV05-001		
Elements						 1	
Total Cadmium (Cd)	ug/L	0.23	0.076	0.068	0.20	7.7	0.3
Total Aluminum (AI)	mg/L	0.77	0.67	0.47	0.76		
Total Antimony (Sb)	mg/L	0.00067	<0.00060	0.00061	<0.00060		
Total Arsenic (As)	mg/L	0.0036	0.0026	0.0030	0.0027		0.00
Total Barium (Ba)	mg/L	0.24	0.081	0.13	0.089	i	
Total Beryllium (Be)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	i	
Total Boron (B)	mg/L	0.17	0.046	0.073	0.068	29	1.
Total Calcium (Ca)	mg/L	400	50	110	410		
Total Chromium (Cr)	mg/L	0.0019	0.0014	0.0013	0.0017	i	
Total Cobalt (Co)	mg/L	0.0034	0.0014	0.0020	0.0023	i	
Total Copper (Cu)	mg/L	0.0091	0.0066	0.0062	0.0073	i	2.5
Total Iron (Fe)	mg/L	3.2	2.2	0.92	1.6	i	0.
Total Lead (Pb)	mg/L	0.0038	0.0017	0.0013	0.0018	i	0.00
Total Lithium (Li)	mg/L	0.048	<0.020	<0.020	<0.020	i	
Total Magnesium (Mg)	mg/L	85	15	38	84		
Total Manganese (Mn)	mg/L	0.55	0.064	0.30	0.12	0.26	
Total Molybdenum (Mo)	mg/L	0.0083	0.0091	0.012	0.0062		0.07
Total Nickel (Ni)	mg/L	0.011	0.0060	0.0088	0.0075		0.
Total Phosphorus (P)	mg/L	0.23	0.12	<0.10	0.13		
Total Potassium (K)	mg/L	21	4.2	7.5	6.8		
Total Selenium (Se)	mg/L	0.0022	0.00082	0.00094	0.0026		0.00
Total Silicon (Si)	mg/L	1.6	1.9	0.96	0.70		
Total Silver (Ag)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010		0.0002
Total Sodium (Na)	mg/L	66	16	22	52		
Total Strontium (Sr)	mg/L	1.5	0.16	0.41	0.74		
Total Sulphur (S)	mg/L	180	16	65	310		
Total Thallium (TI)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020		0.000
Total Tin (Sn)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010		
Total Titanium (Ti)	mg/L	0.020	0.012	0.021	0.030		
Total Uranium (U)	mg/L	0.0080	0.0032	0.0076	0.0062	0.033	0.01
Total Vanadium (V)	mg/L	0.0031	0.0028	0.0028	0.0032		
Total Zinc (Zn)	mg/L	0.044	0.036	0.014	0.020	equation(1)	equation(1
RESULTS OF CHEMICAL ANALY	YSES OF WATER	?					
Bureau Veritas ID		CRK707	CRK708	CRK709	CRK710		
Sampling Date		2024/07/16 12:23	2024/07/16 12:36	2024/07/16 12:41	2024/07/16 12:54		
COC Number		1/1	1/1	1/1	1/1	İ	
	UNITS	HR24-SV02-001	HR24-SV03-001	HR24-SV04-001	HR24-SV05-001	İ	
Misc. Inorganics							
Total Dissolved Solids	mg/L	2400 (1)	320	630	2200 (1)		
Total Suspended Solids	mg/L	220 (1)	49	41	210		

(1) Exceedance for CCME WQL PAL

Water Quality Monitoring



Bureau Veritas Job Number: C446253 OUTCOME CONSULTANTS INC. Report Date: 2024/06/27 Client Project #: 2024 HREDP

The control of the				CCME Water Qu Protection Fres	
Exposure   Exposure					
Bureau vertas ID   CR963   Sampling Date   2024/07/18 10:30   Sampling Date   2024/0	_			Short-Term	Long-Term
Sureau Veritas ID		-		 Exposure	Exposure
Sampling Date   2024/07/18 10:30		B FILT (W			
COC Number					
Calculated Parameters					
Calculated Parameters	COC Number		1/1		
Anion Sum   meq/L   7.6   meq/L   7.8   meq/L   0.034   meg/L   0.034   meg/L   0.034   meg/L   0.15   meg/L   0.020   meg/L   0		UNITS	HR24-SU07-001		
Cation Sum   meq/L   7.8	Calculated Parameters				
Hardness (CaCO3)	Anion Sum	meq/L	7.6		
Nitrate (N)	Cation Sum	meq/L	7.8		
Nitrate (N)   mg/L   0.034   550     Nitrate (NO3)   mg/L   0.15       Nitrate (NO2)   mg/L   0.15       Dissolved Cadmium (Cd)   ug/L   <0.020       Misc. Inorganics	Hardness (CaCO3)	mg/L	340		
Nitrate (NO3)	Ion Balance (% Difference)	%			
Nitrite (NO2) mg/L  Elements  Dissolved Cadmium (Cd) ug/L  Misc. Inorganics  Conductivity us/cm 660  PH pH 8.36 6.5 tc  Anions  Alkalinity (PP as CaCO3) mg/L  Alkalinity (Total as CaCO3) mg/L  Bisarbonate (HCO3) mg/L  Carbonate (CO3) mg/L  Hydroxide (OH) mg/L  Chloride (Cl) mg/L  Sulphate (SO4) mg/L  Nutrients  Nitrite (N) mg/L  Dissolved Metals (Lab Filtered Elements)  Dissolved Autimony (Sb) mg/L  Dissolved Artimony (Sb) mg/L  Dissolved Barium (Ba) mg/L  Dissolved Beryllium (Be) mg/L  Dissolved Boron (B)  Micc. Inorganics  A.0.020  4.0.0019  4.0.0019  4.0.0010	Nitrate (N)	mg/L	0.034	550	13
Elements	Nitrate (NO3)	mg/L	0.15		
Dissolved Cadmium (Cd)   Ug/L   <0.020	Nitrite (NO2)	mg/L	0.15		
Misc. Inorganics         660           Conductivity         uS/cm         660           pH         pH         8.36         6.5 tc           Anions         Alkalinity (PP as CaCO3)         mg/L         4.0           Alkalinity (Total as CaCO3)         mg/L         280           Bicarbonate (HCO3)         mg/L         4.8           Hydroxide (OH)         mg/L         4.8           Hydroxide (OH)         mg/L         4.0           Sulphate (SO4)         mg/L         69           Nutrients         9         69           Nitrite (N)         mg/L         0.047           Nitrate plus Nitrite (N)         mg/L         0.080           Dissolved Metals (Lab Filtered Elements)         0.0072           Dissolved Arsenic (As)         mg/L         0.00060           Dissolved Barium (Ba)         mg/L         0.0019           Dissolved Beryllium (Be)         mg/L         0.0010           Dissolved Boron (B)         mg/L         0.0061         29	Elements				
Conductivity         us/cm         660           pH         pH         8.36         6.5 to           Anions	Dissolved Cadmium (Cd)	ug/L	<0.020		
pH         pH         8.36         6.5 to           Anions         Alkalinity (PP as CaCO3)         mg/L         4.0           Alkalinity (Total as CaCO3)         mg/L         280           Bicarbonate (HCO3)         mg/L         330           Carbonate (CO3)         mg/L         4.8           Hydroxide (OH)         mg/L         4.8           Hydroxide (CI)         mg/L         18         640           Sulphate (SO4)         mg/L         69         640           Nutrients         Nitrite (N)         mg/L         0.047         0.080           Dissolved Metals (Lab Filtered Elements)         mg/L         0.0000         0.0072           Dissolved Aluminum (Al)         mg/L         0.00060         0.0019           Dissolved Barium (Ba)         mg/L         0.0019         0.0019           Dissolved Beryllium (Be)         mg/L         0.0010         0.0010           Dissolved Boron (B)         mg/L         0.0061         29	Misc. Inorganics				
Anions  Alkalinity (PP as CaCO3)  Alkalinity (Total as CaCO3)  Bicarbonate (HCO3)  Carbonate (CO3)  Hydroxide (OH)  Chloride (CI)  Sulphate (SO4)  Nitrite (N)  Nitrite (N)  Dissolved Metals (Lab Filtered Elements)  Dissolved Aluminum (Al)  Dissolved Arsenic (As)  Dissolved Arsenic (As)  Dissolved Barium (Ba)  Dissolved Beryllium (Be)  Dissolved Boron (B)  Mag/L  0.061	Conductivity	uS/cm	660		
Alkalinity (PP as CaCO3) mg/L 4.0  Alkalinity (Total as CaCO3) mg/L 280  Bicarbonate (HCO3) mg/L 330  Carbonate (CO3) mg/L 4.8  Hydroxide (OH) mg/L <1.0  Chloride (Cl) mg/L 18 640  Sulphate (SO4) mg/L 69  Nutrients  Nitrite (N) mg/L 0.047  Nitrate plus Nitrite (N) mg/L 0.080  Dissolved Metals (Lab Filtered Elements)  Dissolved Antimony (Sb) mg/L 0.0019  Dissolved Arsenic (As) mg/L 0.14  Dissolved Beryllium (Be) mg/L 0.0010  Dissolved Boron (B) mg/L 0.0011  Ale 0.0011  Ale 0.0012  Dissolved Boron (B) mg/L 0.0011  Dissolved Boron (B) mg/L 0.0011  Dissolved Boron (B) mg/L 0.0011	рН	рН	8.36		6.5 to 9.0
Alkalinity (Total as CaCO3) mg/L 330	Anions				
Bicarbonate (HCO3)   mg/L   330     330	Alkalinity (PP as CaCO3)	mg/L	4.0		
Carbonate (CO3)	Alkalinity (Total as CaCO3)	mg/L	280		
Hydroxide (OH)   mg/L   <1.0	Bicarbonate (HCO3)	mg/L	330		
Chloride (Cl)	Carbonate (CO3)	mg/L	4.8		
Sulphate (SO4)       mg/L       69         Nutrients	Hydroxide (OH)	mg/L	<1.0		
Nutrients         mg/L         0.047           Nitrate plus Nitrite (N)         mg/L         0.080           Dissolved Metals (Lab Filtered Elements)         0.0072           Dissolved Aluminum (Al)         mg/L         0.0002           Dissolved Antimony (Sb)         mg/L         <0.00060	Chloride (Cl)	mg/L	18	640	120
Nutrients         mg/L         0.047           Nitrite (N)         mg/L         0.080           Dissolved Metals (Lab Filtered Elements)         0.0072           Dissolved Aluminum (AI)         mg/L         0.0072           Dissolved Antimony (Sb)         mg/L         <0.00060	Sulphate (SO4)	mg/L	69		
Nitrate plus Nitrite (N)         mg/L         0.080           Dissolved Metals (Lab Filtered Elements)         0.0072           Dissolved Aluminum (Al)         mg/L         <0.00060           Dissolved Arsenic (As)         mg/L         0.0019           Dissolved Barium (Ba)         mg/L         0.14           Dissolved Beryllium (Be)         mg/L         <0.0010           Dissolved Boron (B)         mg/L         0.061         29	Nutrients				
Dissolved Metals (Lab Filtered Elements)         mg/L         0.0072           Dissolved Aluminum (Al)         mg/L         0.00060           Dissolved Antimony (Sb)         mg/L         <0.00060	Nitrite (N)	mg/L	0.047		
Dissolved Aluminum (AI)         mg/L         0.0072           Dissolved Antimony (Sb)         mg/L         <0.00060	Nitrate plus Nitrite (N)	mg/L	0.080		
Dissolved Aluminum (AI)         mg/L         0.0072           Dissolved Antimony (Sb)         mg/L         <0.00060	Dissolved Metals (Lab Filtered Elements)				
Dissolved Antimony (Sb)         mg/L         <0.00060           Dissolved Arsenic (As)         mg/L         0.0019           Dissolved Barium (Ba)         mg/L         0.14           Dissolved Beryllium (Be)         mg/L         <0.0010		mg/L	0.0072		5
Dissolved Arsenic (As)         mg/L         0.0019           Dissolved Barium (Ba)         mg/L         0.14           Dissolved Beryllium (Be)         mg/L         <0.0010			<0.00060		
Dissolved Barium (Ba)         mg/L         0.14           Dissolved Beryllium (Be)         mg/L         <0.0010	·		0.0019		5
Dissolved Beryllium (Be)         mg/L         <0.0010         29           Dissolved Boron (B)         mg/L         0.061         29			0.14		
Dissolved Boron (B)         mg/L         0.061         29			<0.0010		
	·		0.061	29	1.5
Dissolved Calcium (Ca) mg/L  91	Dissolved Calcium (Ca)	mg/L	91		_
Dissolved Chromium (Cr) mg/L <0.0010			<0.0010		
Dissolved Cobalt (Co) mg/L 0.00057					
			0.0023		2.57

AT1 BTEX AND F1-F4 IN WATER	(WATER)		Short-Term Exposure	Long-Term Exposure
Dissolved Iron (Fe)	mg/L	<0.060		300
Dissolved Lead (Pb)	mg/L	<0.00020		0.004
Dissolved Lithium (Li)	mg/L	<0.020		
Dissolved Magnesium (Mg)	mg/L	27		
Dissolved Manganese (Mn)	mg/L	0.056	0.26	
Dissolved Molybdenum (Mo)	mg/L	0.0097		73
Dissolved Nickel (Ni)	mg/L	0.0036		0.1
Dissolved Phosphorus (P)	mg/L	<0.10		
Dissolved Potassium (K)	mg/L	6.2		
Dissolved Selenium (Se)	mg/L	0.00053		1
Dissolved Silicon (Si)	mg/L	3.0		
Dissolved Silver (Ag)	mg/L	<0.00010		0.25
Dissolved Sodium (Na)	mg/L	20		
Dissolved Strontium (Sr)	mg/L	0.29		
Dissolved Sulphur (S)	mg/L	21		
Dissolved Thallium (TI)	mg/L	<0.00020		0.8
Dissolved Tin (Sn)	mg/L	<0.0010		
Dissolved Titanium (Ti)	mg/L	<0.0010		
Dissolved Uranium (U)	mg/L	0.0047	33	15
Dissolved Vanadium (V)	mg/L	<0.0010		
Dissolved Zinc (Zn)	mg/L	<0.0030	equation(1)	equation(1)
REGULATED METALS (CCME/AT	1) - TOTAL			
Bureau Veritas ID		CRP963		
Sampling Date		2024/07/18 10:30		
COC Number		1/1		
	UNITS	HR24-SU07-001		
Elements				
Total Cadmium (Cd)	ug/L	0.12	7.7	0.37
Total Aluminum (Al)	mg/L	0.79		5
Total Antimony (Sb)	mg/L	<0.00060		
Total Arsenic (As)	mg/L	0.0051		0.005
Total Barium (Ba)	mg/L	0.16		
Total Beryllium (Be)	mg/L	<0.0010		
Total Boron (B)	mg/L	0.065	29	1.5
Total Calcium (Ca)	mg/L	77		
Total Chromium (Cr)	mg/L	0.0018		
Total Cobalt (Co)	mg/L	0.0020		
Total Copper (Cu)	mg/L	0.0058		2.57
Total Iron (Fe)	mg/L	3.2		0.3
Total Lead (Pb)	mg/L	0.0020		0.004
Total Lithium (Li)	mg/L	<0.020		2.30 1
Total Magnesium (Mg)	mg/L	22		
Total Manganese (Mn)	mg/L	0.38	0.26	
Total Molybdenum (Mo)	mg/L	0.011	0.20	0.073
Total Nickel (Ni)	mg/L	0.0073	+	0.073
. Star Michel (M)	1116/ L			0.1
Total Phosphorus (P)	mø/l	0.21		
Total Phosphorus (P)  Total Potassium (K)	mg/L mg/L	0.21 5.4		

Water Quality Monitoring

			Short-Term	Long-Term
AT1 BTEX AND F1-F4 IN WAT	ER (WATER)		Exposure	Exposure
Total Silicon (Si)	mg/L	4.0		
Total Silver (Ag)	mg/L	<0.00010		0.00025
Total Sodium (Na)	mg/L	17		
Total Strontium (Sr)	mg/L	0.26		
Total Sulphur (S)	mg/L	19		
Total Thallium (TI)	mg/L	<0.00020		0.0008
Total Tin (Sn)	mg/L	0.0061		
Total Titanium (Ti)	mg/L	0.015		
Total Uranium (U)	mg/L	0.0055	0.033	0.015
Total Vanadium (V)	mg/L	0.0041		
Total Zinc (Zn)	mg/L	0.053	equation(1)	equation(1)
RESULTS OF CHEMICAL ANA	LYSES OF WATER	₹		
Bureau Veritas ID		CRP963		
Sampling Date		2024/07/18 10:30		
COC Number		1/1		
	UNITS	HR24-SU07-001		
Misc. Inorganics				
Total Dissolved Solids	mg/L	430		
Total Suspended Solids	mg/L	69		

# (1) Exceedance for CCME WQL PAL

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) Detection limit raised based on sample volume used for analysis.

Results relate only to the items tested.

Water Quality Monitoring



Bureau Veritas Job Number: C458310 Report Date: 2024/08/02 OUTCOME CONSULTANTS INC. Client Project #: 2024 HREDP

				CCME Water Qu Protection Fresh Life	water Aquatic
				Short-Term Exposure	Long-Term Exposure
Bureau Veritas ID		CSL884	CSL885	Exposure	LAPOSUIC
Sampling Date		2024/07/30 13:30	2024/07/30 13:35		
COC Number		10F1	10F1		
	UNITS	HR24-SP <del>02-</del> 05-(07-30)-SU01	HR24-SP03-(07-30)-SU02		
Ext. Pet. Hydrocarbon					
F2 (C10-C16 Hydrocarbons)	mg/L	<0.10	<0.10		
F3 (C16-C34 Hydrocarbons)	mg/L	0.11	<0.10		
F4 (C34-C50 Hydrocarbons)	mg/L	<0.20	<0.20		
Volatiles					
Benzene	ug/L	<0.40	<0.40		370
Toluene	ug/L	<0.40	<0.40		2
Ethylbenzene	ug/L	<0.40	<0.40		90
m & p-Xylene	ug/L	<0.80	<0.80		
o-Xylene	ug/L	<0.40	<0.40		
Xylenes (Total)	ug/L	<0.89	<0.89		
F1 (C6-C10) - BTEX	ug/L	<100	<100		
F1 (C6-C10)	ug/L	<100	<100		
Surrogate Recovery (%)					
1,4-Difluorobenzene (sur.)	%	109	108		
4-Bromofluorobenzene (sur.)	%	86	90		
D4-1,2-Dichloroethane (sur.)	%	98	101		
O-TERPHENYL (sur.)	%	96	91		
, , , , , , , , , , , , , , , , , , ,	1				
Bureau Veritas ID		CSL884	CSL885		
Sampling Date		2024/07/30 13:30	2024/07/30 13:35		
COC Number		10F1	10F1		
	+	HR24-SP <del>02-</del> 05-(07-30)-SU01	HR24-SP03-(07-30)-SU02		
	UNITS	111(24-31 02-03-(07-30)-3001			
Calculated Parameters	UNITS	TIN24-37 02-03-(07-30)-3001			
Calculated Parameters  Anion Sum			13		
Anion Sum	meq/L				
Anion Sum Cation Sum	meq/L meq/L	8.2	13		
Anion Sum Cation Sum Hardness (CaCO3)	meq/L meq/L mg/L	8.2 8.5 360	13 13 590		
Anion Sum Cation Sum Hardness (CaCO3) Ion Balance (% Difference)	meq/L meq/L mg/L	8.2 8.5 360 1.9	13 13 590 3.1	550	13
Anion Sum Cation Sum Hardness (CaCO3) Ion Balance (% Difference) Nitrate (N)	meq/L meq/L mg/L % mg/L	8.2 8.5 360 1.9 0.45	13 13 590 3.1 0.80	550	13
Anion Sum Cation Sum Hardness (CaCO3) Ion Balance (% Difference) Nitrate (N) Nitrate (NO3)	meq/L meq/L mg/L % mg/L mg/L	8.2 8.5 360 1.9 0.45 2.0	13 13 590 3.1 0.80 3.5	550	13
Anion Sum Cation Sum Hardness (CaCO3) Ion Balance (% Difference) Nitrate (N) Nitrate (NO3) Nitrite (NO2)	meq/L meq/L mg/L % mg/L	8.2 8.5 360 1.9 0.45	13 13 590 3.1 0.80	550	13
Anion Sum Cation Sum Hardness (CaCO3) Ion Balance (% Difference) Nitrate (N) Nitrate (NO3) Nitrite (NO2) Elements	meq/L meg/L % mg/L mg/L mg/L mg/L	8.2 8.5 360 1.9 0.45 2.0	13 13 590 3.1 0.80 3.5 0.074	550	13
Anion Sum Cation Sum Hardness (CaCO3) Ion Balance (% Difference) Nitrate (N) Nitrate (NO3) Nitrite (NO2) Elements Dissolved Cadmium (Cd)	meq/L meq/L mg/L % mg/L mg/L	8.2 8.5 360 1.9 0.45 2.0	13 13 590 3.1 0.80 3.5	550	13
Anion Sum Cation Sum Hardness (CaCO3) Ion Balance (% Difference) Nitrate (N) Nitrate (NO3) Nitrite (NO2) Elements Dissolved Cadmium (Cd) Misc. Inorganics	meq/L meq/L mg/L mg/L mg/L mg/L ug/L	8.2 8.5 360 1.9 0.45 2.0 0.79	13 13 590 3.1 0.80 3.5 0.074	550	13
Anion Sum Cation Sum Hardness (CaCO3) Ion Balance (% Difference) Nitrate (N) Nitrate (NO3) Nitrite (NO2) Elements Dissolved Cadmium (Cd) Misc. Inorganics Conductivity	meq/L meq/L mg/L mg/L mg/L mg/L ug/L us/cm	8.2 8.5 360 1.9 0.45 2.0 0.79 <0.020	13 13 590 3.1 0.80 3.5 0.074	550	
Anion Sum Cation Sum Hardness (CaCO3) Ion Balance (% Difference) Nitrate (N) Nitrate (NO3) Nitrite (NO2) Elements Dissolved Cadmium (Cd) Misc. Inorganics Conductivity pH	meq/L meq/L mg/L mg/L mg/L mg/L ug/L	8.2 8.5 360 1.9 0.45 2.0 0.79	13 13 590 3.1 0.80 3.5 0.074	550	13 6.5 to 9.0
Anion Sum Cation Sum Hardness (CaCO3) Ion Balance (% Difference) Nitrate (N) Nitrate (NO3) Nitrite (NO2) Elements Dissolved Cadmium (Cd) Misc. Inorganics Conductivity pH Anions	meq/L meg/L % mg/L mg/L mg/L ug/L ug/L	8.2 8.5 360 1.9 0.45 2.0 0.79 <0.020 770 8.59	13 13 590 3.1 0.80 3.5 0.074 0.023	550	
Anion Sum Cation Sum Hardness (CaCO3) Ion Balance (% Difference) Nitrate (N) Nitrate (NO3) Nitrite (NO2) Elements Dissolved Cadmium (Cd) Misc. Inorganics Conductivity pH Anions Alkalinity (PP as CaCO3)	meq/L meg/L % mg/L mg/L mg/L ug/L us/cm pH	8.2 8.5 360 1.9 0.45 2.0 0.79 <0.020 770 8.59 6.0	13 13 590 3.1 0.80 3.5 0.074 0.023 1100 8.40	550	
Anion Sum Cation Sum Hardness (CaCO3) Ion Balance (% Difference) Nitrate (N) Nitrate (NO3) Nitrite (NO2) Elements Dissolved Cadmium (Cd) Misc. Inorganics Conductivity pH Anions Alkalinity (PP as CaCO3) Alkalinity (Total as CaCO3)	meq/L meg/L mg/L mg/L mg/L mg/L ug/L us/cm pH mg/L mg/L	8.2 8.5 360 1.9 0.45 2.0 0.79 <0.020 770 8.59 6.0	13 13 590 3.1 0.80 3.5 0.074 0.023 1100 8.40 4.0 220	550	
Anion Sum Cation Sum Hardness (CaCO3) Ion Balance (% Difference) Nitrate (N) Nitrate (NO3) Nitrite (NO2) Elements Dissolved Cadmium (Cd) Misc. Inorganics Conductivity pH Anions Alkalinity (PP as CaCO3) Alkalinity (Total as CaCO3) Bicarbonate (HCO3)	meq/L meg/L mg/L mg/L mg/L mg/L mg/L ug/L us/cm pH mg/L mg/L mg/L	8.2 8.5 360 1.9 0.45 2.0 0.79 <0.020 770 8.59 6.0 190 220	13 13 13 590 3.1 0.80 3.5 0.074  0.023  1100 8.40  4.0 220 260	550	
Anion Sum Cation Sum Hardness (CaCO3) Ion Balance (% Difference) Nitrate (N) Nitrate (NO3) Nitrite (NO2) Elements Dissolved Cadmium (Cd) Misc. Inorganics Conductivity pH Anions Alkalinity (PP as CaCO3) Alkalinity (Total as CaCO3) Bicarbonate (HCO3) Carbonate (CO3)	meq/L meg/L mg/L mg/L mg/L mg/L ug/L us/cm pH mg/L mg/L mg/L mg/L	8.2 8.5 360 1.9 0.45 2.0 0.79 <0.020 770 8.59 6.0 190 220 7.3	13 13 13 590 3.1 0.80 3.5 0.074  0.023  1100 8.40  4.0 220 260 4.8	550	
Anion Sum Cation Sum Hardness (CaCO3) Ion Balance (% Difference) Nitrate (N) Nitrate (NO3) Nitrite (NO2) Elements Dissolved Cadmium (Cd) Misc. Inorganics Conductivity PH Anions Alkalinity (PP as CaCO3) Alkalinity (Total as CaCO3) Bicarbonate (HCO3) Carbonate (CO3) Hydroxide (OH)	meq/L mg/L mg/L mg/L mg/L ug/L us/cm pH mg/L mg/L mg/L mg/L mg/L mg/L mg/L	8.2 8.5 360 1.9 0.45 2.0 0.79 <0.020 770 8.59 6.0 190 220 7.3 <1.0	13 13 13 590 3.1 0.80 3.5 0.074  0.023  1100 8.40  4.0 220 260 4.8 <1.0		6.5 to 9.0
Anion Sum Cation Sum Hardness (CaCO3) Ion Balance (% Difference) Nitrate (N) Nitrate (NO3) Nitrite (NO2) Elements Dissolved Cadmium (Cd) Misc. Inorganics Conductivity pH Anions Alkalinity (PP as CaCO3) Alkalinity (Total as CaCO3) Bicarbonate (HCO3) Carbonate (CO3) Hydroxide (OH) Chloride (CI)	meq/L mg/L mg/L mg/L mg/L mg/L ug/L us/cm pH mg/L mg/L mg/L mg/L mg/L mg/L mg/L	8.2 8.5 360 1.9 0.45 2.0 0.79 <0.020 770 8.59 6.0 190 220 7.3 <1.0 26	13 13 13 590 3.1 0.80 3.5 0.074  0.023  1100 8.40  4.0 220 260 4.8 <1.0 32	550	6.5 to 9.0
Anion Sum Cation Sum Hardness (CaCO3) Ion Balance (% Difference) Nitrate (N) Nitrate (NO3) Nitrite (NO2) Elements Dissolved Cadmium (Cd) Misc. Inorganics Conductivity pH Anions Alkalinity (PP as CaCO3) Alkalinity (Total as CaCO3) Bicarbonate (HCO3) Carbonate (CO3) Hydroxide (OH) Chloride (Cl) Sulphate (SO4)	meq/L mg/L mg/L mg/L mg/L ug/L us/cm pH mg/L mg/L mg/L mg/L mg/L mg/L mg/L	8.2 8.5 360 1.9 0.45 2.0 0.79 <0.020 770 8.59 6.0 190 220 7.3 <1.0	13 13 13 590 3.1 0.80 3.5 0.074  0.023  1100 8.40  4.0 220 260 4.8 <1.0		6.5 to 9.0
Anion Sum Cation Sum Hardness (CaCO3) Ion Balance (% Difference) Nitrate (N) Nitrate (NO3) Nitrite (NO2) Elements Dissolved Cadmium (Cd) Misc. Inorganics Conductivity PH Anions Alkalinity (PP as CaCO3) Alkalinity (Total as CaCO3) Bicarbonate (HCO3) Carbonate (CO3) Hydroxide (OH) Chloride (Cl) Sulphate (SO4) Nutrients	meq/L meg/L mg/L mg/L mg/L ug/L us/cm pH mg/L mg/L mg/L mg/L mg/L mg/L mg/L	8.2 8.5 360 1.9 0.45 2.0 0.79 <0.020 770 8.59 6.0 190 220 7.3 <1.0 26	13 13 13 590 3.1 0.80 3.5 0.074  0.023  1100 8.40  4.0 220 260 4.8 <1.0 32 340		6.5 to 9.0
Anion Sum Cation Sum Hardness (CaCO3) Ion Balance (% Difference) Nitrate (N) Nitrate (NO3) Nitrite (NO2) Elements Dissolved Cadmium (Cd) Misc. Inorganics Conductivity pH Anions Alkalinity (PP as CaCO3) Alkalinity (Total as CaCO3) Bicarbonate (HCO3) Carbonate (CO3) Hydroxide (OH) Chloride (Cl) Sulphate (SO4) Nutrients Nitrite (N)	meq/L meq/L mg/L % mg/L mg/L ug/L us/cm pH mg/L mg/L mg/L mg/L mg/L mg/L mg/L	8.2 8.5 360 1.9 0.45 2.0 0.79 <0.020  770 8.59 6.0 190 220 7.3 <1.0 26 170 0.24	13 13 13 590 3.1 0.80 3.5 0.074  0.023  1100 8.40  4.0 220 260 4.8 <1.0 32 340  0.023		
Anion Sum Cation Sum Hardness (CaCO3) Ion Balance (% Difference) Nitrate (N) Nitrate (NO3) Nitrite (NO2) Elements Dissolved Cadmium (Cd) Misc. Inorganics Conductivity pH Anions Alkalinity (PP as CaCO3) Alkalinity (Total as CaCO3) Bicarbonate (HCO3) Carbonate (CO3) Hydroxide (OH) Chloride (CI) Sulphate (SO4) Nutrients Nitrite (N) Nitrate plus Nitrite (N)	meq/L meg/L mg/L mg/L mg/L ug/L us/cm pH mg/L mg/L mg/L mg/L mg/L mg/L mg/L	8.2 8.5 360 1.9 0.45 2.0 0.79 <0.020 770 8.59 6.0 190 220 7.3 <1.0 26	13 13 13 590 3.1 0.80 3.5 0.074  0.023  1100 8.40  4.0 220 260 4.8 <1.0 32 340		6.5 to 9.0
Anion Sum Cation Sum Hardness (CaCO3) Ion Balance (% Difference) Nitrate (N) Nitrate (NO3) Nitrite (NO2) Elements Dissolved Cadmium (Cd) Misc. Inorganics Conductivity pH Anions Alkalinity (PP as CaCO3) Alkalinity (Total as CaCO3) Bicarbonate (HCO3) Carbonate (CO3) Hydroxide (OH) Chloride (CI) Sulphate (SO4) Nutrients Nitrite (N) Nitrate plus Nitrite (N) Dissolved Metals (Lab Filtered Elements)	meq/L meg/L mg/L mg/L mg/L ug/L us/cm pH mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	8.2 8.5 360 1.9 0.45 2.0 0.79 <0.020  770 8.59 6.0 190 220 7.3 <1.0 26 170 0.24 0.69	13 13 13 590 3.1 0.80 3.5 0.074  0.023  1100 8.40  4.0 220 260 4.8 <1.0 32 340  0.023  0.023  0.82		6.5 to 9.0
Anion Sum Cation Sum Hardness (CaCO3) Ion Balance (% Difference) Nitrate (N) Nitrate (NO3) Nitrite (NO2) Elements Dissolved Cadmium (Cd) Misc. Inorganics Conductivity pH Anions Alkalinity (PP as CaCO3) Alkalinity (Total as CaCO3) Bicarbonate (HCO3) Carbonate (CO3) Hydroxide (OH) Chloride (CI) Sulphate (SO4) Nutrients Nitrite (N) Nitrate plus Nitrite (N)	meq/L meq/L mg/L % mg/L mg/L ug/L us/cm pH mg/L mg/L mg/L mg/L mg/L mg/L mg/L	8.2 8.5 360 1.9 0.45 2.0 0.79 <0.020  770 8.59 6.0 190 220 7.3 <1.0 26 170 0.24	13 13 13 590 3.1 0.80 3.5 0.074  0.023  1100 8.40  4.0 220 260 4.8 <1.0 32 340  0.023		6.5 to 9.0

				Short-Term Exposure	Long-Term Exposure
Dissolved Arsenic (As)	mg/L	0.0014	0.0014	LAPOGUIC	5
Dissolved Barium (Ba)	mg/L	0.11	0.16		
Dissolved Beryllium (Be)	mg/L	<0.0010	<0.0010		
Dissolved Boron (B)	mg/L	0.079	0.15	29	1.5
Dissolved Calcium (Ca)	mg/L	89	150		
Dissolved Chromium (Cr)	mg/L	<0.0010	<0.0010		
Dissolved Cobalt (Co)	mg/L	0.0012	0.00061		
Dissolved Copper (Cu)	mg/L	0.0049	0.0059		2.57
Dissolved Iron (Fe)	mg/L	<0.060	<0.060		300
Dissolved Lead (Pb)	mg/L	<0.00020	<0.00020		0.004
Dissolved Lithium (Li)	mg/L	0.028	0.036		
Dissolved Magnesium (Mg)	mg/L	33	49		
Dissolved Manganese (Mn)	mg/L	0.0068	0.059	0.26	
Dissolved Molybdenum (Mo)	mg/L	0.0099	0.0099		73
Dissolved Nickel (Ni)	mg/L	0.0046	0.0056		0.1
Dissolved Phosphorus (P)	mg/L	<0.10	<0.10		0.1
Dissolved Potassium (K)	mg/L	6.7	10		
Dissolved Selenium (Se)	mg/L	0.00061	0.00049		1
Dissolved Seleman (Se)		<0.50	<0.50		1
	mg/L	<0.00010	<0.00010		2
Dissolved Silver (Ag)	mg/L	26	32		0.25
Dissolved Sodium (Na)	mg/L		0.60		
Dissolved Strontium (Sr)	mg/L	0.32 59	110		
Dissolved Sulphur (S)	mg/L				
Dissolved Thallium (TI)	mg/L	<0.00020	<0.00020		0.8
Dissolved Tin (Sn)	mg/L	<0.0010	<0.0010		
Dissolved Titanium (Ti)	mg/L	<0.0010	<0.0010		
Dissolved Uranium (U)	mg/L	0.0052	0.0075	33	15
Dissolved Vanadium (V)	mg/L	<0.0010	<0.0010		
Dissolved Zinc (Zn)	mg/L	<0.0030	<0.0030	equation(1)	equation(1)
Bureau Veritas ID		CSL884	CSL885		
Sampling Date		2024/07/30 13:30	2024/07/30 13:35		
COC Number		10F1	10F1		
	UNITS	HR24-SP <del>02-</del> 05-(07-30)-SU01	HR24-SP03-(07-30)-SU02		
Total Metals					
Total Cadmium (Cd)	ug/L	0.17	0.035	7.7	0.37
Total Aluminum (Al)	mg/L	1.7	0.053		5
Total Antimony (Sb)	mg/L	0.00077	0.00081		
Total Arsenic (As)	mg/L	0.0056	0.0016		0.005
Total Barium (Ba)	mg/L	0.16			
Total Beryllium (Be)		0.10	0.15		
Total Poron (P)	mg/L	<0.0010	0.15 <0.0010		
I I OLGI DOLOH (B)				29	1.5
Total Boron (B)  Total Calcium (Ca)	mg/L	<0.0010 0.077	<0.0010 0.13	29	1.5
Total Calcium (Ca)	mg/L mg/L	<0.0010 0.077 89	<0.0010 0.13 140	29	1.5
Total Calcium (Ca) Total Chromium (Cr)	mg/L mg/L mg/L	<0.0010 0.077 89 0.0032	<0.0010 0.13 140 <0.0010	29	1.5
Total Calcium (Ca) Total Chromium (Cr) Total Cobalt (Co)	mg/L mg/L mg/L mg/L	<0.0010 0.077 89 0.0032 0.0041	<0.0010 0.13 140 <0.0010 0.00071	29	
Total Calcium (Ca) Total Chromium (Cr) Total Cobalt (Co) Total Copper (Cu)	mg/L mg/L mg/L mg/L mg/L	<0.0010 0.077 89 0.0032 0.0041 0.011	<0.0010 0.13 140 <0.0010 0.00071 0.0067	29	2.57
Total Calcium (Ca) Total Chromium (Cr) Total Cobalt (Co) Total Copper (Cu) Total Iron (Fe)	mg/L mg/L mg/L mg/L mg/L mg/L mg/L	<0.0010 0.077 89 0.0032 0.0041 0.011 6.6	<0.0010 0.13 140 <0.0010 0.00071 0.0067 0.17	29	2.57 0.3
Total Calcium (Ca) Total Chromium (Cr) Total Cobalt (Co) Total Copper (Cu) Total Iron (Fe) Total Lead (Pb)	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	<0.0010 0.077 89 0.0032 0.0041 0.011 6.6 0.0034	<0.0010 0.13 140 <0.0010 0.00071 0.0067 0.17 0.00024	29	2.57 0.3
Total Calcium (Ca)  Total Chromium (Cr)  Total Cobalt (Co)  Total Copper (Cu)  Total Iron (Fe)  Total Lead (Pb)  Total Lithium (Li)	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	<0.0010 0.077 89 0.0032 0.0041 0.011 6.6 0.0034 0.029	<.0.0010 0.13 140 <.0.0010 0.00071 0.0067 0.17 0.00024 0.031	29	2.57
Total Calcium (Ca)  Total Chromium (Cr)  Total Cobalt (Co)  Total Copper (Cu)  Total Iron (Fe)  Total Lead (Pb)  Total Lithium (Li)  Total Magnesium (Mg)	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	<0.0010 0.077 89 0.0032 0.0041 0.011 6.6 0.0034 0.029 33	<.0.0010 0.13 140 <0.0010 0.00071 0.0067 0.17 0.00024 0.031 47		2.57 0.3
Total Calcium (Ca)  Total Chromium (Cr)  Total Cobalt (Co)  Total Copper (Cu)  Total Iron (Fe)  Total Lead (Pb)  Total Lithium (Li)  Total Magnesium (Mg)  Total Manganese (Mn)	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	<0.0010 0.077 89 0.0032 0.0041 0.011 6.6 0.0034 0.029 33 0.28	<.0.0010 0.13 140 <0.0010 0.00071 0.0067 0.17 0.00024 0.031 47 0.063	29	2.57 0.3 0.004
Total Calcium (Ca)  Total Chromium (Cr)  Total Cobalt (Co)  Total Copper (Cu)  Total Iron (Fe)  Total Lead (Pb)  Total Lithium (Li)  Total Magnesium (Mg)  Total Manganese (Mn)  Total Molybdenum (Mo)	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	<0.0010 0.077 89 0.0032 0.0041 0.011 6.6 0.0034 0.029 33 0.28 0.011	<.0.0010 0.13 140 <0.0010 0.00071 0.0067 0.17 0.00024 0.031 47 0.063 0.011		2.57 0.3 0.004
Total Calcium (Ca)  Total Chromium (Cr)  Total Cobalt (Co)  Total Copper (Cu)  Total Iron (Fe)  Total Lead (Pb)  Total Lithium (Li)  Total Magnesium (Mg)  Total Manganese (Mn)  Total Molybdenum (Mo)  Total Nickel (Ni)	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	<0.0010 0.077 89 0.0032 0.0041 0.011 6.6 0.0034 0.029 33 0.28 0.011 0.012	<.0.0010 0.13 140 <0.0010 0.00071 0.0067 0.17 0.00024 0.031 47 0.063 0.011 0.0068		2.57 0.3 0.004
Total Calcium (Ca)  Total Chromium (Cr)  Total Cobalt (Co)  Total Copper (Cu)  Total Iron (Fe)  Total Lead (Pb)  Total Lithium (Li)  Total Magnesium (Mg)  Total Manganese (Mn)  Total Molybdenum (Mo)  Total Nickel (Ni)  Total Phosphorus (P)	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	<0.0010 0.077 89 0.0032 0.0041 0.011 6.6 0.0034 0.029 33 0.28 0.011 0.012 0.34	<.0.0010 0.13 140 <0.0010 0.00071 0.0067 0.17 0.00024 0.031 47 0.063 0.011 0.0068 <0.10		2.57 0.3 0.004
Total Calcium (Ca)  Total Chromium (Cr)  Total Cobalt (Co)  Total Copper (Cu)  Total Iron (Fe)  Total Lead (Pb)  Total Lithium (Li)  Total Magnesium (Mg)  Total Molybdenum (Mo)  Total Nickel (Ni)  Total Phosphorus (P)  Total Potassium (K)	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	<0.0010 0.077 89 0.0032 0.0041 0.011 6.6 0.0034 0.029 33 0.28 0.011 0.012 0.34 6.8	<.0.0010 0.13 140 <0.0010 0.00071 0.0067 0.17 0.00024 0.031 47 0.063 0.011 0.0068 <0.10 9.3		2.57 0.3 0.004 0.073
Total Calcium (Ca)  Total Chromium (Cr)  Total Cobalt (Co)  Total Copper (Cu)  Total Iron (Fe)  Total Lead (Pb)  Total Lithium (Li)  Total Magnesium (Mg)  Total Molybdenum (Mo)  Total Nickel (Ni)  Total Phosphorus (P)  Total Potassium (K)  Total Selenium (Se)	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	<0.0010 0.077 89 0.0032 0.0041 0.011 6.6 0.0034 0.029 33 0.28 0.011 0.012 0.34 6.8 0.0010	<.0.0010 0.13 140 <0.0010 0.00071 0.0067 0.17 0.00024 0.031 47 0.063 0.011 0.0068 <0.10 9.3 0.00062		2.57 0.3 0.004 0.073
Total Calcium (Ca)  Total Chromium (Cr)  Total Cobalt (Co)  Total Copper (Cu)  Total Iron (Fe)  Total Lead (Pb)  Total Lithium (Li)  Total Magnesium (Mg)  Total Manganese (Mn)  Total Molybdenum (Mo)  Total Nickel (Ni)  Total Phosphorus (P)  Total Selenium (Se)  Total Silicon (Si)	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	<0.0010 0.077 89 0.0032 0.0041 0.011 6.6 0.0034 0.029 33 0.28 0.011 0.012 0.34 6.8 0.0010 3.0	<.0.0010 0.13 140 <0.0010 0.00071 0.0067 0.17 0.00024 0.031 47 0.063 0.011 0.0068 <0.10 9.3 0.00062 <0.50		2.57 0.3 0.004 0.073
Total Calcium (Ca) Total Chromium (Cr) Total Cobalt (Co) Total Copper (Cu) Total Iron (Fe) Total Lead (Pb) Total Lithium (Li) Total Magnesium (Mg) Total Manganese (Mn) Total Molybdenum (Mo) Total Nickel (Ni) Total Phosphorus (P) Total Potassium (K) Total Selenium (Se)	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	<0.0010 0.077 89 0.0032 0.0041 0.011 6.6 0.0034 0.029 33 0.28 0.011 0.012 0.34 6.8 0.0010 3.0 <0.00010	<.0.0010 0.13 140 <0.0010 0.00071 0.00067 0.17 0.00024 0.031 47 0.063 0.011 0.0068 <0.10 9.3 0.00062 <0.50 <0.00010		0.3 0.004 0.073 0.1
Total Calcium (Ca)  Total Chromium (Cr)  Total Cobalt (Co)  Total Copper (Cu)  Total Iron (Fe)  Total Lead (Pb)  Total Lithium (Li)  Total Magnesium (Mg)  Total Manganese (Mn)  Total Molybdenum (Mo)  Total Nickel (Ni)  Total Phosphorus (P)  Total Selenium (Se)  Total Silicon (Si)	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	<0.0010 0.077 89 0.0032 0.0041 0.011 6.6 0.0034 0.029 33 0.28 0.011 0.012 0.34 6.8 0.0010 3.0	<.0.0010 0.13 140 <0.0010 0.00071 0.0067 0.17 0.00024 0.031 47 0.063 0.011 0.0068 <0.10 9.3 0.00062 <0.50		0.3 0.004 0.073 0.1
Total Calcium (Ca) Total Chromium (Cr) Total Cobalt (Co) Total Copper (Cu) Total Iron (Fe) Total Lead (Pb) Total Lithium (Li) Total Magnesium (Mg) Total Manganese (Mn) Total Molybdenum (Mo) Total Nickel (Ni) Total Phosphorus (P) Total Selenium (Se) Total Silicon (Si) Total Silver (Ag)	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	<0.0010 0.077 89 0.0032 0.0041 0.011 6.6 0.0034 0.029 33 0.28 0.011 0.012 0.34 6.8 0.0010 3.0 <0.00010	<.0.0010 0.13 140 <0.0010 0.00071 0.00067 0.17 0.00024 0.031 47 0.063 0.011 0.0068 <0.10 9.3 0.00062 <0.50 <0.00010		0.3 0.004 0.073 0.1
Total Calcium (Ca) Total Chromium (Cr) Total Cobalt (Co) Total Copper (Cu) Total Iron (Fe) Total Lead (Pb) Total Lithium (Li) Total Magnesium (Mg) Total Manganese (Mn) Total Molybdenum (Mo) Total Nickel (Ni) Total Phosphorus (P) Total Potassium (K) Total Selenium (Se) Total Silicon (Si) Total Silver (Ag) Total Sodium (Na)	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	<0.0010 0.077 89 0.0032 0.0041 0.011 6.6 0.0034 0.029 33 0.28 0.011 0.012 0.34 6.8 0.0010 3.0 <0.00010 25	<.0.0010 0.13 140 <0.0010 0.00071 0.00067 0.17 0.00024 0.031 47 0.063 0.011 0.0068 <0.10 9.3 0.00062 <0.50 <0.00010 29		0.3 0.004 0.073 0.1
Total Calcium (Ca)  Total Chromium (Cr)  Total Cobalt (Co)  Total Copper (Cu)  Total Iron (Fe)  Total Lead (Pb)  Total Lithium (Li)  Total Magnesium (Mg)  Total Manganese (Mn)  Total Molybdenum (Mo)  Total Phosphorus (P)  Total Potassium (K)  Total Selenium (Se)  Total Silicon (Si)  Total Silver (Ag)  Total Sodium (Na)  Total Strontium (Sr)	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	<0.0010 0.077 89 0.0032 0.0041 0.011 6.6 0.0034 0.029 33 0.28 0.011 0.012 0.34 6.8 0.0010 3.0 <0.00010 25 0.33	<.0.0010 0.13 140 <0.0010 0.00071 0.00067 0.17 0.00024 0.031 47 0.063 0.011 0.0068 <0.10 9.3 0.00062 <0.50 <0.00010 29 0.57		2.57 0.3

Water Quality Monitoring

				Short-Term Exposure	Long-Term Exposure
Total Titanium (Ti)	mg/L	0.033	0.0027	- Exposure	z.posare
Total Uranium (U)	mg/L	0.0061	0.0086	0.033	0.015
Total Vanadium (V)	mg/L	0.0071	<0.0010		
Total Zinc (Zn)	mg/L	0.045	<0.0030	equation(1)	equation(1)
Bureau Veritas ID		CSL884	CSL885		
Sampling Date		2024/07/30 13:30	2024/07/30 13:35		
COC Number		10F1	10F1		
	UNITS	HR24-SP <del>02</del> -05-(07-30)-SU01	HR24-SP03-(07-30)-SU02		
Misc. Inorganics					
Total Dissolved Solids	mg/L	540	820		
Total Suspended Solids	mg/L	330 (1)	5.7		

(1) Exceedance for CCME WQL PAL

# Appendix B

**Calibration Information from Field Multimeter** 

24/07/24 17:35:36



34%

# View Cal Record

Calibrate Turbidity

Date: [YY/MM/DD] 24/06/01

Time: 10:07:30

Sensor Type: Turbidity

Sensor: 22B101196

Sw Version: 3.0.5

Cal Value: 0.00 FNU

Pre Cal Value: 30.59 FNU

Sensor Value: 0.77 RTU

Temperature: 14.3 Ref °C

Calibrate Status: Calibration

Aborted!