

**Report Transmission Cover Page**

Bill To: City of Parksville 1116 Herring Gull Way Parksville, BC, Canada V9P 1R2	Project ID: Project Name: Full Spectrum Project Location: LSD: P.O.: S23-5095 Proj. Acct. code:	Lot ID: <b>1733340</b> Control Number: Date Received: May 22, 2024 Date Reported: May 29, 2024 Report Number: 3006350 Report Type: Final Report
Attn: Accounts Payable Sampled By: Barbara Silenieks Company: City of Parksville		

Contact	Company	Address
<b>Accounts Payable</b>	<b>City of Parksville</b>	1116 Herring Gull Way Parksville, BC V9P 1R2 Phone: (250) 951-2489 Fax: Email: ap@parksville.ca
<u>Delivery</u>	<u>Format</u>	<u>Deliverables</u>
Email	PDF	Invoice
<b>Barbara Silenieks</b>	<b>City of Parksville</b>	1116 Herring Gull Way Parksville, BC V9P 1R2 Phone: (250) 951-2489 Fax: Email: bsilenieks@parksville.ca
<u>Delivery</u>	<u>Format</u>	<u>Deliverables</u>
Email	PDF	COA
Email - Merge	PDF	COC / Test Report
Email - Merge	Standard Crosstab Without Tabs	Test Report

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## Analytical Report

Bill To: City of Parksville 1116 Herring Gull Way Parksville, BC, Canada V9P 1R2	Project ID: Project Name: Full Spectrum Project Location: LSD: P.O.: S23-5095 Proj. Acct. code:	Lot ID: <b>1733340</b> Control Number: Date Received: May 22, 2024 Date Reported: May 29, 2024 Report Number: 3006350 Report Type: Final Report
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	Reference Number	1733340-1	1733340-2	1733340-3		
	Sample Date	May 21, 2024	May 21, 2024	May 21, 2024		
	Sample Time	10:20	10:40	10:55		
	Sample Location					
	Sample Description	Temple / 8.5 °C	Public Works Yard / 8.5 °C	Water Treatment Plant - finished / 8.5 °C		
	Matrix	Water	Water	Water		
Analyte	Units	Results	Results	Results	Nominal Detection Limit	
<b>Inorganic Nonmetallic Parameters</b>						
Cyanide	Total	mg/L	<0.002	<0.002	<0.002	0.002
<b>Metals Total</b>						
Calcium	Total	mg/L	31	8.8	8.4	0.01
Magnesium	Total	mg/L	13	1.0	0.98	0.02
Potassium	Total	mg/L	0.64	0.13	0.15	0.04
Silicon	Total	mg/L	9.6	2.4	2.2	0.005
Sodium	Total	mg/L	11	13	12	0.1
Digestion	Preparation		Field Pres, digest as total Hg	Field Pres, digest as total Hg	Field Pres, digest as total Hg	
Mercury	Total	mg/L	<0.00001	<0.00001	<0.00001	0.00001
<b>Microbiological Analysis</b>						
Total Coliforms	Enzyme Substrate Test	MPN/100 mL	<1.0	<1.0	<1.0	1.0
Escherichia coli	Enzyme Substrate Test	MPN/100 mL	<1.0	<1.0	<1.0	1.0
<b>Physical and Aggregate Properties</b>						
Colour	True	Colour units	<5	<5	<5	5
Turbidity		NTU	0.21	0.16	<0.10	0.1
<b>Routine Water</b>						
pH			7.94	7.99	7.99	1
Temp. of observed pH		°C	21.5	21.5	21.5	
Electrical Conductivity	at 25 °C	µS/cm	310	112	113	1
T-Alkalinity	as CaCO3	mg/L	118	40	41	5
Digestion	Dissolved		Lab filtered & preserved	Lab filtered & preserved	Lab filtered & preserved	
Langelier Index			0.09	-0.8	-0.8	
Saturation pH			7.85	8.8	8.8	
pH			7.94	7.99	7.99	0.01
pH - Holding Time			Exceeded	Exceeded	Exceeded	
Electrical Conductivity	at 25 °C	µS/cm	310	112	113	1
T-Alkalinity	as CaCO3	mg/L	118	40	41	5
Chloride	Dissolved	mg/L	22.4	9.76	9.95	0.05
Fluoride	Dissolved	mg/L	<0.01	<0.01	<0.01	0.01
Nitrate - N	Dissolved	mg/L	1.00	0.02	0.03	0.01
Nitrite - N	Dissolved	mg/L	<0.01	<0.01	<0.01	0.01
Sulfate (SO4)	Dissolved	mg/L	5.7	1.6	1.6	0.1
Hardness	as CaCO3 (dissolved)	mg/L	128	26	27	5
Total Dissolved Solids	Calculated	mg/L	183	63	65	1
<b>Trace Metals Total</b>						
Aluminum	Total	mg/L	0.004	0.018	0.013	0.001

**Analytical Report**

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Sample Time	10:20	10:40	10:55
Sample Location			
Sample Description	Temple / 8.5 °C	Public Works Yard / 8.5 °C	Water Treatment Plant - finished / 8.5 °C

Analyte	Matrix	Units	Results	Results	Results	Nominal Detection Limit
<b>Trace Metals Total - Continued</b>						
Antimony	Water	mg/L	0.00005	0.00002	0.00002	0.00002
Arsenic	Water	mg/L	0.0003	0.0002	0.0002	0.0001
Barium	Water	mg/L	0.018	0.011	0.012	0.0001
Boron	Water	mg/L	0.014	0.012	0.012	0.002
Cadmium	Water	mg/L	<0.00001	<0.00001	<0.00001	0.00001
Chromium	Water	mg/L	0.00061	0.00012	0.00012	0.00005
Copper	Water	mg/L	0.013	0.0028	0.0011	0.0002
Iron	Water	mg/L	0.019	0.011	0.020	0.002
Lead	Water	mg/L	0.00050	0.00020	0.00002	0.00001
Manganese	Water	mg/L	0.004	0.003	0.004	0.001
Selenium	Water	mg/L	<0.0002	<0.0002	<0.0002	0.0002
Strontium	Water	mg/L	0.095	0.037	0.038	0.0001
Uranium	Water	mg/L	0.00020	<0.00001	<0.00001	0.00001
Zinc	Water	mg/L	0.093	0.062	0.054	0.0005

Approved by:   
 Anthony Neumann, MSc  
 General Manager

## Methodology and Notes

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## Method of Analysis

Method Name	Reference	Method	Date Analysis Started	Location
Alk, pH, EC, Turb in water (BC)	APHA	* Alkalinity - Titration Method, 2320 B	May 27, 2024	Element Vancouver
Alk, pH, EC, Turb in water (BC)	APHA	* Alkalinity - Titration Method, 2320 B	May 27, 2024	Element Vancouver
Alk, pH, EC, Turb in water (BC)	APHA	* Conductivity, 2510 B	May 27, 2024	Element Vancouver
Alk, pH, EC, Turb in water (BC)	APHA	* Conductivity, 2510 B	May 27, 2024	Element Vancouver
Alk, pH, EC, Turb in water (BC)	APHA	* pH - Electrometric Method, 4500-H+ B	May 27, 2024	Element Vancouver
Alk, pH, EC, Turb in water (BC)	APHA	* pH - Electrometric Method, 4500-H+ B	May 27, 2024	Element Vancouver
Alkalinity, pH, and EC in water	APHA	* Alkalinity - Titration Method, 2320 B	May 23, 2024	Element Edmonton - Roper Road
Alkalinity, pH, and EC in water	APHA	* Conductivity, 2510 B	May 23, 2024	Element Edmonton - Roper Road
Alkalinity, pH, and EC in water	APHA	* pH - Electrometric Method, 4500-H+ B	May 23, 2024	Element Edmonton - Roper Road
Anions by IEC in water (VAN)	APHA	* Ion Chromatography with Chemical Suppression of Eluent Cond., 4110 B	May 22, 2024	Element Vancouver
Colour (True) in water (Edmonton)	APHA	* Visual Comparison Method, 2120 B	May 25, 2024	Element Edmonton - Roper Road
Cyanide (Total) in water	US EPA	* US EPA method, 335.3	May 28, 2024	Element Edmonton - Roper Road
Mercury Low Level (Total) in water (VAN)	EPA	* Mercury in Water by Cold Vapor Atomic Fluorescence Spectrometry, 245.7	May 24, 2024	Element Vancouver
Metals SemiTrace (Dissolved) in water (VAN)	US EPA	* Metals & Trace Elements by ICP-AES, 6010C	May 22, 2024	Element Vancouver
Metals SemiTrace (Total) in Water (VAN)	US EPA	* Metals & Trace Elements by ICP-AES, 6010C	May 23, 2024	Element Vancouver
Total and E-Coli - Colilert - DW (VAN)	APHA	Enzyme Substrate Test, APHA 9223 B	May 22, 2024	Element Vancouver
Trace Metals (Total) in Water (VAN)	US EPA	* Determination of Trace Elements in Waters and Wastes by ICP-MS, 200.8	May 23, 2024	Element Vancouver
Turbidity - Water (VAN)	APHA	* Turbidity - Nephelometric Method, 2130 B	May 23, 2024	Element Vancouver

\* Reference Method Modified

## References

APHA	Standard Methods for the Examination of Water and Wastewater
EPA	Environmental Protection Agency Test Methods - US
US EPA	US Environmental Protection Agency Test Methods

Please direct any inquiries regarding this report to our Client Services group.

Results relate only to samples as submitted.

The test report shall not be reproduced except in full, without the written approval of the laboratory.



**Invoice To**

**Report To**

**Additional Reports to**

Company: City of Parksville  
 Address: \_\_\_\_\_  
 Attention: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Cell: \_\_\_\_\_  
 E-mail: \_\_\_\_\_  
 Government Funded Work YES / NO  
 SRP # \_\_\_\_\_  
 Agreement ID: \_\_\_\_\_

Company: City of Parksville  
 Address: \_\_\_\_\_  
 Attention: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Cell: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-mail 1: BSilenieks@Parksville.ca  
 E-mail 2: \_\_\_\_\_  
 Copy of Invoice: YES / NO

1) Name: \_\_\_\_\_  
 E-mail: \_\_\_\_\_  
 2) Name: \_\_\_\_\_  
 E-mail: \_\_\_\_\_  
**Sample Custody**  
 Sampled by: Barb Silenieks  
 Company: City of Parksville  
 I authorize Element to proceed with the work indicated on this form:  
 Signature: [Signature]  
 Date/Time: MAY 21, 11:30

**RUSH Priority**

**Report Results**

**Requirements**

- Same Day (200%)
- Next Day/Two Day (100%)
- Three or Four Days (50%)
- 5 to 7 Days (Regular TAT)

When "ASAP" is requested, turn around will default to a 100% RUSH priority, with pricing and turn around time to match. Please contact the lab prior to submitting RUSH samples. If not all samples require RUSH, please indicate in the special instructions.

- Email  QA/QC
- Online  PDF
- Fax  Excel

- HCDWQ  SPIGEC
- AB Tier 1  BCCSR
- Other (list below)

Date Required \_\_\_\_\_

Special Instructions/Comments (please include contact information including phone number if different from above).

Site I.D.	Sample Description	Depth start end in cm m	Date/Time sampled	Matrix	Sampling method	#	MeOH Field Preserved?	Enter tests above (✓ relevant samples below)									
								Microbiology	Total Metals	Mercury	Cyanide						
1	<u>BM Temple</u>		<u>10:20 MAY 21</u>			<u>5</u>		✓	✓	✓	✓	✓					
2	<u>Public Works Yard</u>		<u>10:40 MAY 21</u>			<u>5</u>		✓	✓	✓	✓	✓					
3	<u>Water Treatment Plant - finished</u>		<u>10:55 MAY 21</u>			<u>5</u>		✓	✓	✓	✓	✓					
4	<u>Englishman River</u>																
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	
13																	
14																	
15																	

Please indicate any potentially hazardous samples

Submission of this form acknowledges acceptance of Element's Standard of terms and conditions (<https://www.element.com/terms/terms-and-conditions>)

Lot: 1733340 COC



Temp. received: 8.5 °C Date/Time stamp: 24 MAY 22 9:19  
 Delivery Method: Auto  
 Waybill: \_\_\_\_\_  
 Received by: [Signature]