

## 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: City of Parksville LSD: P.O.: PO003842 Proj. Acct. code:	Lot ID: <b>1407562</b> Control Number: Date Received: Feb 12, 2020 Date Reported: Feb 19, 2020 Report Number: 2490727
Attn: Accounts Payable Sampled By: Barbara Silenieks Company: City of Parksville		

Contact	Company	Address
Accounts Payable	City of Parksville	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 - Single Report	PDF	Invoice
Barbara Silenieks	City of Parksville	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 - Single Report	PDF	COA
Email - Single Report	PDF	COC / Test Report

### Notes To Clients:

- Feb 18, 2020 - Reduction of analytical volume was necessary for chloride analysis to bring results within the analytical range for samples 1407562-2 and 3. Detection limits are adjusted accordingly.

## Analytical Report

Bill To: City of Parksville 1116 Herring Gull Way Parksville, BC, Canada V9P 1R2	Project ID: Project Name: Full Spectrum Project Location: City of Parksville LSD: P.O.: PO003842 Proj. Acct. code:	Lot ID: <b>1407562</b> Control Number: Date Received: Feb 12, 2020 Date Reported: Feb 19, 2020 Report Number: 2490727
Attn: Accounts Payable Sampled By: Barbara Silenieks Company: City of Parksville		

<b>Reference Number</b>	1407562-1
<b>Sample Date</b>	February 11, 2020
<b>Sample Time</b>	11:20
<b>Sample Location</b>	
<b>Sample Description</b>	River / Raw Water / 4.5 °C
<b>Sample Matrix</b>	Water

Analyte	Units	Result	Nominal Detection Limit	Guideline Limit	Guideline Comments	
<b>Inorganic Nonmetallic Parameters</b>						
Cyanide	Total	mg/L	<0.002	0.002	0.2	Below MAC
<b>Metals Total</b>						
Calcium	Total	mg/L	5.4	0.01		
Magnesium	Total	mg/L	0.96	0.02		
Potassium	Total	mg/L	0.19	0.04		
Silicon	Total	mg/L	3.0	0.005		
Sodium	Total	mg/L	2.6	0.1	200	Below AO
Digestion	Preparation		Field Pres, digest as total Hg			
Mercury	Total	mg/L	<0.00001	0.00005	0.001	Below MAC
<b>Microbiological Analysis</b>						
Total Coliforms	Enzyme Substrate Test	MPN/100 mL	165.2	1.0	0 per 100 mL	Above MAC
Escherichia coli	Enzyme Substrate Test	MPN/100 mL	7.5	1.0	0 per 100 mL	Above MAC
<b>Physical and Aggregate Properties</b>						
Colour	True	Colour units	17	5		
Turbidity		NTU	1.71	0.1	0.1	Above OG
<b>Routine Water</b>						
Digestion	Dissolved		Lab filtered & preserved Exceeded			
pH - Holding Time						
pH	at 25 °C		6.96	0.01	7.0-10.5	Below Range
Electrical Conductivity		µS/cm at 25 °C	59	1		
T-Alkalinity	as CaCO3	mg/L	16	5		
Chloride	Dissolved	mg/L	5.08	0.05	250	Below AO
Fluoride	Dissolved	mg/L	<0.01	0.01	1.5	Below MAC
Nitrate - N	Dissolved	mg/L	0.14	0.01	10	Below MAC
Nitrite - N	Dissolved	mg/L	<0.01	0.01	1	Below MAC
Sulfate (SO4)	Dissolved	mg/L	1.9	0.1	500	Below AO
Hardness	as CaCO3 (dissolved)	mg/L	21	5		
Total Dissolved Solids	Calculated	mg/L	37	1	500	Below AO
Langelier Index			-2.3			
<b>Trace Metals Total</b>						
Aluminum	Total	mg/L	0.16	0.001	0.1	Above OG
Antimony	Total	mg/L	<0.00002	0.00002	0.006	Below MAC
Arsenic	Total	mg/L	0.0002	0.0001	0.010	Below MAC
Barium	Total	mg/L	0.0038	0.0001	1.0	Below MAC
Boron	Total	mg/L	0.006	0.002	5	Below MAC

## Analytical Report

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Attn: Accounts Payable Sampled By: Barbara Silenieks Company: City of Parksville		

<b>Reference Number</b>	1407562-1
<b>Sample Date</b>	February 11, 2020
<b>Sample Time</b>	11:20
<b>Sample Location</b>	
<b>Sample Description</b>	River / Raw Water / 4.5 °C
<b>Sample Matrix</b>	Water

Analyte		Units	Result	Nominal Detection Limit	Guideline Limit	Guideline Comments
<b>Trace Metals Total - Continued</b>						
Cadmium	Total	mg/L	0.00005	0.00001	0.005	Below MAC
Chromium	Total	mg/L	0.00042	0.00005	0.05	Below MAC
Copper	Total	mg/L	0.0011	0.0002	1 AO; 2 MAC	Below AO
Iron	Total	mg/L	0.15	0.002	0.3	Below AO
Lead	Total	mg/L	0.00002	0.00001	0.005	Below MAC
Manganese	Total	mg/L	0.004	0.001	0.02 AO; 0.12 MAC	Below AO
Selenium	Total	mg/L	<0.0002	0.0002	0.05	Below MAC
Strontium	Total	mg/L	0.021	0.0001	7.0	Below MAC
Uranium	Total	mg/L	0.00001	0.00001	0.02	Below MAC
Zinc	Total	mg/L	0.0016	0.0005	5.0	Below AO

## Analytical Report

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Attn: Accounts Payable Sampled By: Barbara Silenieks Company: City of Parksville		

<b>Reference Number</b>	1407562-2
<b>Sample Date</b>	February 11, 2020
<b>Sample Time</b>	10:30
<b>Sample Location</b>	
<b>Sample Description</b>	Railway Well # 3 / Well Water / 4.5 °C
<b>Sample Matrix</b>	Water

Analyte	Units	Result	Nominal Detection Limit	Guideline Limit	Guideline Comments	
<b>Inorganic Nonmetallic Parameters</b>						
Cyanide	Total	mg/L	<0.002	0.002	0.2	Below MAC
<b>Metals Total</b>						
Calcium	Total	mg/L	38	0.01		
Magnesium	Total	mg/L	17	0.02		
Potassium	Total	mg/L	0.79	0.04		
Silicon	Total	mg/L	10	0.005		
Sodium	Total	mg/L	9.8	0.1	200	Below AO
Digestion	Preparation		Field Pres, digest as total Hg			
Mercury	Total	mg/L	<0.00001	0.00005	0.001	Below MAC
<b>Microbiological Analysis</b>						
Total Coliforms	Enzyme Substrate Test	MPN/100 mL	<1.0	1.0	0 per 100 mL	Below MAC
Escherichia coli	Enzyme Substrate Test	MPN/100 mL	<1.0	1.0	0 per 100 mL	Below MAC
<b>Physical and Aggregate Properties</b>						
Colour	True	Colour units	<5	5		
Turbidity		NTU	0.14	0.1	0.1	Above OG
<b>Routine Water</b>						
Digestion	Dissolved		Lab filtered & preserved Exceeded			
pH - Holding Time						
pH	at 25 °C		7.82	0.01	7.0-10.5	Within Range
Electrical Conductivity		µS/cm at 25 °C	419	1		
T-Alkalinity	as CaCO3	mg/L	120	5		
Chloride	Dissolved	mg/L	50.7	0.05	250	Below AO
Fluoride	Dissolved	mg/L	<0.01	0.01	1.5	Below MAC
Nitrate - N	Dissolved	mg/L	1.13	0.01	10	Below MAC
Nitrite - N	Dissolved	mg/L	<0.01	0.01	1	Below MAC
Sulfate (SO4)	Dissolved	mg/L	4.0	0.1	500	Below AO
Hardness	as CaCO3 (dissolved)	mg/L	190	5		
Total Dissolved Solids	Calculated	mg/L	237	1	500	Below AO
Langelier Index			0.1			
<b>Trace Metals Total</b>						
Aluminum	Total	mg/L	<0.001	0.001	0.1	Below OG
Antimony	Total	mg/L	<0.00002	0.00002	0.006	Below MAC
Arsenic	Total	mg/L	0.0003	0.0001	0.010	Below MAC
Barium	Total	mg/L	0.0078	0.0001	1.0	Below MAC
Boron	Total	mg/L	0.010	0.002	5	Below MAC

**Analytical Report**

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<b>Reference Number</b>	1407562-2
<b>Sample Date</b>	February 11, 2020
<b>Sample Time</b>	10:30
<b>Sample Location</b>	
<b>Sample Description</b>	Railway Well # 3 / Well Water / 4.5 °C
<b>Sample Matrix</b>	Water

Analyte		Units	Result	Nominal Detection Limit	Guideline Limit	Guideline Comments
<b>Trace Metals Total - Continued</b>						
Cadmium	Total	mg/L	<0.00001	0.00001	0.005	Below MAC
Chromium	Total	mg/L	0.00049	0.00005	0.05	Below MAC
Copper	Total	mg/L	0.0017	0.0002	1 AO; 2 MAC	Below AO
Iron	Total	mg/L	0.004	0.002	0.3	Below AO
Lead	Total	mg/L	0.00073	0.00001	0.005	Below MAC
Manganese	Total	mg/L	0.021	0.001	0.02 AO; 0.12 MAC	Above AO
Selenium	Total	mg/L	<0.0002	0.0002	0.05	Below MAC
Strontium	Total	mg/L	0.11	0.0001	7.0	Below MAC
Uranium	Total	mg/L	0.00024	0.00001	0.02	Below MAC
Zinc	Total	mg/L	0.026	0.0005	5.0	Below AO

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Attn: Accounts Payable Sampled By: Barbara Silenieks Company: City of Parksville		

<b>Reference Number</b>	1407562-3
<b>Sample Date</b>	February 11, 2020
<b>Sample Time</b>	10:15
<b>Sample Location</b>	
<b>Sample Description</b>	Railway Well # 7 / Well Water / 4.5 °C
<b>Sample Matrix</b>	Water

Analyte	Units	Result	Nominal Detection Limit	Guideline Limit	Guideline Comments	
<b>Inorganic Nonmetallic Parameters</b>						
Cyanide	Total	mg/L	<0.002	0.002	0.2	Below MAC
<b>Metals Total</b>						
Calcium	Total	mg/L	42	0.01		
Magnesium	Total	mg/L	20	0.02		
Potassium	Total	mg/L	0.89	0.04		
Silicon	Total	mg/L	11	0.005		
Sodium	Total	mg/L	11	0.1	200	Below AO
Digestion	Preparation		Field Pres, digest as total Hg			
Mercury	Total	mg/L	<0.00001	0.00005	0.001	Below MAC
<b>Microbiological Analysis</b>						
Total Coliforms	Enzyme Substrate Test	MPN/100 mL	<1.0	1.0	0 per 100 mL	Below MAC
Escherichia coli	Enzyme Substrate Test	MPN/100 mL	<1.0	1.0	0 per 100 mL	Below MAC
<b>Physical and Aggregate Properties</b>						
Colour	True	Colour units	<5	5		
Turbidity		NTU	<0.10	0.1	0.1	Below OG
<b>Routine Water</b>						
Digestion	Dissolved		Lab filtered & preserved Exceeded			
pH - Holding Time						
pH	at 25 °C		7.76	0.01	7.0-10.5	Within Range
Electrical Conductivity		µS/cm at 25 °C	449	1		
T-Alkalinity	as CaCO3	mg/L	151	5		
Chloride	Dissolved	mg/L	44.1	0.05	250	Below AO
Fluoride	Dissolved	mg/L	<0.01	0.01	1.5	Below MAC
Nitrate - N	Dissolved	mg/L	1.65	0.01	10	Below MAC
Nitrite - N	Dissolved	mg/L	<0.01	0.01	1	Below MAC
Sulfate (SO4)	Dissolved	mg/L	5.9	0.1	500	Below AO
Hardness	as CaCO3 (dissolved)	mg/L	200	5		
Total Dissolved Solids	Calculated	mg/L	262	1	500	Below AO
Langelier Index			0.2			
<b>Trace Metals Total</b>						
Aluminum	Total	mg/L	<0.001	0.001	0.1	Below OG
Antimony	Total	mg/L	<0.00002	0.00002	0.006	Below MAC
Arsenic	Total	mg/L	0.0003	0.0001	0.010	Below MAC
Barium	Total	mg/L	0.015	0.0001	1.0	Below MAC
Boron	Total	mg/L	0.011	0.002	5	Below MAC

**Analytical Report**

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<b>Reference Number</b>	1407562-3
<b>Sample Date</b>	February 11, 2020
<b>Sample Time</b>	10:15
<b>Sample Location</b>	
<b>Sample Description</b>	Railway Well # 7 / Well Water / 4.5 °C
<b>Sample Matrix</b>	Water

Analyte		Units	Result	Nominal Detection Limit	Guideline Limit	Guideline Comments
<b>Trace Metals Total - Continued</b>						
Cadmium	Total	mg/L	<0.00001	0.00001	0.005	Below MAC
Chromium	Total	mg/L	0.00078	0.00005	0.05	Below MAC
Copper	Total	mg/L	0.0016	0.0002	1 AO; 2 MAC	Below AO
Iron	Total	mg/L	0.010	0.002	0.3	Below AO
Lead	Total	mg/L	0.00068	0.00001	0.005	Below MAC
Manganese	Total	mg/L	0.007	0.001	0.02 AO; 0.12 MAC	Below AO
Selenium	Total	mg/L	<0.0002	0.0002	0.05	Below MAC
Strontium	Total	mg/L	0.12	0.0001	7.0	Below MAC
Uranium	Total	mg/L	0.00030	0.00001	0.02	Below MAC
Zinc	Total	mg/L	0.013	0.0005	5.0	Below AO

## Analytical Report

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Attn: Accounts Payable Sampled By: Barbara Silenieks Company: City of Parksville		

<b>Reference Number</b>	1407562-4
<b>Sample Date</b>	February 11, 2020
<b>Sample Time</b>	09:40
<b>Sample Location</b>	
<b>Sample Description</b>	Springwood Well # 3 / Well Water / 4.5 °C
<b>Sample Matrix</b>	Water

Analyte	Units	Result	Nominal Detection Limit	Guideline Limit	Guideline Comments	
<b>Inorganic Nonmetallic Parameters</b>						
Cyanide	Total	mg/L	<0.002	0.002	0.2	Below MAC
<b>Metals Total</b>						
Calcium	Total	mg/L	28	0.01		
Magnesium	Total	mg/L	13	0.02		
Potassium	Total	mg/L	0.76	0.04		
Silicon	Total	mg/L	11	0.005		
Sodium	Total	mg/L	8.6	0.1	200	Below AO
Digestion	Preparation		Field Pres, digest as total Hg			
Mercury	Total	mg/L	<0.00001	0.00005	0.001	Below MAC
<b>Microbiological Analysis</b>						
Total Coliforms	Enzyme Substrate Test	MPN/100 mL	<1.0	1.0	0 per 100 mL	Below MAC
Escherichia coli	Enzyme Substrate Test	MPN/100 mL	<1.0	1.0	0 per 100 mL	Below MAC
<b>Physical and Aggregate Properties</b>						
Colour	True	Colour units	<5	5		
Turbidity		NTU	<0.10	0.1	0.1	Below OG
<b>Routine Water</b>						
Digestion	Dissolved		Lab filtered & preserved Exceeded			
pH - Holding Time						
pH	at 25 °C		7.80	0.01	7.0-10.5	Within Range
Electrical Conductivity		µS/cm at 25 °C	308	1		
T-Alkalinity	as CaCO3	mg/L	120	5		
Chloride	Dissolved	mg/L	20.7	0.05	250	Below AO
Fluoride	Dissolved	mg/L	<0.01	0.01	1.5	Below MAC
Nitrate - N	Dissolved	mg/L	1.14	0.01	10	Below MAC
Nitrite - N	Dissolved	mg/L	<0.01	0.01	1	Below MAC
Sulfate (SO4)	Dissolved	mg/L	6.7	0.1	500	Below AO
Hardness	as CaCO3 (dissolved)	mg/L	142	5		
Total Dissolved Solids	Calculated	mg/L	195	1	500	Below AO
Langelier Index			-0.007			
<b>Trace Metals Total</b>						
Aluminum	Total	mg/L	<0.001	0.001	0.1	Below OG
Antimony	Total	mg/L	0.00002	0.00002	0.006	Below MAC
Arsenic	Total	mg/L	0.0004	0.0001	0.010	Below MAC
Barium	Total	mg/L	0.0058	0.0001	1.0	Below MAC
Boron	Total	mg/L	0.012	0.002	5	Below MAC



## Analytical Report

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Attn: Accounts Payable Sampled By: Barbara Silenieks Company: City of Parksville		

<b>Reference Number</b>	1407562-4
<b>Sample Date</b>	February 11, 2020
<b>Sample Time</b>	09:40
<b>Sample Location</b>	
<b>Sample Description</b>	Springwood Well # 3 / Well Water / 4.5 °C
<b>Sample Matrix</b>	Water

Analyte		Units	Result	Nominal Detection Limit	Guideline Limit	Guideline Comments
<b>Trace Metals Total - Continued</b>						
Cadmium	Total	mg/L	<0.00001	0.00001	0.005	Below MAC
Chromium	Total	mg/L	0.00046	0.00005	0.05	Below MAC
Copper	Total	mg/L	0.0019	0.0002	1 AO; 2 MAC	Below AO
Iron	Total	mg/L	0.010	0.002	0.3	Below AO
Lead	Total	mg/L	0.00081	0.00001	0.005	Below MAC
Manganese	Total	mg/L	0.035	0.001	0.02 AO; 0.12 MAC	Above AO
Selenium	Total	mg/L	<0.0002	0.0002	0.05	Below MAC
Strontium	Total	mg/L	0.077	0.0001	7.0	Below MAC
Uranium	Total	mg/L	0.00013	0.00001	0.02	Below MAC
Zinc	Total	mg/L	0.0048	0.0005	5.0	Below AO

## Analytical Report

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Attn: Accounts Payable Sampled By: Barbara Silenieks Company: City of Parksville		

<b>Reference Number</b>	1407562-5
<b>Sample Date</b>	February 11, 2020
<b>Sample Time</b>	09:55
<b>Sample Location</b>	
<b>Sample Description</b>	Springwood Well # 6 / Well Water / 4.5 °C
<b>Sample Matrix</b>	Water

Analyte	Units	Result	Nominal Detection Limit	Guideline Limit	Guideline Comments	
<b>Inorganic Nonmetallic Parameters</b>						
Cyanide	Total	mg/L	<0.002	0.002	0.2	Below MAC
<b>Metals Total</b>						
Calcium	Total	mg/L	33	0.01		
Magnesium	Total	mg/L	14	0.02		
Potassium	Total	mg/L	0.78	0.04		
Silicon	Total	mg/L	12	0.005		
Sodium	Total	mg/L	8.9	0.1	200	Below AO
Digestion	Preparation		Field Pres, digest as total Hg			
Mercury	Total	mg/L	<0.00001	0.00005	0.001	Below MAC
<b>Microbiological Analysis</b>						
Total Coliforms	Enzyme Substrate Test	MPN/100 mL	<1.0	1.0	0 per 100 mL	Below MAC
Escherichia coli	Enzyme Substrate Test	MPN/100 mL	<1.0	1.0	0 per 100 mL	Below MAC
<b>Physical and Aggregate Properties</b>						
Colour	True	Colour units	<5	5		
Turbidity		NTU	0.50	0.1	0.1	Above OG
<b>Routine Water</b>						
Digestion	Dissolved		Lab filtered & preserved Exceeded			
pH - Holding Time						
pH	at 25 °C		7.65	0.01	7.0-10.5	Within Range
Electrical Conductivity		µS/cm at 25 °C	336	1		
T-Alkalinity	as CaCO3	mg/L	135	5		
Chloride	Dissolved	mg/L	19.8	0.05	250	Below AO
Fluoride	Dissolved	mg/L	<0.01	0.01	1.5	Below MAC
Nitrate - N	Dissolved	mg/L	1.41	0.01	10	Below MAC
Nitrite - N	Dissolved	mg/L	<0.01	0.01	1	Below MAC
Sulfate (SO4)	Dissolved	mg/L	7.1	0.1	500	Below AO
Hardness	as CaCO3 (dissolved)	mg/L	157	5		
Total Dissolved Solids	Calculated	mg/L	214	1	500	Below AO
Langelier Index			-0.06			
<b>Trace Metals Total</b>						
Aluminum	Total	mg/L	0.001	0.001	0.1	Below OG
Antimony	Total	mg/L	<0.00002	0.00002	0.006	Below MAC
Arsenic	Total	mg/L	0.0003	0.0001	0.010	Below MAC
Barium	Total	mg/L	0.0060	0.0001	1.0	Below MAC
Boron	Total	mg/L	0.012	0.002	5	Below MAC

**Analytical Report**

Bill To: City of Parksville 1116 Herring Gull Way Parksville, BC, Canada V9P 1R2	Project ID: Project Name: Full Spectrum Project Location: City of Parksville LSD: P.O.: PO003842 Proj. Acct. code:	Lot ID: <b>1407562</b> Control Number: Date Received: Feb 12, 2020 Date Reported: Feb 19, 2020 Report Number: 2490727
Attn: Accounts Payable Sampled By: Barbara Silenieks Company: City of Parksville		

<b>Reference Number</b>	1407562-5
<b>Sample Date</b>	February 11, 2020
<b>Sample Time</b>	09:55
<b>Sample Location</b>	
<b>Sample Description</b>	Springwood Well # 6 / Well Water / 4.5 °C
<b>Sample Matrix</b>	Water

Analyte		Units	Result	Nominal Detection Limit	Guideline Limit	Guideline Comments
<b>Trace Metals Total - Continued</b>						
Cadmium	Total	mg/L	<0.00001	0.00001	0.005	Below MAC
Chromium	Total	mg/L	0.00045	0.00005	0.05	Below MAC
Copper	Total	mg/L	0.0029	0.0002	1 AO; 2 MAC	Below AO
Iron	Total	mg/L	0.045	0.002	0.3	Below AO
Lead	Total	mg/L	0.00033	0.00001	0.005	Below MAC
Manganese	Total	mg/L	0.011	0.001	0.02 AO; 0.12 MAC	Below AO
Selenium	Total	mg/L	<0.0002	0.0002	0.05	Below MAC
Strontium	Total	mg/L	0.089	0.0001	7.0	Below MAC
Uranium	Total	mg/L	0.00011	0.00001	0.02	Below MAC
Zinc	Total	mg/L	0.033	0.0005	5.0	Below AO

## Analytical Report

Bill To: City of Parksville 1116 Herring Gull Way Parksville, BC, Canada V9P 1R2	Project ID: Project Name: Full Spectrum Project Location: City of Parksville LSD: P.O.: PO003842 Proj. Acct. code:	Lot ID: <b>1407562</b> Control Number: Date Received: Feb 12, 2020 Date Reported: Feb 19, 2020 Report Number: 2490727
Attn: Accounts Payable Sampled By: Barbara Silenieks Company: City of Parksville		

<b>Reference Number</b>	1407562-6
<b>Sample Date</b>	February 11, 2020
<b>Sample Time</b>	10:50
<b>Sample Location</b>	
<b>Sample Description</b>	Memorial / Distribution System Water / 4.5 °C
<b>Sample Matrix</b>	Water


Analyte	Units	Result	Nominal Detection Limit	Guideline Limit	Guideline Comments	
<b>Inorganic Nonmetallic Parameters</b>						
Cyanide	Total	mg/L	<0.002	0.002	0.2	Below MAC
<b>Metals Total</b>						
Calcium	Total	mg/L	34	0.01		
Magnesium	Total	mg/L	15	0.02		
Potassium	Total	mg/L	0.75	0.04		
Silicon	Total	mg/L	11	0.005		
Sodium	Total	mg/L	9.4	0.1	200	Below AO
Digestion	Preparation		Field Pres, digest as total Hg			
Mercury	Total	mg/L	<0.00001	0.00005	0.001	Below MAC
<b>Microbiological Analysis</b>						
Total Coliforms	Enzyme Substrate Test	MPN/100 mL	<1.0	1.0	0 per 100 mL	Below MAC
Escherichia coli	Enzyme Substrate Test	MPN/100 mL	<1.0	1.0	0 per 100 mL	Below MAC
<b>Physical and Aggregate Properties</b>						
Colour	True	Colour units	<5	5		
Turbidity		NTU	<0.10	0.1	0.1	Below OG
<b>Routine Water</b>						
Digestion	Dissolved		Lab filtered & preserved Exceeded			
pH - Holding Time						
pH	at 25 °C		7.76	0.01	7.0-10.5	Within Range
Electrical Conductivity		µS/cm at 25 °C	357	1		
T-Alkalinity	as CaCO3	mg/L	136	5		
Chloride	Dissolved	mg/L	26.6	0.05	250	Below AO
Fluoride	Dissolved	mg/L	<0.01	0.01	1.5	Below MAC
Nitrate - N	Dissolved	mg/L	1.30	0.01	10	Below MAC
Nitrite - N	Dissolved	mg/L	<0.01	0.01	1	Below MAC
Sulfate (SO4)	Dissolved	mg/L	6.7	0.1	500	Below AO
Hardness	as CaCO3 (dissolved)	mg/L	163	5		
Total Dissolved Solids	Calculated	mg/L	219	1	500	Below AO
Langelier Index			0.06			
<b>Trace Metals Total</b>						
Aluminum	Total	mg/L	<0.001	0.001	0.1	Below OG
Antimony	Total	mg/L	<0.00002	0.00002	0.006	Below MAC
Arsenic	Total	mg/L	0.0003	0.0001	0.010	Below MAC
Barium	Total	mg/L	0.0096	0.0001	1.0	Below MAC
Boron	Total	mg/L	0.009	0.002	5	Below MAC

**Analytical Report**

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Analyte		Units	Result	Nominal Detection Limit	Guideline Limit	Guideline Comments
<b>Trace Metals Total - Continued</b>						
Cadmium	Total	mg/L	<0.00001	0.00001	0.005	Below MAC
Chromium	Total	mg/L	0.00068	0.00005	0.05	Below MAC
Copper	Total	mg/L	0.078	0.0002	1 AO; 2 MAC	Below AO
Iron	Total	mg/L	0.014	0.002	0.3	Below AO
Lead	Total	mg/L	0.00069	0.00001	0.005	Below MAC
Manganese	Total	mg/L	0.004	0.001	0.02 AO; 0.12 MAC	Below AO
Selenium	Total	mg/L	<0.0002	0.0002	0.05	Below MAC
Strontium	Total	mg/L	0.095	0.0001	7.0	Below MAC
Uranium	Total	mg/L	0.00019	0.00001	0.02	Below MAC
Zinc	Total	mg/L	0.010	0.0005	5.0	Below AO

Approved by:   
 Matthew Norman, BSc, PChem  
 Operations Chemist

## Methodology and Notes

Bill To: City of Parksville 1116 Herring Gull Way Parksville, BC, Canada V9P 1R2	Project ID: Project Name: Full Spectrum Project Location: City of Parksville LSD: P.O.: PO003842 Proj. Acct. code:	Lot ID: <b>1407562</b> Control Number: Date Received: Feb 12, 2020 Date Reported: Feb 19, 2020 Report Number: 2490727
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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	Feb 13, 2020	Element Vancouver
Alk, pH, EC, Turb in water (BC)	APHA	* Conductivity, 2510 B	Feb 13, 2020	Element Vancouver
Alk, pH, EC, Turb in water (BC)	APHA	* pH - Electrometric Method, 4500-H+ B	Feb 13, 2020	Element Vancouver
Anions by IEC in water (VAN)	APHA	* Ion Chromatography with Chemical Suppression of Eluent Cond., 4110 B	Feb 13, 2020	Element Vancouver
Cyanide (Total) in water	US EPA	* US EPA method, 335.3	Feb 19, 2020	Element Edmonton - Roper Road
Mercury Low Level (Total) in water (VAN)	EPA	* Mercury in Water by Cold Vapor Atomic Fluorescence Spectrometry, 245.7	Feb 18, 2020	Element Vancouver
Metals SemiTrace (Dissolved) in water (VAN)	US EPA	* Metals & Trace Elements by ICP-AES, 6010C	Feb 13, 2020	Element Vancouver
Metals SemiTrace (Total) in Water (VAN)	US EPA	* Metals & Trace Elements by ICP-AES, 6010C	Feb 13, 2020	Element Vancouver
Total and E-Coli - Colilert - DW (VAN)	APHA	Enzyme Substrate Test, APHA 9223 B	Feb 12, 2020	Element Vancouver
Trace Metals (Total) in Water (VAN)	US EPA	* Determination of Trace Elements in Waters and Wastes by ICP-MS, 200.8	Feb 13, 2020	Element Vancouver
True Color in water (VAN)	APHA	* Spectrophotometric - Single Wavelength Method, 2120 C	Feb 13, 2020	Element Vancouver
Turbidity - Water (VAN)	APHA	* Turbidity - Nephelometric Method, 2130 B	Feb 12, 2020	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

## Guidelines

Guideline Description	Health Canada GCDWQ
Guideline Source	Guidelines for Canadian Drinking Water Quality, Health Canada, June 2019
Guideline Comments	MAC = Maximum Acceptable Concentration AO = Aesthetic Objective OG = Operational Guideline for Water Treatment Plants (does not apply to private groundwater wells). Refer to Health Canada for complete guidelines at <a href="http://www.hc-sc.gc.ca">www.hc-sc.gc.ca</a>

## Comments:

- Feb 18, 2020 - Reduction of analytical volume was necessary for chloride analysis to bring results within the analytical range for samples 1407562-2 and 3. Detection limits are adjusted accordingly.

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**Methodology and Notes**

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The comparison of test results to guideline limits is provided for information purposes only. This is not to be taken as a statement of conformance / nonconformance to any guideline, regulation or limit. The data user is responsible for all conclusions drawn with respect to the data and is advised to consult official regulatory references when evaluating compliance.

Please direct any inquiries regarding this report to our Client Services group.  
Results relate only to samples as submitted.

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