

<b>REPORTED TO</b>	Parksville, City of P O Box 1390, 100 Jensen Avenue East Parksville, BC V9P 2H3	<b>TEL</b>	(250) 951-2489
		<b>FAX</b>	
<b>ATTENTION</b>	Barbara Silenieks	<b>WORK ORDER</b>	7081189
<b>PO NUMBER</b>	002685	<b>RECEIVED / TEMP</b>	2017-08-15 10:00 / 6°C
<b>PROJECT</b>	361341 - THM Quarterly (Island Health)	<b>REPORTED</b>	2017-08-21
<b>PROJECT INFO</b>		<b>COC NUMBER</b>	B59704

**General Comments:**

CARO Analytical Services employs methods which are conducted according to procedures accepted by appropriate regulatory agencies, and/or are conducted in accordance with recognized professional standards using accepted testing methodologies and quality control efforts, except where otherwise agreed to by the client.

The results in this report apply to the samples analyzed in accordance with the Chain of Custody or Sample Requisition document. This analytical report must be reproduced in its entirety. CARO is not responsible for any loss or damage resulting directly or indirectly from error or omission in the conduct of testing. Liability is limited to the cost of analysis. Samples will be disposed of 30 days after the test report has been issued unless otherwise agreed to in writing.



Authorized By:

**Helen Maleki, Dipl T**  
Client Service Representative

*If you have any questions or concerns, please contact me at [hmaleki@caro.ca](mailto:hmaleki@caro.ca)*

**Locations:**

#110 4011 Viking Way  
Richmond, BC V6V 2K9  
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#102 3677 Highway 97N  
Kelowna, BC V1X 5C3  
Tel: 250-765-9646

17225 109 Avenue  
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**REPORTED TO PROJECT** Parksville, City of  
361341 - THM Quarterly (Island Health)

**WORK ORDER REPORTED** 7081189  
2017-08-21

Analysis Description	Method Reference	Technique	Location
Trihalomethanes in Water	EPA 5030B / APHA 6200 B	Purge&Trap / Purge and Trap Capillary Column GC-MSD	Richmond

**Method Reference Descriptions:**

EPA United States Environmental Protection Agency Test Methods

**Glossary of Terms:**

MRL Method Reporting Limit  
 < Less than the Reported Detection Limit (RDL) - the RDL may be higher than the MRL due to various factors such as dilutions, limited sample volume, high moisture, or interferences  
 mg/L Milligrams per litre

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Analyte	Result / Recovery	Standard / Guideline	MRL / Limits	Units	Prepared	Analyzed	Notes
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**Sample ID: Temple (7081189-01) [Water] Sampled: 2017-08-14 08:55**

<b>Calculated Parameters</b>							
Total Trihalomethanes	0.0165	N/A	0.00400	mg/L	N/A	N/A	
<b>Volatile Organic Compounds (VOC)</b>							
Bromodichloromethane	0.0046	N/A	0.0010	mg/L	N/A	2017-08-18	
Bromoform	0.0014	N/A	0.0010	mg/L	N/A	2017-08-18	
Chloroform	0.0061	N/A	0.0010	mg/L	N/A	2017-08-18	
Dibromochloromethane	0.0045	N/A	0.0010	mg/L	N/A	2017-08-18	
Surrogate: Toluene-d8	86		70-130	%	N/A	2017-08-18	
Surrogate: 4-Bromofluorobenzene	82		70-130	%	N/A	2017-08-18	

**Sample ID: Community Park (7081189-02) [Water] Sampled: 2017-08-14 08:40**

<b>Calculated Parameters</b>							
Total Trihalomethanes	0.0234	N/A	0.00400	mg/L	N/A	N/A	
<b>Volatile Organic Compounds (VOC)</b>							
Bromodichloromethane	0.0042	N/A	0.0010	mg/L	N/A	2017-08-18	
Bromoform	< 0.0010	N/A	0.0010	mg/L	N/A	2017-08-18	
Chloroform	0.0191	N/A	0.0010	mg/L	N/A	2017-08-18	
Dibromochloromethane	< 0.0010	N/A	0.0010	mg/L	N/A	2017-08-18	
Surrogate: Toluene-d8	86		70-130	%	N/A	2017-08-18	
Surrogate: 4-Bromofluorobenzene	82		70-130	%	N/A	2017-08-18	

**Sample ID: Ermineskin (7081189-03) [Water] Sampled: 2017-08-14 09:05**

<b>Calculated Parameters</b>							
Total Trihalomethanes	0.00548	N/A	0.00400	mg/L	N/A	N/A	
<b>Volatile Organic Compounds (VOC)</b>							
Bromodichloromethane	0.0015	N/A	0.0010	mg/L	N/A	2017-08-18	
Bromoform	0.0013	N/A	0.0010	mg/L	N/A	2017-08-18	
Chloroform	< 0.0010	N/A	0.0010	mg/L	N/A	2017-08-18	
Dibromochloromethane	0.0026	N/A	0.0010	mg/L	N/A	2017-08-18	
Surrogate: Toluene-d8	85		70-130	%	N/A	2017-08-18	
Surrogate: 4-Bromofluorobenzene	81		70-130	%	N/A	2017-08-18	

**Sample ID: PW 1116 Herring Gull (7081189-04) [Water] Sampled: 2017-08-14 09:25**

<b>Calculated Parameters</b>							
Total Trihalomethanes	0.0240	N/A	0.00400	mg/L	N/A	N/A	
<b>Volatile Organic Compounds (VOC)</b>							
Bromodichloromethane	0.0042	N/A	0.0010	mg/L	N/A	2017-08-18	
Bromoform	< 0.0010	N/A	0.0010	mg/L	N/A	2017-08-18	
Chloroform	0.0198	N/A	0.0010	mg/L	N/A	2017-08-18	
Dibromochloromethane	< 0.0010	N/A	0.0010	mg/L	N/A	2017-08-18	
Surrogate: Toluene-d8	87		70-130	%	N/A	2017-08-18	
Surrogate: 4-Bromofluorobenzene	84		70-130	%	N/A	2017-08-18	

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Analyte	Result / Recovery	Standard / Guideline	MRL / Units Limits	Prepared	Analyzed	Notes
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The following section displays the quality control (QC) data that is associated with your sample data. Groups of samples are prepared in "batches" and analyzed in conjunction with QC samples that ensure your data is of the highest quality. Common QC types include:

- **Method Blank (Blk):** Laboratory reagent water is carried through sample preparation and analysis steps. Method Blanks indicate that results are free from contamination, i.e. not biased high from sources such as the sample container or the laboratory environment
- **Duplicate (Dup):** Preparation and analysis of a replicate aliquot of a sample. Duplicates provide a measure of the analytical method's precision, i.e. how reproducible a result is. Duplicates are only reported if they are associated with your sample data.
- **Blank Spike (BS):** A known amount of standard is carried through sample preparation and analysis steps. Blank Spikes, also known as laboratory control samples (LCS), are prepared from a different source of standard than used for the calibration. They ensure that the calibration is acceptable (i.e. not biased high or low) and also provide a measure of the analytical method's accuracy (i.e. closeness of the result to a target value).
- **Standard Reference Material (SRM):** A material of similar matrix to the samples, externally certified for the parameter(s) listed. Standard Reference Materials ensure that the preparation steps in the method are adequate to achieve acceptable recoveries of the parameter(s) tested.

Each QC type is analyzed at a 5-10% frequency, i.e. one blank/duplicate/spike for every 10 samples. For all types of QC, the specified recovery (% Rec) and relative percent difference (RPD) limits are derived from long-term method performance averages and/or prescribed by the reference method.

Analyte	Result	MRL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Notes
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**Volatile Organic Compounds (VOC), Batch B7H1392**

**Blank (B7H1392-BLK1)**

Prepared: 2017-08-18, Analyzed: 2017-08-18

Bromodichloromethane	< 0.0010	0.0010 mg/L							
Bromoform	< 0.0010	0.0010 mg/L							
Chloroform	< 0.0010	0.0010 mg/L							
Dibromochloromethane	< 0.0010	0.0010 mg/L							
Surrogate: Toluene-d8	0.0216	mg/L	0.0250		86	70-130			
Surrogate: 4-Bromofluorobenzene	0.0204	mg/L	0.0250		81	70-130			

**LCS (B7H1392-BS1)**

Prepared: 2017-08-18, Analyzed: 2017-08-18

Bromodichloromethane	0.0214	0.0010 mg/L	0.0200		107	70-130			
Bromoform	0.0163	0.0010 mg/L	0.0200		81	70-130			
Chloroform	0.0208	0.0010 mg/L	0.0200		104	70-130			
Dibromochloromethane	0.0205	0.0010 mg/L	0.0200		102	70-130			
Surrogate: Toluene-d8	0.0215	mg/L	0.0250		86	70-130			
Surrogate: 4-Bromofluorobenzene	0.0218	mg/L	0.0250		87	70-130			



3C V6V 2K9  
BC V1X 5C3  
AB T5S 1H7

## CHAIN OF CUSTODY RECORD

COC# **B 59704** PAGE **OF**

RELINQUISHED BY: Barb Sileniewks DATE: Aug 14, 17 RECEIVED BY: HM Puro DATE: 8/15/17  
 TIME: 9:30 TIME: 10:00

TURNAROUND TIME REQUESTED: Routine: (5-7 Days)  Rush: 1 Day\*  2 Day\*  3 Day\*  Other\*

REGULATORY APPLICATION: Show on Report   
 Canadian Drinking Water Quality  BC WQG  BC HWR   
 BC CSR Soil: WL  AL  PL  RL-LD  RL-HD  CL  IL   
 BC CSR Water: AW  IW  LW  DW   
 \*Contact Lab To Confirm. Surcharge May Apply CCME: \_\_\_\_\_ OTHER: \_\_\_\_\_

REPORT TO: \_\_\_\_\_  
 COMPANY: City of Parksville  
 ADDRESS: \_\_\_\_\_  
 CONTACT: Barb Sileniewks  
 TEL/FAX: \_\_\_\_\_  
 DELIVERY METHOD: EMAIL  MAIL  OTHER\*   
 DATA FORMAT: EXCEL  WATERTRAX  ESdat   
 EQUIS  BC EMS  OTHER\*   
 EMAIL 1: bsileniewks@parksville.ca  
 EMAIL 2: \_\_\_\_\_  
 EMAIL 3: \_\_\_\_\_

COMPANY: \_\_\_\_\_  
 ADDRESS: \_\_\_\_\_  
 CONTACT: \_\_\_\_\_  
 TEL/FAX: \_\_\_\_\_  
 DELIVERY METHOD: EMAIL  MAIL  OTHER\*   
 EMAIL 1: \_\_\_\_\_  
 EMAIL 2: \_\_\_\_\_  
 EMAIL 3: \_\_\_\_\_  
 PO #: \_\_\_\_\_

PROJECT NUMBER / INFO: \_\_\_\_\_  
 A: Biohazard D: Asbestos G: Strong Odour  
 B: Cyanide E: Heavy Metals H: High Contamination  
 C: PCBs F: Flammable I: Other (please specify\*)

### ANALYSES REQUESTED:

CLIENT SAMPLE ID:	MATRIX:	SAMPLING:	COMMENTS:	BTEX	VOC	EPH	PAH	PHENOLS	PCB	PESTICIDES	METALS - WATER TOTAL	METALS - WATER DISSOLVED	METALS - SOIL (SALM)	pH	TSS	BOD	TOG	FECAL COLIFORMS	TOTAL COLIFORMS	ASBESTOS	HOLD	POSSIBLE SAMPLE HAZARD CODE(S)
<u>7081109</u>		DATE: YYYY-MM-DD TIME: HH:MM																				
<u>Temple</u>	<input checked="" type="checkbox"/>	<u>2</u> <u>2017-08-14</u> <u>8:55</u>																				
<u>Community Park</u>	<input checked="" type="checkbox"/>	<u>2</u> <u>2017-08-14</u> <u>8:40</u>																				
<u>Ermuneshkin</u>	<input checked="" type="checkbox"/>	<u>2</u> <u>2017-08-14</u> <u>9:05</u>																				
<u>PWY 1116 Herring Gull</u>	<input checked="" type="checkbox"/>	<u>2</u> <u>2017-08-14</u> <u>9:25</u>																				

\*\* If you would like to sign up for ClientConnect and/or Envirochain, CARO's online service offerings, please check here:

SAMPLED BY: Barb Sileniewks

SHIPPING INSTRUCTIONS: Return Cooler(s)   
 Supplies Needed: \_\_\_\_\_

SAMPLE RETENTION: 30 Days (default)   
 60 Days  90 Days   
 Other (surcharges will apply): \_\_\_\_\_

\* OTHER INSTRUCTIONS: \_\_\_\_\_  
 If you would like to talk to a real live Scientist about your project requirements, please check here:

SAMPLE RECEIPT CONDITION:  
 COOLER 1 (°C): 6.1 ICE: Y  N   
 COOLER 2 (°C): \_\_\_\_\_ ICE: Y  N   
 COOLER 3 (°C): \_\_\_\_\_  
 CUSTODY SEALS INTACT: NA