

Unit 120, 8600 Glenlyon Parkway Burnaby, British Columbia CANADA V5J 086 TEL (778)452-4000 FAX (778)452-4074 http://www.agatlabs.com

CLIENT NAME: DEEP BAY IMPROVEMENT DISTRICT 5031 MOUNTAIN VIEW ROAD BOWSER, BC V0R1G0 (250) 757-9312

**ATTENTION TO: LESLIE CARTER** 

PROJECT:

**AGAT WORK ORDER: 17V282760** 

WATER ANALYSIS REVIEWED BY: Andrew Garrard, B.Sc., General Manager

DATE REPORTED: Nov 16, 2017

PAGES (INCLUDING COVER): 8

**VERSION\*: 2** 

Should you require any information regarding this analysis please contact your client services representative at (778) 452-4000

*NOTES
VERSION 2: Sample receipt temperature 5°C.
Version 2 is issued to apply the BC CSR Drinking Water Guideline and to report Metals analysis in mg/L as requested by Leslie Carter of Deep Bay
Improvement District on November 17, 2017. Version 2 is an amendment to Version 1.

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.

**AGAT** Laboratories (V2)

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Member of: Association of Professional Engineers and Geoscientists of Alberta (APEGA)

Western Enviro-Agricultural Laboratory Association (WEALA) Environmental Services Association of Alberta (ESAA) AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation.



**CLIENT NAME: DEEP BAY IMPROVEMENT DISTRICT** 

**SAMPLING SITE:** 

# **Certificate of Analysis**

**AGAT WORK ORDER: 17V282760** 

PROJECT:

Unit 120, 8600 Glenlyon Parkway Burnaby, British Columbia CANADA V5J 0B6 TEL (778)452-4000 FAX (778)452-4074 http://www.agatlabs.com

ATTENTION TO: LESLIE CARTER

**SAMPLED BY:** 

#### **Anions and Nutrients**

DATE RECEIVED: 2017-11-09								[	DATE REPORTE	ED: 2017-11-16	
_		DATE	PLE TYPE: SAMPLED:	Well 1 Water 2017-11-08	Well 2 Water 2017-11-08	Well 3 Water 2017-11-08	Well 4 Water 2017-11-08	Well 5 Water 2017-11-08	Well 6 Water 2017-11-08	Well 8 Water 2017-11-08	
Parameter	Unit	G/S	RDL	8895094	8895112	8895113	8895114	8895115	8895116	8895118	
Chloride	mg/L	250	0.05	1.57	1.59	1.07	1.52	3.24	1.25	2.12	
Nitrate-N	mg/L	10	0.005	0.022	< 0.005	0.037	0.055	0.148	0.061	0.063	
Nitrite-N	mg/L	3.2	0.005	<0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	
Sulphate	mg/L	500	0.5	0.6	<0.5	0.8	1.0	0.7	0.5	0.6	
Fluoride	mg/L	1.5	0.02	< 0.02	<0.02	<0.02	0.02	<0.02	0.02	0.02	
Bromide	mg/L		0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	
Ammonia-N	mg/L		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to BCCSR(DW)mg/L(Van)

Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

Certified By:

Andre Cernorl



**CLIENT NAME: DEEP BAY IMPROVEMENT DISTRICT** 

**SAMPLING SITE:** 

**Certificate of Analysis** 

**AGAT WORK ORDER: 17V282760** 

PROJECT:

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ATTENTION TO: LESLIE CARTER

**SAMPLED BY:** 

### **Physical Tests Package**

1 Hydrodi 100to 1 dollago											
DATE RECEIVED: 2017-11-09								<b>DATE REPORTED: 2017-11-16</b>			
	SA	MPLE DES SAM	CRIPTION: PLE TYPE:	Well 1 Water	Well 2 Water	Well 3 Water	Well 4 Water	Well 5 Water	Well 6 Water	Well 8 Water	
Parameter	Unit	DATE:	SAMPLED: RDL	2017-11-08 8895094	2017-11-08 8895112	2017-11-08 8895113	2017-11-08 8895114	2017-11-08 8895115	2017-11-08 8895116	2017-11-08 8895118	
Н	pH units		0.01	7.11	6.56	6.93	6.88	7.19	7.23	7.19	
True Colour	Colour units		5	<5	<5	<5	<5	<5	<5	<5	
Turbidity	NTU		0.1	0.2	17.8	0.8	0.2	0.1	0.3	0.4	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to BCCSR(DW)mg/L(Van)

Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

8895094-8895118 Literature holding time exceeded for pH analysis.

Certified By:

Andre Cernorl



# **Certificate of Analysis**

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**CLIENT NAME: DEEP BAY IMPROVEMENT DISTRICT** 

SAMPLING SITE:

ATTENTION TO: LESLIE CARTER

**SAMPLED BY:** 

Total Iron, Lead, Potassium, Zinc

DATE RECEIVED: 2017-11-09								ı	DATE REPORTI	ED: 2017-11-1
	SAMPLE DES	CRIPTION:	Well 1	Well 2	Well 3	Well 4	Well 5	Well 6	Well 8	
		_	IPLE TYPE:	Water	Water	Water	Water	Water	Water	Water
			SAMPLED:	2017-11-08	2017-11-08	2017-11-08	2017-11-08	2017-11-08	2017-11-08	2017-11-08
Parameter	Unit	G/S	RDL	8895094	8895112	8895113	8895114	8895115	8895116	8895118
Iron Total	mg/L	6.5	0.01	0.03	1.59	0.11	<0.01	<0.01	0.01	0.02
Lead Total	mg/L	0.01	0.00005	0.00039	0.0137	0.00060	0.00063	0.00013	0.00014	0.00021
Potassium Total	mg/L		0.1	0.3	0.1	0.2	0.2	0.4	0.4	0.4
Zinc Total	mg/L	5	0.005	0.020	0.020	0.014	0.021	< 0.005	< 0.005	< 0.005

Comments: RDI

RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to BCCSR(DW)mg/L(Van)

Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

Certified By:

Ander Carrol



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**AGAT WORK ORDER: 17V282760** 

# **Quality Assurance**

**CLIENT NAME: DEEP BAY IMPROVEMENT DISTRICT** 

PROJECT: **ATTENTION TO: LESLIE CARTER** 

**SAMPLING SITE: SAMPLED BY:** 

Water Analysis															
RPT Date: Nov 16, 2017			DUPLICATE				REFEREN	ICE MATERIAL		METHOD	BLANK	SPIKE	MAT	TRIX SPIKE	
PARAMETER	Batch	Sample	Dup #1	Dup #2	RPD	Method Blank	Measured	Acceptable Limits		Recovery	Lie	ptable nits	Recovery	Lin	ptable nits
		ld		·			Value	Lower	Upper		Lower	Upper		Lower	Upper
Physical Tests Package															
pH	8892890		7.56	7.63	0.9%		100%	95%	105%						
True Colour	8895094	8895094	<5	<5	NA	< 5	108%	90%	110%	98%	80%	120%			
Turbidity	8895094	8895094	0.2	0.2	NA	< 0.1	99%	85%	115%	98%	85%	115%			
Comments: RPDs are calculated	l using raw anal	ytical data	and not the	e rounded	duplicate	values rep	orted.								
Anions and Nutrients															

Chloride	8895094 8895094	1.57	1.58	0.6%	< 0.05	103%	90%	110%	95%	90%	110%
Nitrate-N	8895094 8895094	0.022	0.024	NA	< 0.005	99%	90%	110%	96%	90%	110%
Nitrite-N	8895094 8895094	< 0.005	< 0.005	NA	< 0.005				101%	90%	110%
Sulphate	8895094 8895094	0.6	0.6	NA	< 0.5	94%	90%	110%	97%	90%	110%
Fluoride	8895094 8895094	<0.02	< 0.02	NA	< 0.02	94%	85%	115%	96%	90%	110%
Bromide	8895094 8895094	< 0.05	< 0.05	NA	< 0.05	110%	85%	115%	103%	90%	110%
Ammonia-N	8895094 8895094	<0.01	<0.01	NA	< 0.01	100%	85%	115%	98%	90%	110%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

### Total Iron, Lead, Potassium, Zinc

Iron Total	8892594	0.46	0.45	1.7%	< 0.01	112%	85%	115%	99%	90%	110%	
Lead Total	8892594	< 0.00005	<0.00005	NA	< 0.00005	107%	85%	115%	106%	90%	110%	
Potassium Total	8892594	0.9	0.9	0.5%	< 0.1	101%	85%	115%	103%	90%	110%	
Zinc Total	8892594	< 0.005	< 0.005	NA	< 0.005	99%	85%	115%	99%	90%	110%	

Certified By:

ander Cernard



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# **Method Summary**

CLIENT NAME: DEEP BAY IMPROVEMENT DISTRICT

AGAT WORK ORDER: 17V282760

PROJECT:

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SAMPLING SITE: SAMPLED BY:

		÷ === = :									
PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE								
Water Analysis	·		•								
Chloride	INOR-181-6002	Modified from SM 4110 B	ION CHROMATOGRAPH								
Nitrate-N	INOR-181-6002	Modified from SM 4110 B	ION CHROMATOGRAPH								
Nitrite-N	INOR-181-6002	Modified from SM 4110 B	ION CHROMATOGRAPH								
Sulphate	INOR-181-6002	Modified from SM 4110 B	ION CHROMATOGRAPH								
Fluoride	INOR-181-6002	Modified from SM 4110 B	ION CHROMATOGRAPH								
Bromide	INOR-181-6002	Modified from SM 4110 B	ION CHROMATOGRAPH								
Ammonia-N	INOR-181-6001	Modified from SM 4500-NH3 G	CONTINUOUS FLOW ANALYZER								
рН	INOR-181-6000	Modified from SM 4500-H+	PH METER								
True Colour	INOR-181-6033	Modified from BC MOE Lab Manual Section B (Colour,	PC TITRATE								
Turbidity	INOR-181-6008	SM 2130 B	PC TITRATE								
Iron Total	MET-181-6101, LAB-181-4009	Modified from SM 3120 B	ICP/OES								
Lead Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS								
Potassium Total	MET-181-6101, LAB-181-4009	Modified from SM 3120 B	ICP/OES								
Zinc Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS								

Laboratories

**Chain of Custody Record** 

5031 Mountainview

Address: Contact:

Company: Deep

Report Information

Phone: 355 253

Client Project #:

Invoice To

Company:

Contact: Address:

AGAT Quote #:

Sowser

P: 778.452.4000 • F: 778.452.4074

V5J 0B6 120 - 8600 Glenlyon Parkway Burnaby, BC

200 Laboratory Use Only

177282760 Arrival Temperature: AGAT Job Number:

Notes:

THE BASES

Hold for: | 60 DAYS PLEASE CONTACT LABORATORY IF RUSH REQUIRED SAMPLE SUBMISSION CUT OFF FOR EFFECTIVE DATE BY 3 PM (N/Y) SUOQAASAH PRESERVED (Y/N) *UNMBER OF CONTAINERS* Turnaround Time Required (TAT) □ 5 to 7 working days ☐ Day 2 - 100% ☐ Day 3 - 50% ☐ Day 4 - 25% Date Required: Regular TAT Rush TAT Excel Format Report Format Single Sample per page Samples per Included Multiple page donotrame @ staw Ca ☐ BC CSR - Water admina dold, ca Carto Buchnel  $\square$  $\square$ M □ ≥ Requirements (Please Check) Schedule 11 (Please Specify) CCME (Please Specify) Other (Please Specify) 01/50 Report Information 200 ☐ BC CSR Soil Name: Name: Email: Email:  $\Box$ AL OR.  $\equiv$ ۲. Si Same as above Yeş 🔼 No □ 9312 200 + motorcher Fax: 757 NOR

Fax:

PO/AFE#:

Phone:

7 7 7 7 77 7 777 7 UCIUD COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT 10:45Am NOV8117 10:15 MM 10:30 AV 11:4500 11215 AM MOV8/17 11:30 AM 11 000 DATE/TIME SAMPLED 7118VON T11800 11/8/CM LI ISCON LI/8noN SAMPLE SAMPLE IDENTIFICATION a 7 Moll 11/6/11 well Well 1001 istell Mell 2 USE (LAB ID #) ナ ARIOG4 LABORATORY

N 026759 ф Page. š. Date/Time Date/Time 3 Samples Received By (Print Name and Signal imples Received By (Print Name and Sign): Samples Received By (Print Name and Sign): Jate/Time Date/Time imples Relinquished By (Print Name and Sign): ampies Relinquished by (Print Name and Sign); ment #: DIV 186 1500 00:

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# SAMPLE INTEGRITY RECEIPT FORM - BURNABY

Work Order # 17 \ \ 282760

RECEIVING BASICS: Received From: Ace-Ngo	Waybill #:
SAMPLE QUANTITIES:  Coolers: Containers:	
TIME SENSITIVE ISSUES: Earliest Date Sampled: 08-Nov-17	ALREADY EXCEEDED? Yes No
Sample 10 3) use jars when available	h cooler: (record differing temperatures on the CoC next to°C (3)++=°C (4)++_=°C
Account Project Manager: Whom spoken to:	have they been notified of the above issues: Yes No Date and Time:
Additional Notes:	

Document #: SR-186-9504.001 Revision Date: July 9, 2014