AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

CLIENT NAME: MISC AGAT CLIENT ON, ON (403)

ATTENTION TO: Frank Gotz

PROJECT NO:

AGAT WORK ORDER: 13T794836

WATER ANALYSIS REVIEWED BY: Anthony Dapaah, PhD (Chem), Inorganic Lab Manager

DATE REPORTED: Dec 27, 2013

PAGES (INCLUDING COVER): 7

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

NOTES

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

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Certificate of Analysis

AGAT WORK ORDER: 13T794836

PROJECT NO:

CLIENT NAME: MISC AGAT CLIENT ON

ATTENTION TO: Frank Gotz

Water Quality Assessment

DATE RECEIVED: 2013-12-16

DATE REPORTED: 2013-12-27

		SAMPLE DESCRIPTION:		Hagersville
		SAMPLE TYPE:		Water
		DATE SAMPLED:		12/14/2013
Parameter	Unit	G / S	RDL	5059407
Electrical Conductivity	uS/cm		2	23
pH	pH Units	(6.5-8.5)	NA	6.10
Saturation pH				11.0
Langelier Index				-4.93
Total Hardness (as CaCO3)	mg/L	(80-100)	10	<10
Total Dissolved Solids	mg/L	(500)	20	<20
Alkalinity (as CaCO3)	mg/L	(30-500)	5	<5
Bicarbonate (as CaCO3)	mg/L		5	<5
Carbonate (as CaCO3)	mg/L		5	<5
Hydroxide (as CaCO3)	mg/L		5	<5
Fluoride	mg/L	1.5	0.05	<0.05
Chloride	mg/L	(250)	0.10	1.04
Nitrate as N	mg/L	10.0	0.05	0.28
Nitrite as N	mg/L	1.0	0.05	<0.05
Bromide	mg/L		0.05	<0.05
Sulphate	mg/L	(500)	0.10	0.60
Ortho Phosphate as P	mg/L		0.10	<0.10
Reactive Silica	mg/L		0.05	0.09
Ammonia as N	mg/L		0.02	0.12
Total Phosphorus	mg/L		0.05	<0.05
Total Organic Carbon	mg/L		0.5	2.5
Colour	TCU	(5)	5	<5
Turbidity	NTU	(5)	0.5	0.7
Calcium	mg/L		0.05	0.29
Magnesium	mg/L		0.05	<0.05
Sodium	mg/L	20 (200)	0.05	3.88
Potassium	mg/L		0.05	0.06
Aluminum	mg/L	(0.1)	0.004	0.006
Antimony	mg/L	0.006	0.003	<0.003
Arsenic	mg/L	0.025	0.003	<0.003
Barium	mg/L	1	0.002	<0.002

Certified By:

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Water Quality Assessment

DATE RECEIVED: 2013-12-16

DATE REPORTED: 2013-12-27

		SAMPLE DESCRIPTION:		Hagersville
		SAMPLE TYPE:		Water
		DATE SAMPLED:		12/14/2013
Parameter	Unit	G / S	RDL	5059407
Beryllium	mg/L		0.001	<0.001
Boron	mg/L	5	0.010	<0.010
Cadmium	mg/L	0.005	0.002	<0.002
Chromium	mg/L	0.05	0.003	<0.003
Cobalt	mg/L		0.001	<0.001
Copper	mg/L	(1)	0.003	<0.003
Iron	mg/L	(0.3)	0.010	<0.010
Lead	mg/L	0.01	0.002	<0.002
Manganese	mg/L	(0.05)	0.002	<0.002
Mercury	mg/L	0.001	0.0001	<0.0001
Molybdenum	mg/L		0.002	<0.002
Nickel	mg/L		0.003	<0.003
Selenium	mg/L	0.01	0.004	<0.004
Silver	mg/L		0.002	<0.002
Strontium	mg/L		0.005	<0.005
Thallium	mg/L		0.006	<0.006
Tin	mg/L		0.002	<0.002
Titanium	mg/L		0.002	<0.002
Tungsten	mg/L		0.010	<0.010
Uranium	mg/L	0.02	0.002	<0.002
Vanadium	mg/L		0.002	<0.002
Zinc	mg/L	(5)	0.005	0.006
Zirconium	mg/L		0.004	<0.004
% Difference/ Ion Balance			0.1	51.5

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to O.Reg.169/03(mg/L)

5059407 Turbidity Analysis: Please note that sample was submitted and analyzed past hold time.

Ion Balance: Due to the low level concentrations of major ions in the sample the ion balance difference QA acceptance criteria does not apply.

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Quality Assurance

CLIENT NAME: MISC AGAT CLIENT ON

AGAT WORK ORDER: 13T794836

PROJECT NO:

ATTENTION TO: Frank Gotz

Water Analysis

RPT Date: Dec 27, 2013

PARAMETER	Batch	Sample Id	DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
			Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Water Quality Assessment															
Electrical Conductivity	5058659		818	822	0.5%	< 2	106%	80%	120%	NA			NA		
pH	5058659		7.89	8.04	1.9%	N/A	102%	90%	110%	NA			NA		
Total Dissolved Solids	5059786		1400	1380	1.0%	< 20	100%	80%	120%	NA			NA		
Alkalinity (as CaCO3)	5058659		326	316	3.1%	< 5	101%	80%	120%	NA			NA		
Bicarbonate (as CaCO3)	5058659		326	316	3.1%	< 5	NA	80%	120%	NA			NA		
Carbonate (as CaCO3)	5058659		<5	<5	0.0%	< 5	NA	80%	120%	NA			NA		
Hydroxide (as CaCO3)	5058659		<5	<5	0.0%	< 5	NA	80%	120%	NA			NA		
Fluoride	5060102		<0.5	<0.5	0.0%	< 0.05	104%	90%	110%	97%	90%	110%	102%	80%	120%
Chloride	5060102		156	153	2.1%	< 0.10	96%	90%	110%	96%	90%	110%	98%	80%	120%
Nitrate as N	5060102		<0.5	<0.5	0.0%	< 0.05	92%	90%	110%	104%	90%	110%	102%	80%	120%
Nitrite as N	5060102		<0.5	<0.5	0.0%	< 0.05	NA	90%	110%	107%	90%	110%	98%	80%	120%
Bromide	5060102		<0.5	<0.5	0.0%	< 0.05	104%	90%	110%	102%	90%	110%	99%	80%	120%
Sulphate	5060102		411	403	1.9%	< 0.10	95%	90%	110%	98%	90%	110%	84%	80%	120%
Ortho Phosphate as P	5060102		<1.0	<1.0	0.0%	< 0.10	107%	90%	110%	100%	90%	110%	100%	80%	120%
Reactive Silica	1		13.6	13.9	2.2%	< 0.05	104%	90%	110%	97%	90%	110%	94%	80%	120%
Ammonia as N	1		0.71	0.68	4.3%	< 0.02	108%	90%	110%	109%	90%	110%	117%	80%	120%
Total Phosphorus	1		0.05	< 0.05	NA	< 0.05	106%	80%	120%	101%	90%	110%	97%	70%	130%
Total Organic Carbon	1		1.4	1.3	7.4%	< 0.5	97%	90%	110%	98%	90%	110%	84%	80%	120%
Colour	1	5059407	< 5	< 5	0.0%	< 5	100%	90%	110%	NA			NA		
Turbidity	1	5059407	0.7	0.7	0.0%	< 0.5	100%	90%	110%	NA			NA		
Calcium	5059407	5059407	0.29	0.27	6.7%	< 0.05	103%	90%	110%	103%	90%	110%	97%	70%	130%
Magnesium	5059407	5059407	<0.05	<0.05	0.0%	< 0.05	98%	90%	110%	98%	90%	110%	93%	70%	130%
Sodium	5059407	5059407	3.88	3.89	0.2%	< 0.05	102%	90%	110%	102%	90%	110%	97%	70%	130%
Potassium	5059407	5059407	0.06	0.08	0.0%	< 0.05	107%	90%	110%	107%	90%	110%	95%	70%	130%
Aluminum	1		< 0.004	< 0.004	0.0%	< 0.004	92%	90%	110%	96%	90%	110%	94%	70%	130%
Antimony	1		< 0.003	< 0.003	0.0%	< 0.003	97%	90%	110%	90%	90%	110%	96%	70%	130%
Arsenic	1		0.006	0.006	0.0%	< 0.003	94%	90%	110%	99%	90%	110%	104%	70%	130%
Barium	1		0.047	0.047	0.0%	< 0.002	93%	90%	110%	99%	90%	110%	100%	70%	130%
Beryllium	1		< 0.001	< 0.001	0.0%	< 0.001	95%	90%	110%	98%	90%	110%	108%	70%	130%
Boron	1		0.037	0.038	2.7%	< 0.010	100%	90%	110%	103%	90%	110%	104%	70%	130%
Cadmium	1		< 0.002	< 0.002	0.0%	< 0.002	96%	90%	110%	107%	90%	110%	100%	70%	130%
Chromium	1		< 0.003	< 0.003	0.0%	< 0.003	92%	90%	110%	96%	90%	110%	97%	70%	130%
Cobalt	1		< 0.001	< 0.001	0.0%	< 0.001	95%	90%	110%	99%	90%	110%	99%	70%	130%
Copper	1		< 0.003	< 0.003	0.0%	< 0.003	98%	90%	110%	103%	90%	110%	98%	70%	130%
Iron	1		< 0.010	< 0.010	0.0%	< 0.010	99%	90%	110%	99%	90%	110%	102%	70%	130%
Lead	1		< 0.002	< 0.002	0.0%	< 0.002	93%	90%	110%	99%	90%	110%	96%	70%	130%
Manganese	1		0.007	0.007	0.0%	< 0.002	93%	90%	110%	96%	90%	110%	99%	70%	130%
Mercury	1	5059407	<0.0001	<0.0001	0.0%	< 0.0001	97%	90%	110%	100%	90%	110%	100%	80%	120%
Molybdenum	1		< 0.002	< 0.002	0.0%	< 0.002	98%	90%	110%	96%	90%	110%	102%	70%	130%

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Quality Assurance

CLIENT NAME: MISC AGAT CLIENT ON

AGAT WORK ORDER: 13T794836

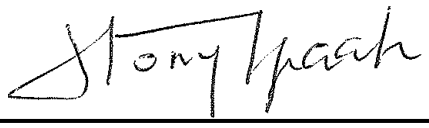
PROJECT NO:

ATTENTION TO: Frank Gotz

Water Analysis (Continued)

RPT Date: Dec 27, 2013			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Nickel	1		< 0.003	< 0.003	0.0%	< 0.003	98%	90%	110%	99%	90%	110%	99%	70%	130%
Selenium	1		< 0.004	< 0.004	0.0%	< 0.004	99%	90%	110%	99%	90%	110%	103%	70%	130%
Silver	1		< 0.002	< 0.002	0.0%	< 0.002	96%	90%	110%	110%	90%	110%	105%	70%	130%
Strontium	1		2.50	2.51	0.4%	< 0.005	90%	90%	110%	93%	90%	110%	101%	70%	130%
Thallium	1		< 0.006	< 0.006	0.0%	< 0.006	94%	90%	110%	99%	90%	110%	97%	70%	130%
Tin	1		< 0.002	< 0.002	0.0%	< 0.002	98%	90%	110%	102%	90%	110%	104%	70%	130%
Titanium	1		< 0.002	< 0.002	0.0%	< 0.002	93%	90%	110%	96%	90%	110%	98%	70%	130%
Tungsten	1		< 0.010	< 0.010	0.0%	< 0.010	99%	90%	110%	100%	90%	110%	100%	70%	130%
Uranium	1		< 0.002	< 0.002	0.0%	< 0.002	93%	90%	110%	98%	90%	110%	101%	70%	130%
Vanadium	1		< 0.002	< 0.002	0.0%	< 0.002	92%	90%	110%	97%	90%	110%	99%	70%	130%
Zinc	1		0.010	0.010	0.0%	< 0.005	96%	90%	110%	100%	90%	110%	104%	70%	130%
Zirconium	1		< 0.004	< 0.004	0.0%	< 0.004	96%	90%	110%	98%	90%	110%	103%	70%	130%

Certified By:



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Method Summary

CLIENT NAME: MISC AGAT CLIENT ON

AGAT WORK ORDER: 13T794836

PROJECT NO:

ATTENTION TO: Frank Gotz

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
Electrical Conductivity	INOR-93-6000	SM 2510 B	PC TITRATE
pH	INOR-93-6000	SM 4500-H+ B	PC TITRATE
Saturation pH		SM 2320 B	CALCULATION
Langelier Index		SM 2330B	CALCULATION
Total Hardness (as CaCO3)	MET-93-6105	EPA SW-846 6010C & 200.7	ICP/OES
Total Dissolved Solids	INOR-93-6028	SM 2540 C	BALANCE
Alkalinity (as CaCO3)	INOR-93-6000	SM 2320 B	PC TITRATE
Bicarbonate (as CaCO3)	INOR-93-6000	SM 2320 B	PC TITRATE
Carbonate (as CaCO3)	INOR-93-6000	SM 2320 B	PC TITRATE
Hydroxide (as CaCO3)	INOR-93-6000	SM 2320 B	PC TITRATE
Fluoride	INOR-93-6004	SM 4110 B	ION CHROMATOGRAPH
Chloride	INOR-93-6004	SM 4110 B	ION CHROMATOGRAPH
Nitrate as N	INOR-93-6004	SM 4110 B	ION CHROMATOGRAPH
Nitrite as N	INOR-93-6004	SM 4110 B	ION CHROMATOGRAPH
Bromide	INOR-93-6004	SM 4110 B	ION CHROMATOGRAPH
Sulphate	INOR-93-6004	SM 4110 B	ION CHROMATOGRAPH
Ortho Phosphate as P	INOR-93-6004	SM 4110 B	ION CHROMATOGRAPH
Reactive Silica	INOR-93-6047	AQ2 EPA-122A & SM 4500 SiO2 D	AQ2 DISCRETE ANALYSER
Ammonia as N	INOR-93-6002	AQ2 EPA-103A & SM 4500 NH3-F	AQ-2 DISCRETE ANALYZER
Total Phosphorus	INOR-93-6057	QuikChem 10-115-01-3-A & SM 4500-P I	LACHAT FIA
Total Organic Carbon	INOR-93-6049	EPA 415.1 & SM 5310	SHIMADZU CARBON ANALYZER
Colour	INOR-93-6046	SM 2120 B	SPECTROPHOTOMETER
Turbidity	INOR-93-6044	SM 2130 B	NEPHELOMETER
Calcium	MET-93-6105	EPA SW-846 6010C & 200.7	ICP/OES
Magnesium	MET-93-6105	EPA SW-846 6010C & 200.7	ICP/OES
Sodium	MET-93-6105	EPA SW-846 6010C & 200.7	ICP/OES
Potassium	MET-93-6105	EPA SW-846 6010C & 200.7	ICP/OES
Aluminum	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Antimony	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Arsenic	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Barium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Beryllium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Boron	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Cadmium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Chromium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Cobalt	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Copper	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Iron	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Lead	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Manganese	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Mercury	MET-93-6100	EPA SW 846 7470 & 245.1	CVAAS
Molybdenum	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Nickel	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Selenium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Silver	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Strontium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Thallium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Tin	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS

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Method Summary

CLIENT NAME: MISC AGAT CLIENT ON

AGAT WORK ORDER: 13T794836

PROJECT NO:

ATTENTION TO: Frank Gotz

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Titanium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Tungsten	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Uranium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Vanadium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Zinc	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Zirconium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
% Difference/ Ion Balance		SM 1030 E	CALCULATION

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Drinking Water Chain of Custody Record

Laboratory Use Only

Arrival Condition: ☒ Good ☐ Poor (complete notes)
Arrival Temperature: 8.3 / 7.6 / 7.7
AGAT Job Number: 13T794836
Notes:

Report Information

Company: Canadian Aquanet Network
Contact: Frank Gotz
Address: 221 Melvin Ave
Hamilton ON
Phone: 2899334689 Fax:
LSD:
Client Project #:

Report Information

1. Name: Frankie Gotz
Email: FrancGotz@yahoo.ca
2. Name:
Email:

Is this water being consumed by humans? ☐ Yes ☑ No
Has lab service notification (LSN) form been completed and submitted to the MOE/PHU? ☐ Yes ☑ No

ALL "NOTIFICATION INFORMATION" MUST BE COMPLETE BELOW UPON SUBMISSION OF SAMPLES. LABORATORY ANALYSIS WILL NOT COMMENCE UNTIL ALL INFORMATION HAS BEEN PROVIDED.

Report Format

☐ Single Sample per page
☐ Multiple Samples per page
☐ Results by Fax

Turnaround Time Required (TAT) *

Regular TAT 7 to 14 working days ☐
Rush TAT (Please provide prior notification)
5 to 7 working days ☐
3 to 5 working days ☑
1 to 3 working days ☐
Rush surcharges apply

Date Required (Rush surcharges may apply):

Requirements (Check one)

☐ O. Regulation 170
☐ O. Regulation 243
☐ O. Regulation 318/319
☐ Not Applicable
☐ Other (Please Specify)

Facility Type (Check all that are applicable)

☐ Large OR ☐ Small
☐ Residential OR ☐ Non-Residential
☐ Municipal OR ☐ Non-Municipal

+ Water Type (Specify in column below)

R: Raw
TR: Treated
D: Distribution
TP: Tap
P: Private Well

SAMPLE IDENTIFICATION/LOCATION	DATE SAMPLED	TIME SAMPLED	WATER TYPE *	# OF CONTAINERS	CHLORINE RESIDUAL (incl. Units)	STANDING	FLUSHED	COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT	Inorganics (Sch. 23)	Organics (Sch. 24)	Lead	Fluoride	Sodium	Turbidity	Nitrate, Nitrite	Trihalomethanes	E.coli, Total Coliforms	WQA		
Hagersville	12/14/13	23:00	R	1														✓		
Hagersville	12/14/13	23:00	R	1														✓		
Hagersville	12/14/13	23:00	R	1														✓		
Hagersville	12/14/13	23:00	R	1														✓		
Hagersville	12/14/13	23:00	R	1														✓		
Hagersville	12/14/13	23:00	R	1														✓		
Hagersville	12/14/13	23:00	R	1														✓		

Samples Taken By (Print Name and Sign):

* TAT is exclusive of weekends and statutory holidays. Prior arrangements must be made with the laboratory in order to submit Microbiology samples on Fridays

NOTIFICATION INFORMATION - (required to report adverse results as per the *Safe Drinking Water Act*) - **Laboratory analysis will not commence until all information is received.**

INFORMATION FOR ADVERSE REPORTING

Waterworks Name: Phone: Fax:
MOE# (ie: Waterworks #): After Hours Phone:
Contact: Address/Location (if different from client above)
Email:

MEDICAL OFFICER OF HEALTH (MOH)

Region:
PHU Contact:
Phone: Fax:
Email:

Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time
Frank Gotz Frank Gotz	Dec 16/13	N. Bray	Dec 16
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time
			12:50
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time

Pink Copy - Client
Yellow/Golden Copy - AGAT
White Copy- AGAT

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