



**CLIENT NAME: DISTRICT OF HUDSON'S HOPE
P.O. BOX 330
HUDSON, BC VOC1V0
(250) 783-9901**

ATTENTION TO: Gordon Davies A.Sc.T.

PROJECT: WT Plant Treated Water Samples 07/24

AGAT WORK ORDER: 24F177993

WATER ANALYSIS REVIEWED BY: Jennifer Liu, Analyst

DATE REPORTED: Aug 26, 2024

PAGES (INCLUDING COVER): 18

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (403) 735-2005

***Notes**

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
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- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
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- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.



Certificate of Analysis

AGAT WORK ORDER: 24F177993

PROJECT: WT Plant Treated Water Samples 07/24

2910 12TH STREET NE
 CALGARY, ALBERTA
 CANADA T2E 7P7
 TEL (403)735-2005
 FAX (403)735-2771
<http://www.agatlabs.com>

CLIENT NAME: DISTRICT OF HUDSON'S HOPE

ATTENTION TO: Gordon Davies A.Sc.T.

SAMPLING SITE:

SAMPLED BY:

British Columbia CSR - Omnibus Dissolved Metals plus Mercury - Lab Filtered (µg/L)

DATE RECEIVED: 2024-07-25

DATE REPORTED: 2024-08-26

Parameter	Unit	SAMPLE DESCRIPTION: WT Plant Treated Water		
		G / S	RDL	6028705
Dissolved Aluminum	µg/L		2	58
Dissolved Antimony	µg/L		0.2	<0.2
Dissolved Arsenic	µg/L		0.1	0.1
Dissolved Barium	µg/L		0.2	17.0
Dissolved Beryllium	µg/L		0.01	<0.01
Dissolved Boron	µg/L		2	3
Dissolved Cadmium	µg/L		0.01	<0.01
Dissolved Calcium	ug/L		70	29700
Dissolved Chromium	µg/L		0.5	<0.5
Dissolved Cobalt	µg/L		0.05	<0.05
Dissolved Copper	µg/L		0.2	1.8
Dissolved Iron	ug/L		1	<1
Dissolved Lead	µg/L		0.05	<0.05
Dissolved Lithium	µg/L		0.5	1.4
Dissolved Magnesium	ug/L		5	7400
Dissolved Manganese	ug/L		0.05	0.32
Dissolved Mercury	ug/L		0.0100	<0.0100
Dissolved Molybdenum	µg/L		0.05	0.60
Dissolved Nickel	µg/L		0.2	0.4
Dissolved Potassium	µg/L		50	575
Dissolved Selenium	µg/L		0.05	0.23
Dissolved Silver	µg/L		0.02	<0.02
Dissolved Sodium	ug/L		50	4260
Dissolved Strontium	µg/L		0.1	110
Dissolved Thallium	µg/L		0.01	<0.01
Dissolved Tin	µg/L		0.05	<0.05
Dissolved Titanium	µg/L		0.5	<0.5
Dissolved Tungsten	µg/L		0.01	<0.01

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SAMPLING SITE:

SAMPLED BY:

British Columbia CSR - Omnibus Dissolved Metals plus Mercury - Lab Filtered (µg/L)

DATE RECEIVED: 2024-07-25

DATE REPORTED: 2024-08-26

		WT Plant		
SAMPLE DESCRIPTION:		Treated Water		
SAMPLE TYPE:		Water		
DATE SAMPLED:		2024-07-24 08:50		
Parameter	Unit	G / S	RDL	6028705
Dissolved Uranium	µg/L		0.01	0.10
Dissolved Vanadium	µg/L		0.5	<0.5
Dissolved Zinc	µg/L		2	3
Lab Filtration Performed				Complete
Hardness	mg CaCO3/L		0.5	105

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard
6028705 < - Values refer to Method Detection Limit.
 Hardness is a calculated parameter. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
 Sample was lab-filtered; test results may be low-biased and are unsuitable for CSR or permittee compliance monitoring.
 Analysis performed at AGAT Calgary (unless marked by *)

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CLIENT NAME: DISTRICT OF HUDSON'S HOPE

ATTENTION TO: Gordon Davies A.Sc.T.

SAMPLING SITE:

SAMPLED BY:

British Columbia CSR - Omnibus Total Metals plus Mercury (µg/L)

DATE RECEIVED: 2024-07-25

DATE REPORTED: 2024-08-26

Parameter	Unit	WT Plant	
		G / S	RDL
SAMPLE DESCRIPTION: Treated Water		6028705	
SAMPLE TYPE: Water			
DATE SAMPLED: 2024-07-24 08:50			
Total Aluminum	ug/L	4	103
Total Antimony	ug/L	1	<1
Total Arsenic	ug/L	1	<1
Total Barium	ug/L	50	<50
Total Beryllium	ug/L	0.5	<0.5
Total Boron	ug/L	10	<10
Total Cadmium	ug/L	0.016	<0.016
Total Calcium	ug/L	50	29700
Total Chromium	ug/L	0.5	<0.5
Total Cobalt	ug/L	0.01	0.02
Total Copper	ug/L	0.8	3.3
Total Iron	ug/L	10	<10
Total Lead	ug/L	0.1	<0.1
Total Lithium	ug/L	1	1
Total Magnesium	ug/L	5	7230
Total Manganese	ug/L	0.2	0.6
Total Mercury	ug/L	0.01	<0.01
Total Molybdenum	ug/L	1	<1
Total Nickel	ug/L	3	<3
Total Potassium	ug/L	20	472
Total Selenium	ug/L	0.5	<0.5
Total Silver	ug/L	0.05	<0.05
Total Sodium	ug/L	20	3840
Total Strontium	ug/L	1	101
Total Thallium	ug/L	0.1	<0.1
Total Tin	ug/L	0.2	<0.2
Total Titanium	ug/L	1	<1
Total Tungsten	ug/L	0.1	<0.1

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SAMPLING SITE:

SAMPLED BY:

British Columbia CSR - Omnibus Total Metals plus Mercury (µg/L)

DATE RECEIVED: 2024-07-25

DATE REPORTED: 2024-08-26

Parameter	Unit	G / S	RDL	6028705
Total Uranium	ug/L		1	<1
Total Vanadium	ug/L		1	<1
Total Zinc	ug/L		4	5
Hardness, Total	mg CaCO3/L		5	104

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard
6028705 < - Values refer to Method Detection Limit.
 Hardness is a calculated parameter. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
 Analysis performed at AGAT Calgary (unless marked by *)

Certified By:



Certificate of Analysis

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CLIENT NAME: DISTRICT OF HUDSON'S HOPE

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SAMPLING SITE:

SAMPLED BY:

Mercury in Water, Total - Ultra-low Level

DATE RECEIVED: 2024-07-25

DATE REPORTED: 2024-08-26

		WT Plant		
SAMPLE DESCRIPTION:		Treated Water		
SAMPLE TYPE:		Water		
DATE SAMPLED:		2024-07-24 08:50		
Parameter	Unit	G / S	RDL	6028705
Mercury, Total, Ultra-low Level	ng/L		0.5	**

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard
Analysis performed at AGAT Halifax (unless marked by *)

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SAMPLING SITE:

SAMPLED BY:

Water Analysis - DOC

DATE RECEIVED: 2024-07-25

DATE REPORTED: 2024-08-26

		WT Plant		
SAMPLE DESCRIPTION:		Treated Water		
SAMPLE TYPE:		Water		
DATE SAMPLED:		2024-07-24 08:50		
Parameter	Unit	G / S	RDL	6028705
Dissolved Organic Carbon (DOC)	mg/L		0.5	2.2

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard
Analysis performed at AGAT Calgary (unless marked by *)

Certified By:



Certificate of Analysis

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CLIENT NAME: DISTRICT OF HUDSON'S HOPE

ATTENTION TO: Gordon Davies A.Sc.T.

SAMPLING SITE:

SAMPLED BY:

Water Package - Routine Chemistry Water Analysis - Lab Filtered Cations

DATE RECEIVED: 2024-07-25

DATE REPORTED: 2024-08-26

		WT Plant		
SAMPLE DESCRIPTION:		Treated Water		
SAMPLE TYPE:		Water		
DATE SAMPLED:		2024-07-24 08:50		
Parameter	Unit	G / S	RDL	6028705
pH	pH Units	7.0-10.5	N/A	8.30
p - Alkalinity (as CaCO3)	mg/L		5	<5
T - Alkalinity (as CaCO3)	mg/L		5	94
Bicarbonate	mg/L		5	114
Carbonate	mg/L		5	<5
Hydroxide	mg/L		5	<5
Electrical Conductivity	uS/cm		5	222
Chloride	mg/L	(250)	1.0	5.1
Fluoride	mg/L	1.5	0.01	0.02
Nitrate	mg/L	45	0.5	<0.5
Nitrate-N	mg/L	10	0.02	<0.02
Nitrite	mg/L	3	0.05	<0.05
Nitrite-N	mg/L	1	0.01	<0.01
Nitrate+Nitrite - Nitrogen	mg/L		0.02	<0.02
Sulfate	mg/L	(500)	1.0	15.3
Dissolved Calcium	mg/L		0.07	29.7
Dissolved Magnesium	mg/L		0.05	7.40
Dissolved Sodium	mg/L	(200)	0.05	4.26
Dissolved Potassium	mg/L		0.05	0.57
Dissolved Iron	mg/L	(0.3)	0.001	<0.001
Dissolved Manganese	mg/L		0.00005	0.00032
Sodium Adsorption Ratio				0.18
Calculated TDS	mg/L		0.6	118
Hardness	mg CaCO3/L		0.5	105
Ion Balance	%		1	98
Lab Filtration on Routine for IC				Complete
Lab Filtration on Routine for Metals				Complete

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SAMPLING SITE:

SAMPLED BY:

Water Package - Routine Chemistry Water Analysis - Lab Filtered Cations

DATE RECEIVED: 2024-07-25

DATE REPORTED: 2024-08-26

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to 2024 Canadian Drinking Water Quality MAC (AO)
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.

6028705 < - Values refer to Report Detection Limits.
SAR is a calculated parameter. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
If sodium results in mg/L are less than detection, SAR is non-calculable and is reported as 0.
Ion Balance is a calculated parameter. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
Hardness is a calculated parameter. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
Calculated TDS is a calculated parameter. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

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Certified By:

Quality Assurance

CLIENT NAME: DISTRICT OF HUDSON'S HOPE
PROJECT: WT Plant Treated Water Samples 07/24
SAMPLING SITE:

AGAT WORK ORDER: 24F177993
ATTENTION TO: Gordon Davies A.Sc.T.
SAMPLED BY:

Water Analysis																
RPT Date: Aug 26, 2024			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits		
								Lower	Upper		Lower	Upper		Lower	Upper	

Water Package - Routine Chemistry Water Analysis - Lab Filtered Cations

pH	6029990	6029990	7.69	7.70	0.1%	N/A	101%	90%	110%						
p - Alkalinity (as CaCO3)	6029990	6029990	<5	<5	NA	< 5	NA	80%	120%						
T - Alkalinity (as CaCO3)	6029990	6029990	270	263	2.5%	< 5	86%	80%	120%						
Bicarbonate	6029990	6029990	329	321	2.5%	< 5									
Carbonate	6029990	6029990	<5	<5	NA	< 5									
Hydroxide	6029990	6029990	<5	<5	NA	< 5									
Electrical Conductivity	6029990	6029990	10400	10500	0.5%	< 5	103%	90%	110%						
Chloride	6028635	6028635	<1.0	<1.0	NA	< 1.0	98%	70%	130%	90%	80%	120%	86%	70%	130%
Fluoride	6028635	6028635	<0.01	<0.01	NA	< 0.01	97%	70%	130%	100%	80%	120%	91%	70%	130%
Nitrate	6028635	6028635	<0.5	<0.5	NA	< 0.5	98%	70%	130%	94%	80%	120%	92%	70%	130%
Nitrite	6028635	6028635	<0.05	<0.05	NA	< 0.05	98%	70%	130%	92%	80%	120%	91%	70%	130%
Sulfate	6028635	6028635	<1.0	<1.0	NA	< 1.0	101%	70%	130%	99%	80%	120%	96%	70%	130%
Dissolved Calcium	6031206	6031206	62.3	61.8	0.9%	< 0.07	105%	70%	130%	NA	80%	120%	NA	70%	130%
Dissolved Magnesium	6031206	6031206	5.00	4.98	0.5%	< 0.05	98%	70%	130%	NA	80%	120%	107%	70%	130%
Dissolved Sodium	6031206	6031206	22.8	22.7	0.6%	< 0.05	100%	70%	130%	NA	80%	120%	114%	70%	130%
Dissolved Potassium	6031206	6031206	3.00	3.03	1.0%	< 0.05	99%	70%	130%	NA	80%	120%	102%	70%	130%
Dissolved Iron	6031206	6031206	2.44	2.47	1.2%	< 0.001	99%	70%	130%	NA	80%	120%	101%	70%	130%
Dissolved Manganese	6031206	6031206	4.77	4.79	0.4%	< 0.00005	96%	70%	130%	NA	80%	120%	NA	70%	130%

Comments: Matrix spike NA: Spike level < native concentration. Matrix spike acceptance limits do not apply and are not calculated.
 Duplicate NA: results are less than 5X the RDL and RDP will not be calculated.

pH has been analyzed past the recommended holding time of 15 minutes from sampling (field measurement ideal if more accurate data required)

Nitrate and Nitrite: The regulatory hold time for the analysis of nitrate and/or nitrite in water is 72 hours.

British Columbia CSR - Omnibus Dissolved Metals plus Mercury - Lab Filtered (µg/L)

Dissolved Aluminum	6031206	6031206	5	5	NA	< 2	102%	70%	130%	NA	80%	120%	95%	70%	130%
Dissolved Antimony	6031206	6031206	<0.2	<0.2	NA	< 0.2	94%	70%	130%	NA	80%	120%	96%	70%	130%
Dissolved Arsenic	6031206	6031206	1.2	1.2	2.0%	< 0.1	99%	70%	130%	NA	80%	120%	101%	70%	130%
Dissolved Barium	6031206	6031206	125	124	0.3%	< 0.2	98%	70%	130%	NA	80%	120%	109%	70%	130%
Dissolved Beryllium	6031206	6031206	<0.01	<0.01	NA	< 0.01	99%	70%	130%	NA	80%	120%	97%	70%	130%
Dissolved Boron	6031206	6031206	24	23	2.4%	< 2	100%	70%	130%	NA	80%	120%	94%	70%	130%
Dissolved Cadmium	6031206	6031206	0.07	0.06	15.4%	< 0.01	96%	70%	130%	NA	80%	120%	99%	70%	130%
Dissolved Calcium	6031206	6031206	62300	61800	0.9%	< 70	105%	70%	130%	NA	80%	120%	NA	70%	130%
Dissolved Chromium	6031206	6031206	<0.5	<0.5	NA	< 0.5	96%	70%	130%	NA	80%	120%	97%	70%	130%
Dissolved Cobalt	6031206	6031206	4.56	4.58	0.4%	< 0.05	107%	70%	130%	NA	80%	120%	107%	70%	130%
Dissolved Copper	6031206	6031206	<0.2	<0.2	NA	< 0.2	107%	70%	130%	NA	80%	120%	105%	70%	130%
Dissolved Iron	6031206	6031206	244	247	1.2%	< 1	99%	70%	130%	NA	80%	120%	101%	70%	130%
Dissolved Lead	6031206	6031206	<0.05	<0.05	NA	< 0.05	106%	70%	130%	NA	80%	120%	124%	70%	130%
Dissolved Lithium	6031206	6031206	0.8	0.7	NA	< 0.5	108%	70%	130%	NA	80%	120%	106%	70%	130%
Dissolved Magnesium	6031206	6031206	5000	4980	0.5%	< 5	98%	70%	130%	NA	80%	120%	107%	70%	130%

Quality Assurance

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SAMPLING SITE:

AGAT WORK ORDER: 24F177993
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SAMPLED BY:

Water Analysis (Continued)																
RPT Date: Aug 26, 2024			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits		
								Lower	Upper		Lower	Upper		Lower	Upper	
Dissolved Manganese	6031206	6031206	4770	4790	0.4%	< 0.05	96%	70%	130%	NA	80%	120%	NA	70%	130%	
Dissolved Mercury	6031206	6031206	<0.0100	<0.0100	NA	< 0.0100	102%	70%	130%	NA	80%	120%	102%	70%	130%	
Dissolved Molybdenum	6031206	6031206	1.85	1.91	3.1%	< 0.05	89%	70%	130%	NA	80%	120%	90%	70%	130%	
Dissolved Nickel	6031206	6031206	5.1	5.2	1.2%	< 0.2	102%	70%	130%	NA	80%	120%	91%	70%	130%	
Dissolved Potassium	6031206	6031206	3000	3030	1.0%	< 50	99%	70%	130%	NA	80%	120%	102%	70%	130%	
Dissolved Selenium	6031206	6031206	0.14	0.15	NA	< 0.05	104%	70%	130%	NA	80%	120%	105%	70%	130%	
Dissolved Silver	6031206	6031206	<0.02	<0.02	NA	< 0.02	97%	70%	130%	NA	80%	120%	98%	70%	130%	
Dissolved Sodium	6031206	6031206	22800	22700	0.6%	< 50	100%	70%	130%	NA	80%	120%	114%	70%	130%	
Dissolved Strontium	6031206	6031206	231	233	0.9%	< 0.1	98%	70%	130%	NA	80%	120%	120%	70%	130%	
Dissolved Thallium	6031206	6031206	0.04	0.04	NA	< 0.01	104%	70%	130%	NA	80%	120%	105%	70%	130%	
Dissolved Tin	6031206	6031206	0.06	0.05	NA	< 0.05	94%	70%	130%	NA	80%	120%	97%	70%	130%	
Dissolved Titanium	6031206	6031206	<0.5	<0.5	NA	< 0.5	92%	70%	130%	NA	80%	120%	92%	70%	130%	
Dissolved Tungsten	6031206	6031206	0.02	0.02	NA	< 0.01	101%	70%	130%	NA	80%	120%	101%	70%	130%	
Dissolved Uranium	6031206	6031206	0.39	0.40	2.2%	< 0.01	99%	70%	130%	NA	80%	120%	101%	70%	130%	
Dissolved Vanadium	6031206	6031206	<0.5	<0.5	NA	< 0.5	95%	70%	130%	NA	80%	120%	97%	70%	130%	
Dissolved Zinc	6031206	6031206	16	17	1.7%	< 2	107%	70%	130%	NA	80%	120%	104%	70%	130%	

Comments: Matrix spike NA: Spike level < native concentration. Matrix spike acceptance limits do not apply and are not calculated.
 Duplicate NA: results are less than 5X the RDL and RDP will not be calculated.

British Columbia CSR - Omnibus Total Metals plus Mercury (µg/L)

Total Aluminum	6041918	6041918	10	14	NA	0.016	100%	70%	130%	NA	80%	120%	88%	70%	130%
Total Antimony	6041918	6041918	<1	<1	NA	< 1	100%	70%	130%	NA	80%	120%	92%	70%	130%
Total Arsenic	6041918	6041918	2	2	NA	< 1	100%	70%	130%	NA	80%	120%	96%	70%	130%
Total Barium	6041918	6041918	120	119	NA	< 50	111%	70%	130%	NA	80%	120%	100%	70%	130%
Total Beryllium	6041918	6041918	<0.5	<0.5	NA	< 0.5	84%	70%	130%	NA	80%	120%	80%	70%	130%
Total Boron	6041918	6041918	<10	<10	NA	< 10	94%	70%	130%	NA	80%	120%	85%	70%	130%
Total Cadmium	6041918	6041918	<0.016	<0.016	NA	< 0.016	100%	70%	130%	NA	80%	120%	96%	70%	130%
Total Calcium	6041918	6041918	45300	46400	2.5%	< 50	100%	70%	130%	NA	80%	120%	NA	70%	130%
Total Chromium	6041918	6041918	<0.5	<0.5	NA	0.0008	96%	70%	130%	NA	80%	120%	91%	70%	130%
Total Cobalt	6041918	6041918	0.02	0.03	NA	< 0.01	110%	70%	130%	NA	80%	120%	105%	70%	130%
Total Copper	6041918	6041918	<0.8	<0.8	NA	< 0.8	110%	70%	130%	NA	80%	120%	102%	70%	130%
Total Iron	6041918	6041918	120	125	4.3%	< 10	104%	70%	130%	NA	80%	120%	95%	70%	130%
Total Lead	6041918	6041918	<0.1	<0.1	NA	< 0.1	101%	70%	130%	NA	80%	120%	94%	70%	130%
Total Lithium	6041918	6041918	6	6	2.7%	< 1	93%	70%	130%	NA	80%	120%	87%	70%	130%
Total Magnesium	6041918	6041918	14800	14500	2.0%	< 5	99%	70%	130%	NA	80%	120%	96%	70%	130%
Total Manganese	6041918	6041918	69.7	69.3	0.6%	< 0.2	100%	70%	130%	NA	80%	120%	88%	70%	130%
Total Mercury	6041918	6041918	<0.01	<0.01	NA	< 0.01	98%	70%	130%	NA	80%	120%	90%	70%	130%
Total Molybdenum	6041918	6041918	2	2	NA	< 1	97%	70%	130%	NA	80%	120%	91%	70%	130%
Total Nickel	6041918	6041918	<3	<3	NA	< 3	106%	70%	130%	NA	80%	120%	103%	70%	130%

Quality Assurance

CLIENT NAME: DISTRICT OF HUDSON'S HOPE
PROJECT: WT Plant Treated Water Samples 07/24
SAMPLING SITE:

AGAT WORK ORDER: 24F177993
ATTENTION TO: Gordon Davies A.Sc.T.
SAMPLED BY:

Water Analysis (Continued)

RPT Date: Aug 26, 2024			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits		
								Lower	Upper		Lower	Upper		Lower	Upper	
Total Potassium	6041918	6041918	852	866	1.6%	< 20	94%	70%	130%	NA	80%	120%	90%	70%	130%	
Total Selenium	6041918	6041918	<0.5	<0.5	NA	< 0.5	103%	70%	130%	NA	80%	120%	100%	70%	130%	
Total Silver	6041918	6041918	<0.05	<0.05	NA	< 0.05	109%	70%	130%	NA	80%	120%	93%	70%	130%	
Total Sodium	6041918	6041918	5500	5340	2.9%	< 20	105%	70%	130%	NA	80%	120%	111%	70%	130%	
Total Strontium	6041918	6041918	106	104	1.5%	< 1	96%	70%	130%	NA	80%	120%	112%	70%	130%	
Total Thallium	6041918	6041918	<0.1	<0.1	NA	< 0.1	100%	70%	130%	NA	80%	120%	95%	70%	130%	
Total Tin	6041918	6041918	<0.2	<0.2	NA	< 0.2	100%	70%	130%	NA	80%	120%	94%	70%	130%	
Total Titanium	6041918	6041918	<1	<1	NA	< 1	90%	70%	130%	NA	80%	120%	84%	70%	130%	
Total Tungsten	6041918	6041918	<0.1	<0.1	NA	< 0.1	98%	70%	130%	NA	80%	120%	91%	70%	130%	
Total Uranium	6041918	6041918	<1	<1	NA	< 1	99%	70%	130%	NA	80%	120%	93%	70%	130%	
Total Vanadium	6041918	6041918	<1	<1	NA	< 1	98%	70%	130%	NA	80%	120%	93%	70%	130%	
Total Zinc	6041918	6041918	<4	6	NA	< 4	112%	70%	130%	NA	80%	120%	95%	70%	130%	

Comments: Matrix spike NA: Spike level < native concentration. Matrix spike acceptance limits do not apply and are not calculated.
 Duplicate NA: results are less than 5X the RDL and RDP will not be calculated.

Water Analysis - DOC

Dissolved Organic Carbon (DOC)	6029989	6029989	11.4	11.3	0.5%	< 0.5	102%	80%	120%	102%	80%	120%	99%	80%	120%
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Comments: Matrix spike NA: Spike level < native concentration. Matrix spike acceptance limits do not apply and are not calculated.
 Duplicate NA: results are less than 5X the RDL and RDP will not be calculated.

Certified By:



Method Summary

CLIENT NAME: DISTRICT OF HUDSON'S HOPE
PROJECT: WT Plant Treated Water Samples 07/24
SAMPLING SITE:

AGAT WORK ORDER: 24F177993
ATTENTION TO: Gordon Davies A.Sc.T.
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
Dissolved Aluminum	INST 0141	SM 3125 B	ICP-MS
Dissolved Antimony	INST 0141	SM 3125 B	ICP-MS
Dissolved Arsenic	INST 0141	SM 3125 B	ICP-MS
Dissolved Barium	INST 0141	SM 3125 B	ICP-MS
Dissolved Beryllium	INST 0141	SM 3125 B	ICP-MS
Dissolved Boron	INST 0141	SM 3125 B	ICP-MS
Dissolved Cadmium	INST 0141	SM 3125 B	ICP-MS
Dissolved Calcium	INST 0141	SM 3125 B	ICP-MS
Dissolved Chromium	INST 0141	SM 3125 B	ICP-MS
Dissolved Cobalt	INST 0141	SM 3125 B	ICP-MS
Dissolved Copper	INST 0141	SM 3125 B	ICP-MS
Dissolved Iron	INST 0141	SM 3125 B	ICP-MS
Dissolved Lead	INST 0141	SM 3125 B	ICP-MS
Dissolved Lithium	INST 0141	SM 3125 B	ICP-MS
Dissolved Magnesium	INST 0141	SM 3125 B	ICP-MS
Dissolved Manganese	INST 0141	SM 3125 B	ICP-MS
Dissolved Mercury	INST 0141	SM 3125 B	ICP-MS
Dissolved Molybdenum	INST 0141	SM 3125 B	ICP-MS
Dissolved Nickel	INST 0141	SM 3125 B	ICP-MS
Dissolved Potassium	INST 0141	SM 3125 B	ICP-MS
Dissolved Selenium	INST 0141	SM 3125 B	ICP-MS
Dissolved Silver	INST 0141	SM 3125 B	ICP-MS
Dissolved Sodium	INST 0141	SM 3125 B	ICP-MS
Dissolved Strontium	INST 0141	SM 3125 B	ICP-MS
Dissolved Thallium	INST 0141	SM 3125 B	ICP-MS
Dissolved Tin	INST 0141	SM 3125 B	ICP-MS
Dissolved Titanium	INST 0141	SM 3125 B	ICP-MS
Dissolved Tungsten	INST 0141	SM 3125 B	ICP-MS
Dissolved Uranium	INST 0141	SM 3125 B	ICP-MS
Dissolved Vanadium	INST 0141	SM 3125 B	ICP-MS
Dissolved Zinc	INST 0141	SM 3125 B	ICP-MS
Lab Filtration Performed			N/A
Total Aluminum	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Antimony	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Arsenic	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Barium	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Beryllium	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Boron	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Cadmium	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Calcium	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Chromium	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Cobalt	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Copper	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Iron	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Lead	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Lithium	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Magnesium	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Manganese	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Mercury	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS

Method Summary

CLIENT NAME: DISTRICT OF HUDSON'S HOPE
 PROJECT: WT Plant Treated Water Samples 07/24
 SAMPLING SITE:

AGAT WORK ORDER: 24F177993
 ATTENTION TO: Gordon Davies A.Sc.T.
 SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Total Molybdenum	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP/MS
Total Nickel	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Potassium	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Selenium	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Silver	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Sodium	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Strontium	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Thallium	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Tin	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Titanium	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Tungsten	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Uranium	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Vanadium	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Zinc	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Mercury, Total, Ultra-low Level	MET-121-6114 & MET-121-6115	Modified from EPA 1631	CV/AFS
Dissolved Organic Carbon (DOC)	INST 0170	SM 5310 B	COMBUSTION
pH	INST 0101, INST 0104	SM 4500 H+	PH METER
p - Alkalinity (as CaCO ₃)	INST-0100, INST-0101	SM 2320 B	TITRATION
T - Alkalinity (as CaCO ₃)	INST-0100, INST-0101	SM 2320 B	TITRATION
Bicarbonate	INST 0101	SM 2320 B	PC TITRATE
Carbonate	INST 0101	SM 2320 B	PC TITRATE
Hydroxide	INST 0101	SM 2320 B	PC TITRATE
Electrical Conductivity	INST 0101, INST 0120	SM 2510 B	CONDUCTIVITY METER
Chloride	INST 0150	SM 4110 B	ION CHROMATOGRAPH
Fluoride	INST 0150	SM 4110 B	ION CHROMATOGRAPH
Nitrate	INST 0150	SM 4110 B	ION CHROMATOGRAPH
Nitrate-N	INST 0150	SM 4110 B	CALCULATION
Nitrite	INST 0150	SM 4110 B	ION CHROMATOGRAPH
Nitrite-N	INST 0150	SM 4110 B	CALCULATION
Nitrate+Nitrite - Nitrogen	INST 0150	SM 4110 B	CALCULATION
Sulfate	INST 0150	SM 4110 B	ION CHROMATOGRAPH
Sodium Adsorption Ratio		CARTER & GREGORICH 2007	CALCULATION
Calculated TDS		SM 1030E	CALCULATION
Hardness		SM 2340 B	CALCULATION
Ion Balance		SM 1030E	CALCULATION
Lab Filtration on Routine for IC			N/A
Lab Filtration on Routine for Metals			N/A



AGAT Laboratories

SAMPLE INTEGRITY RECEIPT FORM

RECEIVING BASICS - Shipping

Company/Consultant: District of Hudson's Hope
 Courier: Jens Prepaid Collect
 Waybill# _____
 Branch: EDM GP FN FM RD VAN LYD FSJ EST SASK Other: _____
 If multiple sites were submitted at once: Yes No
 Custody Seal Intact: Yes No NA
 TAT: <24hr 24-48hr 48-72hr Rep Other _____
 Cooler Quantity: 1 x 5

TIME SENSITIVE ISSUES - Shipping

ALREADY EXCEEDED HOLD TIME? Yes No
 Inorganic Tests (Please Circle): Mibi , BOD , Nitrate/Nitrite , Turbidity ,
 Color , Microtox , Ortho PO4 , Tedlar Bag , Residual Chlorine , Chlorophyll* ,
 Chloroamines* ultra LL HS
 Earliest Expiry: 12/12/20
 Hydrocarbons: Earliest Expiry _____

SAMPLE INTEGRITY - Shipping

Hazardous Samples: YES NO Precaution Taken: _____
 Legal Samples: Yes No
 International Samples: Yes No
 Tape Sealed: Yes No
 Coolant Used: Icepack Bagged Ice Free Ice Free Water None

Temperature (Bottles/Jars only) N/A if only Soil Bags Received

FROZEN (Please Circle if samples received Frozen) 1.5°C

1 (Bottle/Jar) 1.5 + " + " = " °C 2 (Bottle/Jar) 1.5 + " + " = " °C
 3 (Bottle/Jar) 1.5 + " + " = " °C 4 (Bottle/Jar) ___ + ___ + ___ = ___ °C
 5 (Bottle/Jar) ___ + ___ + ___ = ___ °C 6 (Bottle/Jar) ___ + ___ + ___ = ___ °C
 7 (Bottle/Jar) ___ + ___ + ___ = ___ °C 8 (Bottle/Jar) ___ + ___ + ___ = ___ °C
 9 (Bottle/Jar) ___ + ___ + ___ = ___ °C 10 (Bottle/Jar) ___ + ___ + ___ = ___ °C

(If more than 10 coolers are received use another sheet of paper and attach)

LOGISTICS USE ONLY

Workorder No: _____
 Samples Damaged: Yes No If YES why?
 No Bubble Wrap Frozen Courier
 Other: _____
 Account Project Manager: _____ have they been notified of the
 above issues: Yes No
 Whom spoken to: _____ Date/Time: _____
 CPM Initial _____
 General Comments: _____

* Subcontracted Analysis (See CPM)

AGAT Laboratories

SAMPLE INTEGRITY RECEIPT FORM

Date: July 24/24 COC#: 167389

RECEIVING BASICS - Shipping

Company/Consultant: District of Hudson's Hope
 Courier: Client D/O Prepaid Collect
 Waybill# _____
 Branch: EDM GP FN FM RD VAN LYD FSJ EST SASK Other: _____
 If multiple sites were submitted at once: Yes No
 Custody Seal Intact: Yes No NA
 TAT: <24hr 24-48hr 48-72hr Reg Other Not indicated
 Cooler Quantity: 1

TIME SENSITIVE ISSUES - Shipping

ALREADY EXCEEDED HOLD TIME? Yes No
 Inorganic Tests (Please Circle): Mibi, BOD, Nitrate/Nitrite, Turbidity, Color, Microtox, Ortho PO4, Tedlar Bag, Residual Chlorine, Chlorophyll*, Chloroamines*
 Earliest Expiry: _____
 Hydrocarbons: Earliest Expiry _____

SAMPLE INTEGRITY - Shipping

Hazardous Samples: YES NO Precaution Taken: _____
 Legal Samples: Yes No
 International Samples: Yes No
 Tape Sealed: Yes No
 Coolant Used: Icepack Bagged Ice Free Ice Free Water None

Temperature (Bottles/Jars only) N/A if only Soil Bags Received

FROZEN (Please Circle if samples received Frozen)

1 (Bottle/Jar) 10+11+117 = ____ °C 2 (Bottle/Jar) ____ + ____ + ____ = ____ °C
 3 (Bottle/Jar) ____ + ____ + ____ = ____ °C 4 (Bottle/Jar) ____ + ____ + ____ = ____ °C
 5 (Bottle/Jar) ____ + ____ + ____ = ____ °C 6 (Bottle/Jar) ____ + ____ + ____ = ____ °C
 7 (Bottle/Jar) ____ + ____ + ____ = ____ °C 8 (Bottle/Jar) ____ + ____ + ____ = ____ °C
 9 (Bottle/Jar) ____ + ____ + ____ = ____ °C 10 (Bottle/Jar) ____ + ____ + ____ = ____ °C

(If more than 10 coolers are received use another sheet of paper and attach)

LOGISTICS USE ONLY

Workorder No: _____
 Samples Damaged: Yes No If YES why?
 No Bubble Wrap Frozen Courier
 Other: _____
 Account Project Manager: _____ have they been notified of the above issues: Yes No
 Whom spoken to: _____ Date/Time: _____
 CPM Initial _____
 General Comments: 1 SM 'FY

 Sent to: 2910 Burnaby Edm 6310 OTHER: _____
 Courier: Jay 200 Waybill: _____

* Subcontracted Analysis (See CPM)



JAZOO EXPRESS COURIER

www.jazooCourier.com

CLIENT USE ONLY			
Contact Name:	BRADY J.	Contact Location:	FSJ
Date:	JULY 24, 2024	Delivery From:	10316 - 94TH AVE, FORT ST. JOHN BC, V1J 4X3
Total # Items:	16	Delivery To:	AGAT Env: 2910 12ST NE, CALGARY AB, T2E 7P7
		Item	2 CM COOLERS
		Description:	3 MED COOLERS
		envelope, sm./med/lg box, cooler, etc.	5 BOX BUNDLES; 6 20L PAILS
Authorized Shipper Signature:		Job/PO/Reference #:	
DRIVER USE ONLY			
P/U Driver Name:	Nessa	P/U Time:	am
# Items P/U:	16	D/O Time:	4-55 am
Overweight		TDG	pm
5 LG COOLERS, 4 BOX, 6 PAILS 3 MED COOLERS, 2 SM. COOLERS			
Total # Items Dropped Off:		D/O Driver Name:	57
Authorized Receiver Signature:			
HOTSHOT DETAILS			
Total Km:		Or Total Charge (\$):	
OFFICE USE ONLY			
Verified By:		Invoiced By:	
To schedule a pickup please contact dispatch at the city nearest you:			
Calgary	403-660-5504	Fort McMurray	587-645-6364
Edmonton	780-903-3628	Grande Prairie	587-297-8406
THANK YOU FOR SUPPORTING LOCAL AND CHOOSING JAZOO EXPRESS COURIER.			

Document ID: SR-50-9508.004

Date Revised: November 7, 2019