



Laboratory Report of Analysis

To: ADEC-Air & Water Quality
610 University Drive
Fairbanks, AK 99709
(907)451-2141

Report Number: **1222681**

Client Project: **WHADA**

Dear Morgan Brown,

Enclosed are the results of the analytical services performed under the referenced project for the received samples and associated QC as applicable. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of ten years in the event they are required for future reference. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. Any samples submitted to our laboratory will be retained for a maximum of fourteen (14) days from the date of this report unless other archiving requirements were included in the quote.

If there are any questions about the report or services performed during this project, please call Alexandra at (907) 562-2343. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS North America Inc. for your analytical services. We look forward to working with you again on any additional analytical needs.

Sincerely,
SGS North America Inc.

Alexandra Lambe
Project Manager
Alexandra.Lambe@sgs.com

Date

Case Narrative

SGS Client: **ADEC-Air & Water Quality**

SGS Project: **1222681**

Project Name/Site: **WHADA**

Project Contact: **Morgan Brown**

22-464

Refer to sample receipt form for information on sample condition.

*QC comments may be associated with the field samples found in this report. When applicable, comments will be applied to associated field samples.

Print Date: 06/07/2022 3:02:07PM

Laboratory Qualifiers

Enclosed are the analytical results associated with the above work order. The results apply to the samples as received. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. This document is issued by the Company under its General Conditions of Service accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the context or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 DW Chemistry (Provisionally Certified as of 05/31/2022 for Fluoride by EPA 300.0 and Nitrate as N by SM 4500NO3-F) & Microbiology & 17-021 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020B, 7470A, 7471B, 8015C, 8021B, 8082A, 8260D, 8270D, 8270D-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). SGS is only certified for the analytes listed on our Drinking Water Certification (DW methods: 200.8, 2130B, 2320B, 2510B, 300.0, 4500-CN-C,E, 4500-H-B, 4500-NO3-F, 4500-P-E and 524.2) and only those analytes will be reported to the State of Alaska for compliance. Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, other regulatory authorities.

The following descriptors or qualifiers may be found in your report:

*	The analyte has exceeded allowable regulatory or control limits.
!	Surrogate out of control limits.
B	Indicates the analyte is found in a blank associated with the sample.
CCV/CVA/CVB	Continuing Calibration Verification
CCCV/CVC/CVCA/CVCB	Closing Continuing Calibration Verification
CL	Control Limit
DF	Analytical Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
GT	Greater Than
IB	Instrument Blank
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LLQC/LLIQC	Low Level Quantitation Check
LOD	Limit of Detection (i.e., 1/2 of the LOQ)
LOQ	Limit of Quantitation (i.e., reporting or practical quantitation limit)
LT	Less Than
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
RPD	Relative Percent Difference
TNTC	Too Numerous To Count
U	Indicates the analyte was analyzed for but not detected.

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content. All DRO/RRO analyses are integrated per SOP.

Sample Summary

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Collected</u>	<u>Received</u>	<u>Matrix</u>
WHADA-SoCr-0.05	1222681001	06/02/2022	06/02/2022	Water (Surface, Eff., Ground)

<u>Method</u>	<u>Method Description</u>
SM21 9223B	E Coli LT2 (Colilert Quant)
SM21 9222D	Fecal Coliform (MF)

Print Date: 06/07/2022 3:02:10PM

Detectable Results Summary

Client Sample ID: **WHADA-SoCr-0.05**

Lab Sample ID: 1222681001

Microbiology Laboratory

Parameter

E. Coli

Fecal Coliform

Result

33

25

Units

MPN/100mL

col/100mL



Results of **WHADA-SoCr-0.05**

Client Sample ID: **WHADA-SoCr-0.05**
Client Project ID: **WHADA**
Lab Sample ID: 1222681001
Lab Project ID: 1222681

Collection Date: 06/02/22 09:20
Received Date: 06/02/22 12:43
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Microbiology Laboratory**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Fecal Coliform	25	1.67	1.67	col/100mL	1		06/02/22 15:43

Batch Information

Analytical Batch: BTF19577
Analytical Method: SM21 9222D
Analyst: M.A
Analytical Date/Time: 06/02/22 15:43
Container ID: 1222681001-A

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
E. Coli	33	1	1	MPN/100r	1		06/02/22 15:53

Batch Information

Analytical Batch: BTF19586
Analytical Method: SM21 9223B
Analyst: M.A
Analytical Date/Time: 06/02/22 15:53
Container ID: 1222681001-B

Print Date: 06/07/2022 3:02:13PM

Method Blank

Blank ID: MB for HBN 1836918 [BTF/19577]

Blank Lab ID: 1666539

QC for Samples:

1222681001

Matrix: Water (Surface, Eff., Ground)

Results by SM21 9222D

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Fecal Coliform	1.00U	1.00	1.00	col/100mL

Batch Information

Analytical Batch: BTF19577

Analytical Method: SM21 9222D

Instrument:

Analyst: M.A

Analytical Date/Time: 6/2/2022 3:43:00PM

Print Date: 06/07/2022 3:02:14PM

Method Blank

Blank ID: MB for HBN 1836918 [BTF/19577]

Blank Lab ID: 1666541

QC for Samples:

1222681001

Matrix: Water (Surface, Eff., Ground)

Results by SM21 9222D

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Fecal Coliform	1.00U	1.00	1.00	col/100mL

Batch Information

Analytical Batch: BTF19577

Analytical Method: SM21 9222D

Instrument:

Analyst: M.A

Analytical Date/Time: 6/2/2022 5:15:00PM

Print Date: 06/07/2022 3:02:14PM

Method Blank

Blank ID: MB for HBN 1837167 [BTF/19586]

Blank Lab ID: 1666847

QC for Samples:

1222681001

Matrix: Water (Surface, Eff., Ground)

Results by SM21 9223B

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
E. Coli	1U	1	1	MPN/100m

Batch Information

Analytical Batch: BTF19586

Analytical Method: SM21 9223B

Instrument:

Analyst: M.A

Analytical Date/Time: 6/2/2022 12:21:00PM

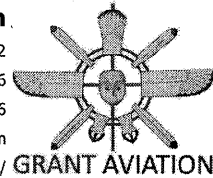
Print Date: 06/07/2022 3:02:18PM

AIRBILL 9952272

I hereby declare that the goods contained herein do not contain dangerous goods.

Signed..... Date

Grant Aviation
 6420 Kulis Dr. Anchorage, AK 99502
Phone: 1 (888) 359-4726
Freephone: 1 (888) 359-4726
Email: res@flygrant.com
Web: http://www.flygrant.com/



FREIGHT DETAILS

FROM/TO: Kenai -> Anchorage International

Flight Departs: Jun 2 22 10:40 AM

Receiver: allie lsmbe
 907-550-3217

Sender: ADE
 907-741-1026

Accepted: Thu, Jun 2 22 10:06:00 AM

Description & Comment	Quan.	Wgt.	Handle Fee	Hazmat Fee	Total
Standard Freight	1	7	-	-	\$28.24
Total Tax:					\$1.76
Total Payments made:					\$30.00
Total Unpaid:					\$0.00

Received in good condition by:

CUSTOMER COPY

AIRBILL 9952272

I hereby declare that the goods contained herein do not contain dangerous goods.

Signed..... Date

Grant Aviation
 6420 Kulis Dr. Anchorage, AK 99502
Phone: 1 (888) 359-4726
Freephone: 1 (888) 359-4726
Email: res@flygrant.com
Web: http://www.flygrant.com/



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Accepted: Thu, Jun 2 22 10:06:00 AM

Description & Comment	Quan.	Wgt.	Handle Fee	Hazmat Fee	Total
Standard Freight	1	7	-	-	\$28.24
TAX: Federal Excise Tax					\$1.76
Total Payments made:					\$30.00
Total Unpaid:					\$0.00

TERMS AND CONDITIONS

Consignemnt Note Text



Sample Containers and Preservatives

<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>	<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>
1222681001-A	Na2S2O3 for Chlorine Redu	OK			
1222681001-B	Na2S2O3 for Chlorine Redu	OK			

Container Condition Glossary

Containers for bacteriological, low level mercury and VOA vials are not opened prior to analysis and will be assigned condition code OK unless evidence indicates than an inappropriate container was submitted.

OK - The container was received at an acceptable pH for the analysis requested.

BU - The container was received with headspace greater than 6mm.

DM - The container was received damaged.

FR - The container was received frozen and not usable for Bacteria or BOD analyses.

IC - The container provided for microbiology analysis was not a laboratory-supplied, pre-sterilized container and therefore was not suitable for analysis.

NC- The container provided was not preserved or was under-preserved. The method does not allow for additional preservative added after collection.

PA - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt and the container is now at the correct pH. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

PH - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt, but was insufficient to bring the container to the correct pH for the analysis requested. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

QN - Insufficient sample quantity provided.



Laboratory Report of Analysis

To: ADEC-Air & Water Quality
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Alexandra Lambe
Project Manager
Alexandra.Lambe@sgs.com

Date

Case Narrative

SGS Client: **ADEC-Air & Water Quality**

SGS Project: **1222761**

Project Name/Site: **WHADA**

Project Contact: **Morgan Brown**

Refer to sample receipt form for information on sample condition.

Mercury 245.1 Total was analyzed by SGS of Orlando, FL.

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Print Date: 06/28/2022 3:17:11PM

Laboratory Qualifiers

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Sample Summary

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Collected</u>	<u>Received</u>	<u>Matrix</u>
Cam6	1222761001	06/06/2022	06/06/2022	Water (Surface, Eff., Ground)
Che3	1222761002	06/06/2022	06/06/2022	Water (Surface, Eff., Ground)
Che33	1222761003	06/06/2022	06/06/2022	Water (Surface, Eff., Ground)
AnchBact20-01	1222761004	06/06/2022	06/06/2022	Water (Surface, Eff., Ground)
Cam6	1222761005	06/06/2022	06/06/2022	Water (Surface, Eff., Ground)
Che3	1222761006	06/06/2022	06/06/2022	Water (Surface, Eff., Ground)
Che33	1222761007	06/06/2022	06/06/2022	Water (Surface, Eff., Ground)
AnchBact20-01	1222761008	06/06/2022	06/06/2022	Water (Surface, Eff., Ground)

Method

SM 5310B
 SM21 2340B
 EP200.8
 EP200.8
 SM21 4500NO3-F
 SM23 4500-N D
 SM21 4500P-B,E

Method Description

Dissolved Organic Carbon
 Hardness as CaCO3 by ICP-MS
 Metals in Drinking Water by ICP-MS DISSO
 Metals in Water by 200.8 ICP-MS
 Nitrate/Nitrite Flow injection Pres.
 TKN by Phenate (W)
 Total Phosphorus (W)

Detectable Results Summary

Client Sample ID: **Cam6**
 Lab Sample ID: 1222761001

Metals by ICP/MS

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Calcium	18600	ug/L
Hardness as CaCO3	57.6	mg/L
Magnesium	2730	ug/L

Waters Department

TOC Average, Dissolved	1.73	mg/L
Total Nitrate/Nitrite-N	0.281	mg/L
Total Phosphorus	0.0679	mg/L

Client Sample ID: **Che3**
 Lab Sample ID: 1222761002

Metals by ICP/MS

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Calcium	42300	ug/L
Hardness as CaCO3	138	mg/L
Magnesium	7780	ug/L

Waters Department

TOC Average, Dissolved	2.38	mg/L
Total Nitrate/Nitrite-N	0.788	mg/L

Client Sample ID: **Che33**
 Lab Sample ID: 1222761003

Metals by ICP/MS

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Calcium	18800	ug/L
Hardness as CaCO3	59.0	mg/L
Magnesium	2900	ug/L

Waters Department

TOC Average, Dissolved	3.32	mg/L
Total Nitrate/Nitrite-N	0.388	mg/L

Client Sample ID: **AnchBact20-01**
 Lab Sample ID: 1222761004

Metals by ICP/MS

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Calcium	16500	ug/L
Hardness as CaCO3	49.5	mg/L
Magnesium	2000	ug/L

Waters Department

TOC Average, Dissolved	1.50	mg/L
Total Nitrate/Nitrite-N	0.237	mg/L

Client Sample ID: **Cam6**
 Lab Sample ID: 1222761005

Dissolved Metals by ICP/MS

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Barium	9.79	ug/L
Calcium	17900	ug/L
Magnesium	2240	ug/L
Manganese	1.01	ug/L
Silicon	2940	ug/L
Sodium	1850	ug/L
Zinc	34.4	ug/L

Detectable Results Summary

Client Sample ID: **Che3**
 Lab Sample ID: 1222761006
Dissolved Metals by ICP/MS

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Barium	19.6	ug/L
Calcium	41500	ug/L
Magnesium	7800	ug/L
Potassium	1010	ug/L
Silicon	5310	ug/L
Sodium	10700	ug/L
Zinc	34.6	ug/L

Client Sample ID: **Che33**
 Lab Sample ID: 1222761007
Dissolved Metals by ICP/MS

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Barium	6.23	ug/L
Calcium	19100	ug/L
Magnesium	3020	ug/L
Silicon	4880	ug/L
Sodium	1570	ug/L
Zinc	51.9	ug/L

Client Sample ID: **AnchBact20-01**
 Lab Sample ID: 1222761008
Dissolved Metals by ICP/MS

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Barium	8.75	ug/L
Calcium	16400	ug/L
Magnesium	1830	ug/L
Silicon	2900	ug/L
Sodium	1060	ug/L
Zinc	31.5	ug/L



Results of Cam6

Client Sample ID: **Cam6**
Client Project ID: **WHADA**
Lab Sample ID: 1222761001
Lab Project ID: 1222761

Collection Date: 06/06/22 12:35
Received Date: 06/06/22 13:05
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Metals by ICP/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Calcium	18600	500	150	ug/L	1		06/13/22 17:58
Magnesium	2730	50.0	15.0	ug/L	1		06/13/22 17:58

Batch Information

Analytical Batch: MMS11579
Analytical Method: EP200.8
Analyst: DMM
Analytical Date/Time: 06/13/22 17:58
Container ID: 1222761001-B

Prep Batch: MX35159
Prep Method: E200.2
Prep Date/Time: 06/13/22 12:27
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Hardness as CaCO3	57.6	5.00	5.00	mg/L	1		06/13/22 17:58

Batch Information

Analytical Batch: MMS11579
Analytical Method: SM21 2340B
Analyst: DMM
Analytical Date/Time: 06/13/22 17:58
Container ID: 1222761001-B

Prep Batch: MX35159
Prep Method: E200.2
Prep Date/Time: 06/13/22 12:27
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Print Date: 06/28/2022 3:17:17PM



Results of Cam6

Client Sample ID: **Cam6**
Client Project ID: **WHADA**
Lab Sample ID: 1222761001
Lab Project ID: 1222761

Collection Date: 06/06/22 12:35
Received Date: 06/06/22 13:05
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Waters Department

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
TOC Average, Dissolved	1.73	1.00	0.400	mg/L	1		06/16/22 23:14

Batch Information

Analytical Batch: WTC3201
Analytical Method: SM 5310B
Analyst: EBH
Analytical Date/Time: 06/16/22 23:14
Container ID: 1222761001-C

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Nitrate/Nitrite-N	0.281	0.200	0.0500	mg/L	2		06/15/22 11:45

Batch Information

Analytical Batch: WFI2992
Analytical Method: SM21 4500NO3-F
Analyst: EBH
Analytical Date/Time: 06/15/22 11:45
Container ID: 1222761001-E

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Phosphorus	0.0679	0.0400	0.0120	mg/L	1		06/24/22 17:15

Batch Information

Analytical Batch: WDA5225	Prep Batch: WXX14256
Analytical Method: SM21 4500P-B,E	Prep Method: SM21 4500P-B,E
Analyst: DMM	Prep Date/Time: 06/23/22 15:09
Analytical Date/Time: 06/24/22 17:15	Prep Initial Wt./Vol.: 25 mL
Container ID: 1222761001-E	Prep Extract Vol: 25 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Kjeldahl Nitrogen	1.00 U	1.00	0.310	mg/L	1		06/16/22 16:23

Print Date: 06/28/2022 3:17:17PM

Results of Cam6

Client Sample ID: **Cam6**
Client Project ID: **WHADA**
Lab Sample ID: 1222761001
Lab Project ID: 1222761

Collection Date: 06/06/22 12:35
Received Date: 06/06/22 13:05
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Waters Department

Batch Information

Analytical Batch: WDA5218
Analytical Method: SM23 4500-N D
Analyst: DMM
Analytical Date/Time: 06/16/22 16:23
Container ID: 1222761001-E

Prep Batch: WXX14242
Prep Method: METHOD
Prep Date/Time: 06/14/22 13:50
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Print Date: 06/28/2022 3:17:17PM



Results of Che3

Client Sample ID: **Che3**
Client Project ID: **WHADA**
Lab Sample ID: 1222761002
Lab Project ID: 1222761

Collection Date: 06/06/22 11:42
Received Date: 06/06/22 13:05
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Metals by ICP/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Calcium	42300	500	150	ug/L	1		06/13/22 18:01
Magnesium	7780	50.0	15.0	ug/L	1		06/13/22 18:01

Batch Information

Analytical Batch: MMS11579
Analytical Method: EP200.8
Analyst: DMM
Analytical Date/Time: 06/13/22 18:01
Container ID: 1222761002-B

Prep Batch: MX35159
Prep Method: E200.2
Prep Date/Time: 06/13/22 12:27
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Hardness as CaCO3	138	5.00	5.00	mg/L	1		06/13/22 18:01

Batch Information

Analytical Batch: MMS11579
Analytical Method: SM21 2340B
Analyst: DMM
Analytical Date/Time: 06/13/22 18:01
Container ID: 1222761002-B

Prep Batch: MX35159
Prep Method: E200.2
Prep Date/Time: 06/13/22 12:27
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Print Date: 06/28/2022 3:17:17PM



Results of Che3

Client Sample ID: **Che3**
Client Project ID: **WHADA**
Lab Sample ID: 1222761002
Lab Project ID: 1222761

Collection Date: 06/06/22 11:42
Received Date: 06/06/22 13:05
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Waters Department

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
TOC Average, Dissolved	2.38	1.00	0.400	mg/L	1		06/16/22 23:28

Batch Information

Analytical Batch: WTC3201
Analytical Method: SM 5310B
Analyst: EBH
Analytical Date/Time: 06/16/22 23:28
Container ID: 1222761002-C

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Nitrate/Nitrite-N	0.788	0.200	0.0500	mg/L	2		06/15/22 11:47

Batch Information

Analytical Batch: WFI2992
Analytical Method: SM21 4500NO3-F
Analyst: EBH
Analytical Date/Time: 06/15/22 11:47
Container ID: 1222761002-E

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Phosphorus	0.0400 U	0.0400	0.0120	mg/L	1		06/24/22 17:20

Batch Information

Analytical Batch: WDA5225	Prep Batch: WXX14256
Analytical Method: SM21 4500P-B,E	Prep Method: SM21 4500P-B,E
Analyst: DMM	Prep Date/Time: 06/23/22 15:09
Analytical Date/Time: 06/24/22 17:20	Prep Initial Wt./Vol.: 25 mL
Container ID: 1222761002-E	Prep Extract Vol: 25 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Kjeldahl Nitrogen	1.00 U	1.00	0.310	mg/L	1		06/16/22 16:24

Print Date: 06/28/2022 3:17:17PM

Results of **Che3**

Client Sample ID: **Che3**
Client Project ID: **WHADA**
Lab Sample ID: 1222761002
Lab Project ID: 1222761

Collection Date: 06/06/22 11:42
Received Date: 06/06/22 13:05
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: WDA5218
Analytical Method: SM23 4500-N D
Analyst: DMM
Analytical Date/Time: 06/16/22 16:24
Container ID: 1222761002-E

Prep Batch: WXX14242
Prep Method: METHOD
Prep Date/Time: 06/14/22 13:50
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Print Date: 06/28/2022 3:17:17PM



Results of Che33

Client Sample ID: **Che33**
Client Project ID: **WHADA**
Lab Sample ID: 1222761003
Lab Project ID: 1222761

Collection Date: 06/06/22 10:20
Received Date: 06/06/22 13:05
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Metals by ICP/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Calcium	18800	500	150	ug/L	1		06/13/22 18:03
Magnesium	2900	50.0	15.0	ug/L	1		06/13/22 18:03

Batch Information

Analytical Batch: MMS11579
Analytical Method: EP200.8
Analyst: DMM
Analytical Date/Time: 06/13/22 18:03
Container ID: 1222761003-B

Prep Batch: MX35159
Prep Method: E200.2
Prep Date/Time: 06/13/22 12:27
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Hardness as CaCO3	59.0	5.00	5.00	mg/L	1		06/13/22 18:03

Batch Information

Analytical Batch: MMS11579
Analytical Method: SM21 2340B
Analyst: DMM
Analytical Date/Time: 06/13/22 18:03
Container ID: 1222761003-B

Prep Batch: MX35159
Prep Method: E200.2
Prep Date/Time: 06/13/22 12:27
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Print Date: 06/28/2022 3:17:17PM



Results of Che33

Client Sample ID: **Che33**
Client Project ID: **WHADA**
Lab Sample ID: 1222761003
Lab Project ID: 1222761

Collection Date: 06/06/22 10:20
Received Date: 06/06/22 13:05
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Waters Department

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
TOC Average, Dissolved	3.32	1.00	0.400	mg/L	1		06/16/22 23:41

Batch Information

Analytical Batch: WTC3201
Analytical Method: SM 5310B
Analyst: EBH
Analytical Date/Time: 06/16/22 23:41
Container ID: 1222761003-C

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Nitrate/Nitrite-N	0.388	0.200	0.0500	mg/L	2		06/15/22 11:49

Batch Information

Analytical Batch: WFI2992
Analytical Method: SM21 4500NO3-F
Analyst: EBH
Analytical Date/Time: 06/15/22 11:49
Container ID: 1222761003-E

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Phosphorus	0.0400 U	0.0400	0.0120	mg/L	1		06/24/22 17:21

Batch Information

Analytical Batch: WDA5225	Prep Batch: WXX14256
Analytical Method: SM21 4500P-B,E	Prep Method: SM21 4500P-B,E
Analyst: DMM	Prep Date/Time: 06/23/22 15:09
Analytical Date/Time: 06/24/22 17:21	Prep Initial Wt./Vol.: 25 mL
Container ID: 1222761003-E	Prep Extract Vol: 25 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Kjeldahl Nitrogen	1.00 U	1.00	0.310	mg/L	1		06/16/22 16:25

Print Date: 06/28/2022 3:17:17PM

Results of **Che33**

Client Sample ID: **Che33**
Client Project ID: **WHADA**
Lab Sample ID: 1222761003
Lab Project ID: 1222761

Collection Date: 06/06/22 10:20
Received Date: 06/06/22 13:05
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: WDA5218
Analytical Method: SM23 4500-N D
Analyst: DMM
Analytical Date/Time: 06/16/22 16:25
Container ID: 1222761003-E

Prep Batch: WXX14242
Prep Method: METHOD
Prep Date/Time: 06/14/22 13:50
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Print Date: 06/28/2022 3:17:17PM



Results of AnchBact20-01

Client Sample ID: **AnchBact20-01**
Client Project ID: **WHADA**
Lab Sample ID: 1222761004
Lab Project ID: 1222761

Collection Date: 06/06/22 11:00
Received Date: 06/06/22 13:05
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Metals by ICP/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Calcium	16500	500	150	ug/L	1		06/13/22 18:12
Magnesium	2000	50.0	15.0	ug/L	1		06/13/22 18:12

Batch Information

Analytical Batch: MMS11579
Analytical Method: EP200.8
Analyst: DMM
Analytical Date/Time: 06/13/22 18:12
Container ID: 1222761004-B

Prep Batch: MXX35159
Prep Method: E200.2
Prep Date/Time: 06/13/22 12:27
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Hardness as CaCO3	49.5	5.00	5.00	mg/L	1		06/13/22 18:12

Batch Information

Analytical Batch: MMS11579
Analytical Method: SM21 2340B
Analyst: DMM
Analytical Date/Time: 06/13/22 18:12
Container ID: 1222761004-B

Prep Batch: MXX35159
Prep Method: E200.2
Prep Date/Time: 06/13/22 12:27
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Print Date: 06/28/2022 3:17:17PM



Results of **AnchBact20-01**

Client Sample ID: **AnchBact20-01**
Client Project ID: **WHADA**
Lab Sample ID: 1222761004
Lab Project ID: 1222761

Collection Date: 06/06/22 11:00
Received Date: 06/06/22 13:05
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
TOC Average, Dissolved	1.50	1.00	0.400	mg/L	1		06/17/22 00:32

Batch Information

Analytical Batch: WTC3201
Analytical Method: SM 5310B
Analyst: EBH
Analytical Date/Time: 06/17/22 00:32
Container ID: 1222761004-C

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Nitrate/Nitrite-N	0.237	0.200	0.0500	mg/L	2		06/15/22 12:03

Batch Information

Analytical Batch: WFI2992
Analytical Method: SM21 4500NO3-F
Analyst: EBH
Analytical Date/Time: 06/15/22 12:03
Container ID: 1222761004-E

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Phosphorus	0.0400 U	0.0400	0.0120	mg/L	1		06/24/22 17:21

Batch Information

Analytical Batch: WDA5225	Prep Batch: WXX14256
Analytical Method: SM21 4500P-B,E	Prep Method: SM21 4500P-B,E
Analyst: DMM	Prep Date/Time: 06/23/22 15:09
Analytical Date/Time: 06/24/22 17:21	Prep Initial Wt./Vol.: 25 mL
Container ID: 1222761004-E	Prep Extract Vol: 25 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Kjeldahl Nitrogen	1.00 U	1.00	0.310	mg/L	1		06/16/22 16:27

Print Date: 06/28/2022 3:17:17PM

Results of AnchBact20-01

Client Sample ID: **AnchBact20-01**
Client Project ID: **WHADA**
Lab Sample ID: 1222761004
Lab Project ID: 1222761

Collection Date: 06/06/22 11:00
Received Date: 06/06/22 13:05
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Waters Department

Batch Information

Analytical Batch: WDA5218
Analytical Method: SM23 4500-N D
Analyst: DMM
Analytical Date/Time: 06/16/22 16:27
Container ID: 1222761004-E

Prep Batch: WXX14242
Prep Method: METHOD
Prep Date/Time: 06/14/22 13:50
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Print Date: 06/28/2022 3:17:17PM



Results of Cam6

Client Sample ID: **Cam6**
 Client Project ID: **WHADA**
 Lab Sample ID: 1222761005
 Lab Project ID: 1222761

Collection Date: 06/06/22 12:35
 Received Date: 06/06/22 13:05
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Dissolved Metals by ICP/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Aluminum	20.0 U	20.0	6.20	ug/L	1		06/13/22 18:14
Antimony	1.00 U	1.00	0.310	ug/L	1		06/13/22 18:14
Arsenic	5.00 U	5.00	1.50	ug/L	1		06/13/22 18:14
Barium	9.79	3.00	0.940	ug/L	1		06/13/22 18:14
Beryllium	0.400 U	0.400	0.130	ug/L	1		06/13/22 18:14
Cadmium	0.500 U	0.500	0.150	ug/L	1		06/13/22 18:14
Calcium	17900	500	150	ug/L	1		06/13/22 18:14
Chromium	5.00 U	5.00	2.50	ug/L	1		06/13/22 18:14
Cobalt	4.00 U	4.00	1.20	ug/L	1		06/13/22 18:14
Copper	3.00 U	3.00	1.00	ug/L	1		06/13/22 18:14
Iron	250 U	250	78.0	ug/L	1		06/13/22 18:14
Lead	2.00 U	2.00	0.500	ug/L	1		06/13/22 18:14
Magnesium	2240	50.0	15.0	ug/L	1		06/13/22 18:14
Manganese	1.01	1.00	0.350	ug/L	1		06/13/22 18:14
Molybdenum	2.00 U	2.00	0.620	ug/L	1		06/13/22 18:14
Nickel	2.00 U	2.00	0.620	ug/L	1		06/13/22 18:14
Phosphorus	200 U	200	62.0	ug/L	1		06/13/22 18:14
Potassium	500 U	500	150	ug/L	1		06/13/22 18:14
Selenium	5.00 U	5.00	1.50	ug/L	1		06/13/22 18:14
Silicon	2940	1000	310	ug/L	1		06/13/22 18:14
Silver	1.00 U	1.00	0.310	ug/L	1		06/13/22 18:14
Sodium	1850	500	150	ug/L	1		06/13/22 18:14
Thallium	1.00 U	1.00	0.310	ug/L	1		06/13/22 18:14
Tin	1.00 U	1.00	0.310	ug/L	1		06/13/22 18:14
Titanium	6.25 U	6.25	3.13	ug/L	1		06/13/22 18:14
Vanadium	20.0 U	20.0	6.20	ug/L	1		06/13/22 18:14
Zinc	34.4	10.0	3.10	ug/L	1		06/13/22 18:14

Batch Information

Analytical Batch: MMS11579
 Analytical Method: EP200.8
 Analyst: DMM
 Analytical Date/Time: 06/13/22 18:14
 Container ID: 1222761005-A

Prep Batch: MXX35159
 Prep Method: E200.2
 Prep Date/Time: 06/13/22 12:27
 Prep Initial Wt./Vol.: 20 mL
 Prep Extract Vol: 50 mL

Print Date: 06/28/2022 3:17:17PM



Results of Che3

Client Sample ID: **Che3**
Client Project ID: **WHADA**
Lab Sample ID: 1222761006
Lab Project ID: 1222761

Collection Date: 06/06/22 11:42
Received Date: 06/06/22 13:05
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Dissolved Metals by ICP/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Aluminum	20.0 U	20.0	6.20	ug/L	1		06/13/22 18:17
Antimony	1.00 U	1.00	0.310	ug/L	1		06/13/22 18:17
Arsenic	5.00 U	5.00	1.50	ug/L	1		06/13/22 18:17
Barium	19.6	3.00	0.940	ug/L	1		06/13/22 18:17
Beryllium	0.400 U	0.400	0.130	ug/L	1		06/13/22 18:17
Cadmium	0.500 U	0.500	0.150	ug/L	1		06/13/22 18:17
Calcium	41500	500	150	ug/L	1		06/13/22 18:17
Chromium	5.00 U	5.00	2.50	ug/L	1		06/13/22 18:17
Cobalt	4.00 U	4.00	1.20	ug/L	1		06/13/22 18:17
Copper	3.00 U	3.00	1.00	ug/L	1		06/13/22 18:17
Iron	250 U	250	78.0	ug/L	1		06/13/22 18:17
Lead	2.00 U	2.00	0.500	ug/L	1		06/13/22 18:17
Magnesium	7800	50.0	15.0	ug/L	1		06/13/22 18:17
Manganese	1.00 U	1.00	0.350	ug/L	1		06/13/22 18:17
Molybdenum	2.00 U	2.00	0.620	ug/L	1		06/13/22 18:17
Nickel	2.00 U	2.00	0.620	ug/L	1		06/13/22 18:17
Phosphorus	200 U	200	62.0	ug/L	1		06/13/22 18:17
Potassium	1010	500	150	ug/L	1		06/13/22 18:17
Selenium	5.00 U	5.00	1.50	ug/L	1		06/13/22 18:17
Silicon	5310	1000	310	ug/L	1		06/13/22 18:17
Silver	1.00 U	1.00	0.310	ug/L	1		06/13/22 18:17
Sodium	10700	500	150	ug/L	1		06/13/22 18:17
Thallium	1.00 U	1.00	0.310	ug/L	1		06/13/22 18:17
Tin	1.00 U	1.00	0.310	ug/L	1		06/13/22 18:17
Titanium	6.25 U	6.25	3.13	ug/L	1		06/13/22 18:17
Vanadium	20.0 U	20.0	6.20	ug/L	1		06/13/22 18:17
Zinc	34.6	10.0	3.10	ug/L	1		06/13/22 18:17

Batch Information

Analytical Batch: MMS11579
Analytical Method: EP200.8
Analyst: DMM
Analytical Date/Time: 06/13/22 18:17
Container ID: 1222761006-A

Prep Batch: MXX35159
Prep Method: E200.2
Prep Date/Time: 06/13/22 12:27
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Print Date: 06/28/2022 3:17:17PM



Results of Che33

Client Sample ID: **Che33**
 Client Project ID: **WHADA**
 Lab Sample ID: 1222761007
 Lab Project ID: 1222761

Collection Date: 06/06/22 10:20
 Received Date: 06/06/22 13:05
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Dissolved Metals by ICP/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Aluminum	20.0 U	20.0	6.20	ug/L	1		06/13/22 18:20
Antimony	1.00 U	1.00	0.310	ug/L	1		06/13/22 18:20
Arsenic	5.00 U	5.00	1.50	ug/L	1		06/13/22 18:20
Barium	6.23	3.00	0.940	ug/L	1		06/13/22 18:20
Beryllium	0.400 U	0.400	0.130	ug/L	1		06/13/22 18:20
Cadmium	0.500 U	0.500	0.150	ug/L	1		06/13/22 18:20
Calcium	19100	500	150	ug/L	1		06/13/22 18:20
Chromium	5.00 U	5.00	2.50	ug/L	1		06/13/22 18:20
Cobalt	4.00 U	4.00	1.20	ug/L	1		06/13/22 18:20
Copper	3.00 U	3.00	1.00	ug/L	1		06/13/22 18:20
Iron	250 U	250	78.0	ug/L	1		06/13/22 18:20
Lead	2.00 U	2.00	0.500	ug/L	1		06/13/22 18:20
Magnesium	3020	50.0	15.0	ug/L	1		06/13/22 18:20
Manganese	1.00 U	1.00	0.350	ug/L	1		06/13/22 18:20
Molybdenum	2.00 U	2.00	0.620	ug/L	1		06/13/22 18:20
Nickel	2.00 U	2.00	0.620	ug/L	1		06/13/22 18:20
Phosphorus	200 U	200	62.0	ug/L	1		06/13/22 18:20
Potassium	500 U	500	150	ug/L	1		06/13/22 18:20
Selenium	5.00 U	5.00	1.50	ug/L	1		06/13/22 18:20
Silicon	4880	1000	310	ug/L	1		06/13/22 18:20
Silver	1.00 U	1.00	0.310	ug/L	1		06/13/22 18:20
Sodium	1570	500	150	ug/L	1		06/13/22 18:20
Thallium	1.00 U	1.00	0.310	ug/L	1		06/13/22 18:20
Tin	1.00 U	1.00	0.310	ug/L	1		06/13/22 18:20
Titanium	6.25 U	6.25	3.13	ug/L	1		06/13/22 18:20
Vanadium	20.0 U	20.0	6.20	ug/L	1		06/13/22 18:20
Zinc	51.9	10.0	3.10	ug/L	1		06/13/22 18:20

Batch Information

Analytical Batch: MMS11579
 Analytical Method: EP200.8
 Analyst: DMM
 Analytical Date/Time: 06/13/22 18:20
 Container ID: 1222761007-A

Prep Batch: MXX35159
 Prep Method: E200.2
 Prep Date/Time: 06/13/22 12:27
 Prep Initial Wt./Vol.: 20 mL
 Prep Extract Vol: 50 mL

Print Date: 06/28/2022 3:17:17PM



Results of AnchBact20-01

Client Sample ID: **AnchBact20-01**
 Client Project ID: **WHADA**
 Lab Sample ID: 1222761008
 Lab Project ID: 1222761

Collection Date: 06/06/22 11:00
 Received Date: 06/06/22 13:05
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Dissolved Metals by ICP/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Aluminum	20.0 U	20.0	6.20	ug/L	1		06/13/22 18:22
Antimony	1.00 U	1.00	0.310	ug/L	1		06/13/22 18:22
Arsenic	5.00 U	5.00	1.50	ug/L	1		06/13/22 18:22
Barium	8.75	3.00	0.940	ug/L	1		06/13/22 18:22
Beryllium	0.400 U	0.400	0.130	ug/L	1		06/13/22 18:22
Cadmium	0.500 U	0.500	0.150	ug/L	1		06/13/22 18:22
Calcium	16400	500	150	ug/L	1		06/13/22 18:22
Chromium	5.00 U	5.00	2.50	ug/L	1		06/13/22 18:22
Cobalt	4.00 U	4.00	1.20	ug/L	1		06/13/22 18:22
Copper	3.00 U	3.00	1.00	ug/L	1		06/13/22 18:22
Iron	250 U	250	78.0	ug/L	1		06/13/22 18:22
Lead	2.00 U	2.00	0.500	ug/L	1		06/13/22 18:22
Magnesium	1830	50.0	15.0	ug/L	1		06/13/22 18:22
Manganese	1.00 U	1.00	0.350	ug/L	1		06/13/22 18:22
Molybdenum	2.00 U	2.00	0.620	ug/L	1		06/13/22 18:22
Nickel	2.00 U	2.00	0.620	ug/L	1		06/13/22 18:22
Phosphorus	200 U	200	62.0	ug/L	1		06/13/22 18:22
Potassium	500 U	500	150	ug/L	1		06/13/22 18:22
Selenium	5.00 U	5.00	1.50	ug/L	1		06/13/22 18:22
Silicon	2900	1000	310	ug/L	1		06/13/22 18:22
Silver	1.00 U	1.00	0.310	ug/L	1		06/13/22 18:22
Sodium	1060	500	150	ug/L	1		06/13/22 18:22
Thallium	1.00 U	1.00	0.310	ug/L	1		06/13/22 18:22
Tin	1.00 U	1.00	0.310	ug/L	1		06/13/22 18:22
Titanium	6.25 U	6.25	3.13	ug/L	1		06/13/22 18:22
Vanadium	20.0 U	20.0	6.20	ug/L	1		06/13/22 18:22
Zinc	31.5	10.0	3.10	ug/L	1		06/13/22 18:22

Batch Information

Analytical Batch: MMS11579
 Analytical Method: EP200.8
 Analyst: DMM
 Analytical Date/Time: 06/13/22 18:22
 Container ID: 1222761008-A

Prep Batch: MXX35159
 Prep Method: E200.2
 Prep Date/Time: 06/13/22 12:27
 Prep Initial Wt./Vol.: 20 mL
 Prep Extract Vol: 50 mL

Print Date: 06/28/2022 3:17:17PM



Method Blank

Blank ID: MB for HBN 1837763 [MXX/35159]
Blank Lab ID: 1667664

Matrix: Water (Surface, Eff., Ground)

QC for Samples:

1222761001, 1222761002, 1222761003, 1222761004, 1222761005, 1222761006, 1222761007, 1222761008

Results by EP200.8

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Aluminum	10.0U	20.0	6.20	ug/L
Antimony	0.500U	1.00	0.310	ug/L
Arsenic	2.50U	5.00	1.50	ug/L
Barium	1.50U	3.00	0.940	ug/L
Beryllium	0.200U	0.400	0.130	ug/L
Cadmium	0.250U	0.500	0.150	ug/L
Calcium	250U	500	150	ug/L
Chromium	2.50U	5.00	2.50	ug/L
Cobalt	2.00U	4.00	1.20	ug/L
Copper	1.50U	3.00	1.00	ug/L
Iron	125U	250	78.0	ug/L
Lead	1.00U	2.00	0.500	ug/L
Magnesium	25.0U	50.0	15.0	ug/L
Manganese	0.500U	1.00	0.350	ug/L
Molybdenum	1.00U	2.00	0.620	ug/L
Nickel	1.00U	2.00	0.620	ug/L
Phosphorus	100U	200	62.0	ug/L
Potassium	250U	500	150	ug/L
Selenium	2.50U	5.00	1.50	ug/L
Silicon	500U	1000	310	ug/L
Silver	0.500U	1.00	0.310	ug/L
Sodium	250U	500	150	ug/L
Thallium	0.500U	1.00	0.310	ug/L
Tin	0.500U	1.00	0.310	ug/L
Titanium	12.5U	25.0	7.75	ug/L
Vanadium	10.0U	20.0	6.20	ug/L
Zinc	5.00U	10.0	3.10	ug/L

Batch Information

Analytical Batch: MMS11579
Analytical Method: EP200.8
Instrument: P7 Agilent 7800
Analyst: DMM
Analytical Date/Time: 6/13/2022 5:39:36PM

Prep Batch: MXX35159
Prep Method: E200.2
Prep Date/Time: 6/13/2022 12:27:49PM
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Print Date: 06/28/2022 3:17:20PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1222761 [MXX35159]

Blank Spike Lab ID: 1667665

Date Analyzed: 06/13/2022 17:42

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222761001, 1222761002, 1222761003, 1222761004, 1222761005, 1222761006, 1222761007, 1222761008

Results by EP200.8

Parameter	Blank Spike (ug/L)			CL
	Spike	Result	Rec (%)	
Aluminum	1000	990	99	(85-115)
Antimony	1000	1040	104	(85-115)
Arsenic	1000	987	99	(85-115)
Barium	1000	1000	100	(85-115)
Beryllium	100	97.6	98	(85-115)
Cadmium	100	101	101	(85-115)
Calcium	10000	10400	104	(85-115)
Chromium	400	413	103	(85-115)
Cobalt	500	515	103	(85-115)
Copper	1000	1030	103	(85-115)
Iron	5000	5130	103	(85-115)
Lead	1000	1070	107	(85-115)
Magnesium	10000	9930	99	(85-115)
Manganese	500	517	103	(85-115)
Molybdenum	400	386	97	(85-115)
Nickel	1000	1030	103	(85-115)
Phosphorus	500	512	102	(85-115)
Potassium	10000	10300	103	(85-115)
Selenium	1000	999	100	(85-115)
Silicon	10000	10100	101	(85-115)
Silver	100	102	102	(85-115)
Sodium	10000	9800	98	(85-115)
Thallium	10	10.3	103	(85-115)
Tin	100	101	101	(85-115)
Titanium	100	102	102	(85-115)
Vanadium	200	210	105	(85-115)
Zinc	1000	1020	102	(85-115)

Batch Information

Analytical Batch: **MMS11579**

Analytical Method: **EP200.8**

Instrument: **P7 Agilent 7800**

Analyst: **DMM**

Prep Batch: **MXX35159**

Prep Method: **E200.2**

Prep Date/Time: **06/13/2022 12:27**

Spike Init Wt./Vol.: 1000 ug/L Extract Vol: 50 mL

Dupe Init Wt./Vol.: Extract Vol:

Print Date: 06/28/2022 3:17:22PM

Matrix Spike Summary

Original Sample ID: 1667670
 MS Sample ID: 1667671 MS
 MSD Sample ID:

Analysis Date: 06/13/2022 17:47
 Analysis Date: 06/13/2022 17:50
 Analysis Date:
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222761001, 1222761002, 1222761003, 1222761004, 1222761005, 1222761006, 1222761007, 1222761008

Results by EP200.8

Parameter	Sample	Matrix Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Aluminum	8.67J	1000	997	99				70-130		
Antimony	0.500U	1000	1040	104				70-130		
Arsenic	2.50U	1000	995	100				70-130		
Barium	10.1	1000	1000	99				70-130		
Beryllium	0.200U	100	99.6	100				70-130		
Cadmium	0.250U	100	101	101				70-130		
Calcium	31800	10000	42000	103				70-130		
Chromium	2.50U	400	396	99				70-130		
Cobalt	2.00U	500	507	101				70-130		
Copper	1.16J	1000	1020	102				70-130		
Iron	107J	5000	5220	102				70-130		
Lead	1.00U	1000	1040	104				70-130		
Magnesium	4490	10000	14400	99				70-130		
Manganese	0.899J	500	512	102				70-130		
Molybdenum	0.895J	400	388	97				70-130		
Nickel	1.00U	1000	1010	101				70-130		
Phosphorus	100U	500	513	103				70-130		
Potassium	872	10000	11100	102				70-130		
Selenium	2.50U	1000	1020	102				70-130		
Silicon	5260	10000	15200	99				70-130		
Silver	0.500U	100	99.7	100				70-130		
Sodium	4220	10000	14100	99				70-130		
Thallium	0.500U	10.0	9.99	100				70-130		
Tin	0.500U	100	101	101				70-130		
Titanium	12.5U	100	103	103				70-130		
Vanadium	10.0U	200	197	98				70-130		
Zinc	55.2	1000	1070	102				70-130		

Batch Information

Analytical Batch: MMS11579
 Analytical Method: EP200.8
 Instrument: P7 Agilent 7800
 Analyst: DMM
 Analytical Date/Time: 6/13/2022 5:50:23PM

Prep Batch: MX35159
 Prep Method: DW Digest for Metals on ICP-MS
 Prep Date/Time: 6/13/2022 12:27:49PM
 Prep Initial Wt./Vol.: 20.00mL
 Prep Extract Vol: 50.00mL

Print Date: 06/28/2022 3:17:23PM

Matrix Spike Summary

Original Sample ID: 1667672
 MS Sample ID: 1667673 MS
 MSD Sample ID:

Analysis Date: 06/13/2022 17:53
 Analysis Date: 06/13/2022 17:55
 Analysis Date:
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222761001, 1222761002, 1222761003, 1222761004, 1222761005, 1222761006, 1222761007, 1222761008

Results by EP200.8

Parameter	Sample	Matrix Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Aluminum	10.0U	1000	1000	100				70-130		
Antimony	0.420J	1000	1040	104				70-130		
Arsenic	2.50U	1000	991	99				70-130		
Barium	12.5	1000	998	99				70-130		
Beryllium	0.200U	100	99.4	99				70-130		
Cadmium	0.250U	100	101	101				70-130		
Calcium	41800	10000	51800	99				70-130		
Chromium	2.50U	400	398	99				70-130		
Cobalt	2.00U	500	503	101				70-130		
Copper	21.5	1000	1030	101				70-130		
Iron	168J	5000	5210	101				70-130		
Lead	1.00U	1000	1050	105				70-130		
Magnesium	7360	10000	17300	100				70-130		
Manganese	16.4	500	521	101				70-130		
Molybdenum	4.89	400	398	98				70-130		
Nickel	1.11J	1000	1000	100				70-130		
Phosphorus	100U	500	515	103				70-130		
Potassium	672	10000	11000	103				70-130		
Selenium	2.50U	1000	1020	102				70-130		
Silicon	4830	10000	14900	101				70-130		
Silver	0.500U	100	101	101				70-130		
Sodium	4000	10000	13900	99				70-130		
Thallium	0.500U	10.0	10	100				70-130		
Tin	0.410J	100	102	101				70-130		
Titanium	12.5U	100	102	102				70-130		
Vanadium	10.0U	200	199	99				70-130		
Zinc	82.7	1000	1100	101				70-130		

Batch Information

Analytical Batch: MMS11579
 Analytical Method: EP200.8
 Instrument: P7 Agilent 7800
 Analyst: DMM
 Analytical Date/Time: 6/13/2022 5:55:45PM

Prep Batch: MXX35159
 Prep Method: DW Digest for Metals on ICP-MS
 Prep Date/Time: 6/13/2022 12:27:49PM
 Prep Initial Wt./Vol.: 20.00mL
 Prep Extract Vol: 50.00mL

Print Date: 06/28/2022 3:17:23PM

Method Blank

Blank ID: MB for HBN 1837859 (WFI/2992)

Blank Lab ID: 1668185

QC for Samples:

1222761001, 1222761002, 1222761003, 1222761004

Matrix: Water (Surface, Eff., Ground)

Results by SM21 4500NO3-F

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Nitrate-N	0.100U	0.200	0.0500	mg/L
Nitrite-N	0.100U	0.200	0.0500	mg/L
Total Nitrate/Nitrite-N	0.100U	0.200	0.0500	mg/L

Batch Information

Analytical Batch: WFI2992

Analytical Method: SM21 4500NO3-F

Instrument: Astoria segmented flow

Analyst: EBH

Analytical Date/Time: 6/15/2022 12:29:31PM

Print Date: 06/28/2022 3:17:28PM

Method Blank

Blank ID: MB for HBN 1837859 (WFI/2992)

Blank Lab ID: 1668194

QC for Samples:

1222761001, 1222761002, 1222761003, 1222761004

Matrix: Water (Surface, Eff., Ground)

Results by SM21 4500NO3-F

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Nitrate-N	0.100U	0.200	0.0500	mg/L
Nitrite-N	0.100U	0.200	0.0500	mg/L
Total Nitrate/Nitrite-N	0.100U	0.200	0.0500	mg/L

Batch Information

Analytical Batch: WFI2992

Analytical Method: SM21 4500NO3-F

Instrument: Astoria segmented flow

Analyst: EBH

Analytical Date/Time: 6/15/2022 11:33:30AM

Print Date: 06/28/2022 3:17:28PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1222761 [WFI2992]

Blank Spike Lab ID: 1668187

Date Analyzed: 06/15/2022 12:27

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222761001, 1222761002, 1222761003, 1222761004

Results by SM21 4500NO3-F

Parameter	Blank Spike (mg/L)			CL
	Spike	Result	Rec (%)	
Nitrate-N	2.5	2.42	97	(70-130)
Nitrite-N	2.5	2.50	100	(90-110)
Total Nitrate/Nitrite-N	5	4.92	98	(90-110)

Batch Information

Analytical Batch: **WFI2992**

Analytical Method: **SM21 4500NO3-F**

Instrument: **Astoria segmented flow**

Analyst: **EBH**

Blank Spike Summary

Blank Spike ID: LCS for HBN 1222761 [WFI2992]

Blank Spike Lab ID: 1668196

Date Analyzed: 06/15/2022 11:31

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222761001, 1222761002, 1222761003, 1222761004

Results by SM21 4500NO3-F

Parameter	Blank Spike (mg/L)			CL
	Spike	Result	Rec (%)	
Nitrate-N	2.5	2.29	91	(70-130)
Nitrite-N	2.5	2.26	90	(90-110)
Total Nitrate/Nitrite-N	5	4.54	91	(90-110)

Batch Information

Analytical Batch: **WFI2992**

Analytical Method: **SM21 4500NO3-F**

Instrument: **Astoria segmented flow**

Analyst: **EBH**

Matrix Spike Summary

Original Sample ID: 1668169
 MS Sample ID: 1668173 MS
 MSD Sample ID: 1668174 MSD

Analysis Date: 06/15/2022 11:38
 Analysis Date: 06/15/2022 11:40
 Analysis Date: 06/15/2022 11:42
 Matrix: Drinking Water

QC for Samples: 1222761001, 1222761002, 1222761003, 1222761004

Results by SM21 4500NO3-F

Parameter	Sample	Matrix Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Nitrate-N	4.15	2.50	7.07	117	2.50	6.72	103	70-130	5.10	(< 25)
Nitrite-N	0.0522J	2.50	2.4	94	2.50	2.39	93	90-110	0.50	(< 25)

Batch Information

Analytical Batch: WFI2992
 Analytical Method: SM21 4500NO3-F
 Instrument: Astoria segmented flow
 Analyst: EBH
 Analytical Date/Time: 6/15/2022 11:40:30AM

Matrix Spike Summary

Original Sample ID: 1222827001
 MS Sample ID: 1668209 MS
 MSD Sample ID: 1668210 MSD

Analysis Date: 06/15/2022 12:33
 Analysis Date: 06/15/2022 12:34
 Analysis Date: 06/15/2022 12:36
 Matrix: Drinking Water

QC for Samples: 1222761001, 1222761002, 1222761003, 1222761004

Results by SM21 4500NO3-F

Parameter	Sample	Matrix Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Nitrate/Nitrite-N	0.200U	5.00	5.33	107	5.00	5.19	104	90-110	2.70	(< 25)

Batch Information

Analytical Batch: WFI2992
 Analytical Method: SM21 4500NO3-F
 Instrument: Astoria segmented flow
 Analyst: EBH
 Analytical Date/Time: 6/15/2022 12:34:00PM

Method Blank

Blank ID: MB for HBN 1837996 [WXX/14242]
Blank Lab ID: 1668425

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1222761001, 1222761002, 1222761003, 1222761004

Results by SM23 4500-N D

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Total Kjeldahl Nitrogen	0.500U	1.00	0.310	mg/L

Batch Information

Analytical Batch: WDA5218
Analytical Method: SM23 4500-N D
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 6/16/2022 3:59:46PM

Prep Batch: WXX14242
Prep Method: METHOD
Prep Date/Time: 6/14/2022 1:50:00PM
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Print Date: 06/28/2022 3:17:36PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1222761 [WXX14242]
 Blank Spike Lab ID: 1668426
 Date Analyzed: 06/16/2022 16:01

Spike Duplicate ID: LCSD for HBN 1222761 [WXX14242]
 Spike Duplicate Lab ID: 1668427
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222761001, 1222761002, 1222761003, 1222761004

Results by SM23 4500-N D

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Kjeldahl Nitrogen	4	3.64	91	4	3.96	99	(75-125)	8.40	(< 25)

Batch Information

Analytical Batch: **WDA5218**
 Analytical Method: **SM23 4500-N D**
 Instrument: **Discrete Analyzer 2**
 Analyst: **DMM**

Prep Batch: **WXX14242**
 Prep Method: **METHOD**
 Prep Date/Time: **06/14/2022 13:50**
 Spike Init Wt./Vol.: 4 mg/L Extract Vol: 25 mL
 Dupe Init Wt./Vol.: 4 mg/L Extract Vol: 25 mL

Matrix Spike Summary

Original Sample ID: 1222300001
 MS Sample ID: 1668428 MS
 MSD Sample ID: 1668429 MSD

Analysis Date: 06/16/2022 16:03
 Analysis Date: 06/16/2022 16:05
 Analysis Date: 06/16/2022 16:06
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222761001, 1222761002, 1222761003, 1222761004

Results by SM23 4500-N D

Parameter	Sample	Matrix Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Kjeldahl Nitrogen	0.500U	4.00	4.14	104	4.00	4.28	107	75-125	3.20	(< 25)

Batch Information

Analytical Batch: WDA5218
 Analytical Method: SM23 4500-N D
 Instrument: Discrete Analyzer 2
 Analyst: DMM
 Analytical Date/Time: 6/16/2022 4:05:01PM

Prep Batch: WXX14242
 Prep Method: Distillation TKN by Phenate (W)
 Prep Date/Time: 6/14/2022 1:50:00PM
 Prep Initial Wt./Vol.: 25.00mL
 Prep Extract Vol: 25.00mL

Method Blank

Blank ID: MB for HBN 1838894 [WXX/14256]

Blank Lab ID: 1670166

QC for Samples:

1222761001, 1222761002, 1222761003, 1222761004

Matrix: Water (Surface, Eff., Ground)

Results by SM21 4500P-B,E

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Total Phosphorus	0.0200U	0.0400	0.0120	mg/L

Batch Information

Analytical Batch: WDA5225

Analytical Method: SM21 4500P-B,E

Instrument: Discrete Analyzer 2

Analyst: DMM

Analytical Date/Time: 6/24/2022 4:56:58PM

Prep Batch: WXX14256

Prep Method: SM21 4500P-B,E

Prep Date/Time: 6/23/2022 3:09:00PM

Prep Initial Wt./Vol.: 25 mL

Prep Extract Vol: 25 mL

Print Date: 06/28/2022 3:17:41PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1222761 [WXX14256]
 Blank Spike Lab ID: 1670167
 Date Analyzed: 06/24/2022 16:57

Spike Duplicate ID: LCSD for HBN 1222761 [WXX14256]
 Spike Duplicate Lab ID: 1670168
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222761001, 1222761002, 1222761003, 1222761004

Results by SM21 4500P-B,E

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Phosphorus	0.2	0.205	102	0.2	0.204	102	(75-125)	0.44	(< 25)

Batch Information

Analytical Batch: **WDA5225**
 Analytical Method: **SM21 4500P-B,E**
 Instrument: **Discrete Analyzer 2**
 Analyst: **DMM**

Prep Batch: **WXX14256**
 Prep Method: **SM21 4500P-B,E**
 Prep Date/Time: **06/23/2022 15:09**
 Spike Init Wt./Vol.: 0.2 mg/L Extract Vol: 25 mL
 Dupe Init Wt./Vol.: 0.2 mg/L Extract Vol: 25 mL

Matrix Spike Summary

Original Sample ID: 1222761001
 MS Sample ID: 1670175 MS
 MSD Sample ID: 1670176 MSD

Analysis Date: 06/24/2022 17:15
 Analysis Date: 06/24/2022 17:16
 Analysis Date: 06/24/2022 17:17
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222761001, 1222761002, 1222761003, 1222761004

Results by SM21 4500P-B,E

Parameter	Sample	Matrix Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Phosphorus	0.0679	0.200	.272	102	0.200	0.276	104	75-125	1.30	(< 25)

Batch Information

Analytical Batch: WDA5225
 Analytical Method: SM21 4500P-B,E
 Instrument: Discrete Analyzer 2
 Analyst: DMM
 Analytical Date/Time: 6/24/2022 5:16:32PM

Prep Batch: WXX14256
 Prep Method: Total Phosphorus (W) Ext.
 Prep Date/Time: 6/23/2022 3:09:00PM
 Prep Initial Wt./Vol.: 25.00mL
 Prep Extract Vol: 25.00mL



SGS NORTH AMERICA INC. CHAIN OF CUSTODY RECORD

1222761



385380 JL

Page 1 of 1

CLIENT: ADEC					INSTRUCTIONS: SECTIONS 1-5 MUST BE FILLED OUT. OMISSIONS MAY DELAY THE ONSET OF ANALYSIS.													
CONTACT: Morgan Brown					PHONE #: 907-451-2141					SECTION 3								
PROJECT NAME: WHADA					PROJECT/ PWSID/ PERMIT #: NTP 22 464					PRESERVATIVE								
REPORTS TO: Morgan Brown					E-MAIL: Morgan.Brown@alaska.gov													
INVOICE TO: ADEC					QUOTE #: P.O. #:													
SECTION 1	RESERVED FOR LAB USE	SAMPLE IDENTIFICATION	DATE MM/DD/YY	TIME HH:MM	MATRIX/ MATRIX CODE	#	CONTAINER S	SAMPLE TYPE: Comp Grab MI (Multi-incremental)	Na2SO4	Na2SO4	HNO3	HNO3	H2SO4	REMARKS/ LOC ID				
									SM9222D Fecal Coliform	SM92223B E. Coli	245.1 Total Hg	200.8 Dissolved Metals (Lab Filter)	2340B Total hardness		5301B DOC (Lab Filter)	SM4500 T-Phos, NO2 +NO3,TKN		
		Cam6	06/06/22	12:35	SW				5	6			X		X	X	X	
		Che3	06/06/22	11:42	SW				5	6			X		X	X	X	
		Che33	06/06/22	10:20	SW				5	6			X		X	X	X	
SECTION 2		AnchBact20-91	06/06/22	11:00	SW	5	6			X	X	X	X					
SECTION 5	RELINQUISHED BY: (1)		DATE	TIME	RECEIVED BY:			SECTION 4 DOD Project?			DATA DELIVERABLE REQUIREMENTS:							
	<i>Kaitan M</i>		6/6/22	1:05 PM	<i>[Signature]</i>													
	RELINQUISHED BY: (2)		DATE	TIME	RECEIVED BY:			REQUESTED TURNAROUND TIME AND/OR SPECIAL INSTRUCTIONS										
	<i>[Signature]</i>				<i>[Signature]</i>													
RELINQUISHED BY: (3)		DATE	TIME	RECEIVED BY:			TEMP BLANK °C:			CHAIN OF CUSTODY SEAL: (CIRCLE)								
<i>[Signature]</i>		6/6/22	1:05	<i>[Signature]</i>			2.4° #D57			INTACT <i>HD</i> BROKEN <u>ABSENT</u>								
RELINQUISHED BY: (4)		DATE	TIME	RECEIVED FOR LABORATORY BY:			OR AMBIENT []			(See attached Sample Receipt Form)								
<i>[Signature]</i>				<i>[Signature]</i>														

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http://www.sgs.com/terms-and-conditions



Project Information Form

This form provides clarification and/or additional information for sample login, and should be scanned with the receiving paperwork.

Client Name:	ADEC
Project:	WHADA
Date:	5/26/2022
Reason for Clarification:	Analytical requests
Notes:	200.8 Dissolved Metals = 200.8 Dissolved Metals Scan (needs Lab Filter, then preservation. Should be separate sample) DOC also needs Lab Filter then preservation T-Phos, NO ₂ NO ₃ , TKN = 4500 Total Phosphorus, 4500 Total Nitrate+Nitrite-N, and 4500 TKN



SGS Workorder #:

1222761

1222761

Review Criteria	Condition (Yes, No, N/A)	Exceptions Noted below
-----------------	--------------------------	------------------------

Chain of Custody / Temperature Requirements		<i>Note: Temperature and COC seal information is found on the chain of custody form</i>
--	--	---

DOD only: Did all sample coolers have a corresponding COC?	N/A	
If <0°C, were sample containers ice free?	N/A	
Note containers received with ice:		
Identify any containers received at non-compliant temperature: (Use form FS-0029 if more space is needed)		

Holding Time / Documentation / Sample Condition Requirement		<i>Note: Refer to form F-083 "Sample Guide" for specific holding times and sample containers.</i>
--	--	---

Were samples received within analytical holding time?	Yes	
Do sample labels match COC? Record discrepancies.	Yes	
<i>Note: If information on containers differs from COC, default to COC information for login. If times differ <1hr, record details & login per COC.</i>		
Were analytical requests clear? <i>(i.e. method is specified for analyses with multiple option for method (Eg, BTEX 8021 vs 8260, Metals 6020 vs 200.8)</i>	Yes	
Were proper containers (type/mass/volume/preservative) used? Note: Exemption for metals analysis by 200.8/6020 in water.	Yes	

Volatile Analysis Requirements (VOC, GRO, LL-Hg, etc.)

Were all soil VOAs received with a corresponding % solids container?	N/A	
Were Trip Blanks (e.g., VOAs, LL-Hg) in cooler with samples?	N/A	
Were all water VOA vials free of headspace (e.g., bubbles ≤ 6mm)?	N/A	
Were all soil VOAs field extracted with Methanol+BFB?	N/A	

Note to Client: Any "No", answer above indicates non-compliance with standard procedures and may impact data quality.

Additional notes (if applicable):
--



Sample Containers and Preservatives

<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>	<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>
1222761001-A	HNO3 to pH < 2	OK			
1222761001-B	HNO3 to pH < 2	OK			
1222761001-C	No Preservative Required	OK			
1222761001-D	No Preservative Required	OK			
1222761001-E	H2SO4 to pH < 2	OK			
1222761002-A	HNO3 to pH < 2	OK			
1222761002-B	HNO3 to pH < 2	OK			
1222761002-C	No Preservative Required	OK			
1222761002-D	No Preservative Required	OK			
1222761002-E	H2SO4 to pH < 2	OK			
1222761003-A	HNO3 to pH < 2	OK			
1222761003-B	HNO3 to pH < 2	OK			
1222761003-C	No Preservative Required	OK			
1222761003-D	No Preservative Required	OK			
1222761003-E	H2SO4 to pH < 2	OK			
1222761004-A	HNO3 to pH < 2	OK			
1222761004-B	HNO3 to pH < 2	OK			
1222761004-C	No Preservative Required	OK			
1222761004-D	No Preservative Required	OK			
1222761004-E	H2SO4 to pH < 2	OK			
1222761005-A	No Preservative Required	OK			
1222761005-B	No Preservative Required	OK			
1222761006-A	No Preservative Required	OK			
1222761006-B	No Preservative Required	OK			
1222761007-A	No Preservative Required	OK			
1222761007-B	No Preservative Required	OK			
1222761008-A	No Preservative Required	OK			
1222761008-B	No Preservative Required	OK			

Container Condition Glossary

Containers for bacteriological, low level mercury and VOA vials are not opened prior to analysis and will be assigned condition code OK unless evidence indicates than an inappropriate container was submitted.

OK - The container was received at an acceptable pH for the analysis requested.

BU - The container was received with headspace greater than 6mm.

DM - The container was received damaged.

FR - The container was received frozen and not usable for Bacteria or BOD analyses.

IC - The container provided for microbiology analysis was not a laboratory-supplied, pre-sterilized container and therefore was not suitable for analysis.

NC- The container provided was not preserved or was under-preserved. The method does not allow for additional preservative added after collection.

PA - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt and the container is now at the correct pH. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

PH - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt, but was insufficient to bring the container to the correct pH for the analysis requested. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

QN - Insufficient sample quantity provided.

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

SGS North America, Inc

1222761

SGS Job Number: FA96293

Sampling Date: 06/06/22

Report to:

**SGS North America, Inc
200 W Potter Dr
Anchorage, AK 99518
julie.shumway@sgs.com**

ATTN: Julie Shumway

Total number of pages in report: 19



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

A handwritten signature in black ink, appearing to read "Norm Farmer".

Norm Farmer
Technical Director

Client Service contact: Andrea Colby 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), NC(573), NJ(FL002), NY(12022), SC(96038001)
DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177),
AL, AK, AR, CT, IA, KY, MA, MI, MS, ND, NH, NV, OK, OR, IL, UT, VT, WA, WI, WV

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Test results relate only to samples analyzed.

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Sample Summary

SGS North America, Inc
1222761

Job No: FA96293

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
FA96293-1	06/06/22	12:35	06/08/22	AQ	Water	CAM6
FA96293-2	06/06/22	11:42	06/08/22	AQ	Water	CHE3
FA96293-3	06/06/22	10:20	06/08/22	AQ	Water	CHE33
FA96293-4	06/06/22	11:00	06/08/22	AQ	Water	ANCHBACT20-01

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: SGS North America, Inc

Job No: FA96293

Site: 1222761

Report Date: 6/15/2022 3:51:44 PM

On 06/08/2022, 4 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at SGS North America Inc - Orlando. at a maximum corrected temperature of 5.2 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. - Orlando Job Number of FA96293 was assigned to the project.

Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section. Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Metals Analysis By Method EPA 245.1

Matrix: AQ

Batch ID: MP40843

Sample(s) FA96353-1DUP, FA96353-1MSD, FA96353-1SDL were used as the QC samples for metals.

Matrix Spike Recovery(s) for Mercury are outside control limits. Spike recovery indicates possible matrix interference.

Matrix Spike Duplicate Recovery(s) for Mercury are outside control limits. Probable cause is due to matrix interference.

SGS North America Inc. - Orlando certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted. Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria. SGS North America Inc.- Orlando is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety.

Narrative prepared by:

Kim Benham, Client Services (*Signature on File*)

Summary of Hits

Job Number: FA96293
Account: SGS North America, Inc
Project: 1222761
Collected: 06/06/22



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
---------------	------------------	-----------------	----	-----	-------	--------

FA96293-1 **CAM6**

No hits reported in this sample.

FA96293-2 **CHE3**

No hits reported in this sample.

FA96293-3 **CHE33**

No hits reported in this sample.

FA96293-4 **ANCHBACT20-01**

No hits reported in this sample.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: CAM6	Date Sampled: 06/06/22
Lab Sample ID: FA96293-1	Date Received: 06/08/22
Matrix: AQ - Water	Percent Solids: n/a
Project: 1222761	

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	< 0.50	0.50	ug/l	1	06/14/22	06/14/22 JC	EPA 245.1 ¹	EPA 245.1 ²

(1) Instrument QC Batch: MA18744

(2) Prep QC Batch: MP40843

RL = Reporting Limit

Report of Analysis

Client Sample ID: CHE3	Date Sampled: 06/06/22
Lab Sample ID: FA96293-2	Date Received: 06/08/22
Matrix: AQ - Water	Percent Solids: n/a
Project: 1222761	

4.2
4

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	< 0.50	0.50	ug/l	1	06/14/22	06/14/22 JC	EPA 245.1 ¹	EPA 245.1 ²

(1) Instrument QC Batch: MA18744

(2) Prep QC Batch: MP40843

RL = Reporting Limit

Report of Analysis

Client Sample ID: CHE33	Date Sampled: 06/06/22
Lab Sample ID: FA96293-3	Date Received: 06/08/22
Matrix: AQ - Water	Percent Solids: n/a
Project: 1222761	

4.3
4

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	< 0.50	0.50	ug/l	1	06/14/22	06/14/22 JC	EPA 245.1 ¹	EPA 245.1 ²

(1) Instrument QC Batch: MA18744

(2) Prep QC Batch: MP40843

RL = Reporting Limit

Report of Analysis

Client Sample ID: ANCHBACT20-01	Date Sampled: 06/06/22
Lab Sample ID: FA96293-4	Date Received: 06/08/22
Matrix: AQ - Water	Percent Solids: n/a
Project: 1222761	

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	< 0.50	0.50	ug/l	1	06/14/22	06/14/22 JC	EPA 245.1 ¹	EPA 245.1 ²

(1) Instrument QC Batch: MA18744

(2) Prep QC Batch: MP40843

RL = Reporting Limit

4.4
4

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

SGS North America Inc.
CHAIN OF CUSTODY RECORD



FA96293

Locations Nationwide
Alaska Florida
New Jersey Colorado
Texas North Carolina
Virginia Louisiana
www.us.sgs.com

CLIENT: SGS North America Inc. - Alaska Division				SGS Reference: SGS Orlando, FL				Page 1 of 1					
CONTACT: Julie Shumway		PHONE NO: (907) 562-2343		Additional Comments: All soils report out in dry weight unless									
PROJECT NAME: 1222761		PWSID#: _____		CONTAINER	#	Preservative Used: HMO3	TYPE	C = COMP G = GRAB M = Multi Incremental Soils	Mercury 245.1, Total	MS	MSD	SGS lab #	Location ID
REPORTS TO: Julie Shumway		E-MAIL: Julie.Shumway@sgs.com											
INVOICE TO: SGS - Alaska		QUOTE #: _____											
env.alaska.accounting@sgs.com		P.O. #: 1222761											
RESERVED for lab use	SAMPLE IDENTIFICATION	DATE mm/dd/yy	TIME HHMM	MATRIX/MATRIX CODE									
	Cam6	06/06/2022	12:35:00	Water	1	X						1222761001	
	Che3	06/06/2022	11:42:00	Water	1	X						1222761002	
	Che33	06/06/2022	10:20:00	Water	1	X						1222761003	
	AnchBact20-01	06/06/2022	11:00:00	Water	1	X						1222761004	
Relinquished By: (1)		Date	Time	Received By:		DOD Project?		NO		Data Deliverable Requirements:			
<i>Julie Shumway</i>		6/7/22	1006	<i>Robert J. Kelly</i>		Report to DL (J Flags)?		NO		Level 2			
Relinquished By: (2)		Date	Time	Received By:		Cooler ID:		Requested Turnaround Time and-or Special Instructions:					
		6-8-22	1500										
Relinquished By: (3)		Date	Time	Received By:		Temp Blank °C:		4.8 FOL		Chain of Custody Seal: (Circle)			
Relinquished By: (4)		Date	Time	Received For Laboratory By:		or Ambient []				INTACT BROKEN ABSENT			

[X] 200 W. Potter Drive Anchorage, AK 99518 Tel: (907) 562-2343 Fax: (907) 561-5301
 [] 5500 Business Drive Wilmington, NC 28405 Tel: (910) 350-1903 Fax: (910) 350-1557

http://www.sgs.com/terms_and_conditions.htm

INITIAL ASSESSMENT *[Signature]*

LABEL VERIFICATION *[Signature]*

F088_COC_REF_LAB_20190411

SGS Sample Receipt Summary

Job Number: FA96293

Client: ALASKA

Project: 1222761

Date / Time Received: 6/8/2022 3:00:00 PM

Delivery Method: FED EX

Airbill #'s: 1483 4802 3310

Therm ID: IR 1;

Therm CF: 0.4;

of Coolers: 1

Cooler Temps (Raw Measured) °C: Cooler 1: (4.8);

Cooler Temps (Corrected) °C: Cooler 1: (5.2);

Cooler Information

Y or N

- 1. Custody Seals Present
- 2. Custody Seals Intact
- 3. Temp criteria achieved
- 4. Cooler temp verification IR Gun
- 5. Cooler media Ice (Bag)

Trip Blank Information

Y or N N/A

- 1. Trip Blank present / cooler
 - 2. Trip Blank listed on COC
- W or S N/A
- 3. Type Of TB Received

Sample Information

Y or N N/A

- 1. Sample labels present on bottles
- 2. Samples preserved properly
- 3. Sufficient volume/containers recvd for analysis:
- 4. Condition of sample Intact
- 5. Sample recvd within HT
- 6. Dates/Times/IDs on COC match Sample Label
- 7. VOCs have headspace
- 8. Bottles received for unspecified tests
- 9. Compositing instructions clear
- 10. Voa Soil Kits/Jars received past 48hrs?
- 11. % Solids Jar received?
- 12. Residual Chlorine Present?

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____ Number of 5035 Field Kits: _____ Number of Lab Filtered Metals: _____
 Test Strip Lot #s: pH 0-3 230315 pH 10-12 219813A Other: (Specify) _____
 Residual Chlorine Test Strip Lot #: _____

Comments

SM001 Rev. Date 05/24/17 Technician: CARLOSD Date: 6/8/2022 3:00:00 PM Reviewer: _____ Date: _____

FA96293: Chain of Custody

Page 2 of 2

5.1
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Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA96293
Account: SGS/SAKA - SGS North America, Inc
Project: 1222761

QC Batch ID: MP40843
Matrix Type: AQUEOUS

Methods: EPA 245.1
Units: ug/l

Prep Date: 06/14/22

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.50	.03	.03	0.0034	<0.50

Associated samples MP40843: FA96293-1, FA96293-2, FA96293-3, FA96293-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA96293
 Account: SGSAKA - SGS North America, Inc
 Project: 1222761

QC Batch ID: MP40843
 Matrix Type: AQUEOUS

Methods: EPA 245.1
 Units: ug/l

Prep Date: 06/14/22 06/14/22

Metal	FA96353-1 Original	DUP	RPD	QC Limits	FA96353-1 Original MS	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.0	0.0	NC	0-10	0.0	1.3	3	43.3N(a) 70-130

Associated samples MP40843: FA96293-1, FA96293-2, FA96293-3, FA96293-4

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested
 (a) Spike recovery indicates possible matrix interference.

6.12
 6

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA96293
 Account: SGS/SAKA - SGS North America, Inc
 Project: 1222761

QC Batch ID: MP40843
 Matrix Type: AQUEOUS

Methods: EPA 245.1
 Units: ug/l

Prep Date: 06/14/22

Metal	FA96353-1 Original MSD	Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit
Mercury	0.0	1.3	3	43.3N(a) 0.0	

Associated samples MP40843: FA96293-1, FA96293-2, FA96293-3, FA96293-4

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested
 (a) Spike recovery indicates possible matrix interference.

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SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA96293
 Account: SGS/SAKA - SGS North America, Inc
 Project: 1222761

QC Batch ID: MP40843
 Matrix Type: AQUEOUS

Methods: EPA 245.1
 Units: ug/l

Prep Date: 06/14/22

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	3.0	3	100.0	85-115

Associated samples MP40843: FA96293-1, FA96293-2, FA96293-3, FA96293-4

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

6.1.3
 6

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA96293
Account: SGS/SAKA - SGS North America, Inc
Project: 1222761

QC Batch ID: MP40843
Matrix Type: AQUEOUS

Methods: EPA 245.1
Units: ug/l

Prep Date: 06/14/22

Metal	FA96353-1	Original	SDL 1:5	%DIF	QC Limits
-------	-----------	----------	---------	------	-----------

Mercury 0.00 0.00 NC 0-10

Associated samples MP40843: FA96293-1, FA96293-2, FA96293-3, FA96293-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested



Laboratory Report of Analysis

To: ADEC-Air & Water Quality
610 University Drive
Fairbanks, AK 99709
(907)451-2141

Report Number: **1222817**

Client Project: **WHADA**

Dear Morgan Brown,

Enclosed are the results of the analytical services performed under the referenced project for the received samples and associated QC as applicable. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of ten years in the event they are required for future reference. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. Any samples submitted to our laboratory will be retained for a maximum of fourteen (14) days from the date of this report unless other archiving requirements were included in the quote.

If there are any questions about the report or services performed during this project, please call Alexandra at (907) 562-2343. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS North America Inc. for your analytical services. We look forward to working with you again on any additional analytical needs.

Sincerely,
SGS North America Inc.

Alexandra Lambe
Project Manager
Alexandra.Lambe@sgs.com

Date

Case Narrative

SGS Client: **ADEC-Air & Water Quality**

SGS Project: **1222817**

Project Name/Site: **WHADA**

Project Contact: **Morgan Brown**

Refer to sample receipt form for information on sample condition.

Mercury 245.1 Total was analyzed by SGS of Orlando, FL.

*QC comments may be associated with the field samples found in this report. When applicable, comments will be applied to associated field samples.

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Laboratory Qualifiers

Enclosed are the analytical results associated with the above work order. The results apply to the samples as received. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. This document is issued by the Company under its General Conditions of Service accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the context or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 DW Chemistry (Provisionally Certified as of 05/31/2022 for Nitrate as N by SM 4500NO3-F) & Microbiology & 17-021 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020B, 7470A, 7471B, 8015C, 8021B, 8082A, 8260D, 8270D, 8270D-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). SGS is only certified for the analytes listed on our Drinking Water Certification (DW methods: 200.8, 2130B, 2320B, 2510B, 300.0, 4500-CN-C,E, 4500-H-B, 4500-NO3-F, 4500-P-E and 524.2) and only those analytes will be reported to the State of Alaska for compliance. Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, other regulatory authorities.

The following descriptors or qualifiers may be found in your report:

*	The analyte has exceeded allowable regulatory or control limits.
!	Surrogate out of control limits.
B	Indicates the analyte is found in a blank associated with the sample.
CCV/CVA/CVB	Continuing Calibration Verification
CCCV/CVC/CVCA/CVCB	Closing Continuing Calibration Verification
CL	Control Limit
DF	Analytical Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
GT	Greater Than
IB	Instrument Blank
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LLQC/LLIQC	Low Level Quantitation Check
LOD	Limit of Detection (i.e., 1/2 of the LOQ)
LOQ	Limit of Quantitation (i.e., reporting or practical quantitation limit)
LT	Less Than
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
RPD	Relative Percent Difference
TNTC	Too Numerous To Count
U	Indicates the analyte was analyzed for but not detected.

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content. All DRO/RRO analyses are integrated per SOP.

Sample Summary

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Collected</u>	<u>Received</u>	<u>Matrix</u>
WA01	1222817001	06/07/2022	06/07/2022	Water (Surface, Eff., Ground)
WA04	1222817002	06/07/2022	06/07/2022	Water (Surface, Eff., Ground)
WA01	1222817003	06/07/2022	06/07/2022	Water (Surface, Eff., Ground)
WA04	1222817004	06/07/2022	06/07/2022	Water (Surface, Eff., Ground)

<u>Method</u>	<u>Method Description</u>
SM 5310B	Dissolved Organic Carbon
SM21 2340B	Hardness as CaCO3 by ICP-MS
EP200.8	Metals in Drinking Water by ICP-MS DISSO
EP200.8	Metals in Water by 200.8 ICP-MS
SM21 4500NO3-F	Nitrate/Nitrite Flow injection Pres.
SM23 4500-N D	TKN by Phenate (W)
SM21 4500P-B,E	Total Phosphorus (W)

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Detectable Results Summary

Client Sample ID: **WA01**
 Lab Sample ID: 1222817001

Metals by ICP/MS

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Calcium	15300	ug/L
Hardness as CaCO3	49.1	mg/L
Magnesium	2650	ug/L

Waters Department

TOC Average, Dissolved	2.23	mg/L
Total Nitrate/Nitrite-N	0.371	mg/L

Client Sample ID: **WA04**
 Lab Sample ID: 1222817002

Metals by ICP/MS

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Calcium	24500	ug/L
Hardness as CaCO3	77.5	mg/L
Magnesium	3930	ug/L

Waters Department

TOC Average, Dissolved	2.19	mg/L
Total Nitrate/Nitrite-N	0.432	mg/L

Client Sample ID: **WA01**
 Lab Sample ID: 1222817003

Dissolved Metals by ICP/MS

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Barium	10.0	ug/L
Calcium	15000	ug/L
Magnesium	2460	ug/L
Silicon	3350	ug/L
Sodium	2220	ug/L
Zinc	12.3	ug/L

Client Sample ID: **WA04**
 Lab Sample ID: 1222817004

Dissolved Metals by ICP/MS

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Barium	11.2	ug/L
Calcium	23900	ug/L
Magnesium	3740	ug/L
Potassium	559	ug/L
Silicon	3890	ug/L
Sodium	3230	ug/L



Results of WA01

Client Sample ID: **WA01**
Client Project ID: **WHADA**
Lab Sample ID: 1222817001
Lab Project ID: 1222817

Collection Date: 06/07/22 10:30
Received Date: 06/07/22 13:59
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Metals by ICP/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Calcium	15300	500	150	ug/L	1		06/22/22 19:04
Magnesium	2650	50.0	15.0	ug/L	1		06/22/22 19:04

Batch Information

Analytical Batch: MMS11587
Analytical Method: EP200.8
Analyst: AKA
Analytical Date/Time: 06/22/22 19:04
Container ID: 1222817001-B

Prep Batch: MXX35168
Prep Method: E200.2
Prep Date/Time: 06/16/22 12:41
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Hardness as CaCO3	49.1	5.00	5.00	mg/L	1		06/22/22 19:04

Batch Information

Analytical Batch: MMS11587
Analytical Method: SM21 2340B
Analyst: AKA
Analytical Date/Time: 06/22/22 19:04
Container ID: 1222817001-B

Prep Batch: MXX35168
Prep Method: E200.2
Prep Date/Time: 06/16/22 12:41
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Print Date: 06/28/2022 3:20:25PM



Results of WA01

Client Sample ID: **WA01**
Client Project ID: **WHADA**
Lab Sample ID: 1222817001
Lab Project ID: 1222817

Collection Date: 06/07/22 10:30
Received Date: 06/07/22 13:59
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Waters Department

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
TOC Average, Dissolved	2.23	1.00	0.400	mg/L	1		06/17/22 01:28

Batch Information

Analytical Batch: WTC3201
Analytical Method: SM 5310B
Analyst: EBH
Analytical Date/Time: 06/17/22 01:28
Container ID: 1222817001-C

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Nitrate/Nitrite-N	0.371	0.200	0.0500	mg/L	2		06/15/22 12:20

Batch Information

Analytical Batch: WFI2992
Analytical Method: SM21 4500NO3-F
Analyst: EBH
Analytical Date/Time: 06/15/22 12:20
Container ID: 1222817001-D

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Phosphorus	0.0400 U	0.0400	0.0120	mg/L	1		06/24/22 17:24

Batch Information

Analytical Batch: WDA5225	Prep Batch: WXX14256
Analytical Method: SM21 4500P-B,E	Prep Method: SM21 4500P-B,E
Analyst: DMM	Prep Date/Time: 06/23/22 15:09
Analytical Date/Time: 06/24/22 17:24	Prep Initial Wt./Vol.: 25 mL
Container ID: 1222817001-D	Prep Extract Vol: 25 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Kjeldahl Nitrogen	1.00 U	1.00	0.310	mg/L	1		06/24/22 10:19

Print Date: 06/28/2022 3:20:25PM

Results of **WA01**

Client Sample ID: **WA01**
Client Project ID: **WHADA**
Lab Sample ID: 1222817001
Lab Project ID: 1222817

Collection Date: 06/07/22 10:30
Received Date: 06/07/22 13:59
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: WDA5224
Analytical Method: SM23 4500-N D
Analyst: DMM
Analytical Date/Time: 06/24/22 10:19
Container ID: 1222817001-D

Prep Batch: WXX14252
Prep Method: METHOD
Prep Date/Time: 06/23/22 12:10
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Print Date: 06/28/2022 3:20:25PM



Results of **WA04**

Client Sample ID: **WA04**
Client Project ID: **WHADA**
Lab Sample ID: 1222817002
Lab Project ID: 1222817

Collection Date: 06/07/22 11:42
Received Date: 06/07/22 13:59
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Metals by ICP/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Calcium	24500	500	150	ug/L	1		06/22/22 19:07
Magnesium	3930	50.0	15.0	ug/L	1		06/22/22 19:07

Batch Information

Analytical Batch: MMS11587
Analytical Method: EP200.8
Analyst: AKA
Analytical Date/Time: 06/22/22 19:07
Container ID: 1222817002-B

Prep Batch: MXX35168
Prep Method: E200.2
Prep Date/Time: 06/16/22 12:41
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Hardness as CaCO3	77.5	5.00	5.00	mg/L	1		06/22/22 19:07

Batch Information

Analytical Batch: MMS11587
Analytical Method: SM21 2340B
Analyst: AKA
Analytical Date/Time: 06/22/22 19:07
Container ID: 1222817002-B

Prep Batch: MXX35168
Prep Method: E200.2
Prep Date/Time: 06/16/22 12:41
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

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Results of **WA04**

Client Sample ID: **WA04**
Client Project ID: **WHADA**
Lab Sample ID: 1222817002
Lab Project ID: 1222817

Collection Date: 06/07/22 11:42
Received Date: 06/07/22 13:59
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
TOC Average, Dissolved	2.19	1.00	0.400	mg/L	1		06/17/22 01:41

Batch Information

Analytical Batch: WTC3201
Analytical Method: SM 5310B
Analyst: EBH
Analytical Date/Time: 06/17/22 01:41
Container ID: 1222817002-C

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Nitrate/Nitrite-N	0.432	0.200	0.0500	mg/L	2		06/15/22 12:22

Batch Information

Analytical Batch: WFI2992
Analytical Method: SM21 4500NO3-F
Analyst: EBH
Analytical Date/Time: 06/15/22 12:22
Container ID: 1222817002-D

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Phosphorus	0.0400 U	0.0400	0.0120	mg/L	1		06/24/22 17:25

Batch Information

Analytical Batch: WDA5225	Prep Batch: WXX14256
Analytical Method: SM21 4500P-B,E	Prep Method: SM21 4500P-B,E
Analyst: DMM	Prep Date/Time: 06/23/22 15:09
Analytical Date/Time: 06/24/22 17:25	Prep Initial Wt./Vol.: 25 mL
Container ID: 1222817002-D	Prep Extract Vol: 25 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Kjeldahl Nitrogen	1.00 U	1.00	0.310	mg/L	1		06/24/22 10:20

Print Date: 06/28/2022 3:20:25PM

Results of **WA04**

Client Sample ID: **WA04**
Client Project ID: **WHADA**
Lab Sample ID: 1222817002
Lab Project ID: 1222817

Collection Date: 06/07/22 11:42
Received Date: 06/07/22 13:59
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: WDA5224
Analytical Method: SM23 4500-N D
Analyst: DMM
Analytical Date/Time: 06/24/22 10:20
Container ID: 1222817002-D

Prep Batch: WXX14252
Prep Method: METHOD
Prep Date/Time: 06/23/22 12:10
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Print Date: 06/28/2022 3:20:25PM



Results of WA01

Client Sample ID: **WA01**
 Client Project ID: **WHADA**
 Lab Sample ID: 1222817003
 Lab Project ID: 1222817

Collection Date: 06/07/22 10:30
 Received Date: 06/07/22 13:59
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Dissolved Metals by ICP/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Aluminum	20.0 U	20.0	6.20	ug/L	1		06/22/22 19:09
Antimony	1.00 U	1.00	0.310	ug/L	1		06/22/22 19:09
Arsenic	5.00 U	5.00	1.50	ug/L	1		06/22/22 19:09
Barium	10.0	3.00	0.940	ug/L	1		06/22/22 19:09
Beryllium	0.400 U	0.400	0.130	ug/L	1		06/22/22 19:09
Cadmium	0.500 U	0.500	0.150	ug/L	1		06/22/22 19:09
Calcium	15000	500	150	ug/L	1		06/22/22 19:09
Chromium	5.00 U	5.00	2.50	ug/L	1		06/22/22 19:09
Cobalt	4.00 U	4.00	1.20	ug/L	1		06/22/22 19:09
Copper	3.00 U	3.00	1.00	ug/L	1		06/22/22 19:09
Iron	250 U	250	78.0	ug/L	1		06/22/22 19:09
Lead	2.00 U	2.00	0.500	ug/L	1		06/22/22 19:09
Magnesium	2460	50.0	15.0	ug/L	1		06/22/22 19:09
Manganese	1.00 U	1.00	0.350	ug/L	1		06/22/22 19:09
Molybdenum	2.00 U	2.00	0.620	ug/L	1		06/22/22 19:09
Nickel	2.00 U	2.00	0.620	ug/L	1		06/22/22 19:09
Phosphorus	200 U	200	62.0	ug/L	1		06/22/22 19:09
Potassium	500 U	500	150	ug/L	1		06/22/22 19:09
Selenium	5.00 U	5.00	1.50	ug/L	1		06/22/22 19:09
Silicon	3350	1000	310	ug/L	1		06/22/22 19:09
Silver	1.00 U	1.00	0.310	ug/L	1		06/22/22 19:09
Sodium	2220	500	150	ug/L	1		06/22/22 19:09
Thallium	1.00 U	1.00	0.310	ug/L	1		06/22/22 19:09
Tin	1.00 U	1.00	0.310	ug/L	1		06/22/22 19:09
Titanium	6.25 U	6.25	3.13	ug/L	1		06/22/22 19:09
Vanadium	20.0 U	20.0	6.20	ug/L	1		06/22/22 19:09
Zinc	12.3	10.0	3.10	ug/L	1		06/22/22 19:09

Batch Information

Analytical Batch: MMS11587
 Analytical Method: EP200.8
 Analyst: AKA
 Analytical Date/Time: 06/22/22 19:09
 Container ID: 1222817003-A

Prep Batch: MXX35168
 Prep Method: E200.2
 Prep Date/Time: 06/16/22 12:41
 Prep Initial Wt./Vol.: 20 mL
 Prep Extract Vol: 50 mL

Print Date: 06/28/2022 3:20:25PM



Results of WA04

Client Sample ID: **WA04**
Client Project ID: **WHADA**
Lab Sample ID: 1222817004
Lab Project ID: 1222817

Collection Date: 06/07/22 11:42
Received Date: 06/07/22 13:59
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Dissolved Metals by ICP/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Aluminum	20.0 U	20.0	6.20	ug/L	1		06/22/22 19:12
Antimony	1.00 U	1.00	0.310	ug/L	1		06/22/22 19:12
Arsenic	5.00 U	5.00	1.50	ug/L	1		06/22/22 19:12
Barium	11.2	3.00	0.940	ug/L	1		06/22/22 19:12
Beryllium	0.400 U	0.400	0.130	ug/L	1		06/22/22 19:12
Cadmium	0.500 U	0.500	0.150	ug/L	1		06/22/22 19:12
Calcium	23900	500	150	ug/L	1		06/22/22 19:12
Chromium	5.00 U	5.00	2.50	ug/L	1		06/22/22 19:12
Cobalt	4.00 U	4.00	1.20	ug/L	1		06/22/22 19:12
Copper	3.00 U	3.00	1.00	ug/L	1		06/22/22 19:12
Iron	250 U	250	78.0	ug/L	1		06/22/22 19:12
Lead	2.00 U	2.00	0.500	ug/L	1		06/22/22 19:12
Magnesium	3740	50.0	15.0	ug/L	1		06/22/22 19:12
Manganese	1.00 U	1.00	0.350	ug/L	1		06/22/22 19:12
Molybdenum	2.00 U	2.00	0.620	ug/L	1		06/22/22 19:12
Nickel	2.00 U	2.00	0.620	ug/L	1		06/22/22 19:12
Phosphorus	200 U	200	62.0	ug/L	1		06/22/22 19:12
Potassium	559	500	150	ug/L	1		06/22/22 19:12
Selenium	5.00 U	5.00	1.50	ug/L	1		06/22/22 19:12
Silicon	3890	1000	310	ug/L	1		06/22/22 19:12
Silver	1.00 U	1.00	0.310	ug/L	1		06/22/22 19:12
Sodium	3230	500	150	ug/L	1		06/22/22 19:12
Thallium	1.00 U	1.00	0.310	ug/L	1		06/22/22 19:12
Tin	1.00 U	1.00	0.310	ug/L	1		06/22/22 19:12
Titanium	6.25 U	6.25	3.13	ug/L	1		06/22/22 19:12
Vanadium	20.0 U	20.0	6.20	ug/L	1		06/22/22 19:12
Zinc	10.0 U	10.0	3.10	ug/L	1		06/22/22 19:12

Batch Information

Analytical Batch: MMS11587
Analytical Method: EP200.8
Analyst: AKA
Analytical Date/Time: 06/22/22 19:12
Container ID: 1222817004-A

Prep Batch: MXX35168
Prep Method: E200.2
Prep Date/Time: 06/16/22 12:41
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Print Date: 06/28/2022 3:20:25PM

Method Blank

Blank ID: MB for HBN 1837978 [MXX/35168]
 Blank Lab ID: 1668327

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
 1222817001, 1222817002, 1222817003, 1222817004

Results by EP200.8

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Aluminum	10.0U	20.0	6.20	ug/L
Antimony	0.340J	1.00	0.310	ug/L
Arsenic	2.50U	5.00	1.50	ug/L
Barium	1.50U	3.00	0.940	ug/L
Beryllium	0.200U	0.400	0.130	ug/L
Cadmium	0.250U	0.500	0.150	ug/L
Calcium	250U	500	150	ug/L
Chromium	2.50U	5.00	2.50	ug/L
Cobalt	2.00U	4.00	1.20	ug/L
Copper	1.50U	3.00	1.00	ug/L
Iron	125U	250	78.0	ug/L
Lead	1.00U	2.00	0.500	ug/L
Magnesium	25.0U	50.0	15.0	ug/L
Manganese	0.500U	1.00	0.350	ug/L
Molybdenum	1.00U	2.00	0.620	ug/L
Nickel	1.00U	2.00	0.620	ug/L
Phosphorus	100U	200	62.0	ug/L
Potassium	250U	500	150	ug/L
Selenium	2.50U	5.00	1.50	ug/L
Silicon	500U	1000	310	ug/L
Silver	0.500U	1.00	0.310	ug/L
Sodium	250U	500	150	ug/L
Thallium	0.500U	1.00	0.310	ug/L
Tin	0.500U	1.00	0.310	ug/L
Titanium	12.5U	25.0	7.75	ug/L
Vanadium	10.0U	20.0	6.20	ug/L
Zinc	5.00U	10.0	3.10	ug/L

Batch Information

Analytical Batch: MMS11587
 Analytical Method: EP200.8
 Instrument: P7 Agilent 7800
 Analyst: AKA
 Analytical Date/Time: 6/22/2022 6:21:16PM

Prep Batch: MXX35168
 Prep Method: E200.2
 Prep Date/Time: 6/16/2022 12:41:29PM
 Prep Initial Wt./Vol.: 20 mL
 Prep Extract Vol: 50 mL



Blank Spike Summary

Blank Spike ID: LCS for HBN 1222817 [MXX35168]

Blank Spike Lab ID: 1668328

Date Analyzed: 06/22/2022 18:23

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222817001, 1222817002, 1222817003, 1222817004

Results by EP200.8

Blank Spike (ug/L)

Parameter	Spike	Result	Rec (%)	CL
Aluminum	1000	965	97	(85-115)
Antimony	1000	990	99	(85-115)
Arsenic	1000	990	99	(85-115)
Barium	1000	975	98	(85-115)
Beryllium	100	99.2	99	(85-115)
Cadmium	100	97.6	98	(85-115)
Calcium	10000	9730	97	(85-115)
Chromium	400	392	98	(85-115)
Cobalt	500	505	101	(85-115)
Copper	1000	1020	102	(85-115)
Iron	5000	5140	103	(85-115)
Lead	1000	1000	100	(85-115)
Magnesium	10000	9930	99	(85-115)
Manganese	500	497	99	(85-115)
Molybdenum	400	381	95	(85-115)
Nickel	1000	1000	100	(85-115)
Phosphorus	500	485	97	(85-115)
Potassium	10000	9880	99	(85-115)
Selenium	1000	973	97	(85-115)
Silicon	10000	9960	100	(85-115)
Silver	100	97.9	98	(85-115)
Sodium	10000	9910	99	(85-115)
Thallium	10	9.66	97	(85-115)
Tin	100	94.0	94	(85-115)
Titanium	100	97.6	98	(85-115)
Vanadium	200	196	98	(85-115)
Zinc	1000	1000	100	(85-115)

Batch Information

Analytical Batch: **MMS11587**

Analytical Method: **EP200.8**

Instrument: **P7 Agilent 7800**

Analyst: **AKA**

Prep Batch: **MXX35168**

Prep Method: **E200.2**

Prep Date/Time: **06/16/2022 12:41**

Spike Init Wt./Vol.: 1000 ug/L Extract Vol: 50 mL

Dupe Init Wt./Vol.: Extract Vol:

Print Date: 06/28/2022 3:20:29PM

Matrix Spike Summary

Original Sample ID: 1668374
 MS Sample ID: 1668375 MS
 MSD Sample ID:

Analysis Date: 06/22/2022 18:29
 Analysis Date: 06/22/2022 18:32
 Analysis Date:
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222817001, 1222817002, 1222817003, 1222817004

Results by EP200.8

Parameter	Sample	Matrix Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Aluminum	10.0U	1000	960	96				70-130		
Antimony	0.500U	1000	994	99				70-130		
Arsenic	2.50U	1000	988	99				70-130		
Barium	8.91	1000	983	97				70-130		
Beryllium	0.200U	100	98.4	98				70-130		
Cadmium	0.250U	100	98.3	98				70-130		
Calcium	44600	10000	54800	103				70-130		
Chromium	3.98J	400	396	98				70-130		
Cobalt	2.00U	500	498	100				70-130		
Copper	240	1000	1250	101				70-130		
Iron	125U	5000	5120	102				70-130		
Lead	5.77	1000	995	99				70-130		
Magnesium	8630	10000	18600	100				70-130		
Manganese	0.607J	500	491	98				70-130		
Molybdenum	1.00U	400	385	96				70-130		
Nickel	1.07J	1000	992	99				70-130		
Phosphorus	100U	500	487	98				70-130		
Potassium	532	10000	10400	98				70-130		
Selenium	2.50U	1000	970	97				70-130		
Silicon	7650	10000	17500	99				70-130		
Silver	0.500U	100	97	97				70-130		
Sodium	4020	10000	13900	99				70-130		
Thallium	0.500U	10.0	9.63	96				70-130		
Tin	0.310J	100	95.3	95				70-130		
Titanium	12.5U	100	98.6	99				70-130		
Vanadium	10.0U	200	194	97				70-130		
Zinc	571	1000	1590	102				70-130		

Batch Information

Analytical Batch: MMS11587
 Analytical Method: EP200.8
 Instrument: P7 Agilent 7800
 Analyst: AKA
 Analytical Date/Time: 6/22/2022 6:32:05PM

Prep Batch: MX35168
 Prep Method: DW Digest for Metals on ICP-MS
 Prep Date/Time: 6/16/2022 12:41:29PM
 Prep Initial Wt./Vol.: 20.00mL
 Prep Extract Vol: 50.00mL

Print Date: 06/28/2022 3:20:31PM

Matrix Spike Summary

Original Sample ID: 1222875003
 MS Sample ID: 1668377 MS
 MSD Sample ID:

Analysis Date: 06/22/2022 18:34
 Analysis Date: 06/22/2022 18:37
 Analysis Date:
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222817001, 1222817002, 1222817003, 1222817004

Results by EP200.8

Parameter	Sample	Matrix Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Aluminum	10.0U	1000	950	95				70-130		
Antimony	0.558J	1000	984	98				70-130		
Arsenic	3.49J	1000	985	98				70-130		
Barium	44.5	1000	1010	97				70-130		
Beryllium	0.200U	100	95.9	96				70-130		
Cadmium	0.250U	100	97.4	97				70-130		
Calcium	23500	10000	33300	97				70-130		
Chromium	2.50U	400	391	98				70-130		
Cobalt	2.00U	500	498	100				70-130		
Copper	1.50U	1000	1010	101				70-130		
Iron	2090	5000	7130	101				70-130		
Lead	1.00U	1000	980	98				70-130		
Magnesium	6980	10000	16500	95				70-130		
Manganese	92.3	500	584	98				70-130		
Molybdenum	1.71J	400	382	95				70-130		
Nickel	2.33	1000	987	99				70-130		
Phosphorus	100U	500	522	104				70-130		
Potassium	6850	10000	16600	98				70-130		
Selenium	2.50U	1000	966	97				70-130		
Silicon	1840	10000	11600	97				70-130		
Silver	0.500U	100	97	97				70-130		
Sodium	4330	10000	14000	97				70-130		
Thallium	0.500U	10.0	9.67	97				70-130		
Tin	0.500U	100	93.9	94				70-130		
Titanium	12.5U	100	97.5	98				70-130		
Vanadium	10.0U	200	196	98				70-130		
Zinc	10.4	1000	1010	100				70-130		

Batch Information

Analytical Batch: MMS11587
 Analytical Method: EP200.8
 Instrument: P7 Agilent 7800
 Analyst: AKA
 Analytical Date/Time: 6/22/2022 6:37:29PM

Prep Batch: MX35168
 Prep Method: DW Digest for Metals on ICP-MS
 Prep Date/Time: 6/16/2022 12:41:29PM
 Prep Initial Wt./Vol.: 20.00mL
 Prep Extract Vol: 50.00mL

Print Date: 06/28/2022 3:20:31PM

Method Blank

Blank ID: MB for HBN 1837859 (WFI/2992)

Blank Lab ID: 1668185

QC for Samples:

1222817001, 1222817002

Matrix: Water (Surface, Eff., Ground)

Results by SM21 4500NO3-F

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Nitrate-N	0.100U	0.200	0.0500	mg/L
Nitrite-N	0.100U	0.200	0.0500	mg/L
Total Nitrate/Nitrite-N	0.100U	0.200	0.0500	mg/L

Batch Information

Analytical Batch: WFI2992

Analytical Method: SM21 4500NO3-F

Instrument: Astoria segmented flow

Analyst: EBH

Analytical Date/Time: 6/15/2022 12:29:31PM

Print Date: 06/28/2022 3:20:36PM

Method Blank

Blank ID: MB for HBN 1837859 (WFI/2992)

Blank Lab ID: 1668194

QC for Samples:

1222817001, 1222817002

Matrix: Water (Surface, Eff., Ground)

Results by SM21 4500NO3-F

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Nitrate-N	0.100U	0.200	0.0500	mg/L
Nitrite-N	0.100U	0.200	0.0500	mg/L
Total Nitrate/Nitrite-N	0.100U	0.200	0.0500	mg/L

Batch Information

Analytical Batch: WFI2992

Analytical Method: SM21 4500NO3-F

Instrument: Astoria segmented flow

Analyst: EBH

Analytical Date/Time: 6/15/2022 11:33:30AM

Print Date: 06/28/2022 3:20:36PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1222817 [WFI2992]
 Blank Spike Lab ID: 1668187
 Date Analyzed: 06/15/2022 12:27

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222817001, 1222817002

Results by SM21 4500NO3-F

Parameter	Blank Spike (mg/L)			CL
	Spike	Result	Rec (%)	
Nitrate-N	2.5	2.42	97	(70-130)
Nitrite-N	2.5	2.50	100	(90-110)
Total Nitrate/Nitrite-N	5	4.92	98	(90-110)

Batch Information

Analytical Batch: **WFI2992**
 Analytical Method: **SM21 4500NO3-F**
 Instrument: **Astoria segmented flow**
 Analyst: **EBH**

Print Date: 06/28/2022 3:20:39PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1222817 [WFI2992]
 Blank Spike Lab ID: 1668196
 Date Analyzed: 06/15/2022 11:31

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222817001, 1222817002

Results by SM21 4500NO3-F

Parameter	Blank Spike (mg/L)			CL
	Spike	Result	Rec (%)	
Nitrate-N	2.5	2.29	91	(70-130)
Nitrite-N	2.5	2.26	90	(90-110)
Total Nitrate/Nitrite-N	5	4.54	91	(90-110)

Batch Information

Analytical Batch: **WFI2992**
 Analytical Method: **SM21 4500NO3-F**
 Instrument: **Astoria segmented flow**
 Analyst: **EBH**

Matrix Spike Summary

Original Sample ID: 1668169
 MS Sample ID: 1668173 MS
 MSD Sample ID: 1668174 MSD

Analysis Date: 06/15/2022 11:38
 Analysis Date: 06/15/2022 11:40
 Analysis Date: 06/15/2022 11:42
 Matrix: Drinking Water

QC for Samples: 1222817001, 1222817002

Results by SM21 4500NO3-F

Parameter	Sample	Matrix Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Nitrate-N	4.15	2.50	7.07	117	2.50	6.72	103	70-130	5.10	(< 25)
Nitrite-N	0.0522J	2.50	2.4	94	2.50	2.39	93	90-110	0.50	(< 25)

Batch Information

Analytical Batch: WFI2992
 Analytical Method: SM21 4500NO3-F
 Instrument: Astoria segmented flow
 Analyst: EBH
 Analytical Date/Time: 6/15/2022 11:40:30AM

Matrix Spike Summary

Original Sample ID: 1222827001
 MS Sample ID: 1668209 MS
 MSD Sample ID: 1668210 MSD

Analysis Date: 06/15/2022 12:33
 Analysis Date: 06/15/2022 12:34
 Analysis Date: 06/15/2022 12:36
 Matrix: Drinking Water

QC for Samples: 1222817001, 1222817002

Results by SM21 4500NO3-F

Parameter	Sample	Matrix Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Nitrate/Nitrite-N	0.200U	5.00	5.33	107	5.00	5.19	104	90-110	2.70	(< 25)

Batch Information

Analytical Batch: WFI2992
 Analytical Method: SM21 4500NO3-F
 Instrument: Astoria segmented flow
 Analyst: EBH
 Analytical Date/Time: 6/15/2022 12:34:00PM

Method Blank

Blank ID: MB for HBN 1838669 [WXX/14252]

Blank Lab ID: 1669713

QC for Samples:

1222817001, 1222817002

Matrix: Water (Surface, Eff., Ground)

Results by SM23 4500-N D

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Total Kjeldahl Nitrogen	0.500U	1.00	0.310	mg/L

Batch Information

Analytical Batch: WDA5224

Analytical Method: SM23 4500-N D

Instrument: Discrete Analyzer 2

Analyst: DMM

Analytical Date/Time: 6/24/2022 9:00:29AM

Prep Batch: WXX14252

Prep Method: METHOD

Prep Date/Time: 6/23/2022 12:10:00PM

Prep Initial Wt./Vol.: 25 mL

Prep Extract Vol: 25 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1222817 [WXX14252]
 Blank Spike Lab ID: 1669714
 Date Analyzed: 06/24/2022 09:01

Spike Duplicate ID: LCSD for HBN 1222817
 [WXX14252]
 Spike Duplicate Lab ID: 1669715
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222817001, 1222817002

Results by SM23 4500-N D

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Kjeldahl Nitrogen	4	4.18	104	4	3.79	95	(75-125)	9.60	(< 25)

Batch Information

Analytical Batch: **WDA5224**
 Analytical Method: **SM23 4500-N D**
 Instrument: **Discrete Analyzer 2**
 Analyst: **DMM**

Prep Batch: **WXX14252**
 Prep Method: **METHOD**
 Prep Date/Time: **06/23/2022 12:10**
 Spike Init Wt./Vol.: 4 mg/L Extract Vol: 25 mL
 Dupe Init Wt./Vol.: 4 mg/L Extract Vol: 25 mL

Print Date: 06/28/2022 3:20:47PM

Matrix Spike Summary

Original Sample ID: 1220002006
 MS Sample ID: 1669716 MS
 MSD Sample ID: 1669717 MSD

Analysis Date: 06/24/2022 10:00
 Analysis Date: 06/24/2022 10:01
 Analysis Date: 06/24/2022 10:02
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222817001, 1222817002

Results by SM23 4500-N D

Parameter	Sample	Matrix Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Kjeldahl Nitrogen	1.00U	4.00	3.97	99	4.00	4.50	112	75-125	12.30	(< 25)

Batch Information

Analytical Batch: WDA5224
 Analytical Method: SM23 4500-N D
 Instrument: Discrete Analyzer 2
 Analyst: DMM
 Analytical Date/Time: 6/24/2022 10:01:30AM

Prep Batch: WXX14252
 Prep Method: Distillation TKN by Phenate (W)
 Prep Date/Time: 6/23/2022 12:10:00PM
 Prep Initial Wt./Vol.: 25.00mL
 Prep Extract Vol: 25.00mL

Method Blank

Blank ID: MB for HBN 1838894 [WXX/14256]

Blank Lab ID: 1670166

QC for Samples:

1222817001, 1222817002

Matrix: Water (Surface, Eff., Ground)

Results by SM21 4500P-B,E

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Total Phosphorus	0.0200U	0.0400	0.0120	mg/L

Batch Information

Analytical Batch: WDA5225

Analytical Method: SM21 4500P-B,E

Instrument: Discrete Analyzer 2

Analyst: DMM

Analytical Date/Time: 6/24/2022 4:56:58PM

Prep Batch: WXX14256

Prep Method: SM21 4500P-B,E

Prep Date/Time: 6/23/2022 3:09:00PM

Prep Initial Wt./Vol.: 25 mL

Prep Extract Vol: 25 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1222817 [WXX14256]
 Blank Spike Lab ID: 1670167
 Date Analyzed: 06/24/2022 16:57

Spike Duplicate ID: LCSD for HBN 1222817
 [WXX14256]
 Spike Duplicate Lab ID: 1670168
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222817001, 1222817002

Results by SM21 4500P-B,E

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Phosphorus	0.2	0.205	102	0.2	0.204	102	(75-125)	0.44	(< 25)

Batch Information

Analytical Batch: **WDA5225**
 Analytical Method: **SM21 4500P-B,E**
 Instrument: **Discrete Analyzer 2**
 Analyst: **DMM**

Prep Batch: **WXX14256**
 Prep Method: **SM21 4500P-B,E**
 Prep Date/Time: **06/23/2022 15:09**
 Spike Init Wt./Vol.: 0.2 mg/L Extract Vol: 25 mL
 Dupe Init Wt./Vol.: 0.2 mg/L Extract Vol: 25 mL



Matrix Spike Summary

Original Sample ID: 1222761001
MS Sample ID: 1670175 MS
MSD Sample ID: 1670176 MSD

Analysis Date: 06/24/2022 17:15
Analysis Date: 06/24/2022 17:16
Analysis Date: 06/24/2022 17:17
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222817001, 1222817002

Results by SM21 4500P-B,E

Parameter	Sample	Matrix Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Phosphorus	0.0679	0.200	.272	102	0.200	0.276	104	75-125	1.30	(< 25)

Batch Information

Analytical Batch: WDA5225
Analytical Method: SM21 4500P-B,E
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 6/24/2022 5:16:32PM

Prep Batch: WXX14256
Prep Method: Total Phosphorus (W) Ext.
Prep Date/Time: 6/23/2022 3:09:00PM
Prep Initial Wt./Vol.: 25.00mL
Prep Extract Vol: 25.00mL

Print Date: 06/28/2022 3:20:54PM



SGS Workorder #:

1222817

1222817

Review Criteria	Condition (Yes, No, N/A)	Exceptions Noted below
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Chain of Custody / Temperature Requirements		<i>Note: Temperature and COC seal information is found on the chain of custody form</i>
--	--	---

DOD only: Did all sample coolers have a corresponding COC?	N/A	
If <0°C, were sample containers ice free?	N/A	
Note containers received with ice:		
Identify any containers received at non-compliant temperature: (Use form FS-0029 if more space is needed)		

Holding Time / Documentation / Sample Condition Requirement		<i>Note: Refer to form F-083 "Sample Guide" for specific holding times and sample containers.</i>
--	--	---

Were samples received within analytical holding time?	Yes	
Do sample labels match COC? Record discrepancies.	Yes	
<i>Note: If information on containers differs from COC, default to COC information for login. If times differ <1hr, record details & login per COC.</i>		
Were analytical requests clear? <i>(i.e. method is specified for analyses with multiple option for method (Eg, BTEX 8021 vs 8260, Metals 6020 vs 200.8)</i>	Yes	
Were proper containers (type/mass/volume/preservative) used? Note: Exemption for metals analysis by 200.8/6020 in water.	Yes	

Volatile Analysis Requirements (VOC, GRO, LL-Hg, etc.)		
---	--	--

Were all soil VOAs received with a corresponding % solids container?	N/A	
Were Trip Blanks (e.g., VOAs, LL-Hg) in cooler with samples?	N/A	
Were all water VOA vials free of headspace (e.g., bubbles ≤ 6mm)?	N/A	
Were all soil VOAs field extracted with Methanol+BFB?	N/A	

Note to Client: Any "No", answer above indicates non-compliance with standard procedures and may impact data quality.

Additional notes (if applicable):		
--	--	--

Sample Containers and Preservatives

<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>	<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>
1222817001-A	HNO3 to pH < 2	OK			
1222817001-B	HNO3 to pH < 2	OK			
1222817001-C	No Preservative Required	OK			
1222817001-D	H2SO4 to pH < 2	OK			
1222817001-E	No Preservative Required	OK			
1222817002-A	HNO3 to pH < 2	OK			
1222817002-B	HNO3 to pH < 2	OK			
1222817002-C	No Preservative Required	OK			
1222817002-D	H2SO4 to pH < 2	OK			
1222817002-E	No Preservative Required	OK			
1222817003-A	No Preservative Required	OK			
1222817003-B	No Preservative Required	OK			
1222817004-A	No Preservative Required	OK			
1222817004-B	No Preservative Required	OK			

Container Condition Glossary

Containers for bacteriological, low level mercury and VOA vials are not opened prior to analysis and will be assigned condition code OK unless evidence indicates than an inappropriate container was submitted.

OK - The container was received at an acceptable pH for the analysis requested.

BU - The container was received with headspace greater than 6mm.

DM - The container was received damaged.

FR - The container was received frozen and not usable for Bacteria or BOD analyses.

IC - The container provided for microbiology analysis was not a laboratory-supplied, pre-sterilized container and therefore was not suitable for analysis.

NC- The container provided was not preserved or was under-preserved. The method does not allow for additional preservative added after collection.

PA - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt and the container is now at the correct pH. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

PH - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt, but was insufficient to bring the container to the correct pH for the analysis requested. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

QN - Insufficient sample quantity provided.

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

SGS North America, Inc

1222817

SGS Job Number: FA96336

Sampling Date: 06/07/22

Report to:

SGS North America, Inc
200 W Potter Dr
Anchorage, AK 99518
julie.shumway@sgs.com

ATTN: Julie Shumway

Total number of pages in report: **17**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

A handwritten signature in black ink that reads "Norm Farmer".

Norm Farmer
Technical Director

Client Service contact: Andrea Colby 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), NC(573), NJ(FL002), NY(12022), SC(96038001)
DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177),
AL, AK, AR, CT, IA, KY, MA, MI, MS, ND, NH, NV, OK, OR, IL, UT, VT, WA, WI, WV

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Test results relate only to samples analyzed.

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Sample Summary

SGS North America, Inc
1222817

Job No: FA96336

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
FA96336-1	06/07/22	10:30	06/09/22	AQ	Water	WA01
FA96336-2	06/07/22	11:42	06/09/22	AQ	Water	WA04

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: SGS North America, Inc

Job No: FA96336

Site: 1222817

Report Date: 6/15/2022 3:53:17 PM

On 06/09/2022, 2 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at SGS North America Inc - Orlando. at a maximum corrected temperature of 4.2 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. - Orlando Job Number of FA96336 was assigned to the project.

Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section. Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Metals Analysis By Method EPA 245.1

Matrix: AQ

Batch ID: MP40843

Sample(s) FA96353-1DUP, FA96353-1MSD, FA96353-1SDL were used as the QC samples for metals.

Matrix Spike Recovery(s) for Mercury are outside control limits. Spike recovery indicates possible matrix interference.

Matrix Spike Duplicate Recovery(s) for Mercury are outside control limits. Probable cause is due to matrix interference.

SGS North America Inc. - Orlando certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted. Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria. SGS North America Inc.- Orlando is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety.

Narrative prepared by:

Kim Benham, Client Services (*Signature on File*)

Summary of Hits

Job Number: FA96336
Account: SGS North America, Inc
Project: 1222817
Collected: 06/07/22



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
---------------	------------------	-----------------	----	-----	-------	--------

FA96336-1 **WA01**

No hits reported in this sample.

FA96336-2 **WA04**

No hits reported in this sample.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: WA01	Date Sampled: 06/07/22
Lab Sample ID: FA96336-1	Date Received: 06/09/22
Matrix: AQ - Water	Percent Solids: n/a
Project: 1222817	

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	< 0.50	0.50	ug/l	1	06/14/22	06/14/22 JC	EPA 245.1 ¹	EPA 245.1 ²

(1) Instrument QC Batch: MA18744

(2) Prep QC Batch: MP40843

RL = Reporting Limit

Report of Analysis

Client Sample ID: WA04	Date Sampled: 06/07/22
Lab Sample ID: FA96336-2	Date Received: 06/09/22
Matrix: AQ - Water	Percent Solids: n/a
Project: 1222817	

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Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	< 0.50	0.50	ug/l	1	06/14/22	06/14/22 JC	EPA 245.1 ¹	EPA 245.1 ²

(1) Instrument QC Batch: MA18744

(2) Prep QC Batch: MP40843

RL = Reporting Limit

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

FA 96336

**SGS North America Inc.
CHAIN OF CUSTODY RECORD**



Locations Nationwide
 Alaska Florida
 New Jersey Colorado
 Texas North Carolina
 Virginia Louisiana
www.us.sgs.com

CLIENT: SGS North America Inc. - Alaska Division				SGS Reference: SGS Orlando, FL				Page 1 of 1			
CONTACT: Julie Shumway		PHONE NO: (907) 562-2343		Additional Comments: All soils report out in dry weight unless							
PROJECT NAME: 1222817		PWSID#: _____		C O N T A I N E R S	# Preservative Used: TYPE C = COMP G = GRAB MI = Multi Incremental Soils	HNO ₃	Mercury 245.1, Total	MS	MSD	SGS lab #	Location ID
REPORTS TO: Julie Shumway		E-MAIL: Julie.Shumway@sgs.com									
INVOICE TO: SGS - Alaska		QUOTE #: _____									
env.alaska.accounting@sgs.com		P.O. #: 1222817									
RESERVED for lab use	SAMPLE IDENTIFICATION	DATE mm/dd/yy	TIME HHMM	MATRIX/MATRIX CODE							
1	WA01	06/07/2022	10:30:00	Water	1	X				1222817001	
2	WA04	06/07/2022	11:42:00	Water	1	X				1222817002	
INITIAL ASSESSMENT <i>[Signature]</i>											
LABEL VERIFICATION <i>[Signature]</i>											
Relinquished By: (1)		Date	Time	Received By:		DOD Project?		NO		Data Deliverable Requirements:	
<i>[Signature]</i>		6/8/22	09/18	<i>[Signature]</i>		Report to DL (J Flags)?		NO		Level 2	
Relinquished By: (2)		Date	Time	Received By:		Cooler ID:		Requested Turnaround Time and-or Special Instructions:			
<i>[Signature]</i>		6/14/22	15:00	<i>[Signature]</i>							
Relinquished By: (3)		Date	Time	Received By:		Temp Blank °C:		Chain of Custody Seal: (Circle)			
						3.8		INTACT BROKEN ABSENT			
Relinquished By: (4)		Date	Time	Received For Laboratory By:		or Ambient []					

[X 200 W. Potter Drive Anchorage, AK 99518 Tel: (907) 562-2343 Fax: (907) 561-5301
 [. 5500 Business Drive Wilmington, NC 28405 Tel: (910) 350-1903 Fax: (910) 350-1557

http://www.sgs.com/terms_and_conditions.htm

F088_COC_REF_LAB_20190411



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SGS Sample Receipt Summary

Job Number: FA96336

Client: SGS NORTH AMERICA INC -ALASKA DIVI

Project: 122817

Date / Time Received: 6/9/2022 3:00:00 PM

Delivery Method: FED EX

Airbill #'s: 1483 4802 3365

Therm ID: IR 1;

Therm CF: 0.4;

of Coolers: 1

Cooler Temps (Raw Measured) °C: Cooler 1: (3.8);

Cooler Temps (Corrected) °C: Cooler 1: (4.2);

Cooler Information

Y or N

- 1. Custody Seals Present
- 2. Custody Seals Intact
- 3. Temp criteria achieved
- 4. Cooler temp verification IR Gun
- 5. Cooler media Ice (Bag)

Trip Blank Information

Y or N N/A

- 1. Trip Blank present / cooler
 - 2. Trip Blank listed on COC
- W or S N/A
- 3. Type Of TB Received

Sample Information

Y or N N/A

- 1. Sample labels present on bottles
- 2. Samples preserved properly
- 3. Sufficient volume/containers recvd for analysis:
- 4. Condition of sample Intact
- 5. Sample recvd within HT
- 6. Dates/Times/IDs on COC match Sample Label
- 7. VOCs have headspace
- 8. Bottles received for unspecified tests
- 9. Compositing instructions clear
- 10. Voa Soil Kits/Jars received past 48hrs?
- 11. % Solids Jar received?
- 12. Residual Chlorine Present?

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____
 Test Strip Lot #: pH 0-3 230315
 Residual Chlorine Test Strip Lot #: _____

Number of 5035 Field Kits: _____
 pH 10-12 219813A

Number of Lab Filtered Metals: _____
 Other: (Specify) _____

Comments

SM001
Rev. Date 05/24/17

Technician: TORYW

Date: 6/9/2022 3:00:00 PM

Reviewer: _____

Date: _____

FA96336: Chain of Custody

Page 2 of 2

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Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA96336
Account: SGS/SAKA - SGS North America, Inc
Project: 1222817

QC Batch ID: MP40843
Matrix Type: AQUEOUS

Methods: EPA 245.1
Units: ug/l

Prep Date: 06/14/22

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.50	.03	.03	0.0034	<0.50

Associated samples MP40843: FA96336-1, FA96336-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA96336
 Account: SGS/SAKA - SGS North America, Inc
 Project: 1222817

QC Batch ID: MP40843
 Matrix Type: AQUEOUS

Methods: EPA 245.1
 Units: ug/l

Prep Date: 06/14/22 06/14/22

Metal	FA96353-1 Original	DUP	RPD	QC Limits	FA96353-1 Original MS	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.0	0.0	NC	0-10	0.0	1.3	3	43.3N(a) 70-130

Associated samples MP40843: FA96336-1, FA96336-2

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested
 (a) Spike recovery indicates possible matrix interference.

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MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA96336
 Account: SGS/SAKA - SGS North America, Inc
 Project: 1222817

QC Batch ID: MP40843
 Matrix Type: AQUEOUS

Methods: EPA 245.1
 Units: ug/l

Prep Date: 06/14/22

Metal	FA96353-1 Original MSD	Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit
-------	---------------------------	---------------------	-------	------------	-------------

Mercury	0.0	1.3	3	43.3N(a)	0.0
---------	-----	-----	---	----------	-----

Associated samples MP40843: FA96336-1, FA96336-2

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested
 (a) Spike recovery indicates possible matrix interference.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA96336
 Account: SGS/SAKA - SGS North America, Inc
 Project: 1222817

QC Batch ID: MP40843
 Matrix Type: AQUEOUS

Methods: EPA 245.1
 Units: ug/l

Prep Date: 06/14/22

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
-------	---------------	---------------------	-------	--------------

Mercury 3.0 3 100.0 85-115

Associated samples MP40843: FA96336-1, FA96336-2

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

6.1.3
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SERIAL DILUTION RESULTS SUMMARY

Login Number: FA96336
Account: SGS/SAKA - SGS North America, Inc
Project: 1222817

QC Batch ID: MP40843
Matrix Type: AQUEOUS

Methods: EPA 245.1
Units: ug/l

Prep Date: 06/14/22

Metal	FA96353-1	Original	SDL 1:5	%DIF	QC Limits
-------	-----------	----------	---------	------	-----------

Mercury 0.00 0.00 NC 0-10

Associated samples MP40843: FA96336-1, FA96336-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

Laboratory Report of Analysis

To: ADEC-Air & Water Quality
610 University Drive
Fairbanks, AK 99709
(907)451-2141

Report Number: **1222793**

Client Project: **WHADA**

Dear Morgan Brown,

Enclosed are the results of the analytical services performed under the referenced project for the received samples and associated QC as applicable. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of ten years in the event they are required for future reference. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. Any samples submitted to our laboratory will be retained for a maximum of fourteen (14) days from the date of this report unless other archiving requirements were included in the quote.

If there are any questions about the report or services performed during this project, please call Alexandra at (907) 562-2343. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS North America Inc. for your analytical services. We look forward to working with you again on any additional analytical needs.

Sincerely,
SGS North America Inc.

Alexandra Lambe
Project Manager
Alexandra.Lambe@sgs.com

Date

Case Narrative

SGS Client: **ADEC-Air & Water Quality**

SGS Project: **1222793**

Project Name/Site: **WHADA**

Project Contact: **Morgan Brown**

Refer to sample receipt form for information on sample condition.

Mercury 245.1 Total was analyzed by SGS of Orlando, FL.

*QC comments may be associated with the field samples found in this report. When applicable, comments will be applied to associated field samples.

Print Date: 06/28/2022 3:18:39PM

Laboratory Qualifiers

Enclosed are the analytical results associated with the above work order. The results apply to the samples as received. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. This document is issued by the Company under its General Conditions of Service accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the context or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 DW Chemistry (Provisionally Certified as of 05/31/2022 for Nitrate as N by SM 4500NO3-F) & Microbiology & 17-021 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020B, 7470A, 7471B, 8015C, 8021B, 8082A, 8260D, 8270D, 8270D-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). SGS is only certified for the analytes listed on our Drinking Water Certification (DW methods: 200.8, 2130B, 2320B, 2510B, 300.0, 4500-CN-C,E, 4500-H-B, 4500-NO3-F, 4500-P-E and 524.2) and only those analytes will be reported to the State of Alaska for compliance. Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, other regulatory authorities.

The following descriptors or qualifiers may be found in your report:

*	The analyte has exceeded allowable regulatory or control limits.
!	Surrogate out of control limits.
B	Indicates the analyte is found in a blank associated with the sample.
CCV/CVA/CVB	Continuing Calibration Verification
CCCV/CVC/CVCA/CVCB	Closing Continuing Calibration Verification
CL	Control Limit
DF	Analytical Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
GT	Greater Than
IB	Instrument Blank
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LLQC/LLIQC	Low Level Quantitation Check
LOD	Limit of Detection (i.e., 1/2 of the LOQ)
LOQ	Limit of Quantitation (i.e., reporting or practical quantitation limit)
LT	Less Than
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
RPD	Relative Percent Difference
TNTC	Too Numerous To Count
U	Indicates the analyte was analyzed for but not detected.

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content. All DRO/RRO analyses are integrated per SOP.

Sample Summary

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Collected</u>	<u>Received</u>	<u>Matrix</u>
WHADA-SoCr-0.05	1222793001	06/07/2022	06/07/2022	Water (Surface, Eff., Ground)
WHADA-SoCr-4.5	1222793002	06/07/2022	06/07/2022	Water (Surface, Eff., Ground)
WHADA-SoCr-0.05	1222793003	06/07/2022	06/07/2022	Water (Surface, Eff., Ground)
WHADA-SoCr-4.5	1222793004	06/07/2022	06/07/2022	Water (Surface, Eff., Ground)

<u>Method</u>	<u>Method Description</u>
SM 5310B	Dissolved Organic Carbon
SM21 9223B	E Coli LT2 (Colilert Quant)
SM21 9222D	Fecal Coliform (MF)
SM21 2340B	Hardness as CaCO3 by ICP-MS
EP200.8	Metals in Drinking Water by ICP-MS DISSO
EP200.8	Metals in Water by 200.8 ICP-MS
SM21 4500NO3-F	Nitrate/Nitrite Flow injection Pres.
SM23 4500-N D	TKN by Phenate (W)
SM21 4500P-B,E	Total Phosphorus (W)

Print Date: 06/28/2022 3:18:42PM

Detectable Results Summary

Client Sample ID: **WHADA-SoCr-0.05**

Lab Sample ID: 1222793001

Metals by ICP/MS

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Calcium	24800	ug/L
Hardness as CaCO ₃	84.6	mg/L
Magnesium	5470	ug/L

Microbiology Laboratory

E. Coli	77	MPN/100mL
Fecal Coliform	44	col/100mL

Waters Department

TOC Average, Dissolved	5.08	mg/L
Total Phosphorus	0.0944	mg/L

Client Sample ID: **WHADA-SoCr-4.5**

Lab Sample ID: 1222793002

Metals by ICP/MS

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Calcium	17900	ug/L
Hardness as CaCO ₃	60.6	mg/L
Magnesium	3840	ug/L

Waters Department

TOC Average, Dissolved	6.06	mg/L
Total Phosphorus	0.0947	mg/L

Client Sample ID: **WHADA-SoCr-0.05**

Lab Sample ID: 1222793003

Dissolved Metals by ICP/MS

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Arsenic	7.93	ug/L
Barium	15.7	ug/L
Calcium	24400	ug/L
Iron	403	ug/L
Magnesium	5380	ug/L
Manganese	1.70	ug/L
Potassium	2020	ug/L
Silicon	11000	ug/L
Sodium	7950	ug/L
Zinc	29.1	ug/L

Client Sample ID: **WHADA-SoCr-4.5**

Lab Sample ID: 1222793004

Dissolved Metals by ICP/MS

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Arsenic	9.81	ug/L
Barium	12.9	ug/L
Calcium	18400	ug/L
Iron	482	ug/L
Magnesium	3920	ug/L
Manganese	1.94	ug/L
Potassium	1720	ug/L
Silicon	10100	ug/L
Sodium	4190	ug/L



Results of **WHADA-SoCr-0.05**

Client Sample ID: **WHADA-SoCr-0.05**
Client Project ID: **WHADA**
Lab Sample ID: 1222793001
Lab Project ID: 1222793

Collection Date: 06/07/22 10:10
Received Date: 06/07/22 13:38
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Metals by ICP/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Calcium	24800	500	150	ug/L	1		06/13/22 18:36
Magnesium	5470	50.0	15.0	ug/L	1		06/13/22 18:36

Batch Information

Analytical Batch: MMS11579
Analytical Method: EP200.8
Analyst: DMM
Analytical Date/Time: 06/13/22 18:36
Container ID: 1222793001-D

Prep Batch: MXX35159
Prep Method: E200.2
Prep Date/Time: 06/13/22 12:27
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Hardness as CaCO3	84.6	5.00	5.00	mg/L	1		06/13/22 18:36

Batch Information

Analytical Batch: MMS11579
Analytical Method: SM21 2340B
Analyst: DMM
Analytical Date/Time: 06/13/22 18:36
Container ID: 1222793001-D

Prep Batch: MXX35159
Prep Method: E200.2
Prep Date/Time: 06/13/22 12:27
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Print Date: 06/28/2022 3:18:44PM

Results of WHADA-SoCr-0.05

Client Sample ID: **WHADA-SoCr-0.05**
 Client Project ID: **WHADA**
 Lab Sample ID: 1222793001
 Lab Project ID: 1222793

Collection Date: 06/07/22 10:10
 Received Date: 06/07/22 13:38
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Microbiology Laboratory

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Fecal Coliform	44	2.00	2.00	col/100mL	1		06/07/22 17:43

Batch Information

Analytical Batch: BTF19589
 Analytical Method: SM21 9222D
 Analyst: M.A
 Analytical Date/Time: 06/07/22 17:43
 Container ID: 1222793001-A

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
E. Coli	77	1	1	MPN/100r	1		06/07/22 15:28

Batch Information

Analytical Batch: BTF19590
 Analytical Method: SM21 9223B
 Analyst: M.A
 Analytical Date/Time: 06/07/22 15:28
 Container ID: 1222793001-B

Print Date: 06/28/2022 3:18:44PM



Results of WHADA-SoCr-0.05

Client Sample ID: WHADA-SoCr-0.05
Client Project ID: WHADA
Lab Sample ID: 1222793001
Lab Project ID: 1222793

Collection Date: 06/07/22 10:10
Received Date: 06/07/22 13:38
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Waters Department

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
TOC Average, Dissolved	5.08	1.00	0.400	mg/L	1		06/17/22 01:01

Batch Information

Analytical Batch: WTC3201
Analytical Method: SM 5310B
Analyst: EBH
Analytical Date/Time: 06/17/22 01:01
Container ID: 1222793001-E

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Nitrate/Nitrite-N	0.200 U	0.200	0.0500	mg/L	2		06/15/22 12:12

Batch Information

Analytical Batch: WFI2992
Analytical Method: SM21 4500NO3-F
Analyst: EBH
Analytical Date/Time: 06/15/22 12:12
Container ID: 1222793001-G

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Phosphorus	0.0944	0.0400	0.0120	mg/L	1		06/24/22 17:22

Batch Information

Analytical Batch: WDA5225	Prep Batch: WXX14256
Analytical Method: SM21 4500P-B,E	Prep Method: SM21 4500P-B,E
Analyst: DMM	Prep Date/Time: 06/23/22 15:09
Analytical Date/Time: 06/24/22 17:22	Prep Initial Wt./Vol.: 25 mL
Container ID: 1222793001-G	Prep Extract Vol: 25 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Kjeldahl Nitrogen	1.00 U	1.00	0.310	mg/L	1		06/16/22 16:33

Print Date: 06/28/2022 3:18:44PM



Results of **WHADA-SoCr-0.05**

Client Sample ID: **WHADA-SoCr-0.05**
Client Project ID: **WHADA**
Lab Sample ID: 1222793001
Lab Project ID: 1222793

Collection Date: 06/07/22 10:10
Received Date: 06/07/22 13:38
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: WDA5218
Analytical Method: SM23 4500-N D
Analyst: DMM
Analytical Date/Time: 06/16/22 16:33
Container ID: 1222793001-G

Prep Batch: WXX14242
Prep Method: METHOD
Prep Date/Time: 06/14/22 13:50
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Print Date: 06/28/2022 3:18:44PM



Results of WHADA-SoCr-4.5

Client Sample ID: WHADA-SoCr-4.5
Client Project ID: WHADA
Lab Sample ID: 1222793002
Lab Project ID: 1222793

Collection Date: 06/07/22 09:15
Received Date: 06/07/22 13:38
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Metals by ICP/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Calcium	17900	500	150	ug/L	1		06/13/22 18:44
Magnesium	3840	50.0	15.0	ug/L	1		06/13/22 18:44

Batch Information

Analytical Batch: MMS11579
Analytical Method: EP200.8
Analyst: DMM
Analytical Date/Time: 06/13/22 18:44
Container ID: 1222793002-B

Prep Batch: MXX35159
Prep Method: E200.2
Prep Date/Time: 06/13/22 12:27
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Hardness as CaCO3	60.6	5.00	5.00	mg/L	1		06/13/22 18:44

Batch Information

Analytical Batch: MMS11579
Analytical Method: SM21 2340B
Analyst: DMM
Analytical Date/Time: 06/13/22 18:44
Container ID: 1222793002-B

Prep Batch: MXX35159
Prep Method: E200.2
Prep Date/Time: 06/13/22 12:27
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Print Date: 06/28/2022 3:18:44PM



Results of WHADA-SoCr-4.5

Client Sample ID: WHADA-SoCr-4.5
Client Project ID: WHADA
Lab Sample ID: 1222793002
Lab Project ID: 1222793

Collection Date: 06/07/22 09:15
Received Date: 06/07/22 13:38
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Waters Department

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
TOC Average, Dissolved	6.06	1.00	0.400	mg/L	1		06/17/22 01:14

Batch Information

Analytical Batch: WTC3201
Analytical Method: SM 5310B
Analyst: EBH
Analytical Date/Time: 06/17/22 01:14
Container ID: 1222793002-C

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Nitrate/Nitrite-N	0.200 U	0.200	0.0500	mg/L	2		06/15/22 12:13

Batch Information

Analytical Batch: WFI2992
Analytical Method: SM21 4500NO3-F
Analyst: EBH
Analytical Date/Time: 06/15/22 12:13
Container ID: 1222793002-E

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Phosphorus	0.0947	0.0400	0.0120	mg/L	1		06/24/22 17:23

Batch Information

Analytical Batch: WDA5225	Prep Batch: WXX14256
Analytical Method: SM21 4500P-B,E	Prep Method: SM21 4500P-B,E
Analyst: DMM	Prep Date/Time: 06/23/22 15:09
Analytical Date/Time: 06/24/22 17:23	Prep Initial Wt./Vol.: 25 mL
Container ID: 1222793002-E	Prep Extract Vol: 25 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Kjeldahl Nitrogen	1.00 U	1.00	0.310	mg/L	1		06/16/22 16:34

Print Date: 06/28/2022 3:18:44PM

Results of WHADA-SoCr-4.5

Client Sample ID: **WHADA-SoCr-4.5**
Client Project ID: **WHADA**
Lab Sample ID: 1222793002
Lab Project ID: 1222793

Collection Date: 06/07/22 09:15
Received Date: 06/07/22 13:38
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Waters Department

Batch Information

Analytical Batch: WDA5218
Analytical Method: SM23 4500-N D
Analyst: DMM
Analytical Date/Time: 06/16/22 16:34
Container ID: 1222793002-E

Prep Batch: WXX14242
Prep Method: METHOD
Prep Date/Time: 06/14/22 13:50
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Print Date: 06/28/2022 3:18:44PM



Results of WHADA-SoCr-0.05

Client Sample ID: WHADA-SoCr-0.05
Client Project ID: WHADA
Lab Sample ID: 1222793003
Lab Project ID: 1222793

Collection Date: 06/07/22 10:10
Received Date: 06/07/22 13:38
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Dissolved Metals by ICP/MS

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Lists various metals like Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Thallium, Tin, Titanium, Vanadium, Zinc.

Batch Information

Analytical Batch: MMS11579
Analytical Method: EP200.8
Analyst: DMM
Analytical Date/Time: 06/13/22 18:47
Container ID: 1222793003-A

Prep Batch: MXX35159
Prep Method: E200.2
Prep Date/Time: 06/13/22 12:27
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Print Date: 06/28/2022 3:18:44PM



Results of WHADA-SoCr-4.5

Client Sample ID: WHADA-SoCr-4.5
Client Project ID: WHADA
Lab Sample ID: 1222793004
Lab Project ID: 1222793

Collection Date: 06/07/22 09:15
Received Date: 06/07/22 13:38
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Dissolved Metals by ICP/MS

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Lists various metals like Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Thallium, Tin, Titanium, Vanadium, Zinc.

Batch Information

Analytical Batch: MMS11579
Analytical Method: EP200.8
Analyst: DMM
Analytical Date/Time: 06/13/22 18:49
Container ID: 1222793004-A

Prep Batch: MXX35159
Prep Method: E200.2
Prep Date/Time: 06/13/22 12:27
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL



Method Blank

Blank ID: MB for HBN 1837344 [BTF/19589]
Blank Lab ID: 1667034

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1222793001

Results by SM21 9222D

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Fecal Coliform	1.00U	1.00	1.00	col/100mL

Batch Information

Analytical Batch: BTF19589
Analytical Method: SM21 9222D
Instrument:
Analyst: M.A
Analytical Date/Time: 6/7/2022 5:43:00PM

Print Date: 06/28/2022 3:18:46PM

Method Blank

Blank ID: MB for HBN 1837345 [BTF/19590]

Blank Lab ID: 1667036

QC for Samples:

1222793001

Matrix: Water (Surface, Eff., Ground)

Results by SM21 9223B

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
E. Coli	1U	1	1	MPN/100m

Batch Information

Analytical Batch: BTF19590

Analytical Method: SM21 9223B

Instrument:

Analyst: M.A

Analytical Date/Time: 6/7/2022 2:28:00PM

Method Blank

Blank ID: MB for HBN 1837763 [MXX/35159]
 Blank Lab ID: 1667664

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
 1222793001, 1222793002, 1222793003, 1222793004

Results by EP200.8

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Aluminum	10.0U	20.0	6.20	ug/L
Antimony	0.500U	1.00	0.310	ug/L
Arsenic	2.50U	5.00	1.50	ug/L
Barium	1.50U	3.00	0.940	ug/L
Beryllium	0.200U	0.400	0.130	ug/L
Cadmium	0.250U	0.500	0.150	ug/L
Calcium	250U	500	150	ug/L
Chromium	2.50U	5.00	2.50	ug/L
Cobalt	2.00U	4.00	1.20	ug/L
Copper	1.50U	3.00	1.00	ug/L
Iron	125U	250	78.0	ug/L
Lead	1.00U	2.00	0.500	ug/L
Magnesium	25.0U	50.0	15.0	ug/L
Manganese	0.500U	1.00	0.350	ug/L
Molybdenum	1.00U	2.00	0.620	ug/L
Nickel	1.00U	2.00	0.620	ug/L
Phosphorus	100U	200	62.0	ug/L
Potassium	250U	500	150	ug/L
Selenium	2.50U	5.00	1.50	ug/L
Silicon	500U	1000	310	ug/L
Silver	0.500U	1.00	0.310	ug/L
Sodium	250U	500	150	ug/L
Thallium	0.500U	1.00	0.310	ug/L
Tin	0.500U	1.00	0.310	ug/L
Titanium	12.5U	25.0	7.75	ug/L
Vanadium	10.0U	20.0	6.20	ug/L
Zinc	5.00U	10.0	3.10	ug/L

Batch Information

Analytical Batch: MMS11579
 Analytical Method: EP200.8
 Instrument: P7 Agilent 7800
 Analyst: DMM
 Analytical Date/Time: 6/13/2022 5:39:36PM

Prep Batch: MXX35159
 Prep Method: E200.2
 Prep Date/Time: 6/13/2022 12:27:49PM
 Prep Initial Wt./Vol.: 20 mL
 Prep Extract Vol: 50 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1222793 [MXX35159]

Blank Spike Lab ID: 1667665

Date Analyzed: 06/13/2022 17:42

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222793001, 1222793002, 1222793003, 1222793004

Results by EP200.8

Parameter	Blank Spike (ug/L)			CL
	Spike	Result	Rec (%)	
Aluminum	1000	990	99	(85-115)
Antimony	1000	1040	104	(85-115)
Arsenic	1000	987	99	(85-115)
Barium	1000	1000	100	(85-115)
Beryllium	100	97.6	98	(85-115)
Cadmium	100	101	101	(85-115)
Calcium	10000	10400	104	(85-115)
Chromium	400	413	103	(85-115)
Cobalt	500	515	103	(85-115)
Copper	1000	1030	103	(85-115)
Iron	5000	5130	103	(85-115)
Lead	1000	1070	107	(85-115)
Magnesium	10000	9930	99	(85-115)
Manganese	500	517	103	(85-115)
Molybdenum	400	386	97	(85-115)
Nickel	1000	1030	103	(85-115)
Phosphorus	500	512	102	(85-115)
Potassium	10000	10300	103	(85-115)
Selenium	1000	999	100	(85-115)
Silicon	10000	10100	101	(85-115)
Silver	100	102	102	(85-115)
Sodium	10000	9800	98	(85-115)
Thallium	10	10.3	103	(85-115)
Tin	100	101	101	(85-115)
Titanium	100	102	102	(85-115)
Vanadium	200	210	105	(85-115)
Zinc	1000	1020	102	(85-115)

Batch Information

Analytical Batch: **MMS11579**

Analytical Method: **EP200.8**

Instrument: **P7 Agilent 7800**

Analyst: **DMM**

Prep Batch: **MXX35159**

Prep Method: **E200.2**

Prep Date/Time: **06/13/2022 12:27**

Spike Init Wt./Vol.: 1000 ug/L Extract Vol: 50 mL

Dupe Init Wt./Vol.: Extract Vol:

Print Date: 06/28/2022 3:18:56PM

Matrix Spike Summary

Original Sample ID: 1667670
 MS Sample ID: 1667671 MS
 MSD Sample ID:

Analysis Date: 06/13/2022 17:47
 Analysis Date: 06/13/2022 17:50
 Analysis Date:
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222793001, 1222793002, 1222793003, 1222793004

Results by EP200.8

Parameter	Sample	Matrix Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Aluminum	8.67J	1000	997	99				70-130		
Antimony	0.500U	1000	1040	104				70-130		
Arsenic	2.50U	1000	995	100				70-130		
Barium	10.1	1000	1000	99				70-130		
Beryllium	0.200U	100	99.6	100				70-130		
Cadmium	0.250U	100	101	101				70-130		
Calcium	31800	10000	42000	103				70-130		
Chromium	2.50U	400	396	99				70-130		
Cobalt	2.00U	500	507	101				70-130		
Copper	1.16J	1000	1020	102				70-130		
Iron	107J	5000	5220	102				70-130		
Lead	1.00U	1000	1040	104				70-130		
Magnesium	4490	10000	14400	99				70-130		
Manganese	0.899J	500	512	102				70-130		
Molybdenum	0.895J	400	388	97				70-130		
Nickel	1.00U	1000	1010	101				70-130		
Phosphorus	100U	500	513	103				70-130		
Potassium	872	10000	11100	102				70-130		
Selenium	2.50U	1000	1020	102				70-130		
Silicon	5260	10000	15200	99				70-130		
Silver	0.500U	100	99.7	100				70-130		
Sodium	4220	10000	14100	99				70-130		
Thallium	0.500U	10.0	9.99	100				70-130		
Tin	0.500U	100	101	101				70-130		
Titanium	12.5U	100	103	103				70-130		
Vanadium	10.0U	200	197	98				70-130		
Zinc	55.2	1000	1070	102				70-130		

Batch Information

Analytical Batch: MMS11579
 Analytical Method: EP200.8
 Instrument: P7 Agilent 7800
 Analyst: DMM
 Analytical Date/Time: 6/13/2022 5:50:23PM

Prep Batch: MXX35159
 Prep Method: DW Digest for Metals on ICP-MS
 Prep Date/Time: 6/13/2022 12:27:49PM
 Prep Initial Wt./Vol.: 20.00mL
 Prep Extract Vol: 50.00mL

Print Date: 06/28/2022 3:18:57PM

Matrix Spike Summary

Original Sample ID: 1667672
 MS Sample ID: 1667673 MS
 MSD Sample ID:

Analysis Date: 06/13/2022 17:53
 Analysis Date: 06/13/2022 17:55
 Analysis Date:
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222793001, 1222793002, 1222793003, 1222793004

Results by EP200.8

Parameter	Sample	Matrix Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Aluminum	10.0U	1000	1000	100				70-130		
Antimony	0.420J	1000	1040	104				70-130		
Arsenic	2.50U	1000	991	99				70-130		
Barium	12.5	1000	998	99				70-130		
Beryllium	0.200U	100	99.4	99				70-130		
Cadmium	0.250U	100	101	101				70-130		
Calcium	41800	10000	51800	99				70-130		
Chromium	2.50U	400	398	99				70-130		
Cobalt	2.00U	500	503	101				70-130		
Copper	21.5	1000	1030	101				70-130		
Iron	168J	5000	5210	101				70-130		
Lead	1.00U	1000	1050	105				70-130		
Magnesium	7360	10000	17300	100				70-130		
Manganese	16.4	500	521	101				70-130		
Molybdenum	4.89	400	398	98				70-130		
Nickel	1.11J	1000	1000	100				70-130		
Phosphorus	100U	500	515	103				70-130		
Potassium	672	10000	11000	103				70-130		
Selenium	2.50U	1000	1020	102				70-130		
Silicon	4830	10000	14900	101				70-130		
Silver	0.500U	100	101	101				70-130		
Sodium	4000	10000	13900	99				70-130		
Thallium	0.500U	10.0	10	100				70-130		
Tin	0.410J	100	102	101				70-130		
Titanium	12.5U	100	102	102				70-130		
Vanadium	10.0U	200	199	99				70-130		
Zinc	82.7	1000	1100	101				70-130		

Batch Information

Analytical Batch: MMS11579
 Analytical Method: EP200.8
 Instrument: P7 Agilent 7800
 Analyst: DMM
 Analytical Date/Time: 6/13/2022 5:55:45PM

Prep Batch: MX35159
 Prep Method: DW Digest for Metals on ICP-MS
 Prep Date/Time: 6/13/2022 12:27:49PM
 Prep Initial Wt./Vol.: 20.00mL
 Prep Extract Vol: 50.00mL

Print Date: 06/28/2022 3:18:57PM

Method Blank

Blank ID: MB for HBN 1837859 (WFI/2992)

Blank Lab ID: 1668185

QC for Samples:

1222793001, 1222793002

Matrix: Water (Surface, Eff., Ground)

Results by SM21 4500NO3-F

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Nitrate-N	0.100U	0.200	0.0500	mg/L
Nitrite-N	0.100U	0.200	0.0500	mg/L
Total Nitrate/Nitrite-N	0.100U	0.200	0.0500	mg/L

Batch Information

Analytical Batch: WFI2992

Analytical Method: SM21 4500NO3-F

Instrument: Astoria segmented flow

Analyst: EBH

Analytical Date/Time: 6/15/2022 12:29:31PM

Print Date: 06/28/2022 3:19:02PM

Method Blank

Blank ID: MB for HBN 1837859 (WFI/2992)

Blank Lab ID: 1668194

QC for Samples:

1222793001, 1222793002

Matrix: Water (Surface, Eff., Ground)

Results by SM21 4500NO3-F

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Nitrate-N	0.100U	0.200	0.0500	mg/L
Nitrite-N	0.100U	0.200	0.0500	mg/L
Total Nitrate/Nitrite-N	0.100U	0.200	0.0500	mg/L

Batch Information

Analytical Batch: WFI2992

Analytical Method: SM21 4500NO3-F

Instrument: Astoria segmented flow

Analyst: EBH

Analytical Date/Time: 6/15/2022 11:33:30AM

Print Date: 06/28/2022 3:19:02PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1222793 [WFI2992]
 Blank Spike Lab ID: 1668187
 Date Analyzed: 06/15/2022 12:27

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222793001, 1222793002

Results by SM21 4500NO3-F

Parameter	Blank Spike (mg/L)			CL
	Spike	Result	Rec (%)	
Nitrate-N	2.5	2.42	97	(70-130)
Nitrite-N	2.5	2.50	100	(90-110)
Total Nitrate/Nitrite-N	5	4.92	98	(90-110)

Batch Information

Analytical Batch: **WFI2992**
 Analytical Method: **SM21 4500NO3-F**
 Instrument: **Astoria segmented flow**
 Analyst: **EBH**

Blank Spike Summary

Blank Spike ID: LCS for HBN 1222793 [WFI2992]
 Blank Spike Lab ID: 1668196
 Date Analyzed: 06/15/2022 11:31

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222793001, 1222793002

Results by SM21 4500NO3-F

Parameter	Blank Spike (mg/L)			CL
	Spike	Result	Rec (%)	
Nitrate-N	2.5	2.29	91	(70-130)
Nitrite-N	2.5	2.26	90	(90-110)
Total Nitrate/Nitrite-N	5	4.54	91	(90-110)

Batch Information

Analytical Batch: **WFI2992**
 Analytical Method: **SM21 4500NO3-F**
 Instrument: **Astoria segmented flow**
 Analyst: **EBH**



Matrix Spike Summary

Original Sample ID: 1668169
MS Sample ID: 1668173 MS
MSD Sample ID: 1668174 MSD

Analysis Date: 06/15/2022 11:38
Analysis Date: 06/15/2022 11:40
Analysis Date: 06/15/2022 11:42
Matrix: Drinking Water

QC for Samples: 1222793001, 1222793002

Results by SM21 4500NO3-F

Parameter	Sample	Matrix Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Nitrate-N	4.15	2.50	7.07	117	2.50	6.72	103	70-130	5.10	(< 25)
Nitrite-N	0.0522J	2.50	2.4	94	2.50	2.39	93	90-110	0.50	(< 25)

Batch Information

Analytical Batch: WFI2992
Analytical Method: SM21 4500NO3-F
Instrument: Astoria segmented flow
Analyst: EBH
Analytical Date/Time: 6/15/2022 11:40:30AM

Print Date: 06/28/2022 3:19:06PM

Matrix Spike Summary

Original Sample ID: 1222827001
 MS Sample ID: 1668209 MS
 MSD Sample ID: 1668210 MSD

Analysis Date: 06/15/2022 12:33
 Analysis Date: 06/15/2022 12:34
 Analysis Date: 06/15/2022 12:36
 Matrix: Drinking Water

QC for Samples: 1222793001, 1222793002

Results by SM21 4500NO3-F

Parameter	Sample	Matrix Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Nitrate/Nitrite-N	0.200U	5.00	5.33	107	5.00	5.19	104	90-110	2.70	(< 25)

Batch Information

Analytical Batch: WFI2992
 Analytical Method: SM21 4500NO3-F
 Instrument: Astoria segmented flow
 Analyst: EBH
 Analytical Date/Time: 6/15/2022 12:34:00PM



Method Blank

Blank ID: MB for HBN 1837996 [WXX/14242]

Blank Lab ID: 1668425

QC for Samples:

1222793001, 1222793002

Matrix: Water (Surface, Eff., Ground)

Results by SM23 4500-N D

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Total Kjeldahl Nitrogen	0.500U	1.00	0.310	mg/L

Batch Information

Analytical Batch: WDA5218

Analytical Method: SM23 4500-N D

Instrument: Discrete Analyzer 2

Analyst: DMM

Analytical Date/Time: 6/16/2022 3:59:46PM

Prep Batch: WXX14242

Prep Method: METHOD

Prep Date/Time: 6/14/2022 1:50:00PM

Prep Initial Wt./Vol.: 25 mL

Prep Extract Vol: 25 mL

Print Date: 06/28/2022 3:19:11PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1222793 [WXX14242]
 Blank Spike Lab ID: 1668426
 Date Analyzed: 06/16/2022 16:01

Spike Duplicate ID: LCSD for HBN 1222793 [WXX14242]
 Spike Duplicate Lab ID: 1668427
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222793001, 1222793002

Results by SM23 4500-N D

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Kjeldahl Nitrogen	4	3.64	91	4	3.96	99	(75-125)	8.40	(< 25)

Batch Information

Analytical Batch: **WDA5218**
 Analytical Method: **SM23 4500-N D**
 Instrument: **Discrete Analyzer 2**
 Analyst: **DMM**

Prep Batch: **WXX14242**
 Prep Method: **METHOD**
 Prep Date/Time: **06/14/2022 13:50**
 Spike Init Wt./Vol.: 4 mg/L Extract Vol: 25 mL
 Dupe Init Wt./Vol.: 4 mg/L Extract Vol: 25 mL

Matrix Spike Summary

Original Sample ID: 1222300001
 MS Sample ID: 1668428 MS
 MSD Sample ID: 1668429 MSD

Analysis Date: 06/16/2022 16:03
 Analysis Date: 06/16/2022 16:05
 Analysis Date: 06/16/2022 16:06
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222793001, 1222793002

Results by SM23 4500-N D

Parameter	Sample	Matrix Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Kjeldahl Nitrogen	0.500U	4.00	4.14	104	4.00	4.28	107	75-125	3.20	(< 25)

Batch Information

Analytical Batch: WDA5218
 Analytical Method: SM23 4500-N D
 Instrument: Discrete Analyzer 2
 Analyst: DMM
 Analytical Date/Time: 6/16/2022 4:05:01PM

Prep Batch: WXX14242
 Prep Method: Distillation TKN by Phenate (W)
 Prep Date/Time: 6/14/2022 1:50:00PM
 Prep Initial Wt./Vol.: 25.00mL
 Prep Extract Vol: 25.00mL

Method Blank

Blank ID: MB for HBN 1838894 [WXX/14256]

Blank Lab ID: 1670166

QC for Samples:

1222793001, 1222793002

Matrix: Water (Surface, Eff., Ground)

Results by SM21 4500P-B,E

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Total Phosphorus	0.0200U	0.0400	0.0120	mg/L

Batch Information

Analytical Batch: WDA5225

Analytical Method: SM21 4500P-B,E

Instrument: Discrete Analyzer 2

Analyst: DMM

Analytical Date/Time: 6/24/2022 4:56:58PM

Prep Batch: WXX14256

Prep Method: SM21 4500P-B,E

Prep Date/Time: 6/23/2022 3:09:00PM

Prep Initial Wt./Vol.: 25 mL

Prep Extract Vol: 25 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1222793 [WXX14256]
 Blank Spike Lab ID: 1670167
 Date Analyzed: 06/24/2022 16:57

Spike Duplicate ID: LCSD for HBN 1222793 [WXX14256]
 Spike Duplicate Lab ID: 1670168
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222793001, 1222793002

Results by SM21 4500P-B,E

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Phosphorus	0.2	0.205	102	0.2	0.204	102	(75-125)	0.44	(< 25)

Batch Information

Analytical Batch: **WDA5225**
 Analytical Method: **SM21 4500P-B,E**
 Instrument: **Discrete Analyzer 2**
 Analyst: **DMM**

Prep Batch: **WXX14256**
 Prep Method: **SM21 4500P-B,E**
 Prep Date/Time: **06/23/2022 15:09**
 Spike Init Wt./Vol.: 0.2 mg/L Extract Vol: 25 mL
 Dupe Init Wt./Vol.: 0.2 mg/L Extract Vol: 25 mL

Matrix Spike Summary

Original Sample ID: 1222761001
 MS Sample ID: 1670175 MS
 MSD Sample ID: 1670176 MSD

Analysis Date: 06/24/2022 17:15
 Analysis Date: 06/24/2022 17:16
 Analysis Date: 06/24/2022 17:17
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1222793001, 1222793002

Results by SM21 4500P-B,E

Parameter	Sample	Matrix Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Phosphorus	0.0679	0.200	.272	102	0.200	0.276	104	75-125	1.30	(< 25)

Batch Information

Analytical Batch: WDA5225
 Analytical Method: SM21 4500P-B,E
 Instrument: Discrete Analyzer 2
 Analyst: DMM
 Analytical Date/Time: 6/24/2022 5:16:32PM

Prep Batch: WXX14256
 Prep Method: Total Phosphorus (W) Ext.
 Prep Date/Time: 6/23/2022 3:09:00PM
 Prep Initial Wt./Vol.: 25.00mL
 Prep Extract Vol: 25.00mL



Project Information Form

This form provides clarification and/or additional information for sample login, and should be scanned with the receiving paperwork.

Client Name:	ADEC
Project:	WHADA
Date:	5/26/2022
Reason for Clarification:	Analytical requests
Notes:	E. coli = LT2 Quantitray 200.8 Dissolved Metals = 200.8 Dissolved Metals Scan (needs Lab Filter, then preservation. Should be on separate sample.) DOC also needs Lab Filter then preservation T-Phos, NO ₂ NO ₃ , TKN = 4500 Total Phosphorus, 4500 Total Nitrate+Nitrite-N, and 4500 TKN

AIRBILL 9973777

I hereby declare that the goods contained herein do not contain dangerous goods.

Signed.....

Date

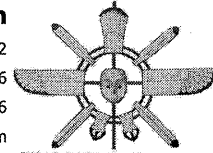
Grant Aviation
6420 Kulis Dr. Anchorage, AK 99502

Phone: 1 (888) 359-4726

Freephone: 1 (888) 359-4726

Email: res@flygrant.com

Web: http://www.flygrant.com/



FREIGHT DETAILS

FROM/TO: Kenai -> Anchorage International

Flight Departs: Jun 7 22 11:40 AM

Receiver: SGS
907-550-3217//907-562-2324

Sender: Sarah Apsens
907-741-1026

Accepted: Tue, Jun 7 22 10:52:00 AM

Description & Comment	Quan.	Wgt.	Handle Fee	Hazmat Fee	Total
Water Samples	1	12	-	-	\$28.24
Total Tax:					\$1.76
Total Payments made:					\$30.00
Total Unpaid:					\$0.00

Received in good condition by:

CUSTOMER COPY

AIRBILL 9973777

I hereby declare that the goods contained herein do not contain dangerous goods.

Signed.....

Date

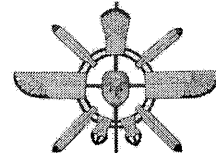
Grant Aviation
6420 Kulis Dr. Anchorage, AK 99502

Phone: 1 (888) 359-4726

Freephone: 1 (888) 359-4726

Email: res@flygrant.com

Web: http://www.flygrant.com/



FREIGHT DETAILS

FROM/TO: Kenai -> Anchorage International

Flight Departs: Jun 7 22 11:40 AM

Receiver: SGS
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907-741-1026

Accepted: Tue, Jun 7 22 10:52:00 AM

Description & Comment	Quan.	Wgt.	Handle Fee	Hazmat Fee	Total
Water Samples	1	12	-	-	\$28.24
TAX: Federal Excise Tax					\$1.76
Total Payments made:					\$30.00
Total Unpaid:					\$0.00

TERMS AND CONDITIONS

Consignemnt Note Text

Alert Expeditors Inc.

#419562

Citywide Delivery • 440-3351
8421 Flamingo Drive • Anchorage, Alaska 99502

Date 6/7/22
From ADEC
To SGS

Collect	Prepay	Advance Charges
Job #	PO#	<u>Grant 9973777</u>

Sample

Shipped Signature JLA

Received By: [Signature] Total Charge 6/7/22
1190

Page 36 of 55



SGS Workorder #:

1222793

1222793

Review Criteria	Condition (Yes, No, N/A)	Exceptions Noted below
-----------------	--------------------------	------------------------

Chain of Custody / Temperature Requirements		<i>Note: Temperature and COC seal information is found on the chain of custody form</i>
--	--	---

DOD only: Did all sample coolers have a corresponding COC?	N/A	
If <0°C, were sample containers ice free?	N/A	
Note containers received with ice:		
Identify any containers received at non-compliant temperature: (Use form FS-0029 if more space is needed)		

Holding Time / Documentation / Sample Condition Requirement		<i>Note: Refer to form F-083 "Sample Guide" for specific holding times and sample containers.</i>
--	--	---

Were samples received within analytical holding time?	Yes	
Do sample labels match COC? Record discrepancies.	Yes	
<i>Note: If information on containers differs from COC, default to COC information for login. If times differ <1hr, record details & login per COC.</i>		
Were analytical requests clear? <i>(i.e. method is specified for analyses with multiple option for method (Eg, BTEX 8021 vs 8260, Metals 6020 vs 200.8)</i>	Yes	
Were proper containers (type/mass/volume/preservative) used? Note: Exemption for metals analysis by 200.8/6020 in water.	Yes	

Volatile Analysis Requirements (VOC, GRO, LL-Hg, etc.)		
---	--	--

Were all soil VOAs received with a corresponding % solids container?	N/A	
Were Trip Blanks (e.g., VOAs, LL-Hg) in cooler with samples?	N/A	
Were all water VOA vials free of headspace (e.g., bubbles ≤ 6mm)?	N/A	
Were all soil VOAs field extracted with Methanol+BFB?	N/A	

Note to Client: Any "No", answer above indicates non-compliance with standard procedures and may impact data quality.

Additional notes (if applicable):		
--	--	--

Sample Containers and Preservatives

<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>	<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>
1222793001-A	Na2S2O3 for Chlorine Redu	OK			
1222793001-B	Na2S2O3 for Chlorine Redu	OK			
1222793001-C	HNO3 to pH < 2	OK			
1222793001-D	HNO3 to pH < 2	OK			
1222793001-E	No Preservative Required	OK			
1222793001-F	HCL to pH < 2	OK			
1222793001-G	H2SO4 to pH < 2	OK			
1222793002-A	HNO3 to pH < 2	OK			
1222793002-B	HNO3 to pH < 2	OK			
1222793002-C	No Preservative Required	OK			
1222793002-D	HCL to pH < 2	OK			
1222793002-E	H2SO4 to pH < 2	OK			
1222793003-A	No Preservative Required	OK			
1222793003-B	HNO3 to pH < 2	OK			
1222793004-A	No Preservative Required	OK			
1222793004-B	HNO3 to pH < 2	OK			

Container Condition Glossary

Containers for bacteriological, low level mercury and VOA vials are not opened prior to analysis and will be assigned condition code OK unless evidence indicates than an inappropriate container was submitted.

OK - The container was received at an acceptable pH for the analysis requested.

BU - The container was received with headspace greater than 6mm.

DM - The container was received damaged.

FR - The container was received frozen and not usable for Bacteria or BOD analyses.

IC - The container provided for microbiology analysis was not a laboratory-supplied, pre-sterilized container and therefore was not suitable for analysis.

NC- The container provided was not preserved or was under-preserved. The method does not allow for additional preservative added after collection.

PA - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt and the container is now at the correct pH. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

PH - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt, but was insufficient to bring the container to the correct pH for the analysis requested. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

QN - Insufficient sample quantity provided.

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

SGS North America, Inc

1222793

SGS Job Number: FA96337

Sampling Date: 06/07/22

Report to:

SGS North America, Inc
200 W Potter Dr
Anchorage, AK 99518
julie.shumway@sgs.com

ATTN: Julie Shumway

Total number of pages in report: 17



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Norm Farmer
Technical Director

Client Service contact: Andrea Colby 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), NC(573), NJ(FL002), NY(12022), SC(96038001)
DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177),
AL, AK, AR, CT, IA, KY, MA, MI, MS, ND, NH, NV, OK, OR, IL, UT, VT, WA, WI, WV

This report shall not be reproduced, except in its entirety, without the written approval of SGS.

Test results relate only to samples analyzed.

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Sample Summary

SGS North America, Inc
1222793

Job No: FA96337

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
FA96337-1	06/07/22	10:10	06/09/22	AQ	Water	WHADA-SOCR-0.05
FA96337-2	06/07/22	09:15	06/09/22	AQ	Water	WHADA-SOCR-4.5

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: SGS North America, Inc

Job No: FA96337

Site: 1222793

Report Date: 6/15/2022 3:52:45 PM

On 06/09/2022, 2 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at SGS North America Inc - Orlando. at a maximum corrected temperature of 4.2 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. - Orlando Job Number of FA96337 was assigned to the project.

Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section. Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Metals Analysis By Method EPA 245.1

Matrix: AQ

Batch ID: MP40843

Sample(s) FA96353-1DUP, FA96353-1MSD, FA96353-1SDL were used as the QC samples for metals.

Matrix Spike Recovery(s) for Mercury are outside control limits. Spike recovery indicates possible matrix interference.

Matrix Spike Duplicate Recovery(s) for Mercury are outside control limits. Probable cause is due to matrix interference.

SGS North America Inc. - Orlando certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted. Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria. SGS North America Inc.- Orlando is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety.

Narrative prepared by:

Kim Benham, Client Services (*Signature on File*)

Summary of Hits

Job Number: FA96337
Account: SGS North America, Inc
Project: 1222793
Collected: 06/07/22



Lab Sample ID	Client Sample ID	Result/ Analyte	Qual	RL	MDL	Units	Method
---------------	------------------	--------------------	------	----	-----	-------	--------

FA96337-1 **WHADA-SOCR-0.05**

No hits reported in this sample.

FA96337-2 **WHADA-SOCR-4.5**

No hits reported in this sample.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: WHADA-SOCR-0.05	Date Sampled: 06/07/22
Lab Sample ID: FA96337-1	Date Received: 06/09/22
Matrix: AQ - Water	Percent Solids: n/a
Project: 1222793	

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	< 0.50	0.50	ug/l	1	06/14/22	06/14/22 JC	EPA 245.1 ¹	EPA 245.1 ²

(1) Instrument QC Batch: MA18744

(2) Prep QC Batch: MP40843

RL = Reporting Limit

Report of Analysis

Client Sample ID: WHADA-SOCR-4.5	Date Sampled: 06/07/22
Lab Sample ID: FA96337-2	Date Received: 06/09/22
Matrix: AQ - Water	Percent Solids: n/a
Project: 1222793	

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	< 0.50	0.50	ug/l	1	06/14/22	06/14/22 JC	EPA 245.1 ¹	EPA 245.1 ²

(1) Instrument QC Batch: MA18744

(2) Prep QC Batch: MP40843

RL = Reporting Limit

4.2
4

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

FA96337

SGS North America Inc.
CHAIN OF CUSTODY RECORD



Locations Nationwide
 Alaska Florida
 New Jersey Colorado
 Texas North Carolina
 Virginia Louisiana
www.us.sgs.com

CLIENT: SGS North America Inc. - Alaska Division				SGS Reference: SGS Orlando, FL				Page 1 of 1				
CONTACT: Julie Shumway		PHONE NO: (907) 562-2343		Additional Comments: All soils report out in dry weight unless								
PROJECT NAME: 1222793		PWSID#: []		CONTAINER #	Preservative Used: H ₂ O ₂	TYPE	C = COMP G = GRAB MI = Multi Incremental Soils	Mercury 245.1, Total	MS	MSD	SGS lab #	Location ID
REPORTS TO: Julie Shumway		E-MAIL: Julie.Shumway@sgs.com										
INVOICE TO: SGS - Alaska		QUOTE #: []										
env.alaska.accounting@sgs.com		P.O. #: 1222793										
RESERVED for lab use	SAMPLE IDENTIFICATION	DATE mm/dd/yy	TIME HHMM	MATRIX/MATRIX CODE	1	X					1222793001	
	WHADA-SoCr-0.05	06/07/2022	10:10:00	Water	1	X					1222793002	
	WHADA-SoCr-4.5	06/07/2022	09:15:00	Water	1	X						
Relinquished By: (1)	Date	Time	Received By:		DOD Project?		NO	Data Deliverable Requirements:				
<i>J. Shumway</i>	6/8/22	09:15	<i>[Signature]</i>		Report to DL (J Flags)?		NO	Level 2				
Relinquished By: (2)	Date	Time	Received By:		Cooler ID:		Requested Turnaround Time and-or Special Instructions:					
	6/9/22	15:00	<i>[Signature]</i>									
Relinquished By: (3)	Date	Time	Received By:		Temp Blank °C:		3.9	Chain of Custody Seal: (Circle)				
Relinquished By: (4)	Date	Time	Received For Laboratory By:		or Ambient []		INTACT BROKEN ABSENT					

[X] 200 W. Potter Drive Anchorage, AK 99518 Tel: (907) 562-2343 Fax: (907) 561-5301
 [] 5500 Business Drive Wilmington, NC 28405 Tel: (910) 350-1903 Fax: (910) 350-1557

http://www.sgs.com/terms_and_conditions.htm

F088_COC_REF_LAB_20190411

FA96337: Chain of Custody
Page 1 of 2

5.1
5

SGS Sample Receipt Summary

Job Number: FA96337

Client: SGS NORTH AMERICA INC - ALASKA DIV

Project: 1222793

Date / Time Received: 6/9/2022 3:00:00 PM

Delivery Method: FED EX

Airbill #'s: 1483 4802 3365

Therm ID: IR 1;

Therm CF: 0.4;

of Coolers: 1

Cooler Temps (Raw Measured) °C: Cooler 1: (3.8);

Cooler Temps (Corrected) °C: Cooler 1: (4.2);

Cooler Information

Y or N

- 1. Custody Seals Present
- 2. Custody Seals Intact
- 3. Temp criteria achieved
- 4. Cooler temp verification IR Gun
- 5. Cooler media Ice (Bag)

Trip Blank Information

Y or N N/A

- 1. Trip Blank present / cooler
 - 2. Trip Blank listed on COC
- W or S N/A
- 3. Type Of TB Received

Sample Information

Y or N N/A

- 1. Sample labels present on bottles
- 2. Samples preserved properly
- 3. Sufficient volume/containers recvd for analysis:
- 4. Condition of sample Intact
- 5. Sample recvd within HT
- 6. Dates/Times/IDs on COC match Sample Label
- 7. VOCs have headspace
- 8. Bottles received for unspecified tests
- 9. Compositing instructions clear
- 10. Voa Soil Kits/Jars received past 48hrs?
- 11. % Solids Jar received?
- 12. Residual Chlorine Present?

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____
 Test Strip Lot #s: pH 0-3 230315
 Residual Chlorine Test Strip Lot #: _____

Number of 5035 Field Kits: _____
 pH 10-12 219813A

Number of Lab Filtered Metals: _____
 Other: (Specify) _____

Comments

SM001
Rev. Date 05/24/17

Technician: TORYW

Date: 6/9/2022 3:00:00 PM

Reviewer: _____

Date: _____

FA96337: Chain of Custody

Page 2 of 2

5.1
5

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA96337
Account: SGS/SAKA - SGS North America, Inc
Project: 1222793

QC Batch ID: MP40843
Matrix Type: AQUEOUS

Methods: EPA 245.1
Units: ug/l

Prep Date: 06/14/22

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.50	.03	.03	0.0034	<0.50

Associated samples MP40843: FA96337-1, FA96337-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA96337
 Account: SGS/SAKA - SGS North America, Inc
 Project: 1222793

QC Batch ID: MP40843
 Matrix Type: AQUEOUS

Methods: EPA 245.1
 Units: ug/l

Prep Date: 06/14/22 06/14/22

Metal	FA96353-1 Original	DUP	RPD	QC Limits	FA96353-1 Original MS	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.0	0.0	NC	0-10	0.0	1.3	3	43.3N(a) 70-130

Associated samples MP40843: FA96337-1, FA96337-2

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested
 (a) Spike recovery indicates possible matrix interference.

6.12
 6

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA96337
 Account: SGS/SAKA - SGS North America, Inc
 Project: 1222793

QC Batch ID: MP40843
 Matrix Type: AQUEOUS

Methods: EPA 245.1
 Units: ug/l

Prep Date: 06/14/22

Metal	FA96353-1 Original MSD	Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit
-------	---------------------------	---------------------	-------	------------	-------------

Mercury	0.0	1.3	3	43.3N(a)	0.0
---------	-----	-----	---	----------	-----

Associated samples MP40843: FA96337-1, FA96337-2

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested
 (a) Spike recovery indicates possible matrix interference.

6.1.2

6



SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA96337
Account: SGS/SAKA - SGS North America, Inc
Project: 1222793

QC Batch ID: MP40843
Matrix Type: AQUEOUS

Methods: EPA 245.1
Units: ug/l

Prep Date: 06/14/22

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
-------	---------------	---------------------	-------	--------------

Mercury 3.0 3 100.0 85-115

Associated samples MP40843: FA96337-1, FA96337-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA96337
Account: SGS/SAKA - SGS North America, Inc
Project: 1222793

QC Batch ID: MP40843
Matrix Type: AQUEOUS

Methods: EPA 245.1
Units: ug/l

Prep Date: 06/14/22

Metal	FA96353-1	Original	SDL 1:5	%DIF	QC Limits
-------	-----------	----------	---------	------	-----------

Mercury 0.00 0.00 NC 0-10

Associated samples MP40843: FA96337-1, FA96337-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested



Laboratory Report of Analysis

To: ADEC-Air & Water Quality
610 University Drive
Fairbanks, AK 99709
(907)451-2141

Report Number: **1222926**

Client Project: **WHADA**

Dear Morgan Brown,

Enclosed are the results of the analytical services performed under the referenced project for the received samples and associated QC as applicable. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of ten years in the event they are required for future reference. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. Any samples submitted to our laboratory will be retained for a maximum of fourteen (14) days from the date of this report unless other archiving requirements were included in the quote.

If there are any questions about the report or services performed during this project, please call Alexandra at (907) 562-2343. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS North America Inc. for your analytical services. We look forward to working with you again on any additional analytical needs.

Sincerely,
SGS North America Inc.

Alexandra Lambe
Project Manager
Alexandra.Lambe@sgs.com

Date

Case Narrative

SGS Client: **ADEC-Air & Water Quality**

SGS Project: **1222926**

Project Name/Site: **WHADA**

Project Contact: **Morgan Brown**

Refer to sample receipt form for information on sample condition.

*QC comments may be associated with the field samples found in this report. When applicable, comments will be applied to associated field samples.

Print Date: 06/14/2022 3:29:49PM

Laboratory Qualifiers

Enclosed are the analytical results associated with the above work order. The results apply to the samples as received. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. This document is issued by the Company under its General Conditions of Service accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the context or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 DW Chemistry (Provisionally Certified as of 05/31/2022 for Fluoride by EPA 300.0 and Nitrate as N by SM 4500NO3-F) & Microbiology & 17-021 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020B, 7470A, 7471B, 8015C, 8021B, 8082A, 8260D, 8270D, 8270D-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). SGS is only certified for the analytes listed on our Drinking Water Certification (DW methods: 200.8, 2130B, 2320B, 2510B, 300.0, 4500-CN-C,E, 4500-H-B, 4500-NO3-F, 4500-P-E and 524.2) and only those analytes will be reported to the State of Alaska for compliance. Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, other regulatory authorities.

The following descriptors or qualifiers may be found in your report:

*	The analyte has exceeded allowable regulatory or control limits.
!	Surrogate out of control limits.
B	Indicates the analyte is found in a blank associated with the sample.
CCV/CVA/CVB	Continuing Calibration Verification
CCCV/CVC/CVCA/CVCB	Closing Continuing Calibration Verification
CL	Control Limit
DF	Analytical Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
GT	Greater Than
IB	Instrument Blank
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LLQC/LLIQC	Low Level Quantitation Check
LOD	Limit of Detection (i.e., 1/2 of the LOQ)
LOQ	Limit of Quantitation (i.e., reporting or practical quantitation limit)
LT	Less Than
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
RPD	Relative Percent Difference
TNTC	Too Numerous To Count
U	Indicates the analyte was analyzed for but not detected.

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content. All DRO/RRO analyses are integrated per SOP.

Sample Summary

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Collected</u>	<u>Received</u>	<u>Matrix</u>
WHADA-SoCr-0.05	1222926001	06/09/2022	06/09/2022	Water (Surface, Eff., Ground)

<u>Method</u>	<u>Method Description</u>
SM21 9223B	E Coli LT2 (Colilert Quant)
SM21 9222D	Fecal Coliform (MF)

Print Date: 06/14/2022 3:29:51PM

Detectable Results Summary

Client Sample ID: **WHADA-SoCr-0.05**

Lab Sample ID: 1222926001

Microbiology Laboratory

Parameter

E. Coli

Fecal Coliform

Result

32

13

Units

MPN/100mL

col/100mL

Results of WHADA-SoCr-0.05

Client Sample ID: **WHADA-SoCr-0.05**
 Client Project ID: **WHADA**
 Lab Sample ID: 1222926001
 Lab Project ID: 1222926

Collection Date: 06/09/22 10:10
 Received Date: 06/09/22 16:02
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Microbiology Laboratory

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Fecal Coliform	13	1.67	1.67	col/100mL	1		06/09/22 17:48

Batch Information

Analytical Batch: BTF19595
 Analytical Method: SM21 9222D
 Analyst: M.A
 Analytical Date/Time: 06/09/22 17:48
 Container ID: 1222926001-A

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
E. Coli	32	1	1	MPN/100r	1		06/09/22 14:44

Batch Information

Analytical Batch: BTF19594
 Analytical Method: SM21 9223B
 Analyst: M.A
 Analytical Date/Time: 06/09/22 14:44
 Container ID: 1222926001-B

Method Blank

Blank ID: MB for HBN 1837540 [BTF/19594]

Blank Lab ID: 1667415

QC for Samples:

1222926001

Matrix: Water (Surface, Eff., Ground)

Results by SM21 9223B

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
E. Coli	1U	1	1	MPN/100m

Batch Information

Analytical Batch: BTF19594

Analytical Method: SM21 9223B

Instrument:

Analyst: M.A

Analytical Date/Time: 6/9/2022 2:44:00PM

Print Date: 06/14/2022 3:29:56PM

Method Blank

Blank ID: MB for HBN 1837541 [BTF/19595]

Blank Lab ID: 1667417

QC for Samples:

1222926001

Matrix: Water (Surface, Eff., Ground)

Results by SM21 9222D

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Fecal Coliform	1.00U	1.00	1.00	col/100mL

Batch Information

Analytical Batch: BTF19595

Analytical Method: SM21 9222D

Instrument:

Analyst: M.A

Analytical Date/Time: 6/9/2022 5:48:00PM

Print Date: 06/14/2022 3:30:00PM



SGS NORTH AMERICA INC. CHAIN OF CUSTODY RECORD

1222926



Profile #3853809M

Page 1 of 1

CLIENT: ADEC					INSTRUCTIONS: SECTIONS 1-5 MUST BE FILLED OUT. OMISSIONS MAY DELAY THE ONSET OF ANALYSIS.													
CONTACT: Morgan Brown					PHONE #: 907-451-2141					SECTION 3								
PROJECT NAME: WHADA					PROJECT/PWSID/PERMIT #: NTP 22 464					PRESERVATIVE								
REPORTS TO: Morgan Brown					E-MAIL: Morgan.Brown@alaska.gov													
INVOICE TO: ADEC					QUOTE #: P.O. #:													
SECTION 1	RESERVED FOR LAB USE	SAMPLE IDENTIFICATION			DATE MM/DD/YY	TIME HH:MM	MATRIX/MATRIX CODE	CONTAINERS	SAMPLE TYPE:	Na2SO4	Na2SO4	HNO3	HNO3	H2SO4	REMARKS/LOC ID			
	(LAB)	WHADA-SoCr - 0.05			06/09/22	10:10	WATER		2	Grab	SM9222D Fecal Coliform	SM92223B E. Coli	245.1 Total Hg	200.8 Dissolved Metals (Lab Filter)		2340B Total hardness	5301B DOC (Lab Filter)	SM4500 T-Phos, NO2 +NO3, TKN
SECTION 2	RELINQUISHED BY: (1)				DATE	TIME	RECEIVED BY:				SECTION 4 DOD Project? NO		DATA DELIVERABLE REQUIREMENTS:					
	RELINQUISHED BY: (2)				DATE	TIME	RECEIVED BY:				COOL ID:		REQUESTED TURNAROUND TIME AND/OR SPECIAL INSTRUCTIONS					
	RELINQUISHED BY: (3)				DATE	TIME	RECEIVED BY:				TEMP BLANK °C: 3.2 DB2		CHAIN OF CUSTODY SEAL: (CIRCLE) INTACT					
	RELINQUISHED BY: (4)				DATE	TIME	RECEIVED FOR LABORATORY BY:				OR AMBIENT []		BROKEN ABSENT					

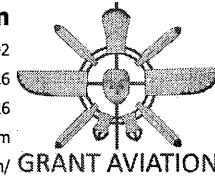
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AIRBILL 9984323

I hereby declare that the goods contained herein do not contain dangerous goods.

Signed..... Date

Grant Aviation
 6420 Kulis Dr. Anchorage, AK 99502
Phone: 1 (888) 359-4726
Freephone: 1 (888) 359-4726
Email: res@flygrant.com
Web: http://www.flygrant.com/



FREIGHT DETAILS

FROM/TO: Kenai -> Anchorage International

Flight Departs: Jun 10 22 11:40 AM

Receiver: Allie Lambe
 907-550-3217

Sender: Sarah Apsens
 907-741-1026

Accepted: Thu, Jun 9 22 10:46:00 AM

Description & Comment	Quan.	Wgt.	Handle Fee	Hazmat Fee	Total
Water Samples	1	8	-	-	\$28.24
Total Tax:					\$1.76
Total Payments made:					\$30.00
Total Unpaid:					\$0.00

Received in good condition by:

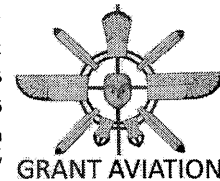
CUSTOMER COPY

AIRBILL 9984323

I hereby declare that the goods contained herein do not contain dangerous goods.

Signed..... Date

Grant Aviation
 6420 Kulis Dr. Anchorage, AK 99502
Phone: 1 (888) 359-4726
Freephone: 1 (888) 359-4726
Email: res@flygrant.com
Web: http://www.flygrant.com/



FREIGHT DETAILS

FROM/TO: Kenal -> Anchorage International

Flight Departs: Jun 10 22 11:40 AM

Receiver: Allie Lambe
 907-550-3217

Sender: Sarah Apsens
 907-741-1026

Accepted: Thu, Jun 9 22 10:46:00 AM

Description & Comment	Quan.	Wgt.	Handle Fee	Hazmat Fee	Total
Water Samples	1	8	-	-	\$28.24
TAX: Federal Excise Tax					\$1.76
Total Payments made:					\$30.00
Total Unpaid:					\$0.00

TERMS AND CONDITIONS

Consignemnt Note Text

Alert Expeditors Inc.

#419580

Citywide Delivery • 440-3351
8421 Flamingo Drive • Anchorage, Alaska 99502

Date 6/19/22
From Simon Apriant ADCC
To SGS

Collect	Prepay	Advance Charges
Job #	PO#	<u>Grant 9984323</u>

Shipped Signature FLX

Received By: _____ Total Charge _____
Page 11 of 13



SGS Workorder #:

1222926

1222926

Review Criteria	Condition (Yes, No, N/A)	Exceptions Noted below
-----------------	--------------------------	------------------------

Chain of Custody / Temperature Requirements

Note: Temperature and COC seal information is found on the chain of custody form

DOD only: Did all sample coolers have a corresponding COC? N/A

If <0°C, were sample containers ice free? N/A

Note containers received with ice:

Identify any containers received at non-compliant temperature:

(Use form FS-0029 if more space is needed)

Holding Time / Documentation / Sample Condition Requirement

Note: Refer to form F-083 "Sample Guide" for specific holding times and sample containers.

Were samples received within analytical holding time? Yes

Do sample labels match COC? Record discrepancies. Yes

Note: If information on containers differs from COC, default to COC information for login. If times differ <1hr, record details & login per COC.

Were analytical requests clear? Yes

(i.e. method is specified for analyses with multiple option for method (Eg, BTEX 8021 vs 8260, Metals 6020 vs 200.8)

Were proper containers (type/mass/volume/preservative)used? Yes

Note: Exemption for metals analysis by 200.8/6020 in water.

Volatile Analysis Requirements (VOC, GRO, LL-Hg, etc.)

Were all soil VOAs received with a corresponding % solids container? N/A

Were Trip Blanks (e.g., VOAs, LL-Hg) in cooler with samples? N/A

Were all water VOA vials free of headspace (e.g., bubbles ≤ 6mm)? N/A

Were all soil VOAs field extracted with Methanol+BFB? N/A

Note to Client: Any "No", answer above indicates non-compliance with standard procedures and may impact data quality.

Additional notes (if applicable):



Sample Containers and Preservatives

<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>	<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>
1222926001-A	Na ₂ S ₂ O ₃ for Chlorine Redu	OK			
1222926001-B	Na ₂ S ₂ O ₃ for Chlorine Redu	OK			

Container Condition Glossary

Containers for bacteriological, low level mercury and VOA vials are not opened prior to analysis and will be assigned condition code OK unless evidence indicates than an inappropriate container was submitted.

OK - The container was received at an acceptable pH for the analysis requested.

BU - The container was received with headspace greater than 6mm.

DM - The container was received damaged.

FR - The container was received frozen and not usable for Bacteria or BOD analyses.

IC - The container provided for microbiology analysis was not a laboratory-supplied, pre-sterilized container and therefore was not suitable for analysis.

NC- The container provided was not preserved or was under-preserved. The method does not allow for additional preservative added after collection.

PA - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt and the container is now at the correct pH. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

PH - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt, but was insufficient to bring the container to the correct pH for the analysis requested. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

QN - Insufficient sample quantity provided.