Laboratory Report of Analysis

To: Stantec Consulting Services Inc.
725 East Fireweed Lane Suite 200
Anchorage, AK 99503
(907)248-8883

Report Number: **1200481**

Client Project: **Wasilla WWTP**

Dear John Marshall,

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 Justin 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.

_____

Justin Nelson Date
Project Manager
Justin.Nelson@sgs.com

SGS North America Inc. 200 West Potter Drive, Anchorage, AK 99518
t 907.562.2343 f 907.561.5301 www.us.sgs.com

Case Narrative

SGS Client: **Stantec Consulting Services Inc.**
SGS Project: **1200481**
Project Name/Site: **Wasilla WWTP**
Project Contact: **John Marshall**

Refer to sample receipt form for information on sample condition.

1200481001MS (1551151) MS

4500NH3-G - Ammonia - MS recovery is outside of QC criteria. Refer to LCS for accuracy requirements.

*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, indenmification 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 & Microbiology) & 17-021 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020A, 7470A, 7471B, 8015C, 8021B, 8082A, 8260C, 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
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.

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Sample Summary

Client Sample ID	Lab Sample ID	Collected	Received	Matrix
MW20	1200481001	02/05/2020	02/05/2020	Water (Surface, Eff., Ground)
Shaw	1200481002	02/05/2020	02/05/2020	Water (Surface, Eff., Ground)
MW14A	1200481003	02/05/2020	02/05/2020	Water (Surface, Eff., Ground)
MW14B	1200481004	02/05/2020	02/05/2020	Water (Surface, Eff., Ground)

Method	Method Description
SM21 4500-NH3 G	Ammonia-N (W) SM21 4500-NH3 G
SM21 5210B	Biochemical Oxygen Demand SM21 5210B
SM21 9222D	Fecal Coliform (MF)
EPA 300.0	Ion Chromatographic Analysis
SM23 4500-N D	TKN by Phenate (W)
SM21 9223B	Total Coliform P/A Quant Tray
SM21 4500P-B,E	Total Phosphorus (W)

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Detectable Results Summary

Client Sample ID: **MW20**
Lab Sample ID: 1200481001
Waters Department

Parameter	Result	Units
Ammonia-N	0.0659J	mg/L
Total Nitrate/Nitrite-N	0.0920J	mg/L

Client Sample ID: **Shaw**
Lab Sample ID: 1200481002

Parameter	Result	Units
Microbiology Laboratory		
Biochemical Oxygen Demand	11.0	mg/L
E. Coli	40	MPN/100mL
Fecal Coliform	91	col/100mL
Total Coliform	640	MPN/100mL
Waters Department		
Nitrate-N	0.125J	mg/L
Total Kjeldahl Nitrogen	11.0	mg/L
Total Nitrate/Nitrite-N	0.125J	mg/L
Total Phosphorus	6.22	mg/L

Client Sample ID: **MW14A**
Lab Sample ID: 1200481003
Waters Department

Parameter	Result	Units
Nitrate-N	0.164J	mg/L
Total Nitrate/Nitrite-N	0.164J	mg/L

Client Sample ID: **MW14B**
Lab Sample ID: 1200481004
Waters Department

Parameter	Result	Units
Ammonia-N	0.180	mg/L
Total Kjeldahl Nitrogen	0.668J	mg/L

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Results of **MW20**

Client Sample ID: **MW20**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1200481001
Lab Project ID: 1200481

Collection Date: 02/05/20 10:32
Received Date: 02/05/20 16:11
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Microbiology Laboratory**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Fecal Coliform	1.67	U	1.67	1.67	col/100mL	1		02/05/20 17:46

Batch Information

Analytical Batch: BTF17907
Analytical Method: SM21 9222D
Analyst: M.A
Analytical Date/Time: 02/05/20 17:46
Container ID: 1200481001-B

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Results of **MW20**

Client Sample ID: **MW20**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1200481001
Lab Project ID: 1200481

Collection Date: 02/05/20 10:32
Received Date: 02/05/20 16:11
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Nitrate-N	0.100	U	0.200	0.0500	mg/L	1		02/05/20 21:21
Nitrite-N	0.100	U	0.200	0.0500	mg/L	1		02/05/20 21:21
Total Nitrate/Nitrite-N	0.0920	J	0.200	0.0500	mg/L	1		02/05/20 21:21

Batch Information

Analytical Batch: WIC6018
Analytical Method: EPA 300.0
Analyst: DMM
Analytical Date/Time: 02/05/20 21:21
Container ID: 1200481001-A

Prep Batch: WXX13197
Prep Method: METHOD
Prep Date/Time: 02/05/20 15:30
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Ammonia-N	0.0659	J	0.100	0.0310	mg/L	1		02/13/20 15:25

Batch Information

Analytical Batch: WDA4737
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 02/13/20 15:25
Container ID: 1200481001-C

Prep Batch: WXX13199
Prep Method: METHOD
Prep Date/Time: 02/13/20 11:15
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	0.500	U	1.00	0.310	mg/L	1		02/06/20 10:17

Batch Information

Analytical Batch: WDA4734
Analytical Method: SM23 4500-N D
Analyst: DMM
Analytical Date/Time: 02/06/20 10:17
Container ID: 1200481001-C

Prep Batch: WXX13194
Prep Method: METHOD
Prep Date/Time: 02/05/20 17:13
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Print Date: 02/19/2020 1:17:46PM

J flagging is activated

Results of **Shaw**

Client Sample ID: **Shaw**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1200481002
Lab Project ID: 1200481

Collection Date: 02/05/20 11:18
Received Date: 02/05/20 16:11
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Ammonia-N	0.562		0.100	0.0310	mg/L	1		02/06/20 13:58

Batch Information

Analytical Batch: WDA4735
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 02/06/20 13:58
Container ID: 1200481002-E

Prep Batch: WXX13195
Prep Method: METHOD
Prep Date/Time: 02/06/20 10:16
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Print Date: 02/19/2020 1:17:46PM

J flagging is activated

Results of **Shaw**

Client Sample ID: **Shaw**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1200481002
Lab Project ID: 1200481

Collection Date: 02/05/20 11:18
Received Date: 02/05/20 16:11
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Microbiology Laboratory**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Biochemical Oxygen Demand	11.0		2.00	2.00	mg/L	1		02/06/20 16:53

Batch Information

Analytical Batch: BOD6528
Analytical Method: SM21 5210B
Analyst: A.L
Analytical Date/Time: 02/06/20 16:53
Container ID: 1200481002-C

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Fecal Coliform	91		90.9	90.9	col/100mL	1		02/05/20 17:46

Batch Information

Analytical Batch: BTF17907
Analytical Method: SM21 9222D
Analyst: M.A
Analytical Date/Time: 02/05/20 17:46
Container ID: 1200481002-B

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
E. Coli	40		20	20	MPN/100m	20		02/05/20 17:01
Total Coliform	640		20	20	MPN/100m	20		02/05/20 17:01

Batch Information

Analytical Batch: BTF17909
Analytical Method: SM21 9223B
Analyst: M.A
Analytical Date/Time: 02/05/20 17:01
Container ID: 1200481002-D

Results of **Shaw**

Client Sample ID: **Shaw**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1200481002
Lab Project ID: 1200481

Collection Date: 02/05/20 11:18
Received Date: 02/05/20 16:11
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Nitrate-N	0.125	J	0.200	0.0500	mg/L	1		02/05/20 21:42
Nitrite-N	0.100	U	0.200	0.0500	mg/L	1		02/05/20 21:42
Total Nitrate/Nitrite-N	0.125	J	0.200	0.0500	mg/L	1		02/05/20 21:42

Batch Information

Analytical Batch: WIC6018
Analytical Method: EPA 300.0
Analyst: DMM
Analytical Date/Time: 02/05/20 21:42
Container ID: 1200481002-A

Prep Batch: WXX13197
Prep Method: METHOD
Prep Date/Time: 02/05/20 15:30
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Phosphorus	6.22		2.00	0.600	mg/L	1		02/18/20 17:56

Batch Information

Analytical Batch: WDA4739
Analytical Method: SM21 4500P-B,E
Analyst: EWW
Analytical Date/Time: 02/18/20 17:56
Container ID: 1200481002-E

Prep Batch: WXX13203
Prep Method: SM21 4500P-B,E
Prep Date/Time: 02/18/20 16:12
Prep Initial Wt./Vol.: 0.5 mL
Prep Extract Vol: 25 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	11.0		1.00	0.310	mg/L	1		02/06/20 10:26

Batch Information

Analytical Batch: WDA4734
Analytical Method: SM23 4500-N D
Analyst: DMM
Analytical Date/Time: 02/06/20 10:26
Container ID: 1200481002-E

Prep Batch: WXX13194
Prep Method: METHOD
Prep Date/Time: 02/05/20 17:13
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Print Date: 02/19/2020 1:17:46PM

J flagging is activated

Results of **MW14A**

Client Sample ID: **MW14A**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1200481003
Lab Project ID: 1200481

Collection Date: 02/05/20 12:29
Received Date: 02/05/20 16:11
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Microbiology Laboratory**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Fecal Coliform	1.64	U	1.64	1.64	col/100mL	1		02/05/20 17:46

Batch Information

Analytical Batch: BTF17907
Analytical Method: SM21 9222D
Analyst: M.A
Analytical Date/Time: 02/05/20 17:46
Container ID: 1200481003-B

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Results of **MW14A**

Client Sample ID: **MW14A**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1200481003
Lab Project ID: 1200481

Collection Date: 02/05/20 12:29
Received Date: 02/05/20 16:11
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Nitrate-N	0.164	J	0.200	0.0500	mg/L	1		02/05/20 22:01
Nitrite-N	0.100	U	0.200	0.0500	mg/L	1		02/05/20 22:01
Total Nitrate/Nitrite-N	0.164	J	0.200	0.0500	mg/L	1		02/05/20 22:01

Batch Information

Analytical Batch: WIC6018
Analytical Method: EPA 300.0
Analyst: DMM
Analytical Date/Time: 02/05/20 22:01
Container ID: 1200481003-A

Prep Batch: WXX13197
Prep Method: METHOD
Prep Date/Time: 02/05/20 15:30
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Ammonia-N	0.0500	U	0.100	0.0310	mg/L	1		02/13/20 15:34

Batch Information

Analytical Batch: WDA4737
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 02/13/20 15:34
Container ID: 1200481003-C

Prep Batch: WXX13199
Prep Method: METHOD
Prep Date/Time: 02/13/20 11:15
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	0.500	U	1.00	0.310	mg/L	1		02/06/20 10:27

Batch Information

Analytical Batch: WDA4734
Analytical Method: SM23 4500-N D
Analyst: DMM
Analytical Date/Time: 02/06/20 10:27
Container ID: 1200481003-C

Prep Batch: WXX13194
Prep Method: METHOD
Prep Date/Time: 02/05/20 17:13
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Print Date: 02/19/2020 1:17:46PM

J flagging is activated

Results of **MW14B**

Client Sample ID: **MW14B**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1200481004
Lab Project ID: 1200481

Collection Date: 02/05/20 12:35
Received Date: 02/05/20 16:11
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Ammonia-N	0.180		0.100	0.0310	mg/L	1		02/13/20 15:35

Batch Information

Analytical Batch: WDA4737
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 02/13/20 15:35
Container ID: 1200481004-A

Prep Batch: WXX13199
Prep Method: METHOD
Prep Date/Time: 02/13/20 11:15
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	0.668	J	1.00	0.310	mg/L	1		02/18/20 12:31

Batch Information

Analytical Batch: WDA4738
Analytical Method: SM23 4500-N D
Analyst: DMM
Analytical Date/Time: 02/18/20 12:31
Container ID: 1200481004-A

Prep Batch: WXX13202
Prep Method: METHOD
Prep Date/Time: 02/14/20 08:03
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Method Blank

Blank ID: MB for HBN 1804247 [BOD/6528]
Blank Lab ID: 1550680

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1200481002

Results by **SM21 5210B**

Parameter	Results	LOQ/CL	DL	Units
Biochemical Oxygen Demand	2.00U	2.00	2.00	mg/L

Batch Information

Analytical Batch: BOD6528
Analytical Method: SM21 5210B
Instrument:
Analyst: A.L
Analytical Date/Time: 2/6/2020 4:53:34PM

Print Date: 02/19/2020 1:17:48PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1200481 [BOD6528]
Blank Spike Lab ID: 1550681
Date Analyzed: 02/06/2020 16:53

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1200481002

Results by **SM21 5210B**

Blank Spike (mg/L)

Parameter	Spike	Result	Rec (%)	CL
Biochemical Oxygen Demand	198	202	102	(84.6-115.4

Batch Information

Analytical Batch: **BOD6528**
Analytical Method: **SM21 5210B**
Instrument:
Analyst: **A.L**

Print Date: 02/19/2020 1:17:50PM

Method Blank

Blank ID: MB for HBN 1804214 [BTF/17907]
Blank Lab ID: 1550688

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1200481001, 1200481002, 1200481003

Results by **SM21 9222D**

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

Batch Information

Analytical Batch: BTF17907
Analytical Method: SM21 9222D
Instrument:
Analyst: M.A
Analytical Date/Time: 2/5/2020 5:46:00PM

Print Date: 02/19/2020 1:17:52PM

Method Blank

Blank ID: MB for HBN 1804222 [BTF/17909]
Blank Lab ID: 1550533

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1200481002

Results by **SM21 9223B**

Parameter	Results	LOQ/CL	DL	Units
Total Coliform	1U	1	1	MPN/100m
E. Coli	1U	1	1	MPN/100m

Batch Information

Analytical Batch: BTF17909
Analytical Method: SM21 9223B
Instrument:
Analyst: M.A
Analytical Date/Time: 2/5/2020 5:01:00PM

Print Date: 02/19/2020 1:17:56PM

Method Blank

Blank ID: MB for HBN 1804231 [WXX/13194]
Blank Lab ID: 1550581

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1200481001, 1200481002, 1200481003

Results by **SM23 4500-N D**

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

Batch Information

Analytical Batch: WDA4734
Analytical Method: SM23 4500-N D
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 2/6/2020 10:11:10AM

Prep Batch: WXX13194
Prep Method: METHOD
Prep Date/Time: 2/5/2020 5:13:00PM
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1200481 [WXX13194]
Blank Spike Lab ID: 1550582
Date Analyzed: 02/06/2020 10:12

Spike Duplicate ID: LCSD for HBN 1200481 [WXX13194]
Spike Duplicate Lab ID: 1550583
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1200481001, 1200481002, 1200481003

Results by **SM23 4500-N D**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Total Kjeldahl Nitrogen	4	3.99	100	4	4.01	100	(75-125)	0.45	(< 25)

Batch Information

Analytical Batch: **WDA4734**
Analytical Method: **SM23 4500-N D**
Instrument: **Discrete Analyzer 2**
Analyst: **DMM**

Prep Batch: **WXX13194**
Prep Method: **METHOD**
Prep Date/Time: **02/05/2020 17:13**
Spike Init Wt./Vol.: 4 mg/L Extract Vol: 25 mL
Dupe Init Wt./Vol.: 4 mg/L Extract Vol: 25 mL

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Matrix Spike Summary

Original Sample ID: 1200481001
MS Sample ID: 1550584 MS
MSD Sample ID: 1550585 MSD

Analysis Date: 02/06/2020 10:17
Analysis Date: 02/06/2020 10:19
Analysis Date: 02/06/2020 10:20
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1200481001, 1200481002, 1200481003

Results by **SM23 4500-N D**

		Matrix Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Total Kjeldahl Nitrogen	0.500U	4.00	4.21	105	4.00	3.62	90	75-125	15.10	(< 25)

Batch Information

Analytical Batch: WDA4734
Analytical Method: SM23 4500-N D
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 2/6/2020 10:19:03AM

Prep Batch: WXX13194
Prep Method: Distillation TKN by Phenate (W)
Prep Date/Time: 2/5/2020 5:13:00PM
Prep Initial Wt./Vol.: 25.00mL
Prep Extract Vol: 25.00mL

Print Date: 02/19/2020 1:18:04PM

Method Blank

Blank ID: MB for HBN 1804240 [WXX/13195]
Blank Lab ID: 1550636

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1200481002

Results by **SM21 4500-NH3 G**

Parameter	Results	LOQ/CL	DL	Units
Ammonia-N	0.0500U	0.100	0.0310	mg/L

Batch Information

Analytical Batch: WDA4735
Analytical Method: SM21 4500-NH3 G
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 2/6/2020 1:50:17PM

Prep Batch: WXX13195
Prep Method: METHOD
Prep Date/Time: 2/6/2020 10:16:00AM
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1200481 [WXX13195]
Blank Spike Lab ID: 1550637
Date Analyzed: 02/06/2020 13:51

Spike Duplicate ID: LCSD for HBN 1200481 [WXX13195]
Spike Duplicate Lab ID: 1550638
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1200481002

Results by **SM21 4500-NH3 G**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Ammonia-N	1	1.11	111	1	1.13	113	(75-125)	2.00	(< 25)

Batch Information

Analytical Batch: **WDA4735**
Analytical Method: **SM21 4500-NH3 G**
Instrument: **Discrete Analyzer 2**
Analyst: **DMM**

Prep Batch: **WXX13195**
Prep Method: **METHOD**
Prep Date/Time: **02/06/2020 10:16**
Spike Init Wt./Vol.: 1 mg/L Extract Vol: 6 mL
Dupe Init Wt./Vol.: 1 mg/L Extract Vol: 6 mL

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Matrix Spike Summary

Original Sample ID: 1200481002
MS Sample ID: 1550639 MS
MSD Sample ID: 1550640 MSD

QC for Samples: 1200481002

Analysis Date: 02/06/2020 13:58
Analysis Date: 02/06/2020 14:00
Analysis Date: 02/06/2020 14:01
Matrix: Water (Surface, Eff., Ground)

Results by **SM21 4500-NH3 G**

		Matrix Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Ammonia-N	0.562	1.00	1.69	113	1.00	1.68	112	75-125	0.47	(< 25)

Batch Information

Analytical Batch: WDA4735
Analytical Method: SM21 4500-NH3 G
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 2/6/2020 2:00:13PM

Prep Batch: WXX13195
Prep Method: Ammonia by 4500F Distillation prep (W)
Prep Date/Time: 2/6/2020 10:16:00AM
Prep Initial Wt./Vol.: 6.00mL
Prep Extract Vol: 6.00mL

Print Date: 02/19/2020 1:18:09PM

Method Blank

Blank ID: MB for HBN 1804274 [WXX/13197]
Blank Lab ID: 1550764

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1200481001, 1200481002, 1200481003

Results by **EPA 300.0**

Parameter	Results	LOQ/CL	DL	Units
Nitrate-N	0.100U	0.200	0.0500	mg/L
Nitrite-N	0.100U	0.200	0.0500	mg/L
Total Nitrate/Nitrite-N	0.0820J	0.200	0.0500	mg/L

Batch Information

Analytical Batch: WIC6018
Analytical Method: EPA 300.0
Instrument: 930 Metrohm compact IC flex
Analyst: DMM
Analytical Date/Time: 2/5/2020 3:56:25PM

Prep Batch: WXX13197
Prep Method: METHOD
Prep Date/Time: 2/5/2020 3:30:00PM
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1200481 [WXX13197]
Blank Spike Lab ID: 1550765
Date Analyzed: 02/05/2020 16:15

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1200481001, 1200481002, 1200481003

Results by **EPA 300.0**

Blank Spike (mg/L)

Parameter	Spike	Result	Rec (%)	CL
Nitrate-N	5	5.06	101	(90-110)
Nitrite-N	5	5.01	100	(90-110)
Total Nitrate/Nitrite-N	10	10.1	101	(90-110)

Batch Information

Analytical Batch: **WIC6018**
Analytical Method: **EPA 300.0**
Instrument: **930 Metrohm compact IC flex**
Analyst: **DMM**

Prep Batch: **WXX13197**
Prep Method: **METHOD**
Prep Date/Time: **02/05/2020 15:30**
Spike Init Wt./Vol.: 5 mg/L Extract Vol: 10 mL
Dupe Init Wt./Vol.: Extract Vol:

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Matrix Spike Summary

Original Sample ID: 1550763
MS Sample ID: 1550767 MS
MSD Sample ID:

Analysis Date: 02/05/2020 16:53
Analysis Date: 02/05/2020 17:12
Analysis Date:
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1200481001, 1200481002, 1200481003

Results by **EPA 300.0**

		Matrix Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Nitrate-N	0.0970J	5.00	5.19	102				90-110		
Nitrite-N	0.100U	5.00	4.81	96				90-110		

Batch Information

Analytical Batch: WIC6018
Analytical Method: EPA 300.0
Instrument: 930 Metrohm compact IC flex
Analyst: DMM
Analytical Date/Time: 2/5/2020 5:12:25PM

Prep Batch: WXX13197
Prep Method: EPA 300.0 Extraction Waters/Liquids
Prep Date/Time: 2/5/2020 3:30:00PM
Prep Initial Wt./Vol.: 10.00mL
Prep Extract Vol: 10.00mL

Print Date: 02/19/2020 1:18:14PM

Method Blank

Blank ID: MB for HBN 1804380 [WXX/13199]
Blank Lab ID: 1551148

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1200481001, 1200481003, 1200481004

Results by **SM21 4500-NH3 G**

Parameter	Results	LOQ/CL	DL	Units
Ammonia-N	0.0500U	0.100	0.0310	mg/L

Batch Information

Analytical Batch: WDA4737
Analytical Method: SM21 4500-NH3 G
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 2/13/2020 3:12:25PM

Prep Batch: WXX13199
Prep Method: METHOD
Prep Date/Time: 2/13/2020 11:15:00AM
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1200481 [WXX13199]
Blank Spike Lab ID: 1551149
Date Analyzed: 02/13/2020 15:14

Spike Duplicate ID: LCSD for HBN 1200481 [WXX13199]
Spike Duplicate Lab ID: 1551150
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1200481001, 1200481003, 1200481004

Results by **SM21 4500-NH3 G**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Ammonia-N	1	1.15	115	1	1.21	121	(75-125)	4.80	(< 25)

Batch Information

Analytical Batch: **WDA4737**
Analytical Method: **SM21 4500-NH3 G**
Instrument: **Discrete Analyzer 2**
Analyst: **DMM**

Prep Batch: **WXX13199**
Prep Method: **METHOD**
Prep Date/Time: **02/13/2020 11:15**
Spike Init Wt./Vol.: 1 mg/L Extract Vol: 6 mL
Dupe Init Wt./Vol.: 1 mg/L Extract Vol: 6 mL

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Matrix Spike Summary

Original Sample ID: 1200481001
MS Sample ID: 1551151 MS
MSD Sample ID: 1551152 MSD

Analysis Date: 02/13/2020 15:25
Analysis Date: 02/13/2020 15:27
Analysis Date: 02/13/2020 15:32
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1200481001, 1200481003, 1200481004

Results by **SM21 4500-NH3 G**

		Matrix Spike (mg/L)				Spike Duplicate (mg/L)					
Parameter	Sample	Spike	Result	Rec (%)		Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Ammonia-N	0.0659J	1.00	.785	72	*	1.00	0.976	91	75-125	21.70	(< 25)

Batch Information

Analytical Batch: WDA4737
Analytical Method: SM21 4500-NH3 G
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 2/13/2020 3:27:26PM

Prep Batch: WXX13199
Prep Method: Ammonia by SM21 4500F prep (W)
Prep Date/Time: 2/13/2020 11:15:00AM
Prep Initial Wt./Vol.: 6.00mL
Prep Extract Vol: 6.00mL

Print Date: 02/19/2020 1:18:19PM

Method Blank

Blank ID: MB for HBN 1804475 [WXX/13202]
Blank Lab ID: 1551492

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1200481004

Results by **SM23 4500-N D**

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

Batch Information

Analytical Batch: WDA4738
Analytical Method: SM23 4500-N D
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 2/18/2020 12:20:05PM

Prep Batch: WXX13202
Prep Method: METHOD
Prep Date/Time: 2/14/2020 8:03:00AM
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1200481 [WXX13202]
Blank Spike Lab ID: 1551493
Date Analyzed: 02/18/2020 12:21

Spike Duplicate ID: LCSD for HBN 1200481 [WXX13202]
Spike Duplicate Lab ID: 1551494
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1200481004

Results by **SM23 4500-N D**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Total Kjeldahl Nitrogen	4	3.38	85	4	3.46	87	(75-125)	2.40	(< 25)

Batch Information

Analytical Batch: **WDA4738**
Analytical Method: **SM23 4500-N D**
Instrument: **Discrete Analyzer 2**
Analyst: **DMM**

Prep Batch: **WXX13202**
Prep Method: **METHOD**
Prep Date/Time: **02/14/2020 08:03**
Spike Init Wt./Vol.: 4 mg/L Extract Vol: 25 mL
Dupe Init Wt./Vol.: 4 mg/L Extract Vol: 25 mL

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Matrix Spike Summary

Original Sample ID: 1200005002
MS Sample ID: 1551495 MS
MSD Sample ID: 1551496 MSD

QC for Samples: 1200481004

Analysis Date: 02/18/2020 12:26
Analysis Date: 02/18/2020 12:27
Analysis Date: 02/18/2020 12:29
Matrix: Water (Surface, Eff., Ground)

Results by **SM23 4500-N D**

		Matrix Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Total Kjeldahl Nitrogen	1.00U	4.00	3.34	84	4.00	3.68	92	75-125	9.80	(< 25)

Batch Information

Analytical Batch: WDA4738
Analytical Method: SM23 4500-N D
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 2/18/2020 12:27:57PM

Prep Batch: WXX13202
Prep Method: Distillation TKN by Phenate (W)
Prep Date/Time: 2/14/2020 8:03:00AM
Prep Initial Wt./Vol.: 25.00mL
Prep Extract Vol: 25.00mL

Print Date: 02/19/2020 1:18:24PM

Method Blank

Blank ID: MB for HBN 1804486 [WXX/13203]
Blank Lab ID: 1551532

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1200481002

Results by **SM21 4500P-B,E**

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

Batch Information

Analytical Batch: WDA4739
Analytical Method: SM21 4500P-B,E
Instrument: Discrete Analyzer 2
Analyst: EWW
Analytical Date/Time: 2/18/2020 5:44:39PM

Prep Batch: WXX13203
Prep Method: SM21 4500P-B,E
Prep Date/Time: 2/18/2020 4:12:00PM
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1200481 [WXX13203]
Blank Spike Lab ID: 1551533
Date Analyzed: 02/18/2020 17:45

Spike Duplicate ID: LCSD for HBN 1200481 [WXX13203]
Spike Duplicate Lab ID: 1551534
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1200481002

Results by **SM21 4500P-B,E**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Total Phosphorus	0.2	0.193	96	0.2	0.221	110	(75-125)	13.60	(< 25)

Batch Information

Analytical Batch: **WDA4739**
Analytical Method: **SM21 4500P-B,E**
Instrument: **Discrete Analyzer 2**
Analyst: **EWW**

Prep Batch: **WXX13203**
Prep Method: **SM21 4500P-B,E**
Prep Date/Time: **02/18/2020 16:12**
Spike Init Wt./Vol.: 0.2 mg/L Extract Vol: 25 mL
Dupe Init Wt./Vol.: 0.2 mg/L Extract Vol: 25 mL

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Matrix Spike Summary

Original Sample ID: 1200456001
MS Sample ID: 1551535 MS
MSD Sample ID: 1551536 MSD

QC for Samples: 1200481002

Analysis Date: 02/18/2020 17:49
Analysis Date: 02/18/2020 17:50
Analysis Date: 02/18/2020 17:50
Matrix: Water (Surface, Eff., Ground)

Results by **SM21 4500P-B,E**

		Matrix Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Total Phosphorus	0.0400U	0.200	.237	118	0.200	0.238	119	75-125	0.76	(< 25)

Batch Information

Analytical Batch: WDA4739
Analytical Method: SM21 4500P-B,E
Instrument: Discrete Analyzer 2
Analyst: EWW
Analytical Date/Time: 2/18/2020 5:50:03PM

Prep Batch: WXX13203
Prep Method: Total Phosphorus (W) Ext.
Prep Date/Time: 2/18/2020 4:12:00PM
Prep Initial Wt./Vol.: 25.00mL
Prep Extract Vol: 25.00mL

Print Date: 02/19/2020 1:18:30PM

SGS **1200481**

SGS North America Inc.
CHAIN OF CUSTODY RECORD

Locations Nationwide

Alaska	Maryland
New Jersey	New York
North Carolina	Indiana
West Virgina	Kentucky

www.us.sgs.com

Instructions: Sections 1 - 5 must be filled out. Omissions may delay the onset of analysis.

Page 1 of 1

Section 1

CLIENT: Stantec

CONTACT: Jake Ward — PHONE NO: 343-5202

PROJECT NAME: Wasilla WWTP — PROJECT/ PWSID/ PERMIT#:

REPORTS TO: — E-MAIL: jake.ward@stantec.com

INVOICE TO: — QUOTE #: — P.O. #: 2047004I5

Section 2

RESERVED for lab use	SAMPLE IDENTIFICATION	DATE mm/dd/yy	TIME HH:MM	MATRIX/ MATRIX CODE	Section 3 # CONTAINERS	Type C = COMP G = GRAB MI = Multi Incremental Soils	Preservative: 1	Na2SO4	H2SO4	1	Na2SO4	H2SO4				REMARKS/ LOC ID
							Nitrate/Nitrite	FC	TKN/Ammonia	BOD	TC (Quanti-Tray)	TKN/Ammonia				
(1) AC	MW20	2/5/20	10:32	Water	3	G	1	1	1							
(2) AE	Shaw		11:18		3		1	1		1	1	1				
(3) AC	MW14A		12:29		3		1	1	1							
(4) A	MW14B		17:35		1				1							
	Note: Please expedite Shaw TKN/Ammonia Results															

Section 5

	Date	Time	
Relinquished By: (1)	2/5/20	1611	Received By:
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	2/5/20	1611	Received For Laboratory By: MA

Section 4

DOD Project? Yes No

Cooler ID:

Data Deliverable Requirements:

Requested Turnaround Time and/or Special Instructions:

Profile #348183

Temp Blank °C: 5.5 D59

or Ambient [ ]

(See attached Sample Receipt Form)

Chain of Custody Seal: (Circle)

INTACT BROKEN (ABSENT)

(See attached Sample Receipt Form)

[ ] 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

e-Sample Receipt Form

SGS Workorder #: **1200481**

1 2 0 0 4 8 1

Review Criteria	Condition (Yes, No, N/A)	Exceptions Noted below
Chain of Custody / Temperature Requirements		Yes — Exemption permitted if sampler hand carries/delivers.
Were Custody Seals intact? Note # & location	N/A	Absent
COC accompanied samples?	Yes	
DOD: Were samples received in COC corresponding coolers?	N/A	
Yes — **Exemption permitted if chilled & collected <8 hours ago, or for samples where chilling is not required		
Temperature blank compliant* (i.e., 0-6 °C after CF)?	Yes	Cooler ID: 1 @ 5.5 °C Therm. ID: D59
If samples received without a temperature blank, the "cooler temperature" will be documented instead & "COOLER TEMP" will be noted to the right. "ambient" or "chilled" will be noted if neither is available.		Cooler ID: @ °C Therm. ID:
		Cooler ID: @ °C Therm. ID:
		Cooler ID: @ °C Therm. ID:
		Cooler ID: @ °C Therm. ID:
*If >6°C, were samples collected <8 hours ago?	N/A	
If <0°C, were sample containers ice free?	N/A	
Note: Identify containers received at non-compliant temperature . Use form FS-0029 if more space is needed.		
Holding Time / Documentation / Sample Condition Requirements		Note: Refer to form F-083 "Sample Guide" for specific holding times.
Were samples received within holding time?	Yes	
Do samples **match COC**** (i.e.,sample IDs,dates/times collected)?	Yes	
**Note: If times differ <1hr, record details & login per COC.		
***Note: If sample information on containers differs from COC, SGS will default to COC information		
Were analytical requests clear? (i.e., method is specified for analyses with multiple option for analysis (Ex: BTEX, Metals)	Yes	
	N/A	***Exemption permitted for metals (e.g,200.8/6020A).
Were proper containers (type/mass/volume/preservative***)used?	Yes	
Volatile / LL-Hg Requirements		
Were Trip Blanks (i.e., VOAs, LL-Hg) in cooler with samples?	N/A	
Were all water VOA vials free of headspace (i.e., bubbles ≤ 6mm)?	N/A	
Were all soil VOAs field extracted with MeOH+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

Container Id	Preservative	Container Condition	Container Id	Preservative	Container Condition
1200481001-A	No Preservative Required	OK			
1200481001-B	Na2S2O3 for Chlorine Redu	OK			
1200481001-C	H2SO4 to pH < 2	OK			
1200481002-A	No Preservative Required	OK			
1200481002-B	Na2S2O3 for Chlorine Redu	OK			
1200481002-C	No Preservative Required	OK			
1200481002-D	No Preservative Required	OK			
1200481002-E	H2SO4 to pH < 2	OK			
1200481003-A	No Preservative Required	OK			
1200481003-B	Na2S2O3 for Chlorine Redu	OK			
1200481003-C	H2SO4 to pH < 2	OK			
1200481004-A	H2SO4 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.

Laboratory Report of Analysis

To: Stantec Consulting Services Inc.
725 East Fireweed Lane Suite 200
Anchorage, AK 99503
(907)248-8883

Report Number: **1200780**

Client Project: **Wasilla WWTP**

Dear John Marshall,

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 Justin 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.

_____

Justin Nelson Date
Project Manager
Justin.Nelson@sgs.com

Case Narrative

SGS Client: **Stantec Consulting Services Inc.**
SGS Project: **1200780**
Project Name/Site: **Wasilla WWTP**
Project Contact: **John Marshall**

Refer to sample receipt form for information on sample condition.

1200755001MS (1552364) MS

4500NO3-F - Nitrate/Nitrite - MS recovery for Total Nitrite / Nitrate is outside of QC criteria. Refer to LCS for accuracy requirements.

*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, indenmification 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 & Microbiology) & 17-021 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020A, 7470A, 7471B, 8015C, 8021B, 8082A, 8260C, 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
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

Client Sample ID	Lab Sample ID	Collected	Received	Matrix
Eff	1200780001	02/27/2020	02/27/2020	Water (Surface, Eff., Ground)
SW5	1200780002	02/27/2020	02/27/2020	Water (Surface, Eff., Ground)
B2	1200780003	02/27/2020	02/27/2020	Water (Surface, Eff., Ground)

Method	Method Description
SM21 4500-NH3 G	Ammonia-N (W) SM21 4500-NH3 G
SM21 5210B	Biochemical Oxygen Demand SM21 5210B
SM21 9222D	Fecal Coliform (MF)
SM21 4500NO3-F	Flow Injection Analysis
SM23 4500-N D	TKN by Phenate (W)
SM21 9223B	Total Coliform P/A Quant Tray
SM21 4500P-B,E	Total Phosphorus (W)
SM21 2540D	Total Suspended Solids SM20 2540D

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Detectable Results Summary

Client Sample ID: **Eff**
Lab Sample ID: 1200780001

Parameter	Result	Units
Microbiology Laboratory		
Biochemical Oxygen Demand	32.9	mg/L
E. Coli	620	MPN/100mL
Fecal Coliform	740	col/100mL
Total Coliform	24200	MPN/100mL
Waters Department		
Ammonia-N	36.3	mg/L
Nitrite-N	0.115J	mg/L
Total Kjeldahl Nitrogen	44.9	mg/L
Total Phosphorus	5.95	mg/L
Total Suspended Solids	35.0	mg/L

Client Sample ID: **SW5**
Lab Sample ID: 1200780002

Parameter	Result	Units
Microbiology Laboratory		
Biochemical Oxygen Demand	6.84	mg/L
Total Coliform	10	MPN/100mL
Waters Department		
Ammonia-N	0.611	mg/L
Nitrite-N	0.0620J	mg/L
Total Kjeldahl Nitrogen	1.19	mg/L
Total Phosphorus	0.0600	mg/L
Total Suspended Solids	45.3	mg/L

Client Sample ID: **B2**
Lab Sample ID: 1200780003

Parameter	Result	Units
Waters Department		
Ammonia-N	35.6	mg/L
Total Kjeldahl Nitrogen	43.5	mg/L
Total Phosphorus	6.19	mg/L

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Results of **Eff**

Client Sample ID: **Eff**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1200780001
Lab Project ID: 1200780

Collection Date: 02/27/20 15:01
Received Date: 02/27/20 16:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Microbiology Laboratory**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Biochemical Oxygen Demand	32.9		2.00	2.00	mg/L	1		02/28/20 15:15

Batch Information

Analytical Batch: BOD6542
Analytical Method: SM21 5210B
Analyst: A.L
Analytical Date/Time: 02/28/20 15:15
Container ID: 1200780001-A

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Fecal Coliform	740		20.0	20.0	col/100mL	1		02/27/20 18:33

Batch Information

Analytical Batch: BTF17943
Analytical Method: SM21 9222D
Analyst: M.A
Analytical Date/Time: 02/27/20 18:33
Container ID: 1200780001-D

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
E. Coli	620		10	10	MPN/100m	10		02/28/20 13:09
Total Coliform	24200		10	10	MPN/100m	10		02/28/20 13:09

Batch Information

Analytical Batch: BTF17944
Analytical Method: SM21 9223B
Analyst: M.A
Analytical Date/Time: 02/28/20 13:09
Container ID: 1200780001-E

Results of **Eff**

Client Sample ID: **Eff**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1200780001
Lab Project ID: 1200780

Collection Date: 02/27/20 15:01
Received Date: 02/27/20 16:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	35.0		5.00	1.55	mg/L	1		02/28/20 17:49

Batch Information

Analytical Batch: STS6613
Analytical Method: SM21 2540D
Analyst: EWW
Analytical Date/Time: 02/28/20 17:49
Container ID: 1200780001-B

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Ammonia-N	36.3		1.00	0.310	mg/L	1		03/10/20 17:49

Batch Information

Analytical Batch: WDA4747
Analytical Method: SM21 4500-NH3 G
Analyst: EWW
Analytical Date/Time: 03/10/20 17:49
Container ID: 1200780001-F

Prep Batch: WXX13216
Prep Method: METHOD
Prep Date/Time: 03/10/20 15:30
Prep Initial Wt./Vol.: 0.6 mL
Prep Extract Vol: 6 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Nitrate-N	0.100	U	0.200	0.0500	mg/L	2		02/28/20 10:45
Nitrite-N	0.115	J	0.200	0.0500	mg/L	2		02/28/20 10:45

Batch Information

Analytical Batch: WFI2859
Analytical Method: SM21 4500NO3-F
Analyst: EWW
Analytical Date/Time: 02/28/20 10:45
Container ID: 1200780001-C

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Phosphorus	5.95		0.800	0.240	mg/L	1		03/04/20 16:43

Print Date: 03/16/2020 1:17:05PM

J flagging is activated

Results of **Eff**

Client Sample ID: **Eff**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1200780001
Lab Project ID: 1200780

Collection Date: 02/27/20 15:01
Received Date: 02/27/20 16:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: WDA4746
Analytical Method: SM21 4500P-B,E
Analyst: DMM
Analytical Date/Time: 03/04/20 16:43
Container ID: 1200780001-F

Prep Batch: WXX13213
Prep Method: SM21 4500P-B,E
Prep Date/Time: 03/04/20 11:45
Prep Initial Wt./Vol.: 1.25 mL
Prep Extract Vol: 25 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	44.9		5.00	1.55	mg/L	1		03/12/20 11:59

Batch Information

Analytical Batch: WDA4751
Analytical Method: SM23 4500-N D
Analyst: DMM
Analytical Date/Time: 03/12/20 11:59
Container ID: 1200780001-F

Prep Batch: WXX13222
Prep Method: METHOD
Prep Date/Time: 03/11/20 12:47
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 25 mL

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Results of **SW5**

Client Sample ID: **SW5**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1200780002
Lab Project ID: 1200780

Collection Date: 02/27/20 12:54
Received Date: 02/27/20 16:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Microbiology Laboratory**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Biochemical Oxygen Demand	6.84		2.00	2.00	mg/L	1		02/28/20 15:15

Batch Information

Analytical Batch: BOD6542
Analytical Method: SM21 5210B
Analyst: A.L
Analytical Date/Time: 02/28/20 15:15
Container ID: 1200780002-A

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Fecal Coliform	6.25	U	6.25	6.25	col/100mL	1		02/27/20 18:33

Batch Information

Analytical Batch: BTF17943
Analytical Method: SM21 9222D
Analyst: M.A
Analytical Date/Time: 02/27/20 18:33
Container ID: 1200780002-D

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
E. Coli	1	U	1	1	MPN/100m	1		02/28/20 13:09
Total Coliform	10		1	1	MPN/100m	1		02/28/20 13:09

Batch Information

Analytical Batch: BTF17944
Analytical Method: SM21 9223B
Analyst: M.A
Analytical Date/Time: 02/28/20 13:09
Container ID: 1200780002-E

Results of **SW5**

Client Sample ID: **SW5**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1200780002
Lab Project ID: 1200780

Collection Date: 02/27/20 12:54
Received Date: 02/27/20 16:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	45.3		2.22	0.689	mg/L	1		02/28/20 17:49

Batch Information

Analytical Batch: STS6613
Analytical Method: SM21 2540D
Analyst: EWW
Analytical Date/Time: 02/28/20 17:49
Container ID: 1200780002-B

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Ammonia-N	0.611		0.100	0.0310	mg/L	1		02/28/20 14:08

Batch Information

Analytical Batch: WDA4744
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 02/28/20 14:08
Container ID: 1200780002-F

Prep Batch: WXX13211
Prep Method: METHOD
Prep Date/Time: 02/28/20 11:10
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Nitrate-N	0.100	U	0.200	0.0500	mg/L	2		02/28/20 10:51
Nitrite-N	0.0620	J	0.200	0.0500	mg/L	2		02/28/20 10:51

Batch Information

Analytical Batch: WFI2859
Analytical Method: SM21 4500NO3-F
Analyst: EWW
Analytical Date/Time: 02/28/20 10:51
Container ID: 1200780002-C

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Phosphorus	0.0600		0.0400	0.0120	mg/L	1		03/04/20 15:21

Print Date: 03/16/2020 1:17:05PM

J flagging is activated

Results of **SW5**

Client Sample ID: **SW5**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1200780002
Lab Project ID: 1200780

Collection Date: 02/27/20 12:54
Received Date: 02/27/20 16:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: WDA4746
Analytical Method: SM21 4500P-B,E
Analyst: DMM
Analytical Date/Time: 03/04/20 15:21
Container ID: 1200780002-F

Prep Batch: WXX13213
Prep Method: SM21 4500P-B,E
Prep Date/Time: 03/04/20 11:45
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	1.19		1.00	0.310	mg/L	1		03/12/20 12:00

Batch Information

Analytical Batch: WDA4751
Analytical Method: SM23 4500-N D
Analyst: DMM
Analytical Date/Time: 03/12/20 12:00
Container ID: 1200780002-F

Prep Batch: WXX13222
Prep Method: METHOD
Prep Date/Time: 03/11/20 12:47
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Results of **B2**

Client Sample ID: **B2**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1200780003
Lab Project ID: 1200780

Collection Date: 02/27/20 10:25
Received Date: 02/27/20 16:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Ammonia-N	35.6		1.00	0.310	mg/L	1		03/10/20 17:50

Batch Information

Analytical Batch: WDA4747
Analytical Method: SM21 4500-NH3 G
Analyst: EWW
Analytical Date/Time: 03/10/20 17:50
Container ID: 1200780003-A

Prep Batch: WXX13216
Prep Method: METHOD
Prep Date/Time: 03/10/20 15:30
Prep Initial Wt./Vol.: 0.6 mL
Prep Extract Vol: 6 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Phosphorus	6.19		2.00	0.600	mg/L	1		03/11/20 15:17

Batch Information

Analytical Batch: WDA4748
Analytical Method: SM21 4500P-B,E
Analyst: EWW
Analytical Date/Time: 03/11/20 15:17
Container ID: 1200780003-A

Prep Batch: WXX13217
Prep Method: SM21 4500P-B,E
Prep Date/Time: 03/11/20 14:01
Prep Initial Wt./Vol.: 0.5 mL
Prep Extract Vol: 25 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	43.5		5.00	1.55	mg/L	1		03/12/20 12:04

Batch Information

Analytical Batch: WDA4751
Analytical Method: SM23 4500-N D
Analyst: DMM
Analytical Date/Time: 03/12/20 12:04
Container ID: 1200780003-A

Prep Batch: WXX13222
Prep Method: METHOD
Prep Date/Time: 03/11/20 12:47
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 25 mL

Method Blank

Blank ID: MB for HBN 1804766 [BOD/6542]
Blank Lab ID: 1552402

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1200780001, 1200780002

Results by **SM21 5210B**

Parameter	Results	LOQ/CL	DL	Units
Biochemical Oxygen Demand	2.00U	2.00	2.00	mg/L

Batch Information

Analytical Batch: BOD6542
Analytical Method: SM21 5210B
Instrument:
Analyst: A.L
Analytical Date/Time: 2/28/2020 3:15:48PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1200780 [BOD6542]
Blank Spike Lab ID: 1552403
Date Analyzed: 02/28/2020 15:15

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1200780001, 1200780002

Results by **SM21 5210B**

Blank Spike (mg/L)

Parameter	Spike	Result	Rec (%)	CL
Biochemical Oxygen Demand	198	189	96	(84.6-115.4

Batch Information

Analytical Batch: **BOD6542**
Analytical Method: **SM21 5210B**
Instrument:
Analyst: **A.L**

Print Date: 03/16/2020 1:17:09PM

Method Blank

Blank ID: MB for HBN 1804767 [BTF/17943]
Blank Lab ID: 1552404

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1200780001, 1200780002

Results by **SM21 9222D**

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

Batch Information

Analytical Batch: BTF17943
Analytical Method: SM21 9222D
Instrument:
Analyst: M.A
Analytical Date/Time: 2/27/2020 6:33:00PM

Print Date: 03/16/2020 1:17:12PM

Method Blank

Blank ID: MB for HBN 1804768 [BTF/17944]
Blank Lab ID: 1552406

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1200780001, 1200780002

Results by **SM21 9223B**

Parameter	Results	LOQ/CL	DL	Units
Total Coliform	1U	1	1	MPN/100m
E. Coli	1U	1	1	MPN/100m

Batch Information

Analytical Batch: BTF17944
Analytical Method: SM21 9223B
Instrument:
Analyst: M.A
Analytical Date/Time: 2/28/2020 1:09:00PM

Print Date: 03/16/2020 1:17:16PM

Method Blank

Blank ID: MB for HBN 1804772 [STS/6613]
Blank Lab ID: 1552414

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1200780001, 1200780002

Results by **SM21 2540D**

Parameter	Results	LOQ/CL	DL	Units
Total Suspended Solids	0.500U	1.00	0.310	mg/L

Batch Information

Analytical Batch: STS6613
Analytical Method: SM21 2540D
Instrument:
Analyst: EWW
Analytical Date/Time: 2/28/2020 5:49:57PM

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Duplicate Sample Summary

Original Sample ID: 1200780002
Duplicate Sample ID: 1552417
QC for Samples:
1200780001, 1200780002

Analysis Date: 02/28/2020 17:49
Matrix: Water (Surface, Eff., Ground)

Results by **SM21 2540D**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
Total Suspended Solids	45.3	47.8	mg/L	5.30*	(< 5)

Batch Information

Analytical Batch: STS6613
Analytical Method: SM21 2540D
Instrument:
Analyst: EWW

Print Date: 03/16/2020 1:17:21PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1200780 [STS6613]
Blank Spike Lab ID: 1552415
Date Analyzed: 02/28/2020 17:49

Spike Duplicate ID: LCSD for HBN 1200780 [STS6613]
Spike Duplicate Lab ID: 1552416
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1200780001, 1200780002

Results by **SM21 2540D**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Total Suspended Solids	25	25.4	102	25	25.1	100	(75-125)	1.20	(< 5)

Batch Information

Analytical Batch: **STS6613**
Analytical Method: **SM21 2540D**
Instrument:
Analyst: **EWW**

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Method Blank

Blank ID: MB for HBN 1804755 (WFI/2859)
Blank Lab ID: 1552380

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1200780001, 1200780002

Results by **SM21 4500NO3-F**

Parameter	Results	LOQ/CL	DL	Units
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: WFI2859
Analytical Method: SM21 4500NO3-F
Instrument: Astoria segmented flow
Analyst: EWW
Analytical Date/Time: 2/28/2020 10:40:38AM

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Method Blank

Blank ID: MB for HBN 1804755 (WFI/2859)
Blank Lab ID: 1552382

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1200780001, 1200780002

Results by **SM21 4500NO3-F**

Parameter	Results	LOQ/CL	DL	Units
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: WFI2859
Analytical Method: SM21 4500NO3-F
Instrument: Astoria segmented flow
Analyst: EWW
Analytical Date/Time: 2/28/2020 11:27:53AM

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1200780 [WFI2859]
Blank Spike Lab ID: 1552379
Date Analyzed: 02/28/2020 10:38

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1200780001, 1200780002

Results by **SM21 4500NO3-F**

Blank Spike (mg/L)

Parameter	Spike	Result	Rec (%)	CL
Nitrate-N	2.5	2.68	107	(70-130)
Nitrite-N	2.5	2.52	101	(90-110)
Total Nitrate/Nitrite-N	5	5.20	104	(90-110)

Batch Information

Analytical Batch: **WFI2859**
Analytical Method: **SM21 4500NO3-F**
Instrument: **Astoria segmented flow**
Analyst: **EWW**

Print Date: 03/16/2020 1:17:26PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1200780 [WFI2859]
Blank Spike Lab ID: 1552381
Date Analyzed: 02/28/2020 11:26

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1200780001, 1200780002

Results by **SM21 4500NO3-F**

Blank Spike (mg/L)

Parameter	Spike	Result	Rec (%)	CL
Nitrate-N	2.5	2.26	90	(70-130)
Nitrite-N	2.5	2.54	102	(90-110)
Total Nitrate/Nitrite-N	5	4.80	96	(90-110)

Batch Information

Analytical Batch: **WFI2859**
Analytical Method: **SM21 4500NO3-F**
Instrument: **Astoria segmented flow**
Analyst: **EWW**

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Matrix Spike Summary

Original Sample ID: 1200755001
MS Sample ID: 1552364 MS
MSD Sample ID: 1552365 MSD

Analysis Date: 02/28/2020 11:57
Analysis Date: 02/28/2020 11:59
Analysis Date: 02/28/2020 12:01
Matrix: Drinking Water

QC for Samples: 1200780002

Results by **SM21 4500NO3-F**

		Matrix Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Total Nitrate/Nitrite-N	5.95	10.0	17.6	116 *	10.0	16.9	110	90-110	3.70	(< 25)

Batch Information

Analytical Batch: WFI2859
Analytical Method: SM21 4500NO3-F
Instrument: Astoria segmented flow
Analyst: EWW
Analytical Date/Time: 2/28/2020 11:59:23AM

Print Date: 03/16/2020 1:17:27PM

Matrix Spike Summary

Original Sample ID: 1200780001
MS Sample ID: 1552366 MS
MSD Sample ID: 1552367 MSD

Analysis Date: 02/28/2020 10:45
Analysis Date: 02/28/2020 10:47
Analysis Date: 02/28/2020 10:49
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1200780001, 1200780002

Results by **SM21 4500NO3-F**

		Matrix Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Nitrate-N	0.100U	2.50	2.66	106	2.50	2.70	108	70-130	1.50	(< 25)
Nitrite-N	0.115J	2.50	2.8	107	2.50	2.81	108	90-110	0.59	(< 25)

Batch Information

Analytical Batch: WFI2859
Analytical Method: SM21 4500NO3-F
Instrument: Astoria segmented flow
Analyst: EWW
Analytical Date/Time: 2/28/2020 10:47:38AM

Print Date: 03/16/2020 1:17:27PM

Method Blank

Blank ID: MB for HBN 1804775 [WXX/13211]
Blank Lab ID: 1552428

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1200780002

Results by **SM21 4500-NH3 G**

Parameter	Results	LOQ/CL	DL	Units
Ammonia-N	0.0500U	0.100	0.0310	mg/L

Batch Information

Analytical Batch: WDA4744
Analytical Method: SM21 4500-NH3 G
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 2/28/2020 12:32:14PM

Prep Batch: WXX13211
Prep Method: METHOD
Prep Date/Time: 2/28/2020 11:10:00AM
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1200780 [WXX13211]
Blank Spike Lab ID: 1552429
Date Analyzed: 02/28/2020 14:00

Spike Duplicate ID: LCSD for HBN 1200780 [WXX13211]
Spike Duplicate Lab ID: 1552430
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1200780002

Results by **SM21 4500-NH3 G**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Ammonia-N	1	1.11	111	1	1.22	122	(75-125)	8.90	(< 25)

Batch Information

Analytical Batch: **WDA4744**
Analytical Method: **SM21 4500-NH3 G**
Instrument: **Discrete Analyzer 2**
Analyst: **DMM**

Prep Batch: **WXX13211**
Prep Method: **METHOD**
Prep Date/Time: **02/28/2020 11:10**
Spike Init Wt./Vol.: 1 mg/L Extract Vol: 6 mL
Dupe Init Wt./Vol.: 1 mg/L Extract Vol: 6 mL

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Matrix Spike Summary

Original Sample ID: 1200669002
MS Sample ID: 1552431 MS
MSD Sample ID: 1552432 MSD

QC for Samples: 1200780002

Analysis Date: 02/28/2020 12:40
Analysis Date: 02/28/2020 12:42
Analysis Date: 02/28/2020 12:43
Matrix: Water (Surface, Eff., Ground)

Results by **SM21 4500-NH3 G**

		Matrix Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Ammonia-N	0.195	1.00	1.11	92	1.00	1.25	106	75-125	12.10	(< 25)

Batch Information

Analytical Batch: WDA4744
Analytical Method: SM21 4500-NH3 G
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 2/28/2020 12:42:17PM

Prep Batch: WXX13211
Prep Method: Ammonia by SM21 4500F prep (W)
Prep Date/Time: 2/28/2020 11:10:00AM
Prep Initial Wt./Vol.: 6.00mL
Prep Extract Vol: 6.00mL

Print Date: 03/16/2020 1:17:32PM

Method Blank

Blank ID: MB for HBN 1804879 [WXX/13213]
Blank Lab ID: 1552782

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1200780001, 1200780002

Results by **SM21 4500P-B,E**

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

Batch Information

Analytical Batch: WDA4746
Analytical Method: SM21 4500P-B,E
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 3/4/2020 2:52:39PM

Prep Batch: WXX13213
Prep Method: SM21 4500P-B,E
Prep Date/Time: 3/4/2020 11:45:00AM
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1200780 [WXX13213]
Blank Spike Lab ID: 1552783
Date Analyzed: 03/04/2020 14:53

Spike Duplicate ID: LCSD for HBN 1200780 [WXX13213]
Spike Duplicate Lab ID: 1552784
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1200780001, 1200780002

Results by **SM21 4500P-B,E**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Total Phosphorus	0.2	0.191	96	0.2	0.192	96	(75-125)	0.16	(< 25)

Batch Information

Analytical Batch: **WDA4746**
Analytical Method: **SM21 4500P-B,E**
Instrument: **Discrete Analyzer 2**
Analyst: **DMM**

Prep Batch: **WXX13213**
Prep Method: **SM21 4500P-B,E**
Prep Date/Time: **03/04/2020 11:45**
Spike Init Wt./Vol.: 0.2 mg/L Extract Vol: 25 mL
Dupe Init Wt./Vol.: 0.2 mg/L Extract Vol: 25 mL

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Matrix Spike Summary

Original Sample ID: 1200857001
MS Sample ID: 1552785 MS
MSD Sample ID: 1552786 MSD

Analysis Date: 03/04/2020 15:18
Analysis Date: 03/04/2020 15:19
Analysis Date: 03/04/2020 15:20
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1200780001, 1200780002

Results by **SM21 4500P-B,E**

		Matrix Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Total Phosphorus	0.199	0.200	.393	97	0.200	0.402	102	75-125	2.40	(< 25)

Batch Information

Analytical Batch: WDA4746
Analytical Method: SM21 4500P-B,E
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 3/4/2020 3:19:33PM

Prep Batch: WXX13213
Prep Method: Total Phosphorus (W) Ext.
Prep Date/Time: 3/4/2020 11:45:00AM
Prep Initial Wt./Vol.: 25.00mL
Prep Extract Vol: 25.00mL

Print Date: 03/16/2020 1:17:37PM

Method Blank

Blank ID: MB for HBN 1804979 [WXX/13216]
Blank Lab ID: 1553172

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1200780001, 1200780003

Results by **SM21 4500-NH3 G**

Parameter	Results	LOQ/CL	DL	Units
Ammonia-N	0.0500U	0.100	0.0310	mg/L

Batch Information

Analytical Batch: WDA4747
Analytical Method: SM21 4500-NH3 G
Instrument: Discrete Analyzer 2
Analyst: EWW
Analytical Date/Time: 3/10/2020 5:44:02PM

Prep Batch: WXX13216
Prep Method: METHOD
Prep Date/Time: 3/10/2020 3:30:00PM
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1200780 [WXX13216]
Blank Spike Lab ID: 1553173
Date Analyzed: 03/10/2020 17:45

Spike Duplicate ID: LCSD for HBN 1200780 [WXX13216]
Spike Duplicate Lab ID: 1553174
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1200780001, 1200780003

Results by **SM21 4500-NH3 G**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Ammonia-N	1	1.14	114	1	1.06	106	(75-125)	7.30	(< 25)

Batch Information

Analytical Batch: **WDA4747**
Analytical Method: **SM21 4500-NH3 G**
Instrument: **Discrete Analyzer 2**
Analyst: **EWW**

Prep Batch: **WXX13216**
Prep Method: **METHOD**
Prep Date/Time: **03/10/2020 15:30**
Spike Init Wt./Vol.: 1 mg/L Extract Vol: 6 mL
Dupe Init Wt./Vol.: 1 mg/L Extract Vol: 6 mL

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Matrix Spike Summary

Original Sample ID: 1200857001
MS Sample ID: 1553175 MS
MSD Sample ID: 1553176 MSD

Analysis Date: 03/10/2020 17:52
Analysis Date: 03/10/2020 17:54
Analysis Date: 03/10/2020 17:55
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1200780001, 1200780003

Results by **SM21 4500-NH3 G**

		Matrix Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Ammonia-N	0.446	1.00	1.36	92	1.00	1.46	101	75-125	6.80	(< 25)

Batch Information

Analytical Batch: WDA4747
Analytical Method: SM21 4500-NH3 G
Instrument: Discrete Analyzer 2
Analyst: EWW
Analytical Date/Time: 3/10/2020 5:54:04PM

Prep Batch: WXX13216
Prep Method: Ammonia by SM21 4500F prep (W)
Prep Date/Time: 3/10/2020 3:30:00PM
Prep Initial Wt./Vol.: 6.00mL
Prep Extract Vol: 6.00mL

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Method Blank

Blank ID: MB for HBN 1804996 [WXX/13217]
Blank Lab ID: 1553223

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1200780003

Results by **SM21 4500P-B,E**

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

Batch Information

Analytical Batch: WDA4748
Analytical Method: SM21 4500P-B,E
Instrument: Discrete Analyzer 2
Analyst: EWW
Analytical Date/Time: 3/11/2020 1:00:19PM

Prep Batch: WXX13217
Prep Method: SM21 4500P-B,E
Prep Date/Time: 3/11/2020 11:19:00AM
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1200780 [WXX13217]
Blank Spike Lab ID: 1553224
Date Analyzed: 03/11/2020 13:01

Spike Duplicate ID: LCSD for HBN 1200780 [WXX13217]
Spike Duplicate Lab ID: 1553225
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1200780003

Results by **SM21 4500P-B,E**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Total Phosphorus	0.2	0.201	100	0.2	0.198	99	(75-125)	1.30	(< 25)

Batch Information

Analytical Batch: **WDA4748**
Analytical Method: **SM21 4500P-B,E**
Instrument: **Discrete Analyzer 2**
Analyst: **EWW**

Prep Batch: **WXX13217**
Prep Method: **SM21 4500P-B,E**
Prep Date/Time: **03/11/2020 11:19**
Spike Init Wt./Vol.: 0.2 mg/L Extract Vol: 25 mL
Dupe Init Wt./Vol.: 0.2 mg/L Extract Vol: 25 mL

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Matrix Spike Summary

Original Sample ID: 1200780003
MS Sample ID: 1553226 MS
MSD Sample ID: 1553227 MSD

QC for Samples: 1200780003

Analysis Date: 03/11/2020 15:17
Analysis Date: 03/11/2020 15:18
Analysis Date: 03/11/2020 15:19
Matrix: Water (Surface, Eff., Ground)

Results by **SM21 4500P-B,E**

		Matrix Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Total Phosphorus	6.19	10.0	16.4	102	10.0	16.1	99	75-125	2.30	(< 25)

Batch Information

Analytical Batch: WDA4748
Analytical Method: SM21 4500P-B,E
Instrument: Discrete Analyzer 2
Analyst: EWW
Analytical Date/Time: 3/11/2020 3:18:31PM

Prep Batch: WXX13217
Prep Method: Total Phosphorus (W) Ext.
Prep Date/Time: 3/11/2020 2:01:00PM
Prep Initial Wt./Vol.: 0.50mL
Prep Extract Vol: 25.00mL

Print Date: 03/16/2020 1:17:47PM

Method Blank

Blank ID: MB for HBN 1805072 [WXX/13222]
Blank Lab ID: 1553518

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1200780001, 1200780002, 1200780003

Results by **SM23 4500-N D**

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

Batch Information

Analytical Batch: WDA4751
Analytical Method: SM23 4500-N D
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 3/12/2020 11:48:32AM

Prep Batch: WXX13222
Prep Method: METHOD
Prep Date/Time: 3/11/2020 12:47:00PM
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1200780 [WXX13222]
Blank Spike Lab ID: 1553519
Date Analyzed: 03/12/2020 11:49

Spike Duplicate ID: LCSD for HBN 1200780 [WXX13222]
Spike Duplicate Lab ID: 1553520
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1200780001, 1200780002, 1200780003

Results by **SM23 4500-N D**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Total Kjeldahl Nitrogen	4	3.67	92	4	4.06	102	(75-125)	10.10	(< 25)

Batch Information

Analytical Batch: **WDA4751**
Analytical Method: **SM23 4500-N D**
Instrument: **Discrete Analyzer 2**
Analyst: **DMM**

Prep Batch: **WXX13222**
Prep Method: **METHOD**
Prep Date/Time: **03/11/2020 12:47**
Spike Init Wt./Vol.: 4 mg/L Extract Vol: 25 mL
Dupe Init Wt./Vol.: 4 mg/L Extract Vol: 25 mL

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Matrix Spike Summary

Original Sample ID: 1200005003
MS Sample ID: 1553521 MS
MSD Sample ID: 1553522 MSD

Analysis Date: 03/12/2020 11:52
Analysis Date: 03/12/2020 11:53
Analysis Date: 03/12/2020 11:55
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1200780001, 1200780002, 1200780003

Results by **SM23 4500-N D**

		Matrix Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Total Kjeldahl Nitrogen	1.00U	4.00	3.58	90	4.00	3.66	92	75-125	2.20	(< 25)

Batch Information

Analytical Batch: WDA4751
Analytical Method: SM23 4500-N D
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 3/12/2020 11:53:47AM

Prep Batch: WXX13222
Prep Method: Distillation TKN by Phenate (W)
Prep Date/Time: 3/11/2020 12:47:00PM
Prep Initial Wt./Vol.: 25.00mL
Prep Extract Vol: 25.00mL

Print Date: 03/16/2020 1:17:51PM

SGS **1200780**

SGS North America Inc.
CHAIN OF CUSTODY RECORD

Locations Nationwide

Alaska	Maryland
New Jersey	New York
North Carolina	Indiana
West Virgina	Kentucky

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Instructions: Sections 1 - 5 must be filled out. Omissions may delay the onset of analysis.

Page ____ of ____

Section 1

CLIENT: Stantec

CONTACT: Wasilla (MTP) PHONE NO: 343-5208

PROJECT NAME: Jake Alward PROJECT/ PWSID/ PERMIT#:

REPORTS TO: E-MAIL: jake.alward@stantec.com

INVOICE TO: QUOTE #:

P.O. #: 2047004115

Section 2

RESERVED for lab use	SAMPLE IDENTIFICATION	DATE mm/dd/yy	TIME HH:MM	MATRIX/ MATRIX CODE	# CONTAINERS	Type C = COMP G = GRAB MI = Multi Incre-mental Soils	Preservative: BOD	TSS	Nitrate/Nitrite	FC	TC (Quant) 1:10x	TKN/Ammonia/TP					REMARKS/ LOC ID
							1	1	1	H2SO4	H2SO4	H2SO4					
1AF	Eff	2/27/20	15:01	water	6	G	1	1	1	1	1	1					
2AF	SW5	↓	12:54	↓	6	↓	1	1	1	1	1	1					
3A	BD	↓	10:25	↓	1	↓						1					

Section 5

	Date	Time	Received By:
Relinquished By: (1)	2/27/20	1631	
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date 2/27/20	Time 1630	Received For Laboratory By: NK

Section 4

DOD Project? Yes No

Cooler ID: _____

Data Deliverable Requirements:

Requested Turnaround Time and/or Special Instructions:

Profile #348183 GM

Temp Blank °C: 3.2 DS1

or Ambient [ ]

(See attached Sample Receipt Form)

Chain of Custody Seal: (Circle)

INTACT BROKEN (ABSENT) H.D

(See attached Sample Receipt Form)

[ ] 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

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e-Sample Receipt Form

SGS Workorder #: **1200780**

1200780

Review Criteria	Condition (Yes, No, N/A)	Exceptions Noted below
Chain of Custody / Temperature Requirements		Yes — Exemption permitted if sampler hand carries/delivers.
Were Custody Seals intact? Note # & location	N/A	Absent
COC accompanied samples?	Yes	
DOD: Were samples received in COC corresponding coolers?	N/A	
	N/A	**Exemption permitted if chilled & collected <8 hours ago, or for samples where chilling is not required
Temperature blank compliant* (i.e., 0-6 °C after CF)?	Yes	Cooler ID: 1 @ 3.2 °C Therm. ID: D51
		Cooler ID: @ °C Therm. ID:
If samples received without a temperature blank, the "cooler temperature" will be documented instead & "COOLER TEMP" will be noted to the right. "ambient" or "chilled" will be noted if neither is available.		Cooler ID: @ °C Therm. ID:
		Cooler ID: @ °C Therm. ID:
		Cooler ID: @ °C Therm. ID:
*If >6°C, were samples collected <8 hours ago?	N/A	
If <0°C, were sample containers ice free?	N/A	
Note: Identify containers received at non-compliant temperature . Use form FS-0029 if more space is needed.		
Holding Time / Documentation / Sample Condition Requirements		Note: Refer to form F-083 "Sample Guide" for specific holding times.
Were samples received within holding time?	Yes	
Do samples **match COC**** (i.e.,sample IDs,dates/times collected)?	Yes	
**Note: If times differ <1hr, record details & login per COC.		
***Note: If sample information on containers differs from COC, SGS will default to COC information		
Were analytical requests clear? (i.e., method is specified for analyses with multiple option for analysis (Ex: BTEX, Metals)	Yes	
	N/A	***Exemption permitted for metals (e.g,200.8/6020A).
Were proper containers (type/mass/volume/preservative***)used?	Yes	
Volatile / LL-Hg Requirements		
Were Trip Blanks (i.e., VOAs, LL-Hg) in cooler with samples?	N/A	
Were all water VOA vials free of headspace (i.e., bubbles ≤ 6mm)?	N/A	
Were all soil VOAs field extracted with MeOH+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

Container Id	Preservative	Container Condition	Container Id	Preservative	Container Condition
1200780001-A	No Preservative Required	OK			
1200780001-B	No Preservative Required	OK			
1200780001-C	No Preservative Required	OK			
1200780001-D	Na2S2O3 for Chlorine Redu	OK			
1200780001-E	Na2S2O3 for Chlorine Redu	OK			
1200780001-F	H2SO4 to pH < 2	OK			
1200780002-A	No Preservative Required	OK			
1200780002-B	No Preservative Required	OK			
1200780002-C	No Preservative Required	OK			
1200780002-D	Na2S2O3 for Chlorine Redu	OK			
1200780002-E	Na2S2O3 for Chlorine Redu	OK			
1200780002-F	H2SO4 to pH < 2	OK			
1200780003-A	H2SO4 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.