

Laboratory Report of Analysis

To: Stantec Consulting Services Inc. 725 East Fireweed Lane Suite 200

Anchorage, AK 99503 (907)248-8883

Report Number: 1186663

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
Project Manager
Justin.Nelson@sgs.com

Date

Print Date: 12/13/2018 12:25:12PM Results via Engage



Case Narrative

SGS Client: Stantec Consulting Services Inc.
SGS Project: 1186663
Project Name/Site: Wasilla WWTP

Project Name/Site: **Wasilla WWTI** Project Contact: **John Marshall**

Refer to sample receipt form for information on sample condition.

1186650001MS (1490016) MS

300.0 - Anions - MS recoveries for Chloride and Sulfate are outside of QC criteria. Refer to LCS for accuracy requirements.

1186650001MSD (1490017) MSD

300.0 - Anions - MSD recoveries for Chloride and Sulfate are 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.

Print Date: 12/13/2018 12:25:14PM



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 (Provisionally Certified as of 12/06/2018 for Uranium by EPA200.8 and TDS by SM 2540C) & 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). 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.

Print Date: 12/13/2018 12:25:16PM

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



Sample Summary

Client Sample ID	Lab Sample ID	Collected	Received	<u>Matrix</u>
SW5	1186663001	11/28/2018	11/28/2018	Water (Surface, Eff., Ground)
SW17	1186663002	11/28/2018	11/28/2018	Water (Surface, Eff., Ground)
SW18	1186663003	11/28/2018	11/28/2018	Water (Surface, Eff., Ground)
DUP1	1186663004	11/28/2018	11/28/2018	Water (Surface, Eff., Ground)

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

SM21 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

Print Date: 12/13/2018 12:25:17PM



Detectable Results Summary

Lab Sample ID: 1186663001	<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Microbiology Laboratory	Biochemical Oxygen Demand	4.89	mg/L
	Fecal Coliform	1.0	col/100mL
	Total Coliform	179	MPN/100mL
Naters Department	Ammonia-N	0.337	mg/L
	Total Kjeldahl Nitrogen	0.765J	mg/L
	Total Phosphorus	0.0529	mg/L
	Total Suspended Solids	33.8	mg/L
Client Sample ID: SW17			
Lab Sample ID: 1186663002	Parameter	Result	Units
Microbiology Laboratory	E. Coli	22	MPN/100mL
,	Fecal Coliform	10	col/100mL
	Total Coliform	140	MPN/100ml
Waters Department	Ammonia-N	0.180	mg/L
•	Nitrate-N	3.38	mg/L
	Total Kjeldahl Nitrogen	0.382J	mg/L
	Total Nitrate/Nitrite-N	3.41	mg/L
	Total Phosphorus	0.123	mg/L
	Total Suspended Solids	1.20	mg/L
Client Sample ID: SW18			
_ab Sample ID: 1186663003	Parameter	Result	Units
Microbiology Laboratory	Biochemical Oxygen Demand	2.43	mg/L
moropiology Laboratory	E. Coli	10	MPN/100ml
	Total Coliform	488	MPN/100ml
Waters Department	Ammonia-N	0.179	mg/L
	Nitrate-N	7.82	mg/L
	Total Kjeldahl Nitrogen	0.407J	mg/L
	Total Nitrate/Nitrite-N	7.85	mg/L
	Total Phosphorus	0.559	mg/L
	Total Suspended Solids	0.816J	mg/L
Client Sample ID: DUP1			
Lab Sample ID: 1186663004	Parameter	Result	Units
Microbiology Laboratory	E. Coli	11	<u>01113</u> MPN/100mL
wicrobiology Laboratory	Fecal Coliform	2.0	col/100mL
	Total Coliform	649	MPN/100ml
Waters Department	Ammonia-N	0.164	mg/L
rators Department	Nitrate-N	8.04	mg/L
	Total Kjeldahl Nitrogen	0.430J	mg/L
	Total Nitrate/Nitrite-N	8.07	mg/L
	Total Phosphorus	0.556	mg/L

Print Date: 12/13/2018 12:25:18PM

SGS North America Inc.

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



Client Sample ID: SW5

Client Project ID: **Wasilla WWTP**Lab Sample ID: 1186663001
Lab Project ID: 1186663

Collection Date: 11/28/18 11:30 Received Date: 11/28/18 16:39 Matrix: Water (Surface, Eff., Ground)

۸ اا ما سام ال

Solids (%): Location:

Results by Microbiology Laboratory

						Allowable	
<u>Parameter</u>	Result Qual	LOQ/CL	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Limits</u>	Date Analyzed
Biochemical Oxygen Demand	4.89	2.00	2.00	mg/L	1		11/29/18 15:39

Batch Information

Analytical Batch: BOD6190 Analytical Method: SM21 5210B

Analyst: A.L

Analytical Date/Time: 11/29/18 15:39 Container ID: 1186663001-A

					Allowable	
<u>Parameter</u>	Result Qual	LOQ/CL	<u>DL</u>	<u>Units</u> <u>DF</u>	<u>Limits</u>	Date Analyzed
Fecal Coliform	1.0	1.00	1.00	col/100mL 1		11/28/18 18:35

Batch Information

Analytical Batch: BTF17031 Analytical Method: SM21 9222D

Analyst: A.L

Analytical Date/Time: 11/28/18 18:35 Container ID: 1186663001-E

				Allowable	<u>e</u>
<u>Parameter</u>	Result Qual	LOQ/CL	<u>DL</u>	<u>Units</u> <u>DF</u> <u>Limits</u>	Date Analyzed
E. Coli	1 U	1	1	MPN/100m1	11/28/18 19:16
Total Coliform	179	1	1	MPN/100rr 1	11/28/18 19:16

Batch Information

Analytical Batch: BTF17035 Analytical Method: SM21 9223B

Analyst: A.L

Analytical Date/Time: 11/28/18 19:16 Container ID: 1186663001-F

Print Date: 12/13/2018 12:25:20PM

200 West Potter Drive Anchorage, AK 95518 t 907.562.2343 f 907.561.5301 www.us.sgs.com



Client Sample ID: SW5

Client Project ID: **Wasilla WWTP**Lab Sample ID: 1186663001
Lab Project ID: 1186663

Collection Date: 11/28/18 11:30 Received Date: 11/28/18 16:39 Matrix: Water (Surface, Eff., Ground)

Solids (%): Location:

Results by Waters Department

						<u>Allowable</u>	
<u>Parameter</u>	Result Qual	LOQ/CL	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Limits</u>	Date Analyzed
Nitrate-N	0.100 U	0.200	0.0500	mg/L	1		11/29/18 15:05
Nitrite-N	0.100 U	0.200	0.0500	mg/L	1		11/29/18 15:05
Total Nitrate/Nitrite-N	0.100 U	0.200	0.0500	mg/L	1		11/29/18 15:05

Batch Information

Analytical Batch: WIC5852 Analytical Method: EPA 300.0

Analyst: DMM
Analytical Date/Time:

Analytical Date/Time: 11/29/18 15:05 Container ID: 1186663001-C Prep Batch: WXX12647
Prep Method: METHOD
Prep Date/Time: 11/29/18 11:40
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

						<u>Allowable</u>	
<u>Parameter</u>	Result Qual	LOQ/CL	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Limits</u>	Date Analyzed
Total Suspended Solids	33.8	2.00	0.620	mg/L	1		12/03/18 14:01

Batch Information

Analytical Batch: STS6102 Analytical Method: SM21 2540D

Analyst: EWW

Analytical Date/Time: 12/03/18 14:01 Container ID: 1186663001-B

						Allowable	
<u>Parameter</u>	Result Qual	LOQ/CL	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Limits</u>	Date Analyzed
Total Kjeldahl Nitrogen	0.765 J	1.00	0.310	mg/L	1		12/05/18 11:35

Batch Information

Analytical Batch: WDA4467 Analytical Method: SM21 4500-N D

Analyst: EWW

Analytical Date/Time: 12/05/18 11:35 Container ID: 1186663001-D Prep Batch: WXX12649
Prep Method: METHOD
Prep Date/Time: 12/04/18 11:25
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

						<u>Allowable</u>	
<u>Parameter</u>	Result Qual	LOQ/CL	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Limits</u>	Date Analyzed
Ammonia-N	0.337	0.100	0.0310	mg/L	1		12/04/18 16:24

Print Date: 12/13/2018 12:25:20PM

J flagging is activated



Client Sample ID: SW5

Client Project ID: Wasilla WWTP Lab Sample ID: 1186663001 Lab Project ID: 1186663 Collection Date: 11/28/18 11:30 Received Date: 11/28/18 16:39 Matrix: Water (Surface, Eff., Ground)

Solids (%): Location:

Results by Waters Department

Batch Information

Analytical Batch: WDA4466

Analytical Method: SM21 4500-NH3 G

Analyst: EWW

Analytical Date/Time: 12/04/18 16:24 Container ID: 1186663001-D Prep Batch: WXX12648
Prep Method: METHOD
Prep Date/Time: 12/04/18 15:00
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

<u>Allowable</u> Parameter Result Qual LOQ/CL Units <u>DF</u> Date Analyzed DL <u>Limits</u> Total Phosphorus 0.0529 0.0200 0.00500 mg/L 1 12/10/18 15:16

Batch Information

Analytical Batch: WDA4468 Analytical Method: SM21 4500P-B,E

Analyst: DMM

Analytical Date/Time: 12/10/18 15:16 Container ID: 1186663001-D Prep Batch: WXX12651
Prep Method: SM21 4500P-B,E
Prep Date/Time: 12/10/18 14:12
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Print Date: 12/13/2018 12:25:20PM J flagging is activated



Client Sample ID: SW17

Client Project ID: **Wasilla WWTP**Lab Sample ID: 1186663002
Lab Project ID: 1186663

Collection Date: 11/28/18 14:00 Received Date: 11/28/18 16:39 Matrix: Water (Surface, Eff., Ground)

۸ اا ما سام ال

Solids (%): Location:

Results by Microbiology Laboratory

						Allowable	
<u>Parameter</u>	Result Qual	LOQ/CL	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Limits</u>	Date Analyzed
Biochemical Oxygen Demand	2.00 U	2.00	2.00	mg/L	1		11/29/18 15:39

Batch Information

Analytical Batch: BOD6190 Analytical Method: SM21 5210B

Analyst: A.L

Analytical Date/Time: 11/29/18 15:39 Container ID: 1186663002-A

<u>Parameter</u>	Result Qual	LOQ/CL	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Limits</u>	Date Analyzed
Fecal Coliform	10	1.00	1.00	col/100ml	L 1		11/28/18 18:35

Batch Information

Analytical Batch: BTF17031 Analytical Method: SM21 9222D

Analyst: A.L

Analytical Date/Time: 11/28/18 18:35 Container ID: 1186663002-E

				Allowab	<u>le</u>
<u>Parameter</u>	Result Qual	LOQ/CL	<u>DL</u>	<u>Units</u> <u>DF</u> <u>Limits</u>	Date Analyzed
E. Coli	22	1	1	MPN/100m1	11/28/18 19:16
Total Coliform	140	1	1	MPN/100m1	11/28/18 19:16

Batch Information

Analytical Batch: BTF17035 Analytical Method: SM21 9223B

Analyst: A.L

Analytical Date/Time: 11/28/18 19:16 Container ID: 1186663002-F

Print Date: 12/13/2018 12:25:20PM

J flagging is activated



Client Sample ID: SW17

Client Project ID: Wasilla WWTP Lab Sample ID: 1186663002 Lab Project ID: 1186663 Collection Date: 11/28/18 14:00 Received Date: 11/28/18 16:39 Matrix: Water (Surface, Eff., Ground)

Solids (%): Location:

Results by Waters Department

						<u>Allowable</u>	
<u>Parameter</u>	Result Qual	LOQ/CL	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Limits</u>	Date Analyzed
Nitrate-N	3.38	0.200	0.0500	mg/L	1		11/29/18 15:24
Nitrite-N	0.100 U	0.200	0.0500	mg/L	1		11/29/18 15:24
Total Nitrate/Nitrite-N	3.41	0.200	0.0500	mg/L	1		11/29/18 15:24

Batch Information

Analytical Batch: WIC5852 Analytical Method: EPA 300.0

Analyst: DMM

Analytical Date/Time: 11/29/18 15:24 Container ID: 1186663002-C Prep Batch: WXX12647
Prep Method: METHOD
Prep Date/Time: 11/29/18 11:40
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

						<u>Allowable</u>	
<u>Parameter</u>	Result Qual	LOQ/CL	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Limits</u>	Date Analyzed
Total Suspended Solids	1.20	1.00	0.310	mg/L	1		12/03/18 14:01

Batch Information

Analytical Batch: STS6102 Analytical Method: SM21 2540D

Analyst: EWW

Analytical Date/Time: 12/03/18 14:01 Container ID: 1186663002-B

						Allowable	
<u>Parameter</u>	Result Qual	LOQ/CL	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Limits</u>	Date Analyzed
Total Kjeldahl Nitrogen	0.382 J	1.00	0.310	mg/L	1		12/05/18 11:37

Batch Information

Analytical Batch: WDA4467 Analytical Method: SM21 4500-N D

Analyst: EWW

Analytical Date/Time: 12/05/18 11:37 Container ID: 1186663002-D

Prep Batch: WXX12649
Prep Method: METHOD
Prep Date/Time: 12/04/18 11:25
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

						Allowable	
<u>Parameter</u>	Result Qual	LOQ/CL	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Limits</u>	Date Analyzed
Ammonia-N	0.180	0.100	0.0310	mg/L	1		12/04/18 16:26

Print Date: 12/13/2018 12:25:20PM

J flagging is activated



Client Sample ID: SW17

Client Project ID: Wasilla WWTP Lab Sample ID: 1186663002 Lab Project ID: 1186663

Collection Date: 11/28/18 14:00 Received Date: 11/28/18 16:39 Matrix: Water (Surface, Eff., Ground)

Solids (%): Location:

Results by Waters Department

Batch Information

Analytical Batch: WDA4466

Analytical Method: SM21 4500-NH3 G

Analyst: EWW

Analytical Date/Time: 12/04/18 16:26 Container ID: 1186663002-D

Prep Batch: WXX12648 Prep Method: METHOD Prep Date/Time: 12/04/18 15:00 Prep Initial Wt./Vol.: 6 mL Prep Extract Vol: 6 mL

<u>Allowable</u> Parameter Result Qual LOQ/CL Units <u>DF</u> Date Analyzed DL <u>Limits</u> Total Phosphorus 0.123 0.0200 0.00500 mg/L 1 12/10/18 13:48

Batch Information

Analytical Batch: WDA4468 Analytical Method: SM21 4500P-B,E

Analyst: DMM

Analytical Date/Time: 12/10/18 13:48 Container ID: 1186663002-D

Prep Batch: WXX12651 Prep Method: SM21 4500P-B,E Prep Date/Time: 12/10/18 11:49 Prep Initial Wt./Vol.: 25 mL Prep Extract Vol: 25 mL

Print Date: 12/13/2018 12:25:20PM J flagging is activated



Client Sample ID: SW18 Client Project ID: Wasilla WWTP Lab Sample ID: 1186663003 Lab Project ID: 1186663

Collection Date: 11/28/18 14:43 Received Date: 11/28/18 16:39 Matrix: Water (Surface, Eff., Ground)

Solids (%): Location:

Results by Microbiology Laboratory

Allowable <u>Parameter</u> Result Qual LOQ/CL DL <u>Units</u> <u>DF</u> Date Analyzed **Limits** Biochemical Oxygen Demand 2.43 2.00 2.00 mg/L 1 11/29/18 15:39

Batch Information

Analytical Batch: BOD6190 Analytical Method: SM21 5210B

Analyst: A.L

Analytical Date/Time: 11/29/18 15:39 Container ID: 1186663003-A

<u>Allowable</u> <u>Parameter</u> Result Qual LOQ/CL <u>DL</u> Units <u>DF</u> Date Analyzed **Limits** Fecal Coliform 1.00 U 1.00 1.00 col/100mL 1 11/28/18 18:35

Batch Information

Analytical Batch: BTF17031 Analytical Method: SM21 9222D

Analyst: A.L

Analytical Date/Time: 11/28/18 18:35 Container ID: 1186663003-E

Allowable LOQ/CL Parameter Result Qual DL Units DF Date Analyzed Limits E. Coli 10 1 MPN/100rr 1 11/28/18 19:16 1 **Total Coliform** 488 1 1 MPN/100n 1 11/28/18 19:16

Batch Information

Analytical Batch: BTF17035 Analytical Method: SM21 9223B

Analyst: A.L

Analytical Date/Time: 11/28/18 19:16 Container ID: 1186663003-F

Print Date: 12/13/2018 12:25:20PM

J flagging is activated



Client Sample ID: SW18

Client Project ID: **Wasilla WWTP**Lab Sample ID: 1186663003
Lab Project ID: 1186663

Collection Date: 11/28/18 14:43 Received Date: 11/28/18 16:39 Matrix: Water (Surface, Eff., Ground)

Solids (%): Location:

Results by Waters Department

						<u>Allowable</u>	
<u>Parameter</u>	Result Qual	LOQ/CL	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Limits</u>	Date Analyzed
Nitrate-N	7.82	0.200	0.0500	mg/L	1		11/29/18 15:43
Nitrite-N	0.100 U	0.200	0.0500	mg/L	1		11/29/18 15:43
Total Nitrate/Nitrite-N	7.85	0.200	0.0500	mg/L	1		11/29/18 15:43

Batch Information

Analytical Batch: WIC5852 Analytical Method: EPA 300.0

Analyst: DMM

Analytical Date/Time: 11/29/18 15:43 Container ID: 1186663003-C Prep Batch: WXX12647 Prep Method: METHOD Prep Date/Time: 11/29/18 11:40 Prep Initial Wt./Vol.: 10 mL

Prep Extract Vol: 10 mL

<u>Allowable</u> <u>Parameter</u> Result Qual LOQ/CL DL <u>Units</u> DF **Date Analyzed** Limits **Total Suspended Solids** 0.816 J 1.02 0.316 12/03/18 14:01 mg/L 1

Batch Information

Analytical Batch: STS6102 Analytical Method: SM21 2540D

Analyst: EWW

Analytical Date/Time: 12/03/18 14:01 Container ID: 1186663003-B

<u>Allowable</u> DF **Parameter** Result Qual LOQ/CL DL **Units** Limits **Date Analyzed** Total Kjeldahl Nitrogen 0.407 J 0.310 1.00 mg/L 1 12/05/18 11:38

Batch Information

Analytical Batch: WDA4467 Analytical Method: SM21 4500-N D

Analyst: EWW

Analytical Date/Time: 12/05/18 11:38 Container ID: 1186663003-D

Prep Batch: WXX12649 Prep Method: METHOD Prep Date/Time: 12/04/18 11:25 Prep Initial Wt./Vol.: 25 mL

Prep Extract Vol: 25 mL

<u>Allowable</u> <u>Parameter</u> Result Qual LOQ/CL DL **Units** DF Limits **Date Analyzed** Ammonia-N 0.179 0.100 0.0310 mg/L 1 12/04/18 16:27

Print Date: 12/13/2018 12:25:20PM

J flagging is activated



Client Sample ID: SW18 Client Project ID: Wasilla WWTP Lab Sample ID: 1186663003 Lab Project ID: 1186663

Collection Date: 11/28/18 14:43 Received Date: 11/28/18 16:39 Matrix: Water (Surface, Eff., Ground)

Solids (%): Location:

Results by Waters Department

Batch Information

Analytical Batch: WDA4466 Analytical Method: SM21 4500-NH3 G

Analyst: EWW

Analytical Date/Time: 12/04/18 16:27 Container ID: 1186663003-D

Prep Batch: WXX12648 Prep Method: METHOD Prep Date/Time: 12/04/18 15:00 Prep Initial Wt./Vol.: 6 mL Prep Extract Vol: 6 mL

<u>Allowable</u> Parameter Result Qual LOQ/CL Units <u>DF</u> Date Analyzed DL <u>Limits</u> Total Phosphorus 0.559 0.200 0.0500 mg/L 1 12/10/18 15:14

Batch Information

Analytical Batch: WDA4468 Analytical Method: SM21 4500P-B,E

Analyst: DMM

Analytical Date/Time: 12/10/18 15:14 Container ID: 1186663003-D

Prep Batch: WXX12651 Prep Method: SM21 4500P-B,E Prep Date/Time: 12/10/18 14:12 Prep Initial Wt./Vol.: 2.5 mL Prep Extract Vol: 25 mL

Print Date: 12/13/2018 12:25:20PM J flagging is activated



Results of **DUP1**

Client Sample ID: DUP1

Client Project ID: **Wasilla WWTP** Lab Sample ID: 1186663004 Lab Project ID: 1186663 Collection Date: 11/28/18 14:43 Received Date: 11/28/18 16:39 Matrix: Water (Surface, Eff., Ground)

Solids (%): Location:

Results by Microbiology Laboratory

Allowable <u>Parameter</u> Result Qual LOQ/CL DL <u>Units</u> <u>DF</u> Date Analyzed **Limits** Biochemical Oxygen Demand 2.00 U 2.00 2.00 mg/L 1 11/29/18 15:39

Batch Information

Analytical Batch: BOD6190 Analytical Method: SM21 5210B

Analyst: A.L

Analytical Date/Time: 11/29/18 15:39 Container ID: 1186663004-A

 Parameter
 Result Qual
 LOQ/CL
 DL
 Units
 DF
 Limits
 Date Analyzed

 Fecal Coliform
 2.0
 1.00
 1.00
 col/100mL 1
 11/28/18 18:35

Batch Information

Analytical Batch: BTF17031 Analytical Method: SM21 9222D

Analyst: A.L

Analytical Date/Time: 11/28/18 18:35 Container ID: 1186663004-E

Allowable LOQ/CL Parameter Result Qual DL Units DF Date Analyzed Limits E. Coli 11 1 MPN/100rr 1 11/28/18 19:16 1 **Total Coliform** 649 1 1 MPN/100n 1 11/28/18 19:16

Batch Information

Analytical Batch: BTF17035 Analytical Method: SM21 9223B

Analyst: A.L

Analytical Date/Time: 11/28/18 19:16 Container ID: 1186663004-F

Print Date: 12/13/2018 12:25:20PM

J flagging is activated



Results of **DUP1**

Client Sample ID: DUP1

Client Project ID: Wasilla WWTP Lab Sample ID: 1186663004 Lab Project ID: 1186663 Collection Date: 11/28/18 14:43 Received Date: 11/28/18 16:39 Matrix: Water (Surface, Eff., Ground)

Solids (%): Location:

Results by Waters Department

						<u>Allowable</u>	
<u>Parameter</u>	Result Qual	LOQ/CL	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Limits</u>	Date Analyzed
Nitrate-N	8.04	0.200	0.0500	mg/L	1		11/29/18 16:40
Nitrite-N	0.100 U	0.200	0.0500	mg/L	1		11/29/18 16:40
Total Nitrate/Nitrite-N	8.07	0.200	0.0500	mg/L	1		11/29/18 16:40

Batch Information

Analytical Batch: WIC5852 Analytical Method: EPA 300.0

Analyst: DMM

Analytical Date/Time: 11/29/18 16:40 Container ID: 1186663004-C Prep Batch: WXX12647
Prep Method: METHOD
Prep Date/Time: 11/29/18 11:40
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

						Allowable	
<u>Parameter</u>	Result Qual	LOQ/CL	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Limits</u>	Date Analyzed
Total Suspended Solids	0.505 U	1.01	0.313	mg/L	1		12/03/18 14:01

Batch Information

Analytical Batch: STS6102 Analytical Method: SM21 2540D

Analyst: EWW

Analytical Date/Time: 12/03/18 14:01 Container ID: 1186663004-B

						Allowable	
<u>Parameter</u>	Result Qual	LOQ/CL	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Limits</u>	Date Analyzed
Total Kjeldahl Nitrogen	0.430 J	1.00	0.310	mg/L	1		12/05/18 11:42

Batch Information

Analytical Batch: WDA4467 Analytical Method: SM21 4500-N D

Analyst: EWW

Analytical Date/Time: 12/05/18 11:42 Container ID: 1186663004-D Prep Batch: WXX12649
Prep Method: METHOD
Prep Date/Time: 12/04/18 11:25
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

						Allowable	
<u>Parameter</u>	Result Qual	LOQ/CL	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Limits</u>	Date Analyzed
Ammonia-N	0.164	0.100	0.0310	mg/L	1		12/04/18 16:29

Print Date: 12/13/2018 12:25:20PM

J flagging is activated

SGS North America Inc.

200 West Potter Drive Anchorage, AK 95518 t 907.562.2343 f 907.561.5301 www.us.sgs.com



Results of **DUP1**

Client Sample ID: DUP1

Client Project ID: Wasilla WWTP Lab Sample ID: 1186663004 Lab Project ID: 1186663

Collection Date: 11/28/18 14:43 Received Date: 11/28/18 16:39 Matrix: Water (Surface, Eff., Ground)

Solids (%): Location:

Results by Waters Department

Batch Information

Analytical Batch: WDA4466

Analytical Method: SM21 4500-NH3 G

Analyst: EWW

Analytical Date/Time: 12/04/18 16:29 Container ID: 1186663004-D

Prep Batch: WXX12648 Prep Method: METHOD Prep Date/Time: 12/04/18 15:00 Prep Initial Wt./Vol.: 6 mL Prep Extract Vol: 6 mL

<u>Allowable</u> Parameter Result Qual LOQ/CL Units <u>DF</u> Date Analyzed DL <u>Limits</u> Total Phosphorus 0.556 0.200 0.0500 mg/L 1 12/10/18 15:15

Batch Information

Analytical Batch: WDA4468

Analytical Method: SM21 4500P-B,E

Analyst: DMM

Analytical Date/Time: 12/10/18 15:15 Container ID: 1186663004-D

Prep Batch: WXX12651 Prep Method: SM21 4500P-B,E Prep Date/Time: 12/10/18 14:12 Prep Initial Wt./Vol.: 2.5 mL Prep Extract Vol: 25 mL

Print Date: 12/13/2018 12:25:20PM J flagging is activated



Blank ID: MB for HBN 1789425 [BOD/6190]

Blank Lab ID: 1489927

QC for Samples:

1186663001, 1186663002, 1186663003, 1186663004

Matrix: Water (Surface, Eff., Ground)

Results by SM21 5210B

ParameterResultsLOQ/CLDLUnitsBiochemical Oxygen Demand2.00U2.002.00mg/L

Batch Information

Analytical Batch: BOD6190 Analytical Method: SM21 5210B

Instrument: Analyst: A.L

Analytical Date/Time: 11/29/2018 3:39:36PM

Print Date: 12/13/2018 12:25:23PM



Blank Spike Summary

Blank Spike ID: LCS for HBN 1186663 [BOD6190]

Blank Spike Lab ID: 1489928 Date Analyzed: 11/29/2018 15:39

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1186663001, 1186663002, 1186663003, 1186663004

Results by SM21 5210B

Blank Spike (mg/L)

Parameter Spike Result Rec (%)

Biochemical Oxygen Demand 198 184 **93** (84.6-115.4

Batch Information

Analytical Batch: BOD6190
Analytical Method: SM21 5210B

Instrument: Analyst: A.L

Print Date: 12/13/2018 12:25:25PM



Blank ID: MB for HBN 1789391 [BTF/17031]

Blank Lab ID: 1489997

QC for Samples:

1186663001, 1186663002

Matrix: Water (Surface, Eff., Ground)

Results by SM21 9222D

 Parameter
 Results
 LOQ/CL
 DL
 Units

 Fecal Coliform
 1.00U
 1.00
 1.00
 col/100mL

Batch Information

Analytical Batch: BTF17031 Analytical Method: SM21 9222D

Instrument: Analyst: A.L

Analytical Date/Time: 11/28/2018 6:35:44PM

Print Date: 12/13/2018 12:25:26PM



Blank ID: MB for HBN 1789391 [BTF/17031]

Blank Lab ID: 1489998

QC for Samples:

1186663001, 1186663002, 1186663003, 1186663004

Matrix: Water (Surface, Eff., Ground)

Results by SM21 9222D

 Parameter
 Results
 LOQ/CL
 DL
 Units

 Fecal Coliform
 1.00U
 1.00
 1.00
 col/100mL

Batch Information

Analytical Batch: BTF17031 Analytical Method: SM21 9222D

Instrument: Analyst: A.L

Analytical Date/Time: 11/28/2018 6:35:44PM

Print Date: 12/13/2018 12:25:26PM



Blank ID: MB for HBN 1789395 [BTF/17035]

Blank Lab ID: 1489790

QC for Samples:

1186663001, 1186663002, 1186663003, 1186663004

Matrix: Water (Surface, Eff., Ground)

Results by SM21 9223B

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

Batch Information

Analytical Batch: BTF17035 Analytical Method: SM21 9223B

Instrument: Analyst: A.L

Analytical Date/Time: 11/28/2018 7:16:07PM

Print Date: 12/13/2018 12:25:29PM



Blank ID: MB for HBN 1789441 [STS/6102]

Blank Lab ID: 1489981

QC for Samples:

1186663001, 1186663002, 1186663003, 1186663004

Matrix: Water (Surface, Eff., Ground)

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: STS6102 Analytical Method: SM21 2540D

Instrument: Analyst: EWW

Analytical Date/Time: 12/3/2018 2:01:35PM

Print Date: 12/13/2018 12:25:31PM



Duplicate Sample Summary

Original Sample ID: 1186676001 Duplicate Sample ID: 1489984

QC for Samples:

1186663001, 1186663002, 1186663003, 1186663004

Analysis Date: 12/03/2018 14:01 Matrix: Water (Surface, Eff., Ground)

Results by SM21 2540D

<u>NAME</u>	<u>Original</u>	<u>Duplicate</u>	<u>Units</u>	RPD (%)	RPD CL
Total Suspended Solids	40.5	40.0	mg/L	1.20	(< 5)

Batch Information

Analytical Batch: STS6102 Analytical Method: SM21 2540D

Instrument: Analyst: EWW

Print Date: 12/13/2018 12:25:31PM



Blank Spike Summary

Blank Spike ID: LCS for HBN 1186663 [STS6102]

Blank Spike Lab ID: 1489982

Date Analyzed: 12/03/2018 14:01

Spike Duplicate ID: LCSD for HBN 1186663

[STS6102]

Spike Duplicate Lab ID: 1489983

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1186663001, 1186663002, 1186663003, 1186663004

Results by SM21 2540D

		Blank Spike	e (mg/L)	,	Spike Duplic	cate (mg/L)			
<u>Parameter</u>	<u>Spike</u>	Result	Rec (%)	<u>Spike</u>	Result	Rec (%)	CL	RPD (%)	RPD CL
Total Suspended Solids	25	25.0	100	25	24.6	98	(75-125)	1.60	(< 5)

Batch Information

Analytical Batch: STS6102
Analytical Method: SM21 2540D

Instrument: Analyst: **EWW**

Print Date: 12/13/2018 12:25:33PM



Blank ID: MB for HBN 1789448 [WXX/12647]

Blank Lab ID: 1490013

QC for Samples:

1186663001, 1186663002, 1186663003, 1186663004

Matrix: Water (Surface, Eff., Ground)

Results by EPA 300.0

<u>Parameter</u>	<u>Results</u>	LOQ/CL	<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: WIC5852 Analytical Method: EPA 300.0

Instrument: 930 Metrohm compact IC flex

Analyst: DMM

Analytical Date/Time: 11/29/2018 12:52:33PM

Prep Batch: WXX12647 Prep Method: METHOD

Prep Date/Time: 11/29/2018 11:40:00AM

Prep Initial Wt./Vol.: 10 mL Prep Extract Vol: 10 mL

Print Date: 12/13/2018 12:25:34PM



Blank Spike Summary

Blank Spike ID: LCS for HBN 1186663 [WXX12647]

Blank Spike Lab ID: 1490014 Date Analyzed: 11/29/2018 14:46

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1186663001, 1186663002, 1186663003, 1186663004

Results by EPA 300.0

Blank	Spike	(mg/L)
-------	-------	--------

<u>Parameter</u>	Spike	Result	Rec (%)	CL
Nitrate-N	5	4.78	96	(90-110)
Nitrite-N	5	4.97	99	(90-110)
Total Nitrate/Nitrite-N	10	9.75	98	(90-110)

Batch Information

Analytical Batch: WIC5852 Analytical Method: EPA 300.0

Instrument: 930 Metrohm compact IC flex

Analyst: DMM

Prep Batch: **WXX12647**Prep Method: **METHOD**

Prep Date/Time: 11/29/2018 11:40

Spike Init Wt./Vol.: 5 mg/L Extract Vol: 10 mL

Dupe Init Wt./Vol.: Extract Vol:

Print Date: 12/13/2018 12:25:35PM



Blank ID: MB for HBN 1789495 [WXX/12648]

Blank Lab ID: 1490222

QC for Samples:

1186663001, 1186663002, 1186663003, 1186663004

Matrix: Water (Surface, Eff., Ground)

Results by SM21 4500-NH3 G

Parameter Results
Ammonia-N 0.0500U

LOQ/CL 0.100 <u>DL</u> 0.0310 Units mg/L

Batch Information

Analytical Batch: WDA4466 Analytical Method: SM21 4500-NH3 G Instrument: Discrete Analyzer 2

Analyst: EWW

Analytical Date/Time: 12/4/2018 4:19:35PM

Prep Batch: WXX12648 Prep Method: METHOD

Prep Date/Time: 12/4/2018 3:00:00PM

Prep Initial Wt./Vol.: 6 mL Prep Extract Vol: 6 mL

Print Date: 12/13/2018 12:25:36PM



Blank Spike Summary

Blank Spike ID: LCS for HBN 1186663 [WXX12648]

Blank Spike Lab ID: 1490223

Date Analyzed: 12/04/2018 16:21

Spike Duplicate ID: LCSD for HBN 1186663

[WXX12648]

Spike Duplicate Lab ID: 1490224

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1186663001, 1186663002, 1186663003, 1186663004

Results by SM21 4500-NH3 G

Blank Spike (mg/L) Spike Duplicate (mg/L)

<u>Parameter</u> Spike Rec (%) Spike Result Rec (%) RPD (%) RPD CL Result Ammonia-N 1.06 106 1.25 125 1 1 (75-125)16.60 (< 25)

Batch Information

Analytical Batch: WDA4466

Analytical Method: SM21 4500-NH3 G

Instrument: Discrete Analyzer 2

Analyst: EWW

Prep Batch: **WXX12648**Prep Method: **METHOD**

Prep Date/Time: 12/04/2018 15:00

Spike Init Wt./Vol.: 1 mg/L Extract Vol: 6 mL Dupe Init Wt./Vol.: 1 mg/L Extract Vol: 6 mL

Print Date: 12/13/2018 12:25:38PM



Matrix Spike Summary

 Original Sample ID: 1186720001
 Analysis Date: 12/04/2018 16:34

 MS Sample ID: 1490225 MS
 Analysis Date: 12/04/2018 16:39

 MSD Sample ID: 1490226 MSD
 Analysis Date: 12/04/2018 16:41

 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1186663001, 1186663002, 1186663003, 1186663004

Results by SM21 4500-NH3 G

Matrix Spike (mg/L) Spike Duplicate (mg/L)

<u>Parameter</u> Sample Spike Result Rec (%) Spike Result Rec (%) CL RPD (%) RPD CL Ammonia-N 0.100U 104 1.00 1.12 112 1.00 1.04 75-125 7.80 (< 25)

Batch Information

Analytical Batch: WDA4466 Prep Batch: WXX12648

Analytical Method: SM21 4500-NH3 G Prep Method: Ammonia by SM21 4500F prep (W)

Instrument: Discrete Analyzer 2 Prep Date/Time: 12/4/2018 3:00:00PM

Analyst: EWW Prep Initial Wt./Vol.: 6.00mL Analytical Date/Time: 12/4/2018 4:39:36PM Prep Extract Vol: 6.00mL

Print Date: 12/13/2018 12:25:39PM



Blank ID: MB for HBN 1789504 [WXX/12649]

Blank Lab ID: 1490267

QC for Samples:

1186663001, 1186663002, 1186663003, 1186663004

Matrix: Water (Surface, Eff., Ground)

Results by SM21 4500-N D

 Parameter
 Results
 LOQ/CL
 DL
 Units

 Total Kjeldahl Nitrogen
 0.500U
 1.00
 0.310
 mg/L

Batch Information

Analytical Batch: WDA4467 Analytical Method: SM21 4500-N D Instrument: Discrete Analyzer 2

Analyst: EWW

Analytical Date/Time: 12/5/2018 11:26:38AM

Prep Batch: WXX12649 Prep Method: METHOD

Prep Date/Time: 12/4/2018 11:25:00AM

Prep Initial Wt./Vol.: 25 mL Prep Extract Vol: 25 mL

Print Date: 12/13/2018 12:25:40PM



Blank Spike Summary

Blank Spike ID: LCS for HBN 1186663 [WXX12649]

Blank Spike Lab ID: 1490268 Date Analyzed: 12/05/2018 11:27 Spike Duplicate ID: LCSD for HBN 1186663

[WXX12649]

Spike Duplicate Lab ID: 1490269 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1186663001, 1186663002, 1186663003, 1186663004

Results by SM21 4500-N D

Blank Spike (mg/L) Spike Duplicate (mg/L)

<u>Parameter</u> Rec (%) <u>Spike</u> Result Rec (%) Spike RPD (%) RPD CL Result Total Kjeldahl Nitrogen 4.04 101 4 3.97 99 4 (75-125)1.80 (< 25)

Batch Information

Analytical Batch: WDA4467 Analytical Method: SM21 4500-N D Instrument: Discrete Analyzer 2

Analyst: EWW

Prep Batch: WXX12649
Prep Method: METHOD

Prep Date/Time: 12/04/2018 11:25

Spike Init Wt./Vol.: 4 mg/L Extract Vol: 25 mL Dupe Init Wt./Vol.: 4 mg/L Extract Vol: 25 mL

Print Date: 12/13/2018 12:25:41PM



Matrix Spike Summary

 Original Sample ID: 1188801012
 Analysis Date: 12/05/2018 11:30

 MS Sample ID: 1490270 MS
 Analysis Date: 12/05/2018 11:31

 MSD Sample ID: 1490271 MSD
 Analysis Date: 12/05/2018 11:33

 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1186663001, 1186663002, 1186663003, 1186663004

Results by SM21 4500-N D

Matrix Spike (mg/L) Spike Duplicate (mg/L)

<u>Parameter</u> Sample Spike Result Rec (%) Spike Result Rec (%) CL RPD (%) RPD CL Total Kjeldahl Nitrogen 1.00U 3.78 75-125 4.00 95 4.00 3.54 88 6.70 (< 25)

Batch Information

Analytical Batch: WDA4467 Analytical Method: SM21 4500-N D Instrument: Discrete Analyzer 2

Analyst: EWW

Analytical Date/Time: 12/5/2018 11:31:53AM

Prep Batch: WXX12649

Prep Method: Distillation TKN by Phenate (W) Prep Date/Time: 12/4/2018 11:25:00AM

Prep Initial Wt./Vol.: 25.00mL Prep Extract Vol: 25.00mL

Print Date: 12/13/2018 12:25:42PM



Blank ID: MB for HBN 1789657 [WXX/12651]

Blank Lab ID: 1490888

QC for Samples:

1186663001, 1186663002, 1186663003, 1186663004

Matrix: Water (Surface, Eff., Ground)

Results by SM21 4500P-B,E

 Parameter
 Results
 LOQ/CL
 DL
 Units

 Total Phosphorus
 0.0100U
 0.0200
 0.00500
 mg/L

Batch Information

Analytical Batch: WDA4468 Analytical Method: SM21 4500P-B,E Instrument: Discrete Analyzer 2

Analyst: DMM

Analytical Date/Time: 12/10/2018 1:45:15PM

Prep Batch: WXX12651

Prep Method: SM21 4500P-B,E

Prep Date/Time: 12/10/2018 11:49:00AM

Prep Initial Wt./Vol.: 25 mL Prep Extract Vol: 25 mL

Print Date: 12/13/2018 12:25:43PM



Blank Spike Summary

Blank Spike ID: LCS for HBN 1186663 [WXX12651]

Blank Spike Lab ID: 1490889

Date Analyzed: 12/10/2018 13:46

Spike Duplicate ID: LCSD for HBN 1186663

[WXX12651]

Spike Duplicate Lab ID: 1490890

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1186663001, 1186663002, 1186663003, 1186663004

Results by SM21 4500P-B,E

Blank Spike (mg/L) Spike Duplicate (mg/L)

<u>Parameter</u> Rec (%) Spike Result Rec (%) Spike RPD (%) RPD CL Result **Total Phosphorus** 0.202 0.219 0.2 101 0.2 110 (75-125)8.00 (< 25)

Batch Information

Analytical Batch: WDA4468 Analytical Method: SM21 4500P-B,E Instrument: Discrete Analyzer 2

Analyst: DMM

Prep Batch: WXX12651
Prep Method: SM21 4500P-B,E
Prep Date/Time: 12/10/2018 11:49

Spike Init Wt./Vol.: 0.2 mg/L Extract Vol: 25 mL Dupe Init Wt./Vol.: 0.2 mg/L Extract Vol: 25 mL

Print Date: 12/13/2018 12:25:44PM



Matrix Spike Summary

 Original Sample ID: 1186663002
 Analysis Date: 12/10/2018 13:48

 MS Sample ID: 1490891 MS
 Analysis Date: 12/10/2018 13:49

 MSD Sample ID: 1490892 MSD
 Analysis Date: 12/10/2018 13:50

 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1186663001, 1186663002, 1186663003, 1186663004

Results by SM21 4500P-B,E

Matrix Spike (mg/L) Spike Duplicate (mg/L)

<u>Parameter</u> Sample Spike Result Rec (%) Spike Result Rec (%) CL RPD (%) RPD CL Total Phosphorus 0.123 0.200 101 .327 102 0.200 0.324 75-125 1.00 (< 25)

Batch Information

Analytical Batch: WDA4468 Analytical Method: SM21 4500P-B,E Instrument: Discrete Analyzer 2

Analyst: DMM

Analytical Date/Time: 12/10/2018 1:49:08PM

Prep Batch: WXX12651

Prep Method: Total Phosphorus (W) Ext. Prep Date/Time: 12/10/2018 11:49:00AM

Prep Initial Wt./Vol.: 25.00mL Prep Extract Vol: 25.00mL

Print Date: 12/13/2018 12:25:46PM



Section 1

SGS North America Inc. CHAIN OF CUSTODY RECORD

1186663

Locations Nationwide

New Jersey Alaska

New York Maryland North Carolina

www.us.sgs.com

Kentucky

Indiana West Virgina

(See attached Sample Receipt Form) Data Deliverable Requirements: Chain of Custody Seal: (Circle) ABSENT REMARKS/ LOCID INTACT BROKEN Requested Turnaround Time and/or Special Instructions: Instructions: Sections 1 - 5 must be filled out. Omissions may delay the onset of analysis. (See attached Sample Receipt Form) 553 DOD Project? Yes No Temp Blank °C: 26° Cor Ambient [] Preservative 'DSZM) 35th MANAH Section 4 105ZH Cooler ID: <u>227</u> GOS Received For Laboratory By: Type

COMP

G =

GRAB

MII =

Multi
Incremental Section 3 D Received By: Received By: Received By: Jake-alward a stantec com MATRIX MATRIX CODE Moder P.O. #: 2UY100415 16.39 TIME HH:MM 11/28/18/14:39 45 Da:H 14:43 1130 Time Time DATE mm/dd/yy PWSID/ PERMIT#: 81/82/11 PHONE NO: Date Date Date ROJECT E-MAIL: SAMPLE IDENTIFICATION CONTACT: JOHN HALLIGH NAME: WKSIME WWTP REPORTS TO: FINTER SKID 2500 どろ DAP Relinquished By: (3) Relinquished By: (4) Relinguished By: (2) INVOICE TO: RESERVED for lab use アイア シアーカ カーヤ(び Relinquis PROJECT CLIENT:

Section 2

[] 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

Section 5

37 of 39

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



e-Sample Receipt Form

SGS Workorder #:

1186663



<u> </u>					8 6 6	0	<u> </u>
Review Criteria	Condition (Yes, No, N/A		eptions Note			
Chain of Custody / Temperature Requi			Exemption pe	rmitted if sample	er hand carries/	delive	rs.
Were Custody Seals intact? Note # &	location N	/A Absent					
COC accompanied sa	amples?	es					
Yes **Exemption permitted if	chilled & co	ollected <8 hou	ı <mark>rs ago, or for sam</mark>	n <mark>ples where chill</mark> i	ng is not requi	red	
	Y	es Cooler ID:	1	@	2.6 °C Therm	. ID: C)53
		Cooler ID:		@	°C Therm	. ID:	
Temperature blank compliant* (i.e., 0-6 °C afte	er CF)?	Cooler ID:		@	°C Therm	. ID:	
, , , , , , , , , , , , , , , , , , , ,		Cooler ID:		@	°C Therm		
		Cooler ID:		@	°C Therm		
*If >6°C, were samples collected <8 hours	ago? N		<u> </u>				
		7					
If <0°C, were sample containers ice	e free? N	/A					
If samples received without a temperature blank, the	"cooler						
temperature" will be documented in lieu of the temperature by	blank &						
"COOLER TEMP" will be noted to the right. In cases where no							
temp blank nor cooler temp can be obtained, note "amb	oient" or chilled".						
"(crilled.						
Note: Identify containers received at non-compliant temper							
Use form FS-0029 if more space is n	needed.						
Holding Time / Documentation / Sample Condition Re	<u>equireme</u> r	Note: Refe	r to form F-083 "S	Sample Guide" fo	r specific holdi	ng tim	es.
Were samples received within holding							
Do samples match COC** (i.e.,sample IDs,dates/times colle	ected)?	es					
**Note: If times differ <1hr, record details & login pe	r COC.						
Were analyses requested unambiguous? (i.e., method is speci		es					
analyses with >1 option for ar							
			/A ***	normitta d f	tale (a = coo c	/enec	۸)
Word proper containers (the selection to the selection of)uoodo		//A ***Exemption	heuminea tol we	<u>iais (e.g,200.8</u>	/UUZU/	<u>^).</u>
Were proper containers (type/mass/volume/preservative***							
Volatile / LL-Hg Reg							
Were Trip Blanks (i.e., VOAs, LL-Hg) in cooler with sar							
Were all water VOA vials free of headspace (i.e., bubbles ≤	·						
Were all soil VOAs field extracted with MeOH							
Note to Client: Any "No", answer above indicates no	n-complian	ce with standa	rd procedures and	d may impact dat	a quality.		
Additional notes (if applicable):							
Sample 2F container was received crackedproceed with analysis per client.							
	-						ļ
							ļ



Sample Containers and Preservatives

Container Id	<u>Preservative</u>	Container Condition	Container Id	<u>Preservative</u>	Container Condition
1186663001-A	No Preservative Required	ОК			
1186663001-В	No Preservative Required	ОК			
1186663001-C	No Preservative Required	ОК			
1186663001-D	H2SO4 to pH < 2	ОК			
1186663001-E	Na2S2O3 for Chlorine Redu	ОК			
1186663001-F	Na2S2O3 for Chlorine Redu	ОК			
1186663002-A	No Preservative Required	OK			
1186663002-B	No Preservative Required	OK			
1186663002-C	No Preservative Required	OK			
1186663002-D	H2SO4 to pH < 2	OK			
1186663002-E	Na2S2O3 for Chlorine Redu	OK			
1186663002-F	Na2S2O3 for Chlorine Redu	OK			
1186663003-A	No Preservative Required	OK			
1186663003-B	No Preservative Required	OK			
1186663003-C	No Preservative Required	OK			
1186663003-D	H2SO4 to pH < 2	OK			
1186663003-E	Na2S2O3 for Chlorine Redu	OK			
1186663003-F	Na2S2O3 for Chlorine Redu	OK			
1186663004-A	No Preservative Required	OK			
1186663004-B	No Preservative Required	OK			
1186663004-C	No Preservative Required	OK			
1186663004-D	H2SO4 to pH < 2	OK			
1186663004-E	Na2S2O3 for Chlorine Redu	OK			
1186663004-F	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.
- 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.