

## Laboratory Report of Analysis

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

Report Number: **1196923**

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.

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Justin Nelson  
Project Manager  
Justin.Nelson@sgs.com

Date

## Case Narrative

SGS Client: **Stantec Consulting Services Inc.**

SGS Project: **1196923**

Project Name/Site: **Wasilla WWTP**

Project Contact: **John Marshall**

Refer to sample receipt form for information on sample condition.

### **SW5 (1196923005) PS**

5210-BOD- Dissolved oxygen did not adequately deplete at min depletion requirement of 2 mg/L. Sample reported with an elevated detection limit. Results are estimated.

### **1196870002MS (1544244) MS**

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

### **1196870002MSD (1544245) MSD**

4500NH3-G - Ammonia - MSD 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.

Print Date: 12/09/2019 5:19:29PM

## Laboratory Qualifiers

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

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

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 (DW Chemistry & 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

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Collected</u>	<u>Received</u>	<u>Matrix</u>
SW1	1196923001	11/19/2019	11/19/2019	Water (Surface, Eff., Ground)
SW2	1196923002	11/19/2019	11/19/2019	Water (Surface, Eff., Ground)
SW3	1196923003	11/19/2019	11/19/2019	Water (Surface, Eff., Ground)
SW4	1196923004	11/19/2019	11/19/2019	Water (Surface, Eff., Ground)
SW5	1196923005	11/19/2019	11/19/2019	Water (Surface, Eff., Ground)
SW6	1196923006	11/19/2019	11/19/2019	Water (Surface, Eff., Ground)
Eff	1196923007	11/19/2019	11/19/2019	Water (Surface, Eff., Ground)
Dup1	1196923008	11/19/2019	11/19/2019	Water (Surface, Eff., Ground)

<u>Method</u>	<u>Method Description</u>
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
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

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### Detectable Results Summary

Client Sample ID: **SW1**  
 Lab Sample ID: 1196923001  
**Microbiology Laboratory**  
**Waters Department**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Total Coliform	72	MPN/100mL
Ammonia-N	0.0438J	mg/L
Total Kjeldahl Nitrogen	0.587J	mg/L
Total Phosphorus	0.0160J	mg/L
Total Suspended Solids	1.90	mg/L

Client Sample ID: **SW2**  
 Lab Sample ID: 1196923002  
**Microbiology Laboratory**

**Waters Department**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
E. Coli	40	MPN/100mL
Fecal Coliform	76	col/100mL
Total Coliform	280	MPN/100mL
Ammonia-N	0.0338J	mg/L
Nitrate-N	12.5	mg/L
Total Kjeldahl Nitrogen	0.800J	mg/L
Total Phosphorus	0.701	mg/L
Total Suspended Solids	0.825J	mg/L

Client Sample ID: **SW3**  
 Lab Sample ID: 1196923003  
**Microbiology Laboratory**

**Waters Department**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Biochemical Oxygen Demand	7.30	mg/L
E. Coli	10	MPN/100mL
Fecal Coliform	15	col/100mL
Total Coliform	3650	MPN/100mL
Ammonia-N	0.325	mg/L
Nitrate-N	17.2	mg/L
Nitrite-N	0.180J	mg/L
Total Kjeldahl Nitrogen	2.27	mg/L
Total Phosphorus	3.42	mg/L
Total Suspended Solids	8.63	mg/L

Client Sample ID: **SW4**  
 Lab Sample ID: 1196923004  
**Microbiology Laboratory**  
**Waters Department**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Total Coliform	248	MPN/100mL
Ammonia-N	0.0342J	mg/L
Nitrate-N	2.24	mg/L
Nitrite-N	0.345	mg/L
Total Kjeldahl Nitrogen	0.586J	mg/L
Total Phosphorus	0.0376	mg/L
Total Suspended Solids	1.08	mg/L

### Detectable Results Summary

Client Sample ID: **SW5**  
 Lab Sample ID: 1196923005  
**Microbiology Laboratory**

**Waters Department**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Biochemical Oxygen Demand	LT3.93	mg/L
E. Coli	2	MPN/100mL
Total Coliform	187	MPN/100mL
Ammonia-N	0.107	mg/L
Nitrate-N	0.0544J	mg/L
Total Kjeldahl Nitrogen	0.671J	mg/L
Total Phosphorus	0.00890J	mg/L
Total Suspended Solids	1.82	mg/L

Client Sample ID: **SW6**  
 Lab Sample ID: 1196923006  
**Microbiology Laboratory**

**Waters Department**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
E. Coli	4	MPN/100mL
Fecal Coliform	1.7	col/100mL
Total Coliform	150	MPN/100mL
Ammonia-N	0.0656J	mg/L
Nitrate-N	11.5	mg/L
Total Kjeldahl Nitrogen	0.670J	mg/L
Total Phosphorus	0.223	mg/L

Client Sample ID: **Eff**  
 Lab Sample ID: 1196923007  
**Microbiology Laboratory**

**Waters Department**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Biochemical Oxygen Demand	38.9	mg/L
E. Coli	2910	MPN/100mL
Fecal Coliform	3300	col/100mL
Total Coliform	GT2420	MPN/100mL
Ammonia-N	14.5	mg/L
Nitrate-N	10.7	mg/L
Nitrite-N	0.439	mg/L
Total Kjeldahl Nitrogen	13.7	mg/L
Total Phosphorus	4.14	mg/L
Total Suspended Solids	12.8	mg/L

Client Sample ID: **Dup1**  
 Lab Sample ID: 1196923008  
**Microbiology Laboratory**

**Waters Department**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Biochemical Oxygen Demand	49.1	mg/L
E. Coli	3870	MPN/100mL
Fecal Coliform	3100	col/100mL
Total Coliform	GT2420	MPN/100mL
Ammonia-N	14.9	mg/L
Nitrate-N	10.9	mg/L
Nitrite-N	0.444	mg/L
Total Kjeldahl Nitrogen	14.4	mg/L
Total Phosphorus	4.34	mg/L
Total Suspended Solids	12.0	mg/L



Results of SW1

Client Sample ID: SW1
Client Project ID: Wasilla WWTP
Lab Sample ID: 1196923001
Lab Project ID: 1196923

Collection Date: 11/19/19 10:31
Received Date: 11/19/19 15:52
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Microbiology Laboratory

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Row 1: Biochemical Oxygen Demand, 2.00 U, 2.00, 2.00, mg/L, 1, 11/20/19 19:48

Batch Information

Analytical Batch: BOD6483
Analytical Method: SM21 5210B
Analyst: A.L
Analytical Date/Time: 11/20/19 19:48
Container ID: 1196923001-D

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Row 1: Fecal Coliform, 1.67 U, 1.67, 1.67, col/100mL, 1, 11/19/19 17:31

Batch Information

Analytical Batch: BTF17772
Analytical Method: SM21 9222D
Analyst: A.L
Analytical Date/Time: 11/19/19 17:31
Container ID: 1196923001-A

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Row 1: E. Coli, 1 U, 1, 1, MPN/100n, 1, 11/20/19 12:42. Row 2: Total Coliform, 72, 1, 1, MPN/100n, 1, 11/20/19 12:42

Batch Information

Analytical Batch: BTF17776
Analytical Method: SM21 9223B
Analyst: A.L
Analytical Date/Time: 11/20/19 12:42
Container ID: 1196923001-B



Results of SW1

Client Sample ID: SW1
Client Project ID: Wasilla WWTP
Lab Sample ID: 1196923001
Lab Project ID: 1196923

Collection Date: 11/19/19 10:31
Received Date: 11/19/19 15:52
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Waters Department

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Row 1: Total Suspended Solids, 1.90, 1.00, 0.310, mg/L, 1, 11/20/19 15:11

Batch Information

Analytical Batch: STS6556
Analytical Method: SM21 2540D
Analyst: EWW
Analytical Date/Time: 11/20/19 15:11
Container ID: 1196923001-E

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Row 1: Total Kjeldahl Nitrogen, 0.587 J, 1.00, 0.310, mg/L, 1, 12/04/19 16:51

Batch Information

Analytical Batch: WDA4697
Analytical Method: SM21 4500-N D
Analyst: DMM
Analytical Date/Time: 12/04/19 16:51
Container ID: 1196923001-F
Prep Batch: WXX13133
Prep Method: METHOD
Prep Date/Time: 12/04/19 10:52
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Row 1: Ammonia-N, 0.0438 J, 0.100, 0.0310, mg/L, 1, 11/19/19 18:15

Batch Information

Analytical Batch: WDA4689
Analytical Method: SM21 4500-NH3 G
Analyst: EWW
Analytical Date/Time: 11/19/19 18:15
Container ID: 1196923001-F
Prep Batch: WXX13120
Prep Method: METHOD
Prep Date/Time: 11/19/19 15:00
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Rows: Nitrate-N (0.100 U, 0.200, 0.0500, mg/L, 2, 11/20/19 17:05), Nitrite-N (0.100 U, 0.200, 0.0500, mg/L, 2, 11/20/19 17:05)





Results of SW1

Client Sample ID: SW1
Client Project ID: Wasilla WWTP
Lab Sample ID: 1196923001
Lab Project ID: 1196923

Collection Date: 11/19/19 10:31
Received Date: 11/19/19 15:52
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Waters Department

Batch Information

Analytical Batch: WFI2847
Analytical Method: SM21 4500NO3-F
Analyst: EWW
Analytical Date/Time: 11/20/19 17:05
Container ID: 1196923001-C

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Row 1: Total Phosphorus, 0.0160 J, 0.0200, 0.00500, mg/L, 1, 12/05/19 11:15

Batch Information

Analytical Batch: WDA4698
Analytical Method: SM21 4500P-B,E
Analyst: DMM
Analytical Date/Time: 12/05/19 11:15
Container ID: 1196923001-F
Prep Batch: WXX13135
Prep Method: SM21 4500P-B,E
Prep Date/Time: 12/04/19 17:18
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL



**Results of SW2**

Client Sample ID: **SW2**  
Client Project ID: **Wasilla WWTP**  
Lab Sample ID: 1196923002  
Lab Project ID: 1196923

Collection Date: 11/19/19 10:58  
Received Date: 11/19/19 15:52  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Microbiology Laboratory**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Biochemical Oxygen Demand	2.00 U	2.00	2.00	mg/L	1		11/20/19 19:48

**Batch Information**

Analytical Batch: BOD6483  
Analytical Method: SM21 5210B  
Analyst: A.L  
Analytical Date/Time: 11/20/19 19:48  
Container ID: 1196923002-D

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Fecal Coliform	76	2.00	2.00	col/100mL	1		11/19/19 17:31

**Batch Information**

Analytical Batch: BTF17772  
Analytical Method: SM21 9222D  
Analyst: A.L  
Analytical Date/Time: 11/19/19 17:31  
Container ID: 1196923002-A

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
E. Coli	40	10	10	MPN/100n	10		11/20/19 12:42
Total Coliform	280	10	10	MPN/100n	10		11/20/19 12:42

**Batch Information**

Analytical Batch: BTF17776  
Analytical Method: SM21 9223B  
Analyst: A.L  
Analytical Date/Time: 11/20/19 12:42  
Container ID: 1196923002-B



Results of SW2

Client Sample ID: SW2
Client Project ID: Wasilla WWTP
Lab Sample ID: 1196923002
Lab Project ID: 1196923

Collection Date: 11/19/19 10:58
Received Date: 11/19/19 15:52
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Waters Department

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Row 1: Total Suspended Solids, 0.825 J, 1.03, 0.320, mg/L, 1, 11/20/19 15:11

Batch Information

Analytical Batch: STS6556
Analytical Method: SM21 2540D
Analyst: EWW
Analytical Date/Time: 11/20/19 15:11
Container ID: 1196923002-E

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Row 1: Total Kjeldahl Nitrogen, 0.800 J, 1.00, 0.310, mg/L, 1, 12/04/19 16:53

Batch Information

Analytical Batch: WDA4697
Analytical Method: SM21 4500-N D
Analyst: DMM
Analytical Date/Time: 12/04/19 16:53
Container ID: 1196923002-F
Prep Batch: WXX13133
Prep Method: METHOD
Prep Date/Time: 12/04/19 10:52
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Row 1: Ammonia-N, 0.0338 J, 0.100, 0.0310, mg/L, 1, 11/19/19 18:16

Batch Information

Analytical Batch: WDA4689
Analytical Method: SM21 4500-NH3 G
Analyst: EWW
Analytical Date/Time: 11/19/19 18:16
Container ID: 1196923002-F
Prep Batch: WXX13120
Prep Method: METHOD
Prep Date/Time: 11/19/19 15:00
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Rows: Nitrate-N (12.5, 0.400, 0.100, mg/L, 4, 11/20/19 17:48), Nitrite-N (0.200 U, 0.400, 0.100, mg/L, 4, 11/20/19 17:48)

Print Date: 12/09/2019 5:19:36PM

J flagging is activated

## Results of SW2

Client Sample ID: **SW2**  
 Client Project ID: **Wasilla WWTP**  
 Lab Sample ID: 1196923002  
 Lab Project ID: 1196923

Collection Date: 11/19/19 10:58  
 Received Date: 11/19/19 15:52  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

## Results by Waters Department

### Batch Information

Analytical Batch: WFI2847  
 Analytical Method: SM21 4500NO3-F  
 Analyst: EWW  
 Analytical Date/Time: 11/20/19 17:48  
 Container ID: 1196923002-C

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Phosphorus	0.701	0.100	0.0250	mg/L	1		12/05/19 15:53

### Batch Information

Analytical Batch: WDA4698  
 Analytical Method: SM21 4500P-B,E  
 Analyst: DMM  
 Analytical Date/Time: 12/05/19 15:53  
 Container ID: 1196923002-F

Prep Batch: WXX13136  
 Prep Method: SM21 4500P-B,E  
 Prep Date/Time: 12/05/19 14:30  
 Prep Initial Wt./Vol.: 5 mL  
 Prep Extract Vol: 25 mL



**Results of SW3**

Client Sample ID: **SW3**  
Client Project ID: **Wasilla WWTP**  
Lab Sample ID: 1196923003  
Lab Project ID: 1196923

Collection Date: 11/19/19 11:20  
Received Date: 11/19/19 15:52  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Microbiology Laboratory**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Biochemical Oxygen Demand	7.30	2.00	2.00	mg/L	1		11/20/19 19:48

**Batch Information**

Analytical Batch: BOD6483  
Analytical Method: SM21 5210B  
Analyst: A.L  
Analytical Date/Time: 11/20/19 19:48  
Container ID: 1196923003-D

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Fecal Coliform	15	1.67	1.67	col/100mL	1		11/19/19 17:31

**Batch Information**

Analytical Batch: BTF17772  
Analytical Method: SM21 9222D  
Analyst: A.L  
Analytical Date/Time: 11/19/19 17:31  
Container ID: 1196923003-A

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
E. Coli	10	10	10	MPN/100n	10		11/20/19 12:42
Total Coliform	3650	10	10	MPN/100n	10		11/20/19 12:42

**Batch Information**

Analytical Batch: BTF17776  
Analytical Method: SM21 9223B  
Analyst: A.L  
Analytical Date/Time: 11/20/19 12:42  
Container ID: 1196923003-B



### Results of SW3

Client Sample ID: **SW3**  
 Client Project ID: **Wasilla WWTP**  
 Lab Sample ID: 1196923003  
 Lab Project ID: 1196923

Collection Date: 11/19/19 11:20  
 Received Date: 11/19/19 15:52  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

### Results by Waters Department

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Suspended Solids	8.63	1.05	0.326	mg/L	1		11/20/19 15:11

### Batch Information

Analytical Batch: STS6556  
 Analytical Method: SM21 2540D  
 Analyst: EWW  
 Analytical Date/Time: 11/20/19 15:11  
 Container ID: 1196923003-E

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Kjeldahl Nitrogen	2.27	1.00	0.310	mg/L	1		12/04/19 16:54

### Batch Information

Analytical Batch: WDA4697  
 Analytical Method: SM21 4500-N D  
 Analyst: DMM  
 Analytical Date/Time: 12/04/19 16:54  
 Container ID: 1196923003-F

Prep Batch: WXX13133  
 Prep Method: METHOD  
 Prep Date/Time: 12/04/19 10:52  
 Prep Initial Wt./Vol.: 25 mL  
 Prep Extract Vol: 25 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Ammonia-N	0.325	0.100	0.0310	mg/L	1		11/19/19 18:18

### Batch Information

Analytical Batch: WDA4689  
 Analytical Method: SM21 4500-NH3 G  
 Analyst: EWW  
 Analytical Date/Time: 11/19/19 18:18  
 Container ID: 1196923003-F

Prep Batch: WXX13120  
 Prep Method: METHOD  
 Prep Date/Time: 11/19/19 15:00  
 Prep Initial Wt./Vol.: 6 mL  
 Prep Extract Vol: 6 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Nitrate-N	17.2	0.400	0.100	mg/L	4		11/20/19 17:50
Nitrite-N	0.180 J	0.400	0.100	mg/L	4		11/20/19 17:50

Print Date: 12/09/2019 5:19:36PM

J flagging is activated

## Results of SW3

Client Sample ID: **SW3**  
 Client Project ID: **Wasilla WWTP**  
 Lab Sample ID: 1196923003  
 Lab Project ID: 1196923

Collection Date: 11/19/19 11:20  
 Received Date: 11/19/19 15:52  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

## Results by Waters Department

### Batch Information

Analytical Batch: WFI2847  
 Analytical Method: SM21 4500NO3-F  
 Analyst: EWW  
 Analytical Date/Time: 11/20/19 17:50  
 Container ID: 1196923003-C

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Phosphorus	3.42	0.200	0.0500	mg/L	1		12/05/19 15:54

### Batch Information

Analytical Batch: WDA4698  
 Analytical Method: SM21 4500P-B,E  
 Analyst: DMM  
 Analytical Date/Time: 12/05/19 15:54  
 Container ID: 1196923003-F

Prep Batch: WXX13136  
 Prep Method: SM21 4500P-B,E  
 Prep Date/Time: 12/05/19 14:30  
 Prep Initial Wt./Vol.: 2.5 mL  
 Prep Extract Vol: 25 mL



Results of SW4

Client Sample ID: SW4
Client Project ID: Wasilla WWTP
Lab Sample ID: 1196923004
Lab Project ID: 1196923

Collection Date: 11/19/19 13:48
Received Date: 11/19/19 15:52
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Microbiology Laboratory

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Row 1: Biochemical Oxygen Demand, 2.00 U, 2.00, 2.00, mg/L, 1, 11/20/19 19:48

Batch Information

Analytical Batch: BOD6483
Analytical Method: SM21 5210B
Analyst: A.L
Analytical Date/Time: 11/20/19 19:48
Container ID: 1196923004-D

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Row 1: Fecal Coliform, 1.67 U, 1.67, 1.67, col/100mL, 1, 11/19/19 17:31

Batch Information

Analytical Batch: BTF17772
Analytical Method: SM21 9222D
Analyst: A.L
Analytical Date/Time: 11/19/19 17:31
Container ID: 1196923004-A

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Row 1: E. Coli, 1 U, 1, 1, MPN/100n, 1, 11/20/19 12:42. Row 2: Total Coliform, 248, 1, 1, MPN/100n, 1, 11/20/19 12:42

Batch Information

Analytical Batch: BTF17776
Analytical Method: SM21 9223B
Analyst: A.L
Analytical Date/Time: 11/20/19 12:42
Container ID: 1196923004-B





Results of SW4

Client Sample ID: SW4
Client Project ID: Wasilla WWTP
Lab Sample ID: 1196923004
Lab Project ID: 1196923

Collection Date: 11/19/19 13:48
Received Date: 11/19/19 15:52
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Waters Department

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Row 1: Total Suspended Solids, 1.08, 1.08, 0.333, mg/L, 1, 11/20/19 15:11

Batch Information

Analytical Batch: STS6556
Analytical Method: SM21 2540D
Analyst: EWW
Analytical Date/Time: 11/20/19 15:11
Container ID: 1196923004-E

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Row 1: Total Kjeldahl Nitrogen, 0.586 J, 1.00, 0.310, mg/L, 1, 12/04/19 16:55

Batch Information

Analytical Batch: WDA4697
Analytical Method: SM21 4500-N D
Analyst: DMM
Analytical Date/Time: 12/04/19 16:55
Container ID: 1196923004-F
Prep Batch: WXX13133
Prep Method: METHOD
Prep Date/Time: 12/04/19 10:52
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Row 1: Ammonia-N, 0.0342 J, 0.100, 0.0310, mg/L, 1, 11/19/19 18:20

Batch Information

Analytical Batch: WDA4689
Analytical Method: SM21 4500-NH3 G
Analyst: EWW
Analytical Date/Time: 11/19/19 18:20
Container ID: 1196923004-F
Prep Batch: WXX13120
Prep Method: METHOD
Prep Date/Time: 11/19/19 15:00
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Rows: Nitrate-N (2.24), Nitrite-N (0.345)

## Results of SW4

Client Sample ID: **SW4**  
 Client Project ID: **Wasilla WWTP**  
 Lab Sample ID: 1196923004  
 Lab Project ID: 1196923

Collection Date: 11/19/19 13:48  
 Received Date: 11/19/19 15:52  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

## Results by Waters Department

### Batch Information

Analytical Batch: WFI2847  
 Analytical Method: SM21 4500NO3-F  
 Analyst: EWW  
 Analytical Date/Time: 11/20/19 17:13  
 Container ID: 1196923004-C

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Phosphorus	0.0376	0.0200	0.00500	mg/L	1		12/05/19 11:22

### Batch Information

Analytical Batch: WDA4698  
 Analytical Method: SM21 4500P-B,E  
 Analyst: DMM  
 Analytical Date/Time: 12/05/19 11:22  
 Container ID: 1196923004-F

Prep Batch: WXX13135  
 Prep Method: SM21 4500P-B,E  
 Prep Date/Time: 12/04/19 17:18  
 Prep Initial Wt./Vol.: 25 mL  
 Prep Extract Vol: 25 mL



Results of **SW5**

Client Sample ID: **SW5**  
Client Project ID: **Wasilla WWTP**  
Lab Sample ID: 1196923005  
Lab Project ID: 1196923

Collection Date: 11/19/19 13:40  
Received Date: 11/19/19 15:52  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

Results by **Microbiology Laboratory**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Biochemical Oxygen Demand	<3.93	6.00	6.00	mg/L	1		11/20/19 19:48

**Batch Information**

Analytical Batch: BOD6483  
Analytical Method: SM21 5210B  
Analyst: A.L  
Analytical Date/Time: 11/20/19 19:48  
Container ID: 1196923005-D

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Fecal Coliform	1.67 U	1.67	1.67	col/100mL	1		11/19/19 17:31

**Batch Information**

Analytical Batch: BTF17772  
Analytical Method: SM21 9222D  
Analyst: A.L  
Analytical Date/Time: 11/19/19 17:31  
Container ID: 1196923005-A

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
E. Coli	2	1	1	MPN/100n	1		11/20/19 12:42
Total Coliform	187	1	1	MPN/100n	1		11/20/19 12:42

**Batch Information**

Analytical Batch: BTF17776  
Analytical Method: SM21 9223B  
Analyst: A.L  
Analytical Date/Time: 11/20/19 12:42  
Container ID: 1196923005-B



Results of SW5

Client Sample ID: SW5
Client Project ID: Wasilla WWTP
Lab Sample ID: 1196923005
Lab Project ID: 1196923

Collection Date: 11/19/19 13:40
Received Date: 11/19/19 15:52
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Waters Department

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Row 1: Total Suspended Solids, 1.82, 1.01, 0.313, mg/L, 1, 11/20/19 15:11

Batch Information

Analytical Batch: STS6556
Analytical Method: SM21 2540D
Analyst: EWW
Analytical Date/Time: 11/20/19 15:11
Container ID: 1196923005-E

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Row 1: Total Kjeldahl Nitrogen, 0.671 J, 1.00, 0.310, mg/L, 1, 12/04/19 16:59

Batch Information

Analytical Batch: WDA4697
Analytical Method: SM21 4500-N D
Analyst: DMM
Analytical Date/Time: 12/04/19 16:59
Container ID: 1196923005-F
Prep Batch: WXX13133
Prep Method: METHOD
Prep Date/Time: 12/04/19 10:52
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Row 1: Ammonia-N, 0.107, 0.100, 0.0310, mg/L, 1, 11/19/19 18:21

Batch Information

Analytical Batch: WDA4689
Analytical Method: SM21 4500-NH3 G
Analyst: EWW
Analytical Date/Time: 11/19/19 18:21
Container ID: 1196923005-F
Prep Batch: WXX13120
Prep Method: METHOD
Prep Date/Time: 11/19/19 15:00
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Rows: Nitrate-N (0.0544 J), Nitrite-N (0.100 U)

## Results of SW5

Client Sample ID: **SW5**  
 Client Project ID: **Wasilla WWTP**  
 Lab Sample ID: 1196923005  
 Lab Project ID: 1196923

Collection Date: 11/19/19 13:40  
 Received Date: 11/19/19 15:52  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

## Results by Waters Department

### Batch Information

Analytical Batch: WFI2847  
 Analytical Method: SM21 4500NO3-F  
 Analyst: EWW  
 Analytical Date/Time: 11/20/19 17:15  
 Container ID: 1196923005-C

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Phosphorus	0.00890 J	0.0200	0.00500	mg/L	1		12/05/19 11:23

### Batch Information

Analytical Batch: WDA4698  
 Analytical Method: SM21 4500P-B,E  
 Analyst: DMM  
 Analytical Date/Time: 12/05/19 11:23  
 Container ID: 1196923005-F

Prep Batch: WXX13135  
 Prep Method: SM21 4500P-B,E  
 Prep Date/Time: 12/04/19 17:18  
 Prep Initial Wt./Vol.: 25 mL  
 Prep Extract Vol: 25 mL



Results of SW6

Client Sample ID: SW6
Client Project ID: Wasilla WWTP
Lab Sample ID: 1196923006
Lab Project ID: 1196923

Collection Date: 11/19/19 12:45
Received Date: 11/19/19 15:52
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Microbiology Laboratory

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Row 1: Biochemical Oxygen Demand, 2.00 U, 2.00, 2.00, mg/L, 1, 11/20/19 19:48

Batch Information

Analytical Batch: BOD6483
Analytical Method: SM21 5210B
Analyst: A.L
Analytical Date/Time: 11/20/19 19:48
Container ID: 1196923006-D

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Row 1: Fecal Coliform, 1.7, 1.67, 1.67, col/100mL, 1, 11/19/19 17:31

Batch Information

Analytical Batch: BTF17772
Analytical Method: SM21 9222D
Analyst: A.L
Analytical Date/Time: 11/19/19 17:31
Container ID: 1196923006-A

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Row 1: E. Coli, 4, 1, 1, MPN/100n, 1, 11/20/19 12:42. Row 2: Total Coliform, 150, 1, 1, MPN/100n, 1, 11/20/19 12:42

Batch Information

Analytical Batch: BTF17776
Analytical Method: SM21 9223B
Analyst: A.L
Analytical Date/Time: 11/20/19 12:42
Container ID: 1196923006-B



Results of SW6

Client Sample ID: SW6
Client Project ID: Wasilla WWTP
Lab Sample ID: 1196923006
Lab Project ID: 1196923

Collection Date: 11/19/19 12:45
Received Date: 11/19/19 15:52
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Waters Department

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Row 1: Total Suspended Solids, 0.500 U, 1.00, 0.310, mg/L, 1, 11/20/19 15:11

Batch Information

Analytical Batch: STS6556
Analytical Method: SM21 2540D
Analyst: EWW
Analytical Date/Time: 11/20/19 15:11
Container ID: 1196923006-E

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Row 1: Total Kjeldahl Nitrogen, 0.670 J, 1.00, 0.310, mg/L, 1, 12/04/19 17:00

Batch Information

Analytical Batch: WDA4697
Analytical Method: SM21 4500-N D
Analyst: DMM
Analytical Date/Time: 12/04/19 17:00
Container ID: 1196923006-F
Prep Batch: WXX13133
Prep Method: METHOD
Prep Date/Time: 12/04/19 10:52
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Row 1: Ammonia-N, 0.0656 J, 0.100, 0.0310, mg/L, 1, 11/19/19 18:23

Batch Information

Analytical Batch: WDA4689
Analytical Method: SM21 4500-NH3 G
Analyst: EWW
Analytical Date/Time: 11/19/19 18:23
Container ID: 1196923006-F
Prep Batch: WXX13120
Prep Method: METHOD
Prep Date/Time: 11/19/19 15:00
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Rows: Nitrate-N (11.5), Nitrite-N (0.200 U)

Print Date: 12/09/2019 5:19:36PM

J flagging is activated

## Results of SW6

Client Sample ID: **SW6**  
 Client Project ID: **Wasilla WWTP**  
 Lab Sample ID: 1196923006  
 Lab Project ID: 1196923

Collection Date: 11/19/19 12:45  
 Received Date: 11/19/19 15:52  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

## Results by Waters Department

### Batch Information

Analytical Batch: WFI2847  
 Analytical Method: SM21 4500NO3-F  
 Analyst: EWW  
 Analytical Date/Time: 11/20/19 17:52  
 Container ID: 1196923006-C

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Phosphorus	0.223	0.0200	0.00500	mg/L	1		12/05/19 11:24

### Batch Information

Analytical Batch: WDA4698  
 Analytical Method: SM21 4500P-B,E  
 Analyst: DMM  
 Analytical Date/Time: 12/05/19 11:24  
 Container ID: 1196923006-F

Prep Batch: WXX13135  
 Prep Method: SM21 4500P-B,E  
 Prep Date/Time: 12/04/19 17:18  
 Prep Initial Wt./Vol.: 25 mL  
 Prep Extract Vol: 25 mL





**Results of Eff**

Client Sample ID: **Eff**  
Client Project ID: **Wasilla WWTP**  
Lab Sample ID: 1196923007  
Lab Project ID: 1196923

Collection Date: 11/19/19 14:00  
Received Date: 11/19/19 15:52  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Microbiology Laboratory**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Biochemical Oxygen Demand	38.9	2.00	2.00	mg/L	1		11/20/19 19:48

**Batch Information**

Analytical Batch: BOD6483  
Analytical Method: SM21 5210B  
Analyst: A.L  
Analytical Date/Time: 11/20/19 19:48  
Container ID: 1196923007-D

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Fecal Coliform	3300	10.0	10.0	col/100mL	1		11/19/19 17:31

**Batch Information**

Analytical Batch: BTF17772  
Analytical Method: SM21 9222D  
Analyst: A.L  
Analytical Date/Time: 11/19/19 17:31  
Container ID: 1196923007-A

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
E. Coli	2910	10	10	MPN/100n	10		11/20/19 12:42
Total Coliform	>2420	10	10	MPN/100n	10		11/20/19 12:42

**Batch Information**

Analytical Batch: BTF17776  
Analytical Method: SM21 9223B  
Analyst: A.L  
Analytical Date/Time: 11/20/19 12:42  
Container ID: 1196923007-B



Results of Eff

Client Sample ID: Eff
Client Project ID: Wasilla WWTP
Lab Sample ID: 1196923007
Lab Project ID: 1196923

Collection Date: 11/19/19 14:00
Received Date: 11/19/19 15:52
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Waters Department

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Row 1: Total Suspended Solids, 12.8, 2.00, 0.620, mg/L, 1, 11/20/19 15:11

Batch Information

Analytical Batch: STS6556
Analytical Method: SM21 2540D
Analyst: EWW
Analytical Date/Time: 11/20/19 15:11
Container ID: 1196923007-E

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Row 1: Total Kjeldahl Nitrogen, 13.7, 5.00, 1.55, mg/L, 5, 12/04/19 18:04

Batch Information

Analytical Batch: WDA4697
Analytical Method: SM21 4500-N D
Analyst: DMM
Analytical Date/Time: 12/04/19 18:04
Container ID: 1196923007-F
Prep Batch: WXX13133
Prep Method: METHOD
Prep Date/Time: 12/04/19 10:52
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Row 1: Ammonia-N, 14.5, 1.00, 0.310, mg/L, 1, 11/19/19 18:24

Batch Information

Analytical Batch: WDA4689
Analytical Method: SM21 4500-NH3 G
Analyst: EWW
Analytical Date/Time: 11/19/19 18:24
Container ID: 1196923007-F
Prep Batch: WXX13120
Prep Method: METHOD
Prep Date/Time: 11/19/19 15:00
Prep Initial Wt./Vol.: 0.6 mL
Prep Extract Vol: 6 mL

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Rows: Nitrate-N (10.7, 0.400, 0.100, mg/L, 4, 11/20/19 17:54), Nitrite-N (0.439, 0.400, 0.100, mg/L, 4, 11/20/19 17:54)

## Results of Eff

Client Sample ID: **Eff**  
 Client Project ID: **Wasilla WWTP**  
 Lab Sample ID: 1196923007  
 Lab Project ID: 1196923

Collection Date: 11/19/19 14:00  
 Received Date: 11/19/19 15:52  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

## Results by Waters Department

### Batch Information

Analytical Batch: WFI2847  
 Analytical Method: SM21 4500NO3-F  
 Analyst: EWW  
 Analytical Date/Time: 11/20/19 17:54  
 Container ID: 1196923007-C

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Phosphorus	4.14	0.400	0.100	mg/L	1		12/05/19 15:55

### Batch Information

Analytical Batch: WDA4698  
 Analytical Method: SM21 4500P-B,E  
 Analyst: DMM  
 Analytical Date/Time: 12/05/19 15:55  
 Container ID: 1196923007-F

Prep Batch: WXX13136  
 Prep Method: SM21 4500P-B,E  
 Prep Date/Time: 12/05/19 14:30  
 Prep Initial Wt./Vol.: 1.25 mL  
 Prep Extract Vol: 25 mL



### Results of Dup1

Client Sample ID: **Dup1**  
 Client Project ID: **Wasilla WWTP**  
 Lab Sample ID: 1196923008  
 Lab Project ID: 1196923

Collection Date: 11/19/19 14:00  
 Received Date: 11/19/19 15:52  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

### Results by Microbiology Laboratory

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable</u> <u>Limits</u>	<u>Date Analyzed</u>
Biochemical Oxygen Demand	49.1		2.00	2.00	mg/L	1		11/20/19 19:48

### Batch Information

Analytical Batch: BOD6483  
 Analytical Method: SM21 5210B  
 Analyst: A.L  
 Analytical Date/Time: 11/20/19 19:48  
 Container ID: 1196923008-D

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable</u> <u>Limits</u>	<u>Date Analyzed</u>
Fecal Coliform	3100		10.0	10.0	col/100mL	1		11/19/19 17:31

### Batch Information

Analytical Batch: BTF17772  
 Analytical Method: SM21 9222D  
 Analyst: A.L  
 Analytical Date/Time: 11/19/19 17:31  
 Container ID: 1196923008-A

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable</u> <u>Limits</u>	<u>Date Analyzed</u>
E. Coli	3870		10	10	MPN/100n	10		11/20/19 12:42
Total Coliform	>2420		10	10	MPN/100n	10		11/20/19 12:42

### Batch Information

Analytical Batch: BTF17776  
 Analytical Method: SM21 9223B  
 Analyst: A.L  
 Analytical Date/Time: 11/20/19 12:42  
 Container ID: 1196923008-B



### Results of Dup1

Client Sample ID: **Dup1**  
 Client Project ID: **Wasilla WWTP**  
 Lab Sample ID: 1196923008  
 Lab Project ID: 1196923

Collection Date: 11/19/19 14:00  
 Received Date: 11/19/19 15:52  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

### Results by Waters Department

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Suspended Solids	12.0	1.82	0.564	mg/L	1		11/20/19 15:11

### Batch Information

Analytical Batch: STS6556  
 Analytical Method: SM21 2540D  
 Analyst: EWW  
 Analytical Date/Time: 11/20/19 15:11  
 Container ID: 1196923008-E

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Kjeldahl Nitrogen	14.4	5.00	1.55	mg/L	5		12/04/19 18:05

### Batch Information

Analytical Batch: WDA4697  
 Analytical Method: SM21 4500-N D  
 Analyst: DMM  
 Analytical Date/Time: 12/04/19 18:05  
 Container ID: 1196923008-F

Prep Batch: WXX13133  
 Prep Method: METHOD  
 Prep Date/Time: 12/04/19 10:52  
 Prep Initial Wt./Vol.: 25 mL  
 Prep Extract Vol: 25 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Ammonia-N	14.9	1.00	0.310	mg/L	1		11/19/19 18:26

### Batch Information

Analytical Batch: WDA4689  
 Analytical Method: SM21 4500-NH3 G  
 Analyst: EWW  
 Analytical Date/Time: 11/19/19 18:26  
 Container ID: 1196923008-F

Prep Batch: WXX13120  
 Prep Method: METHOD  
 Prep Date/Time: 11/19/19 15:00  
 Prep Initial Wt./Vol.: 0.6 mL  
 Prep Extract Vol: 6 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Nitrate-N	10.9	0.400	0.100	mg/L	4		11/20/19 17:55
Nitrite-N	0.444	0.400	0.100	mg/L	4		11/20/19 17:55

## Results of Dup1

Client Sample ID: **Dup1**  
 Client Project ID: **Wasilla WWTP**  
 Lab Sample ID: 1196923008  
 Lab Project ID: 1196923

Collection Date: 11/19/19 14:00  
 Received Date: 11/19/19 15:52  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

## Results by Waters Department

### Batch Information

Analytical Batch: WFI2847  
 Analytical Method: SM21 4500NO3-F  
 Analyst: EWW  
 Analytical Date/Time: 11/20/19 17:55  
 Container ID: 1196923008-C

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Phosphorus	4.34	0.400	0.100	mg/L	1		12/05/19 15:56

### Batch Information

Analytical Batch: WDA4698  
 Analytical Method: SM21 4500P-B,E  
 Analyst: DMM  
 Analytical Date/Time: 12/05/19 15:56  
 Container ID: 1196923008-F

Prep Batch: WXX13136  
 Prep Method: SM21 4500P-B,E  
 Prep Date/Time: 12/05/19 14:30  
 Prep Initial Wt./Vol.: 1.25 mL  
 Prep Extract Vol: 25 mL

## Method Blank

Blank ID: MB for HBN 1802411 [BOD/6483]  
Blank Lab ID: 1544376

Matrix: Water (Surface, Eff., Ground)

QC for Samples:

1196923001, 1196923002, 1196923003, 1196923004, 1196923005, 1196923006, 1196923007, 1196923008

## Results by SM21 5210B

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

## Batch Information

Analytical Batch: BOD6483  
Analytical Method: SM21 5210B  
Instrument:  
Analyst: A.L  
Analytical Date/Time: 11/20/2019 7:48:09PM

Print Date: 12/09/2019 5:19:39PM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1196923 [BOD6483]

Blank Spike Lab ID: 1544377

Date Analyzed: 11/20/2019 19:48

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1196923001, 1196923002, 1196923003, 1196923004, 1196923005, 1196923006, 1196923007, 1196923008

## Results by SM21 5210B

Parameter	Blank Spike (mg/L)			CL
	Spike	Result	Rec (%)	
Biochemical Oxygen Demand	198	201	102	( 84.6-115.4

## Batch Information

Analytical Batch: **BOD6483**

Analytical Method: **SM21 5210B**

Instrument:

Analyst: **A.L**





### Method Blank

Blank ID: MB for HBN 1802369 [BTF/17772]  
Blank Lab ID: 1544206

Matrix: Water (Surface, Eff., Ground)

QC for Samples:

1196923001, 1196923002, 1196923003, 1196923004, 1196923005, 1196923006, 1196923007, 1196923008

### Results by SM21 9222D

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

### Batch Information

Analytical Batch: BTF17772  
Analytical Method: SM21 9222D  
Instrument:  
Analyst: A.L  
Analytical Date/Time: 11/19/2019 5:31:08PM

Print Date: 12/09/2019 5:19:45PM

## Method Blank

Blank ID: MB for HBN 1802408 [BTF/17776]

Matrix: Water (Surface, Eff., Ground)

Blank Lab ID: 1544372

QC for Samples:

1196923001, 1196923002, 1196923003, 1196923004, 1196923005, 1196923006, 1196923007, 1196923008

## Results by SM21 9223B

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

## Batch Information

Analytical Batch: BTF17776

Analytical Method: SM21 9223B

Instrument:

Analyst: A.L

Analytical Date/Time: 11/20/2019 12:42:05PM

Print Date: 12/09/2019 5:19:49PM

## Method Blank

Blank ID: MB for HBN 1802386 [STS/6556]

Matrix: Water (Surface, Eff., Ground)

Blank Lab ID: 1544292

QC for Samples:

1196923001, 1196923002, 1196923003, 1196923004, 1196923005, 1196923006, 1196923007, 1196923008

## Results by SM21 2540D

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

## Batch Information

Analytical Batch: STS6556

Analytical Method: SM21 2540D

Instrument:

Analyst: EWW

Analytical Date/Time: 11/20/2019 3:11:54PM

Print Date: 12/09/2019 5:19:54PM

## Duplicate Sample Summary

Original Sample ID: 1199948002

Duplicate Sample ID: 1544295

QC for Samples:

1196923001, 1196923002, 1196923003, 1196923004, 1196923005, 1196923006, 1196923007, 1196923008

Analysis Date: 11/20/2019 15:11

Matrix: Water (Surface, Eff., Ground)

## Results by SM21 2540D

<u>NAME</u>	<u>Original</u>	<u>Duplicate</u>	<u>Units</u>	<u>RPD (%)</u>	<u>RPD CL</u>
Total Suspended Solids	74.4	76.8	mg/L	3.20	(< 5 )

## Batch Information

Analytical Batch: STS6556

Analytical Method: SM21 2540D

Instrument:

Analyst: EWW

Print Date: 12/09/2019 5:19:55PM



### Blank Spike Summary

Blank Spike ID: LCS for HBN 1196923 [STS6556]  
 Blank Spike Lab ID: 1544293  
 Date Analyzed: 11/20/2019 15:11

Spike Duplicate ID: LCSD for HBN 1196923 [STS6556]  
 Spike Duplicate Lab ID: 1544294  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1196923001, 1196923002, 1196923003, 1196923004, 1196923005, 1196923006, 1196923007, 1196923008

### Results by SM21 2540D

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

### Batch Information

Analytical Batch: **STS6556**  
 Analytical Method: **SM21 2540D**  
 Instrument:  
 Analyst: **EWV**

Print Date: 12/09/2019 5:19:56PM

## Method Blank

Blank ID: MB for HBN 1802423 (WFI/2847)

Matrix: Water (Surface, Eff., Ground)

Blank Lab ID: 1544434

QC for Samples:

1196923001, 1196923002, 1196923003, 1196923004, 1196923005, 1196923006, 1196923007, 1196923008

## Results by SM21 4500NO3-F

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

## Batch Information

Analytical Batch: WFI2847

Analytical Method: SM21 4500NO3-F

Instrument: Astoria segmented flow

Analyst: EWW

Analytical Date/Time: 11/20/2019 4:45:25PM

Print Date: 12/09/2019 5:19:59PM

## Method Blank

Blank ID: MB for HBN 1802423 (WFI/2847)

Matrix: Water (Surface, Eff., Ground)

Blank Lab ID: 1544436

QC for Samples:

1196923001, 1196923002, 1196923003, 1196923004, 1196923005, 1196923006, 1196923007, 1196923008

## Results by SM21 4500NO3-F

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

## Batch Information

Analytical Batch: WFI2847

Analytical Method: SM21 4500NO3-F

Instrument: Astoria segmented flow

Analyst: EWW

Analytical Date/Time: 11/20/2019 5:59:29PM

Print Date: 12/09/2019 5:19:59PM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1196923 [WFI2847]

Blank Spike Lab ID: 1544433

Date Analyzed: 11/20/2019 16:43

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1196923001, 1196923002, 1196923003, 1196923004, 1196923005, 1196923006, 1196923007, 1196923008

## Results by SM21 4500NO3-F

Parameter	Blank Spike (mg/L)			CL
	Spike	Result	Rec (%)	
Nitrate-N	2.5	2.32	93	( 70-130 )
Nitrite-N	2.5	2.57	103	( 90-110 )
Total Nitrate/Nitrite-N	5	4.89	98	( 90-110 )

## Batch Information

Analytical Batch: **WFI2847**

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

Instrument: **Astoria segmented flow**

Analyst: **EWV**

Print Date: 12/09/2019 5:20:00PM



## Blank Spike Summary

Blank Spike ID: LCS for HBN 1196923 [WFI2847]

Blank Spike Lab ID: 1544435

Date Analyzed: 11/20/2019 17:57

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1196923001, 1196923002, 1196923003, 1196923004, 1196923005, 1196923006, 1196923007, 1196923008

## Results by SM21 4500NO3-F

Parameter	Blank Spike (mg/L)			CL
	Spike	Result	Rec (%)	
Nitrate-N	2.5	2.64	106	( 70-130 )
Nitrite-N	2.5	2.63	105	( 90-110 )
Total Nitrate/Nitrite-N	5	5.28	106	( 90-110 )

## Batch Information

Analytical Batch: **WFI2847**

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

Instrument: **Astoria segmented flow**

Analyst: **EWV**

Print Date: 12/09/2019 5:20:00PM

## Matrix Spike Summary

Original Sample ID: 1196923001  
 MS Sample ID: 1544415 MS  
 MSD Sample ID: 1544416 MSD

Analysis Date: 11/20/2019 17:05  
 Analysis Date: 11/20/2019 17:06  
 Analysis Date: 11/20/2019 17:08  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1196923001, 1196923002, 1196923003, 1196923004, 1196923005, 1196923006, 1196923007, 1196923008

## Results by SM21 4500NO3-F

Parameter	Sample	Matrix Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Nitrate-N	0.100U	2.50	2.63	105	2.50	2.47	99	70-130	6.30	(< 25 )
Nitrite-N	0.100U	2.50	2.5	100	2.50	2.45	98	90-110	2.20	(< 25 )

## Batch Information

Analytical Batch: WFI2847  
 Analytical Method: SM21 4500NO3-F  
 Instrument: Astoria segmented flow  
 Analyst: EWW  
 Analytical Date/Time: 11/20/2019 5:06:58PM

Print Date: 12/09/2019 5:20:02PM

## Matrix Spike Summary

Original Sample ID: 1196957001  
 MS Sample ID: 1544417 MS  
 MSD Sample ID: 1544418 MSD

Analysis Date: 11/20/2019 18:02  
 Analysis Date: 11/20/2019 18:04  
 Analysis Date: 11/20/2019 18:06  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1196923002, 1196923003, 1196923004, 1196923005, 1196923006, 1196923007, 1196923008

## Results by SM21 4500NO3-F

Parameter	Sample	Matrix Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Nitrate-N	0.100U	2.50	2.69	108	2.50	2.45	98	70-130	9.30	(< 25 )
Nitrite-N	0.100U	2.50	2.62	105	2.50	2.61	105	90-110	0.41	(< 25 )

## Batch Information

Analytical Batch: WFI2847  
 Analytical Method: SM21 4500NO3-F  
 Instrument: Astoria segmented flow  
 Analyst: EWW  
 Analytical Date/Time: 11/20/2019 6:04:43PM

Print Date: 12/09/2019 5:20:02PM

## Method Blank

Blank ID: MB for HBN 1802378 [WXX/13120]  
Blank Lab ID: 1544241

Matrix: Water (Surface, Eff., Ground)

QC for Samples:

1196923001, 1196923002, 1196923003, 1196923004, 1196923005, 1196923006, 1196923007, 1196923008

## Results by SM21 4500-NH3 G

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

## Batch Information

Analytical Batch: WDA4689  
Analytical Method: SM21 4500-NH3 G  
Instrument: Discrete Analyzer 2  
Analyst: EWW  
Analytical Date/Time: 11/19/2019 3:44:56PM

Prep Batch: WXX13120  
Prep Method: METHOD  
Prep Date/Time: 11/19/2019 3:00:00PM  
Prep Initial Wt./Vol.: 6 mL  
Prep Extract Vol: 6 mL

Print Date: 12/09/2019 5:20:03PM

## Method Blank

Blank ID: MB for HBN 1802378 [WXX/13120]  
Blank Lab ID: 1544249

Matrix: Water (Surface, Eff., Ground)

QC for Samples:

1196923001, 1196923002, 1196923003, 1196923004, 1196923005, 1196923006, 1196923007, 1196923008

## Results by SM21 4500-NH3 G

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

## Batch Information

Analytical Batch: WDA4689  
Analytical Method: SM21 4500-NH3 G  
Instrument: Discrete Analyzer 2  
Analyst: EWW  
Analytical Date/Time: 11/19/2019 4:55:43PM

Prep Batch: WXX13120  
Prep Method: METHOD  
Prep Date/Time: 11/19/2019 3:00:00PM  
Prep Initial Wt./Vol.: 6 mL  
Prep Extract Vol: 6 mL

Print Date: 12/09/2019 5:20:03PM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1196923 [WXX13120]  
 Blank Spike Lab ID: 1544242  
 Date Analyzed: 11/19/2019 15:46

Spike Duplicate ID: LCSD for HBN 1196923 [WXX13120]  
 Spike Duplicate Lab ID: 1544243  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1196923001, 1196923002, 1196923003, 1196923004, 1196923005, 1196923006, 1196923007, 1196923008

## Results by SM21 4500-NH3 G

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Ammonia-N	1	1.00	100	1	1.06	106	( 75-125 )	5.50	(< 25 )

## Batch Information

Analytical Batch: **WDA4689**  
 Analytical Method: **SM21 4500-NH3 G**  
 Instrument: **Discrete Analyzer 2**  
 Analyst: **EWV**

Prep Batch: **WXX13120**  
 Prep Method: **METHOD**  
 Prep Date/Time: **11/19/2019 15:00**  
 Spike Init Wt./Vol.: 1 mg/L Extract Vol: 6 mL  
 Dupe Init Wt./Vol.: 1 mg/L Extract Vol: 6 mL

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1196923 [WXX13120]  
 Blank Spike Lab ID: 1544250  
 Date Analyzed: 11/19/2019 16:57

Spike Duplicate ID: LCSD for HBN 1196923 [WXX13120]  
 Spike Duplicate Lab ID: 1544251  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1196923001, 1196923002, 1196923003, 1196923004, 1196923005, 1196923006, 1196923007, 1196923008

## Results by SM21 4500-NH3 G

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Ammonia-N	1	1.01	101	1	1.03	103	( 75-125 )	1.70	(< 25 )

## Batch Information

Analytical Batch: **WDA4689**  
 Analytical Method: **SM21 4500-NH3 G**  
 Instrument: **Discrete Analyzer 2**  
 Analyst: **EWV**

Prep Batch: **WXX13120**  
 Prep Method: **METHOD**  
 Prep Date/Time: **11/19/2019 15:00**  
 Spike Init Wt./Vol.: 1 mg/L Extract Vol: 6 mL  
 Dupe Init Wt./Vol.: 1 mg/L Extract Vol: 6 mL

## Matrix Spike Summary

Original Sample ID: 1196870002  
 MS Sample ID: 1544244 MS  
 MSD Sample ID: 1544245 MSD

Analysis Date: 11/19/2019 16:18  
 Analysis Date: 11/19/2019 18:11  
 Analysis Date: 11/19/2019 18:13  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1196923001, 1196923002, 1196923003, 1196923004, 1196923005, 1196923006, 1196923007, 1196923008

## Results by SM21 4500-NH3 G

Parameter	Sample	Matrix Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Ammonia-N	3.10	1.00	3.31	21 *	1.00	3.35	25 *	75-125	1.30	(< 25 )

## Batch Information

Analytical Batch: WDA4689  
 Analytical Method: SM21 4500-NH3 G  
 Instrument: Discrete Analyzer 2  
 Analyst: EWW  
 Analytical Date/Time: 11/19/2019 6:11:43PM

Prep Batch: WXX13120  
 Prep Method: Ammonia by SM21 4500F prep (W)  
 Prep Date/Time: 11/19/2019 3:00:00PM  
 Prep Initial Wt./Vol.: 6.00mL  
 Prep Extract Vol: 6.00mL



## Matrix Spike Summary

Original Sample ID: 1196872001  
 MS Sample ID: 1544252 MS  
 MSD Sample ID: 1544253 MSD

Analysis Date: 11/19/2019 17:00  
 Analysis Date: 11/19/2019 17:02  
 Analysis Date: 11/19/2019 17:07  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1196923001, 1196923002, 1196923003, 1196923004, 1196923005, 1196923006, 1196923007, 1196923008

## Results by SM21 4500-NH3 G

Parameter	Sample	Matrix Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Ammonia-N	0.0328J	1.00	1.03	100	1.00	1.01	98	75-125	2.10	(< 25 )

## Batch Information

Analytical Batch: WDA4689  
 Analytical Method: SM21 4500-NH3 G  
 Instrument: Discrete Analyzer 2  
 Analyst: EWW  
 Analytical Date/Time: 11/19/2019 5:02:21PM

Prep Batch: WXX13120  
 Prep Method: Ammonia by SM21 4500F prep (W)  
 Prep Date/Time: 11/19/2019 3:00:00PM  
 Prep Initial Wt./Vol.: 6.00mL  
 Prep Extract Vol: 6.00mL

Print Date: 12/09/2019 5:20:07PM

## Method Blank

Blank ID: MB for HBN 1802832 [WXX/13133]  
Blank Lab ID: 1545943

Matrix: Water (Surface, Eff., Ground)

QC for Samples:

1196923001, 1196923002, 1196923003, 1196923004, 1196923005, 1196923006, 1196923007, 1196923008

## Results by SM21 4500-N D

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

## Batch Information

Analytical Batch: WDA4697  
Analytical Method: SM21 4500-N D  
Instrument: Discrete Analyzer 2  
Analyst: DMM  
Analytical Date/Time: 12/4/2019 4:28:15PM

Prep Batch: WXX13133  
Prep Method: METHOD  
Prep Date/Time: 12/4/2019 10:52:00AM  
Prep Initial Wt./Vol.: 25 mL  
Prep Extract Vol: 25 mL

Print Date: 12/09/2019 5:20:09PM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1196923 [WXX13133]  
 Blank Spike Lab ID: 1545944  
 Date Analyzed: 12/04/2019 16:29

Spike Duplicate ID: LCSD for HBN 1196923 [WXX13133]  
 Spike Duplicate Lab ID: 1545945  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1196923001, 1196923002, 1196923003, 1196923004, 1196923005, 1196923006, 1196923007, 1196923008

## Results by SM21 4500-N D

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Kjeldahl Nitrogen	4	3.89	97	4	3.99	100	( 75-125 )	2.60	(< 25 )

## Batch Information

Analytical Batch: **WDA4697**  
 Analytical Method: **SM21 4500-N D**  
 Instrument: **Discrete Analyzer 2**  
 Analyst: **DMM**

Prep Batch: **WXX13133**  
 Prep Method: **METHOD**  
 Prep Date/Time: **12/04/2019 10:52**  
 Spike Init Wt./Vol.: 4 mg/L Extract Vol: 25 mL  
 Dupe Init Wt./Vol.: 4 mg/L Extract Vol: 25 mL

## Matrix Spike Summary

Original Sample ID: 1196870002  
 MS Sample ID: 1545946 MS  
 MSD Sample ID: 1545947 MSD

Analysis Date: 12/04/2019 16:36  
 Analysis Date: 12/04/2019 16:37  
 Analysis Date: 12/04/2019 16:38  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1196923001, 1196923002, 1196923003, 1196923004, 1196923005, 1196923006, 1196923007, 1196923008

## Results by SM21 4500-N D

Parameter	Sample	Matrix Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Kjeldahl Nitrogen	4.01	4.00	8.3	107	4.00	8.35	108	75-125	0.64	(< 25 )

## Batch Information

Analytical Batch: WDA4697  
 Analytical Method: SM21 4500-N D  
 Instrument: Discrete Analyzer 2  
 Analyst: DMM  
 Analytical Date/Time: 12/4/2019 4:37:26PM

Prep Batch: WXX13133  
 Prep Method: Distillation TKN by Phenate (W)  
 Prep Date/Time: 12/4/2019 10:52:00AM  
 Prep Initial Wt./Vol.: 25.00mL  
 Prep Extract Vol: 25.00mL

## Method Blank

Blank ID: MB for HBN 1802839 [WXX/13135]  
Blank Lab ID: 1546005

Matrix: Water (Surface, Eff., Ground)

QC for Samples:  
1196923001, 1196923004, 1196923005, 1196923006

## Results by SM21 4500P-B,E

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Total Phosphorus	0.0100U	0.0200	0.00500	mg/L

## Batch Information

Analytical Batch: WDA4698  
Analytical Method: SM21 4500P-B,E  
Instrument: Discrete Analyzer 2  
Analyst: DMM  
Analytical Date/Time: 12/5/2019 11:11:00AM

Prep Batch: WXX13135  
Prep Method: SM21 4500P-B,E  
Prep Date/Time: 12/4/2019 5:18:00PM  
Prep Initial Wt./Vol.: 25 mL  
Prep Extract Vol: 25 mL

Print Date: 12/09/2019 5:20:13PM

## Method Blank

Blank ID: MB for HBN 1802839 [WXX/13135]  
Blank Lab ID: 1546008

Matrix: Water (Surface, Eff., Ground)

QC for Samples:  
1196923001, 1196923004, 1196923005, 1196923006

## Results by SM21 4500P-B,E

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Total Phosphorus	0.0100U	0.0200	0.00500	mg/L

## Batch Information

Analytical Batch: WDA4698  
Analytical Method: SM21 4500P-B,E  
Instrument: Discrete Analyzer 2  
Analyst: DMM  
Analytical Date/Time: 12/5/2019 11:48:12AM

Prep Batch: WXX13135  
Prep Method: SM21 4500P-B,E  
Prep Date/Time: 12/4/2019 5:18:00PM  
Prep Initial Wt./Vol.: 25 mL  
Prep Extract Vol: 25 mL

Print Date: 12/09/2019 5:20:13PM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1196923 [WXX13135]  
 Blank Spike Lab ID: 1546006  
 Date Analyzed: 12/05/2019 11:11

Spike Duplicate ID: LCSD for HBN 1196923 [WXX13135]  
 Spike Duplicate Lab ID: 1546007  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1196923001, 1196923004, 1196923005, 1196923006

## Results by SM21 4500P-B,E

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Phosphorus	0.2	0.203	102	0.2	0.188	94	( 75-125 )	7.90	(< 25 )

## Batch Information

Analytical Batch: **WDA4698**  
 Analytical Method: **SM21 4500P-B,E**  
 Instrument: **Discrete Analyzer 2**  
 Analyst: **DMM**

Prep Batch: **WXX13135**  
 Prep Method: **SM21 4500P-B,E**  
 Prep Date/Time: **12/04/2019 17:18**  
 Spike Init Wt./Vol.: 0.2 mg/L Extract Vol: 25 mL  
 Dupe Init Wt./Vol.: 0.2 mg/L Extract Vol: 25 mL

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1196923 [WXX13135]  
 Blank Spike Lab ID: 1546009  
 Date Analyzed: 12/05/2019 11:49

Spike Duplicate ID: LCSD for HBN 1196923 [WXX13135]  
 Spike Duplicate Lab ID: 1546010  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1196923001, 1196923004, 1196923005, 1196923006

## Results by SM21 4500P-B,E

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Phosphorus	0.2	0.185	93	0.2	0.186	93	( 75-125 )	0.49	(< 25 )

## Batch Information

Analytical Batch: **WDA4698**  
 Analytical Method: **SM21 4500P-B,E**  
 Instrument: **Discrete Analyzer 2**  
 Analyst: **DMM**

Prep Batch: **WXX13135**  
 Prep Method: **SM21 4500P-B,E**  
 Prep Date/Time: **12/04/2019 17:18**  
 Spike Init Wt./Vol.: 0.2 mg/L Extract Vol: 25 mL  
 Dupe Init Wt./Vol.: 0.2 mg/L Extract Vol: 25 mL





### Matrix Spike Summary

Original Sample ID: 1196923001  
MS Sample ID: 1546018 MS  
MSD Sample ID: 1546019 MSD

Analysis Date: 12/05/2019 11:15  
Analysis Date: 12/05/2019 11:16  
Analysis Date: 12/05/2019 11:17  
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1196923001, 1196923004, 1196923005, 1196923006

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

Parameter	Sample	Matrix Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Phosphorus	0.0160J	0.200	.212	98	0.200	0.211	98	75-125	0.10	(< 25 )

### Batch Information

Analytical Batch: WDA4698  
Analytical Method: SM21 4500P-B,E  
Instrument: Discrete Analyzer 2  
Analyst: DMM  
Analytical Date/Time: 12/5/2019 11:16:49AM

Prep Batch: WXX13135  
Prep Method: Total Phosphorus (W) Ext.  
Prep Date/Time: 12/4/2019 5:18:00PM  
Prep Initial Wt./Vol.: 25.00mL  
Prep Extract Vol: 25.00mL

Print Date: 12/09/2019 5:20:17PM

## Matrix Spike Summary

Original Sample ID: 1196957004  
 MS Sample ID: 1546040 MS  
 MSD Sample ID: 1546041 MSD

Analysis Date: 12/05/2019 11:53  
 Analysis Date: 12/05/2019 11:54  
 Analysis Date: 12/05/2019 11:57  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1196923004, 1196923005, 1196923006

## Results by SM21 4500P-B,E

Parameter	Sample	Matrix Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Phosphorus	0.00520J	0.200	.213	104	0.200	0.200	98	75-125	5.90	(< 25 )

## Batch Information

Analytical Batch: WDA4698  
 Analytical Method: SM21 4500P-B,E  
 Instrument: Discrete Analyzer 2  
 Analyst: DMM  
 Analytical Date/Time: 12/5/2019 11:54:35AM

Prep Batch: WXX13135  
 Prep Method: Total Phosphorus (W) Ext.  
 Prep Date/Time: 12/4/2019 5:18:00PM  
 Prep Initial Wt./Vol.: 25.00mL  
 Prep Extract Vol: 25.00mL

## Method Blank

Blank ID: MB for HBN 1802841 [WXX/13136]  
Blank Lab ID: 1546020

Matrix: Water (Surface, Eff., Ground)

QC for Samples:  
1196923002, 1196923003, 1196923007, 1196923008

## Results by SM21 4500P-B,E

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Total Phosphorus	0.0100U	0.0200	0.00500	mg/L

## Batch Information

Analytical Batch: WDA4698  
Analytical Method: SM21 4500P-B,E  
Instrument: Discrete Analyzer 2  
Analyst: DMM  
Analytical Date/Time: 12/5/2019 3:48:56PM

Prep Batch: WXX13136  
Prep Method: SM21 4500P-B,E  
Prep Date/Time: 12/5/2019 2:30:00PM  
Prep Initial Wt./Vol.: 25 mL  
Prep Extract Vol: 25 mL

Print Date: 12/09/2019 5:20:19PM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1196923 [WXX13136]  
 Blank Spike Lab ID: 1546021  
 Date Analyzed: 12/05/2019 15:49

Spike Duplicate ID: LCSD for HBN 1196923 [WXX13136]  
 Spike Duplicate Lab ID: 1546022  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1196923002, 1196923003, 1196923007, 1196923008

## Results by SM21 4500P-B,E

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Phosphorus	0.2	0.188	94	0.2	0.189	95	( 75-125 )	0.85	(< 25 )

## Batch Information

Analytical Batch: **WDA4698**  
 Analytical Method: **SM21 4500P-B,E**  
 Instrument: **Discrete Analyzer 2**  
 Analyst: **DMM**

Prep Batch: **WXX13136**  
 Prep Method: **SM21 4500P-B,E**  
 Prep Date/Time: **12/05/2019 14:30**  
 Spike Init Wt./Vol.: 0.2 mg/L Extract Vol: 25 mL  
 Dupe Init Wt./Vol.: 0.2 mg/L Extract Vol: 25 mL

## Matrix Spike Summary

Original Sample ID: 1196923008  
 MS Sample ID: 1546023 MS  
 MSD Sample ID: 1546024 MSD

Analysis Date: 12/05/2019 15:56  
 Analysis Date: 12/05/2019 15:56  
 Analysis Date: 12/05/2019 15:59  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1196923002, 1196923003, 1196923007, 1196923008

## Results by SM21 4500P-B,E

Parameter	Sample	Matrix Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Phosphorus	4.34	4.00	7.96	91	4.00	7.98	91	75-125	0.30	(< 25 )

## Batch Information

Analytical Batch: WDA4698  
 Analytical Method: SM21 4500P-B,E  
 Instrument: Discrete Analyzer 2  
 Analyst: DMM  
 Analytical Date/Time: 12/5/2019 3:56:56PM

Prep Batch: WXX13136  
 Prep Method: Total Phosphorus (W) Ext.  
 Prep Date/Time: 12/5/2019 2:30:00PM  
 Prep Initial Wt./Vol.: 1.25mL  
 Prep Extract Vol: 25.00mL

Print Date: 12/09/2019 5:20:22PM



SGS North America Inc. CHAIN OF CUSTODY RECORD

1196923



Locations Nationwide: Maryland, New York, Indiana, Kentucky

www.us.sgs.com

**CLIENT:** Stantec

**CONTACT:** Jake Alward **PHONE NO:** 343-5202

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

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

**INVOICE TO:** **QUOTE #:** 204700415 **P.O. #:**

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

Page 1 of 1

RESERVED for lab use	SAMPLE IDENTIFICATION	DATE mm/dd/yy	TIME HH:MM	MATRIX/MATRIX CODE	#	CONTAINER	Preservative						REMARKS/LOC ID
							FC	TC (Doubt)	Nitrate/Nitrite	BOD	TSS	TEN/Ammonia/TP	
① AF	SW1	11/19/19	10:31	Water	6	G	1	1	1	1	1	1	
② AF	SW2		10:58										
③ AF	SW3		11:20										
④ AF	SW4		12:48										
⑤ AF	SW5		13:40										
⑥ AF	SW6		12:45										
⑦ AF	EFF		14:00										
⑧ AF	DUP 1		14:00										

**Section 4** DOD Project? Yes No **Data Deliverable Requirements:**

**Relinquished By: (1)** [Signature] **Date:** 11/19/19 **Time:** 15:52 **Received By:**

**Relinquished By: (2)** **Date:** **Time:** **Received By:**

**Relinquished By: (3)** **Date:** **Time:** **Received By:**

**Relinquished By: (4)** **Date:** 11/19/19 **Time:** 15:52 **Received For Laboratory By:** [Signature]

**Section 5** **Requested Turnaround Time and/or Special Instructions:** Profile 348183 GM

**Temp Blank °C:** 12.54 1.8° **or Ambient [ ]** 26.1 2.1°

**Chain of Custody Seal: (Circle)** INTACT **BROKEN** **ABSENT** [Signature]

(See attached Sample Receipt Form) (See attached Sample Receipt Form)



e-Sample Receipt Form

SGS Workorder #:

1196923



1 1 9 6 9 2 3

Review Criteria		Condition (Yes, No, N/A)	1196923	
<b>Chain of Custody / Temperature Requirements</b>		<input checked="" type="checkbox"/>	Exemption permitted if sampler hand carries/delivers.	
Were Custody Seals intact? Note # & location	<input type="checkbox"/>	<input type="checkbox"/>	Absent	
COC accompanied samples?	<input checked="" type="checkbox"/>			
DOD: Were samples received in COC corresponding coolers?	<input type="checkbox"/>			
<input checked="" type="checkbox"/> **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)?	<input checked="" type="checkbox"/>	Cooler ID:	1	@ 1.8 °C Therm. ID: D54
	<input checked="" type="checkbox"/>	Cooler ID:	2	@ 2.1 °C Therm. ID: D61
	<input type="checkbox"/>	Cooler ID:		@ °C Therm. ID:
	<input type="checkbox"/>	Cooler ID:		@ °C Therm. ID:
	<input type="checkbox"/>	Cooler ID:		@ °C Therm. ID:
*If >6°C, were samples collected <8 hours ago?	<input type="checkbox"/>			
If <0°C, were sample containers ice free?	<input type="checkbox"/>			
Note: Identify containers received at non-compliant temperature . Use form FS-0029 if more space is needed.				
<b>Holding Time / Documentation / Sample Condition Requirements</b>		Note: Refer to form F-083 "Sample Guide" for specific holding times.		
Were samples received within holding time?	<input checked="" type="checkbox"/>			
Do samples match COC** (i.e., sample IDs, dates/times collected)?	<input checked="" type="checkbox"/>			
**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)	<input checked="" type="checkbox"/>			
Were proper containers (type/mass/volume/preservative***) used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	***Exemption permitted for metals (e.g,200.8/6020A).	
<b>Volatile / LL-Hg Requirements</b>				
Were Trip Blanks (i.e., VOAs, LL-Hg) in cooler with samples?	<input type="checkbox"/>			
Were all water VOA vials free of headspace (i.e., bubbles ≤ 6mm)?	<input type="checkbox"/>			
Were all soil VOAs field extracted with MeOH+BFB?	<input type="checkbox"/>			
<b>Note to Client:</b> Any "No", answer above indicates non-compliance with standard procedures and may impact data quality.				
Additional notes (if applicable):				



### Sample Containers and Preservatives

<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>	<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>
1196923001-A	Na2S2O3 for Chlorine Redu	OK			
1196923001-B	Na2S2O3 for Chlorine Redu	OK			
1196923001-C	No Preservative Required	OK			
1196923001-D	No Preservative Required	OK			
1196923001-E	No Preservative Required	OK			
1196923001-F	H2SO4 to pH < 2	OK			
1196923002-A	Na2S2O3 for Chlorine Redu	OK			
1196923002-B	Na2S2O3 for Chlorine Redu	OK			
1196923002-C	No Preservative Required	OK			
1196923002-D	No Preservative Required	OK			
1196923002-E	No Preservative Required	OK			
1196923002-F	H2SO4 to pH < 2	OK			
1196923003-A	Na2S2O3 for Chlorine Redu	OK			
1196923003-B	Na2S2O3 for Chlorine Redu	OK			
1196923003-C	No Preservative Required	OK			
1196923003-D	No Preservative Required	OK			
1196923003-E	No Preservative Required	OK			
1196923003-F	H2SO4 to pH < 2	OK			
1196923004-A	Na2S2O3 for Chlorine Redu	OK			
1196923004-B	Na2S2O3 for Chlorine Redu	OK			
1196923004-C	No Preservative Required	OK			
1196923004-D	No Preservative Required	OK			
1196923004-E	No Preservative Required	OK			
1196923004-F	H2SO4 to pH < 2	OK			
1196923005-A	Na2S2O3 for Chlorine Redu	OK			
1196923005-B	Na2S2O3 for Chlorine Redu	OK			
1196923005-C	No Preservative Required	OK			
1196923005-D	No Preservative Required	OK			
1196923005-E	No Preservative Required	OK			
1196923005-F	H2SO4 to pH < 2	OK			
1196923006-A	Na2S2O3 for Chlorine Redu	OK			
1196923006-B	Na2S2O3 for Chlorine Redu	OK			
1196923006-C	No Preservative Required	OK			
1196923006-D	No Preservative Required	OK			
1196923006-E	No Preservative Required	OK			
1196923006-F	H2SO4 to pH < 2	OK			
1196923007-A	Na2S2O3 for Chlorine Redu	OK			
1196923007-B	Na2S2O3 for Chlorine Redu	OK			
1196923007-C	No Preservative Required	OK			
1196923007-D	No Preservative Required	OK			
1196923007-E	No Preservative Required	OK			
1196923007-F	H2SO4 to pH < 2	OK			
1196923008-A	Na2S2O3 for Chlorine Redu	OK			
1196923008-B	Na2S2O3 for Chlorine Redu	OK			
1196923008-C	No Preservative Required	OK			
1196923008-D	No Preservative Required	OK			
1196923008-E	No Preservative Required	OK			
1196923008-F	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 that 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: **1196957**

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

## Case Narrative

SGS Client: **Stantec Consulting Services Inc.**

SGS Project: **1196957**

Project Name/Site: **Wasilla WWTP**

Project Contact: **John Marshall**

Refer to sample receipt form for information on sample condition.

**1197027007MS (1546379) MS**

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

**1196924001MSD (1546375) MSD**

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

**1197027007MSD (1546380) MSD**

4500NH3-G - Ammonia - MSD 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.

Print Date: 12/11/2019 11:17:27AM

## Laboratory Qualifiers

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

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

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 (DW Chemistry & 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

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Collected</u>	<u>Received</u>	<u>Matrix</u>
SW8	1196957001	11/20/2019	11/20/2019	Water (Surface, Eff., Ground)
SW9	1196957002	11/20/2019	11/20/2019	Water (Surface, Eff., Ground)
SW14	1196957003	11/20/2019	11/20/2019	Water (Surface, Eff., Ground)
SW15	1196957004	11/20/2019	11/20/2019	Water (Surface, Eff., Ground)
SW17	1196957005	11/20/2019	11/20/2019	Water (Surface, Eff., Ground)
SW18	1196957006	11/20/2019	11/20/2019	Water (Surface, Eff., Ground)
Shaw	1196957007	11/20/2019	11/20/2019	Water (Surface, Eff., Ground)
Dup2	1196957008	11/20/2019	11/20/2019	Water (Surface, Eff., Ground)

Method

SM21 4500-NH3 G  
 SM21 5210B  
 SM21 9222D  
 SM21 4500NO3-F  
 SM21 4500-N D  
 SM21 9223B  
 SM21 4500P-B,E  
 SM21 2540D

Method Description

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

### Detectable Results Summary

Client Sample ID: **SW8**  
 Lab Sample ID: 1196957001  
**Microbiology Laboratory**  
**Waters Department**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Total Coliform	90	MPN/100mL
Ammonia-N	0.0719J	mg/L
Total Kjeldahl Nitrogen	0.432J	mg/L

Client Sample ID: **SW9**  
 Lab Sample ID: 1196957002  
**Microbiology Laboratory**  
**Waters Department**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
E. Coli	3	MPN/100mL
Fecal Coliform	1.7	col/100mL
Total Coliform	19	MPN/100mL
Ammonia-N	0.119	mg/L
Nitrate-N	2.76	mg/L
Nitrite-N	0.126J	mg/L
Total Kjeldahl Nitrogen	0.476J	mg/L
Total Suspended Solids	1.37	mg/L

Client Sample ID: **SW14**  
 Lab Sample ID: 1196957003  
**Microbiology Laboratory**  
**Waters Department**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Total Coliform	166	MPN/100mL
Ammonia-N	0.0939J	mg/L
Nitrate-N	0.597	mg/L
Total Suspended Solids	3.88	mg/L

Client Sample ID: **SW15**  
 Lab Sample ID: 1196957004  
**Microbiology Laboratory**  
**Waters Department**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
E. Coli	19	MPN/100mL
Fecal Coliform	10	col/100mL
Total Coliform	236	MPN/100mL
Ammonia-N	0.117	mg/L
Nitrate-N	0.0574J	mg/L
Total Phosphorus	0.00520J	mg/L

Client Sample ID: **SW17**  
 Lab Sample ID: 1196957005  
**Microbiology Laboratory**  
**Waters Department**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
E. Coli	12	MPN/100mL
Fecal Coliform	3.3	col/100mL
Total Coliform	276	MPN/100mL
Ammonia-N	0.125	mg/L
Nitrate-N	3.45	mg/L
Total Kjeldahl Nitrogen	0.399J	mg/L
Total Phosphorus	0.0624	mg/L
Total Suspended Solids	1.60	mg/L

### Detectable Results Summary

Client Sample ID: **SW18**  
 Lab Sample ID: 1196957006  
**Microbiology Laboratory**

**Waters Department**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
E. Coli	14	MPN/100mL
Total Coliform	727	MPN/100mL
Ammonia-N	0.183	mg/L
Nitrate-N	5.56	mg/L
Total Kjeldahl Nitrogen	0.487J	mg/L
Total Phosphorus	0.325	mg/L
Total Suspended Solids	5.56	mg/L

Client Sample ID: **Shaw**  
 Lab Sample ID: 1196957007  
**Microbiology Laboratory**

**Waters Department**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
E. Coli	10	MPN/100mL
Fecal Coliform	6.7	col/100mL
Total Coliform	219	MPN/100mL
Ammonia-N	0.0883J	mg/L
Total Kjeldahl Nitrogen	0.353J	mg/L
Total Phosphorus	0.0119J	mg/L
Total Suspended Solids	3.56	mg/L

Client Sample ID: **Dup2**  
 Lab Sample ID: 1196957008  
**Microbiology Laboratory**

**Waters Department**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
E. Coli	11	MPN/100mL
Fecal Coliform	6.7	col/100mL
Total Coliform	649	MPN/100mL
Ammonia-N	0.0984J	mg/L
Nitrate-N	5.52	mg/L
Total Kjeldahl Nitrogen	0.574J	mg/L
Total Phosphorus	0.267	mg/L
Total Suspended Solids	9.78	mg/L



**Results of SW8**

Client Sample ID: **SW8**  
Client Project ID: **Wasilla WWTP**  
Lab Sample ID: 1196957001  
Lab Project ID: 1196957

Collection Date: 11/20/19 11:40  
Received Date: 11/20/19 16:25  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Microbiology Laboratory**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Biochemical Oxygen Demand	2.00 U	2.00	2.00	mg/L	1		11/21/19 15:33

**Batch Information**

Analytical Batch: BOD6485  
Analytical Method: SM21 5210B  
Analyst: A.L  
Analytical Date/Time: 11/21/19 15:33  
Container ID: 1196957001-F

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Fecal Coliform	1.67 U	1.67	1.67	col/100mL	1		11/20/19 18:18

**Batch Information**

Analytical Batch: BTF17775  
Analytical Method: SM21 9222D  
Analyst: A.L  
Analytical Date/Time: 11/20/19 18:18  
Container ID: 1196957001-B

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
E. Coli	1 U	1	1	MPN/100n	1		11/21/19 09:45
Total Coliform	90	1	1	MPN/100n	1		11/21/19 09:45

**Batch Information**

Analytical Batch: BTF17778  
Analytical Method: SM21 9223B  
Analyst: A.L  
Analytical Date/Time: 11/21/19 09:45  
Container ID: 1196957001-A

Print Date: 12/11/2019 11:17:33AM

J flagging is activated





**Results of SW8**

Client Sample ID: **SW8**  
Client Project ID: **Wasilla WWTP**  
Lab Sample ID: 1196957001  
Lab Project ID: 1196957

Collection Date: 11/20/19 11:40  
Received Date: 11/20/19 16:25  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Waters Department**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Suspended Solids	0.500 U	1.00	0.310	mg/L	1		11/25/19 17:13

**Batch Information**

Analytical Batch: STS6562  
Analytical Method: SM21 2540D  
Analyst: EWW  
Analytical Date/Time: 11/25/19 17:13  
Container ID: 1196957001-E

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Kjeldahl Nitrogen	0.432 J	1.00	0.310	mg/L	1		12/04/19 17:17

**Batch Information**

Analytical Batch: WDA4697	Prep Batch: WXX13134
Analytical Method: SM21 4500-N D	Prep Method: METHOD
Analyst: DMM	Prep Date/Time: 12/04/19 10:52
Analytical Date/Time: 12/04/19 17:17	Prep Initial Wt./Vol.: 25 mL
Container ID: 1196957001-D	Prep Extract Vol: 25 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Ammonia-N	0.0719 J	0.100	0.0310	mg/L	1		12/09/19 14:41

**Batch Information**

Analytical Batch: WDA4699	Prep Batch: WXX13140
Analytical Method: SM21 4500-NH3 G	Prep Method: METHOD
Analyst: EWW	Prep Date/Time: 12/09/19 13:00
Analytical Date/Time: 12/09/19 14:41	Prep Initial Wt./Vol.: 6 mL
Container ID: 1196957001-D	Prep Extract Vol: 6 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Nitrate-N	0.100 U	0.200	0.0500	mg/L	2		11/20/19 18:02
Nitrite-N	0.100 U	0.200	0.0500	mg/L	2		11/20/19 18:02

Print Date: 12/11/2019 11:17:33AM

J flagging is activated

## Results of SW8

Client Sample ID: **SW8**  
 Client Project ID: **Wasilla WWTP**  
 Lab Sample ID: 1196957001  
 Lab Project ID: 1196957

Collection Date: 11/20/19 11:40  
 Received Date: 11/20/19 16:25  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

## Results by Waters Department

### Batch Information

Analytical Batch: WFI2847  
 Analytical Method: SM21 4500NO3-F  
 Analyst: EWW  
 Analytical Date/Time: 11/20/19 18:02  
 Container ID: 1196957001-C

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Phosphorus	0.0100 U	0.0200	0.00500	mg/L	1		12/05/19 11:51

### Batch Information

Analytical Batch: WDA4698  
 Analytical Method: SM21 4500P-B,E  
 Analyst: DMM  
 Analytical Date/Time: 12/05/19 11:51  
 Container ID: 1196957001-D

Prep Batch: WXX13135  
 Prep Method: SM21 4500P-B,E  
 Prep Date/Time: 12/04/19 17:18  
 Prep Initial Wt./Vol.: 25 mL  
 Prep Extract Vol: 25 mL



**Results of SW9**

Client Sample ID: **SW9**  
Client Project ID: **Wasilla WWTP**  
Lab Sample ID: 1196957002  
Lab Project ID: 1196957

Collection Date: 11/20/19 11:26  
Received Date: 11/20/19 16:25  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Microbiology Laboratory**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Biochemical Oxygen Demand	2.00 U	2.00	2.00	mg/L	1		11/21/19 15:33

**Batch Information**

Analytical Batch: BOD6485  
Analytical Method: SM21 5210B  
Analyst: A.L  
Analytical Date/Time: 11/21/19 15:33  
Container ID: 1196957002-F

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Fecal Coliform	1.7	1.67	1.67	col/100mL	1		11/20/19 18:18

**Batch Information**

Analytical Batch: BTF17775  
Analytical Method: SM21 9222D  
Analyst: A.L  
Analytical Date/Time: 11/20/19 18:18  
Container ID: 1196957002-B

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
E. Coli	3	1	1	MPN/100n	1		11/21/19 09:45
Total Coliform	19	1	1	MPN/100n	1		11/21/19 09:45

**Batch Information**

Analytical Batch: BTF17778  
Analytical Method: SM21 9223B  
Analyst: A.L  
Analytical Date/Time: 11/21/19 09:45  
Container ID: 1196957002-A

Print Date: 12/11/2019 11:17:33AM

J flagging is activated



**Results of SW9**

Client Sample ID: **SW9**  
Client Project ID: **Wasilla WWTP**  
Lab Sample ID: 1196957002  
Lab Project ID: 1196957

Collection Date: 11/20/19 11:26  
Received Date: 11/20/19 16:25  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Waters Department**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Suspended Solids	1.37	1.05	0.326	mg/L	1		11/25/19 17:13

**Batch Information**

Analytical Batch: STS6562  
Analytical Method: SM21 2540D  
Analyst: EWW  
Analytical Date/Time: 11/25/19 17:13  
Container ID: 1196957002-E

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Kjeldahl Nitrogen	0.476 J	1.00	0.310	mg/L	1		12/04/19 17:19

**Batch Information**

Analytical Batch: WDA4697	Prep Batch: WXX13134
Analytical Method: SM21 4500-N D	Prep Method: METHOD
Analyst: DMM	Prep Date/Time: 12/04/19 10:52
Analytical Date/Time: 12/04/19 17:19	Prep Initial Wt./Vol.: 25 mL
Container ID: 1196957002-D	Prep Extract Vol: 25 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Ammonia-N	0.119	0.100	0.0310	mg/L	1		12/09/19 14:42

**Batch Information**

Analytical Batch: WDA4699	Prep Batch: WXX13140
Analytical Method: SM21 4500-NH3 G	Prep Method: METHOD
Analyst: EWW	Prep Date/Time: 12/09/19 13:00
Analytical Date/Time: 12/09/19 14:42	Prep Initial Wt./Vol.: 6 mL
Container ID: 1196957002-D	Prep Extract Vol: 6 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Nitrate-N	2.76	0.200	0.0500	mg/L	2		11/20/19 18:08
Nitrite-N	0.126 J	0.200	0.0500	mg/L	2		11/20/19 18:08

## Results of SW9

Client Sample ID: **SW9**  
 Client Project ID: **Wasilla WWTP**  
 Lab Sample ID: 1196957002  
 Lab Project ID: 1196957

Collection Date: 11/20/19 11:26  
 Received Date: 11/20/19 16:25  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

## Results by Waters Department

### Batch Information

Analytical Batch: WFI2847  
 Analytical Method: SM21 4500NO3-F  
 Analyst: EWW  
 Analytical Date/Time: 11/20/19 18:08  
 Container ID: 1196957002-C

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Phosphorus	0.0100 U	0.0200	0.00500	mg/L	1		12/05/19 11:52

### Batch Information

Analytical Batch: WDA4698  
 Analytical Method: SM21 4500P-B,E  
 Analyst: DMM  
 Analytical Date/Time: 12/05/19 11:52  
 Container ID: 1196957002-D

Prep Batch: WXX13135  
 Prep Method: SM21 4500P-B,E  
 Prep Date/Time: 12/04/19 17:18  
 Prep Initial Wt./Vol.: 25 mL  
 Prep Extract Vol: 25 mL



Results of **SW14**

Client Sample ID: **SW14**  
Client Project ID: **Wasilla WWTP**  
Lab Sample ID: 1196957003  
Lab Project ID: 1196957

Collection Date: 11/20/19 14:16  
Received Date: 11/20/19 16:25  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

Results by **Microbiology Laboratory**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Biochemical Oxygen Demand	2.00 U	2.00	2.00	mg/L	1		11/21/19 15:33

**Batch Information**

Analytical Batch: BOD6485  
Analytical Method: SM21 5210B  
Analyst: A.L  
Analytical Date/Time: 11/21/19 15:33  
Container ID: 1196957003-F

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Fecal Coliform	1.67 U	1.67	1.67	col/100mL	1		11/20/19 18:18

**Batch Information**

Analytical Batch: BTF17775  
Analytical Method: SM21 9222D  
Analyst: A.L  
Analytical Date/Time: 11/20/19 18:18  
Container ID: 1196957003-B

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
E. Coli	1 U	1	1	MPN/100n	1		11/21/19 09:45
Total Coliform	166	1	1	MPN/100n	1		11/21/19 09:45

**Batch Information**

Analytical Batch: BTF17778  
Analytical Method: SM21 9223B  
Analyst: A.L  
Analytical Date/Time: 11/21/19 09:45  
Container ID: 1196957003-A

Print Date: 12/11/2019 11:17:33AM

J flagging is activated



**Results of SW14**

Client Sample ID: **SW14**  
Client Project ID: **Wasilla WWTP**  
Lab Sample ID: 1196957003  
Lab Project ID: 1196957

Collection Date: 11/20/19 14:16  
Received Date: 11/20/19 16:25  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Waters Department**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Suspended Solids	3.88	1.02	0.316	mg/L	1		11/25/19 17:13

**Batch Information**

Analytical Batch: STS6562  
Analytical Method: SM21 2540D  
Analyst: EWW  
Analytical Date/Time: 11/25/19 17:13  
Container ID: 1196957003-E

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Kjeldahl Nitrogen	0.500 U	1.00	0.310	mg/L	1		12/04/19 17:20

**Batch Information**

Analytical Batch: WDA4697	Prep Batch: WXX13134
Analytical Method: SM21 4500-N D	Prep Method: METHOD
Analyst: DMM	Prep Date/Time: 12/04/19 10:52
Analytical Date/Time: 12/04/19 17:20	Prep Initial Wt./Vol.: 25 mL
Container ID: 1196957003-D	Prep Extract Vol: 25 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Ammonia-N	0.0939 J	0.100	0.0310	mg/L	1		12/09/19 14:44

**Batch Information**

Analytical Batch: WDA4699	Prep Batch: WXX13140
Analytical Method: SM21 4500-NH3 G	Prep Method: METHOD
Analyst: EWW	Prep Date/Time: 12/09/19 13:00
Analytical Date/Time: 12/09/19 14:44	Prep Initial Wt./Vol.: 6 mL
Container ID: 1196957003-D	Prep Extract Vol: 6 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Nitrate-N	0.597	0.200	0.0500	mg/L	2		11/20/19 18:09
Nitrite-N	0.100 U	0.200	0.0500	mg/L	2		11/20/19 18:09



Results of **SW14**

Client Sample ID: **SW14**  
Client Project ID: **Wasilla WWTP**  
Lab Sample ID: 1196957003  
Lab Project ID: 1196957

Collection Date: 11/20/19 14:16  
Received Date: 11/20/19 16:25  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

Results by **Waters Department**

**Batch Information**

Analytical Batch: WFI2847  
Analytical Method: SM21 4500NO3-F  
Analyst: EWW  
Analytical Date/Time: 11/20/19 18:09  
Container ID: 1196957003-C

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Phosphorus	0.0100 U	0.0200	0.00500	mg/L	1		12/05/19 11:53

**Batch Information**

Analytical Batch: WDA4698  
Analytical Method: SM21 4500P-B,E  
Analyst: DMM  
Analytical Date/Time: 12/05/19 11:53  
Container ID: 1196957003-D

Prep Batch: WXX13135  
Prep Method: SM21 4500P-B,E  
Prep Date/Time: 12/04/19 17:18  
Prep Initial Wt./Vol.: 25 mL  
Prep Extract Vol: 25 mL





**Results of SW15**

Client Sample ID: **SW15**  
Client Project ID: **Wasilla WWTP**  
Lab Sample ID: 1196957004  
Lab Project ID: 1196957

Collection Date: 11/20/19 14:11  
Received Date: 11/20/19 16:25  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Microbiology Laboratory**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Biochemical Oxygen Demand	2.00 U	2.00	2.00	mg/L	1		11/21/19 15:33

**Batch Information**

Analytical Batch: BOD6485  
Analytical Method: SM21 5210B  
Analyst: A.L  
Analytical Date/Time: 11/21/19 15:33  
Container ID: 1196957004-F

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Fecal Coliform	10	1.67	1.67	col/100mL	1		11/20/19 18:18

**Batch Information**

Analytical Batch: BTF17775  
Analytical Method: SM21 9222D  
Analyst: A.L  
Analytical Date/Time: 11/20/19 18:18  
Container ID: 1196957004-B

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
E. Coli	19	1	1	MPN/100n	1		11/21/19 09:45
Total Coliform	236	1	1	MPN/100n	1		11/21/19 09:45

**Batch Information**

Analytical Batch: BTF17778  
Analytical Method: SM21 9223B  
Analyst: A.L  
Analytical Date/Time: 11/21/19 09:45  
Container ID: 1196957004-A

Print Date: 12/11/2019 11:17:33AM

J flagging is activated



Results of **SW15**

Client Sample ID: **SW15**  
Client Project ID: **Wasilla WWTP**  
Lab Sample ID: 1196957004  
Lab Project ID: 1196957

Collection Date: 11/20/19 14:11  
Received Date: 11/20/19 16:25  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

Results by **Waters Department**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Suspended Solids	0.510 U	1.02	0.316	mg/L	1		11/25/19 17:13

**Batch Information**

Analytical Batch: STS6562  
Analytical Method: SM21 2540D  
Analyst: EWW  
Analytical Date/Time: 11/25/19 17:13  
Container ID: 1196957004-E

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Kjeldahl Nitrogen	0.500 U	1.00	0.310	mg/L	1		12/04/19 17:21

**Batch Information**

Analytical Batch: WDA4697	Prep Batch: WXX13134
Analytical Method: SM21 4500-N D	Prep Method: METHOD
Analyst: DMM	Prep Date/Time: 12/04/19 10:52
Analytical Date/Time: 12/04/19 17:21	Prep Initial Wt./Vol.: 25 mL
Container ID: 1196957004-D	Prep Extract Vol: 25 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Ammonia-N	0.117	0.100	0.0310	mg/L	1		12/09/19 14:46

**Batch Information**

Analytical Batch: WDA4699	Prep Batch: WXX13140
Analytical Method: SM21 4500-NH3 G	Prep Method: METHOD
Analyst: EWW	Prep Date/Time: 12/09/19 13:00
Analytical Date/Time: 12/09/19 14:46	Prep Initial Wt./Vol.: 6 mL
Container ID: 1196957004-D	Prep Extract Vol: 6 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Nitrate-N	0.0574 J	0.200	0.0500	mg/L	2		11/20/19 18:11
Nitrite-N	0.100 U	0.200	0.0500	mg/L	2		11/20/19 18:11

Print Date: 12/11/2019 11:17:33AM

J flagging is activated

## Results of SW15

Client Sample ID: **SW15**  
 Client Project ID: **Wasilla WWTP**  
 Lab Sample ID: 1196957004  
 Lab Project ID: 1196957

Collection Date: 11/20/19 14:11  
 Received Date: 11/20/19 16:25  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

## Results by Waters Department

### Batch Information

Analytical Batch: WFI2847  
 Analytical Method: SM21 4500NO3-F  
 Analyst: EWW  
 Analytical Date/Time: 11/20/19 18:11  
 Container ID: 1196957004-C

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Phosphorus	0.00520 J	0.0200	0.00500	mg/L	1		12/05/19 11:53

### Batch Information

Analytical Batch: WDA4698  
 Analytical Method: SM21 4500P-B,E  
 Analyst: DMM  
 Analytical Date/Time: 12/05/19 11:53  
 Container ID: 1196957004-D

Prep Batch: WXX13135  
 Prep Method: SM21 4500P-B,E  
 Prep Date/Time: 12/04/19 17:18  
 Prep Initial Wt./Vol.: 25 mL  
 Prep Extract Vol: 25 mL



**Results of SW17**

Client Sample ID: **SW17**  
Client Project ID: **Wasilla WWTP**  
Lab Sample ID: 1196957005  
Lab Project ID: 1196957

Collection Date: 11/20/19 13:38  
Received Date: 11/20/19 16:25  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Microbiology Laboratory**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Biochemical Oxygen Demand	2.00 U	2.00	2.00	mg/L	1		11/21/19 15:33

**Batch Information**

Analytical Batch: BOD6485  
Analytical Method: SM21 5210B  
Analyst: A.L  
Analytical Date/Time: 11/21/19 15:33  
Container ID: 1196957005-F

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Fecal Coliform	3.3	1.67	1.67	col/100mL	1		11/20/19 18:18

**Batch Information**

Analytical Batch: BTF17775  
Analytical Method: SM21 9222D  
Analyst: A.L  
Analytical Date/Time: 11/20/19 18:18  
Container ID: 1196957005-B

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
E. Coli	12	1	1	MPN/100n	1		11/21/19 09:45
Total Coliform	276	1	1	MPN/100n	1		11/21/19 09:45

**Batch Information**

Analytical Batch: BTF17778  
Analytical Method: SM21 9223B  
Analyst: A.L  
Analytical Date/Time: 11/21/19 09:45  
Container ID: 1196957005-A



**Results of SW17**

Client Sample ID: **SW17**  
Client Project ID: **Wasilla WWTP**  
Lab Sample ID: 1196957005  
Lab Project ID: 1196957

Collection Date: 11/20/19 13:38  
Received Date: 11/20/19 16:25  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Waters Department**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable</u> <u>Limits</u>	<u>Date Analyzed</u>
Total Suspended Solids	1.60		1.00	0.310	mg/L	1		11/25/19 17:13

**Batch Information**

Analytical Batch: STS6562  
Analytical Method: SM21 2540D  
Analyst: EWW  
Analytical Date/Time: 11/25/19 17:13  
Container ID: 1196957005-E

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable</u> <u>Limits</u>	<u>Date Analyzed</u>
Total Kjeldahl Nitrogen	0.399	J	1.00	0.310	mg/L	1		12/04/19 17:23

**Batch Information**

Analytical Batch: WDA4697	Prep Batch: WXX13134
Analytical Method: SM21 4500-N D	Prep Method: METHOD
Analyst: DMM	Prep Date/Time: 12/04/19 10:52
Analytical Date/Time: 12/04/19 17:23	Prep Initial Wt./Vol.: 25 mL
Container ID: 1196957005-D	Prep Extract Vol: 25 mL

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable</u> <u>Limits</u>	<u>Date Analyzed</u>
Ammonia-N	0.125		0.100	0.0310	mg/L	1		12/09/19 14:47

**Batch Information**

Analytical Batch: WDA4699	Prep Batch: WXX13140
Analytical Method: SM21 4500-NH3 G	Prep Method: METHOD
Analyst: EWW	Prep Date/Time: 12/09/19 13:00
Analytical Date/Time: 12/09/19 14:47	Prep Initial Wt./Vol.: 6 mL
Container ID: 1196957005-D	Prep Extract Vol: 6 mL

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable</u> <u>Limits</u>	<u>Date Analyzed</u>
Nitrate-N	3.45		0.200	0.0500	mg/L	2		11/20/19 18:13
Nitrite-N	0.100	U	0.200	0.0500	mg/L	2		11/20/19 18:13



Results of **SW17**

Client Sample ID: **SW17**  
Client Project ID: **Wasilla WWTP**  
Lab Sample ID: 1196957005  
Lab Project ID: 1196957

Collection Date: 11/20/19 13:38  
Received Date: 11/20/19 16:25  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

Results by **Waters Department**

**Batch Information**

Analytical Batch: WFI2847  
Analytical Method: SM21 4500NO3-F  
Analyst: EWW  
Analytical Date/Time: 11/20/19 18:13  
Container ID: 1196957005-C

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Phosphorus	0.0624	0.0200	0.00500	mg/L	1		12/05/19 11:58

**Batch Information**

Analytical Batch: WDA4698  
Analytical Method: SM21 4500P-B,E  
Analyst: DMM  
Analytical Date/Time: 12/05/19 11:58  
Container ID: 1196957005-D

Prep Batch: WXX13135  
Prep Method: SM21 4500P-B,E  
Prep Date/Time: 12/04/19 17:18  
Prep Initial Wt./Vol.: 25 mL  
Prep Extract Vol: 25 mL



**Results of SW18**

Client Sample ID: **SW18**  
Client Project ID: **Wasilla WWTP**  
Lab Sample ID: 1196957006  
Lab Project ID: 1196957

Collection Date: 11/20/19 13:13  
Received Date: 11/20/19 16:25  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Microbiology Laboratory**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Biochemical Oxygen Demand	2.00 U	2.00	2.00	mg/L	1		11/21/19 15:33

**Batch Information**

Analytical Batch: BOD6485  
Analytical Method: SM21 5210B  
Analyst: A.L  
Analytical Date/Time: 11/21/19 15:33  
Container ID: 1196957006-F

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Fecal Coliform	1.67 U	1.67	1.67	col/100mL	1		11/20/19 18:18

**Batch Information**

Analytical Batch: BTF17775  
Analytical Method: SM21 9222D  
Analyst: A.L  
Analytical Date/Time: 11/20/19 18:18  
Container ID: 1196957006-B

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
E. Coli	14	1	1	MPN/100n	1		11/21/19 09:45
Total Coliform	727	1	1	MPN/100n	1		11/21/19 09:45

**Batch Information**

Analytical Batch: BTF17778  
Analytical Method: SM21 9223B  
Analyst: A.L  
Analytical Date/Time: 11/21/19 09:45  
Container ID: 1196957006-A



Results of **SW18**

Client Sample ID: **SW18**  
Client Project ID: **Wasilla WWTP**  
Lab Sample ID: 1196957006  
Lab Project ID: 1196957

Collection Date: 11/20/19 13:13  
Received Date: 11/20/19 16:25  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

Results by **Waters Department**

<u>Parameter</u>	<u>Result</u> <u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable</u> <u>Limits</u>	<u>Date Analyzed</u>
Total Suspended Solids	5.56	1.11	0.344	mg/L	1		11/25/19 17:13

**Batch Information**

Analytical Batch: STS6562  
Analytical Method: SM21 2540D  
Analyst: EWW  
Analytical Date/Time: 11/25/19 17:13  
Container ID: 1196957006-E

<u>Parameter</u>	<u>Result</u> <u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable</u> <u>Limits</u>	<u>Date Analyzed</u>
Total Kjeldahl Nitrogen	0.487 J	1.00	0.310	mg/L	1		12/04/19 17:24

**Batch Information**

Analytical Batch: WDA4697	Prep Batch: WXX13134
Analytical Method: SM21 4500-N D	Prep Method: METHOD
Analyst: DMM	Prep Date/Time: 12/04/19 10:52
Analytical Date/Time: 12/04/19 17:24	Prep Initial Wt./Vol.: 25 mL
Container ID: 1196957006-D	Prep Extract Vol: 25 mL

<u>Parameter</u>	<u>Result</u> <u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable</u> <u>Limits</u>	<u>Date Analyzed</u>
Ammonia-N	0.183	0.100	0.0310	mg/L	1		12/09/19 14:49

**Batch Information**

Analytical Batch: WDA4699	Prep Batch: WXX13140
Analytical Method: SM21 4500-NH3 G	Prep Method: METHOD
Analyst: EWW	Prep Date/Time: 12/09/19 13:00
Analytical Date/Time: 12/09/19 14:49	Prep Initial Wt./Vol.: 6 mL
Container ID: 1196957006-D	Prep Extract Vol: 6 mL

<u>Parameter</u>	<u>Result</u> <u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable</u> <u>Limits</u>	<u>Date Analyzed</u>
Nitrate-N	5.56	0.200	0.0500	mg/L	2		11/20/19 18:15
Nitrite-N	0.100 U	0.200	0.0500	mg/L	2		11/20/19 18:15





Results of **SW18**

Client Sample ID: **SW18**  
Client Project ID: **Wasilla WWTP**  
Lab Sample ID: 1196957006  
Lab Project ID: 1196957

Collection Date: 11/20/19 13:13  
Received Date: 11/20/19 16:25  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

Results by **Waters Department**

**Batch Information**

Analytical Batch: WFI2847  
Analytical Method: SM21 4500NO3-F  
Analyst: EWW  
Analytical Date/Time: 11/20/19 18:15  
Container ID: 1196957006-C

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Phosphorus	0.325	0.0200	0.00500	mg/L	1		12/05/19 11:58

**Batch Information**

Analytical Batch: WDA4698  
Analytical Method: SM21 4500P-B,E  
Analyst: DMM  
Analytical Date/Time: 12/05/19 11:58  
Container ID: 1196957006-D

Prep Batch: WXX13135  
Prep Method: SM21 4500P-B,E  
Prep Date/Time: 12/04/19 17:18  
Prep Initial Wt./Vol.: 25 mL  
Prep Extract Vol: 25 mL



**Results of Shaw**

Client Sample ID: **Shaw**  
Client Project ID: **Wasilla WWTP**  
Lab Sample ID: 1196957007  
Lab Project ID: 1196957

Collection Date: 11/20/19 12:19  
Received Date: 11/20/19 16:25  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Microbiology Laboratory**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Biochemical Oxygen Demand	2.00 U	2.00	2.00	mg/L	1		11/21/19 15:33

**Batch Information**

Analytical Batch: BOD6485  
Analytical Method: SM21 5210B  
Analyst: A.L  
Analytical Date/Time: 11/21/19 15:33  
Container ID: 1196957007-F

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Fecal Coliform	6.7	1.67	1.67	col/100mL	1		11/20/19 18:18

**Batch Information**

Analytical Batch: BTF17775  
Analytical Method: SM21 9222D  
Analyst: A.L  
Analytical Date/Time: 11/20/19 18:18  
Container ID: 1196957007-B

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
E. Coli	10	1	1	MPN/100n	1		11/21/19 09:45
Total Coliform	219	1	1	MPN/100n	1		11/21/19 09:45

**Batch Information**

Analytical Batch: BTF17778  
Analytical Method: SM21 9223B  
Analyst: A.L  
Analytical Date/Time: 11/21/19 09:45  
Container ID: 1196957007-A



**Results of Shaw**

Client Sample ID: **Shaw**  
Client Project ID: **Wasilla WWTP**  
Lab Sample ID: 1196957007  
Lab Project ID: 1196957

Collection Date: 11/20/19 12:19  
Received Date: 11/20/19 16:25  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Waters Department**

<u>Parameter</u>	<u>Result</u> <u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable</u> <u>Limits</u>	<u>Date Analyzed</u>
Total Suspended Solids	3.56	1.11	0.344	mg/L	1		11/25/19 17:13

**Batch Information**

Analytical Batch: STS6562  
Analytical Method: SM21 2540D  
Analyst: EWW  
Analytical Date/Time: 11/25/19 17:13  
Container ID: 1196957007-E

<u>Parameter</u>	<u>Result</u> <u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable</u> <u>Limits</u>	<u>Date Analyzed</u>
Total Kjeldahl Nitrogen	0.353 J	1.00	0.310	mg/L	1		12/04/19 17:25

**Batch Information**

Analytical Batch: WDA4697	Prep Batch: WXX13134
Analytical Method: SM21 4500-N D	Prep Method: METHOD
Analyst: DMM	Prep Date/Time: 12/04/19 10:52
Analytical Date/Time: 12/04/19 17:25	Prep Initial Wt./Vol.: 25 mL
Container ID: 1196957007-D	Prep Extract Vol: 25 mL

<u>Parameter</u>	<u>Result</u> <u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable</u> <u>Limits</u>	<u>Date Analyzed</u>
Ammonia-N	0.0883 J	0.100	0.0310	mg/L	1		12/09/19 14:51

**Batch Information**

Analytical Batch: WDA4699	Prep Batch: WXX13140
Analytical Method: SM21 4500-NH3 G	Prep Method: METHOD
Analyst: EWW	Prep Date/Time: 12/09/19 13:00
Analytical Date/Time: 12/09/19 14:51	Prep Initial Wt./Vol.: 6 mL
Container ID: 1196957007-D	Prep Extract Vol: 6 mL

<u>Parameter</u>	<u>Result</u> <u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable</u> <u>Limits</u>	<u>Date Analyzed</u>
Nitrate-N	0.100 U	0.200	0.0500	mg/L	2		11/20/19 18:16
Nitrite-N	0.100 U	0.200	0.0500	mg/L	2		11/20/19 18:16

Print Date: 12/11/2019 11:17:33AM

J flagging is activated



Results of **Shaw**

Client Sample ID: **Shaw**  
Client Project ID: **Wasilla WWTP**  
Lab Sample ID: 1196957007  
Lab Project ID: 1196957

Collection Date: 11/20/19 12:19  
Received Date: 11/20/19 16:25  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

Results by **Waters Department**

**Batch Information**

Analytical Batch: WFI2847  
Analytical Method: SM21 4500NO3-F  
Analyst: EWW  
Analytical Date/Time: 11/20/19 18:16  
Container ID: 1196957007-C

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Phosphorus	0.0119 J	0.0200	0.00500	mg/L	1		12/05/19 11:59

**Batch Information**

Analytical Batch: WDA4698  
Analytical Method: SM21 4500P-B,E  
Analyst: DMM  
Analytical Date/Time: 12/05/19 11:59  
Container ID: 1196957007-D

Prep Batch: WXX13135  
Prep Method: SM21 4500P-B,E  
Prep Date/Time: 12/04/19 17:18  
Prep Initial Wt./Vol.: 25 mL  
Prep Extract Vol: 25 mL



**Results of Dup2**

Client Sample ID: **Dup2**  
Client Project ID: **Wasilla WWTP**  
Lab Sample ID: 1196957008  
Lab Project ID: 1196957

Collection Date: 11/20/19 13:13  
Received Date: 11/20/19 16:25  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Microbiology Laboratory**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Biochemical Oxygen Demand	2.00 U	2.00	2.00	mg/L	1		11/21/19 15:33

**Batch Information**

Analytical Batch: BOD6485  
Analytical Method: SM21 5210B  
Analyst: A.L  
Analytical Date/Time: 11/21/19 15:33  
Container ID: 1196957008-F

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Fecal Coliform	6.7	1.67	1.67	col/100mL	1		11/20/19 18:18

**Batch Information**

Analytical Batch: BTF17775  
Analytical Method: SM21 9222D  
Analyst: A.L  
Analytical Date/Time: 11/20/19 18:18  
Container ID: 1196957008-B

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
E. Coli	11	1	1	MPN/100n	1		11/21/19 09:45
Total Coliform	649	1	1	MPN/100n	1		11/21/19 09:45

**Batch Information**

Analytical Batch: BTF17778  
Analytical Method: SM21 9223B  
Analyst: A.L  
Analytical Date/Time: 11/21/19 09:45  
Container ID: 1196957008-A

Print Date: 12/11/2019 11:17:33AM

J flagging is activated



**Results of Dup2**

Client Sample ID: **Dup2**  
Client Project ID: **Wasilla WWTP**  
Lab Sample ID: 1196957008  
Lab Project ID: 1196957

Collection Date: 11/20/19 13:13  
Received Date: 11/20/19 16:25  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Waters Department**

<u>Parameter</u>	<u>Result</u> <u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable</u> <u>Limits</u>	<u>Date Analyzed</u>
Total Suspended Solids	9.78	1.10	0.341	mg/L	1		11/25/19 17:13

**Batch Information**

Analytical Batch: STS6562  
Analytical Method: SM21 2540D  
Analyst: EWW  
Analytical Date/Time: 11/25/19 17:13  
Container ID: 1196957008-E

<u>Parameter</u>	<u>Result</u> <u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable</u> <u>Limits</u>	<u>Date Analyzed</u>
Total Kjeldahl Nitrogen	0.574 J	1.00	0.310	mg/L	1		12/04/19 17:27

**Batch Information**

Analytical Batch: WDA4697	Prep Batch: WXX13134
Analytical Method: SM21 4500-N D	Prep Method: METHOD
Analyst: DMM	Prep Date/Time: 12/04/19 10:52
Analytical Date/Time: 12/04/19 17:27	Prep Initial Wt./Vol.: 25 mL
Container ID: 1196957008-D	Prep Extract Vol: 25 mL

<u>Parameter</u>	<u>Result</u> <u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable</u> <u>Limits</u>	<u>Date Analyzed</u>
Ammonia-N	0.0984 J	0.100	0.0310	mg/L	1		12/09/19 14:52

**Batch Information**

Analytical Batch: WDA4699	Prep Batch: WXX13140
Analytical Method: SM21 4500-NH3 G	Prep Method: METHOD
Analyst: EWW	Prep Date/Time: 12/09/19 13:00
Analytical Date/Time: 12/09/19 14:52	Prep Initial Wt./Vol.: 6 mL
Container ID: 1196957008-D	Prep Extract Vol: 6 mL

<u>Parameter</u>	<u>Result</u> <u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable</u> <u>Limits</u>	<u>Date Analyzed</u>
Nitrate-N	5.52	0.200	0.0500	mg/L	2		11/20/19 18:18
Nitrite-N	0.100 U	0.200	0.0500	mg/L	2		11/20/19 18:18

Print Date: 12/11/2019 11:17:33AM

J flagging is activated



Results of Dup2

Client Sample ID: Dup2
Client Project ID: Wasilla WWTP
Lab Sample ID: 1196957008
Lab Project ID: 1196957

Collection Date: 11/20/19 13:13
Received Date: 11/20/19 16:25
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Waters Department

Batch Information

Analytical Batch: WFI2847
Analytical Method: SM21 4500NO3-F
Analyst: EWW
Analytical Date/Time: 11/20/19 18:18
Container ID: 1196957008-C

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Row 1: Total Phosphorus, 0.267, 0.0200, 0.00500, mg/L, 1, 12/05/19 12:00

Batch Information

Analytical Batch: WDA4698
Analytical Method: SM21 4500P-B,E
Analyst: DMM
Analytical Date/Time: 12/05/19 12:00
Container ID: 1196957008-D
Prep Batch: WXX13135
Prep Method: SM21 4500P-B,E
Prep Date/Time: 12/04/19 17:18
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

## Method Blank

Blank ID: MB for HBN 1802435 [BOD/6485]

Matrix: Water (Surface, Eff., Ground)

Blank Lab ID: 1544478

QC for Samples:

1196957001, 1196957002, 1196957003, 1196957004, 1196957005, 1196957006, 1196957007, 1196957008

## Results by SM21 5210B

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

## Batch Information

Analytical Batch: BOD6485

Analytical Method: SM21 5210B

Instrument:

Analyst: A.L

Analytical Date/Time: 11/21/2019 12:21:21PM

Print Date: 12/11/2019 11:17:37AM



## Blank Spike Summary

Blank Spike ID: LCS for HBN 1196957 [BOD6485]

Blank Spike Lab ID: 1544479

Date Analyzed: 11/21/2019 12:21

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1196957001, 1196957002, 1196957003, 1196957004, 1196957005, 1196957006, 1196957007, 1196957008

## Results by SM21 5210B

Parameter	Blank Spike (mg/L)			CL
	Spike	Result	Rec (%)	
Biochemical Oxygen Demand	198	214	108	( 84.6-115.4

## Batch Information

Analytical Batch: **BOD6485**

Analytical Method: **SM21 5210B**

Instrument:

Analyst: **A.L**

Print Date: 12/11/2019 11:17:40AM



**Method Blank**

Blank ID: MB for HBN 1802407 [BTF/17775]  
Blank Lab ID: 1544370

Matrix: Water (Surface, Eff., Ground)

QC for Samples:

1196957001, 1196957002, 1196957003, 1196957004, 1196957005, 1196957006, 1196957007, 1196957008

**Results by SM21 9222D**

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

**Batch Information**

Analytical Batch: BTF17775  
Analytical Method: SM21 9222D  
Instrument:  
Analyst: A.L  
Analytical Date/Time: 11/20/2019 6:18:56PM

Print Date: 12/11/2019 11:17:41AM

## Method Blank

Blank ID: MB for HBN 1802457 [BTF/17778]

Matrix: Water (Surface, Eff., Ground)

Blank Lab ID: 1544575

QC for Samples:

1196957001, 1196957002, 1196957003, 1196957004, 1196957005, 1196957006, 1196957007, 1196957008

## Results by SM21 9223B

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

## Batch Information

Analytical Batch: BTF17778

Analytical Method: SM21 9223B

Instrument:

Analyst: A.L

Analytical Date/Time: 11/21/2019 9:45:19AM

Print Date: 12/11/2019 11:17:46AM

## Method Blank

Blank ID: MB for HBN 1802525 [STS/6562]

Matrix: Water (Surface, Eff., Ground)

Blank Lab ID: 1544809

QC for Samples:

1196957001, 1196957002, 1196957003, 1196957004, 1196957005, 1196957006, 1196957007, 1196957008

## Results by SM21 2540D

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

## Batch Information

Analytical Batch: STS6562

Analytical Method: SM21 2540D

Instrument:

Analyst: EWW

Analytical Date/Time: 11/25/2019 5:13:50PM

Print Date: 12/11/2019 11:17:50AM

## Duplicate Sample Summary

Original Sample ID: 1196973001

Duplicate Sample ID: 1544812

QC for Samples:

1196957001, 1196957002, 1196957003, 1196957004, 1196957005, 1196957006, 1196957007, 1196957008

Analysis Date: 11/25/2019 17:13

Matrix: Water (Surface, Eff., Ground)

## Results by SM21 2540D

<u>NAME</u>	<u>Original</u>	<u>Duplicate</u>	<u>Units</u>	<u>RPD (%)</u>	<u>RPD CL</u>
Total Suspended Solids	166	175	mg/L	5.20*	(< 5 )

## Batch Information

Analytical Batch: STS6562

Analytical Method: SM21 2540D

Instrument:

Analyst: EWW

Print Date: 12/11/2019 11:17:51AM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1196957 [STS6562]  
 Blank Spike Lab ID: 1544810  
 Date Analyzed: 11/25/2019 17:13

Spike Duplicate ID: LCSD for HBN 1196957 [STS6562]  
 Spike Duplicate Lab ID: 1544811  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1196957001, 1196957002, 1196957003, 1196957004, 1196957005, 1196957006, 1196957007, 1196957008

## Results by SM21 2540D

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Suspended Solids	25	26.1	104	25	25.9	104	( 75-125 )	0.77	(< 5 )

## Batch Information

Analytical Batch: **STS6562**  
 Analytical Method: **SM21 2540D**  
 Instrument:  
 Analyst: **EWV**

Print Date: 12/11/2019 11:17:53AM

## Method Blank

Blank ID: MB for HBN 1802423 (WFI/2847)

Blank Lab ID: 1544434

QC for Samples:

Matrix: Water (Surface, Eff., Ground)

## Results by SM21 4500NO3-F

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

## Batch Information

Analytical Batch: WFI2847

Analytical Method: SM21 4500NO3-F

Instrument: Astoria segmented flow

Analyst: EWW

Analytical Date/Time: 11/20/2019 4:45:25PM

Print Date: 12/11/2019 11:17:54AM

## Method Blank

Blank ID: MB for HBN 1802423 (WFI/2847)

Matrix: Water (Surface, Eff., Ground)

Blank Lab ID: 1544436

QC for Samples:

1196957001, 1196957002, 1196957003, 1196957004, 1196957005, 1196957006, 1196957007, 1196957008

## Results by SM21 4500NO3-F

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

## Batch Information

Analytical Batch: WFI2847

Analytical Method: SM21 4500NO3-F

Instrument: Astoria segmented flow

Analyst: EWW

Analytical Date/Time: 11/20/2019 5:59:29PM

Print Date: 12/11/2019 11:17:54AM



## Blank Spike Summary

Blank Spike ID: LCS for HBN 1196957 [WFI2847]  
 Blank Spike Lab ID: 1544433  
 Date Analyzed: 11/20/2019 16:43

Matrix: Water (Surface, Eff., Ground)

QC for Samples:

## Results by SM21 4500NO3-F

Parameter	Blank Spike (mg/L)			CL
	Spike	Result	Rec (%)	
Nitrate-N	2.5	2.32	93	( 70-130 )
Nitrite-N	2.5	2.57	103	( 90-110 )
Total Nitrate/Nitrite-N	5	4.89	98	( 90-110 )

## Batch Information

Analytical Batch: **WFI2847**  
 Analytical Method: **SM21 4500NO3-F**  
 Instrument: **Astoria segmented flow**  
 Analyst: **EWV**

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1196957 [WFI2847]

Blank Spike Lab ID: 1544435

Date Analyzed: 11/20/2019 17:57

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1196957001, 1196957002, 1196957003, 1196957004, 1196957005, 1196957006, 1196957007, 1196957008

## Results by SM21 4500NO3-F

Parameter	Blank Spike (mg/L)			CL
	Spike	Result	Rec (%)	
Nitrate-N	2.5	2.64	106	( 70-130 )
Nitrite-N	2.5	2.63	105	( 90-110 )
Total Nitrate/Nitrite-N	5	5.28	106	( 90-110 )

## Batch Information

Analytical Batch: **WFI2847**

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

Instrument: **Astoria segmented flow**

Analyst: **EWV**

Print Date: 12/11/2019 11:17:57AM

## Matrix Spike Summary

Original Sample ID: 1196923001  
 MS Sample ID: 1544415 MS  
 MSD Sample ID: 1544416 MSD

Analysis Date: 11/20/2019 17:05  
 Analysis Date: 11/20/2019 17:06  
 Analysis Date: 11/20/2019 17:08  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1196957001

## Results by SM21 4500NO3-F

Parameter	Sample	Matrix Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Nitrate-N	0.100U	2.50	2.63	105	2.50	2.47	99	70-130	6.30	(< 25 )
Nitrite-N	0.100U	2.50	2.5	100	2.50	2.45	98	90-110	2.20	(< 25 )

## Batch Information

Analytical Batch: WFI2847  
 Analytical Method: SM21 4500NO3-F  
 Instrument: Astoria segmented flow  
 Analyst: EWW  
 Analytical Date/Time: 11/20/2019 5:06:58PM

Print Date: 12/11/2019 11:17:58AM

## Matrix Spike Summary

Original Sample ID: 1196957001  
 MS Sample ID: 1544417 MS  
 MSD Sample ID: 1544418 MSD

Analysis Date: 11/20/2019 18:02  
 Analysis Date: 11/20/2019 18:04  
 Analysis Date: 11/20/2019 18:06  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1196957001, 1196957002, 1196957003, 1196957004, 1196957005, 1196957006, 1196957007, 1196957008

## Results by SM21 4500NO3-F

Parameter	Sample	Matrix Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Nitrate-N	0.100U	2.50	2.69	108	2.50	2.45	98	70-130	9.30	(< 25 )
Nitrite-N	0.100U	2.50	2.62	105	2.50	2.61	105	90-110	0.41	(< 25 )

## Batch Information

Analytical Batch: WFI2847  
 Analytical Method: SM21 4500NO3-F  
 Instrument: Astoria segmented flow  
 Analyst: EWW  
 Analytical Date/Time: 11/20/2019 6:04:43PM

Print Date: 12/11/2019 11:17:58AM

## Method Blank

Blank ID: MB for HBN 1802833 [WXX/13134]  
Blank Lab ID: 1545950

Matrix: Water (Surface, Eff., Ground)

QC for Samples:

1196957001, 1196957002, 1196957003, 1196957004, 1196957005, 1196957006, 1196957007, 1196957008

## Results by SM21 4500-N D

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

## Batch Information

Analytical Batch: WDA4697  
Analytical Method: SM21 4500-N D  
Instrument: Discrete Analyzer 2  
Analyst: DMM  
Analytical Date/Time: 12/4/2019 5:07:26PM

Prep Batch: WXX13134  
Prep Method: METHOD  
Prep Date/Time: 12/4/2019 10:52:00AM  
Prep Initial Wt./Vol.: 25 mL  
Prep Extract Vol: 25 mL

Print Date: 12/11/2019 11:17:59AM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1196957 [WXX13134]  
 Blank Spike Lab ID: 1545951  
 Date Analyzed: 12/04/2019 17:08

Spike Duplicate ID: LCSD for HBN 1196957 [WXX13134]  
 Spike Duplicate Lab ID: 1545952  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1196957001, 1196957002, 1196957003, 1196957004, 1196957005, 1196957006, 1196957007, 1196957008

## Results by SM21 4500-N D

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Kjeldahl Nitrogen	4	3.73	93	4	3.90	98	( 75-125 )	4.40	(< 25 )

## Batch Information

Analytical Batch: **WDA4697**  
 Analytical Method: **SM21 4500-N D**  
 Instrument: **Discrete Analyzer 2**  
 Analyst: **DMM**

Prep Batch: **WXX13134**  
 Prep Method: **METHOD**  
 Prep Date/Time: **12/04/2019 10:52**  
 Spike Init Wt./Vol.: 4 mg/L Extract Vol: 25 mL  
 Dupe Init Wt./Vol.: 4 mg/L Extract Vol: 25 mL

Print Date: 12/11/2019 11:18:01AM

## Matrix Spike Summary

Original Sample ID: 1198801012  
 MS Sample ID: 1545948 MS  
 MSD Sample ID: 1545949 MSD

Analysis Date: 12/04/2019 17:11  
 Analysis Date: 12/04/2019 17:15  
 Analysis Date: 12/04/2019 17:16  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1196957001, 1196957002, 1196957003, 1196957004, 1196957005, 1196957006, 1196957007, 1196957008

## Results by SM21 4500-N D

Parameter	Sample	Matrix Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Kjeldahl Nitrogen	1.00U	4.00	3.67	92	4.00	3.94	99	75-125	7.30	(< 25 )

## Batch Information

Analytical Batch: WDA4697  
 Analytical Method: SM21 4500-N D  
 Instrument: Discrete Analyzer 2  
 Analyst: DMM  
 Analytical Date/Time: 12/4/2019 5:15:13PM

Prep Batch: WXX13134  
 Prep Method: Distillation TKN by Phenate (W)  
 Prep Date/Time: 12/4/2019 10:52:00AM  
 Prep Initial Wt./Vol.: 25.00mL  
 Prep Extract Vol: 25.00mL

Print Date: 12/11/2019 11:18:03AM

## Method Blank

Blank ID: MB for HBN 1802839 [WXX/13135]  
Blank Lab ID: 1546008

Matrix: Water (Surface, Eff., Ground)

QC for Samples:

1196957001, 1196957002, 1196957003, 1196957004, 1196957005, 1196957006, 1196957007, 1196957008

## Results by SM21 4500P-B,E

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Total Phosphorus	0.0100U	0.0200	0.00500	mg/L

## Batch Information

Analytical Batch: WDA4698  
Analytical Method: SM21 4500P-B,E  
Instrument: Discrete Analyzer 2  
Analyst: DMM  
Analytical Date/Time: 12/5/2019 11:48:12AM

Prep Batch: WXX13135  
Prep Method: SM21 4500P-B,E  
Prep Date/Time: 12/4/2019 5:18:00PM  
Prep Initial Wt./Vol.: 25 mL  
Prep Extract Vol: 25 mL

Print Date: 12/11/2019 11:18:04AM



## Blank Spike Summary

Blank Spike ID: LCS for HBN 1196957 [WXX13135]  
 Blank Spike Lab ID: 1546009  
 Date Analyzed: 12/05/2019 11:49

Spike Duplicate ID: LCSD for HBN 1196957 [WXX13135]  
 Spike Duplicate Lab ID: 1546010  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1196957001, 1196957002, 1196957003, 1196957004, 1196957005, 1196957006, 1196957007, 1196957008

## Results by SM21 4500P-B,E

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Phosphorus	0.2	0.185	93	0.2	0.186	93	( 75-125 )	0.49	(< 25 )

## Batch Information

Analytical Batch: **WDA4698**  
 Analytical Method: **SM21 4500P-B,E**  
 Instrument: **Discrete Analyzer 2**  
 Analyst: **DMM**

Prep Batch: **WXX13135**  
 Prep Method: **SM21 4500P-B,E**  
 Prep Date/Time: **12/04/2019 17:18**  
 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: 12/11/2019 11:18:06AM

## Matrix Spike Summary

Original Sample ID: 1196923001  
 MS Sample ID: 1546018 MS  
 MSD Sample ID: 1546019 MSD

Analysis Date: 12/05/2019 11:15  
 Analysis Date: 12/05/2019 11:16  
 Analysis Date: 12/05/2019 11:17  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1196957001, 1196957002, 1196957003, 1196957004

## Results by SM21 4500P-B,E

Parameter	Sample	Matrix Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Phosphorus	0.0160J	0.200	.212	98	0.200	0.211	98	75-125	0.10	(< 25 )

## Batch Information

Analytical Batch: WDA4698  
 Analytical Method: SM21 4500P-B,E  
 Instrument: Discrete Analyzer 2  
 Analyst: DMM  
 Analytical Date/Time: 12/5/2019 11:16:49AM

Prep Batch: WXX13135  
 Prep Method: Total Phosphorus (W) Ext.  
 Prep Date/Time: 12/4/2019 5:18:00PM  
 Prep Initial Wt./Vol.: 25.00mL  
 Prep Extract Vol: 25.00mL

## Matrix Spike Summary

Original Sample ID: 1196957004  
 MS Sample ID: 1546040 MS  
 MSD Sample ID: 1546041 MSD

Analysis Date: 12/05/2019 11:53  
 Analysis Date: 12/05/2019 11:54  
 Analysis Date: 12/05/2019 11:57  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1196957001, 1196957002, 1196957003, 1196957004, 1196957005, 1196957006, 1196957007, 1196957008

## Results by SM21 4500P-B,E

Parameter	Sample	Matrix Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Phosphorus	0.00520J	0.200	.213	104	0.200	0.200	98	75-125	5.90	(< 25 )

## Batch Information

Analytical Batch: WDA4698  
 Analytical Method: SM21 4500P-B,E  
 Instrument: Discrete Analyzer 2  
 Analyst: DMM  
 Analytical Date/Time: 12/5/2019 11:54:35AM

Prep Batch: WXX13135  
 Prep Method: Total Phosphorus (W) Ext.  
 Prep Date/Time: 12/4/2019 5:18:00PM  
 Prep Initial Wt./Vol.: 25.00mL  
 Prep Extract Vol: 25.00mL

## Method Blank

Blank ID: MB for HBN 1802914 [WXX/13140]  
 Blank Lab ID: 1546371

Matrix: Water (Surface, Eff., Ground)

QC for Samples:

1196957001, 1196957002, 1196957003, 1196957004, 1196957005, 1196957006, 1196957007, 1196957008

## Results by SM21 4500-NH3 G

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Ammonia-N	0.0519J	0.100	0.0310	mg/L

## Batch Information

Analytical Batch: WDA4699  
 Analytical Method: SM21 4500-NH3 G  
 Instrument: Discrete Analyzer 2  
 Analyst: EWW  
 Analytical Date/Time: 12/9/2019 2:17:42PM

Prep Batch: WXX13140  
 Prep Method: METHOD  
 Prep Date/Time: 12/9/2019 1:00:00PM  
 Prep Initial Wt./Vol.: 6 mL  
 Prep Extract Vol: 6 mL

Print Date: 12/11/2019 11:18:09AM

## Method Blank

Blank ID: MB for HBN 1802914 [WXX/13140]  
Blank Lab ID: 1546376

Matrix: Water (Surface, Eff., Ground)

QC for Samples:

1196957001, 1196957002, 1196957003, 1196957004, 1196957005, 1196957006, 1196957007, 1196957008

## Results by SM21 4500-NH3 G

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Ammonia-N	0.0608J	0.100	0.0310	mg/L

## Batch Information

Analytical Batch: WDA4699  
Analytical Method: SM21 4500-NH3 G  
Instrument: Discrete Analyzer 2  
Analyst: EWW  
Analytical Date/Time: 12/9/2019 3:06:11PM

Prep Batch: WXX13140  
Prep Method: METHOD  
Prep Date/Time: 12/9/2019 1:00:00PM  
Prep Initial Wt./Vol.: 6 mL  
Prep Extract Vol: 6 mL

Print Date: 12/11/2019 11:18:09AM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1196957 [WXX13140]  
 Blank Spike Lab ID: 1546372  
 Date Analyzed: 12/09/2019 14:19

Spike Duplicate ID: LCSD for HBN 1196957 [WXX13140]  
 Spike Duplicate Lab ID: 1546373  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1196957001, 1196957002, 1196957003, 1196957004, 1196957005, 1196957006, 1196957007, 1196957008

## Results by SM21 4500-NH3 G

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Ammonia-N	1	0.922	92	1	0.937	94	( 75-125 )	1.60	(< 25 )

## Batch Information

Analytical Batch: **WDA4699**  
 Analytical Method: **SM21 4500-NH3 G**  
 Instrument: **Discrete Analyzer 2**  
 Analyst: **EWV**

Prep Batch: **WXX13140**  
 Prep Method: **METHOD**  
 Prep Date/Time: **12/09/2019 13:00**  
 Spike Init Wt./Vol.: 1 mg/L Extract Vol: 6 mL  
 Dupe Init Wt./Vol.: 1 mg/L Extract Vol: 6 mL

Print Date: 12/11/2019 11:18:11AM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1196957 [WXX13140]  
 Blank Spike Lab ID: 1546377  
 Date Analyzed: 12/09/2019 15:07

Spike Duplicate ID: LCSD for HBN 1196957 [WXX13140]  
 Spike Duplicate Lab ID: 1546378  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1196957001, 1196957002, 1196957003, 1196957004, 1196957005, 1196957006, 1196957007, 1196957008

## Results by SM21 4500-NH3 G

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Ammonia-N	1	0.954	95	1	0.902	90	( 75-125 )	5.60	(< 25 )

## Batch Information

Analytical Batch: **WDA4699**  
 Analytical Method: **SM21 4500-NH3 G**  
 Instrument: **Discrete Analyzer 2**  
 Analyst: **EWV**

Prep Batch: **WXX13140**  
 Prep Method: **METHOD**  
 Prep Date/Time: **12/09/2019 13:00**  
 Spike Init Wt./Vol.: 1 mg/L Extract Vol: 6 mL  
 Dupe Init Wt./Vol.: 1 mg/L Extract Vol: 6 mL

Print Date: 12/11/2019 11:18:11AM



### Matrix Spike Summary

Original Sample ID: 1196924001  
MS Sample ID: 1546374 MS  
MSD Sample ID: 1546375 MSD

Analysis Date: 12/09/2019 14:22  
Analysis Date: 12/09/2019 14:24  
Analysis Date: 12/09/2019 14:26  
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1196957001, 1196957002, 1196957003, 1196957004, 1196957005, 1196957006, 1196957007, 1196957008

### Results by SM21 4500-NH3 G

Parameter	Sample	Matrix Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Ammonia-N	0.100U	1.00	.779	78	1.00	0.664	66 *	75-125	15.90	(< 25 )

### Batch Information

Analytical Batch: WDA4699  
Analytical Method: SM21 4500-NH3 G  
Instrument: Discrete Analyzer 2  
Analyst: EWW  
Analytical Date/Time: 12/9/2019 2:24:25PM

Prep Batch: WXX13140  
Prep Method: Ammonia by SM21 4500F prep (W)  
Prep Date/Time: 12/9/2019 1:00:00PM  
Prep Initial Wt./Vol.: 6.00mL  
Prep Extract Vol: 6.00mL

Print Date: 12/11/2019 11:18:13AM



## Matrix Spike Summary

Original Sample ID: 1197027007  
 MS Sample ID: 1546379 MS  
 MSD Sample ID: 1546380 MSD

Analysis Date: 12/09/2019 15:11  
 Analysis Date: 12/09/2019 15:12  
 Analysis Date: 12/09/2019 15:17  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1196957001, 1196957002, 1196957003, 1196957004, 1196957005, 1196957006, 1196957007, 1196957008

## Results by SM21 4500-NH3 G

Parameter	Sample	Matrix Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Ammonia-N	0.227	1.00	1.93	171 *	1.00	1.86	163 *	75-125	4.00	(< 25 )

## Batch Information

Analytical Batch: WDA4699  
 Analytical Method: SM21 4500-NH3 G  
 Instrument: Discrete Analyzer 2  
 Analyst: EWW  
 Analytical Date/Time: 12/9/2019 3:12:51PM

Prep Batch: WXX13140  
 Prep Method: Ammonia by SM21 4500F prep (W)  
 Prep Date/Time: 12/9/2019 1:00:00PM  
 Prep Initial Wt./Vol.: 6.00mL  
 Prep Extract Vol: 6.00mL



1196957



SGS North America Inc. CHAIN OF CUSTODY RECORD

Locations Nationwide

- Alaska
- New Jersey
- North Carolina
- West Virginia
- Maryland
- New York
- Indiana
- Kentucky

www.us.sgs.com

Profile: 348183 JKJ

**CLIENT:** Stantec

**CONTACT:** Jake Alward **PHONE NO.:** 343-5202

**PROJECT NAME:** Wassila WWTP **PROJECT/PWSID/PERMIT#:**

**REPORTS TO:** **E-MAIL:**

**INVOICE TO:** **QUOTE #:** **P.O. #:** 204200415

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

Page 1 of 1

RESERVED for lab use	SAMPLE IDENTIFICATION	DATE mm/dd/yy	TIME HH:MM	MATRIX/MATRIX CODE	#	CONTAINER	Type C = COMP G = GRAB MI = Multi Incremental Soils	Preservative						REMARKS/LOC ID
								BOD	TSS	Nitrate/Nitrite	Ni2SO4	Ni2SO4	H2SO4	
(1AF)	SW8	11/20/19	1140	Water	6	G								
(2AF)	SW9		1126											
(3AF)	SW14		1416											
(4AF)	SW15		1411											
(5AF)	SW17		1338											
(6AF)	SW18		1313											
(7AF)	Shaw		1219											
(8AF)	Dup 2		1313											

**Section 4** DOD Project? Yes No **Data Deliverable Requirements:**

**Section 5** Relinquished By: (1) [Signature] Date 11/20/19 Time 1625 Received By: [Signature]

Relinquished By: (2) \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_ Received By: \_\_\_\_\_

Relinquished By: (3) \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_ Received By: \_\_\_\_\_

Relinquished By: (4) [Signature] Date 11/20/19 Time 1625 Received For Laboratory By: [Signature]

Cooler ID: \_\_\_\_\_

Requested Turnaround Time and/or Special Instructions:

Temp Blank °C: 1-2.6° #059  
2-0.8 #044

Chain of Custody Seal: (Circle) H.D.  
INTACT BROKEN ABSENT

(See attached Sample Receipt Form) (See attached Sample Receipt Form)



e-Sample Receipt Form

SGS Workorder #:

1196957



1 1 9 6 9 5 7

Review Criteria	Condition (Yes, No, N/A)	Exceptions Noted below
<b>Chain of Custody / Temperature Requirements</b>	<input checked="" type="checkbox"/> Yes	Exemption permitted if sampler hand carries/delivers.
Were Custody Seals intact? Note # & location	<input type="checkbox"/> N/A	Absent
COC accompanied samples?	<input checked="" type="checkbox"/> Yes	
DOD: Were samples received in COC corresponding coolers?	<input type="checkbox"/> N/A	
<input type="checkbox"/> 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)?	<input checked="" type="checkbox"/> Yes	Cooler ID: 1 @ 2.6 °C Therm. ID: D59
	<input checked="" type="checkbox"/> Yes	Cooler ID: 2 @ 0.8 °C Therm. ID: D44
	<input type="checkbox"/>	Cooler ID: @ °C Therm. ID:
	<input type="checkbox"/>	Cooler ID: @ °C Therm. ID:
	<input type="checkbox"/>	Cooler ID: @ °C Therm. ID:
	<input type="checkbox"/>	Cooler ID: @ °C Therm. ID:
*If >6°C, were samples collected <8 hours ago?	<input type="checkbox"/> N/A	
If <0°C, were sample containers ice free?	<input type="checkbox"/> N/A	
Note: Identify containers received at non-compliant temperature . Use form FS-0029 if more space is needed.		
<b>Holding Time / Documentation / Sample Condition Requirements</b>		Note: Refer to form F-083 "Sample Guide" for specific holding times.
Were samples received within holding time?	<input checked="" type="checkbox"/> Yes	
Do samples match COC** (i.e., sample IDs, dates/times collected)?	<input checked="" type="checkbox"/> 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)	<input checked="" type="checkbox"/> Yes	
Were proper containers (type/mass/volume/preservative***) used?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> N/A ***Exemption permitted for metals (e.g,200.8/6020A).
<b>Volatile / LL-Hg Requirements</b>		
Were Trip Blanks (i.e., VOAs, LL-Hg) in cooler with samples?	<input type="checkbox"/> N/A	
Were all water VOA vials free of headspace (i.e., bubbles ≤ 6mm)?	<input type="checkbox"/> N/A	
Were all soil VOAs field extracted with MeOH+BFB?	<input type="checkbox"/> N/A	
<b>Note to Client:</b> Any "No", answer above indicates non-compliance with standard procedures and may impact data quality.		
Additional notes (if applicable):		



### Sample Containers and Preservatives

<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>	<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>
1196957001-A	Na2S2O3 for Chlorine Redu	OK			
1196957001-B	Na2S2O3 for Chlorine Redu	OK			
1196957001-C	No Preservative Required	OK			
1196957001-D	H2SO4 to pH < 2	OK			
1196957001-E	No Preservative Required	OK			
1196957001-F	No Preservative Required	OK			
1196957002-A	Na2S2O3 for Chlorine Redu	OK			
1196957002-B	Na2S2O3 for Chlorine Redu	OK			
1196957002-C	No Preservative Required	OK			
1196957002-D	H2SO4 to pH < 2	OK			
1196957002-E	No Preservative Required	OK			
1196957002-F	No Preservative Required	OK			
1196957003-A	Na2S2O3 for Chlorine Redu	OK			
1196957003-B	Na2S2O3 for Chlorine Redu	OK			
1196957003-C	No Preservative Required	OK			
1196957003-D	H2SO4 to pH < 2	OK			
1196957003-E	No Preservative Required	OK			
1196957003-F	No Preservative Required	OK			
1196957004-A	Na2S2O3 for Chlorine Redu	OK			
1196957004-B	Na2S2O3 for Chlorine Redu	OK			
1196957004-C	No Preservative Required	OK			
1196957004-D	H2SO4 to pH < 2	OK			
1196957004-E	No Preservative Required	OK			
1196957004-F	No Preservative Required	OK			
1196957005-A	Na2S2O3 for Chlorine Redu	OK			
1196957005-B	Na2S2O3 for Chlorine Redu	OK			
1196957005-C	No Preservative Required	OK			
1196957005-D	H2SO4 to pH < 2	OK			
1196957005-E	No Preservative Required	OK			
1196957005-F	No Preservative Required	OK			
1196957006-A	Na2S2O3 for Chlorine Redu	OK			
1196957006-B	Na2S2O3 for Chlorine Redu	OK			
1196957006-C	No Preservative Required	OK			
1196957006-D	H2SO4 to pH < 2	OK			
1196957006-E	No Preservative Required	OK			
1196957006-F	No Preservative Required	OK			
1196957007-A	Na2S2O3 for Chlorine Redu	OK			
1196957007-B	Na2S2O3 for Chlorine Redu	OK			
1196957007-C	No Preservative Required	OK			
1196957007-D	H2SO4 to pH < 2	OK			
1196957007-E	No Preservative Required	OK			
1196957007-F	No Preservative Required	OK			
1196957008-A	Na2S2O3 for Chlorine Redu	OK			
1196957008-B	Na2S2O3 for Chlorine Redu	OK			
1196957008-C	No Preservative Required	OK			
1196957008-D	H2SO4 to pH < 2	OK			
1196957008-E	No Preservative Required	OK			
1196957008-F	No Preservative Required	OK			

Container Condition Glossary

Containers for bacteriological, low level mercury and VOA vials are not opened prior to analysis and will be assigned condition code OK unless evidence indicates that 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.