Laboratory Report of Analysis

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

Report Number: **1190783**

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.

SGS North America Inc.
Environmental Services – Alaska Division
Project Manager

Justin Nelson
2019.02.28
14:44:15 -09'00'

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

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

Case Narrative

SGS Client: **Stantec Consulting Services Inc.**
SGS Project: **1190783**
Project Name/Site: **Wasilla WWTP**
Project Contact: **John Marshall**

Refer to sample receipt form for information on sample condition.

1190690001 SI(1497001MS) (1496996) MS

300.0 - Anions - MS recovery for Sulfate is outside of QC criteria. Refer to LCS for accuracy requirements.

1190846001MS (1497415) MS

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

1190690001 SI(1497001MSD) (1496997) MSD

300.0 - Anions - MSD recovery for Sulfate is outside of QC criteria. Refer to LCS for accuracy requirements.

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

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Laboratory Qualifiers

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

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

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 (DW Chemistry & Microbiology) & 17-021 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020A, 7470A, 7471B, 8015C, 8021B, 8082A, 8260C, 8270D, 8270D-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, other regulatory authorities.

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

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

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

Sample Summary

Client Sample ID	Lab Sample ID	Collected	Received	Matrix
SW 5	1190783001	02/20/2019	02/20/2019	Water (Surface, Eff., Ground)
SW 17	1190783002	02/20/2019	02/20/2019	Water (Surface, Eff., Ground)
SW 18	1190783003	02/20/2019	02/20/2019	Water (Surface, Eff., Ground)
Dup 1	1190783004	02/20/2019	02/20/2019	Water (Surface, Eff., Ground)

Method	Method Description
SM21 4500-NH3 G	Ammonia-N (W) SM21 4500-NH3 G
SM21 5210B	Biochemical Oxygen Demand SM21 5210B
SM21 9222D	Fecal Coliform (MF)
EPA 300.0	Ion Chromatographic Analysis
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: **SW 5**
Lab Sample ID: 1190783001

	Parameter	Result	Units
Microbiology Laboratory	Biochemical Oxygen Demand	14.8	mg/L
	Total Coliform	5	MPN/100mL
Waters Department	Ammonia-N	2.03	mg/L
	Total Kjeldahl Nitrogen	2.76	mg/L
	Total Phosphorus	0.228	mg/L
	Total Suspended Solids	4.10	mg/L

Client Sample ID: **SW 17**
Lab Sample ID: 1190783002

	Parameter	Result	Units
Microbiology Laboratory	E. Coli	1	MPN/100mL
	Fecal Coliform	1.0	col/100mL
	Total Coliform	53	MPN/100mL
Waters Department	Ammonia-N	0.600	mg/L
	Nitrate-N	2.66	mg/L
	Total Kjeldahl Nitrogen	1.30	mg/L
	Total Nitrate/Nitrite-N	2.68	mg/L
	Total Phosphorus	0.139	mg/L
	Total Suspended Solids	1.22	mg/L

Client Sample ID: **SW 18**
Lab Sample ID: 1190783003

	Parameter	Result	Units
Microbiology Laboratory	Fecal Coliform	1.0	col/100mL
	Total Coliform	147	MPN/100mL
Waters Department	Ammonia-N	2.05	mg/L
	Nitrite-N	3.02	mg/L
	Total Kjeldahl Nitrogen	2.40	mg/L
	Total Nitrate/Nitrite-N	3.04	mg/L
	Total Phosphorus	1.39	mg/L
	Total Suspended Solids	0.426J	mg/L

Client Sample ID: **Dup 1**
Lab Sample ID: 1190783004

	Parameter	Result	Units
Microbiology Laboratory	Biochemical Oxygen Demand	13.9	mg/L
	Total Coliform	3	MPN/100mL
Waters Department	Ammonia-N	2.39	mg/L
	Total Kjeldahl Nitrogen	2.48	mg/L
	Total Phosphorus	0.227	mg/L
	Total Suspended Solids	11.7	mg/L

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Results of **SW 5**

Client Sample ID: **SW 5**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1190783001
Lab Project ID: 1190783

Collection Date: 02/20/19 11:45
Received Date: 02/20/19 14:37
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Microbiology Laboratory**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Biochemical Oxygen Demand	14.8		2.00	2.00	mg/L	1		02/21/19 15:00

Batch Information

Analytical Batch: BOD6242
Analytical Method: SM21 5210B
Analyst: ACF
Analytical Date/Time: 02/21/19 15:00
Container ID: 1190783001-A

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Fecal Coliform	1.00	U	1.00	1.00	col/100mL	1		02/20/19 16:07

Batch Information

Analytical Batch: BTF17167
Analytical Method: SM21 9222D
Analyst: A.L
Analytical Date/Time: 02/20/19 16:07
Container ID: 1190783001-E

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
E. Coli	1	U	1	1	MPN/100m	1		02/20/19 16:24
Total Coliform	5		1	1	MPN/100m	1		02/20/19 16:24

Batch Information

Analytical Batch: BTF17168
Analytical Method: SM21 9223B
Analyst: DSH
Analytical Date/Time: 02/20/19 16:24
Container ID: 1190783001-F

Results of **SW 5**

Client Sample ID: **SW 5**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1190783001
Lab Project ID: 1190783

Collection Date: 02/20/19 11:45
Received Date: 02/20/19 14:37
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Nitrate-N	0.100	U	0.200	0.0500	mg/L	1		02/20/19 21:40
Nitrite-N	0.100	U	0.200	0.0500	mg/L	1		02/20/19 21:40
Total Nitrate/Nitrite-N	0.100	U	0.200	0.0500	mg/L	1		02/20/19 21:40

Batch Information

Analytical Batch: WIC5871
Analytical Method: EPA 300.0
Analyst: DMM
Analytical Date/Time: 02/20/19 21:40
Container ID: 1190783001-C

Prep Batch: WXX12714
Prep Method: METHOD
Prep Date/Time: 02/20/19 15:30
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	4.10		1.00	0.310	mg/L	1		02/22/19 16:09

Batch Information

Analytical Batch: STS6165
Analytical Method: SM21 2540D
Analyst: EWW
Analytical Date/Time: 02/22/19 16:09
Container ID: 1190783001-B

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	2.76		1.00	0.310	mg/L	1		02/28/19 10:46

Batch Information

Analytical Batch: WDA4512
Analytical Method: SM21 4500-N D
Analyst: DMM
Analytical Date/Time: 02/28/19 10:46
Container ID: 1190783001-D

Prep Batch: WXX12723
Prep Method: METHOD
Prep Date/Time: 02/26/19 09:42
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Ammonia-N	2.03		0.100	0.0310	mg/L	1		02/25/19 12:58

Results of **SW 5**

Client Sample ID: **SW 5**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1190783001
Lab Project ID: 1190783

Collection Date: 02/20/19 11:45
Received Date: 02/20/19 14:37
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: WDA4508
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 02/25/19 12:58
Container ID: 1190783001-D

Prep Batch: WXX12717
Prep Method: METHOD
Prep Date/Time: 02/25/19 10:00
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Phosphorus	0.228		0.0200	0.00500	mg/L	1		02/27/19 10:24

Batch Information

Analytical Batch: WDA4511
Analytical Method: SM21 4500P-B,E
Analyst: DMM
Analytical Date/Time: 02/27/19 10:24
Container ID: 1190783001-D

Prep Batch: WXX12720
Prep Method: SM21 4500P-B,E
Prep Date/Time: 02/26/19 15:47
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Results of **SW 17**

Client Sample ID: **SW 17**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1190783002
Lab Project ID: 1190783

Collection Date: 02/20/19 12:30
Received Date: 02/20/19 14:37
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Microbiology Laboratory**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Biochemical Oxygen Demand	2.00	U	2.00	2.00	mg/L	1		02/21/19 15:00

Batch Information

Analytical Batch: BOD6242
Analytical Method: SM21 5210B
Analyst: ACF
Analytical Date/Time: 02/21/19 15:00
Container ID: 1190783002-A

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Fecal Coliform	1.0		1.00	1.00	col/100mL	1		02/20/19 16:07

Batch Information

Analytical Batch: BTF17167
Analytical Method: SM21 9222D
Analyst: A.L
Analytical Date/Time: 02/20/19 16:07
Container ID: 1190783002-E

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
E. Coli	1		1	1	MPN/100m	1		02/20/19 16:24
Total Coliform	53		1	1	MPN/100m	1		02/20/19 16:24

Batch Information

Analytical Batch: BTF17168
Analytical Method: SM21 9223B
Analyst: DSH
Analytical Date/Time: 02/20/19 16:24
Container ID: 1190783002-F

Results of **SW 17**

Client Sample ID: **SW 17**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1190783002
Lab Project ID: 1190783

Collection Date: 02/20/19 12:30
Received Date: 02/20/19 14:37
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Nitrate-N	2.66		0.200	0.0500	mg/L	1		02/20/19 21:59
Nitrite-N	0.100	U	0.200	0.0500	mg/L	1		02/20/19 21:59
Total Nitrate/Nitrite-N	2.68		0.200	0.0500	mg/L	1		02/20/19 21:59

Batch Information

Analytical Batch: WIC5871
Analytical Method: EPA 300.0
Analyst: DMM
Analytical Date/Time: 02/20/19 21:59
Container ID: 1190783002-C

Prep Batch: WXX12714
Prep Method: METHOD
Prep Date/Time: 02/20/19 15:30
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	1.22		1.11	0.344	mg/L	1		02/22/19 16:09

Batch Information

Analytical Batch: STS6165
Analytical Method: SM21 2540D
Analyst: EWW
Analytical Date/Time: 02/22/19 16:09
Container ID: 1190783002-B

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	1.30		1.00	0.310	mg/L	1		02/28/19 10:50

Batch Information

Analytical Batch: WDA4512
Analytical Method: SM21 4500-N D
Analyst: DMM
Analytical Date/Time: 02/28/19 10:50
Container ID: 1190783002-D

Prep Batch: WXX12723
Prep Method: METHOD
Prep Date/Time: 02/26/19 09:42
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Ammonia-N	0.600		0.100	0.0310	mg/L	1		02/25/19 13:00

Print Date: 02/28/2019 2:38:08PM

J flagging is activated

Results of **SW 17**

Client Sample ID: **SW 17**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1190783002
Lab Project ID: 1190783

Collection Date: 02/20/19 12:30
Received Date: 02/20/19 14:37
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: WDA4508
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 02/25/19 13:00
Container ID: 1190783002-D

Prep Batch: WXX12717
Prep Method: METHOD
Prep Date/Time: 02/25/19 10:00
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Phosphorus	0.139		0.0200	0.00500	mg/L	1		02/27/19 10:27

Batch Information

Analytical Batch: WDA4511
Analytical Method: SM21 4500P-B,E
Analyst: DMM
Analytical Date/Time: 02/27/19 10:27
Container ID: 1190783002-D

Prep Batch: WXX12720
Prep Method: SM21 4500P-B,E
Prep Date/Time: 02/26/19 15:47
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Results of **SW 18**

Client Sample ID: **SW 18**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1190783003
Lab Project ID: 1190783

Collection Date: 02/20/19 13:25
Received Date: 02/20/19 14:37
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Microbiology Laboratory**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Biochemical Oxygen Demand	2.00	U	2.00	2.00	mg/L	1		02/21/19 15:00

Batch Information

Analytical Batch: BOD6242
Analytical Method: SM21 5210B
Analyst: ACF
Analytical Date/Time: 02/21/19 15:00
Container ID: 1190783003-A

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Fecal Coliform	1.0		1.00	1.00	col/100mL	1		02/20/19 16:07

Batch Information

Analytical Batch: BTF17167
Analytical Method: SM21 9222D
Analyst: A.L
Analytical Date/Time: 02/20/19 16:07
Container ID: 1190783003-E

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
E. Coli	1	U	1	1	MPN/100m	1		02/20/19 16:24
Total Coliform	147		1	1	MPN/100m	1		02/20/19 16:24

Batch Information

Analytical Batch: BTF17168
Analytical Method: SM21 9223B
Analyst: DSH
Analytical Date/Time: 02/20/19 16:24
Container ID: 1190783003-F

Results of **SW 18**

Client Sample ID: **SW 18**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1190783003
Lab Project ID: 1190783

Collection Date: 02/20/19 13:25
Received Date: 02/20/19 14:37
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Nitrate-N	0.100	U	0.200	0.0500	mg/L	1		02/20/19 22:18
Nitrite-N	3.02		0.200	0.0500	mg/L	1		02/20/19 22:18
Total Nitrate/Nitrite-N	3.04		0.200	0.0500	mg/L	1		02/20/19 22:18

Batch Information

Analytical Batch: WIC5871
Analytical Method: EPA 300.0
Analyst: DMM
Analytical Date/Time: 02/20/19 22:18
Container ID: 1190783003-C

Prep Batch: WXX12714
Prep Method: METHOD
Prep Date/Time: 02/20/19 15:30
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	0.426	J	1.06	0.330	mg/L	1		02/22/19 16:09

Batch Information

Analytical Batch: STS6165
Analytical Method: SM21 2540D
Analyst: EWW
Analytical Date/Time: 02/22/19 16:09
Container ID: 1190783003-B

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	2.40		1.00	0.310	mg/L	1		02/28/19 10:52

Batch Information

Analytical Batch: WDA4512
Analytical Method: SM21 4500-N D
Analyst: DMM
Analytical Date/Time: 02/28/19 10:52
Container ID: 1190783003-D

Prep Batch: WXX12723
Prep Method: METHOD
Prep Date/Time: 02/26/19 09:42
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Ammonia-N	2.05		0.100	0.0310	mg/L	1		02/26/19 10:13

Print Date: 02/28/2019 2:38:08PM

J flagging is activated

Results of **SW 18**

Client Sample ID: **SW 18**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1190783003
Lab Project ID: 1190783

Collection Date: 02/20/19 13:25
Received Date: 02/20/19 14:37
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: WDA4509
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 02/26/19 10:13
Container ID: 1190783003-D

Prep Batch: WXX12718
Prep Method: METHOD
Prep Date/Time: 02/26/19 09:05
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Phosphorus	1.39		0.200	0.0500	mg/L	1		02/27/19 11:01

Batch Information

Analytical Batch: WDA4511
Analytical Method: SM21 4500P-B,E
Analyst: DMM
Analytical Date/Time: 02/27/19 11:01
Container ID: 1190783003-D

Prep Batch: WXX12720
Prep Method: SM21 4500P-B,E
Prep Date/Time: 02/26/19 15:47
Prep Initial Wt./Vol.: 2.5 mL
Prep Extract Vol: 25 mL

Results of **Dup 1**

Client Sample ID: **Dup 1**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1190783004
Lab Project ID: 1190783

Collection Date: 02/20/19 11:45
Received Date: 02/20/19 14:37
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Microbiology Laboratory**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Biochemical Oxygen Demand	13.9		2.00	2.00	mg/L	1		02/21/19 15:00

Batch Information

Analytical Batch: BOD6242
Analytical Method: SM21 5210B
Analyst: ACF
Analytical Date/Time: 02/21/19 15:00
Container ID: 1190783004-A

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Fecal Coliform	1.00	U	1.00	1.00	col/100mL	1		02/20/19 16:07

Batch Information

Analytical Batch: BTF17167
Analytical Method: SM21 9222D
Analyst: A.L
Analytical Date/Time: 02/20/19 16:07
Container ID: 1190783004-E

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
E. Coli	1	U	1	1	MPN/100m	1		02/20/19 16:24
Total Coliform	3		1	1	MPN/100m	1		02/20/19 16:24

Batch Information

Analytical Batch: BTF17168
Analytical Method: SM21 9223B
Analyst: DSH
Analytical Date/Time: 02/20/19 16:24
Container ID: 1190783004-F

Results of **Dup 1**

Client Sample ID: **Dup 1**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1190783004
Lab Project ID: 1190783

Collection Date: 02/20/19 11:45
Received Date: 02/20/19 14:37
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Nitrate-N	0.100	U	0.200	0.0500	mg/L	1		02/20/19 22:37
Nitrite-N	0.100	U	0.200	0.0500	mg/L	1		02/20/19 22:37
Total Nitrate/Nitrite-N	0.100	U	0.200	0.0500	mg/L	1		02/20/19 22:37

Batch Information

Analytical Batch: WIC5871
Analytical Method: EPA 300.0
Analyst: DMM
Analytical Date/Time: 02/20/19 22:37
Container ID: 1190783004-C

Prep Batch: WXX12714
Prep Method: METHOD
Prep Date/Time: 02/20/19 15:30
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	11.7		1.67	0.517	mg/L	1		02/22/19 16:09

Batch Information

Analytical Batch: STS6165
Analytical Method: SM21 2540D
Analyst: EWW
Analytical Date/Time: 02/22/19 16:09
Container ID: 1190783004-B

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	2.48		1.00	0.310	mg/L	1		02/28/19 10:53

Batch Information

Analytical Batch: WDA4512
Analytical Method: SM21 4500-N D
Analyst: DMM
Analytical Date/Time: 02/28/19 10:53
Container ID: 1190783004-D

Prep Batch: WXX12723
Prep Method: METHOD
Prep Date/Time: 02/26/19 09:42
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Ammonia-N	2.39		0.100	0.0310	mg/L	1		02/26/19 10:15

Print Date: 02/28/2019 2:38:08PM

J flagging is activated

Results of **Dup 1**

Client Sample ID: **Dup 1**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1190783004
Lab Project ID: 1190783

Collection Date: 02/20/19 11:45
Received Date: 02/20/19 14:37
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: WDA4509
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 02/26/19 10:15
Container ID: 1190783004-D

Prep Batch: WXX12718
Prep Method: METHOD
Prep Date/Time: 02/26/19 09:05
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Phosphorus	0.227		0.0200	0.00500	mg/L	1		02/27/19 10:28

Batch Information

Analytical Batch: WDA4511
Analytical Method: SM21 4500P-B,E
Analyst: DMM
Analytical Date/Time: 02/27/19 10:28
Container ID: 1190783004-D

Prep Batch: WXX12720
Prep Method: SM21 4500P-B,E
Prep Date/Time: 02/26/19 15:47
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Method Blank

Blank ID: MB for HBN 1791184 [BOD/6242]
Blank Lab ID: 1497106

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1190783001, 1190783002, 1190783003, 1190783004

Results by **SM21 5210B**

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

Batch Information

Analytical Batch: BOD6242
Analytical Method: SM21 5210B
Instrument:
Analyst: ACF
Analytical Date/Time: 2/21/2019 3:00:05PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1190783 [BOD6242]
Blank Spike Lab ID: 1497107
Date Analyzed: 02/21/2019 15:00

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1190783001, 1190783002, 1190783003, 1190783004

Results by **SM21 5210B**

Blank Spike (mg/L)

Parameter	Spike	Result	Rec (%)	CL
Biochemical Oxygen Demand	198	194	98	(84.6-115.4

Batch Information

Analytical Batch: **BOD6242**
Analytical Method: **SM21 5210B**
Instrument:
Analyst: **ACF**

Print Date: 02/28/2019 2:38:12PM

Method Blank

Blank ID: MB for HBN 1791149 [BTF/17167]
Blank Lab ID: 1496960

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1190783001, 1190783002, 1190783003, 1190783004

Results by **SM21 9222D**

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

Batch Information

Analytical Batch: BTF17167
Analytical Method: SM21 9222D
Instrument:
Analyst: A.L
Analytical Date/Time: 2/20/2019 4:07:39PM

Print Date: 02/28/2019 2:38:14PM

Method Blank

Blank ID: MB for HBN 1791152 [BTF/17168]
Blank Lab ID: 1496963

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1190783001, 1190783002, 1190783003, 1190783004

Results by **SM21 9223B**

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

Batch Information

Analytical Batch: BTF17168
Analytical Method: SM21 9223B
Instrument:
Analyst: DSH
Analytical Date/Time: 2/20/2019 4:24:05PM

Print Date: 02/28/2019 2:38:16PM

Method Blank

Blank ID: MB for HBN 1791195 [STS/6165]
Blank Lab ID: 1497145

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1190783001, 1190783002, 1190783003, 1190783004

Results by **SM21 2540D**

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

Batch Information

Analytical Batch: STS6165
Analytical Method: SM21 2540D
Instrument:
Analyst: EWW
Analytical Date/Time: 2/22/2019 4:09:53PM

Duplicate Sample Summary

Original Sample ID: 1190775002
Duplicate Sample ID: 1497148
QC for Samples:
1190783001, 1190783002, 1190783003, 1190783004

Analysis Date: 02/22/2019 16:09
Matrix: Water (Surface, Eff., Ground)

Results by **SM21 2540D**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
Total Suspended Solids	12.0	12.0	mg/L	0.00	(< 5)

Batch Information

Analytical Batch: STS6165
Analytical Method: SM21 2540D
Instrument:
Analyst: EWW

Print Date: 02/28/2019 2:38:20PM

Duplicate Sample Summary

Original Sample ID: 1497149
Duplicate Sample ID: 1497150
QC for Samples:
1190783001, 1190783002, 1190783003, 1190783004

Analysis Date: 02/22/2019 16:09
Matrix: Water (Surface, Eff., Ground)

Results by **SM21 2540D**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
Total Suspended Solids	3240	3280	mg/L	1.20	(< 5)

Batch Information

Analytical Batch: STS6165
Analytical Method: SM21 2540D
Instrument:
Analyst: EWW

Print Date: 02/28/2019 2:38:20PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1190783 [STS6165]
Blank Spike Lab ID: 1497146
Date Analyzed: 02/22/2019 16:09

Spike Duplicate ID: LCSD for HBN 1190783 [STS6165]
Spike Duplicate Lab ID: 1497147
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1190783001, 1190783002, 1190783003, 1190783004

Results by **SM21 2540D**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Total Suspended Solids	25	25.7	103	25	25.6	102	(75-125)	0.39	(< 5)

Batch Information

Analytical Batch: **STS6165**
Analytical Method: **SM21 2540D**
Instrument:
Analyst: **EWW**

Print Date: 02/28/2019 2:38:21PM

Method Blank

Blank ID: MB for HBN 1791161 [WXX/12714]
Blank Lab ID: 1496993

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1190783001, 1190783002, 1190783003, 1190783004

Results by **EPA 300.0**

Parameter	Results	LOQ/CL	DL	Units
Nitrate-N	0.100U	0.200	0.0500	mg/L
Nitrite-N	0.143J	0.200	0.0500	mg/L
Total Nitrate/Nitrite-N	0.170J	0.200	0.0500	mg/L

Batch Information

Analytical Batch: WIC5871
Analytical Method: EPA 300.0
Instrument: 930 Metrohm compact IC flex
Analyst: DMM
Analytical Date/Time: 2/20/2019 1:26:48PM

Prep Batch: WXX12714
Prep Method: METHOD
Prep Date/Time: 2/20/2019 12:30:00PM
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1190783 [WXX12714]
Blank Spike Lab ID: 1496994
Date Analyzed: 02/20/2019 13:45

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1190783001, 1190783002, 1190783003, 1190783004

Results by **EPA 300.0**

Blank Spike (mg/L)

Parameter	Spike	Result	Rec (%)	CL
Nitrate-N	5	4.88	98	(90-110)
Nitrite-N	5	4.95	99	(90-110)
Total Nitrate/Nitrite-N	10	9.83	98	(90-110)

Batch Information

Analytical Batch: **WIC5871**
Analytical Method: **EPA 300.0**
Instrument: **930 Metrohm compact IC flex**
Analyst: **DMM**

Prep Batch: **WXX12714**
Prep Method: **METHOD**
Prep Date/Time: **02/20/2019 12:30**
Spike Init Wt./Vol.: 5 mg/L Extract Vol: 10 mL
Dupe Init Wt./Vol.: Extract Vol:

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Matrix Spike Summary

Original Sample ID: 1497001
MS Sample ID: 1496996 MS
MSD Sample ID: 1496997 MSD

Analysis Date: 02/20/2019 14:23
Analysis Date: 02/20/2019 14:42
Analysis Date: 02/20/2019 15:01
Matrix: Drinking Water

QC for Samples: 1190783001, 1190783002, 1190783003, 1190783004

Results by **EPA 300.0**

		Matrix Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Nitrate-N	0.244	5.00	5.35	102	5.00	5.38	103	90-110	0.65	(< 15)
Nitrite-N	0.100U	5.00	5.07	101	5.00	5.09	102	90-110	0.41	(< 15)

Batch Information

Analytical Batch: WIC5871
Analytical Method: EPA 300.0
Instrument: 930 Metrohm compact IC flex
Analyst: DMM
Analytical Date/Time: 2/20/2019 2:42:44PM

Prep Batch: WXX12714
Prep Method: EPA 300.0 Extraction Waters/Liquids
Prep Date/Time: 2/20/2019 12:30:00PM
Prep Initial Wt./Vol.: 10.00mL
Prep Extract Vol: 10.00mL

Print Date: 02/28/2019 2:38:26PM

Method Blank

Blank ID: MB for HBN 1791265 [WXX/12717]
Blank Lab ID: 1497379

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1190783001, 1190783002

Results by **SM21 4500-NH3 G**

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

Batch Information

Analytical Batch: WDA4508
Analytical Method: SM21 4500-NH3 G
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 2/25/2019 10:49:51AM

Prep Batch: WXX12717
Prep Method: METHOD
Prep Date/Time: 2/25/2019 10:00:00AM
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

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Method Blank

Blank ID: MB for HBN 1791265 [WXX/12717]
Blank Lab ID: 1497384

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1190783001, 1190783002

Results by **SM21 4500-NH3 G**

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

Batch Information

Analytical Batch: WDA4508
Analytical Method: SM21 4500-NH3 G
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 2/25/2019 12:45:05PM

Prep Batch: WXX12717
Prep Method: METHOD
Prep Date/Time: 2/25/2019 10:00:00AM
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1190783 [WXX12717]
Blank Spike Lab ID: 1497380
Date Analyzed: 02/25/2019 10:51

Spike Duplicate ID: LCSD for HBN 1190783 [WXX12717]
Spike Duplicate Lab ID: 1497381
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1190783001, 1190783002

Results by **SM21 4500-NH3 G**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Ammonia-N	1	0.988	99	1	1.06	106	(75-125)	6.80	(< 25)

Batch Information

Analytical Batch: **WDA4508**
Analytical Method: **SM21 4500-NH3 G**
Instrument: **Discrete Analyzer 2**
Analyst: **DMM**

Prep Batch: **WXX12717**
Prep Method: **METHOD**
Prep Date/Time: **02/25/2019 10:00**
Spike Init Wt./Vol.: 1 mg/L Extract Vol: 6 mL
Dupe Init Wt./Vol.: 1 mg/L Extract Vol: 6 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1190783 [WXX12717]
Blank Spike Lab ID: 1497385
Date Analyzed: 02/25/2019 12:46

Spike Duplicate ID: LCSD for HBN 1190783 [WXX12717]
Spike Duplicate Lab ID: 1497386
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1190783001, 1190783002

Results by **SM21 4500-NH3 G**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Ammonia-N	1	1.13	113	1	1.03	103	(75-125)	9.50	(< 25)

Batch Information

Analytical Batch: **WDA4508**
Analytical Method: **SM21 4500-NH3 G**
Instrument: **Discrete Analyzer 2**
Analyst: **DMM**

Prep Batch: **WXX12717**
Prep Method: **METHOD**
Prep Date/Time: **02/25/2019 10:00**
Spike Init Wt./Vol.: 1 mg/L Extract Vol: 6 mL
Dupe Init Wt./Vol.: 1 mg/L Extract Vol: 6 mL

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Matrix Spike Summary

Original Sample ID: 1190644001
MS Sample ID: 1497382 MS
MSD Sample ID: 1497383 MSD

Analysis Date: 02/25/2019 10:54
Analysis Date: 02/25/2019 10:56
Analysis Date: 02/25/2019 10:58
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1190783001, 1190783002

Results by **SM21 4500-NH3 G**

		Matrix Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Ammonia-N	0.0500U	1.00	.805	81	1.00	0.862	86	75-125	6.80	(< 25)

Batch Information

Analytical Batch: WDA4508
Analytical Method: SM21 4500-NH3 G
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 2/25/2019 10:56:37AM

Prep Batch: WXX12717
Prep Method: Ammonia by SM21 4500F prep (W)
Prep Date/Time: 2/25/2019 10:00:00AM
Prep Initial Wt./Vol.: 6.00mL
Prep Extract Vol: 6.00mL

Print Date: 02/28/2019 2:38:31PM

Matrix Spike Summary

Original Sample ID: 1190836002
MS Sample ID: 1497387 MS
MSD Sample ID: 1497388 MSD

Analysis Date: 02/25/2019 12:50
Analysis Date: 02/25/2019 12:51
Analysis Date: 02/25/2019 12:53
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1190783001, 1190783002

Results by **SM21 4500-NH3 G**

		Matrix Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Ammonia-N	0.0920J	1.00	.896	80	1.00	1.00	91	75-125	11.20	(< 25)

Batch Information

Analytical Batch: WDA4508
Analytical Method: SM21 4500-NH3 G
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 2/25/2019 12:51:47PM

Prep Batch: WXX12717
Prep Method: Ammonia by SM21 4500F prep (W)
Prep Date/Time: 2/25/2019 10:00:00AM
Prep Initial Wt./Vol.: 6.00mL
Prep Extract Vol: 6.00mL

Print Date: 02/28/2019 2:38:31PM

Method Blank

Blank ID: MB for HBN 1791272 [WXX/12718]
Blank Lab ID: 1497412

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1190783003, 1190783004

Results by **SM21 4500-NH3 G**

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

Batch Information

Analytical Batch: WDA4509
Analytical Method: SM21 4500-NH3 G
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 2/26/2019 9:51:40AM

Prep Batch: WXX12718
Prep Method: METHOD
Prep Date/Time: 2/26/2019 9:05:00AM
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1190783 [WXX12718]
Blank Spike Lab ID: 1497413
Date Analyzed: 02/26/2019 09:53

Spike Duplicate ID: LCSD for HBN 1190783 [WXX12718]
Spike Duplicate Lab ID: 1497414
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1190783003, 1190783004

Results by **SM21 4500-NH3 G**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Ammonia-N	1	1.15	115	1	1.12	112	(75-125)	2.40	(< 25)

Batch Information

Analytical Batch: **WDA4509**
Analytical Method: **SM21 4500-NH3 G**
Instrument: **Discrete Analyzer 2**
Analyst: **DMM**

Prep Batch: **WXX12718**
Prep Method: **METHOD**
Prep Date/Time: **02/26/2019 09:05**
Spike Init Wt./Vol.: 1 mg/L Extract Vol: 6 mL
Dupe Init Wt./Vol.: 1 mg/L Extract Vol: 6 mL

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Matrix Spike Summary

Original Sample ID: 1190846001
MS Sample ID: 1497415 MS
MSD Sample ID: 1497416 MSD

Analysis Date: 02/26/2019 10:03
Analysis Date: 02/26/2019 10:05
Analysis Date: 02/26/2019 10:06
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1190783003, 1190783004

Results by **SM21 4500-NH3 G**

		Matrix Spike (mg/L)				Spike Duplicate (mg/L)					
Parameter	Sample	Spike	Result	Rec (%)		Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Ammonia-N	0.914	1.00	1.41	50	*	1.00	1.71	79	75-125	19.10	(< 25)

Batch Information

Analytical Batch: WDA4509
Analytical Method: SM21 4500-NH3 G
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 2/26/2019 10:05:02AM

Prep Batch: WXX12718
Prep Method: Ammonia by SM21 4500F prep (W)
Prep Date/Time: 2/26/2019 9:05:00AM
Prep Initial Wt./Vol.: 6.00mL
Prep Extract Vol: 6.00mL

Print Date: 02/28/2019 2:38:34PM

Method Blank

Blank ID: MB for HBN 1791294 [WXX/12720]
Blank Lab ID: 1497505

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1190783001, 1190783002, 1190783003, 1190783004

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

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

Batch Information

Analytical Batch: WDA4511
Analytical Method: SM21 4500P-B,E
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 2/27/2019 10:21:33AM

Prep Batch: WXX12720
Prep Method: SM21 4500P-B,E
Prep Date/Time: 2/26/2019 3:47:00PM
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1190783 [WXX12720]
Blank Spike Lab ID: 1497506
Date Analyzed: 02/27/2019 10:22

Spike Duplicate ID: LCSD for HBN 1190783 [WXX12720]
Spike Duplicate Lab ID: 1497507
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1190783001, 1190783002, 1190783003, 1190783004

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

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Total Phosphorus	0.2	0.190	95	0.2	0.190	95	(75-125)	0.32	(< 25)

Batch Information

Analytical Batch: **WDA4511**
Analytical Method: **SM21 4500P-B,E**
Instrument: **Discrete Analyzer 2**
Analyst: **DMM**

Prep Batch: **WXX12720**
Prep Method: **SM21 4500P-B,E**
Prep Date/Time: **02/26/2019 15:47**
Spike Init Wt./Vol.: 0.2 mg/L Extract Vol: 25 mL
Dupe Init Wt./Vol.: 0.2 mg/L Extract Vol: 25 mL

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Matrix Spike Summary

Original Sample ID: 1190783001
MS Sample ID: 1497508 MS
MSD Sample ID: 1497509 MSD

Analysis Date: 02/27/2019 10:24
Analysis Date: 02/27/2019 10:25
Analysis Date: 02/27/2019 10:26
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1190783001, 1190783002, 1190783003, 1190783004

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

		Matrix Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Total Phosphorus	0.228	0.200	.429	100	0.200	0.405	89	75-125	5.70	(< 25)

Batch Information

Analytical Batch: WDA4511
Analytical Method: SM21 4500P-B,E
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 2/27/2019 10:25:25AM

Prep Batch: WXX12720
Prep Method: Total Phosphorus (W) Ext.
Prep Date/Time: 2/26/2019 3:47:00PM
Prep Initial Wt./Vol.: 25.00mL
Prep Extract Vol: 25.00mL

Print Date: 02/28/2019 2:38:37PM

Method Blank

Blank ID: MB for HBN 1791341 [WXX/12723]
Blank Lab ID: 1497724

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1190783001, 1190783002, 1190783003, 1190783004

Results by **SM21 4500-N D**

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

Batch Information

Analytical Batch: WDA4512
Analytical Method: SM21 4500-N D
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 2/28/2019 10:42:49AM

Prep Batch: WXX12723
Prep Method: METHOD
Prep Date/Time: 2/26/2019 9:42:00AM
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
t 907.562.2343 **f** 907.561.5301 www.us.sgs.com

Blank Spike Summary

Blank Spike ID: LCS for HBN 1190783 [WXX12723]
Blank Spike Lab ID: 1497725
Date Analyzed: 02/28/2019 10:44

Spike Duplicate ID: LCSD for HBN 1190783 [WXX12723]
Spike Duplicate Lab ID: 1497726
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1190783001, 1190783002, 1190783003, 1190783004

Results by **SM21 4500-N D**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Total Kjeldahl Nitrogen	4	3.85	96	4	3.69	92	(75-125)	4.30	(< 25)

Batch Information

Analytical Batch: **WDA4512**
Analytical Method: **SM21 4500-N D**
Instrument: **Discrete Analyzer 2**
Analyst: **DMM**

Prep Batch: **WXX12723**
Prep Method: **METHOD**
Prep Date/Time: **02/26/2019 09:42**
Spike Init Wt./Vol.: 4 mg/L Extract Vol: 25 mL
Dupe Init Wt./Vol.: 4 mg/L Extract Vol: 25 mL

SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
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Matrix Spike Summary

Original Sample ID: 1190783001
MS Sample ID: 1497727 MS
MSD Sample ID: 1497728 MSD

Analysis Date: 02/28/2019 10:46
Analysis Date: 02/28/2019 10:48
Analysis Date: 02/28/2019 10:49
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1190783001, 1190783002, 1190783003, 1190783004

Results by **SM21 4500-N D**

		Matrix Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Total Kjeldahl Nitrogen	2.76	4.00	5.86	78	4.00	6.25	87	75-125	6.50	(< 25)

Batch Information

Analytical Batch: WDA4512
Analytical Method: SM21 4500-N D
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 2/28/2019 10:48:04AM

Prep Batch: WXX12723
Prep Method: Distillation TKN by Phenate (W)
Prep Date/Time: 2/26/2019 9:42:00AM
Prep Initial Wt./Vol.: 25.00mL
Prep Extract Vol: 25.00mL

Print Date: 02/28/2019 2:38:43PM

SGS

SGS North America Inc.
CHAIN OF CUSTODY RECOR

1190783

Locations Nationwide

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

www.us.sgs.com

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

Page 1 of 1

Section 1

CLIENT: Stantec

CONTACT: Jake Alward PHONE NO: 343-5202

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

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

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

Section 3

Preservative

						# CONTAINERS	Type C = COMP G = GRAB MI = Multi Incre-mental Soils	BOD	TSS	Nitrate/Nitrite	TKN/TP/Ammonia	FC	TC (Quanti) 1x/10x					REMARKS/LOC ID
Preservative								|	|	|	[illegible] H_2SO_4	$Na_2S_2O_3$	$Na_2S_2O_3$					
RESERVED for lab use	**SAMPLE IDENTIFICATION**	**DATE mm/dd/yy**	**TIME HH:MM**	**MATRIX/MATRIX CODE**														
①A-F	SW5	2/20/19	1145	Water		6	G											
②A-F	SW17	↓	1230	↓		↓	↓											
③A-F	SW18	↓	1325	↓		↓	↓											
④A-F	DUP1	↓	1145	↓		↓	↓											

Section 2

Section 5

Relinquished By: (1)	Date 2/20/19	Time 1437	Received By:
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date 2/20/19	Time 1437	Received For Laboratory By: [signature]

Section 4 DOD Project? Yes No

Cooler ID: ______

Data Deliverable Requirements:

Requested Turnaround Time and/or Special Instructions:

Temp Blank °C: 1.4 D44

or Ambient [ ]

(See attached Sample Receipt Form)

Chain of Custody Seal: (Circle)

INTACT BROKEN (ABSENT)

(See attached Sample Receipt Form)

HD

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

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

F083-Kit_Request_and_COC_Templates-Blank
Revised 2013-03-24

e-Sample Receipt Form

SGS Workorder #: **1190783**

Review Criteria	Condition (Yes, No, N/A)	Exceptions Noted below
Chain of Custody / Temperature Requirements		Yes — Exemption permitted if sampler hand carries/delivers.
Were Custody Seals intact? Note # & location	N/A	Hand Delivered
COC accompanied samples?	Yes	
Yes **Exemption permitted if chilled & collected <8 hours ago, or for samples where chilling is not required		
Temperature blank compliant* (i.e., 0-6 °C after CF)?	Yes	Cooler ID: 1 @ 1.4 °C Therm. ID: D44
		Cooler ID: @ °C Therm. ID:
		Cooler ID: @ °C Therm. ID:
		Cooler ID: @ °C Therm. ID:
		Cooler ID: @ °C Therm. ID:
If >6°C, were samples collected <8 hours ago?	N/A	
If <0°C, were sample containers ice free?	N/A	
If samples received without a temperature blank, the "cooler temperature" will be documented in lieu of the temperature blank & "**COOLER TEMP**" will be noted to the right. In cases where neither a temp blank nor cooler temp can be obtained, note "ambient" or "chilled".		
Note: Identify containers received at non-compliant temperature . Use form FS-0029 if more space is needed.		
Holding Time / Documentation / Sample Condition Requirements		Note: Refer to form F-083 "Sample Guide" for specific holding times.
Were samples received within holding time?	Yes	
Do samples **match COC**** (i.e.,sample IDs,dates/times collected)? **Note: If times differ <1hr, record details & login per COC.	Yes	
Were analyses requested unambiguous? (i.e., method is specified for analyses with >1 option for analysis)	Yes	
	N/A	***Exemption permitted for metals (e.g,200.8/6020A).
Were proper containers (type/mass/volume/preservative***)used?	Yes	
Volatile / LL-Hg Requirements		
Were Trip Blanks (i.e., VOAs, LL-Hg) in cooler with samples?	N/A	
Were all water VOA vials free of headspace (i.e., bubbles ≤ 6mm)?	N/A	
Were all soil VOAs field extracted with MeOH+BFB?	N/A	

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

Additional notes (if applicable):

Sample Containers and Preservatives

Container Id	Preservative	Container Condition	Container Id	Preservative	Container Condition
1190783001-A	No Preservative Required	OK			
1190783001-B	No Preservative Required	OK			
1190783001-C	No Preservative Required	OK			
1190783001-D	H2SO4 to pH < 2	OK			
1190783001-E	Na2S2O3 for Chlorine Redu	OK			
1190783001-F	Na2S2O3 for Chlorine Redu	OK			
1190783002-A	No Preservative Required	OK			
1190783002-B	No Preservative Required	OK			
1190783002-C	No Preservative Required	OK			
1190783002-D	H2SO4 to pH < 2	OK			
1190783002-E	Na2S2O3 for Chlorine Redu	OK			
1190783002-F	Na2S2O3 for Chlorine Redu	OK			
1190783003-A	No Preservative Required	OK			
1190783003-B	No Preservative Required	OK			
1190783003-C	No Preservative Required	OK			
1190783003-D	H2SO4 to pH < 2	OK			
1190783003-E	Na2S2O3 for Chlorine Redu	OK			
1190783003-F	Na2S2O3 for Chlorine Redu	OK			
1190783004-A	No Preservative Required	OK			
1190783004-B	No Preservative Required	OK			
1190783004-C	No Preservative Required	OK			
1190783004-D	H2SO4 to pH < 2	OK			
1190783004-E	Na2S2O3 for Chlorine Redu	OK			
1190783004-F	Na2S2O3 for Chlorine Redu	OK			

Container Condition Glossary

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

OK - The container was received at an acceptable pH for the analysis requested.
BU - The container was received with headspace greater than 6mm.
DM - The container was received damaged.
FR - The container was received frozen and not usable for Bacteria or BOD analyses.
IC - The container provided for microbiology analysis was not a laboratory-supplied, pre-sterilized container and therefore was not suitable for analysis.
PA - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt and the container is now at the correct pH. See the Sample Receipt Form for details on the amount and lot # of the preservative added.
PH - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt, but was insufficient to bring the container to the correct pH for the analysis requested. See the Sample Receipt Form for details on the amount and lot # of the preservative added.