Laboratory Report of Analysis

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

Report Number: **1178729**

Client Project: **Wasilla WWTP**

Dear John Marshall,

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

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

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

Sincerely,
SGS North America Inc.

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

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

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Case Narrative

SGS Client: **Stantec Consulting Services Inc.**
SGS Project: **1178729**
Project Name/Site: **Wasilla WWTP**
Project Contact: **John Marshall**

Refer to sample receipt form for information on sample condition.

1178762003MS (1429256) MS

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

1178762003MSD (1429257) MSD

4500NO3-F - Nitrate/Nitrite - MSD recovery for Total Nitrate/Nitrite 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.

Laboratory Qualifiers

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

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

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are **AK00971 DW Chemistry (Provisionally Certified as of 10/12/2017) & Microbiology (Provisionally Certified as of 9/21/2017)** & UST-005 (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	Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
GT	Greater Than
IB	Instrument Blank
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LLQC/LLIQC	Low Level Quantitation Check
LOD	Limit of Detection (i.e., 1/2 of the LOQ)
LOQ	Limit of Quantitation (i.e., reporting or practical quantitation limit)
LT	Less Than
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
RPD	Relative Percent Difference
U	Indicates the analyte was analyzed for but not detected.

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

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Sample Summary

Client Sample ID	Lab Sample ID	Collected	Received	Matrix
B1	1178729001	12/12/2017	12/12/2017	Water (Surface, Eff., Ground)
B3	1178729002	12/12/2017	12/12/2017	Water (Surface, Eff., Ground)
B4	1178729003	12/12/2017	12/12/2017	Water (Surface, Eff., Ground)
B11	1178729004	12/12/2017	12/12/2017	Water (Surface, Eff., Ground)
MW6	1178729005	12/12/2017	12/12/2017	Water (Surface, Eff., Ground)
Dup 1	1178729006	12/12/2017	12/12/2017	Water (Surface, Eff., Ground)

Method	Method Description
SM21 4500-NH3 G	Ammonia-N (W) SM21 4500-NH3 G
SM21 9222D	Fecal Coliform (MF)
SM21 4500NO3-F	Nitrate/Nitrite Flow injection Pres.
SM21 4500-N D	TKN by Phenate (W)

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Detectable Results Summary

Client Sample ID: **B1**
Lab Sample ID: 1178729001
Waters Department

Parameter	Result	Units
Ammonia-N	0.0383J	mg/L
Total Nitrate/Nitrite-N	0.0724J	mg/L

Client Sample ID: **B3**
Lab Sample ID: 1178729002
Waters Department

Parameter	Result	Units
Ammonia-N	0.0816J	mg/L
Total Kjeldahl Nitrogen	0.719J	mg/L
Total Nitrate/Nitrite-N	0.0542J	mg/L

Client Sample ID: **B4**
Lab Sample ID: 1178729003
Waters Department

Parameter	Result	Units
Total Nitrate/Nitrite-N	1.93	mg/L

Client Sample ID: **B11**
Lab Sample ID: 1178729004
Waters Department

Parameter	Result	Units
Ammonia-N	0.122	mg/L
Total Nitrate/Nitrite-N	0.0310J	mg/L

Client Sample ID: **MW6**
Lab Sample ID: 1178729005
Waters Department

Parameter	Result	Units
Ammonia-N	0.0494J	mg/L
Total Nitrate/Nitrite-N	0.0318J	mg/L

Client Sample ID: **Dup 1**
Lab Sample ID: 1178729006
Waters Department

Parameter	Result	Units
Ammonia-N	0.131	mg/L
Total Nitrate/Nitrite-N	0.0624J	mg/L

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Results of **B1**

Client Sample ID: **B1**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1178729001
Lab Project ID: 1178729

Collection Date: 12/12/17 12:02
Received Date: 12/12/17 16:22
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Microbiology Laboratory**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Fecal Coliform	1.00	U	1.00	1.00	col/100mL	1		12/12/17 17:40

Batch Information

Analytical Batch: BTF16188
Analytical Method: SM21 9222D
Analyst: K.W
Analytical Date/Time: 12/12/17 17:40
Container ID: 1178729001-A

Results of **B1**

Client Sample ID: **B1**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1178729001
Lab Project ID: 1178729

Collection Date: 12/12/17 12:02
Received Date: 12/12/17 16:22
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	0.500 U		1.00	0.310	mg/L	1		12/14/17 13:28

Batch Information

Analytical Batch: WDA4152
Analytical Method: SM21 4500-N D
Analyst: DMM
Analytical Date/Time: 12/14/17 13:28
Container ID: 1178729001-B

Prep Batch: WXX12145
Prep Method: METHOD
Prep Date/Time: 12/13/17 16:58
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	0.0383 J		0.100	0.0310	mg/L	1		12/13/17 11:40

Batch Information

Analytical Batch: WDA4151
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 12/13/17 11:40
Container ID: 1178729001-B

Prep Batch: WXX12144
Prep Method: METHOD
Prep Date/Time: 12/13/17 10:43
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Nitrate/Nitrite-N	0.0724 J		0.100	0.0300	mg/L	2		12/13/17 17:34

Batch Information

Analytical Batch: WFI2625
Analytical Method: SM21 4500NO3-F
Analyst: AYC
Analytical Date/Time: 12/13/17 17:34
Container ID: 1178729001-B

Print Date: 12/20/2017 11:19:25AM

J flagging is activated

Results of **B3**

Client Sample ID: **B3**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1178729002
Lab Project ID: 1178729

Collection Date: 12/12/17 12:26
Received Date: 12/12/17 16:22
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Microbiology Laboratory**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Fecal Coliform	1.64	U	1.64	1.64	col/100mL	1		12/12/17 17:40

Batch Information

Analytical Batch: BTF16188
Analytical Method: SM21 9222D
Analyst: K.W
Analytical Date/Time: 12/12/17 17:40
Container ID: 1178729002-A

Results of **B3**

Client Sample ID: **B3**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1178729002
Lab Project ID: 1178729

Collection Date: 12/12/17 12:26
Received Date: 12/12/17 16:22
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	0.719	J	1.00	0.310	mg/L	1		12/14/17 13:29

Batch Information

Analytical Batch: WDA4152
Analytical Method: SM21 4500-N D
Analyst: DMM
Analytical Date/Time: 12/14/17 13:29
Container ID: 1178729002-B

Prep Batch: WXX12145
Prep Method: METHOD
Prep Date/Time: 12/13/17 16:58
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	0.0816	J	0.100	0.0310	mg/L	1		12/13/17 11:42

Batch Information

Analytical Batch: WDA4151
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 12/13/17 11:42
Container ID: 1178729002-B

Prep Batch: WXX12144
Prep Method: METHOD
Prep Date/Time: 12/13/17 10:43
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Nitrate/Nitrite-N	0.0542	J	0.100	0.0300	mg/L	2		12/13/17 17:36

Batch Information

Analytical Batch: WFI2625
Analytical Method: SM21 4500NO3-F
Analyst: AYC
Analytical Date/Time: 12/13/17 17:36
Container ID: 1178729002-B

Print Date: 12/20/2017 11:19:25AM

J flagging is activated

Results of **B4**

Client Sample ID: **B4**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1178729003
Lab Project ID: 1178729

Collection Date: 12/12/17 11:30
Received Date: 12/12/17 16:22
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Microbiology Laboratory**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Fecal Coliform	1.00	U	1.00	1.00	col/100mL	1		12/12/17 17:40

Batch Information

Analytical Batch: BTF16188
Analytical Method: SM21 9222D
Analyst: K.W
Analytical Date/Time: 12/12/17 17:40
Container ID: 1178729003-A

Results of **B4**

Client Sample ID: **B4**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1178729003
Lab Project ID: 1178729

Collection Date: 12/12/17 11:30
Received Date: 12/12/17 16:22
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	0.500 U		1.00	0.310	mg/L	1		12/14/17 13:31

Batch Information

Analytical Batch: WDA4152
Analytical Method: SM21 4500-N D
Analyst: DMM
Analytical Date/Time: 12/14/17 13:31
Container ID: 1178729003-B

Prep Batch: WXX12145
Prep Method: METHOD
Prep Date/Time: 12/13/17 16:58
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	0.0500 U		0.100	0.0310	mg/L	1		12/13/17 11:43

Batch Information

Analytical Batch: WDA4151
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 12/13/17 11:43
Container ID: 1178729003-B

Prep Batch: WXX12144
Prep Method: METHOD
Prep Date/Time: 12/13/17 10:43
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Nitrate/Nitrite-N	1.93		0.100	0.0300	mg/L	2		12/13/17 17:38

Batch Information

Analytical Batch: WFI2625
Analytical Method: SM21 4500NO3-F
Analyst: AYC
Analytical Date/Time: 12/13/17 17:38
Container ID: 1178729003-B

Print Date: 12/20/2017 11:19:25AM

J flagging is activated

Results of **B11**

Client Sample ID: **B11**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1178729004
Lab Project ID: 1178729

Collection Date: 12/12/17 13:59
Received Date: 12/12/17 16:22
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Microbiology Laboratory**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Fecal Coliform	1.00	U	1.00	1.00	col/100mL	1		12/12/17 17:40

Batch Information

Analytical Batch: BTF16188
Analytical Method: SM21 9222D
Analyst: K.W
Analytical Date/Time: 12/12/17 17:40
Container ID: 1178729004-A

Results of **B11**

Client Sample ID: **B11**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1178729004
Lab Project ID: 1178729

Collection Date: 12/12/17 13:59
Received Date: 12/12/17 16:22
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	0.500	U	1.00	0.310	mg/L	1		12/14/17 13:32

Batch Information

Analytical Batch: WDA4152
Analytical Method: SM21 4500-N D
Analyst: DMM
Analytical Date/Time: 12/14/17 13:32
Container ID: 1178729004-B

Prep Batch: WXX12145
Prep Method: METHOD
Prep Date/Time: 12/13/17 16:58
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	0.122		0.100	0.0310	mg/L	1		12/13/17 11:45

Batch Information

Analytical Batch: WDA4151
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 12/13/17 11:45
Container ID: 1178729004-B

Prep Batch: WXX12144
Prep Method: METHOD
Prep Date/Time: 12/13/17 10:43
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Nitrate/Nitrite-N	0.0310	J	0.100	0.0300	mg/L	2		12/13/17 17:39

Batch Information

Analytical Batch: WFI2625
Analytical Method: SM21 4500NO3-F
Analyst: AYC
Analytical Date/Time: 12/13/17 17:39
Container ID: 1178729004-B

Results of **MW6**

Client Sample ID: **MW6**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1178729005
Lab Project ID: 1178729

Collection Date: 12/12/17 12:52
Received Date: 12/12/17 16:22
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Microbiology Laboratory**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Fecal Coliform	1.00	U	1.00	1.00	col/100mL	1		12/12/17 17:40

Batch Information

Analytical Batch: BTF16188
Analytical Method: SM21 9222D
Analyst: K.W
Analytical Date/Time: 12/12/17 17:40
Container ID: 1178729005-A

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Results of **MW6**

Client Sample ID: **MW6**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1178729005
Lab Project ID: 1178729

Collection Date: 12/12/17 12:52
Received Date: 12/12/17 16:22
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	0.500 U		1.00	0.310	mg/L	1		12/14/17 13:36

Batch Information

Analytical Batch: WDA4152
Analytical Method: SM21 4500-N D
Analyst: DMM
Analytical Date/Time: 12/14/17 13:36
Container ID: 1178729005-B

Prep Batch: WXX12145
Prep Method: METHOD
Prep Date/Time: 12/13/17 16:58
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	0.0494 J		0.100	0.0310	mg/L	1		12/13/17 11:50

Batch Information

Analytical Batch: WDA4151
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 12/13/17 11:50
Container ID: 1178729005-B

Prep Batch: WXX12144
Prep Method: METHOD
Prep Date/Time: 12/13/17 10:43
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Nitrate/Nitrite-N	0.0318 J		0.100	0.0300	mg/L	2		12/13/17 17:41

Batch Information

Analytical Batch: WFI2625
Analytical Method: SM21 4500NO3-F
Analyst: AYC
Analytical Date/Time: 12/13/17 17:41
Container ID: 1178729005-B

Print Date: 12/20/2017 11:19:25AM

J flagging is activated

Results of **Dup 1**

Client Sample ID: **Dup 1**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1178729006
Lab Project ID: 1178729

Collection Date: 12/12/17 13:59
Received Date: 12/12/17 16:22
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Microbiology Laboratory**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Fecal Coliform	1.00	U	1.00	1.00	col/100mL	1		12/12/17 17:40

Batch Information

Analytical Batch: BTF16188
Analytical Method: SM21 9222D
Analyst: K.W
Analytical Date/Time: 12/12/17 17:40
Container ID: 1178729006-A

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Results of **Dup 1**

Client Sample ID: **Dup 1**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1178729006
Lab Project ID: 1178729

Collection Date: 12/12/17 13:59
Received Date: 12/12/17 16:22
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	0.500	U	1.00	0.310	mg/L	1		12/14/17 13:37

Batch Information

Analytical Batch: WDA4152
Analytical Method: SM21 4500-N D
Analyst: DMM
Analytical Date/Time: 12/14/17 13:37
Container ID: 1178729006-B

Prep Batch: WXX12145
Prep Method: METHOD
Prep Date/Time: 12/13/17 16:58
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	0.131		0.100	0.0310	mg/L	1		12/13/17 11:52

Batch Information

Analytical Batch: WDA4151
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 12/13/17 11:52
Container ID: 1178729006-B

Prep Batch: WXX12144
Prep Method: METHOD
Prep Date/Time: 12/13/17 10:43
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Nitrate/Nitrite-N	0.0624	J	0.100	0.0300	mg/L	2		12/13/17 17:43

Batch Information

Analytical Batch: WFI2625
Analytical Method: SM21 4500NO3-F
Analyst: AYC
Analytical Date/Time: 12/13/17 17:43
Container ID: 1178729006-B

Print Date: 12/20/2017 11:19:25AM

J flagging is activated

Method Blank

Blank ID: MB for HBN 1773291 [BTF/16188]
Blank Lab ID: 1429067

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1178729001, 1178729002, 1178729003, 1178729004, 1178729005, 1178729006

Results by **SM21 9222D**

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

Batch Information

Analytical Batch: BTF16188
Analytical Method: SM21 9222D
Instrument:
Analyst: K.W
Analytical Date/Time: 12/12/2017 5:40:00PM

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Method Blank

Blank ID: MB for HBN 1773346 (WFI/2625)
Blank Lab ID: 1429274

Matrix: Water (Surface, Eff., Ground)

QC for Samples:

Results by **SM21 4500NO3-F**

Parameter	Results	LOQ/CL	DL	Units
Nitrate-N	0.0500U	0.100	0.0300	mg/L
Nitrite-N	0.0500U	0.100	0.0300	mg/L
Total Nitrate/Nitrite-N	0.0500U	0.100	0.0300	mg/L

Batch Information

Analytical Batch: WFI2625
Analytical Method: SM21 4500NO3-F
Instrument: Astoria segmented flow
Analyst: AYC
Analytical Date/Time: 12/13/2017 3:47:11PM

Method Blank

Blank ID: MB for HBN 1773346 (WFI/2625)
Blank Lab ID: 1429276

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1178729001, 1178729002, 1178729003, 1178729004, 1178729005, 1178729006

Results by **SM21 4500NO3-F**

Parameter	Results	LOQ/CL	DL	Units
Nitrate-N	0.0500U	0.100	0.0300	mg/L
Nitrite-N	0.0500U	0.100	0.0300	mg/L
Total Nitrate/Nitrite-N	0.0500U	0.100	0.0300	mg/L

Batch Information

Analytical Batch: WFI2625
Analytical Method: SM21 4500NO3-F
Instrument: Astoria segmented flow
Analyst: AYC
Analytical Date/Time: 12/13/2017 5:31:08PM

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1178729 [WFI2625]
Blank Spike Lab ID: 1429258
Date Analyzed: 12/13/2017 15:45

Matrix: Water (Surface, Eff., Ground)

QC for Samples:

Results by **SM21 4500NO3-F**

Blank Spike (mg/L)

Parameter	Spike	Result	Rec (%)	CL
Nitrate-N	2.5	2.75	110	(70-130)
Nitrite-N	2.5	2.50	100	(90-110)
Total Nitrate/Nitrite-N	5	5.25	105	(90-110)

Batch Information

Analytical Batch: **WFI2625**
Analytical Method: **SM21 4500NO3-F**
Instrument: **Astoria segmented flow**
Analyst: **AYC**

Print Date: 12/20/2017 11:19:32AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1178729 [WFI2625]
Blank Spike Lab ID: 1429275
Date Analyzed: 12/13/2017 17:29

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1178729001, 1178729002, 1178729003, 1178729004, 1178729005, 1178729006

Results by **SM21 4500NO3-F**

Blank Spike (mg/L)

Parameter	Spike	Result	Rec (%)	CL
Nitrate-N	2.5	2.62	105	(70-130)
Nitrite-N	2.5	2.34	94	(90-110)
Total Nitrate/Nitrite-N	5	4.96	99	(90-110)

Batch Information

Analytical Batch: **WFI2625**
Analytical Method: **SM21 4500NO3-F**
Instrument: **Astoria segmented flow**
Analyst: **AYC**

Print Date: 12/20/2017 11:19:32AM

Matrix Spike Summary

Original Sample ID: 1178730002
MS Sample ID: 1429254 MS
MSD Sample ID: 1429255 MSD

Analysis Date: 12/13/2017 17:46
Analysis Date: 12/13/2017 17:48
Analysis Date: 12/13/2017 17:50
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1178729001, 1178729002, 1178729003, 1178729004, 1178729005, 1178729006

Results by **SM21 4500NO3-F**

		Matrix Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Total Nitrate/Nitrite-N	0.199	5.00	5.33	103	5.00	5.48	106	90-110	2.70	(< 25)

Batch Information

Analytical Batch: WFI2625
Analytical Method: SM21 4500NO3-F
Instrument: Astoria segmented flow
Analyst: AYC
Analytical Date/Time: 12/13/2017 5:48:38PM

Print Date: 12/20/2017 11:19:33AM

Method Blank

Blank ID: MB for HBN 1773325 [WXX/12144]
Blank Lab ID: 1429165

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1178729001, 1178729002, 1178729003, 1178729004, 1178729005, 1178729006

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: WDA4151
Analytical Method: SM21 4500-NH3 G
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 12/13/2017 11:30:36AM

Prep Batch: WXX12144
Prep Method: METHOD
Prep Date/Time: 12/13/2017 10:43:00AM
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1178729 [WXX12144]
Blank Spike Lab ID: 1429166
Date Analyzed: 12/13/2017 11:32

Spike Duplicate ID: LCSD for HBN 1178729 [WXX12144]
Spike Duplicate Lab ID: 1429167
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1178729001, 1178729002, 1178729003, 1178729004, 1178729005, 1178729006

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	0.960	96	1	1.07	107	(75-125)	10.60	(< 25)

Batch Information

Analytical Batch: **WDA4151**
Analytical Method: **SM21 4500-NH3 G**
Instrument: **Discrete Analyzer 2**
Analyst: **DMM**

Prep Batch: **WXX12144**
Prep Method: **METHOD**
Prep Date/Time: **12/13/2017 10:43**
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: 1179196001
MS Sample ID: 1429168 MS
MSD Sample ID: 1429169 MSD

Analysis Date: 12/13/2017 11:35
Analysis Date: 12/13/2017 11:37
Analysis Date: 12/13/2017 11:38
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1178729001, 1178729002, 1178729003, 1178729004, 1178729005, 1178729006

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	0.290	1.00	1.16	87	1.00	1.07	78	75-125	8.70	(< 25)

Batch Information

Analytical Batch: WDA4151
Analytical Method: SM21 4500-NH3 G
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 12/13/2017 11:37:18AM

Prep Batch: WXX12144
Prep Method: Ammonia by SM21 4500F prep (W)
Prep Date/Time: 12/13/2017 10:43:00AM
Prep Initial Wt./Vol.: 6.00mL
Prep Extract Vol: 6.00mL

Print Date: 12/20/2017 11:19:38AM

Method Blank

Blank ID: MB for HBN 1773357 [WXX/12145]
Blank Lab ID: 1429329

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1178729001, 1178729002, 1178729003, 1178729004, 1178729005, 1178729006

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: WDA4152
Analytical Method: SM21 4500-N D
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 12/14/2017 1:20:41PM

Prep Batch: WXX12145
Prep Method: METHOD
Prep Date/Time: 12/13/2017 4:58:00PM
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1178729 [WXX12145]
Blank Spike Lab ID: 1429330
Date Analyzed: 12/14/2017 13:21

Spike Duplicate ID: LCSD for HBN 1178729 [WXX12145]
Spike Duplicate Lab ID: 1429331
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1178729001, 1178729002, 1178729003, 1178729004, 1178729005, 1178729006

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	3.63	91	4	3.64	91	(75-125)	0.41	(< 25)

Batch Information

Analytical Batch: **WDA4152**
Analytical Method: **SM21 4500-N D**
Instrument: **Discrete Analyzer 2**
Analyst: **DMM**

Prep Batch: **WXX12145**
Prep Method: **METHOD**
Prep Date/Time: **12/13/2017 16:58**
Spike Init Wt./Vol.: 4 mg/L Extract Vol: 25 mL
Dupe Init Wt./Vol.: 4 mg/L Extract Vol: 25 mL

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Matrix Spike Summary

Original Sample ID: 1178721001
MS Sample ID: 1429332 MS
MSD Sample ID: 1429333 MSD

Analysis Date: 12/14/2017 13:24
Analysis Date: 12/14/2017 13:25
Analysis Date: 12/14/2017 13:27
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1178729001, 1178729002, 1178729003, 1178729004, 1178729005, 1178729006

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	5.66	4.00	9.91	106	4.00	9.88	106	75-125	0.30	(< 25)

Batch Information

Analytical Batch: WDA4152
Analytical Method: SM21 4500-N D
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 12/14/2017 1:25:55PM

Prep Batch: WXX12145
Prep Method: Distillation TKN by Phenate (W)
Prep Date/Time: 12/13/2017 4:58:00PM
Prep Initial Wt./Vol.: 25.00mL
Prep Extract Vol: 25.00mL

Print Date: 12/20/2017 11:19:45AM

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CHAIN OF CUSTODY RECORD

1178729

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Page 1 of 1

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

Section 1

CLIENT: Stantec Consulting

CONTACT: John Marshall — PHONE #:

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

REPORTS TO: — E-MAIL: john.marshall@stantec.com

INVOICE TO: Stantec Consulting — QUOTE #: — P.O. #: 20470415

Section 2

RESERVED for lab use	SAMPLE IDENTIFICATION	DATE mm/dd/yy	TIME HH:MM	MATRIX/ MATRIX CODE	# CONTAINERS	Pres: Type: Comp / Grab / MI (Multi-incremental)	BOD	TSS	Total Phos	Total Coliform (Quantitray)	TKN, Nitrate+Nitrite, Ammonia	Fecal Coliform	RCRA Metals + Cu/Zn				REMARKS/ LOC ID
					Section 3	Preservative	None	None	H2SO4	Na2SO4	H2SO4	Na2SO4	HNO3				
1 A-B	B1	12/12/17	1202	W	2						1	1					
2 A-B	B3	12/12/17	1226	W	2						1	1					
3 A-B	B4	12/12/17	1130	W	2						1	1					
4 A-B	B11	12/12/17	1359	W	2						1	1					
~~5 A-B Cns~~	B14	12/12/17	1438	W	2						1	1					
5 A-B	MW6	12/12/17	1252	W	2						1	1					
	MW8	12/12/17	1346	W	2						1	1					
6 A-B	Dup 1	12/12/17	1359	W	2						1	1					

Section 5

	Date	Time	
Relinquished By: (1)			Received By:
Relinquished By: (2)			Received By:
Relinquished By: (3)			Received By:
Relinquished By: (4)	12/12/17	16:22	Received For Laboratory By: NCW

Section 4 — DOD Project? Yes (No)

Cooler ID: _____

Data Deliverable Requirements:

Requested Turnaround Time and/or Special Instructions:

Temp Blank °C: 1.5 #D24 or Ambient [ ]

Chain of Custody Seal: (Circle) INTACT BROKEN (ABSENT)

Delivery Method: (Check) Hand Delivered [X] Commerical Delivered [ ]

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

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

e-Sample Receipt Form

SGS Workorder #: **1178729**

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 @ 1.5 °C Therm. ID: D24
		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.	No	Did not receive samples B14 or MW8. Leaving off workorder per JAN.
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
1178729001-A	Na2S2O3 for Chlorine Redu	OK			
1178729001-B	H2SO4 to pH < 2	OK			
1178729002-A	Na2S2O3 for Chlorine Redu	OK			
1178729002-B	H2SO4 to pH < 2	OK			
1178729003-A	Na2S2O3 for Chlorine Redu	OK			
1178729003-B	H2SO4 to pH < 2	OK			
1178729004-A	Na2S2O3 for Chlorine Redu	OK			
1178729004-B	H2SO4 to pH < 2	OK			
1178729005-A	Na2S2O3 for Chlorine Redu	OK			
1178729005-B	H2SO4 to pH < 2	OK			
1178729006-A	Na2S2O3 for Chlorine Redu	OK			
1178729006-B	H2SO4 to pH < 2	OK			

Container Condition Glossary

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

OK - The container was received at an acceptable pH for the analysis requested.
BU - The container was received with headspace greater than 6mm.
DM - The container was received damaged.
FR - The container was received frozen and not usable for Bacteria or BOD analyses.
IC - The container provided for microbiology analysis was not a laboratory-supplied, pre-sterilized container and therefore was not suitable for analysis.
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.

Laboratory Report of Analysis

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

Report Number: **1178770**

Client Project: **Wasilla WWTP**

Dear John Marshall,

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

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

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

Sincerely,
SGS North America Inc.

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

Print Date: 01/08/2018 3:32:52PM

Case Narrative

SGS Client: **Stantec Consulting Services Inc.**
SGS Project: **1178770**
Project Name/Site: **Wasilla WWTP**
Project Contact: **John Marshall**

Refer to sample receipt form for information on sample condition.

SW-5 (1178770001) PS

5210B - BOD - Dissolved oxygen depletion at 1.48 mg/L did not meet the minimum change of 2.0 mg/L; sample reported with elevated detection limit. Sample results are estimated.

1178738001DUP (1429527) DUP

2540D - Total Suspended Solids - Sample duplicate RPD was outside of acceptance limits. The difference between sample and duplicate results is less than the LOQ.

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

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

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are **AK00971 DW Chemistry (Provisionally Certified as of 10/12/2017) & Microbiology (Provisionally Certified as of 9/21/2017)** & UST-005 (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	Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
GT	Greater Than
IB	Instrument Blank
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LLQC/LLIQC	Low Level Quantitation Check
LOD	Limit of Detection (i.e., 1/2 of the LOQ)
LOQ	Limit of Quantitation (i.e., reporting or practical quantitation limit)
LT	Less Than
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
RPD	Relative Percent Difference
U	Indicates the analyte was analyzed for but not detected.

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

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Sample Summary

Client Sample ID	Lab Sample ID	Collected	Received	Matrix
SW-5	1178770001	12/13/2017	12/13/2017	Water (Surface, Eff., Ground)
SW-15	1178770002	12/13/2017	12/13/2017	Water (Surface, Eff., Ground)
SW-17	1178770003	12/13/2017	12/13/2017	Water (Surface, Eff., Ground)
SW-18	1178770004	12/13/2017	12/13/2017	Water (Surface, Eff., Ground)
Dup 2	1178770005	12/13/2017	12/13/2017	Water (Surface, Eff., Ground)
Dup 3	1178770006	12/13/2017	12/13/2017	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)
SW6020A	Metals by ICP-MS
SM21 4500NO3-F	Nitrate/Nitrite Flow injection Pres.
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: 1178770001

	Parameter	Result	Units
Microbiology Laboratory	Biochemical Oxygen Demand	2.82	mg/L
	Total Coliform	28	MPN/100mL
Waters Department	Ammonia-N	0.239	mg/L
	Total Kjeldahl Nitrogen	0.362J	mg/L
	Total Nitrate/Nitrite-N	0.0446J	mg/L
	Total Phosphorus	0.0245	mg/L
	Total Suspended Solids	7.86	mg/L

Client Sample ID: **SW-15**
Lab Sample ID: 1178770002

	Parameter	Result	Units
Metals by ICP/MS	Arsenic	1.85J	ug/L
	Barium	12.5	ug/L
	Copper	1.93J	ug/L
Microbiology Laboratory	E. Coli	54	MPN/100mL
	Fecal Coliform	24	col/100mL
	Total Coliform	228	MPN/100mL
Waters Department	Ammonia-N	0.0577J	mg/L
	Total Nitrate/Nitrite-N	0.0704J	mg/L
	Total Phosphorus	0.0158J	mg/L
	Total Suspended Solids	5.25	mg/L

Client Sample ID: **SW-17**
Lab Sample ID: 1178770003

	Parameter	Result	Units
Microbiology Laboratory	E. Coli	1414	MPN/100mL
	Fecal Coliform	1420	col/100mL
	Total Coliform	1733	MPN/100mL
Waters Department	Ammonia-N	0.209	mg/L
	Total Kjeldahl Nitrogen	0.561J	mg/L
	Total Nitrate/Nitrite-N	3.19	mg/L
	Total Phosphorus	0.156	mg/L
	Total Suspended Solids	0.928J	mg/L

Client Sample ID: **SW-18**
Lab Sample ID: 1178770004

	Parameter	Result	Units
Microbiology Laboratory	Biochemical Oxygen Demand	2.17	mg/L
	E. Coli	579	MPN/100mL
	Fecal Coliform	430	col/100mL
	Total Coliform	1203	MPN/100mL
Waters Department	Ammonia-N	0.144	mg/L
	Total Kjeldahl Nitrogen	0.637J	mg/L
	Total Nitrate/Nitrite-N	5.02	mg/L
	Total Phosphorus	0.661	mg/L
	Total Suspended Solids	14.4	mg/L

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Detectable Results Summary

Client Sample ID: **Dup 2**
Lab Sample ID: 1178770005

	Parameter	Result	Units
Microbiology Laboratory	Biochemical Oxygen Demand	2.52	mg/L
	E. Coli	1	MPN/100mL
	Total Coliform	34	MPN/100mL
Waters Department	Ammonia-N	0.223	mg/L
	Total Kjeldahl Nitrogen	0.438J	mg/L
	Total Phosphorus	0.0313	mg/L
	Total Suspended Solids	7.55	mg/L

Client Sample ID: **Dup 3**
Lab Sample ID: 1178770006

	Parameter	Result	Units
Metals by ICP/MS	Barium	11.6	ug/L
	Copper	2.68J	ug/L
Microbiology Laboratory	E. Coli	36	MPN/100mL
	Fecal Coliform	18	col/100mL
	Total Coliform	272	MPN/100mL
Waters Department	Ammonia-N	0.0677J	mg/L
	Total Nitrate/Nitrite-N	0.0994J	mg/L
	Total Phosphorus	0.0135J	mg/L
	Total Suspended Solids	1.44	mg/L

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

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Results of **SW-5**

Client Sample ID: **SW-5**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1178770001
Lab Project ID: 1178770

Collection Date: 12/13/17 11:43
Received Date: 12/13/17 16:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Microbiology Laboratory**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Biochemical Oxygen Demand	2.82		2.00	2.00	mg/L	1		12/14/17 16:00

Batch Information

Analytical Batch: BOD5927
Analytical Method: SM21 5210B
Analyst: S.D
Analytical Date/Time: 12/14/17 16:00
Container ID: 1178770001-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		12/13/17 17:14

Batch Information

Analytical Batch: BTF16189
Analytical Method: SM21 9222D
Analyst: K.W
Analytical Date/Time: 12/13/17 17:14
Container ID: 1178770001-E

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
E. Coli	1	U	1	1	MPN/100m	1		12/13/17 17:28
Total Coliform	28		1	1	MPN/100m	1		12/13/17 17:28

Batch Information

Analytical Batch: BTF16191
Analytical Method: SM21 9223B
Analyst: DSH
Analytical Date/Time: 12/13/17 17:28
Container ID: 1178770001-F

Results of **SW-5**

Client Sample ID: **SW-5**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1178770001
Lab Project ID: 1178770

Collection Date: 12/13/17 11:43
Received Date: 12/13/17 16:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	7.86		1.19	0.369	mg/L	1		12/18/17 11:04

Batch Information

Analytical Batch: STS5747
Analytical Method: SM21 2540D
Analyst: EWW
Analytical Date/Time: 12/18/17 11:04
Container ID: 1178770001-B

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	0.362 J		1.00	0.310	mg/L	1		12/20/17 11:19

Batch Information

Analytical Batch: WDA4157
Analytical Method: SM21 4500-N D
Analyst: DMM
Analytical Date/Time: 12/20/17 11:19
Container ID: 1178770001-D

Prep Batch: WXX12151
Prep Method: METHOD
Prep Date/Time: 12/19/17 13:43
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	0.239		0.100	0.0310	mg/L	1		12/18/17 13:00

Batch Information

Analytical Batch: WDA4156
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 12/18/17 13:00
Container ID: 1178770001-D

Prep Batch: WXX12150
Prep Method: METHOD
Prep Date/Time: 12/18/17 12:05
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Nitrate/Nitrite-N	0.0446 J		0.100	0.0300	mg/L	2		12/18/17 19:18

Print Date: 01/08/2018 3:32:57PM

J flagging is activated

Results of **SW-5**

Client Sample ID: **SW-5**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1178770001
Lab Project ID: 1178770

Collection Date: 12/13/17 11:43
Received Date: 12/13/17 16:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: WFI2627
Analytical Method: SM21 4500NO3-F
Analyst: AYC
Analytical Date/Time: 12/18/17 19:18
Container ID: 1178770001-D

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Phosphorus	0.0245		0.0200	0.00620	mg/L	1		12/15/17 11:10

Batch Information

Analytical Batch: WDA4153
Analytical Method: SM21 4500P-B,E
Analyst: DMM
Analytical Date/Time: 12/15/17 11:10
Container ID: 1178770001-C

Prep Batch: WXX12146
Prep Method: SM21 4500P-B,E
Prep Date/Time: 12/15/17 09:39
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Print Date: 01/08/2018 3:32:57PM

J flagging is activated

Results of **SW-15**

Client Sample ID: **SW-15**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1178770002
Lab Project ID: 1178770

Collection Date: 12/13/17 14:04
Received Date: 12/13/17 16:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Metals by ICP/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Arsenic	1.85	J	5.00	1.50	ug/L	5		01/03/18 15:00
Barium	12.5		3.00	0.940	ug/L	5		01/03/18 15:00
Cadmium	1.00	U	2.00	0.620	ug/L	5		01/03/18 15:00
Chromium	2.00	U	4.00	1.30	ug/L	5		01/03/18 15:00
Copper	1.93	J	6.00	1.80	ug/L	5		01/03/18 15:00
Lead	0.500	U	1.00	0.310	ug/L	5		01/03/18 15:00
Mercury	0.100	U	0.200	0.0620	ug/L	5		01/03/18 15:00
Selenium	10.0	U	20.0	6.20	ug/L	5		01/03/18 15:00
Silver	1.00	U	2.00	0.620	ug/L	5		01/03/18 15:00
Zinc	12.5	U	25.0	7.80	ug/L	5		01/03/18 15:00

Batch Information

Analytical Batch: MMS10036
Analytical Method: SW6020A
Analyst: VDL
Analytical Date/Time: 01/03/18 15:00
Container ID: 1178770002-G

Prep Batch: MXX31286
Prep Method: SW3010A
Prep Date/Time: 12/18/17 08:00
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Print Date: 01/08/2018 3:32:57PM

J flagging is activated

Results of **SW-15**

Client Sample ID: **SW-15**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1178770002
Lab Project ID: 1178770

Collection Date: 12/13/17 14:04
Received Date: 12/13/17 16:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Microbiology Laboratory**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Biochemical Oxygen Demand	2.00 U		2.00	2.00	mg/L	1		12/14/17 16:00

Batch Information

Analytical Batch: BOD5927
Analytical Method: SM21 5210B
Analyst: S.D
Analytical Date/Time: 12/14/17 16:00
Container ID: 1178770002-A

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Fecal Coliform	24		1.00	1.00	col/100mL	1		12/13/17 17:14

Batch Information

Analytical Batch: BTF16189
Analytical Method: SM21 9222D
Analyst: K.W
Analytical Date/Time: 12/13/17 17:14
Container ID: 1178770002-E

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
E. Coli	54		1	1	MPN/100m	1		12/13/17 17:28
Total Coliform	228		1	1	MPN/100m	1		12/13/17 17:28

Batch Information

Analytical Batch: BTF16191
Analytical Method: SM21 9223B
Analyst: DSH
Analytical Date/Time: 12/13/17 17:28
Container ID: 1178770002-F

Results of **SW-15**

Client Sample ID: **SW-15**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1178770002
Lab Project ID: 1178770

Collection Date: 12/13/17 14:04
Received Date: 12/13/17 16:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	5.25		0.990	0.307	mg/L	1		12/18/17 11:04

Batch Information

Analytical Batch: STS5747
Analytical Method: SM21 2540D
Analyst: EWW
Analytical Date/Time: 12/18/17 11:04
Container ID: 1178770002-B

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	0.500 U		1.00	0.310	mg/L	1		12/20/17 11:20

Batch Information

Analytical Batch: WDA4157
Analytical Method: SM21 4500-N D
Analyst: DMM
Analytical Date/Time: 12/20/17 11:20
Container ID: 1178770002-D

Prep Batch: WXX12151
Prep Method: METHOD
Prep Date/Time: 12/19/17 13:43
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	0.0577 J		0.100	0.0310	mg/L	1		12/18/17 13:02

Batch Information

Analytical Batch: WDA4156
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 12/18/17 13:02
Container ID: 1178770002-D

Prep Batch: WXX12150
Prep Method: METHOD
Prep Date/Time: 12/18/17 12:05
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Nitrate/Nitrite-N	0.0704 J		0.100	0.0300	mg/L	2		12/18/17 19:20

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J flagging is activated

Results of **SW-15**

Client Sample ID: **SW-15**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1178770002
Lab Project ID: 1178770

Collection Date: 12/13/17 14:04
Received Date: 12/13/17 16:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: WFI2627
Analytical Method: SM21 4500NO3-F
Analyst: AYC
Analytical Date/Time: 12/18/17 19:20
Container ID: 1178770002-D

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Phosphorus	0.0158	J	0.0200	0.00620	mg/L	1		12/15/17 11:11

Batch Information

Analytical Batch: WDA4153
Analytical Method: SM21 4500P-B,E
Analyst: DMM
Analytical Date/Time: 12/15/17 11:11
Container ID: 1178770002-C

Prep Batch: WXX12146
Prep Method: SM21 4500P-B,E
Prep Date/Time: 12/15/17 09:39
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Print Date: 01/08/2018 3:32:57PM

J flagging is activated

Results of **SW-17**

Client Sample ID: **SW-17**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1178770003
Lab Project ID: 1178770

Collection Date: 12/13/17 13:44
Received Date: 12/13/17 16:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Microbiology Laboratory**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Biochemical Oxygen Demand	2.00	U	2.00	2.00	mg/L	1		12/14/17 16:00

Batch Information

Analytical Batch: BOD5927
Analytical Method: SM21 5210B
Analyst: S.D
Analytical Date/Time: 12/14/17 16:00
Container ID: 1178770003-A

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Fecal Coliform	1420		10.0	10.0	col/100mL	1		12/13/17 17:14

Batch Information

Analytical Batch: BTF16189
Analytical Method: SM21 9222D
Analyst: K.W
Analytical Date/Time: 12/13/17 17:14
Container ID: 1178770003-E

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
E. Coli	1414		1	1	MPN/100m	1		12/13/17 17:28
Total Coliform	1733		1	1	MPN/100m	1		12/13/17 17:28

Batch Information

Analytical Batch: BTF16191
Analytical Method: SM21 9223B
Analyst: DSH
Analytical Date/Time: 12/13/17 17:28
Container ID: 1178770003-F

Results of **SW-17**

Client Sample ID: **SW-17**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1178770003
Lab Project ID: 1178770

Collection Date: 12/13/17 13:44
Received Date: 12/13/17 16:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	0.928	J	1.03	0.320	mg/L	1		12/18/17 11:04

Batch Information

Analytical Batch: STS5747
Analytical Method: SM21 2540D
Analyst: EWW
Analytical Date/Time: 12/18/17 11:04
Container ID: 1178770003-B

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	0.561	J	1.00	0.310	mg/L	1		12/20/17 11:24

Batch Information

Analytical Batch: WDA4157
Analytical Method: SM21 4500-N D
Analyst: DMM
Analytical Date/Time: 12/20/17 11:24
Container ID: 1178770003-D

Prep Batch: WXX12151
Prep Method: METHOD
Prep Date/Time: 12/19/17 13:43
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	0.209		0.100	0.0310	mg/L	1		12/18/17 12:55

Batch Information

Analytical Batch: WDA4156
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 12/18/17 12:55
Container ID: 1178770003-D

Prep Batch: WXX12150
Prep Method: METHOD
Prep Date/Time: 12/18/17 12:05
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Nitrate/Nitrite-N	3.19		0.100	0.0300	mg/L	2		12/18/17 19:22

Print Date: 01/08/2018 3:32:57PM

J flagging is activated

Results of **SW-17**

Client Sample ID: **SW-17**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1178770003
Lab Project ID: 1178770

Collection Date: 12/13/17 13:44
Received Date: 12/13/17 16:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: WFI2627
Analytical Method: SM21 4500NO3-F
Analyst: AYC
Analytical Date/Time: 12/18/17 19:22
Container ID: 1178770003-D

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Phosphorus	0.156		0.0200	0.00620	mg/L	1		12/15/17 11:13

Batch Information

Analytical Batch: WDA4153
Analytical Method: SM21 4500P-B,E
Analyst: DMM
Analytical Date/Time: 12/15/17 11:13
Container ID: 1178770003-C

Prep Batch: WXX12146
Prep Method: SM21 4500P-B,E
Prep Date/Time: 12/15/17 09:39
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: 1178770004
Lab Project ID: 1178770

Collection Date: 12/13/17 14:43
Received Date: 12/13/17 16:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Microbiology Laboratory**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Biochemical Oxygen Demand	2.17		2.00	2.00	mg/L	1		12/14/17 16:00

Batch Information

Analytical Batch: BOD5927
Analytical Method: SM21 5210B
Analyst: S.D
Analytical Date/Time: 12/14/17 16:00
Container ID: 1178770004-A

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Fecal Coliform	430		10.0	10.0	col/100mL	1		12/13/17 17:14

Batch Information

Analytical Batch: BTF16189
Analytical Method: SM21 9222D
Analyst: K.W
Analytical Date/Time: 12/13/17 17:14
Container ID: 1178770004-E

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
E. Coli	579		1	1	MPN/100m	1		12/13/17 17:28
Total Coliform	1203		1	1	MPN/100m	1		12/13/17 17:28

Batch Information

Analytical Batch: BTF16191
Analytical Method: SM21 9223B
Analyst: DSH
Analytical Date/Time: 12/13/17 17:28
Container ID: 1178770004-F

Results of **SW-18**

Client Sample ID: **SW-18**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1178770004
Lab Project ID: 1178770

Collection Date: 12/13/17 14:43
Received Date: 12/13/17 16:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	14.4		1.03	0.320	mg/L	1		12/18/17 11:04

Batch Information

Analytical Batch: STS5747
Analytical Method: SM21 2540D
Analyst: EWW
Analytical Date/Time: 12/18/17 11:04
Container ID: 1178770004-B

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	0.637 J		1.00	0.310	mg/L	1		12/20/17 11:25

Batch Information

Analytical Batch: WDA4157
Analytical Method: SM21 4500-N D
Analyst: DMM
Analytical Date/Time: 12/20/17 11:25
Container ID: 1178770004-D

Prep Batch: WXX12151
Prep Method: METHOD
Prep Date/Time: 12/19/17 13:43
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	0.144		0.100	0.0310	mg/L	1		12/18/17 13:03

Batch Information

Analytical Batch: WDA4156
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 12/18/17 13:03
Container ID: 1178770004-D

Prep Batch: WXX12150
Prep Method: METHOD
Prep Date/Time: 12/18/17 12:05
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Nitrate/Nitrite-N	5.02		0.100	0.0300	mg/L	2		12/18/17 19:24

Print Date: 01/08/2018 3:32:57PM

J flagging is activated

Results of **SW-18**

Client Sample ID: **SW-18**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1178770004
Lab Project ID: 1178770

Collection Date: 12/13/17 14:43
Received Date: 12/13/17 16:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: WFI2627
Analytical Method: SM21 4500NO3-F
Analyst: AYC
Analytical Date/Time: 12/18/17 19:24
Container ID: 1178770004-D

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Phosphorus	0.661		0.100	0.0310	mg/L	1		12/15/17 11:18

Batch Information

Analytical Batch: WDA4153
Analytical Method: SM21 4500P-B,E
Analyst: DMM
Analytical Date/Time: 12/15/17 11:18
Container ID: 1178770004-C

Prep Batch: WXX12146
Prep Method: SM21 4500P-B,E
Prep Date/Time: 12/15/17 09:39
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 25 mL

Print Date: 01/08/2018 3:32:57PM

J flagging is activated

Results of **Dup 2**

Client Sample ID: **Dup 2**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1178770005
Lab Project ID: 1178770

Collection Date: 12/13/17 11:43
Received Date: 12/13/17 16:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Microbiology Laboratory**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Biochemical Oxygen Demand	2.52		2.00	2.00	mg/L	1		12/14/17 16:00

Batch Information

Analytical Batch: BOD5927
Analytical Method: SM21 5210B
Analyst: S.D
Analytical Date/Time: 12/14/17 16:00
Container ID: 1178770005-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		12/13/17 17:14

Batch Information

Analytical Batch: BTF16189
Analytical Method: SM21 9222D
Analyst: K.W
Analytical Date/Time: 12/13/17 17:14
Container ID: 1178770005-E

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
E. Coli	1		1	1	MPN/100m	1		12/13/17 17:28
Total Coliform	34		1	1	MPN/100m	1		12/13/17 17:28

Batch Information

Analytical Batch: BTF16191
Analytical Method: SM21 9223B
Analyst: DSH
Analytical Date/Time: 12/13/17 17:28
Container ID: 1178770005-F

Print Date: 01/08/2018 3:32:57PM

J flagging is activated

Results of **Dup 2**

Client Sample ID: **Dup 2**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1178770005
Lab Project ID: 1178770

Collection Date: 12/13/17 11:43
Received Date: 12/13/17 16:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	7.55		1.02	0.316	mg/L	1		12/18/17 11:04

Batch Information

Analytical Batch: STS5747
Analytical Method: SM21 2540D
Analyst: EWW
Analytical Date/Time: 12/18/17 11:04
Container ID: 1178770005-B

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	0.438 J		1.00	0.310	mg/L	1		12/20/17 11:27

Batch Information

Analytical Batch: WDA4157
Analytical Method: SM21 4500-N D
Analyst: DMM
Analytical Date/Time: 12/20/17 11:27
Container ID: 1178770005-D

Prep Batch: WXX12151
Prep Method: METHOD
Prep Date/Time: 12/19/17 13:43
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	0.223		0.100	0.0310	mg/L	1		12/18/17 13:05

Batch Information

Analytical Batch: WDA4156
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 12/18/17 13:05
Container ID: 1178770005-D

Prep Batch: WXX12150
Prep Method: METHOD
Prep Date/Time: 12/18/17 12:05
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Nitrate/Nitrite-N	0.0500 U		0.100	0.0300	mg/L	2		12/18/17 19:25

Results of **Dup 2**

Client Sample ID: **Dup 2**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1178770005
Lab Project ID: 1178770

Collection Date: 12/13/17 11:43
Received Date: 12/13/17 16:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: WFI2627
Analytical Method: SM21 4500NO3-F
Analyst: AYC
Analytical Date/Time: 12/18/17 19:25
Container ID: 1178770005-D

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Phosphorus	0.0313		0.0200	0.00620	mg/L	1		12/15/17 11:14

Batch Information

Analytical Batch: WDA4153
Analytical Method: SM21 4500P-B,E
Analyst: DMM
Analytical Date/Time: 12/15/17 11:14
Container ID: 1178770005-C

Prep Batch: WXX12146
Prep Method: SM21 4500P-B,E
Prep Date/Time: 12/15/17 09:39
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Print Date: 01/08/2018 3:32:57PM

J flagging is activated

Results of **Dup 3**

Client Sample ID: **Dup 3**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1178770006
Lab Project ID: 1178770

Collection Date: 12/13/17 14:04
Received Date: 12/13/17 16:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Metals by ICP/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Arsenic	2.50	U	5.00	1.50	ug/L	5		01/03/18 15:05
Barium	11.6		3.00	0.940	ug/L	5		01/03/18 15:05
Cadmium	1.00	U	2.00	0.620	ug/L	5		01/03/18 15:05
Chromium	2.00	U	4.00	1.30	ug/L	5		01/03/18 15:05
Copper	2.68	J	6.00	1.80	ug/L	5		01/03/18 15:05
Lead	0.500	U	1.00	0.310	ug/L	5		01/03/18 15:05
Mercury	0.100	U	0.200	0.0620	ug/L	5		01/03/18 15:05
Selenium	10.0	U	20.0	6.20	ug/L	5		01/03/18 15:05
Silver	1.00	U	2.00	0.620	ug/L	5		01/03/18 15:05
Zinc	12.5	U	25.0	7.80	ug/L	5		01/03/18 15:05

Batch Information

Analytical Batch: MMS10036
Analytical Method: SW6020A
Analyst: VDL
Analytical Date/Time: 01/03/18 15:05
Container ID: 1178770006-G

Prep Batch: MXX31286
Prep Method: SW3010A
Prep Date/Time: 12/18/17 08:00
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Results of **Dup 3**

Client Sample ID: **Dup 3**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1178770006
Lab Project ID: 1178770

Collection Date: 12/13/17 14:04
Received Date: 12/13/17 16:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Microbiology Laboratory**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Biochemical Oxygen Demand	2.00 U		2.00	2.00	mg/L	1		12/14/17 16:00

Batch Information

Analytical Batch: BOD5927
Analytical Method: SM21 5210B
Analyst: S.D
Analytical Date/Time: 12/14/17 16:00
Container ID: 1178770006-A

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Fecal Coliform	18		1.00	1.00	col/100mL	1		12/13/17 17:14

Batch Information

Analytical Batch: BTF16189
Analytical Method: SM21 9222D
Analyst: K.W
Analytical Date/Time: 12/13/17 17:14
Container ID: 1178770006-E

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
E. Coli	36		1	1	MPN/100m	1		12/13/17 17:28
Total Coliform	272		1	1	MPN/100m	1		12/13/17 17:28

Batch Information

Analytical Batch: BTF16191
Analytical Method: SM21 9223B
Analyst: DSH
Analytical Date/Time: 12/13/17 17:28
Container ID: 1178770006-F

Print Date: 01/08/2018 3:32:57PM

J flagging is activated

Results of **Dup 3**

Client Sample ID: **Dup 3**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1178770006
Lab Project ID: 1178770

Collection Date: 12/13/17 14:04
Received Date: 12/13/17 16:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	1.44		1.03	0.320	mg/L	1		12/18/17 11:04

Batch Information

Analytical Batch: STS5747
Analytical Method: SM21 2540D
Analyst: EWW
Analytical Date/Time: 12/18/17 11:04
Container ID: 1178770006-B

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	0.500 U		1.00	0.310	mg/L	1		12/20/17 11:30

Batch Information

Analytical Batch: WDA4157
Analytical Method: SM21 4500-N D
Analyst: DMM
Analytical Date/Time: 12/20/17 11:30
Container ID: 1178770006-D

Prep Batch: WXX12151
Prep Method: METHOD
Prep Date/Time: 12/19/17 13:43
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	0.0677 J		0.100	0.0310	mg/L	1		12/18/17 13:10

Batch Information

Analytical Batch: WDA4156
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 12/18/17 13:10
Container ID: 1178770006-D

Prep Batch: WXX12150
Prep Method: METHOD
Prep Date/Time: 12/18/17 12:05
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Nitrate/Nitrite-N	0.0994 J		0.100	0.0300	mg/L	2		12/18/17 19:27

Print Date: 01/08/2018 3:32:57PM

J flagging is activated

Results of **Dup 3**

Client Sample ID: **Dup 3**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1178770006
Lab Project ID: 1178770

Collection Date: 12/13/17 14:04
Received Date: 12/13/17 16:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: WFI2627
Analytical Method: SM21 4500NO3-F
Analyst: AYC
Analytical Date/Time: 12/18/17 19:27
Container ID: 1178770006-D

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Phosphorus	0.0135	J	0.0200	0.00620	mg/L	1		12/15/17 11:15

Batch Information

Analytical Batch: WDA4153
Analytical Method: SM21 4500P-B,E
Analyst: DMM
Analytical Date/Time: 12/15/17 11:15
Container ID: 1178770006-C

Prep Batch: WXX12146
Prep Method: SM21 4500P-B,E
Prep Date/Time: 12/15/17 09:39
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Method Blank

Blank ID: MB for HBN 1773361 [BOD/5927]
Blank Lab ID: 1429349

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1178770001, 1178770002, 1178770003, 1178770004, 1178770005, 1178770006

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: BOD5927
Analytical Method: SM21 5210B
Instrument:
Analyst: S.D
Analytical Date/Time: 12/14/2017 4:00:00PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1178770 [BOD5927]
Blank Spike Lab ID: 1429350
Date Analyzed: 12/14/2017 16:00

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1178770001, 1178770002, 1178770003, 1178770004, 1178770005, 1178770006

Results by **SM21 5210B**

Blank Spike (mg/L)

Parameter	Spike	Result	Rec (%)	CL
Biochemical Oxygen Demand	198	211	107	(84.6-115.4

Batch Information

Analytical Batch: **BOD5927**
Analytical Method: **SM21 5210B**
Instrument:
Analyst: **S.D**

Print Date: 01/08/2018 3:33:03PM

Method Blank

Blank ID: MB for HBN 1773333 [BTF/16189]
Blank Lab ID: 1429221

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1178770001, 1178770002, 1178770003, 1178770004, 1178770005, 1178770006

Results by **SM21 9222D**

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

Batch Information

Analytical Batch: BTF16189
Analytical Method: SM21 9222D
Instrument:
Analyst: K.W
Analytical Date/Time: 12/13/2017 5:14:00PM

Print Date: 01/08/2018 3:33:04PM

Method Blank

Blank ID: MB for HBN 1773335 [BTF/16191]
Blank Lab ID: 1429225

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1178770001, 1178770002, 1178770003, 1178770004, 1178770005, 1178770006

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: BTF16191
Analytical Method: SM21 9223B
Instrument:
Analyst: DSH
Analytical Date/Time: 12/13/2017 5:28:00PM

Method Blank

Blank ID: MB for HBN 1773497 [MXX/31286]
Blank Lab ID: 1429473

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1178770002, 1178770006

Results by **SW6020A**

Parameter	Results	LOQ/CL	DL	Units
Arsenic	2.50U	5.00	1.50	ug/L
Barium	1.50U	3.00	0.940	ug/L
Cadmium	1.00U	2.00	0.620	ug/L
Chromium	2.00U	4.00	1.30	ug/L
Copper	3.00U	6.00	1.80	ug/L
Lead	0.500U	1.00	0.310	ug/L
Mercury	0.100U	0.200	0.0620	ug/L
Selenium	10.0U	20.0	6.20	ug/L
Silver	1.00U	2.00	0.620	ug/L
Zinc	12.5U	25.0	7.80	ug/L

Batch Information

Analytical Batch: MMS10030
Analytical Method: SW6020A
Instrument: Perkin Elmer Nexlon P5
Analyst: VDL
Analytical Date/Time: 12/19/2017 12:53:15PM

Prep Batch: MXX31286
Prep Method: SW3010A
Prep Date/Time: 12/18/2017 8:00:21AM
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Analytical Batch: MMS10036
Analytical Method: SW6020A
Instrument: Perkin Elmer Nexlon P5
Analyst: VDL
Analytical Date/Time: 1/3/2018 2:51:56PM

Prep Batch: MXX31286
Prep Method: SW3010A
Prep Date/Time: 12/18/2017 8:00:21AM
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1178770 [MXX31286]
Blank Spike Lab ID: 1429474
Date Analyzed: 12/19/2017 12:57

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1178770002, 1178770006

Results by **SW6020A**

Blank Spike (ug/L)

Parameter	Spike	Result	Rec (%)	CL
Arsenic	1000	988	99	(84-116)
Barium	1000	1090	109	(86-114)
Cadmium	100	104	104	(87-115)
Chromium	400	401	100	(85-116)
Copper	1000	1030	103	(85-118)
Lead	1000	1010	101	(88-115)
Selenium	1000	1010	101	(80-120)
Silver	100	103	103	(85-116)
Zinc	1000	1030	103	(83-119)
Mercury	10	10.1	101	(70-124)

Batch Information

Analytical Batch: **MMS10030**
Analytical Method: **SW6020A**
Instrument: **Perkin Elmer Nexlon P5**
Analyst: **VDL**

Prep Batch: **MXX31286**
Prep Method: **SW3010A**
Prep Date/Time: **12/18/2017 08:00**
Spike Init Wt./Vol.: 1000 ug/L Extract Vol: 25 mL
Dupe Init Wt./Vol.: Extract Vol:

Analytical Batch: **MMS10036**
Analytical Method: **SW6020A**
Instrument: **Perkin Elmer Nexlon P5**
Analyst: **VDL**

Prep Batch: **MXX31286**
Prep Method: **SW3010A**
Prep Date/Time: **12/18/2017 08:00**
Spike Init Wt./Vol.: 10 ug/L Extract Vol: 25 mL
Dupe Init Wt./Vol.: Extract Vol:

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Matrix Spike Summary

Original Sample ID: 1429475
MS Sample ID: 1429477 MS
MSD Sample ID: 1429478 MSD

Analysis Date: 12/19/2017 13:11
Analysis Date: 12/19/2017 13:15
Analysis Date: 12/19/2017 13:20
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1178770002, 1178770006

Results by **SW6020A**

		Matrix Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Arsenic	2.57J	1000	1010	101	1000	1020	101	84-116	0.35	(< 20)
Barium	108	1000	1180	108	1000	1150	104	86-114	2.82	(< 20)
Cadmium	1.00U	100	105	105	100	101	101	87-115	3.79	(< 20)
Chromium	2.00U	400	413	103	400	408	102	85-116	1.30	(< 20)
Copper	3.00U	1000	1040	104	1000	1030	103	85-118	0.62	(< 20)
Lead	0.322J	1000	1010	100	1000	995	100	88-115	1.04	(< 20)
Selenium	10.0U	1000	1020	102	1000	1040	104	80-120	2.02	(< 20)
Silver	1.00U	100	106	106	100	102	102	85-116	3.14	(< 20)
Zinc	12.5U	1000	996	100	1000	986	99	83-119	0.92	(< 20)
Mercury	0.100U	10.0	10.4	104	10.0	10.6	106	70-124	1.15	(< 20)

Batch Information

Analytical Batch: MMS10030
Analytical Method: SW6020A
Instrument: Perkin Elmer Nexlon P5
Analyst: VDL
Analytical Date/Time: 12/19/2017 1:15:47PM

Prep Batch: MXX31286
Prep Method: 3010 H20 Digest for Metals ICP-MS
Prep Date/Time: 12/18/2017 8:00:21AM
Prep Initial Wt./Vol.: 25.00mL
Prep Extract Vol: 25.00mL

Analytical Batch: MMS10036
Analytical Method: SW6020A
Instrument: Perkin Elmer Nexlon P5
Analyst: VDL
Analytical Date/Time: 1/3/2018 3:14:24PM

Prep Batch: MXX31286
Prep Method: 3010 H20 Digest for Metals ICP-MS
Prep Date/Time: 12/18/2017 8:00:21AM
Prep Initial Wt./Vol.: 25.00mL
Prep Extract Vol: 25.00mL

Print Date: 01/08/2018 3:33:14PM

Method Blank

Blank ID: MB for HBN 1773507 [STS/5747]
Blank Lab ID: 1429524

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1178770001, 1178770002, 1178770003, 1178770004, 1178770005, 1178770006

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: STS5747
Analytical Method: SM21 2540D
Instrument:
Analyst: EWW
Analytical Date/Time: 12/18/2017 11:04:43AM

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Duplicate Sample Summary

Original Sample ID: 1178738001
Duplicate Sample ID: 1429527

Analysis Date: 12/18/2017 11:04
Matrix: Water (Surface, Eff., Ground)

QC for Samples:

1178770001, 1178770002, 1178770003, 1178770004, 1178770005, 1178770006

Results by **SM21 2540D**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
Total Suspended Solids	6.00	7.33	mg/L	20.00*	(< 5)

Batch Information

Analytical Batch: STS5747
Analytical Method: SM21 2540D
Instrument:
Analyst: EWW

Print Date: 01/08/2018 3:33:16PM

Duplicate Sample Summary

Original Sample ID: 1178788002
Duplicate Sample ID: 1429528

Analysis Date: 12/18/2017 11:04
Matrix: Water (Surface, Eff., Ground)

QC for Samples:

1178770001, 1178770002, 1178770003, 1178770004, 1178770005, 1178770006

Results by **SM21 2540D**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
Total Suspended Solids	11.7	12.0	mg/L	2.40	(< 5)

Batch Information

Analytical Batch: STS5747
Analytical Method: SM21 2540D
Instrument:
Analyst: EWW

Print Date: 01/08/2018 3:33:16PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1178770 [STS5747]
Blank Spike Lab ID: 1429525
Date Analyzed: 12/18/2017 11:04

Spike Duplicate ID: LCSD for HBN 1178770 [STS5747]
Spike Duplicate Lab ID: 1429526
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1178770001, 1178770002, 1178770003, 1178770004, 1178770005, 1178770006

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	50	49.9	100	50	49.8	100	(75-125)	0.20	(< 5)

Batch Information

Analytical Batch: **STS5747**
Analytical Method: **SM21 2540D**
Instrument:
Analyst: **EWW**

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Method Blank

Blank ID: MB for HBN 1773540 (WFI/2627)
Blank Lab ID: 1429674

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1178770001, 1178770002, 1178770003, 1178770004, 1178770005, 1178770006

Results by **SM21 4500NO3-F**

Parameter	Results	LOQ/CL	DL	Units
Total Nitrate/Nitrite-N	0.0500U	0.100	0.0300	mg/L

Batch Information

Analytical Batch: WFI2627
Analytical Method: SM21 4500NO3-F
Instrument: Astoria segmented flow
Analyst: AYC
Analytical Date/Time: 12/18/2017 6:50:51PM

Print Date: 01/08/2018 3:33:19PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1178770 [WFI2627]
Blank Spike Lab ID: 1429666
Date Analyzed: 12/18/2017 18:49

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1178770001, 1178770002, 1178770003, 1178770004, 1178770005, 1178770006

Results by **SM21 4500NO3-F**

Blank Spike (mg/L)

Parameter	Spike	Result	Rec (%)	CL
Total Nitrate/Nitrite-N	5	5.09	102	(90-110)

Batch Information

Analytical Batch: **WFI2627**
Analytical Method: **SM21 4500NO3-F**
Instrument: **Astoria segmented flow**
Analyst: **AYC**

Print Date: 01/08/2018 3:33:22PM

Matrix Spike Summary

Original Sample ID: 1178819003
MS Sample ID: 1429664 MS
MSD Sample ID: 1429665 MSD

Analysis Date: 12/18/2017 19:08
Analysis Date: 12/18/2017 19:10
Analysis Date: 12/18/2017 19:11
Matrix: Drinking Water

QC for Samples: 1178770001, 1178770002, 1178770003, 1178770004, 1178770005, 1178770006

Results by **SM21 4500NO3-F**

		Matrix Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Total Nitrate/Nitrite-N	0.100U	5.00	5.14	103	5.00	5.18	104	90-110	0.67	(< 25)

Batch Information

Analytical Batch: WFI2627
Analytical Method: SM21 4500NO3-F
Instrument: Astoria segmented flow
Analyst: AYC
Analytical Date/Time: 12/18/2017 7:10:06PM

Print Date: 01/08/2018 3:33:22PM

Method Blank

Blank ID: MB for HBN 1773381 [WXX/12146]
Blank Lab ID: 1429424

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1178770001, 1178770002, 1178770003, 1178770004, 1178770005, 1178770006

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

Parameter	Results	LOQ/CL	DL	Units
Total Phosphorus	0.0100U	0.0200	0.00620	mg/L

Batch Information

Analytical Batch: WDA4153
Analytical Method: SM21 4500P-B,E
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 12/15/2017 11:07:36AM

Prep Batch: WXX12146
Prep Method: SM21 4500P-B,E
Prep Date/Time: 12/15/2017 9:39:00AM
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1178770 [WXX12146]
Blank Spike Lab ID: 1429425
Date Analyzed: 12/15/2017 11:08

Spike Duplicate ID: LCSD for HBN 1178770 [WXX12146]
Spike Duplicate Lab ID: 1429426
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1178770001, 1178770002, 1178770003, 1178770004, 1178770005, 1178770006

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	0.209	104	0.2	0.209	104	(85-115)	0.00	(< 25)

Batch Information

Analytical Batch: **WDA4153**
Analytical Method: **SM21 4500P-B,E**
Instrument: **Discrete Analyzer 2**
Analyst: **DMM**

Prep Batch: **WXX12146**
Prep Method: **SM21 4500P-B,E**
Prep Date/Time: **12/15/2017 09:39**
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: 1178770002
MS Sample ID: 1429427 MS
MSD Sample ID: 1429428 MSD

Analysis Date: 12/15/2017 11:11
Analysis Date: 12/15/2017 11:12
Analysis Date: 12/15/2017 11:13
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1178770001, 1178770002, 1178770003, 1178770004, 1178770005, 1178770006

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	0.0158J	0.200	.207	95	0.200	0.205	95	75-125	0.78	(< 25)

Batch Information

Analytical Batch: WDA4153
Analytical Method: SM21 4500P-B,E
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 12/15/2017 11:12:04AM

Prep Batch: WXX12146
Prep Method: Total Phosphorus (W) Ext.
Prep Date/Time: 12/15/2017 9:39:00AM
Prep Initial Wt./Vol.: 25.00mL
Prep Extract Vol: 25.00mL

Print Date: 01/08/2018 3:33:27PM

Method Blank

Blank ID: MB for HBN 1773522 [WXX/12150]
Blank Lab ID: 1429590

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1178770001, 1178770002, 1178770003, 1178770004, 1178770005, 1178770006

Results by **SM21 4500-NH3 G**

Parameter	Results	LOQ/CL	DL	Units
Ammonia-N	0.0392J	0.100	0.0310	mg/L

Batch Information

Analytical Batch: WDA4156
Analytical Method: SM21 4500-NH3 G
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 12/18/2017 12:50:31PM

Prep Batch: WXX12150
Prep Method: METHOD
Prep Date/Time: 12/18/2017 12:05:00PM
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1178770 [WXX12150]
Blank Spike Lab ID: 1429591
Date Analyzed: 12/18/2017 12:52

Spike Duplicate ID: LCSD for HBN 1178770 [WXX12150]
Spike Duplicate Lab ID: 1429592
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1178770001, 1178770002, 1178770003, 1178770004, 1178770005, 1178770006

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	0.996	100	1	1.03	103	(75-125)	3.50	(< 25)

Batch Information

Analytical Batch: **WDA4156**
Analytical Method: **SM21 4500-NH3 G**
Instrument: **Discrete Analyzer 2**
Analyst: **DMM**

Prep Batch: **WXX12150**
Prep Method: **METHOD**
Prep Date/Time: **12/18/2017 12:05**
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: 1178770002
MS Sample ID: 1429593 MS
MSD Sample ID: 1429594 MSD

Analysis Date: 12/18/2017 13:02
Analysis Date: 12/18/2017 12:57
Analysis Date: 12/18/2017 12:58
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1178770001, 1178770002, 1178770003, 1178770004, 1178770005, 1178770006

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	0.0577J	1.00	1.04	98	1.00	0.985	93	75-125	5.30	(< 25)

Batch Information

Analytical Batch: WDA4156
Analytical Method: SM21 4500-NH3 G
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 12/18/2017 12:57:14PM

Prep Batch: WXX12150
Prep Method: Ammonia by SM21 4500F prep (W)
Prep Date/Time: 12/18/2017 12:05:00PM
Prep Initial Wt./Vol.: 6.00mL
Prep Extract Vol: 6.00mL

Print Date: 01/08/2018 3:33:49PM

Method Blank

Blank ID: MB for HBN 1773571 [WXX/12151]
Blank Lab ID: 1429798

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1178770001, 1178770002, 1178770003, 1178770004, 1178770005, 1178770006

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: WDA4157
Analytical Method: SM21 4500-N D
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 12/20/2017 11:15:31AM

Prep Batch: WXX12151
Prep Method: METHOD
Prep Date/Time: 12/19/2017 1:43:00PM
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1178770 [WXX12151]
Blank Spike Lab ID: 1429799
Date Analyzed: 12/20/2017 11:16

Spike Duplicate ID: LCSD for HBN 1178770 [WXX12151]
Spike Duplicate Lab ID: 1429800
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1178770001, 1178770002, 1178770003, 1178770004, 1178770005, 1178770006

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	4.01	100	4	4.03	101	(75-125)	0.37	(< 25)

Batch Information

Analytical Batch: **WDA4157**
Analytical Method: **SM21 4500-N D**
Instrument: **Discrete Analyzer 2**
Analyst: **DMM**

Prep Batch: **WXX12151**
Prep Method: **METHOD**
Prep Date/Time: **12/19/2017 13:43**
Spike Init Wt./Vol.: 4 mg/L Extract Vol: 25 mL
Dupe Init Wt./Vol.: 4 mg/L Extract Vol: 25 mL

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Matrix Spike Summary

Original Sample ID: 1178770002
MS Sample ID: 1429801 MS
MSD Sample ID: 1429802 MSD

Analysis Date: 12/20/2017 11:20
Analysis Date: 12/20/2017 11:22
Analysis Date: 12/20/2017 11:23
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1178770001, 1178770002, 1178770003, 1178770004, 1178770005, 1178770006

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	0.500U	4.00	4.16	104	4.00	4.27	107	75-125	2.80	(< 25)

Batch Information

Analytical Batch: WDA4157
Analytical Method: SM21 4500-N D
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 12/20/2017 11:22:04AM

Prep Batch: WXX12151
Prep Method: Distillation TKN by Phenate (W)
Prep Date/Time: 12/19/2017 1:43:00PM
Prep Initial Wt./Vol.: 25.00mL
Prep Extract Vol: 25.00mL

Print Date: 01/08/2018 3:33:54PM

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CHAIN OF CUSTODY RECORD

1178770

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

Page 1 of 1

Section 1

CLIENT: Stantec Consulting

CONTACT: John Marshall — PHONE #:

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

REPORTS TO: — E-MAIL: john.marshall@stantec.com

INVOICE TO: Stantec Consulting — QUOTE #: — P.O. #: 2047004115

Section 3 — Preservative

Section 2

RESERVED for lab use	SAMPLE IDENTIFICATION	DATE mm/dd/yy	TIME HH:MM	MATRIX/ MATRIX CODE	# CONTAINERS	Pres: Type: Comp / Grab / MI (Multi-incremental)	BOD (None)	TSS (None)	Total Phos (H2SO4)	Total Coliform (Quantitray) (Na2SO4)	TKN, Nitrate+Nitrite, Ammonia (H2SO4)	Fecal Coliform (Na2SO4)	RCRA Metals + Cu/Zn (HNO3)				REMARKS/ LOC ID
(1) A-F	SW-5	12/13/17	1143	W	6		1	1	1	1	1	1					
(2) A-G	SW-15	12/13/17	1404	W	7		1	1	1	1	1	1	1				
(3) A-F	SW-17	12/13/17	1344	W	6		1	1	1	1	1	1					
(4) A-F	SW-18	12/13/17	1443	W	6		1	1	1	1	1	1					
(5) A-F	Dup 2	12/13/17	1143	W	6		1	1	1	1	1	1					
(6) A-G	Dup 3	12/13/17	1404	W	7		1	1	1	1	1	1	1				

Section 5

	Date	Time	
Relinquished By: (1)			Received By:
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	12/13/17	16:30	Received For Laboratory By: NW

Section 4

DOD Project? Yes (No)

Data Deliverable Requirements:

Cooler ID:

Requested Turnaround Time and/or Special Instructions:

Temp Blank °C: #1: 1.0 #D24 #2: 1.3 #D21 or Ambient [ ]

Chain of Custody Seal: (Circle) INTACT BROKEN (ABSENT)

Delivery Method: (Check) Hand Delivered [ ] Commerical Delivered [X]

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

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

e-Sample Receipt Form

SGS Workorder #: **1178770**

Review Criteria	Condition (Yes, No, N/A)	Exceptions Noted below
Chain of Custody / Temperature Requirements		yes Exemption permitted if sampler hand carries/delivers.
Were Custody Seals intact? Note # & location	n/a	ABSENT
COC accompanied samples?	yes	
n/a **Exemption permitted if chilled & collected <8 hours ago, or for samples where chilling is not required		
Temperature blank compliant* (i.e., 0-6 °C after CF)?	yes	Cooler ID: 1 @ 1.0 °C Therm. ID: D24
	yes	Cooler ID: 2 @ 1.3 °C Therm. ID: D21
	n/a	Cooler ID: @ °C Therm. ID:
	n/a	Cooler ID: @ °C Therm. ID:
	n/a	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)?	yes	
**Note: If times differ <1hr, record details & login per COC.		
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
1178770001-A	No Preservative Required	OK			
1178770001-B	No Preservative Required	OK			
1178770001-C	H2SO4 to pH < 2	OK			
1178770001-D	H2SO4 to pH < 2	OK			
1178770001-E	Na2S2O3 for Chlorine Redu	OK			
1178770001-F	Na2S2O3 for Chlorine Redu	OK			
1178770002-A	No Preservative Required	OK			
1178770002-B	No Preservative Required	OK			
1178770002-C	H2SO4 to pH < 2	OK			
1178770002-D	H2SO4 to pH < 2	OK			
1178770002-E	Na2S2O3 for Chlorine Redu	OK			
1178770002-F	Na2S2O3 for Chlorine Redu	OK			
1178770002-G	HNO3 to pH < 2	OK			
1178770003-A	No Preservative Required	OK			
1178770003-B	No Preservative Required	OK			
1178770003-C	H2SO4 to pH < 2	OK			
1178770003-D	H2SO4 to pH < 2	OK			
1178770003-E	Na2S2O3 for Chlorine Redu	OK			
1178770003-F	Na2S2O3 for Chlorine Redu	OK			
1178770004-A	No Preservative Required	OK			
1178770004-B	No Preservative Required	OK			
1178770004-C	H2SO4 to pH < 2	OK			
1178770004-D	H2SO4 to pH < 2	OK			
1178770004-E	Na2S2O3 for Chlorine Redu	OK			
1178770004-F	Na2S2O3 for Chlorine Redu	OK			
1178770005-A	No Preservative Required	OK			
1178770005-B	No Preservative Required	OK			
1178770005-C	H2SO4 to pH < 2	OK			
1178770005-D	H2SO4 to pH < 2	OK			
1178770005-E	Na2S2O3 for Chlorine Redu	OK			
1178770005-F	Na2S2O3 for Chlorine Redu	OK			
1178770006-A	No Preservative Required	OK			
1178770006-B	No Preservative Required	OK			
1178770006-C	H2SO4 to pH < 2	OK			
1178770006-D	H2SO4 to pH < 2	OK			
1178770006-E	Na2S2O3 for Chlorine Redu	OK			
1178770006-F	Na2S2O3 for Chlorine Redu	OK			
1178770006-G	HNO3 to pH < 2	OK			

Container Id	Preservative	Container Condition	Container Id	Preservative	Container Condition

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.