Laboratory Report of Analysis

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

Report Number: **1187133**

Client Project: **Wasilla WWTP**

Dear John Marshall,

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

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

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

Sincerely,
SGS North America Inc.

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

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

Case Narrative

SGS Client: **Stantec Consulting Services Inc.**
SGS Project: **1187133**
Project Name/Site: **Wasilla WWTP**
Project Contact: **John Marshall**

Refer to sample receipt form for information on sample condition.

MW-10 (1187133001) PS

9222D- Fecal coliform sample received and analysed past hold time. ADEC allows 8 hours from the time of collection to analysis.

1186999004MS (1492096) MS

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

1186999004MSD (1492097) 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 (Provisionally Certified as of 12/06/2018 for Uranium by EPA200.8, TDS by SM 2540C and Nitrate by SM 4500-NO3-F) & 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.

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Sample Summary

Client Sample ID	Lab Sample ID	Collected	Received	Matrix
MW-10	1187133001	12/18/2018	12/18/2018	Water (Surface, Eff., Ground)
MW-15	1187133002	12/18/2018	12/18/2018	Water (Surface, Eff., Ground)
B-4	1187133003	12/18/2018	12/18/2018	Water (Surface, Eff., Ground)
MW-6	1187133004	12/18/2018	12/18/2018	Water (Surface, Eff., Ground)
B-3	1187133005	12/18/2018	12/18/2018	Water (Surface, Eff., Ground)
SW-5	1187133006	12/18/2018	12/18/2018	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: **MW-10**
Lab Sample ID: 1187133001
Waters Department

Parameter	Result	Units
Ammonia-N	0.0651J	mg/L
Nitrate-N	0.236	mg/L
Total Nitrate/Nitrite-N	0.271	mg/L

Client Sample ID: **MW-15**
Lab Sample ID: 1187133002
Waters Department

Parameter	Result	Units
Ammonia-N	0.242	mg/L
Total Kjeldahl Nitrogen	0.673J	mg/L

Client Sample ID: **B-4**
Lab Sample ID: 1187133003
Waters Department

Parameter	Result	Units
Ammonia-N	0.0512J	mg/L
Nitrate-N	1.46	mg/L
Total Nitrate/Nitrite-N	1.46	mg/L

Client Sample ID: **MW-6**
Lab Sample ID: 1187133004
Waters Department

Parameter	Result	Units
Ammonia-N	0.119	mg/L
Total Kjeldahl Nitrogen	0.418J	mg/L

Client Sample ID: **B-3**
Lab Sample ID: 1187133005
Waters Department

Parameter	Result	Units
Ammonia-N	0.128	mg/L
Total Kjeldahl Nitrogen	0.523J	mg/L

Client Sample ID: **SW-5**
Lab Sample ID: 1187133006
Microbiology Laboratory

Waters Department

Parameter	Result	Units
Biochemical Oxygen Demand	4.05	mg/L
Total Coliform	31	MPN/100mL
Ammonia-N	0.197	mg/L
Total Kjeldahl Nitrogen	0.800J	mg/L
Total Phosphorus	0.0202	mg/L
Total Suspended Solids	3.47	mg/L

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Results of **MW-10**

Client Sample ID: **MW-10**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1187133001
Lab Project ID: 1187133

Collection Date: 12/18/18 10:00
Received Date: 12/18/18 16:38
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		12/18/18 18:09

Batch Information

Analytical Batch: BTF17069
Analytical Method: SM21 9222D
Analyst: A.L
Analytical Date/Time: 12/18/18 18:09
Container ID: 1187133001-A

Results of **MW-10**

Client Sample ID: **MW-10**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1187133001
Lab Project ID: 1187133

Collection Date: 12/18/18 10:00
Received Date: 12/18/18 16:38
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	0.236		0.200	0.0500	mg/L	1		12/18/18 18:02
Nitrite-N	0.100 U		0.200	0.0500	mg/L	1		12/18/18 18:02
Total Nitrate/Nitrite-N	0.271		0.200	0.0500	mg/L	1		12/18/18 18:02

Batch Information

Analytical Batch: WIC5858
Analytical Method: EPA 300.0
Analyst: DMM
Analytical Date/Time: 12/18/18 18:02
Container ID: 1187133001-C

Prep Batch: WXX12662
Prep Method: METHOD
Prep Date/Time: 12/18/18 17:30
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	0.500 U		1.00	0.310	mg/L	1		01/03/19 09:50

Batch Information

Analytical Batch: WDA4482
Analytical Method: SM21 4500-N D
Analyst: DMM
Analytical Date/Time: 01/03/19 09:50
Container ID: 1187133001-B

Prep Batch: WXX12679
Prep Method: METHOD
Prep Date/Time: 12/27/18 10:20
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	0.0651 J		0.100	0.0310	mg/L	1		12/20/18 10:27

Batch Information

Analytical Batch: WDA4477
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 12/20/18 10:27
Container ID: 1187133001-B

Prep Batch: WXX12665
Prep Method: METHOD
Prep Date/Time: 12/20/18 09:05
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Results of **MW-15**

Client Sample ID: **MW-15**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1187133002
Lab Project ID: 1187133

Collection Date: 12/18/18 10:40
Received Date: 12/18/18 16:38
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		12/18/18 18:09

Batch Information

Analytical Batch: BTF17069
Analytical Method: SM21 9222D
Analyst: A.L
Analytical Date/Time: 12/18/18 18:09
Container ID: 1187133002-A

Results of **MW-15**

Client Sample ID: **MW-15**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1187133002
Lab Project ID: 1187133

Collection Date: 12/18/18 10:40
Received Date: 12/18/18 16:38
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		12/18/18 18:22
Nitrite-N	0.100	U	0.200	0.0500	mg/L	1		12/18/18 18:22
Total Nitrate/Nitrite-N	0.100	U	0.200	0.0500	mg/L	1		12/18/18 18:22

Batch Information

Analytical Batch: WIC5858
Analytical Method: EPA 300.0
Analyst: DMM
Analytical Date/Time: 12/18/18 18:22
Container ID: 1187133002-C

Prep Batch: WXX12662
Prep Method: METHOD
Prep Date/Time: 12/18/18 17:30
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	0.673	J	1.00	0.310	mg/L	1		01/03/19 09:54

Batch Information

Analytical Batch: WDA4482
Analytical Method: SM21 4500-N D
Analyst: DMM
Analytical Date/Time: 01/03/19 09:54
Container ID: 1187133002-B

Prep Batch: WXX12679
Prep Method: METHOD
Prep Date/Time: 12/27/18 10:20
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	0.242		0.100	0.0310	mg/L	1		12/20/18 10:32

Batch Information

Analytical Batch: WDA4477
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 12/20/18 10:32
Container ID: 1187133002-B

Prep Batch: WXX12665
Prep Method: METHOD
Prep Date/Time: 12/20/18 09:05
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Results of **B-4**

Client Sample ID: **B-4**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1187133003
Lab Project ID: 1187133

Collection Date: 12/18/18 12:05
Received Date: 12/18/18 16:38
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		12/18/18 18:09

Batch Information

Analytical Batch: BTF17069
Analytical Method: SM21 9222D
Analyst: A.L
Analytical Date/Time: 12/18/18 18:09
Container ID: 1187133003-A

Print Date: 01/08/2019 4:10:29PM

J flagging is activated

Results of **B-4**

Client Sample ID: **B-4**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1187133003
Lab Project ID: 1187133

Collection Date: 12/18/18 12:05
Received Date: 12/18/18 16:38
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	1.46		0.200	0.0500	mg/L	1		12/18/18 18:40
Nitrite-N	0.100	U	0.200	0.0500	mg/L	1		12/18/18 18:40
Total Nitrate/Nitrite-N	1.46		0.200	0.0500	mg/L	1		12/18/18 18:40

Batch Information

Analytical Batch: WIC5858
Analytical Method: EPA 300.0
Analyst: DMM
Analytical Date/Time: 12/18/18 18:40
Container ID: 1187133003-C

Prep Batch: WXX12662
Prep Method: METHOD
Prep Date/Time: 12/18/18 17:30
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	0.500	U	1.00	0.310	mg/L	1		01/03/19 09:58

Batch Information

Analytical Batch: WDA4482
Analytical Method: SM21 4500-N D
Analyst: DMM
Analytical Date/Time: 01/03/19 09:58
Container ID: 1187133003-B

Prep Batch: WXX12679
Prep Method: METHOD
Prep Date/Time: 12/27/18 10:20
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	0.0512	J	0.100	0.0310	mg/L	1		12/20/18 10:33

Batch Information

Analytical Batch: WDA4477
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 12/20/18 10:33
Container ID: 1187133003-B

Prep Batch: WXX12665
Prep Method: METHOD
Prep Date/Time: 12/20/18 09:05
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Results of **MW-6**

Client Sample ID: **MW-6**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1187133004
Lab Project ID: 1187133

Collection Date: 12/18/18 12:55
Received Date: 12/18/18 16:38
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		12/18/18 18:09

Batch Information

Analytical Batch: BTF17069
Analytical Method: SM21 9222D
Analyst: A.L
Analytical Date/Time: 12/18/18 18:09
Container ID: 1187133004-A

Results of **MW-6**

Client Sample ID: **MW-6**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1187133004
Lab Project ID: 1187133

Collection Date: 12/18/18 12:55
Received Date: 12/18/18 16:38
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		12/18/18 18:59
Nitrite-N	0.100	U	0.200	0.0500	mg/L	1		12/18/18 18:59
Total Nitrate/Nitrite-N	0.100	U	0.200	0.0500	mg/L	1		12/18/18 18:59

Batch Information

Analytical Batch: WIC5858
Analytical Method: EPA 300.0
Analyst: DMM
Analytical Date/Time: 12/18/18 18:59
Container ID: 1187133004-C

Prep Batch: WXX12662
Prep Method: METHOD
Prep Date/Time: 12/18/18 17:30
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	0.418	J	1.00	0.310	mg/L	1		01/03/19 09:59

Batch Information

Analytical Batch: WDA4482
Analytical Method: SM21 4500-N D
Analyst: DMM
Analytical Date/Time: 01/03/19 09:59
Container ID: 1187133004-B

Prep Batch: WXX12679
Prep Method: METHOD
Prep Date/Time: 12/27/18 10:20
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	0.119		0.100	0.0310	mg/L	1		12/20/18 10:35

Batch Information

Analytical Batch: WDA4477
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 12/20/18 10:35
Container ID: 1187133004-B

Prep Batch: WXX12665
Prep Method: METHOD
Prep Date/Time: 12/20/18 09:05
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Results of **B-3**

Client Sample ID: **B-3**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1187133005
Lab Project ID: 1187133

Collection Date: 12/18/18 13:15
Received Date: 12/18/18 16:38
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		12/18/18 18:09

Batch Information

Analytical Batch: BTF17069
Analytical Method: SM21 9222D
Analyst: A.L
Analytical Date/Time: 12/18/18 18:09
Container ID: 1187133005-A

Print Date: 01/08/2019 4:10:29PM

J flagging is activated

Results of **B-3**

Client Sample ID: **B-3**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1187133005
Lab Project ID: 1187133

Collection Date: 12/18/18 13:15
Received Date: 12/18/18 16:38
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		12/18/18 19:18
Nitrite-N	0.100	U	0.200	0.0500	mg/L	1		12/18/18 19:18
Total Nitrate/Nitrite-N	0.100	U	0.200	0.0500	mg/L	1		12/18/18 19:18

Batch Information

Analytical Batch: WIC5858
Analytical Method: EPA 300.0
Analyst: DMM
Analytical Date/Time: 12/18/18 19:18
Container ID: 1187133005-C

Prep Batch: WXX12662
Prep Method: METHOD
Prep Date/Time: 12/18/18 17:30
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	0.523	J	1.00	0.310	mg/L	1		01/03/19 10:00

Batch Information

Analytical Batch: WDA4482
Analytical Method: SM21 4500-N D
Analyst: DMM
Analytical Date/Time: 01/03/19 10:00
Container ID: 1187133005-B

Prep Batch: WXX12679
Prep Method: METHOD
Prep Date/Time: 12/27/18 10:20
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	0.128		0.100	0.0310	mg/L	1		12/20/18 10:37

Batch Information

Analytical Batch: WDA4477
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 12/20/18 10:37
Container ID: 1187133005-B

Prep Batch: WXX12665
Prep Method: METHOD
Prep Date/Time: 12/20/18 09:05
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Results of **SW-5**

Client Sample ID: **SW-5**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1187133006
Lab Project ID: 1187133

Collection Date: 12/18/18 14:00
Received Date: 12/18/18 16:38
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	4.05		2.00	2.00	mg/L	1		12/18/18 14:30

Batch Information

Analytical Batch: BOD6204
Analytical Method: SM21 5210B
Analyst: J.N
Analytical Date/Time: 12/18/18 14:30
Container ID: 1187133006-D

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Fecal Coliform	1.00 U		1.00	1.00	col/100mL	1		12/18/18 18:09

Batch Information

Analytical Batch: BTF17069
Analytical Method: SM21 9222D
Analyst: A.L
Analytical Date/Time: 12/18/18 18:09
Container ID: 1187133006-A

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
E. Coli	1 U		1	1	MPN/100m	1		12/18/18 18:07
Total Coliform	31		1	1	MPN/100m	1		12/18/18 18:07

Batch Information

Analytical Batch: BTF17070
Analytical Method: SM21 9223B
Analyst: DSH
Analytical Date/Time: 12/18/18 18:07
Container ID: 1187133006-F

Results of **SW-5**

Client Sample ID: **SW-5**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1187133006
Lab Project ID: 1187133

Collection Date: 12/18/18 14:00
Received Date: 12/18/18 16:38
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		12/18/18 19:37
Nitrite-N	0.100	U	0.200	0.0500	mg/L	1		12/18/18 19:37
Total Nitrate/Nitrite-N	0.100	U	0.200	0.0500	mg/L	1		12/18/18 19:37

Batch Information

Analytical Batch: WIC5858
Analytical Method: EPA 300.0
Analyst: DMM
Analytical Date/Time: 12/18/18 19:37
Container ID: 1187133006-C

Prep Batch: WXX12662
Prep Method: METHOD
Prep Date/Time: 12/18/18 17:30
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	3.47		0.990	0.307	mg/L	1		12/21/18 16:33

Batch Information

Analytical Batch: STS6116
Analytical Method: SM21 2540D
Analyst: EWW
Analytical Date/Time: 12/21/18 16:33
Container ID: 1187133006-E

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	0.800	J	1.00	0.310	mg/L	1		01/03/19 10:02

Batch Information

Analytical Batch: WDA4482
Analytical Method: SM21 4500-N D
Analyst: DMM
Analytical Date/Time: 01/03/19 10:02
Container ID: 1187133006-B

Prep Batch: WXX12679
Prep Method: METHOD
Prep Date/Time: 12/27/18 10:20
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	0.197		0.100	0.0310	mg/L	1		12/20/18 10:42

Print Date: 01/08/2019 4:10:29PM

J flagging is activated

Results of **SW-5**

Client Sample ID: **SW-5**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1187133006
Lab Project ID: 1187133

Collection Date: 12/18/18 14:00
Received Date: 12/18/18 16:38
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: WDA4477
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 12/20/18 10:42
Container ID: 1187133006-B

Prep Batch: WXX12665
Prep Method: METHOD
Prep Date/Time: 12/20/18 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	0.0202		0.0200	0.00500	mg/L	1		12/27/18 17:28

Batch Information

Analytical Batch: WDA4479
Analytical Method: SM21 4500P-B,E
Analyst: EWW
Analytical Date/Time: 12/27/18 17:28
Container ID: 1187133006-B

Prep Batch: WXX12673
Prep Method: SM21 4500P-B,E
Prep Date/Time: 12/27/18 11:55
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Print Date: 01/08/2019 4:10:29PM

J flagging is activated

Method Blank

Blank ID: MB for HBN 1790061 [BOD/6204]
Blank Lab ID: 1492799

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1187133006

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: BOD6204
Analytical Method: SM21 5210B
Instrument:
Analyst: J.N
Analytical Date/Time: 12/18/2018 2:30:00PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1187133 [BOD6204]
Blank Spike Lab ID: 1492800
Date Analyzed: 12/18/2018 14:30

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1187133006

Results by **SM21 5210B**

Blank Spike (mg/L)

Parameter	Spike	Result	Rec (%)	CL
Biochemical Oxygen Demand	198	222	112	(84.6-115.4

Batch Information

Analytical Batch: **BOD6204**
Analytical Method: **SM21 5210B**
Instrument:
Analyst: **J.N**

Print Date: 01/08/2019 4:10:32PM

Method Blank

Blank ID: MB for HBN 1789883 [BTF/17069]
Blank Lab ID: 1492001

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1187133001, 1187133002, 1187133003, 1187133004, 1187133005, 1187133006

Results by **SM21 9222D**

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

Batch Information

Analytical Batch: BTF17069
Analytical Method: SM21 9222D
Instrument:
Analyst: A.L
Analytical Date/Time: 12/18/2018 6:09:48PM

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Method Blank

Blank ID: MB for HBN 1789884 [BTF/17070]
Blank Lab ID: 1492002

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1187133006

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: BTF17070
Analytical Method: SM21 9223B
Instrument:
Analyst: DSH
Analytical Date/Time: 12/18/2018 6:07:44PM

Print Date: 01/08/2019 4:10:36PM

Method Blank

Blank ID: MB for HBN 1790016 [STS/6116]
Blank Lab ID: 1492582

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1187133006

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: STS6116
Analytical Method: SM21 2540D
Instrument:
Analyst: EWW
Analytical Date/Time: 12/21/2018 4:33:33PM

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Duplicate Sample Summary

Original Sample ID: 1187111002
Duplicate Sample ID: 1492585
QC for Samples:
1187133006

Analysis Date: 12/21/2018 16:33
Matrix: Water (Surface, Eff., Ground)

Results by **SM21 2540D**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
Total Suspended Solids	12.2	11.8	mg/L	3.30	(< 5)

Batch Information

Analytical Batch: STS6116
Analytical Method: SM21 2540D
Instrument:
Analyst: EWW

Print Date: 01/08/2019 4:10:39PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1187133 [STS6116]
Blank Spike Lab ID: 1492583
Date Analyzed: 12/21/2018 16:33

Spike Duplicate ID: LCSD for HBN 1187133 [STS6116]
Spike Duplicate Lab ID: 1492584
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1187133006

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	24.2	97	25	24.6	98	(75-125)	1.60	(< 5)

Batch Information

Analytical Batch: **STS6116**
Analytical Method: **SM21 2540D**
Instrument:
Analyst: **EWW**

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Method Blank

Blank ID: MB for HBN 1789899 [WXX/12662]
Blank Lab ID: 1492090

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1187133001, 1187133002, 1187133003, 1187133004, 1187133005, 1187133006

Results by **EPA 300.0**

Parameter	Results	LOQ/CL	DL	Units
Nitrate-N	0.100U	0.200	0.0500	mg/L
Nitrite-N	0.100U	0.200	0.0500	mg/L
Total Nitrate/Nitrite-N	0.0570J	0.200	0.0500	mg/L

Batch Information

Analytical Batch: WIC5858
Analytical Method: EPA 300.0
Instrument: 930 Metrohm compact IC flex
Analyst: DMM
Analytical Date/Time: 12/18/2018 1:55:50PM

Prep Batch: WXX12662
Prep Method: METHOD
Prep Date/Time: 12/18/2018 12:30:00PM
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

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Method Blank

Blank ID: MB for HBN 1789899 [WXX/12662]
Blank Lab ID: 1492094

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1187133001, 1187133002, 1187133003, 1187133004, 1187133005, 1187133006

Results by **EPA 300.0**

Parameter	Results	LOQ/CL	DL	Units
Nitrate-N	0.100U	0.200	0.0500	mg/L
Nitrite-N	0.100U	0.200	0.0500	mg/L
Total Nitrate/Nitrite-N	0.0610J	0.200	0.0500	mg/L

Batch Information

Analytical Batch: WIC5858
Analytical Method: EPA 300.0
Instrument: 930 Metrohm compact IC flex
Analyst: DMM
Analytical Date/Time: 12/18/2018 11:06:31PM

Prep Batch: WXX12662
Prep Method: METHOD
Prep Date/Time: 12/18/2018 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 1187133 [WXX12662]
Blank Spike Lab ID: 1492091
Date Analyzed: 12/18/2018 14:14

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1187133001, 1187133002, 1187133003, 1187133004, 1187133005, 1187133006

Results by **EPA 300.0**

Blank Spike (mg/L)

Parameter	Spike	Result	Rec (%)	CL
Nitrate-N	5	5.15	103	(90-110)
Nitrite-N	5	5.07	101	(90-110)
Total Nitrate/Nitrite-N	10	10.2	102	(90-110)

Batch Information

Analytical Batch: **WIC5858**
Analytical Method: **EPA 300.0**
Instrument: **930 Metrohm compact IC flex**
Analyst: **DMM**

Prep Batch: **WXX12662**
Prep Method: **METHOD**
Prep Date/Time: **12/18/2018 12:30**
Spike Init Wt./Vol.: 5 mg/L Extract Vol: 10 mL
Dupe Init Wt./Vol.: Extract Vol:

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1187133 [WXX12662]
Blank Spike Lab ID: 1492095
Date Analyzed: 12/18/2018 23:25

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1187133001, 1187133002, 1187133003, 1187133004, 1187133005, 1187133006

Results by **EPA 300.0**

Blank Spike (mg/L)

Parameter	Spike	Result	Rec (%)	CL
Nitrate-N	5	5.12	102	(90-110)
Nitrite-N	5	4.85	97	(90-110)
Total Nitrate/Nitrite-N	10	9.97	100	(90-110)

Batch Information

Analytical Batch: **WIC5858**
Analytical Method: **EPA 300.0**
Instrument: **930 Metrohm compact IC flex**
Analyst: **DMM**

Prep Batch: **WXX12662**
Prep Method: **METHOD**
Prep Date/Time: **12/18/2018 12:30**
Spike Init Wt./Vol.: 5 mg/L Extract Vol: 10 mL
Dupe Init Wt./Vol.: Extract Vol:

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Method Blank

Blank ID: MB for HBN 1789996 [WXX/12665]
Blank Lab ID: 1492467

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1187133001, 1187133002, 1187133003, 1187133004, 1187133005, 1187133006

Results by **SM21 4500-NH3 G**

Parameter	Results	LOQ/CL	DL	Units
Ammonia-N	0.0507J	0.100	0.0310	mg/L

Batch Information

Analytical Batch: WDA4477
Analytical Method: SM21 4500-NH3 G
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 12/20/2018 10:22:05AM

Prep Batch: WXX12665
Prep Method: METHOD
Prep Date/Time: 12/20/2018 9:05:00AM
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1187133 [WXX12665]
Blank Spike Lab ID: 1492468
Date Analyzed: 12/20/2018 10:23

Spike Duplicate ID: LCSD for HBN 1187133 [WXX12665]
Spike Duplicate Lab ID: 1492469
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1187133001, 1187133002, 1187133003, 1187133004, 1187133005, 1187133006

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	0.838	84	1	0.869	87	(75-125)	3.70	(< 25)

Batch Information

Analytical Batch: **WDA4477**
Analytical Method: **SM21 4500-NH3 G**
Instrument: **Discrete Analyzer 2**
Analyst: **DMM**

Prep Batch: **WXX12665**
Prep Method: **METHOD**
Prep Date/Time: **12/20/2018 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: 1187133001
MS Sample ID: 1492470 MS
MSD Sample ID: 1492471 MSD

Analysis Date: 12/20/2018 10:27
Analysis Date: 12/20/2018 10:28
Analysis Date: 12/20/2018 10:30
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1187133001, 1187133002, 1187133003, 1187133004, 1187133005, 1187133006

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	0.0651J	1.00	.936	87	1.00	0.863	80	75-125	8.00	(< 25)

Batch Information

Analytical Batch: WDA4477
Analytical Method: SM21 4500-NH3 G
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 12/20/2018 10:28:49AM

Prep Batch: WXX12665
Prep Method: Ammonia by SM21 4500F prep (W)
Prep Date/Time: 12/20/2018 9:05:00AM
Prep Initial Wt./Vol.: 6.00mL
Prep Extract Vol: 6.00mL

Print Date: 01/08/2019 4:10:46PM

Method Blank

Blank ID: MB for HBN 1790157 [WXX/12673]
Blank Lab ID: 1493211

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1187133006

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: WDA4479
Analytical Method: SM21 4500P-B,E
Instrument: Discrete Analyzer 2
Analyst: EWW
Analytical Date/Time: 12/27/2018 5:24:48PM

Prep Batch: WXX12673
Prep Method: SM21 4500P-B,E
Prep Date/Time: 12/27/2018 11:55:00AM
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1187133 [WXX12673]
Blank Spike Lab ID: 1493212
Date Analyzed: 12/27/2018 17:25

Spike Duplicate ID: LCSD for HBN 1187133 [WXX12673]
Spike Duplicate Lab ID: 1493213
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1187133006

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	0.198	99	0.2	0.190	95	(75-125)	3.90	(< 25)

Batch Information

Analytical Batch: **WDA4479**
Analytical Method: **SM21 4500P-B,E**
Instrument: **Discrete Analyzer 2**
Analyst: **EWW**

Prep Batch: **WXX12673**
Prep Method: **SM21 4500P-B,E**
Prep Date/Time: **12/27/2018 11:55**
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: 1493202
MS Sample ID: 1493214 MS
MSD Sample ID: 1493215 MSD

QC for Samples: 1187133006

Analysis Date: 12/27/2018 17:32
Analysis Date: 12/27/2018 17:35
Analysis Date: 12/27/2018 17:36
Matrix: Water (Surface, Eff., Ground)

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

		Matrix Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Total Phosphorus	0.591	0.200	.744	77	0.200	0.755	82	75-125	1.40	(< 25)

Batch Information

Analytical Batch: WDA4479
Analytical Method: SM21 4500P-B,E
Instrument: Discrete Analyzer 2
Analyst: EWW
Analytical Date/Time: 12/27/2018 5:35:29PM

Prep Batch: WXX12673
Prep Method: Total Phosphorus (W) Ext.
Prep Date/Time: 12/27/2018 11:55:00AM
Prep Initial Wt./Vol.: 25.00mL
Prep Extract Vol: 25.00mL

Print Date: 01/08/2019 4:10:49PM

Method Blank

Blank ID: MB for HBN 1790213 [WXX/12679]
Blank Lab ID: 1493434

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1187133001, 1187133002, 1187133003, 1187133004, 1187133005, 1187133006

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: WDA4482
Analytical Method: SM21 4500-N D
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 1/3/2019 9:42:29AM

Prep Batch: WXX12679
Prep Method: METHOD
Prep Date/Time: 12/27/2018 10:20:00AM
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1187133 [WXX12679]
Blank Spike Lab ID: 1493435
Date Analyzed: 01/03/2019 09:43

Spike Duplicate ID: LCSD for HBN 1187133 [WXX12679]
Spike Duplicate Lab ID: 1493436
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1187133001, 1187133002, 1187133003, 1187133004, 1187133005, 1187133006

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	4.39	110	4	4.18	105	(75-125)	4.80	(< 25)

Batch Information

Analytical Batch: **WDA4482**
Analytical Method: **SM21 4500-N D**
Instrument: **Discrete Analyzer 2**
Analyst: **DMM**

Prep Batch: **WXX12679**
Prep Method: **METHOD**
Prep Date/Time: **12/27/2018 10:20**
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: 1187133001
MS Sample ID: 1493437 MS
MSD Sample ID: 1493438 MSD

Analysis Date: 01/03/2019 9:50
Analysis Date: 01/03/2019 9:51
Analysis Date: 01/03/2019 9:52
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1187133001, 1187133002, 1187133003, 1187133004, 1187133005, 1187133006

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	4.49	112	4.00	4.19	105	75-125	7.10	(< 25)

Batch Information

Analytical Batch: WDA4482
Analytical Method: SM21 4500-N D
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 1/3/2019 9:51:38AM

Prep Batch: WXX12679
Prep Method: Distillation TKN by Phenate (W)
Prep Date/Time: 12/27/2018 10:20:00AM
Prep Initial Wt./Vol.: 25.00mL
Prep Extract Vol: 25.00mL

Print Date: 01/08/2019 4:10:53PM

SGS **1187133**

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CHAIN OF CUSTODY RECORD

Locations Nationwide
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New Jersey New York
North Carolina Indiana
West Virgina Kentucky
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Instructions: Sections 1 - 5 must be filled out. Omissions may delay the onset of analysis.

Page 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. #: 2047004115

Section 2

RESERVED for lab use	SAMPLE IDENTIFICATION	DATE mm/dd/yy	TIME HH:MM	MATRIX/ MATRIX CODE	# CONTAINERS	Type C = COMP G = GRAB MI = Multi Incre-mental Soils	Preservative: 1	1	Na_2SO_4	Na_2SO_4	H_2SO_4	H_2SO_4	—				REMARKS/ LOC ID
							BOD	TSS	FC	TC (Quanti-Tray)	TKN/Ammonia	TKN/Ammonia	Nitrate/Nitrite				
1 A-C	MW-10	12/18/18	10:00	Water	3	G			1		1		1				
2 A-C	MW-15		10:40		3				1		1		1				
3 A-C	B-4		1205		3				1		1		1				
4 A-C	MW6		1255		3				1		1		1				
5 A-C	B3		1315		3				1		1		1				
6 A-F	SW5		1400		6		1	1	1	1		1	1				

Section 5

	Date	Time	
Relinquished By: (1)	12/18/18	1638	Received By:
Relinquished By: (2)			Received By:
Relinquished By: (3)			Received By:
Relinquished By: (4)	12/18/18	1638	Received For Laboratory By:

Section 4

DOD Project? Yes No

Cooler ID: _____

Data Deliverable Requirements:

Requested Turnaround Time and/or Special Instructions:

Temp Blank °C: 1.5° #D11
or Ambient [ ]
(See attached Sample Receipt Form)

Chain of Custody Seal: (Circle)
INTACT BROKEN ABSENT
(See attached Sample Receipt Form)

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

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e-Sample Receipt Form

SGS Workorder #: **1187133**

1 1 8 7 1 3 3

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	
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 @ 1.5 °C Therm. ID: D11
		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	**Proceed without Trip Blank, per Jillian.**
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
1187133001-A	Na2S2O3 for Chlorine Redu	OK			
1187133001-B	H2SO4 to pH < 2	OK			
1187133001-C	No Preservative Required	OK			
1187133002-A	Na2S2O3 for Chlorine Redu	OK			
1187133002-B	H2SO4 to pH < 2	OK			
1187133002-C	No Preservative Required	OK			
1187133003-A	Na2S2O3 for Chlorine Redu	OK			
1187133003-B	H2SO4 to pH < 2	OK			
1187133003-C	No Preservative Required	OK			
1187133004-A	Na2S2O3 for Chlorine Redu	OK			
1187133004-B	H2SO4 to pH < 2	OK			
1187133004-C	No Preservative Required	OK			
1187133005-A	Na2S2O3 for Chlorine Redu	OK			
1187133005-B	H2SO4 to pH < 2	OK			
1187133005-C	No Preservative Required	OK			
1187133006-A	Na2S2O3 for Chlorine Redu	OK			
1187133006-B	H2SO4 to pH < 2	OK			
1187133006-C	No Preservative Required	OK			
1187133006-D	No Preservative Required	OK			
1187133006-E	No Preservative Required	OK			
1187133006-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.

Laboratory Report of Analysis

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

Report Number: **1187175**

Client Project: **Wasilla WWTP**

Dear John Marshall,

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

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

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

Sincerely,
SGS North America Inc.

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

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

Case Narrative

SGS Client: **Stantec Consulting Services Inc.**
SGS Project: **1187175**
Project Name/Site: **Wasilla WWTP**
Project Contact: **John Marshall**

Refer to sample receipt form for information on sample condition.

SW17 (1187175004) PS

5210B BOD - The sample was analyzed past holding time due to holiday analysis schedules.

SW18 (1187175005) PS

5210B BOD - The sample was analyzed past holding time due to holiday analysis schedules.

DUP (1187175006) PS

5210B BOD - The sample was analyzed past holding time due to holiday analysis schedules.

*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 (Provisionally Certified as of 12/06/2018 for Uranium by EPA200.8, TDS by SM 2540C and Nitrate by SM 4500-NO3-F) & 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.

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Sample Summary

Client Sample ID	Lab Sample ID	Collected	Received	Matrix
MW13	1187175001	12/19/2018	12/19/2018	Water (Surface, Eff., Ground)
MW14A	1187175002	12/19/2018	12/19/2018	Water (Surface, Eff., Ground)
MW20	1187175003	12/19/2018	12/19/2018	Water (Surface, Eff., Ground)
SW17	1187175004	12/19/2018	12/19/2018	Water (Surface, Eff., Ground)
SW18	1187175005	12/19/2018	12/19/2018	Water (Surface, Eff., Ground)
DUP	1187175006	12/19/2018	12/19/2018	Water (Surface, Eff., Ground)
B11	1187175007	12/19/2018	12/19/2018	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: **MW13**
Lab Sample ID: 1187175001
Waters Department

Parameter	Result	Units
Ammonia-N	0.138	mg/L
Total Kjeldahl Nitrogen	0.579J	mg/L

Client Sample ID: **MW14A**
Lab Sample ID: 1187175002
Waters Department

Parameter	Result	Units
Ammonia-N	0.0701J	mg/L
Total Kjeldahl Nitrogen	0.333J	mg/L
Total Nitrate/Nitrite-N	0.0760J	mg/L

Client Sample ID: **MW20**
Lab Sample ID: 1187175003
Waters Department

Parameter	Result	Units
Ammonia-N	0.0648J	mg/L
Nitrate-N	0.247	mg/L
Total Kjeldahl Nitrogen	0.348J	mg/L
Total Nitrate/Nitrite-N	0.247	mg/L

Client Sample ID: **SW17**
Lab Sample ID: 1187175004
Microbiology Laboratory

Parameter	Result	Units
E. Coli	5	MPN/100mL
Total Coliform	66	MPN/100mL

Waters Department

Parameter	Result	Units
Ammonia-N	0.128	mg/L
Nitrate-N	3.26	mg/L
Total Kjeldahl Nitrogen	0.683J	mg/L
Total Nitrate/Nitrite-N	3.26	mg/L
Total Phosphorus	0.125	mg/L
Total Suspended Solids	4.40	mg/L

Client Sample ID: **SW18**
Lab Sample ID: 1187175005
Microbiology Laboratory

Parameter	Result	Units
E. Coli	1	MPN/100mL
Fecal Coliform	2.0	col/100mL
Total Coliform	219	MPN/100mL

Waters Department

Parameter	Result	Units
Ammonia-N	0.165	mg/L
Nitrate-N	3.31	mg/L
Total Kjeldahl Nitrogen	0.979J	mg/L
Total Nitrate/Nitrite-N	3.34	mg/L
Total Phosphorus	0.599	mg/L
Total Suspended Solids	1.89	mg/L

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Detectable Results Summary

Client Sample ID: **DUP**
Lab Sample ID: 1187175006
Microbiology Laboratory

Waters Department

Parameter	Result	Units
E. Coli	2	MPN/100mL
Total Coliform	219	MPN/100mL
Ammonia-N	0.212	mg/L
Nitrate-N	3.29	mg/L
Total Kjeldahl Nitrogen	1.02	mg/L
Total Nitrate/Nitrite-N	3.32	mg/L
Total Phosphorus	0.545	mg/L
Total Suspended Solids	2.18	mg/L

Client Sample ID: **B11**
Lab Sample ID: 1187175007
Waters Department

Parameter	Result	Units
Ammonia-N	0.185	mg/L
Total Kjeldahl Nitrogen	0.646J	mg/L

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Results of **MW13**

Client Sample ID: **MW13**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1187175001
Lab Project ID: 1187175

Collection Date: 12/19/18 12:00
Received Date: 12/19/18 15:41
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		12/19/18 17:33

Batch Information

Analytical Batch: BTF17073
Analytical Method: SM21 9222D
Analyst: A.L
Analytical Date/Time: 12/19/18 17:33
Container ID: 1187175001-A

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Results of **MW13**

Client Sample ID: **MW13**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1187175001
Lab Project ID: 1187175

Collection Date: 12/19/18 12:00
Received Date: 12/19/18 15:41
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		12/20/18 14:43
Nitrite-N	0.100	U	0.200	0.0500	mg/L	1		12/20/18 14:43
Total Nitrate/Nitrite-N	0.100	U	0.200	0.0500	mg/L	1		12/20/18 14:43

Batch Information

Analytical Batch: WIC5859
Analytical Method: EPA 300.0
Analyst: DMM
Analytical Date/Time: 12/20/18 14:43
Container ID: 1187175001-B

Prep Batch: WXX12667
Prep Method: METHOD
Prep Date/Time: 12/20/18 08:30
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	0.579	J	1.00	0.310	mg/L	1		01/03/19 10:03

Batch Information

Analytical Batch: WDA4482
Analytical Method: SM21 4500-N D
Analyst: DMM
Analytical Date/Time: 01/03/19 10:03
Container ID: 1187175001-C

Prep Batch: WXX12679
Prep Method: METHOD
Prep Date/Time: 12/27/18 10:20
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	0.138		0.100	0.0310	mg/L	1		12/20/18 10:43

Batch Information

Analytical Batch: WDA4477
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 12/20/18 10:43
Container ID: 1187175001-C

Prep Batch: WXX12665
Prep Method: METHOD
Prep Date/Time: 12/20/18 09:05
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Results of **MW14A**

Client Sample ID: **MW14A**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1187175002
Lab Project ID: 1187175

Collection Date: 12/19/18 14:00
Received Date: 12/19/18 15:41
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		12/19/18 17:33

Batch Information

Analytical Batch: BTF17073
Analytical Method: SM21 9222D
Analyst: A.L
Analytical Date/Time: 12/19/18 17:33
Container ID: 1187175002-A

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Results of **MW14A**

Client Sample ID: **MW14A**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1187175002
Lab Project ID: 1187175

Collection Date: 12/19/18 14:00
Received Date: 12/19/18 15:41
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		12/20/18 13:44
Nitrite-N	0.100	U	0.200	0.0500	mg/L	1		12/20/18 13:44
Total Nitrate/Nitrite-N	0.0760	J	0.200	0.0500	mg/L	1		12/20/18 13:44

Batch Information

Analytical Batch: WIC5859
Analytical Method: EPA 300.0
Analyst: DMM
Analytical Date/Time: 12/20/18 13:44
Container ID: 1187175002-B

Prep Batch: WXX12667
Prep Method: METHOD
Prep Date/Time: 12/20/18 08:30
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	0.333	J	1.00	0.310	mg/L	1		01/03/19 10:04

Batch Information

Analytical Batch: WDA4482
Analytical Method: SM21 4500-N D
Analyst: DMM
Analytical Date/Time: 01/03/19 10:04
Container ID: 1187175002-C

Prep Batch: WXX12679
Prep Method: METHOD
Prep Date/Time: 12/27/18 10:20
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	0.0701	J	0.100	0.0310	mg/L	1		12/20/18 10:45

Batch Information

Analytical Batch: WDA4477
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 12/20/18 10:45
Container ID: 1187175002-C

Prep Batch: WXX12665
Prep Method: METHOD
Prep Date/Time: 12/20/18 09:05
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Results of **MW20**

Client Sample ID: **MW20**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1187175003
Lab Project ID: 1187175

Collection Date: 12/19/18 14:30
Received Date: 12/19/18 15:41
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		12/19/18 17:33

Batch Information

Analytical Batch: BTF17073
Analytical Method: SM21 9222D
Analyst: A.L
Analytical Date/Time: 12/19/18 17:33
Container ID: 1187175003-A

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Results of **MW20**

Client Sample ID: **MW20**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1187175003
Lab Project ID: 1187175

Collection Date: 12/19/18 14:30
Received Date: 12/19/18 15:41
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	0.247		0.200	0.0500	mg/L	1		12/20/18 15:02
Nitrite-N	0.100 U		0.200	0.0500	mg/L	1		12/20/18 15:02
Total Nitrate/Nitrite-N	0.247		0.200	0.0500	mg/L	1		12/20/18 15:02

Batch Information

Analytical Batch: WIC5859
Analytical Method: EPA 300.0
Analyst: DMM
Analytical Date/Time: 12/20/18 15:02
Container ID: 1187175003-B

Prep Batch: WXX12667
Prep Method: METHOD
Prep Date/Time: 12/20/18 08:30
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	0.348 J		1.00	0.310	mg/L	1		01/03/19 10:05

Batch Information

Analytical Batch: WDA4482
Analytical Method: SM21 4500-N D
Analyst: DMM
Analytical Date/Time: 01/03/19 10:05
Container ID: 1187175003-C

Prep Batch: WXX12679
Prep Method: METHOD
Prep Date/Time: 12/27/18 10:20
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	0.0648 J		0.100	0.0310	mg/L	1		12/20/18 10:47

Batch Information

Analytical Batch: WDA4477
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 12/20/18 10:47
Container ID: 1187175003-C

Prep Batch: WXX12665
Prep Method: METHOD
Prep Date/Time: 12/20/18 09:05
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Results of **SW17**

Client Sample ID: **SW17**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1187175004
Lab Project ID: 1187175

Collection Date: 12/19/18 12:20
Received Date: 12/19/18 15:41
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		12/21/18 14:38

Batch Information

Analytical Batch: BOD6205
Analytical Method: SM21 5210B
Analyst: J.N
Analytical Date/Time: 12/21/18 14:38
Container ID: 1187175004-E

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Fecal Coliform	1.00 U		1.00	1.00	col/100mL	1		12/19/18 17:33

Batch Information

Analytical Batch: BTF17073
Analytical Method: SM21 9222D
Analyst: A.L
Analytical Date/Time: 12/19/18 17:33
Container ID: 1187175004-A

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
E. Coli	5		1	1	MPN/100m	1		12/19/18 17:40
Total Coliform	66		1	1	MPN/100m	1		12/19/18 17:40

Batch Information

Analytical Batch: BTF17074
Analytical Method: SM21 9223B
Analyst: NRO
Analytical Date/Time: 12/19/18 17:40
Container ID: 1187175004-F

Print Date: 01/08/2019 4:15:47PM

J flagging is activated

Results of **SW17**

Client Sample ID: **SW17**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1187175004
Lab Project ID: 1187175

Collection Date: 12/19/18 12:20
Received Date: 12/19/18 15:41
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	3.26		0.200	0.0500	mg/L	1		12/20/18 15:21
Nitrite-N	0.100	U	0.200	0.0500	mg/L	1		12/20/18 15:21
Total Nitrate/Nitrite-N	3.26		0.200	0.0500	mg/L	1		12/20/18 15:21

Batch Information

Analytical Batch: WIC5859
Analytical Method: EPA 300.0
Analyst: DMM
Analytical Date/Time: 12/20/18 15:21
Container ID: 1187175004-B

Prep Batch: WXX12667
Prep Method: METHOD
Prep Date/Time: 12/20/18 08:30
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	4.40		4.00	1.24	mg/L	1		12/21/18 16:33

Batch Information

Analytical Batch: STS6116
Analytical Method: SM21 2540D
Analyst: EWW
Analytical Date/Time: 12/21/18 16:33
Container ID: 1187175004-D

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	0.683	J	1.00	0.310	mg/L	1		01/03/19 10:07

Batch Information

Analytical Batch: WDA4482
Analytical Method: SM21 4500-N D
Analyst: DMM
Analytical Date/Time: 01/03/19 10:07
Container ID: 1187175004-C

Prep Batch: WXX12679
Prep Method: METHOD
Prep Date/Time: 12/27/18 10:20
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	0.128		0.100	0.0310	mg/L	1		12/20/18 10:48

Print Date: 01/08/2019 4:15:47PM

J flagging is activated

Results of **SW17**

Client Sample ID: **SW17**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1187175004
Lab Project ID: 1187175

Collection Date: 12/19/18 12:20
Received Date: 12/19/18 15:41
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: WDA4477
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 12/20/18 10:48
Container ID: 1187175004-C

Prep Batch: WXX12665
Prep Method: METHOD
Prep Date/Time: 12/20/18 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	0.125		0.0200	0.00500	mg/L	1		12/27/18 17:32

Batch Information

Analytical Batch: WDA4479
Analytical Method: SM21 4500P-B,E
Analyst: EWW
Analytical Date/Time: 12/27/18 17:32
Container ID: 1187175004-C

Prep Batch: WXX12673
Prep Method: SM21 4500P-B,E
Prep Date/Time: 12/27/18 11:55
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Print Date: 01/08/2019 4:15:47PM

J flagging is activated

Results of **SW18**

Client Sample ID: **SW18**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1187175005
Lab Project ID: 1187175

Collection Date: 12/19/18 12:54
Received Date: 12/19/18 15:41
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		12/21/18 14:38

Batch Information

Analytical Batch: BOD6205
Analytical Method: SM21 5210B
Analyst: J.N
Analytical Date/Time: 12/21/18 14:38
Container ID: 1187175005-E

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Fecal Coliform	2.0		1.00	1.00	col/100mL	1		12/19/18 17:33

Batch Information

Analytical Batch: BTF17073
Analytical Method: SM21 9222D
Analyst: A.L
Analytical Date/Time: 12/19/18 17:33
Container ID: 1187175005-A

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
E. Coli	1		1	1	MPN/100m	1		12/19/18 17:40
Total Coliform	219		1	1	MPN/100m	1		12/19/18 17:40

Batch Information

Analytical Batch: BTF17074
Analytical Method: SM21 9223B
Analyst: NRO
Analytical Date/Time: 12/19/18 17:40
Container ID: 1187175005-F

Print Date: 01/08/2019 4:15:47PM

J flagging is activated

Results of **SW18**

Client Sample ID: **SW18**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1187175005
Lab Project ID: 1187175

Collection Date: 12/19/18 12:54
Received Date: 12/19/18 15:41
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	3.31		0.200	0.0500	mg/L	1		12/20/18 15:40
Nitrite-N	0.100	U	0.200	0.0500	mg/L	1		12/20/18 15:40
Total Nitrate/Nitrite-N	3.34		0.200	0.0500	mg/L	1		12/20/18 15:40

Batch Information

Analytical Batch: WIC5859
Analytical Method: EPA 300.0
Analyst: DMM
Analytical Date/Time: 12/20/18 15:40
Container ID: 1187175005-B

Prep Batch: WXX12667
Prep Method: METHOD
Prep Date/Time: 12/20/18 08:30
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	1.89		1.89	0.585	mg/L	1		12/21/18 16:33

Batch Information

Analytical Batch: STS6116
Analytical Method: SM21 2540D
Analyst: EWW
Analytical Date/Time: 12/21/18 16:33
Container ID: 1187175005-D

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	0.979	J	1.00	0.310	mg/L	1		01/03/19 10:08

Batch Information

Analytical Batch: WDA4482
Analytical Method: SM21 4500-N D
Analyst: DMM
Analytical Date/Time: 01/03/19 10:08
Container ID: 1187175005-C

Prep Batch: WXX12679
Prep Method: METHOD
Prep Date/Time: 12/27/18 10:20
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	0.165		0.100	0.0310	mg/L	1		12/20/18 10:50

Print Date: 01/08/2019 4:15:47PM

J flagging is activated

Results of **SW18**

Client Sample ID: **SW18**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1187175005
Lab Project ID: 1187175

Collection Date: 12/19/18 12:54
Received Date: 12/19/18 15:41
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: WDA4477
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 12/20/18 10:50
Container ID: 1187175005-C

Prep Batch: WXX12665
Prep Method: METHOD
Prep Date/Time: 12/20/18 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	0.599		0.200	0.0500	mg/L	1		12/28/18 12:28

Batch Information

Analytical Batch: WDA4479
Analytical Method: SM21 4500P-B,E
Analyst: EWW
Analytical Date/Time: 12/28/18 12:28
Container ID: 1187175005-C

Prep Batch: WXX12674
Prep Method: SM21 4500P-B,E
Prep Date/Time: 12/28/18 09:45
Prep Initial Wt./Vol.: 2.5 mL
Prep Extract Vol: 25 mL

Print Date: 01/08/2019 4:15:47PM

J flagging is activated

Results of **DUP**

Client Sample ID: **DUP**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1187175006
Lab Project ID: 1187175

Collection Date: 12/19/18 12:54
Received Date: 12/19/18 15:41
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		12/21/18 14:38

Batch Information

Analytical Batch: BOD6205
Analytical Method: SM21 5210B
Analyst: J.N
Analytical Date/Time: 12/21/18 14:38
Container ID: 1187175006-E

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Fecal Coliform	1.00 U		1.00	1.00	col/100mL	1		12/19/18 17:33

Batch Information

Analytical Batch: BTF17073
Analytical Method: SM21 9222D
Analyst: A.L
Analytical Date/Time: 12/19/18 17:33
Container ID: 1187175006-A

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
E. Coli	2		1	1	MPN/100m	1		12/19/18 17:40
Total Coliform	219		1	1	MPN/100m	1		12/19/18 17:40

Batch Information

Analytical Batch: BTF17074
Analytical Method: SM21 9223B
Analyst: NRO
Analytical Date/Time: 12/19/18 17:40
Container ID: 1187175006-F

Print Date: 01/08/2019 4:15:47PM

J flagging is activated

Results of **DUP**

Client Sample ID: **DUP**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1187175006
Lab Project ID: 1187175

Collection Date: 12/19/18 12:54
Received Date: 12/19/18 15:41
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	3.29		0.200	0.0500	mg/L	1		12/20/18 15:59
Nitrite-N	0.100	U	0.200	0.0500	mg/L	1		12/20/18 15:59
Total Nitrate/Nitrite-N	3.32		0.200	0.0500	mg/L	1		12/20/18 15:59

Batch Information

Analytical Batch: WIC5859
Analytical Method: EPA 300.0
Analyst: DMM
Analytical Date/Time: 12/20/18 15:59
Container ID: 1187175006-B

Prep Batch: WXX12667
Prep Method: METHOD
Prep Date/Time: 12/20/18 08:30
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	2.18		1.82	0.564	mg/L	1		12/21/18 16:33

Batch Information

Analytical Batch: STS6116
Analytical Method: SM21 2540D
Analyst: EWW
Analytical Date/Time: 12/21/18 16:33
Container ID: 1187175006-D

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	1.02		1.00	0.310	mg/L	1		01/03/19 10:09

Batch Information

Analytical Batch: WDA4482
Analytical Method: SM21 4500-N D
Analyst: DMM
Analytical Date/Time: 01/03/19 10:09
Container ID: 1187175006-C

Prep Batch: WXX12679
Prep Method: METHOD
Prep Date/Time: 12/27/18 10:20
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	0.212		0.100	0.0310	mg/L	1		12/20/18 10:52

Print Date: 01/08/2019 4:15:47PM

J flagging is activated

Results of **DUP**

Client Sample ID: **DUP**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1187175006
Lab Project ID: 1187175

Collection Date: 12/19/18 12:54
Received Date: 12/19/18 15:41
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: WDA4477
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 12/20/18 10:52
Container ID: 1187175006-C

Prep Batch: WXX12665
Prep Method: METHOD
Prep Date/Time: 12/20/18 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	0.545		0.200	0.0500	mg/L	1		12/28/18 12:30

Batch Information

Analytical Batch: WDA4479
Analytical Method: SM21 4500P-B,E
Analyst: EWW
Analytical Date/Time: 12/28/18 12:30
Container ID: 1187175006-C

Prep Batch: WXX12674
Prep Method: SM21 4500P-B,E
Prep Date/Time: 12/28/18 09:45
Prep Initial Wt./Vol.: 2.5 mL
Prep Extract Vol: 25 mL

Print Date: 01/08/2019 4:15:47PM

J flagging is activated

Results of **B11**

Client Sample ID: **B11**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1187175007
Lab Project ID: 1187175

Collection Date: 12/19/18 12:54
Received Date: 12/19/18 15:41
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		12/19/18 17:33

Batch Information

Analytical Batch: BTF17073
Analytical Method: SM21 9222D
Analyst: A.L
Analytical Date/Time: 12/19/18 17:33
Container ID: 1187175007-A

Print Date: 01/08/2019 4:15:47PM

J flagging is activated

Results of **B11**

Client Sample ID: **B11**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1187175007
Lab Project ID: 1187175

Collection Date: 12/19/18 12:54
Received Date: 12/19/18 15:41
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		12/20/18 16:18
Nitrite-N	0.100	U	0.200	0.0500	mg/L	1		12/20/18 16:18
Total Nitrate/Nitrite-N	0.100	U	0.200	0.0500	mg/L	1		12/20/18 16:18

Batch Information

Analytical Batch: WIC5859
Analytical Method: EPA 300.0
Analyst: DMM
Analytical Date/Time: 12/20/18 16:18
Container ID: 1187175007-B

Prep Batch: WXX12667
Prep Method: METHOD
Prep Date/Time: 12/20/18 08:30
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	0.646	J	1.00	0.310	mg/L	1		01/03/19 10:13

Batch Information

Analytical Batch: WDA4482
Analytical Method: SM21 4500-N D
Analyst: DMM
Analytical Date/Time: 01/03/19 10:13
Container ID: 1187175007-C

Prep Batch: WXX12679
Prep Method: METHOD
Prep Date/Time: 12/27/18 10:20
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	0.185		0.100	0.0310	mg/L	1		12/20/18 10:53

Batch Information

Analytical Batch: WDA4477
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 12/20/18 10:53
Container ID: 1187175007-C

Prep Batch: WXX12665
Prep Method: METHOD
Prep Date/Time: 12/20/18 09:05
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Method Blank

Blank ID: MB for HBN 1790076 [BOD/6205]
Blank Lab ID: 1492887

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1187175004, 1187175005, 1187175006

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: BOD6205
Analytical Method: SM21 5210B
Instrument:
Analyst: J.N
Analytical Date/Time: 12/21/2018 2:38:00PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1187175 [BOD6205]
Blank Spike Lab ID: 1492888
Date Analyzed: 12/21/2018 14:38

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1187175004, 1187175005, 1187175006

Results by **SM21 5210B**

Blank Spike (mg/L)

Parameter	Spike	Result	Rec (%)	CL
Biochemical Oxygen Demand	198	205	104	(84.6-115.4

Batch Information

Analytical Batch: **BOD6205**
Analytical Method: **SM21 5210B**
Instrument:
Analyst: **J.N**

Print Date: 01/08/2019 4:15:51PM

Method Blank

Blank ID: MB for HBN 1789933 [BTF/17073]
Blank Lab ID: 1492202

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1187175001, 1187175002, 1187175003, 1187175004, 1187175005, 1187175006, 1187175007

Results by **SM21 9222D**

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

Batch Information

Analytical Batch: BTF17073
Analytical Method: SM21 9222D
Instrument:
Analyst: A.L
Analytical Date/Time: 12/19/2018 5:33:14PM

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Method Blank

Blank ID: MB for HBN 1789934 [BTF/17074]
Blank Lab ID: 1492204

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1187175004, 1187175005, 1187175006

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: BTF17074
Analytical Method: SM21 9223B
Instrument:
Analyst: NRO
Analytical Date/Time: 12/19/2018 5:40:45PM

Method Blank

Blank ID: MB for HBN 1790016 [STS/6116]
Blank Lab ID: 1492582

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1187175004, 1187175005, 1187175006

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: STS6116
Analytical Method: SM21 2540D
Instrument:
Analyst: EWW
Analytical Date/Time: 12/21/2018 4:33:33PM

Print Date: 01/08/2019 4:15:58PM

Duplicate Sample Summary

Original Sample ID: 1187111002
Duplicate Sample ID: 1492585
QC for Samples:
1187175004, 1187175005, 1187175006

Analysis Date: 12/21/2018 16:33
Matrix: Water (Surface, Eff., Ground)

Results by **SM21 2540D**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
Total Suspended Solids	12.2	11.8	mg/L	3.30	(< 5)

Batch Information

Analytical Batch: STS6116
Analytical Method: SM21 2540D
Instrument:
Analyst: EWW

Print Date: 01/08/2019 4:15:59PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1187175 [STS6116]
Blank Spike Lab ID: 1492583
Date Analyzed: 12/21/2018 16:33

Spike Duplicate ID: LCSD for HBN 1187175 [STS6116]
Spike Duplicate Lab ID: 1492584
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1187175004, 1187175005, 1187175006

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	24.2	97	25	24.6	98	(75-125)	1.60	(< 5)

Batch Information

Analytical Batch: **STS6116**
Analytical Method: **SM21 2540D**
Instrument:
Analyst: **EWW**

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Method Blank

Blank ID: MB for HBN 1789996 [WXX/12665]
Blank Lab ID: 1492467

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1187175001, 1187175002, 1187175003, 1187175004, 1187175005, 1187175006, 1187175007

Results by **SM21 4500-NH3 G**

Parameter	Results	LOQ/CL	DL	Units
Ammonia-N	0.0507J	0.100	0.0310	mg/L

Batch Information

Analytical Batch: WDA4477
Analytical Method: SM21 4500-NH3 G
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 12/20/2018 10:22:05AM

Prep Batch: WXX12665
Prep Method: METHOD
Prep Date/Time: 12/20/2018 9:05:00AM
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1187175 [WXX12665]
Blank Spike Lab ID: 1492468
Date Analyzed: 12/20/2018 10:23

Spike Duplicate ID: LCSD for HBN 1187175 [WXX12665]
Spike Duplicate Lab ID: 1492469
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1187175001, 1187175002, 1187175003, 1187175004, 1187175005, 1187175006, 1187175007

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	0.838	84	1	0.869	87	(75-125)	3.70	(< 25)

Batch Information

Analytical Batch: **WDA4477**
Analytical Method: **SM21 4500-NH3 G**
Instrument: **Discrete Analyzer 2**
Analyst: **DMM**

Prep Batch: **WXX12665**
Prep Method: **METHOD**
Prep Date/Time: **12/20/2018 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: 1187133001
MS Sample ID: 1492470 MS
MSD Sample ID: 1492471 MSD

Analysis Date: 12/20/2018 10:27
Analysis Date: 12/20/2018 10:28
Analysis Date: 12/20/2018 10:30
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1187175001, 1187175002, 1187175003, 1187175004, 1187175005, 1187175006, 1187175007

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	0.0651J	1.00	.936	87	1.00	0.863	80	75-125	8.00	(< 25)

Batch Information

Analytical Batch: WDA4477
Analytical Method: SM21 4500-NH3 G
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 12/20/2018 10:28:49AM

Prep Batch: WXX12665
Prep Method: Ammonia by SM21 4500F prep (W)
Prep Date/Time: 12/20/2018 9:05:00AM
Prep Initial Wt./Vol.: 6.00mL
Prep Extract Vol: 6.00mL

Print Date: 01/08/2019 4:16:05PM

Method Blank

Blank ID: MB for HBN 1790056 [WXX/12667]
Blank Lab ID: 1492768

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1187175001, 1187175002, 1187175003, 1187175004, 1187175005, 1187175006, 1187175007

Results by **EPA 300.0**

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

Batch Information

Analytical Batch: WIC5859
Analytical Method: EPA 300.0
Instrument: 930 Metrohm compact IC flex
Analyst: DMM
Analytical Date/Time: 12/20/2018 10:29:16AM

Prep Batch: WXX12667
Prep Method: METHOD
Prep Date/Time: 12/20/2018 8:30:00AM
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1187175 [WXX12667]
Blank Spike Lab ID: 1492769
Date Analyzed: 12/20/2018 10:48

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1187175001, 1187175002, 1187175003, 1187175004, 1187175005, 1187175006, 1187175007

Results by **EPA 300.0**

Blank Spike (mg/L)

Parameter	Spike	Result	Rec (%)	CL
Nitrate-N	5	5.00	100	(90-110)
Nitrite-N	5	4.72	94	(90-110)
Total Nitrate/Nitrite-N	10	9.72	97	(90-110)

Batch Information

Analytical Batch: **WIC5859**
Analytical Method: **EPA 300.0**
Instrument: **930 Metrohm compact IC flex**
Analyst: **DMM**

Prep Batch: **WXX12667**
Prep Method: **METHOD**
Prep Date/Time: **12/20/2018 08:30**
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: 1187175002
MS Sample ID: 1492770 MS
MSD Sample ID: 1492771 MSD

Analysis Date: 12/20/2018 13:44
Analysis Date: 12/20/2018 14:05
Analysis Date: 12/20/2018 14:24
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1187175001, 1187175002, 1187175003, 1187175004, 1187175005, 1187175006, 1187175007

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	0.100U	5.00	5.1	102	5.00	5.12	102	90-110	0.37	(< 15)
Nitrite-N	0.100U	5.00	4.71	94	5.00	4.71	94	90-110	0.00	(< 15)
Total Nitrate/Nitrite-N	0.0760J	10.0	9.82	97	10.0	9.83	98	90-110	0.19	(< 15)

Batch Information

Analytical Batch: WIC5859
Analytical Method: EPA 300.0
Instrument: 930 Metrohm compact IC flex
Analyst: DMM
Analytical Date/Time: 12/20/2018 2:05:36PM

Prep Batch: WXX12667
Prep Method: EPA 300.0 Extraction Waters/Liquids
Prep Date/Time: 12/20/2018 8:30:00AM
Prep Initial Wt./Vol.: 10.00mL
Prep Extract Vol: 10.00mL

Print Date: 01/08/2019 4:16:08PM

Method Blank

Blank ID: MB for HBN 1790157 [WXX/12673]
Blank Lab ID: 1493211

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1187175004

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: WDA4479
Analytical Method: SM21 4500P-B,E
Instrument: Discrete Analyzer 2
Analyst: EWW
Analytical Date/Time: 12/27/2018 5:24:48PM

Prep Batch: WXX12673
Prep Method: SM21 4500P-B,E
Prep Date/Time: 12/27/2018 11:55:00AM
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Print Date: 01/08/2019 4:16:09PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1187175 [WXX12673]
Blank Spike Lab ID: 1493212
Date Analyzed: 12/27/2018 17:25

Spike Duplicate ID: LCSD for HBN 1187175 [WXX12673]
Spike Duplicate Lab ID: 1493213
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1187175004

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	0.198	99	0.2	0.190	95	(75-125)	3.90	(< 25)

Batch Information

Analytical Batch: **WDA4479**
Analytical Method: **SM21 4500P-B,E**
Instrument: **Discrete Analyzer 2**
Analyst: **EWW**

Prep Batch: **WXX12673**
Prep Method: **SM21 4500P-B,E**
Prep Date/Time: **12/27/2018 11:55**
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: 1493202
MS Sample ID: 1493214 MS
MSD Sample ID: 1493215 MSD

QC for Samples: 1187175004

Analysis Date: 12/27/2018 17:32
Analysis Date: 12/27/2018 17:35
Analysis Date: 12/27/2018 17:36
Matrix: Water (Surface, Eff., Ground)

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

		Matrix Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Total Phosphorus	0.591	0.200	.744	77	0.200	0.755	82	75-125	1.40	(< 25)

Batch Information

Analytical Batch: WDA4479
Analytical Method: SM21 4500P-B,E
Instrument: Discrete Analyzer 2
Analyst: EWW
Analytical Date/Time: 12/27/2018 5:35:29PM

Prep Batch: WXX12673
Prep Method: Total Phosphorus (W) Ext.
Prep Date/Time: 12/27/2018 11:55:00AM
Prep Initial Wt./Vol.: 25.00mL
Prep Extract Vol: 25.00mL

Print Date: 01/08/2019 4:16:11PM

Method Blank

Blank ID: MB for HBN 1790158 [WXX/12674]
Blank Lab ID: 1493216

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1187175005, 1187175006

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

Parameter	Results	LOQ/CL	DL	Units
Total Phosphorus	0.00890J	0.0200	0.00500	mg/L

Batch Information

Analytical Batch: WDA4479
Analytical Method: SM21 4500P-B,E
Instrument: Discrete Analyzer 2
Analyst: EWW
Analytical Date/Time: 12/28/2018 12:24:43PM

Prep Batch: WXX12674
Prep Method: SM21 4500P-B,E
Prep Date/Time: 12/28/2018 9:45:00AM
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1187175 [WXX12674]
Blank Spike Lab ID: 1493217
Date Analyzed: 12/28/2018 12:25

Spike Duplicate ID: LCSD for HBN 1187175 [WXX12674]
Spike Duplicate Lab ID: 1493218
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1187175005, 1187175006

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	0.186	93	0.2	0.191	96	(75-125)	2.90	(< 25)

Batch Information

Analytical Batch: **WDA4479**
Analytical Method: **SM21 4500P-B,E**
Instrument: **Discrete Analyzer 2**
Analyst: **EWW**

Prep Batch: **WXX12674**
Prep Method: **SM21 4500P-B,E**
Prep Date/Time: **12/28/2018 09:45**
Spike Init Wt./Vol.: 0.2 mg/L Extract Vol: 25 mL
Dupe Init Wt./Vol.: 0.2 mg/L Extract Vol: 25 mL

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Matrix Spike Summary

Original Sample ID: 1187175005
MS Sample ID: 1493219 MS
MSD Sample ID: 1493220 MSD

Analysis Date: 12/28/2018 12:28
Analysis Date: 12/28/2018 12:29
Analysis Date: 12/28/2018 12:29
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1187175005, 1187175006

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	0.599	2.00	2.37	89	2.00	2.42	91	75-125	2.10	(< 25)

Batch Information

Analytical Batch: WDA4479
Analytical Method: SM21 4500P-B,E
Instrument: Discrete Analyzer 2
Analyst: EWW
Analytical Date/Time: 12/28/2018 12:29:00PM

Prep Batch: WXX12674
Prep Method: Total Phosphorus (W) Ext.
Prep Date/Time: 12/28/2018 9:45:00AM
Prep Initial Wt./Vol.: 2.50mL
Prep Extract Vol: 25.00mL

Print Date: 01/08/2019 4:16:14PM

Method Blank

Blank ID: MB for HBN 1790213 [WXX/12679]
Blank Lab ID: 1493434

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1187175001, 1187175002, 1187175003, 1187175004, 1187175005, 1187175006, 1187175007

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: WDA4482
Analytical Method: SM21 4500-N D
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 1/3/2019 9:42:29AM

Prep Batch: WXX12679
Prep Method: METHOD
Prep Date/Time: 12/27/2018 10:20:00AM
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1187175 [WXX12679]
Blank Spike Lab ID: 1493435
Date Analyzed: 01/03/2019 09:43

Spike Duplicate ID: LCSD for HBN 1187175 [WXX12679]
Spike Duplicate Lab ID: 1493436
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1187175001, 1187175002, 1187175003, 1187175004, 1187175005, 1187175006, 1187175007

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	4.39	110	4	4.18	105	(75-125)	4.80	(< 25)

Batch Information

Analytical Batch: **WDA4482**
Analytical Method: **SM21 4500-N D**
Instrument: **Discrete Analyzer 2**
Analyst: **DMM**

Prep Batch: **WXX12679**
Prep Method: **METHOD**
Prep Date/Time: **12/27/2018 10:20**
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: 1187133001
MS Sample ID: 1493437 MS
MSD Sample ID: 1493438 MSD

Analysis Date: 01/03/2019 9:50
Analysis Date: 01/03/2019 9:51
Analysis Date: 01/03/2019 9:52
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1187175001, 1187175002, 1187175003, 1187175004, 1187175005, 1187175006, 1187175007

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	4.49	112	4.00	4.19	105	75-125	7.10	(< 25)

Batch Information

Analytical Batch: WDA4482
Analytical Method: SM21 4500-N D
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 1/3/2019 9:51:38AM

Prep Batch: WXX12679
Prep Method: Distillation TKN by Phenate (W)
Prep Date/Time: 12/27/2018 10:20:00AM
Prep Initial Wt./Vol.: 25.00mL
Prep Extract Vol: 25.00mL

Print Date: 01/08/2019 4:16:17PM

SGS **1187175**

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CHAIN OF CUSTODY RECORD

Locations Nationwide

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

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

Page 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. #: 2047100415

Section 2

RESERVED for lab use	SAMPLE IDENTIFICATION	DATE mm/dd/yy	TIME HH:MM	MATRIX/ MATRIX CODE	# CONTAINERS	Type C = COMP G = GRAB MI = Multi Incre-mental Soils	Preservative: 1	1	Na_2SO_4	Na_2SO_4	1	H_2SO_4	H_2SO_4			REMARKS/ LOC ID
							BOD	TSS	FC	TC (Quanti) 1x10^4	Nitrate/Nitrite	TKN/Ammonia	TKN/Ammonia HP			
1 A-C	MW13	12/19/18	12:00	Water	3	G			1		1	1	≠			
2 A-C	MW14A		14:00		3				1		1	1	≠			
3 A-C	MW20		14:30		3				1		1	1	≠			
4 A-F	SW17		12:20		6		1	1	1	1	1		1			
5 A-F	SW18		12:54		6		1	1	1	1	1		1			
6 A-F	DUP		12:54		6		1	1	1	1	1		1			
7 A-C	BII		10:00		3				1		1	1				

Section 5

	Date	Time	
Relinquished By: (1)	12/19/18	15:41	Received By:
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	12/19/18	1541	Received For Laboratory By:

Section 4

DOD Project? Yes No

Cooler ID:

Data Deliverable Requirements:

Requested Turnaround Time and/or Special Instructions:

Temp Blank °C: 3.4°# D25

or Ambient [ ]

(See attached Sample Receipt Form)

Chain of Custody Seal: (Circle) HD

INTACT BROKEN (ABSENT)

(See attached Sample Receipt Form)

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

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

e-Sample Receipt Form

SGS Workorder #: **1187175**

1 1 8 7 1 7 5

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 @ 3.4 °C Therm. ID: D25
		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)?	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):

Samples were received for BOD analysis on 12/19/2018, however due to holiday closures we are unable to accept this analysis.