Laboratory Report of Analysis

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

Report Number: **1186073**

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

Case Narrative

SGS Client: **Stantec Consulting Services Inc.**
SGS Project: **1186073**
Project Name/Site: **Wasilla WWTP**
Project Contact: **John Marshall**

Refer to sample receipt form for information on sample condition.

MB for HBN 1788224 [BOD/6172] (1484937) MB

5210B – BOD - MB (0.21 mg/L) is greater than the recommended limit of 0.2 mg/L. Samples >10X the MB are not significantly affected. Samples <10X the MB results may be biased high.

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

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Laboratory Qualifiers

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

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

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 (DW Chemistry & 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
SW1	1186073001	10/23/2018	10/23/2018	Water (Surface, Eff., Ground)
SW2	1186073002	10/23/2018	10/23/2018	Water (Surface, Eff., Ground)
SW3	1186073003	10/23/2018	10/23/2018	Water (Surface, Eff., Ground)
SW4	1186073004	10/23/2018	10/23/2018	Water (Surface, Eff., Ground)
SW5	1186073005	10/23/2018	10/23/2018	Water (Surface, Eff., Ground)
SW6	1186073006	10/23/2018	10/23/2018	Water (Surface, Eff., Ground)
SW7	1186073007	10/23/2018	10/23/2018	Water (Surface, Eff., Ground)
SW8	1186073008	10/23/2018	10/23/2018	Water (Surface, Eff., Ground)
SW9	1186073009	10/23/2018	10/23/2018	Water (Surface, Eff., Ground)
SW10	1186073010	10/23/2018	10/23/2018	Water (Surface, Eff., Ground)
DUP 1	1186073011	10/23/2018	10/23/2018	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)
SM21 4500NO3-F	Flow Injection Analysis
SM21 4500-N D	TKN by Phenate (W)
SM21 9223B	Total Coliform P/A Quant Tray
SM21 4500P-B,E	Total Phosphorus (W)
SM21 2540D	Total Suspended Solids SM20 2540D

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Detectable Results Summary

Client Sample ID: **SW1**
Lab Sample ID: 1186073001

	Parameter	Result	Units
Microbiology Laboratory	Biochemical Oxygen Demand	2.67	mg/L
	E. Coli	3	MPN/100mL
	Fecal Coliform	1.0	col/100mL
	Total Coliform	387	MPN/100mL
Waters Department	Total Kjeldahl Nitrogen	0.660J	mg/L
	Total Phosphorus	0.0552	mg/L
	Total Suspended Solids	4.13	mg/L

Client Sample ID: **SW2**
Lab Sample ID: 1186073002

	Parameter	Result	Units
Microbiology Laboratory	Biochemical Oxygen Demand	2.04	mg/L
	Total Coliform	613	MPN/100mL
Waters Department	Total Kjeldahl Nitrogen	0.600J	mg/L
	Total Phosphorus	0.0248	mg/L
	Total Suspended Solids	1.88	mg/L

Client Sample ID: **SW3**
Lab Sample ID: 1186073003

	Parameter	Result	Units
Microbiology Laboratory	E. Coli	46	MPN/100mL
	Fecal Coliform	37	col/100mL
	Total Coliform	727	MPN/100mL
Waters Department	Total Kjeldahl Nitrogen	0.426J	mg/L
	Total Phosphorus	0.0263	mg/L
	Total Suspended Solids	4.95	mg/L

Client Sample ID: **SW4**
Lab Sample ID: 1186073004

	Parameter	Result	Units
Microbiology Laboratory	Biochemical Oxygen Demand	2.90	mg/L
	E. Coli	16	MPN/100mL
	Total Coliform	2420	MPN/100mL
Waters Department	Total Kjeldahl Nitrogen	0.745J	mg/L
	Total Phosphorus	0.0740	mg/L
	Total Suspended Solids	13.7	mg/L

Client Sample ID: **SW5**
Lab Sample ID: 1186073005

	Parameter	Result	Units
Microbiology Laboratory	Biochemical Oxygen Demand	4.75	mg/L
	E. Coli	8	MPN/100mL
	Fecal Coliform	36	col/100mL
	Total Coliform	1046	MPN/100mL
Waters Department	Ammonia-N	0.0898J	mg/L
	Total Kjeldahl Nitrogen	0.731J	mg/L
	Total Phosphorus	0.0670	mg/L
	Total Suspended Solids	15.1	mg/L

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Detectable Results Summary

Client Sample ID: **SW6**
Lab Sample ID: 1186073006

	Parameter	Result	Units
Microbiology Laboratory	E. Coli	23	MPN/100mL
	Total Coliform	186	MPN/100mL
Waters Department	Total Kjeldahl Nitrogen	0.445J	mg/L
	Total Phosphorus	0.0354	mg/L
	Total Suspended Solids	2.32	mg/L

Client Sample ID: **SW7**
Lab Sample ID: 1186073007

	Parameter	Result	Units
Microbiology Laboratory	E. Coli	16	MPN/100mL
	Fecal Coliform	10	col/100mL
	Total Coliform	488	MPN/100mL
Waters Department	Total Phosphorus	0.0105J	mg/L
	Total Suspended Solids	2.50	mg/L

Client Sample ID: **SW8**
Lab Sample ID: 1186073008

	Parameter	Result	Units
Microbiology Laboratory	E. Coli	2	MPN/100mL
	Fecal Coliform	1.0	col/100mL
	Total Coliform	649	MPN/100mL
Waters Department	Total Kjeldahl Nitrogen	0.463J	mg/L
	Total Phosphorus	0.0290	mg/L
	Total Suspended Solids	1.09	mg/L

Client Sample ID: **SW9**
Lab Sample ID: 1186073009

	Parameter	Result	Units
Microbiology Laboratory	Total Coliform	54	MPN/100mL
Waters Department	Total Phosphorus	0.00650J	mg/L
	Total Suspended Solids	8.57	mg/L

Client Sample ID: **SW10**
Lab Sample ID: 1186073010

	Parameter	Result	Units
Microbiology Laboratory	Biochemical Oxygen Demand	4.57	mg/L
	E. Coli	10	MPN/100mL
	Fecal Coliform	2.0	col/100mL
	Total Coliform	1553	MPN/100mL
Waters Department	Total Kjeldahl Nitrogen	0.356J	mg/L
	Total Phosphorus	0.0170J	mg/L
	Total Suspended Solids	3.33	mg/L

Client Sample ID: **DUP 1**
Lab Sample ID: 1186073011

	Parameter	Result	Units
Microbiology Laboratory	E. Coli	1	MPN/100mL
	Total Coliform	488	MPN/100mL
Waters Department	Total Kjeldahl Nitrogen	0.431J	mg/L
	Total Phosphorus	0.0297	mg/L
	Total Suspended Solids	1.76	mg/L

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Results of **SW1**

Client Sample ID: **SW1**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1186073001
Lab Project ID: 1186073

Collection Date: 10/23/18 10:37
Received Date: 10/23/18 16:02
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	2.67		2.00	2.00	mg/L	1		10/24/18 18:21

Batch Information

Analytical Batch: BOD6172
Analytical Method: SM21 5210B
Analyst: A.L
Analytical Date/Time: 10/24/18 18:21
Container ID: 1186073001-A

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Fecal Coliform	1.0		1.00	1.00	col/100mL	1		10/23/18 17:30

Batch Information

Analytical Batch: BTF16971
Analytical Method: SM21 9222D
Analyst: NAB
Analytical Date/Time: 10/23/18 17:30
Container ID: 1186073001-E

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
E. Coli	3		1	1	MPN/100m	1		10/23/18 18:12
Total Coliform	387		1	1	MPN/100m	1		10/23/18 18:12

Batch Information

Analytical Batch: BTF16974
Analytical Method: SM21 9223B
Analyst: NAB
Analytical Date/Time: 10/23/18 18:12
Container ID: 1186073001-D

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Results of **SW1**

Client Sample ID: **SW1**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1186073001
Lab Project ID: 1186073

Collection Date: 10/23/18 10:37
Received Date: 10/23/18 16:02
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	4.13		1.33	0.413	mg/L	1		10/25/18 13:29

Batch Information

Analytical Batch: STS6073
Analytical Method: SM21 2540D
Analyst: DMM
Analytical Date/Time: 10/25/18 13:29
Container ID: 1186073001-B

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	0.660 J		1.00	0.310	mg/L	1		10/26/18 13:25

Batch Information

Analytical Batch: WDA4446
Analytical Method: SM21 4500-N D
Analyst: EWW
Analytical Date/Time: 10/26/18 13:25
Container ID: 1186073001-F

Prep Batch: WXX12615
Prep Method: METHOD
Prep Date/Time: 10/25/18 14:55
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Ammonia-N	0.0500 U		0.100	0.0310	mg/L	1		10/25/18 11:02

Batch Information

Analytical Batch: WDA4444
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 10/25/18 11:02
Container ID: 1186073001-F

Prep Batch: WXX12613
Prep Method: METHOD
Prep Date/Time: 10/25/18 10:10
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Nitrate-N	0.0500 U		0.100	0.0250	mg/L	2		10/23/18 18:21
Nitrite-N	0.0500 U		0.100	0.0250	mg/L	2		10/23/18 18:21

Print Date: 10/31/2018 8:59:29AM

J flagging is activated

Results of **SW1**

Client Sample ID: **SW1**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1186073001
Lab Project ID: 1186073

Collection Date: 10/23/18 10:37
Received Date: 10/23/18 16:02
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: WFI2768
Analytical Method: SM21 4500NO3-F
Analyst: AYC
Analytical Date/Time: 10/23/18 18:21
Container ID: 1186073001-C

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Phosphorus	0.0552		0.0200	0.00500	mg/L	1		10/30/18 11:46

Batch Information

Analytical Batch: WDA4447
Analytical Method: SM21 4500P-B,E
Analyst: DMM
Analytical Date/Time: 10/30/18 11:46
Container ID: 1186073001-F

Prep Batch: WXX12617
Prep Method: SM21 4500P-B,E
Prep Date/Time: 10/30/18 10:02
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

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Results of **SW2**

Client Sample ID: **SW2**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1186073002
Lab Project ID: 1186073

Collection Date: 10/23/18 10:53
Received Date: 10/23/18 16:02
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	2.04		2.00	2.00	mg/L	1		10/24/18 18:21

Batch Information

Analytical Batch: BOD6172
Analytical Method: SM21 5210B
Analyst: A.L
Analytical Date/Time: 10/24/18 18:21
Container ID: 1186073002-A

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Fecal Coliform	1.00	U	1.00	1.00	col/100mL	1		10/23/18 17:30

Batch Information

Analytical Batch: BTF16971
Analytical Method: SM21 9222D
Analyst: NAB
Analytical Date/Time: 10/23/18 17:30
Container ID: 1186073002-E

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
E. Coli	1	U	1	1	MPN/100m	1		10/23/18 18:12
Total Coliform	613		1	1	MPN/100m	1		10/23/18 18:12

Batch Information

Analytical Batch: BTF16974
Analytical Method: SM21 9223B
Analyst: VDL
Analytical Date/Time: 10/23/18 18:12
Container ID: 1186073002-D

Results of **SW2**

Client Sample ID: **SW2**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1186073002
Lab Project ID: 1186073

Collection Date: 10/23/18 10:53
Received Date: 10/23/18 16:02
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	1.88		1.04	0.323	mg/L	1		10/25/18 13:29

Batch Information

Analytical Batch: STS6073
Analytical Method: SM21 2540D
Analyst: DMM
Analytical Date/Time: 10/25/18 13:29
Container ID: 1186073002-B

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	0.600 J		1.00	0.310	mg/L	1		10/26/18 13:29

Batch Information

Analytical Batch: WDA4446
Analytical Method: SM21 4500-N D
Analyst: EWW
Analytical Date/Time: 10/26/18 13:29
Container ID: 1186073002-F

Prep Batch: WXX12615
Prep Method: METHOD
Prep Date/Time: 10/25/18 14:55
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Ammonia-N	0.0500 U		0.100	0.0310	mg/L	1		10/25/18 11:04

Batch Information

Analytical Batch: WDA4444
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 10/25/18 11:04
Container ID: 1186073002-F

Prep Batch: WXX12613
Prep Method: METHOD
Prep Date/Time: 10/25/18 10:10
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Nitrate-N	0.0500 U		0.100	0.0250	mg/L	2		10/23/18 18:23
Nitrite-N	0.0500 U		0.100	0.0250	mg/L	2		10/23/18 18:23

Print Date: 10/31/2018 8:59:29AM

J flagging is activated

Results of **SW2**

Client Sample ID: **SW2**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1186073002
Lab Project ID: 1186073

Collection Date: 10/23/18 10:53
Received Date: 10/23/18 16:02
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: WFI2768
Analytical Method: SM21 4500NO3-F
Analyst: AYC
Analytical Date/Time: 10/23/18 18:23
Container ID: 1186073002-C

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Phosphorus	0.0248		0.0200	0.00500	mg/L	1		10/30/18 11:47

Batch Information

Analytical Batch: WDA4447
Analytical Method: SM21 4500P-B,E
Analyst: DMM
Analytical Date/Time: 10/30/18 11:47
Container ID: 1186073002-F

Prep Batch: WXX12617
Prep Method: SM21 4500P-B,E
Prep Date/Time: 10/30/18 10:02
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Print Date: 10/31/2018 8:59:29AM

J flagging is activated

Results of **SW3**

Client Sample ID: **SW3**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1186073003
Lab Project ID: 1186073

Collection Date: 10/23/18 11:10
Received Date: 10/23/18 16:02
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		10/24/18 18:21

Batch Information

Analytical Batch: BOD6172
Analytical Method: SM21 5210B
Analyst: A.L
Analytical Date/Time: 10/24/18 18:21
Container ID: 1186073003-A

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Fecal Coliform	37		1.00	1.00	col/100mL	1		10/23/18 17:30

Batch Information

Analytical Batch: BTF16971
Analytical Method: SM21 9222D
Analyst: NAB
Analytical Date/Time: 10/23/18 17:30
Container ID: 1186073003-E

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
E. Coli	46		1	1	MPN/100m	1		10/23/18 18:12
Total Coliform	727		1	1	MPN/100m	1		10/23/18 18:12

Batch Information

Analytical Batch: BTF16974
Analytical Method: SM21 9223B
Analyst: VDL
Analytical Date/Time: 10/23/18 18:12
Container ID: 1186073003-D

Results of **SW3**

Client Sample ID: **SW3**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1186073003
Lab Project ID: 1186073

Collection Date: 10/23/18 11:10
Received Date: 10/23/18 16:02
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	4.95		0.990	0.307	mg/L	1		10/25/18 13:29

Batch Information

Analytical Batch: STS6073
Analytical Method: SM21 2540D
Analyst: DMM
Analytical Date/Time: 10/25/18 13:29
Container ID: 1186073003-B

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	0.426 J		1.00	0.310	mg/L	1		10/26/18 13:31

Batch Information

Analytical Batch: WDA4446
Analytical Method: SM21 4500-N D
Analyst: EWW
Analytical Date/Time: 10/26/18 13:31
Container ID: 1186073003-F

Prep Batch: WXX12615
Prep Method: METHOD
Prep Date/Time: 10/25/18 14:55
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Ammonia-N	0.0500 U		0.100	0.0310	mg/L	1		10/25/18 11:06

Batch Information

Analytical Batch: WDA4444
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 10/25/18 11:06
Container ID: 1186073003-F

Prep Batch: WXX12613
Prep Method: METHOD
Prep Date/Time: 10/25/18 10:10
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Nitrate-N	0.0500 U		0.100	0.0250	mg/L	2		10/23/18 18:25
Nitrite-N	0.0500 U		0.100	0.0250	mg/L	2		10/23/18 18:25

Print Date: 10/31/2018 8:59:29AM

J flagging is activated

Results of **SW3**

Client Sample ID: **SW3**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1186073003
Lab Project ID: 1186073

Collection Date: 10/23/18 11:10
Received Date: 10/23/18 16:02
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: WFI2768
Analytical Method: SM21 4500NO3-F
Analyst: AYC
Analytical Date/Time: 10/23/18 18:25
Container ID: 1186073003-C

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Phosphorus	0.0263		0.0200	0.00500	mg/L	1		10/30/18 11:48

Batch Information

Analytical Batch: WDA4447
Analytical Method: SM21 4500P-B,E
Analyst: DMM
Analytical Date/Time: 10/30/18 11:48
Container ID: 1186073003-F

Prep Batch: WXX12617
Prep Method: SM21 4500P-B,E
Prep Date/Time: 10/30/18 10:02
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

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Results of **SW4**

Client Sample ID: **SW4**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1186073004
Lab Project ID: 1186073

Collection Date: 10/23/18 12:24
Received Date: 10/23/18 16:02
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	2.90		2.00	2.00	mg/L	1		10/24/18 18:21

Batch Information

Analytical Batch: BOD6172
Analytical Method: SM21 5210B
Analyst: A.L
Analytical Date/Time: 10/24/18 18:21
Container ID: 1186073004-A

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
E. Coli	16		1	1	MPN/100m	1		10/23/18 18:12
Total Coliform	2420		1	1	MPN/100m	1		10/23/18 18:12

Batch Information

Analytical Batch: BTF16974
Analytical Method: SM21 9223B
Analyst: VDL
Analytical Date/Time: 10/23/18 18:12
Container ID: 1186073004-D

Results of **SW4**

Client Sample ID: **SW4**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1186073004
Lab Project ID: 1186073

Collection Date: 10/23/18 12:24
Received Date: 10/23/18 16:02
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	13.7		1.33	0.413	mg/L	1		10/25/18 13:29

Batch Information

Analytical Batch: STS6073
Analytical Method: SM21 2540D
Analyst: DMM
Analytical Date/Time: 10/25/18 13:29
Container ID: 1186073004-B

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	0.745 J		1.00	0.310	mg/L	1		10/26/18 13:32

Batch Information

Analytical Batch: WDA4446
Analytical Method: SM21 4500-N D
Analyst: EWW
Analytical Date/Time: 10/26/18 13:32
Container ID: 1186073004-E

Prep Batch: WXX12615
Prep Method: METHOD
Prep Date/Time: 10/25/18 14:55
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Ammonia-N	0.0500 U		0.100	0.0310	mg/L	1		10/25/18 11:07

Batch Information

Analytical Batch: WDA4444
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 10/25/18 11:07
Container ID: 1186073004-E

Prep Batch: WXX12613
Prep Method: METHOD
Prep Date/Time: 10/25/18 10:10
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Nitrate-N	0.0500 U		0.100	0.0250	mg/L	2		10/23/18 18:26
Nitrite-N	0.0500 U		0.100	0.0250	mg/L	2		10/23/18 18:26

Print Date: 10/31/2018 8:59:29AM

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Results of **SW4**

Client Sample ID: **SW4**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1186073004
Lab Project ID: 1186073

Collection Date: 10/23/18 12:24
Received Date: 10/23/18 16:02
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: WFI2768
Analytical Method: SM21 4500NO3-F
Analyst: AYC
Analytical Date/Time: 10/23/18 18:26
Container ID: 1186073004-C

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Phosphorus	0.0740		0.0200	0.00500	mg/L	1		10/30/18 11:49

Batch Information

Analytical Batch: WDA4447
Analytical Method: SM21 4500P-B,E
Analyst: DMM
Analytical Date/Time: 10/30/18 11:49
Container ID: 1186073004-E

Prep Batch: WXX12617
Prep Method: SM21 4500P-B,E
Prep Date/Time: 10/30/18 10:02
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

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Results of **SW5**

Client Sample ID: **SW5**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1186073005
Lab Project ID: 1186073

Collection Date: 10/23/18 12:45
Received Date: 10/23/18 16:02
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	4.75		2.00	2.00	mg/L	1		10/24/18 18:21

Batch Information

Analytical Batch: BOD6172
Analytical Method: SM21 5210B
Analyst: A.L
Analytical Date/Time: 10/24/18 18:21
Container ID: 1186073005-A

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Fecal Coliform	36		1.00	1.00	col/100mL	1		10/23/18 17:30

Batch Information

Analytical Batch: BTF16971
Analytical Method: SM21 9222D
Analyst: NAB
Analytical Date/Time: 10/23/18 17:30
Container ID: 1186073005-E

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
E. Coli	8		1	1	MPN/100m	1		10/23/18 18:12
Total Coliform	1046		1	1	MPN/100m	1		10/23/18 18:12

Batch Information

Analytical Batch: BTF16974
Analytical Method: SM21 9223B
Analyst: VDL
Analytical Date/Time: 10/23/18 18:12
Container ID: 1186073005-D

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Results of **SW5**

Client Sample ID: **SW5**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1186073005
Lab Project ID: 1186073

Collection Date: 10/23/18 12:45
Received Date: 10/23/18 16:02
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	15.1		1.05	0.326	mg/L	1		10/25/18 13:29

Batch Information

Analytical Batch: STS6073
Analytical Method: SM21 2540D
Analyst: DMM
Analytical Date/Time: 10/25/18 13:29
Container ID: 1186073005-B

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	0.731 J		1.00	0.310	mg/L	1		10/26/18 13:33

Batch Information

Analytical Batch: WDA4446
Analytical Method: SM21 4500-N D
Analyst: EWW
Analytical Date/Time: 10/26/18 13:33
Container ID: 1186073005-F

Prep Batch: WXX12615
Prep Method: METHOD
Prep Date/Time: 10/25/18 14:55
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	0.0898 J		0.100	0.0310	mg/L	1		10/25/18 11:12

Batch Information

Analytical Batch: WDA4444
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 10/25/18 11:12
Container ID: 1186073005-F

Prep Batch: WXX12613
Prep Method: METHOD
Prep Date/Time: 10/25/18 10:10
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Nitrate-N	0.0500 U		0.100	0.0250	mg/L	2		10/23/18 18:28
Nitrite-N	0.0500 U		0.100	0.0250	mg/L	2		10/23/18 18:28

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Results of **SW5**

Client Sample ID: **SW5**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1186073005
Lab Project ID: 1186073

Collection Date: 10/23/18 12:45
Received Date: 10/23/18 16:02
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: WFI2768
Analytical Method: SM21 4500NO3-F
Analyst: AYC
Analytical Date/Time: 10/23/18 18:28
Container ID: 1186073005-C

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Phosphorus	0.0670		0.0200	0.00500	mg/L	1		10/30/18 11:50

Batch Information

Analytical Batch: WDA4447
Analytical Method: SM21 4500P-B,E
Analyst: DMM
Analytical Date/Time: 10/30/18 11:50
Container ID: 1186073005-F

Prep Batch: WXX12617
Prep Method: SM21 4500P-B,E
Prep Date/Time: 10/30/18 10:02
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

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Results of **SW6**

Client Sample ID: **SW6**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1186073006
Lab Project ID: 1186073

Collection Date: 10/23/18 12:10
Received Date: 10/23/18 16:02
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		10/24/18 18:21

Batch Information

Analytical Batch: BOD6172
Analytical Method: SM21 5210B
Analyst: A.L
Analytical Date/Time: 10/24/18 18:21
Container ID: 1186073006-A

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
E. Coli	23		1	1	MPN/100m	1		10/23/18 18:12
Total Coliform	186		1	1	MPN/100m	1		10/23/18 18:12

Batch Information

Analytical Batch: BTF16974
Analytical Method: SM21 9223B
Analyst: VDL
Analytical Date/Time: 10/23/18 18:12
Container ID: 1186073006-D

Results of **SW6**

Client Sample ID: **SW6**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1186073006
Lab Project ID: 1186073

Collection Date: 10/23/18 12:10
Received Date: 10/23/18 16:02
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	2.32		1.01	0.313	mg/L	1		10/25/18 13:29

Batch Information

Analytical Batch: STS6073
Analytical Method: SM21 2540D
Analyst: DMM
Analytical Date/Time: 10/25/18 13:29
Container ID: 1186073006-B

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	0.445 J		1.00	0.310	mg/L	1		10/26/18 13:37

Batch Information

Analytical Batch: WDA4446
Analytical Method: SM21 4500-N D
Analyst: EWW
Analytical Date/Time: 10/26/18 13:37
Container ID: 1186073006-E

Prep Batch: WXX12615
Prep Method: METHOD
Prep Date/Time: 10/25/18 14:55
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Ammonia-N	0.0500 U		0.100	0.0310	mg/L	1		10/25/18 11:14

Batch Information

Analytical Batch: WDA4444
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 10/25/18 11:14
Container ID: 1186073006-E

Prep Batch: WXX12613
Prep Method: METHOD
Prep Date/Time: 10/25/18 10:10
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Nitrate-N	0.0500 U		0.100	0.0250	mg/L	2		10/23/18 18:30
Nitrite-N	0.0500 U		0.100	0.0250	mg/L	2		10/23/18 18:30

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Results of **SW6**

Client Sample ID: **SW6**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1186073006
Lab Project ID: 1186073

Collection Date: 10/23/18 12:10
Received Date: 10/23/18 16:02
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: WFI2768
Analytical Method: SM21 4500NO3-F
Analyst: AYC
Analytical Date/Time: 10/23/18 18:30
Container ID: 1186073006-C

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Phosphorus	0.0354		0.0200	0.00500	mg/L	1		10/30/18 11:51

Batch Information

Analytical Batch: WDA4447
Analytical Method: SM21 4500P-B,E
Analyst: DMM
Analytical Date/Time: 10/30/18 11:51
Container ID: 1186073006-E

Prep Batch: WXX12617
Prep Method: SM21 4500P-B,E
Prep Date/Time: 10/30/18 10:02
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

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Results of **SW7**

Client Sample ID: **SW7**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1186073007
Lab Project ID: 1186073

Collection Date: 10/23/18 11:54
Received Date: 10/23/18 16:02
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		10/24/18 18:21

Batch Information

Analytical Batch: BOD6172
Analytical Method: SM21 5210B
Analyst: A.L
Analytical Date/Time: 10/24/18 18:21
Container ID: 1186073007-A

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Fecal Coliform	10		1.00	1.00	col/100mL	1		10/23/18 17:30

Batch Information

Analytical Batch: BTF16971
Analytical Method: SM21 9222D
Analyst: NAB
Analytical Date/Time: 10/23/18 17:30
Container ID: 1186073007-E

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
E. Coli	16		1	1	MPN/100m	1		10/23/18 18:12
Total Coliform	488		1	1	MPN/100m	1		10/23/18 18:12

Batch Information

Analytical Batch: BTF16974
Analytical Method: SM21 9223B
Analyst: VDL
Analytical Date/Time: 10/23/18 18:12
Container ID: 1186073007-D

Print Date: 10/31/2018 8:59:29AM

J flagging is activated

Results of **SW7**

Client Sample ID: **SW7**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1186073007
Lab Project ID: 1186073

Collection Date: 10/23/18 11:54
Received Date: 10/23/18 16:02
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	2.50		1.00	0.310	mg/L	1		10/25/18 13:29

Batch Information

Analytical Batch: STS6073
Analytical Method: SM21 2540D
Analyst: DMM
Analytical Date/Time: 10/25/18 13:29
Container ID: 1186073007-B

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	0.500 U		1.00	0.310	mg/L	1		10/26/18 13:38

Batch Information

Analytical Batch: WDA4446
Analytical Method: SM21 4500-N D
Analyst: EWW
Analytical Date/Time: 10/26/18 13:38
Container ID: 1186073007-F

Prep Batch: WXX12615
Prep Method: METHOD
Prep Date/Time: 10/25/18 14:55
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Ammonia-N	0.0500 U		0.100	0.0310	mg/L	1		10/25/18 11:16

Batch Information

Analytical Batch: WDA4444
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 10/25/18 11:16
Container ID: 1186073007-F

Prep Batch: WXX12613
Prep Method: METHOD
Prep Date/Time: 10/25/18 10:10
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Nitrate-N	0.0500 U		0.100	0.0250	mg/L	2		10/23/18 18:32
Nitrite-N	0.0500 U		0.100	0.0250	mg/L	2		10/23/18 18:32

Print Date: 10/31/2018 8:59:29AM

J flagging is activated

Results of **SW7**

Client Sample ID: **SW7**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1186073007
Lab Project ID: 1186073

Collection Date: 10/23/18 11:54
Received Date: 10/23/18 16:02
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: WFI2768
Analytical Method: SM21 4500NO3-F
Analyst: AYC
Analytical Date/Time: 10/23/18 18:32
Container ID: 1186073007-C

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Phosphorus	0.0105	J	0.0200	0.00500	mg/L	1		10/30/18 11:52

Batch Information

Analytical Batch: WDA4447
Analytical Method: SM21 4500P-B,E
Analyst: DMM
Analytical Date/Time: 10/30/18 11:52
Container ID: 1186073007-F

Prep Batch: WXX12617
Prep Method: SM21 4500P-B,E
Prep Date/Time: 10/30/18 10:02
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

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Results of **SW8**

Client Sample ID: **SW8**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1186073008
Lab Project ID: 1186073

Collection Date: 10/23/18 14:02
Received Date: 10/23/18 16:02
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		10/24/18 18:21

Batch Information

Analytical Batch: BOD6172
Analytical Method: SM21 5210B
Analyst: A.L
Analytical Date/Time: 10/24/18 18:21
Container ID: 1186073008-A

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Fecal Coliform	1.0		1.00	1.00	col/100mL	1		10/23/18 17:30

Batch Information

Analytical Batch: BTF16971
Analytical Method: SM21 9222D
Analyst: NAB
Analytical Date/Time: 10/23/18 17:30
Container ID: 1186073008-E

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
E. Coli	2		1	1	MPN/100m	1		10/23/18 18:12
Total Coliform	649		1	1	MPN/100m	1		10/23/18 18:12

Batch Information

Analytical Batch: BTF16974
Analytical Method: SM21 9223B
Analyst: VDL
Analytical Date/Time: 10/23/18 18:12
Container ID: 1186073008-D

Results of **SW8**

Client Sample ID: **SW8**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1186073008
Lab Project ID: 1186073

Collection Date: 10/23/18 14:02
Received Date: 10/23/18 16:02
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	1.09		0.990	0.307	mg/L	1		10/25/18 13:29

Batch Information

Analytical Batch: STS6073
Analytical Method: SM21 2540D
Analyst: DMM
Analytical Date/Time: 10/25/18 13:29
Container ID: 1186073008-B

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	0.463 J		1.00	0.310	mg/L	1		10/26/18 13:40

Batch Information

Analytical Batch: WDA4446
Analytical Method: SM21 4500-N D
Analyst: EWW
Analytical Date/Time: 10/26/18 13:40
Container ID: 1186073008-F

Prep Batch: WXX12615
Prep Method: METHOD
Prep Date/Time: 10/25/18 14:55
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Ammonia-N	0.0500 U		0.100	0.0310	mg/L	1		10/25/18 11:17

Batch Information

Analytical Batch: WDA4444
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 10/25/18 11:17
Container ID: 1186073008-F

Prep Batch: WXX12613
Prep Method: METHOD
Prep Date/Time: 10/25/18 10:10
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Nitrate-N	0.0500 U		0.100	0.0250	mg/L	2		10/23/18 18:33
Nitrite-N	0.0500 U		0.100	0.0250	mg/L	2		10/23/18 18:33

Print Date: 10/31/2018 8:59:29AM

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Results of **SW8**

Client Sample ID: **SW8**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1186073008
Lab Project ID: 1186073

Collection Date: 10/23/18 14:02
Received Date: 10/23/18 16:02
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: WFI2768
Analytical Method: SM21 4500NO3-F
Analyst: AYC
Analytical Date/Time: 10/23/18 18:33
Container ID: 1186073008-C

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Phosphorus	0.0290		0.0200	0.00500	mg/L	1		10/30/18 11:55

Batch Information

Analytical Batch: WDA4447
Analytical Method: SM21 4500P-B,E
Analyst: DMM
Analytical Date/Time: 10/30/18 11:55
Container ID: 1186073008-F

Prep Batch: WXX12617
Prep Method: SM21 4500P-B,E
Prep Date/Time: 10/30/18 10:02
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Print Date: 10/31/2018 8:59:29AM

J flagging is activated

Results of **SW9**

Client Sample ID: **SW9**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1186073009
Lab Project ID: 1186073

Collection Date: 10/23/18 13:30
Received Date: 10/23/18 16:02
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		10/24/18 18:21

Batch Information

Analytical Batch: BOD6172
Analytical Method: SM21 5210B
Analyst: A.L
Analytical Date/Time: 10/24/18 18:21
Container ID: 1186073009-A

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Fecal Coliform	1.00 U		1.00	1.00	col/100mL	1		10/23/18 17:30

Batch Information

Analytical Batch: BTF16971
Analytical Method: SM21 9222D
Analyst: NAB
Analytical Date/Time: 10/23/18 17:30
Container ID: 1186073009-E

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
E. Coli	1 U		1	1	MPN/100m	1		10/23/18 18:12
Total Coliform	54		1	1	MPN/100m	1		10/23/18 18:12

Batch Information

Analytical Batch: BTF16974
Analytical Method: SM21 9223B
Analyst: VDL
Analytical Date/Time: 10/23/18 18:12
Container ID: 1186073009-D

Results of **SW9**

Client Sample ID: **SW9**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1186073009
Lab Project ID: 1186073

Collection Date: 10/23/18 13:30
Received Date: 10/23/18 16:02
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	8.57		0.952	0.295	mg/L	1		10/25/18 13:29

Batch Information

Analytical Batch: STS6073
Analytical Method: SM21 2540D
Analyst: DMM
Analytical Date/Time: 10/25/18 13:29
Container ID: 1186073009-B

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	0.500 U		1.00	0.310	mg/L	1		10/26/18 13:41

Batch Information

Analytical Batch: WDA4446
Analytical Method: SM21 4500-N D
Analyst: EWW
Analytical Date/Time: 10/26/18 13:41
Container ID: 1186073009-F

Prep Batch: WXX12615
Prep Method: METHOD
Prep Date/Time: 10/25/18 14:55
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Ammonia-N	0.0500 U		0.100	0.0310	mg/L	1		10/25/18 11:19

Batch Information

Analytical Batch: WDA4444
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 10/25/18 11:19
Container ID: 1186073009-F

Prep Batch: WXX12613
Prep Method: METHOD
Prep Date/Time: 10/25/18 10:10
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Nitrate-N	0.0500 U		0.100	0.0250	mg/L	2		10/23/18 18:35
Nitrite-N	0.0500 U		0.100	0.0250	mg/L	2		10/23/18 18:35

Print Date: 10/31/2018 8:59:29AM

J flagging is activated

Results of **SW9**

Client Sample ID: **SW9**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1186073009
Lab Project ID: 1186073

Collection Date: 10/23/18 13:30
Received Date: 10/23/18 16:02
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: WFI2768
Analytical Method: SM21 4500NO3-F
Analyst: AYC
Analytical Date/Time: 10/23/18 18:35
Container ID: 1186073009-C

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Phosphorus	0.00650	J	0.0200	0.00500	mg/L	1		10/30/18 11:56

Batch Information

Analytical Batch: WDA4447
Analytical Method: SM21 4500P-B,E
Analyst: DMM
Analytical Date/Time: 10/30/18 11:56
Container ID: 1186073009-F

Prep Batch: WXX12617
Prep Method: SM21 4500P-B,E
Prep Date/Time: 10/30/18 10:02
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

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Results of **SW10**

Client Sample ID: **SW10**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1186073010
Lab Project ID: 1186073

Collection Date: 10/23/18 13:22
Received Date: 10/23/18 16:02
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	4.57		2.00	2.00	mg/L	1		10/24/18 18:21

Batch Information

Analytical Batch: BOD6172
Analytical Method: SM21 5210B
Analyst: A.L
Analytical Date/Time: 10/24/18 18:21
Container ID: 1186073010-A

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Fecal Coliform	2.0		1.00	1.00	col/100mL	1		10/23/18 17:30

Batch Information

Analytical Batch: BTF16971
Analytical Method: SM21 9222D
Analyst: NAB
Analytical Date/Time: 10/23/18 17:30
Container ID: 1186073010-E

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
E. Coli	10		1	1	MPN/100m	1		10/23/18 18:12
Total Coliform	1553		1	1	MPN/100m	1		10/23/18 18:12

Batch Information

Analytical Batch: BTF16974
Analytical Method: SM21 9223B
Analyst: VDL
Analytical Date/Time: 10/23/18 18:12
Container ID: 1186073010-D

Results of **SW10**

Client Sample ID: **SW10**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1186073010
Lab Project ID: 1186073

Collection Date: 10/23/18 13:22
Received Date: 10/23/18 16:02
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	3.33		1.01	0.313	mg/L	1		10/25/18 13:29

Batch Information

Analytical Batch: STS6073
Analytical Method: SM21 2540D
Analyst: DMM
Analytical Date/Time: 10/25/18 13:29
Container ID: 1186073010-B

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	0.356 J		1.00	0.310	mg/L	1		10/26/18 13:42

Batch Information

Analytical Batch: WDA4446
Analytical Method: SM21 4500-N D
Analyst: EWW
Analytical Date/Time: 10/26/18 13:42
Container ID: 1186073010-F

Prep Batch: WXX12615
Prep Method: METHOD
Prep Date/Time: 10/25/18 14:55
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Ammonia-N	0.0500 U		0.100	0.0310	mg/L	1		10/25/18 11:21

Batch Information

Analytical Batch: WDA4444
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 10/25/18 11:21
Container ID: 1186073010-F

Prep Batch: WXX12613
Prep Method: METHOD
Prep Date/Time: 10/25/18 10:10
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Nitrate-N	0.0500 U		0.100	0.0250	mg/L	2		10/23/18 18:37
Nitrite-N	0.0500 U		0.100	0.0250	mg/L	2		10/23/18 18:37

Print Date: 10/31/2018 8:59:29AM

J flagging is activated

Results of **SW10**

Client Sample ID: **SW10**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1186073010
Lab Project ID: 1186073

Collection Date: 10/23/18 13:22
Received Date: 10/23/18 16:02
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: WFI2768
Analytical Method: SM21 4500NO3-F
Analyst: AYC
Analytical Date/Time: 10/23/18 18:37
Container ID: 1186073010-C

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Phosphorus	0.0170	J	0.0200	0.00500	mg/L	1		10/30/18 11:58

Batch Information

Analytical Batch: WDA4447
Analytical Method: SM21 4500P-B,E
Analyst: DMM
Analytical Date/Time: 10/30/18 11:58
Container ID: 1186073010-F

Prep Batch: WXX12617
Prep Method: SM21 4500P-B,E
Prep Date/Time: 10/30/18 10:02
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Results of **DUP 1**

Client Sample ID: **DUP 1**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1186073011
Lab Project ID: 1186073

Collection Date: 10/23/18 14:02
Received Date: 10/23/18 16:02
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		10/24/18 18:21

Batch Information

Analytical Batch: BOD6172
Analytical Method: SM21 5210B
Analyst: A.L
Analytical Date/Time: 10/24/18 18:21
Container ID: 1186073011-A

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Fecal Coliform	1.00 U		1.00	1.00	col/100mL	1		10/23/18 17:30

Batch Information

Analytical Batch: BTF16971
Analytical Method: SM21 9222D
Analyst: NAB
Analytical Date/Time: 10/23/18 17:30
Container ID: 1186073011-E

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
E. Coli	1		1	1	MPN/100m	1		10/23/18 18:12
Total Coliform	488		1	1	MPN/100m	1		10/23/18 18:12

Batch Information

Analytical Batch: BTF16974
Analytical Method: SM21 9223B
Analyst: VDL
Analytical Date/Time: 10/23/18 18:12
Container ID: 1186073011-D

Results of **DUP 1**

Client Sample ID: **DUP 1**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1186073011
Lab Project ID: 1186073

Collection Date: 10/23/18 14:02
Received Date: 10/23/18 16:02
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	1.76		0.980	0.304	mg/L	1		10/25/18 13:29

Batch Information

Analytical Batch: STS6073
Analytical Method: SM21 2540D
Analyst: DMM
Analytical Date/Time: 10/25/18 13:29
Container ID: 1186073011-B

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	0.431 J		1.00	0.310	mg/L	1		10/26/18 13:43

Batch Information

Analytical Batch: WDA4446
Analytical Method: SM21 4500-N D
Analyst: EWW
Analytical Date/Time: 10/26/18 13:43
Container ID: 1186073011-F

Prep Batch: WXX12615
Prep Method: METHOD
Prep Date/Time: 10/25/18 14:55
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Ammonia-N	0.0500 U		0.100	0.0310	mg/L	1		10/25/18 11:22

Batch Information

Analytical Batch: WDA4444
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 10/25/18 11:22
Container ID: 1186073011-F

Prep Batch: WXX12613
Prep Method: METHOD
Prep Date/Time: 10/25/18 10:10
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Nitrate-N	0.0500 U		0.100	0.0250	mg/L	2		10/23/18 18:07
Nitrite-N	0.0500 U		0.100	0.0250	mg/L	2		10/23/18 18:07

Print Date: 10/31/2018 8:59:29AM

J flagging is activated

Results of **DUP 1**

Client Sample ID: **DUP 1**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1186073011
Lab Project ID: 1186073

Collection Date: 10/23/18 14:02
Received Date: 10/23/18 16:02
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: WFI2768
Analytical Method: SM21 4500NO3-F
Analyst: AYC
Analytical Date/Time: 10/23/18 18:07
Container ID: 1186073011-C

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Phosphorus	0.0297		0.0200	0.00500	mg/L	1		10/30/18 11:59

Batch Information

Analytical Batch: WDA4447
Analytical Method: SM21 4500P-B,E
Analyst: DMM
Analytical Date/Time: 10/30/18 11:59
Container ID: 1186073011-F

Prep Batch: WXX12617
Prep Method: SM21 4500P-B,E
Prep Date/Time: 10/30/18 10:02
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

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Method Blank

Blank ID: MB for HBN 1788224 [BOD/6172]
Blank Lab ID: 1484937

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1186073001, 1186073002, 1186073003, 1186073004, 1186073005, 1186073006, 1186073007, 1186073008, 1186073009, 1186073010, 1186073011

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: BOD6172
Analytical Method: SM21 5210B
Instrument:
Analyst: A.L
Analytical Date/Time: 10/24/2018 6:21:26PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1186073 [BOD6172]
Blank Spike Lab ID: 1484938
Date Analyzed: 10/24/2018 18:21

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1186073001, 1186073002, 1186073003, 1186073004, 1186073005, 1186073006, 1186073007, 1186073008, 1186073009, 1186073010, 1186073011

Results by **SM21 5210B**

Blank Spike (mg/L)

Parameter	Spike	Result	Rec (%)	CL
Biochemical Oxygen Demand	198	208	105	(84.6-115.4

Batch Information

Analytical Batch: **BOD6172**
Analytical Method: **SM21 5210B**
Instrument:
Analyst: **A.L**

Print Date: 10/31/2018 8:59:35AM

Method Blank

Blank ID: MB for HBN 1788150 [BTF/16971]
Blank Lab ID: 1484604

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1186073001, 1186073002, 1186073003, 1186073005, 1186073007, 1186073008, 1186073009, 1186073010, 1186073011

Results by **SM21 9222D**

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

Batch Information

Analytical Batch: BTF16971
Analytical Method: SM21 9222D
Instrument:
Analyst: VDL
Analytical Date/Time: 10/23/2018 12:57:00PM

Print Date: 10/31/2018 8:59:36AM

Method Blank

Blank ID: MB for HBN 1788150 [BTF/16971]
Blank Lab ID: 1485019

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1186073001, 1186073002, 1186073003, 1186073005, 1186073007, 1186073008, 1186073009, 1186073010, 1186073011

Results by **SM21 9222D**

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

Batch Information

Analytical Batch: BTF16971
Analytical Method: SM21 9222D
Instrument:
Analyst: NAB
Analytical Date/Time: 10/23/2018 5:30:00PM

Print Date: 10/31/2018 8:59:36AM

Method Blank

Blank ID: MB for HBN 1788153 [BTF/16974]
Blank Lab ID: 1484610

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1186073001, 1186073002, 1186073003, 1186073004, 1186073005, 1186073006, 1186073007, 1186073008, 1186073009, 1186073010, 1186073011

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: BTF16974
Analytical Method: SM21 9223B
Instrument:
Analyst: NAB
Analytical Date/Time: 10/23/2018 5:46:00PM

Method Blank

Blank ID: MB for HBN 1788252 [STS/6073]
Blank Lab ID: 1485026

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1186073001, 1186073002, 1186073003, 1186073004, 1186073005, 1186073006, 1186073007, 1186073008, 1186073009, 1186073010, 1186073011

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: STS6073
Analytical Method: SM21 2540D
Instrument:
Analyst: DMM
Analytical Date/Time: 10/25/2018 1:29:33PM

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Duplicate Sample Summary

Original Sample ID: 1485025
Duplicate Sample ID: 1485029

Analysis Date: 10/25/2018 13:29
Matrix: Water (Surface, Eff., Ground)

QC for Samples:

1186073001, 1186073002, 1186073003, 1186073004, 1186073005, 1186073006, 1186073007, 1186073008, 1186073009, 1186073010, 1186073011

Results by **SM21 2540D**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
Total Suspended Solids	3980	3800	mg/L	4.60	(< 5)

Batch Information

Analytical Batch: STS6073
Analytical Method: SM21 2540D
Instrument:
Analyst: DMM

Print Date: 10/31/2018 8:59:41AM

Duplicate Sample Summary

Original Sample ID: 1189894001
Duplicate Sample ID: 1485030

Analysis Date: 10/25/2018 13:29
Matrix: Water (Surface, Eff., Ground)

QC for Samples:

1186073001, 1186073002, 1186073003, 1186073004, 1186073005, 1186073006, 1186073007, 1186073008, 1186073009, 1186073010, 1186073011

Results by **SM21 2540D**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
Total Suspended Solids	35.8	37.3	mg/L	4.30	(< 5)

Batch Information

Analytical Batch: STS6073
Analytical Method: SM21 2540D
Instrument:
Analyst: DMM

Print Date: 10/31/2018 8:59:41AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1186073 [STS6073]
Blank Spike Lab ID: 1485027
Date Analyzed: 10/25/2018 13:29

Spike Duplicate ID: LCSD for HBN 1186073 [STS6073]
Spike Duplicate Lab ID: 1485028
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1186073001, 1186073002, 1186073003, 1186073004, 1186073005, 1186073006, 1186073007, 1186073008, 1186073009, 1186073010, 1186073011

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	19.9	80	25	19.3	77	(75-125)	3.10	(< 5)

Batch Information

Analytical Batch: **STS6073**
Analytical Method: **SM21 2540D**
Instrument:
Analyst: **DMM**

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Method Blank

Blank ID: MB for HBN 1788154 (WFI/2768) Matrix: Water (Surface, Eff., Ground)
Blank Lab ID: 1484623

QC for Samples:
1186073001, 1186073002, 1186073003, 1186073004, 1186073005, 1186073006, 1186073007, 1186073008, 1186073009, 1186073010, 1186073011

Results by **SM21 4500NO3-F**

Parameter	Results	LOQ/CL	DL	Units
Nitrate-N	0.0500U	0.100	0.0250	mg/L
Nitrite-N	0.0500U	0.100	0.0250	mg/L
Total Nitrate/Nitrite-N	0.0500U	0.100	0.0250	mg/L

Batch Information

Analytical Batch: WFI2768
Analytical Method: SM21 4500NO3-F
Instrument: Astoria segmented flow
Analyst: AYC
Analytical Date/Time: 10/23/2018 6:00:33PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1186073 [WFI2768]
Blank Spike Lab ID: 1484615
Date Analyzed: 10/23/2018 17:58

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1186073001, 1186073002, 1186073003, 1186073004, 1186073005, 1186073006, 1186073007, 1186073008, 1186073009, 1186073010, 1186073011

Results by **SM21 4500NO3-F**

Blank Spike (mg/L)

Parameter	Spike	Result	Rec (%)	CL
Nitrate-N	2.5	2.69	107	(70-130)
Nitrite-N	2.5	2.49	100	(90-110)
Total Nitrate/Nitrite-N	5	5.17	103	(90-110)

Batch Information

Analytical Batch: **WFI2768**
Analytical Method: **SM21 4500NO3-F**
Instrument: **Astoria segmented flow**
Analyst: **AYC**

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Matrix Spike Summary

Original Sample ID: 1186065002
MS Sample ID: 1484612 MS
MSD Sample ID: 1484613 MSD

Analysis Date: 10/23/2018 18:11
Analysis Date: 10/23/2018 18:12
Analysis Date: 10/23/2018 18:14
Matrix: Drinking Water

QC for Samples: 1186073001, 1186073002, 1186073003, 1186073004, 1186073005, 1186073006, 1186073007, 1186073008, 1186073009, 1186073010, 1186073011

Results by **SM21 4500NO3-F**

		Matrix Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Nitrate-N	0.0500U	2.50	2.73	109	2.50	2.74	109	70-130	0.08	(< 25)
Nitrite-N	0.0500U	2.50	2.44	98	2.50	2.39	96	90-110	2.20	(< 25)

Batch Information

Analytical Batch: WFI2768
Analytical Method: SM21 4500NO3-F
Instrument: Astoria segmented flow
Analyst: AYC
Analytical Date/Time: 10/23/2018 6:12:48PM

Print Date: 10/31/2018 8:59:47AM

Method Blank

Blank ID: MB for HBN 1788274 [WXX/12613]
Blank Lab ID: 1485118

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1186073001, 1186073002, 1186073003, 1186073004, 1186073005, 1186073006, 1186073007, 1186073008, 1186073009, 1186073010, 1186073011

Results by **SM21 4500-NH3 G**

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

Batch Information

Analytical Batch: WDA4444
Analytical Method: SM21 4500-NH3 G
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 10/25/2018 10:52:46AM

Prep Batch: WXX12613
Prep Method: METHOD
Prep Date/Time: 10/25/2018 10:10:00AM
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Print Date: 10/31/2018 8:59:48AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1186073 [WXX12613]
Blank Spike Lab ID: 1485119
Date Analyzed: 10/25/2018 10:54

Spike Duplicate ID: LCSD for HBN 1186073 [WXX12613]
Spike Duplicate Lab ID: 1485120
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1186073001, 1186073002, 1186073003, 1186073004, 1186073005, 1186073006, 1186073007, 1186073008, 1186073009, 1186073010, 1186073011

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	0.965	97	1	1.01	101	(75-125)	4.90	(< 25)

Batch Information

Analytical Batch: **WDA4444**
Analytical Method: **SM21 4500-NH3 G**
Instrument: **Discrete Analyzer 2**
Analyst: **DMM**

Prep Batch: **WXX12613**
Prep Method: **METHOD**
Prep Date/Time: **10/25/2018 10:10**
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: 1186038001
MS Sample ID: 1485121 MS
MSD Sample ID: 1485122 MSD

Analysis Date: 10/25/2018 10:57
Analysis Date: 10/25/2018 10:59
Analysis Date: 10/25/2018 11:01
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1186073001, 1186073002, 1186073003, 1186073004, 1186073005, 1186073006, 1186073007, 1186073008, 1186073009, 1186073010, 1186073011

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	0.173	1.00	1.35	117	1.00	1.40	123	75-125	3.80	(< 25)

Batch Information

Analytical Batch: WDA4444
Analytical Method: SM21 4500-NH3 G
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 10/25/2018 10:59:29AM

Prep Batch: WXX12613
Prep Method: Ammonia by SM21 4500F prep (W)
Prep Date/Time: 10/25/2018 10:10:00AM
Prep Initial Wt./Vol.: 6.00mL
Prep Extract Vol: 6.00mL

Print Date: 10/31/2018 8:59:50AM

Method Blank

Blank ID: MB for HBN 1788373 [WXX/12615]
Blank Lab ID: 1485510

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1186073001, 1186073002, 1186073003, 1186073004, 1186073005, 1186073006, 1186073007, 1186073008, 1186073009, 1186073010, 1186073011

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: WDA4446
Analytical Method: SM21 4500-N D
Instrument: Discrete Analyzer 2
Analyst: EWW
Analytical Date/Time: 10/26/2018 1:22:00PM

Prep Batch: WXX12615
Prep Method: METHOD
Prep Date/Time: 10/25/2018 2:55:00PM
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1186073 [WXX12615]
Blank Spike Lab ID: 1485511
Date Analyzed: 10/26/2018 13:23

Spike Duplicate ID: LCSD for HBN 1186073 [WXX12615]
Spike Duplicate Lab ID: 1485512
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1186073001, 1186073002, 1186073003, 1186073004, 1186073005, 1186073006, 1186073007, 1186073008, 1186073009, 1186073010, 1186073011

Results by **SM21 4500-N D**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Total Kjeldahl Nitrogen	4	3.73	93	4	3.64	91	(75-125)	2.50	(< 25)

Batch Information

Analytical Batch: **WDA4446**
Analytical Method: **SM21 4500-N D**
Instrument: **Discrete Analyzer 2**
Analyst: **EWW**

Prep Batch: **WXX12615**
Prep Method: **METHOD**
Prep Date/Time: **10/25/2018 14:55**
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: 1186073001
MS Sample ID: 1485513 MS
MSD Sample ID: 1485514 MSD

Analysis Date: 10/26/2018 13:25
Analysis Date: 10/26/2018 13:27
Analysis Date: 10/26/2018 13:28
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1186073001, 1186073002, 1186073003, 1186073004, 1186073005, 1186073006, 1186073007, 1186073008, 1186073009, 1186073010, 1186073011

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	0.660J	4.00	4.08	85	4.00	4.16	87	75-125	1.90	(< 25)

Batch Information

Analytical Batch: WDA4446
Analytical Method: SM21 4500-N D
Instrument: Discrete Analyzer 2
Analyst: EWW
Analytical Date/Time: 10/26/2018 1:27:14PM

Prep Batch: WXX12615
Prep Method: Distillation TKN by Phenate (W)
Prep Date/Time: 10/25/2018 2:55:00PM
Prep Initial Wt./Vol.: 25.00mL
Prep Extract Vol: 25.00mL

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Method Blank

Blank ID: MB for HBN 1788440 [WXX/12617]
Blank Lab ID: 1485856

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1186073001, 1186073002, 1186073003, 1186073004, 1186073005, 1186073006, 1186073007, 1186073008, 1186073009, 1186073010, 1186073011

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: WDA4447
Analytical Method: SM21 4500P-B,E
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 10/30/2018 11:44:05AM

Prep Batch: WXX12617
Prep Method: SM21 4500P-B,E
Prep Date/Time: 10/30/2018 10:02:00AM
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1186073 [WXX12617]
Blank Spike Lab ID: 1485857
Date Analyzed: 10/30/2018 11:45

Spike Duplicate ID: LCSD for HBN 1186073 [WXX12617]
Spike Duplicate Lab ID: 1485858
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1186073001, 1186073002, 1186073003, 1186073004, 1186073005, 1186073006, 1186073007, 1186073008, 1186073009, 1186073010, 1186073011

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	0.200	100	0.2	0.195	98	(75-125)	2.50	(< 25)

Batch Information

Analytical Batch: **WDA4447**
Analytical Method: **SM21 4500P-B,E**
Instrument: **Discrete Analyzer 2**
Analyst: **DMM**

Prep Batch: **WXX12617**
Prep Method: **SM21 4500P-B,E**
Prep Date/Time: **10/30/2018 10:02**
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: 1186073009
MS Sample ID: 1485859 MS
MSD Sample ID: 1485860 MSD

Analysis Date: 10/30/2018 11:56
Analysis Date: 10/30/2018 11:56
Analysis Date: 10/30/2018 11:57
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1186073001, 1186073002, 1186073003, 1186073004, 1186073005, 1186073006, 1186073007, 1186073008, 1186073009, 1186073010, 1186073011

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	0.00650J	0.200	.196	95	0.200	0.196	95	75-125	0.36	(< 25)

Batch Information

Analytical Batch: WDA4447
Analytical Method: SM21 4500P-B,E
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 10/30/2018 11:56:56AM

Prep Batch: WXX12617
Prep Method: Total Phosphorus (W) Ext.
Prep Date/Time: 10/30/2018 10:02:00AM
Prep Initial Wt./Vol.: 25.00mL
Prep Extract Vol: 25.00mL

Print Date: 10/31/2018 8:59:59AM

SGS REVIEWED AC

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CHAIN OF CUSTODY RECORD

1186073

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

Page 1 of 2

Section 1

CLIENT: Stantec

CONTACT: Jake Allward PHONE NO: 343-5202

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

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

INVOICE TO: QUOTE #:

P.O. #: 204700415

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: TSS	BOD	Nitrate/Nitrite	FC (Quant) 1x10x	TC	TKN/Ammonia/TP	REMARKS/ LOC ID
(1) A-E	SW1	10/23/18	1037	Water	6	G	1	1	1	1	1	1	
(2) A-E	SW2		1053		6		1	1	1	1	1	1	
(3) A-E SD 10/23/18	SW3		1110		6		1	1	1	1	1	1	
(4) A-E F	SW4		1224		5		1	1	1		1	1	
(5) A-E	SW5		1245		6		1	1	1	1	1	1	
(6) A-E F SOLD 10/23/18	SW6		1210		5		1	1	1		1	1	
(7) A-E	SW7		1154		6		1	1	1	1	1	1	
(8) A-E	SW8		1402		6		1	1	1	1	1	1	
(9) A-E	SW9		1330		6		1	1	1	1	1	1	
(10) A-E	SW10		1322		6		1	1	1	1	1	1	

Section 5

	Date	Time	
Relinquished By: (1)	10/23/18	16:11	Received By:
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	10/23/18	16:02	Received For Laboratory By: SB

Section 4

DOD Project? Yes No

Cooler ID:

Data Deliverable Requirements:

Requested Turnaround Time and/or Special Instructions:

Temp Blank °C: #1 2.4 D21 #2

or Ambient [ ] 1.9 D25

(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

SGS

SGS North America Inc.
CHAIN OF CUSTODY RECORD

1186073

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

Section 1

CLIENT:

CONTACT: PHONE NO:

PROJECT NAME: PROJECT/ PWSID/ PERMIT#:

REPORTS TO: E-MAIL:

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

Section 2

RESERVED for lab use	SAMPLE IDENTIFICATION	DATE mm/dd/yy	TIME HH:MM	MATRIX/ MATRIX CODE	Section 3 # CONTAINERS	Type C = COMP G = GRAB MI = Multi Incre-mental Soils	Preservative: HCl	Preservative: H2SO4	Preservative: NaOH	Preservative: NaOH	Preservative: Nitric Acid	Preservative: Nitric Acid	Preservative: Ascorbic Acid/H2SO4	REMARKS/ LOC ID
(11)AE	Dup1	10/23/18	14:02	Water	6	G	1	1		1		1	1	

Section 5

	Date	Time	
Relinquished By: (1)	10/23/18	16:11	Received By:
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	10/23/18	16:02	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: _____

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

e-Sample Receipt Form

SGS Workorder #: **1186073**

1 1 8 6 0 7 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	hand delvieredd
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 @ 2.4 °C Therm. ID: D21
	yes	Cooler ID: 2 @ 1.9 °C Therm. ID: D25
		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)?	no	**Sample 6 had a contianer for fecal coli, COC indicated quant tray. Proceed with quant tray per client and JAN.**
**Note: If times differ <1hr, record details & login per COC.		
Were analyses requested unambiguous? (i.e., method is specified for analyses with >1 option for analysis)	yes	
	n/a	***Exemption permitted for metals (e.g,200.8/6020A).
Were proper containers (type/mass/volume/preservative***)used?	yes	
Volatile / LL-Hg Requirements		
Were Trip Blanks (i.e., VOAs, LL-Hg) in cooler with samples?	n/a	
Were all water VOA vials free of headspace (i.e., bubbles ≤ 6mm)?	n/a	
Were all soil VOAs field extracted with MeOH+BFB?	n/a	

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

Additional notes (if applicable):

Sample Containers and Preservatives

Container Id	Preservative	Container Condition
1186073001-A	No Preservative Required	OK
1186073001-B	No Preservative Required	OK
1186073001-C	No Preservative Required	OK
1186073001-D	Na2S2O3 for Chlorine Redu	OK
1186073001-E	Na2S2O3 for Chlorine Redu	OK
1186073001-F	H2SO4 to pH < 2	OK
1186073002-A	No Preservative Required	OK
1186073002-B	No Preservative Required	OK
1186073002-C	No Preservative Required	OK
1186073002-D	Na2S2O3 for Chlorine Redu	OK
1186073002-E	Na2S2O3 for Chlorine Redu	OK
1186073002-F	H2SO4 to pH < 2	OK
1186073003-A	No Preservative Required	OK
1186073003-B	No Preservative Required	OK
1186073003-C	No Preservative Required	OK
1186073003-D	Na2S2O3 for Chlorine Redu	OK
1186073003-E	Na2S2O3 for Chlorine Redu	OK
1186073003-F	H2SO4 to pH < 2	OK
1186073004-A	No Preservative Required	OK
1186073004-B	No Preservative Required	OK
1186073004-C	No Preservative Required	OK
1186073004-D	Na2S2O3 for Chlorine Redu	OK
1186073004-E	H2SO4 to pH < 2	OK
1186073005-A	No Preservative Required	OK
1186073005-B	No Preservative Required	OK
1186073005-C	No Preservative Required	OK
1186073005-D	Na2S2O3 for Chlorine Redu	OK
1186073005-E	Na2S2O3 for Chlorine Redu	OK
1186073005-F	H2SO4 to pH < 2	OK
1186073006-A	No Preservative Required	OK
1186073006-B	No Preservative Required	OK
1186073006-C	No Preservative Required	OK
1186073006-D	Na2S2O3 for Chlorine Redu	OK
1186073006-E	H2SO4 to pH < 2	OK
1186073007-A	No Preservative Required	OK
1186073007-B	No Preservative Required	OK
1186073007-C	No Preservative Required	OK
1186073007-D	Na2S2O3 for Chlorine Redu	OK
1186073007-E	Na2S2O3 for Chlorine Redu	OK
1186073007-F	H2SO4 to pH < 2	OK
1186073008-A	No Preservative Required	OK
1186073008-B	No Preservative Required	OK
1186073008-C	No Preservative Required	OK
1186073008-D	Na2S2O3 for Chlorine Redu	OK
1186073008-E	Na2S2O3 for Chlorine Redu	OK
1186073008-F	H2SO4 to pH < 2	OK
1186073009-A	No Preservative Required	OK
1186073009-B	No Preservative Required	OK
1186073009-C	No Preservative Required	OK
1186073009-D	Na2S2O3 for Chlorine Redu	OK
1186073009-E	Na2S2O3 for Chlorine Redu	OK
1186073009-F	H2SO4 to pH < 2	OK
1186073010-A	No Preservative Required	OK
1186073010-B	No Preservative Required	OK
1186073010-C	No Preservative Required	OK
1186073010-D	Na2S2O3 for Chlorine Redu	OK
1186073010-E	Na2S2O3 for Chlorine Redu	OK
1186073010-F	H2SO4 to pH < 2	OK
1186073011-A	No Preservative Required	OK
1186073011-B	No Preservative Required	OK
1186073011-C	No Preservative Required	OK
1186073011-D	Na2S2O3 for Chlorine Redu	OK
1186073011-E	Na2S2O3 for Chlorine Redu	OK
1186073011-F	H2SO4 to pH < 2	OK

Container Id	Preservative	Container Condition	Container Id	Preservative	Container Condition

Container Condition Glossary

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

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

Laboratory Report of Analysis

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

Report Number: **1186188**

Client Project: **Wasilla Waste Water Treatment**

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

Case Narrative

SGS Client: **Stantec Consulting Services Inc.**
SGS Project: **1186188**
Project Name/Site: **Wasilla Waste Water Treatment**
Project Contact: **John Marshall**

Refer to sample receipt form for information on sample condition.

MB for HBN 1788501 [BOD/6176] (1486122) MB

5210B – BOD - MB (0.23 mg/L) is greater than the recommended limit of 0.2 mg/L. Samples >10X the MB are not significantly affected. Samples <10X the MB results may be biased high.

*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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t 907.562.2343 **f** 907.561.5301 www.us.sgs.com

Laboratory Qualifiers

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

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

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 (DW Chemistry & 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
SW11	1186188001	10/30/2018	10/30/2018	Water (Surface, Eff., Ground)
SW12	1186188002	10/30/2018	10/30/2018	Water (Surface, Eff., Ground)
SW13	1186188003	10/30/2018	10/30/2018	Water (Surface, Eff., Ground)
SW14	1186188004	10/30/2018	10/30/2018	Water (Surface, Eff., Ground)
SW15	1186188005	10/30/2018	10/30/2018	Water (Surface, Eff., Ground)
SW16	1186188006	10/30/2018	10/30/2018	Water (Surface, Eff., Ground)
SW17	1186188007	10/30/2018	10/30/2018	Water (Surface, Eff., Ground)
SW18	1186188008	10/30/2018	10/30/2018	Water (Surface, Eff., Ground)
Shaw	1186188009	10/30/2018	10/30/2018	Water (Surface, Eff., Ground)
Dup 2	1186188010	10/30/2018	10/30/2018	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)
SM21 4500NO3-F	Flow Injection Analysis
SM21 4500-N D	TKN by Phenate (W)
SM21 9223B	Total Coliform P/A Quant Tray
SM21 4500P-B,E	Total Phosphorus (W)
SM21 2540D	Total Suspended Solids SM20 2540D

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Detectable Results Summary

Client Sample ID: **SW11**
Lab Sample ID: 1186188001
Microbiology Laboratory
Waters Department

Parameter	Result	Units
Total Coliform	285	MPN/100mL
Total Phosphorus	0.0714	mg/L
Total Suspended Solids	49.9	mg/L

Client Sample ID: **SW12**
Lab Sample ID: 1186188002
Microbiology Laboratory
Waters Department

Parameter	Result	Units
Fecal Coliform	2.0	col/100mL
Total Coliform	201	MPN/100mL
Total Phosphorus	0.0490	mg/L
Total Suspended Solids	4.85	mg/L

Client Sample ID: **SW13**
Lab Sample ID: 1186188003
Microbiology Laboratory
Waters Department

Parameter	Result	Units
E. Coli	34	MPN/100mL
Fecal Coliform	77	col/100mL
Total Coliform	613	MPN/100mL
Ammonia-N	0.0338J	mg/L
Total Kjeldahl Nitrogen	0.473J	mg/L
Total Phosphorus	0.151	mg/L
Total Suspended Solids	10.9	mg/L

Client Sample ID: **SW14**
Lab Sample ID: 1186188004
Microbiology Laboratory
Waters Department

Parameter	Result	Units
Biochemical Oxygen Demand	8.90	mg/L
E. Coli	6	MPN/100mL
Fecal Coliform	17	col/100mL
Total Coliform	59	MPN/100mL
Ammonia-N	0.0815J	mg/L
Nitrate-N	0.0488J	mg/L
Total Kjeldahl Nitrogen	0.868J	mg/L
Total Phosphorus	0.250	mg/L
Total Suspended Solids	286	mg/L

Client Sample ID: **SW15**
Lab Sample ID: 1186188005
Microbiology Laboratory
Waters Department

Parameter	Result	Units
Biochemical Oxygen Demand	4.54	mg/L
E. Coli	10	MPN/100mL
Fecal Coliform	360	col/100mL
Total Coliform	488	MPN/100mL
Ammonia-N	0.0581J	mg/L
Total Kjeldahl Nitrogen	0.855J	mg/L
Total Phosphorus	1.89	mg/L
Total Suspended Solids	156	mg/L

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Detectable Results Summary

Client Sample ID: **SW16**
Lab Sample ID: 1186188006

	Parameter	Result	Units
Microbiology Laboratory	Biochemical Oxygen Demand	4.29	mg/L
	Total Coliform	133	MPN/100mL
Waters Department	Ammonia-N	0.0838J	mg/L
	Total Kjeldahl Nitrogen	1.19	mg/L
	Total Phosphorus	0.405	mg/L
	Total Suspended Solids	392	mg/L

Client Sample ID: **SW17**
Lab Sample ID: 1186188007

	Parameter	Result	Units
Microbiology Laboratory	Biochemical Oxygen Demand	6.22	mg/L
	E. Coli	3	MPN/100mL
	Fecal Coliform	69	col/100mL
	Total Coliform	649	MPN/100mL
Waters Department	Ammonia-N	0.0654J	mg/L
	Nitrate-N	1.60	mg/L
	Total Kjeldahl Nitrogen	0.798J	mg/L
	Total Phosphorus	3.40	mg/L
	Total Suspended Solids	413	mg/L

Client Sample ID: **SW18**
Lab Sample ID: 1186188008

	Parameter	Result	Units
Microbiology Laboratory	Biochemical Oxygen Demand	10.5	mg/L
	E. Coli	30	MPN/100mL
	Fecal Coliform	30	col/100mL
	Total Coliform	2380	MPN/100mL
Waters Department	Ammonia-N	0.137	mg/L
	Nitrate-N	7.08	mg/L
	Total Kjeldahl Nitrogen	0.848J	mg/L
	Total Phosphorus	4.13	mg/L
	Total Suspended Solids	448	mg/L

Client Sample ID: **Shaw**
Lab Sample ID: 1186188009

	Parameter	Result	Units
Microbiology Laboratory	E. Coli	3	MPN/100mL
	Total Coliform	49	MPN/100mL
Waters Department	Nitrate-N	0.0700J	mg/L
	Total Phosphorus	0.210	mg/L
	Total Suspended Solids	43.4	mg/L

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Detectable Results Summary

Client Sample ID: **Dup 2**
Lab Sample ID: 1186188010

Microbiology Laboratory

Waters Department

Parameter	Result	Units
Biochemical Oxygen Demand	5.54	mg/L
E. Coli	8	MPN/100mL
Fecal Coliform	200	col/100mL
Total Coliform	517	MPN/100mL
Ammonia-N	0.0640J	mg/L
Nitrate-N	1.64	mg/L
Total Kjeldahl Nitrogen	0.650J	mg/L
Total Phosphorus	2.21	mg/L
Total Suspended Solids	368	mg/L

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Results of **SW11**

Client Sample ID: **SW11**
Client Project ID: **Wasilla Waste Water Treatment**
Lab Sample ID: 1186188001
Lab Project ID: 1186188

Collection Date: 10/30/18 10:11
Received Date: 10/30/18 15:38
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	2.00 U		2.00	2.00	mg/L	1		10/31/18 15:56

Batch Information

Analytical Batch: BOD6176
Analytical Method: SM21 5210B
Analyst: A.L
Analytical Date/Time: 10/31/18 15:56
Container ID: 1186188001-A

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Fecal Coliform	1.00 U		1.00	1.00	col/100mL	1		10/30/18 17:55

Batch Information

Analytical Batch: BTF16988
Analytical Method: SM21 9222D
Analyst: VDL
Analytical Date/Time: 10/30/18 17:55
Container ID: 1186188001-C

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
E. Coli	1 U		1	1	MPN/100m	1		10/30/18 17:54
Total Coliform	285		1	1	MPN/100m	1		10/30/18 17:54

Batch Information

Analytical Batch: BTF16985
Analytical Method: SM21 9223B
Analyst: NAB
Analytical Date/Time: 10/30/18 17:54
Container ID: 1186188001-D

Results of **SW11**

Client Sample ID: **SW11**
Client Project ID: **Wasilla Waste Water Treatment**
Lab Sample ID: 1186188001
Lab Project ID: 1186188

Collection Date: 10/30/18 10:11
Received Date: 10/30/18 15:38
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	49.9		1.10	0.341	mg/L	1		11/02/18 17:50

Batch Information

Analytical Batch: STS6078
Analytical Method: SM21 2540D
Analyst: EWW
Analytical Date/Time: 11/02/18 17:50
Container ID: 1186188001-B

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	0.500 U		1.00	0.310	mg/L	1		11/02/18 14:05

Batch Information

Analytical Batch: WDA4450
Analytical Method: SM21 4500-N D
Analyst: DMM
Analytical Date/Time: 11/02/18 14:05
Container ID: 1186188001-F

Prep Batch: WXX12621
Prep Method: METHOD
Prep Date/Time: 11/01/18 17:48
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Ammonia-N	0.0500 U		0.100	0.0310	mg/L	1		10/31/18 11:06

Batch Information

Analytical Batch: WDA4448
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 10/31/18 11:06
Container ID: 1186188001-F

Prep Batch: WXX12618
Prep Method: METHOD
Prep Date/Time: 10/31/18 10:00
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Nitrate-N	0.0500 U		0.100	0.0250	mg/L	2		10/31/18 23:21
Nitrite-N	0.0500 U		0.100	0.0250	mg/L	2		10/31/18 23:21

Print Date: 11/06/2018 11:20:12AM

J flagging is activated

Results of **SW11**

Client Sample ID: **SW11**
Client Project ID: **Wasilla Waste Water Treatment**
Lab Sample ID: 1186188001
Lab Project ID: 1186188

Collection Date: 10/30/18 10:11
Received Date: 10/30/18 15:38
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: WFI2772
Analytical Method: SM21 4500NO3-F
Analyst: AYC
Analytical Date/Time: 10/31/18 23:21
Container ID: 1186188001-A

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Phosphorus	0.0714		0.0200	0.00500	mg/L	1		11/05/18 14:36

Batch Information

Analytical Batch: WDA4451
Analytical Method: SM21 4500P-B,E
Analyst: DMM
Analytical Date/Time: 11/05/18 14:36
Container ID: 1186188001-F

Prep Batch: WXX12624
Prep Method: SM21 4500P-B,E
Prep Date/Time: 11/05/18 11:00
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Results of **SW12**

Client Sample ID: **SW12**
Client Project ID: **Wasilla Waste Water Treatment**
Lab Sample ID: 1186188002
Lab Project ID: 1186188

Collection Date: 10/30/18 10:37
Received Date: 10/30/18 15:38
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	2.00	U	2.00	2.00	mg/L	1		10/31/18 15:56

Batch Information

Analytical Batch: BOD6176
Analytical Method: SM21 5210B
Analyst: A.L
Analytical Date/Time: 10/31/18 15:56
Container ID: 1186188002-A

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Fecal Coliform	2.0		1.00	1.00	col/100mL	1		10/30/18 17:55

Batch Information

Analytical Batch: BTF16988
Analytical Method: SM21 9222D
Analyst: VDL
Analytical Date/Time: 10/30/18 17:55
Container ID: 1186188002-C

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
E. Coli	1	U	1	1	MPN/100m	1		10/30/18 17:54
Total Coliform	201		1	1	MPN/100m	1		10/30/18 17:54

Batch Information

Analytical Batch: BTF16985
Analytical Method: SM21 9223B
Analyst: NAB
Analytical Date/Time: 10/30/18 17:54
Container ID: 1186188002-D

Results of **SW12**

Client Sample ID: **SW12**
Client Project ID: **Wasilla Waste Water Treatment**
Lab Sample ID: 1186188002
Lab Project ID: 1186188

Collection Date: 10/30/18 10:37
Received Date: 10/30/18 15:38
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	4.85		0.971	0.301	mg/L	1		11/02/18 17:50

Batch Information

Analytical Batch: STS6078
Analytical Method: SM21 2540D
Analyst: EWW
Analytical Date/Time: 11/02/18 17:50
Container ID: 1186188002-B

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	0.500 U		1.00	0.310	mg/L	1		11/02/18 14:09

Batch Information

Analytical Batch: WDA4450
Analytical Method: SM21 4500-N D
Analyst: DMM
Analytical Date/Time: 11/02/18 14:09
Container ID: 1186188002-F

Prep Batch: WXX12621
Prep Method: METHOD
Prep Date/Time: 11/01/18 17:48
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Ammonia-N	0.0500 U		0.100	0.0310	mg/L	1		10/31/18 11:11

Batch Information

Analytical Batch: WDA4448
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 10/31/18 11:11
Container ID: 1186188002-F

Prep Batch: WXX12618
Prep Method: METHOD
Prep Date/Time: 10/31/18 10:00
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Nitrate-N	0.0500 U		0.100	0.0250	mg/L	2		10/31/18 23:10
Nitrite-N	0.0500 U		0.100	0.0250	mg/L	2		10/31/18 23:10

Print Date: 11/06/2018 11:20:12AM

J flagging is activated

Results of **SW12**

Client Sample ID: **SW12**
Client Project ID: **Wasilla Waste Water Treatment**
Lab Sample ID: 1186188002
Lab Project ID: 1186188

Collection Date: 10/30/18 10:37
Received Date: 10/30/18 15:38
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: WFI2772
Analytical Method: SM21 4500NO3-F
Analyst: AYC
Analytical Date/Time: 10/31/18 23:10
Container ID: 1186188002-A

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Phosphorus	0.0490		0.0200	0.00500	mg/L	1		11/05/18 14:39

Batch Information

Analytical Batch: WDA4451
Analytical Method: SM21 4500P-B,E
Analyst: DMM
Analytical Date/Time: 11/05/18 14:39
Container ID: 1186188002-F

Prep Batch: WXX12624
Prep Method: SM21 4500P-B,E
Prep Date/Time: 11/05/18 11:00
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Results of **SW13**

Client Sample ID: **SW13**
Client Project ID: **Wasilla Waste Water Treatment**
Lab Sample ID: 1186188003
Lab Project ID: 1186188

Collection Date: 10/30/18 10:57
Received Date: 10/30/18 15:38
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	2.00 U		2.00	2.00	mg/L	1		10/31/18 15:56

Batch Information

Analytical Batch: BOD6176
Analytical Method: SM21 5210B
Analyst: A.L
Analytical Date/Time: 10/31/18 15:56
Container ID: 1186188003-A

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Fecal Coliform	77		1.00	1.00	col/100mL	1		10/30/18 17:55

Batch Information

Analytical Batch: BTF16988
Analytical Method: SM21 9222D
Analyst: VDL
Analytical Date/Time: 10/30/18 17:55
Container ID: 1186188003-C

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
E. Coli	34		1	1	MPN/100m	1		10/30/18 17:54
Total Coliform	613		1	1	MPN/100m	1		10/30/18 17:54

Batch Information

Analytical Batch: BTF16985
Analytical Method: SM21 9223B
Analyst: NAB
Analytical Date/Time: 10/30/18 17:54
Container ID: 1186188003-D

Results of **SW13**

Client Sample ID: **SW13**
Client Project ID: **Wasilla Waste Water Treatment**
Lab Sample ID: 1186188003
Lab Project ID: 1186188

Collection Date: 10/30/18 10:57
Received Date: 10/30/18 15:38
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	10.9		1.06	0.330	mg/L	1		11/02/18 17:50

Batch Information

Analytical Batch: STS6078
Analytical Method: SM21 2540D
Analyst: EWW
Analytical Date/Time: 11/02/18 17:50
Container ID: 1186188003-B

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	0.473 J		1.00	0.310	mg/L	1		11/02/18 14:11

Batch Information

Analytical Batch: WDA4450
Analytical Method: SM21 4500-N D
Analyst: DMM
Analytical Date/Time: 11/02/18 14:11
Container ID: 1186188003-F

Prep Batch: WXX12621
Prep Method: METHOD
Prep Date/Time: 11/01/18 17:48
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	0.0338 J		0.100	0.0310	mg/L	1		10/31/18 11:13

Batch Information

Analytical Batch: WDA4448
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 10/31/18 11:13
Container ID: 1186188003-F

Prep Batch: WXX12618
Prep Method: METHOD
Prep Date/Time: 10/31/18 10:00
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Nitrate-N	0.0500 U		0.100	0.0250	mg/L	2		10/31/18 23:12
Nitrite-N	0.0500 U		0.100	0.0250	mg/L	2		10/31/18 23:12

Print Date: 11/06/2018 11:20:12AM

J flagging is activated

Results of **SW13**

Client Sample ID: **SW13**
Client Project ID: **Wasilla Waste Water Treatment**
Lab Sample ID: 1186188003
Lab Project ID: 1186188

Collection Date: 10/30/18 10:57
Received Date: 10/30/18 15:38
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: WFI2772
Analytical Method: SM21 4500NO3-F
Analyst: AYC
Analytical Date/Time: 10/31/18 23:12
Container ID: 1186188003-A

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Phosphorus	0.151		0.0200	0.00500	mg/L	1		11/05/18 14:40

Batch Information

Analytical Batch: WDA4451
Analytical Method: SM21 4500P-B,E
Analyst: DMM
Analytical Date/Time: 11/05/18 14:40
Container ID: 1186188003-F

Prep Batch: WXX12624
Prep Method: SM21 4500P-B,E
Prep Date/Time: 11/05/18 11:00
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

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Results of **SW14**

Client Sample ID: **SW14**
Client Project ID: **Wasilla Waste Water Treatment**
Lab Sample ID: 1186188004
Lab Project ID: 1186188

Collection Date: 10/30/18 11:43
Received Date: 10/30/18 15:38
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	8.90		2.00	2.00	mg/L	1		10/31/18 15:56

Batch Information

Analytical Batch: BOD6176
Analytical Method: SM21 5210B
Analyst: A.L
Analytical Date/Time: 10/31/18 15:56
Container ID: 1186188004-A

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Fecal Coliform	17		1.00	1.00	col/100mL	1		10/30/18 18:10

Batch Information

Analytical Batch: BTF16988
Analytical Method: SM21 9222D
Analyst: VDL
Analytical Date/Time: 10/30/18 18:10
Container ID: 1186188004-C

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
E. Coli	6		1	1	MPN/100m	1		10/30/18 17:54
Total Coliform	59		1	1	MPN/100m	1		10/30/18 17:54

Batch Information

Analytical Batch: BTF16985
Analytical Method: SM21 9223B
Analyst: NAB
Analytical Date/Time: 10/30/18 17:54
Container ID: 1186188004-D

Results of **SW14**

Client Sample ID: **SW14**
Client Project ID: **Wasilla Waste Water Treatment**
Lab Sample ID: 1186188004
Lab Project ID: 1186188

Collection Date: 10/30/18 11:43
Received Date: 10/30/18 15:38
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	286		2.00	0.620	mg/L	1		11/02/18 17:50

Batch Information

Analytical Batch: STS6078
Analytical Method: SM21 2540D
Analyst: EWW
Analytical Date/Time: 11/02/18 17:50
Container ID: 1186188004-B

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	0.868 J		1.00	0.310	mg/L	1		11/02/18 14:12

Batch Information

Analytical Batch: WDA4450
Analytical Method: SM21 4500-N D
Analyst: DMM
Analytical Date/Time: 11/02/18 14:12
Container ID: 1186188004-F

Prep Batch: WXX12621
Prep Method: METHOD
Prep Date/Time: 11/01/18 17:48
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	0.0815 J		0.100	0.0310	mg/L	1		10/31/18 11:14

Batch Information

Analytical Batch: WDA4448
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 10/31/18 11:14
Container ID: 1186188004-F

Prep Batch: WXX12618
Prep Method: METHOD
Prep Date/Time: 10/31/18 10:00
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Nitrate-N	0.0488 J		0.100	0.0250	mg/L	2		10/31/18 23:14
Nitrite-N	0.0500 U		0.100	0.0250	mg/L	2		10/31/18 23:14

Print Date: 11/06/2018 11:20:12AM

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Results of **SW14**

Client Sample ID: **SW14**
Client Project ID: **Wasilla Waste Water Treatment**
Lab Sample ID: 1186188004
Lab Project ID: 1186188

Collection Date: 10/30/18 11:43
Received Date: 10/30/18 15:38
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: WFI2772
Analytical Method: SM21 4500NO3-F
Analyst: AYC
Analytical Date/Time: 10/31/18 23:14
Container ID: 1186188004-A

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Phosphorus	0.250		0.0200	0.00500	mg/L	1		11/05/18 14:41

Batch Information

Analytical Batch: WDA4451
Analytical Method: SM21 4500P-B,E
Analyst: DMM
Analytical Date/Time: 11/05/18 14:41
Container ID: 1186188004-F

Prep Batch: WXX12624
Prep Method: SM21 4500P-B,E
Prep Date/Time: 11/05/18 11:00
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Results of **SW15**

Client Sample ID: **SW15**
Client Project ID: **Wasilla Waste Water Treatment**
Lab Sample ID: 1186188005
Lab Project ID: 1186188

Collection Date: 10/30/18 11:29
Received Date: 10/30/18 15:38
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	4.54		2.00	2.00	mg/L	1		10/31/18 15:56

Batch Information

Analytical Batch: BOD6176
Analytical Method: SM21 5210B
Analyst: A.L
Analytical Date/Time: 10/31/18 15:56
Container ID: 1186188005-A

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Fecal Coliform	360		10.0	10.0	col/100mL	1		10/30/18 18:10

Batch Information

Analytical Batch: BTF16988
Analytical Method: SM21 9222D
Analyst: VDL
Analytical Date/Time: 10/30/18 18:10
Container ID: 1186188005-C

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
E. Coli	10		1	1	MPN/100m	1		10/30/18 17:54
Total Coliform	488		1	1	MPN/100m	1		10/30/18 17:54

Batch Information

Analytical Batch: BTF16985
Analytical Method: SM21 9223B
Analyst: NAB
Analytical Date/Time: 10/30/18 17:54
Container ID: 1186188005-D

Results of **SW15**

Client Sample ID: **SW15**
Client Project ID: **Wasilla Waste Water Treatment**
Lab Sample ID: 1186188005
Lab Project ID: 1186188

Collection Date: 10/30/18 11:29
Received Date: 10/30/18 15:38
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	156		2.00	0.620	mg/L	1		11/02/18 17:50

Batch Information

Analytical Batch: STS6078
Analytical Method: SM21 2540D
Analyst: EWW
Analytical Date/Time: 11/02/18 17:50
Container ID: 1186188005-B

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	0.855 J		1.00	0.310	mg/L	1		11/02/18 14:16

Batch Information

Analytical Batch: WDA4450
Analytical Method: SM21 4500-N D
Analyst: DMM
Analytical Date/Time: 11/02/18 14:16
Container ID: 1186188005-F

Prep Batch: WXX12621
Prep Method: METHOD
Prep Date/Time: 11/01/18 17:48
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	0.0581 J		0.100	0.0310	mg/L	1		10/31/18 11:16

Batch Information

Analytical Batch: WDA4448
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 10/31/18 11:16
Container ID: 1186188005-F

Prep Batch: WXX12618
Prep Method: METHOD
Prep Date/Time: 10/31/18 10:00
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Nitrate-N	0.0500 U		0.100	0.0250	mg/L	2		10/31/18 23:15
Nitrite-N	0.0500 U		0.100	0.0250	mg/L	2		10/31/18 23:15

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Results of **SW15**

Client Sample ID: **SW15**
Client Project ID: **Wasilla Waste Water Treatment**
Lab Sample ID: 1186188005
Lab Project ID: 1186188

Collection Date: 10/30/18 11:29
Received Date: 10/30/18 15:38
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: WFI2772
Analytical Method: SM21 4500NO3-F
Analyst: AYC
Analytical Date/Time: 10/31/18 23:15
Container ID: 1186188005-A

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Phosphorus	1.89		0.200	0.0500	mg/L	1		11/05/18 16:25

Batch Information

Analytical Batch: WDA4451
Analytical Method: SM21 4500P-B,E
Analyst: DMM
Analytical Date/Time: 11/05/18 16:25
Container ID: 1186188005-F

Prep Batch: WXX12624
Prep Method: SM21 4500P-B,E
Prep Date/Time: 11/05/18 15:12
Prep Initial Wt./Vol.: 2.5 mL
Prep Extract Vol: 25 mL

Results of **SW16**

Client Sample ID: **SW16**
Client Project ID: **Wasilla Waste Water Treatment**
Lab Sample ID: 1186188006
Lab Project ID: 1186188

Collection Date: 10/30/18 11:12
Received Date: 10/30/18 15:38
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	4.29		2.00	2.00	mg/L	1		10/31/18 15:56

Batch Information

Analytical Batch: BOD6176
Analytical Method: SM21 5210B
Analyst: A.L
Analytical Date/Time: 10/31/18 15:56
Container ID: 1186188006-A

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Fecal Coliform	1.00	U	1.00	1.00	col/100mL	1		10/30/18 18:10

Batch Information

Analytical Batch: BTF16988
Analytical Method: SM21 9222D
Analyst: VDL
Analytical Date/Time: 10/30/18 18:10
Container ID: 1186188006-C

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
E. Coli	1	U	1	1	MPN/100m	1		10/30/18 17:54
Total Coliform	133		1	1	MPN/100m	1		10/30/18 17:54

Batch Information

Analytical Batch: BTF16985
Analytical Method: SM21 9223B
Analyst: NAB
Analytical Date/Time: 10/30/18 17:54
Container ID: 1186188006-D

Results of **SW16**

Client Sample ID: **SW16**
Client Project ID: **Wasilla Waste Water Treatment**
Lab Sample ID: 1186188006
Lab Project ID: 1186188

Collection Date: 10/30/18 11:12
Received Date: 10/30/18 15:38
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	392		3.33	1.03	mg/L	1		11/02/18 17:50

Batch Information

Analytical Batch: STS6078
Analytical Method: SM21 2540D
Analyst: EWW
Analytical Date/Time: 11/02/18 17:50
Container ID: 1186188006-B

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	1.19		1.00	0.310	mg/L	1		11/02/18 14:17

Batch Information

Analytical Batch: WDA4450
Analytical Method: SM21 4500-N D
Analyst: DMM
Analytical Date/Time: 11/02/18 14:17
Container ID: 1186188006-F

Prep Batch: WXX12621
Prep Method: METHOD
Prep Date/Time: 11/01/18 17:48
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	0.0838	J	0.100	0.0310	mg/L	1		10/31/18 11:21

Batch Information

Analytical Batch: WDA4448
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 10/31/18 11:21
Container ID: 1186188006-F

Prep Batch: WXX12618
Prep Method: METHOD
Prep Date/Time: 10/31/18 10:00
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Nitrate-N	0.0500	U	0.100	0.0250	mg/L	2		10/31/18 23:17
Nitrite-N	0.0500	U	0.100	0.0250	mg/L	2		10/31/18 23:17

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Results of **SW16**

Client Sample ID: **SW16**
Client Project ID: **Wasilla Waste Water Treatment**
Lab Sample ID: 1186188006
Lab Project ID: 1186188

Collection Date: 10/30/18 11:12
Received Date: 10/30/18 15:38
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: WFI2772
Analytical Method: SM21 4500NO3-F
Analyst: AYC
Analytical Date/Time: 10/31/18 23:17
Container ID: 1186188006-A

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Phosphorus	0.405		0.0200	0.00500	mg/L	1		11/05/18 14:44

Batch Information

Analytical Batch: WDA4451
Analytical Method: SM21 4500P-B,E
Analyst: DMM
Analytical Date/Time: 11/05/18 14:44
Container ID: 1186188006-F

Prep Batch: WXX12624
Prep Method: SM21 4500P-B,E
Prep Date/Time: 11/05/18 11:00
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Results of **SW17**

Client Sample ID: **SW17**
Client Project ID: **Wasilla Waste Water Treatment**
Lab Sample ID: 1186188007
Lab Project ID: 1186188

Collection Date: 10/30/18 13:19
Received Date: 10/30/18 15:38
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	6.22		2.00	2.00	mg/L	1		10/31/18 15:56

Batch Information

Analytical Batch: BOD6176
Analytical Method: SM21 5210B
Analyst: A.L
Analytical Date/Time: 10/31/18 15:56
Container ID: 1186188007-A

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Fecal Coliform	69		1.00	1.00	col/100mL	1		10/30/18 18:10

Batch Information

Analytical Batch: BTF16988
Analytical Method: SM21 9222D
Analyst: VDL
Analytical Date/Time: 10/30/18 18:10
Container ID: 1186188007-C

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
E. Coli	3		1	1	MPN/100m	1		10/30/18 17:54
Total Coliform	649		1	1	MPN/100m	1		10/30/18 17:54

Batch Information

Analytical Batch: BTF16985
Analytical Method: SM21 9223B
Analyst: NAB
Analytical Date/Time: 10/30/18 17:54
Container ID: 1186188007-D

Results of **SW17**

Client Sample ID: **SW17**
Client Project ID: **Wasilla Waste Water Treatment**
Lab Sample ID: 1186188007
Lab Project ID: 1186188

Collection Date: 10/30/18 13:19
Received Date: 10/30/18 15:38
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	413		3.33	1.03	mg/L	1		11/02/18 17:50

Batch Information

Analytical Batch: STS6078
Analytical Method: SM21 2540D
Analyst: EWW
Analytical Date/Time: 11/02/18 17:50
Container ID: 1186188007-B

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	0.798	J	1.00	0.310	mg/L	1		11/02/18 14:18

Batch Information

Analytical Batch: WDA4450
Analytical Method: SM21 4500-N D
Analyst: DMM
Analytical Date/Time: 11/02/18 14:18
Container ID: 1186188007-F

Prep Batch: WXX12621
Prep Method: METHOD
Prep Date/Time: 11/01/18 17:48
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	0.0654	J	0.100	0.0310	mg/L	1		10/31/18 11:23

Batch Information

Analytical Batch: WDA4448
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 10/31/18 11:23
Container ID: 1186188007-F

Prep Batch: WXX12618
Prep Method: METHOD
Prep Date/Time: 10/31/18 10:00
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Nitrate-N	1.60		0.100	0.0250	mg/L	2		10/31/18 23:19
Nitrite-N	0.0500	U	0.100	0.0250	mg/L	2		10/31/18 23:19

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Results of **SW17**

Client Sample ID: **SW17**
Client Project ID: **Wasilla Waste Water Treatment**
Lab Sample ID: 1186188007
Lab Project ID: 1186188

Collection Date: 10/30/18 13:19
Received Date: 10/30/18 15:38
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: WFI2772
Analytical Method: SM21 4500NO3-F
Analyst: AYC
Analytical Date/Time: 10/31/18 23:19
Container ID: 1186188007-A

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Phosphorus	3.40		0.200	0.0500	mg/L	1		11/05/18 16:26

Batch Information

Analytical Batch: WDA4451
Analytical Method: SM21 4500P-B,E
Analyst: DMM
Analytical Date/Time: 11/05/18 16:26
Container ID: 1186188007-F

Prep Batch: WXX12624
Prep Method: SM21 4500P-B,E
Prep Date/Time: 11/05/18 15:12
Prep Initial Wt./Vol.: 2.5 mL
Prep Extract Vol: 25 mL

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

Results of **SW18**

Client Sample ID: **SW18**
Client Project ID: **Wasilla Waste Water Treatment**
Lab Sample ID: 1186188008
Lab Project ID: 1186188

Collection Date: 10/30/18 13:40
Received Date: 10/30/18 15:38
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	10.5		2.00	2.00	mg/L	1		10/31/18 15:56

Batch Information

Analytical Batch: BOD6176
Analytical Method: SM21 5210B
Analyst: A.L
Analytical Date/Time: 10/31/18 15:56
Container ID: 1186188008-A

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Fecal Coliform	30		10.0	10.0	col/100mL	1		10/30/18 18:10

Batch Information

Analytical Batch: BTF16988
Analytical Method: SM21 9222D
Analyst: VDL
Analytical Date/Time: 10/30/18 18:10
Container ID: 1186188008-C

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
E. Coli	30		10	10	MPN/100m	10		10/30/18 17:54
Total Coliform	2380		10	10	MPN/100m	10		10/30/18 17:54

Batch Information

Analytical Batch: BTF16985
Analytical Method: SM21 9223B
Analyst: NAB
Analytical Date/Time: 10/30/18 17:54
Container ID: 1186188008-D

Results of **SW18**

Client Sample ID: **SW18**
Client Project ID: **Wasilla Waste Water Treatment**
Lab Sample ID: 1186188008
Lab Project ID: 1186188

Collection Date: 10/30/18 13:40
Received Date: 10/30/18 15:38
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	448		2.00	0.620	mg/L	1		11/02/18 17:50

Batch Information

Analytical Batch: STS6078
Analytical Method: SM21 2540D
Analyst: EWW
Analytical Date/Time: 11/02/18 17:50
Container ID: 1186188008-B

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	0.848	J	1.00	0.310	mg/L	1		11/02/18 14:20

Batch Information

Analytical Batch: WDA4450
Analytical Method: SM21 4500-N D
Analyst: DMM
Analytical Date/Time: 11/02/18 14:20
Container ID: 1186188008-F

Prep Batch: WXX12621
Prep Method: METHOD
Prep Date/Time: 11/01/18 17:48
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	0.137		0.100	0.0310	mg/L	1		10/31/18 11:24

Batch Information

Analytical Batch: WDA4448
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 10/31/18 11:24
Container ID: 1186188008-F

Prep Batch: WXX12618
Prep Method: METHOD
Prep Date/Time: 10/31/18 10:00
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Nitrate-N	7.08		0.100	0.0250	mg/L	2		10/31/18 23:31
Nitrite-N	0.0500	U	0.100	0.0250	mg/L	2		10/31/18 23:31

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Results of **SW18**

Client Sample ID: **SW18**
Client Project ID: **Wasilla Waste Water Treatment**
Lab Sample ID: 1186188008
Lab Project ID: 1186188

Collection Date: 10/30/18 13:40
Received Date: 10/30/18 15:38
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: WFI2772
Analytical Method: SM21 4500NO3-F
Analyst: AYC
Analytical Date/Time: 10/31/18 23:31
Container ID: 1186188008-A

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Phosphorus	4.13		0.200	0.0500	mg/L	1		11/05/18 16:27

Batch Information

Analytical Batch: WDA4451
Analytical Method: SM21 4500P-B,E
Analyst: DMM
Analytical Date/Time: 11/05/18 16:27
Container ID: 1186188008-F

Prep Batch: WXX12624
Prep Method: SM21 4500P-B,E
Prep Date/Time: 11/05/18 15:12
Prep Initial Wt./Vol.: 2.5 mL
Prep Extract Vol: 25 mL

Results of **Shaw**

Client Sample ID: **Shaw**
Client Project ID: **Wasilla Waste Water Treatment**
Lab Sample ID: 1186188009
Lab Project ID: 1186188

Collection Date: 10/30/18 12:41
Received Date: 10/30/18 15:38
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	2.00 U		2.00	2.00	mg/L	1		10/31/18 15:56

Batch Information

Analytical Batch: BOD6176
Analytical Method: SM21 5210B
Analyst: A.L
Analytical Date/Time: 10/31/18 15:56
Container ID: 1186188009-A

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Fecal Coliform	1.00 U		1.00	1.00	col/100mL	1		10/30/18 18:10

Batch Information

Analytical Batch: BTF16988
Analytical Method: SM21 9222D
Analyst: VDL
Analytical Date/Time: 10/30/18 18:10
Container ID: 1186188009-C

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
E. Coli	3		1	1	MPN/100m	1		10/30/18 17:54
Total Coliform	49		1	1	MPN/100m	1		10/30/18 17:54

Batch Information

Analytical Batch: BTF16985
Analytical Method: SM21 9223B
Analyst: NAB
Analytical Date/Time: 10/30/18 17:54
Container ID: 1186188009-D

Results of **Shaw**

Client Sample ID: **Shaw**
Client Project ID: **Wasilla Waste Water Treatment**
Lab Sample ID: 1186188009
Lab Project ID: 1186188

Collection Date: 10/30/18 12:41
Received Date: 10/30/18 15:38
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	43.4		1.06	0.330	mg/L	1		11/02/18 17:50

Batch Information

Analytical Batch: STS6078
Analytical Method: SM21 2540D
Analyst: EWW
Analytical Date/Time: 11/02/18 17:50
Container ID: 1186188009-B

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	0.500 U		1.00	0.310	mg/L	1		11/02/18 14:21

Batch Information

Analytical Batch: WDA4450
Analytical Method: SM21 4500-N D
Analyst: DMM
Analytical Date/Time: 11/02/18 14:21
Container ID: 1186188009-F

Prep Batch: WXX12621
Prep Method: METHOD
Prep Date/Time: 11/01/18 17:48
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Ammonia-N	0.0500 U		0.100	0.0310	mg/L	1		10/31/18 11:26

Batch Information

Analytical Batch: WDA4448
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 10/31/18 11:26
Container ID: 1186188009-F

Prep Batch: WXX12618
Prep Method: METHOD
Prep Date/Time: 10/31/18 10:00
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Nitrate-N	0.0700 J		0.100	0.0250	mg/L	2		10/31/18 23:33
Nitrite-N	0.0500 U		0.100	0.0250	mg/L	2		10/31/18 23:33

Print Date: 11/06/2018 11:20:12AM

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Results of **Shaw**

Client Sample ID: **Shaw**
Client Project ID: **Wasilla Waste Water Treatment**
Lab Sample ID: 1186188009
Lab Project ID: 1186188

Collection Date: 10/30/18 12:41
Received Date: 10/30/18 15:38
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: WFI2772
Analytical Method: SM21 4500NO3-F
Analyst: AYC
Analytical Date/Time: 10/31/18 23:33
Container ID: 1186188009-A

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Phosphorus	0.210		0.0200	0.00500	mg/L	1		11/05/18 14:47

Batch Information

Analytical Batch: WDA4451
Analytical Method: SM21 4500P-B,E
Analyst: DMM
Analytical Date/Time: 11/05/18 14:47
Container ID: 1186188009-F

Prep Batch: WXX12624
Prep Method: SM21 4500P-B,E
Prep Date/Time: 11/05/18 11:00
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

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Results of **Dup 2**

Client Sample ID: **Dup 2**
Client Project ID: **Wasilla Waste Water Treatment**
Lab Sample ID: 1186188010
Lab Project ID: 1186188

Collection Date: 10/30/18 13:19
Received Date: 10/30/18 15:38
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	5.54		2.00	2.00	mg/L	1		10/31/18 15:56

Batch Information

Analytical Batch: BOD6176
Analytical Method: SM21 5210B
Analyst: A.L
Analytical Date/Time: 10/31/18 15:56
Container ID: 1186188010-A

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Fecal Coliform	200		10.0	10.0	col/100mL	1		10/30/18 18:10

Batch Information

Analytical Batch: BTF16988
Analytical Method: SM21 9222D
Analyst: VDL
Analytical Date/Time: 10/30/18 18:10
Container ID: 1186188010-C

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
E. Coli	8		1	1	MPN/100m	1		10/30/18 17:54
Total Coliform	517		1	1	MPN/100m	1		10/30/18 17:54

Batch Information

Analytical Batch: BTF16985
Analytical Method: SM21 9223B
Analyst: NAB
Analytical Date/Time: 10/30/18 17:54
Container ID: 1186188010-D

Results of **Dup 2**

Client Sample ID: **Dup 2**
Client Project ID: **Wasilla Waste Water Treatment**
Lab Sample ID: 1186188010
Lab Project ID: 1186188

Collection Date: 10/30/18 13:19
Received Date: 10/30/18 15:38
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	368		2.00	0.620	mg/L	1		11/02/18 17:50

Batch Information

Analytical Batch: STS6078
Analytical Method: SM21 2540D
Analyst: EWW
Analytical Date/Time: 11/02/18 17:50
Container ID: 1186188010-B

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	0.650	J	1.00	0.310	mg/L	1		11/02/18 14:22

Batch Information

Analytical Batch: WDA4450
Analytical Method: SM21 4500-N D
Analyst: DMM
Analytical Date/Time: 11/02/18 14:22
Container ID: 1186188010-F

Prep Batch: WXX12621
Prep Method: METHOD
Prep Date/Time: 11/01/18 17:48
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	0.0640	J	0.100	0.0310	mg/L	1		10/31/18 11:28

Batch Information

Analytical Batch: WDA4448
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 10/31/18 11:28
Container ID: 1186188010-F

Prep Batch: WXX12618
Prep Method: METHOD
Prep Date/Time: 10/31/18 10:00
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Nitrate-N	1.64		0.100	0.0250	mg/L	2		10/31/18 23:35
Nitrite-N	0.0500	U	0.100	0.0250	mg/L	2		10/31/18 23:35

Print Date: 11/06/2018 11:20:12AM

J flagging is activated

Results of **Dup 2**

Client Sample ID: **Dup 2**
Client Project ID: **Wasilla Waste Water Treatment**
Lab Sample ID: 1186188010
Lab Project ID: 1186188

Collection Date: 10/30/18 13:19
Received Date: 10/30/18 15:38
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: WFI2772
Analytical Method: SM21 4500NO3-F
Analyst: AYC
Analytical Date/Time: 10/31/18 23:35
Container ID: 1186188010-A

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Phosphorus	2.21		0.200	0.0500	mg/L	1		11/05/18 16:28

Batch Information

Analytical Batch: WDA4451
Analytical Method: SM21 4500P-B,E
Analyst: DMM
Analytical Date/Time: 11/05/18 16:28
Container ID: 1186188010-F

Prep Batch: WXX12624
Prep Method: SM21 4500P-B,E
Prep Date/Time: 11/05/18 15:12
Prep Initial Wt./Vol.: 2.5 mL
Prep Extract Vol: 25 mL

Method Blank

Blank ID: MB for HBN 1788501 [BOD/6176]
Blank Lab ID: 1486122

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1186188001, 1186188002, 1186188003, 1186188004, 1186188005, 1186188006, 1186188007, 1186188008, 1186188009, 1186188010

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: BOD6176
Analytical Method: SM21 5210B
Instrument:
Analyst: A.L
Analytical Date/Time: 10/31/2018 3:56:47PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1186188 [BOD6176]
Blank Spike Lab ID: 1486123
Date Analyzed: 10/31/2018 15:56

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1186188001, 1186188002, 1186188003, 1186188004, 1186188005, 1186188006, 1186188007, 1186188008, 1186188009, 1186188010

Results by **SM21 5210B**

Blank Spike (mg/L)

Parameter	Spike	Result	Rec (%)	CL
Biochemical Oxygen Demand	198	200	101	(84.6-115.4

Batch Information

Analytical Batch: **BOD6176**
Analytical Method: **SM21 5210B**
Instrument:
Analyst: **A.L**

Print Date: 11/06/2018 11:20:18AM

Method Blank

Blank ID: MB for HBN 1788498 [BTF/16985]
Blank Lab ID: 1486111

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1186188001, 1186188002, 1186188003, 1186188004, 1186188005, 1186188006, 1186188007, 1186188008, 1186188009, 1186188010

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: BTF16985
Analytical Method: SM21 9223B
Instrument:
Analyst: NAB
Analytical Date/Time: 10/30/2018 5:54:00PM

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Method Blank

Blank ID: MB for HBN 1788507 [BTF/16988]
Blank Lab ID: 1486133

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1186188001, 1186188002, 1186188003, 1186188004, 1186188005, 1186188006, 1186188007, 1186188008, 1186188009, 1186188010

Results by **SM21 9222D**

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

Batch Information

Analytical Batch: BTF16988
Analytical Method: SM21 9222D
Instrument:
Analyst: VDL
Analytical Date/Time: 10/30/2018 5:55:00PM

Print Date: 11/06/2018 11:20:20AM

Method Blank

Blank ID: MB for HBN 1788606 [STS/6078]
Blank Lab ID: 1486531

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1186188001, 1186188002, 1186188003, 1186188004, 1186188005, 1186188006, 1186188007, 1186188008, 1186188009, 1186188010

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: STS6078
Analytical Method: SM21 2540D
Instrument:
Analyst: EWW
Analytical Date/Time: 11/2/2018 5:50:33PM

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Duplicate Sample Summary

Original Sample ID: 1186196002
Duplicate Sample ID: 1486534

Analysis Date: 11/02/2018 17:50
Matrix: Water (Surface, Eff., Ground)

QC for Samples:

1186188001, 1186188002, 1186188003, 1186188004, 1186188005, 1186188006, 1186188007, 1186188008, 1186188009, 1186188010

Results by **SM21 2540D**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
Total Suspended Solids	80.0	81.0	mg/L	1.20	(< 5)

Batch Information

Analytical Batch: STS6078
Analytical Method: SM21 2540D
Instrument:
Analyst: EWW

Print Date: 11/06/2018 11:20:23AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1186188 [STS6078]
Blank Spike Lab ID: 1486532
Date Analyzed: 11/02/2018 17:50

Spike Duplicate ID: LCSD for HBN 1186188 [STS6078]
Spike Duplicate Lab ID: 1486533
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1186188001, 1186188002, 1186188003, 1186188004, 1186188005, 1186188006, 1186188007, 1186188008, 1186188009, 1186188010

Results by **SM21 2540D**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Total Suspended Solids	25	25.5	102	25	25.6	102	(75-125)	0.39	(< 5)

Batch Information

Analytical Batch: **STS6078**
Analytical Method: **SM21 2540D**
Instrument:
Analyst: **EWW**

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Method Blank

Blank ID: MB for HBN 1788560 (WFI/2772) Matrix: Water (Surface, Eff., Ground)
Blank Lab ID: 1486313

QC for Samples:
1186188001, 1186188002, 1186188003, 1186188004, 1186188005, 1186188006, 1186188007, 1186188008, 1186188009, 1186188010

Results by **SM21 4500NO3-F**

Parameter	Results	LOQ/CL	DL	Units
Nitrate-N	0.0286J	0.100	0.0250	mg/L
Nitrite-N	0.0500U	0.100	0.0250	mg/L
Total Nitrate/Nitrite-N	0.0286J	0.100	0.0250	mg/L

Batch Information

Analytical Batch: WFI2772
Analytical Method: SM21 4500NO3-F
Instrument: Astoria segmented flow
Analyst: AYC
Analytical Date/Time: 10/31/2018 11:05:22PM

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1186188 [WFI2772]
Blank Spike Lab ID: 1486305
Date Analyzed: 10/31/2018 23:03

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1186188001, 1186188002, 1186188003, 1186188004, 1186188005, 1186188006, 1186188007, 1186188008, 1186188009, 1186188010

Results by **SM21 4500NO3-F**

Blank Spike (mg/L)

Parameter	Spike	Result	Rec (%)	CL
Nitrate-N	2.5	2.98	119	(70-130)
Nitrite-N	2.5	2.54	102	(90-110)
Total Nitrate/Nitrite-N	5	5.52	110	(90-110)

Batch Information

Analytical Batch: **WFI2772**
Analytical Method: **SM21 4500NO3-F**
Instrument: **Astoria segmented flow**
Analyst: **AYC**

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Matrix Spike Summary

Original Sample ID: 1186188001
MS Sample ID: 1486303 MS
MSD Sample ID: 1486304 MSD

Analysis Date: 10/31/2018 23:21
Analysis Date: 10/31/2018 23:22
Analysis Date: 10/31/2018 23:24
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1186188001, 1186188002, 1186188003, 1186188004, 1186188005, 1186188006, 1186188007, 1186188008, 1186188009, 1186188010

Results by **SM21 4500NO3-F**

		Matrix Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Nitrate-N	0.0500U	2.50	2.72	109	2.50	2.43	97	70-130	11.40	(< 25)
Nitrite-N	0.0500U	2.50	2.48	99	2.50	2.62	105	90-110	5.40	(< 25)

Batch Information

Analytical Batch: WFI2772
Analytical Method: SM21 4500NO3-F
Instrument: Astoria segmented flow
Analyst: AYC
Analytical Date/Time: 10/31/2018 11:22:51PM

Print Date: 11/06/2018 11:20:28AM

Method Blank

Blank ID: MB for HBN 1788490 [WXX/12618]
Blank Lab ID: 1486059

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1186188001, 1186188002, 1186188003, 1186188004, 1186188005, 1186188006, 1186188007, 1186188008, 1186188009, 1186188010

Results by **SM21 4500-NH3 G**

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

Batch Information

Analytical Batch: WDA4448
Analytical Method: SM21 4500-NH3 G
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 10/31/2018 11:01:24AM

Prep Batch: WXX12618
Prep Method: METHOD
Prep Date/Time: 10/31/2018 10:00:00AM
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Print Date: 11/06/2018 11:20:29AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1186188 [WXX12618]
Blank Spike Lab ID: 1486060
Date Analyzed: 10/31/2018 11:03

Spike Duplicate ID: LCSD for HBN 1186188 [WXX12618]
Spike Duplicate Lab ID: 1486061
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1186188001, 1186188002, 1186188003, 1186188004, 1186188005, 1186188006, 1186188007, 1186188008, 1186188009, 1186188010

Results by **SM21 4500-NH3 G**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Ammonia-N	1	1.09	109	1	1.04	104	(75-125)	4.60	(< 25)

Batch Information

Analytical Batch: **WDA4448**
Analytical Method: **SM21 4500-NH3 G**
Instrument: **Discrete Analyzer 2**
Analyst: **DMM**

Prep Batch: **WXX12618**
Prep Method: **METHOD**
Prep Date/Time: **10/31/2018 10:00**
Spike Init Wt./Vol.: 1 mg/L Extract Vol: 6 mL
Dupe Init Wt./Vol.: 1 mg/L Extract Vol: 6 mL

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Matrix Spike Summary

Original Sample ID: 1186188001
MS Sample ID: 1486062 MS
MSD Sample ID: 1486063 MSD

Analysis Date: 10/31/2018 11:06
Analysis Date: 10/31/2018 11:08
Analysis Date: 10/31/2018 11:09
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1186188001, 1186188002, 1186188003, 1186188004, 1186188005, 1186188006, 1186188007, 1186188008, 1186188009, 1186188010

Results by **SM21 4500-NH3 G**

		Matrix Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Ammonia-N	0.0500U	1.00	1.03	103	1.00	1.07	107	75-125	3.30	(< 25)

Batch Information

Analytical Batch: WDA4448
Analytical Method: SM21 4500-NH3 G
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 10/31/2018 11:08:08AM

Prep Batch: WXX12618
Prep Method: Ammonia by SM21 4500F prep (W)
Prep Date/Time: 10/31/2018 10:00:00AM
Prep Initial Wt./Vol.: 6.00mL
Prep Extract Vol: 6.00mL

Print Date: 11/06/2018 11:20:32AM

Method Blank

Blank ID: MB for HBN 1788605 [WXX/12621]
Blank Lab ID: 1486526

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1186188001, 1186188002, 1186188003, 1186188004, 1186188005, 1186188006, 1186188007, 1186188008, 1186188009, 1186188010

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: WDA4450
Analytical Method: SM21 4500-N D
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 11/2/2018 2:00:40PM

Prep Batch: WXX12621
Prep Method: METHOD
Prep Date/Time: 11/1/2018 5:48:00PM
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1186188 [WXX12621]
Blank Spike Lab ID: 1486527
Date Analyzed: 11/02/2018 14:01

Spike Duplicate ID: LCSD for HBN 1186188 [WXX12621]
Spike Duplicate Lab ID: 1486528
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1186188001, 1186188002, 1186188003, 1186188004, 1186188005, 1186188006, 1186188007, 1186188008, 1186188009, 1186188010

Results by **SM21 4500-N D**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Total Kjeldahl Nitrogen	4	3.60	90	4	3.63	91	(75-125)	0.91	(< 25)

Batch Information

Analytical Batch: **WDA4450**
Analytical Method: **SM21 4500-N D**
Instrument: **Discrete Analyzer 2**
Analyst: **DMM**

Prep Batch: **WXX12621**
Prep Method: **METHOD**
Prep Date/Time: **11/01/2018 17:48**
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: 1186188001
MS Sample ID: 1486529 MS
MSD Sample ID: 1486530 MSD

Analysis Date: 11/02/2018 14:05
Analysis Date: 11/02/2018 14:07
Analysis Date: 11/02/2018 14:08
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1186188001, 1186188002, 1186188003, 1186188004, 1186188005, 1186188006, 1186188007, 1186188008, 1186188009, 1186188010

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	3.65	91	4.00	3.54	89	75-125	3.00	(< 25)

Batch Information

Analytical Batch: WDA4450
Analytical Method: SM21 4500-N D
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 11/2/2018 2:07:12PM

Prep Batch: WXX12621
Prep Method: Distillation TKN by Phenate (W)
Prep Date/Time: 11/1/2018 5:48:00PM
Prep Initial Wt./Vol.: 25.00mL
Prep Extract Vol: 25.00mL

Print Date: 11/06/2018 11:20:35AM

Method Blank

Blank ID: MB for HBN 1788698 [WXX/12624]
Blank Lab ID: 1486946

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1186188001, 1186188002, 1186188003, 1186188004, 1186188005, 1186188006, 1186188007, 1186188008, 1186188009, 1186188010

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

Parameter	Results	LOQ/CL	DL	Units
Total Phosphorus	0.00740J	0.0200	0.00500	mg/L

Batch Information

Analytical Batch: WDA4451
Analytical Method: SM21 4500P-B,E
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 11/5/2018 2:34:03PM

Prep Batch: WXX12624
Prep Method: SM21 4500P-B,E
Prep Date/Time: 11/5/2018 11:00:00AM
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1186188 [WXX12624]
Blank Spike Lab ID: 1486947
Date Analyzed: 11/05/2018 14:35

Spike Duplicate ID: LCSD for HBN 1186188 [WXX12624]
Spike Duplicate Lab ID: 1486948
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1186188001, 1186188002, 1186188003, 1186188004, 1186188005, 1186188006, 1186188007, 1186188008, 1186188009, 1186188010

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	0.201	101	0.2	0.210	105	(75-125)	4.30	(< 25)

Batch Information

Analytical Batch: **WDA4451**
Analytical Method: **SM21 4500P-B,E**
Instrument: **Discrete Analyzer 2**
Analyst: **DMM**

Prep Batch: **WXX12624**
Prep Method: **SM21 4500P-B,E**
Prep Date/Time: **11/05/2018 11:00**
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: 1186188001
MS Sample ID: 1486949 MS
MSD Sample ID: 1486950 MSD

Analysis Date: 11/05/2018 14:36
Analysis Date: 11/05/2018 14:37
Analysis Date: 11/05/2018 14:38
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1186188001, 1186188002, 1186188003, 1186188004, 1186188005, 1186188006, 1186188007, 1186188008, 1186188009, 1186188010

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	0.0714	0.200	.268	99	0.200	0.267	98	75-125	0.41	(< 25)

Batch Information

Analytical Batch: WDA4451
Analytical Method: SM21 4500P-B,E
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 11/5/2018 2:37:56PM

Prep Batch: WXX12624
Prep Method: Total Phosphorus (W) Ext.
Prep Date/Time: 11/5/2018 11:00:00AM
Prep Initial Wt./Vol.: 25.00mL
Prep Extract Vol: 25.00mL

Print Date: 11/06/2018 11:20:38AM

SGS REVIEWED AET

SGS North America Inc.
CHAIN OF CUSTODY RECORD

1186188

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

Page ___ of ___

Section 1

CLIENT: Wasilla Waste Water Treatment

CONTACT: Jake Alward — PHONE NO: 907 441 7060

PROJECT NAME: Stantec — PROJECT/ PWSID/ PERMIT#:

REPORTS TO: — E-MAIL: Jake.alward@stantec.com

INVOICE TO: — QUOTE #: — P.O. #:

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	REMARKS/ LOC ID
(1) A-F	SW11	10/30	10:11		6			
(2) A-F	SW12		10:37					
(3) A-F	SW13		10:57					
(4) A-F	SW14		11:43					
(5) A-F	SW15		11:09					
(6) A-F	SW16		11:12					
(7) A-F	SW17		13:19					
(8) A-F	SW18		13:40					
(9) A-F	Shaw		10:41					
(10) A-F	Dup 2		13:19					

Section 5

	Date	Time	Received By:
Relinquished By: (1)			
Relinquished By: (2)			
Relinquished By: (3)			
Relinquished By: (4)	10/30/18	15:38	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: 0.3 D25, 2.0 D25

or Ambient [ ]

(See attached Sample Receipt Form)

Chain of Custody Seal: (Circle)

INTACT BROKEN (ABSENT) HD

(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

1186188

SGS North America Inc.

200 W. Potter Dr., Anchorage, AK 99518 (ph) 907-562-2343, (fax) 907-561-5301

3180 Peger Rd. Ste. 190, Fairbanks, AK 99709 (ph) 907-474-8656

Sample Kit Request

☑ **Client pickup Date:** 10/22/2018 **Time:** 15:00

Be sure to ask if client will ship by ground (DOT) or air carrier (IATA)

☐ **Deliver to client:**

☐ **Ship by/Air Carrier:**

Airbill Number:

Date to ship by:

Notes:

Kit request taken by: JAN **Date:** October 19, 2018

Kit prepared by: KET **Date:** 10/22/18

Kit *(including lid tightness for pres'd bottles)* checked by: JKV **Date:** 10/22/18

Kit packed & shipped by: KET **Date:** 10/22/18

Does a Profile exist in LIMS? **If not, please send a request for new profile build.**

Client Name: Stantec

Ordered By: Jake Alward **Phone #:**

Email: Jake.Alward@stantec.com

Project Name: Wasilla WWTP **Project/Permit#:**

Quote #: **Profile #:**

Delivery Address:

Filename: SKIT_Stantec_Wasilla WWTP_2018-10-19 ***Required Items**

No. Samples	Matrix	Analysis	Container Size & Type		Pres.	Bottle Lot #	Preservative Lot #	Hold Time	# QC Bottles	Total Bottles
21	Water	BOD	1 x 1 L	HDPE	None			48 hr.	0	21
21	Water	TSS	1 x 1 L	HDPE	None			7 d.	0	21
21	Water	Fecal Coliform*	1 x 125 mL	Sterile HDPE	Na2SO4			8 hr.	0	21
21	Water	Total Coliform**	1 x 125 mL	Sterile HDPE	Na2SO4			30 hr.	0	21
21	Water	Nitrate/Nitrite	1 x 125 mL	HDPE	None			48 hr.	0	21
21	Water	Ammonia/TKN/Tphos	1 x 250 mL	HDPE	H2SO4			28 d.	0	21

☐ Pack for Shipping via ***ground*** (DOT)

☐ Pack for Shipping via ***air carrier*** (IATA)

☑ Temperature Blank (***circle one:*** 120-ml OR 500-ml)

☐ Soil VOA Trip Blank - Lot#:

☐ Water VOA Trip Blank - Lot#:

☐ 524 VOA Trip Blank - Lot#:

☐ Low Level Mercury Trip Blank- Lot#:

☑ Coolers

☑ Gel Ice

☑ Bubble Wrap

☑ Labels

☑ Custody Seals

☐ Total # includes bottles for % Solids

☐ Track all Lot#? (Required for DOD)

☐ Foreign Soil

Other Notes/Reminders for Kit Prep:

*** Write "FC" on Lids**
****Write "QT 1x/10x" on Lids**

☑ SGS COCs - ***Circle req'd forma*** ☐ Blank COC ☐ DW COC ☐ COC initiated by PM (attached)

☐ Send additional instructions/documents *(**Note to PM:** Be sure to attach copy of requested form.)*

Attention Client/Sampler:

1. Do not rinse container; be aware of any acid preservative in container.
2. Fill container, but do not overfill (except volatile waters).
3. Label the container with your sample ID as well as the date/time of collection.
4. Fill out the Chain of Custody.
5. Add frozen gel packs or ice to your cooler & pack to prevent breakage.

Charges may be invoiced for bottles which are unused or improperly used.

If you have any questions concerning this sample kit, please contact your Project Manager for assistance. ***Thank you.***

***This will email a copy of this form for confirmation to the client email and save the form to the network. This should not be**

e-Sample Receipt Form

SGS Workorder #: **1186188**

Review Criteria	Condition (Yes, No, N/A)	Exceptions Noted below
Chain of Custody / Temperature Requirements		YES Exemption permitted if sampler hand carries/delivers.
Were Custody Seals intact? Note # & location	N/A	ABSENT
COC accompanied samples?	YES	
N/A **Exemption permitted if chilled & collected <8 hours ago, or for samples where chilling is not required		
Temperature blank compliant* (i.e., 0-6 °C after CF)?	YES	Cooler ID: 1 @ 0.3 °C Therm. ID: D25
	YES	Cooler ID: 2 @ 2.0 °C Therm. ID: D25
	N/A	Cooler ID: @ °C Therm. ID:
	N/A	Cooler ID: @ °C Therm. ID:
	N/A	Cooler ID: @ °C Therm. ID:
*If >6°C, were samples collected <8 hours ago?	N/A	
If <0°C, were sample containers ice free?	NO	Sample 1 contains ice in Fecal Coli, Quant Tray, and Nitrate containers. Proceed per JAN.
If samples received without a temperature blank, the "cooler temperature" will be documented in lieu of the temperature blank & "**COOLER TEMP**" will be noted to the right. In cases where neither a temp blank nor cooler temp can be obtained, note "ambient" or "chilled".		
Note: Identify containers received at non-compliant temperature . Use form FS-0029 if more space is needed.		
Holding Time / Documentation / Sample Condition Requirements		Note: Refer to form F-083 "Sample Guide" for specific holding times.
Were samples received within holding time?	YES	
Do samples **match COC**** (i.e.,sample IDs,dates/times collected)?	YES	
**Note: If times differ <1hr, record details & login per COC.		
Were analyses requested unambiguous? (i.e., method is specified for analyses with >1 option for analysis)	YES	
	N/A	***Exemption permitted for metals (e.g,200.8/6020A).
Were proper containers (type/mass/volume/preservative***)used?	YES	
Volatile / LL-Hg Requirements		
Were Trip Blanks (i.e., VOAs, LL-Hg) in cooler with samples?	N/A	
Were all water VOA vials free of headspace (i.e., bubbles ≤ 6mm)?	N/A	
Were all soil VOAs field extracted with MeOH+BFB?	N/A	

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

Additional notes (if applicable):

Sample Containers and Preservatives

Container Id	Preservative	Container Condition
1186188001-A	No Preservative Required	OK
1186188001-B	No Preservative Required	OK
1186188001-C	Na2S2O3 for Chlorine Redu	OK
1186188001-D	Na2S2O3 for Chlorine Redu	OK
1186188001-E	No Preservative Required	OK
1186188001-F	H2SO4 to pH < 2	OK
1186188002-A	No Preservative Required	OK
1186188002-B	No Preservative Required	OK
1186188002-C	Na2S2O3 for Chlorine Redu	OK
1186188002-D	Na2S2O3 for Chlorine Redu	OK
1186188002-E	No Preservative Required	OK
1186188002-F	H2SO4 to pH < 2	OK
1186188003-A	No Preservative Required	OK
1186188003-B	No Preservative Required	OK
1186188003-C	Na2S2O3 for Chlorine Redu	OK
1186188003-D	Na2S2O3 for Chlorine Redu	OK
1186188003-E	No Preservative Required	OK
1186188003-F	H2SO4 to pH < 2	OK
1186188004-A	No Preservative Required	OK
1186188004-B	No Preservative Required	OK
1186188004-C	Na2S2O3 for Chlorine Redu	OK
1186188004-D	Na2S2O3 for Chlorine Redu	OK
1186188004-E	No Preservative Required	OK
1186188004-F	H2SO4 to pH < 2	OK
1186188005-A	No Preservative Required	OK
1186188005-B	No Preservative Required	OK
1186188005-C	Na2S2O3 for Chlorine Redu	OK
1186188005-D	Na2S2O3 for Chlorine Redu	OK
1186188005-E	No Preservative Required	OK
1186188005-F	H2SO4 to pH < 2	OK
1186188006-A	No Preservative Required	OK
1186188006-B	No Preservative Required	OK
1186188006-C	Na2S2O3 for Chlorine Redu	OK
1186188006-D	Na2S2O3 for Chlorine Redu	OK
1186188006-E	No Preservative Required	OK
1186188006-F	H2SO4 to pH < 2	OK
1186188007-A	No Preservative Required	OK
1186188007-B	No Preservative Required	OK
1186188007-C	Na2S2O3 for Chlorine Redu	OK
1186188007-D	Na2S2O3 for Chlorine Redu	OK
1186188007-E	No Preservative Required	OK
1186188007-F	H2SO4 to pH < 2	OK
1186188008-A	No Preservative Required	OK
1186188008-B	No Preservative Required	OK
1186188008-C	Na2S2O3 for Chlorine Redu	OK
1186188008-D	Na2S2O3 for Chlorine Redu	OK
1186188008-E	No Preservative Required	OK
1186188008-F	H2SO4 to pH < 2	OK
1186188009-A	No Preservative Required	OK
1186188009-B	No Preservative Required	OK
1186188009-C	Na2S2O3 for Chlorine Redu	OK
1186188009-D	Na2S2O3 for Chlorine Redu	OK
1186188009-E	No Preservative Required	OK
1186188009-F	H2SO4 to pH < 2	OK
1186188010-A	No Preservative Required	OK
1186188010-B	No Preservative Required	OK
1186188010-C	Na2S2O3 for Chlorine Redu	OK
1186188010-D	Na2S2O3 for Chlorine Redu	OK
1186188010-E	No Preservative Required	OK
1186188010-F	H2SO4 to pH < 2	OK

Container Id	Preservative	Container Condition	Container Id	Preservative	Container Condition

Container Condition Glossary

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

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