

Laboratory Report of Analysis

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

Report Number: 1174398

Client Project: Wasilla WWTP Surface

Dear John Marshall,

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

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

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

Sincerely, SGS North America Inc.

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

Print Date: 07/21/2017 3:29:05PM

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Case Narrative

SGS Client: Stantec Consulting Services Inc. SGS Project: 1174398 Project Name/Site: Wasilla WWTP Surface Project Contact: John Marshall

Refer to sample receipt form for information on sample condition.

SW-01 (1174398001) PS

5210B - BOD - LCS does not meet QC criteria (59.1%).

SW-02 (1174398002) PS

5210B - BOD - LCS does not meet QC criteria (59.1%).

SW-14 (1174398003) PS

5210B - BOD - LCS does not meet QC criteria (59.1%).

SW-15 (1174398004) PS

5210B - BOD - LCS does not meet QC criteria (59.1%).

Dup (1174398005) PS

5210B - BOD - LCS does not meet QC criteria (59.1%).

1174255001DUP (1397850) DUP

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

LCSS for HBN 1763434 [BOD/5798 (1397855) LCSS

5210B - BOD - LCS does not meet QC criteria (59.1%).

*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 <<u>http://www.sgs.com/en/Terms-and-Conditions.aspx></u>. 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) & UST-005 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020A, 7470A, 7471B, 8015C, 8021B, 8082A, 8260C, 8270D, 8270D-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, other regulatory authorities.

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

*	The analyte has exceeded allowable regulatory or control limits.
!	Surrogate out of control limits.
В	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.
Sampla aummariaa which i	nglude a regult for "Total Solide" have already been adjusted for maisture a

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

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	:	Sample Summary	,	
Client Sample ID	Lab Sample ID	Collected	Received	Matrix
SW-01	1174398001	07/12/2017	07/12/2017	Water (Surface, Eff., Ground)
SW-02	1174398002	07/12/2017	07/12/2017	Water (Surface, Eff., Ground)
SW-14	1174398003	07/12/2017	07/12/2017	Water (Surface, Eff., Ground)
SW-15	1174398004	07/12/2017	07/12/2017	Water (Surface, Eff., Ground)
Dup	1174398005	07/12/2017	07/12/2017	Water (Surface, Eff., Ground)
<u>Method</u> SM21 4500-NH3 G	<u>Method Des</u> Ammonia-N	<u>scription</u> (W) SM21 4500-I	NH3 G	
SM21 5210B	Biochemica	I Oxygen Demand	SM21 5210B	
SM21 9222D	Fecal Colifo	orm (MF)		
SM21 4500NO3-F	Flow Injection	on Analysis		
SM21 9223B	Total Colifor	rm P/A Qualitative		
SM21 4500P-B,E	Total Phosp	horus (W)		
SM21 2540D	Total Suspe	ended Solids SM20) 2540D	



Detectable Results Summary

Client Sample ID: SW-01			
Lab Sample ID: 1174398001	Parameter	Result	<u>Units</u>
Microbiology Laboratory	E. Coli	Positive	100mL
	Fecal Coliform	4.0	col/100mL
	Total Coliform	Positive	100mL
Waters Department	Total Phosphorus	0.0654	mg/L
	Total Suspended Solids	9.50	mg/L
Client Sample ID: SW-02			
Lab Sample ID: 1174398002	Parameter	Result	Units
Microbiology Laboratory	Biochemical Oxygen Demand	3.89	mg/L
Microbiology Laboratory	E. Coli	Positive	100mL
	Fecal Coliform	20	col/100mL
	Total Coliform	Positive	100mL
Waters Department	Total Phosphorus	0.0452	mg/L
Waters Department	Total Suspended Solids	11.0	mg/L
		11.0	
Client Sample ID: SW-14			
Lab Sample ID: 1174398003	<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Microbiology Laboratory	E. Coli	Negative	100mL
	Fecal Coliform	1.0	col/100mL
	Total Coliform	Positive	100mL
Waters Department	Total Phosphorus	0.244	mg/L
	Total Suspended Solids	32.0	mg/L
Client Sample ID: SW-15			
Lab Sample ID: 1174398004	Parameter	Result	Units
Microbiology Laboratory	Biochemical Oxygen Demand	2.32	mg/L
	E. Coli	Positive	100mL
	Fecal Coliform	112	col/100mL
	Total Coliform	Positive	100mL
Waters Department	Total Phosphorus	0.0581	mg/L
Hatoro Dopartmont	Total Suspended Solids	13.8	mg/L
Client Sample ID: Dup			
Lab Sample ID: 1174398005	Parameter	Result	<u>Units</u>
Microbiology Laboratory	Biochemical Oxygen Demand	2.31	mg/L
	E. Coli	Positive	100mL
	Fecal Coliform	120	col/100mL
	Total Coliform	Positive	100mL
Waters Department	Total Phosphorus	0.0694	mg/L
	Total Suspended Solids	20.0	mg/L

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Results of SW-01							
Client Sample ID: SW-01 Client Project ID: Wasilla WWTP Surface Lab Sample ID: 1174398001 Lab Project ID: 1174398		Collection Date: 07/12/17 10:15 Received Date: 07/12/17 17:12 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:					
Results by Microbiology Laboratory							
<u>Parameter</u> Biochemical Oxygen Demand	<u>Result Qual</u> 2.00 U	<u>LOQ/CL</u> 2.00	<u>DL</u> 2.00	<u>Units</u> mg/L	<u>DF</u> 1	<u>Allowable</u> <u>Limits</u>	<u>Date Analyze</u> 07/13/17 12:4
Batch Information							
Analytical Batch: BOD5798 Analytical Method: SM21 5210B Analyst: AKD Analytical Date/Time: 07/13/17 12:47 Container ID: 1174398001-A							
<u>Parameter</u> Fecal Coliform	<u>Result Qual</u> 4.0	<u>LOQ/CL</u> 1.00	<u>DL</u> 1.00	<u>Units</u> col/100mL	<u>DF</u> . 1	<u>Allowable</u> Limits	<u>Date Analyze</u> 07/12/17 18:1
Analytical Batch: BTF15767 Analytical Method: SM21 9222D Analyst: K.W Analytical Date/Time: 07/12/17 18:10 Container ID: 1174398001-C							
<u>Parameter</u> E. Coli Total Coliform	<u>Result Qual</u> Positive Positive	<u>LOQ/CL</u> 1 1	<u>DL</u> 1 1	<u>Units</u> 100mL 100mL	<u>DF</u> 1 1	Allowable Limits	Date Analyze 07/12/17 17:5 07/12/17 17:5
Batch Information							
Analytical Batch: BTF15766 Analytical Method: SM21 9223B Analyst: ACF Analytical Date/Time: 07/12/17 17:53 Container ID: 1174398001-F							

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Results of SW-01 Client Sample ID: SW-01		C	ollection Da	te: 07/12/	17 10·15		
Client Project ID: Wasilla WWTP Surf	ace		eceived Dat				
ab Sample ID: 1174398001		М	atrix: Water	(Surface,	Eff., Gro	und)	
ab Project ID: 1174398			olids (%):				
		Lo	ocation:				
Results by Waters Department			_				
Parameter	Result Qual	LOQ/CL	DL	<u>Units</u>	<u>DF</u>	<u>Allowable</u> <u>Limits</u>	Date Analyze
otal Suspended Solids	9.50	2.50	0.775	mg/L	1		07/13/17 14:4
Batch Information							
Analytical Batch: STS5548 Analytical Method: SM21 2540D Analyst: AYC Analytical Date/Time: 07/13/17 14:40 Container ID: 1174398001-B							
						Allowable	
<u>'arameter</u> Mmmonia-N	<u>Result Qual</u> 0.100 U	<u>LOQ/CL</u> 0.100	<u>DL</u> 0.0310	<u>Units</u> mg/L	<u>DF</u> 1	<u>Limits</u>	<u>Date Analyze</u> 07/13/17 14:0
Batch Information							
Analytical Batch: WDA4019 Analytical Method: SM21 4500-NH3 G Analyst: NEG Analytical Date/Time: 07/13/17 14:04 Container ID: 1174398001-E		F F F	Prep Batch: N Prep Method: Prep Date/Tin Prep Initial Wi Prep Extract N	METHOD ne: 07/13/1 t./Vol.: 6 m			
						Allowable	
<u>Parameter</u>	<u>Result Qual</u>	LOQ/CL	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Limits</u>	Date Analyze
litrate-N	0.100 U	0.100	0.0300	mg/L	2		07/12/17 17:5
litrite-N	0.100 U	0.100	0.0300	mg/L	2		07/12/17 17:5
Analytical Batch: WFI2578 Analytical Method: SM21 4500NO3-F Analyst: AYC Analytical Date/Time: 07/12/17 17:57 Container ID: 1174398001-D							
Parameter	Posult Oucl	LOQ/CL	DL	Linita	DE	Allowable	Data Analyza
<u>'arameter</u> otal Phosphorus	<u>Result Qual</u> 0.0654	0.0200	<u>DL</u> 0.00620	<u>Units</u> mg/L	<u>DF</u> 1	<u>Limits</u>	Date Analyze 07/17/17 12:3

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Results of SW-01

Client Sample ID: **SW-01** Client Project ID: **Wasilla WWTP Surface** Lab Sample ID: 1174398001 Lab Project ID: 1174398 Collection Date: 07/12/17 10:15 Received Date: 07/12/17 17:12 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:

Results by Waters Department

Batch Information

Analytical Batch: WDA4021 Analytical Method: SM21 4500P-B,E Analyst: NEG Analytical Date/Time: 07/17/17 12:36 Container ID: 1174398001-E Prep Batch: WXX11914 Prep Method: SM21 4500P-B,E Prep Date/Time: 07/14/17 15:45 Prep Initial Wt./Vol.: 25 mL Prep Extract Vol: 25 mL

Print Date: 07/21/2017 3:29:13PM

Results of SW-02 Client Sample ID: SW-02 Client Project ID: Wasilla WWTP Su Lab Sample ID: 1174398002 Lab Project ID: 1174398	rface	R M S	eceived Da	ate: 07/12/17 ate: 07/12/17 er (Surface, E	17:12		
Results by Microbiology Laboratory			_				
<u>Parameter</u> Biochemical Oxygen Demand	<u>Result Qual</u> 3.89	<u>LOQ/CL</u> 2.00	<u>DL</u> 2.00	<u>Units</u> mg/L	<u>DF</u> 1	<u>Allowable</u> <u>Limits</u>	<u>Date Analyze</u> 07/13/17 12:4
Batch Information							
Analytical Batch: BOD5798 Analytical Method: SM21 5210B Analyst: AKD Analytical Date/Time: 07/13/17 12:47 Container ID: 1174398002-A							
<u>Parameter</u> Fecal Coliform	<u>Result Qual</u> 20	<u>LOQ/CL</u> 1.00	<u>DL</u> 1.00	<u>Units</u> col/100mL	<u>DF</u> . 1	<u>Allowable</u> <u>Limits</u>	<u>Date Analyze</u> 07/12/17 18: ⁻
Analytical Batch: BTF15767 Analytical Method: SM21 9222D Analyst: K.W Analytical Date/Time: 07/12/17 18:10 Container ID: 1174398002-C							
<u>Parameter</u> E. Coli Total Coliform	<u>Result Qual</u> Positive Positive	<u>LOQ/CL</u> 1 1	<u>DL</u> 1 1	<u>Units</u> 100mL 100mL	<u>DF</u> 1 1	<u>Allowable</u> <u>Limits</u>	<u>Date Analyze</u> 07/12/17 17:t 07/12/17 17:t
Batch Information							
Analytical Batch: BTF15766 Analytical Method: SM21 9223B Analyst: ACF Analytical Date/Time: 07/12/17 17:53 Container ID: 1174398002-F							

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Results of SW-02							
Client Sample ID: SW-02 Client Project ID: Wasilla WWTP Surfa .ab Sample ID: 1174398002 .ab Project ID: 1174398	ice	C R M Si La					
Results by Waters Department]				
Parameter Fotal Suspended Solids	<u>Result Qual</u> 11.0	<u>LOQ/CL</u> 3.33	<u>DL</u> 1.03	<u>Units</u> mg/L	<u>DF</u> 1	<u>Allowable</u> <u>Limits</u>	<u>Date Analyze</u> 07/13/17 14:4
Batch Information							
Analytical Batch: STS5548 Analytical Method: SM21 2540D Analyst: AYC Analytical Date/Time: 07/13/17 14:40 Container ID: 1174398002-B							
Parameter	<u>Result Qual</u>	LOQ/CL	DL	Units	DF	<u>Allowable</u> Limits	Date Analyze
mmonia-N	0.100 U	0.100	0.0310	mg/L	1		07/13/17 14:0
Batch Information							
Analytical Batch: WDA4019 Analytical Method: SM21 4500-NH3 G Analyst: NEG Analytical Date/Time: 07/13/17 14:06 Container ID: 1174398002-E		F F F	Prep Batch: N Prep Method: Prep Date/Tin Prep Initial Wi Prep Extract N	METHOD ne: 07/13/1 t./Vol.: 6 m	7 13:00		
Parameter	Result Qual	LOQ/CL	DL	<u>Units</u>	<u>DF</u>	Allowable Limits	Date Analyze
Jitrate-N Jitrite-N	0.100 U 0.100 U	0.100 0.100	0.0300 0.0300	mg/L mg/L	2 2		07/12/17 17:5 07/12/17 17:5
Batch Information Analytical Batch: WFI2578 Analytical Method: SM21 4500NO3-F Analyst: AYC Analytical Date/Time: 07/12/17 17:59 Container ID: 1174398002-D							
P <u>arameter</u> Total Phosphorus	<u>Result Qual</u> 0.0452	<u>LOQ/CL</u> 0.0200	<u>DL</u> 0.00620	<u>Units</u> mg/L	<u>DF</u> 1	<u>Allowable</u> Limits	Date Analyze
	0.0702	0.0200	0.00020	mg/L			51111112.

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Results of SW-02

Client Sample ID: **SW-02** Client Project ID: **Wasilla WWTP Surface** Lab Sample ID: 1174398002 Lab Project ID: 1174398 Collection Date: 07/12/17 11:00 Received Date: 07/12/17 17:12 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:

Results by Waters Department

Batch Information

Analytical Batch: WDA4021 Analytical Method: SM21 4500P-B,E Analyst: NEG Analytical Date/Time: 07/17/17 12:37 Container ID: 1174398002-E Prep Batch: WXX11914 Prep Method: SM21 4500P-B,E Prep Date/Time: 07/14/17 15:45 Prep Initial Wt./Vol.: 25 mL Prep Extract Vol: 25 mL

Print Date: 07/21/2017 3:29:13PM

Results of SW-14							
Client Sample ID: SW-14 Client Project ID: Wasilla WWTP Lab Sample ID: 1174398003 Lab Project ID: 1174398	Surface	Collection Date: 07/12/17 14:50 Received Date: 07/12/17 17:12 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:					
Results by Microbiology Laborat	ory						
<u>Parameter</u> Biochemical Oxygen Demand	<u>Result Qual</u> 2.00 U	<u>LOQ/CL</u> 2.00	<u>DL</u> 2.00	<u>Units</u> mg/L	<u>DF</u> 1	<u>Allowable</u> <u>Limits</u>	<u>Date Analyze</u> 07/13/17 12:4
Batch Information							
Analytical Batch: BOD5798 Analytical Method: SM21 5210B Analyst: AKD Analytical Date/Time: 07/13/17 12 Container ID: 1174398003-A	.47						
<u>Parameter</u> Fecal Coliform	<u>Result Qual</u> 1.0	<u>LOQ/CL</u> 1.00	<u>DL</u> 1.00	<u>Units</u> col/100mL	<u>DF</u> . 1	<u>Allowable</u> Limits	<u>Date Analyze</u> 07/12/17 18:1
Analyst: K.W Analytical Date/Time: 07/12/17 18 Container ID: 1174398003-C	:10						
<u>Parameter</u> E. Coli Total Coliform	<u>Result Qual</u> Negative Positive	<u>LOQ/CL</u> 1 1	<u>DL</u> 1 1	<u>Units</u> 100mL 100mL	<u>DF</u> 1 1	<u>Allowable</u> <u>Limits</u>	Date Analyze 07/12/17 17:5 07/12/17 17:5
Batch Information Analytical Batch: BTF15766 Analytical Method: SM21 9223B Analyst: ACF Analytical Date/Time: 07/12/17 17 Container ID: 1174398003-F	:53						

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	К <i>Л</i>	atrix: Water		17 17:12 Fff Gro	und)	
	So	olids (%): ocation:	(Oundee,	LII., 010	unay	
<u>Result Qual</u> 32.0	<u>LOQ/CL</u> 3.33	<u>DL</u> 1.03	<u>Units</u> mg/L	<u>DF</u> 1	Allowable Limits	<u>Date Analyze</u> 07/13/17 14:4
Result Qual	LOQ/CL	DL	Units	DF	<u>Allowable</u>	Date Analyze
0.100 U	0.100	0.0310	mg/L	1		07/13/17 14:1
	F F F	Prep Method: Prep Date/Tim Prep Initial Wt	METHOD ne: 07/13/1 t./Vol.: 6 m			
Result Qual		DI	Units	DF	<u>Allowable</u>	Date Analyze
0.100 U	0.100	0.0300	mg/L	2		07/12/17 18:0
0.100 U	0.100	0.0300	mg/L	2		07/12/17 18:0
<u>Result Qual</u> 0.244	<u>LOQ/CL</u> 0.0200	<u>DL</u> 0.00620	<u>Units</u> mg/L	<u>DF</u> 1	<u>Allowable</u> Limits	Date Analyze 07/17/17 12:3
	32.0 Result Qual 0.100 U Result Qual 0.100 U 0.100 U 0.100 U 0.100 U	32.0 3.33 Result Qual LOQ/CL 0.100 U 0.100 Result Qual LOQ/CL 0.100 U 0.100 Result Qual LOQ/CL 0.100 U 0.100 0.100 U 0.100	32.0 3.33 1.03 Result Qual LOQ/CL DL 0.100 U 0.100 0.0310 Prep Batch: V Prep Method: Prep Date/Tim Prep Initial With Prep Extract V Prep Extract V 0.100 U 0.100 0.0300 0.100 U 0.100 0.0300 Result Qual LOQ/CL DL 0.100 U 0.100 0.0300 0.100 U 0.100 0.0300	32.0 3.33 1.03 mg/L Result Qual LOQ/CL DL Units 0.100 U 0.100 0.0310 mg/L Prep Batch: WXX11909 Prep Method: METHOD Prep Date/Time: 07/13/1 Prep Initial Wt./Vol.: 6 mL 0.100 0.100 U 0.100 Units mg/L Wt. Wt. Wt. Wt. <td>32.0 3.33 1.03 mg/L 1 Result Qual LOQ/CL DL Units DE 0.100 U 0.100 D.0310 Mg/L 1 Prep Batch: WXX11909 Prep Method: METHOD Prep Date/Time: 07/13/17 13:00 Prep Extract Vol: 6 mL Prep 0.100 U 0.100 0.0300 mg/L 2 0.100 U 0.100 0.0300 mg/L 2 0.100 U 0.100 0.0300 mg/L 2 Result Qual LOQ/CL DL Units DE Result Qual LOQ/CL DL Units DE</td> <td>Result Qual 32.0LOQ/CL 3.33DL I.03Units mg/LDF 1LimitsResult Qual 0.100 ULOQ/CL 0.100DL 0.0310Units mg/LDF 1Allowable LimitsResult Qual 0.100 ULOQ/CL 0.100DL 0.0310Units mg/LDF 1Allowable LimitsResult Qual 0.100 ULOQ/CL 0.100DL DL DL Prep Date/Time: 07/13/17 13:00 Prep Initial Wt./Vol.: 6 mL Prep Extract Vol: 6 mL Prep Extract Vol: 6 mL Prep 2Allowable LimitsResult Qual 0.100 ULOQ/CL 0.100DL 0.0300Units mg/L 2DF 2Allowable LimitsResult Qual 0.100 ULOQ/CL 0.100DL Units Units UnitsDF 2Allowable LimitsResult Qual 0.100 ULOQ/CL 0.100DL Units UnitsDF DF 2Allowable LimitsResult Qual U UlitLOQ/CL U UlitDL UnitsUnits DF DFAllowable LimitsResult Qual U UlitLOQ/CLDL U UlitsDE UnitsAllowable Limits</td>	32.0 3.33 1.03 mg/L 1 Result Qual LOQ/CL DL Units DE 0.100 U 0.100 D.0310 Mg/L 1 Prep Batch: WXX11909 Prep Method: METHOD Prep Date/Time: 07/13/17 13:00 Prep Extract Vol: 6 mL Prep 0.100 U 0.100 0.0300 mg/L 2 0.100 U 0.100 0.0300 mg/L 2 0.100 U 0.100 0.0300 mg/L 2 Result Qual LOQ/CL DL Units DE Result Qual LOQ/CL DL Units DE	Result Qual 32.0LOQ/CL 3.33DL I.03Units mg/LDF 1LimitsResult Qual 0.100 ULOQ/CL 0.100DL 0.0310Units mg/LDF 1Allowable LimitsResult Qual 0.100 ULOQ/CL 0.100DL 0.0310Units mg/LDF 1Allowable LimitsResult Qual 0.100 ULOQ/CL 0.100DL DL DL Prep Date/Time: 07/13/17 13:00 Prep Initial Wt./Vol.: 6 mL Prep Extract Vol: 6 mL Prep Extract Vol: 6 mL Prep 2Allowable LimitsResult Qual 0.100 ULOQ/CL 0.100DL 0.0300Units mg/L 2DF 2Allowable LimitsResult Qual 0.100 ULOQ/CL 0.100DL Units Units UnitsDF 2Allowable LimitsResult Qual 0.100 ULOQ/CL 0.100DL Units UnitsDF DF 2Allowable LimitsResult Qual U UlitLOQ/CL U UlitDL UnitsUnits DF DFAllowable LimitsResult Qual U UlitLOQ/CLDL U UlitsDE UnitsAllowable Limits

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Results of SW-14

Client Sample ID: **SW-14** Client Project ID: **Wasilla WWTP Surface** Lab Sample ID: 1174398003 Lab Project ID: 1174398 Collection Date: 07/12/17 14:50 Received Date: 07/12/17 17:12 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:

Results by Waters Department

Batch Information

Analytical Batch: WDA4021 Analytical Method: SM21 4500P-B,E Analyst: NEG Analytical Date/Time: 07/17/17 12:37 Container ID: 1174398003-E Prep Batch: WXX11914 Prep Method: SM21 4500P-B,E Prep Date/Time: 07/14/17 15:45 Prep Initial Wt./Vol.: 25 mL Prep Extract Vol: 25 mL

Print Date: 07/21/2017 3:29:13PM

Results of SW-15 Client Sample ID: SW-15 Client Project ID: Wasilla WWTP Su Lab Sample ID: 1174398004 Lab Project ID: 1174398	rface	Collection Date: 07/12/17 15:15 Received Date: 07/12/17 17:12 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:					
Results by Microbiology Laboratory	,						
<u>Parameter</u> Biochemical Oxygen Demand	<u>Result Qual</u> 2.32	<u>LOQ/CL</u> 2.00	<u>DL</u> 2.00	<u>Units</u> mg/L	<u>DF</u> 1	Allowable Limits	<u>Date Analyze</u> 07/13/17 12:4
Batch Information							
Analytical Batch: BOD5798 Analytical Method: SM21 5210B Analyst: AKD Analytical Date/Time: 07/13/17 12:47 Container ID: 1174398004-A							
<u>Parameter</u> Fecal Coliform	<u>Result Qual</u> 112	<u>LOQ/CL</u> 2.00	<u>DL</u> 2.00	<u>Units</u> col/100mL	<u>DF</u> . 1	<u>Allowable</u> Limits	<u>Date Analyze</u> 07/12/17 18:
Analytical Method: SM21 9222D Analyst: K.W Analytical Date/Time: 07/12/17 18:10 Container ID: 1174398004-C							
<u>Parameter</u> E. Coli Total Coliform	<u>Result Qual</u> Positive Positive	<u>LOQ/CL</u> 1 1	<u>DL</u> 1 1	<u>Units</u> 100mL 100mL	<u>DF</u> 1 1	<u>Allowable</u> Limits	<u>Date Analyze</u> 07/12/17 17:{ 07/12/17 17:{
Batch Information							
Analytical Batch: BTF15766 Analytical Method: SM21 9223B Analyst: ACF Analytical Date/Time: 07/12/17 17:53 Container ID: 1174398004-F							

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Results of SW-15 Client Sample ID: SW-15		C	ollection Da	te: 07/12/	17 15:15		
Client Project ID: Wasilla WWTP Surfa ab Sample ID: 1174398004 ab Project ID: 1174398	ice	Ri M Si Lo					
Results by Waters Department) ——				
Parameter Fotal Suspended Solids	<u>Result Qual</u> 13.8	<u>LOQ/CL</u> 2.00	<u>DL</u> 0.620	<u>Units</u> mg/L	<u>DF</u> 1	<u>Allowable</u> Limits	<u>Date Analyze</u> 07/13/17 14:4
Batch Information							
Analytical Batch: STS5548 Analytical Method: SM21 2540D Analyst: AYC Analytical Date/Time: 07/13/17 14:40 Container ID: 1174398004-B							
Parameter	Result Qual	LOQ/CL	DL	<u>Units</u>	DF	Allowable Limits	Date Analyze
Ammonia-N	0.100 U	0.100	<u>0.0</u> 0.0310	mg/L	1	Linits	07/13/17 14:1
Batch Information							
Analytical Batch: WDA4019 Analytical Method: SM21 4500-NH3 G Analyst: NEG Analytical Date/Time: 07/13/17 14:12 Container ID: 1174398004-E		F F F	Prep Batch: N Prep Method: Prep Date/Tin Prep Initial Wi Prep Extract N	METHOD ne: 07/13/1 t./Vol.: 6 m	7 13:00		
Parameter Nitrate-N	<u>Result Qual</u> 0.100 U	<u>LOQ/CL</u> 0.100	<u>DL</u> 0.0300	<u>Units</u> mg/L	<u>DF</u> 2	<u>Allowable</u> Limits	Date Analyze
Nitrite-N	0.100 U	0.100	0.0300	mg/L	2		07/12/17 18:0
Batch InformationAnalytical Batch: WFI2578Analytical Method: SM21 4500NO3-FAnalyst: AYCAnalytical Date/Time: 07/12/17 18:02Container ID: 1174398004-D							
Parameter	Result Qual	LOQ/CL	DL	<u>Units</u>	DF	<u>Allowable</u> Limits	Date Analyze
Fotal Phosphorus	0.0581	0.0200	0.00620	mg/L	1		07/17/17 12:3

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Results of SW-15

Client Sample ID: **SW-15** Client Project ID: **Wasilla WWTP Surface** Lab Sample ID: 1174398004 Lab Project ID: 1174398 Collection Date: 07/12/17 15:15 Received Date: 07/12/17 17:12 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:

Results by Waters Department

Batch Information

Analytical Batch: WDA4021 Analytical Method: SM21 4500P-B,E Analyst: NEG Analytical Date/Time: 07/17/17 12:38 Container ID: 1174398004-E Prep Batch: WXX11914 Prep Method: SM21 4500P-B,E Prep Date/Time: 07/14/17 15:45 Prep Initial Wt./Vol.: 25 mL Prep Extract Vol: 25 mL

Print Date: 07/21/2017 3:29:13PM

Results of Dup							
Client Sample ID: Dup Client Project ID: Wasilla WWTP Su Lab Sample ID: 1174398005 Lab Project ID: 1174398	rface	Collection Date: 07/12/17 15:15 Received Date: 07/12/17 17:12 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:					
Results by Microbiology Laboratory							
<u>Parameter</u> Biochemical Oxygen Demand	<u>Result Qual</u> 2.31	<u>LOQ/CL</u> 2.00	<u>DL</u> 2.00	<u>Units</u> mg/L	<u>DF</u> 1	<u>Allowable</u> <u>Limits</u>	Date Analyzed 07/13/17 12:4
Batch Information							
Analytical Batch: BOD5798 Analytical Method: SM21 5210B Analyst: AKD Analytical Date/Time: 07/13/17 12:47 Container ID: 1174398005-A							
<u>Parameter</u> Fecal Coliform	<u>Result Qual</u> 120	<u>LOQ/CL</u> 2.00	<u>DL</u> 2.00	<u>Units</u> col/100mL	<u>DF</u> 1	<u>Allowable</u> Limits	Date Analyze 07/12/17 18:1
Analytical Method: SM21 9222D Analyst: K.W Analytical Date/Time: 07/12/17 18:10 Container ID: 1174398005-C							
<u>Parameter</u> E. Coli Total Coliform	<u>Result Qual</u> Positive Positive	<u>LOQ/CL</u> 1 1	<u>DL</u> 1 1	<u>Units</u> 100mL 100mL	<u>DF</u> 1 1	<u>Allowable</u> Limits	Date Analyzed 07/12/17 17:5 07/12/17 17:5
Batch Information Analytical Batch: BTF15766 Analytical Method: SM21 9223B Analyst: ACF Analytical Date/Time: 07/12/17 17:53 Container ID: 1174398005-F							

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Results of Dup Client Sample ID: Dup Client Project ID: Wasilla WWTP Surface Lab Sample ID: 1174398005 Lab Project ID: 1174398 Results by Waters Department		R M Se	Collection Date: 07/12/17 15:15 Received Date: 07/12/17 17:12 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:				
Parameter Total Suspended Solids	<u>Result Qual</u> 20.0	<u>LOQ/CL</u> 2.00	<u>DL</u> 0.620	<u>Units</u> mg/L	<u>DF</u> 1	<u>Allowable</u> Limits	Date Analyzed 07/13/17 14:4
Batch Information							
Analytical Batch: STS5548 Analytical Method: SM21 2540D Analyst: AYC Analytical Date/Time: 07/13/17 14:40 Container ID: 1174398005-B							
Parameter	Result Qual	LOQ/CL	DL	<u>Units</u>	DF	<u>Allowable</u> <u>Limits</u>	Date Analyze
Ammonia-N	0.100 U	0.100	0.0310	mg/L	1		07/13/17 14:1
Batch InformationAnalytical Batch: WDA4019Analytical Method: SM21 4500-NH3 GAnalyst: NEGAnalytical Date/Time: 07/13/17 14:14Container ID: 1174398005-E		F F F	Prep Batch: V Prep Method: Prep Date/Tin Prep Initial Wt Prep Extract V	METHOD ne: 07/13/1 t./Vol.: 6 m			
P <u>arameter</u> Nitrate-N Nitrite-N	<u>Result Qual</u> 0.100 U 0.100 U	<u>LOQ/CL</u> 0.100 0.100	<u>DL</u> 0.0300 0.0300	<u>Units</u> mg/L mg/L	<u>DF</u> 2 2	Allowable Limits	Date Analyzed 07/12/17 18:0 07/12/17 18:0
Batch Information Analytical Batch: WFI2578 Analytical Method: SM21 4500NO3-F Analyst: AYC Analytical Date/Time: 07/12/17 18:04 Container ID: 1174398005-D							
<u>Parameter</u> Total Phosphorus	<u>Result Qual</u> 0.0694	<u>LOQ/CL</u> 0.0200	<u>DL</u> 0.00620	<u>Units</u> mg/L	<u>DF</u> 1	Allowable Limits	Date Analyzed 07/17/17 12:4

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Results of Dup

Client Sample ID: **Dup** Client Project ID: **Wasilla WWTP Surface** Lab Sample ID: 1174398005 Lab Project ID: 1174398 Collection Date: 07/12/17 15:15 Received Date: 07/12/17 17:12 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:

Results by Waters Department

Batch Information

Analytical Batch: WDA4021 Analytical Method: SM21 4500P-B,E Analyst: NEG Analytical Date/Time: 07/17/17 12:41 Container ID: 1174398005-E Prep Batch: WXX11914 Prep Method: SM21 4500P-B,E Prep Date/Time: 07/14/17 15:45 Prep Initial Wt./Vol.: 25 mL Prep Extract Vol: 25 mL

Print Date: 07/21/2017 3:29:13PM

Method Blank					
Blank ID: MB for HBN 17634 Blank Lab ID: 1397854	34 [BOD/5798]	Matri	x: Water (Surf	ace, Eff., Ground)	
QC for Samples: 1174398001, 1174398002, 1174	4398003, 1174398004, 117	74398005			
Results by SM21 5210B					
<u>Parameter</u> Biochemical Oxygen Demand	<u>Results</u> 2.00U	<u>LOQ/CL</u> 2.00	<u>DL</u> 2.00	<u>Units</u> mg/L	
Batch Information					
Analytical Batch: BOD5798 Analytical Method: SM21 52 Instrument: Analyst: AKD Analytical Date/Time: 7/13/2					

Print Date: 07/21/2017 3:29:16PM

ank Spike Summary					
ank Spike ID: LCS for HBI ank Spike Lab ID: 139785 ate Analyzed: 07/13/2017	5	[BOD5798		Nater (Surface, Eff., Ground)	
C for Samples: 1174398	8001, 11743	98002, 1174	4398003, 1174398004, 11743	398005	
esults by SM21 5210B					
		Blank Spike	e (mg/L)		
a <u>rameter</u> ochemical Oxygen Demand	<u>Spike</u> 198	<u>Result</u> 117	<u>Rec (%)</u> 59 *	<u>CL</u> (84.6-115.4	
atch Information					
Analytical Batch: BOD5798 Analytical Method: SM21 521 Instrument: Analyst: AKD	0B				

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Blank ID: MB for HBN Blank Lab ID: 1397518		Matrix	: Water (Sur	ace, Eff., Ground)	
QC for Samples: 1174398001, 117439800)2, 1174398003, 1174398004, 1174	398005			
Results by SM21 9223	В				
Parameter	<u>Results</u>	LOQ/CL	DL	<u>Units</u>	
E. Coli	Negative	1	1	100mL	
Total Coliform	Negative	1	1	100mL	
atch Information Analytical Batch: BTF Analytical Method: St Instrument: Analyst: K.W					

Print Date: 07/21/2017 3:29:20PM

Method Blank					
Blank ID: MB for HBN Blank Lab ID: 139767		Matrix	: Water (Sur	face, Eff., Ground)	
QC for Samples: 1174398001, 117439800)2, 1174398003, 1174398004, 117	4398005			
Results by SM21 9222	D				
Parameter Fecal Coliform	<u>Results</u> 1.00U	<u>LOQ/CL</u> 1.00	<u>DL</u> 1.00	<u>Units</u> col/100mL	
Batch Information Analytical Batch: BTI Analytical Method: S Instrument: Analyst: K.W Analytical Date/Time:					

Print Date: 07/21/2017 3:29:22PM

Method Blank					
Blank ID: MB for HBN Blank Lab ID: 139767	1763366 [BTF/15767] 2	Matri	x: Water (Surf	ace, Eff., Ground)	
QC for Samples: 1174398001, 117439800	02, 1174398003, 1174398004, 117	4398005			
Results by SM21 9222	2D				
Parameter Fecal Coliform	<u>Results</u> 1.00U	<u>LOQ/CL</u> 1.00	<u>DL</u> 1.00	<u>Units</u> col/100mL	
Batch Information					
Analytical Batch: BT Analytical Method: S Instrument: Analyst: ACF Analytical Date/Time:					

Print Date: 07/21/2017 3:29:22PM

Blank ID: MB for HBN 1763431 [STS/5548] Matrix: Water (Surface, Eff., Ground) Blank Lab ID: 1397847 QC for Samples: 1174398001, 1174398002, 1174398003, 1174398004, 1174398005 Matrix: Water (Surface, Eff., Ground) Results by SM21 2540D Parameter Results Total Suspended Solids 0.500U Batch Information					Method Blank
1174398001, 1174398002, 1174398003, 1174398004, 1174398005 Results by SM21 2540D Parameter Results Total Suspended Solids 0.500U 1.00 0.310 mg/L	ce, Eff., Ground)	k: Water (Surfa	Matrix	3431 [STS/5548]	
Parameter Results LOQ/CL DL Units Total Suspended Solids 0.500U 1.00 0.310 mg/L			398005	174398003, 1174398004, 1174	
Total Suspended Solids 0.500U 1.00 0.310 mg/L					Results by SM21 2540D
Batch Information					
					Batch Information
Analytical Batch: STS5548 Analytical Method: SM21 2540D Instrument: Analyst: AYC Analytical Date/Time: 7/13/2017 2:40:11PM				2540D	Analytical Method: SM21 Instrument: Analyst: AYC

Print Date: 07/21/2017 3:29:24PM

Duplicate Sample Summary					
Original Sample ID: 117425500 Duplicate Sample ID: 1397850)1			07/13/2017 14:40 Surface, Eff., Grou	
QC for Samples:					
1174398001, 1174398002, 1174	4398003, 11743	398004, 1174398005			
Results by SM21 2540D					
NAME	Original	Duplicate	<u>Units</u>	<u>RPD (%)</u>	RPD CL
Total Suspended Solids	345	375	mg/L	8.30*	(< 5)
Batch Information					
Analytical Batch: STS5548 Analytical Method: SM21 2540D Instrument: Analyst: AYC					

Print Date: 07/21/2017 3:29:25PM

uplicate Sample Summary	,				
riginal Sample ID: 117442 uplicate Sample ID: 13978					nd)
C for Samples:					
174398001, 1174398002, 1	174398003, 11743	398004, 1174398005			
Results by SM21 2540D					
NAME	Original	Duplicate	<u>Units</u>	<u>RPD (%)</u>	RPD CL
otal Suspended Solids	118	112	mg/L	5.20*	(< 5)
Analytical Method: SM21 254 Instrument: Analyst: AYC	.0D				

Print Date: 07/21/2017 3:29:25PM



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Blank Spike Summary									
Blank Spike ID: LCS for HB Blank Spike Lab ID: 139784 Date Analyzed: 07/13/2017	.8	STS5548]		[S] Sp	⁻ S5548] ike Duplica	ite Lab ID:	D for HBN 1 1397849 Eff., Ground		
QC for Samples: 117439	8001, 117439	8002, 1174	398003, 117	74398004,	117439800)5			
Results by SM21 2540D									
	F	Blank Spike	(ma/L)		Spike Duplic	cate (mg/L)			
Parameter	Spike	Result	<u>Rec (%)</u>	<u>Spike</u>	Result	<u>Rec (%)</u>	<u>CL</u>	<u>RPD (%)</u>	RPD CL
Total Suspended Solids	50	50.1	100	50	49.5	99	(75-125)	1.20	(< 5)
Batch Information									
Analytical Batch: STS5548 Analytical Method: SM21 254 Instrument: Analyst: AYC	40D								

Blank ID: IMB for HBN 1763427 (WFI/2578) Hart Lab ID: 1397818 20 for Samples: Results by SM21 4500N03-F Tataneter Results <u>COO/CL</u> <u>DL</u> <u>Units</u> Witate-N <u>0.0528</u> J <u>0.100</u> <u>0.0300</u> mg/L 100 <u>0.0300</u>	Method Blank					
Results by SM21 4500NO3-F Parameter Results LOQ/CL DL Units Name 0.0526J 0.100 0.0300 mg/L Name 0.0500U 0.100 0.0300 mg/L Votal Nitrate/Nitrite-N 0.0672J 0.100 0.0300 mg/L Itch Information Analytical Batch: WF12578 Malytical Method: SM21 4500NO3-F Instrument: Astoria segmented flow Analytical Katoria Segmented flow Analyst: AYC Area Mathematical Sectoria Segmented flow Mathematical Sectoria Segmented flow Mathematical Sectoria Segmented flow		3427 (WFI/2578)	Matri	x: Water (Surfa	ce, Eff., Ground)	
arameter Results LOQ/CL DL Units itrate-N 0.0526J 0.100 0.0300 mg/L itrite-N 0.0500U 0.100 0.0300 mg/L otal Nitrate/Nitrite-N 0.0672J 0.100 0.0300 mg/L tch Information Analytical Batch: WFI2578 Manalytical Method: SM21 4500NO3-F Instrument: Astoria segmented flow Analyst: AYC	C for Samples:					
Parameter Results LOQ/CL DL Units litrate-N 0.0526J 0.100 0.0300 mg/L litrite-N 0.0500U 0.100 0.0300 mg/L total Nitrate/Nitrite-N 0.0672J 0.100 0.0500 mg/L total Nitrate/Nitrite-N 0.0672J 0.100 0.000 mg/L Analytical Method: SM21 4500N						
litrate-N 0.0526J 0.100 0.0300 mg/L litrite-N 0.0500U 0.100 0.0300 mg/L otal Nitrate/Nitrite-N 0.0672J 0.100 0.0300 mg/L Analytical Batch: WFI2578 Analytical Method: SM21 4500NO3-F Instrument: Astoria segmented flow Analyst: AYC	Results by SM21 4500NO	3-F)			
Nitrite-N 0.0500U 0.100 0.0300 mg/L Total Nitrate/Nitrite-N 0.0672J 0.100 0.0300 mg/L Atch Information Analytical Batch: WFI2578 Analytical Method: SM21 4500NO3-F Instrument: Astoria segmented flow Analyst: AYC	Parameter				<u>Units</u>	
Total Nitrate/Nitrite-N 0.0672J 0.100 0.0300 mg/L Atch Information Analytical Batch: WFI2578 Analytical Method: SM21 4500NO3-F Instrument: Astoria segmented flow Analyst: AYC	litrate-N	0.0526J	0.100	0.0300	mg/L	
Analytical Batch: WFI2578 Analytical Method: SM21 4500NO3-F Instrument: Astoria segmented flow Analyst: AYC	Nitrite-N	0.0500U	0.100	0.0300	mg/L	
Analytical Batch: WFI2578 Analytical Method: SM21 4500NO3-F Instrument: Astoria segmented flow Analyst: AYC	otal Nitrate/Nitrite-N	0.0672J	0.100	0.0300	mg/L	
Analytical Method: SM21 4500NO3-F Instrument: Astoria segmented flow Analyst: AYC	atch Information					
Analytical Method: SM21 4500NO3-F Instrument: Astoria segmented flow Analyst: AYC	Applytical Databy M/EI2/	70				
Instrument: Astoria segmented flow Analyst: AYC						
Analyst: AYC	Instrument: Astoria segm	lented flow				
Analytical Date/Time: 7/12/2017 4:31:15PM	Analyst: AYC					
	Analytical Date/Time: 7/1	12/2017 4:31:15PM				

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Method Blank

Blank ID: MB for HBN 1763427 (WFI/2578) Blank Lab ID: 1397820 Matrix: Water (Surface, Eff., Ground)

QC for Samples:

1174398001, 1174398002, 1174398003, 1174398004, 1174398005

Results by SM21 4500NO3-F

Parameter	Results	LOQ/CL	DL	<u>Units</u>
Nitrate-N	0.0526J	0.100	0.0300	mg/L
Nitrite-N	0.0500U	0.100	0.0300	mg/L
Total Nitrate/Nitrite-N	0.0674J	0.100	0.0300	mg/L

Batch Information

Analytical Batch: WFI2578 Analytical Method: SM21 4500NO3-F Instrument: Astoria segmented flow Analyst: AYC Analytical Date/Time: 7/12/2017 5:13:16PM

Print Date: 07/21/2017 3:29:27PM



Blank	Spike	Summary
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Blank Spike ID: LCS for HBN 1174398 [WFI2578] Blank Spike Lab ID: 1397802 Date Analyzed: 07/12/2017 16:29

Matrix: Water (Surface, Eff., Ground)

QC for Samples:

Results by SM21 4500NO3-F Blank Spike (mg/L) Parameter Rec (%) <u>CL</u> <u>Spike</u> Result Nitrate-N 2.5 2.51 101 (70-130) Nitrite-N 2.5 2.50 100 (90-110) Total Nitrate/Nitrite-N 5 5.01 100 (90-110)

Batch Information

Analytical Batch: WFI2578 Analytical Method: SM21 4500NO3-F Instrument: Astoria segmented flow Analyst: AYC

Print Date: 07/21/2017 3:29:28PM



Blank Spike Summary

Blank Spike ID: LCS for HBN 1174398 [WFI2578] Blank Spike Lab ID: 1397819 Date Analyzed: 07/12/2017 17:11

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1174398001, 1174398002, 1174398003, 1174398004, 1174398005

Results by SM21 4500NO3-F

	ł	Blank Spike	e (mg/L)
Parameter	<u>Spike</u>	Result	<u>Rec (%)</u>
Nitrate-N	2.5	2.45	98
Nitrite-N	2.5	2.47	99
Total Nitrate/Nitrite-N	5	4.93	99

Batch Information

Analytical Batch: WFI2578 Analytical Method: SM21 4500NO3-F Instrument: Astoria segmented flow Analyst: AYC

Print Date: 07/21/2017 3:29:28PM



Matrix Spike Summary

Original Sample ID: 1174337001 MS Sample ID: 1397798 MS MSD Sample ID: 1397799 MSD

Analytical Date/Time: 7/12/2017 4:38:15PM

Analysis Date: 07/12/2017 16:36 Analysis Date: 07/12/2017 16:38 Analysis Date: 07/12/2017 16:40 Matrix: Drinking Water

QC for Samples: 1174398001, 1174398002, 1174398003, 1174398004, 1174398005

		Ma	trix Spike (mg/L)	Spike	e Duplicate	e (mg/L)			
<u>Parameter</u>	<u>Sample</u>	Spike	Result	<u>Rec (%)</u>	Spike	Result	<u>Rec (%)</u>	CL	<u>RPD (%)</u>	RPD C
Nitrate-N	1.08	2.50	3.61	101	2.50	3.55	99	70-130	1.60	(< 25)
Nitrite-N	0.100U	2.50	2.52	101	2.50	2.60	104	90-110	3.20	(< 25)
Nitrite-N	0.100U	2.50	2.52	101	2.50	2.60	104	90-110	3.20	(<
atch Information										
Batch Information										
Analytical Batch: WFI2578										
Analytical Method: SM21										
Instrument: Astoria segme	enteu now									

Print Date: 07/21/2017 3:29:29PM

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Matrix Spike Summary

Original Sample ID: 1174398005 MS Sample ID: 1397800 MS MSD Sample ID: 1397801 MSD Analysis Date: 07/12/2017 18:04 Analysis Date: 07/12/2017 18:06 Analysis Date: 07/12/2017 18:07 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1174398001, 1174398002, 1174398003, 1174398004, 1174398005

		Ma	trix Spike (mg/L)	Spike	e Duplicate	e (mg/L)			
Parameter	Sample	Spike	Result	<u>Rec (%)</u>	<u>Spike</u>	Result	<u>Rec (%)</u>	CL	<u>RPD (%)</u>	RPD CI
Nitrate-N	0.100U	2.50	2.46	98	2.50	2.48	99	70-130	0.71	(< 25)
Nitrite-N	0.100U	2.50	2.62	105	2.50	2.61	104	90-110	0.54	(< 25)
Analytical Method: SM21 Instrument: Astoria segm Analyst: AYC										

Print Date: 07/21/2017 3:29:29PM

Blank ID: MB for HBN 1763479 [WXX/11909] Blank Lab ID: 1398004		Matrix: Water (Surface, Eff., Ground)					
QC for Samples: 1174398001, 1174398	002, 1174398003, 1174398004, 1174	4398005					
Results by SM21 450	00-NH3 G						
ParameterResultsAmmonia-N0.0500U		<u>LOQ/CL</u> 0.100	<u>DL</u> 0.0310	<u>Units</u> mg/L			
Batch Information]						
Analytical Batch: WDA4019 Analytical Method: SM21 4500-NH3 G Instrument: Discrete Analyzer 2 Analyst: NEG Analytical Date/Time: 7/13/2017 1:31:07PM		Prep Me Prep Da Prep Init	tch: WXX11909 ethod: METHOD te/Time: 7/13/20 tial Wt./Vol.: 6 m tract Vol: 6 mL	17 1:00:00PM			



QC for Samples: 11 Results by SM21 4500	174398001, 117439	98002, 1174	1398003, 117				Eff., Ground)	
		Blank Spike	e (mg/L)	S	Spike Duplie	cate (mg/L)			
<u>Parameter</u> Ammonia-N	<u>Spike</u> 1	<u>Result</u> 0.960	<u>Rec (%)</u> 96	<u>Spike</u> 1	<u>Result</u> 0.994	<u>Rec (%)</u> 99	<u>CL</u> (75-125)	<u>RPD (%)</u> 3.50	<u>RPD CL</u> (< 25)
Batch Information									
Analytical Batch: WDA Analytical Method: SM Instrument: Discrete A Analyst: NEG	21 4500-NH3 G			Pre Pre Spil	ke Init Wt./\	METHOD e: 07/13/201 /ol.: 1 mg/L	7 13:00 Extract Vol: Extract Vol:		
alyst: NEG									

Print Date: 07/21/2017 3:29:31PM



Results by SM21 4500-NH3 G Matrix Spike (mg/L) Spike (mg/L) Spike (mg/L) arrameter Sample Spike Result Rec (%) CL RPD (%) RPD (%)	Matrix Spike Summa	ary									
QC for Samples: 1174398001, 1174398002, 1174398003, 1174398004, 1174398005 Results by SM21 4500-NH3 G Matrix Spike (mg/L) spike Result Matrix Spike (mg/L) Spike spike Result Results by SM21 4500-NH3 G nmonia-N 0.0681J 1.00 .885 82 1.00 0.0681J 1.00 .885 82 1.00 0.902 83 75-125 1.90 (< 25)	MS Sample ID: 1398	3007 MS				Analysis Analysis	Date: 0 Date: 0	7/13/2017 7/13/2017	13:37 13:39)	
Matrix Spike (mg/L) Spike Duplicate (mg/L) arameter nmonia-N Sample 0.0681J Spike 1.00 Result 82 Result 1.00 Result 0.902 Result 83 RPD (%) 75-125 RPD (%) (< 25) Batch Information Prep Batch: WXX11909 Prep Method: Ammonia by SM21 4500F prep (W) Prep Method: Ammonia by SM21 4500F prep (W) Analytical Method: SM21 4500-NH3 G Instrument: Discrete Analyzer 2 Analyst: NEG Prep Date/Time: 7/13/2017 1:00:00PM	QC for Samples: 11	74398001, 117439800	02, 117439	8003, 117			-	,	, ,	,	
Arrameter nmonia-NSample 0.0681JSpike 1.00Result 885Rec (%) 82Spike 0.902Rec (%) 83CL 75-125RPD (%) 1.90RPD CL (< 25)	Results by SM21 450	00-NH3 G									
nmonia-N 0.0681J 1.00 .885 82 1.00 0.902 83 75-125 1.90 (< 25)			Mat	rix Spike (mg/L)	Spike	e Duplicate	e (mg/L)			
Analytical Batch: WDA4019Prep Batch: WXX11909Analytical Method: SM21 4500-NH3 GPrep Method: Ammonia by SM21 4500F prep (W)Instrument: Discrete Analyzer 2Prep Date/Time: 7/13/2017 1:00:00PMAnalyst: NEGPrep Initial Wt./Vol.: 6.00mL	<u>Parameter</u> Ammonia-N										
	Analytical Method: S Instrument: Discrete Analyst: NEG	SM21 4500-NH3 G Analyzer 2	PM		Prep Prep Prep	Method: Date/Tim Initial Wt	Ammonia ne: 7/13/2 /Vol.: 6.0	a by SM21 4 2017 1:00:0 00mL) (W)	

Print Date: 07/21/2017 3:29:32PM

Method Blank					
Blank ID: MB for HBN 1 [°] Blank Lab ID: 1398700	763881 [WXX/11914]	Matri	x: Water (Surfac	e, Eff., Ground)	
QC for Samples: 1174398001, 1174398002	, 1174398003, 1174398004, 1174	4398005			
Results by SM21 4500P	-B,E				
<u>Parameter</u>	<u>Results</u>	LOQ/CL	<u>DL</u>	<u>Units</u>	
Total Phosphorus	0.0129J	0.0200	0.00620	mg/L	
atch Information					
Analytical Batch: WDA			tch: WXX11914		
Analytical Method: SM: Instrument: Discrete Ar			ethod: SM21 450 ate/Time: 7/14/20		
Analyst: NEG		Prep Ini	tial Wt./Vol.: 25 n		
Analytical Date/Time: 7	/17/2017 12:18:43PM	Prep Ex	tract Vol: 25 mL		

Print Date: 07/21/2017 3:29:34PM



Blank	Spike	Summary
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Blank Spike ID: LCS for HBN 1174398 [WXX11914] Blank Spike Lab ID: 1398701 Date Analyzed: 07/17/2017 12:19 Spike Duplicate ID: LCSD for HBN 1174398 [WXX11914] Spike Duplicate Lab ID: 1398702 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1174398001, 1174398002, 1174398003, 1174398004, 1174398005

		Blank Spike	e (mg/L)	5	Spike Duplie	cate (mg/L)					
<u>Parameter</u>	<u>Spike</u>	Result	<u>Rec (%)</u>	<u>Spike</u>	Result	<u>Rec (%)</u>	<u>CL</u>	<u>RPD (%)</u>	RPD CL		
Total Phosphorus	0.2	0.199	99	0.2	0.196	98	(85-115)	1.10	(< 25)		
Analytical Batch: WDA4021				tical Batch: WDA4021 Prep Batch: WXX11914 tical Method: SM21 4500P-B,E Prep Method: SM21 4500P-B,E ment: Discrete Analyzer 2 Prep Date/Time: 07/14/2017 15:45 st: NEG Spike Init Wt./Vol.: 0.2 mg/L							

Print Date: 07/21/2017 3:29:36PM



	MS Sample ID: 1398703 MS Analysis Date: 07/17/2017 12:22 MSD Sample ID: 1398704 MSD Analysis Date: 07/17/2017 12:23 MSD Sample ID: 1398704 MSD Matrix: Water (Surface, Eff., Ground) QC for Samples: 1174398002, 1174398003, 1174398004, 1174398005 Results by SM21 4500P-B,E Matrix Spike (mg/L) Parameter Sample Sample Spike Result Rec (%) O.0385 0.200 .232 97 0.200 0.257 109 75-125 10.20 (< 25) Batch Information Analytical Batch: WDA4021 Prep Batch: WXX11914 Analytical Method: SM21 4500P-B,E Prep Method: Total Phosphorus (W) Ext. Instrument: Discrete Analyzer 2 Prep Date/Time: 7/14/2017 Analyst: NEG Prep Initial Wt./vol.: 25.00PM	Matrix Spike Summary										
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 C Total Phosphorus 0.0385 0.200 .232 97 0.200 0.257 109 75-125 10.20 (< 25) Batch Information Prep Batch: WXX11914 Prep Batch: WXX11914 Prep Method: Total Phosphorus (W) Ext. Prep Method: Total Phosphorus (W) Ext. Instrument: Discrete Analyzer 2 Prep Date/Time: 7/14/2017 3:45:00PM Prep Initial Wt./Vol.: 25.00mL	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 0.0385 0.200 .232 97 0.200 0.257 109 75-125 10.20 (< 25) Batch Information Prep Batch: WXX11914 Prep Batch: WXX11914 Prep Method: Total Phosphorus (W) Ext. Prep Method: Total Phosphorus (W) Ext. Instrument: Discrete Analyzer 2 Prep Date/Time: 7/14/2017 3:45:00PM Prep Initial Wt./Vol.: 25.00mL	MS Sample ID: 1398703	3 MS				Analysis Analysis	s Date: 0 s Date: 0	7/17/2017 7/17/2017	12:22 12:23)	
Matrix Spike (mg/L) Spike Duplicate (mg/L) Parameter Sample Spike Result Rec (%) Spike Result Rec (%) CL RPD (%) Result	Matrix Spike (mg/L) Spike Duplicate (mg/L) Parameter Sample Spike Result Rec (%) Spike Result Rec (%) CL RPD (%) RPD (L) Total Phosphorus 0.0385 0.200 .232 97 0.200 0.257 109 75-125 10.20 (< 25) Batch Information Analytical Batch: WDA4021 Prep Batch: WXX11914 Prep Method: Total Phosphorus (W) Ext. Prep Method: Total Phosphorus (W) Ext. Prep Date/Time: 7/14/2017 3:45:00PM Instrument: Discrete Analyzer 2 Analyst: NEG Prep Initial Wt./Vol.: 25.00mL Prep Initial Wt./Vol.: 25.00mL	QC for Samples: 117439)8001, 117439800	02, 117439	98003, 117	4398004, 11	7439800	5				
Parameter Sample Spike Result Rec (%) Spike Result Rec (%) CL RPD (%) Rec (%) Rec (%) Lasses Rec (%) Rec (%) Lasses Rec (%) Rec (%) <th>Parameter Sample Spike Result Rec (%) Spike Result Rec (%) CL RPD (%) RPD CL Total Phosphorus 0.0385 0.200 .232 97 0.200 0.257 109 75-125 10.20 (< 25) Batch Information Analytical Batch: WDA4021 Prep Batch: WXX11914 Prep Method: Total Phosphorus (W) Ext. Prep Method: Total Phosphorus (W) Ext. Prep Date/Time: 7/14/2017 3:45:00PM Instrument: Discrete Analyzer 2 Analyst: NEG Prep Initial Wt./Vol.: 25.00mL Prep Initial Wt./Vol.: 25.00mL</th> <th>Results by SM21 4500P-</th> <th>B,E</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>	Parameter Sample Spike Result Rec (%) Spike Result Rec (%) CL RPD (%) RPD CL Total Phosphorus 0.0385 0.200 .232 97 0.200 0.257 109 75-125 10.20 (< 25) Batch Information Analytical Batch: WDA4021 Prep Batch: WXX11914 Prep Method: Total Phosphorus (W) Ext. Prep Method: Total Phosphorus (W) Ext. Prep Date/Time: 7/14/2017 3:45:00PM Instrument: Discrete Analyzer 2 Analyst: NEG Prep Initial Wt./Vol.: 25.00mL Prep Initial Wt./Vol.: 25.00mL	Results by SM21 4500P-	B,E									
Total Phosphorus 0.0385 0.200 .232 97 0.200 0.257 109 75-125 10.20 (< 25)	Total Phosphorus 0.0385 0.200 .232 97 0.200 0.257 109 75-125 10.20 (< 25)			Ma	trix Spike (mg/L)	Spik	e Duplicat	e (mg/L)			
Analytical Batch: WDA4021Prep Batch: WXX11914Analytical Method: SM21 4500P-B,EPrep Method: Total Phosphorus (W) Ext.Instrument: Discrete Analyzer 2Prep Date/Time: 7/14/2017 3:45:00PMAnalyst: NEGPrep Initial Wt./Vol.: 25.00mL	Analytical Batch: WDA4021Prep Batch: WXX11914Analytical Method: SM21 4500P-B,EPrep Method: Total Phosphorus (W) Ext.Instrument: Discrete Analyzer 2Prep Date/Time: 7/14/2017 3:45:00PMAnalyst: NEGPrep Initial Wt./Vol.: 25.00mL											
Analytical Method:SM21 4500P-B,EPrep Method:Total Phosphorus (W) Ext.Instrument:Discrete Analyzer 2Prep Date/Time:7/14/20173:45:00PMAnalyst:NEGPrep Initial Wt./Vol.:25.00mL	Analytical Method:SM21 4500P-B,EPrep Method:Total Phosphorus (W) Ext.Instrument:Discrete Analyzer 2Prep Date/Time:7/14/20173:45:00PMAnalyst:NEGPrep Initial Wt./Vol.:25.00mL	Batch Information										
		Analytical Method: SM2 ⁻ Instrument: Discrete Ana Analyst: NEG	1 4500P-B,E alyzer 2	3PM		Prep Prep Prep	Method: Date/Tin Initial W	Total Pho ne: 7/14/2 t./Vol.: 25	osphorus (V 2017 3:45:0 5.00mL			
			17/2017 12:22:38	3PM								

Print Date: 07/21/2017 3:29:37PM

W	
E	
S	

SGS North America Inc. CHAIN OF CUSTODY RECORD



New York Maryland Locations Nationwide North Carolina New Jersey Alaska

IS.COM		Page 🕂 of 📙		T		REMARKS/ LOC ID									Data Deliverable Requirements:		:su		Chain of Custody Seal: (Circle)	BOKEN ABSENT
www.us.sgs.com			$\left \right\rangle$										 	 	Data Deliv		Requested Turnaround Time and/or Special Instructions:		Chain of	INTACT
-1	5 must be filled out. onset of analysis.				-								 				Special I			
	istructions: Sections 1 - 5 must be filled or Omissions may delay the onset of analysis		40 SURA		uu	otiloO IstoT	2	ر لا	x	K	×			 	DOD Project? Yes 🔞		e and/or		3.54021	F
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	- -	РНОИЕ #: 907 ~ С	Project/ PWSID/ PERMIT#:	ALL: John. Ma	QUOTE #:	.#: DATE mm/dd/yy	2/12/10	C)/m/C	(1/1/1/10)	r1/10/0	C1/11/12				Date		Date	Date		Date /
	Stantec Consulting	John Marshall	Project Wasilla WWTP Surface PWSID/ PERMIT	0: E-MAIL: John Marshall		Stantec Consulting P.O. #: ^{ED} SAMPLE IDENTIFICATION m	56-01	50-03	1	SW - 15	Ouo	-			By: (1)		By: (2)	By: (3)	٦ ،	Bv: (4)
	CLIENT: S	CONTACT:	ection AMME: WAME:	TS T	INVOICE TO:	Stant RESERVED for lab use	Û A-F	O A-F	0	(OA-F	ecti OA - F				Relinquished By: (1)		ନ୍ଥା ସୁସ୍ଥି ଅନ୍ଥାର୍ଯ୍ୟ ଅନ୍ଥ (2) ସୁସ୍ଥି ଅନ୍ୟ	Relinquished	S	Relinguished

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

F083-Blank_COC_Templates_2015-03-19

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



e-Sample Receipt Form

SGS Workorder #:	
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1'	17	43	98



Review Criteria	Condition			Exceptions Noted below
				•
Chain of Custody / Temperature Requir			J	Exemption permitted if sampler hand carries/delivers.
Were Custody Seals intact? Note # & I			ABSENT	
COC accompanied sa				
yes **Exemption permitted if o	chilled &	colle		urs ago, or for samples where chilling is not required
		yes	Cooler ID:	1 @ 3.5 °C Therm. ID: D21
	Γ	n/a	Cooler ID:	@ °O Therm. ID:
Temperature blank compliant* (i.e., 0-6 °C afte	r CF)?	n/a	Cooler ID:	@ °C Therm. ID:
	ľ	n/a	Cooler ID:	@ °C Therm. ID:
	i i	n/a	Cooler ID:	@ °C Therm. ID:
*If >6°C, were samples collected <8 hours		n/a		
If <0°C, were sample containers ice	free?	n/a		
		1.,α		
If samples received without a temperature blank, the "	"cooler			
temperature" will be documented in lieu of the temperature ballic, the				
"COOLER TEMP" will be noted to the right. In cases where ne				
temp blank nor cooler temp can be obtained, note "ambie	ent" or			
"ci	hilled".			
Note: Identify containers received at non-compliant temper	ature			
Use form FS-0029 if more space is ne				
Holding Time / Documentation / Sample Condition Re		onte	Note: Refor	r to form E-083 "Sample Guide" for specific holding times
Were samples received within holding			NOLE. NEIEI	a to form 1-000 Cample Oulde for specific holding liffles.
	,	,		
Do samples match COC** (i.e.,sample IDs,dates/times colle	octod)2	VOS		
	· · ·	yes		
**Note: If times differ <1hr, record details & login per				
Were analyses requested unambiguous? (i.e., method is specif analyses with >1 option for an		yes		
analyses with >1 option for an	alysis)			
			n	/a ***Exemption permitted for metals (e.g.200.8/6020A).
Were proper containers (type/mass/volume/preservative***))used?	ves		
Volatile / LL-Hg Requ				
Were Trip Blanks (i.e., VOAs, LL-Hg) in cooler with san				
Were all water VOA vials free of headspace (i.e., bubbles ≤ 6				
Were all soil VOA viais nee of neadspace (i.e., bubbles 2 to Were all soil VOAs field extracted with MeOH+				
Note to Client: Any "No", answer above indicates nor	n-complia	ance v	with standar	rd procedures and may impact data quality.
Additional	Inotes	(if a	oplicable)):
Sample 1 listed 08:36 as the collection time on the jars, but it is 10:15 on the COC				
Sample Tristed to so as the conection time on the jars, but it is 10:15 on the COC	. It has de		iyeu in per m	



Sample Containers and Preservatives

Container Id	Preservative	<u>Container</u> Condition	Container Id	<u>Preservative</u>	<u>Container</u> Condition
1174398001-A	No Preservative Required	ОК			
1174398001-B	No Preservative Required	ОК			
1174398001-C	Na2S2O3 for Chlorine Redu	ОК			
1174398001-D	No Preservative Required	ОК			
1174398001-E	H2SO4 to pH < 2	ОК			
1174398001-F	Na2S2O3 for Chlorine Redu	ОК			
1174398002-A	No Preservative Required	ОК			
1174398002-В	No Preservative Required	ОК			
1174398002-C	Na2S2O3 for Chlorine Redu	ОК			
1174398002-D	No Preservative Required	ОК			
1174398002-E	H2SO4 to pH < 2	ОК			
1174398002-F	Na2S2O3 for Chlorine Redu	ОК			
1174398003-A	No Preservative Required	ОК			
1174398003-B	No Preservative Required	ОК			
1174398003-C	Na2S2O3 for Chlorine Redu	ОК			
1174398003-D	No Preservative Required	ОК			
1174398003-E	H2SO4 to pH < 2	ОК			
1174398003-F	Na2S2O3 for Chlorine Redu	ОК			
1174398004-A	No Preservative Required	ОК			
1174398004-B	No Preservative Required	ОК			
1174398004-C	Na2S2O3 for Chlorine Redu	ОК			
1174398004-D	No Preservative Required	ОК			
1174398004-E	H2SO4 to pH < 2	ОК			
1174398004-F	Na2S2O3 for Chlorine Redu	ОК			
1174398005-A	No Preservative Required	ОК			
1174398005-B	No Preservative Required	ОК			
1174398005-C	Na2S2O3 for Chlorine Redu	ОК			
1174398005-D	No Preservative Required	ОК			
1174398005-E	H2SO4 to pH < 2	ОК			
1174398005-F	Na2S2O3 for Chlorine Redu	ОК			

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.

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 Perceipt Form for details on the amount and let # of the analysis added to the correct pH for the analysis requested.

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: 1174399

Client Project: Wasilla WWTP Surface

Dear John Marshall,

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

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

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

Sincerely, SGS North America Inc.

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

Print Date: 07/21/2017 3:31:14PM

SGS North America Inc.



Case Narrative

SGS Client: Stantec Consulting Services Inc. SGS Project: 1174399 Project Name/Site: Wasilla WWTP Surface Project Contact: John Marshall

Refer to sample receipt form for information on sample condition.

SW-03 (1174399001) PS

5210B - BOD - LCS does not meet QC criteria (59.1%).

SW-04 (1174399002) PS

5210B - BOD - LCS does not meet QC criteria (59.1%).

SW-05 (1174399003) PS

5210B - BOD - LCS does not meet QC criteria (59.1%).

SW-09 (1174399004) PS

5210B - BOD - LCS does not meet QC criteria (59.1%).

1174255001DUP (1397850) DUP

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

LCSS for HBN 1763434 [BOD/5798 (1397855) LCSS

5210B - BOD - LCS does not meet QC criteria (59.1%).

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

Print Date: 07/21/2017 3:31:14PM

SGS North America Inc.

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

Member of SGS Group



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 <<u>http://www.sgs.com/en/Terms-and-Conditions.aspx></u>. 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) & UST-005 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020A, 7470A, 7471B, 8015C, 8021B, 8082A, 8260C, 8270D, 8270D-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, other regulatory authorities.

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

*	The analyte has exceeded allowable regulatory or control limits.
!	Surrogate out of control limits.
В	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.

Print Date: 07/21/2017 3:31:16PM



SM21 2540D

	:	Sample Summary	,	
Client Sample ID	Lab Sample ID	Collected	Received	Matrix
SW-03	1174399001	07/12/2017	07/12/2017	Water (Surface, Eff., Ground)
SW-04	1174399002	07/12/2017	07/12/2017	Water (Surface, Eff., Ground)
SW-05	1174399003	07/12/2017	07/12/2017	Water (Surface, Eff., Ground)
SW-09	1174399004	07/12/2017	07/12/2017	Water (Surface, Eff., Ground)
<u>Method</u>	Method Des	scription		
SM21 4500-NH3 G	Ammonia-N	(W) SM21 4500-M	NH3 G	
SM21 5210B	Biochemica	l Oxygen Demand	SM21 5210B	
SM21 9222D	Fecal Colifo	rm (MF)		
SM21 4500NO3-F	Flow Injection	on Analysis		
SM21 9223B	Total Colifor	rm P/A Qualitative		
SM21 4500P-B,E	Total Phosp	horus (W)		

Total Suspended Solids SM20 2540D

Print Date: 07/21/2017 3:31:17PM



Detectable	Results	Summary
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Client Sample ID: SW-03			
Lab Sample ID: 1174399001	Parameter	Result	<u>Units</u>
Microbiology Laboratory	Biochemical Oxygen Demand	3.10	mg/L
	E. Coli	Negative	100mL
	Fecal Coliform	3.0	col/100mL
	Total Coliform	Positive	100mL
Waters Department	Nitrate-N	0.0412J	mg/L
	Total Phosphorus	0.0265	mg/L
	Total Suspended Solids	68.3	mg/L
Client Sample ID: SW-04			
Lab Sample ID: 1174399002	Parameter	Result	Units
Microbiology Laboratory	Biochemical Oxygen Demand	2.19	mg/L
	E. Coli	Positive	100mL
	Fecal Coliform	1.0	col/100mL
	Total Coliform	Positive	100mL
Waters Department	Nitrate-N	0.0404J	mg/L
•	Total Phosphorus	0.0251	mg/L
	Total Suspended Solids	4.00	mg/L
Client Sample ID: SW-05			
Lab Sample ID: 1174399003	Parameter	Popult	<u>Units</u>
Microbiology Laboratory	Biochemical Oxygen Demand	<u>Result</u> 2.74	mg/L
Microbiology Laboratory	E. Coli	Positive	100mL
	Fecal Coliform	720	col/100mL
	Total Coliform	Positive	100mL
Watawa Dawawtwa aut	Nitrate-N	0.0506J	mg/L
Waters Department	Total Phosphorus	0.0135J	mg/L
	Total Suspended Solids	7.00	mg/L
	Total Suspended Solids	7.00	IIIg/L
Client Sample ID: SW-09			
Lab Sample ID: 1174399004	Parameter	Result	<u>Units</u>
Microbiology Laboratory	E. Coli	Negative	100mL
	Fecal Coliform	3.0	col/100mL
	Total Coliform	Positive	100mL
Waters Department	Nitrate-N	0.0388J	mg/L
	TIDI	0.0180J	mg/L
	Total Phosphorus	0.01000	ing/L
	Total Phosphorus Total Suspended Solids	1.80	mg/L

Print Date: 07/21/2017 3:31:24PM

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Client Sample ID: SW-03 Client Project ID: Wasilla WWTP Surfa Lab Sample ID: 1174399001 Lab Project ID: 1174399 Results by Microbiology Laboratory Parameter Biochemical Oxygen Demand Batch Information	r ce Result Qual 3.10	R M Se	eceived Da	ate: 07/12/17 ate: 07/12/17 er (Surface, E	17:12		
Parameter Biochemical Oxygen Demand Batch Information		1.00/01]				
Biochemical Oxygen Demand Batch Information							
		2.00	<u>DL</u> 2.00	<u>Units</u> mg/L	<u>DF</u> 1	Allowable Limits	<u>Date Analyze</u> 07/13/17 12:4
Analytical Batch: BOD5798							
Analytical Method: SM21 5210B Analyst: AKD Analytical Date/Time: 07/13/17 12:47 Container ID: 1174399001-A							
P <u>arameter</u> Fecal Coliform	Result Qual 3.0	<u>LOQ/CL</u> 1.00	<u>DL</u> 1.00	<u>Units</u> col/100mL	<u>DF</u> 1	<u>Allowable</u> <u>Limits</u>	Date Analyze 07/12/17 18:5
Batch Information							
Analytical Method: SM21 9222D Analyst: ACF Analytical Date/Time: 07/12/17 18:50 Container ID: 1174399001-C	DesultQuel					Allowable	
P <u>arameter</u> E. Coli N	<u>Result Qual</u> Negative	<u>LOQ/CL</u> 1	<u>DL</u> 1	<u>Units</u> 100mL	<u>DF</u> 1	<u>Limits</u>	Date Analyze 07/12/17 18:0
	Positive	1	1	100mL	1		07/12/17 18:0
Batch Information							
Analytical Batch: BTF15766 Analytical Method: SM21 9223B Analyst: ACF Analytical Date/Time: 07/12/17 18:02 Container ID: 1174399001-F							

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Results of SW-03								
Client Sample ID: SW-03 Client Project ID: Wasilla WWTP Sur Lab Sample ID: 1174399001 Lab Project ID: 1174399	face	Collection Date: 07/12/17 11:40 Received Date: 07/12/17 17:12 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:						
Results by Waters Department			_					
Parameter Total Suspended Solids	<u>Result Qual</u> 68.3	<u>LOQ/CL</u> 3.33	<u>DL</u> 1.03	<u>Units</u> mg/L	<u>DF</u> 1	Allowable Limits	<u>Date Analyzed</u> 07/13/17 14:4	
Batch Information Analytical Batch: STS5548 Analytical Method: SM21 2540D Analyst: AYC Analytical Date/Time: 07/13/17 14:40 Container ID: 1174399001-B								
<u>Parameter</u> Ammonia-N	<u>Result Qual</u> 0.0500 U	<u>LOQ/CL</u> 0.100	<u>DL</u> 0.0310	<u>Units</u> mg/L	<u>DF</u> 1	<u>Allowable</u> <u>Limits</u>	Date Analyzed	
Analytical Batch: WDA4024 Analytical Method: SM21 4500-NH3 G Analyst: NEG Analytical Date/Time: 07/20/17 13:28 Container ID: 1174399001-E		F	Prep Batch: V Prep Method: Prep Date/Tim Prep Initial Wt Prep Extract V	METHOD ne: 07/20/1 ./Vol.: 6 m				
<u>Parameter</u> Nitrate-N Nitrite-N	<u>Result Qual</u> 0.0412 J 0.0500 U	<u>LOQ/CL</u> 0.100 0.100	<u>DL</u> 0.0300 0.0300	<u>Units</u> mg/L mg/L	<u>DF</u> 2 2	<u>Allowable</u> Limits	Date Analyzed 07/12/17 18:1- 07/12/17 18:1-	
Batch Information Analytical Batch: WFI2578 Analytical Method: SM21 4500NO3-F Analyst: AYC Analytical Date/Time: 07/12/17 18:14 Container ID: 1174399001-D								
<u>Parameter</u> Total Phosphorus	<u>Result Qual</u> 0.0265	<u>LOQ/CL</u> 0.0200	<u>DL</u> 0.00620	<u>Units</u> mg/L	<u>DF</u> 1	<u>Allowable</u> <u>Limits</u>	<u>Date Analyzec</u> 07/17/17 12:4	



Results of SW-03

Client Sample ID: **SW-03** Client Project ID: **Wasilla WWTP Surface** Lab Sample ID: 1174399001 Lab Project ID: 1174399 Collection Date: 07/12/17 11:40 Received Date: 07/12/17 17:12 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:

Results by Waters Department

Batch Information

Analytical Batch: WDA4021 Analytical Method: SM21 4500P-B,E Analyst: NEG Analytical Date/Time: 07/17/17 12:42 Container ID: 1174399001-E Prep Batch: WXX11914 Prep Method: SM21 4500P-B,E Prep Date/Time: 07/14/17 15:45 Prep Initial Wt./Vol.: 25 mL Prep Extract Vol: 25 mL

Print Date: 07/21/2017 3:31:25PM

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Results of SW-04							
Client Sample ID: SW-04 Client Project ID: Wasilla WWTP Su .ab Sample ID: 1174399002 .ab Project ID: 1174399	rface	Collection Date: 07/12/17 13:00 Received Date: 07/12/17 17:12 Matrix: Water (Surface, Eff., Gro Solids (%): Location:					
Results by Microbiology Laboratory	,						
Parameter Biochemical Oxygen Demand	<u>Result Qual</u> 2.19	<u>LOQ/CL</u> 2.00	<u>DL</u> 2.00	<u>Units</u> mg/L	<u>DF</u> 1	<u>Allowable</u> Limits	<u>Date Analyze</u> 07/13/17 12:4
Batch Information							
Analytical Batch: BOD5798 Analytical Method: SM21 5210B Analyst: AKD Analytical Date/Time: 07/13/17 12:47 Container ID: 1174399002-A							
Parameter	<u>Result Qual</u>	LOQ/CL	DL	<u>Units</u>	DF	<u>Allowable</u> Limits	Date Analyze
Fecal Coliform	1.0	1.00	<u>DL</u> 1.00	col/100mL		Linits	07/12/17 18:5
Analytical Date/Time: 07/12/17 18:50 Container ID: 1174399002-C							
Parameter	<u>Result Qual</u>	LOQ/CL	DL	Units	<u>DF</u>	<u>Allowable</u> Limits	Date Analyze
E. Coli	Positive	1	1	100mL	1		07/12/17 18:0
Total Coliform	Positive	1	1	100mL	1		07/12/17 18:0
Batch Information							
Analytical Batch: BTF15766 Analytical Method: SM21 9223B Analyst: ACF Analytical Date/Time: 07/12/17 18:02 Container ID: 1174399002-F							

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Client Sample ID: SW-04 Client Project ID: Wasilla WWTP Sur Lab Sample ID: 1174399002 Lab Project ID: 1174399	face	R M Se	ollection Dat eceived Date latrix: Water olids (%): ocation:	e: 07/12/1	7 17:12	und)	
Results by Waters Department			_			Allowable	
<u>Parameter</u> Total Suspended Solids	<u>Result Qual</u> 4.00	<u>LOQ/CL</u> 2.00	<u>DL</u> 0.620	<u>Units</u> mg/L	<u>DF</u> 1	Limits	Date Analyzed 07/13/17 14:4
Batch Information Analytical Batch: STS5548 Analytical Method: SM21 2540D Analyst: AYC Analytical Date/Time: 07/13/17 14:40 Container ID: 1174399002-B							
<u>Parameter</u> Ammonia-N	<u>Result Qual</u> 0.0500 U	<u>LOQ/CL</u> 0.100	<u>DL</u> 0.0310	<u>Units</u> mg/L	<u>DF</u> 1	<u>Allowable</u> Limits	Date Analyze 07/20/17 13:3
Analytical Batch: WDA4024 Analytical Method: SM21 4500-NH3 G Analyst: NEG Analytical Date/Time: 07/20/17 13:33 Container ID: 1174399002-E		F F F	Prep Batch: V Prep Method: Prep Date/Tim Prep Initial Wt Prep Extract V	METHOD ie: 07/20/1 ./Vol.: 6 m			
<u>Parameter</u> Nitrate-N Nitrite-N	<u>Result Qual</u> 0.0404 J 0.0500 U	<u>LOQ/CL</u> 0.100 0.100	<u>DL</u> 0.0300 0.0300	<u>Units</u> mg/L mg/L	<u>DF</u> 2 2	<u>Allowable</u> Limits	Date Analyzed 07/12/17 18:1 07/12/17 18:1
Batch Information Analytical Batch: WFI2578 Analytical Method: SM21 4500NO3-F Analyst: AYC Analytical Date/Time: 07/12/17 18:16 Container ID: 1174399002-D							
<u>Parameter</u> Total Phosphorus	<u>Result Qual</u> 0.0251	<u>LOQ/CL</u> 0.0200	<u>DL</u> 0.00620	<u>Units</u> mg/L	<u>DF</u> 1	<u>Allowable</u> <u>Limits</u>	<u>Date Analyzed</u> 07/17/17 12:4



Results of SW-04

Client Sample ID: **SW-04** Client Project ID: **Wasilla WWTP Surface** Lab Sample ID: 1174399002 Lab Project ID: 1174399 Collection Date: 07/12/17 13:00 Received Date: 07/12/17 17:12 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:

Results by Waters Department

Batch Information

Analytical Batch: WDA4021 Analytical Method: SM21 4500P-B,E Analyst: NEG Analytical Date/Time: 07/17/17 12:43 Container ID: 1174399002-E Prep Batch: WXX11914 Prep Method: SM21 4500P-B,E Prep Date/Time: 07/14/17 15:45 Prep Initial Wt./Vol.: 25 mL Prep Extract Vol: 25 mL

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11 of 38

Results of SW-05							
Client Sample ID: SW-05 Client Project ID: Wasilla WWTP Sur Lab Sample ID: 1174399003 Lab Project ID: 1174399	face	Collection Date: 07/12/17 13:50 Received Date: 07/12/17 17:12 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:					
Results by Microbiology Laboratory]				
P <u>arameter</u> Biochemical Oxygen Demand	<u>Result Qual</u> 2.74	<u>LOQ/CL</u> 2.00	<u>DL</u> 2.00	<u>Units</u> mg/L	<u>DF</u> 1	<u>Allowable</u> Limits	Date Analyze 07/13/17 12:4
Batch Information							
Analytical Batch: BOD5798 Analytical Method: SM21 5210B Analyst: AKD Analytical Date/Time: 07/13/17 12:47 Container ID: 1174399003-A							
P <u>arameter</u> Fecal Coliform	<u>Result Qual</u> 720	<u>LOQ/CL</u> 1.00	<u>DL</u> 1.00	<u>Units</u> col/100mL	<u>DF</u> . 1	<u>Allowable</u> <u>Limits</u>	Date Analyze 07/12/17 18:5
Analytical Date/Time: 07/12/17 18:50 Container ID: 1174399003-C						Allowshis	
Parameter	Result Qual	LOQ/CL	<u>DL</u>	<u>Units</u>	DF	<u>Allowable</u> <u>Limits</u>	Date Analyze
E. Coli Fotal Coliform	Positive Positive	1 1	1 1	100mL 100mL	1 1		07/12/17 18:0 07/12/17 18:0
Batch Information							
Analytical Batch: BTF15766 Analytical Method: SM21 9223B Analyst: ACF Analytical Date/Time: 07/12/17 18:02 Container ID: 1174399003-F							

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Client Sample ID: SW-05 Client Project ID: Wasilla WWTP Sur Lab Sample ID: 1174399003 Lab Project ID: 1174399	face	Collection Date: 07/12/17 Received Date: 07/12/17 Matrix: Water (Surface, Eff Solids (%): Location:					
Results by Waters Department Parameter	Result Qual	LOQ/CL	DL	<u>Units</u>	DE	<u>Allowable</u> <u>Limits</u>	Date Analyzed
Total Suspended Solids	7.00	2.00	0.620	mg/L	1		07/13/17 14:4
Batch Information Analytical Batch: STS5548 Analytical Method: SM21 2540D Analyst: AYC Analytical Date/Time: 07/13/17 14:40 Container ID: 1174399003-B							
<u>Parameter</u> Ammonia-N	<u>Result Qual</u> 0.0500 U	<u>LOQ/CL</u> 0.100	<u>DL</u> 0.0310	<u>Units</u> mg/L	<u>DF</u> 1	<u>Allowable</u> Limits	<u>Date Analyzed</u> 07/20/17 13:3
Batch Information Analytical Batch: WDA4024 Analytical Method: SM21 4500-NH3 G Analyst: NEG Analytical Date/Time: 07/20/17 13:35 Container ID: 1174399003-E		F F F	Prep Batch: V Prep Method: Prep Date/Tim Prep Initial Wt Prep Extract V	METHOD ne: 07/20/1 ./Vol.: 6 m			
Parameter Nitrate-N Nitrite-N	<u>Result Qual</u> 0.0506 J 0.0500 U	LOQ/CL 0.100 0.100	<u>DL</u> 0.0300 0.0300	<u>Units</u> mg/L mg/L	<u>DF</u> 2 2	<u>Allowable</u> Limits	Date Analyzed 07/12/17 18:1 07/12/17 18:1
Batch Information Analytical Batch: WFI2578 Analytical Method: SM21 4500NO3-F Analyst: AYC Analytical Date/Time: 07/12/17 18:18 Container ID: 1174399003-D							
<u>Parameter</u> Total Phosphorus	<u>Result Qual</u> 0.0135 J	<u>LOQ/CL</u> 0.0200	<u>DL</u> 0.00620	<u>Units</u> mg/L	<u>DF</u> 1	<u>Allowable</u> <u>Limits</u>	Date Analyzed 07/17/17 12:44



Results of SW-05

Client Sample ID: **SW-05** Client Project ID: **Wasilla WWTP Surface** Lab Sample ID: 1174399003 Lab Project ID: 1174399 Collection Date: 07/12/17 13:50 Received Date: 07/12/17 17:12 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:

Results by Waters Department

Batch Information

Analytical Batch: WDA4021 Analytical Method: SM21 4500P-B,E Analyst: NEG Analytical Date/Time: 07/17/17 12:44 Container ID: 1174399003-E Prep Batch: WXX11914 Prep Method: SM21 4500P-B,E Prep Date/Time: 07/14/17 15:45 Prep Initial Wt./Vol.: 25 mL Prep Extract Vol: 25 mL

Print Date: 07/21/2017 3:31:25PM

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Results of SW-09							
Client Sample ID: SW-09 Client Project ID: Wasilla WWTP S Lab Sample ID: 1174399004 Lab Project ID: 1174399	urface	R M S	ollection D eceived Da latrix: Wate olids (%): ocation:				
Results by Microbiology Laborator	у						
<u>Parameter</u> Biochemical Oxygen Demand	<u>Result Qual</u> 2.00 U	<u>LOQ/CL</u> 2.00	<u>DL</u> 2.00	<u>Units</u> mg/L	<u>DF</u> 1	<u>Allowable</u> Limits	<u>Date Analyze</u> 07/13/17 12:4
Batch Information							
Analytical Batch: BOD5798 Analytical Method: SM21 5210B Analyst: AKD Analytical Date/Time: 07/13/17 12:47 Container ID: 1174399004-A	7						
Parameter	Result Qual	LOQ/CL	DL	<u>Units</u>	DF	<u>Allowable</u> Limits	Date Analyze
Fecal Coliform	3.0	1.00	<u>DL</u> 1.00	col/100m		Linits	07/12/17 18:5
Analytical Date/Time: 07/12/17 18:50 Container ID: 1174399004-C)						
Parameter	Result Qual	LOQ/CL	DL	Units	DF	<u>Allowable</u> Limits	Date Analyze
E. Coli Fotal Coliform	Negative Positive	1 1	1 1	100mL 100mL	1 1		07/12/17 18:0 07/12/17 18:0
Batch Information							
Analytical Batch: BTF15766 Analytical Method: SM21 9223B Analyst: ACF Analytical Date/Time: 07/12/17 18:02 Container ID: 1174399004-F	2						

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Results of SW-09							
Client Sample ID: SW-09 Client Project ID: Wasilla WWTP Surfa Lab Sample ID: 1174399004 Lab Project ID: 1174399	ace	R M Se	ollection Dat eceived Date latrix: Water olids (%): ocation:	e: 07/12/1	17 17:12	und)	
Results by Waters Department]				
<u>Parameter</u> Total Suspended Solids	<u>Result Qual</u> 1.80	<u>LOQ/CL</u> 1.00	<u>DL</u> 0.310	<u>Units</u> mg/L	<u>DF</u> 1	<u>Allowable</u> <u>Limits</u>	<u>Date Analyze</u> 07/13/17 14:4
Batch Information							
Analytical Batch: STS5548 Analytical Method: SM21 2540D Analyst: AYC Analytical Date/Time: 07/13/17 14:40 Container ID: 1174399004-B							
P <u>arameter</u> Ammonia-N	<u>Result Qual</u> 0.0500 U	<u>LOQ/CL</u> 0.100	<u>DL</u> 0.0310	<u>Units</u> mg/L	<u>DF</u> 1	<u>Allowable</u> <u>Limits</u>	Date Analyze 07/20/17 13:3
Batch InformationAnalytical Batch: WDA4024Analytical Method: SM21 4500-NH3 GAnalyst: NEGAnalytical Date/Time: 07/20/17 13:36Container ID: 1174399004-E		F F F	Prep Batch: V Prep Method: Prep Date/Tim Prep Initial Wt Prep Extract V	METHOD ne: 07/20/1 /Vol.: 6 m			
P <u>arameter</u> Vitrate-N Vitrite-N	<u>Result Qual</u> 0.0388 J 0.0500 U	<u>LOQ/CL</u> 0.100 0.100	<u>DL</u> 0.0300 0.0300	<u>Units</u> mg/L mg/L	<u>DF</u> 2 2	<u>Allowable</u> Limits	Date Analyze 07/12/17 18:1 07/12/17 18:1
Analytical Batch: WFI2578 Analytical Batch: WFI2578 Analytical Method: SM21 4500NO3-F Analyst: AYC Analytical Date/Time: 07/12/17 18:19 Container ID: 1174399004-D							
<u>Parameter</u> Total Phosphorus	<u>Result Qual</u> 0.0180 J	<u>LOQ/CL</u> 0.0200	<u>DL</u> 0.00620	<u>Units</u> mg/L	<u>DF</u> 1	<u>Allowable</u> <u>Limits</u>	<u>Date Analyze</u> 07/17/17 12:4

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Results of SW-09

Client Sample ID: **SW-09** Client Project ID: **Wasilla WWTP Surface** Lab Sample ID: 1174399004 Lab Project ID: 1174399 Collection Date: 07/12/17 13:45 Received Date: 07/12/17 17:12 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:

Results by Waters Department

Batch Information

Analytical Batch: WDA4021 Analytical Method: SM21 4500P-B,E Analyst: NEG Analytical Date/Time: 07/17/17 12:44 Container ID: 1174399004-E Prep Batch: WXX11914 Prep Method: SM21 4500P-B,E Prep Date/Time: 07/14/17 15:45 Prep Initial Wt./Vol.: 25 mL Prep Extract Vol: 25 mL

Print Date: 07/21/2017 3:31:25PM

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Method Blank]			
Blank ID: MB for HBN 176 Blank Lab ID: 1397854	63434 [BOD/5798]	Matrix	: Water (Sur	face, Eff., Ground)	
QC for Samples: 1174399001, 1174399002, 1	174399003, 1174399004				
Results by SM21 5210B					
<u>Parameter</u> Biochemical Oxygen Deman	Results d 2.00U	LOQ/CL 2.00	<u>DL</u> 2.00	<u>Units</u> mg/L	
Batch Information					
Analytical Batch: BOD57 Analytical Method: SM21 Instrument: Analyst: AKD Analytical Date/Time: 7/1	I 5210B				

Print Date: 07/21/2017 3:31:28PM

lank Spike Summary					
ank Spike ID: LCS for HBN lank Spike Lab ID: 1397855 ate Analyzed: 07/13/2017		[BOD5798		ix: Water (Surface, Eff., Ground)	
C for Samples: 11743990	001, 11743	99002, 1174	399003, 1174399004		
Results by SM21 5210B					
		Blank Spike	(mg/L)		
arameter ochemical Oxygen Demand	<u>Spike</u> 198	<u>Result</u> 117	<u>Rec (%)</u> 59 *	<u>CL</u> (84.6-115.4	
atch Information					
Analytical Batch: BOD5798 Analytical Method: SM21 5210 Instrument: Analyst: AKD	IB				

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lank ID: MB for HBN 1 lank Lab ID: 1397518		Matrix	k: Water (Sur	face, Eff., Ground)
C for Samples: 174399001, 1174399002	2, 1174399003, 1174399004			
Results by SM21 9223E	3			
arameter	<u>Results</u>	LOQ/CL	<u>DL</u>	<u>Units</u>
. Coli	Negative	1	1	100mL
otal Coliform	Negative	1	1	100mL
tch Information Analytical Batch: BTF Analytical Method: SM Instrument: Analyst: K.W				
	7/12/2017 12:43:00PM			

Print Date: 07/21/2017 3:31:32PM

Method Blank		J			
Blank ID: MB for HBN Blank Lab ID: 1397672		Matrix	:: Water (Surf	ace, Eff., Ground)	
QC for Samples: 1174399001, 117439900	2, 1174399003, 1174399004				
Results by SM21 9222	D	J			
Parameter	Results	LOQ/CL	<u>DL</u>	<u>Units</u>	
Fecal Coliform	1.00U	1.00	1.00	col/100mL	
Batch Information					
Analytical Batch: BTF Analytical Method: SM Instrument: Analyst: ACF Analytical Date/Time:					

Print Date: 07/21/2017 3:31:34PM

Method Blank					
Blank ID: MB for HBN 1763 Blank Lab ID: 1397847	3431 [STS/5548]	Matri	x: Water (Surfa	ace, Eff., Ground)	
QC for Samples: 1174399001, 1174399002, 17	174399003, 1174399004				
Results by SM21 2540D]			
Parameter Total Suspended Solids	<u>Results</u> 0.500U	<u>LOQ/CL</u> 1.00	<u>DL</u> 0.310	<u>Units</u> mg/L	
Batch Information					
Analytical Batch: STS554 Analytical Method: SM21 Instrument: Analyst: AYC Analytical Date/Time: 7/13	2540D				

Print Date: 07/21/2017 3:31:37PM

Ouplicate Sample Summary	У				
Driginal Sample ID: 117425 Duplicate Sample ID: 13978				07/13/2017 14:40 Surface, Eff., Grou	
C for Samples:					
174399001, 1174399002, 1	1174399003, 11743	399004			
Results by SM21 2540D					
IAME	<u>Original</u>	Duplicate	<u>Units</u>	<u>RPD (%)</u>	RPD CL
otal Suspended Solids	345	375	mg/L	8.30*	(< 5)
atch Information					
Analytical Batch: STS5548 Analytical Method: SM21 254 Instrument: Analyst: AYC	40D				
Analyst. ATC					

Print Date: 07/21/2017 3:31:38PM

Duplicate Sample Summary	/				
Driginal Sample ID: 117442 Duplicate Sample ID: 13978				07/13/2017 14:40 Surface, Eff., Grou	nd)
C for Samples:					
174399001, 1174399002, 1	174399003, 11743	399004			
Results by SM21 2540D					
IAME	Original	Duplicate	<u>Units</u>	<u>RPD (%)</u>	RPD CL
otal Suspended Solids	118	112	mg/L	5.20*	(< 5)
Batch Information					
Analytical Batch: STS5548 Analytical Method: SM21 254 Instrument: Analyst: AYC	40D				

Print Date: 07/21/2017 3:31:38PM



Blank Spike Summary Blank Spike ID: LCS for HB Blank Spike Lab ID: 139784 Date Analyzed: 07/13/201	48	[STS5548]		[ST Spi	S5548] ke Duplica	ate Lab ID:	D for HBN 1 1397849 Eff., Ground		
QC for Samples: 117439	9001, 11743	99002, 1174	1399003, 117	74399004					
Results by SM21 2540D									
Deveneder		Blank Spike				cate (mg/L)	CI		
<u>Parameter</u> Fotal Suspended Solids	<u>Spike</u> 50	<u>Result</u> 50.1	<u>Rec (%)</u> 100	<u>Spike</u> 50	<u>Result</u> 49.5	<u>Rec (%)</u> 99	<u>CL</u> (75-125)	<u>RPD (%)</u> 1.20	<u>RPD CL</u> (< 5)
Batch Information									
Analytical Batch: STS5548 Analytical Method: SM21 25 Instrument:	40D								
Analyst: AYC									

Method Blank					
Blank ID: MB for HBN 176 Blank Lab ID: 1397820	63427 (WFI/2578)	Matrix	x: Water (Surfa	ce, Eff., Ground)	
QC for Samples: 1174399001, 1174399002, 1	174399003, 1174399004				
Results by SM21 4500NO	3-F				
Parameter	Results	LOQ/CL	<u>DL</u>	<u>Units</u>	
Nitrate-N	0.0526J	0.100	0.0300	mg/L	
Nitrite-N	0.0500U	0.100	0.0300	mg/L	
Total Nitrate/Nitrite-N	0.0674J	0.100	0.0300	mg/L	
Batch Information Analytical Batch: WFI257 Analytical Method: SM21	4500NO3-F				
Instrument: Astoria segm Analyst: AYC Analytical Date/Time: 7/1					

Print Date: 07/21/2017 3:31:40PM



Blank Spike Summary

Blank Spike ID: LCS for HBN 1174399 [WFI2578] Blank Spike Lab ID: 1397819 Date Analyzed: 07/12/2017 17:11

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1174399001, 1174399002, 1174399003, 1174399004

Results by SM21 4500NO3-F

Batch Information

Analytical Batch: WFI2578 Analytical Method: SM21 4500NO3-F Instrument: Astoria segmented flow Analyst: AYC

Print Date: 07/21/2017 3:31:41PM



Matrix Spike Summary

Original Sample ID: 1174337001 MS Sample ID: 1397798 MS MSD Sample ID: 1397799 MSD Analysis Date: 07/12/2017 16:36 Analysis Date: 07/12/2017 16:38 Analysis Date: 07/12/2017 16:40 Matrix: Drinking Water

QC for Samples:

Results by SM21 45	500NO3-F									
		Ma	trix Spike (mg/L)	Spike	e Duplicate	e (mg/L)			
Parameter	<u>Sample</u>	Spike	Result	<u>Rec (%)</u>	<u>Spike</u>	Result	<u>Rec (%)</u>	CL	<u>RPD (%)</u>	RPD CL
Nitrate-N	1.08	2.50	3.61	101	2.50	3.55	99	70-130	1.60	(< 25)
Nitrite-N	0.100U	2.50	2.52	101	2.50	2.60	104	90-110	3.20	(< 25)

Batch Information

Analytical Batch: WFI2578 Analytical Method: SM21 4500NO3-F Instrument: Astoria segmented flow Analyst: AYC Analytical Date/Time: 7/12/2017 4:38:15PM

Print Date: 07/21/2017 3:31:43PM



Matrix Spike Summary

Original Sample ID: 1174398005 MS Sample ID: 1397800 MS MSD Sample ID: 1397801 MSD Analysis Date: 07/12/2017 18:04 Analysis Date: 07/12/2017 18:06 Analysis Date: 07/12/2017 18:07 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1174399001, 1174399002, 1174399003, 1174399004

		Ma	trix Spike (mg/L)	Spike	e Duplicate	e (mg/L)			
<u>Parameter</u> Nitrate-N Nitrite-N	<u>Sample</u> 0.100U 0.100U	<u>Spike</u> 2.50 2.50	<u>Result</u> 2.46 2.62	<u>Rec (%)</u> 98 105	<u>Spike</u> 2.50 2.50	<u>Result</u> 2.48 2.61	<u>Rec (%)</u> 99 104	<u>CL</u> 70-130 90-110	<u>RPD (%)</u> 0.71 0.54	<u>RPD C</u> (< 25) (< 25)
Instrument: Astoria s Analyst: AYC Analytical Date/Time:	-	PM								

Print Date: 07/21/2017 3:31:43PM

ank Lab ID: 1398700 for Samples:	763881 [WXX/11914] 2, 1174399003, 1174399004		k: Water (Surfac	-, , ,
esults by SM21 4500P	P-B,E			
<u>arameter</u> otal Phosphorus	<u>Results</u> 0.0129J	<u>LOQ/CL</u> 0.0200	<u>DL</u> 0.00620	<u>Units</u> mg/L
tch Information				
Analytical Batch: WDA Analytical Method: SM Instrument: Discrete A Analyst: NEG Analytical Date/Time:	l21 4500P-B,E	Prep Me Prep Da Prep Init	tch: WXX11914 ethod: SM21 4500 te/Time: 7/14/20 ial Wt./Vol.: 25 m tract Vol: 25 mL	17 3:45:00PM

Print Date: 07/21/2017 3:31:43PM



Blank Spike Summary

Blank Spike ID: LCS for HBN 1174399 [WXX11914] Blank Spike Lab ID: 1398701 Date Analyzed: 07/17/2017 12:19 Spike Duplicate ID: LCSD for HBN 1174399 [WXX11914] Spike Duplicate Lab ID: 1398702 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1174399001, 1174399002, 1174399003, 1174399004

		Blank Spike	e (mg/L)	5	pike Duplic	ate (mg/L)			
Parameter	<u>Spike</u>	Result	Rec (%)	<u>Spike</u>	Result	<u>Rec (%)</u>	CL	<u>RPD (%)</u>	RPD CL
Total Phosphorus	0.2	0.199	99	0.2	0.196	98	(85-115)	1.10	(< 25)
Batch Information									
Batch Information Analytical Batch: WDA4021				Pre	o Batch: W	XX11914			
	-B,E					XX11914 SM21 4500P	-B,E		
Analytical Batch: WDA4021	,			Pre	o Method:		,		
Analytical Batch: WDA4021 Analytical Method: SM21 4500P-	,			Pre Pre	o Method: S o Date/Time	SM21 4500P e: 07/14/201	,	′ol: 25 mL	

Print Date: 07/21/2017 3:31:46PM



Matrix Spike Summary

Original Sample ID: 1174028001 MS Sample ID: 1398703 MS MSD Sample ID: 1398704 MSD Analysis Date: 07/17/2017 12:21 Analysis Date: 07/17/2017 12:22 Analysis Date: 07/17/2017 12:23 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1174399001, 1174399002, 1174399003, 1174399004

		Ma	trix Spike ((mg/L)	Spike	e Duplicate	e (mg/L)			
Parameter	Sample	<u>Spike</u>	<u>Result</u>	<u>Rec (%)</u>	<u>Spike</u>	Result	<u>Rec (%)</u>	<u>CL</u>	<u>RPD (%)</u>	RPD C
otal Phosphorus	0.0385	0.200	.232	97	0.200	0.257	109	75-125	10.20	(< 25)
Batch Information	021			Dror	Dotob: W	NXX11014				
Batch Information Analytical Batch: WDA4 Analytical Method: SM2 Instrument: Discrete An	1 4500P-B,E			Prep	Method:		sphorus (W 017 3:45:0	/		
Analytical Batch: WDA4 Analytical Method: SM2	1 4500P-B,E			Prep Prep	Method: Date/Tim	Total Pho	sphorus (W 017 3:45:0	/		

Print Date: 07/21/2017 3:31:47PM

Ammonia-N 0.0500U 0.100 0.0310 mg/L	Parameter Results LOQ/CL DL Units Ammonia-N 0.0500U 0.100 0.0310 mg/L Match Information Prep Batch: WDA4024 Prep Batch: WXX11917 Analytical Batch: WDA4024 Prep Method: METHOD Instrument: Discrete Analyzer 2 Prep Date/Time: 7/20/2017 1:00:00PM Analyst: NEG Prep Initial Wt./Vol.: 6 mL	Blank Lab ID: 13993 QC for Samples:	N 1764036 [WXX/11917] 74 002, 1174399003, 1174399004	Matrix	k: Water (Surfac	ce, Eff., Ground)	
Ammonia-N 0.0500U 0.100 0.0310 mg/L Batch Information Prep Batch: WXX11917 Analytical Batch: WDA4024 Prep Batch: WXX11917 Analytical Method: SM21 4500-NH3 G Prep Method: METHOD Instrument: Discrete Analyzer 2 Prep Date/Time: 7/20/2017 Analyst: NEG Prep Initial Wt./Vol.: 6 mL	Ammonia-N 0.0500U 0.100 0.0310 mg/L Batch Information Prep Batch: WDA4024 Prep Batch: WXX11917 Analytical Batch: WDA4024 Prep Method: METHOD Instrument: Discrete Analyzer 2 Prep Date/Time: 7/20/2017 1:00:00PM Analyst: NEG Prep Initial Wt./Vol.: 6 mL	Results by SM21 450	0-NH3 G				
Analytical Method:SM21 4500-NH3 GPrep Method:METHODInstrument:Discrete Analyzer 2Prep Date/Time:7/20/20171:00:00PMAnalyst:NEGPrep Initial Wt./Vol.:6 mL	Analytical Batch: WDA4024Prep Batch: WXX11917Analytical Method: SM21 4500-NH3 GPrep Method: METHODInstrument: Discrete Analyzer 2Prep Date/Time: 7/20/2017 1:00:00PMAnalyst: NEGPrep Initial Wt./Vol.: 6 mL	<u>Parameter</u> Ammonia-N					
		Analytical Method: Instrument: Discrete Analyst: NEG	SM21 4500-NH3 G e Analyzer 2	Prep Me Prep Da Prep Init	ethod: METHOD te/Time: 7/20/20 tial Wt./Vol.: 6 m	017 1:00:00PM	

Print Date: 07/21/2017 3:31:48PM



Blank Spike Summary

Blank Spike ID: LCS for HBN 1174399 [WXX11917] Blank Spike Lab ID: 1399375 Date Analyzed: 07/20/2017 13:25 Spike Duplicate ID: LCSD for HBN 1174399 [WXX11917] Spike Duplicate Lab ID: 1399376 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1174399001, 1174399002, 1174399003, 1174399004

		Blank Spike	e (mg/L)	5	Spike Duplie	cate (mg/L)			
<u>Parameter</u>	<u>Spike</u>	Result	<u>Rec (%)</u>	<u>Spike</u>	Result	<u>Rec (%)</u>	<u>CL</u>	<u>RPD (%)</u>	RPD CL
Ammonia-N	1	1.00	100	1	1.02	102	(75-125)	1.40	(< 25)
Analytical Batch: WDA402 Analytical Method: SM21	4500-NH3 G			Pre	p Batch: W p Method:	METHOD			
Instrument: Discrete Anal				Pre	o Date/Tim	e: 07/20/201			
Analyst: NEG		Spike Init Wt./Vol.: 1 mg/L Extract Vol: 6 mL Dupe Init Wt./Vol.: 1 mg/L Extract Vol: 6 mL							

Print Date: 07/21/2017 3:31:50PM



Matrix Spike Summary

Original Sample ID: 1174399001 MS Sample ID: 1399377 MS MSD Sample ID: 1399378 MSD Analysis Date: 07/20/2017 13:28 Analysis Date: 07/20/2017 13:30 Analysis Date: 07/20/2017 13:31 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1174399001, 1174399002, 1174399003, 1174399004

		Ma	trix Spike (mg/L)	Spike	e Duplicate	e (mg/L)			
<u>Parameter</u> Ammonia-N	<u>Sample</u> 0.0500U	<u>Spike</u> 1.00	<u>Result</u> .906	<u>Rec (%)</u> 91	<u>Spike</u> 1.00	<u>Result</u> 0.832	<u>Rec (%)</u> 83	<u>CL</u> 75-125	<u>RPD (%)</u> 8.50	<u>RPD C</u> (< 25)
Batch Information Analytical Batch: WDA4024 Analytical Method: SM21 45 Instrument: Discrete Analyzi Analyst: NEG Analytical Date/Time: 7/20/2	500-NH3 G er 2	PM		Prep Prep Prep	Method: Date/Tim Initial Wt		by SM21 4 017 1:00:0 0mL		(W)	

Print Date: 07/21/2017 3:31:51PM

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SGS North America Inc. CHAIN OF CUSTODY RECORD

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F083-Blank_COC_Templates_2015-03-19

ABSENT

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

al: (Circle)

uirements:



e-Sample Receipt Form

Workorder #:	
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SGS

1174399



Review Criteria	on (Yes,	No, N/A	Excep	otions No	ted belo	w	
Chain of Custody / Temperature Requiremen	<u>ts</u>	у	es Exemption perm	nitted if sam	pler hand c	arries/deliv	ers.
Were Custody Seals intact? Note # & location	n/a	ABSENT					
COC accompanied samples?	yes						
yes **Exemption permitted if chilled &	& colle	cted <8 hou	irs ago, or for samp	les where ch	nilling is not	required	
	yes	Cooler ID:	1	@	4.1 °C ⁻	Therm. ID:	D21
	n/a	Cooler ID:		@	°C	Therm. ID:	
Temperature blank compliant* (i.e., 0-6 °C after CF)?	n/a	Cooler ID:		@	°C	Therm. ID:	
	n/a	Cooler ID:		@	°C	Therm. ID:	
	n/a	Cooler ID:		@	°C	Therm. ID:	
*If >6°C, were samples collected <8 hours ago?	n/a		-				
If <0°C, were sample containers ice free?	n/a						
If samples received without a temperature blank, the "cooler							
temperature" will be documented in lieu of the temperature blank &							
"COOLER TEMP" will be noted to the right. In cases where neither a							
temp blank nor cooler temp can be obtained, note "ambient" or "chilled".							
Note: Identify containers received at non-compliant temperature .							
Use form FS-0029 if more space is needed.							
Holding Time / Documentation / Sample Condition Requiren		Note: Refe	r to form F-083 "Sar	nple Guide"	for specific	c holding tir	nes.
Were samples received within holding time?	yes						
Do samples match COC** (i.e.,sample IDs,dates/times collected)?							
**Note: If times differ <1hr, record details & login per COC.							
Were analyses requested unambiguous? (i.e., method is specified for							
analyses with >1 option for analysis)							
		n	/a ***Exemption pe	ermitted for I	netals (e.a.	,200.8/602	0A).
Were proper containers (type/mass/volume/preservative***)used?	ves						
Volatile / LL-Hg Requirem	_						
Were Trip Blanks (i.e., VOAs, LL-Hg) in cooler with samples?							
Were all water VOA vials free of headspace (i.e., bubbles ≤ 6mm)?							
Were all soil VOAs field extracted with MeOH+BFB?							
Note to Client: Any "No", answer above indicates non-compl		with standa	rd procedures and r	nav impact (tata quality	,	
				nay impact (add quality		
Additional notes	s (if a	pplicable)):				



Sample Containers and Preservatives

Container Id	Preservative	<u>Container</u> Condition	Container Id	<u>Preservative</u>	<u>Container</u> Condition
1174399001-A	No Preservative Required	ОК			
1174399001-B	No Preservative Required	ОК			
1174399001-C	Na2S2O3 for Chlorine Redu	ОК			
1174399001-D	No Preservative Required	ОК			
1174399001-E	H2SO4 to pH < 2	ОК			
1174399001-F	Na2S2O3 for Chlorine Redu	ОК			
1174399002-A	No Preservative Required	ОК			
1174399002-В	No Preservative Required	ОК			
1174399002-C	Na2S2O3 for Chlorine Redu	ОК			
1174399002-D	No Preservative Required	ОК			
1174399002-Е	H2SO4 to pH < 2	ОК			
1174399002-F	Na2S2O3 for Chlorine Redu	ОК			
1174399003-A	No Preservative Required	ОК			
1174399003-B	No Preservative Required	ОК			
1174399003-C	Na2S2O3 for Chlorine Redu	ОК			
1174399003-D	No Preservative Required	ОК			
1174399003-Е	H2SO4 to pH < 2	ОК			
1174399003-F	Na2S2O3 for Chlorine Redu	ОК			
1174399004-A	No Preservative Required	ОК			
1174399004-В	No Preservative Required	ОК			
1174399004-C	Na2S2O3 for Chlorine Redu	ОК			
1174399004-D	No Preservative Required	ОК			
1174399004-Е	H2SO4 to pH < 2	ОК			
1174399004-F	Na2S2O3 for Chlorine Redu	ОК			

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.

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 Perceipt Form for details on the amount and let # of the analysis added to the correct pH for the analysis requested.

requested. See the Sample Receipt Form for details on the amount and lot # of the preservative added.