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March 31, 2016

Ms. Kelley Keenan Environmental Testing Solutions, Inc. 351 Depot Street Asheville, NC 28801 USA

Dear Kelley,

Thank you for participating in the WP0216 Water Pollution Proficiency Testing Study. Enclosed is your final report, which has been carefully reviewed by the PT specialists at Phenova. This report presents some additional sections and features which will give you more information on the study data for the standards that were reported by your laboratory and more information regarding the overall performance of your laboratory in relation to other study participants.

The enclosed report is in two sections, the "Evaluation Report" and the "Statistical Report". The "Evaluation Report" contains the evaluation of your reported data as well the reported method, analysis date and analyst. The "Evaluation Report" is an updated and enhanced version of the reports you previously received at the conclusion of our PT studies. The "Statistical Report" contains your passing percentage as well as statistics from the study for the analytes reported by your laboratory.

For any analyte falling outside the established acceptance limits, our PT management staff would like to assist you in determining the most appropriate course of corrective action for your facility. Please contact us at any time if we may be of service to you.

Thank you again for participating in the WP0216 Water Pollution Proficiency Testing Study. We appreciate working with you and look forward to our next study. If you have any questions, please call us at 866-942-2978.





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Report Definitions:	
Assigned Value	The Assigned Value is determined from the study mean, gravimetric and volumetric true concentration of an analyte to be analyzed, calculation and/or an appropriate reference value as stipulated in the EPA National Standards for Water Proficiency Testing Studies Criteria Document (current version), the National Environmental Laboratory Accreditation Conference (NELAC) criteria (ref: NELAC FOT tables, NELAC PT Committee) and other documents distributed by accrediting agencies as applicable.
Evaluation Limits	Acceptance Limits are derived from fixed limits, coefficients, constants and calculations stipulated in the EPA National Standards for Water Proficiency Testing Studies Criteria Documents (current version), the National Environmental Laboratory Accreditation Conference (NELAC) criteria (ref: NELAC PT FOT tables, NELAC PT Committee) and other documents distributed by accrediting agencies as applicable.
Evaluation	
Acceptable	The reported value falls within the Acceptance Limits.
Not Acceptable	The reported value falls outside the Acceptance Limits.
No Evaluation	The reported value is non-numeric and can not be evaluated.
NR	As required by the NELAC standards and requested by state authorities, any analyte purchased but not reported by your facility is listed as NR (Not Reported).
Study Mean and Standard Deviation	The mean and standard deviation are calculated from the study data using robust statistical calculations when possible. Other statistical calculations may be used if robust statistical calculations are not possible. The displayed values are independent of any statistical calculations required for the calculation of the analyte evaluation limits.

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This report must not be used to claim product certification, approval, or endorsement by the American Association for Laboratory

Accreditation (A2LA) or any agency of the federal government.





State Regulatory Agency Request(s):

Phenova has been authorized to send a copy of your WP0216 final results to the following state agencies: KY, NC and SC

Other Regulatory Agency Request(s):

No requests were made to send a copy of your WP0216 final results to an agency.

Third Party Request(s):

No requests were made to send a copy of your WP0216 final results to a third party.





Final Report - Water Pollution Proficiency Testing

Study: WP0216

Opening Date: February 8, 2016 - Closing Date: March 24, 2016

Laboratory:	Environmental Testing Solutions, Inc. 351 Depot Street	Contact:	Ms. Kelley Keenan 828-350-9364
	Asheville, NC 28801 USA	EPA Lab ID:	NC01230

Dem	nand (PT-DEM-WP)								Lot	#: 8164-07
NELAC Code	Analyte	Analysis Date	Analyst	Method Code	Method Description	Units	Assigned Value	Result	Acceptance Limits	Evaluation
1530	BOD	2/18/2016	KEK	20135017	SM 5210 B-2001, Rev. 2011	mg/L	35.6	17	17.4 - 59.4	Not Acceptable
1555	CBOD	2/24/2016	KEK	20135017	SM 5210 B-2001, Rev. 2011	mg/L	35.6	18	13.1 - 59.4	Acceptable
1565	COD	2/18/2016	KEK	60003001	Hach 8000	mg/L	55.2	<50	37.8 - 70.3	Acceptable
2040	TOC					mg/L	21.8		17.7 - 26.0	NR
Mine	erals 1 (PT-MIN1-WP)								Lot	#: 8164-08
NELAC Code	Analyte	Analysis Date	Analyst	Method Code	Method Description	Units	Assigned Value	Result	Acceptance Limits	Evaluation
1505	Total Alkalinity(as CaCO3)	2/26/2016	KEK	20045414	SM 2320 B-1997, Rev. 2011	mg/L	378	356	321 - 435	Acceptable
1540	Bromide					mg/L	2.06		1.50 - 2.55	NR
1575	Chloride	2/26/2016	KEK	20079010	SM 4500-CI C-1997, Rev. 2011	mg/L	174	167	154 - 195	Acceptable
1730	Fluoride					mg/L	1.12		0.864 - 1.36	NR
2000	Sulfate	3/17/2016	KEK	20132836	SM 4500-SO4 ⁻ E-1997, Rev.2011	mg/L	12.0	11	8.97 - 14.4	Acceptable
Additi	ional State Specific Analytes									
1813	Total Inorganic Carbon					mg/L	90.3		72.2 - 108	NR
Mine	erals 2 - Hardness (PT-MI	N2-WP)							Lot #:	8164-102
NELAC Code	Analyte	Analysis Date	Analyst	Method Code	Method Description	Units	Assigned Value	Result	Acceptance Limits	Evaluation
1035	Calcium					mg/L	37.0		31.5 - 42.6	NR
1550	Calcium Hardness (as CaCO3)					mg/L	92.5		78.6 - 106	NR
1755	Total Hardness (as CaCO3)	3/4/2016	KEK	20047410	SM 2340 C-1997, Rev. 2011	mg/L	134	126	114 - 155	Acceptable
1085	Magnesium					mg/L	10.2		8.66 - 11.7	NR
1125	Potassium					mg/L	33.5		26.8 - 40.2	NR
1155	Sodium					mg/L	39.5		31.6 - 47.4	NR





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Laboratory:	Environmental Testing Solutions, Inc. 351 Depot Street	Contact:	Ms. Kelley Keenan 828-350-9364
	Asheville, NC 28801 USA	EPA Lab ID:	NC01230

Spe	cific Conductance (PT-CO	ND-WP)							Lot	#: 8164-72
NELAC Code	Analyte	Analysis Date	Analyst	Method Code	Method Description	Units	Assigned Value	Result	Acceptance Limits	Evaluation
1610	Specific Conductance (25°C)	2/19/2016	KEK	20048413	SM 2510 B-1997, Rev. 2011	µmhos/cm	725	720	653 - 798	Acceptable
Soli	ds (PT-SOL-WP)								Lot	#: 8164-09
NELAC Code	Analyte	Analysis Date	Analyst	Method Code	Method Description	Units	Assigned Value	Result	Acceptance Limits	Evaluation
1955	Total Dissolved Solids at 180° (TFR)	2/17/2016	KEK	20050424	SM 2540 C-1997, Rev. 2011	mg/L	496	582	447 - 546	Not Acceptable
1960	Non-Filterable Residue (TSS)	2/11/2016	KEK	20051018	SM 2540 D-1997, Rev. 2011	mg/L	84.9	84	69.6 - 94.4	Acceptable
1950	Total Solids					mg/L	581		523 - 639	NR
Nutr	ients 1 - Simple (PT-NUT1	I-WP)							Lot	#: 816 <mark>4-1</mark> 0
NELAC Code	Analyte	Analysis Date	Analyst	Method Code	Method Description	Units	Assigned Value	Result	Acceptance Limits	Evaluation
1515	Ammonia as N	3/17/2016	KEK	20109211	SM 4500-NH3 D-1997, Rev. 2011	mg/L	13.4	12.8	10.7 - 15.9	Acceptable
1810	Nitrate as N					mg/L	3.75		2.98 - 4.50	NR
1820	Nitrate and Nitrite as N					mg/L	3.75		3.04 - 4.42	NR
1870	Orthophosphate as P					mg/L	3.04		2.59 - 3.50	NR
Additi	onal State Specific Analytes									
1712	Total Dissolved Phosphorus					mg/L	3.04		2.59 - 3.50	NR
1647	Dissolved Nitrogen					mg/L	17.1		14.3 - 19.9	NR
1827	Total Nitrogen					mg/L	17.1		14.3 - 19.9	NR
pH (PT-PH-WP)								Lot	#: 8164-15
NELAC Code	Analyte	Analysis Date	Analyst	Method Code	Method Description	Units	Assigned Value	Result	Acceptance Limits	Evaluation
1900	рН	2/19/2016	KEK	20105015	SM 4500-H+ B-2000, Rev. 2011	S.U.	6.14	6.10	5.94 - 6.34	Acceptable





Final Report - Water Pollution Proficiency Testing

Study: WP0216

Opening Date: February 8, 2016 - Closing Date: March 24, 2016

Laboratory:	Environmental Testing Solutions, Inc. 351 Depot Street	Contact:	Ms. Kelley Keenan 828-350-9364
	Asheville, NC 28801 USA	EPA Lab ID:	NC01230

Res	idual Chlorine Low Level	(PT-CLLL-	WP)						Lot #:	8164-94B
NELAC Code	Analyte	Analysis Date	Analyst	Method Code	Method Description	Units	Assigned Value	Result	Acceptance Limits	Evaluation
1940	Total Residual Chlorine	2/23/2016	KEK	60006522	Orion Electrode, 1977	µg/L	217	200	157 - 277	Acceptable
Sett	leable Solids (PT-SSOL-V	/P)							Lot #	#: 8164-17
NELAC Code	Analyte	Analysis Date	Analyst	Method Code	Method Description	Units	Assigned Value	Result	Acceptance Limits	Evaluation
1965	Settleable Solids	2/17/2016	KEK	20052011	SM 2540 F-1997, Rev. 2011	mL/L	31.0	32	25.4 - 39.3	Acceptable
Tur	bidity (PT-TURB-WP)								Lot #	#: 8164-20
NELAC Code	Analyte	Analysis Date	Analyst	Method Code	Method Description	Units	Assigned Value	Result	Acceptance Limits	Evaluation
2055	Turbidity	2/18/2016	KEK	20042619	SM 2130 B-2001, Rev. 2011	NTU	20.0	18	16.7 - 23.3	Acceptable





PT Study Score Report

EPA ID:	NC01230
Laboratory:	Environmental Testing Solutions, Inc.
	351 Depot Street
	Asheville, NC 28801
	USA

	Number of	Number of	
Study Number	Reported Results	Passing Results	Percent Passing
WP0216	15	13	86.7%

Report Definitions:

Number of Reported Results	The number of results reported which could be evaluated. Results receiving an evaluation of "NR" or "No Evaluation" are not included.
Number of Passing Results	The number of results reported receiving an evaluation of "Acceptable" or "Check for Error".
Percent Passing	The percentage of results reported receiving an evaluation of "Acceptable" or "Check for Error".





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Statistical Summary Report - Water Pollution Proficiency Testing

Opening Date: February 8, 2016 - Closing Date: March 24, 2016

Laboratory: Environmental Testing Solutions, Inc. 351 Depot Street

- Asheville, NC 28801
- USA

Ms. Kelley Keenan 828-350-9364

EPA Lab ID: NC01230

Contact:

Code Mean Standard Deviation Limit % Limit % 1530 BOD mg/L 34.8 6.65 44.9 167 1555 CBOD mg/L 34.6 3.71 36.8 167 1565 COD mg/L 53.9 3.82 68.5 127 2040 TOC mg/L 22.9 2.21 81.2 119 Minerals 1 (PT-MIN1-WP) Lot #: 8164 Lot #: 8164 Lot #: 8164 196.4 196.4 196.4 197.4 84.9 115 1505 Total Alkalinity(as CaCO3) mg/L 367 9.74 84.9 115 154.0 Bromide mg/L 10.5 0.0806 77.1 121 120 118 0.627 74.8 120 1730 Fluoride mg/L 11.8 0.627 74.8 120 Additional State Specific Analytes mg/L 11.8 0.627 74.8 120 NeLAC Analyte Units Study	Dem	nand (PT-DEM-WP)				Lot	#: 8164-07
1555 CBOD mg/L 34.6 3.71 36.8 167 1565 COD mg/L 53.9 3.82 68.5 127 2040 TOC mg/L 22.9 2.21 81.2 119 Minerals 1 (PT-MIN1-WP) Lot #: 8164 NELAC Analyte Units Study Study Low Acceptance Limit % High Accept 1505 Total Alkalinity(as CaCO3) mg/L 367 9.74 84.9 115 1506 Bromide mg/L 2.07 0.287 72.8 124 1575 Choirde mg/L 1.05 0.0806 77.1 121 2000 Suffate mg/L 1.05 0.0806 77.1 121 2000 Suffate mg/L 1.05 0.0806 77.1 121 2000 Suffate mg/L 1.05 0.0806 74.8 120 Additional State Specific Analytes Units Study Study <td< th=""><th></th><th>Analyte</th><th>Units</th><th>-</th><th>Standard</th><th></th><th>High Acceptance Limit %</th></td<>		Analyte	Units	-	Standard		High Acceptance Limit %
1565 COD mg/L 53.9 3.82 68.5 127 2040 TOC mg/L 22.9 2.21 81.2 119 Minerals 1 (PT-MIN1-WP) Lot #: 8164- NELAC Analyte Units Study Mean Study Standard Deviation Low Acceptance Limit % High Accepts 1505 Total Alkalinity(as CaCO3) mg/L 367 9.74 84.9 115 1540 Bromide mg/L 2.07 0.287 72.8 124 1575 Chloride mg/L 1.05 0.0806 77.1 121 2000 Suffate mg/L 11.8 0.627 74.8 120 Additional State Specific Analytes mg/L N/A 0.00 80.0 120 Minerals 2 - Hardness (PT-MIN2-WP) Lot #: 8164-1 Limit % Limit % Limit % NELAC Analyte Units Study Study Low Acceptance Limit % 1035 Calclum Hardness (as CaCO3) mg/L <td< td=""><td>1530</td><td>BOD</td><td>mg/L</td><td>34.8</td><td>6.65</td><td>48.9</td><td>167</td></td<>	1530	BOD	mg/L	34.8	6.65	48.9	167
2040 TOC mg/L 22.9 2.21 81.2 119 Minerals 1 (PT-MIN1-WP) Lot #: 8164- NELAC Code Analyte Units Study Mean Study Study Deviation Low Acceptance Limit % High Accepts 1505 Total Alkalinity(as CaCO3) mg/L 367 9.74 84.9 115 1540 Bromide mg/L 2.07 0.287 72.8 124 1575 Chloride mg/L 1.05 0.0806 77.1 121 2000 Suffate mg/L 1.05 0.0806 77.1 121 2000 Suffate mg/L 11.8 0.627 74.8 120 Additional State Specific Analytes mg/L N/A 0.00 80.0 120 Minerals 2 - Hardness (PT-MIN2-WP) Lot #: 8164-1 1.90 85.1 115 1813 Total Inorganic Carbon mg/L 35.4 1.90 85.1 115 1935 Calcium Hardness (as CaCO3) mg/L 35.4	1555	CBOD	mg/L	34.6	3.71	36.8	167
Minerals 1 (PT-MIN1-WP) Lot #: 8164 NELAC Analyte Units Study Study Lot #: 8164 Code Analyte Units Study Mean Lot #: 8164 1505 Total Alkalinity(as CaCO3) mg/L 367 9.74 84.9 115 1540 Bromide mg/L 2.07 0.287 72.8 124 1575 Chloride mg/L 10.5 0.0806 77.1 121 2000 Sulfate mg/L 11.8 0.627 74.8 120 Additional State Specific Analytes mg/L 11.8 0.627 74.8 120 Additional State Specific Analytes mg/L 11.8 0.627 74.8 120 Minerals 2 + Hardness (PT-MIN2-WP) Lot #: 8164-1 N/A 0.00 80.0 120 NELAC Analyte Units Study Study Low Acceptance Limit % 1035 Calcium Hardness (as CaCO3) mg/L 35.4 1.90 85.1 <td>1565</td> <td>COD</td> <td>mg/L</td> <td>53.9</td> <td>3.82</td> <td>68.5</td> <td>127</td>	1565	COD	mg/L	53.9	3.82	68.5	127
NELAC Code Analyte Units Study Mean Study Standard Deviation Low Acceptance Limit % High Accepta Limit % 1505 Total Alkalinity(as CaCO3) mg/L 367 9.74 84.9 115 1506 formide mg/L 2.07 0.287 72.8 124 1575 Chloride mg/L 173 5.21 88.5 112 1730 Fluoride mg/L 105 0.0806 77.1 121 2000 Sulfate mg/L 11.8 0.627 74.8 120 Additional State Specific Analytes mg/L 11.8 0.627 74.8 120 Minerals 2 - Hardness (PT-MIN2-WP) Lot #: 8164-1 N/A 0.00 80.0 120 NELAC Analyte Units Study Mean Study Standard Deviation Low Acceptance Limit % High Accepta Limit % 1035 Calcium Hardness (as CaCO3) mg/L 35.4 1.90 85.1 115 1550 Calclum Hardness (as CaCO3) mg/L	2040	TOC	mg/L	22.9	2.21	81.2	119
Code Mean Standard Deviation Limit % Deviation Limit % Deviation 1505 Total Alkalinity(as CaCO3) mg/L 367 9.74 84.9 115 1540 Bromide mg/L 2.07 0.287 72.8 124 1575 Chloride mg/L 173 5.21 88.5 112 1730 Fluoride mg/L 105 0.0806 77.1 121 2000 Sulfate mg/L 11.8 0.627 74.8 120 Additional State Specific Analytes mg/L 11.8 0.627 74.8 120 Additional State Specific Analytes mg/L N/A 0.00 80.0 120 Minerals 2 - Hardness (PT-MIN2-WP) Lot #: 8164-1 N/A 0.00 85.1 116 1035 Calcium Hardness (as CaCO3) mg/L 35.4 1.90 85.1 1115 1755 Total Hardness (as CaCO3) mg/L 130 6.85 85.1 1115 1155 <	Mine	erals 1 (PT-MIN1-WP)				Lot	#: 8164-08
1540 Bromide mg/L 2.07 0.287 72.8 124 1575 Chloride mg/L 173 5.21 88.5 112 1370 Fluoride mg/L 1.05 0.0806 77.1 121 2000 Sulfate mg/L 1.18 0.627 74.8 120 Additional State Specific Analytes mg/L N/A 0.00 80.0 120 Minerals 2 - Hardness (PT-MIN2-WP) Lot #: 8164-1 N/A 0.00 80.0 120 NELAC Code Analyte Units Study Mean Study Deviation Low Acceptance Limit % High Acceptance Limit % Study Standard Deviation Low Acceptance Limit % High Acceptance Limit % Limit % Limit % Limit % Study Standard Deviation Limit % Study Standard Deviation Limit % Limit % Limit % Limit % Limit % <td></td> <td>Analyte</td> <td>Units</td> <td>-</td> <td>Standard</td> <td></td> <td>High Acceptance Limit %</td>		Analyte	Units	-	Standard		High Acceptance Limit %
1575 Chloride mg/L 173 5.21 88.5 112 1730 Fluoride mg/L 1.05 0.0806 77.1 121 2000 Suffate mg/L 11.8 0.627 74.8 120 Additional State Specific Analytes mg/L 11.8 0.627 74.8 120 Minerals 2 - Hardness (PT-MIN2-WP) Lot #: 8164-1 Study Study Low Acceptance High Accepta Code Analyte Units Study Study Low Acceptance Limit % 1035 Calcium Hardness (as CaCO3) mg/L 35.4 1.90 85.1 115 1550 Calcium Hardness (as CaCO3) mg/L 89.2 5.47 85.0 115 1755 Total Hardness (as CaCO3) mg/L 130 6.65 85.1 116 1085 Magnesium mg/L 32.6 1.63 80.0 120 Specific Conductance (PT-COND-WP) Lot #: 8164- Low Acceptance Limit % High Accepta<	1505	Total Alkalinity(as CaCO3)	mg/L	367	9.74	84.9	115
1730 Fluoride mg/L 1.05 0.0806 77.1 121 2000 Sulfate mg/L 11.8 0.627 74.8 120 Additional State Specific Analytes mg/L 11.8 0.627 74.8 120 Additional State Specific Analytes mg/L N/A 0.00 80.0 120 Minerals 2 - Hardness (PT-MIN2-WP) Lot #: 8164-1 Study Study Study Lot #: 8164-1 NELAC Analyte Units Study Study Low Acceptance High Acceptance 1035 Calcium Hardness (as CaCO3) mg/L 35.4 1.90 85.1 115 1755 Total Hardness (as CaCO3) mg/L 89.2 5.47 85.0 115 1125 Potassium mg/L 32.6 1.63 80.0 120 1155 Sodium mg/L 38.5 2.54 80.0 120 1155 Sodium mg/L 38.5 2.54 80.0 120	1540	Bromide	mg/L	2.07	0.287	72.8	124
2000 Sulfate mg/L 11.8 0.627 74.8 120 Additional State Specific Analytes mg/L N/A 0.00 80.0 120 I813 Total Inorganic Carbon mg/L N/A 0.00 80.0 120 Minerals 2 - Hardness (PT-MIN2-WP) Lot #: 8164-1 Study Study Study Cow Acceptance High Acceptance Limit % 1035 Calcium mg/L 35.4 1.90 85.1 115 1550 Calcium Hardness (as CaCO3) mg/L 89.2 5.47 85.0 115 1755 Total Hardness (as CaCO3) mg/L 9.96 0.536 84.9 115 1125 Potassium mg/L 32.6 1.63 80.0 120 Specific Conductance (PT-COND-WP) Lot #: 8164- Low Acceptance Limit % 120 NELAC Analyte Units Study Study Study Lot #: 8164- NELAC Analyte Units Study Study	1575	Chloride	mg/L	173	5.21	88.5	112
Additional State Specific Analytes 1813 Total Inorganic Carbon mg/L N/A 0.00 80.0 120 Minerals 2 - Hardness (PT-MIN2-WP) Lot #: 8164-1 NELAC Analyte Units Study Mean Study Standard Deviation Low Acceptance Limit % High Accepta Limit % 1035 Calcium mg/L 35.4 1.90 85.1 115 1550 Calcium Hardness (as CaCO3) mg/L 89.2 5.47 85.0 115 1755 Total Hardness (as CaCO3) mg/L 9.96 0.536 84.9 115 1125 Potassium mg/L 32.6 1.63 80.0 120 1155 Sodium mg/L 38.5 2.54 80.0 120 <t< td=""><td>1730</td><td>Fluoride</td><td>mg/L</td><td>1.05</td><td>0.0806</td><td>77.1</td><td>121</td></t<>	1730	Fluoride	mg/L	1.05	0.0806	77.1	121
1813 Total Inorganic Carbon mg/L N/A 0.00 80.0 120 Minerals 2 - Hardness (PT-MIN2-WP) Lot #: 8164-1 NELAC Code Analyte Units Study Mean Study Standard Deviation Low Acceptance Limit % High Accepta Limit % 1035 Calcium mg/L 35.4 1.90 85.1 115 1550 Calcium Hardness (as CaCO3) mg/L 89.2 5.47 85.0 115 1755 Total Hardness (as CaCO3) mg/L 9.96 0.536 84.9 115 1125 Potassium mg/L 32.6 1.63 80.0 120 1155 Sodium mg/L 38.5 2.54 80.0 120 1155 Sodium mg/L 38.5 2.54 80.0 120 1155 Sodium mg/L 38.5 2.54 80.0 120 1156 Analyte Units Study Mean Study Standard Deviation Lot #: 8164- NELAC Code Analyte </td <td>2000</td> <td>Sulfate</td> <td>mg/L</td> <td>11.8</td> <td>0.627</td> <td>74.8</td> <td>120</td>	2000	Sulfate	mg/L	11.8	0.627	74.8	120
Minerals 2 - Hardness (PT-MIN2-WP) Lot #: 8164-1 NELAC Code Analyte Units Study Mean Study Standard Deviation Low Acceptance Limit % High Accepta Limit % 1035 Calcium mg/L 35.4 1.90 85.1 115 1550 Calcium Hardness (as CaCO3) mg/L 89.2 5.47 85.0 115 1755 Total Hardness (as CaCO3) mg/L 130 6.65 85.1 116 1085 Magnesium mg/L 9.96 0.536 84.9 115 1125 Potassium mg/L 32.6 1.63 80.0 120 1155 Sodium mg/L 38.5 2.54 80.0 120 Specific Conductance (PT-COND-WP) Lot #: 8164- Lot #: 8164- Limit % Limit % NELAC Code Analyte Units Study Mean Study Standard Deviation Lot #: 8164- NELAC Code Analyte Units Study Mean Lot #: 8164- NELAC Code Analyte Units<	Additi	ional State Specific Analytes					
NELAC Code Analyte Units Study Mean Study Standard Deviation Low Acceptance Limit % High Accepta Limit % 1035 Calcium mg/L 35.4 1.90 85.1 115 1035 Calcium Hardness (as CaCO3) mg/L 89.2 5.47 85.0 1115 1755 Total Hardness (as CaCO3) mg/L 130 6.65 85.1 116 1085 Magnesium mg/L 9.96 0.536 84.9 115 1125 Potassium mg/L 32.6 1.63 80.0 120 Specific Conductance (PT-COND-WP) Lot #: 8164- NELAC Code Analyte Units Study Mean Study Standard Deviation Low Acceptance Limit % High Accepta Limit % 1610 Specific Conductance (25°C) µmhos/cm 722 19.1 90.1 110 Solids (PT-SOL-WP) Lot #: 8164- Low Acceptance Limit % Limit % High Accepta Limit % NELAC Code Analyte Units Study Mean Study Standard Deviation	1813	Total Inorganic Carbon	mg/L	N/A	0.00	80.0	120
Code Mean Standard Deviation Limit % Limit % 1035 Calcium mg/L 35.4 1.90 85.1 115 1550 Calcium Hardness (as CaCO3) mg/L 89.2 5.47 85.0 115 1755 Total Hardness (as CaCO3) mg/L 130 6.65 85.1 116 1085 Magnesium mg/L 9.96 0.536 84.9 115 1125 Potassium mg/L 32.6 1.63 80.0 120 1155 Sodium mg/L 38.5 2.54 80.0 120 1155 Sodium mg/L 38.5 1.63 80.0 120 1155 Sodium mg/L 38.5 2.54 80.0 120 1155 Sodium mg/L 38.5 2.54 80.0 120 11610 Specific Conductance (PT-COND-WP) Lot #: 8164- Limit % Limit % Limit % 1610 Specific Conductance (25°C)	Mine	erals 2 - Hardness (PT-MI	N2-WP)			Lot #	: 8164-102
1550 Calcium Hardness (as CaCO3) mg/L 89.2 5.47 85.0 115 1755 Total Hardness (as CaCO3) mg/L 130 6.65 85.1 116 1085 Magnesium mg/L 9.96 0.536 84.9 115 1125 Potassium mg/L 32.6 1.63 80.0 120 1155 Sodium mg/L 38.5 2.54 80.0 120 Specific Conductance (PT-COND-WP) Lot #: 8164- NELAC Analyte Units Study Mean Study Deviation Low Acceptance Limit % High Acceptance Limit % 1610 Specific Conductance (25°C) µmhos/cm 722 19.1 90.1 110 Solids (PT-SOL-WP) Lot #: 8164- NELAC Analyte Units Study Mean Study Standard Deviation High Acceptance Limit % 1955 Total Dissolved Solids at 180° (TFR) mg/L 479 24.6 90.1 110 1960 Non-Filtera	-	Analyte	Units		Standard		High Acceptance Limit %
1755 Total Hardness (as CaCO3) mg/L 130 6.65 85.1 116 1085 Magnesium mg/L 9.96 0.536 84.9 115 1125 Potassium mg/L 32.6 1.63 80.0 120 1155 Sodium mg/L 38.5 2.54 80.0 120 Specific Conductance (PT-COND-WP) Lot #: 8164- Ket Add Add Add Add Add Add Add Add Add Ad	1035	Calcium	mg/L	35.4	1.90	85.1	115
1085 Magnesium mg/L 9.96 0.536 84.9 115 1125 Potassium mg/L 32.6 1.63 80.0 120 1155 Sodium mg/L 38.5 2.54 80.0 120 Specific Conductance (PT-COND-WP) Lot #: 8164- NELAC Code Analyte Units Study Mean Study Study Standard Deviation Low Acceptance Limit % High Accepta Limit % 1610 Specific Conductance (25°C) μmhos/cm 722 19.1 90.1 110 Solids (PT-SOL-WP) Lot #: 8164- Lot #: 8164- Lot #: 8164- NELAC Code Analyte Units Study Mean Low Acceptance Limit % High Accepta Limit % NELAC Code Analyte Units Study Mean Low Acceptance Limit % High Accepta Limit % NELAC Code Analyte Units Study Mean Low Acceptance Limit % High Accepta Limit % NELAC Code Analyte Units Study Mean Low Acceptance Limit % Limit % <t< td=""><td>1550</td><td>Calcium Hardness (as CaCO3)</td><td>mg/L</td><td>89.2</td><td>5.47</td><td>85.0</td><td>115</td></t<>	1550	Calcium Hardness (as CaCO3)	mg/L	89.2	5.47	85.0	115
1125 Potassium mg/L 32.6 1.63 80.0 120 1155 Sodium mg/L 38.5 2.54 80.0 120 Specific Conductance (PT-COND-WP) Lot #: 8164- NELAC Code Analyte Units Study Mean Study Standard Deviation Low Acceptance Limit % High Accepta Limit % 1610 Specific Conductance (25°C) μmhos/cm 722 19.1 90.1 110 Solids (PT-SOL-WP) Lot #: 8164- Lot #: 8164- Lot #: 8164- NELAC Code Analyte Units Study Mean Low Acceptance Limit % High Accepta Limit % NELAC Code Analyte Units Study Mean Low Acceptance Limit % High Accepta Limit % NELAC Code Analyte Units Study Mean Low Acceptance Limit % High Accepta Limit % 1955 Total Dissolved Solids at 180° (TFR) mg/L 479 24.6 90.1 110 1960 Non-Filterable Residue (TSS) mg/L 81.4 4.72 82.0 111	1755	Total Hardness (as CaCO3)	mg/L	130	6.65	85.1	116
1155Sodiummg/L38.52.5480.0120Specific Conductance (PT-COND-WP)NELAC CodeAnalyteUnitsStudy MeanStudy Standard DeviationLot #: 8164-1610Specific Conductance (25°C)µmhos/cm72219.190.1110Solids (PT-SOL-WP)NELAC CodeAnalyteUnitsStudy MeanStudy Standard DeviationLot #: 8164-NELAC CodeAnalyteUnitsStudy MeanStudy Study Standard DeviationLot #: 8164-NELAC CodeAnalyteUnitsStudy MeanStudy Study Standard DeviationLot #: 8164-1955Total Dissolved Solids at 180° (TFR)mg/L47924.690.11101960Non-Filterable Residue (TSS)mg/L81.44.7282.0111	1085	Magnesium	mg/L	9.96	0.536	84.9	115
Specific Conductance (PT-COND-WP) Lot #: 8164- NELAC Code Analyte Units Study Mean Study Standard Deviation Low Acceptance Limit % High Accepta Limit % 1610 Specific Conductance (25°C) µmhos/cm 722 19.1 90.1 110 Solids (PT-SOL-WP) Lot #: 8164- NELAC Code Analyte Units Study Mean Study Standard Deviation Low Acceptance Limit % High Accepta Limit % NELAC Code Analyte Units Study Mean Study Standard Deviation Low Acceptance Limit % High Accepta Limit % 1955 Total Dissolved Solids at 180° (TFR) mg/L 479 24.6 90.1 110 1960 Non-Filterable Residue (TSS) mg/L 81.4 4.72 82.0 111	1125	Potassium	mg/L	32.6	1.63	80.0	120
NELAC CodeAnalyteUnitsStudy MeanStudy Standard DeviationLow Acceptance Limit %High Accepta Limit %1610Specific Conductance (25°C)μmhos/cm72219.190.1110Solids (PT-SOL-WP)NELAC CodeAnalyteUnitsStudy MeanStudy Standard DeviationLow Acceptance Limit %NELAC CodeAnalyteUnitsStudy MeanStudy Standard DeviationLow Acceptance Limit %High Accepta Limit %1955Total Dissolved Solids at 180° (TFR)mg/L47924.690.11101960Non-Filterable Residue (TSS)mg/L81.44.7282.0111	1155	Sodium	mg/L	38.5	2.54	80.0	120
CodeMany termMeanStandard DeviationLimit %1610Specific Conductance (25°C)μmhos/cm72219.190.1110Solids (PT-SOL-WP)NELAC CodeAnalyteUnitsStudy MeanStudy Standard DeviationLow Acceptance Limit %NELAC CodeAnalyteUnitsStudy MeanLow Acceptance Limit %High Accepta Limit %1955Total Dissolved Solids at 180° (TFR)mg/L47924.690.11101960Non-Filterable Residue (TSS)mg/L81.44.7282.0111	Spe	cific Conductance (PT-CO	ND-WP)			Lot	#: 8164-72
Solids (PT-SOL-WP)Lot #: 8164-NELAC CodeAnalyteUnitsStudy MeanStudy Standard DeviationLow Acceptance Limit %High Acceptance Limit %1955Total Dissolved Solids at 180° (TFR)mg/L47924.690.11101960Non-Filterable Residue (TSS)mg/L81.44.7282.0111		Analyte	Units		Standard		High Acceptance Limit %
NELAC CodeAnalyteUnitsStudy MeanStudy Standard DeviationLow Acceptance Limit %High Accepta Limit %1955Total Dissolved Solids at 180° (TFR)mg/L47924.690.11101960Non-Filterable Residue (TSS)mg/L81.44.7282.0111	1610	Specific Conductance (25°C)	µmhos/cm	722	19.1	90.1	110
CodeMeanStandard DeviationLimit %Limit %1955Total Dissolved Solids at 180° (TFR)mg/L47924.690.11101960Non-Filterable Residue (TSS)mg/L81.44.7282.0111	Soli	ds (PT-SOL-WP)				Lot	#: 8164- <u>09</u>
1960 Non-Filterable Residue (TSS) mg/L 81.4 4.72 82.0 111		Analyte	Units	-	Standard		High Acceptance Limit %
	1955	Total Dissolved Solids at 180° (TFR)	mg/L	479	24.6	90.1	110
1950 Total Solids mg/L 583 26.2 90.0 110	1960	Non-Filterable Residue (TSS)	mg/L	81.4	4.72	82.0	111
	1950	Total Solids	mg/L	583	26.2	90.0	110





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Statistical Summary Report - Water Pollution Proficiency Testing

Opening Date: February 8, 2016 - Closing Date: March 24, 2016

Laboratory: Environmental Testing Solutions, Inc. 351 Depot Street

- Asheville, NC 28801
- USA

Ms. Kelley Keenan 828-350-9364

EPA Lab ID: NC01230

Contact:

Nut	rients 1 - Simple (PT-NUT1-	WP)			Lot	#: 8164-10
NELAC Code	Analyte	Units	Study Mean	Study Standard Deviation	Low Acceptance Limit %	High Acceptance Limit %
1515	Ammonia as N	mg/L	13.1	0.966	79.9	119
1810	Nitrate as N	mg/L	3.68	0.256	79.5	120
1820	Nitrate and Nitrite as N	mg/L	3.68	0.261	81.1	118
1870	Orthophosphate as P	mg/L	3.12	0.156	85.2	115
Addit	ional State Specific Analytes					
1712	Total Dissolved Phosphorus	mg/L	5.07	3.32	85.2	115
1647	Dissolved Nitrogen	mg/L	16.5	2.14	83.6	116
1827	Total Nitrogen	mg/L	16.8	1.12	83.6	116
pН ((PT-PH-WP)				Lot	#: 8164-15
NELAC Code	Analyte	Units	Study Mean	Study Standard Deviation	Low Acceptance Limit %	High Acceptance Limit %
1900	рН	S.U.	6.11	0.0333	96.7	103
	idual Chlorine Low Level -CLLL-WP)				Lot #	8164-94B
NELAC Code	Analyte	Units	Study Mean	Study Standard Deviation	Low Acceptance Limit %	High Acceptance Limit %
1940	Total Residual Chlorine	μg/L	215	15.4	72.4	128
Satt						
	leable Solids (PT-SSOL-WI	2)			Lot	#: 8164-17
NELAC Code	Analyte	D) Units	Study Mean	Study Standard Deviation	Lot Acceptance Limit %	#: 8164-17 High Acceptance Limit %
NELAC				Standard	Low Acceptance	High Acceptance
NELAC Code 1965	Analyte	Units	Mean	Standard Deviation	Low Acceptance Limit % 81.9	High Acceptance Limit %
NELAC Code 1965	Analyte Settleable Solids	Units	Mean	Standard Deviation	Low Acceptance Limit % 81.9	High Acceptance Limit % 127