

PERFORMANCE EVALUATION



Scheduled Study

WP16-1

13-Jan-2016 Through 26-Feb-2016

49732057

RTC Labcode

TX01520

EPA Labcode

Participating Laboratory:

Energy Laboratories-College Station
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Thank you for participating in study WP16-1. Additional information about this study may be found online at www.sigmaaldrich.com/pt.

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Sincerely,

A handwritten signature in black ink, appearing to read "Jennifer Duhon".

Jennifer Duhon
Proficiency Testing Supervisor

Accreditors

Evaluations of this dataset will be sent to the accreditor(s) listed below using your laboratory's labcode listed above each accrediting agency. If any of the information listed below is incorrect, please contact RTC immediately.

Accrediting Labcode

Texas CEQ

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RTC is accredited to perform PT programs for the scope of accreditation to ISO/IEC 17043 under ACLASS certificate AP-1469



Demands

Method:EPA 410.4 2 (1993) [10077404]

Analyte	Result Units	Assigned Value	Accept. Window	Z	Evaluation
Chemical oxygen demand (COD) ^{1,2} 1565 / PE1130-20ML - Lot LRAA7523 /Analyst:DP/ Analysis Date: 2016-02-05	187 mg/L	164	133 to 195	2.25	Acceptable <i>Evaluation Parameter - a:0.9843, b:-0.3171, c:0.0432, d:3.0191</i>
<i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary					

Method:SM 5210 B 22nd ED (2011) [20135017]

Analyte	Result Units	Assigned Value	Accept. Window	Z	Evaluation
5-day BOD ^{1,2} 1530 / PE1130-20ML - Lot LRAA7523 /Analyst:DP/ Analysis Date: 2016-01-27	111 mg/L	103	55.1 to 150	0.51	Acceptable <i>Evaluation Parameter - a:0.6237, b:0.7022, c:0.0928, d:0.6636</i>
<i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary					
Carbonaceous BOD (CBOD) ^{1,2} 1555 / PE1130-20ML - Lot LRAA7523 /Analyst:DP/ Analysis Date: 2016-01-27	103 mg/L	92.9	43.1 to 143	0.61	Acceptable <i>Evaluation Parameter - a:0.5648, b:0.6665, c:0.0965, d:0.8253</i>
<i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary					

Minerals

Method:EPA 200.7 4.4 (1994) [10013806]

Analyte	Result Units	Assigned Value	Accept. Window	Z	Evaluation
Calcium, Ca ^{1,2} 1035 / PE1041-1KT - Lot LRAA9549 /Analyst:JR/ Analysis Date: 2016-01-22	54.1 mg/L	56.5	48 to 65	-0.85	Acceptable
<i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary <i>Evaluation Parameter - a:1, b:0, c:0.05, d:0</i>					
Magnesium, Mg ^{1,2} 1085 / PE1041-1KT - Lot LRAA9549 /Analyst:JR/ Analysis Date: 2016-01-22	24.9 mg/L	25.3	21.5 to 29.1	-0.31	Acceptable
<i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary <i>Evaluation Parameter - a:1, b:0, c:0.05, d:0</i>					
Potassium, K ^{1,2} 1125 / PE1041-1KT - Lot LRAA9549 /Analyst:JR/ Analysis Date: 2016-01-22	11.5 mg/L	10.6	8.48 to 12.7	1.27	Acceptable
<i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary <i>Evaluation Parameter - a:1, b:0, c:0.0666, d:0</i>					
Sodium, Na ^{1,2} 1155 / PE1041-1KT - Lot LRAA9549 /Analyst:JR/ Analysis Date: 2016-01-22	22.9 mg/L	22.6	18.1 to 27.1	0.2	Acceptable
<i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary <i>Evaluation Parameter - a:1, b:0, c:0.0666, d:0</i>					

Method:EPA 300.0 2.1 (1993) [10053200]

Analyte	Result Units	Assigned Value	Accept. Window	Z	Evaluation
Bromide ^{1,2} 1540 / PE1060-20ML - Lot LRAA9629 /Analyst:DP/ Analysis Date: 2016-01-18	6.82 mg/L	6.42	5.38 to 7.46	1.15	Acceptable
<i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary <i>Evaluation Parameter - a:1.0098, b:-0.0533, c:0.0400, d:0.0912</i>					
Chloride ^{1,2} 1575 / PE1060-20ML - Lot LRAA9629 /Analyst:DP/ Analysis Date: 2016-01-19	58.4 mg/L	58.1	50.5 to 65.8	0.12	Acceptable
<i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary <i>Evaluation Parameter - a:1.005, b:0.0490, c:0.0376, d:0.3716</i>					
Fluoride ^{1,2} 1730 / PE1060-20ML - Lot LRAA9629 /Analyst:DP/ Analysis Date: 2016-01-19	2.92 mg/L	3.05	2.51 to 3.58	-0.73	Acceptable
<i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary <i>Evaluation Parameter - a:0.9748, b:0.0156, c:0.0487, d:0.0277</i>					

Sulfate ^{1,2}	16.3 mg/L	17.1	13.6 to 20.6	-0.69	Acceptable
2000 / PE1060-20ML - Lot LRAA9629 /Analyst:DP/ Analysis Date: 2016-01-18	<i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary		<i>Evaluation Parameter - a:0.9880, b:-0.2130, c:0.0473, d:0.3309</i>		

Method:EPA 6010B (1996) [10155609]

Analyte	Result Units	Assigned Value	Accept. Window	Z	Evaluation
Calcium, Ca ^{1,2} 1035 / PE1041-1KT - Lot LRAA9549 /Analyst:JR/ Analysis Date: 2016-02-01	54.1 mg/L	56.5	48 to 65	-0.85	Acceptable
	<i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary		<i>Evaluation Parameter - a:1, b:0, c:0.05, d:0</i>		
Magnesium, Mg ^{1,2} 1085 / PE1041-1KT - Lot LRAA9549 /Analyst:JR/ Analysis Date: 2016-02-01	24.9 mg/L	25.3	21.5 to 29.1	-0.31	Acceptable
	<i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary		<i>Evaluation Parameter - a:1, b:0, c:0.05, d:0</i>		
Potassium, K ^{1,2} 1125 / PE1041-1KT - Lot LRAA9549 /Analyst:JR/ Analysis Date: 2016-02-01	11.0 mg/L	10.6	8.48 to 12.7	0.57	Acceptable
	<i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary		<i>Evaluation Parameter - a:1, b:0, c:0.0666, d:0</i>		
Sodium, Na ^{1,2} 1155 / PE1041-1KT - Lot LRAA9549 /Analyst:JR/ Analysis Date: 2016-02-01	21.1 mg/L	22.6	18.1 to 27.1	-0.99	Acceptable
	<i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary		<i>Evaluation Parameter - a:1, b:0, c:0.0666, d:0</i>		

Method:SM 2320 B 21st ED (1997) [20045403]

Analyte	Result Units	Assigned Value	Accept. Window	Z	Evaluation
Alkalinity as CaCO ₃ ^{1,2} 1505 / PE1041-1KT - Lot LRAA9549 /Analyst:RA/ Analysis Date: 2016-01-21	52.1 mg/L	48.8	41.5 to 56.1	1.36	Acceptable
	<i>Evaluation Criteria - 4</i> <input type="checkbox"/> Voluntary		<i>Evaluation Parameter - break:40, highPercentage:0.15, lowPercentage:0.20</i>		

Method:SM 2340 B 21st ED (1997) [20046406]

Analyte	Result Units	Assigned Value	Accept. Window	Z	Evaluation
Hardness, total as CaCO ₃ ^{1,2}	238 mg/L	245	208 to 282	-0.57	Acceptable

1755 / PE1041-1KT - Lot LRAA9549
 /Analyst:SS/ Analysis Date: 2016-02-26

Evaluation Criteria - 1
 Voluntary

Evaluation Parameter - a:1, b:0, c:0.05, d:0

Method:SM 2510 B 21st ED (1997) [20048402]

Analyte	Result Units	Assigned Value	Accept. Window	Z	Evaluation
Specific conductance, Conductivity (25°C) ^{1,2}	662 umhos/cm	702	632 to 772	-1.71	Acceptable
1610 / PE1041-1KT - Lot LRAA9549 /Analyst:RA/ Analysis Date: 2016-01-21 Evaluation Criteria - 1 <input type="checkbox"/> Voluntary Evaluation Parameter - a:1, b:0, c:0.0333, d:0					

Method:SM 2540 B 21st ED (1997) [20049201]

Analyte	Result Units	Assigned Value	Accept. Window	Z	Evaluation
Total Solids (TS) ^{1,2}	654 mg/L	620	575 to 665	2.27	Acceptable
1950 / PE3050-500ML - Lot LRAA8001 /Analyst:DP/ Analysis Date: 2016-01-21 Evaluation Criteria - 1 <input type="checkbox"/> Voluntary Evaluation Parameter - a:1.00, b:0.00, c:0.00, d:15.0					

Method:SM 2540 C 22nd Ed (2011) [20050424]

Analyte	Result Units	Assigned Value	Accept. Window	Z	Evaluation
Total Dissolved Solids at 180°C (TDS) ^{1,2}	578 mg/L	560	515 to 605	1.2	Acceptable
1955 / PE3050-500ML - Lot LRAA8001 /Analyst:DP/ Analysis Date: 2016-01-21 Evaluation Criteria - 1 <input type="checkbox"/> Voluntary Evaluation Parameter - a:1, b:0, c:0, d:15.0					

Method:SM 4500-F⁻ D 21st ED (1997) [20103202]

Analyte	Result Units	Assigned Value	Accept. Window	Z	Evaluation
Fluoride ^{1,2}	2.99 mg/L	3.05	2.51 to 3.58	-0.34	Acceptable
1730 / PE1060-20ML - Lot LRAA9629 /Analyst:DP/ Analysis Date: 2016-01-20 Evaluation Criteria - 1 <input type="checkbox"/> Voluntary Evaluation Parameter - a:0.9748, b:0.0156, c:0.0487, d:0.0277					

Method:SM 4500-S2⁻ F 21st ED (2000) [20126403]

Analyte	Result Units	Assigned Value	Accept. Window	Z	Evaluation
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Sulfide ^{1,2}	6.08 mg/L	4.8	2.11 to 7.49	1.43	Acceptable
2005 / PE1034-20ML - Lot LRAA8800 /Analyst:RA/ Analysis Date: 2016-01-28	<i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary		<i>Evaluation Parameter - a:0.9657, b:-0.1271, c:0.1205, d:0.2816</i>		

Miscellaneous Analytes

Method:EPA 200.7 4.4 (1994) [10013806]

Analyte	Result Units	Assigned Value	Accept. Window	Z	Evaluation
Silica as SiO ₂ ^{1,2} 1990 / PE1078-20ML - Lot LRAA9366 /Analyst:JR/ Analysis Date: 2016-02-02	183 mg/L	188	141 to 235	-0.32	Acceptable <i>Evaluation Parameter - a:1, b:0, c:0.08333, d:0</i>
<i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary					

Method:EPA 420.4 1 (1993) [10080203]

Analyte	Result Units	Assigned Value	Accept. Window	Z	Evaluation
Total phenolics ^{1,2} 1905 / PE1134-2ML - Lot LRAA7603 /Analyst:RA/ Analysis Date: 2016-01-26	2.12 mg/L	1.94	0.98 to 2.89	0.57	Acceptable <i>Evaluation Parameter - a:0.6408, b:0.0250, c:0.1038, d:0.0082</i>
<i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary					

Method:EPA 6010B (1996) [10155609]

Analyte	Result Units	Assigned Value	Accept. Window	Z	Evaluation
Silica as SiO ₂ ^{1,2} 1990 / PE1078-20ML - Lot LRAA9366 /Analyst:JR/ Analysis Date: 2016-02-02	186 mg/L	188	141 to 235	-0.13	Acceptable <i>Evaluation Parameter - a:1, b:0, c:0.08333, d:0</i>
<i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary					

Method:EPA 9040C (2002) [10244403]

Analyte	Result Units	Assigned Value	Accept. Window	Z	Evaluation
pH ^{1,2} 1900 / PE1210-100ML - Lot LRAA9689 /Analyst:RA/ Analysis Date: 2016-01-21	7.86 Units	7.9	7.7 to 8.1	-0.6	Acceptable <i>Evaluation Parameter - a:1, b:0, c:0, d:0.06667</i>
<i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary					

Method:SM 2120 B 21st ED (2001) [20039003]

Analyte	Result Units	Assigned Value	Accept. Window	Z	Evaluation
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Color ^{1,2}	30.0 PC Units	29	18.4 to 39.7	0.28	Acceptable
1605 / PE1126-20ML - Lot LRAA9595 /Analyst:DP/ Analysis Date: 2016-01-26	<i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary		<i>Evaluation Parameter - a:0.9474, b:0.6098, c:0.0367, d:2.4407</i>		

Method:SM 2130 B 21st ED (2001) [20042608]

Analyte	Result Units	Assigned Value	Accept. Window	Z	Evaluation
Turbidity ^{1,2}	10.9 NTU	10.6	8.66 to 12.6	0.45	Acceptable
2055 / PE1081-20ML - Lot LRAA8879 /Analyst:RA/ Analysis Date: 2016-01-19	<i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary		<i>Evaluation Parameter - a:1.0040, b:-0.0368, c:0.0475, d:0.1575</i>		

Method:SM 2310 B 21st ED (1997) [20044400]

Analyte	Result Units	Assigned Value	Accept. Window	Z	Evaluation
Acidity, as CaCO ₃ ^{1,2}	795 mg/L	834	751 to 917	-1.4	Acceptable
1500 / PE1269-20ML - Lot LRAA8806 /Analyst:FP/ Analysis Date: 2016-01-22	<i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary		<i>Evaluation Parameter - a:1, b:0, c:.03333334, d:0</i>		

Method:SM 2540 D 22nd Ed (2011) [20051018]

Analyte	Result Units	Assigned Value	Accept. Window	Z	Evaluation
Total Suspended Solids, Non-Filterable Residue (TSS) ^{1,2}	53.0 mg/L	57.6	47.5 to 67.7	-1.36	Acceptable
1960 / PE3050-500ML - Lot LRAA8001 /Analyst:DP/ Analysis Date: 2016-01-21	<i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary		<i>Evaluation Parameter - a:0.9728, b:-0.6338, c:0.0300, d:1.5793</i>		

Method:SM 2540 F 21st ED (1997) [20052000]

Analyte	Result Units	Assigned Value	Accept. Window	Z	Evaluation
Settleable solids ^{1,2}	11.0 mL/L	12.2	8.72 to 15.6	-1.04	Acceptable
1965 / PE1194-1EA - Lot LRAA7765 /Analyst:FP/ Analysis Date: 2016-01-22	<i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary		<i>Evaluation Parameter - a:1.0436, b:-0.0108, c:.0597, d:.4546</i>		

Method:SM 4500-Cl G 21st ED (2000) [20081407]

Analyte	Result Units	Assigned Value	Accept. Window	Z	Evaluation
Total residual chlorine ^{1,2} 1940 / PE1065-2ML - Lot LRAA7602 /Analyst:RA/ Analysis Date: 2016-01-25	0.787 mg/L	0.81	0.61 to 1	-0.28	Acceptable
		<i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary		<i>Evaluation Parameter - a:0.9345, b:0.0392, c:0.0688, d:0.0073</i>	

Method:SM 4500-H+ B 21st ED (2000) [20105004]

Analyte	Result Units	Assigned Value	Accept. Window	Z	Evaluation
pH ^{1,2} 1900 / PE1210-100ML - Lot LRAA9689 /Analyst:RA/ Analysis Date: 2016-01-21	7.86 Units	7.9	7.7 to 8.1	-0.6	Acceptable
		<i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary		<i>Evaluation Parameter - a:1, b:0, c:0, d:0.06667</i>	

Nutrients

Method:EPA 300.0 2.1 (1993) [10053200]

Analyte	Result Units	Assigned Value	Accept. Window	Z	Evaluation
Nitrate as N ^{1,2} 1810 / PE1060-20ML - Lot LRAA9629 /Analyst:DP/ Analysis Date: 2016-01-18	6.93 mg/L	6.9	5.66 to 8.15	0.07	Acceptable <i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary <i>Evaluation Parameter - a:0.9975, b:-0.0005, c:0.0506, d:0.0642</i>
Nitrate+nitrite as N ^{1,2} 1820 / PE1060-20ML - Lot LRAA9629 /Analyst:DP/ Analysis Date: 2016-01-18	7.85 mg/L	7.85	6.52 to 9.17	0	Acceptable <i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary <i>Evaluation Parameter - a:0.9957, b:-0.0010, c:0.0509, d:0.0400</i>

Method:EPA 353.2 2 (1993) [10067604]

Analyte	Result Units	Assigned Value	Accept. Window	Z	Evaluation
Nitrate as N ^{1,2} 1810 / PE1195-20ML - Lot LRAA9425 /Analyst:DP/ Analysis Date: 2016-01-20	7.30 mg/L	7.03	5.77 to 8.29	0.64	Acceptable <i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary <i>Evaluation Parameter - a:0.9975, b:-0.0005, c:0.0506, d:0.0642</i>
Nitrate+nitrite as N ^{1,2} 1820 / PE1195-20ML - Lot LRAA9425 /Analyst:DP/ Analysis Date: 2016-01-19	7.30 mg/L	7.02	5.82 to 8.22	0.7	Acceptable <i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary <i>Evaluation Parameter - a:0.9957, b:-0.0010, c:0.0509, d:0.0400</i>
Nitrite as N ^{1,2} 1840 / PE1153-2ML - Lot LRAA7843 /Analyst:DP/ Analysis Date: 2016-01-19	2.10 mg/L	2.02	1.72 to 2.32	0.79	Acceptable <i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary <i>Evaluation Parameter - a:1.0017, b:-0.0030, c:0.0377, d:0.0250</i>

Method:EPA 365.1 2 (1993) [10070005]

Analyte	Result Units	Assigned Value	Accept. Window	Z	Evaluation
Orthophosphate as P ^{1,2} 1870 / PE1195-20ML - Lot LRAA9425 /Analyst:RA/ Analysis Date: 2016-01-18	1.47 mg/L	1.46	1.24 to 1.68	0.14	Acceptable <i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary <i>Evaluation Parameter - a:1, b:0, c:0.05, d:0</i>

Phosphorus as P, total^{1,2} 1.98 mg/L 1.98 1.61 to 2.36 0 Acceptable

1910 / PE1051-2ML - Lot LRAA8570
 /Analyst:RA/ Analysis Date: 2016-02-01

Evaluation Criteria - 1
 Voluntary

*Evaluation Parameter - a:0.9932, b:0.0084,
 c:0.0506, d:0.0254*

Petroleum Hydrocarbons

Method:EPA 1664A (1999) [10127807]

Analyte	Result Units	Assigned Value	Accept. Window	Z	Evaluation
n-Hexane Extractable Material (O&G) ^{1,2} 1803 / PE1083-2ML - Lot LRAA7607 /Analyst:RA/ Analysis Date: 2016-01-28	39.9 mg/L	42.1	28.5 to 55.7	-0.48	Acceptable
<i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary					
<i>Evaluation Parameter - a:0.9400, b:-0.4166, c:0.0545, d:2.0789</i>					

Method:TNRCC 1005 3 (2001) [90019208]

Analyte	Result Units	Assigned Value	Accept. Window	Z	Evaluation
Total Petroleum Hydrocarbons (TPH), (C6-C35) ² 2050 / PE1619-2ML - Lot LRAA8069 /Analyst:KH/ Analysis Date: 2016-01-25	139 mg/L	128	63.3 to 192	0.51	Acceptable
<i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary					
<i>Evaluation Parameter - a:0.9692, b:-1.1573, c:0.1586, d:0.3709</i>					
Total Petroleum Hydrocarbons (TPH), (C6-C35) ² 2050 / PE1799-2ML - Lot LRAA0194 /Analyst:KH/ Analysis Date: 2016-01-23	13.2 mg/L	13.8	7.01 to 20.5	-0.27	Acceptable
<i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary					
<i>Evaluation Parameter - a:0.9692, b:0, c:0.1586, d:0</i>					
Diesel-range total petroleum hydrocarbons, >C12-C28 ² 9372 / PE1619-2ML - Lot LRAA8069 /Analyst:KH/ Analysis Date: 2016-01-25	45.8 mg/L	30.7	13.9 to 47.4	2.71	Acceptable
<i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary					
<i>Evaluation Parameter - a:0.9692, b:-1.1573, c:0.1586, d:0.3709</i>					
Diesel-range total petroleum hydrocarbons, >C12-C28 ² 9372 / PE1799-2ML - Lot LRAA0194 /Analyst:KH/ Analysis Date: 2016-01-23	7.94 mg/L	6.07	2.08 to 10.1	1.41	Acceptable
<i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary					
<i>Evaluation Parameter - a:0.7700, b:-0.0082807, c:0.1644, d:0.0322339</i>					
Gasoline Range Organics, C6-C12 ^{1,2} 9408 / PE1619-2ML - Lot LRAA8069 /Analyst:KH/ Analysis Date: 2016-01-25	93.4 mg/L	95.8	47.1 to 145	-0.15	Acceptable
<i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary					
<i>Evaluation Parameter - a:0.9692, b:-1.1573, c:0.1586, d:0.3709</i>					
Gasoline Range Organics, C6-C12 ^{1,2} 9408 / PE1799-2ML - Lot LRAA0194 /Analyst:KH/ Analysis Date: 2016-01-23	5.30 mg/L	5.63	2.02 to 9.24	-0.28	Acceptable
<i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary					
<i>Evaluation Parameter - a:1.0682, b:0.0213958, c:0.2285, d:0.0024231</i>					

Trace Metals - Waste Water

Method: EPA 200.7 4.4 (1994) [10013806]

Analyte	Result Units	Assigned Value	Accept. Window	Z	Evaluation
Antimony, Sb ^{1,2} 1005 / PE3053-500ML - Lot LRAA8910 /Analyst:JR/ Analysis Date: 2016-01-27	564 ug/L	618	511 to 725	-1.51	Acceptable <i>Evaluation Parameter - a:0.9864, b:-1.1174, c:0.0471, d:6.1230</i>
		<i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary			
Arsenic, As ^{1,2} 1010 / PE3132-500ML - Lot LRAA9334 /Analyst:JR/ Analysis Date: 2016-01-27	536 ug/L	572	484 to 661	-1.22	Acceptable <i>Evaluation Parameter - a:0.9916, b:1.2647, c:0.0422, d:5.1741</i>
		<i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary			
Barium, Ba ^{1,2} 1015 / PE3053-500ML - Lot LRAA8910 /Analyst:JR/ Analysis Date: 2016-01-27	1290 ug/L	1370	1160 to 1580	-1.17	Acceptable <i>Evaluation Parameter - a:1, b:0, c:0.05, d:0</i>
		<i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary			
Beryllium, Be ^{1,2} 1020 / PE3132-500ML - Lot LRAA9334 /Analyst:JR/ Analysis Date: 2016-01-27	226 ug/L	233	198 to 268	-0.6	Acceptable <i>Evaluation Parameter - a:1, b:0, c:0.05, d:0</i>
		<i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary			
Boron, B ^{1,2} 1025 / PE3053-500ML - Lot LRAA8910 /Analyst:JR/ Analysis Date: 2016-02-01	1400 ug/L	1460	1240 to 1680	-0.82	Acceptable <i>Evaluation Parameter - a:1, b:0, c:0.05, d:0</i>
		<i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary			
Cadmium, Cd ^{1,2} 1030 / PE3132-500ML - Lot LRAA9334 /Analyst:JR/ Analysis Date: 2016-01-27	461 ug/L	504	428 to 580	-1.71	Acceptable <i>Evaluation Parameter - a:1, b:0, c:0.05, d:0</i>
		<i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary			
Chromium, Cr (total) ^{1,2} 1040 / PE3132-500ML - Lot LRAA9334 /Analyst:JR/ Analysis Date: 2016-01-27	230 ug/L	243	207 to 279	-1.07	Acceptable <i>Evaluation Parameter - a:1, b:0, c:0.05, d:0</i>
		<i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary			
Cobalt, Co ^{1,2} 1050 / PE3132-500ML - Lot LRAA9334 /Analyst:JR/ Analysis Date: 2016-01-27	240 ug/L	259	220 to 298	-1.46	Acceptable <i>Evaluation Parameter - a:1, b:0, c:0.05, d:0</i>
		<i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary			
Copper, Cu ^{1,2} 1055 / PE3132-500ML - Lot LRAA9334 /Analyst:JR/ Analysis Date: 2016-01-27	620 ug/L	631	536 to 726	-0.35	Acceptable <i>Evaluation Parameter - a:1, b:0, c:0.05, d:0</i>
		<i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary			

Method: EPA 200.7 4.4 (1994) (Continued)

Analyte	Result Units	Assigned Value	Accept. Window	Z	Evaluation
Iron, Fe ^{1,2} 1070 / PE3132-500ML - Lot LRAA9334 /Analyst:JR/ Analysis Date: 2016-01-27	1220 ug/L	1290	1090 to 1480	-1.09	Acceptable <i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary <i>Evaluation Parameter - a:1, b:0, c:0.05, d:0</i>
Lead, Pb ^{1,2} 1075 / PE3132-500ML - Lot LRAA9334 /Analyst:JR/ Analysis Date: 2016-01-27	479 ug/L	501	426 to 576	-0.88	Acceptable <i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary <i>Evaluation Parameter - a:1, b:0, c:0.05, d:0</i>
Lithium, Li ² 1080 / PE3132-500ML - Lot LRAA9334 /Analyst:JR/ Analysis Date: 2016-01-29	548 ug/L	557	390 to 724	-0.16	Acceptable <i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary <i>Evaluation Parameter - a:1, b:0, c:0.10, d:0</i>
Manganese, Mn ^{1,2} 1090 / PE3132-500ML - Lot LRAA9334 /Analyst:JR/ Analysis Date: 2016-01-27	986 ug/L	1070	910 to 1230	-1.57	Acceptable <i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary <i>Evaluation Parameter - a:1, b:0, c:0.05, d:0</i>
Molybdenum, Mo ^{1,2} 1100 / PE3053-500ML - Lot LRAA8910 /Analyst:JR/ Analysis Date: 2016-01-27	314 ug/L	330	286 to 375	-1.07	Acceptable <i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary <i>Evaluation Parameter - a:0.9953, b:-0.1614, c:0.0372, d:2.5555</i>
Nickel, Ni ^{1,2} 1105 / PE3132-500ML - Lot LRAA9334 /Analyst:JR/ Analysis Date: 2016-01-27	980 ug/L	1040	912 to 1160	-1.43	Acceptable <i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary <i>Evaluation Parameter - a:1.0012, b:1.5795, c:0.0368, d:3.8151</i>
Selenium, Se ^{1,2} 1140 / PE3132-500ML - Lot LRAA9334 /Analyst:JR/ Analysis Date: 2016-01-27	635 ug/L	681	579 to 783	-1.35	Acceptable <i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary <i>Evaluation Parameter - a:1, b:0, c:0.05, d:0</i>
Silver, Ag ^{1,2} 1150 / PE3053-500ML - Lot LRAA8910 /Analyst:JR/ Analysis Date: 2016-01-27	128 ug/L	136	116 to 156	-1.18	Acceptable <i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary <i>Evaluation Parameter - a:1, b:0, c:0.05, d:0</i>
Strontium, Sr ^{1,2} 1160 / PE3053-500ML - Lot LRAA8910 /Analyst:JR/ Analysis Date: 2016-01-27	228 ug/L	236	201 to 271	-0.68	Acceptable <i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary <i>Evaluation Parameter - a:1, b:0, c:0.05, d:0</i>

Method:EPA 200.7 4.4 (1994) (Continued)

Analyte	Result Units	Assigned Value	Accept. Window	Z	Evaluation
Thallium, Tl ^{1,2} 1165 / PE3053-500ML - Lot LRAA8910 /Analyst:JR/ Analysis Date: 2016-01-27	492 ug/L	499	414 to 584	-0.25	Acceptable <i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary <i>Evaluation Parameter - a:0.9932, b:-0.9634, c:0.0479, d:4.2361</i>
Tin, Sn ^{1,2} 1175 / PE3053-500ML - Lot LRAA8910 /Analyst:JR/ Analysis Date: 2016-02-02	1360 ug/L	1450	1010 to 1880	-0.62	Acceptable <i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary <i>Evaluation Parameter - a:1, b:0, c:0.10, d:0</i>
Titanium, Ti ^{1,2} 1180 / PE3053-500ML - Lot LRAA8910 /Analyst:JR/ Analysis Date: 2016-01-27	137 ug/L	140	119 to 161	-0.43	Acceptable <i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary <i>Evaluation Parameter - a:1, b:0, c:0.05, d:0</i>
Vanadium, V ^{1,2} 1185 / PE3132-500ML - Lot LRAA9334 /Analyst:JR/ Analysis Date: 2016-01-27	580 ug/L	609	518 to 700	-0.95	Acceptable <i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary <i>Evaluation Parameter - a:1, b:0, c:0.05, d:0</i>
Zinc, Zn ^{1,2} 1190 / PE3132-500ML - Lot LRAA9334 /Analyst:JR/ Analysis Date: 2016-01-27	983 ug/L	1050	893 to 1210	-1.27	Acceptable <i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary <i>Evaluation Parameter - a:1, b:0, c:0.05, d:0</i>
Aluminum, Al ^{1,2} 1000 / PE3132-500ML - Lot LRAA9334 /Analyst:JR/ Analysis Date: 2016-01-27	1990 ug/L	1910	1600 to 2210	0.78	Acceptable <i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary <i>Evaluation Parameter - a:0.9823, b:9.5889, c:0.0471, d:11.2110</i>

Method:EPA 245.1 3 (1994) [10036609]

Analyte	Result Units	Assigned Value	Accept. Window	Z	Evaluation
Mercury, Hg ^{1,2} 1095 / PE3132-500ML - Lot LRAA9334 /Analyst:JR/ Analysis Date:	16.0 ug/L	19.5	13.7 to 25.4	-1.79	Acceptable <i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary <i>Evaluation Parameter - a:1, b:0, c:0.10, d:0</i>

Method:EPA 6010B (1996) [10155609]

Analyte	Result Units	Assigned Value	Accept. Window	Z	Evaluation
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Antimony, Sb ^{1,2} 1005 / PE3053-500ML - Lot LRAA8910 /Analyst:JR/ Analysis Date: 2016-01-27	569 ug/L <i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary	618	511 to 725	-1.37	Acceptable <i>Evaluation Parameter - a:0.9864, b:-1.1174, c:0.0471, d:6.1230</i>
Arsenic, As ^{1,2} 1010 / PE3132-500ML - Lot LRAA9334 /Analyst:JR/ Analysis Date: 2016-01-27	559 ug/L <i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary	572	484 to 661	-0.44	Acceptable <i>Evaluation Parameter - a:0.9916, b:1.2647, c:0.0422, d:5.1741</i>
Barium, Ba ^{1,2} 1015 / PE3053-500ML - Lot LRAA8910 /Analyst:JR/ Analysis Date: 2016-01-27	1300 ug/L <i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary	1370	1160 to 1580	-1.02	Acceptable <i>Evaluation Parameter - a:1, b:0, c:0.05, d:0</i>
Beryllium, Be ^{1,2} 1020 / PE3132-500ML - Lot LRAA9334 /Analyst:JR/ Analysis Date: 2016-01-27	228 ug/L <i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary	233	198 to 268	-0.43	Acceptable <i>Evaluation Parameter - a:1, b:0, c:0.05, d:0</i>
Boron, B ^{1,2} 1025 / PE3053-500ML - Lot LRAA8910 /Analyst:JR/ Analysis Date: 2016-02-01	1400 ug/L <i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary	1460	1240 to 1680	-0.82	Acceptable <i>Evaluation Parameter - a:1, b:0, c:0.05, d:0</i>
Cadmium, Cd ^{1,2} 1030 / PE3132-500ML - Lot LRAA9334 /Analyst:JR/ Analysis Date: 2016-01-27	484 ug/L <i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary	504	428 to 580	-0.79	Acceptable <i>Evaluation Parameter - a:1, b:0, c:0.05, d:0</i>
Chromium, Cr (total) ^{1,2} 1040 / PE3132-500ML - Lot LRAA9334 /Analyst:JR/ Analysis Date: 2016-01-27	236 ug/L <i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary	243	207 to 279	-0.57	Acceptable <i>Evaluation Parameter - a:1, b:0, c:0.05, d:0</i>
Cobalt, Co ^{1,2} 1050 / PE3132-500ML - Lot LRAA9334 /Analyst:JR/ Analysis Date: 2016-01-27	250 ug/L <i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary	259	220 to 298	-0.69	Acceptable <i>Evaluation Parameter - a:1, b:0, c:0.05, d:0</i>
Copper, Cu ^{1,2} 1055 / PE3132-500ML - Lot LRAA9334 /Analyst:JR/ Analysis Date: 2016-01-27	626 ug/L <i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary	631	536 to 726	-0.16	Acceptable <i>Evaluation Parameter - a:1, b:0, c:0.05, d:0</i>

Method: EPA 6010B (1996) (Continued)

Analyte	Result Units	Assigned Value	Accept. Window	Z	Evaluation
Iron, Fe ^{1,2} 1070 / PE3132-500ML - Lot LRAA9334 /Analyst:JR/ Analysis Date: 2016-01-27	1250 ug/L	1290	1090 to 1480	-0.62	Acceptable <i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary <i>Evaluation Parameter - a:1, b:0, c:0.05, d:0</i>
Lead, Pb ^{1,2} 1075 / PE3132-500ML - Lot LRAA9334 /Analyst:JR/ Analysis Date: 2016-01-27	489 ug/L	501	426 to 576	-0.48	Acceptable <i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary <i>Evaluation Parameter - a:1, b:0, c:0.05, d:0</i>
Lithium, Li ² 1080 / PE3132-500ML - Lot LRAA9334 /Analyst:JR/ Analysis Date: 2016-01-29	547 ug/L	557	390 to 724	-0.18	Acceptable <i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary <i>Evaluation Parameter - a:1, b:0, c:0.10, d:0</i>
Manganese, Mn ^{1,2} 1090 / PE3132-500ML - Lot LRAA9334 /Analyst:JR/ Analysis Date: 2016-01-27	1030 ug/L	1070	910 to 1230	-0.75	Acceptable <i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary <i>Evaluation Parameter - a:1, b:0, c:0.05, d:0</i>
Molybdenum, Mo ^{1,2} 1100 / PE3053-500ML - Lot LRAA8910 /Analyst:JR/ Analysis Date: 2016-01-27	316 ug/L	330	286 to 375	-0.94	Acceptable <i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary <i>Evaluation Parameter - a:0.9953, b:-0.1614, c:0.0372, d:2.5555</i>
Nickel, Ni ^{1,2} 1105 / PE3132-500ML - Lot LRAA9334 /Analyst:JR/ Analysis Date: 2016-01-27	1020 ug/L	1040	912 to 1160	-0.48	Acceptable <i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary <i>Evaluation Parameter - a:1.0012, b:1.5795, c:0.0368, d:3.8151</i>
Selenium, Se ^{1,2} 1140 / PE3132-500ML - Lot LRAA9334 /Analyst:JR/ Analysis Date: 2016-01-27	666 ug/L	681	579 to 783	-0.44	Acceptable <i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary <i>Evaluation Parameter - a:1, b:0, c:0.05, d:0</i>
Silver, Ag ^{1,2} 1150 / PE3053-500ML - Lot LRAA8910 /Analyst:JR/ Analysis Date: 2016-01-27	128 ug/L	136	116 to 156	-1.18	Acceptable <i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary <i>Evaluation Parameter - a:1, b:0, c:0.05, d:0</i>
Strontium, Sr ^{1,2} 1160 / PE3053-500ML - Lot LRAA8910 /Analyst:JR/ Analysis Date: 2016-01-27	224 ug/L	236	201 to 271	-1.02	Acceptable <i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary <i>Evaluation Parameter - a:1, b:0, c:0.05, d:0</i>

Method:EPA 6010B (1996) (Continued)

Analyte	Result Units	Assigned Value	Accept. Window	Z	Evaluation
Thallium, Tl ^{1,2} 1165 / PE3053-500ML - Lot LRAA8910 /Analyst:JR/ Analysis Date: 2016-01-27	500 ug/L	499	414 to 584	0.04	Acceptable <i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary <i>Evaluation Parameter - a:0.9932, b:-0.9634, c:0.0479, d:4.2361</i>
Tin, Sn ^{1,2} 1175 / PE3053-500ML - Lot LRAA8910 /Analyst:JR/ Analysis Date: 2016-01-29	1330 ug/L	1450	1010 to 1880	-0.83	Acceptable <i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary <i>Evaluation Parameter - a:1, b:0, c:0.10, d:0</i>
Titanium, Ti ^{1,2} 1180 / PE3053-500ML - Lot LRAA8910 /Analyst:JR/ Analysis Date: 2016-01-27	147 ug/L	140	119 to 161	1	Acceptable <i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary <i>Evaluation Parameter - a:1, b:0, c:0.05, d:0</i>
Vanadium, V ^{1,2} 1185 / PE3132-500ML - Lot LRAA9334 /Analyst:JR/ Analysis Date: 2016-01-27	598 ug/L	609	518 to 700	-0.36	Acceptable <i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary <i>Evaluation Parameter - a:1, b:0, c:0.05, d:0</i>
Zinc, Zn ^{1,2} 1190 / PE3132-500ML - Lot LRAA9334 /Analyst:JR/ Analysis Date: 2016-01-27	1020 ug/L	1050	893 to 1210	-0.57	Acceptable <i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary <i>Evaluation Parameter - a:1, b:0, c:0.05, d:0</i>
Aluminum, Al ^{1,2} 1000 / PE3132-500ML - Lot LRAA9334 /Analyst:JR/ Analysis Date: 2016-01-27	2040 ug/L	1910	1600 to 2210	1.27	Acceptable <i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary <i>Evaluation Parameter - a:0.9823, b:9.5889, c:0.0471, d:11.2110</i>

Method:EPA 7062 (1994) [10159407]

Analyte	Result Units	Assigned Value	Accept. Window	Z	Evaluation
Antimony, Sb ^{1,2} 1005 / PE3053-500ML - Lot LRAA8910 /Analyst:JR/ Analysis Date: 2016-02-05	576 ug/L	618	511 to 725	-1.18	Acceptable <i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary <i>Evaluation Parameter - a:0.9864, b:-1.1174, c:0.0471, d:6.1230</i>
Arsenic, As ^{1,2} 1010 / PE3132-500ML - Lot LRAA9334 /Analyst:JR/ Analysis Date: 2016-02-24	643 ug/L	572	484 to 661	2.41	Acceptable <i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary <i>Evaluation Parameter - a:0.9916, b:1.2647, c:0.0422, d:5.1741</i>

Method:EPA 7470A (1994) [10165807]

Analyte	Result Units	Assigned Value	Accept. Window	Z	Evaluation
Mercury, Hg ^{1,2} 1095 / PE3132-500ML - Lot LRAA9334 /Analyst:JR/ Analysis Date: 2016-02-02	15.7 ug/L	19.5	13.7 to 25.4	-1.95	Acceptable
<i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary <i>Evaluation Parameter - a:1, b:0, c:0.10, d:0</i>					

Method:EPA 7742 (1994) [10169207]

Analyte	Result Units	Assigned Value	Accept. Window	Z	Evaluation
Selenium, Se ^{1,2} 1140 / PE3132-500ML - Lot LRAA9334 /Analyst:JR/ Analysis Date: 2016-02-24	638 ug/L	681	579 to 783	-1.26	Acceptable
<i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary <i>Evaluation Parameter - a:1, b:0, c:0.05, d:0</i>					

Method:SM 3114 B 21st ED (1997) [20059807]

Analyte	Result Units	Assigned Value	Accept. Window	Z	Evaluation
Arsenic, As ^{1,2} 1010 / PE3132-500ML - Lot LRAA9334 /Analyst:JR/ Analysis Date: 2016-01-29	644 ug/L	572	484 to 661	2.44	Acceptable
<i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary <i>Evaluation Parameter - a:0.9916, b:1.2647, c:0.0422, d:5.1741</i>					
Selenium, Se ^{1,2} 1140 / PE3132-500ML - Lot LRAA9334 /Analyst:JR/ Analysis Date: 2016-01-29	666 ug/L	681	579 to 783	-0.44	Acceptable
<i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary <i>Evaluation Parameter - a:1, b:0, c:0.05, d:0</i>					

Method:SM 3500-Cr B 21st ED (2001) [20066006]

Analyte	Result Units	Assigned Value	Accept. Window	Z	Evaluation
Chromium VI, Cr(VI) ^{1,2} 1045 / PE1088-20ML - Lot LRAB0104 /Analyst:RA/ Analysis Date: 2016-01-25	212 ug/L	214	177 to 252	-0.16	Acceptable
<i>Evaluation Criteria - 1</i> <input type="checkbox"/> Voluntary <i>Evaluation Parameter - a:0.9917, b:1.0232, c:0.0476, d:2.2011</i>					

Sample Information

DEMAND - WP

PE1130-20ML / Lot LRAA7523

Analytes	Units	Gravimetric Value	Study Mean	Study Std. Dev.
5-day BOD ^{1,2} 1530 Demands	mg/L	163.23±0.832	94.8	20.5
Carbonaceous BOD (CBOD) ^{1,2} 1555 Demands	mg/L	163.23±0.832	91	14.9
Chemical oxygen demand (COD) ^{1,2} 1565 Demands	mg/L	166.86±0.851	165	15.1
Dissolved organic carbon (DOC) ^{1,2} 1710 Demands	mg/L	65.96±0.336	66	3.77
Total organic carbon (TOC) ^{1,2} 2040 Demands	mg/L	65.96±0.336	64.6	4.91
5-day BOD ^{1,2} 1530 Miscellaneous Analytes	mg/L	163.23±0.832	94.8	20.5
Carbonaceous BOD (CBOD) ^{1,2} 1555 Miscellaneous Analytes	mg/L	163.23±0.832	91	14.9
Chemical oxygen demand (COD) ^{1,2} 1565 Miscellaneous Analytes	mg/L	166.86±0.851	165	15.1
Total organic carbon (TOC) ^{1,2} 2040 Miscellaneous Analytes	mg/L	65.96±0.336	64.6	4.91

MINERALS - WP

PE1041-1KT / Lot LRAA9549

Analytes	Units	Gravimetric Value	Study Mean	Study Std. Dev.
Calcium, Ca ^{1,2} 1035 Minerals	mg/L	56.5±0.288	54.8	2.53
Magnesium, Mg ^{1,2} 1085 Minerals	mg/L	25.3±0.129	24.7	1.34
Potassium, K ^{1,2} 1125 Minerals	mg/L	10.6±0.054	10.6	0.64
Sodium, Na ^{1,2} 1155 Minerals	mg/L	22.6±0.115	22.6	1.18
Alkalinity as CaCO ₃ ^{1,2} 1505 Minerals	mg/L	48.8±0.249	49.4	2.43
Calcium hardness as CaCO ₃ ^{1,2} 1550 Minerals	mg/L	141±0.719	137	11.5
Specific conductance, Conductivity (25°C) ^{1,2} 1610 Minerals	umhos/cm	702±2.69	700	29.9
Hardness ² 1750 Minerals	mg/L	245±1.25	246	9.66
Hardness, total as CaCO ₃ ^{1,2} 1755 Minerals	mg/L	245±1.25	236	13.7
Calcium, Ca ^{1,2} 1035	mg/L	56.5±0.288	54.8	2.53
Magnesium, Mg ^{1,2} 1085	mg/L	25.3±0.129	24.7	1.34
Potassium, K ^{1,2} 1125	mg/L	10.6±0.054	10.6	0.64
Sodium, Na ^{1,2} 1155	mg/L	22.6±0.115	22.6	1.18
Alkalinity as CaCO ₃ ^{1,2} 1505	mg/L	48.8±0.249	49.4	2.43
Calcium hardness as CaCO ₃ ^{1,2} 1550	mg/L	141±0.719	137	11.5
Specific conductance, Conductivity (25°C) ^{1,2} 1610	umhos/cm	702±2.69	700	29.9
Hardness, total as CaCO ₃ ^{1,2} 1755	mg/L	245±1.25	236	13.7

PH - WP - 100ML

PE1210-100ML / Lot LRAA9689

Analytes	Units	Gravimetric Value	Study Mean	Study Std. Dev.
pH ^{1,2} 1900 Miscellaneous Analytes	Units	7.90±0.040	7.91	0.04

SIMPLE NUTRIENTS - WP

PE1195-20ML / Lot LRAA9425

Analytes	Units	Gravimetric Value	Study Mean	Study Std. Dev.
Ammonia as N ^{1,2} 1515 Nutrients	mg/L	14.3±0.073	14.1	0.96
Nitrate as N ^{1,2} 1810 Nutrients	mg/L	7.05±0.036	7.05	0.29
Nitrate+nitrite as N ^{1,2} 1820 Nutrients	mg/L	7.05±0.036	7.03	0.38
Orthophosphate as P ^{1,2} 1870 Nutrients	mg/L	1.46±0.007	1.48	0.06
Ammonia as N ^{1,2} 1515	mg/L	14.3±0.073	14.1	0.96
Nitrate as N ^{1,2} 1810	mg/L	7.05±0.036	7.05	0.29
Nitrate+nitrite as N ^{1,2} 1820	mg/L	7.05±0.036	7.03	0.38
Orthophosphate as P ^{1,2} 1870	mg/L	1.46±0.007	1.48	0.06

COMPLEX NUTRIENTS - WP

PE1051-2ML / Lot LRAA8570

Analytes	Units	Gravimetric Value	Study Mean	Study Std. Dev.
Kjeldahl nitrogen, total (TKN) ^{1,2} 1795 Nutrients	mg/L	14.0	14.5	1.78
Organic nitrogen ^{1,2} 1865 Nutrients	mg/L	14.04	0	0
Nitrogen, total ² 1866 Nutrients	mg/L	14.0	14.8	1.89
Phosphorus as P, total ^{1,2} 1910 Nutrients	mg/L	1.99	2.07	0.14

NITRITE - WP

PE1153-2ML / Lot LRAA7843

Analytes	Units	Gravimetric Value	Study Mean	Study Std. Dev.
Nitrite as N ^{1,2} 1840 Nutrients	mg/L	2.02±0.01	2.04	0.06
Nitrite as N ^{1,2} 1840	mg/L	2.02±0.01	2.04	0.06

OIL & GREASE - WP

PE1083-2ML / Lot LRAA7607

Analytes	Units	Gravimetric Value	Study Mean	Study Std. Dev.
n-Hexane Extractable Material (O&G) ^{1,2} 1803 Petroleum Hydrocarbons	mg/L	45.2098	42.5	5.85
Silica Gel Treated n-Hexane Extractable Material (Non-polar Material) ^{1,2} 6142 Miscellaneous Analytes	mg/L	22.6049	24.3	8.34
n-Hexane Extractable Material (O&G) ^{1,2} 1803 Miscellaneous Analytes	mg/L	45.2098	42.5	5.85
C10-C32 Hydrocarbons ^{1,2} 2050 Miscellaneous Analytes	mg/L	45.2098	0	0

RESIDUE - WP

PE3050-500ML / Lot LRAA8001

Analytes	Units	Gravimetric Value	Study Mean	Study Std. Dev.
Total Solids (TS) ^{1,2} 1950 Minerals	mg/L	620±3.003	642	20.4
Total Dissolved Solids at 180°C (TDS) ^{1,2} 1955 Minerals	mg/L	560±2.703	569	23.4
Total Suspended Solids, Non-Filterable Residue (TSS) ^{1,2} 1960 Miscellaneous Analytes	mg/L	59.85±0.300	59.6	3.04
Total Solids (TS) ^{1,2} 1950	mg/L	620±3.003	642	20.4
Total Dissolved Solids at 180°C (TDS) ^{1,2} 1955	mg/L	560±2.703	569	23.4
Total Suspended Solids, Non-Filterable Residue (TSS) ^{1,2} 1960	mg/L	59.85±0.300	59.6	3.04

TOTAL PHENOLICS - WP

PE1134-2ML / Lot LRAA7603

Analytes	Units	Gravimetric Value	Study Mean	Study Std. Dev.
Total phenolics ^{1,2} 1905 Miscellaneous Analytes	mg/L	2.98157316±0.01 52	2.1	0.4

TOTAL RESIDUAL CHLORINE - WP

PE1065-2ML / Lot LRAA7602

Analytes	Units	Gravimetric Value	Study Mean	Study Std. Dev.
Total residual chlorine ^{1,2} 1940 Miscellaneous Analytes	mg/L	0.82±0.0042	0.75	0.05
Residual free chlorine ^{1,2} 1945 Miscellaneous Analytes	mg/L	0.82±0.0042	0.74	0.04

CHROMIUM VI - WP

PE1088-20ML / Lot LRAB0104

Analytes	Units	Gravimetric Value	Study Mean	Study Std. Dev.
Chromium VI, Cr(VI) ^{1,2} 1045 Trace Metals - Waste Water	ug/L	215.1±1.10	210	11

ANIONS - WP

PE1060-20ML / Lot LRAA9629

Analytes	Units	Gravimetric Value	Study Mean	Study Std. Dev.
Bromide ^{1,2} 1540 Minerals	mg/L	6.41±0.033	6.42	0.4
Chloride ^{1,2} 1575 Minerals	mg/L	57.8±0.295	58.2	3.26
Fluoride ^{1,2} 1730 Minerals	mg/L	3.11±0.016	2.95	0.22
Nitrate as NO ₃ ^{1,2} 1805 Nutrients	mg/L	30.6±0.156	30.2	3.37
Nitrate as N ^{1,2} 1810 Nutrients	mg/L	6.92±0.035	6.98	0.28
Nitrate+nitrite as N ^{1,2} 1820 Nutrients	mg/L	7.88±0.040	8.04	0.31
Nitrite as NO ₂ ^{1,2} 1835 Nutrients	mg/L	3.18±0.016	3.1	0.3
Nitrite as N ^{1,2} 1840 Nutrients	mg/L	0.968±0.005	0.95	0.09
Orthophosphate as P ^{1,2} 1870 Nutrients	mg/L	2.50±0.013	2.55	0.17
Sulfate ^{1,2} 2000 Minerals	mg/L	17.5±0.089	17.3	1.24
Bromide ^{1,2} 1540 Miscellaneous Analytes	mg/L	6.41±0.033	6.42	0.4
Chloride ^{1,2} 1575 Miscellaneous Analytes	mg/L	57.8±0.295	58.2	3.26
Fluoride ^{1,2} 1730 Miscellaneous Analytes	mg/L	3.11±0.016	2.95	0.22
Nitrate as N ^{1,2} 1810 Miscellaneous Analytes	mg/L	6.92±0.035	6.98	0.28
Nitrate+nitrite as N ^{1,2} 1820 Miscellaneous Analytes	mg/L	7.88±0.040	8.04	0.31
Nitrite as N ^{1,2} 1840 Miscellaneous Analytes	mg/L	0.968±0.005	0.95	0.09
Orthophosphate as P ^{1,2} 1870 Miscellaneous Analytes	mg/L	2.50±0.013	2.55	0.17
Sulfate ^{1,2} 2000 Miscellaneous Analytes	mg/L	17.5±0.089	17.3	1.24
Bromide ^{1,2} 1540 Anions - Waste Water	mg/L	6.41±0.033	6.42	0.4
Chloride ^{1,2} 1575 Anions - Waste Water	mg/L	57.8±0.295	58.2	3.26
Fluoride ^{1,2} 1730 Anions - Waste Water	mg/L	3.11±0.016	2.95	0.22

Nitrate as NO ₃ ^{1,2} 1805 Anions - Waste Water	mg/L	30.6±0.156	30.2	3.37
Nitrate as N ^{1,2} 1810 Anions - Waste Water	mg/L	6.92±0.035	6.98	0.28
Nitrate+nitrite as N ^{1,2} 1820 Anions - Waste Water	mg/L	7.88±0.040	8.04	0.31
Nitrite as NO ₂ ^{1,2} 1835 Anions - Waste Water	mg/L	3.18±0.016	3.1	0.3
Nitrite as N ^{1,2} 1840 Anions - Waste Water	mg/L	0.968±0.005	0.95	0.09
Orthophosphate as P ^{1,2} 1870 Anions - Waste Water	mg/L	2.50±0.013	2.55	0.17
Sulfate ^{1,2} 2000 Anions - Waste Water	mg/L	17.5±0.089	17.3	1.24

SILICA - WP

PE1078-20ML / Lot LRAA9366

Analytes	Units	Gravimetric Value	Study Mean	Study Std. Dev.
Silica as SiO ₂ ^{1,2} 1990 Miscellaneous Analytes	mg/L	188	184	5.1

ACIDITY - WP

PE1269-20ML / Lot LRAA8806

Analytes	Units	Gravimetric Value	Study Mean	Study Std. Dev.
Acidity, as CaCO ₃ ^{1,2} 1500 Miscellaneous Analytes	mg/L	834±5.56	839	33.4
Carbon dioxide ^{1,2} 3755 Miscellaneous Analytes	mg/L		0	0
Screen (+/-) ² 12100 Miscellaneous Analytes	mg/L		0	0

SULFIDE (TOTAL AND SOLUBLE) - WP

PE1034-20ML / Lot LRAA8800

Analytes	Units	Gravimetric Value	Study Mean	Study Std. Dev.
Sulfide ^{1,2} 2005 Minerals	mg/L	5.1±0.026	4.89	0.62
Sulfide-Screen () ² 2007	mg/L	5.1±0.026	0	0
Sulfide, Soluble ² 2012 Minerals	mg/L	5.1	0	0

COLOR - WP

PE1126-20ML / Lot LRAA9595

Analytes	Units	Gravimetric Value	Study Mean	Study Std. Dev.
Color ^{1,2} 1605 Miscellaneous Analytes	PC Units	30±0.153	28.2	5.52

SETTLEABLE SOLIDS - WP

PE1194-1EA / Lot LRAA7765

Analytes	Units	Gravimetric Value	Study Mean	Study Std. Dev.
Settleable solids ^{1,2} 1965 Miscellaneous Analytes	mL/L	11.6822±0.0596	11.3	0.85

TRACE METALS 1 - WHOLE VOLUME - WP

PE3132-500ML / Lot LRAA9334

Analytes	Units	Gravimetric Value	Study Mean	Study Std. Dev.
Arsenic, As ^{1,2} 1010 Trace Metals - Waste Water	ug/L	576±2.94	571	35.4
Beryllium, Be ^{1,2} 1020 Trace Metals - Waste Water	ug/L	233±1.19	228	9.68
Cadmium, Cd ^{1,2} 1030 Trace Metals - Waste Water	ug/L	504±2.57	496	25.4
Chromium, Cr (total) ^{1,2} 1040 Trace Metals - Waste Water	ug/L	243±1.24	243	10.4
Cobalt, Co ^{1,2} 1050 Trace Metals - Waste Water	ug/L	259±1.27	249	13.9
Copper, Cu ^{1,2} 1055 Trace Metals - Waste Water	ug/L	631±3.22	625	28.4
Iron, Fe ^{1,2} 1070 Trace Metals - Waste Water	ug/L	1286±6.56	1300	69.1
Lead, Pb ^{1,2} 1075 Trace Metals - Waste Water	ug/L	501±2.55	503	28.4
Lithium, Li ² 1080 Trace Metals - Waste Water	ug/L	557±2.84	543	49.3
Manganese, Mn ^{1,2} 1090 Trace Metals - Waste Water	ug/L	1070±5.39	1060	52.3
Mercury, Hg ^{1,2} 1095 Trace Metals - Waste Water	ug/L	19.5±0.099	19.3	3.3
Nickel, Ni ^{1,2} 1105 Trace Metals - Waste Water	ug/L	1035±5.28	1030	59.9
Selenium, Se ^{1,2} 1140 Trace Metals - Waste Water	ug/L	681±3.47	677	37.4
Vanadium, V ^{1,2} 1185 Trace Metals - Waste Water	ug/L	609±3.11	602	23
Zinc, Zn ^{1,2} 1190 Trace Metals - Waste Water	ug/L	1051±5.36	1050	65
Aluminum, Al ^{1,2} 1000 Trace Metals - Waste Water	ug/L	1931±10.4	1990	119

TPH IN WATER (HIGH LEVEL)

PE1619-2ML / Lot LRAA8069

Analytes	Units	Gravimetric Value	Study Mean	Study Std. Dev.
C6 Aliphatics ² 30026 Petroleum Hydrocarbons	mg/L	4.00	0	0
VPH Aliphatic >C6-C8 ^{1,2} 5301 Petroleum Hydrocarbons	mg/L	19.97	0	0
EPH Aliphatic >C8 to C10 ^{1,2} 6220 Petroleum Hydrocarbons	mg/L	6.65	0	0
EPH Aliphatic >C10-C12 ^{1,2} 6211 Petroleum Hydrocarbons	mg/L	6.12	0	0
EPH Aliphatic >C12-C16 ^{1,2} 6212 Petroleum Hydrocarbons	mg/L	6.61	0	0
EPH Aliphatic >C16-C21 ² 6214 Petroleum Hydrocarbons	mg/L	4.41	0	0
EPH Aliphatic >C21-C34 ² 6216 Petroleum Hydrocarbons	mg/L	1±0	0	0
>C7-C8 Aromatics ² 8 Petroleum Hydrocarbons	mg/L	7.58	0	0
EPH Aromatics >C8 to C10 ^{1,2} 6236 Petroleum Hydrocarbons	mg/L	25.96	0	0
EPH Aromatic >C10-C12 ^{1,2} 6224 Petroleum Hydrocarbons	mg/L	4.19	0	0
EPH Aromatic >C12-C16 ^{1,2} 6226 Petroleum Hydrocarbons	mg/L	6.66	0	0
EPH Aromatic >C16-C21 ^{1,2} 6228 Petroleum Hydrocarbons	mg/L	3.34	0	0
EPH Aromatic >C21-C34 ^{1,2} 6231 Petroleum Hydrocarbons	mg/L	1±0	0	0
RRO (Residual Range Organics, C28-C35) ² 9506 Petroleum Hydrocarbons	mg/L	0±0	0	0
Total Petroleum Hydrocarbons (TPH), (C6-C35) ² 2050 Petroleum Hydrocarbons	mg/L	132.95±1.2896	132	10.2
Diesel-range total petroleum hydrocarbons, >C12-C28 ² 9372 Petroleum Hydrocarbons	mg/L	32.86	34.8	10
Gasoline Range Organics, C6-C12 ^{1,2} 9408 Petroleum Hydrocarbons	mg/L	100.09	98.9	13.8
Diesel Range Organics (DRO) ^{1,2} 9369 Petroleum Hydrocarbons	mg/L	32.86	0	0
Gasoline range organics (GRO), C5-C10 ^{1,2} 9408 Petroleum Hydrocarbons	mg/L	100.09	0	0
EPH Aliphatic >C8 to C10 ^{1,2} 6220	mg/L	6.65	0	0
EPH Aliphatic >C10-C12 ^{1,2} 6211	mg/L	6.12	0	0

EPH Aliphatic >C12-C16 ^{1,2} 6212	mg/L	6.61	0	0
EPH Aliphatic >C16-C21 ² 6214	mg/L	4.41	0	0
EPH Aliphatic >C21-C34 ² 6216	mg/L	1±0	0	0
EPH Aromatics >C8 to C10 ^{1,2} 6236	mg/L	25.96	0	0
EPH Aromatic >C10-C12 ^{1,2} 6224	mg/L	4.19	0	0
EPH Aromatic >C12-C16 ^{1,2} 6226	mg/L	6.66	0	0
EPH Aromatic >C16-C21 ^{1,2} 6228	mg/L	3.34	0	0
EPH Aromatic >C21-C34 ^{1,2} 6231	mg/L	1±0	0	0
Diesel-range total petroleum hydrocarbons, >C12-C28 ² 9372	mg/L	32.86	34.8	10
Gasoline Range Organics, C6-C12 ^{1,2} 9408	mg/L	100.09	98.9	13.8
C6 Aliphatics ² 30026	mg/L	4.00	0	0
VPH Aliphatic >C6-C8 ^{1,2} 5301	mg/L	19.97	0	0
>C7-C8 Aromatics ² 8	mg/L	7.58	0	0
RRO (Residual Range Organics, C28-C35) ² 9506	mg/L	0±0	0	0
Diesel Range Organics (DRO) ^{1,2} 9369	mg/L	32.86	0	0
Gasoline range organics (GRO), C5-C10 ^{1,2} 9408	mg/L	100.09	0	0

TPH IN WATER (LOW LEVEL)

PE1799-2ML / Lot LRAB0194

Analytes	Units	Gravimetric Value	Study Mean	Study Std. Dev.
C6 Aliphatics ² 30026 Petroleum Hydrocarbons	mg/L		0	0
VPH Aliphatic >C6-C8 ^{1,2} 5301 Petroleum Hydrocarbons	mg/L		0	0
EPH Aliphatic >C8 to C10 ^{1,2} 6220 Petroleum Hydrocarbons	mg/L		0	0
EPH Aliphatic >C10-C12 ^{1,2} 6211 Petroleum Hydrocarbons	mg/L		0	0
EPH Aliphatic >C12-C16 ^{1,2} 6212 Petroleum Hydrocarbons	mg/L		0	0
EPH Aliphatic >C16-C21 ² 6214 Petroleum Hydrocarbons	mg/L		0	0
EPH Aliphatic >C21-C34 ² 6216 Petroleum Hydrocarbons	mg/L		0	0
>C7-C8 Aromatics ² 8 Petroleum Hydrocarbons	mg/L		0	0
EPH Aromatics >C8 to C10 ^{1,2} 6236 Petroleum Hydrocarbons	mg/L		0	0
EPH Aromatic >C10-C12 ^{1,2} 6224 Petroleum Hydrocarbons	mg/L		0	0
EPH Aromatic >C12-C16 ^{1,2} 6226 Petroleum Hydrocarbons	mg/L		0	0
EPH Aromatic >C16-C21 ^{1,2} 6228 Petroleum Hydrocarbons	mg/L		0	0
EPH Aromatic >C21-C34 ^{1,2} 6231 Petroleum Hydrocarbons	mg/L		0	0
RRO (Residual Range Organics, C28-C35) ² 9506 Petroleum Hydrocarbons	mg/L		0	0
Total Petroleum Hydrocarbons (TPH), (C6-C35) ² 2050 Petroleum Hydrocarbons	mg/L	14.2	0	0
Diesel-range total petroleum hydrocarbons, >C12-C28 ² 9372 Petroleum Hydrocarbons	mg/L	7.90	0	0
Gasoline Range Organics, C6-C12 ^{1,2} 9408 Petroleum Hydrocarbons	mg/L	5.25	0	0
Diesel Range Organics (DRO) ^{1,2} 9369 Petroleum Hydrocarbons	mg/L	6.13	0	0
C6 Aliphatics ² 30026	mg/L		0	0
VPH Aliphatic >C6-C8 ^{1,2} 5301	mg/L		0	0

EPH Aliphatic >C8 to C10 ^{1,2} 6220	mg/L		0	0
EPH Aliphatic >C10-C12 ^{1,2} 6211	mg/L		0	0
EPH Aliphatic >C12-C16 ^{1,2} 6212	mg/L		0	0
EPH Aliphatic >C16-C21 ² 6214	mg/L		0	0
EPH Aliphatic >C21-C34 ² 6216	mg/L		0	0
>C7-C8 Aromatics ² 8	mg/L		0	0
EPH Aromatics >C8 to C10 ^{1,2} 6236	mg/L		0	0
EPH Aromatic >C10-C12 ^{1,2} 6224	mg/L		0	0
EPH Aromatic >C12-C16 ^{1,2} 6226	mg/L		0	0
EPH Aromatic >C16-C21 ^{1,2} 6228	mg/L		0	0
EPH Aromatic >C21-C34 ^{1,2} 6231	mg/L		0	0
RRO (Residual Range Organics, C28-C35) ² 9506	mg/L		0	0
Total Petroleum Hydrocarbons (TPH), (C6-C35) ² 2050	mg/L	14.2	0	0
Diesel-range total petroleum hydrocarbons, >C12-C28 ² 9372	mg/L	7.90	0	0
Gasoline Range Organics, C6-C12 ^{1,2} 9408	mg/L	5.25	0	0

TRACE METALS 2 - WHOLE VOLUME - WP

PE3053-500ML / Lot LRAA8910

Analytes	Units	Gravimetric Value	Study Mean	Study Std. Dev.
Antimony, Sb ^{1,2} 1005 Trace Metals - Waste Water	ug/L	628±3.2	611	54.5
Barium, Ba ^{1,2} 1015 Trace Metals - Waste Water	ug/L	1370±6.99	1340	23.6
Boron, B ^{1,2} 1025 Trace Metals - Waste Water	ug/L	1463±7.46	1530	97.5
Molybdenum, Mo ^{1,2} 1100 Trace Metals - Waste Water	ug/L	332±1.69	332	8.83
Silver, Ag ^{1,2} 1150 Trace Metals - Waste Water	ug/L	136±0.695	142	2.65
Strontium, Sr ^{1,2} 1160 Trace Metals - Waste Water	ug/L	236±1.2	238	10.3
Thallium, Tl ^{1,2} 1165 Trace Metals - Waste Water	ug/L	503±2.57	508	28.1
Tin, Sn ^{1,2} 1175 Trace Metals - Waste Water	ug/L	1449±7.39	1390	52.7
Titanium, Ti ^{1,2} 1180 Trace Metals - Waste Water	ug/L	140±0.713	145	7.73

TURBIDITY - WP

PE1081-20ML / Lot LRAA8879

Analytes	Units	Gravimetric Value	Study Mean	Study Std. Dev.
Turbidity ^{1,2} 2055 Miscellaneous Analytes	NTU	10.64±0.056	10.4	0.76

Definitions and Interpretation of Statistical Analysis:

Assigned Value: Value attributed to a particular quantity and accepted, sometimes by convention, as having an uncertainty appropriate for a given purpose. See ISO/IEC 17043 for additional information. In general the assigned value is the value used to assess proficiency and may or may not be the made to value (gravimetric value).

Accept. Window: The range of values that constitute acceptable performance for a laboratory participating in this PT study.

Z: A Z-Score tells how a single data point compares to normal data. A Z-Score says not only whether a point was above or below average, but how unusual the measurement is. Generally, a method result with a Z-Score less than |2| is considered to be in control, a Z-Score between |2| and |3| is considered 'Questionable', but still within control and a Z greater than |3| is considered not acceptable and the method is out of control. For WS studies, a z-score greater than |2| is unacceptable. Calculated as **Z = (Reported Value - Assigned Value) / Proficiency Std. Dev.**

Proficiency Std. Dev.: Standard deviation calculated based on **Evaluation Criteria.**

Study Mean: Statistical study mean calculated using a robust statistical model (RTC employs the 'Biweight Program'). Robust statistical techniques to minimize the influence that extreme results can have on estimates of the mean and standard deviation. NOTE - These techniques assign less weight to extreme results, rather than eliminate them from a data set.

Study Std. Dev.: Standard deviation calculated from study data using robust statisticals (Biweight).

Gravimetric Value: The 'prepared to' value, determined by gravimetric means. The uncertainty associated to this value is standard uncertainty and based on RTC's gravimetric tolerances.

Evaluation Criteria:

1 - Regression Equation - Acceptance windows based on TNI adopted equation of proficiency value +/- 3 proficiency standard deviations and check limits of proficiency value +/- 2 proficiency standard deviations. Proficiency value and proficiency standard deviation are calculated from gravimetric variables a, b, c, & d as proficiency value = a * gravimetric + b and proficiency standard deviation = c * gravimetric + d.

2 - Study Robust Mean and c,d regression - Acceptance windows based on TNI adopted equation of proficiency value +/- 3 proficiency standard deviations and check limits of proficiency value +/- 2 proficiency standard deviations. Proficiency value and proficiency standard deviation calculated from robust study mean and variables c & d as proficiency value = robust mean and proficiency standard deviation = c * proficiency value + d.

3 - Fixed Limits - Acceptance windows based on span of gravimetric percentage from gravimetric as gravimetric +/- gravimetric * percentage.

4 - Adjustable Fixed Limits - Acceptance windows base on a span of gravimetric percentage from gravimetric as gravimetric +/- gravimetric * lowPercentage where gravimetric < break and gravimetric +/-

gravimetric * highPercentage where gravimetric >= break.

5 - Study Statistics - Acceptance windows based on a number of standard deviations span from the study mean as study mean +/- (deviations * standard deviation).

6 - Log Transform Statistics - Acceptance windows based on lognormal distributed data. Acceptance windows = mean(lognormal) +/- span * standard deviation(lognormal).

7 - Reserved

8 - Regression Equation 2SD - Acceptance windows based on EPA equation of proficiency value +/- 2 proficiency standard deviations. Proficiency value and proficiency standard deviation are calculated from gravimetric variables a, b, c, & d as proficiency value = a * gravimetric + b and proficiency standard deviation = c * gravimetric + d. Generally reserved for drinking water studies.

Proficiency Test Item Preparation, Homogeneity and Stability Assessment - RTC uses proprietary and published methods for the manufacture, homogeneity and stability testing of proficiency test items. RTC's proficiency test materials meet requirements of ISO Guide 34. For more information contact RTC. Additionally RTC complies with TNI Volume 3 'General Requirements for Environmental Proficiency Test Providers', EL-V3-2009, 2009 for all TNI Fields of Proficiency Testing analytes.

Metrological Traceability - All preparations are made using balances calibrated annually traceable to NIST standards. Where appropriate analytical measurements are traceable through an unbroken chain to NIST standards, or a Certified Reference Material manufactured under ISO Guide 34 in conjunction with ISO/IEC 17025.

Statistical Analysis - RTC uses robust statistics to calculate study means and standard deviations - Reference - Kafadar, K, A Biweight Approach to the One-Sample Problem, Journal of the American Statistical Association, Vol. 77, No. 378, June, 1982, pp. 416-424.

Additional Information - Go to www.rt-corp.com/reporting for additional information on summary statistics for specific methods, advice on the interpretation of the statistical analysis, and additional comments/recommendations. If you failed an analyte it may be required to perform a corrective action and/or retest. RTC recommends that you contact your accreditation body for specific instruction.

Program analyte accrediting footnotes

¹ NELAC Compliant, covered by RTC's ACLASS Proficiency Testing Provider accreditation, Cert. AP-1469

² ISO 17043 Accredited, covered by RTC's ACLASS Proficiency Testing Provider accreditation, Cert AP-1469

Authorizing Officer:  _____

Date: 3/18/2016

Patrick Brumfield, ASQ CQA
QA Manager

This section of the report is for informational purposes only. If you are unsure about specific accreditation requirements, please contact your state coordinator.

UNACCEPTABLE ANALYTES

PASS RATE

Number of Reported Results:	103
Number of Passing Results:	103
Pass Rate:	100%