



**2009 North American Proficiency Testing Program
4th Quarter Report - November 22, 2009**

Laboratory ID

Water Analysis	Units	n	Water 2009-310			Water 2009-311			Water 2009-312		
			Median	MAD	Lab ^{1,2}	Median	MAD	Lab ^{1,2}	Median	MAD	Lab ^{1,2}
pH		31	7.91	0.130		7.90	0.180		8.21	0.170	
EC	dS/m	27	0.292	0.265		0.430	0.026		0.410	0.016	
Cations											
Ca	mmolc/L	27	1.42	0.056		2.78	0.111		2.28	0.102	
Mg	mmolc/L	27	0.120	0.428		0.658	0.026		1.18	0.030	
Na	mmolc/L	27	1.13	0.050		0.770	0.043		0.780	0.031	
K	mmolc/L	26	0.290	0.018		0.180	0.010		0.080	0.003	
NH4-N	mmolc/L	9	0.003	0.003		0.002	0.002		0.001	0.001	
Sum Cations	mmolc/L	16	2.97	2.53		4.39	0.183		4.37	0.237	
SAR		16	1.30	0.052		0.600	0.009		0.600	0.030	
Adj-SAR		8	1.79	0.190		1.04	0.062		1.03	0.068	
Anions											
HCO3	mmolc/L	17	2.41	0.096		2.87	0.137		2.84	0.140	
CO3	mmolc/L	12	0.000	0.000		0.000	0.000		0.000	0.000	
Cl	mmolc/L	21	0.160	0.016		0.843	0.072		0.510	0.034	
NO3	mmolc/L	22	0.003	0.003		0.090	0.010		0.020	0.010	
SO4	mmolc/L	22	0.290	0.022		0.458	0.032		0.725	0.036	
Sum Anions	mmolc/L	13	2.93	0.149		4.27	0.191		4.20	0.110	
Cation-Anion Difference		39	0.00	0.000		0.00	0.000		0.00	0.000	
Boron	mg/L	20	0.050	0.010		0.030	0.010		0.059	0.012	
PO4-P Phosphorus - Spec	mg/L	4	0.216	0.112		0.133	0.114		0.085	0.066	
Phosphorus - ICP (Total)	mg/L	13	0.018	0.018		0.036	0.026		0.047	0.026	
TKN	mg/L	3	0.240	0.240		1.16	1.16		0.100	0.100	
Nitrogen Combustion (Total)	mg/L	0									
Total Organic Carbon	mg/L	3	3.91	3.740		3.32	2.87		4.10	1.61	

1 - Values flagged exceed Warning Limits " * " 2.5 x MAD (Median Absolute Deviation) and Control Limits " *** " 4 x MAD. " < " and "ND" values not recorded.

2 - Limits not compared to lab data for methods with < 7 labs reporting.