

**Appendix 4C-3: Summary
for LICD Study at STA-1W North
Test Cell Facility
(Means Presented are
Arithmetic Means)**

<i>SAMPLE SITE</i>	<i>MAX</i>	<i>MIN</i>	<i>MEDIAN</i>	<i>MEAN</i>	<i>STD. ERR.</i>	<i>STD. DEV.</i>	<i>N</i>
TOTAL PHOSOPHORUS (Autosampler) (mg/L)							
RAW WATER NALPHA BEFORE DOSING	0.211	0.028	0.130	0.125	0.004	0.052	13
RAW WATER NALPHA AFTER DOSING	0.086	0.025	0.044	0.049	0.001	0.016	22
NO DOSE CONTROL 05 BEFORE DOSING	0.100	0.019	0.042	0.054	0.002	0.028	13
NO DOSE CONTROL 05 AFTER DOSING	0.054	0.010	0.017	0.021	0.000	0.009	25
NO DOSE CONTROL 10 BEFORE DOSING	0.172	0.025	0.065	0.075	0.003	0.041	13
NO DOSE CONTROL 10 AFTER DOSING	0.037	0.013	0.020	0.020	0.000	0.006	19
BEFORE DOSING 0.5 MG/L AS AL	0.304	0.024	0.068	0.088	0.006	0.073	12
AFTER DOSING 0.5 MG/L AS AL	0.088	0.004	0.018	0.025	0.001	0.021	17
BEFORE DOSING 2.0 MG/L AS AL	0.135	0.026	0.070	0.076	0.004	0.043	11
AFTER DOSING 2.0 MG/L AS AL	0.121	0.004	0.016	0.027	0.002	0.032	17
BEFORE DOSING 5.0 MG/L AS AL	0.144	0.004	0.062	0.073	0.004	0.041	10
AFTER DOSING 5.0 MG/L AS AL	0.070	0.004	0.020	0.025	0.001	0.018	16
TOTAL PHOSOPHORUS (Grab) (mg/L)							
RAW WATER NALPHA BEFORE DOSING	0.225	0.058	0.130	0.135	0.004	0.052	13
RAW WATER NALPHA AFTER DOSING	0.063	0.024	0.040	0.041	0.000	0.009	19
NO DOSE CONTROL 05 BEFORE DOSING	0.095	0.021	0.031	0.040	0.002	0.021	11
NO DOSE CONTROL 05 AFTER DOSING	0.029	0.010	0.016	0.016	0.000	0.005	19
NO DOSE CONTROL 10 BEFORE DOSING	0.090	0.020	0.039	0.046	0.002	0.022	12
NO DOSE CONTROL 10 AFTER DOSING	0.031	0.013	0.019	0.019	0.000	0.004	20
BEFORE DOSING 0.5 MG/L AS AL	0.120	0.039	0.060	0.068	0.003	0.026	9
AFTER DOSING 0.5 MG/L AS AL	0.101	0.004	0.018	0.027	0.001	0.024	17
BEFORE DOSING 2.0 MG/L AS AL	0.158	0.024	0.050	0.077	0.004	0.045	11
AFTER DOSING 2.0 MG/L AS AL	0.117	0.004	0.018	0.024	0.002	0.025	16
BEFORE DOSING 5.0 MG/L AS AL	0.145	0.004	0.061	0.072	0.004	0.042	11
AFTER DOSING 5.0 MG/L AS AL	0.061	0.004	0.018	0.020	0.001	0.013	14

<i>SAMPLE SITE</i>	<i>MAX</i>	<i>MIN</i>	<i>MEDIAN</i>	<i>MEAN</i>	<i>STD. ERR.</i>	<i>STD. DEV.</i>	<i>N</i>
TOTAL DISSOLVED PHOSPHORUS (mg/L)							
RAW WATER NALPHA BEFORE DOSING	0.227	0.022	0.094	0.092	0.005	0.057	12
RAW WATER NALPHA AFTER DOSING	0.038	0.015	0.023	0.023	0.000	0.006	19
NO DOSE CONTROL 05 BEFORE DOSING	0.088	0.009	0.017	0.024	0.002	0.022	10
NO DOSE CONTROL 05 AFTER DOSING	0.012	0.007	0.009	0.009	0.000	0.001	19
NO DOSE CONTROL 10 BEFORE DOSING	0.120	0.010	0.022	0.036	0.003	0.036	11
NO DOSE CONTROL 10 AFTER DOSING	0.013	0.008	0.010	0.010	0.000	0.001	19
BEFORE DOSING 0.5 MG/L AS AL	0.162	0.025	0.037	0.061	0.005	0.049	9
AFTER DOSING 0.5 MG/L AS AL	0.023	0.004	0.009	0.010	0.000	0.005	18
BEFORE DOSING 2.0 MG/L AS AL	0.198	0.010	0.033	0.055	0.005	0.057	11
AFTER DOSING 2.0 MG/L AS AL	0.014	0.007	0.009	0.010	0.000	0.002	14
BEFORE DOSING 5.0 MG/L AS AL	0.684	0.004	0.024	0.092	0.017	0.189	11
AFTER DOSING 5.0 MG/L AS AL	0.015	0.005	0.009	0.009	0.000	0.002	15
SOLUBLE REACTIVE PHOSPHOROUS (mg/L)							
RAW WATER NALPHA BEFORE DOSING	0.227	0.022	0.105	0.095	0.005	0.059	11
RAW WATER NALPHA AFTER DOSING	0.038	0.015	0.023	0.024	0.000	0.007	16
NO DOSE CONTROL 05 BEFORE DOSING	0.088	0.012	0.018	0.026	0.003	0.023	9
NO DOSE CONTROL 05 AFTER DOSING	0.029	0.007	0.009	0.010	0.000	0.005	16
NO DOSE CONTROL 10 BEFORE DOSING	0.120	0.013	0.023	0.039	0.004	0.036	10
NO DOSE CONTROL 10 AFTER DOSING	0.031	0.008	0.010	0.012	0.000	0.006	17
BEFORE DOSING 0.5 MG/L AS AL	0.162	0.025	0.034	0.063	0.007	0.052	8
AFTER DOSING 0.5 MG/L AS AL	0.023	0.004	0.009	0.010	0.000	0.005	15
BEFORE DOSING 2.0 MG/L AS AL	0.198	0.010	0.036	0.059	0.006	0.058	10
AFTER DOSING 2.0 MG/L AS AL	0.014	0.007	0.010	0.010	0.000	0.002	13
BEFORE DOSING 5.0 MG/L AS AL	0.684	0.004	0.026	0.100	0.020	0.196	10
AFTER DOSING 5.0 MG/L AS AL	0.015	0.005	0.009	0.009	0.000	0.002	12

<i>SAMPLE SITE</i>	<i>MAX</i>	<i>MIN</i>	<i>MEDIAN</i>	<i>MEAN</i>	<i>STD. ERR.</i>	<i>STD. DEV.</i>	<i>N</i>
TOTAL KJELDAHL NITROGEN (Autosampler) (mg/L)							
RAW WATER NALPHA BEFORE DOSING	3.3	2.1	2.8	2.8	0.0	0.3	15
RAW WATER NALPHA AFTER DOSING	3.9	2.3	2.7	2.7	0.0	0.3	24
NO DOSE CONTROL 05 BEFORE DOSING	2.9	1.6	2.3	2.2	0.0	0.4	15
NO DOSE CONTROL 05 AFTER DOSING	3.0	1.7	2.2	2.2	0.0	0.3	24
NO DOSE CONTROL 10 BEFORE DOSING	3.0	1.5	2.2	2.3	0.0	0.4	15
NO DOSE CONTROL 10 AFTER DOSING	2.5	1.5	2.3	2.2	0.0	0.3	23
BEFORE DOSING 0.5 MG/L AS AL	2.7	1.7	2.2	2.2	0.0	0.3	14
AFTER DOSING 0.5 MG/L AS AL	2.5	1.2	2.2	2.2	0.0	0.3	16
BEFORE DOSING 2.0 MG/L AS AL	2.7	1.5	2.1	2.2	0.0	0.3	15
AFTER DOSING 2.0 MG/L AS AL	2.5	1.8	2.2	2.2	0.0	0.2	17
BEFORE DOSING 5.0 MG/L AS AL	2.5	0.5	2.2	2.1	0.0	0.5	15
AFTER DOSING 5.0 MG/L AS AL	2.4	1.7	2.1	2.1	0.0	0.2	14
TOTAL DISSOLVED KJELDAHL NITROGEN (mg/L)							
RAW WATER NALPHA BEFORE DOSING	3.6	2.4	2.8	2.8	0.0	0.3	13
RAW WATER NALPHA AFTER DOSING	3.3	2.1	2.6	2.6	0.0	0.2	26
NO DOSE CONTROL 05 BEFORE DOSING	2.5	1.6	2.2	2.0	0.0	0.3	13
NO DOSE CONTROL 05 AFTER DOSING	2.9	1.3	2.1	2.1	0.0	0.3	26
NO DOSE CONTROL 10 BEFORE DOSING	2.7	1.4	1.9	2.0	0.0	0.3	13
NO DOSE CONTROL 10 AFTER DOSING	2.5	1.5	2.2	2.1	0.0	0.2	26
BEFORE DOSING 0.5 MG/L AS AL	2.5	1.7	2.3	2.2	0.0	0.2	12
AFTER DOSING 0.5 MG/L AS AL	2.6	1.9	2.2	2.2	0.0	0.2	11
BEFORE DOSING 2.0 MG/L AS AL	2.6	1.8	2.3	2.2	0.0	0.2	12
AFTER DOSING 2.0 MG/L AS AL	2.4	2.0	2.2	2.2	0.0	0.2	11
BEFORE DOSING 5.0 MG/L AS AL	2.9	0.3	2.3	2.1	0.1	0.6	12
AFTER DOSING 5.0 MG/L AS AL	2.6	1.9	2.1	2.1	0.0	0.2	10

<i>SAMPLE SITE</i>	<i>MAX</i>	<i>MIN</i>	<i>MEDIAN</i>	<i>MEAN</i>	<i>STD. ERR.</i>	<i>STD. DEV.</i>	<i>N</i>
AMMONIA NITROGEN (mg/L)							
RAW WATER NALPHA BEFORE DOSING	0.912	0.151	0.333	0.382	0.004	0.170	39
RAW WATER NALPHA AFTER DOSING							
NO DOSE CONTROL 05 BEFORE DOSING							
NO DOSE CONTROL 05 AFTER DOSING	0.181	0.004	0.023	0.038	0.001	0.036	39
NO DOSE CONTROL 10 BEFORE DOSING							
NO DOSE CONTROL 10 AFTER DOSING	0.167	0.004	0.015	0.028	0.001	0.033	39
BEFORE DOSING 0.5 MG/L AS AL	0.101	0.093	0.097	0.097	0.002	0.004	2
AFTER DOSING 0.5 MG/L AS AL	0.073	0.028	0.040	0.045	0.004	0.017	4
BEFORE DOSING 2.0 MG/L AS AL	0.126	0.061	0.094	0.094	0.016	0.033	2
AFTER DOSING 2.0 MG/L AS AL	0.078	0.039	0.054	0.057	0.005	0.016	3
BEFORE DOSING 5.0 MG/L AS AL	0.074	0.009	0.068	0.050	0.010	0.029	3
AFTER DOSING 5.0 MG/L AS AL	0.088	0.070	0.082	0.080	0.002	0.007	3
NITRATE-NITRITE NITROGEN (mg/L)							
RAW WATER NALPHA BEFORE DOSING	0.011	0.004	0.004	0.005	0.000	0.002	16
RAW WATER NALPHA AFTER DOSING							
NO DOSE CONTROL 05 BEFORE DOSING							
NO DOSE CONTROL 05 AFTER DOSING	0.021	0.004	0.004	0.006	0.000	0.004	16
NO DOSE CONTROL 10 BEFORE DOSING							
NO DOSE CONTROL 10 AFTER DOSING	0.008	0.004	0.004	0.005	0.000	0.001	16
BEFORE DOSING 0.5 MG/L AS AL	0.006	0.000	0.004	0.003	0.001	0.002	3
AFTER DOSING 0.5 MG/L AS AL	0.005	0.004	0.004	0.004	0.000	0.000	4
BEFORE DOSING 2.0 MG/L AS AL	0.005	0.004	0.004	0.004	0.000	0.000	3
AFTER DOSING 2.0 MG/L AS AL	0.013	0.004	0.006	0.007	0.001	0.003	4
BEFORE DOSING 5.0 MG/L AS AL	0.004	0.004	0.004	0.004	0.000	0.000	3
AFTER DOSING 5.0 MG/L AS AL	0.022	0.000	0.004	0.009	0.003	0.010	3

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SILICA (mg/L)							
RAW WATER NALPHA BEFORE DOSING	41.50	17.20	26.10	25.87	0.15	5.72	39
RAW WATER NALPHA AFTER DOSING							
NO DOSE CONTROL 05 BEFORE DOSING							
NO DOSE CONTROL 05 AFTER DOSING	31.40	10.70	22.10	21.81	0.12	4.79	39
NO DOSE CONTROL 10 BEFORE DOSING							
NO DOSE CONTROL 10 AFTER DOSING	33.60	9.90	21.90	22.08	0.14	5.54	39
BEFORE DOSING 0.5 MG/L AS AL	28.24	17.10	23.80	23.24	1.07	4.27	4
AFTER DOSING 0.5 MG/L AS AL	24.00	11.82	18.13	18.02	1.45	5.79	4
BEFORE DOSING 2.0 MG/L AS AL	28.42	16.50	23.55	23.01	1.24	4.97	4
AFTER DOSING 2.0 MG/L AS AL	26.20	13.56	19.32	19.60	1.37	5.49	4
BEFORE DOSING 5.0 MG/L AS AL	27.30	0.05	20.55	17.11	2.60	10.40	4
AFTER DOSING 5.0 MG/L AS AL	25.40	14.06	19.92	19.83	1.15	4.60	4
SULFATE (mg/L)							
RAW WATER NALPHA BEFORE DOSING	112.0	13.0	54.3	60.2	0.5	20.2	39
RAW WATER NALPHA AFTER DOSING							
NO DOSE CONTROL 05 BEFORE DOSING							
NO DOSE CONTROL 05 AFTER DOSING	69.6	26.4	50.1	49.1	0.3	12.1	38
NO DOSE CONTROL 10 BEFORE DOSING							
NO DOSE CONTROL 10 AFTER DOSING	70.8	24.0	47.8	47.5	0.3	12.9	38
BEFORE DOSING 0.5 MG/L AS AL	79.4	39.5	46.8	53.1	3.9	15.7	4
AFTER DOSING 0.5 MG/L AS AL	65.1	51.4	52.7	55.5	1.4	5.6	4
BEFORE DOSING 2.0 MG/L AS AL	69.6	31.0	37.5	43.9	3.9	15.6	4
AFTER DOSING 2.0 MG/L AS AL	65.0	51.0	54.7	56.4	1.4	5.7	4
BEFORE DOSING 5.0 MG/L AS AL	75.4	0.1	42.4	40.1	6.7	26.7	4
AFTER DOSING 5.0 MG/L AS AL	63.2	50.9	52.8	54.9	1.2	4.8	4

<i>SAMPLE SITE</i>	<i>MAX</i>	<i>MIN</i>	<i>MEDIAN</i>	<i>MEAN</i>	<i>STD. ERR.</i>	<i>STD. DEV.</i>	<i>N</i>
CHLORIDE (mg/L)							
RAW WATER NALPHA BEFORE DOSING	193.0	128.0	169.0	166.3	0.9	17.1	19
RAW WATER NALPHA AFTER DOSING	196.5	144.0	177.7	174.4	0.7	13.9	20
NO DOSE CONTROL 05 BEFORE DOSING	175.0	96.4	152.0	142.7	1.4	25.7	19
NO DOSE CONTROL 05 AFTER DOSING	197.4	130.0	180.0	173.0	0.9	18.0	20
NO DOSE CONTROL 10 BEFORE DOSING	174.0	103.0	141.0	139.1	1.2	22.6	19
NO DOSE CONTROL 10 AFTER DOSING	198.4	138.0	182.1	176.1	0.8	15.4	20
BEFORE DOSING 0.5 MG/L AS AL	171.0	112.0	157.3	149.4	5.7	22.9	4
AFTER DOSING 0.5 MG/L AS AL	195.2	166.0	186.1	183.4	2.8	11.0	4
BEFORE DOSING 2.0 MG/L AS AL	176.0	117.0	155.4	150.9	5.5	22.1	4
AFTER DOSING 2.0 MG/L AS AL	199.7	171.0	190.5	187.9	2.7	10.9	4
BEFORE DOSING 5.0 MG/L AS AL	172.0	0.1	131.5	108.8	16.5	66.1	4
AFTER DOSING 5.0 MG/L AS AL	200.4	164.0	191.4	186.8	3.4	13.7	4
TOTAL ALUMINUM (mg/L)							
RAW WATER NALPHA BEFORE DOSING	30	11	17	19	0	6	19
RAW WATER NALPHA AFTER DOSING	25	5	12	13	0	5	20
NO DOSE CONTROL 05 BEFORE DOSING	173	5	13	24	2	36	19
NO DOSE CONTROL 05 AFTER DOSING	21	5	9	10	0	5	20
NO DOSE CONTROL 10 BEFORE DOSING	72	6	15	22	1	17	19
NO DOSE CONTROL 10 AFTER DOSING	16	5	9	9	0	3	20
BEFORE DOSING 0.5 MG/L AS AL	17	7	11	11	1	4	4
AFTER DOSING 0.5 MG/L AS AL	157	5	26	36	2	35	17
BEFORE DOSING 2.0 MG/L AS AL	16	9	12	12	1	3	4
AFTER DOSING 2.0 MG/L AS AL	213	5	47	58	3	54	17
BEFORE DOSING 5.0 MG/L AS AL	20	4	13	13	1	6	4
AFTER DOSING 5.0 MG/L AS AL	149	6	59	62	3	48	16

<i>SAMPLE SITE</i>	<i>MAX</i>	<i>MIN</i>	<i>MEDIAN</i>	<i>MEAN</i>	<i>STD. ERR.</i>	<i>STD. DEV.</i>	<i>N</i>
DISSOLVED ALUMINUM (mg/L)							
RAW WATER NALPHA BEFORE DOSING							
RAW WATER NALPHA AFTER DOSING							
NO DOSE CONTROL 05 BEFORE DOSING							
NO DOSE CONTROL 05 AFTER DOSING							
NO DOSE CONTROL 10 BEFORE DOSING							
NO DOSE CONTROL 10 AFTER DOSING							
BEFORE DOSING 0.5 MG/L AS AL							
AFTER DOSING 0.5 MG/L AS AL	88	5	26	27	1	23	19
BEFORE DOSING 2.0 MG/L AS AL							
AFTER DOSING 2.0 MG/L AS AL	162	5	33	41	2	41	19
BEFORE DOSING 5.0 MG/L AS AL							
AFTER DOSING 5.0 MG/L AS AL	127	4	40	44	2	39	19
CALCIUM (mg/L)							
RAW WATER NALPHA BEFORE DOSING	105.0	72.3	88.5	89.2	0.2	6.9	39
RAW WATER NALPHA AFTER DOSING							
NO DOSE CONTROL 05 BEFORE DOSING							
NO DOSE CONTROL 05 AFTER DOSING	90.3	37.5	69.5	67.0	0.4	15.7	39
NO DOSE CONTROL 10 BEFORE DOSING							
NO DOSE CONTROL 10 AFTER DOSING	87.8	25.8	59.6	57.6	0.5	19.3	39
BEFORE DOSING 0.5 MG/L AS AL	78.9	60.6	75.6	72.7	1.8	7.2	4
AFTER DOSING 0.5 MG/L AS AL	92.0	0.2	87.6	66.9	9.6	38.5	4
BEFORE DOSING 2.0 MG/L AS AL	66.9	53.9	65.7	63.1	1.3	5.4	4
AFTER DOSING 2.0 MG/L AS AL	92.0	86.4	88.4	88.8	0.6	2.2	4
BEFORE DOSING 5.0 MG/L AS AL	77.1	0.2	64.6	51.6	7.6	30.4	4
AFTER DOSING 5.0 MG/L AS AL	92.0	86.4	88.4	88.8	0.6	2.2	4

<i>SAMPLE SITE</i>	<i>MAX</i>	<i>MIN</i>	<i>MEDIAN</i>	<i>MEAN</i>	<i>STD. ERR.</i>	<i>STD. DEV.</i>	<i>N</i>
IRON (mg/L)							
RAW WATER NALPHA BEFORE DOSING	61	7	32	32	0	14	39
RAW WATER NALPHA AFTER DOSING							
NO DOSE CONTROL 05 BEFORE DOSING							
NO DOSE CONTROL 05 AFTER DOSING	54	4	9	12	0	10	39
NO DOSE CONTROL 10 BEFORE DOSING							
NO DOSE CONTROL 10 AFTER DOSING	56	4	16	17	0	11	38
BEFORE DOSING 0.5 MG/L AS AL	109	8	23	28	2	25	12
AFTER DOSING 0.5 MG/L AS AL	22	3	11	12	2	8	4
BEFORE DOSING 2.0 MG/L AS AL	66	14	24	27	1	14	12
AFTER DOSING 2.0 MG/L AS AL	32	4	20	19	2	10	4
BEFORE DOSING 5.0 MG/L AS AL	33	3	16	16	1	7	11
AFTER DOSING 5.0 MG/L AS AL	18	4	14	12	1	6	4
MAGNESIUM (mg/L)							
RAW WATER NALPHA BEFORE DOSING	35.7	20.8	28.2	28.5	0.1	3.3	39
RAW WATER NALPHA AFTER DOSING							
NO DOSE CONTROL 05 BEFORE DOSING							
NO DOSE CONTROL 05 AFTER DOSING	32.3	16.1	26.1	25.3	0.1	4.5	39
NO DOSE CONTROL 10 BEFORE DOSING							
NO DOSE CONTROL 10 AFTER DOSING	32.7	14.2	26.5	24.8	0.1	5.1	39
BEFORE DOSING 0.5 MG/L AS AL	29.5	17.7	24.6	24.1	1.2	4.7	4
AFTER DOSING 0.5 MG/L AS AL	30.7	0.1	28.5	21.9	3.2	12.7	4
BEFORE DOSING 2.0 MG/L AS AL	29.2	17.7	24.4	23.9	1.2	4.7	4
AFTER DOSING 2.0 MG/L AS AL	32.2	27.3	30.2	30.0	0.5	1.9	4
BEFORE DOSING 5.0 MG/L AS AL	28.0	0.1	19.2	16.6	2.6	10.2	4
AFTER DOSING 5.0 MG/L AS AL	32.4	27.3	29.9	29.9	0.5	1.9	4

<i>SAMPLE SITE</i>	<i>MAX</i>	<i>MIN</i>	<i>MEDIAN</i>	<i>MEAN</i>	<i>STD. ERR.</i>	<i>STD. DEV.</i>	<i>N</i>
MANGANESE (mg/L)							
RAW WATER NALPHA BEFORE DOSING	29.1	0.2	11.1	13.3	0.2	7.6	39
RAW WATER NALPHA AFTER DOSING							
NO DOSE CONTROL 05 BEFORE DOSING							
NO DOSE CONTROL 05 AFTER DOSING	42.3	0.2	17.4	17.0	0.3	12.0	39
NO DOSE CONTROL 10 BEFORE DOSING							
NO DOSE CONTROL 10 AFTER DOSING	27.0	0.2	8.1	9.6	0.2	6.6	39
BEFORE DOSING 0.5 MG/L AS AL	129.0	16.0	40.2	56.4	11.3	45.1	4
AFTER DOSING 0.5 MG/L AS AL	1.0	1.0	1.0	1.0	0.0	0.0	1
BEFORE DOSING 2.0 MG/L AS AL	68.2	13.0	22.0	31.3	5.5	21.8	4
AFTER DOSING 2.0 MG/L AS AL	1.0	1.0	1.0	1.0	0.0	0.0	1
BEFORE DOSING 5.0 MG/L AS AL	34.3	0.2	21.7	19.5	3.1	12.3	4
AFTER DOSING 5.0 MG/L AS AL	1.0	1.0	1.0	1.0	0.0	0.0	1
MOLYBDENUM (mg/L)							
RAW WATER NALPHA BEFORE DOSING	10.0	0.5	1.5	2.7	0.1	3.0	38
RAW WATER NALPHA AFTER DOSING							
NO DOSE CONTROL 05 BEFORE DOSING							
NO DOSE CONTROL 05 AFTER DOSING	10.0	0.5	0.7	2.2	0.1	3.2	38
NO DOSE CONTROL 10 BEFORE DOSING							
NO DOSE CONTROL 10 AFTER DOSING	10.0	0.5	0.6	2.1	0.1	3.2	38
BEFORE DOSING 0.5 MG/L AS AL	96.2	0.5	1.3	32.7	15.0	44.9	3
AFTER DOSING 0.5 MG/L AS AL	7.7	2.2	5.0	5.0	1.4	2.8	2
BEFORE DOSING 2.0 MG/L AS AL	1.0	0.5	0.5	0.7	0.1	0.2	3
AFTER DOSING 2.0 MG/L AS AL	2.6	1.4	2.0	2.0	0.3	0.6	2
BEFORE DOSING 5.0 MG/L AS AL	0.9	0.5	0.5	0.6	0.1	0.2	3
AFTER DOSING 5.0 MG/L AS AL	2.4	0.8	1.6	1.6	0.4	0.8	2

<i>SAMPLE SITE</i>	<i>MAX</i>	<i>MIN</i>	<i>MEDIAN</i>	<i>MEAN</i>	<i>STD. ERR.</i>	<i>STD. DEV.</i>	<i>N</i>
POTASSIUM (mg/L)							
RAW WATER NALPHA BEFORE DOSING	17.0	9.3	11.9	12.0	0.0	1.6	39
RAW WATER NALPHA AFTER DOSING							
NO DOSE CONTROL 05 BEFORE DOSING							
NO DOSE CONTROL 05 AFTER DOSING	13.6	9.2	11.1	11.2	0.0	1.1	39
NO DOSE CONTROL 10 BEFORE DOSING							
NO DOSE CONTROL 10 AFTER DOSING	13.1	8.1	10.8	10.8	0.0	1.2	39
BEFORE DOSING 0.5 MG/L AS AL	13.3	9.6	11.7	11.6	0.3	1.3	4
AFTER DOSING 0.5 MG/L AS AL	13.8	0.6	11.2	9.2	1.3	5.1	4
BEFORE DOSING 2.0 MG/L AS AL	13.1	9.8	11.9	11.6	0.3	1.2	4
AFTER DOSING 2.0 MG/L AS AL	13.3	10.2	10.9	11.3	0.3	1.2	4
BEFORE DOSING 5.0 MG/L AS AL	13.2	0.1	11.8	9.2	1.3	5.3	4
AFTER DOSING 5.0 MG/L AS AL	13.6	10.3	11.0	11.5	0.3	1.3	4
SODIUM (mg/L)							
RAW WATER NALPHA BEFORE DOSING	147.0	102.0	128.0	125.7	0.3	11.3	39
RAW WATER NALPHA AFTER DOSING							
NO DOSE CONTROL 05 BEFORE DOSING							
NO DOSE CONTROL 05 AFTER DOSING	148.9	79.2	119.0	115.8	0.5	19.2	39
NO DOSE CONTROL 10 BEFORE DOSING							
NO DOSE CONTROL 10 AFTER DOSING	148.8	76.6	116.0	114.9	0.5	20.1	39
BEFORE DOSING 0.5 MG/L AS AL	126.0	88.6	114.1	110.7	3.5	14.1	4
AFTER DOSING 0.5 MG/L AS AL	146.0	0.2	131.1	102.1	14.8	59.1	4
BEFORE DOSING 2.0 MG/L AS AL	130.0	88.4	116.0	112.6	4.1	16.4	4
AFTER DOSING 2.0 MG/L AS AL	148.0	128.0	136.3	137.2	2.0	7.9	4
BEFORE DOSING 5.0 MG/L AS AL	130.0	0.2	95.4	80.2	12.2	48.6	4
AFTER DOSING 5.0 MG/L AS AL	145.0	128.0	136.5	136.5	1.8	7.0	4

<i>SAMPLE SITE</i>	<i>MAX</i>	<i>MIN</i>	<i>MEDIAN</i>	<i>MEAN</i>	<i>STD. ERR.</i>	<i>STD. DEV.</i>	<i>N</i>
TOTAL SUSPENDED SOLIDS (mg/L)							
RAW WATER NALPHA BEFORE DOSING	11	1	2	3	0	2	38
RAW WATER NALPHA AFTER DOSING							
NO DOSE CONTROL 05 BEFORE DOSING							
NO DOSE CONTROL 05 AFTER DOSING	9	1	2	3	0	2	38
NO DOSE CONTROL 10 BEFORE DOSING							
NO DOSE CONTROL 10 AFTER DOSING	6	1	2	3	0	1	38
BEFORE DOSING 0.5 MG/L AS AL	4	1	2	2	0	1	13
AFTER DOSING 0.5 MG/L AS AL	5	1	2	2	0	1	10
BEFORE DOSING 2.0 MG/L AS AL	5	1	2	2	0	1	13
AFTER DOSING 2.0 MG/L AS AL	6	1	2	2	0	1	10
BEFORE DOSING 5.0 MG/L AS AL	4	1	2	2	0	1	13
AFTER DOSING 5.0 MG/L AS AL	4	1	2	2	0	1	10
TOTAL DISSOLVED SOLIDS (mg/L)							
RAW WATER NALPHA BEFORE DOSING	872	541	712	704	5	85	18
RAW WATER NALPHA AFTER DOSING							
NO DOSE CONTROL 05 BEFORE DOSING	794	403	538	535	5	93	18
NO DOSE CONTROL 05 AFTER DOSING	821	599	749	727	4	71	19
NO DOSE CONTROL 10 BEFORE DOSING	583	350	495	483	4	67	18
NO DOSE CONTROL 10 AFTER DOSING	807	583	745	708	4	72	19
BEFORE DOSING 0.5 MG/L AS AL	728	508	636	629	5	71	13
AFTER DOSING 0.5 MG/L AS AL	811	567	753	737	7	73	10
BEFORE DOSING 2.0 MG/L AS AL	675	483	613	596	5	62	13
AFTER DOSING 2.0 MG/L AS AL	808	592	738	726	7	67	10
BEFORE DOSING 5.0 MG/L AS AL	691	13	626	570	12	166	14
AFTER DOSING 5.0 MG/L AS AL	816	494	745	721	9	93	10

<i>SAMPLE SITE</i>	<i>MAX</i>	<i>MIN</i>	<i>MEDIAN</i>	<i>MEAN</i>	<i>STD. ERR.</i>	<i>STD. DEV.</i>	<i>N</i>
TOTAL ORGANIC CARBON (mg/L)							
RAW WATER NALPHA BEFORE DOSING	60	31	42	42	0	6	39
RAW WATER NALPHA AFTER DOSING							
NO DOSE CONTROL 05 BEFORE DOSING							
NO DOSE CONTROL 05 AFTER DOSING	50	29	40	39	0	6	39
NO DOSE CONTROL 10 BEFORE DOSING							
NO DOSE CONTROL 10 AFTER DOSING	54	15	39	39	0	7	39
BEFORE DOSING 0.5 MG/L AS AL	46	28	36	36	0	4	14
AFTER DOSING 0.5 MG/L AS AL	47	35	42	42	0	3	10
BEFORE DOSING 2.0 MG/L AS AL	46	29	37	36	0	4	14
AFTER DOSING 2.0 MG/L AS AL	46	37	41	42	0	3	10
BEFORE DOSING 5.0 MG/L AS AL	42	1	37	33	1	10	14
AFTER DOSING 5.0 MG/L AS AL	44	31	40	39	0	4	10
DISSOLVED ORGANIC CARBON (mg/L)							
RAW WATER NALPHA BEFORE DOSING	60	31	42	42	0	6	39
RAW WATER NALPHA AFTER DOSING							
NO DOSE CONTROL 05 BEFORE DOSING							
NO DOSE CONTROL 05 AFTER DOSING	50	29	40	39	0	6	39
NO DOSE CONTROL 10 BEFORE DOSING							
NO DOSE CONTROL 10 AFTER DOSING	54	15	39	39	0	7	39
BEFORE DOSING 0.5 MG/L AS AL	46	28	36	36	0	4	14
AFTER DOSING 0.5 MG/L AS AL	47	35	42	42	0	3	10
BEFORE DOSING 2.0 MG/L AS AL	46	29	37	36	0	4	14
AFTER DOSING 2.0 MG/L AS AL	46	37	41	42	0	3	10
BEFORE DOSING 5.0 MG/L AS AL	42	1	37	33	1	10	14
AFTER DOSING 5.0 MG/L AS AL	44	31	40	39	0	4	10

<i>SAMPLE SITE</i>	<i>MAX</i>	<i>MIN</i>	<i>MEDIAN</i>	<i>MEAN</i>	<i>STD. ERR.</i>	<i>STD. DEV.</i>	<i>N</i>
TOTAL INORGANIC CARBON (mg/L)							
RAW WATER NALPHA BEFORE DOSING	43	26	37	37	0	3	39
RAW WATER NALPHA AFTER DOSING							
NO DOSE CONTROL 05 BEFORE DOSING							
NO DOSE CONTROL 05 AFTER DOSING	40	17	29	29	0	7	39
NO DOSE CONTROL 10 BEFORE DOSING							
NO DOSE CONTROL 10 AFTER DOSING	39	14	25	27	0	8	38
BEFORE DOSING 0.5 MG/L AS AL	34	24	30	29	1	3	4
AFTER DOSING 0.5 MG/L AS AL	40	36	36	38	0	2	5
BEFORE DOSING 2.0 MG/L AS AL	30	23	28	27	1	2	4
AFTER DOSING 2.0 MG/L AS AL	39	35	36	37	0	2	5
BEFORE DOSING 5.0 MG/L AS AL	30	0	27	21	3	12	4
AFTER DOSING 5.0 MG/L AS AL	39	35	35	37	0	2	5
ALKALINITY (mg/L)							
RAW WATER NALPHA BEFORE DOSING	360	216	311	305	1	28	39
RAW WATER NALPHA AFTER DOSING							
NO DOSE CONTROL 05 BEFORE DOSING							
NO DOSE CONTROL 05 AFTER DOSING	334	140	240	246	1	55	39
NO DOSE CONTROL 10 BEFORE DOSING							
NO DOSE CONTROL 10 AFTER DOSING	326	114	207	221	2	66	38
BEFORE DOSING 0.5 MG/L AS AL	279	204	250	246	7	27	4
AFTER DOSING 0.5 MG/L AS AL	332	303	304	314	3	13	5
BEFORE DOSING 2.0 MG/L AS AL	247	192	232	226	5	21	4
AFTER DOSING 2.0 MG/L AS AL	327	294	297	307	3	14	5
BEFORE DOSING 5.0 MG/L AS AL	252	2	223	175	25	102	4
AFTER DOSING 5.0 MG/L AS AL	326	291	294	304	3	14	5