

COMPREHENSIVE CHEMICAL ANALYSIS
CITY OF CHICAGO - DEPARTMENT OF WATER MANAGEMENT - BUREAU OF WATER SUPPLY
WATER QUALITY DIVISION-WATER PURIFICATION LABORATORIES
 LABORATORY ACCREDITATION NUMBER: 100228

SAMPLE COLLECTION DATE: March 18 & 19, 2014

LAB ID Nos. 14C1471 - 14C1479

1st QUARTER

PARAMETER	IEPA MCL	DETERMINED AS	STORET NUMBER	SOUTH WATER PURIFICATION PLANT				JAROINE WATER PURIFICATION PLANT				
				1	2A	2B	3	4	5A	5B	6	7
				RAW LAKE	OUTLETS		***DISTRIBUTION	RAW LAKE	OUTLETS		***DISTRIBUTION	
					73rd Street	79th Street	SOUTH		North	Central	Central	North
TEMPERATURE		°C	00010	4	3	3	4	5	5	4	3	5
TURBIDITY	TT	N.T.U.	82079	1.80	0.05	0.05	0.10	0.85	0.10	0.05	0.10	0.10
THRESHOLD ODOR, STRAIGHT	*3	T.O.N	00086	4 E	2 Cc	2 Cc	2.5 Cc	1 E	2 Cc	2.5 Cc	2.5 Cc	2.0 Cc
THRESHOLD ODOR, DECHLORINATED	*3	T.O.N.		4 E	1 Mm	1 Mm	1 Mm	1 E	2 Mm	1 Mm	1 Mm	1 Mm
COLOR	*15	Pt.-Co. CU	00080	0	0	0	0	0	0	0	0	0
pH	*6.5-8.5	STD. Units	00040	8.34	7.85	7.85	7.82	8.26	7.87	7.79	7.82	7.81
FREE CHLORINE RESIDUAL		CL ₂ , mg/L	50064	--	1.12	1.08	0.98	--	1.12	1.12	1.07	1.21
SATURATION INDEX, LANGELIER		UNITS +/-		0.08	-0.51	-0.50	-0.47	-0.01	-0.62	-0.60	-0.49	-0.44
ALKALINITY, PHENOLPHTHALEIN		0	00415	4	0	0	0	0	0	0	0	0
ALKALINITY, TOTAL		CaCO ₃ , mg/L	00410	124	116	118	110	117	112	112	111	111
BROMIDE		Br, mg/L	71870	0.021	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
CHLORIDE	*250	Cl, mg/L	00940	15.3	15.8	16.0	14.8	13.0	15.2	14.8	15.2	15.3
FLUORIDE	4	F, mg/L	00951	0.17	1.07	1.09	1.05	0.16	1.05	1.06	1.02	1.04
SULFATE	*250	SO ₄ , mg/L	00945	26.4	28.1	28.2	27.9	24.3	27.0	27.0	28.0	28.0
HARDNESS		CaCO ₃ , mg/L	00900	158	155	156	149	148	149	147	150	150
CALCIUM		Ca, mg/L	00916	41.1	40.3	40.6	38.5	38.5	38.6	38.9	39.1	39.2
MAGNESIUM		Mg, mg/L	00927	13.5	13.2	13.3	12.8	12.7	12.8	12.2	12.8	12.8
POTASSIUM		K, mg/L	00937	1.08	1.13	1.03	1.06	1.02	<1	1.05	1.03	<1
SODIUM		Na, mg/L	00006	9.73	9.11	9.28	8.34	7.88	8.70	8.68	8.59	8.67
SOLIDS, TOTAL DISSOLVED	*500	TDS, mg/L	00150	174	167	168	168	156	159	157	157	159
SOLIDS, TOTAL		Tot. Sol., mg/L	00500	202	205	191	182	179	179	182	185	184
TOTAL ORGANIC CARBON		TOC, mg/L	00680	H	H	H	H	H	H	H	H	H
OXYGEN DEMAND, CHEMICAL		O, mg/L	00335	<10	<10	<10	<10	<10	<10	<10	<10	<10
NITROGEN, AMMONIA		N, mg/L	00610	<0.02	<0.02	<0.02	<0.02	<0.02	0.031	<0.02	<0.02	<0.02
NITROGEN, NITRATE	10	N, mg/L	00620	0.392	0.353	0.371	0.350	0.335	0.334	0.338	0.346	0.346
NITROGEN, NITRITE	1	N, mg/L	00615	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
ORTHOPHOSPHATE		PO ₄ , mg/L	00660	0.005	0.448	0.436	0.454	0.006	0.439	0.413	0.480	0.446
PHOSPHATE, TOTAL		PO ₄ , mg/L	00650	0.021	1.156	1.085	1.088	0.018	1.101	0.923	0.864	1.088
CYANIDE, TOTAL	200	CN, ug/L	00720	H	H	H	H	H	H	H	H	H
RADIOACTIVITY, GROSS ALPHA	15	pCi/L	01501	<9	<9	<9	<9	<9	<9	<9	<9	<9
RADIOACTIVITY, GROSS BETA	50	pCi/L	03501	15.4	9.9	7.1	11.9	9.0	10.7	9.4	9.9	11.0

* Federal/State Secondary MCLs ** Action Level ***Distribution samples are composited. TT - Treatment Technique ND - not detected

H - Holding Time Exceeded

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WATER QUALITY DIVISION-WATER PURIFICATION LABORATORIES
 LABORATORY ACCREDITATION NUMBER: 100228

SAMPLE COLLECTION DATE: March 18 & 19, 2014

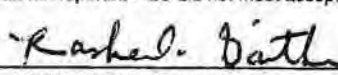
LAB ID Nos. 14C1471 - 14C1479

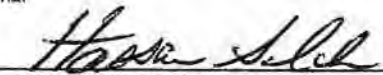
1st QUARTER

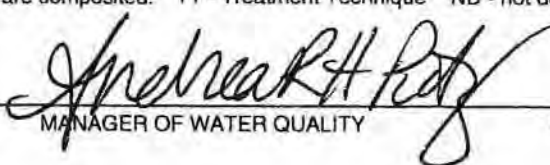
PARAMETER	IEPA MCL	DETERMINED AS	STORET NUMBER	SOUTH WATER PURIFICATION PLANT				JARDINE WATER PURIFICATION PLANT				
				RAW LAKE	OUTLETS		***DISTRIBUTION	RAW LAKE	OUTLETS		***DISTRIBUTION	
					73rd Street	79th Street	South		North	Central	Central	North
ALUMINUM	*50-200	Al, µg/L	01105	79.7	52.2	51.7	52.0	56.4	54.9	56.8	50.3	53.2
ANTIMONY	6	Sb, µg/L	01268	<1	<1	<1	<1	<1	<1	<1	<1	<1
ARSENIC	10	As, µg/L	01002	<1	<1	<1	<1	<1	<1	<1	<1	<1
BARIIUM	2000	Ba, µg/L	01007	<2.0	19.1	19.2	18.3	19.2	19.1	18.9	19.0	19.3
BERYLLIUM	4	Be, µg/L	01012	<1	<1	<1	<1	<1	<1	<1	<1	<1
BORON		B, µg/L	01022	25.2	18.2	18.8	17.8	17.7	16.9	<17	17.1	16.8
CADMIUM	5	Cd, µg/L	01027	<1	<1	<1	<1	<1	<1	<1	<1	<1
CHROMIUM	100	Cr, µg/L	01034	<1	1.90	2.18	2.02	1.77	2.13	2.16	2.00	1.78
COBALT		Co, µg/L	01037	<1	<1	<1	<1	<1	<1	<1	<1	<1
COPPER	**1300	Cu, µg/L	01042	<1	<1	<1	1.04	2.83	<1	<1	<1	1.57
IRON	*300	Fe, µg/L	00031	36.3	<3	<3	7.92	15.4	<3	<3	3.33	11.9
LEAD	**15.0	Pb, µg/L	01051	R	<3	<3	<3	<3	<3	<3	<3	<3
LITHIUM		Li, µg/L	01132	3.78	3.34	3.68	<3	3.41	3.24	3.32	<3	<3
MANGANESE	*50	Mn, µg/L	01055	R	<1	<1	<1	<1	<1	<1	<1	<1
MERCURY	2	Hg, µg/L	71900	H	H	H	H	H	H	H	H	H
MOLYBDENUM		Mo, µg/L	01062	<2	<2	<2	<2	<2	<2	<2	<2	<2
NICKEL		Ni, µg/L	01067	R	1.05	1.06	1.06	1.03	<1	<1	1.10	1.21
SELENIUM	50	Se, µg/L	01147	<3	<3	<3	<3	<3	<3	<3	<3	<3
SILICON		Si, µg/L	01142	1131	1192	1188	1172	1006	1170	1171	1176	1180
SILVER	*100	Ag, µg/L	01077	<1	<1	<1	<1	<1	<1	<1	<1	<1
STRONTIUM		Sr, µg/L	01082	R	106	107	102	101	102	101	101	101
THALLIUM	2	Tl, µg/L	01059	R	<1	<1	<1	<1	<1	<1	<1	<1
TITANIUM		Ti, µg/L	01152	R	<2	<2	<2	<2	<2	<2	<2	<2
VANADIUM		V, µg/L	00985	R	<1	<1	<1	<1	<1	<1	<1	<1
ZINC	*5000	Zn, µg/L	01092	<6	<6	<6	8.62	<6	<6	<6	21.8	30.3

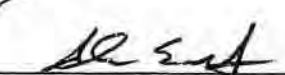
* Federal/State Secondary MCLs ** Action Level ***Distribution samples are composited. TT - Treatment Technique ND - not detected

R - Data not reported - QC did not meet acceptance criteria.


 CHIEF WATER CHEMIST


 DIRECTOR OF LABORATORIES


 MANAGER OF WATER QUALITY


 DEPUTY COMMISSIONER

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WATER QUALITY DIVISION-WATER PURIFICATION LABORATORIES
 LABORATORY ACCREDITATION NUMBER: 100228

SAMPLE COLLECTION DATE: June 11 and June 12, 2014

LAB ID Nos.

2nd QUARTER

PARAMETER	IEPA MCL	DETERMINED AS	STORET NUMBER	14C2875	14C2876	14C2877	14C2892	14C2866	14C2867	14C2868	14C2902	14C2903
				SOUTH WATER PURIFICATION PLANT				JARDINE WATER PURIFICATION PLANT				
				1	2A	2B	3	4	5A	5B	6	7
				RAW LAKE	OUTLETS		***DISTRIBUTION	RAW LAKE	OUTLETS		***DISTRIBUTION	
	73rd Street	79th Street	SOUTH		North	Central	Central	North				
TEMPERATURE		°C	00010	18	17	17	16	17	16	16	15	17
TURBIDITY	TT	N.T.U.	82079	6.05	0.10	0.10	0.10	0.70	0.05	0.05	0.10	0.15
THRESHOLD ODOR, STRAIGHT	*3	T.O.N	00086	3 DF	2.5 Cc	1 Cc	2 Cc	1.5 E	2 Cc	0.5 Cc	2 Cc	2 CC
THRESHOLD ODOR, DECHLORINATED	*3	T.O.N.		3 DF	1 Mm	1 Mm	1 Mm	1.5 E	1.5 Mm	1 Mm	1 Mm	1 Mm
COLOR	*15	Pt.-Co. CU	00080	1	<1	<1	<1	2	<1	<1	<1	<1
pH	*6.5-8.5	STD. Units	00040	8.31	7.86	7.88	7.79	8.34	7.84	7.81	7.87	7.87
FREE CHLORINE RESIDUAL		Cl ₂ , mg/L	50064	--	1.24	1.23	0.97	--	1.03	1.09	1.09	0.72
SATURATION INDEX, LANGELIER		UNITS +/-		0.32	-0.18	-0.15	-0.25	0.34	-0.21	-0.24	-0.21	-0.16
ALKALINITY, PHENOLPHTHALEIN		0	00415	1	0	0	0	2	0	0	0	0
ALKALINITY, TOTAL		CaCO ₃ , mg/L	00410	109	106	107	108	113	106	108	107	106
BROMIDE		Br, mg/L	71870	0.159	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
CHLORIDE	*250	Cl, mg/L	00940	16.8	15.7	15.8	15.6	14.3	16.0	16.0	16.1	16.2
FLUORIDE	4	F, mg/L	00951	0.66	0.97	1.00	0.98	0.14	1.01	1.02	1.03	1.05
SULFATE	*250	SO ₄ , mg/L	00945	23.5	25.7	25.5	25.8	23.5	26.1	26.4	26.6	26.0
HARDNESS		CaCO ₃ , mg/L	00900	142	132	134	132	133	133	134	135	132
CALCIUM		Ca, mg/L	00916	34.4	34.0	33.8	34.8	34.6	34.5	34.1	34.2	34.1
MAGNESIUM		Mg, mg/L	00927	12.9	12.6	12.3	12.4	12.3	12.3	12.4	12.3	12.4
POTASSIUM		K, mg/L	00937	1.63	1.63	1.55	1.65	1.55	1.59	1.59	1.57	1.62
SODIUM		Na, mg/L	00006	8.34	8.39	8.24	8.27	8.16	8.48	8.50	8.49	8.59
SOLIDS, TOTAL DISSOLVED	*500	TDS, mg/L	00150	147	143	150	157	153	159	169	156	154
SOLIDS, TOTAL		Tot. Sol., mg/L	00500	191	191	188	194	186	185	191	191	184
TOTAL ORGANIC CARBON		TOC, mg/L	00680	2.04	1.90	1.88	1.88	1.90	1.78	1.78	1.76	1.83
OXYGEN DEMAND, CHEMICAL		O, mg/L	00335	<10	<10	<10	<10	<10	<10	<10	<10	<10
NITROGEN, AMMONIA		N, mg/L	00610	0.022	0.023	0.022	0.021	0.020	<0.02	0.020	<0.02	<0.02
NITROGEN, NITRATE	10	N, mg/L	00620	0.151	0.278	0.273	0.272	0.298	0.293	0.296	0.291	0.291
NITROGEN, NITRITE	1	N, mg/L	00615	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
ORTHOPHOSPHATE		PO ₄ , mg/L	00660	0.148	0.474	0.468	0.488	0.012	0.464	0.471	0.468	0.494
PHOSPHATE, TOTAL		PO ₄ , mg/L	00650	0.224	1.12	1.07	1.05	0.054	1.11	1.12	1.28	1.23
CYANIDE, TOTAL	200	CN, ug/L	00720	<12	<12	<12	<12	<12	<12	<12	<12	<12
RADIOACTIVITY, GROSS ALPHA	15	pCi/L	01501	<9	<9	<9	<9	<9	<9	<9	<9	<9
RADIOACTIVITY, GROSS BETA	50	pCi/L	03501	12.3	<7	13.3	9.36	7.58	7.08	<7	8.05	7.88

* Federal/State Secondary MCLs

** Action Level

***Distribution samples are composited. TT - Treatment Technique ND - not detected

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 LABORATORY ACCREDITATION NUMBER: 100228

SAMPLE COLLECTION DATE: June 11 and June 12, 2014

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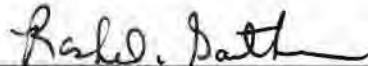
2nd QUARTER


PARAMETER	IEPA MCL	DETERMINED AS	STORET NUMBER	14C2875	14C2876	14C2877	14C2892	14C2866	14C2867	14C2868	14C2902	14C2903
				SOUTH WATER PURIFICATION PLANT				JARDINE WATER PURIFICATION PLANT				
				RAW LAKE	OUTLETS		***DISTRIBUTION	RAW LAKE	OUTLETS		***DISTRIBUTION	
	73rd Street	79th Street	South		North	Central	Central	North				
ALUMINIUM	*50-200	Al, µg/L	01105	111	130	123	116	36.4	113	107	89.6	86.7
ANTIMONY	6	Sb, µg/L	01268	<1	<1	<1	<1	<1	<1	<1	<1	<1
ARSENIC	10	As, µg/L	01002	<1	<1	<1	<1	<1	<1	<1	<1	<1
BARIUM	2000	Ba, µg/L	01007	20.3	18.4	18.1	18.2	18.7	17.8	17.8	18.0	18.1
BERYLLIUM	4	Be, µg/L	01012	<1	<1	<1	<1	<1	<1	<1	<1	<1
BORON		B, µg/L	01022	23.0	22.5	21.3	22.2	21.8	21.9	22.2	20.9	21.4
CADMIUM	5	Cd, µg/L	01027	<1	<1	<1	<1	<1	<1	<1	<1	<1
CHROMIUM	100	Cr, µg/L	01034	1.20	2.57	2.89	2.56	2.75	2.76	3.26	3.10	2.21
COBALT		Co, µg/L	01037	<1	<1	<1	<1	<1	<1	<1	<1	<1
COPPER	**1300	Cu, µg/L	01042	2.08	1.62	1.35	1.38	2.69	1.65	<1	1.27	2.22
IRON	*300	Fe, µg/L	00031	156	<3	<3	<3	17.8	<3	<3	3.1	10.0
LEAD	**15.0	Pb, µg/L	01051	<2	<2	<2	<2	<2	<2	<2	<2	<2
LITHIUM		Li, µg/L	01132	<1	<1	<1	<1	<1	<1	<1	<1	<1
MANGANESE	*50	Mn, µg/L	01055	4.88	<1	<1	<1	<1	<1	<1	<1	1.08
MERCURY	2	Hg, µg/L	71900	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
MOLYBDENUM		Mo, µg/L	01062	<2	<2	<2	<2	<2	<2	<2	<2	<2
NICKEL		Ni, µg/L	01067	1.21	1.02	<1	<1	<1	<1	<1	<1	<1
SELENIUM	50	Se, µg/L	01147	<2	<2	<2	<2	<2	<2	<2	<2	<2
SILICON		Si, µg/L	01142	1148	873	870	895	800	971	959	957	960
SILVER	*100	Ag, µg/L	01077	<1	<1	<1	<1	<1	<1	<1	<1	<1
STRONTIUM		Sr, µg/L	01082	116	113	111	113	113	113	113	112	111
THALLIUM	2	Tl, µg/L	01059	<1	<1	<1	<1	<1	<1	<1	<1	<1
TITANIUM		Ti, µg/L	01152	2.48	<2	<2	<2	<2	<2	<2	<2	<2
VANADIUM		V, µg/L	00985	<1	<1	<1	<1	<1	<1	1.09	1.04	<1
ZINC	*5000	Zn, µg/L	01092	<5	<5	<5	8.24	<5	<5	<5	21.6	22.0

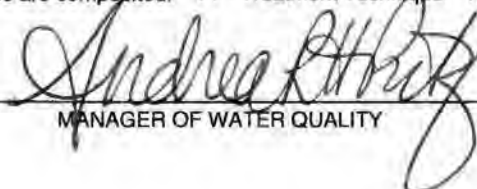
* Federal/State Secondary MCLs

** Action Level

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SAMPLE COLLECTION DATE: August 13, 2014

LAB ID Nos.

3rd QUARTER

PARAMETER	IEPA MCL	DETERMINED AS	STORET NUMBER	14C3978	14C3979	14C3980	14C3981	14C3982	14C3983	14C3984	14C3985	14C3986
				SOUTH WATER PURIFICATION PLANT				JARDINE WATER PURIFICATION PLANT				
				1	2A	2B	3	4	5A	5B	6	7
				RAW LAKE	OUTLETS		***DISTRIBUTION	RAW LAKE	OUTLETS		***DISTRIBUTION	
	73rd Street	79th Street	SOUTH		North	Central	Central	North				
TEMPERATURE		°C	00010	22	22	22	21	23	22	22	22	22
TURBIDITY	TT	N.T.U.	82079	0.85	0.10	0.10	0.15	0.80	0.10	0.10	0.10	0.10
THRESHOLD ODOR, STRAIGHT	*3	T.O.N	00086	--	2Cc	2Cc	2Cc	--	2Cc	2Cc	2Cc	2Cc
THRESHOLD ODOR, DECHLORINATED	*3	T.O.N.		--	2M	2M	2M	1M	3M	2M	2M	2M
COLOR	*15	Pt.-Co. CU	00080	<1	<1	<1	<1	<1	<1	<1	<1	<1
pH	*6.5-8.5	STD. Units	00040	8.30	7.71	7.74	7.85	8.34	7.72	7.72	7.82	7.81
FREE CHLORINE RESIDUAL		CL ₂ , mg/L	50064	--	1.24	1.23	0.75	--	1.18	1.15	0.80	0.84
SATURATION INDEX, LANGELIER		UNITS +/-		0.41	-0.21	-0.18	-0.10	0.46	-0.21	-0.14	-0.10	-0.11
ALKALINITY, PHENOLPHTHALEIN		0	00415	3	0	0	0	4	0	0	0	0
ALKALINITY, TOTAL		CaCO ₃ , mg/L	00410	112	104	105	105	111	104	104	104	104
BROMIDE		Br, mg/L	71870	0.030	<0.02	<0.02	<0.02	0.030	<0.02	<0.02	<0.02	<0.02
CHLORIDE	*250	Cl, mg/L	00940	13.9	16.1	16.6	16.4	13.7	15.9	16.0	16.0	15.9
FLUORIDE	4	F, mg/L	00951	0.15	0.92	0.93	0.95	0.15	0.98	0.98	1.00	1.00
SULFATE	*250	SO ₄ , mg/L	00945	23.2	27.0	27.0	27.0	23.0	26.3	26.5	26.4	26.8
HARDNESS		CaCO ₃ , mg/L	00900	130	134	131	131	129	129	133	135	130
CALCIUM		Ca, mg/L	00916	33.4	33.4	33.2	33.4	32.7	33.1	32.9	33.2	33.3
MAGNESIUM		Mg, mg/L	00927	12.4	12.4	12.3	12.3	12.1	12.3	12.2	12.3	12.3
POTASSIUM		K, mg/L	00937	1.74	1.59	1.74	1.61	1.53	1.54	1.52	1.52	1.60
SODIUM		Na, mg/L	00006	8.01	8.29	8.23	8.40	7.67	8.15	8.13	8.16	8.18
SOLIDS, TOTAL DISSOLVED	*500	TDS, mg/L	00150	151	148	154	155	148	150	153	148	158
SOLIDS, TOTAL		Tot. Sol., mg/L	00500	161	170	167	174	168	175	174	174	180
TOTAL ORGANIC CARBON		TOC, mg/L	00680	1.93	1.94	1.96	1.94	1.99	1.94	1.84	1.82	1.83
OXYGEN DEMAND, CHEMICAL		O, mg/L	00335	<10	<10	<10	<10	<10	<10	<10	<10	<10
NITROGEN, AMMONIA		N, mg/L	00610	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
NITROGEN, NITRATE	10	N, mg/L	00620	H	H	H	H	H	H	H	H	H
NITROGEN, NITRITE	1	N, mg/L	00615	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
ORTHOPHOSPHATE		PO ₄ , mg/L	00660	0.009	0.451	0.466	0.498	0.009	0.501	0.515	0.557	0.549
PHOSPHATE, TOTAL		PO ₄ , mg/L	00650	0.067	0.955	1.00	1.03	0.060	1.12	1.08	1.07	1.08
CYANIDE, TOTAL	200	CN, ug/L	00720	<12	<12	<12	<12	<12	<12	<12	<12	<12
RADIOACTIVITY, GROSS ALPHA	15	pCi/L	01501	<9	<9	<9	<9	<9	<9	<9	<9	<9
RADIOACTIVITY, GROSS BETA	50	pCi/L	03501	7.18	9.44	13.9	9.26	<7	<7	9.96	<7	<7

* Federal/State Secondary MCLs

** Action Level

***Distribution samples are composited. TT - Treatment Technique ND - not detected

H - Holding Time Exceeded

COMPREHENSIVE CHEMICAL ANALYSIS
CITY OF CHICAGO - DEPARTMENT OF WATER MANAGEMENT - BUREAU OF WATER SUPPLY
WATER QUALITY DIVISION-WATER PURIFICATION LABORATORIES
 LABORATORY ACCREDITATION NUMBER: 100228

SAMPLE COLLECTION DATE: August 13, 2014

LAB ID Nos.

3rd QUARTER

PARAMETER	IEPA MCL	DETERMINED AS	STORET NUMBER	SOUTH WATER PURIFICATION PLANT				JARDINE WATER PURIFICATION PLANT				
				RAW LAKE	OUTLETS		***DISTRIBUTION South	RAW LAKE	OUTLETS		***DISTRIBUTION	
					73rd Street	79th Street			North	Central		Central
ALUMINIUM	*50-200	Al, µg/L	01105	29.1	127	117	115	28.1	120	124	90.0	86.3
ANTIMONY	6	Sb, µg/L	01268	<1	<1	<1	<1	<1	<1	<1	<1	<1
ARSENIC	10	As, µg/L	01002	1.03	<1	<1	<1	1.05	<1	<1	<1	<1
BARIUM	2000	Ba, µg/L	01007	22.5	22.4	27.5	23.2	22.8	22.1	22.0	23.0	22.4
BERYLLIUM	4	Be, µg/L	01012	<1	<1	<1	<1	<1	<1	<1	<1	<1
BORON		B, µg/L	01022	20.5	19.4	22.7	21.4	19.0	23.2	20.3	20.0	20.3
CADMIUM	5	Cd, µg/L	01027	<1	<1	<1	<1	<1	<1	<1	<1	<1
CHROMIUM	100	Cr, µg/L	01034	<1	<1	<1	<1	<1	<1	<1	<1	<1
COBALT		Co, µg/L	01037	<1	<1	<1	<1	<1	<1	<1	<1	<1
COPPER	**1300	Cu, µg/L	01042	1.38	0.83	0.4	1.09	4.04	1.23	0.38	0.99	1.87
IRON	*300	Fe, µg/L	00031	21.2	<3	<3	4.71	26.5	<3	<3	5.67	8.48
LEAD	**15.0	Pb, µg/L	01051	<2	<2	<2	<2	<2	<2	<2	<2	<2
LITHIUM		Li, µg/L	01132	<1	<1	<1	<1	<1	<1	<1	<1	<1
MANGANESE	*50	Mn, µg/L	01055	1.06	<1	<1	<1	1.74	<1	<1	<1	1.15
MERCURY	2	Hg, µg/L	71900	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
MOLYBDENUM		Mo, µg/L	01062	<2	<2	<2	<2	<2	<2	<2	<2	<2
NICKEL		Ni, µg/L	01067	1.78	1.75	1.72	1.85	1.84	1.72	1.72	1.78	1.77
SELENIUM	50	Se, µg/L	01147	<2	<2	<2	<2	<2	<2	<2	<2	<2
SILICON		Si, µg/L	01142	863	911	901	871	829	986	931	968	987
SILVER	*100	Ag, µg/L	01077	<1	<1	<1	<1	<1	<1	<1	<1	<1
STRONTIUM		Sr, µg/L	01082	133	135	134	135	134	133	134	134	133
THALLIUM	2	Tl, µg/L	01059	<1	<1	<1	<1	<1	<1	<1	<1	<1
TITANIUM		Ti, µg/L	01152	<1	1.31	1.26	1.28	1.09	1.42	1.41	1.34	1.39
VANADIUM		V, µg/L	00985	<1	<1	<1	<1	<1	<1	<1	<1	<1
ZINC	*5000	Zn, µg/L	01092	<5	<5	<5	8.89	<5	<5	<5	<5	20.6

* Federal/State Secondary MCLs

** Action Level

***Distribution samples are composited. TT - Treatment Technique ND - not detected

Rashed Bait
CHIEF WATER CHEMIST

Haseeb
DIRECTOR OF LABORATORIES

Andrea R. White
MANAGER OF WATER QUALITY

sd
DEPUTY COMMISSIONER

COMPREHENSIVE CHEMICAL ANALYSIS
CITY OF CHICAGO - DEPARTMENT OF WATER MANAGEMENT - BUREAU OF WATER SUPPLY
WATER QUALITY DIVISION-WATER PURIFICATION LABORATORIES
 LABORATORY ACCREDITATION NUMBER: 100228

SAMPLE COLLECTION DATE: November 19, 2014

LAB ID Nos.

4th QUARTER

PARAMETER	IEPA MCL	DETERMINED AS	STORET NUMBER	14C5605	14C5606	14C5607	14C5608	14C5609	14C5610	14C5611	14C5612	14C5613
				SOUTH WATER PURIFICATION PLANT				JARDINE WATER PURIFICATION PLANT				
				1	2A	2B	3	4	5A	5B	6	7
				RAW LAKE	OUTLETS		***DISTRIBUTION	RAW LAKE	OUTLETS		***DISTRIBUTION	
73rd Street	79th Street	SOUTH	North		Central	Central	North					
TEMPERATURE		°C	00010	8	6	8	10	7	7	7	11	12
TURBIDITY	TT	N.T.U.	82079	5.0	0.10	0.10	0.15	2.0	0.10	0.10	0.10	0.15
THRESHOLD ODOR, STRAIGHT	*3	T.O.N	00086	2 Mm	2 Cc	2 Cc	2 Cc	2 Mm	1 Cc	2 Cc	0.5 Cc	0.5 Cc
THRESHOLD ODOR, DECHLORINATED	*3	T.O.N.		2 Mm	2 Mm	2 Mm	1 Mm	2 Mm	1 M	1 M	1 M	1 Bs
COLOR (Apparent)	*15	Pt-Co. CU	00080	42	<1	<1	<1	20	<1	<1	<1	<1
pH	*6.5-8.5	STD. Units	00040	8.24	7.62	7.63	7.89	8.22	7.69	7.68	7.90	7.92
FREE CHLORINE RESIDUAL		CL ₂ , mg/L	50064	--	1.24	1.24	0.94	--	1.30	1.26	0.82	0.86
SATURATION INDEX, LANGELEIR		UNITS +/-		0.02	-0.72	-0.65	-0.34	-0.03	-0.62	-0.62	-0.31	-0.27
ALKALINITY, PHENOLPHTHALEIN		0	00415	0	0	0	0	0	0	0	0	0
ALKALINITY, TOTAL		CaCO ₃ , mg/L	00410	113	105	106	106	113	107	106	106	106
BROMIDE		Br, mg/L	71870	0.025	<0.02	<0.02	<0.02	0.024	<0.02	<0.02	<0.02	<0.02
CHLORIDE	*250	Cl, mg/L	00940	12.8	14.7	14.6	14.8	12.8	14.8	15.0	14.8	14.8
FLUORIDE	4	F, mg/L	00951	0.15	1.03	0.92	0.95	0.15	1.02	0.98	0.97	1.00
SULFATE	*250	SO ₄ , mg/L	00945	23.6	28.8	28.4	28.8	23.4	26.9	27.2	27.4	26.7
HARDNESS		CaCO ₃ , mg/L	00900	134	135	134	132	137	137	134	135	137
CALCIUM		Ca, mg/L	00916	34.3	31.8	32.4	31.9	34.2	31.2	32.2	31.4	31.8
MAGNESIUM		Mg, mg/L	00927	12.4	11.4	11.6	11.4	12.4	11.6	11.6	11.3	11.4
POTASSIUM		K, mg/L	00937	2.25	1.56	1.46	1.48	1.98	1.34	1.37	1.64	1.53
SODIUM		Na, mg/L	00006	8.26	8.02	8.20	8.02	8.20	8.31	8.34	8.18	8.02
SOLIDS, TOTAL DISSOLVED	*500	TDS, mg/L	00150	182	178	182	180	174	176	178	177	175
SOLIDS, TOTAL		Tot. Sol., mg/L	00500	190	189	189	190	184	183	187	193	189
TOTAL ORGANIC CARBON		TOC, mg/L	00680	1.70	1.59	1.60	1.50	1.70	1.62	1.58	1.60	1.68
OXYGEN DEMAND, CHEMICAL		O, mg/L	00335	<10	<10	<10	<10	<10	<10	<10	<10	<10
NITROGEN, AMMONIA		N, mg/L	00610	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
NITROGEN, NITRATE	10	N, mg/L	00620	0.19	0.34	0.19	0.23	0.23	0.32	0.27	0.25	0.25
NITROGEN, NITRITE	1	N, mg/L	00615	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
ORTHOPHOSPHATE		PO ₄ , mg/L	00660	0.03	0.45	0.44	0.46	0.02	0.40	0.60	0.74	0.39
PHOSPHATE, TOTAL		PO ₄ , mg/L	00650	0.02	1.09	1.00	0.95	0.03	0.89	1.32	1.59	0.81
CYANIDE, TOTAL	200	CN, ug/L	00720	R	R	R	R	R	R	R	R	R
RADIOACTIVITY, GROSS ALPHA	15	pCi/L	01501	<9	<9	<9	11	<9	11	10	<9	<9
RADIOACTIVITY, GROSS BETA	50	pCi/L	03501	14	13	7	11	12	13	12	14	<7

* Federal/State Secondary MCLs

** Action Level

***Distribution samples are composited. TT - Treatment Technique ND - not detected

H - Holding Time Exceeded

R - Data did not meet QC Criteria

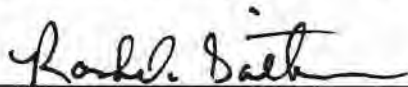
COMPREHENSIVE CHEMICAL ANALYSIS
CITY OF CHICAGO - DEPARTMENT OF WATER MANAGEMENT - BUREAU OF WATER SUPPLY
WATER QUALITY DIVISION-WATER PURIFICATION LABORATORIES
 LABORATORY ACCREDITATION NUMBER: 100228

SAMPLE COLLECTION DATE: November 19, 2014

LAB ID Nos. 4th QUARTER

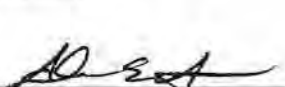
PARAMETER	IEPA MCL	DETERMINED AS	STORET NUMBER	SOUTH WATER PURIFICATION PLANT				JARDINE WATER PURIFICATION PLANT				
				RAW LAKE	OUTLETS		***DISTRIBUTION	RAW LAKE	OUTLETS		***DISTRIBUTION	
					73rd Street	79th Street			South	North		Central
ALUMINUM	*50-200	Al, µg/L	01105	158	40.7	38.8	35.5	106	45.5	41.6	36.4	41.5
ANTIMONY	6	Sb, µg/L	01268	<1	<1	<1	<1	<1	<1	<1	<1	<1
ARSENIC	10	As, µg/L	01002	<1	<1	<1	<1	<1	<1	<1	<1	<1
BARIUM	2000	Ba, µg/L	01007	22.9	20.8	20.7	19.8	21.9	20.6	20.6	19.8	19.4
BERYLLIUM	4	Be, µg/L	01012	<1	<1	<1	<1	<1	<1	<1	<1	<1
BORON		B, µg/L	01022	21.3	25.4	22.8	17.0	18.6	20.0	27.4	14.3	18.6
CADMIUM	5	Cd, µg/L	01027	<1	<1	<1	<1	<1	<1	<1	<1	<1
CHROMIUM	100	Cr, µg/L	01034	<1	<1	<1	<1	<1	<1	<1	<1	<1
COBALT		Co, µg/L	01037	<1	<1	<1	<1	<1	<1	<1	<1	<1
COPPER	**1300	Cu, µg/L	01042	1.64	<1	1.35	1.64	3.67	<1	<1	1.27	2.52
IRON	*300	Fe, µg/L	00031	156	<3.0	<3.0	4.84	76.8	4.91	<3.0	9.63	14.4
LEAD	**15.0	Pb, µg/L	01051	<2	<2	<2	<2	<2	<2	<2	<2	<2
LITHIUM		Li, µg/L	01132	3.72	3.29	2.93	2.79	3.24	3.02	3.10	3.08	3.08
MANGANESE	*50	Mn, µg/L	01055	2.47	<1	<1	<1	1.54	<1	<1	<1	<1
MERCURY	2	Hg, µg/L	71900	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
MOLYBDENUM		Mo, µg/L	01062	<2	<2	<2	<2	<2	<2	<2	<2	<2
NICKEL		Ni, µg/L	01067	1.79	1.62	1.72	1.69	1.69	1.67	1.60	1.68	1.64
SELENIUM	50	Se, µg/L	01147	<2	<2	<2	<2	<2	<2	<2	<2	<2
SILICON		Si, µg/L	01142	1348	1096	1060	1068	1374	1259	1203	1204	1236
SILVER	*100	Ag, µg/L	01077	<1	<1	<1	<1	<1	<1	<1	<1	<1
STRONTIUM		Sr, µg/L	01082	124	124	125	125	124	125	125	125	122
THALLIUM	2	Tl, µg/L	01059	<1	<1	<1	<1	<1	<1	<1	<1	<1
TITANIUM		Ti, µg/L	01152	4.30	<2	<2	<2	2.98	<2	<2	<2	<2
VANADIUM		V, µg/L	00985	<1	<1	<1	<1	<1	<1	<1	<1	<1
ZINC	*5000	Zn, µg/L	01092	<5	<5	5.32	10.6	<5	<5	<5	23.7	29.1

* Federal/State Secondary MCLs ** Action Level ***Distribution samples are composited. TT - Treatment Technique ND - not detected


 CHIEF WATER CHEMIST


 DIRECTOR OF LABORATORIES


 MANAGER OF WATER QUALITY


 DEPUTY COMMISSIONER