

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: January 16, 2013

LAB ID Nos. 13C0296 - 13C0304

1st QUARTER

PARAMETER	IEPA MCL	DETERMINED AS	STORET NUMBER	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	4	2	3	6	3	4	4	5	5
TURBIDITY	TT	N.T.U.	82079	1.45	0.10	0.05	0.10	1.9	0.10	0.10	0.15	0.15
THRESHOLD ODOR, STRAIGHT	*3	T.O.N	00086	--	2 Cc	2 Cc	2 Cc	1 Mm	2 Cc	2 Cc	1 Cc	2 Cc
THRESHOLD ODOR, DECHLORINATED	*3	T.O.N.		1 Mm	1 Mm	1 Mm	1 Mm	1 Mm	1 Mm	1 Mm	1 Mm	1 Mm
COLOR (Apparent)	*15	Pt.-Co. CU	00080	3	2	2	2	6	1	1	2	2
pH	*6.5-8.5	STD. Units	00040	8.33	7.74	7.75	7.87	8.28	7.71	7.77	7.85	7.90
FREE CHLORINE RESIDUAL		CL ₂ , mg/L	50064	ND	1.17	1.12	0.86	ND	1.16	1.17	0.93	1.03
SATURATION INDEX, LANGELIER		UNITS +/-		-0.01	-0.71	-0.64	-0.46	-0.07	-0.65	-0.59	-0.50	-0.44
ALKALINITY, PHENOLPHTHALEIN		0	00415	0.90	0	0	0	0	0	0	0	0
ALKALINITY, TOTAL		CaCO ₃ , mg/L	00410	109	101	105	102	112	105	104	102	103
BROMIDE		Br, mg/L	71870	0.020	<0.01	<0.01	<0.01	0.020	<0.01	<0.01	<0.01	<0.01
CHLORIDE	*250	Cl, mg/L	00940	12.4	13.8	13.6	13.7	12.5	14.0	14.0	14.1	14.0
FLUORIDE	4	F, mg/L	00951	0.08	1.05	1.05	1.02	0.09	1.12	1.13	1.04	1.07
SULFATE	*250	SO ₄ , mg/L	00945	23.3	28.6	28.3	28.7	23.4	27.5	27.6	27.2	27.3
HARDNESS		CaCO ₃ , mg/L	00900	143	140	139	140	141	137	138	142	140
CALCIUM		Ca, mg/L	00916	34.3	33.9	34.0	33.5	34.7	34.1	34.0	34.3	34.6
MAGNESIUM		Mg, mg/L	00927	13.2	12.0	11.8	11.6	12.7	11.6	11.7	11.6	11.5
POTASSIUM		K, mg/L	00937	0.82	0.65	0.70	0.51	0.58	0.54	<0.45	<0.45	0.491
SODIUM		Na, mg/L	00006	7.0	7.3	7.0	7.0	6.8	7.2	7.0	7.1	6.9
SOLIDS, TOTAL DISSOLVED	*500	TDS, mg/L	00150	163	149	151	160	156	154	158	156	163
SOLIDS, TOTAL		Tot. Sol., mg/L	00500	203	204	206	203	197	199	176	202	R
TOTAL ORGANIC CARBON		TOC, mg/L	00680	1.62	1.43	1.42	1.41	1.62	1.49	1.45	1.45	1.48
OXYGEN DEMAND, CHEMICAL		O, mg/L	00335	<5	<5	<5	11.6	<5	<5	6.0	<5	<5
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	0.287	0.293	0.288	0.285	0.316	0.294	0.302	0.292	0.292
NITROGEN, NITRITE	1	N, mg/L	00615	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
ORTHOPHOSPHATE		PO ₄ , mg/L	00660	H	H	H	H	H	H	H	H	H
PHOSPHATE, TOTAL		PO ₄ , mg/L	00650	0.020	0.94	1.00	1.04	0.030	0.980	1.05	1.01	0.97
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	<7	<7	<7	<7	<7	<7	<7	<7	<7

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

R - Sample results not reported due to unacceptable QC criteria or method performance H - Holding Time exceeded

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

SAMPLE COLLECTION DATE: January 16, 2013

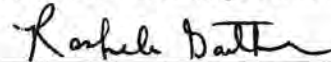
LAB ID Nos. 13C0296 - 13C0304

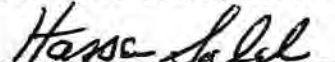
1st QUARTER


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	85.5	30.3	21.5	22.7	74.0	35.3	47.0	41.2	39.8
ANTIMONY	6	Sb, µg/L	01268	0.249	<0.2	<0.2	<0.2	0.649	<0.2	<0.2	<0.2	<0.2
ARSENIC	10	As, µg/L	01002	<1	<1	<1	<1	<1	<1	<1	<1	<1
BARIUM	2000	Ba, µg/L	01007	25.5	23.2	23.2	22.7	25.3	23.8	23.7	22.9	22.9
BERYLLIUM	4	Be, µg/L	01012	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
BORON		B, µg/L	01022	47.8	31.5	29.8	31.0	40.4	30.8	30.3	28.4	28.0
CADMIUM	5	Cd, µg/L	01027	<3	<3	<3	<3	<3	<3	<3	<3	<3
CHROMIUM	100	Cr, µg/L	01034	<1	<1	<1	<1	<1	<1	<1	<1	<1
COBALT		Co, µg/L	01037	<2	<2	<2	<2	<2	<2	<2	<2	<2
COPPER	**1300	Cu, µg/L	01042	<1	2.6	<1	<1	1.8	<1	1.7	<1	1.2
IRON	*300	Fe, µg/L	00031	19.8	<6	<6	<6	15.4	<6	<6	7.2	<6
LEAD	**15.0	Pb, µg/L	01051	<3	<3	<3	<3	<3	<3	<3	<3	<3
LITHIUM		Li, µg/L	01132	3.5	2.5	2.4	2.5	3.6	2.5	2.3	2.3	2.3
MANGANESE	*50	Mn, µg/L	01055	<5	<5	<5	<5	<5	<5	<5	<5	<5
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	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5
NICKEL		Ni, µg/L	01067	<3	<3	<3	<3	<3	<3	<3	<3	<3
SELENIUM	50	Se, µg/L	01147	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SILICON		Si, µg/L	01142	947	1174	1162	1174	980	1182	1193	1178	1185
SILVER	*100	Ag, µg/L	01077	<1	<1	<1	<1	<1	<1	<1	<1	<1
STRONTIUM		Sr, µg/L	01082	124	119	119	118	121	121	121	120	120
THALLIUM	2	Tl, µg/L	01059	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
TITANIUM		Ti, µg/L	01152	<2	<2	<2	<2	<2	<2	<2	<2	<2
VANADIUM		V, µg/L	00985	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
ZINC	*5000	Zn, µg/L	01092	27.3	3.3	<2	9.5	52.4	<2	<2	22.4	20.8

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

Note: Lithium - Laboratory Fortified Matrix (LFM) did not meet QC 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: April 17, 2013

LAB ID Nos. 13C1926 - 13C1934

2nd 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
					1	2A	2B					
TEMPERATURE		°C	00010	9	8	8	8	8	8	8	7	7
TURBIDITY	TT	N.T.U.	82079	2.5	0.15	0.15	0.10	1.1	0.10	0.05	0.10	0.10
THRESHOLD ODOR, STRAIGHT	*3	T.O.N	00086	2.5 Df	1 Cc	2 Cc	1 Cc	2 E	1 Cc	1 Cc	1 Cc	1 Cc
THRESHOLD ODOR, DECHLORINATED	*3	T.O.N.		2.5 Df	1 Mm	1 Mm	1 Mm	2 E	1 Mm	1 Mm	1 Mm	0.5 Mm
COLOR (Apparent)	*15	Pt.-Co. CU	00080	3	2	2	2	6	1	1	2	2
pH	*6.5-8.5	STD. Units	00040	8.26	7.67	7.72	7.83	8.35	7.74	7.75	7.87	7.87
FREE CHLORINE RESIDUAL		CL ₂ , mg/L	50064	ND	1.19	1.21	0.93	ND	1.36	1.22	0.98	0.86
SATURATION INDEX, LANGELIER		UNITS +/-		0.12	-0.62	-0.57	-0.45	0.18	-0.53	-0.52	-0.41	-0.42
ALKALINITY, PHENOLPHTHALEIN		0	00415	0	0	0	0	1	0	0	0	0
ALKALINITY, TOTAL		CaCO ₃ , mg/L	00410	107	99	98	103	112	103	102	103	103
BROMIDE		Br, mg/L	71870	0.019	<0.01	<0.01	<0.01	0.019	<0.01	<0.01	<0.01	<0.01
CHLORIDE	*250	Cl, mg/L	00940	17.3	19.3	19.2	19.1	17.2	19.1	19.1	19.8	19.7
FLUORIDE	4	F, mg/L	00951	0.14	0.99	1.00	1.02	0.15	0.98	1.00	1.05	1.05
SULFATE	*250	SO ₄ , mg/L	00945	23.2	28.3	28.0	28.1	23.3	27.4	27.4	27.7	27.4
HARDNESS		CaCO ₃ , mg/L	00900	143	139	140	137	137	135	141	141	142
CALCIUM		Ca, mg/L	00916	41.7	34.0	34.0	33.0	39.2	34.0	34.6	34.5	33.8
MAGNESIUM		Mg, mg/L	00927	16.0	12.5	12.3	11.8	15.0	12.7	11.5	11.6	11.5
POTASSIUM		K, mg/L	00937	1.81	1.37	1.37	1.39	1.69	1.34	1.37	1.35	1.30
SODIUM		Na, mg/L	00006	13.4	10.5	10.8	9.8	12.0	10.6	9.3	10.0	10.0
SOLIDS, TOTAL DISSOLVED	*500	TDS, mg/L	00150	178	189	166	184	176	175	178	171	173
SOLIDS, TOTAL		Tot. Sol., mg/L	00500	207	211	202	197	194	200	197	203	190
TOTAL ORGANIC CARBON		TOC, mg/L	00680	1.61	1.40	1.42	1.41	1.60	1.44	1.41	1.48	1.44
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	0.377	0.363	0.359	0.348	0.323	0.338	0.341	0.339	0.345
NITROGEN, NITRITE	1	N, mg/L	00615	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
ORTHOPHOSPHATE		PO ₄ , mg/L	00660	<0.01	0.535	0.501	0.537	<0.01	0.460	0.457	0.480	0.474
PHOSPHATE, TOTAL		PO ₄ , mg/L	00650	0.048	1.21	1.04	1.17	0.041	0.960	1.04	1.01	1.04
CYANIDE, TOTAL	200	CN, ug/L	00720	<3	<3	<3	<3	<3	<3	<3	<3	<3
RADIOACTIVITY, GROSS ALPHA	15	pCi/L	01501	<9	<9	<9	<9	<9	<9	<9	<9	<9
RADIOACTIVITY, GROSS BETA	50	pCi/L	03501	15.1	<7	7.6	8.0	8.0	<7	<7	7.7	<7

* Federal/State Secondary MCLs

** Action Level

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

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SAMPLE COLLECTION DATE: April 17, 2013

LAB ID Nos. 13C1926 - 13C1934

2nd 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	93.6	55.0	55.3	47.0	74.4	62.0	52.5	54.0	55.0
ANTIMONY	6	Sb, µg/L	01268	0.246	<0.2	<0.2	<0.2	0.244	<0.2	<0.2	<0.2	<0.2
ARSENIC	10	As, µg/L	01002	<1	<1	<1	<1	<1	<1	<1	<1	<1
BARIIUM	2000	Ba, µg/L	01007	28.9	22.5	22.5	22.0	27.3	22.5	22.6	22.4	22.4
BERYLLIUM	4	Be, µg/L	01012	<1	<1	<1	<1	<1	<1	<1	<1	<1
BORON		B, µg/L	01022	46.0	30.7	31.5	28.8	41.2	30.8	28.3	32.4	28.0
CADMIUM	5	Cd, µg/L	01027	4.1	<3	<3	<3	4.10	<3	<3	<3	<3
CHROMIUM	100	Cr, µg/L	01034	<1	<1	<1	<1	<1	<1	<1	<1	<1
COBALT		Co, µg/L	01037	<2	<2	<2	<2	<2	<2	<2	<2	<2
COPPER	**1300	Cu, µg/L	01042	<1	<1	<1	<1	2.30	<1	<1	<1	1.60
IRON	*300	Fe, µg/L	00031	37.3	<1	<1	<1	15.0	<1	<1	<1	<1
LEAD	**15.0	Pb, µg/L	01051	<1	<1	<1	<1	<1	<1	<1	<1	<1
LITHIUM		Li, µg/L	01132	4.5	2.3	2.3	2.3	4.0	2.3	2.3	2.2	2.3
MANGANESE	*50	Mn, µg/L	01055	<5	<5	<5	<5	<5	<5	<5	<5	<5
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	<3	<3	<3	<3	<3	<3	<3	<3	<3
NICKEL		Ni, µg/L	01067	<3	<3	<3	<3	<3	<3	<3	<3	<3
SELENIUM	50	Se, µg/L	01147	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.888
SILICON		Si, µg/L	01142	881	1050	1056	1056	790	961	974	980	983
SILVER	*100	Ag, µg/L	01077	<1	<1	<1	<1	<1	<1	<1	<1	<1
STRONTIUM		Sr, µg/L	01082	150	122	122	120	142	122	121	121	121
THALLIUM	2	Tl, µg/L	01059	<1	<1	<1	<1	<1	<1	<1	<1	<1
TITANIUM		Ti, µg/L	01152	<2	<2	<2	<2	<2	<2	<2	<2	<2
VANADIUM		V, µg/L	00985	<2	<2	<2	<2	<2	<2	<2	<2	<2
ZINC	*5000	Zn, µg/L	01092	42.7	<2	2.9	11.3	44	<2	<2	18.6	12.8

* Federal/State Secondary MCLs

** Action Level

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

Renald Bath

CHIEF WATER CHEMIST

Harsh Lal

DIRECTOR OF LABORATORIES

MANAGER OF WATER QUALITY

De E A

DEPUTY COMMISSIONER

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WATER QUALITY DIVISION-WATER PURIFICATION LABORATORIES

LABORATORY ACCREDITATION NUMBER: 100228

SAMPLE COLLECTION DATE: July 17, 2013

LAB ID Nos. 13C3484 - 13C3492

3rd QUARTER

PARAMETER	IEPA MCL	DETERMINED AS	STORET NUMBER	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	20	23	23	23	21	20
TURBIDITY	TT	N.T.U.	82079	0.80	0.10	0.10	0.30	0.90	0.10	0.10	0.15	0.15
THRESHOLD ODOR, STRAIGHT	*3	T.O.N	00086	2 E	1 Cc	0.5 Cc	2 Cc	2 Df	2 Cc	2 Cc	2 Cc	2 Cc
THRESHOLD ODOR, DECHLORINATED	*3	T.O.N.		2 E	2 M	2 Mm	2 Mm	2 Df	1 Mm	1 M	1 Mm	0.5 Mm
COLOR	*15	Pt.-Co. CU	00080	2	<1	<1	<1	3	<1	<1	<1	<1
pH	*6.5-8.5	STD. Units	00040	8.34	7.77	7.81	7.86	8.33	7.84	7.85	7.83	7.88
FREE CHLORINE RESIDUAL		CL ₂ , mg/L	50064	ND	1.11	1.04	0.84	ND	1.20	1.14	0.82	0.86
SATURATION INDEX, LANGELIER		UNITS +/-		0.43	-0.18	-0.15	-0.14	0.43	-0.09	-0.08	-0.15	-0.13
ALKALINITY, PHENOLPHTHALEIN		0	00415	3	0	0	0	3	0	0	0	0
ALKALINITY, TOTAL		CaCO ₃ , mg/L	00410	109	100	99	100	108	101	102	101	101
BROMIDE		Br, mg/L	71870	0.017	<0.01	<0.01	<0.01	0.017	<0.01	<0.01	<0.01	<0.01
CHLORIDE	*250	Cl, mg/L	00940	13.3	15.5	15.4	15.4	13.0	14.9	14.8	14.8	14.8
FLUORIDE	4	F, mg/L	00951	0.16	1.02	1.03	1.02	0.18	1.03	1.06	1.05	1.04
SULFATE	*250	SO ₄ , mg/L	00945	23.0	28.2	28.2	28.2	22.8	26.2	26.0	26.1	26.2
HARDNESS		CaCO ₃ , mg/L	00900	135	137	141	138	134	136	136	138	140
CALCIUM		Ca, mg/L	00916	32.8	32.7	32.5	32.4	32.0	32.1	32.0	32.1	31.8
MAGNESIUM		Mg, mg/L	00927	11.6	11.6	11.6	11.5	11.6	11.6	11.5	11.6	11.6
POTASSIUM		K, mg/L	00937	1.41	1.32	1.39	1.47	1.40	1.46	1.40	1.39	1.41
SODIUM		Na, mg/L	00006	7.92	8.48	8.34	8.38	7.58	7.92	7.89	7.78	7.80
SOLIDS, TOTAL DISSOLVED	*500	TDS, mg/L	00150	172	170	172	166	165	164	164	159	166
SOLIDS, TOTAL		Tot. Sol., mg/L	00500	192	225	218	213	204	201	206	206	202
TOTAL ORGANIC CARBON		TOC, mg/L	00680	1.83	1.76	1.72	1.77	1.86	1.78	1.73	1.73	1.76
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	0.254	0.236	0.237	0.232	0.232	0.219	0.212	0.211	0.216
NITROGEN, NITRITE	1	N, mg/L	00615	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
ORTHOPHOSPHATE		PO ₄ , mg/L	00660	0.005	0.477	0.408	0.517	0.010	0.479	0.479	0.512	0.508
PHOSPHATE, TOTAL		PO ₄ , mg/L	00650	0.028	0.982	0.842	1.06	0.020	1.030	1.03	0.973	1.03
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	10.0	<9
RADIOACTIVITY, GROSS BETA	50	pCi/L	03501	10.0	14.0	10.0	11.0	11.0	11.0	7.0	8.0	12.0

* Federal/State Secondary MCLs

** Action Level

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

Note: Gross Alpha - Laboratory Fortified Matrix (LFM) did not meet QC acceptance 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: July 17, 2013

LAB ID Nos. 13C3484 - 13C3492

3rd 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	76.8	175	171	176	110	186	185	151	147
ANTIMONY	6	Sb, µg/L	01268	<1	<1	<1	<1	<1	<1	<1	<1	<1
ARSENIC	10	As, µg/L	01002	<2	<2	<2	<2	<2	<2	<2	<2	<2
BARIUM	2000	Ba, µg/L	01007	22.5	22.8	22.8	23.0	23.2	22.9	22.9	22.9	22.8
BERYLLIUM	4	Be, µg/L	01012	<1	<1	<1	<1	<1	<1	<1	<1	<1
BORON		B, µg/L	01022	20.1	20.4	20.3	20.1	19.3	18.7	18.6	18.7	19.6
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	<2	<2	<2	<2	<2	<2	<2	<2	<2
COPPER	**1300	Cu, µg/L	01042	<1	<1	<1	<1	2.45	<1	<1	<1	11.5
IRON	*300	Fe, µg/L	00031	24.0	<5	<5	15.9	32.0	<5	<5	4.95	9.96
LEAD	**15.0	Pb, µg/L	01051	<1	<1	<1	1.06	<1	<1	<1	1.23	<1
LITHIUM		Li, µg/L	01132	3.70	3.79	3.70	3.70	3.76	3.68	3.70	3.62	3.71
MANGANESE	*50	Mn, µg/L	01055	1.31	<1	<1	<1	1.30	<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	<3	<3	<3	<3	<3	<3	<3	<3	<3
NICKEL		Ni, µg/L	01067	<2	<2	<2	<2	<2	<2	<2	<2	<2
SELENIUM	50	Se, µg/L	01147	<1	<1	<1	<1	<1	<1	<1	<1	<1
SILICON		Si, µg/L	01142	634	731	732	739	651	748	745	747	746
SILVER	*100	Ag, µg/L	01077	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
STRONTIUM		Sr, µg/L	01082	117	120	118	119	119	116	117	116	118
THALLIUM	2	Tl, µg/L	01059	<1	<1	<1	<1	<1	<1	<1	<1	<1
TITANIUM		Ti, µg/L	01152	<2	<2	<2	<2	4.51	<2	<2	<2	<2
VANADIUM		V, µg/L	00985	1.11	1.04	1.05	1.07	1.04	1.04	1.11	1.08	1.01
ZINC	*5000	Zn, µg/L	01092	<2	<2	<2	7.78	2.11	<2	<2	25.2	24.3

* Federal/State Secondary MCLs

** Action Level

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

Rashida Dault

CHIEF WATER CHEMIST

Harv. S. S. S.

DIRECTOR OF LABORATORIES

—

MANAGER OF WATER QUALITY

SE E.A.

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: October 23, 24, 2013

LAB ID Nos. 13C5241-5249, 13C5266

4th QUARTER

PARAMETER	IEPA MCL	DETERMINED AS	STORET NUMBER	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	15	14	14	16	15	15	15	16	16
TURBIDITY	TT	N.T.U.	82079	0.45	0.10	0.10	0.10	0.45	0.10	0.10	0.10	0.15
THRESHOLD ODOR, STRAIGHT	*3	T.O.N	00086	2 Df	2 Cc	2 Cc	1 Cc	2 Df	2 Cc	1 Cc	1 Cc	1 Cc
THRESHOLD ODOR, DECHLORINATED	*3	T.O.N.		2 Df	1 Mm	1 Mm	1 Mm	2 Df	1 M	0.5 M	1 M	1 M
COLOR	*15	Pt.-Co. CU	00080	H	H	H	H	H	H	H	H	H
pH	*6.5-8.5	STD. Units	00040	8.13	7.70	7.69	7.77	8.15	7.74	7.76	7.82	7.83
FREE CHLORINE RESIDUAL		CL ₂ , mg/L	50064	--	1.26	1.26	0.83	--	1.20	1.15	0.91	0.85
SATURATION INDEX, LANGELIER		UNITS +/-		0.52	-0.19	-0.16	-0.15	0.54	-0.12	-0.03	-0.05	-0.13
ALKALINITY, PHENOLPHTHALEIN		0	00415	0	0	0	0	0	0	0	0	0
ALKALINITY, TOTAL		CaCO ₃ , mg/L	00410	111	103	103	102	102	102	102	102	103
BROMIDE		Br, mg/L	71870	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
CHLORIDE	*250	Cl, mg/L	00940	13.8	14.1	14.2	14.2	12.5	14.1	14.1	14.0	14.1
FLUORIDE	4	F, mg/L	00951	0.15	0.90	0.92	0.89	0.15	0.93	0.94	0.92	0.94
SULFATE	*250	SO ₄ , mg/L	00945	25.2	26.4	26.3	26.2	23.4	26.3	26.4	26.2	26.1
HARDNESS		CaCO ₃ , mg/L	00900	136	140	137	137	135	140	138	137	139
CALCIUM		Ca, mg/L	00916	32.7	32.9	32.8	32.8	32.6	32.4	32.6	32.6	32.7
MAGNESIUM		Mg, mg/L	00927	12.3	12.3	12.4	12.3	12.2	12.2	12.2	12.2	12.3
POTASSIUM		K, mg/L	00937	1.38	1.38	1.37	1.41	1.36	1.37	1.36	1.36	1.37
SODIUM		Na, mg/L	00006	7.29	7.61	7.64	7.65	7.26	7.42	7.47	7.45	7.55
SOLIDS, TOTAL DISSOLVED	*500	TDS, mg/L	00150	H	H	H	H	H	H	H	H	H
SOLIDS, TOTAL		Tot. Sol., mg/L	00500	H	H	H	H	H	H	H	H	H
TOTAL ORGANIC CARBON		TOC, mg/L	00680	2.01	1.82	1.87	1.85	2.01	1.81	1.78	1.82	1.78
OXYGEN DEMAND, CHEMICAL		O, mg/L	00335	<10	<10	<10	<10	<10	<10	<10	<10	<10
NITROGEN, AMMONIA		N, mg/L	00610	0.021	0.032	0.024	0.021	0.019	0.022	0.027	0.019	0.022
NITROGEN, NITRATE	10	N, mg/L	00620	0.252	0.247	0.247	0.247	0.252	0.244	0.244	0.244	0.241
NITROGEN, NITRITE	1	N, mg/L	00615	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
ORTHOPHOSPHATE		PO ₄ , mg/L	00660	0.013	0.434	0.439	0.461	0.016	0.465	0.464	0.502	0.490
PHOSPHATE, TOTAL		PO ₄ , mg/L	00650	<0.01	1.003	0.963	0.940	<0.01	1.032	1.058	1.040	1.073
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	10.3	<7	7.6	10.8	<7	10.7	<7	8.4	11.0

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

Note: Gross Beta - Laboratory Fortified Matrix (LFM) did not meet QC acceptance 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: October 23, 24, 2013

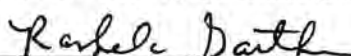
LAB ID Nos. 13C5241-5249, 13C5266

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	Central	North
ALUMINIUM	*50-200	Al, µg/L	01105	49.8	32.1	30.2	19.4	46.7	38.6	39.2	20.8	24.4
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	19.6	19.2	19.4	18.5	19.6	19.4	19.7	20.6	18.7
BERYLLIUM	4	Be, µg/L	01012	<1	<1	<1	<1	<1	<1	<1	<1	<1
BORON		B, µg/L	01022	24.3	23.7	23.6	24.4	23.9	23.6	24.0	23.4	23.2
CADMIUM	5	Cd, µg/L	01027	<1	<1	<1	<1	<1	<1	<1	<1	<1
CHROMIUM	100	Cr, µg/L	01034	<2	<2	<2	<2	<2	<2	<2	<2	<2
COBALT		Co, µg/L	01037	<1	<1	<1	<1	<1	<1	<1	<1	<1
COPPER	**1300	Cu, µg/L	01042	<1	<1	<1	<1	2.06	<1	<1	<1	1.17
IRON	*300	Fe, µg/L	00031	15.3	<5	<5	8.07	15.6	<5	<5	7.71	19.5
LEAD	**15.0	Pb, µg/L	01051	<1	<1	<1	<1	<1	<1	<1	<1	<1
*LITHIUM		Li, µg/L	01132	6.98	6.98	7.03	7.15	7.04	6.87	6.90	6.92	6.78
MANGANESE	*50	Mn, µg/L	01055	<1	<1	<1	<1	<1	<1	<1	<1	1.19
*MERCURY	2	Hg, µg/L	71900	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MOLYBDENUM		Mo, µg/L	01062	<2	<2	<2	2.05	<2	<2	<2	<2	<2
NICKEL		Ni, µg/L	01067	<5	<5	<5	<5	<5	<5	<5	<5	<5
SELENIUM	50	Se, µg/L	01147	<2	<2	<2	<2	<2	<2	<2	<2	<2
SILICON		Si, µg/L	01142	657	826	814	820	662	866	865	875	857
SILVER	*100	Ag, µg/L	01077	<1	<1	<1	<1	<1	<1	<1	<1	<1
STRONTIUM		Sr, µg/L	01082	112	113	114	113	113	114	116	112	113
THALLIUM	2	Tl, µg/L	01059	<1	<1	<1	<1	<1	<1	<1	<1	<1
TITANIUM		Ti, µg/L	01152	<1	<1	<1	<1	<1	<1	<1	<1	<1
VANADIUM		V, µg/L	00985	<1	<1	<1	<1	<1	<1	<1	<1	<1
ZINC	*5000	Zn, µg/L	01092	<5	<5	<5	7.73	<5	<5	<5	20.0	21.6

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

Note: Lithium - Laboratory Fortified Matrix (LFM) did not meet QC acceptance criteria.


 CHIEF WATER CHEMIST


 DIRECTOR OF LABORATORIES


 MANAGER OF WATER QUALITY


 DEPUTY COMMISSIONER