

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: February 25, 2015

LAB ID Nos.

1st QUARTER

PARAMETER	IEPA MCL	DETERMINED AS	STORET NUMBER	15C1078	15C1079	15C1080	15C1081	15C1082	15C1083	15C1084	15C1085	15C1086
				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	3	2	2	2	1	2	3	3	3
TURBIDITY	TT	N.T.U.	82079	13.5	0.05	0.10	0.15	5.50	0.10	0.10	0.15	0.15
THRESHOLD ODOR, STRAIGHT	*3	T.O.N	00086	--	1 Cc	1 Cc	1 Cc	--	1 Cc	1 Cc	1 Cc	1 Cc
THRESHOLD ODOR, DECHLORINATED	*3	T.O.N.		2 Mm	1 Mm	1 Mm	1 Mm	2 Mm	1 Mm	1 Mm	1 Mm	1 Mm
COLOR (Apparent)	*15	Pt.-Co. CU	00080	79	1	<1	3	40	6	<1	<1	4
pH	*6.5-8.5	STD. Units	00040	8.17	7.61	7.59	7.70	8.15	7.64	7.63	7.73	7.73
FREE CHLORINE RESIDUAL		CL ₂ , mg/L	50064	--	1.27	1.27	0.98	--	1.17	1.14	0.98	0.99
SATURATION INDEX, LANGELIER		UNITS +/-		0.07	-0.77	-0.75	-0.68	-0.14	-0.86	-0.84	-0.60	-0.58
ALKALINITY, PHENOLPHTHALEIN		0	00415	0	0	0	0	0	0	0	0	0
ALKALINITY, TOTAL		CaCO ₃ , mg/L	00410	121	110	112	114	117	110	111	114	114
BROMIDE		Br, mg/L	71870	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
CHLORIDE	*250	Cl, mg/L	00940	14.2	16.6	16.7	17.4	13.5	16.2	16.5	17.2	16.9
FLUORIDE	4	F, mg/L	00951	0.14	0.96	0.91	0.91	0.14	0.95	0.93	0.93	0.92
SULFATE	*250	SO ₄ , mg/L	00945	24.8	31.2	31.8	31.8	24.5	30.5	30.8	31.4	31.1
HARDNESS		CaCO ₃ , mg/L	00900	141	141	145	147	142	144	142	143	141
CALCIUM		Ca, mg/L	00916	38.8	35.2	35.4	35.4	35.1	35.2	34.8	35.7	34.9
MAGNESIUM		Mg, mg/L	00927	14.1	12.7	12.7	12.7	12.7	12.7	12.5	12.8	12.6
POTASSIUM		K, mg/L	00937	<3	<3	<3	<3	<3	<3	<3	<3	<3
SODIUM		Na, mg/L	00006	8.76	8.97	8.92	9.28	7.80	8.75	8.70	9.10	8.97
SOLIDS, TOTAL DISSOLVED	*500	TDS, mg/L	00150	155	157	171	182	168	183	181	184	180
SOLIDS, TOTAL		Tot. Sol., mg/L	00500	202	201	191	194	183	193	191	194	194
TOTAL ORGANIC CARBON		TOC, mg/L	00680	1.71	1.48	1.45	1.49	1.66	1.43	1.43	1.52	1.47
OXYGEN DEMAND, CHEMICAL		O, mg/L	00335	<10	<10	<10	<10	<10	<10	<10	12.0	<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	0.272	0.283	0.285	0.301	0.254	0.276	0.281	0.296	0.290
NITROGEN, NITRITE	1	N, mg/L	00615	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
ORTHOPHOSPHATE		PO ₄ , mg/L	00660	0.11	0.47	0.44	0.44	0.02	0.50	0.46	0.47	0.48
PHOSPHATE, TOTAL		PO ₄ , mg/L	00650	0.08	1.24	1.24	1.16	0.05	0.97	1.00	1.04	1.05
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	<7	<7	<7	12	8.6	<7	7.1	7.4

* 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

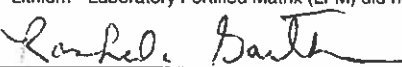
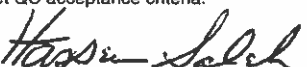


SAMPLE COLLECTION DATE: February 25, 2015

LAB ID Nos. 1st QUARTER

PARAMETER	IEPA MCL	DETERMINED AS	STORET NUMBER	15C1078	15C1079	15C1080	15C1081	15C1082	15C1083	15C1084	15C1085	15C1086
				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	366	35.8	31.2	30.9	132	39.9	40.0	36.2	32.4
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
BARIIUM	2000	Ba, µg/L	01007	24.0	20.6	20.9	20.4	20.6	20.8	20.9	20.5	20.2
BERYLLIUM	4	Be, µg/L	01012	<1	<1	<1	<1	<1	<1	<1	<1	<1
BORON		B, µg/L	01022	25.8	24.8	25.0	24.2	23.7	24.0	24.7	24.5	24.7
CADMIUM	5	Cd, µg/L	01027	<1	<1	<1	<1	<1	<1	<1	<1	<1
CHROMIUM	100	Cr, µg/L	01034	1.97	1.35	1.10	<1	1.54	<1	<1	1.17	1.11
COBALT		Co, µg/L	01037	<1	<1	<1	<1	<1	<1	<1	<1	<1
COPPER	**1300	Cu, µg/L	01042	3.99	1.28	1.17	2.56	5.04	<1	<1	1.20	2.20
IRON	*300	Fe, µg/L	00031	414	6.04	3.99	6.62	158	4.94	4.26	7.40	12.1
LEAD	**15.0	Pb, µg/L	01051	<2	<2	<2	<2	<2	<2	<2	<2	<2
*LITHIUM		Li, µg/L	01132	3.78	<3	<3	<3	<3	<3	<3	<3	<3
MANGANESE	*50	Mn, µg/L	01055	10.2	<1	<1	<1	5.32	<1	<1	<1	1.09
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	3.27	1.90	1.90	1.99	3.10	1.80	1.84	1.92	2.01
SELENIUM	50	Se, µg/L	01147	<2	<2	<2	<2	<2	<2	<2	<2	<2
SILICON		Si, µg/L	01142	2637	1376	1452	1414	1598	1458	1451	1472	1404
SILVER	*100	Ag, µg/L	01077	<1	<1	<1	<1	<1	<1	<1	<1	<1
STRONTIUM		Sr, µg/L	01082	135	131	132	131	120	127	129	131	131
THALLIUM	2	Tl, µg/L	01059	<1	<1	<1	<1	<1	<1	<1	<1	<1
TITANIUM		Ti, µg/L	01152	8.77	<2	<2	<2	3.85	<2	<2	<2	<2
VANADIUM		V, µg/L	00985	<1	<1	<1	<1	<1	<1	<1	<1	<1
ZINC	*5000	Zn, µg/L	01092	7.10	<5	<5	13.3	5.75	<5	<5	17.1	25.0

* 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

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: April 22 & 23, 2015

LAB ID Nos.

2nd QUARTER

PARAMETER	IEPA MCL	DETERMINED AS	STORET NUMBER	15C2109	15C2110	15C2111	15C2100	15C2112	15C2113	15C2114	15C2101	15C2102			
				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	10	9	9	9	8	9	10	10	12			
TURBIDITY	TT	N.T.U.	82079	0.97	0.05	0.10	0.05	0.30	0.10	0.10	0.15	0.10			
THRESHOLD ODOR, STRAIGHT	*3	T.O.N	00086	2 C	1 Cc	1 Cc	1 Cc	1 C	1 Cc	1 Cc	1 Cc	1 Cc			
THRESHOLD ODOR, DECHLORINATED	*3	T.O.N.		2 Mm	1 Mm	1 Mm	1 Mm	1 Mm	1 Mm	1 Mm	1 Mm	1 Mm			
COLOR (Apparent)	*15	Pt.-Co. CU	00080	<1	<1	<1	<1	<1	<1	<1	<1	<1			
pH	*6.5-8.5	STD. Units	00040	8.24	7.77	7.76	7.84	8.23	7.78	7.78	7.87	7.84			
FREE CHLORINE RESIDUAL		CL ₂ , mg/L	50064	--	1.28	1.29	0.88	--	1.12	1.08	0.88	0.68			
SATURATION INDEX, LANGELIER		UNITS +/-		0.13	-0.41	-0.42	-0.34	0.05	-0.40	-0.37	-0.29	-0.29			
ALKALINITY, PHENOLPHTHALEIN		0	00415	0	0	0	0	0	0	0	0	0			
ALKALINITY, TOTAL		CaCO ₃ , mg/L	00410	115	108	108	107	114	107	107	105	105			
BROMIDE		Br, mg/L	71870	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2			
CHLORIDE	*250	Cl, mg/L	00940	14.2	14.8	14.9	15.0	13.5	16.4	16.8	16.3	15.9			
FLUORIDE	4	F, mg/L	00951	0.07	0.94	0.91	0.94	0.07	0.90	0.88	0.93	0.92			
SULFATE	*250	SO ₄ , mg/L	00945	23.8	26.1	26.0	26.8	23.5	27.1	27.4	27.4	27.4			
HARDNESS		CaCO ₃ , mg/L	00900	134	135	134	137	133	134	134	137	137			
CALCIUM		Ca, mg/L	00916	38.7	37.8	37.8	38.3	37.8	37.9	38.2	38.3	36.2			
MAGNESIUM		Mg, mg/L	00927	13.5	13.2	13.2	13.2	13.1	13.2	13.3	13.3	12.3			
POTASSIUM		K, mg/L	00937	1.37	1.33	1.38	1.26	1.27	1.38	1.28	1.31	1.34			
SODIUM		Na, mg/L	00006	9.16	8.96	8.96	8.96	8.82	9.87	10.0	9.85	9.79			
SOLIDS, TOTAL DISSOLVED	*500	TDS, mg/L	00150	155	167	162	160	156	157	163	168	159			
SOLIDS, TOTAL		Tot. Sol., mg/L	00500	183	181	181	181	179	185	188	188	182			
TOTAL ORGANIC CARBON		TOC, mg/L	00680	1.59	1.45	1.46	1.44	1.58	1.42	1.41	1.44	1.42			
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	0.054	<0.03	<0.03	<0.03	<0.03			
NITROGEN, NITRATE	10	N, mg/L	00620	<0.2	<0.2	<0.2	H	0.203	<0.2	<0.2	H	H			
NITROGEN, NITRITE	1	N, mg/L	00615	<0.2	<0.2	<0.2	H	<0.2	<0.2	<0.2	H	H			
ORTHOPHOSPHATE		PO ₄ , mg/L	00660	0.019	0.431	0.422	0.467	0.004	0.462	0.482	0.522	0.507			
PHOSPHATE, TOTAL		PO ₄ , mg/L	00650	0.053	1.07	0.800	0.996	0.065	0.937	0.939	1.07	1.00			
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	7.37	<7	<7	<7	8.71	8.04	7.02			

* 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: April 22 & 23, 2015

LAB ID Nos.

2nd QUARTER

PARAMETER	IEPA MCL	DETERMINED AS	STORET NUMBER	15C1078	15C1079	15C1080	15C1081	15C1082	15C1083	15C1084	15C1085	15C1086
				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	46.6	60.3	56.2	48.3	<7	56.7	56.9	52.7	49.2
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	21.8	20.4	20.5	20.8	21.2	20.4	20.2	21.4	21.0
BERYLLIUM	4	Be, µg/L	01012	<1	<1	<1	<1	<1	<1	<1	<1	<1
BORON		B, µg/L	01022	22.2	21.8	22.0	22.7	21.1	22.4	21.8	22.3	21.8
CADMIUM	5	Cd, µg/L	01027	<1	<1	<1	<1	<1	<1	<1	<1	<1
CHROMIUM	100	Cr, µg/L	01034	1.08	<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	1.35	<1	<1	1.56	<1	<1	<1	2.78	3.13
IRON	*300	Fe, µg/L	00031	73.8	<3	<3	11.6	5.84	<3	<3	13.1	10.9
LEAD	**15.0	Pb, µg/L	01051	<1	<1	<1	<1	<1	<1	<1	1.07	1.42
LITHIUM		Li, µg/L	01132	<3	<3	<3	<3	<3	<3	<3	<3	<3
MANGANESE	*50	Mn, µg/L	01055	2.37	<1	<1	<1	<1	<1	<1	<1	1.02
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	1.13	1.10	1.08	1.13	1.06	1.11	1.11	1.14	1.11
NICKEL		Ni, µg/L	01067	1.90	1.73	1.76	1.85	1.78	1.81	1.76	1.87	1.89
SELENIUM	50	Se, µg/L	01147	<1	<1	<1	<1	<1	<1	<1	<1	<1
SILICON		Si, µg/L	01142	922	1071	1075	1107	879	1056	1033	1059	1079
SILVER	*100	Ag, µg/L	01077	<1	<1	<1	<1	<1	<1	<1	<1	<1
STRONTIUM		Sr, µg/L	01082	125	124	123	125	122	126	126	126	126
THALLIUM	2	Tl, µg/L	01059	<1	<1	<1	<1	<1	<1	<1	<1	<1
TITANIUM		Ti, µg/L	01152	1.56	1.42	1.38	1.41	<1	1.53	1.55	1.48	1.48
VANADIUM		V, µg/L	00985	<1	<1	<1	<1	<1	<1	<1	<1	<1
ZINC	*5000	Zn, µg/L	01092	<4	<4	<4	11.6	<4	<4	<4	22.3	22.2

* Federal/State Secondary MCLs

** Action Level

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

Rasheda Dauter
 CHIEF WATER CHEMIST

Hassan Sobel
 DIRECTOR OF LABORATORIES

Andrew P. [Signature]
 MANAGER OF WATER QUALITY

[Signature]
 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: August 26, 2015

LAB ID Nos.

3rd QUARTER

PARAMETER	IEPA MCL	DETERMINED AS	STORET NUMBER	15C4262	15C4263	15C4264	15C4265	15C4266	15C4267	15C4268	15C4269	15C4270
				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	16	15	15	19	13	14	14	17	19
TURBIDITY	TT	N.T.U.	82079	0.25	0.10	0.10	0.15	0.30	0.10	0.10	0.15	0.15
THRESHOLD ODOR, STRAIGHT	*3	T.O.N	00086	1 Ep	1 Ep	1 Ep	1 Ep	1 Ep	1 Ep	1 Ep	1 Ep	1 Ep
THRESHOLD ODOR, DECHLORINATED	*3	T.O.N.		1 Ep	1 Ep	1 Mm	1 Mm	1 Mm	1 Mm	1 Mm	1 Mm	1 Mm
COLOR	*15	Pt.-Co. CU	00080	2	3	2	2	4	2	1	1	1
pH	*6.5-8.5	STD. Units	00040	8.11	7.61	7.64	7.79	7.63	7.70	7.67	7.83	7.81
FREE CHLORINE RESIDUAL		CL ₂ , mg/L	50064	--	1.32	1.29	0.86	--	1.19	1.10	1.00	0.93
SATURATION INDEX, LANGELIER		UNITS +/-		0.04	-0.49	-0.44	-0.21	-0.52	-0.42	-0.45	-0.24	-0.18
ALKALINITY, PHENOLPHTHALEIN		0	00415	0	0	0	0	0	0	0	0	0
ALKALINITY, TOTAL		CaCO ₃ , mg/L	00410	108	100	108	98	101	101	101	98	101
CONDUCTIVITY		uS/cm		289	296	292	302	287	293	296	295	295
BROMIDE		Br, mg/L	71870	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
CHLORIDE	*250	Cl, mg/L	00940	12.7	14.3	14.3	14.7	12.5	14.2	14.2	14.2	14.2
FLUORIDE	4	F, mg/L	00951	0.12	0.99	0.98	0.95	0.14	1.04	1.08	1.00	1.01
SULFATE	*250	SO ₄ , mg/L	00945	22.9	27.2	27.4	27.4	22.9	26.2	26.3	25.9	25.9
HARDNESS		CaCO ₃ , mg/L	00900	140	132	134	135	137	134	132	134	138
CALCIUM		Ca, mg/L	00916	34.3	34.6	34.1	35.0	34.4	34.3	34.6	34.3	34.2
MAGNESIUM		Mg, mg/L	00927	12.4	12.4	12.3	12.5	12.3	12.3	12.4	12.3	12.3
POTASSIUM		K, mg/L	00937	1.48	1.49	1.44	1.58	1.41	1.43	1.42	1.56	1.56
SODIUM		Na, mg/L	00006	7.81	8.11	8.03	8.24	7.67	8.03	8.12	8.01	7.99
SOLIDS, TOTAL DISSOLVED	*500	TDS, mg/L	00150	146	189	176	172	182	182	182	160	181
SOLIDS, TOTAL		Tot. Sol., mg/L	00500	181	191	190	194	186	188	195	188	183
TOTAL ORGANIC CARBON		TOC, mg/L	00680	1.79	1.66	1.63	1.64	1.90	1.77	1.72	1.64	1.68
OXYGEN DEMAND, CHEMICAL - H		O, mg/L	00335	<15	<15	<15	<15	<15	<15	<15	<15	<15
NITROGEN, AMMONIA		N, mg/L	00610	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
NITROGEN, NITRATE	10	N, mg/L	00620	0.215	0.206	0.224	0.226	0.247	0.217	0.234	0.228	0.241
NITROGEN, NITRITE	1	N, mg/L	00615	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
ORTHOPHOSPHATE		PO ₄ , mg/L	00660	<0.06	0.476	0.479	0.516	<0.06	0.514	0.523	0.547	0.545
PHOSPHATE, TOTAL		PO ₄ , mg/L	00650	0.094	0.951	0.939	0.923	0.071	1.06	1.05	1.04	0.982
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	7.75	<7	9.09	<7	11.3	7.06	<7	10.9	9.73

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

H - Holding Time Exceeded

Note: Ammonia Nitrogen - Continuous Calibration Verification (CCV) did not meet QC acceptance criteria.

pH - 2B (79th) - Ran on 8-28-15

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 26, 2015

LAB ID Nos. 14C3978 14C3979 14C3980 14C3981 14C3982 14C3983 14C3984 14C3985 14C3986 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	7.01	95.6	87.4	76.0	8.29	90.5	90.8	76.9	73.5
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	19.3	19.3	18.7	19.5	18.8	18.6	18.6	17.4	17.3
BERYLLIUM	4	Be, µg/L	01012	<1	<1	<1	<1	<1	<1	<1	<1	<1
BORON		B, µg/L	01022	21.4	22.6	21.7	22.0	21.5	21.8	22.3	22.1	21.3
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	1.09	1.10	1.08	<1	<1
COBALT		Co, µg/L	01037	<1	<1	<1	<1	<1	<1	<1	<1	<1
COPPER	**1300	Cu, µg/L	01042	<1	<1	<1	2.22	<1	<1	<1	2.03	1.60
IRON	*300	Fe, µg/L	00031	5.97	1.30	<0.80	20.8	7.83	1.30	1.57	16.0	7.88
LEAD	**15.0	Pb, µg/L	01051	<1	<1	<1	<1	<1	<1	<1	1.44	<1
LITHIUM		Li, µg/L	01132	2.26	2.31	2.28	2.31	2.27	2.24	2.23	2.22	2.24
MANGANESE	*50	Mn, µg/L	01055	<1	<1	<1	<1	<1	<1	<1	<1	<1
MERCURY	2	Hg, µg/L	71900	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
MOLYBDENUM		Mo, µg/L	01062	1.12	1.13	1.12	1.11	1.10	1.10	1.10	1.11	1.11
NICKEL		Ni, µg/L	01067	2.03	2.03	2.03	2.12	2.06	2.00	2.02	2.02	2.14
SELENIUM	50	Se, µg/L	01147	<1	<1	<1	<1	<1	<1	<1	<1	<1
SILICON		Si, µg/L	01142	528	732	749	716	547	748	751	737	737
SILVER	*100	Ag, µg/L	01077	<1	<1	<1	<1	<1	<1	<1	<1	<1
STRONTIUM		Sr, µg/L	01082	121	122	120	121	121	121	120	121	123
THALLIUM	2	Tl, µg/L	01059	<1	<1	<1	<1	<1	<1	<1	<1	<1
TITANIUM		Ti, µg/L	01152	<1	1.32	1.30	1.30	<1	1.42	1.41	1.41	1.41
VANADIUM		V, µg/L	00985	<1	<1	<1	<1	<1	<1	<1	<1	<1
ZINC	*5000	Zn, µg/L	01092	<1.5	<1.5	<1.5	8.80	<1.5	<1.5	<1.5	21.0	12.8

* 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

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: December 9, 2015

LAB ID Nos.

4th QUARTER

PARAMETER	IEPA MCL	DETERMINED AS	STORET NUMBER	15C6186	15C6187	15C6188	15C6189	15C6190	15C6191	15C6192	15C6193	15C6194
				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	7	7	12	10	9	9	10	12
TURBIDITY	TT	N.T.U.	82079	1.10	0.10	0.10	0.10	0.90	0.10	0.10	0.10	0.45
THRESHOLD ODOR, STRAIGHT	*3	T.O.N	00086	2 Mm	2.5 Cc	2 Cc	1 Cc	2 E	1 Cc	1 Cc	2 Cc	3 Cc
THRESHOLD ODOR, DECHLORINATED	*3	T.O.N.		2 Mm	2 M	1 Mm	1 Mm	2 E	1 Mm	1 Mm	1 Mm	1 Mm
COLOR	*15	Pt.-Co. CU	00080	10	0	0	0	10	0	0	0	2
pH	*6.5-8.5	STD. Units	00040	7.88	7.40	7.43	7.68	7.93	7.43	7.44	7.62	7.62
FREE CHLORINE RESIDUAL		CL ₂ , mg/L	50064	--	1.31	1.29	0.86	--	1.10	1.12	1.02	0.87
SATURATION INDEX, LANGELIER		UNITS +/-		-0.35	-0.89	-0.86	-0.47	-0.26	-0.81	-0.81	-0.60	-0.54
ALKALINITY, PHENOLPHTHALEIN		0	00415	0	0	0	0	0	0	0	0	0
ALKALINITY, TOTAL		CaCO ₃ , mg/L	00410	109	99.6	100	103	107	101	100	98.8	101
CONDUCTIVITY		uS/cm		308	308	314	313	301	308	307	308	308
BROMIDE		Br, mg/L	71870	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
CHLORIDE	*250	Cl, mg/L	00940	13.8	14.8	14.9	14.9	12.3	13.9	13.9	14.2	14.3
FLUORIDE	4	F, mg/L	00951	0.10	0.78	0.73	0.71	0.09	0.92	0.84	0.81	0.80
SULFATE	*250	SO ₄ , mg/L	00945	24.1	28.4	28.5	28.6	22.6	27.3	27.3	27.9	27.6
HARDNESS		CaCO ₃ , mg/L	00900	138	138	139	138	136	138	138	137	138
CALCIUM		Ca, mg/L	00916	35.0	35.0	35.3	35.1	34.6	35.0	35.0	34.9	35.1
MAGNESIUM		Mg, mg/L	00927	12.2	12.2	12.3	12.2	12.1	12.2	12.2	12.2	12.2
POTASSIUM		K, mg/L	00937	1.57	1.53	1.50	1.55	1.43	1.49	1.43	1.55	1.43
SODIUM		Na, mg/L	00006	8.64	8.71	8.78	8.71	7.54	8.14	8.08	8.12	8.21
SOLIDS, TOTAL DISSOLVED	*500	TDS, mg/L	00150	115	115	115	111	110	113	111	111	110
SOLIDS, TOTAL		Tot. Sol., mg/L	00500	174	171	181	175	177	177	170	178	181
TOTAL ORGANIC CARBON		TOC, mg/L	00680	1.83	1.61	1.56	1.55	1.72	1.53	1.51	1.50	1.51
OXYGEN DEMAND, CHEMICAL		O, mg/L	00335	12.4	11.8	12.9	11.3	11.5	8.97	12.3	10.6	10.3
NITROGEN, AMMONIA		N, mg/L	00610	0.041	<0.02	<0.02	0.023	0.039	0.022	0.022	0.024	<0.02
NITROGEN, NITRATE	10	N, mg/L	00620	0.268	0.239	0.242	0.232	0.222	0.219	0.218	0.225	0.221
NITROGEN, NITRITE	1	N, mg/L	00615	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
ORTHOPHOSPHATE		PO ₄ , mg/L	00660	0.030	0.428	0.428	0.498	0.030	0.491	0.507	0.517	0.561
PHOSPHATE, TOTAL		PO ₄ , mg/L	00650	0.114	1.02	0.995	1.09	0.102	1.15	1.20	1.16	1.39
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	8.64	10.8	<7	10.5	<7	7.81	<7	9.66	<7

* Federal/State Secondary MCLs

** Action Level

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

H - Holding Time Exceeded - pH

revised

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: December 9, 2015

LAB ID Nos. 4th 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				
				RAW LAKE	OUTLETS		***DISTRIBUTION	RAW LAKE	OUTLETS		***DISTRIBUTION	
					73rd Street	79th Street	South		North	Central	Central	North
ALUMINUM	*50-200	Al, µg/L	01105	48.5	43.0	38.7	36.2	40.20	44.9	45.3	39.8	128
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	20.5	19.7	19.5	18.8	20.4	19.8	19.9	19.1	19.5
BERYLLIUM	4	Be, µg/L	01012	<1	<1	<1	<1	<1	<1	<1	<1	<1
BORON		B, µg/L	01022	25.7	25.3	24.8	24.9	22.7	22.2	23.3	23.0	23.1
CADMIUM	5	Cd, µg/L	01027	<1	<1	<1	<1	<1	<1	<1	<1	<1
CHROMIUM	100	Cr, µg/L	01034	1.88	2.10	1.88	1.69	1.60	1.54	1.50	1.46	4.11
COBALT		Co, µg/L	01037	<1	<1	<1	<1	<1	<1	<1	<1	<1
COPPER	**1300	Cu, µg/L	01042	<1	<1	<1	1.48	<1	<1	<1	<1	2.30
IRON	*300	Fe, µg/L	00031	30.8	<1	<1	5.33	24.33	<1	<1	3.92	49.5
LEAD	**15.0	Pb, µg/L	01051	<1	<1	<1	<1	<1	<1	<1	<1	<1
LITHIUM		Li, µg/L	01132	3.18	2.98	3.01	2.99	2.73	2.72	2.78	2.72	2.74
MANGANESE	*50	Mn, µg/L	01055	<1	<1	<1	<1	<1	<1	<1	<1	<1
MERCURY	2	Hg, µg/L	71900	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
MOLYBDENUM		Mo, µg/L	01062	1.27	1.22	1.23	1.18	<1	1.02	1.02	1.04	1.02
NICKEL		Ni, µg/L	01067	2.95	3.83	2.76	2.83	2.68	2.64	2.75	2.72	2.73
SELENIUM	50	Se, µg/L	01147	<1	<1	<1	<1	<1	<1	<1	<1	<1
SILICON		Si, µg/L	01142	992	952	1018	1030	1023	1076	1090	1090	1025
SILVER	*100	Ag, µg/L	01077	<1	<1	<1	<1	<1	<1	<1	<1	<1
STRONTIUM		Sr, µg/L	01082	122	121	121	121	122	120	122	120	121
THALLIUM	2	Tl, µg/L	01059	<1	<1	<1	<1	<1	<1	<1	<1	<1
TITANIUM		Ti, µg/L	01152	1.45	1.55	1.57	1.68	1.11	1.82	1.82	1.80	2.13
VANADIUM		V, µg/L	00985	<1	<1	<1	<1	<1	<1	<1	<1	1.30
ZINC	*5000	Zn, µg/L	01092	<1.45	<1.45	1.45	8.95	<1.45	<1.45	<1.45	22.6	17.8

* Federal/State Secondary MCLs

** Action Level

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


 CHIEF WATER CHEMIST


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 DEPUTY COMMISSIONER