



ANNUAL MONITORING REPORT

NORTH CITY WATER RECLAMATION PLANT

SDRWQCB Order No. R9-2015-0091

2016

Environmental Monitoring and Technical Services
2392 Kincaid Road • Mail Station 45A • San Diego, CA 92101
Tel (619) 758-2300 Fax (619) 758-2309





THE CITY OF SAN DIEGO

February 28, 2017

Mr. David W. Gibson, Executive Officer
California Regional Water Quality Control Board
2375 Northside Drive, Suite 100
San Diego, CA 92108

Attn: Groundwater Basins Branch

Subject: North City Water Reclamation Plant Annual Report Regional Board
Code No. POTW: 01-0730.01:hansd

Dear Mr. Gibson:

Enclosed is the Annual Monitoring Report for 2016 for the City of San Diego North City Water Reclamation Plant, as specified in Monitoring and Reporting Program No. R9-2015-0091 for the production and purveyance of reclaimed water.

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Sincerely,

Peter S. Vroom, Ph.D.
Public Utilities Deputy Director

DC:nt

Enclosure

cc: EPA Region 9
San Diego County Department of Environmental Health, Land Use Division
Distribution
File

Public Utilities Department

5530 Kiowa Drive • MS 85A • La Mesa, CA 91942-1331
Tel (619) 668-3232 Fax (619) 668-3250



INTRODUCTION:

The purpose of this document is to both meet the requirements of Monitoring and Reporting Program and to provide a reference source and resource tools for both regulatory agencies and City staff and their consultants. To this end, the past year's data is presented in tabular and graphical form. To make this document more useful we have included operational data and background analyses.

Notes on data conventions and analyses:

It should be noted that for averaging purposes "less than" and "not detected" (nd) values were treated as zeros. In many parts of the report zero values are found. Our computer system reads "less than" values as zero for summaries, as well as in computing averages. In those areas where zeros are found, the reader can find appropriate Method Detection Limit (MDL) in the table of data. Because "less than" values are averaged as zero, a number in the summary table values may be lower than the detection limits.

The data tables may also contain values expressed as a <X (less than) with some number X. For example, the Diazinon value for PLE on March 10, 1998 (in the table below) is reported as <2.4 ug/L (see the below table); this indicates that one or more, of two or more, determinations was above the MDL, while the average was below the MDL. This value is still treated as a zero for averaging and other summary calculations. Note also, that sub-totals and totals consisting of multiple analytes (see below) are also reported as "<X", where the "X" value is the highest MDL for the particular group of analytes. This has the same significance as a "ND" or not detected.

Organophosphorus Pesticides

	MDL	Units	PLE	PLE	PLE	PLR	PLR	PLR
			10-MAR-1998 0311980006	27-APR-1998 0428980006	10-SEP-1998 9809107494	10-MAR-1998 0311980007	27-APR-1998 0428980007	10-SEP-1998 9809107515
Demeton O	1.69	UG/L	ND	ND	ND	ND	ND	ND
Demeton S	1.82	UG/L	ND	ND	ND	ND	ND	ND
Diazinon	2.41	UG/L	<2.4	ND	ND	<2.4	ND	ND
Guthion	7.1	UG/L	ND	ND	ND	ND	ND	ND
Malathion	2.98	UG/L	ND	ND	ND	ND	ND	ND
Parathion	2.83	UG/L	ND	ND	ND	ND	ND	ND
Thiophosphorus Pesticides			<7.1	<7.1	<7.1	<7.1	<7.1	<7.1
Demeton -O, -S			<1.8	<0.2	<0.2	<1.8	<0.2	<0.2
Total Organophosphorus Pesticides			<7.1	<7.1	<7.1	<7.1	<7.1	<7.1

A further limitation, that the user of this data should note, is that confidence in the results of an analysis is heavily dependent upon the concentration relative to the Method Detection Limit (MDL). For the most part our detection limits have been established using the procedure in 40 CFR, part 136. This statistical basis for the MDL results in a defined statistical confidence (at the 99% Confidence Interval) of essentially $\pm 100\%$ of the result at or near the MDL. Only at concentrations approximately 5 times the MDL is the confidence interval at $\pm 20\%$ relative. While the precision of our methods generally ranges from 2-3 significant figures, the above limitations of confidence should always be considered.

Laboratories Contributing Results used in this report.

Alvarado Wastewater Chemistry Laboratory
(EPA Lab Code: CA00380,
ELAP Certificate: 1609)
5530 Kiowa Drive
La Mesa, CA 91942
(619)668-3212

All results except those listed below.

Point Loma Wastewater Chemistry Laboratory
(EPA Lab Code: CA01435,
ELAP Certificate: 2474)
1902 Gatchell Road
San Diego, CA 92106
(619)221-8765

*Process control analyses and wet methods for the
plant.*

North City Wastewater Chemistry Laboratory
(EPA Lab Code: CA01436,
ELAP Certificate: 2477)
4949 Eastgate Mall
San Diego, CA 92121
(858)824-6009

*Process control analyses and wet methods for the
plant.*

Metro Biosolids Center Wastewater Chemistry
(EPA Lab Code: CA01437,
ELAP Certificate: 2478)
5240 Convoy Street
San Diego, CA 92111
(858)614-5834

*Process control analyses and wet methods for the
plant.*

South Bay Water Reclamation Plant
(EPA Lab Code: CA01460,
ELAP Certificate: 2539)
2411 Dairy Mart Road
San Diego, CA 92173
(619)428-7349

*Process control analyses and wet methods for the
plant.*

City of San Diego - Water Quality Laboratory (EPA
Lab Code: CA00080,
ELAP Certificate: 1058)
5530 Kiowa Drive La
Mesa, CA 91942
(619)668-3237

***Totals of Organic Carbon, Nitrogen, Thallium, and
Phosphorus in Wastewater***

City of San Diego - Marine Microbiology and Vector
Management (EPA Lab Code: CA01393, ELAP
Certificate: 2185)
2392 Kincaid Road San
Diego, CA 92101
(619)758-2312

Microbiology

Test America Richland (EPA Lab Code: WA00023,
ELAP Certificate: 2425)
2800 George Washington Way
Richland, WA 99354-1613
(509)375-3131

Gross Alpha/Beta Radioactivity

Graphs:

Graphs of monthly averages show the arithmetic mean of the determinations made in the calendar month without weighing for variation in frequency or number of determinations. If the mean is less than the MDL (i.e. 'nd' or '<X'), the expressed graphical value is zero (0).

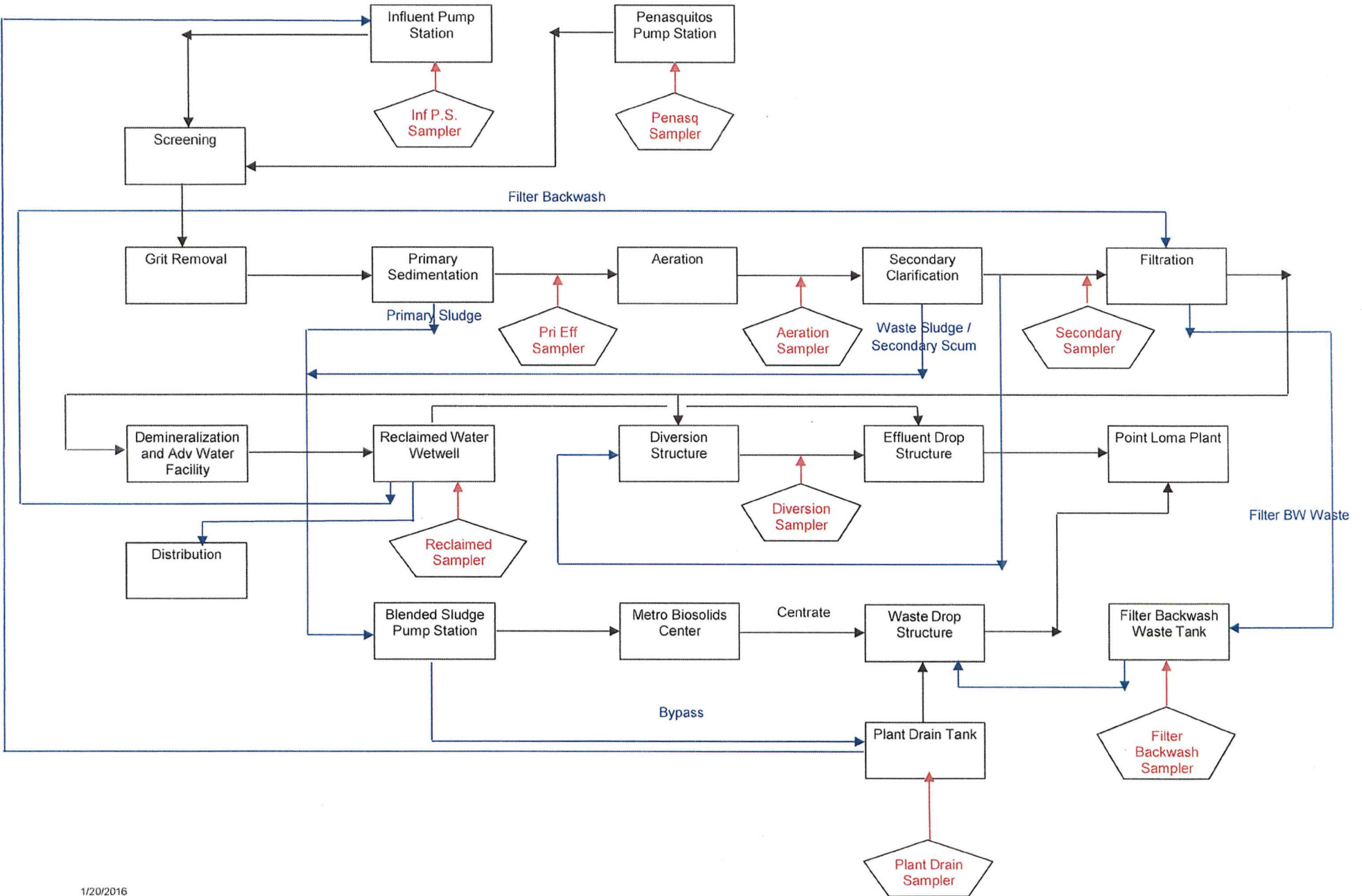
Terms:North City Water Reclamation Plant Source Codes

N01-PEN	Penasquitos Influent Pump Station
N01 PS_INF	Pump Station 64 Influent
N30-DFE	Disinfected Final Effluent
N15 AE	Aeration Effluent
N34 REC WATER	Compliance point. Reclaimed water distributed to customers, downstream of EDR unit.
N25 FES	Filter Effluent Structure
N10 EFF	Primary Effluent
N10-PSP COMB	Combined Primary Sludge Pump
N15-WAS HCP	Waste Activated Sludge (High Capacity Pump)
N15-WAS LCP	Waste Activated Sludge (Low Capacity Pump)

North City Water Reclamation Plant Operator Certification 2016

<u>Name</u>	<u>Grade</u>	<u>Cert. No.</u>	<u>Expiration Date</u>
<u>Chief Plant Operator</u>			
Guerreiro, Juan	V	27670	12/31/2017
<u>North City Plant Superintendent</u>			
Pitchford, Richard	V	9851	06/30/2017
<u>North City Sr. Operations Supervisor</u>			
Pinto, Elisabete	V	10265	06/30/2017
<u>North City Operations Supervisors</u>			
Richie Jacques	III	27921	06/30/2018
Carroll, John C.	III	28867	12/31/2018
Cozad, John	III	7138	12/31/2017
Relph, Robert	III	6742	12/31/2018
<u>North City Sr. Operators</u>			
William L. Mercado	III	41838	09/23/2017
<u>North City Operators</u>			
Castillo, Jose	III	9849	06/30/2017
Tomas, Matthew D.	III	29004	12/31/2017
Squyres, Traci L.	III	35602	10/31/2018
Duresseau, Gabriel L.	II	28294	06/30/2018
Gonzalez-Bueno, Noemi	II	41833	10/31/2018
Gutierrez, Marlene E.	II	9636	06/30/2017
Saulog, Noel	II	10299	12/31/2018
Wendorf, George P.	II	9774	12/31/2017
Strunk, Robert E.	II	42439	09/27/2018
Gonzalez, Adolfo	OIT-2	N/A	06/08/2018
Hullin, Marshall D.	OIT-1	N/A	05/17/2018
<u>Trussell Technologies</u>			
Pisarenko, Aleksey N.	III	41526	10/01/2017
Chen, Elise C.	III	42568	11/17/2017
Kolakovsky, Aviv	OIT-1	N/A	10/13/2017
Abordo, Gene L.	OIT-1	N/A	08/18/2018
Tackaert, Rodrigo A.	OIT-1	N/A	08/18/2018

NCWRP Sampling Schematic



North City Water Reclamation Plant
2016
Monthly Totals - Millions of Gallons

Month	Penas- quitos Influent (MG)	Headworks Flow 36" (MG)	Plant Drain Influent (MG)	Disinfect Final Effluent (MG)	Reclaim Water (MG)	N Return (MG)	FES Filter Effluent (MG)	Primary Effluent (MG)	Primary Sludge (MG)	WAS Hi Cap sludge (MG)	WAS Lo Cap sludge (MG)	Filter Backwash (MG)	Total Sludge Flow to MBC (MG)
01	206.2	287.0	48.8	15.8	53.0	374.99	141.82	481.45	20.79	.00	5.98	4.63	20.30
02	188.9	254.6	21.7	12.2	124.2	297.46	168.18	438.74	24.62	.11	5.37	7.53	29.26
03	202.9	289.9	21.7	16.9	119.1	339.26	151.39	479.09	19.29	1.62	6.41	6.19	31.57
04	203.6	279.7	15.3	14.7	120.8	321.34	182.92	465.56	18.88	7.07	2.75	8.63	27.06
05	200.0	289.2	6.9	21.0	156.8	329.49	200.28	480.52	46.29	12.10	.00	9.10	31.50
06	154.2	332.7	11.5	27.3	168.5	273.12	213.96	455.32	23.80	9.95	.00	11.74	29.65
07	197.2	321.8	14.0	25.6	294.0	166.55	329.39	480.11	16.04	9.96	.00	8.87	30.82
08	114.6	377.1	16.1	22.4	304.7	154.89	335.66	478.40	20.56	10.11	.00	7.74	30.87
09	.0	483.8	15.6	21.4	237.1	189.22	275.59	462.33	14.34	10.03	.00	14.12	29.93
10	124.6	335.2	11.7	18.4	211.5	242.23	244.78	478.82	20.42	9.76	.00	13.99	30.87
11	133.7	312.5	14.3	28.8	166.3	256.75	213.99	465.29	14.31	9.64	.00	8.89	29.04
12	161.1	322.2	11.5	16.9	85.4	374.62	153.53	486.17	20.17	9.70	.00	8.64	29.21
Average	157.3	323.8	17.4	20.1	170.1	276.66	217.62	470.98	21.63	7.50	1.71	9.17	29.17
Total	1887.1	3885.5	208.9	241.2	2041.2	3319.92	2611.49	5651.80	259.51	90.05	20.51	110.07	350.08

Reclaim Water = Distribution Water

North City Water Reclamation Plant
2016
Monthly Averages - Millions of Gallons

Month	Penas- quitos Influent (MG)	Headworks Flow 36" (MG)	Plant Drain Influent (MG)	Disinfect Final Effluent (MG)	Reclaim Water (MG)	N Return (MG)	FES Filter Effluent (MG)	Primary Effluent (MG)	Primary Sludge (MG)	WAS Hi Cap sludge (MG)	WAS Lo Cap sludge (MG)	Filter Backwash (MG)	Total Sludge Flow to MBC (MG)
01	6.7	9.3	1.6	.5	1.7	12.10	4.57	15.53	.67	.00	.19	.15	.65
02	6.5	8.8	.7	.4	4.3	10.26	5.80	15.13	.85	.00	.19	.26	1.01
03	6.5	9.4	.7	.5	3.8	10.94	4.88	15.45	.62	.05	.21	.20	1.02
04	6.8	9.3	.5	.5	4.0	10.71	6.10	15.52	.63	.24	.09	.29	.90
05	6.5	9.3	.2	.7	5.1	10.63	6.46	15.50	1.49	.39	.00	.29	1.02
06	5.1	11.1	.4	.9	5.6	9.10	7.13	15.18	.79	.33	.00	.39	.99
07	6.4	10.4	.5	.8	9.5	5.37	10.63	15.49	.52	.32	.00	.29	.99
08	3.7	12.2	.5	.7	9.8	5.00	10.83	15.43	.66	.33	.00	.25	1.00
09	.0	16.1	.5	.7	7.9	6.31	9.19	15.41	.48	.33	.00	.47	1.00
10	4.0	10.8	.4	.6	6.8	7.81	7.90	15.45	.66	.31	.00	.45	1.00
11	4.5	10.4	.5	1.0	5.5	8.56	7.13	15.51	.48	.32	.00	.30	.97
12	5.2	10.4	.4	.5	2.8	12.08	4.95	15.68	.65	.31	.00	.28	.94
Average	5.2	10.6	.6	.7	5.6	9.07	7.13	15.44	.71	.25	.06	.30	.96

Reclaim Water = Distribution Water

North City Water Reclamation Plant			
(N34-REC WATER) Recycled Water Chlorine Report			
N34-REC WATER is compliance point for reclaimed water			
	Minimum Daily ¹	Maximum Daily ²	Time ³
Operations 2016	Chlorine Residual	Chlorine Residual	CT less than
Date	(mg/L)	(mg/L)	450 mg-min/l (min)
Jan	3.87	5.42	0
Feb	3.19	6.42	0
Mar	3.48	9.25	0
Apr	2.66	10.74	0
May	3.33	7.02	0
Jun	2.49	7.29	0
Jul	3.18	5.84	0
Aug	3.19	5.59	0
Sep	2.72	6.00	0
Oct	2.93	5.24	0
Nov	3.88	5.71	0
Dec	3.87	6.20	0
Average:	3.23	6.73 Total:	0
1 Minimum Daily value is the average recorded for the month.			
2 Maximum Daily value is the average recorded value for the month.			
3 Total time for the month.			

North City Water Reclamation Plant
Recycled Water Coliform Report

Operations 2016 Date	Tot. Coliform (Monthly Avg) (MPN)
Jan	<1.8
Feb	<1.8
Mar	<1.8
Apr	<4.34
May	<2.00
Jun	<1.8
Jul	<1.8
Aug	<1.8
Sep	<1.8
Oct	<1.8
Nov	<1.8
Dec	<1.8

North City Water Reclamation Plant				
Recycled Water Turbidity Report				
Data from in-plant meter ⁴				
	Average Daily	Minimum Daily ¹	Maximum Daily ²	Time Over ³
Operations 2016	Turbidity	Turbidity	Turbidity	5 NTU's
Date	(NTU)	(NTU)	(NTU)	(MINUTES)
Jan	0.50	0.46	0.75	0.00
Feb	0.67	0.45	1.38	0.00
Mar	0.50	0.37	0.85	0.00
Apr	0.46	0.39	0.72	0.00
May	0.40	0.35	0.55	0.00
Jun	0.37	0.32	0.99	6.67
Jul	0.25	0.22	0.33	0.00
Aug	0.43	0.38	0.58	0.00
Sep	0.58	0.50	0.80	0.00
Oct	0.30	0.26	0.47	0.00
Nov	0.26	0.22	0.72	0.00
Dec	0.24	0.20	0.47	0.00
Average:	0.41	0.34	0.72 Total:	6.67
1 Minimum Daily value is the average recorded for the month.				
2 Maximum Daily value is the average recorded value for the month.				
3 Total time for the month.				
4 Compliance monitoring point, values taken from the combined filter effluent turbidity meter (N25AIT673) or (N25AIT674), located at meter room of Area 25 (Tertiary Filter Structures)				

NORTH CITY WATER RECLAMATION PLANT

Monthly/Annual Averages - Daily Parameters

From: 01-Jan-2016 — 31-Dec-2016

(N01-PEN) Penasquitos Pump Station Influent

	Biochemical Oxygen Demand (mg/L)	Total Dissolved Solids (mg/L)	Total Suspended Solids (mg/L)	Volatile Suspended Solids (mg/L)	Turbidity (NTU)	pH COMPOSITE (pH)
January-2016	333	966	411	313	145	7.45
February-2016	337	930	376	317	135	7.42
March-2016	300	890	382	322	166	7.46
April-2016	299	909	380	317	166	7.46
May-2016	318	921	395	328	141	7.51
June-2016	329	935	427	348	145	7.48
July-2016	324	889	379	312	163	7.58
August-2016	314	851	384	308	159	7.59
October-2016	294	913	382	315	153	7.45
November-2016	311	907	395	330	145	7.49
December-2016	310	908	400	338	151	7.41
Average:	315	911	392	323	152	7.48
Maximum:	337	966	427	348	166	7.59
Minimum:	294	851	376	308	135	7.41

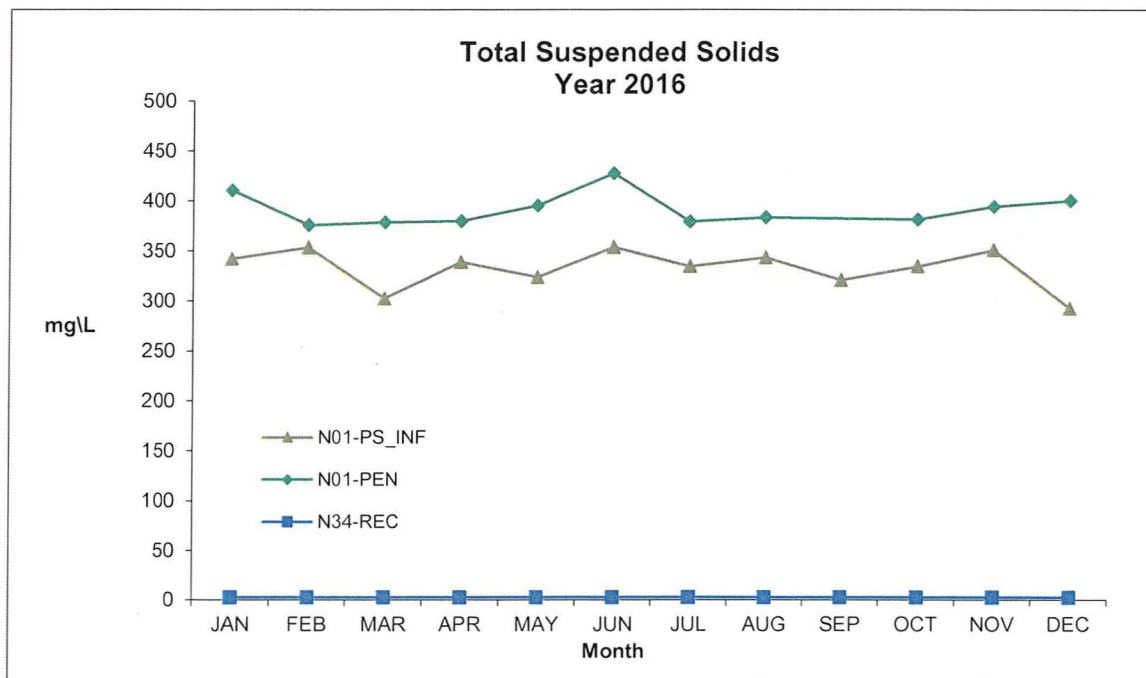
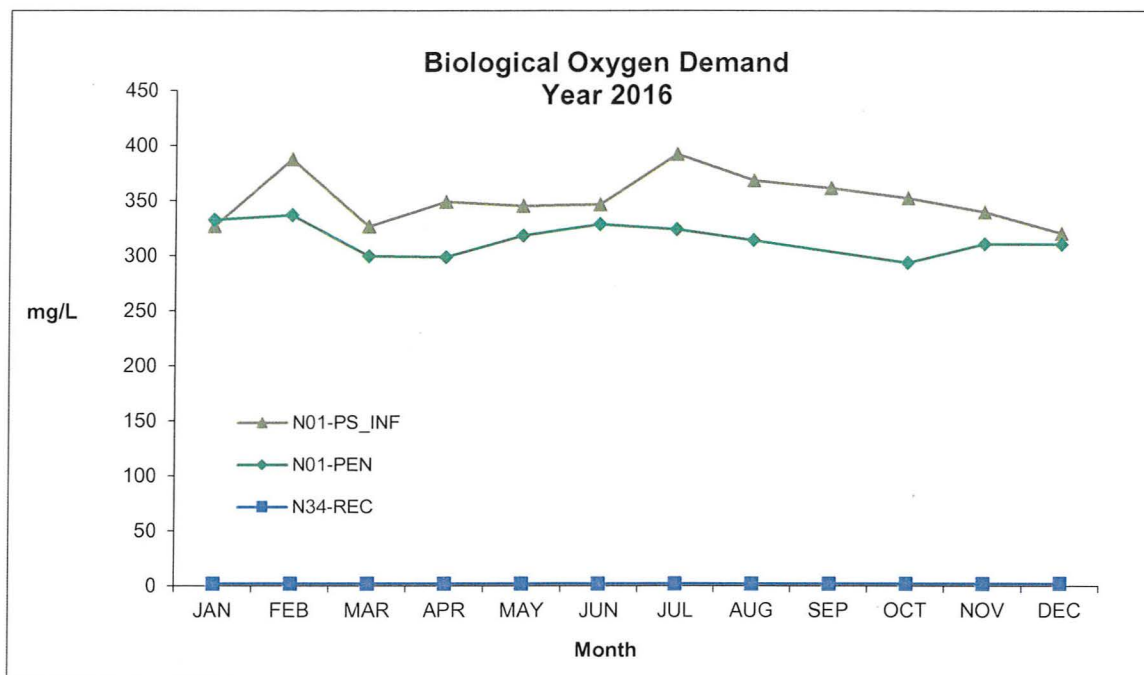
(N01-PS_INF) Pump Station 64

	Biochemical Oxygen Demand (mg/L)	Total Dissolved Solids (mg/L)	Total Suspended Solids (mg/L)	Volatile Suspended Solids (mg/L)	Turbidity (NTU)	pH COMPOSITE (pH)
January-2016	327	1160	342	285	128	7.39
February-2016	388	1250	354	314	140	7.31
March-2016	326	1230	303	272	136	7.32
April-2016	349	1220	339	303	141	7.32
May-2016	345	1270	324	287	131	7.33
June-2016	348	1240	354	313	132	7.37
July-2016	392	1220	335	295	156	7.35
August-2016	368	1140	344	297	152	7.29
September-2016	361	1120	321	282	149	7.31
October-2016	352	1240	335	295	141	7.39
November-2016	340	1240	351	304	148	7.42
December-2016	320	1210	293	257	138	7.24
Average:	351	1212	333	292	141	7.34
Maximum:	392	1270	354	314	156	7.42
Minimum:	320	1120	293	257	128	7.24

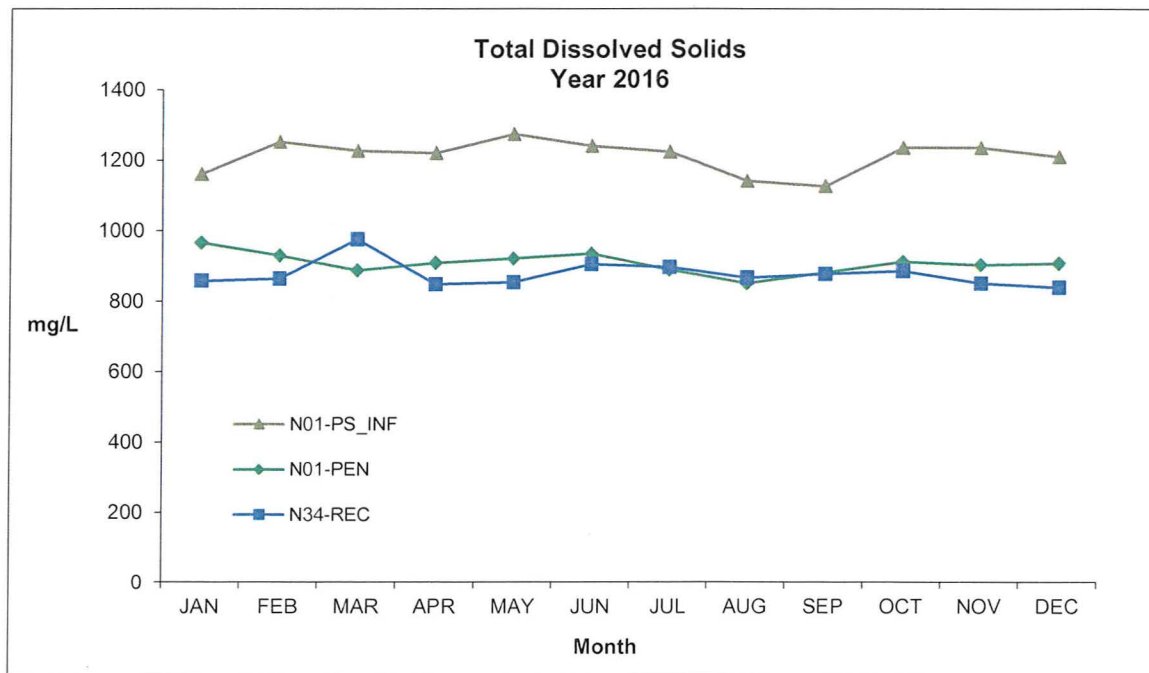
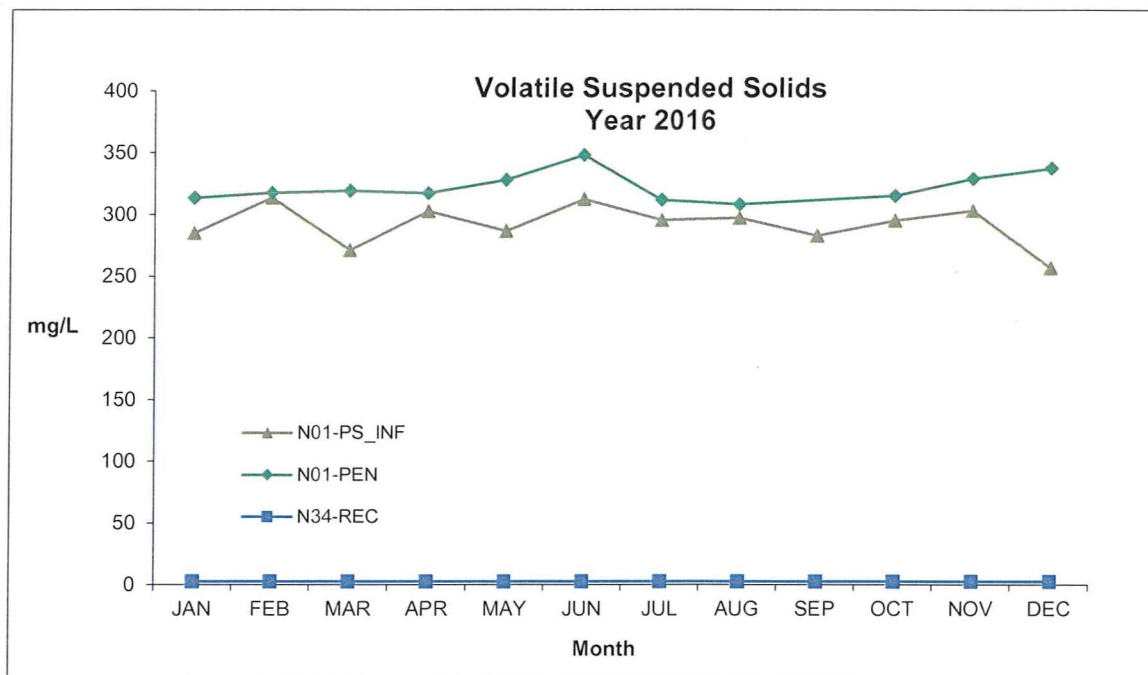
All samples are 24-hour composite

* N01-PEN Pipeline was out of service for the entire month of September; flows were rerouted to N01-PS_INF pipeline.

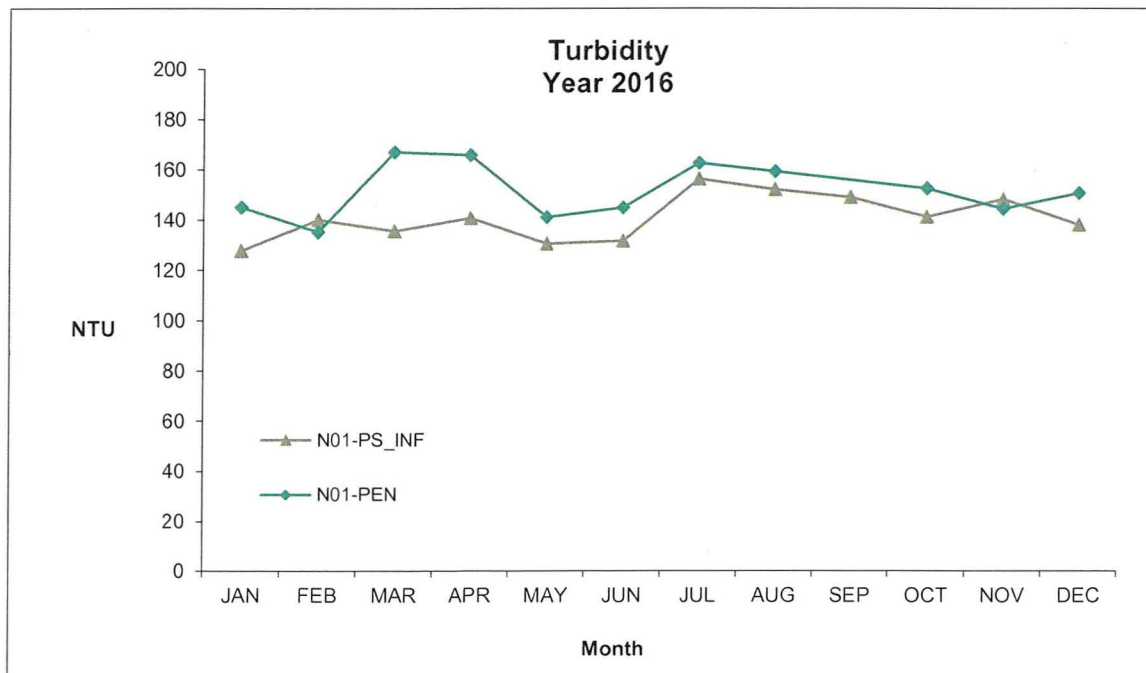
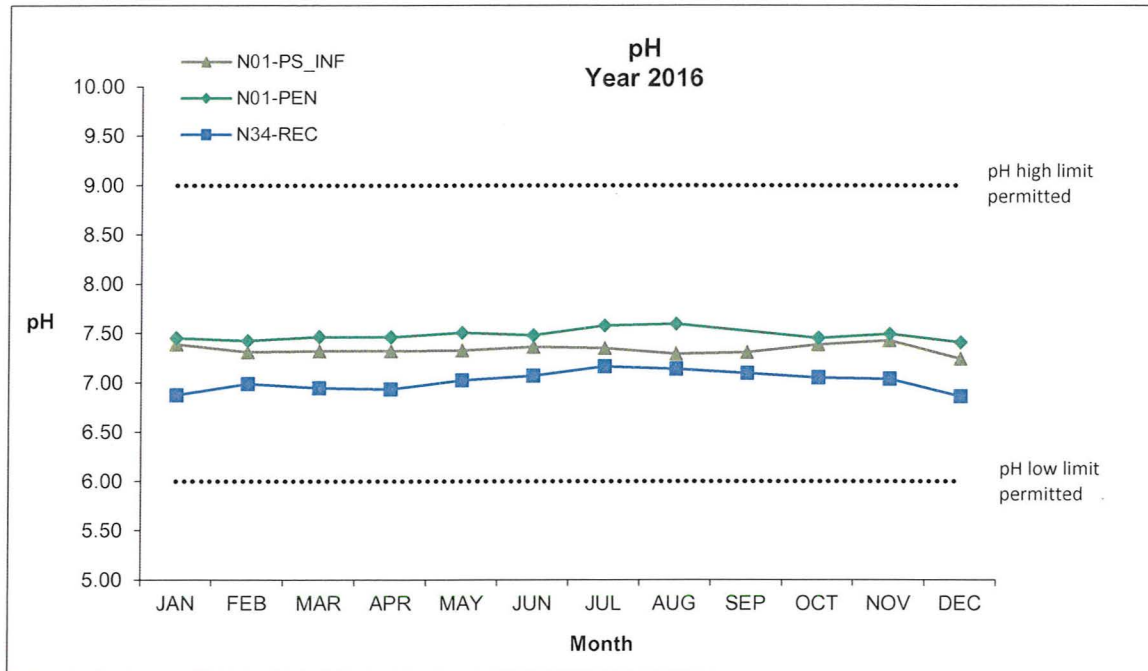
**NORTH CITY WATER RECLAMATION PLANT
ANNUAL MONITORING REPORT
2016 Daily Parameters**



**NORTH CITY WATER RECLAMATION PLANT
ANNUAL MONITORING REPORT
2016 Daily Parameters**



**NORTH CITY WATER RECLAMATION PLANT
ANNUAL MONITORING REPORT
2016 Daily Parameters**



* Turbidity for N34-REC is taken from an in-plant meter.

NORTH CITY WATER RECLAMATION PLANT
(N34-REC) Reclaim Water - Monthly/Annual Averages

From: 01-Jan-2016 — 31-Dec-2016

Analyte:	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron
MDL:	23.8	2.44	0.824	0.7	0.072	5.32
Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Limit:	1000	6	50	1000	4	750
January-2016	ND	ND	0.4	23.0	ND	316
February-2016	ND	ND	0.2	23.3	ND	315
March-2016	ND	<2.4	0.1	22.7	ND	312
April-2016	<24	<2.4	0.2	21.8	ND	301
May-2016	ND	ND	0.3	21.0	ND	316
June-2016	ND	ND	0.3	26.7	ND	325
July-2016	ND	ND	1.6	23.5	ND	403
August-2016	ND	ND	1.4	18.3	ND	305
September-2016	ND	ND	0.6	30.1	ND	282
October-2016	ND	ND	0.3	23.7	ND	286
November-2016	ND	ND	0.6	21.9	ND	290
December-2016	ND	ND	ND	25.7	ND	273
Annual Average:	0	0	0.5	23.5	ND	310

Analyte:	Cadmium	Chromium	Cobalt	Copper	Iron	Lead
MDL:	0.26	0.54	0.24	2.16	15.6	1.68
Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Limit:	5				300	
January-2016	<0.26	1.9	0.70	4.50	174	ND
February-2016	ND	8.2	0.66	2.81	122	<1.7
March-2016	ND	2.4	0.49	ND	72.0	<1.7
April-2016	ND	1.4	0.76	8.55	106	ND
May-2016	ND	1.9	0.64	5.98	75.0	ND
June-2016	<0.26	2.7	0.93	5.35	72.0	ND
July-2016	ND	1.3	0.33	6.70	82.0	ND
August-2016	<0.03	42	1.11	NR	248	ND
September-2016	ND	1.6	0.49	10.5	61.0	<1.7
October-2016	ND	1.5	0.99	5.13	254	ND
November-2016	ND	1.6	1.15	8.73	64.0	ND
December-2016	ND	1.3	0.38	9.42	109	ND
Annual Average:	0	5.7	0.75	6.15	120	0

Analyte:	Manganese	Mercury	Molybdenum	Nickel	Selenium	Silver
MDL:	0.78	0.005	0.32	0.53	0.216	0.73
Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Limit:	100	2		100	50	
January-2016	70.3	ND	5.63	5.63	0.69	ND
February-2016	91.8	ND	5.63	5.63	0.69	ND
March-2016	42.8	ND	4.71	9.84	1.19	ND
April-2016	72.9	ND	6.64	6.37	0.81	ND
May-2016	33.3	ND	4.78	6.30	0.86	ND
June-2016	51.0	ND	6.14	5.49	0.82	ND
July-2016	56.7	ND	5.71	4.35	1.65	ND
August-2016	45.9	ND	6.88	25.9	0.64	ND
September-2016	63.9	ND	6.92	3.79	0.71	ND
October-2016	75.2	0.006	6.98	3.99	0.65	ND
November-2016	69.2	0.007	6.05	4.36	0.86	ND
December-2016	73.4	ND	6.19	4.34	0.54	ND
Annual Average:	62.2	0.002	5.98	7.59	0.84	ND

MDLs listed are the maximum for the past 12 months

ND= Not Detected

NR= Not Required

NORTH CITY WATER RECLAMATION PLANT
(N34-REC) Reclaim Water - Monthly/Annual Averages

From: 01-Jan-2016 — 31-Dec-2016

Analyte:	Thallium	Vanadium	Zinc	Calcium	Lithium	Magnesium
MDL:	0.5	4.4	4.19	0.134	0.015	0.132
Units:	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L
Limit:	2					
January-2016	ND	0.45	20.8	63.3	0.048	26.3
February-2016	ND	1.36	20.8	64.8	0.039	28.8
March-2016	ND	1.60	21.4	74.6	0.042	33.0
April-2016	ND	0.78	18.6	70.3	0.043	29.9
May-2016	ND	0.74	22.0	70.1	NR	27.6
June-2016	ND	0.78	22.4	74.2	0.047	29.7
July-2016	<0.5	ND	28.3	59.1	0.040	24.6
August-2016	ND	NR	21.4	66.2	0.042	28.4
September-2016	ND	ND	29.0	58.5	0.037	25.6
October-2016	ND	ND	22.4	59.1	0.046	25.1
November-2016	ND	ND	22.3	58.4	0.042	25.4
December-2016	ND	<0.45	26.4	67.2	0.037	29.0
Annual Average:	0	0.52	23.0	65.5	0.042	27.8

Analyte:	Potassium	Sodium	Calcium Hardness	Magnesium Hardness	Total Hardness	Total Alkalinity
MDL:	0.84	1	0.335	0.544	0.878	20
Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Limit:						
January-2016	15.3	169	158	108	266	71
February-2016	16.1	173	162	119	281	99
March-2016	17.3	193	187	136	322	92
April-2016	17.7	187	176	123	299	134
May-2016	18.5	201	175	114	289	89
June-2016	18.3	191	185	122	307	96
July-2016	16.1	170	148	101	249	93
August-2016	19.2	202	159	114	273	91
September-2016	17.8	183	146	105	251	88
October-2016	16.3	175	148	103	251	83
November-2016	14.7	193	146	105	251	79
December-2016	16.1	179	168	120	288	75
Annual Average:	17.0	185	163	114	277	91

Analyte:	Chloride	Fluoride	Nitrate	Nitrate as N	Sulfate	Ortho Phosphate
MDL:	7	0.05	1		9	0.5
Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Limit:	300	1			300	
January-2016	220	0.40	60.2	13.6	210	2.6
February-2016	234	0.39	55.3	12.5	204	2.2
March-2016	255	0.49	59.3	13.4	215	2.8
April-2016	254	0.44	45.2	10.2	216	3.7
May-2016	244	0.54	54.0	12.2	220	3.5
June-2016	243	0.55	56.8	12.8	225	4.0
July-2016	229	0.55	51.0	11.5	191	3.5
August-2016	250	0.51	55.0	12.4	189	4.2
September-2016	230	0.49	54.6	12.3	190	4.7
October-2016	229	0.51	53.2	12.0	193	<2.2
November-2016	229	0.48	59.3	13.4	190	3.4
December-2016	243	0.45	60.9	13.8	208	3.0
Annual Average:	238	0.48	55.4	12.5	204	3.3

MDLs listed are the maximum for the past 12 months

ND= Not Detected

NR= Not Required

NORTH CITY WATER RECLAMATION PLANT
(N34-REC) Reclaim Water - Monthly/Annual Averages

From: 01-Jan-2016 — 31-Dec-2016

Analyte:	Total Organic Carbon	Percent Sodium	Adjusted Sodium Ratio	Total Cyanides	Total Dissolved Solids	Total Nitrogen
MDL:	0.3			0.002	100	0.78
Units:	mg/L	PERCENT	Ratio	mg/L	mg/L	mg/L
Limit:		60		0.2	1200	
January-2016	7.1	56	4.0	0.007	858	18.9
February-2016	6.0	56	4.3	0.004	864	11.3
March-2016	7.0	55	4.6	0.004	976	8.20
April-2016	7.2	56	4.6	ND	848	17.0
May-2016	7.3	58	5.0	ND	853	15.7
June-2016	8.0	56	4.5	0.003	909	20.8
July-2016	6.9	58	4.5	ND	897	12.7
August-2016	7.7	59	5.2	0.011	867	15.0
September-2016	8.8	60	4.6	0.002	877	25.2
October-2016	7.2	58	4.4	ND	886	17.0
November-2016	6.3	61	4.9	ND	853	14.9
December-2016	7.0	56	4.2	ND	840	19.7
Annual Average:	7.2	57	4.6	0.003	877	16.4

	MBAS (Surfactants)
Analyte:	
MDL:	0.03
Units:	mg/L
Limit:	0.5
January-2016	ND
February-2016	ND
March-2016	0.06
April-2016	0.06
May-2016	ND
June-2016	0.05
July-2016	0.07
August-2016	0.07
September-2016	0.09
October-2016	ND
November-2016	0.04
December-2016	ND
Annual Average:	0.04

MDLs listed are the maximum for the past 12 months

ND= Not Detected

NR= Not Required

NORTH CITY WATER RECLAMATION PLANT
(N01-PS_INF) Pump Station 64 - Monthly/Annual Averages

From: 01-Jan-2016 — 31-Dec-2016

Analyte:	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron
MDL:	23.8	2.44	0.824	0.7	0.072	5.32
Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
January-2016	2000	<2.4	3.0	137	ND	292
February-2016	461	ND	0.9	126	ND	318
March-2016	495	<2.4	0.9	123	ND	317
April-2016	447	<2.4	0.8	127	ND	308
May-2016	390	ND	0.9	138	ND	311
June-2016	614	ND	1.1	141	ND	336
July-2016	455	ND	3.4	138	ND	397
August-2016	491	ND	1.5	123	ND	297
September-2016	1070	ND	1.7	119	ND	277
October-2016	395	<2.4	0.4	128	ND	298
November-2016	424	4.7	1.1	134	ND	316
December-2016	351	ND	1.0	116	ND	290
Annual Average:	633	0.4	1.4	129	ND	313

Analyte:	Cadmium	Chromium	Cobalt	Copper	Iron	Lead
MDL:	0.26	0.54	0.24	2.16	15.6	1.68
Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
January-2016	0.40	5.2	2.05	116	9430	4.0
February-2016	0.32	5.2	1.37	136	7210	3.9
March-2016	ND	6.0	1.39	123	7910	2.1
April-2016	ND	6.0	1.08	140	6840	ND
May-2016	<0.26	6.6	1.24	134	7480	1.9
June-2016	<0.26	8.5	1.36	147	8350	2.7
July-2016	<0.10	6.3	1.00	149	10200	2.1
August-2016	0.15	8.0	1.59	172	7760	2.1
September-2016	ND	5.7	1.39	192	6280	3.7
October-2016	<0.26	7.2	1.61	159	8050	<1.7
November-2016	ND	11.3	0.49	170	8580	ND
December-2016	ND	5.9	0.96	119	6870	ND
Annual Average:	0.07	6.8	1.41	146	7913	1.9

Analyte:	Lithium	Manganese	Mercury	Molybdenum	Nickel	Selenium
MDL:	0.015	0.78	0.005	0.32	0.53	0.216
Units:	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L
January-2016	0.067	156	0.170	9.40	10.1	1.81
February-2016	0.056	147	0.070	9.42	7.4	1.74
March-2016	0.067	182	0.070	10.3	9.2	2.62
April-2016	0.071	160	0.060	11.8	7.6	2.27
May-2016	NR	153	0.150	10.8	7.2	1.75
June-2016	0.062	158	0.080	12.4	9.1	1.47
July-2016	0.060	171	0.090	12.3	5.8	3.97
August-2016	0.052	133	0.060	14.3	4.9	0.99
September-2016	0.045	121	0.100	11.7	8.0	1.93
October-2016	0.060	166	0.100	11.7	6.1	1.58
November-2016	0.070	168	0.110	10.3	6.5	1.80
December-2016	0.038	152	0.060	8.41	5.9	1.60
Annual Average:	0.059	156	0.090	11.1	7.3	1.96

MDLs listed are the maximum for the past 12 months

ND= Not Detected

NR= Not Required

NORTH CITY WATER RECLAMATION PLANT
(N01-PS_INF) Pump Station 64 - Monthly/Annual Averages

From: 01-Jan-2016 — 31-Dec-2016

Analyte:	Silver	Thallium	Vanadium	Zinc	Calcium	Magnesium
MDL:	0.73	0.5	4.4	4.19	0.134	0.132
Units:	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L
January-2016	<0.7	ND	8.30	144	79.6	34.2
February-2016	ND	ND	4.71	157	79.3	34.9
March-2016	<0.7	ND	3.25	199	101	47.0
April-2016	ND	ND	1.07	168	100	43.0
May-2016	ND	ND	1.40	171	97.6	42.0
June-2016	0.9	ND	1.31	206	96.0	39.0
July-2016	ND	ND	ND	196	94.9	39.8
August-2016	0.9	ND	NR	225	90.8	39.2
September-2016	<0.7	ND	2.21	168	73.1	31.6
October-2016	1.4	ND	ND	183	88.6	39.8
November-2016	ND	ND	<0.45	194	103	45.1
December-2016	ND	ND	0.76	151	56.6	23.2
Annual Average:	0.3	ND	2.09	180	88.4	38.2

Analyte:	Potassium	Sodium	Chloride	Fluoride	Sulfate	Total Dissolved Solids
MDL:	0.84	1.00	7.00	0.05	9	100
Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
January-2016	17.0	185	NR	NR	NR	1160
February-2016	21.2	178	NR	NR	NR	1250
March-2016	26.0	264	352	0.19	268	1230
April-2016	24.1	246	NR	NR	NR	1220
May-2016	25.0	230	NR	NR	NR	1270
June-2016	22.9	228	350	0.57	286	1240
July-2016	22.8	234	NR	NR	NR	1220
August-2016	23.1	237	NR	NR	NR	1140
September-2016	21.1	195	288	0.47	227	1120
October-2016	25.1	243	352	0.46	260	1240
November-2016	25.3	294	356	0.45	265	1240
December-2016	15.8	158	NR	NR	NR	1210
Annual Average:	22.5	224	340	0.43	261	1212

Analyte:	Total Cyanides
MDL:	0.002
Units:	mg/L
January-2016	0.003
February-2016	ND
March-2016	0.003
April-2016	ND
May-2016	0.002
June-2016	ND
July-2016	0.003
August-2016	ND
September-2016	ND
October-2016	ND
November-2016	ND
December-2016	0.003
Annual Average:	0.001

MDLs listed are the maximum for the past 12 months

ND= Not Detected

NR= Not Required

NORTH CITY WATER RECLAMATION PLANT

(N01-PEN) Penasquitos Pump Station Influent - Monthly/Annual Averages

From: 01-Jan-2016 — 31-Dec-2016

Analyte:	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron
MDL:	23.8	2.44	0.824	0.7	0.072	5.32
Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
January-2016	1760	7.5	3.96	425	ND	326
February-2016	1620	ND	1.54	107	ND	318
March-2016	1110	3.3	1.16	103	ND	303
April-2016	1990	<2.4	2.09	113	ND	290
May-2016	1900	<2.4	1.58	121	ND	296
June-2016	1600	3.0	1.72	255	ND	300
July-2016	1330	2.7	3.89	108	ND	378
August-2016	1650	ND	2.90	100	ND	275
October-2016	1600	ND	0.92	111	ND	292
November-2016	1170	5.2	2.00	123	ND	294
December-2016	1240	ND	1.55	104	ND	275
Annual Average:	1543	2.0	2.12	152	ND	304

Analyte:	Cadmium	Chromium	Cobalt	Copper	Iron	Lead
MDL:	0.26	0.54	0.24	2.16	15.6	1.68
Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
January-2016	<0.26	11.8	6.60	123	88900	14
February-2016	ND	9.3	1.49	98	16200	4.8
March-2016	ND	11.5	1.49	82	18200	5.3
April-2016	ND	5.5	1.49	109	19200	4.5
May-2016	ND	5.5	1.62	88	17800	2.7
June-2016	ND	7.4	4.07	124	48700	9.6
July-2016	ND	8.5	1.22	128	19300	2.3
August-2016	<0.10	11.1	1.76	112	17700	6.8
October-2016	ND	12.7	2.11	108	18700	1.8
November-2016	ND	15.9	2.10	115	21400	ND
December-2016	ND	12.4	1.44	95	16400	1.9
Annual Average:	0	10.1	2.31	107	27500	4.9

Analyte:	Lithium	Manganese	Mercury	Molybdenum	Nickel	Selenium
MDL:	0.015	0.78	0.005	0.32	0.53	0.216
Units:	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L
January-2016	0.057	154	0.297	39.0	35.9	5.57
February-2016	0.074	107	0.132	9.67	14.7	1.42
March-2016	0.062	115	0.110	7.38	19.5	0.87
April-2016	0.055	131	0.095	10.0	12.3	1.89
May-2016	NR	113	0.118	11.5	13.7	1.43
June-2016	0.055	130	0.094	24.0	19.4	1.48
July-2016	0.060	140	0.176	9.68	9.97	2.69
August-2016	0.045	144	0.065	12.3	8.47	1.46
October-2016	0.049	167	0.170	12.4	8.63	2.20
November-2016	0.060	164	0.087	14.4	9.41	1.63
December-2016	0.055	160	0.109	10.7	9.23	1.57
Annual Average:	0.057	139	0.132	14.6	14.7	2.02

MDLs listed are the maximum for the past 12 months

ND= Not Detected

NR= Not Required

* N01-PEN Pipeline was out of service for the entire month of September; flows were rerouted to N01-PS_INF pipeline.

NORTH CITY WATER RECLAMATION PLANT

(N01-PEN) Penasquitos Pump Station Influent - Monthly/Annual Averages

From: 01-Jan-2016 — 31-Dec-2016

Analyte:	Silver	Thallium	Vanadium	Zinc	Calcium	Magnesium
MDL:	0.73	3.12	4.4	4.19	0.134	0.132
Units:	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L
January-2016	<0.73	ND	17.5	219	83.9	33.5
February-2016	ND	ND	15.1	145	91.1	41.8
March-2016	<0.73	ND	12.8	150	82.7	35.2
April-2016	4.88	ND	12.6	166	80.2	32.5
May-2016	5.35	ND	13.9	154	82.3	33.5
June-2016	0.97	ND	20.6	252	76.0	28.7
July-2016	0.85	ND	10.1	144	72.5	27.8
August-2016	1.13	ND	NR	263	78.4	29.1
October-2016	<0.73	ND	1.45	170	72.2	28.2
November-2016	0.90	ND	2.41	191	86.8	33.2
December-2016	2.91	ND	2.83	151	89.3	31.2
Annual Average:	1.54	ND	10.9	182	81.4	32.2

Analyte:	Potassium	Sodium	Chloride	Fluoride	Sulfate	Total Dissolved Solids
MDL:	0.84	1	7	0.05	9	100
Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
January-2016	16.3	169	NR	NR	NR	966
February-2016	22.2	230	NR	NR	NR	930
March-2016	22.1	177	216	0.23	222	890
April-2016	20.8	175	NR	NR	NR	909
May-2016	21.7	184	NR	NR	NR	921
June-2016	19.7	156	224	0.52	226	935
July-2016	19.5	154	NR	NR	NR	889
August-2016	21.4	162	NR	NR	NR	851
October-2016	20.4	163	218	0.43	213	913
November-2016	22.6	211	210	0.44	216	907
December-2016	20.7	166	NR	NR	NR	908
Annual Average:	20.7	177	217	0.41	219	911

Analyte:	Total Cyanides
MDL:	0.002
Units:	mg/L
January-2016	ND
February-2016	ND
March-2016	ND
April-2016	ND
May-2016	ND
June-2016	ND
July-2016	ND
August-2016	ND
October-2016	ND
November-2016	ND
December-2016	0.002
Annual Average:	0

MDLs listed are the maximum for the past 12 months

ND= Not Detected

NR= Not Required

* N01-PEN Pipeline was out of service for the entire month of September; flows were rerouted to N01-PS_INF pipeline.

NORTH CITY WATER RECLAMATION PLANT
QUARTERLY SLUDGE PROJECT
2016

Physical Parameters

Source:			N01-PS_INF	N01-PS_INF	N01-PS_INF	N01-PS_INF
Date:	MDL	Units	02-MAR-2016	01-JUN-2016	07-SEP-2016	02-NOV-2016
=====	=====	=====	=====	=====	=====	=====
Ammonia-N	.3	MG/L	36.3	39.9	35.4	38.3
BOD (Biochemical Oxygen Demand)	2	MG/L	316	374	358	NR
Hexane Extractable Material	1.01	MG/L	36.7	34.7	45.1	42.1
Chemical Oxygen Demand	18	MG/L	535	712	765	695
Conductivity	10	UMHOS/CM	2280	2200	1980	2270
MBAS (Surfactants)	.03	MG/L	5.03	4.69	5.93	4.21
pH (grab)		PH	7.0	7.1	6.9	6.8
Total Alkalinity (bicarbonate)	20	MG/L	312	339	293	318
Total Dissolved Solids	100	MG/L	1320	1320	1060	1400
Total Suspended Solids	2.5	MG/L	316	360	304	356
Volatile Suspended Solids	2.5	MG/L	284	320	256	316
Total Kjeldahl Nitrogen	1.6	MG/L	66.0	61.9	58.3	62.9
Turbidity	.13	NTU	157	140	153	152
Sulfides-Total	.4	MG/L	2.3	3.4	1.7	2.1
Total Nitrogen	.78	MG/L	NR	NR	NR	NR
Total Organic Carbon	.3	MG/L	NR	NR	NR	NR
=====	=====	=====	=====	=====	=====	=====

Source:			N01-PEN	N01-PEN	N01-PEN	N10-EFF
Date:	MDL	Units	02-MAR-2016	01-JUN-2016	02-NOV-2016	02-MAR-2016
=====	=====	=====	=====	=====	=====	=====
Ammonia-N	.3	MG/L	35.2	38.3	38.2	34.5
BOD (Biochemical Oxygen Demand)	2	MG/L	318	333	NR	152
Hexane Extractable Material	1.01	MG/L	60.5	56.8	178	30.9
Chemical Oxygen Demand	18	MG/L	816	590	721	384
Conductivity	10	UMHOS/CM	1780	1790	1720	2050
MBAS (Surfactants)	.03	MG/L	4.57	4.41	3.14	4.42
pH (grab)		PH	7.2	7.2	7.0	7.3
Total Alkalinity (bicarbonate)	20	MG/L	322	334	322	301
Total Dissolved Solids	100	MG/L	952	936	1010	1220
Total Suspended Solids	2.5	MG/L	468	420	416	72.0
Volatile Suspended Solids	2.5	MG/L	404	348	348	64.0
Total Kjeldahl Nitrogen	1.6	MG/L	62.5	57.1	54.9	50.1
Turbidity	.13	NTU	150	137	147	73.8
Sulfides-Total	.4	MG/L	5.1	5.4	7.0	1.2
Total Nitrogen	.78	MG/L	NR	NR	NR	NR
Total Organic Carbon	.3	MG/L	NR	NR	NR	NR
=====	=====	=====	=====	=====	=====	=====

NA= Not Analyzed

ND= Not Detected

NORTH CITY WATER RECLAMATION PLANT
QUARTERLY SLUDGE PROJECT
Physical Parameters

Source:			N10-EFF	N10-EFF	N10-EFF	N34-REC WATER
Date:	MDL Units		01-JUN-2016	07-SEP-2016	02-NOV-2016	02-MAR-2016
Ammonia-N	.3 MG/L		39.9	37.5	38.7	ND
BOD (Biochemical Oxygen Demand)	2 MG/L		172	207	NR	ND
Hexane Extractable Material	1.01 MG/L		29.4	27.8	43.1	1.3
Chemical Oxygen Demand	18 MG/L		352	393	379	26
Conductivity	10 UMHOS/CM		2110	1990	2100	1530
MBAS (Surfactants)	.03 MG/L		4.55	5.47	4.87	0.06
pH (grab)	PH		7.2	7.2	7.1	7.0
Total Alkalinity (bicarbonate)	20 MG/L		337	292	313	90
Total Dissolved Solids	100 MG/L		1140	1150	1260	984
Total Suspended Solids	2.5 MG/L		90.0	74.0	84.0	5.6
Volatile Suspended Solids	2.5 MG/L		74.0	62.0	66.0	4.4
Total Kjeldahl Nitrogen	1.6 MG/L		53.8	51.8	49.4	ND
Turbidity	.13 NTU		72.5	83.0	83.2	NR
Sulfides-Total	.4 MG/L		0.8	0.9	1.0	ND
Total Nitrogen	.78 MG/L		NR	NR	NR	8.2
Total Organic Carbon	.3 MG/L		NR	NR	NR	7.0

Source:			N34-REC WATER	N34-REC WATER	N34-REC WATER
Date:	MDL Units		01-JUN-2016	07-SEP-2016	02-NOV-2016
Ammonia-N	.3 MG/L		ND	0.5	ND
BOD (Biochemical Oxygen Demand)	2 MG/L		2	ND	NR
Hexane Extractable Material	1.01 MG/L		ND	2.7	6.0
Chemical Oxygen Demand	18 MG/L		27	31	24
Conductivity	10 UMHOS/CM		1560	1450	1380
MBAS (Surfactants)	.03 MG/L		0.05	0.09	0.04
pH (grab)	PH		6.8	7.1	6.8
Total Alkalinity (bicarbonate)	20 MG/L		83	88	78
Total Dissolved Solids	100 MG/L		1030	876	930
Total Suspended Solids	2.5 MG/L		ND	ND	ND
Volatile Suspended Solids	2.5 MG/L		ND	ND	ND
Total Kjeldahl Nitrogen	1.6 MG/L		ND	1.7	1.5
Turbidity	.13 NTU		NR	1.32	0.80
Sulfides-Total	.4 MG/L		ND	0.7	ND
Total Nitrogen	.78 MG/L		20.8	25.2	14.9
Total Organic Carbon	.3 MG/L		8.0	8.8	6.3

NR= Not Analyzed

ND= Not Detected

NORTH CITY WATER RECLAMATION PLANT
ANNUAL MONITORING REPORT
Radioactivity

From: 01-JAN-2016 To: 31-DEC-2016

Source	Sample Date	Sample	Units	Gross Alpha Radiation	Gross Beta Radiation
=====	=====	=====	=====	=====	=====
N10-EFF	02-MAR-2016	P839955	pCi/L	3.4±3.8	24.8±4.6
N10-EFF	01-JUN-2016	P863466	pCi/L	5.8±1.4	7.2±1.5
N10-EFF	07-SEP-2016	P886365	pCi/L	7.6±2.1	9.4±1.5
N10-EFF	02-NOV-2016	P902023	pCi/L	6.4±3.8	14.4±2.3
N01-PS_INF	02-MAR-2016	P839945	pCi/L	0.6±4.1	24.8±5.0
N01-PS_INF	01-JUN-2016	P863456	pCi/L	9.4±2.9	7.3±2.2
N01-PS_INF	07-SEP-2016	P886355	pCi/L	4.8±1.9	7.8±1.6
N01-PS_INF	02-NOV-2016	P902013	pCi/L	5.7±2.5	9.4±2.0
N01-PEN	02-MAR-2016	P839950	pCi/L	3.8±4.2	19.7±4.0
N01-PEN	01-JUN-2016	P863461	pCi/L	1.9±1.7	3.6±1.9
N01-PEN	02-NOV-2016	P902018	pCi/L	11.4±2.9	5.3±1.6
N34-REC WATER	02-MAR-2016	P839960	pCi/L	1.2±3.5	18.6±3.8
N34-REC WATER	01-JUN-2016	P863471	pCi/L	4.9±2.2	8.2±2.1
N34-REC WATER	07-SEP-2016	P886370	pCi/L	2.6±2.3	10.0±2.4
N34-REC WATER	02-NOV-2016	P902028	pCi/L	2.5±1.8	5.9±1.5

ND= Not Detected

NR= Not Required

Units in picocuries per Liter (pCi/L)

N34-REC WATER = NCWRP Reclaimed Water After Mixing

N10-EFF = Primary Effluent

N01-PS_INF = North City Pump Station Influent (PS #64)

N01-PEN = Penasquitos Pump Station Influent

NORTH CITY WATER RECLAMATION PLANT
ANNUAL MONITORING REPORT
2016
Organo - Tins

Source:			N01-PS_INF	N01-PS_INF	N01-PS_INF	N01-PS_INF
Date:			02-MAR-2016	01-JUN-2016	07-SEP-2016	02-NOV-2016
Sample ID:	MDL Units		P839945	P863456	P886355	P902013
=====	=====	=====	=====	=====	=====	=====
Tributyltin	2 UG/L		ND	ND	ND	ND
Dibutyltin	7 UG/L		ND	ND	ND	ND
Monobutyltin	16 UG/L		ND	ND	ND	NA

Source:			N01-PEN	N01-PEN	N01-PEN	N10-EFF
Date:			02-MAR-2016	01-JUN-2016	02-NOV-2016	02-MAR-2016
Sample ID:	MDL Units		P839950	P863461	P902018	P839955
=====	=====	=====	=====	=====	=====	=====
Tributyltin	2 UG/L		ND	ND	ND	ND
Dibutyltin	7 UG/L		ND	ND	ND	ND
Monobutyltin	16 UG/L		ND	ND	NA	ND

Source:			N10-EFF	N10-EFF	N10-EFF	N34-REC WATER
Date:			01-JUN-2016	07-SEP-2016	02-NOV-2016	02-MAR-2016
Sample ID:	MDL Units		P863466	P886365	P902023	P839960
=====	=====	=====	=====	=====	=====	=====
Tributyltin	2 UG/L		ND	ND	ND	ND
Dibutyltin	7 UG/L		ND	ND	ND	ND
Monobutyltin	16 UG/L		ND	ND	NA	ND

Source:			N34-REC WATER	N34-REC WATER	N34-REC WATER
Date:			01-JUN-2016	07-SEP-2016	02-NOV-2016
Sample ID:	MDL Units		P863471	P886370	P902028
=====	=====	=====	=====	=====	=====
Tributyltin	2 UG/L		ND	ND	ND
Dibutyltin	7 UG/L		ND	ND	ND
Monobutyltin	16 UG/L		ND	ND	NA

NA= Not Analyzed

ND= Not Detected

NORTH CITY WATER RECLAMATION PLANT
ANNUAL MONITORING REPORT
2016
Phenolic Compounds

Analyte	MDL	Units	N01-PS_INF 02-MAR-2016 P839945	N01-PS_INF 01-JUN-2016 P863456	N01-PS_INF 02-NOV-2016 P902013	N01-PEN 02-MAR-2016 P839950
2,4,6-Trichlorophenol	1.65	UG/L	ND	ND	ND	ND
2,4-Dichlorophenol	1.01	UG/L	ND	ND	ND	ND
2,4-Dimethylphenol	2.01	UG/L	ND	ND	ND	ND
2,4-Dinitrophenol	2.16	UG/L	ND	ND	ND	ND
2-Methyl-4,6-dinitrophenol	1.52	UG/L	ND	ND	ND	ND
2-Chlorophenol	1.32	UG/L	ND	ND	ND	ND
2-Nitrophenol	1.55	UG/L	ND	ND	ND	ND
4-Chloro-3-methylphenol	1.67	UG/L	ND	ND	ND	ND
4-Nitrophenol	1.14	UG/L	ND	ND	ND	ND
Pentachlorophenol	1.12	UG/L	ND	ND	ND	ND
Phenol	1.76	UG/L	24.10	28.20	19.30	13.20
=====						
Total Non-Chlorinated Phenols	2.16	UG/L	24.10	28.20	19.30	13.20
Total Chlorinated Phenols	1.67	UG/L	0.00	0.00	0.00	0.00
=====						
Phenols	2.16	UG/L	24.10	28.20	19.30	13.20
2-Methylphenol	2.15	UG/L	ND	ND	ND	ND
3-Methylphenol(4-MP is unresolved)		UG/L	NA	NA	NA	NA
4-Methylphenol(3-MP is unresolved)	2.11	UG/L	60.40	80.40	58.30	25.60
2,4,5-Trichlorophenol	1.66	UG/L	ND	ND	ND	ND
=====						
Analyte	MDL	Units	N01-PEN 01-JUN-2016 P863461	N01-PEN 02-NOV-2016 P902018	N10-EFF 02-MAR-2016 P839955	N10-EFF 01-JUN-2016 P863466
2,4,6-Trichlorophenol	1.65	UG/L	ND	ND	ND	ND
2,4-Dichlorophenol	1.01	UG/L	ND	ND	ND	ND
2,4-Dimethylphenol	2.01	UG/L	ND	ND	ND	ND
2,4-Dinitrophenol	2.16	UG/L	ND	ND	ND	ND
2-Methyl-4,6-dinitrophenol	1.52	UG/L	ND	ND	ND	ND
2-Chlorophenol	1.32	UG/L	ND	ND	ND	ND
2-Nitrophenol	1.55	UG/L	ND	ND	ND	ND
4-Chloro-3-methylphenol	1.67	UG/L	ND	ND	ND	ND
4-Nitrophenol	1.14	UG/L	ND	ND	ND	ND
Pentachlorophenol	1.12	UG/L	ND	ND	ND	ND
Phenol	1.76	UG/L	16.10	13.20	12.90	14.70
=====						
Total Non-Chlorinated Phenols	2.16	UG/L	16.10	13.20	12.90	14.70
Total Chlorinated Phenols	1.67	UG/L	0.00	0.00	0.00	0.00
=====						
Phenols	2.16	UG/L	16.10	13.20	12.90	14.70
2-Methylphenol	2.15	UG/L	ND	ND	ND	ND
3-Methylphenol(4-MP is unresolved)		UG/L	NA	NA	NA	NA
4-Methylphenol(3-MP is unresolved)	2.11	UG/L	27.80	23.10	25.80	42.30
2,4,5-Trichlorophenol	1.66	UG/L	ND	ND	ND	ND
=====						

ND= not detected NS= Not Sampled NR= Not Required NA= Not Analyzed

NORTH CITY WATER RECLAMATION PLANT
ANNUAL MONITORING REPORT
2016
Phenolic Compounds

Analyte	MDL	Units	N10-EFF 07-SEP-2016 P886365	N10-EFF 02-NOV-2016 P902023	N34-REC WATER 02-MAR-2016 P839960	N34-REC WATER 07-SEP-2016 P886370
2,4,6-Trichlorophenol	1.65	UG/L	ND	ND	ND	ND
2,4-Dichlorophenol	1.01	UG/L	ND	ND	ND	ND
2,4-Dimethylphenol	2.01	UG/L	ND	ND	ND	ND
2,4-Dinitrophenol	2.16	UG/L	ND	ND	ND	ND
2-Methyl-4,6-dinitrophenol	1.52	UG/L	ND	ND	ND	ND
2-Chlorophenol	1.32	UG/L	ND	ND	ND	ND
2-Nitrophenol	1.55	UG/L	ND	ND	ND	ND
4-Chloro-3-methylphenol	1.67	UG/L	ND	ND	ND	ND
4-Nitrophenol	1.14	UG/L	ND	ND	ND	ND
Pentachlorophenol	1.12	UG/L	ND	ND	ND	ND
Phenol	1.76	UG/L	20.50	16.40	ND	ND
Total Non-Chlorinated Phenols	2.16	UG/L	20.50	16.40	0.00	0.00
Total Chlorinated Phenols	1.67	UG/L	0.00	0.00	0.00	0.00
Phenols	2.16	UG/L	20.50	16.40	0.00	0.00
2-Methylphenol	2.15	UG/L	ND	ND	ND	ND
3-Methylphenol(4-MP is unresolved)		UG/L	NA	NA	NA	NA
4-Methylphenol(3-MP is unresolved)	2.11	UG/L	28.40	41.70	ND	ND
2,4,5-Trichlorophenol	1.66	UG/L	ND	ND	ND	ND

Analyte	MDL	Units	N34-REC WATER 02-NOV-2016 P902028
2,4,6-Trichlorophenol	1.65	UG/L	ND
2,4-Dichlorophenol	1.01	UG/L	ND
2,4-Dimethylphenol	2.01	UG/L	ND
2,4-Dinitrophenol	2.16	UG/L	ND
2-Methyl-4,6-dinitrophenol	1.52	UG/L	ND
2-Chlorophenol	1.32	UG/L	ND
2-Nitrophenol	1.55	UG/L	ND
4-Chloro-3-methylphenol	1.67	UG/L	ND
4-Nitrophenol	1.14	UG/L	ND
Pentachlorophenol	1.12	UG/L	ND
Phenol	1.76	UG/L	ND
Total Non-Chlorinated Phenols	2.16	UG/L	0.00
Total Chlorinated Phenols	1.67	UG/L	0.00
Phenols	2.16	UG/L	0.00
2-Methylphenol	2.15	UG/L	ND
3-Methylphenol(4-MP is unresolved)		UG/L	NA
4-Methylphenol(3-MP is unresolved)	2.11	UG/L	ND
2,4,5-Trichlorophenol	1.66	UG/L	ND

ND= not detected

NA= Not Analyzed

NORTH CITY WATER RECLAMATION PLANT
ANNUAL MONITORING REPORT
2016
Chlorinated Pesticides

Analyte	MDL	Units	N01-PS_INF 02-MAR-2016 P839945	N01-PS_INF 01-JUN-2016 P863456	N01-PS_INF 07-SEP-2016 P886355	N01-PS_INF 02-NOV-2016 P902013
=====						
Aldrin	4	NG/L	ND	ND	ND	ND
BHC, Alpha isomer	2.15	NG/L	ND	ND	ND	ND
BHC, Beta isomer	2	NG/L	ND	ND	ND	ND
BHC, Delta isomer	2	NG/L	ND	ND	ND	ND
BHC, Gamma isomer	1.71	NG/L	ND	ND	ND	ND
Alpha (cis) Chlordane	1.4	NG/L	ND	ND	ND	ND
Gamma (trans) Chlordane	1.83	NG/L	ND	ND	ND	ND
Alpha Chlordene		NG/L	NA	NA	NA	NA
Gamma Chlordene		NG/L	NA	NA	NA	NA
Cis Nonachlor	4	NG/L	ND	ND	ND	ND
Dieldrin	4.3	NG/L	ND	ND	ND	ND
Endosulfan Sulfate	7	NG/L	ND	ND	ND	ND
Alpha Endosulfan	1.5	NG/L	ND	ND	ND	ND
Beta Endosulfan	3.1	NG/L	ND	ND	ND	ND
Endrin	6	NG/L	ND	ND	ND	ND
Endrin aldehyde	5.4	NG/L	ND	ND	ND	ND
Heptachlor	.89	NG/L	ND	ND	ND	ND
Heptachlor epoxide	9.4	NG/L	ND	ND	ND	ND
Methoxychlor	20	NG/L	ND	ND	ND	ND
Mirex	2.3	NG/L	ND	ND	ND	ND
o,p-DDD	4	NG/L	250	ND	ND	ND
o,p-DDE	2	NG/L	ND	ND	ND	ND
o,p-DDT	2.4	NG/L	ND	ND	ND	ND
Oxychlordane	2	NG/L	ND	ND	ND	ND
PCB 1016	250	NG/L	ND	ND	ND	ND
PCB 1221	2000	NG/L	ND	ND	ND	ND
PCB 1232	750	NG/L	ND	ND	ND	ND
PCB 1242	250	NG/L	ND	ND	ND	ND
PCB 1248	250	NG/L	ND	ND	ND	ND
PCB 1254	500	NG/L	ND	ND	ND	ND
PCB 1260	500	NG/L	ND	ND	ND	ND
PCB 1262	500	NG/L	ND	ND	ND	ND
p,p-DDD	4	NG/L	ND	ND	ND	ND
p,p-DDE	1.4	NG/L	ND	ND	ND	ND
p,p-DDT	3	NG/L	ND	ND	ND	ND
Toxaphene	250	NG/L	ND	ND	ND	ND
Trans Nonachlor	1.1	NG/L	ND	ND	ND	ND
=====						
Heptachlors	9.4	NG/L	0	0	0	0
Endosulfans	7	NG/L	0	0	0	0
Polychlorinated biphenyls	2000	NG/L	0	0	0	0
Chlordane + related cmpds.	4	NG/L	0	0	0	0
DDT and derivatives	4	NG/L	250	0	0	0
Hexachlorocyclohexanes	2.15	NG/L	0	0	0	0
Aldrin + Dieldrin	4.3	NG/L	0	0	0	0
=====						
Chlorinated Hydrocarbons	2000	NG/L	250	0	0	0

NA= Not Analyzed

ND= Not Detected

NORTH CITY WATER RECLAMATION PLANT
ANNUAL MONITORING REPORT
2016
Chlorinated Pesticides

Analyte	MDL	Units	N01-PEN 02-MAR-2016 P839950	N01-PEN 01-JUN-2016 P863461	N01-PEN 02-NOV-2016 P902018	N10-EFF 02-MAR-2016 P839955
			=====	=====	=====	=====
Aldrin	4	NG/L	ND	ND	ND	ND
BHC, Alpha isomer	2.15	NG/L	ND	ND	ND	ND
BHC, Beta isomer	2	NG/L	ND	ND	ND	ND
BHC, Delta isomer	2	NG/L	ND	ND	ND	ND
BHC, Gamma isomer	1.71	NG/L	ND	ND	ND	ND
Alpha (cis) Chlordane	1.4	NG/L	ND	ND	ND	ND
Gamma (trans) Chlordane	1.83	NG/L	ND	ND	ND	ND
Alpha Chlordene		NG/L	NA	NA	NA	NA
Gamma Chlordene		NG/L	NA	NA	NA	NA
Cis Nonachlor	4	NG/L	ND	ND	ND	ND
Dieldrin	4.3	NG/L	ND	ND	ND	ND
Endosulfan Sulfate	7	NG/L	ND	ND	ND	ND
Alpha Endosulfan	1.5	NG/L	ND	ND	ND	ND
Beta Endosulfan	3.1	NG/L	ND	ND	ND	ND
Endrin	6	NG/L	ND	ND	ND	ND
Endrin aldehyde	5.4	NG/L	ND	ND	ND	ND
Heptachlor	.89	NG/L	ND	ND	ND	ND
Heptachlor epoxide	9.4	NG/L	ND	ND	ND	ND
Methoxychlor	20	NG/L	ND	ND	ND	ND
Mirex	2.3	NG/L	ND	ND	ND	ND
o,p-DDD	4	NG/L	ND	ND	ND	ND
o,p-DDE	2	NG/L	ND	ND	ND	ND
o,p-DDT	2.4	NG/L	ND	ND	ND	ND
Oxychlordane	2	NG/L	ND	ND	ND	ND
PCB 1016	250	NG/L	ND	ND	ND	ND
PCB 1221	2000	NG/L	ND	ND	ND	ND
PCB 1232	750	NG/L	ND	ND	ND	ND
PCB 1242	250	NG/L	ND	ND	ND	ND
PCB 1248	250	NG/L	ND	ND	ND	ND
PCB 1254	500	NG/L	ND	ND	ND	ND
PCB 1260	500	NG/L	ND	ND	ND	ND
PCB 1262	500	NG/L	ND	ND	ND	ND
p,p-DDD	4	NG/L	ND	ND	ND	ND
p,p-DDE	1.4	NG/L	ND	ND	ND	ND
p,p-DDT	3	NG/L	ND	ND	ND	ND
Toxaphene	250	NG/L	ND	ND	ND	ND
Trans Nonachlor	1.1	NG/L	ND	ND	ND	ND
=====						
Heptachlors	9.4	NG/L	0	0	0	0
Endosulfans	7	NG/L	0	0	0	0
Polychlorinated biphenyls	2000	NG/L	0	0	0	0
Chlordane + related cmpds.	4	NG/L	0	0	0	0
DDT and derivatives	4	NG/L	0	0	0	0
Hexachlorocyclohexanes	2.15	NG/L	0	0	0	0
Aldrin + Dieldrin	4.3	NG/L	0	0	0	0
=====						
Chlorinated Hydrocarbons	2000	NG/L	0	0	0	0

NA= Not Analyzed

ND= Not Detected

NORTH CITY WATER RECLAMATION PLANT
ANNUAL MONITORING REPORT
2016
Chlorinated Pesticides

Analyte	MDL	Units	N10-EFF 01-JUN-2016 P863466	N10-EFF 07-SEP-2016 P886365	N10-EFF 02-NOV-2016 P902023	N34-REC WATER 02-MAR-2016 P839960
Aldrin	4	NG/L	ND	ND	ND	ND
BHC, Alpha isomer	2.15	NG/L	ND	ND	ND	ND
BHC, Beta isomer	2	NG/L	ND	ND	ND	ND
BHC, Delta isomer	2	NG/L	ND	ND	ND	ND
BHC, Gamma isomer	1.71	NG/L	ND	ND	ND	ND
Alpha (cis) Chlordane	1.4	NG/L	ND	ND	ND	ND
Gamma (trans) Chlordane	1.83	NG/L	ND	ND	ND	ND
Alpha Chlordene		NG/L	NA	NA	NA	NA
Gamma Chlordene		NG/L	NA	NA	NA	NA
Cis Nonachlor	4	NG/L	ND	ND	ND	ND
Dieldrin	4.3	NG/L	ND	ND	ND	ND
Endosulfan Sulfate	7	NG/L	ND	ND	ND	ND
Alpha Endosulfan	1.5	NG/L	ND	ND	ND	ND
Beta Endosulfan	3.1	NG/L	ND	ND	ND	ND
Endrin	6	NG/L	ND	ND	ND	ND
Endrin aldehyde	5.4	NG/L	ND	ND	ND	ND
Heptachlor	.89	NG/L	ND	ND	ND	ND
Heptachlor epoxide	9.4	NG/L	ND	ND	ND	ND
Methoxychlor	20	NG/L	ND	ND	ND	ND
Mirex	2.3	NG/L	ND	ND	ND	ND
o,p-DDD	4	NG/L	ND	ND	ND	ND
o,p-DDE	2	NG/L	ND	ND	ND	ND
o,p-DDT	2.4	NG/L	ND	ND	ND	ND
Oxychlordane	2	NG/L	ND	ND	ND	ND
PCB 1016	250	NG/L	ND	ND	ND	ND
PCB 1221	2000	NG/L	ND	ND	ND	ND
PCB 1232	750	NG/L	ND	ND	ND	ND
PCB 1242	250	NG/L	ND	ND	ND	ND
PCB 1248	250	NG/L	ND	ND	ND	ND
PCB 1254	500	NG/L	ND	ND	ND	ND
PCB 1260	500	NG/L	ND	ND	ND	ND
PCB 1262	500	NG/L	ND	ND	ND	ND
p,p-DDD	4	NG/L	ND	ND	ND	ND
p,p-DDE	1.4	NG/L	ND	ND	ND	ND
p,p-DDT	3	NG/L	ND	ND	ND	ND
Toxaphene	250	NG/L	ND	ND	ND	ND
Trans Nonachlor	1.1	NG/L	ND	ND	ND	ND
Heptachlors	9.4	NG/L	0	0	0	0
Endosulfans	7	NG/L	0	0	0	0
Polychlorinated biphenyls	2000	NG/L	0	0	0	0
Chlordane + related cmpds.	4	NG/L	0	0	0	0
DDT and derivatives	4	NG/L	0	0	0	0
Hexachlorocyclohexanes	2.15	NG/L	0	0	0	0
Aldrin + Dieldrin	4.3	NG/L	0	0	0	0
Chlorinated Hydrocarbons	2000	NG/L	0	0	0	0

NA= Not Analyzed

ND= Not Detected

NORTH CITY WATER RECLAMATION PLANT
ANNUAL MONITORING REPORT
2016
Chlorinated Pesticides

Analyte	MDL	Units	N34-REC WATER 01-JUN-2016 P863471	N34-REC WATER 07-SEP-2016 P886370
			=====	=====
Aldrin	4	NG/L	ND	ND
BHC, Alpha isomer	2.15	NG/L	ND	ND
BHC, Beta isomer	2	NG/L	ND	ND
BHC, Delta isomer	2	NG/L	ND	ND
BHC, Gamma isomer	1.71	NG/L	ND	ND
Alpha (cis) Chlordane	1.4	NG/L	ND	ND
Gamma (trans) Chlordane	1.83	NG/L	ND	ND
Alpha Chlordene		NG/L	NA	NA
Gamma Chlordene		NG/L	NA	NA
Cis Nonachlor	4	NG/L	ND	ND
Dieldrin	4.3	NG/L	ND	ND
Endosulfan Sulfate	7	NG/L	ND	ND
Alpha Endosulfan	1.5	NG/L	ND	ND
Beta Endosulfan	3.1	NG/L	ND	ND
Endrin	6	NG/L	ND	ND
Endrin aldehyde	5.4	NG/L	ND	ND
Heptachlor	.89	NG/L	ND	ND
Heptachlor epoxide	9.4	NG/L	ND	ND
Methoxychlor	20	NG/L	ND	ND
Mirex	2.3	NG/L	ND	ND
o,p-DDD	4	NG/L	ND	ND
o,p-DDE	2	NG/L	ND	ND
o,p-DDT	2.4	NG/L	ND	ND
Oxychlordane	2	NG/L	ND	ND
PCB 1016	250	NG/L	ND	ND
PCB 1221	2000	NG/L	ND	ND
PCB 1232	750	NG/L	ND	ND
PCB 1242	250	NG/L	ND	ND
PCB 1248	250	NG/L	ND	ND
PCB 1254	500	NG/L	ND	ND
PCB 1260	500	NG/L	ND	ND
PCB 1262	500	NG/L	ND	ND
p,p-DDD	4	NG/L	ND	ND
p,p-DDE	1.4	NG/L	ND	ND
p,p-DDT	3	NG/L	ND	ND
Toxaphene	250	NG/L	ND	ND
Trans Nonachlor	1.1	NG/L	ND	ND
=====	=====	=====	=====	=====
Heptachlors	9.4	NG/L	0	0
Endosulfans	7	NG/L	0	0
Polychlorinated biphenyls	2000	NG/L	0	0
Chlordane + related cmpds.	4	NG/L	0	0
DDT and derivatives	4	NG/L	0	0
Hexachlorocyclohexanes	2.15	NG/L	0	0
Aldrin + Dieldrin	4.3	NG/L	0	0
=====	=====	=====	=====	=====
Chlorinated Hydrocarbons	2000	NG/L	0	0

NA= Not Analyzed

ND= Not Detected

NORTH CITY WATER RECLAMATION PLANT
ANNUAL MONITORING REPORT
2016
Organophosphorous Pesticides

Analyte	MDL Units	N01-PS_INF 01-JUN-2016 P863456	N01-PS_INF 02-NOV-2016 P902013	N01-PEN 01-JUN-2016 P863461	N01-PEN 02-NOV-2016 P902018
Demeton O	.02 UG/L	ND	ND	ND	ND
Demeton S	.08 UG/L	ND	ND	ND	ND
Diazinon	.04 UG/L	ND	ND	ND	ND
Guthion	.09 UG/L	ND	ND	ND	ND
Malathion	.06 UG/L	ND	ND	ND	ND
Parathion	.07 UG/L	ND	ND	ND	ND
Thiophosphorus Pesticides	.09 UG/L	0.000	0.000	0.000	0.000
Demeton -O, -S	.08 UG/L	0.000	0.000	0.000	0.000
Total Organophosphorus Pesticides	.12 UG/L	0.000	0.000	0.000	0.000
Dichlorvos	.04 UG/L	ND	ND	ND	ND
Disulfoton	.04 UG/L	ND	ND	ND	ND
Dimethoate	.12 UG/L	ND	NA	ND	NA
Stirophos	.05 UG/L	ND	ND	ND	ND
Coumaphos	.07 UG/L	ND	ND	ND	ND
Chlorpyrifos	.04 UG/L	ND	ND	ND	ND

Analyte	MDL Units	N10-EFF 01-JUN-2016 P863466	N10-EFF 02-NOV-2016 P902023	N34-REC WATER 01-JUN-2016 P863471
Demeton O	.02 UG/L	ND	ND	ND
Demeton S	.08 UG/L	ND	ND	ND
Diazinon	.04 UG/L	ND	ND	ND
Guthion	.09 UG/L	ND	ND	ND
Malathion	.06 UG/L	ND	ND	ND
Parathion	.07 UG/L	ND	ND	ND
Thiophosphorus Pesticides	.09 UG/L	0.000	0.000	0.000
Demeton -O, -S	.08 UG/L	0.000	0.000	0.000
Total Organophosphorus Pesticides	.12 UG/L	0.000	0.000	0.000
Dichlorvos	.04 UG/L	ND	ND	ND
Disulfoton	.04 UG/L	ND	ND	ND
Dimethoate	.12 UG/L	ND	NA	ND
Stirophos	.05 UG/L	ND	ND	ND
Coumaphos	.07 UG/L	ND	ND	ND
Chlorpyrifos	.04 UG/L	ND	ND	ND

ND= Not Detected

NORTH CITY WATER RECLAMATION PLANT
ANNUAL MONITORING REPORT
2016
Base/Neutral Compounds

Analyte	MDL	Units	N01-PS_INF 02-MAR-2016 P839945	N01-PS_INF 01-JUN-2016 P863456	N01-PS_INF 07-SEP-2016 P886355	N01-PS_INF 02-NOV-2016 P902013
			=====	=====	=====	=====
1,2,4-Trichlorobenzene	1.52	UG/L	ND	ND	ND	ND
1,2-Diphenylhydrazine	1.37	UG/L	ND	ND	ND	ND
2,4-Dinitrotoluene	1.36	UG/L	ND	ND	ND	ND
2,6-Dinitrotoluene	1.53	UG/L	ND	ND	ND	ND
Dibenzo(a,h)anthracene	1.01	UG/L	ND	ND	ND	ND
Diethyl phthalate	3.05	UG/L	ND	ND	ND	5.5
Dimethyl phthalate	1.44	UG/L	ND	ND	ND	ND
Di-n-butyl phthalate	3.96	UG/L	ND	ND	ND	ND
Di-n-octyl phthalate	1	UG/L	ND	ND	ND	ND
2-Chloronaphthalene	1.87	UG/L	ND	ND	ND	ND
3,3-Dichlorobenzidine	2.44	UG/L	ND	ND	ND	ND
3,4-Benzo(b)fluoranthene	1.35	UG/L	ND	ND	ND	ND
4-Bromophenyl phenyl ether	1.4	UG/L	ND	ND	ND	ND
4-Chlorophenyl phenyl ether	1.57	UG/L	ND	ND	ND	ND
Hexachloroethane	1.32	UG/L	ND	ND	ND	ND
Hexachlorobenzene	1.48	UG/L	ND	ND	ND	ND
Hexachlorobutadiene	1.64	UG/L	ND	ND	ND	ND
Hexachlorocyclopentadiene	1.25	UG/L	ND	ND	ND	ND
Acenaphthene	1.8	UG/L	ND	ND	ND	ND
Acenaphthylene	1.77	UG/L	ND	ND	ND	ND
Anthracene	1.29	UG/L	ND	ND	ND	ND
Bis-(2-chloroisopropyl) ether	1.16	UG/L	ND	ND	ND	ND
Bis-(2-ethylhexyl) phthalate	8.96	UG/L	12.1	ND	10.3	ND
Benzidine	1.52	UG/L	ND	ND	ND	ND
Benzo[a]anthracene	1.1	UG/L	ND	ND	ND	ND
Benzo[a]pyrene	1.25	UG/L	ND	ND	ND	ND
Benzo[g,h,i]perylene	1.09	UG/L	ND	ND	ND	ND
Benzo[k]fluoranthene	1.49	UG/L	ND	ND	ND	ND
Bis-(2-chloroethoxy) methane	1.01	UG/L	ND	ND	ND	ND
Bis-(2-chloroethyl) ether	1.38	UG/L	ND	ND	ND	ND
Butyl benzyl phthalate	2.84	UG/L	ND	ND	ND	ND
Chrysene	1.16	UG/L	ND	ND	ND	ND
Fluoranthene	1.33	UG/L	ND	ND	ND	ND
Fluorene	1.61	UG/L	ND	ND	ND	ND
Indeno(1,2,3-CD)pyrene	1.14	UG/L	ND	ND	ND	ND
Isophorone	1.53	UG/L	ND	ND	ND	ND
Naphthalene	1.65	UG/L	ND	ND	ND	ND
Nitrobenzene	1.6	UG/L	ND	ND	ND	ND
N-nitrosodimethylamine	1.27	UG/L	ND	ND	ND	ND
N-nitrosodiphenylamine	3.48	UG/L	ND	ND	ND	ND
N-nitrosodi-n-propylamine	1.16	UG/L	ND	ND	ND	ND
Phenanthrene	1.34	UG/L	ND	ND	ND	ND
Pyrene	1.43	UG/L	ND	ND	ND	ND
=====	=====	=====	=====	=====	=====	=====
Polynuc. Aromatic Hydrocarbons	1.77	UG/L	0.0	0.0	0.0	0.0
Base/Neutral Compounds	8.96	UG/L	12.10	0.00	10.30	5.50
=====	=====	=====	=====	=====	=====	=====
1-Methylnaphthalene	2.18	UG/L	ND	ND	ND	ND
2-Methylnaphthalene	2.14	UG/L	ND	ND	ND	ND
2,6-Dimethylnaphthalene	2.16	UG/L	ND	ND	ND	ND
2,3,5-Trimethylnaphthalene	2.18	UG/L	ND	ND	ND	ND
1-Methylphenanthrene	1.46	UG/L	ND	ND	ND	ND
Benzo[e]pyrene	1.44	UG/L	ND	ND	ND	ND
Perylene	1.41	UG/L	ND	ND	ND	ND
Biphenyl	2.29	UG/L	ND	ND	ND	ND
Pyridine	3.33	UG/L	ND	ND	ND	ND
=====	=====	=====	=====	=====	=====	=====

NA= Not Analyzed

ND= Not Detected

NORTH CITY WATER RECLAMATION PLANT
ANNUAL MONITORING REPORT
2016
Base/Neutral Compounds

Analyte	MDL	Units	N01-PEN 02-MAR-2016 P839950	N01-PEN 01-JUN-2016 P863461	N01-PEN 02-NOV-2016 P902018	N10-EFF 02-MAR-2016 P839955
			=====	=====	=====	=====
1,2,4-Trichlorobenzene	1.52	UG/L	ND	ND	ND	ND
1,2-Diphenylhydrazine	1.37	UG/L	ND	ND	ND	ND
2,4-Dinitrotoluene	1.36	UG/L	ND	ND	ND	ND
2,6-Dinitrotoluene	1.53	UG/L	ND	ND	ND	ND
Dibenzo(a,h)anthracene	1.01	UG/L	ND	ND	ND	ND
Diethyl phthalate	3.05	UG/L	ND	ND	3.4	ND
Dimethyl phthalate	1.44	UG/L	ND	ND	ND	ND
Di-n-butyl phthalate	3.96	UG/L	ND	ND	ND	ND
Di-n-octyl phthalate	1	UG/L	ND	ND	ND	ND
2-Chloronaphthalene	1.87	UG/L	ND	ND	ND	ND
3,3-Dichlorobenzidine	2.44	UG/L	ND	ND	ND	ND
3,4-Benzo(b)fluoranthene	1.35	UG/L	ND	ND	ND	ND
4-Bromophenyl phenyl ether	1.4	UG/L	ND	ND	ND	ND
4-Chlorophenyl phenyl ether	1.57	UG/L	ND	ND	ND	ND
Hexachloroethane	1.32	UG/L	ND	ND	ND	ND
Hexachlorobenzene	1.48	UG/L	ND	ND	ND	ND
Hexachlorobutadiene	1.64	UG/L	ND	ND	ND	ND
Hexachlorocyclopentadiene	1.25	UG/L	ND	ND	ND	ND
Acenaphthene	1.8	UG/L	ND	ND	ND	ND
Acenaphthylene	1.77	UG/L	ND	ND	ND	ND
Anthracene	1.29	UG/L	ND	ND	ND	ND
Bis-(2-chloroisopropyl) ether	1.16	UG/L	ND	ND	ND	ND
Bis-(2-ethylhexyl) phthalate	8.96	UG/L	ND	ND	45.2	ND
Benzidine	1.52	UG/L	ND	ND	ND	ND
Benzo[a]anthracene	1.1	UG/L	ND	ND	ND	ND
Benzo[a]pyrene	1.25	UG/L	ND	ND	ND	ND
Benzo[g,h,i]perylene	1.09	UG/L	ND	ND	ND	ND
Benzo[k]fluoranthene	1.49	UG/L	ND	ND	ND	ND
Bis-(2-chloroethoxy) methane	1.01	UG/L	ND	ND	ND	ND
Bis-(2-chloroethyl) ether	1.38	UG/L	ND	ND	ND	ND
Butyl benzyl phthalate	2.84	UG/L	ND	DNQ4.7	ND	ND
Chrysene	1.16	UG/L	ND	ND	ND	ND
Fluoranthene	1.33	UG/L	ND	ND	ND	ND
Fluorene	1.61	UG/L	ND	ND	ND	ND
Indeno(1,2,3-CD)pyrene	1.14	UG/L	ND	ND	ND	ND
Isophorone	1.53	UG/L	ND	ND	ND	ND
Naphthalene	1.65	UG/L	ND	ND	ND	ND
Nitrobenzene	1.6	UG/L	ND	ND	ND	ND
N-nitrosodimethylamine	1.27	UG/L	ND	ND	ND	ND
N-nitrosodiphenylamine	3.48	UG/L	ND	ND	ND	ND
N-nitrosodi-n-propylamine	1.16	UG/L	ND	ND	ND	ND
Phenanthrene	1.34	UG/L	ND	ND	ND	ND
Pyrene	1.43	UG/L	ND	ND	ND	ND
=====	=====	=====	=====	=====	=====	=====
Polynuc. Aromatic Hydrocarbons	1.77	UG/L	0.0	0.0	0.0	0.0
Base/Neutral Compounds	8.96	UG/L	0.00	4.70	48.60	0.00
=====	=====	=====	=====	=====	=====	=====
1-Methylnaphthalene	2.18	UG/L	ND	ND	ND	ND
2-Methylnaphthalene	2.14	UG/L	ND	ND	ND	ND
2,6-Dimethylnaphthalene	2.16	UG/L	ND	ND	ND	ND
2,3,5-Trimethylnaphthalene	2.18	UG/L	ND	ND	ND	ND
1-Methylphenanthrene	1.46	UG/L	ND	ND	ND	ND
Benzo[e]pyrene	1.44	UG/L	ND	ND	ND	ND
Perylene	1.41	UG/L	ND	ND	ND	ND
Biphenyl	2.29	UG/L	ND	ND	ND	ND
Pyridine	3.33	UG/L	4.6	ND	ND	ND
=====	=====	=====	=====	=====	=====	=====

NA= Not Analyzed ND= Not Detected

NORTH CITY WATER RECLAMATION PLANT
ANNUAL MONITORING REPORT
2016
Base/Neutral Compounds

Analyte	MDL	Units	N10-EFF 01-JUN-2016 P863466	N10-EFF 07-SEP-2016 P886365	N10-EFF 02-NOV-2016 P902023	N34-REC WATER 02-MAR-2016 P839960
			=====	=====	=====	=====
1,2,4-Trichlorobenzene	1.52	UG/L	ND	ND	ND	ND
1,2-Diphenylhydrazine	1.37	UG/L	ND	ND	ND	ND
2,4-Dinitrotoluene	1.36	UG/L	ND	ND	ND	ND
2,6-Dinitrotoluene	1.53	UG/L	ND	ND	ND	ND
Dibenzo(a,h)anthracene	1.01	UG/L	ND	ND	ND	ND
Diethyl phthalate	3.05	UG/L	ND	ND	4.9	ND
Dimethyl phthalate	1.44	UG/L	ND	ND	ND	ND
Di-n-butyl phthalate	3.96	UG/L	ND	ND	ND	ND
Di-n-octyl phthalate	1	UG/L	ND	ND	ND	ND
2-Chloronaphthalene	1.87	UG/L	ND	ND	ND	ND
3,3-Dichlorobenzidine	2.44	UG/L	ND	ND	ND	ND
3,4-Benzo(b)fluoranthene	1.35	UG/L	ND	ND	ND	ND
4-Bromophenyl phenyl ether	1.4	UG/L	ND	ND	ND	ND
4-Chlorophenyl phenyl ether	1.57	UG/L	ND	ND	ND	ND
Hexachloroethane	1.32	UG/L	ND	ND	ND	ND
Hexachlorobenzene	1.48	UG/L	ND	ND	ND	ND
Hexachlorobutadiene	1.64	UG/L	ND	ND	ND	ND
Hexachlorocyclopentadiene	1.25	UG/L	ND	ND	ND	ND
Acenaphthene	1.8	UG/L	ND	ND	ND	ND
Acenaphthylene	1.77	UG/L	ND	ND	ND	ND
Anthracene	1.29	UG/L	ND	ND	ND	ND
Bis-(2-chloroisopropyl) ether	1.16	UG/L	ND	ND	ND	ND
Bis-(2-ethylhexyl) phthalate	8.96	UG/L	ND	18.1	ND	ND
Benzidine	1.52	UG/L	ND	ND	ND	ND
Benzo[a]anthracene	1.1	UG/L	ND	ND	ND	ND
Benzo[a]pyrene	1.25	UG/L	ND	ND	ND	ND
Benzo[g,h,i]perylene	1.09	UG/L	ND	ND	ND	ND
Benzo[k]fluoranthene	1.49	UG/L	ND	ND	ND	ND
Bis-(2-chloroethoxy) methane	1.01	UG/L	ND	ND	ND	ND
Bis-(2-chloroethyl) ether	1.38	UG/L	ND	ND	ND	ND
Butyl benzyl phthalate	2.84	UG/L	ND	ND	ND	ND
Chrysene	1.16	UG/L	ND	ND	ND	ND
Fluoranthene	1.33	UG/L	ND	ND	ND	ND
Fluorene	1.61	UG/L	ND	ND	ND	ND
Indeno(1,2,3-CD)pyrene	1.14	UG/L	ND	ND	ND	ND
Isophorone	1.53	UG/L	ND	ND	ND	ND
Naphthalene	1.65	UG/L	ND	ND	ND	ND
Nitrobenzene	1.6	UG/L	ND	ND	ND	ND
N-nitrosodimethylamine	1.27	UG/L	ND	ND	ND	ND
N-nitrosodiphenylamine	3.48	UG/L	ND	ND	ND	ND
N-nitrosodi-n-propylamine	1.16	UG/L	ND	ND	ND	ND
Phenanthrene	1.34	UG/L	ND	ND	ND	ND
Pyrene	1.43	UG/L	ND	ND	ND	ND
=====	=====	=====	=====	=====	=====	=====
Polynuc. Aromatic Hydrocarbons	1.77	UG/L	0.0	0.0	0.0	0.0
Base/Neutral Compounds	8.96	UG/L	0.00	18.10	4.90	0.00
=====	=====	=====	=====	=====	=====	=====
1-Methylnaphthalene	2.18	UG/L	ND	ND	ND	ND
2-Methylnaphthalene	2.14	UG/L	ND	ND	ND	ND
2,6-Dimethylnaphthalene	2.16	UG/L	ND	ND	ND	ND
2,3,5-Trimethylnaphthalene	2.18	UG/L	ND	ND	ND	ND
1-Methylphenanthrene	1.46	UG/L	ND	ND	ND	ND
Benzo[e]pyrene	1.44	UG/L	ND	ND	ND	ND
Perylene	1.41	UG/L	ND	ND	ND	ND
Biphenyl	2.29	UG/L	ND	ND	ND	ND
Pyridine	3.33	UG/L	ND	ND	ND	ND
=====	=====	=====	=====	=====	=====	=====

NA= Not Analyzed ND= Not Detected

NORTH CITY WATER RECLAMATION PLANT
ANNUAL MONITORING REPORT
2016
Base/Neutral Compounds

Analyte	MDL	Units	N34-REC WATER	N34-REC WATER	N34-REC WATER
			01-JUN-2016	07-SEP-2016	02-NOV-2016
			P863471	P886370	P902028
=====	=====	=====	=====	=====	=====
1,2,4-Trichlorobenzene	1.52	UG/L	ND	ND	ND
1,2-Diphenylhydrazine	1.37	UG/L	ND	ND	ND
2,4-Dinitrotoluene	1.36	UG/L	ND	ND	ND
2,6-Dinitrotoluene	1.53	UG/L	ND	ND	ND
Dibenzo(a,h)anthracene	1.01	UG/L	ND	ND	ND
Diethyl phthalate	3.05	UG/L	ND	ND	ND
Dimethyl phthalate	1.44	UG/L	ND	ND	ND
Di-n-butyl phthalate	3.96	UG/L	ND	ND	ND
Di-n-octyl phthalate	1	UG/L	ND	ND	ND
2-Chloronaphthalene	1.87	UG/L	ND	ND	ND
3,3-Dichlorobenzidine	2.44	UG/L	ND	ND	ND
3,4-Benzo(b)fluoranthene	1.35	UG/L	ND	ND	ND
4-Bromophenyl phenyl ether	1.4	UG/L	ND	ND	ND
4-Chlorophenyl phenyl ether	1.57	UG/L	ND	ND	ND
Hexachloroethane	1.32	UG/L	ND	ND	ND
Hexachlorobenzene	1.48	UG/L	ND	ND	ND
Hexachlorobutadiene	1.64	UG/L	ND	ND	ND
Hexachlorocyclopentadiene	1.25	UG/L	ND	ND	ND
Acenaphthene	1.8	UG/L	ND	ND	ND
Acenaphthylene	1.77	UG/L	ND	ND	ND
Anthracene	1.29	UG/L	ND	ND	ND
Bis-(2-chloroisopropyl) ether	1.16	UG/L	ND	ND	ND
Bis-(2-ethylhexyl) phthalate	8.96	UG/L	24.3	89.8	25.9
Benzidine	1.52	UG/L	ND	ND	ND
Benzo[a]anthracene	1.1	UG/L	ND	ND	ND
Benzo[a]pyrene	1.25	UG/L	ND	ND	ND
Benzo[g,h,i]perylene	1.09	UG/L	ND	ND	ND
Benzo[k]fluoranthene	1.49	UG/L	ND	ND	ND
Bis-(2-chloroethoxy) methane	1.01	UG/L	ND	ND	ND
Bis-(2-chloroethyl) ether	1.38	UG/L	ND	ND	ND
Butyl benzyl phthalate	2.84	UG/L	ND	ND	ND
Chrysene	1.16	UG/L	ND	ND	ND
Fluoranthene	1.33	UG/L	ND	ND	ND
Fluorene	1.61	UG/L	ND	ND	ND
Indeno(1,2,3-CD)pyrene	1.14	UG/L	ND	ND	ND
Isophorone	1.53	UG/L	ND	ND	ND
Naphthalene	1.65	UG/L	ND	ND	ND
Nitrobenzene	1.6	UG/L	ND	ND	ND
N-nitrosodimethylamine	1.27	UG/L	ND	ND	ND
N-nitrosodiphenylamine	3.48	UG/L	ND	ND	ND
N-nitrosodi-n-propylamine	1.16	UG/L	ND	ND	ND
Phenanthrene	1.34	UG/L	ND	ND	ND
Pyrene	1.43	UG/L	ND	ND	ND
=====	=====	=====	=====	=====	=====
Polynuc. Aromatic Hydrocarbons	1.77	UG/L	0.0	0.0	0.0
Base/Neutral Compounds	8.96	UG/L	24.30	89.80	25.90
=====	=====	=====	=====	=====	=====
1-Methylnaphthalene	2.18	UG/L	ND	ND	ND
2-Methylnaphthalene	2.14	UG/L	ND	ND	ND
2,6-Dimethylnaphthalene	2.16	UG/L	ND	ND	ND
2,3,5-Trimethylnaphthalene	2.18	UG/L	ND	ND	ND
1-Methylphenanthrene	1.46	UG/L	ND	ND	ND
Benzo[e]pyrene	1.44	UG/L	ND	ND	ND
Perylene	1.41	UG/L	ND	ND	ND
Biphenyl	2.29	UG/L	ND	ND	ND
Pyridine	3.33	UG/L	ND	ND	ND
=====	=====	=====	=====	=====	=====

NA= Not Analyzed

ND= Not Detected

NORTH CITY WATER RECLAMATION PLANT
ANNUAL MONITORING REPORT
2016
Benzidines

Source:		N01-PS_INF	N01-PS_INF	N01-PS_INF	N01-PS_INF
Date:		02-MAR-2016	01-JUN-2016	07-SEP-2016	02-NOV-2016
		P839945	P863456	P886355	P902013
	MDL Units				
=====	=====	=====	=====	=====	=====
3,3-Dichlorobenzidine	2.44 UG/L	ND	ND	ND	ND
Benzidine	1.52 UG/L	ND	ND	ND	ND

Source:		N01-PEN	N01-PEN	N01-PEN	N10-EFF
Date:		02-MAR-2016	01-JUN-2016	02-NOV-2016	02-MAR-2016
		P839950	P863461	P902018	P839955
	MDL Units				
=====	=====	=====	=====	=====	=====
3,3-Dichlorobenzidine	2.44 UG/L	ND	ND	ND	ND
Benzidine	1.52 UG/L	ND	ND	ND	ND

Source:		N10-EFF	N10-EFF	N10-EFF	N34-REC WATER
Date:		01-JUN-2016	07-SEP-2016	02-NOV-2016	02-MAR-2016
		P863466	P886365	P902023	P839960
	MDL Units				
=====	=====	=====	=====	=====	=====
3,3-Dichlorobenzidine	2.44 UG/L	ND	ND	ND	ND
Benzidine	1.52 UG/L	ND	ND	ND	ND

Source:		N34-REC WATER	N34-REC WATER	N34-REC WATER
Date:		01-JUN-2016	07-SEP-2016	02-NOV-2016
		P863471	P886370	P902028
	MDL Units			
=====	=====	=====	=====	=====
3,3-Dichlorobenzidine	2.44 UG/L	ND	ND	ND
Benzidine	1.52 UG/L	ND	ND	ND

NA= Not Analyzed

ND= Not Detected

NORTH CITY WATER RECLAMATION PLANT
ANNUAL MONITORING REPORT
2016

Priority Pollutants Purgeable Compounds, EPA Method 8260B

Analyte	MDL	Units	N01-PS_INF 02-MAR-2016 P839948	N01-PS_INF 01-JUN-2016 P863459	N01-PS_INF 07-SEP-2016 P886358	N01-PS_INF 02-NOV-2016 P902016
Chloromethane	.5	UG/L	ND	ND	ND	ND
Bromomethane	.7	UG/L	ND	ND	*	DNQ0.8
Vinyl chloride	.4	UG/L	ND	ND	ND	ND
Chloroethane	.9	UG/L	ND	ND	ND	ND
1,1-Dichloroethane	.4	UG/L	ND	ND	ND	ND
Trichlorofluoromethane	.3	UG/L	ND	ND	ND	ND
Methylene chloride	.37	UG/L	2.0	DNQ0.7	DNQ1.2	DNQ1.4
1,1-Dichloroethene	.4	UG/L	ND	ND	ND	ND
trans-1,2-dichloroethene	.6	UG/L	ND	ND	ND	ND
Chloroform	.3	UG/L	6.5	DNQ2.0	2.5	2.6
1,2-Dichloroethane	.5	UG/L	ND	ND	ND	ND
1,1,1-Trichloroethane	.4	UG/L	ND	ND	ND	ND
Carbon tetrachloride	.4	UG/L	ND	ND	ND	ND
Bromodichloromethane	.5	UG/L	ND	ND	ND	ND
1,2-Dichloropropane	.43	UG/L	ND	ND	ND	ND
trans-1,3-dichloropropene	.5	UG/L	ND	ND	ND	ND
Trichloroethene	.7	UG/L	ND	ND	ND	ND
Benzene	.4	UG/L	ND	ND	ND	ND
Dibromochloromethane	.6	UG/L	ND	ND	ND	ND
1,1,2-Trichloroethane	.5	UG/L	ND	ND	ND	ND
cis-1,3-dichloropropene	.38	UG/L	ND	ND	ND	ND
2-Chloroethylvinyl ether	1.1	UG/L	ND	ND	ND	ND
Bromoform	.5	UG/L	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	.5	UG/L	ND	ND	ND	ND
Tetrachloroethene	1.1	UG/L	ND	ND	ND	ND
Chlorobenzene	.4	UG/L	ND	ND	ND	ND
Toluene	.4	UG/L	2.2	3.1	DNQ1.9	4.7
Ethylbenzene	.41	UG/L	DNQ0.4	ND	ND	DNQ0.4
Acrylonitrile	.7	UG/L	ND	ND	ND	ND
Acrolein	1.3	UG/L	ND	ND	ND	ND
1,2-Dichlorobenzene	.4	UG/L	ND	ND	ND	ND
1,4-Dichlorobenzene	.46	UG/L	DNQ0.9	*	ND	ND
1,3-Dichlorobenzene	.5	UG/L	ND	ND	ND	ND
Dichlorodifluoromethane	2.39	UG/L	ND	ND	ND	ND
Halomethane Purgeable Cmpnds	.7	UG/L	0.0	0.0	0.0	0.8
Total Dichlorobenzenes	.5	UG/L	0.9	0.0	0.0	0.0
Purgeable Compounds	1.3	UG/L	11.1	5.8	5.6	9.9
Allyl chloride	.6	UG/L	ND	ND	ND	ND
4-Methyl-2-pentanone	1.3	UG/L	ND	ND	ND	ND
meta,para xylenes	.85	UG/L	DNQ1.6	ND	ND	ND
Styrene	.38	UG/L	ND	ND	ND	ND
1,2,4-Trichlorobenzene	.7	UG/L	ND	ND	ND	ND
Methyl Iodide	.6	UG/L	ND	ND	ND	ND
Chloroprene	.4	UG/L	ND	ND	ND	ND
Methyl methacrylate	.8	UG/L	ND	ND	ND	ND
2-Nitropropane	12	UG/L	ND	ND	ND	ND
1,2-Dibromoethane	.41	UG/L	ND	ND	ND	ND
Isopropylbenzene	.41	UG/L	ND	ND	ND	ND
Benzyl chloride	1.1	UG/L	ND	ND	ND	ND
ortho-xylene	.4	UG/L	DNQ0.6	ND	ND	ND
Acetone	6.74	UG/L	135	134	290	404
Carbon disulfide	.6	UG/L	3.6	2.9	3.1	9.6
2-Butanone	6.3	UG/L	ND	ND	DNQ5.7	12.4
Methyl tert-butyl ether	.4	UG/L	ND	ND	ND	ND

ND= Not Detected

NA= not analyzed

NS= not sampled

DNQ= Detected but not quantified. Result is less than Minimum Level but greater than or equal to the MDL.

*= The internal check and spike results for these analytes in this batch were outside the acceptance range. The results are not used in the average.

NORTH CITY WATER RECLAMATION PLANT
ANNUAL MONITORING REPORT
2016

Priority Pollutants Purgeable Compounds, EPA Method 8260B

Analyte	MDL	Units	N01-PEN 02-MAR-2016 P839953	N01-PEN 01-JUN-2016 P863464	N01-PEN 02-NOV-2016 P902021	N10-EFF 02-MAR-2016 P839958
			=====	=====	=====	=====
Chloromethane	.5	UG/L	ND	ND	ND	ND
Bromomethane	.7	UG/L	ND	ND	DNQ0.8	ND
Vinyl chloride	.4	UG/L	ND	ND	ND	ND
Chloroethane	.9	UG/L	ND	ND	ND	ND
1,1-Dichloroethane	.4	UG/L	ND	ND	ND	ND
Trichlorofluoromethane	.3	UG/L	ND	ND	ND	ND
Methylene chloride	.37	UG/L	2.4	DNQ0.8	DNQ1.6	2.2
1,1-Dichloroethene	.4	UG/L	ND	ND	ND	ND
trans-1,2-dichloroethene	.6	UG/L	ND	ND	ND	ND
Chloroform	.3	UG/L	DNQ1.6	DNQ1.8	DNQ1.7	3.5
1,2-Dichloroethane	.5	UG/L	ND	ND	ND	ND
1,1,1-Trichloroethane	.4	UG/L	ND	ND	ND	ND
Carbon tetrachloride	.4	UG/L	ND	ND	ND	ND
Bromodichloromethane	.5	UG/L	ND	ND	ND	DNQ0.5
1,2-Dichloropropane	.43	UG/L	ND	ND	ND	ND
trans-1,3-dichloropropene	.5	UG/L	ND	ND	ND	ND
Trichloroethene	.7	UG/L	ND	ND	ND	ND
Benzene	.4	UG/L	ND	ND	ND	ND
Dibromochloromethane	.6	UG/L	ND	ND	ND	ND
1,1,2-Trichloroethane	.5	UG/L	ND	ND	ND	ND
cis-1,3-dichloropropene	.38	UG/L	ND	ND	ND	ND
2-Chloroethylvinyl ether	1.1	UG/L	ND	ND	ND	ND
Bromoform	.5	UG/L	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	.5	UG/L	ND	ND	ND	ND
Tetrachloroethene	1.1	UG/L	ND	ND	ND	ND
Chlorobenzene	.4	UG/L	ND	ND	ND	ND
Toluene	.4	UG/L	DNQ0.8	DNQ0.6	14.0	4.9
Ethylbenzene	.41	UG/L	ND	ND	DNQ0.4	DNQ1.0
Acrylonitrile	.7	UG/L	ND	ND	ND	ND
Acrolein	1.3	UG/L	ND	ND	ND	ND
1,2-Dichlorobenzene	.4	UG/L	ND	ND	ND	ND
1,4-Dichlorobenzene	.46	UG/L	ND	*	ND	DNQ0.4
1,3-Dichlorobenzene	.5	UG/L	ND	ND	ND	ND
Dichlorodifluoromethane	2.39	UG/L	ND	ND	ND	ND
=====						
Halomethane Purgeable Cmpnds	.7	UG/L	0.0	0.0	0.8	0.5
Total Dichlorobenzenes	.5	UG/L	0.0	0.0	0.0	0.4
Purgeable Compounds	1.3	UG/L	4.8	3.2	18.5	12.1
=====						
Allyl chloride	.6	UG/L	ND	ND	ND	ND
4-Methyl-2-pentanone	1.3	UG/L	ND	ND	ND	ND
meta,para xylenes	.85	UG/L	ND	ND	DNQ1.7	4.3
Styrene	.38	UG/L	ND	ND	ND	ND
1,2,4-Trichlorobenzene	.7	UG/L	ND	ND	ND	ND
Methyl Iodide	.6	UG/L	ND	ND	ND	ND
Chloroprene	.4	UG/L	ND	ND	ND	ND
Methyl methacrylate	.8	UG/L	ND	ND	ND	ND
2-Nitropropane	12	UG/L	ND	ND	ND	ND
1,2-Dibromoethane	.41	UG/L	ND	ND	ND	ND
Isopropylbenzene	.41	UG/L	ND	ND	ND	ND
Benzyl chloride	1.1	UG/L	ND	ND	ND	ND
ortho-xylene	.4	UG/L	ND	ND	1.0	2.2
Acetone	6.74	UG/L	712	197	531	416
Carbon disulfide	.6	UG/L	1.6	10.5	14.9	2.5
2-Butanone	6.3	UG/L	DNQ6.5	ND	12.9	DNQ6.4
Methyl tert-butyl ether	.4	UG/L	ND	ND	ND	ND
=====						

ND= Not Detected NA= not analyzed NS= not sampled
DNQ= Detected but not quantified. Result is less than Minimum Level but greater than or equal to the MDL.
*= The internal check and spike results for these analytes in this batch were outside the acceptance range. The results are not used in the average.

NORTH CITY WATER RECLAMATION PLANT
ANNUAL MONITORING REPORT
2016

Priority Pollutants Purgeable Compounds, EPA Method 8260B

Analyte	MDL	Units	N10-EFF 01-JUN-2016 P863469	N10-EFF 07-SEP-2016 P886368	N10-EFF 02-NOV-2016 P902026	N34-REC WATER 02-MAR-2016 P839963
			=====	=====	=====	=====
Chloromethane	.5	UG/L	ND	ND	ND	ND
Bromomethane	.7	UG/L	ND	*	DNQ0.8	ND
Vinyl chloride	.4	UG/L	ND	ND	ND	ND
Chloroethane	.9	UG/L	ND	ND	ND	ND
1,1-Dichloroethane	.4	UG/L	ND	ND	ND	ND
Trichlorofluoromethane	.3	UG/L	ND	ND	ND	ND
Methylene chloride	.37	UG/L	DNQ0.9	2.3	DNQ2.0	DNQ0.3
1,1-Dichloroethene	.4	UG/L	ND	ND	ND	ND
trans-1,2-dichloroethene	.6	UG/L	ND	ND	ND	ND
Chloroform	.3	UG/L	DNQ1.9	2.4	2.8	66.1
1,2-Dichloroethane	.5	UG/L	ND	ND	ND	ND
1,1,1-Trichloroethane	.4	UG/L	ND	ND	ND	ND
Carbon tetrachloride	.4	UG/L	ND	ND	ND	ND
Bromodichloromethane	.5	UG/L	ND	ND	ND	51.3
1,2-Dichloropropane	.43	UG/L	ND	ND	ND	ND
trans-1,3-dichloropropene	.5	UG/L	ND	ND	ND	ND
Trichloroethene	.7	UG/L	ND	ND	ND	ND
Benzene	.4	UG/L	ND	ND	ND	ND
Dibromochloromethane	.6	UG/L	ND	ND	ND	25.2
1,1,2-Trichloroethane	.5	UG/L	ND	ND	ND	ND
cis-1,3-dichloropropene	.38	UG/L	ND	ND	ND	ND
2-Chloroethylvinyl ether	1.1	UG/L	ND	ND	ND	ND
Bromoform	.5	UG/L	ND	ND	ND	2.1
1,1,2,2-Tetrachloroethane	.5	UG/L	ND	ND	ND	ND
Tetrachloroethene	1.1	UG/L	ND	ND	ND	ND
Chlorobenzene	.4	UG/L	ND	ND	ND	ND
Toluene	.4	UG/L	10.9	DNQ0.9	2.9	ND
Ethylbenzene	.41	UG/L	DNQ0.4	ND	ND	ND
Acrylonitrile	.7	UG/L	ND	ND	ND	ND
Acrolein	1.3	UG/L	ND	ND	ND	ND
1,2-Dichlorobenzene	.4	UG/L	ND	ND	ND	ND
1,4-Dichlorobenzene	.46	UG/L	*	ND	ND	ND
1,3-Dichlorobenzene	.5	UG/L	ND	ND	ND	ND
Dichlorodifluoromethane	2.39	UG/L	ND	ND	ND	ND
=====						
Halomethane Purgeable Cmpnds	.7	UG/L	0.0	0.0	0.8	78.6
Total Dichlorobenzenes	.5	UG/L	0.0	0.0	0.0	0.0
Purgeable Compounds	1.3	UG/L	14.1	5.6	8.5	145.0
=====						
Allyl chloride	.6	UG/L	ND	ND	ND	ND
4-Methyl-2-pentanone	1.3	UG/L	ND	ND	ND	ND
meta,para xylenes	.85	UG/L	ND	ND	ND	ND
Styrene	.38	UG/L	ND	ND	ND	ND
1,2,4-Trichlorobenzene	.7	UG/L	ND	ND	ND	ND
Methyl Iodide	.6	UG/L	ND	ND	ND	ND
Chloroprene	.4	UG/L	ND	ND	ND	ND
Methyl methacrylate	.8	UG/L	ND	ND	ND	ND
2-Nitropropane	12	UG/L	ND	ND	ND	ND
1,2-Dibromoethane	.41	UG/L	ND	ND	ND	ND
Isopropylbenzene	.41	UG/L	ND	ND	ND	ND
Benzyl chloride	1.1	UG/L	ND	ND	ND	ND
ortho-xylene	.4	UG/L	ND	ND	ND	ND
Acetone	6.74	UG/L	281	979	989	ND
Carbon disulfide	.6	UG/L	2.7	4.6	26.8	ND
2-Butanone	6.3	UG/L	DNQ6.5	10.2	15.9	ND
Methyl tert-butyl ether	.4	UG/L	ND	ND	ND	ND
=====						

ND= Not Detected NA= not analyzed NS= not sampled
DNQ= Detected but not quantified. Result is less than Minimum Level but greater than or equal to the MDL.
*= The internal check and spike results for these analytes in this batch were outside the acceptance range. The results are not used in the average.

NORTH CITY WATER RECLAMATION PLANT
ANNUAL MONITORING REPORT
2016

Priority Pollutants Purgeable Compounds, EPA Method 8260B

Analyte	MDL	Units	N34-REC WATER 01-JUN-2016 P863474	N34-REC WATER 07-SEP-2016 P886373	N34-REC WATER 02-NOV-2016 P902031
			=====	=====	=====
Chloromethane	.5	UG/L	ND	ND	ND
Bromomethane	.7	UG/L	ND	*	DNQ0.9
Vinyl chloride	.4	UG/L	ND	ND	ND
Chloroethane	.9	UG/L	ND	ND	ND
1,1-Dichloroethane	.4	UG/L	ND	ND	ND
Trichlorofluoromethane	.3	UG/L	ND	ND	ND
Methylene chloride	.37	UG/L	ND	ND	DNQ0.6
1,1-Dichloroethene	.4	UG/L	ND	ND	ND
trans-1,2-dichloroethene	.6	UG/L	ND	ND	ND
Chloroform	.3	UG/L	57.0	66.9	80.6
1,2-Dichloroethane	.5	UG/L	ND	ND	ND
1,1,1-Trichloroethane	.4	UG/L	ND	ND	ND
Carbon tetrachloride	.4	UG/L	ND	ND	ND
Bromodichloromethane	.5	UG/L	41.2	55.2	53.3
1,2-Dichloropropane	.43	UG/L	ND	ND	ND
trans-1,3-dichloropropene	.5	UG/L	ND	ND	ND
Trichloroethene	.7	UG/L	ND	ND	ND
Benzene	.4	UG/L	ND	ND	ND
Dibromochloromethane	.6	UG/L	21.1	29.2	27.8
1,1,2-Trichloroethane	.5	UG/L	ND	ND	ND
cis-1,3-dichloropropene	.38	UG/L	ND	ND	ND
2-Chloroethylvinyl ether	1.1	UG/L	ND	ND	ND
Bromoform	.5	UG/L	2.5	2.6	2.4
1,1,2,2-Tetrachloroethane	.5	UG/L	ND	ND	ND
Tetrachloroethene	1.1	UG/L	ND	ND	ND
Chlorobenzene	.4	UG/L	ND	ND	ND
Toluene	.4	UG/L	ND	ND	ND
Ethylbenzene	.41	UG/L	ND	ND	ND
Acrylonitrile	.7	UG/L	ND	ND	ND
Acrolein	1.3	UG/L	ND	ND	ND
1,2-Dichlorobenzene	.4	UG/L	ND	ND	ND
1,4-Dichlorobenzene	.46	UG/L	*	ND	ND
1,3-Dichlorobenzene	.5	UG/L	ND	ND	ND
Dichlorodifluoromethane	2.39	UG/L	ND	ND	ND
=====	=====	=====	=====	=====	=====
Halomethane Purgeable Cmpnds	.7	UG/L	64.8	87.0	84.4
Total Dichlorobenzenes	.5	UG/L	0.0	0.0	0.0
Purgeable Compounds	1.3	UG/L	121.8	153.9	165.6
=====	=====	=====	=====	=====	=====
Allyl chloride	.6	UG/L	ND	ND	ND
4-Methyl-2-pentanone	1.3	UG/L	ND	ND	ND
meta,para xylenes	.85	UG/L	ND	ND	ND
Styrene	.38	UG/L	ND	ND	ND
1,2,4-Trichlorobenzene	.7	UG/L	ND	ND	ND
Methyl Iodide	.6	UG/L	ND	ND	ND
Chloroprene	.4	UG/L	ND	ND	ND
Methyl methacrylate	.8	UG/L	ND	ND	ND
2-Nitropropane	12	UG/L	ND	ND	ND
1,2-Dibromoethane	.41	UG/L	ND	ND	ND
Isopropylbenzene	.41	UG/L	ND	ND	ND
Benzyl chloride	1.1	UG/L	ND	ND	ND
ortho-xylene	.4	UG/L	ND	ND	ND
Acetone	6.74	UG/L	ND	ND	ND
Carbon disulfide	.6	UG/L	ND	ND	ND
2-Butanone	6.3	UG/L	ND	ND	ND
Methyl tert-butyl ether	.4	UG/L	ND	ND	ND
=====	=====	=====	=====	=====	=====

ND= Not Detected

NA= not analyzed

NS= not sampled

DNQ= Detected but not quantified. Result is less than Minimum Level but greater than or equal to the MDL.

*= The internal check and spike results for these analytes in this batch were outside the acceptance range. The results are not used in the average.

NORTH CITY WATER RECLAMATION PLANT
(N34-REC) Reclaimed Water - Annual Perchlorate Monitoring

Source: N34-REC WATER
Sample Date: 11-OCT-2016
Sample ID: W1133584

Analysis	Analyte	MDL	Units	Result
=====	=====	=====	=====	=====
EPA314	Perchlorate	4	ug/L	8.23

N34-REC WATER= Reclaimed Water

Records of sampling and analyses:

Sampling performed at all City of San Diego Facilities and received by the Environmental Chemistry Services and reported in any laboratory generated reports, including NPDES and other permit reports, are documented in writing using a Chain-of-Custody and Sampling Record form and electronically in our laboratory database (LIMS). Each specific sample, sampling event, and analyses is fully documented using procedures and processes audited and approved by the California Department of Health Services, Environmental Laboratory Accreditation Program (ELAP).

The following table lists our staff involved in the sampling and analyses of samples for permit compliance at Public Utilities Department facilities. This is intended as a general disclosure of the individuals who perform the permit required work. If any question arises concerning specific events, samples, or analyses, our records contain detailed information. These may be inspected at our facilities during normal business hours, or copies may be requested. Please note that the sampling at the North City, Metro Biosolids Center, and South Bay facilities is performed exclusively by Operations & Maintenance staff at those facilities. Copies of reports of analysis by contracted laboratories are included in the monthly reports in their entirety.

Deputy Director Peter Vroom, Ph.D.						
Senior Chemist 1.00 Elvira R. Mercado						
Pesticides Group Associate Chemist 1.00 RONALD JARDINE	QA/DM Group Associate Chemist 1.00 LEE KING	Metals Group Associate Chemist 1.00 SANDRA VALENZUELA	Pt. Loma WWTP / MBC Group Associate Chemist 1.00 VESSELKA KOZAREV	South Bay WRP Group Associate Chemist 1.00 Vacant	GC/MS Group Associate Chemist 1.00 JEFF MCANALLY	Inorganic/ Wet Chemistry Group Associate Chemist 1.00 ROBERT SANDOVAL
Analyses: Chlorinated & organo-phosphorus pesticides, PCBs, herbicides, organo-tins, lipids and methods 8081/8082 in fish and marine sediments.	Analyses: Sampling, field determinations (e.g. pH, Temperature, salinity, etc.), percent sodium and adjusted sodium adsorption ratio, Quality Assurance, data management, and reports generation.	Analyses: Trace metals by ICP-AES and ICP/MS, TOC/TN, cations, radiation, and other inorganics	Analyses: BOD, COD, TS/VS, TSS, pH, and other wet chemistry analyses and sampling for the Pt. Loma WWTP.	Analyses: BOD, COD, TS/VS, TSS, pH, MBAS, and other wet chemistry analyses for the South Bay WRP.	Analyses: GC/MS analyses including methods 624, 625, 8260B, 8270, PAHs, TPH-G, TPH-D, dioxins, and sediment grain size.	Analyses: Sulfides and anions by ion chromatography, TKN, cyanide, ammonia, and other inorganics.
Assistant Chemists: 4.00 BRADLEY DONAHUE BRENDA DOWELL ERIC HUNT PAOLA PARRA	Assistant Chemists: 4.00 ARMANDO MARTINEZ FERNANDO MARTINEZ MARIA NOLLER JULIE WEBB	Assistant Chemists: 5.00 ERICA FITZGERALD OSCAR MIRANDA JESUS NIETO VICTORIA SANTIBANEZ Vacant	Assistant Chemists: 2.00 VIRGINIA BASILAN TATSIANA GARCIA (To start 12.01.2016)	Assistant Chemists: 1.00 GREG SCHLIMME	Assistant Chemists: 5.00 ENRIQUE BLANCO CHRISTINE CORRAO JERRY CZAJKOWSKI ESTELA LANEZ CONNIE MATA YOLANDA REYNOSO-MARTIN	Assistant Chemists: 4.00 IRMA BOLIO JACQUELINE CAZARES- MEDINA KEN DANG LEONARD PRZYBYLO
Laboratory Technician: 2.00 MARICELA CORONEL Vacant	Laboratory Technician: 2.00 BRETT KELLEY CIARA PAYAN	Laboratory Technician: 1.00 Vacant	Laboratory Technician: 4.00 TIM CANNON NICOLE GRIMAUD ROWENA RONSAIRO ERICA WESTCOTT	Laboratory Technician: 2.00 JOSE CASTRO ANGELICA DURAN	Laboratory Technician: 2.00 ANGELA ENTERA Vacant	Laboratory Technician: 2.00 MIKE DAOUD JOSE GUERRERO
Intern:	Word Processing Operator: 1.00 CORINNA QUINATA	Intern:				

