II. Influent and Effluent Data Summary.

A. Mass Emissions

B. Discharge Limits

C. Influent and Effluent Data Summaries

D. Influent and Effluent Graphs

E. Daily Values of Selected Parameters

F. Toxicity Bioassay

A. Mass Emissions

Mass Emissions of Effluent Using 2010 Monthly Averages

DISCHARGE SPECIFICATIONS from NPDES Permit No. CA0109045/RWQCB Order No. 2006-067 effective on January 1st 2007 with limits on pollutant discharges.

Effluent Limitations Based on Secondary Treatment Standards

Constituent/Property	Limit: Monthly Average (30 day) (lbs/day)	2010 Mass Emissions (lbs/day)[1]	2010 Average Concentration	Units
Flow (MGD)			**3.4**	MGD
Total Suspended Solids	3,700	**165**	**5.8**	mg/L
BOD	3,700	**321**	**11.3**	mg/L
Oil & Grease	3,100	94	3.3	mg/L

Effluent Limitations Based on 2005 California Ocean Plan

Constituent/Property	Limit: Daily Maximum (lbs/day)	2010 Mass Emissions (lbs/day)[1]	2010 Average Concentration	Units
Arsenic	350	0.020	0.69	ug/L
Cadmium	48	0	0	ug/L
Chromium	96	0.014	0.5	ug/L
Copper	120	0.5	17	ug/L
Lead	96	0.000	0	ug/L
Mercury	1.9	0.0	0	ug/L
Nickel	2.4	0.15	5.21	ug/L
Selenium	720	0.019	0.67	ug/L
Silver	32	0.003	0.1	ug/L
Zinc	860	0.9	30.4	ug/L
Cyanide	48	0.028	0.001	mg/L
Residual Chlorine	96	2.0	0.07	mg/L
Ammonia	29,000	31.2	1.1	mg/L
Non-Chor. Phenols	1,400	0	0	ug/L
Chlorinated Phenols	48	0	0	ug/L
Endosulfan	0.21	0.0	0	ng/L
Endrin	0.05	0.0	0	ng/L
hexachlorocyclohexanes *(HCH)	0.1	0.0	0	ng/L

* (all as Lindane, the gamma isomer)

Effluent Limitations Based on 2005 California Ocean Plan				
Constituent/Property	Limit: Daily Maximum (lbs/day)	2010 Mass Emissions (lbs/day)[1]	2010 Average Concentration	Units
Acrolein	2,600	0	0	ug/L
Antimony	14,000	0	0	ug/L
Bis(2-chloroethoxy) methane	53	0	0	ug/L
Bis(2-chloroisopropyl) ether	14,000	0	0	ug/L
Chlorobenzene	6,800	0	0	ug/L
Chromium (III)	--	--	--	
di-n-butyl phthalate	42,000	0	0	ug/L
dichlorobenzenes	61,000	0	0	ug/L
1,1-dichloroethylene	11	0	0	ug/L
Diethyl phthalate	390,000	0.037	1.3	ug/L
Dimethyl phthalate	9,800,000	0	0	ug/L
4,6-dinitro-2-methylphenol	2,600	0	0	ug/L
2,4-dinitrophenol	480	0	0	ug/L
Ethylbenzene	49,000	0.01	0.4	ug/L
Fluoranthene	180	0	0	ug/L
Hexachlorocyclopentadiene	690	0	0	ug/L
Isophorone	70,000	0	0	ug/L
Nitrobenzene	59	0	0	ug/L
Thallium	24	0	0	ug/L
Toluene	1,000,000	0.15	5.3	ug/L
1,1,2,2-tetrachloroethane	27	0.006	0.2	ug/L
Tributyltin	0.02	0.00	0	ug/L
1,1,1-trichloroethane	6,500,000	0	0	ug/L
1,1,2-trichloroethane	110	0	0	ug/L
Acrylonitrile	1.2	0.0	0	ug/L
Aldrin	0.00026	0	0	ng/L
Benzene	71	0	0	ug/L
Benzidine	82,000	0	0	ug/L
Beryllium	0.39	0.0	0	ug/L
Bis(2-chloroethyl)ether	0.54	0.0	0	ug/L
Bis(2-ethylhexyl)phthalate	42	0.071	2.5	ug/L
Carbon Tetrachloride	11	0	0	ug/L
Chlordane	0.00027	0.00000	0	ng/L
Chlorodibromomethane	100	0	0	ug/L
Chloroform	1,500	0.02	0.7	ug/L
DDT	0.002	0.000	0	ng/L
1,4-dichlorobenzene	210	0	0	ug/L
3,3-dichlorobenzidine	0.097	0.00	0	ug/L
1,2-dichloroethane	330	0	0	ug/L
Dichlorobromomethane	74	0	0	ug/L
Dichloromethane (methylene chloride)	5,400	0.04	1.5	ug/L
1,3-dichloropropene	110	0	0	ug/L
Dieldrin	0.00048	0.00000	0	ng/L

Effluent Limitations Based on 2005 California Ocean Plan				
Constituent/Property	Limit: Daily Maximum (lbs/day)	2010 Mass Emissions (lbs/day)[1]	2010 Average Concentration	Units
2,4-dinitrotoluene	31	0	0	ug/L
1,2-diphenylhydrazine	1.9	0.0	0	ug/L
Halomethanes	1,500	0	0	ug/L
Heptachlor	0.0006	0.000000	0	ng/L
Heptachlor epoxide	0.00024	0.0000	0	ng/L
Hexachlorobenzene	0.0025	0.0000	0	ug/L
Hexachlorobutadiene	170	0	0	ug/L
Hexachloroethane	30	0	0	ug/L
N-nitrosodimethylamine	87	0	0	ug/L
N-nitrosodi-N-Propylamine	4.5	0	0	ug/L
N-nitrosodiphenylamine	30	0	0	ug/L
PAHs	0.11	0.00	0	ug/L
PCBs	0.00023	0.000	0	ng/L
TCDD equivalents	0.000000048	0.0000	0	pg/L
Tetrachloroethylene	24	0	0	ug/L
Toxaphene	0.0025	0	0	ng/L
Trichloroethylene	320	0	0	ug/L
2,4,6-trichlorophenol	3.5	0	0	ug/L
Vinyl Chloride	430	0	0	ug/L

[1] Mass emissions is calculated assuming the density of effluent is 1. The mean constituent value and mean daily flow value over the year is used to compute the mass emissions, assuming that constant concentration over 365 days.

B. Discharge Limits

DISCHARGE SPECIFICATIONS from NPDES Permit No. CA0109045/RWQCB Order No. 2006-067 effective on January 1st, 2007 with limits on pollutant discharges.

The discharge of effluent through the South Bay Ocean Outfall(E-001) shall maintain compliance with the following effluent limitations:

Effluent Limitations based on Secondary Treatment Standards						
Constituent	Units	6-month Median	30-day Average	7-Day Average	Daily Maximum	Instantaneous Maximum
Biochemical Oxygen Demand(BOD_5)@ 20°C	mg/L		30	45		50
	lb/day		3,700	5,600		6,200
Total Suspended Solids	mg/L		30	45		50
	lb/day		3,700	5,600		6,200
pH	pH units		Within the limits of 6.0 - 9.0 at all times.			

Effluent Limitations based on 2005 California Ocean Plan						
Constituent	Units	6-month Median	30-day Average	7-Day Average	Daily Maximum	Instantaneous Maximum
Grease & Oil	mg/L		25	40		75
	lb/day		3,100	5,000		9,400
Settleable Solids	mL/L		1	2		3
Turbidity	NTU		75	100		230
Total Residual Chlorine(TRC)	mg/L	0.19			0.76	5.7
	lb/day	24			96	720
Copper	ug/L	97			960	2,700
	lb/day	12			120	330

Constituents that do not have reasonable potential or had inconclusive reasonable potential analysis results are referred to as performance goal constituents and are assigned the performace goals listed in the following table. Performance goal constituents shall also be monitored at E-001.

Performance Goals Based on 2005 California Ocean Plan				
Constituent	Units	6-month Median	Daily Maximum	Instantaneous Maximum
Arsenic	ug/L	480	2,800	7,400
	lb/day	60	350	920
Cadmium	ug/L	96	380	960
	lb/day	12	48	120
Chromium[2](Hexavalent)	ug/L	190	760	1900
	lb/day	24	96	240
Lead	ug/L	190	760	1,900
	lb/day	24	96	240
Mercury	ug/L	38	15.0	3.8
	lb/day	4.8	1.9	0.48
Nickel	ug/L	480	1,900	4,800
	lb/day	60	240	600
Selenium	ug/L	1,400	5,700	14,000
	lb/day	180	720	1800
Silver	ug/L	52	250	650
	lb/day	6.5	32	82
Zinc	ug/L	1,100	6,900	18,000
	lb/day	140	860	2300
Cyanide	mg/L	0.096	0.38	0.96
	lb/day	12	48	120
Ammonia (expressed as Nitrogen)	mg/L	57	230	570
	lb/day	7200	29,000	72,000
Acute Toxicity	TUa		3.1[3]	
Chronic Toxicity	TUc		96	
Phenolic Compounds(non-chlorinated)	ug/L	2,900	11,000	29,000
	lb/day	360	1400	3600
Chlorinated Phenolics	ug/L	96	380	960
	lb/day	12	48	120
Endosulfan	ng/L	860	1,700	2,600
	lb/day	0.11	0.21	0.32
Endrin	ng/L	190	380	570
	lb/day	0.02	0.05	0.07
HCH (hexachlorocyclohexanes)	ng/L	380	760	1,100
	lb/day	0.04	0.1	0.14
Radioactivity	Not to exceed limits specified in Title 17 California Code of Regulations Section 30253, Standards for Protection Against Radiation			

[2] Hexavalent Chromium limit met as Total Chromium.

[3] Permit shows 2.9×10^{-1} which reflects an apparent error in calculation as discussed with SDRWQCB staff. Correction to 3.1 TUa referenced by email of Friday, January 26, 2007 4:14 PM, From: Melissa Valdovinos [mailto:mvaldovinos@waterboards.ca.gov] To: Stebbins, Tim, [Tstebbins@sandiego.gov]

Performance Goals Based on 2005 California Ocean Plan Continued

Constituent	Monthly Average (30-Day)	
	ug/L	lbs/day
Acrolein	21,000	2600
Antimony	110,000	14,000
Bis(2-chloroethoxy) methane	420	53
Bis(2-chloroisopropyl) ether	110,000	14,000
Chlorobenzene	54,000	6800
Chromium (III)[4]	18,000,000	2,300,000
di-n-butyl phthalate	330,000	42,000
Dichlorobenzenes	490,000	61,000
Diethyl phthalate	3,100,000	390,000
Dimethyl phthalate	78,000,000	9,800,000
4,6-dinitro-2-methylphenol	21,000	2600
2,4-dinitrophenol	3800	480
Ethylbenzene	390,000	49,000
Fluoranthene	1,400	180
Hexachlorocyclopentadiene	5,500	690
Nitrobenzene	470	59
Thallium	190	24
Toluene	8,100,000	1,000,000
Tributyltin	0.13	0.020
1,1,1-trichloroethane	52,000,000	6,500,000
Acrylonitrile	9.6	1.2
Benzene	560	71
Benzidine	0.0066	82,000
Beryllium	3.1	0.39
Bis(2-chloroethyl)ether	4.3	0.54
Bis(2-ethylhexyl)phthalate	330	42
Carbon Tetrachloride	86	11
Chloroform	12,000	1500
1,4-dichlorobenzene	1,700	210
3,3-dichlorobenzidine	0.77	0.097
1,2-dichloroethane	2,700	330
1,1-dichloroethylene	86	11
Dichlorobormomethane	590	74
Dichloromethane	43,000	5400
1,3-dichloropropene	850	110
2,4-dinitrotoluene	250	31
1,2-diphenylhydrazine	15	1.9
Halomethanes	12,000	1500

Performance Goals Based on 2005 California Ocean Plan Continued

Constituent	Monthly Average (30-Day)	
	ug/L	lbs/day
Hexachlorobenzene	0.02	0.0025
Hexachlorobutadiene	1,300	170
Hexachloroethane	240	30
Isophorone	70,000	8700
N-nitrosodimethylamine	700	87
N-nitrosodi-N-propylamine	36	4.5
N-nitrosodiphenylamine	240	30
PAHs	0.84	0.11
1,1,2,2-tetrachloroethane	220	27
Tetrachloroethylene	190	24
Trichloroethylene	2,600	320
1,1,2-trichloroethane	900	110
2,4,6-trichlorophenol	28	3.5
Vinyl Chloride	3,400	430

	ng/L	lbs/day
Aldrin	2.1	0.00026
Chlordane	2,200,000	0.00027
DDT	16	0.0026
Dieldrin	3.8	0.00048
Heptachlor	48	.00060
Heptachlor Epoxide	1.9	0.00024
PCBs	1.8	0.00023
Toxaphene	200	0.0025

	pg/L	lbs/day
TCDD equivalents	0.37	0.000000047

[4] Chromium (III) limit is met by Total Chromium.

C. Influent and Effluent Data Summaries

The results of all analyses performed on the SBWRP influent and effluent are summarized in tables with monthly and annual averages (and in some cases annual totals) calculated. Data that has been reevaluated as discussed in Section 1.E, are explicitly indicated. All other tables and charts include all data.

SOUTH BAY WATER RECLAMATION PLANT
SEWAGE INFUENT and EFFLUENT

Annual 2010

Biochemical Oxygen Demand Concentration
(24-hour composite)

	Influent Flow MGD	Daily Influent Value (mg/L)	Daily Influent Value (lbs/Day)	Effluent Flow MGD	Daily Effluent Value (mg/L)	Daily Effluent Value (lbs/Day)	Percent Removal BOD (%)
JANUARY -2010	8.1	331	22360	5.1	20.6	876	93.8
FEBRUARY -2010	8.4	332	23259	6.3	13.6	715	95.9
MARCH -2010	8.2	346	23662	5.2	9.8	425	97.2
APRIL -2010	8.4	349	24450	5.1	9.5	404	97.3
MAY -2010	8.3	363	25128	2.4	4.2	84	98.8
JUNE -2010	8.2	374	25577	0.8	8.8	59	97.6
JULY -2010	8.2	356	24346	1.0	11.5	96	96.8
AUGUST -2010	8.2	378	25851	0.7	9.4	55	97.5
SEPTEMBER-2010	8.1	379	25603	1.1	10.3	94	97.3
OCTOBER -2010	8.1	367	24792	4.4	8.5	312	97.7
NOVEMBER -2010	8.2	359	24551	3.9	10.2	332	97.2
DECEMBER -2010	8.4	324	22698	5.3	19.3	853	94.0
Average	8.2	355	24356	3.4	11.3	359	96.8

Annual Mass Emissions are calculated from monthly averages of flow and BOD, wheras
Monthly Report average mass emissions are calculated from average daily mass emissions.

ND=not detected
NS=not sampled
NA=not analyzed

SEWAGE ANNUAL

Total Suspended Solids Concentration
(24-hour composite)

Annual 2010

	Influent Flow (MGD)	Daily Influent TSS (mg/L)	Daily Influent VSS (mg/L)	Percent VSS (%)	Daily Influent Mass Emission (lbs/Day)
JANUARY -2010	8.1	300	259	86.3	20266
FEBRUARY -2010	8.4	314	272	86.6	21998
MARCH -2010	8.2	284	250	88.0	19422
APRIL -2010	8.4	305	263	86.2	21367
MAY -2010	8.3	313	274	87.5	21666
JUNE -2010	8.2	327	285	87.2	22363
JULY -2010	8.2	309	269	87.1	21132
AUGUST -2010	8.2	317	275	86.8	21679
SEPTEMBER-2010	8.1	328	286	87.2	22158
OCTOBER -2010	8.1	308	268	87.0	20807
NOVEMBER -2010	8.2	306	270	88.2	20927
DECEMBER -2010	8.4	314	274	87.3	21998
Average	8.2	310	270		21315

Total Suspended Solids Concentration
(24-hour composite)

	Effluent Flow (MGD)	Daily Effluent TSS (mg/L)	Daily Effluent VSS (mg/L)	Percent VSS (%)	Daily Effluent Mass Emission (lbs/Day)	Percent Removal TSS (%)	Percent Removal VSS (%)
JANUARY -2010	5.1	8.7	7.4	85.1	370	97.1	97.1
FEBRUARY -2010	6.3	7.9	6.7	84.8	415	97.5	97.5
MARCH -2010	5.2	6.6	5.7	86.4	286	97.7	97.7
APRIL -2010	5.1	7.3	6.3	86.3	310	97.6	97.6
MAY -2010	2.4	3.2	2.6	81.3	64	99.0	99.1
JUNE -2010	0.8	6.4	5.5	85.9	43	98.0	98.1
JULY -2010	1.0	6.7	5.7	85.1	56	97.8	97.9
AUGUST -2010	0.7	5.6	4.7	83.9	33	98.2	98.3
SEPTEMBER-2010	1.1	4.7	3.7	78.7	43	98.6	98.7
OCTOBER -2010	4.4	2.7	2.0	74.1	99	99.1	99.3
NOVEMBER -2010	3.9	3.2	2.4	75.0	104	99.0	99.1
DECEMBER -2010	5.3	6.6	5.7	86.4	292	97.9	97.9
Average	3.4	5.8	4.9		176	98.1	98.2

Annual Mass Emissions are calculated from monthly averages of flow and TSS, wheras
Monthly Report average mass emissions are calculated from average daily mass emissions.

VSS = Volatile Suspended Solids
TSS = Total Suspended Solids

SOUTH BAY WATER RECLAMATION PLANT

Annual 2010

Effluent to Ocean Outfall
(SB_OUTFALL_01)

	Flow (mgd) 15	pH	Settleable Solids (ml/L)	Biochemical Oxygen Demand (mg/L)	Total Suspended Solids (mg/L)	Volatile Suspended Solids (mg/L)	Total Dissolved Solids (mg/L)
JANUARY -2010	5.06	7.55	ND	20.60	8.70	7.38	1060
FEBRUARY -2010	6.32	7.42	ND	13.60	7.85	6.71	1010
MARCH -2010	5.20	7.40	ND	9.83	6.63	5.68	1010
APRIL -2010	5.12	7.38	ND	9.49	7.29	6.28	1030
MAY -2010	2.41	7.37	ND	4.17	3.22	2.59	955
JUNE -2010	0.84	7.35	ND	8.79	6.41	5.49	991
JULY -2010	0.95	7.42	ND	11.50	6.70	5.72	973
AUGUST -2010	0.66	7.36	ND	9.39	5.59	4.71	999
SEPTEMBER-2010	1.07	7.41	ND	10.30	4.66	3.67	921
OCTOBER -2010	4.38	7.36	ND	8.46	2.65	2.03	920
NOVEMBER -2010	3.90	7.35	ND	10.20	3.21	2.40	968
DECEMBER -2010	5.32	7.39	ND	19.30	6.63	5.73	975
Average	3.44	7.40	ND	11.30	5.80	4.87	984

	Oil & Grease (mg/L)	Outfall Temperature (C)	Residual Chlorine (mg/L)	Turbidity (NTU)	Dissolved Oxygen (mg/L)
JANUARY -2010	2.3	21.7	0.06	4.65	4.42
FEBRUARY -2010	4.2	21.6	0.06	3.68	4.26
MARCH -2010	2.6	22.4	0.07	2.96	4.34
APRIL -2010	5.3	22.9	0.06	2.81	4.09
MAY -2010	4.1	22.8	0.07	1.23	4.71
JUNE -2010	2.7	24.4	0.07	2.51	3.86
JULY -2010	1.8	24.9	0.16	2.96	4.37
AUGUST -2010	1.7	25.9	0.10	2.32	3.40
SEPTEMBER-2010	2.7	25.6	0.07	1.90	4.07
OCTOBER -2010	3.8	24.8	0.05	1.39	3.99
NOVEMBER -2010	1.9	23.8	0.05	2.07	3.79
DECEMBER -2010	6.0	22.6	0.05	3.47	3.86
Average	3.3	23.6	0.07	2.66	4.10

ND=not detected
NR=not required

SOUTH BAY WATER RECLAMATION PLANT

Annual 2010

Influent to Plant
(SB_INF_02)

	Flow (mgd)	pH	Total Dissolved Solids (mg/L)	Biochemical Oxygen Demand (mg/L)	Total Suspended Solids (mg/L)	Volatile Suspended Solids (mg/L)	Turbidity (NTU)
JANUARY -2010	8.09	NR	1050	331	300	259	NR
FEBRUARY -2010	8.37	8.16	1030	332	314	272	134
MARCH -2010	8.21	NR	1040	346	284	250	NR
APRIL -2010	8.43	NR	1050	349	305	263	NR
MAY -2010	8.26	7.44	979	363	313	274	191
JUNE -2010	8.19	NR	986	374	327	285	NR
JULY -2010	8.22	NR	979	356	309	269	NR
AUGUST -2010	8.20	7.05	976	378	317	275	124
SEPTEMBER-2010	8.09	NR	985	379	328	286	NR
OCTOBER -2010	8.09	7.35	938	367	308	268	152
NOVEMBER -2010	8.23	NR	1000	359	306	270	NR
DECEMBER -2010	8.35	NR	990	324	314	274	NR
Average	8.23	7.50	1000	355	310	270	150

ND=not detected
NR=not required

SOUTH BAY WATER RECLAMATION PLANT
ANNUAL SEWAGE

Annual 2010

Trace Metals

Analyte:	Aluminum	Aluminum	Antimony	Antimony	Arsenic	Arsenic
MAX MDL Units:	47 UG/L	47 UG/L	2.9 UG/L	2.9 UG/L	.4 UG/L	.4 UG/L
Source:	Influent	Effluent	Influent	Effluent	Influent	Effluent
Month/Limit:						480
JANUARY -2010	1130	106	4.40	ND	0.92	0.51
FEBRUARY -2010	1300	135	ND	ND	1.22	0.79
MARCH -2010	1360	177	ND	ND	1.48	1.01
APRIL -2010	1440	152	ND	ND	0.90	0.86
MAY -2010	618	115	ND	ND	0.87	0.79
JUNE -2010	1310	101	ND	ND	1.13	0.72
JULY -2010	382	109	ND	ND	0.53	0.42
AUGUST -2010	380	342	ND	ND	ND	0.56
SEPTEMBER-2010	1150	174	ND	ND	0.85	0.83
OCTOBER -2010	1260	131	ND	ND	ND	0.49
NOVEMBER -2010	1350	158	ND	ND	0.87	0.52
DECEMBER -2010	1030	111	ND	ND	0.94	0.78
AVERAGE	1059	151	0.37	ND	0.81	0.69

Analyte:	Barium	Barium	Beryllium	Beryllium	Boron	Boron
MAX MDL Units:	.039 UG/L	.039 UG/L	.022 UG/L	.022 UG/L	7 UG/L	7 UG/L
Source:	Influent	Effluent	Influent	Effluent	Influent	Effluent
Month/Limit:						
JANUARY -2010	111.0	72.8	0.033	ND	316	299
FEBRUARY -2010	97.8	68.3	ND	ND	347	361
MARCH -2010	101.0	61.6	ND	ND	279	290
APRIL -2010	129.0	78.4	ND	ND	332	309
MAY -2010	63.4	52.1	ND	ND	306	369
JUNE -2010	98.6	61.4	ND	ND	312	334
JULY -2010	71.5	57.6	ND	ND	330	351
AUGUST -2010	76.8	48.1	ND	ND	325	334
SEPTEMBER-2010	85.3	54.9	ND	ND	310	320
OCTOBER -2010	77.8	46.6	ND	ND	260	194
NOVEMBER -2010	85.9	55.1	0.023	ND	348	317
DECEMBER -2010	90.3	55.6	ND	ND	318	319
AVERAGE	90.7	59.4	<0.022	ND	315	316

Analyte:	Cadmium	Cadmium	Chromium	Chromium	Cobalt	Cobalt
MAX MDL Units:	.53 UG/L	.53 UG/L	1.2 UG/L	1.2 UG/L	.85 UG/L	.85 UG/L
Source:	Influent	Effluent	Influent	Effluent	Influent	Effluent
Month/Limit:		48		760		
JANUARY -2010	0.7	ND	3.1	1.8	NR	ND
FEBRUARY -2010	ND	ND	3.5	<1.2	ND	ND
MARCH -2010	ND	ND	2.5	ND	ND	ND
APRIL -2010	ND	ND	3.8	ND	NR	ND
MAY -2010	ND	ND	1.5	2.1	ND	ND
JUNE -2010	ND	ND	3.4	ND	NR	ND
JULY -2010	ND	ND	2.3	ND	NR	ND
AUGUST -2010	ND	ND	2.2	ND	ND	ND
SEPTEMBER-2010	ND	ND	2.6	ND	NR	ND
OCTOBER -2010	ND	ND	3.0	1.5	ND	ND
NOVEMBER -2010	ND	ND	3.4	ND	NR	ND
DECEMBER -2010	ND	ND	2.3	ND	NR	ND
AVERAGE	0.1	ND	2.8	0.5	ND	ND

ND= not detected
NA= not analyzed
NS= not sampled

SOUTH BAY WATER RECLAMATION PLANT
ANNUAL SEWAGE

Annual 2010

Trace Metals

Analyte:	Copper	Copper	Iron	Iron	Lead	Lead
MAX MDL Units:	2 UG/L	2 UG/L	37 UG/L	37 UG/L	2 UG/L	2 UG/L
Source:	Influent	Effluent	Influent	Effluent	Influent	Effluent
Month/Limit:		960				760
JANUARY -2010	76	28	583	76	4.1	ND
FEBRUARY -2010	73	11	623	103	ND	ND
MARCH -2010	54	8	840	94	2.9	ND
APRIL -2010	79	21	823	128	3.5	ND
MAY -2010	32	13	255	95	ND	ND
JUNE -2010	70	8	827	99	2.4	ND
JULY -2010	64	19	318	41	ND	ND
AUGUST -2010	57	12	282	<37	ND	ND
SEPTEMBER-2010	84	24	643	115	5.1	ND
OCTOBER -2010	64	14	602	95	ND	ND
NOVEMBER -2010	83	16	682	ND	ND	ND
DECEMBER -2010	69	29	527	40	2.5	ND
AVERAGE	67	17	584	74	1.7	ND

Analyte:	Manganese	Manganese	Mercury	Mercury	Molybdenum	Molybdenum
MAX MDL Units:	.24 UG/L	.24 UG/L	.09 UG/L	.09 UG/L	.89 UG/L	.89 UG/L
Source:	Influent	Effluent	Influent	Effluent	Influent	Effluent
Month/Limit:				15		
JANUARY -2010	58.0	32.7	ND	ND	NR	4.3
FEBRUARY -2010	59.1	40.1	0.31	ND	5.6	3.3
MARCH -2010	51.5	21.4	0.17	ND	6.8	4.6
APRIL -2010	60.9	47.6	0.37	ND	NR	4.0
MAY -2010	59.3	29.7	ND	ND	5.5	6.4
JUNE -2010	53.7	32.3	0.13	ND	NR	3.5
JULY -2010	39.7	28.1	ND	ND*	NR	3.6
AUGUST -2010	43.8	23.4	ND	ND	5.4	3.0
SEPTEMBER-2010	46.7	24.4	0.13	ND	NR	3.3
OCTOBER -2010	40.2	25.1	0.07	0.01*	4.6	3.0
NOVEMBER -2010	66.0	41.0	0.07	ND*	NR	3.3
DECEMBER -2010	73.9	38.2	0.09	ND*	NR	4.6
AVERAGE	54.4	32.0	0.11	0.00	5.6	3.9

* MDL = 0.009
ND= not detected
NA= not analyzed
NS= not sampled

SOUTH BAY WATER RECLAMATION PLANT
ANNUAL SEWAGE

Annual 2010

Trace Metals

Analyte:	Nickel	Nickel	Selenium	Selenium	Silver	Silver
MAX MDL Units:	.53 UG/L	.53 UG/L	.28 UG/L	.28 UG/L	.4 UG/L	.4 UG/L
Source:	Influent	Effluent	Influent	Effluent	Influent	Effluent
Month/Limit:		1900		1400		250
JANUARY -2010	11.6	4.97	2.00	0.90	0.8	ND
FEBRUARY -2010	5.75	10.1	1.83	0.85	1.2	ND
MARCH -2010	3.73	4.17	1.80	0.83	1.7	0.6
APRIL -2010	4.89	3.29	2.18	0.93	1.4	ND
MAY -2010	4.05	5.19	1.18	0.63	ND	ND
JUNE -2010	5.09	5.16	1.79	0.66	1.7	ND
JULY -2010	3.90	4.46	1.15	0.51	1.0	ND
AUGUST -2010	4.67	4.63	1.07	0.64	ND	ND
SEPTEMBER-2010	6.27	4.10	1.04	0.60	0.5	ND
OCTOBER -2010	4.90	3.93	ND	0.53	0.6	ND
NOVEMBER -2010	15.1	8.91	1.43	0.39	2.2	0.5
DECEMBER -2010	5.00	3.55	1.53	0.61	0.8	ND
AVERAGE	6.25	5.21	1.42	0.67	1.0	0.1

Analyte:	Thallium	Thallium	Vanadium	Vanadium	Zinc	Zinc
MAX MDL Units:	3.9 UG/L	3.9 UG/L	.64 UG/L	.64 UG/L	2.5 UG/L	2.5 UG/L
Source:	Influent	Effluent	Influent	Effluent	Influent	Effluent
Month/Limit:						6900
JANUARY -2010	ND	ND	NR	ND	187	37.3
FEBRUARY -2010	ND	ND	3.0	1.31	153	29.8
MARCH -2010	ND	ND	3.6	2.02	137	39.6
APRIL -2010	ND	ND	NR	1.61	245	32.4
MAY -2010	ND	ND	1.4	1.12	63	31.5
JUNE -2010	ND	ND	NR	ND	149	28.5
JULY -2010	ND	ND	NR	ND	81	23.8
AUGUST -2010	ND	ND	1.4	1.17	83	30.7
SEPTEMBER-2010	ND	ND	NR	ND	176	26.0
OCTOBER -2010	ND	ND	1.1	<0.64	143	30.0
NOVEMBER -2010	ND	ND	NR	1.12	167	27.4
DECEMBER -2010	ND	ND	NR	0.95	150	27.2
AVERAGE	ND	ND	2.1	0.78	145	30.4

ND= not detected
NA= not analyzed
NS= not sampled

SOUTH BAY WATER RECLAMATION PLANT
Annual Sewage Cations

Annual 2010

MDL/UNITS:	Calcium .04 mg/L		Magnesium .1 mg/L		Lithium .002 mg/L	
	INF	EFF	INF	EFF	INF	EFF
JANUARY -2010	78.0	78.2	31.3	29.8	0.043	0.044
FEBRUARY -2010	80.8	84.0	35.5	36.4	0.037	0.038
MARCH -2010	74.8	71.6	31.2	28.7	0.035	0.031
APRIL -2010	82.7	87.1	32.2	33.9	0.050	0.042
MAY -2010	68.3	73.1	29.3	30.5	0.029	0.028
JUNE -2010	79.5	78.4	31.2	30.9	0.041	0.038
JULY -2010	77.5	75.1	34.2	32.0	0.033	0.033
AUGUST -2010	75.6	73.1	31.9	29.8	0.041	0.041
SEPTEMBER-2010	72.1	73.0	34.2	33.2	0.035	0.032
OCTOBER -2010	66.4	68.8	30.4	30.1	0.032	0.031
NOVEMBER -2010	72.2	75.5	36.2	35.0	0.035	0.033
DECEMBER -2010	76.5	77.9	37.5	36.6	0.036	0.034
Average:	75.4	76.3	32.9	32.2	0.037	0.035

MDL/UNITS:	Sodium 1 mg/L		Potassium .3 mg/L	
	INF	EFF	INF	EFF
JANUARY -2010	182	187	20.8	19.1
FEBRUARY -2010	218	219	22.0	19.8
MARCH -2010	190	180	19.4	15.7
APRIL -2010	186	201	20.9	19.8
MAY -2010	178	201	20.9	19.8
JUNE -2010	192	196	22.8	20.2
JULY -2010	196	197	24.5	20.5
AUGUST -2010	178	182	19.8	21.4
SEPTEMBER-2010	194	203	25.3	20.8
OCTOBER -2010	191	192	20.6	19.2
NOVEMBER -2010	207	215	22.4	20.3
DECEMBER -2010	214	216	21.9	19.9
Average:	194	199	21.8	19.7

ND=not detected

SOUTH BAY WATER RECLAMATION PLANT
ANNUAL SEWAGE

Anions

Annual 2010

Analyte:	Bromide	Bromide	Chloride	Chloride	Fluoride	Fluoride
MDL Units:	.1	.1	7	7	.05	.05
Source:	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
Month/Limit:	INFLUENT	EFFLUENT	INFLUENT	EFFLUENT	INFLUENT	EFFLUENT
JANUARY -2010	0.32	0.37	223	243	0.330	0.670
FEBRUARY -2010	0.36	0.45	232	251	0.602	0.710
MARCH -2010	0.44	0.42	237	231	0.612	0.630
APRIL -2010	0.44	0.45	239	250	0.547	0.690
MAY -2010	0.46	0.53	230	251	0.647	0.670
JUNE -2010	0.34	0.42	220	235	0.434	0.544
JULY -2010	0.30	0.39	238	244	0.476	0.560
AUGUST -2010	0.32	0.36	235	229	0.530	0.590
SEPTEMBER-2010	0.29	0.39	240	248	0.453	0.620
OCTOBER -2010	<0.10	0.26	212	233	0.367	0.530
NOVEMBER -2010	0.27	0.33	254	278	0.475	0.578
DECEMBER -2010	0.36	0.38	279	281	0.521	0.562
AVERAGE	0.33	0.40	237	248	0.500	0.613

Analyte:	Nitrate	Nitrate	Ortho PhosphOrtho Phosphate		Sulfate	Sulfate
MDL:	.04	.04	.2	.2	9	9
Units:	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
Source:	INFLUENT	EFFLUENT	INFLUENT	EFFLUENT	INFLUENT	EFFLUENT
JANUARY -2010	0.317	14.2	11.2	1.41	197	238
FEBRUARY -2010	0.362	25.5	11.8	4.69	189	224
MARCH -2010	0.471	26.4	11.8	7.25	189	193
APRIL -2010	0.158	25.3	11.7	5.05	183	237
MAY -2010	0.196	28.7	13.3	9.00	162	181
JUNE -2010	0.178	27.6	12.4	9.26	167	210
JULY -2010	0.349	24.9	13.5	4.25	161	197
AUGUST -2010	0.200	26.2	12.8	10.40	164	210
SEPTEMBER-2010	0.867	25.6	14.3	1.58	156	196
OCTOBER -2010	0.115	25.2	11.6	4.33	145	188
NOVEMBER -2010	0.044	24.0	11.5	0.62	159	192
DECEMBER -2010	0.117	29.3	11.5	3.14	166	198
AVERAGE	0.281	25.2	12.3	5.08	170	205

ND= not detected
NA= not analyzed
NS= not sampled

SOUTH BAY WATER RECLAMATION PLANT
ANNUAL SEWAGE

Ammonia-Nitrogen and Total Cyanides

Annual 2010

	Ammonia-N .3 SB_INF_02	Ammonia-N .3 SB_OUTFALL_01	Total Cyanides .002 MG/L SB_INF_02	Total Cyanides .002 MG/L SB_OUTFALL_01
JANUARY -2010	36.8	4.8	ND	ND
FEBRUARY -2010	32.7	1.7	ND	ND
MARCH -2010	30.6	0.3	ND	0.002
APRIL -2010	32.7	0.5	ND	ND
MAY -2010	47.0	ND	ND	ND
JUNE -2010	32.5	1.4	ND	ND
JULY -2010	40.3	1.4	ND	0.002
AUGUST -2010	30.8	ND	ND	ND
SEPTEMBER-2010	36.0	ND	ND	ND
OCTOBER -2010	30.9	ND	ND	ND
NOVEMBER -2010	26.8	1.8	ND	ND
DECEMBER -2010	34.3	1.8	ND	0.002
Average:	34.3	1.1	ND	0.001

ND= not detected

SOUTH BAY WATER RECLAMATION PLANT
Radioactivity
Effluent to the Ocean

Analyzed by: TestAmerica Laboratories Richland

Annual 2010

Source	Month	Gross Alpha Radiation	Gross Beta Radiation
SB_OUTFALL_01	JANUARY -2010	3.0 ± 2.0	21.2 ± 4.5
SB_OUTFALL_01	FEBRUARY -2010	2.1 ± 2.2	22.0 ± 4.5
SB_OUTFALL_01	MARCH -2010	1.5 ± 2.3	18.8 ± 4.1
SB_OUTFALL_01	APRIL -2010	1.8 ± 2.2	18.4 ± 4.4
SB_OUTFALL_01	MAY -2010	2.0 ± 2.6	21.9 ± 6.2
SB_OUTFALL_01	JUNE -2010	1.0 ± 1.4	20.4 ± 4.3
SB_OUTFALL_01	JULY -2010	1.9 ± 2.0	21.2 ± 4.5
SB_OUTFALL_01	AUGUST -2010	1.9 ± 1.5	25.5 ± 4.8
SB_OUTFALL_01	SEPTEMBER-2010	3.2 ± 2.2	19.1 ± 4.9
SB_OUTFALL_01	OCTOBER -2010	2.9 ± 2.8	28.3 ± 7.9
SB_OUTFALL_01	NOVEMBER -2010	2.0 ± 1.6	25.5 ± 5.7
SB_OUTFALL_01	DECEMBER -2010	0.9 ± 1.1	25.2 ± 4.7
AVERAGE		2.0 ± 2.0	22.3 ± 5.0

Units in picocuries/liter (pCi/L)

SOUTH BAY WATER RECLAMATION PLANT
SEWAGE ANNUAL - Chlorinated Pesticide Analysis

Annual 2010

Analyte	MDL	Units	EFF JAN	EFF FEB	EFF MAR	EFF APR	EFF MAY	EFF JUN	EFF JUL	EFF AUG	EFF SEP	EFF OCT	EFF NOV	EFF DEC	EFF Avg
Aldrin	7	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	3	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BHC, Alpha isomer	7	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BHC, Beta isomer	3	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BHC, Gamma isomer	5	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BHC, Delta isomer	3	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
p,p-DDD	3	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
p,p-DDE	4	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
p,p-DDT	8	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
o,p-DDD	4	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
o,p-DDE	5	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
o,p-DDT	3	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	8	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor epoxide	4	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Alpha (cis) Chlordane	3	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Gamma (trans) Chlordane	4	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Alpha Chlordene		NG/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gamma Chlordene		NG/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oxychlordane	6	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trans Nonachlor	5	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cis Nonachlor	3	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Alpha Endosulfan	4	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Beta Endosulfan	2	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan Sulfate	6	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	2	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin aldehyde	9	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mirex	10	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methoxychlor	10	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toxaphene	330	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB 1016	4000	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB 1221	4000	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB 1232	360	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB 1242	4000	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB 1248	2000	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB 1254	2000	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB 1260	2000	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB 1262	930	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aldrin + Dieldrin	7	NG/L	0	0	0	0	0	0	0	0	0	0	0	0	0
Hexachlorocyclohexanes	7	NG/L	0	0	0	0	0	0	0	0	0	0	0	0	0
DDT and derivatives	8	NG/L	0	0	0	0	0	0	0	0	0	0	0	0	0
Chlordane + related cmpds.	6	NG/L	0	0	0	0	0	0	0	0	0	0	0	0	0
Polychlorinated biphenyls	4000	NG/L	0	0	0	0	0	0	0	0	0	0	0	0	0
Endosulfans	6	NG/L	0	0	0	0	0	0	0	0	0	0	0	0	0
Heptachlors	8	NG/L	0	0	0	0	0	0	0	0	0	0	0	0	0
Chlorinated Hydrocarbons	4000	NG/L	0	0	0	0	0	0	0	0	0	0	0	0	0

ND= not detected
NA= not analyzed
NS= not sampled
Standards for alpha and gamma chlordene are no longer available in the U.S. for the analysis of these compounds.

SOUTH BAY WATER RECLAMATION PLANT
SEWAGE ANNUAL - Chlorinated Pesticide Analysis

Annual 2010

Analyte	MDL	Units	INF FEB	INF MAY	INF AUG	INF OCT	INF Avg
Aldrin	7	NG/L	ND	ND	ND	ND	ND
Dieldrin	3	NG/L	ND	ND	ND	ND	ND
BHC, Alpha isomer	7	NG/L	ND	ND	ND	ND	ND
BHC, Beta isomer	3	NG/L	ND	ND	ND	ND	ND
BHC, Gamma isomer	5	NG/L	ND	ND	ND	10	3
BHC, Delta isomer	3	NG/L	ND	ND	ND	ND	ND
p,p-DDD	3	NG/L	ND	ND	ND	ND	ND
p,p-DDE	4	NG/L	ND	ND	ND	ND	ND
p,p-DDT	8	NG/L	ND	ND	ND	ND	ND
o,p-DDD	4	NG/L	ND	ND	ND	ND	ND
o,p-DDE	5	NG/L	ND	ND	ND	ND	ND
o,p-DDT	3	NG/L	ND	ND	ND	ND	ND
Heptachlor	8	NG/L	ND	ND	ND	ND	ND
Heptachlor epoxide	4	NG/L	ND	ND	ND	ND	ND
Alpha (cis) Chlordane	3	NG/L	ND	ND	ND	ND	ND
Gamma (trans) Chlordane	4	NG/L	ND	ND	ND	ND	ND
Alpha Chlordene		NG/L	NA	NA	NA	NA	NA
Gamma Chlordene		NG/L	NA	NA	NA	NA	NA
Oxychlordane	6	NG/L	ND	ND	ND	ND	ND
Trans Nonachlor	5	NG/L	ND	ND	ND	ND	ND
Cis Nonachlor	3	NG/L	ND	ND	ND	ND	ND
Alpha Endosulfan	4	NG/L	ND	ND	ND	ND	ND
Beta Endosulfan	2	NG/L	ND	ND	ND	ND	ND
Endosulfan Sulfate	6	NG/L	ND	ND	ND	ND	ND
Endrin	2	NG/L	ND	ND	ND	ND	ND
Endrin aldehyde	9	NG/L	ND	ND	ND	ND	ND
Mirex	10	NG/L	ND	ND	ND	ND	ND
Methoxychlor	10	NG/L	ND	ND	ND	ND	ND
Toxaphene	330	NG/L	ND	ND	ND	ND	ND
PCB 1016	4000	NG/L	ND	ND	ND	ND	ND
PCB 1221	4000	NG/L	ND	ND	ND	ND	ND
PCB 1232	360	NG/L	ND	ND	ND	ND	ND
PCB 1242	4000	NG/L	ND	ND	ND	ND	ND
PCB 1248	2000	NG/L	ND	ND	ND	ND	ND
PCB 1254	2000	NG/L	ND	ND	ND	ND	ND
PCB 1260	2000	NG/L	ND	ND	ND	ND	ND
PCB 1262	930	NG/L	ND	ND	ND	ND	ND
Aldrin + Dieldrin	7	NG/L	0	0	0	0	0
Hexachlorocyclohexanes	7	NG/L	0	0	0	10	3
DDT and derivatives	8	NG/L	0	0	0	0	0
Chlordane + related cmpds.	6	NG/L	0	0	0	0	0
Polychlorinated biphenyls	4000	NG/L	0	0	0	0	0
Endosulfans	6	NG/L	0	0	0	0	0
Heptachlors	8	NG/L	0	0	0	0	0
Chlorinated Hydrocarbons	4000	NG/L	0	0	0	10	3

ND= not detected
NA= not analyzed
NS= not sampled
Standards for alpha and gamma chlordene are no longer available in the U.S. for the analysis of these compounds.

SOUTH BAY WATER RECLAMATION PLANT
Organophosphorus PesticidesEPA Method 614/622 (with additions)

INFLUENT & EFFLUENT

Annual 2010

Analyte	MDL	Units	Effluent 04-MAY-2010 P515506	Effluent 05-OCT-2010 P533621	Influent 04-MAY-2010 P515501	Influent 05-OCT-2010 P533616
Demeton O	.15	UG/L	ND	ND	ND	ND
Demeton S	.08	UG/L	ND	ND	ND	ND
Diazinon	.03	UG/L	ND	ND	ND	ND
Guthion	.15	UG/L	ND	ND	ND	ND
Malathion	.03	UG/L	ND	ND	ND	ND
Parathion	.03	UG/L	ND	ND	ND	ND
Dichlorvos	.05	UG/L	ND	ND	ND	ND
Dibrom	.2	UG/L	ND	NR	ND	NR
Ethoprop	.04	UG/L	ND	NR	ND	NR
Phorate	.04	UG/L	ND	NR	ND	NR
Sulfotepp	.04	UG/L	ND	NR	ND	NR
Disulfoton	.02	UG/L	ND	ND	ND	ND
Dimethoate	.04	UG/L	ND	ND	ND	ND
Ronnel	.03	UG/L	ND	NR	ND	NR
Trichloronate	.04	UG/L	ND	NR	ND	NR
Merphos	.09	UG/L	ND	NR	ND	NR
Dichlofenthion	.03	UG/L	ND	NR	ND	NR
Tokuthion	.06	UG/L	ND	NR	ND	NR
Stirophos	.03	UG/L	ND	ND	ND	ND
Bolstar	.07	UG/L	ND	NR	ND	NR
Fensulfothion	.07	UG/L	ND	NR	ND	NR
EPN	.09	UG/L	ND	NR	ND	NR
Coumaphos	.15	UG/L	ND	ND	ND	ND
Mevinphos, e isomer	.05	UG/L	ND	NR	ND	NR
Mevinphos, z isomer	.3	UG/L	ND	NR	ND	NR
Chlorpyrifos	.03	UG/L	ND	ND	ND	ND
Thiophosphorus Pesticides	.15	UG/L	0.0	0.0	0.0	0.0
Demeton -O, -S	.15	UG/L	0.0	0.0	0.0	0.0
Total Organophosphorus Pesticides	.3	UG/L	0.0	0.0	0.0	0.0

ND=not detected
NR=not required

SOUTH BAY WATER RECLAMATION PLANT
ANNUAL SEWAGE - Tributyl Tin Analysis

Annual 2010

Effluent

Analyte	MDL	Units	FEB	MAY	AUG	OCT	Average
Dibutyltin	7	UG/L	ND	ND	ND	ND	ND
Monobutyltin	16	UG/L	ND	ND	ND	ND	ND
Tributyltin	2	UG/L	ND	ND	ND	ND	ND

Influent

Analyte	MDL	Units	FEB	MAY	AUG	OCT	Average
Dibutyltin	7	UG/L	ND	ND	ND	ND	ND
Monobutyltin	16	UG/L	ND	ND	ND	ND	ND
Tributyltin	2	UG/L	ND	ND	ND	ND	ND

ND=not detected

SOUTH BAY WATER RECLAMATION PLANT
SEWAGE ANNUAL - Acid Extractables

Annual 2010

EFFLUENT

Analyte	MDL	Units	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVG
2-chlorophenol	1.32	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-dichlorophenol	1.01	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-chloro-3-methylphenol	1.67	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4,6-trichlorophenol	1.65	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pentachlorophenol	1.12	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenol	1.76	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-nitrophenol	1.55	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-dimethylphenol	2.01	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-dinitrophenol	2.16	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-nitrophenol	1.14	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-methyl-4,6-dinitrophenol	1.52	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Chlorinated Phenols	1.67	UG/L	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Non-Chlorinated Phenols	2.16	UG/L	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Phenols	2.16	UG/L	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2-methylphenol	2.15	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3-methylphenol(4-MP is unresolved)		UG/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-methylphenol(3-MP is unresolved)	2.11	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4,5-trichlorophenol	1.66	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

INFLUENT

Analyte	MDL	Units	FEB	MAY	AUG	OCT	AVG
2-chlorophenol	1.32	UG/L	ND	ND	ND	ND	ND
2,4-dichlorophenol	1.01	UG/L	ND	ND	ND	ND	ND
4-chloro-3-methylphenol	1.67	UG/L	ND	ND	ND	ND	ND
2,4,6-trichlorophenol	1.65	UG/L	ND	ND	ND	ND	ND
Pentachlorophenol	1.12	UG/L	ND	ND	ND	ND	ND
Phenol	1.76	UG/L	26.7	47.7	44.2	36.5	38.8
2-nitrophenol	1.55	UG/L	ND	ND	ND	ND	ND
2,4-dimethylphenol	2.01	UG/L	ND	ND	ND	ND	ND
2,4-dinitrophenol	2.16	UG/L	ND	ND	ND	ND	ND
4-nitrophenol	1.14	UG/L	ND	ND	ND	ND	ND
2-methyl-4,6-dinitrophenol	1.52	UG/L	ND	ND	ND	ND	ND
Total Chlorinated Phenols	1.67	UG/L	0.0	0.0	0.0	0.0	0.0
Total Non-Chlorinated Phenols	2.16	UG/L	26.7	47.7	44.2	36.5	38.8
Total Phenols	2.16	UG/L	26.7	47.7	44.2	36.5	38.8
2-methylphenol	2.15	UG/L	ND	ND	ND	ND	ND
3-methylphenol(4-MP is unresolved)		UG/L	NA	NA	NA	NA	NA
4-methylphenol(3-MP is unresolved)	2.11	UG/L	101	123	120	92.5	109
2,4,5-trichlorophenol	1.66	UG/L	ND	ND	ND	ND	ND

ND=not detected
NS=not sampled
NA=not analyzed

SOUTH BAY WATER RECLAMATION PLANT
SEWAGE ANNUAL Priority Pollutants Base/Neutrals

Annual 2010

Analyte	MDL	Units	EFF FEB Avg	EFF MAY Avg	EFF AUG Avg	EFF OCT Avg	EFF Average
bis(2-chloroethyl) ether	1.38	UG/L	ND	ND	ND	ND	ND
Bis-(2-chloroisopropyl) ether	1.16	UG/L	ND	ND	ND	ND	ND
N-nitrosodi-n-propylamine	1.16	UG/L	ND	ND	ND	ND	ND
Nitrobenzene	1.6	UG/L	ND	ND	ND	ND	ND
Hexachloroethane	1.32	UG/L	ND	ND	ND	ND	ND
Isophorone	1.53	UG/L	ND	ND	ND	ND	ND
bis(2-chloroethoxy)methane	1.01	UG/L	ND	ND	ND	ND	ND
1,2,4-trichlorobenzene	1.52	UG/L	ND	ND	ND	ND	ND
Naphthalene	1.65	UG/L	ND	ND	ND	ND	ND
Hexachlorobutadiene	1.64	UG/L	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	1.25	UG/L	ND	ND	ND	ND	ND
Acenaphthylene	1.77	UG/L	ND	ND	ND	ND	ND
Dimethyl phthalate	1.44	UG/L	ND	ND	ND	ND	ND
2,6-dinitrotoluene	1.53	UG/L	ND	ND	ND	ND	ND
Acenaphthene	1.8	UG/L	ND	ND	ND	ND	ND
2,4-dinitrotoluene	1.36	UG/L	ND	ND	ND	ND	ND
Fluorene	1.61	UG/L	ND	ND	ND	ND	ND
4-chlorophenyl phenyl ether	1.57	UG/L	ND	ND	ND	ND	ND
Diethyl phthalate	3.05	UG/L	ND	ND	ND	ND	ND
N-nitrosodiphenylamine	3.48	UG/L	ND	ND	ND	ND	ND
4-bromophenyl phenyl ether	1.4	UG/L	ND	ND	ND	ND	ND
Hexachlorobenzene	1.48	UG/L	ND	ND	ND	ND	ND
Phenanthrene	1.34	UG/L	ND	ND	ND	ND	ND
Anthracene	1.29	UG/L	ND	ND	ND	ND	ND
Di-n-butyl phthalate	3.96	UG/L	ND	ND	ND	ND	ND
N-nitrosodimethylamine	1.27	UG/L	ND	ND	ND	ND	ND
Fluoranthene	1.33	UG/L	ND	ND	ND	ND	ND
Pyrene	1.43	UG/L	ND	ND	ND	ND	ND
Benzidine	1.52	UG/L	ND	ND	ND	ND	ND
Butyl benzyl phthalate	2.84	UG/L	ND	ND	ND	ND	ND
Chrysene	1.16	UG/L	ND	ND	ND	ND	ND
Benzo[A]anthracene	1.1	UG/L	ND	ND	ND	ND	ND
Bis-(2-ethylhexyl) phthalate	8.96	UG/L	9.8	ND	ND	ND	2.5
Di-n-octyl phthalate	1	UG/L	ND	ND	ND	ND	ND
3,3-dichlorobenzidine	2.44	UG/L	ND	ND	ND	ND	ND
Benzo[K]fluoranthene	1.49	UG/L	ND	ND	ND	ND	ND
3,4-benzo(B)fluoranthene	1.35	UG/L	ND	ND	ND	ND	ND
Benzo[A]pyrene	1.25	UG/L	ND	ND	ND	ND	ND
Indeno(1,2,3-CD)pyrene	1.14	UG/L	ND	ND	ND	ND	ND
Dibenzo(A,H)anthracene	1.01	UG/L	ND	ND	ND	ND	ND
Benzo[G,H,I]perylene	1.09	UG/L	ND	ND	ND	ND	ND
1,2-diphenylhydrazine	1.37	UG/L	ND	ND	ND	ND	ND
Polynuc. Aromatic Hydrocarbons	1.77	UG/L	0.0	0.0	0.0	0.0	0.0
Base/Neutral Compounds	8.96	UG/L	9.8	0.0	0.0	0.0	2.5
1-methylnaphthalene	2.18	UG/L	ND	ND	ND	ND	ND
2-methylnaphthalene	2.14	UG/L	ND	ND	ND	ND	ND
2,6-dimethylnaphthalene	2.16	UG/L	ND	ND	ND	ND	ND
2,3,5-trimethylnaphthalene	2.18	UG/L	ND	ND	ND	ND	ND
1-methylphenanthrene	1.46	UG/L	ND	ND	ND	ND	ND
Benzo[e]pyrene	1.44	UG/L	ND	ND	ND	ND	ND
Perylene	1.41	UG/L	ND	ND	ND	ND	ND
Biphenyl	2.29	UG/L	ND	ND	ND	ND	ND

ND=not detected

SOUTH BAY WATER RECLAMATION PLANT
SEWAGE ANNUAL Priority Pollutants Base/Neutrals

Annual 2010

Analyte	MDL	Units	INF FEB Avg	INF MAY Avg	INF AUG Avg	INF OCT Avg	Average
bis(2-chloroethyl) ether	1.38	UG/L	ND	ND	ND	ND	ND
Bis-(2-chloroisopropyl) ether	1.16	UG/L	ND	ND	ND	ND	ND
N-nitrosodi-n-propylamine	1.16	UG/L	ND	ND	ND	ND	ND
Nitrobenzene	1.6	UG/L	ND	ND	ND	ND	ND
Hexachloroethane	1.32	UG/L	ND	ND	ND	ND	ND
Isophorone	1.53	UG/L	ND	33.8	ND	ND	8.5
bis(2-chloroethoxy)methane	1.01	UG/L	ND	ND	ND	ND	ND
1,2,4-trichlorobenzene	1.52	UG/L	ND	ND	ND	ND	ND
Naphthalene	1.65	UG/L	ND	ND	ND	ND	ND
Hexachlorobutadiene	1.64	UG/L	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	1.25	UG/L	ND	ND	ND	ND	ND
Acenaphthylene	1.77	UG/L	ND	ND	ND	ND	ND
Dimethyl phthalate	1.44	UG/L	ND	ND	ND	ND	ND
2,6-dinitrotoluene	1.53	UG/L	ND	ND	ND	ND	ND
Acenaphthene	1.8	UG/L	ND	ND	ND	ND	ND
2,4-dinitrotoluene	1.36	UG/L	ND	ND	ND	ND	ND
Fluorene	1.61	UG/L	ND	ND	ND	ND	ND
4-chlorophenyl phenyl ether	1.57	UG/L	ND	ND	ND	ND	ND
Diethyl phthalate	3.05	UG/L	10.8	13.2	9.7	8.9	10.7
N-nitrosodiphenylamine	3.48	UG/L	ND	ND	ND	ND	ND
4-bromophenyl phenyl ether	1.4	UG/L	ND	ND	ND	ND	ND
Hexachlorobenzene	1.48	UG/L	ND	ND	ND	ND	ND
Phenanthrene	1.34	UG/L	ND	ND	ND	ND	ND
Anthracene	1.29	UG/L	ND	ND	ND	ND	ND
Di-n-butyl phthalate	3.96	UG/L	ND	ND	ND	ND	ND
N-nitrosodimethylamine	1.27	UG/L	ND	ND	ND	ND	ND
Fluoranthene	1.33	UG/L	ND	ND	ND	ND	ND
Pyrene	1.43	UG/L	ND	ND	ND	ND	ND
Benzidine	1.52	UG/L	ND	ND	ND	ND	ND
Butyl benzyl phthalate	2.84	UG/L	3.9	ND	ND	ND	1.0
Chrysene	1.16	UG/L	ND	ND	ND	ND	ND
Benzo[A]anthracene	1.1	UG/L	ND	ND	ND	ND	ND
Bis-(2-ethylhexyl) phthalate	8.96	UG/L	10.3	11.1	12.2	23.6	14.3
Di-n-octyl phthalate	1	UG/L	ND	ND	ND	ND	ND
3,3-dichlorobenzidine	2.44	UG/L	ND	ND	ND	ND	ND
Benzo[K]fluoranthene	1.49	UG/L	ND	ND	ND	ND	ND
3,4-benzo(B)fluoranthene	1.35	UG/L	ND	ND	ND	ND	ND
Benzo[A]pyrene	1.25	UG/L	ND	ND	ND	ND	ND
Indeno(1,2,3-CD)pyrene	1.14	UG/L	ND	ND	ND	ND	ND
Dibenzo(A,H)anthracene	1.01	UG/L	ND	ND	ND	ND	ND
Benzo[G,H,I]perylene	1.09	UG/L	ND	ND	ND	ND	ND
1,2-diphenylhydrazine	1.37	UG/L	ND	ND	ND	ND	ND
Polynuc. Aromatic Hydrocarbons	1.77	UG/L	0.0	0.0	0.0	0.0	0.0
Base/Neutral Compounds	8.96	UG/L	25.0	58.1	21.9	32.5	34.4
1-methylnaphthalene	2.18	UG/L	ND	ND	ND	ND	ND
2-methylnaphthalene	2.14	UG/L	ND	ND	ND	ND	ND
2,6-dimethylnaphthalene	2.16	UG/L	ND	ND	ND	ND	ND
2,3,5-trimethylnaphthalene	2.18	UG/L	ND	ND	ND	ND	ND
1-methylphenanthrene	1.46	UG/L	ND	ND	ND	ND	ND
Benzo[e]pyrene	1.44	UG/L	ND	ND	ND	ND	ND
Perylene	1.41	UG/L	ND	ND	ND	ND	ND
Biphenyl	2.29	UG/L	ND	ND	ND	ND	ND

ND=not detected

SOUTH BAY WATER RECLAMATION PLANT
SEWAGE ANNUAL Priority Pollutants Purgeables

Annual 2010

Analyte	MDL	Units	EFF FEB	EFF MAY	EFF AUG	EFF OCT	EFF Average
Dichlorodifluoromethane	.66	UG/L	ND	ND	ND	ND	ND
Chloromethane	.5	UG/L	ND	ND	ND	ND	ND
Vinyl chloride	.4	UG/L	ND	ND	ND	ND	ND
Bromomethane	.7	UG/L	ND	ND	ND	ND	ND
Chloroethane	.9	UG/L	ND	ND	ND	ND	ND
Trichlorofluoromethane	.3	UG/L	ND	ND	ND	ND	ND
Acrolein	1.3	UG/L	ND	ND	ND	ND	ND
1,1-dichloroethane	.4	UG/L	ND	ND	ND	ND	ND
Methylene chloride	.3	UG/L	2.1	0.5	0.8	2.7	1.5
trans-1,2-dichloroethene	.6	UG/L	ND	ND	ND	ND	ND
1,1-dichloroethene	.4	UG/L	ND	ND	ND	ND	ND
Acrylonitrile	.7	UG/L	ND	ND	ND	ND	ND
Chloroform	.2	UG/L	0.5	0.6	1.0	0.5	0.7
1,1,1-trichloroethane	.4	UG/L	ND	ND	ND	ND	ND
Carbon tetrachloride	.4	UG/L	ND	ND	ND	ND	ND
Benzene	.4	UG/L	ND	ND	ND	ND	ND
1,2-dichloroethane	.5	UG/L	ND	ND	ND	ND	ND
Trichloroethene	.7	UG/L	ND	ND	ND	ND	ND
1,2-dichloropropane	.3	UG/L	ND	ND	ND	ND	ND
Bromodichloromethane	.5	UG/L	ND	ND	ND	ND	ND
2-chloroethylvinyl ether	1.1	UG/L	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	.3	UG/L	ND	ND	ND	ND	ND
Toluene	.4	UG/L	ND	ND	ND	ND	ND
trans-1,3-dichloropropene	.5	UG/L	ND	ND	ND	ND	ND
1,1,2-trichloroethane	.5	UG/L	ND	ND	ND	ND	ND
Tetrachloroethene	1.1	UG/L	ND	ND	ND	ND	ND
Dibromochloromethane	.6	UG/L	ND	ND	ND	ND	ND
Chlorobenzene	.4	UG/L	ND	ND	ND	ND	ND
Ethylbenzene	.3	UG/L	ND	ND	ND	ND	ND
Bromoform	.5	UG/L	ND	ND	ND	ND	ND
1,1,2,2-tetrachloroethane	.5	UG/L	ND	ND	ND	ND	ND
1,3-dichlorobenzene	.5	UG/L	ND	ND	ND	ND	ND
1,4-dichlorobenzene	.4	UG/L	ND	ND	ND	ND	ND
1,2-dichlorobenzene	.4	UG/L	ND	ND	ND	ND	ND
Halomethane Purgeable Cmpnds	.7	UG/L	0.0	0.0	0.0	0.0	0.0
Total Dichlorobenzenes	.5	UG/L	0.0	0.0	0.0	0.0	0.0
Total Chloromethanes	.5	UG/L	2.6	1.1	1.8	3.2	2.2
Purgeable Compounds	1.3	UG/L	2.6	1.1	1.8	3.2	2.2
Methyl Iodide	.6	UG/L	ND	ND	ND	ND	ND
Carbon disulfide	.6	UG/L	ND	ND	ND	ND	ND
Acetone	4.5	UG/L	ND	ND	ND	ND	ND
Allyl chloride	.6	UG/L	ND	ND	ND	ND	ND
Methyl tert-butyl ether	.4	UG/L	ND	ND	ND	ND	ND
Chloroprene	.4	UG/L	ND	ND	ND	ND	ND
1,2-dibromoethane	.3	UG/L	ND	ND	ND	ND	ND
2-butanone	6.3	UG/L	ND	ND	ND	ND	ND
Methyl methacrylate	.8	UG/L	ND	ND	ND	ND	ND
2-nitropropane	12	UG/L	ND	ND	ND	ND	ND
4-methyl-2-pentanone	1.3	UG/L	ND	ND	ND	ND	ND
meta,para xylenes	.6	UG/L	ND	ND	ND	ND	ND
ortho-xylene	.4	UG/L	ND	ND	ND	ND	ND
Isopropylbenzene	.3	UG/L	ND	ND	ND	ND	ND
Styrene	.3	UG/L	ND	ND	ND	ND	ND
Benzyl chloride	1.1	UG/L	ND	ND	ND	ND	ND
1,2,4-trichlorobenzene	1.52	UG/L	ND	ND	ND	ND	ND

ND=not detected

SOUTH BAY WATER RECLAMATION PLANT
SEWAGE ANNUAL Priority Pollutants Purgeables

Annual 2010

Analyte	MDL	Units	INF FEB	INF MAY	INF AUG	INF OCT	INF Average
Dichlorodifluoromethane	.66	UG/L	ND	ND	ND	ND	ND
Chloromethane	.5	UG/L	ND	ND	ND	ND	ND
Vinyl chloride	.4	UG/L	ND	ND	ND	ND	ND
Bromomethane	.7	UG/L	ND	ND	ND	ND	ND
Chloroethane	.9	UG/L	ND	ND	ND	ND	ND
Trichlorofluoromethane	.3	UG/L	ND	ND	ND	ND	ND
Acrolein	1.3	UG/L	ND	ND	ND	ND	ND
1,1-dichloroethane	.4	UG/L	ND	ND	ND	ND	ND
Methylene chloride	.3	UG/L	1.4	1.8	2.2	10.2	3.9
trans-1,2-dichloroethene	.6	UG/L	ND	ND	ND	ND	ND
1,1-dichloroethene	.4	UG/L	ND	ND	ND	ND	ND
Acrylonitrile	.7	UG/L	ND	ND	ND	ND	ND
Chloroform	.2	UG/L	1.8	2.2	3.2	1.7	2.2
1,1,1-trichloroethane	.4	UG/L	ND	ND	ND	ND	ND
Carbon tetrachloride	.4	UG/L	ND	ND	ND	ND	ND
Benzene	.4	UG/L	ND	ND	ND	ND	ND
1,2-dichloroethane	.5	UG/L	ND	ND	ND	ND	ND
Trichloroethene	.7	UG/L	ND	ND	ND	ND	ND
1,2-dichloropropane	.3	UG/L	ND	ND	ND	ND	ND
Bromodichloromethane	.5	UG/L	ND	ND	ND	ND	ND
2-chloroethylvinyl ether	1.1	UG/L	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	.3	UG/L	ND	ND	ND	ND	ND
Toluene	.4	UG/L	0.5	0.6	0.8	0.8	0.7
trans-1,3-dichloropropene	.5	UG/L	ND	ND	ND	ND	ND
1,1,2-trichloroethane	.5	UG/L	ND	ND	ND	ND	ND
Tetrachloroethene	1.1	UG/L	ND	ND	ND	ND	ND
Dibromochloromethane	.6	UG/L	ND	ND	ND	ND	ND
Chlorobenzene	.4	UG/L	ND	ND	ND	ND	ND
Ethylbenzene	.3	UG/L	ND	ND	ND	ND	ND
Bromoform	.5	UG/L	ND	ND	ND	ND	ND
1,1,2,2-tetrachloroethane	.5	UG/L	ND	ND	ND	ND	ND
1,3-dichlorobenzene	.5	UG/L	ND	ND	ND	ND	ND
1,4-dichlorobenzene	.4	UG/L	0.6	0.8	1.1	0.6	0.8
1,2-dichlorobenzene	.4	UG/L	ND	ND	ND	ND	ND
Halomethane Purgeable Cmpnds	.7	UG/L	0.0	0.0	0.0	0.0	0.0
Total Dichlorobenzenes	.5	UG/L	0.0	0.0	0.0	0.0	0.0
Total Chloromethanes	.5	UG/L	3.2	4.0	5.4	11.9	6.1
Purgeable Compounds	1.3	UG/L	4.3	5.4	7.3	13.3	7.6
Methyl Iodide	.6	UG/L	ND	ND	ND	ND	ND
Carbon disulfide	.6	UG/L	1.6	4.6	1.3	1.9	2.4
Acetone	4.5	UG/L	120	199	173	168	165
Allyl chloride	.6	UG/L	ND	ND	ND	ND	ND
Methyl tert-butyl ether	.4	UG/L	ND	ND	ND	ND	ND
Chloroprene	.4	UG/L	ND	ND	ND	ND	ND
1,2-dibromoethane	.3	UG/L	ND	ND	ND	ND	ND
2-butanone	6.3	UG/L	ND	ND	9.8	12.8	5.7
Methyl methacrylate	.8	UG/L	ND	ND	ND	ND	ND
2-nitropropane	12	UG/L	ND	ND	ND	ND	ND
4-methyl-2-pentanone	1.3	UG/L	ND	ND	ND	ND	ND
meta,para xylenes	.6	UG/L	ND	ND	ND	ND	ND
ortho-xylene	.4	UG/L	ND	ND	ND	ND	ND
Isopropylbenzene	.3	UG/L	ND	ND	ND	ND	ND
Styrene	.3	UG/L	ND	ND	ND	ND	ND
Benzyl chloride	1.1	UG/L	ND	ND	ND	ND	ND
1,2,4-trichlorobenzene	1.52	UG/L	ND	ND	ND	ND	ND

ND=not detected

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Analyte	MDL	Units	Equiv	INF JAN P502514	INF FEB P504507	INF MAR P512089	INF APR P514107
2,3,7,8-tetra CDD	125	PG/L	1.000	ND	ND	ND	ND
1,2,3,7,8-penta CDD	123	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8_hexa_CDD	113	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDD	98	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDD	111	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDD	137	PG/L	0.010	ND	ND	ND	ND
octa CDD	247	PG/L	0.001	ND	ND	ND	ND
2,3,7,8-tetra CDF	115	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8-penta CDF	140	PG/L	0.050	ND	ND	ND	ND
2,3,4,7,8-penta CDF	118	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDF	147	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDF	107	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDF	152	PG/L	0.100	ND	ND	ND	ND
2,3,4,6,7,8-hexa CDF	148	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDF	90	PG/L	0.010	ND	ND	ND	ND
1,2,3,4,7,8,9-hepta CDF	166	PG/L	0.010	ND	ND	ND	ND
octa CDF	222	PG/L	0.001	ND	ND	ND	ND

Analyte	MDL	Units	Equiv	INF MAY P515501	INF JUN P520723	INF JUL P524640	INF AUG P525067
2,3,7,8-tetra CDD	125	PG/L	1.000	ND	ND	ND	ND
1,2,3,7,8-penta CDD	123	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8_hexa_CDD	113	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDD	98	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDD	111	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDD	137	PG/L	0.010	ND	ND	ND	ND
octa CDD	247	PG/L	0.001	ND	ND	ND	ND
2,3,7,8-tetra CDF	115	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8-penta CDF	140	PG/L	0.050	ND	ND	ND	ND
2,3,4,7,8-penta CDF	118	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDF	147	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDF	107	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDF	152	PG/L	0.100	ND	ND	ND	ND
2,3,4,6,7,8-hexa CDF	148	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDF	90	PG/L	0.010	ND	ND	ND	ND
1,2,3,4,7,8,9-hepta CDF	166	PG/L	0.010	ND	ND	ND	ND
octa CDF	222	PG/L	0.001	ND	ND	ND	ND

Analyte	MDL	Units	Equiv	INF SEP P531924	INF OCT P533616	INF NOV P540027	INF DEC P543578
2,3,7,8-tetra CDD	125	PG/L	1.000	ND	ND	ND	ND
1,2,3,7,8-penta CDD	123	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8_hexa_CDD	113	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDD	98	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDD	111	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDD	137	PG/L	0.010	ND	ND	ND	ND
octa CDD	247	PG/L	0.001	ND	ND	ND	ND
2,3,7,8-tetra CDF	115	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8-penta CDF	140	PG/L	0.050	ND	ND	ND	ND
2,3,4,7,8-penta CDF	118	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDF	147	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDF	107	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDF	152	PG/L	0.100	ND	ND	ND	ND
2,3,4,6,7,8-hexa CDF	148	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDF	90	PG/L	0.010	ND	ND	ND	ND
1,2,3,4,7,8,9-hepta CDF	166	PG/L	0.010	ND	ND	ND	ND
octa CDF	222	PG/L	0.001	ND	ND	ND	ND

Above are permit required CDD/CDF isomers. ND= not detected

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Analyte	MDL	Units	Equiv	EFF JAN P502518	EFF FEB P504512	EFF MAR P512092	EFF APR P514111
2,3,7,8-tetra CDD	125	PG/L	1.000	ND	ND	ND	ND
1,2,3,7,8-penta CDD	123	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8_hexa_CDD	113	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDD	98	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDD	111	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDD	137	PG/L	0.010	ND	ND	ND	ND
octa CDD	247	PG/L	0.001	ND	ND	ND	ND
2,3,7,8-tetra CDF	115	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8-penta CDF	140	PG/L	0.050	ND	ND	ND	ND
2,3,4,7,8-penta CDF	118	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDF	147	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDF	107	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDF	152	PG/L	0.100	ND	ND	ND	ND
2,3,4,6,7,8-hexa CDF	148	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDF	90	PG/L	0.010	ND	ND	ND	ND
1,2,3,4,7,8,9-hepta CDF	166	PG/L	0.010	ND	ND	ND	ND
octa CDF	222	PG/L	0.001	ND	ND	ND	ND

Analyte	MDL	Units	Equiv	EFF MAY P515506	EFF JUN P520727	EFF JUL P524644	EFF AUG P525072
2,3,7,8-tetra CDD	125	PG/L	1.000	ND	ND	ND	ND
1,2,3,7,8-penta CDD	123	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8_hexa_CDD	113	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDD	98	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDD	111	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDD	137	PG/L	0.010	ND	ND	ND	ND
octa CDD	247	PG/L	0.001	ND	ND	ND	ND
2,3,7,8-tetra CDF	115	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8-penta CDF	140	PG/L	0.050	ND	ND	ND	ND
2,3,4,7,8-penta CDF	118	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDF	147	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDF	107	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDF	152	PG/L	0.100	ND	ND	ND	ND
2,3,4,6,7,8-hexa CDF	148	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDF	90	PG/L	0.010	ND	ND	ND	ND
1,2,3,4,7,8,9-hepta CDF	166	PG/L	0.010	ND	ND	ND	ND
octa CDF	222	PG/L	0.001	ND	ND	ND	ND

Analyte	MDL	Units	Equiv	EFF SEP P531928	EFF OCT P533621	EFF NOV P540031	EFF DEC P543582
2,3,7,8-tetra CDD	125	PG/L	1.000	ND	ND	ND	ND
1,2,3,7,8-penta CDD	123	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8_hexa_CDD	113	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDD	98	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDD	111	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDD	137	PG/L	0.010	ND	ND	ND	ND
octa CDD	247	PG/L	0.001	ND	ND	ND	ND
2,3,7,8-tetra CDF	115	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8-penta CDF	140	PG/L	0.050	ND	ND	ND	ND
2,3,4,7,8-penta CDF	118	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDF	147	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDF	107	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDF	152	PG/L	0.100	ND	ND	ND	ND
2,3,4,6,7,8-hexa CDF	148	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDF	90	PG/L	0.010	ND	ND	ND	ND
1,2,3,4,7,8,9-hepta CDF	166	PG/L	0.010	ND	ND	ND	ND
octa CDF	222	PG/L	0.001	ND	ND	ND	ND

Above are permit required CDD/CDF isomers. ND= not detected

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Analyte	MDL	Units	Equiv	INF TCCD JAN P502514	INF TCCD FEB P504507	INF TCCD MAR P512089	INF TCCD APR P514107
2,3,7,8-tetra CDD	125	PG/L	1.000	ND	ND	ND	ND
1,2,3,7,8-penta CDD	123	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8_hexa_CDD	113	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDD	98	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDD	111	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDD	137	PG/L	0.010	ND	ND	ND	ND
octa CDD	247	PG/L	0.001	ND	ND	ND	ND
2,3,7,8-tetra CDF	115	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8-penta CDF	140	PG/L	0.050	ND	ND	ND	ND
2,3,4,7,8-penta CDF	118	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDF	147	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDF	107	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDF	152	PG/L	0.100	ND	ND	ND	ND
2,3,4,6,7,8-hexa CDF	148	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDF	90	PG/L	0.010	ND	ND	ND	ND
1,2,3,4,7,8,9-hepta CDF	166	PG/L	0.010	ND	ND	ND	ND
octa CDF	222	PG/L	0.001	ND	ND	ND	ND

Analyte	MDL	Units	Equiv	INF TCCD MAY P515501	INF TCCD JUN P520723	INF TCCD JUL P524640	INF TCCD AUG P525067
2,3,7,8-tetra CDD	125	PG/L	1.000	ND	ND	ND	ND
1,2,3,7,8-penta CDD	123	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8_hexa_CDD	113	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDD	98	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDD	111	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDD	137	PG/L	0.010	ND	ND	ND	ND
octa CDD	247	PG/L	0.001	ND	ND	ND	ND
2,3,7,8-tetra CDF	115	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8-penta CDF	140	PG/L	0.050	ND	ND	ND	ND
2,3,4,7,8-penta CDF	118	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDF	147	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDF	107	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDF	152	PG/L	0.100	ND	ND	ND	ND
2,3,4,6,7,8-hexa CDF	148	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDF	90	PG/L	0.010	ND	ND	ND	ND
1,2,3,4,7,8,9-hepta CDF	166	PG/L	0.010	ND	ND	ND	ND
octa CDF	222	PG/L	0.001	ND	ND	ND	ND

Analyte	MDL	Units	Equiv	INF TCCD SEP P531924	INF TCCD OCT P533616	INF TCCD NOV P540027	INF TCCD DEC P543578
2,3,7,8-tetra CDD	125	PG/L	1.000	ND	ND	ND	ND
1,2,3,7,8-penta CDD	123	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8_hexa_CDD	113	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDD	98	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDD	111	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDD	137	PG/L	0.010	ND	ND	ND	ND
octa CDD	247	PG/L	0.001	ND	ND	ND	ND
2,3,7,8-tetra CDF	115	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8-penta CDF	140	PG/L	0.050	ND	ND	ND	ND
2,3,4,7,8-penta CDF	118	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDF	147	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDF	107	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDF	152	PG/L	0.100	ND	ND	ND	ND
2,3,4,6,7,8-hexa CDF	148	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDF	90	PG/L	0.010	ND	ND	ND	ND
1,2,3,4,7,8,9-hepta CDF	166	PG/L	0.010	ND	ND	ND	ND
octa CDF	222	PG/L	0.001	ND	ND	ND	ND

Above are permit required CDD/CDF isomers. ND= not detected

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Effluent Limit (TCDD): 0.37 pg/L (30-day Average)

Analyte	MDL	Units	Equiv	EFF TCCD JAN P502518	EFF TCCD FEB P504512	EFF TCCD MAR P512092	EFF TCCD APR P514111
2,3,7,8-tetra CDD	125	PG/L	1.000	ND	ND	ND	ND
1,2,3,7,8-penta CDD	123	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8_hexa_CDD	113	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDD	98	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDD	111	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDD	137	PG/L	0.010	ND	ND	ND	ND
octa CDD	247	PG/L	0.001	ND	ND	ND	ND
2,3,7,8-tetra CDF	115	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8-penta CDF	140	PG/L	0.050	ND	ND	ND	ND
2,3,4,7,8-penta CDF	118	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDF	147	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDF	107	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDF	152	PG/L	0.100	ND	ND	ND	ND
2,3,4,6,7,8-hexa CDF	148	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDF	90	PG/L	0.010	ND	ND	ND	ND
1,2,3,4,7,8,9-hepta CDF	166	PG/L	0.010	ND	ND	ND	ND
octa CDF	222	PG/L	0.001	ND	ND	ND	ND

Analyte	MDL	Units	Equiv	EFF TCCD MAY P515506	EFF TCCD JUN P520727	EFF TCCD JUL P524644	EFF TCCD AUG P525072
2,3,7,8-tetra CDD	125	PG/L	1.000	ND	ND	ND	ND
1,2,3,7,8-penta CDD	123	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8_hexa_CDD	113	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDD	98	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDD	111	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDD	137	PG/L	0.010	ND	ND	ND	ND
octa CDD	247	PG/L	0.001	ND	ND	ND	ND
2,3,7,8-tetra CDF	115	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8-penta CDF	140	PG/L	0.050	ND	ND	ND	ND
2,3,4,7,8-penta CDF	118	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDF	147	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDF	107	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDF	152	PG/L	0.100	ND	ND	ND	ND
2,3,4,6,7,8-hexa CDF	148	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDF	90	PG/L	0.010	ND	ND	ND	ND
1,2,3,4,7,8,9-hepta CDF	166	PG/L	0.010	ND	ND	ND	ND
octa CDF	222	PG/L	0.001	ND	ND	ND	ND

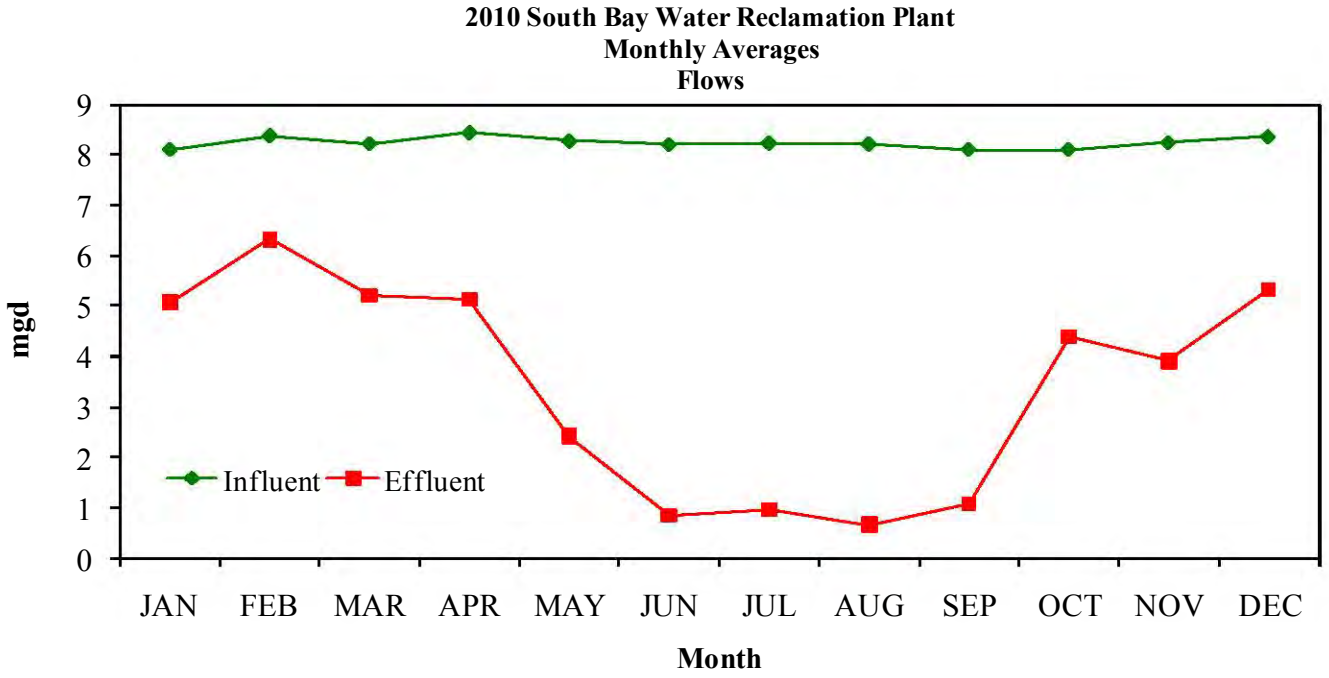
Analyte	MDL	Units	Equiv	EFF TCCD SEP P531928	EFF TCCD OCT P533621	EFF TCCD NOV P540031	EFF TCCD DEC P543582
2,3,7,8-tetra CDD	125	PG/L	1.000	ND	ND	ND	ND
1,2,3,7,8-penta CDD	123	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8_hexa_CDD	113	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDD	98	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDD	111	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDD	137	PG/L	0.010	ND	ND	ND	ND
octa CDD	247	PG/L	0.001	ND	ND	ND	ND
2,3,7,8-tetra CDF	115	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8-penta CDF	140	PG/L	0.050	ND	ND	ND	ND
2,3,4,7,8-penta CDF	118	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDF	147	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDF	107	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDF	152	PG/L	0.100	ND	ND	ND	ND
2,3,4,6,7,8-hexa CDF	148	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDF	90	PG/L	0.010	ND	ND	ND	ND
1,2,3,4,7,8,9-hepta CDF	166	PG/L	0.010	ND	ND	ND	ND
octa CDF	222	PG/L	0.001	ND	ND	ND	ND

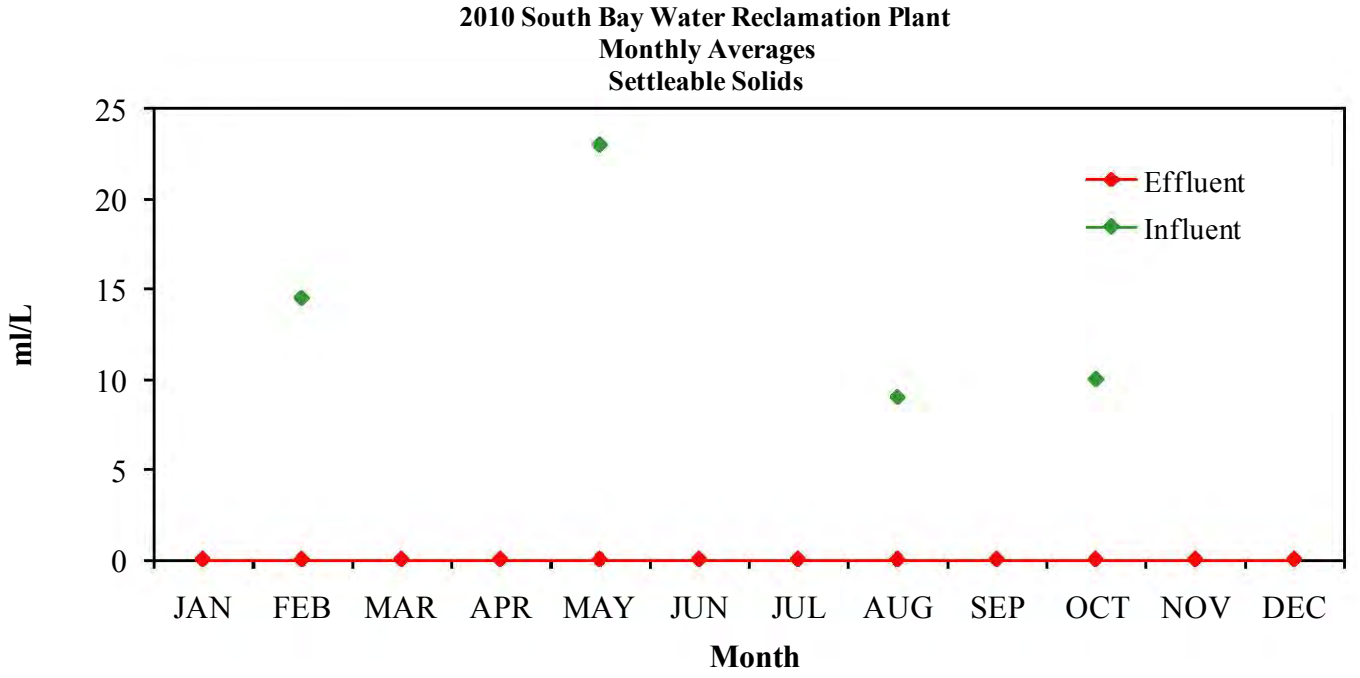
Above are permit required CDD/CDF isomers. ND= not detected

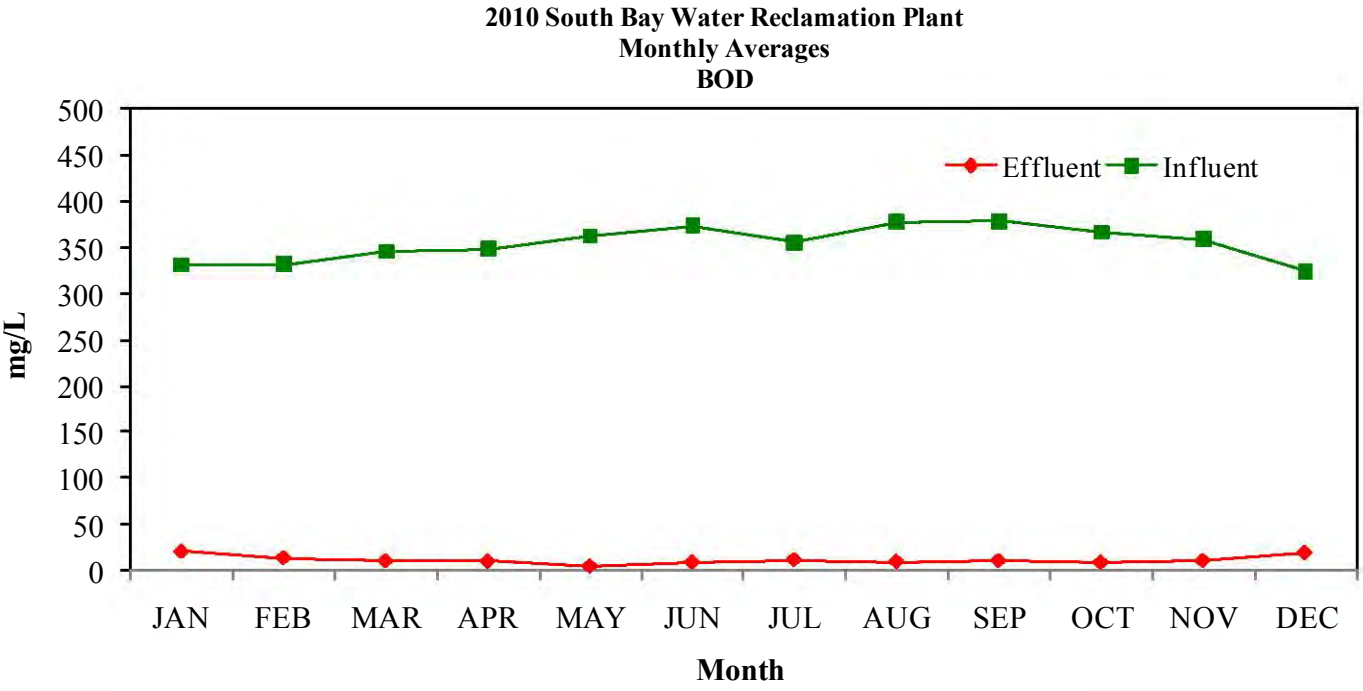
D. Influent and Effluent Graphs

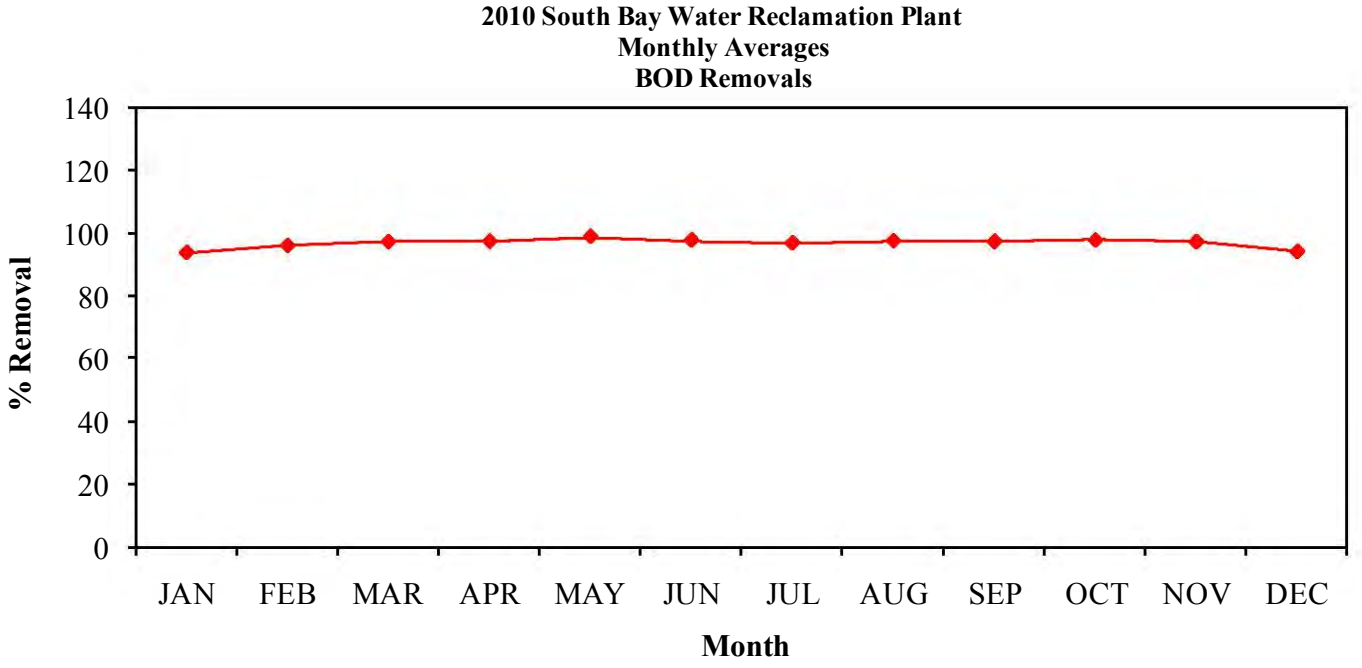
Graphs of monthly averages for permit parameters with measurable concentration averages.

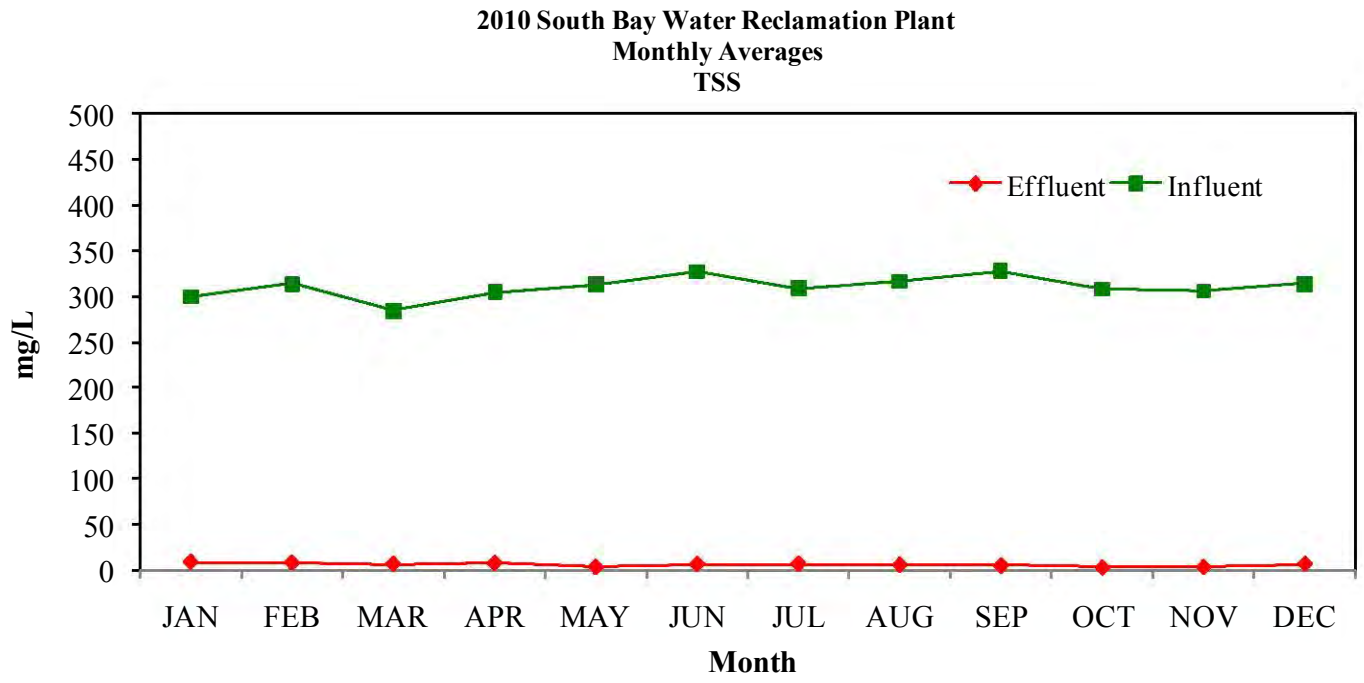
Where possible, the influent and effluent values of a given parameter have been included on the same graph so that removals and other relationships are readily apparent. Please note that many of the graphs are on expanded scales. That is, they normally don't go to zero concentrations but show, in magnified scale, that range of concentrations where variation takes place. This makes differences and some trends obvious that might normally not be noticed. However, it also provides the temptation to interpret minor changes or trends as being of more significance than they are. Frequent reference to the scales and the actual differences in concentrations is therefore necessary.

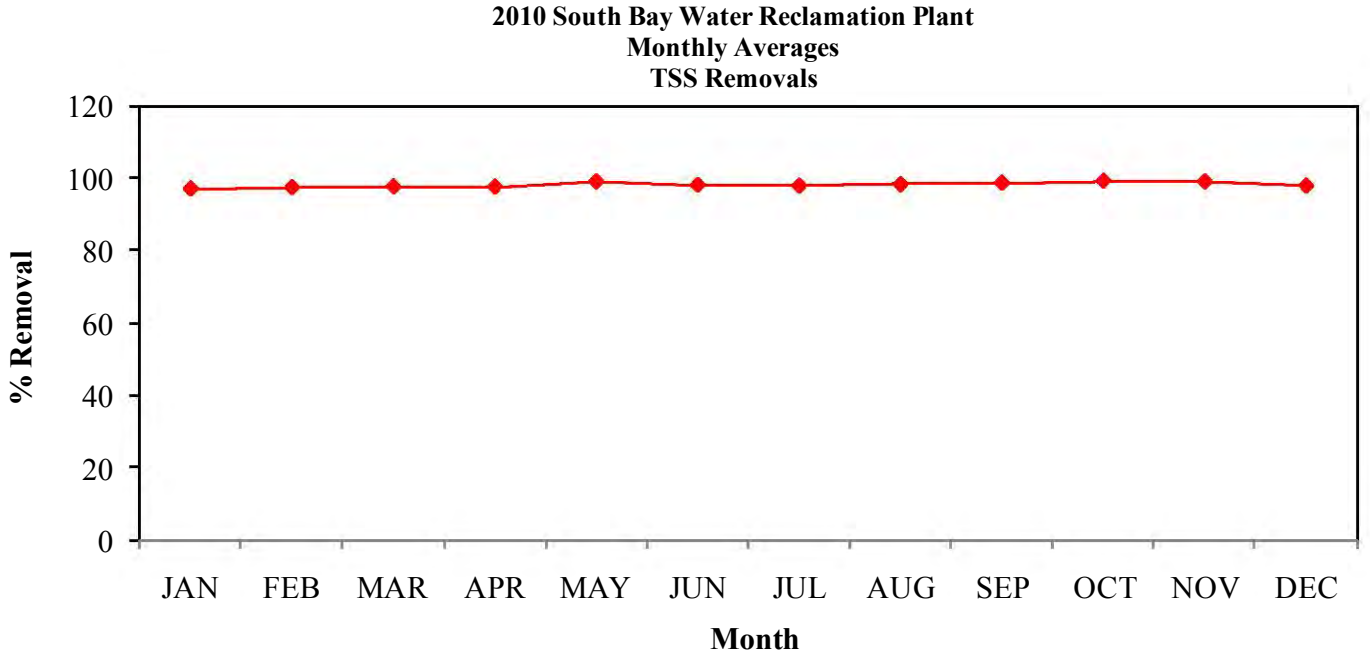

2010 South Bay Water Reclamation Plant
Monthly Averages
Flows
mgd
9
8
7
6
5
4
3
2
1
0
Influent
Effluent
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Month

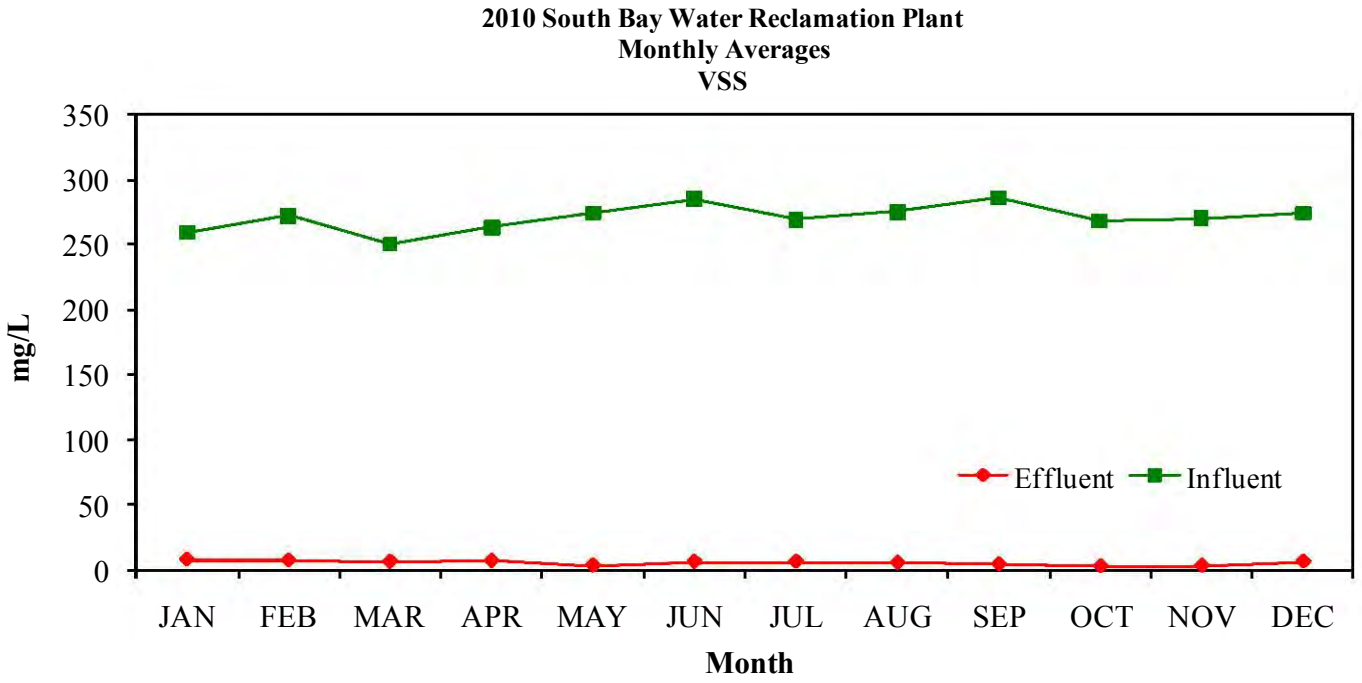

2010 South Bay Water Reclamation Plant
Monthly Averages
Settleable Solids
ml/L
25
20
15
10
5
0
Effluent
Influent
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Month

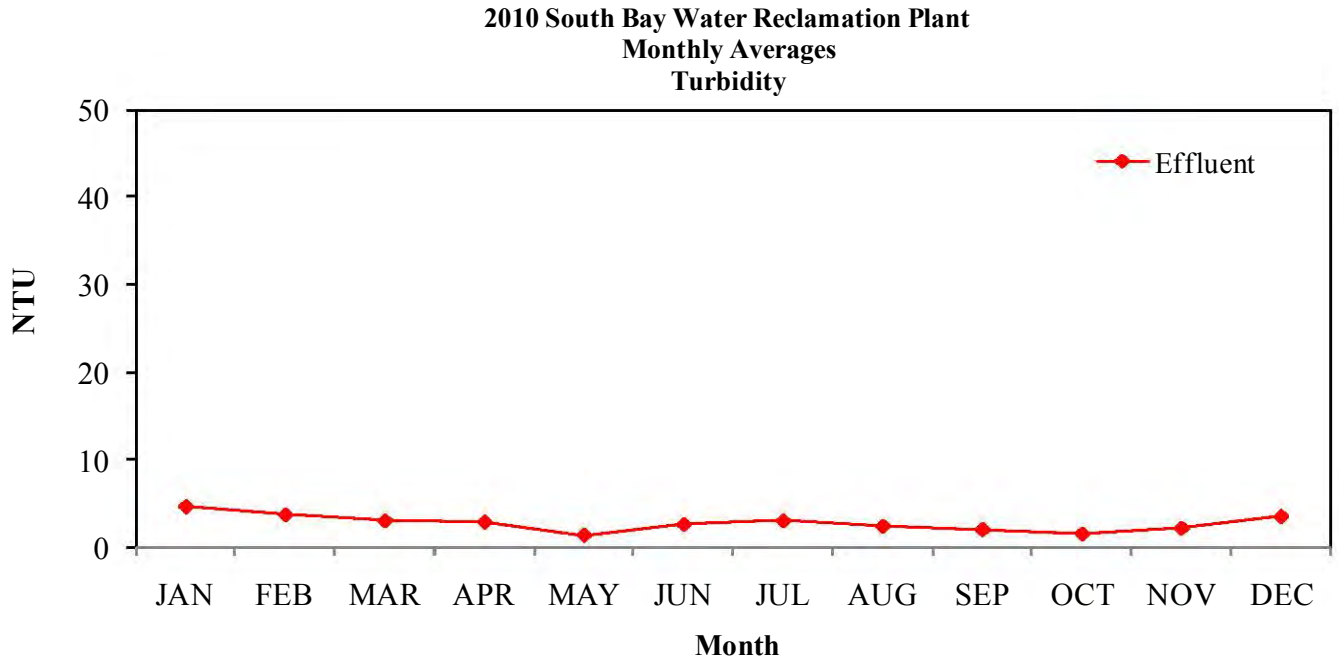

2010 South Bay Water Reclamation Plant
Monthly Averages
BOD
500
450
400
350
300
250
200
150
100
50
0
mg/L
Effluent
Influent
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Month

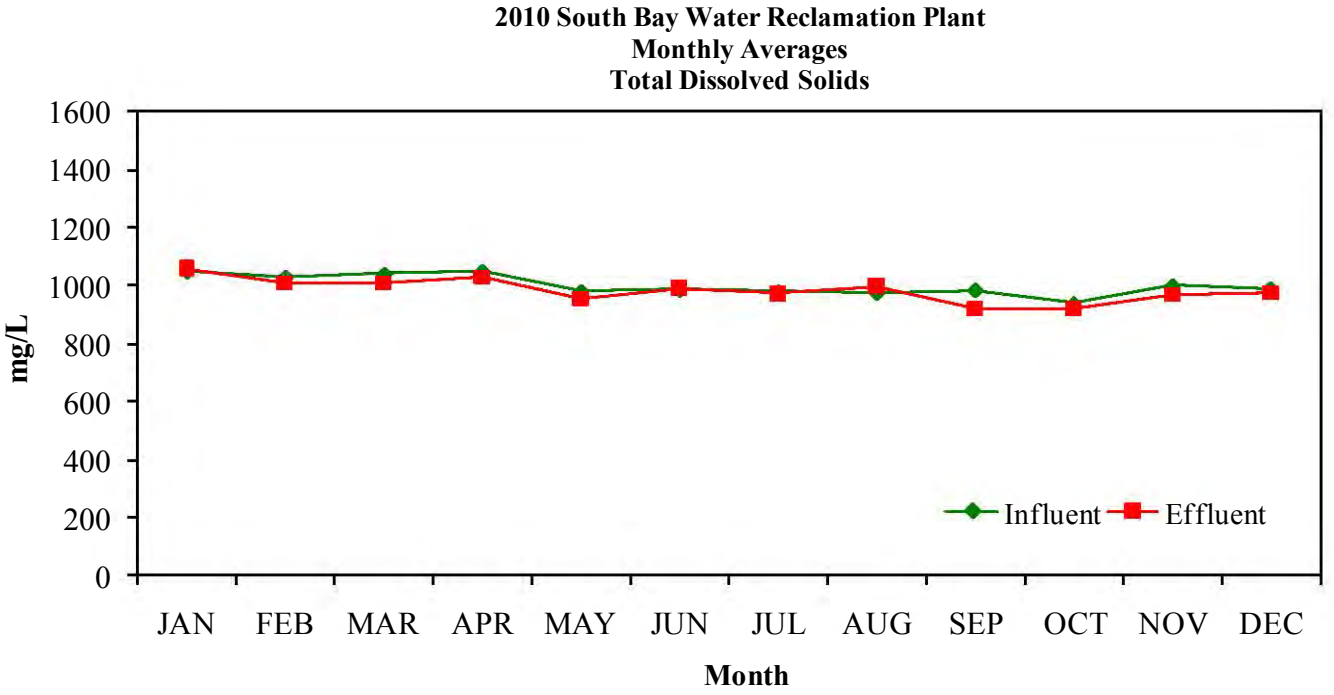

2010 South Bay Water Reclamation Plant
Monthly Averages
BOD Removals
140
120
100
80
60
40
20
0
% Removal
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Month

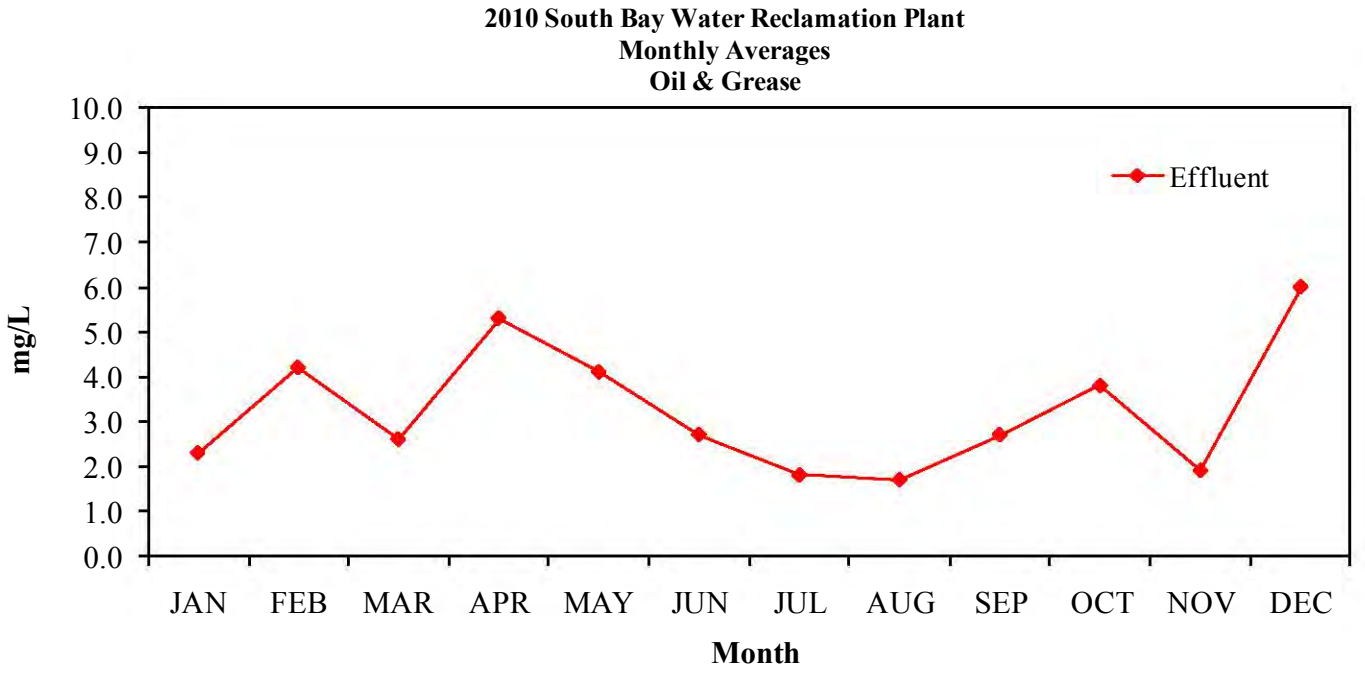

2010 South Bay Water Reclamation Plant
Monthly Averages
TSS
mg/L
500
450
400
350
300
250
200
150
100
50
0
Effluent
Influent
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Month

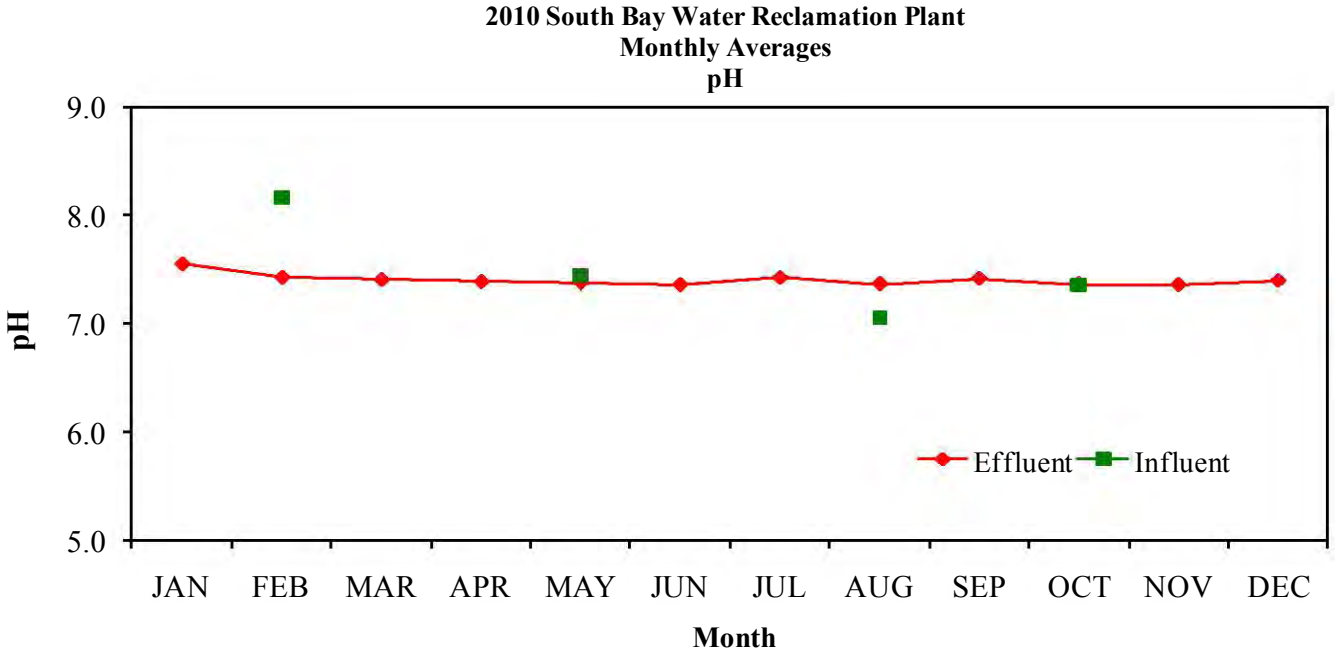

2010 South Bay Water Reclamation Plant
Monthly Averages
TSS Removals
% Removal
120
100
80
60
40
20
0
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Month

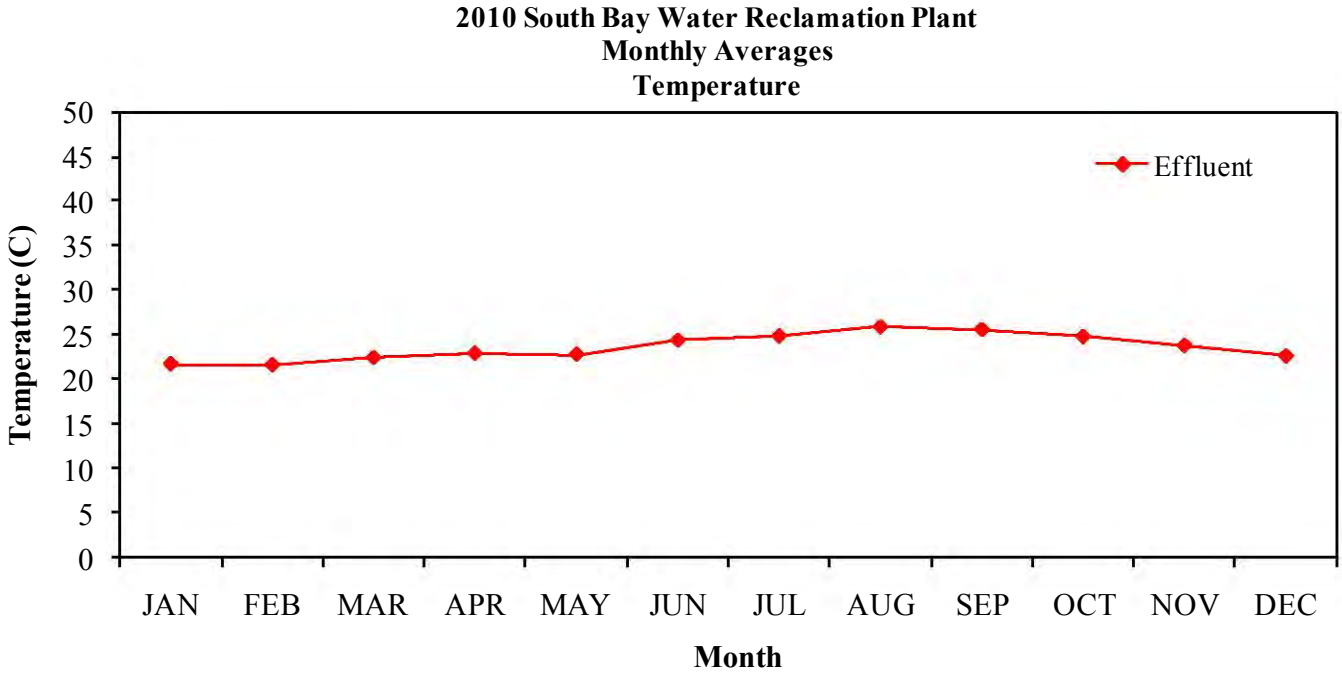

2010 South Bay Water Reclamation Plant
Monthly Averages
VSS
350
300
250
200
150
100
50
0
mg/L
Effluent
Influent
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Month


2010 South Bay Water Reclamation Plant
Monthly Averages
Turbidity
50
40
30
20
10
0
NTU
Effluent
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Month

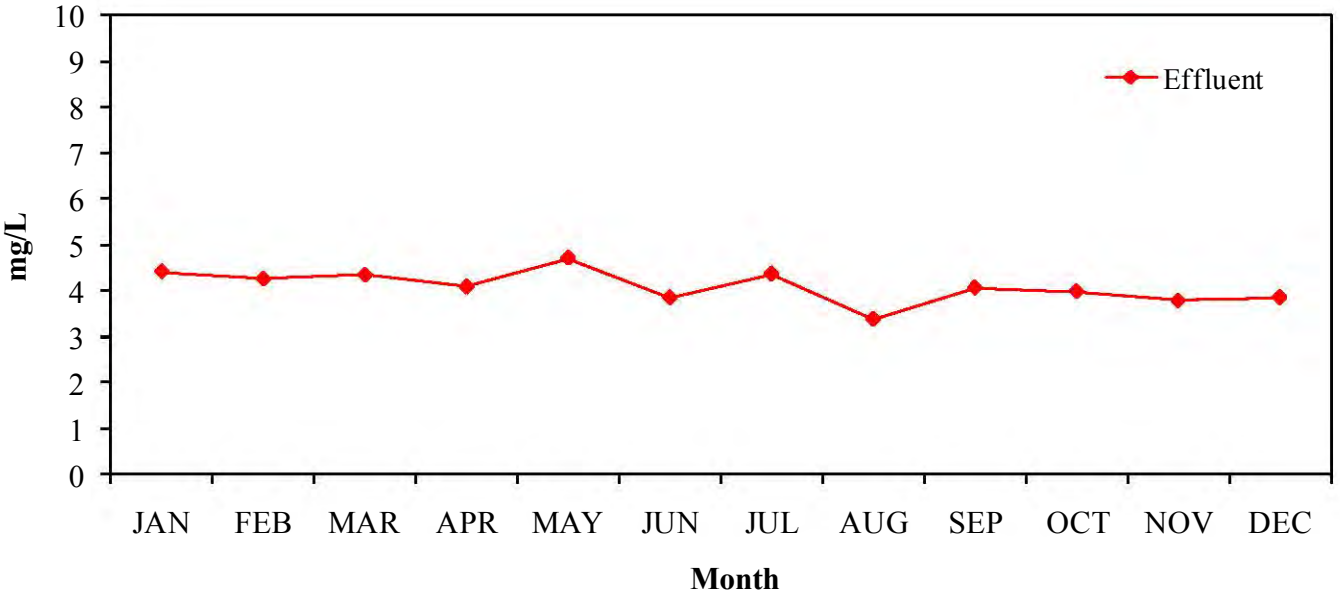

2010 South Bay Water Reclamation Plant
Monthly Averages
Total Dissolved Solids
1600
1400
1200
1000
800
600
400
200
0
mg/L
Influent
Effluent
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Month


2010 South Bay Water Reclamation Plant
Monthly Averages
Oil & Grease
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
mg/L
Effluent
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Month

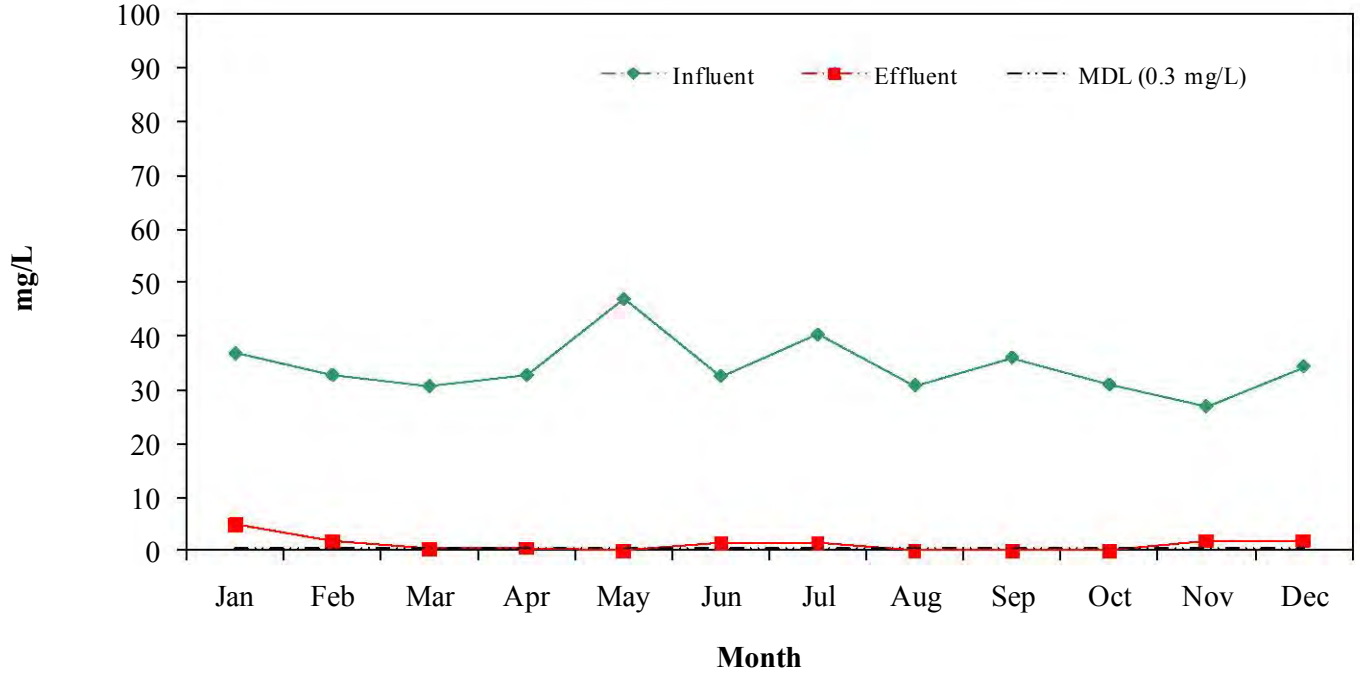

2010 South Bay Water Reclamation Plant
Monthly Averages
pH
9.0
8.0
7.0
6.0
5.0
pH
Effluent
Influent
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Month

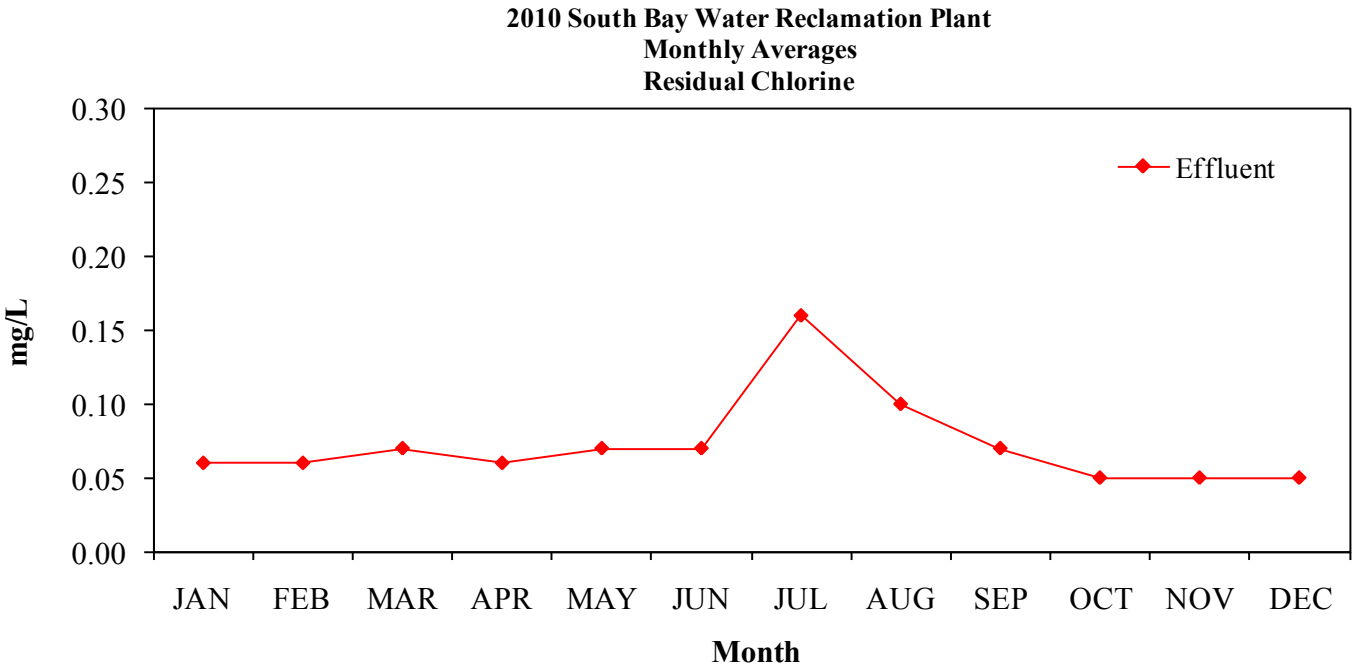

2010 South Bay Water Reclamation Plant
Monthly Averages
Temperature
50
45
40
35
30
25
20
15
10
5
0
Temperature (C)
Effluent
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Month

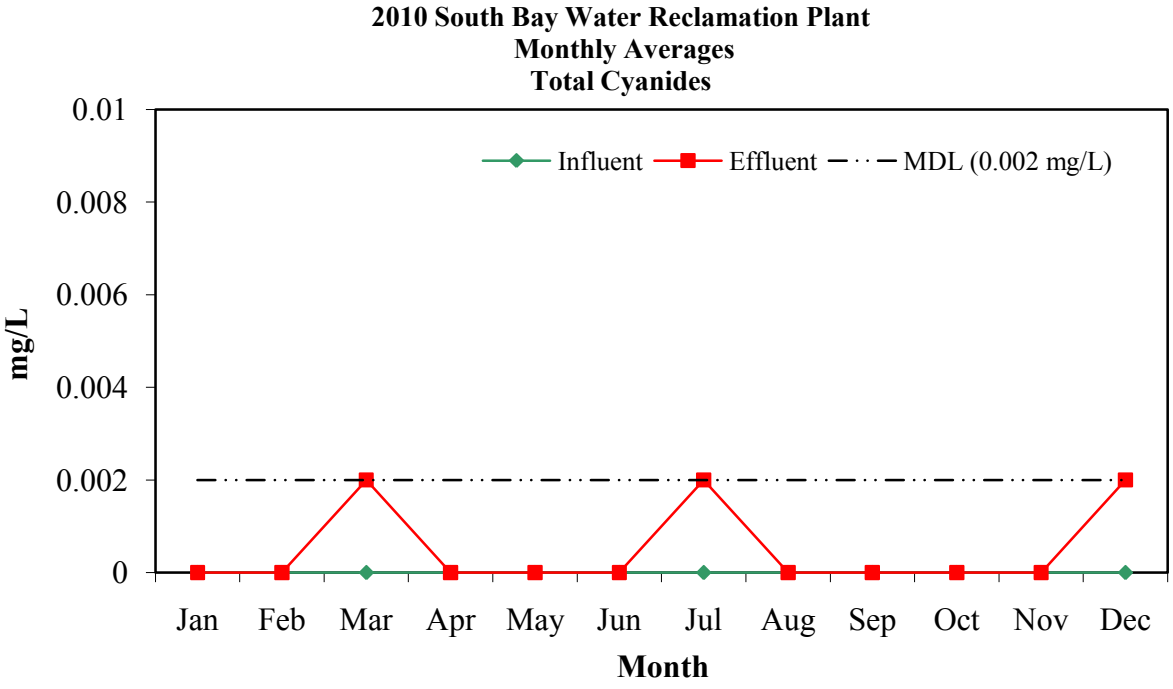
2010 South Bay Water Reclamation Plant
Monthly Averages
Dissolved Oxygen



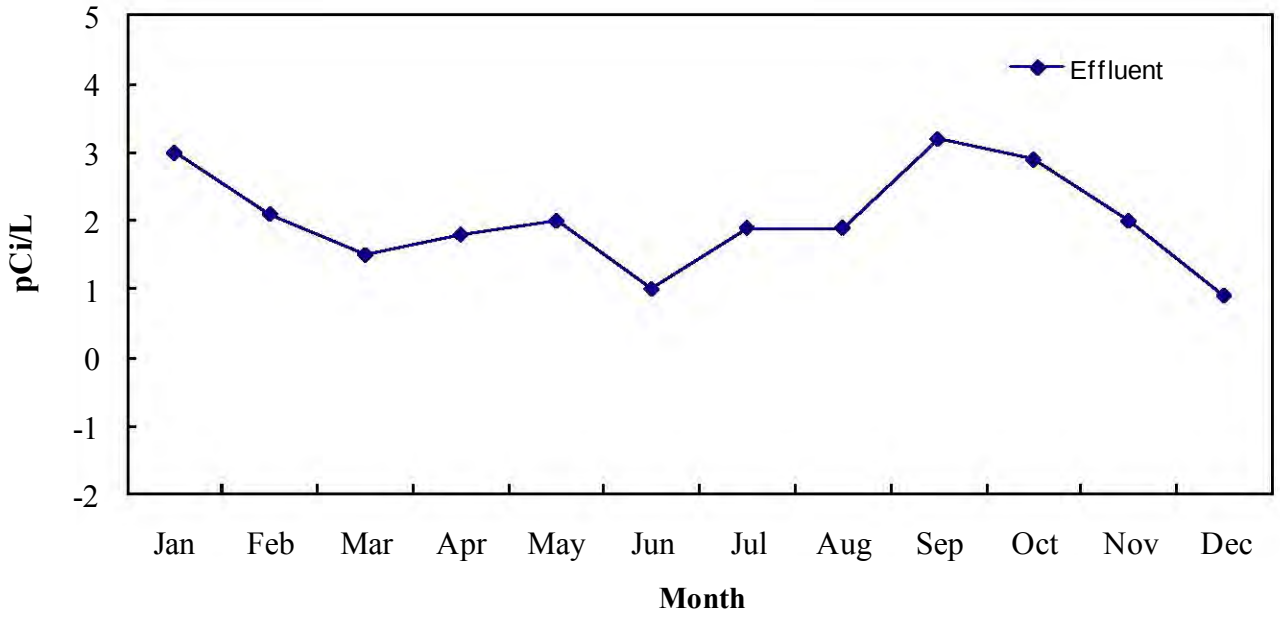
2010 South Bay Water Reclamation Plant
Monthly Averages
Ammonia-N



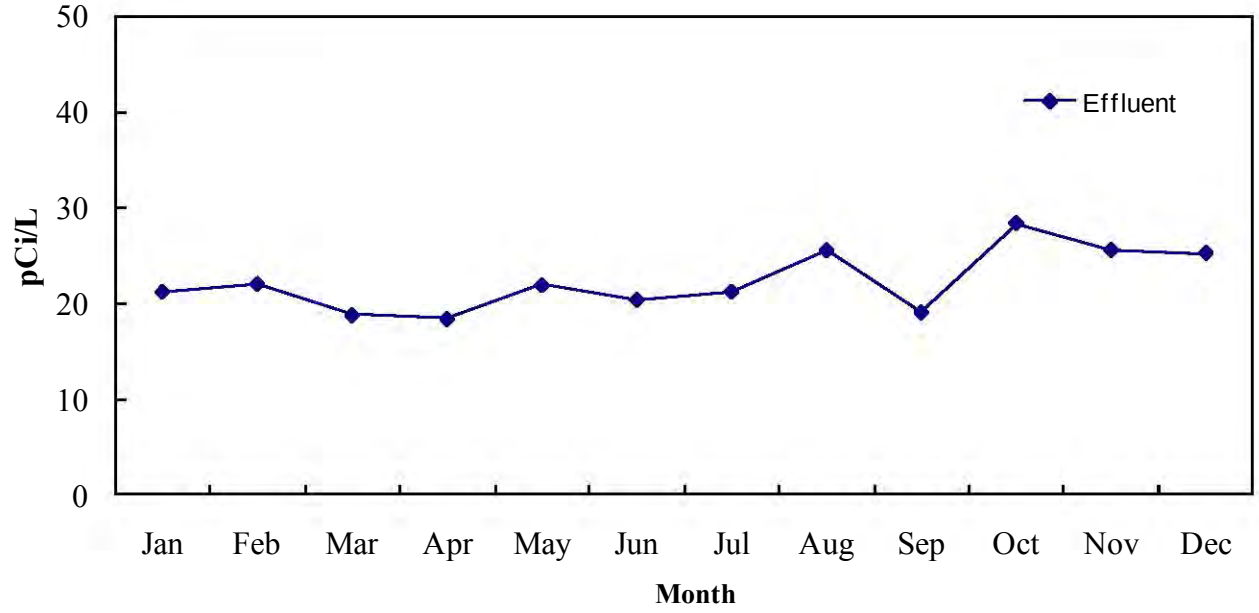

2010 South Bay Water Reclamation Plant
Monthly Averages
Residual Chlorine
0.30
0.25
0.20
0.15
0.10
0.05
0.00
mg/L
Effluent
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Month


2010 South Bay Water Reclamation Plant
Monthly Averages
Total Cyanides
0.01
0.008
0.006
0.004
0.002
0
mg/L
Influent
Effluent
MDL (0.002 mg/L)
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month

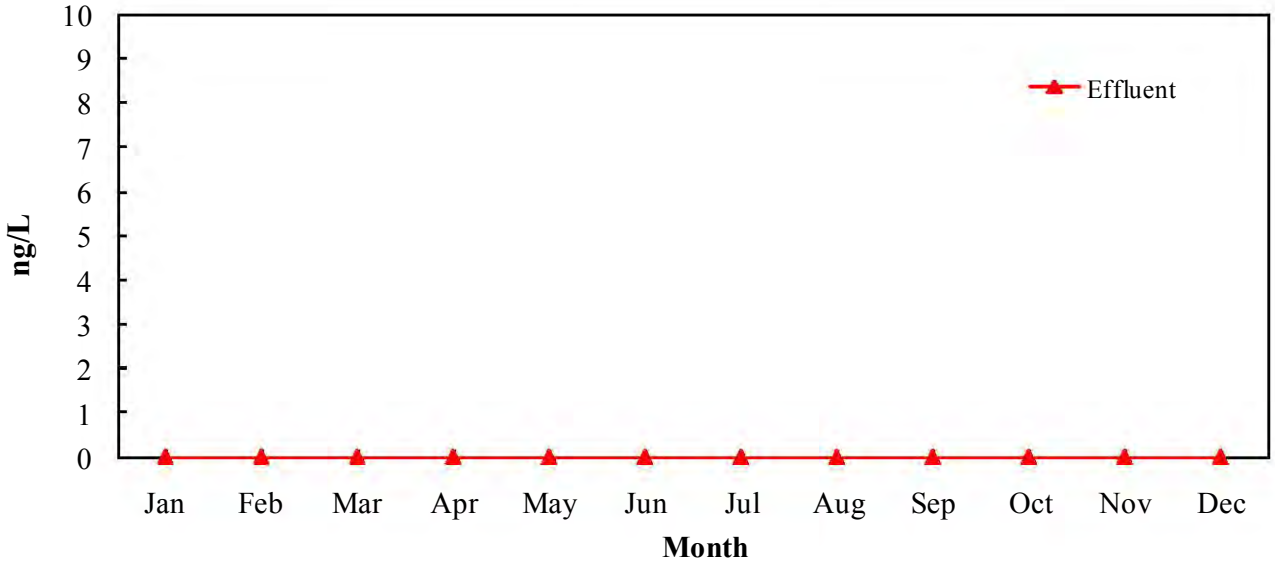
2010 South Bay Water Reclamation Plant
Monthly Averages
Alpha Radiation



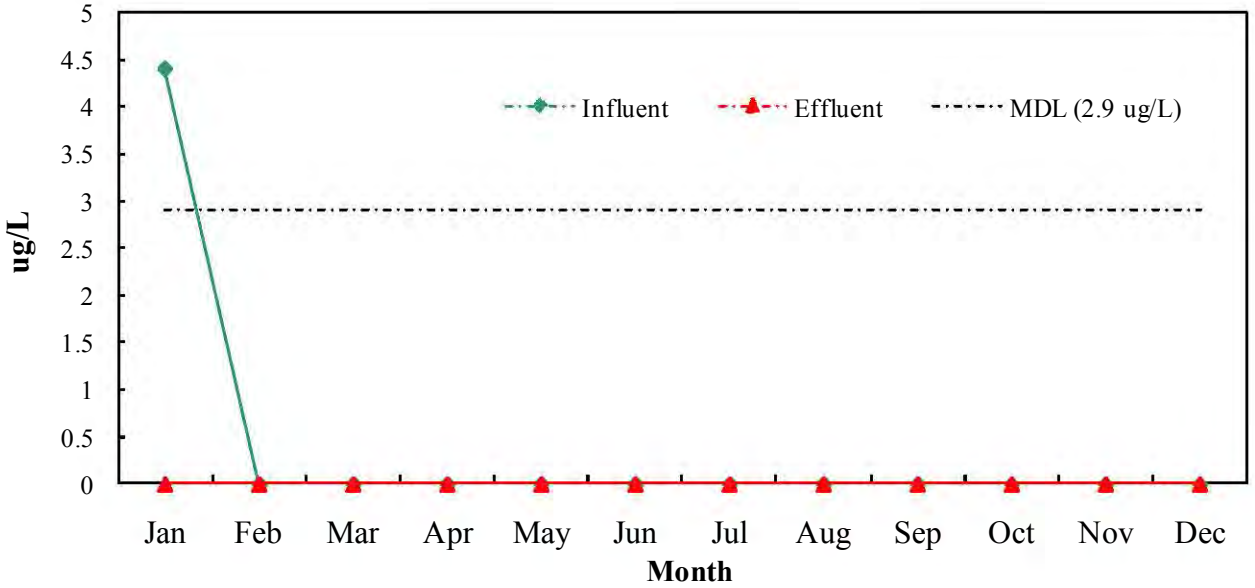
2010 South Bay Water Reclamation Plant
Monthly Averages
Beta Radiation



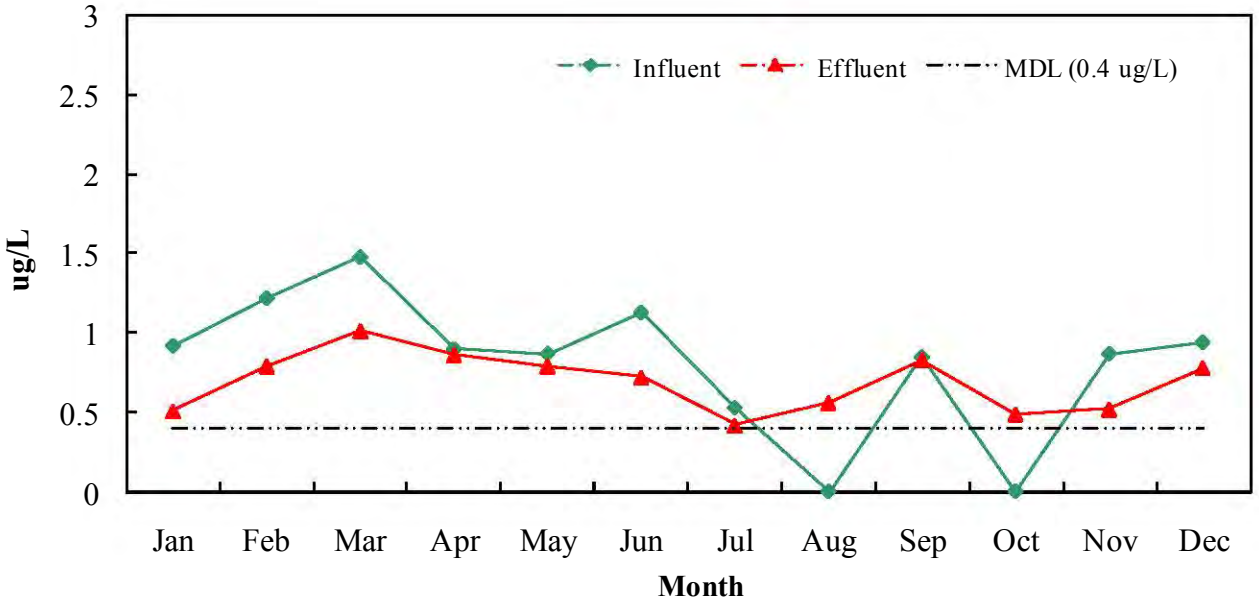
2010 South Bay Water Reclamation Plant
Monthly Averages
Total Chlorinated Hydrocarbons



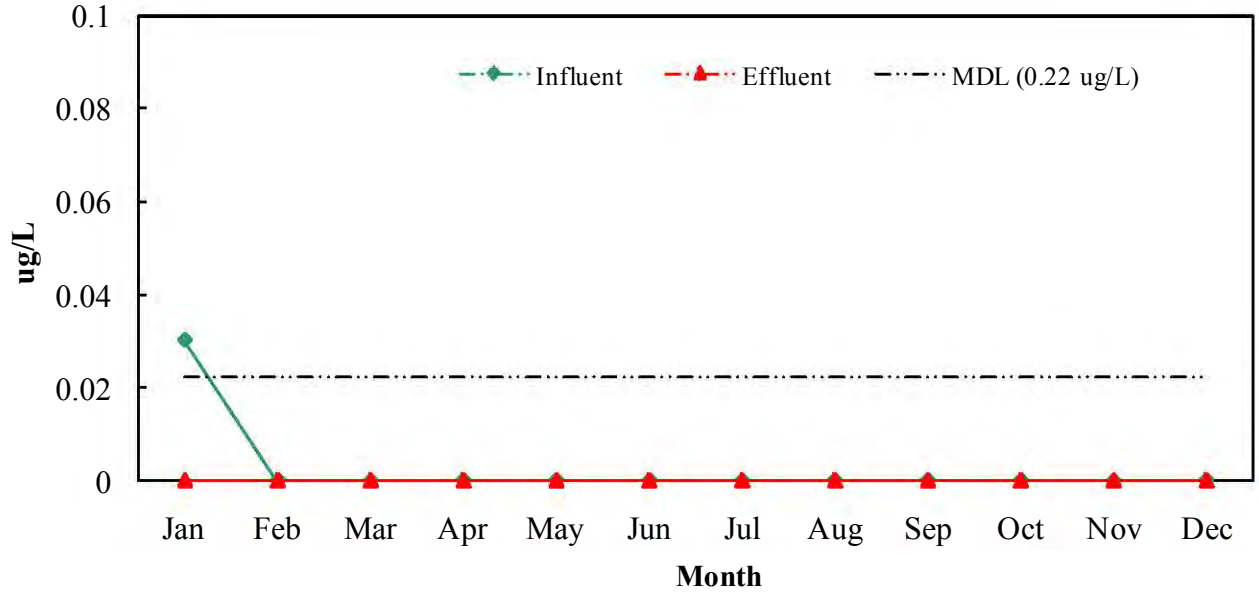
2010 South Bay Water Reclamation Plant
Monthly Averages
Antimony



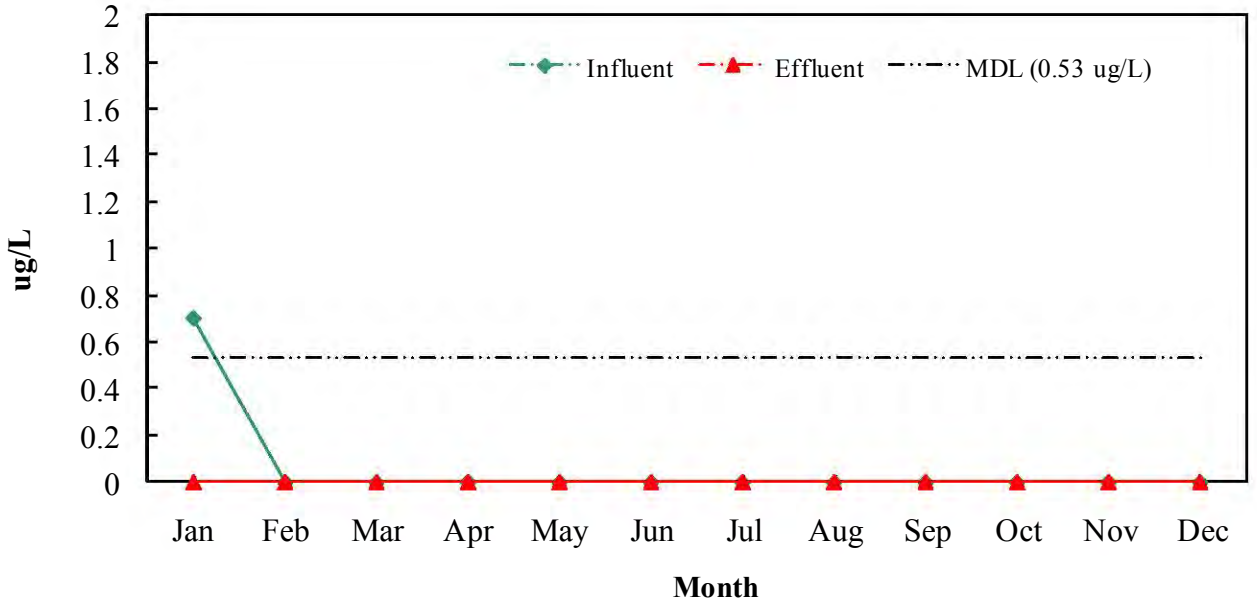
2010 South Bay Water Reclamation Plant
Monthly Averages
Arsenic



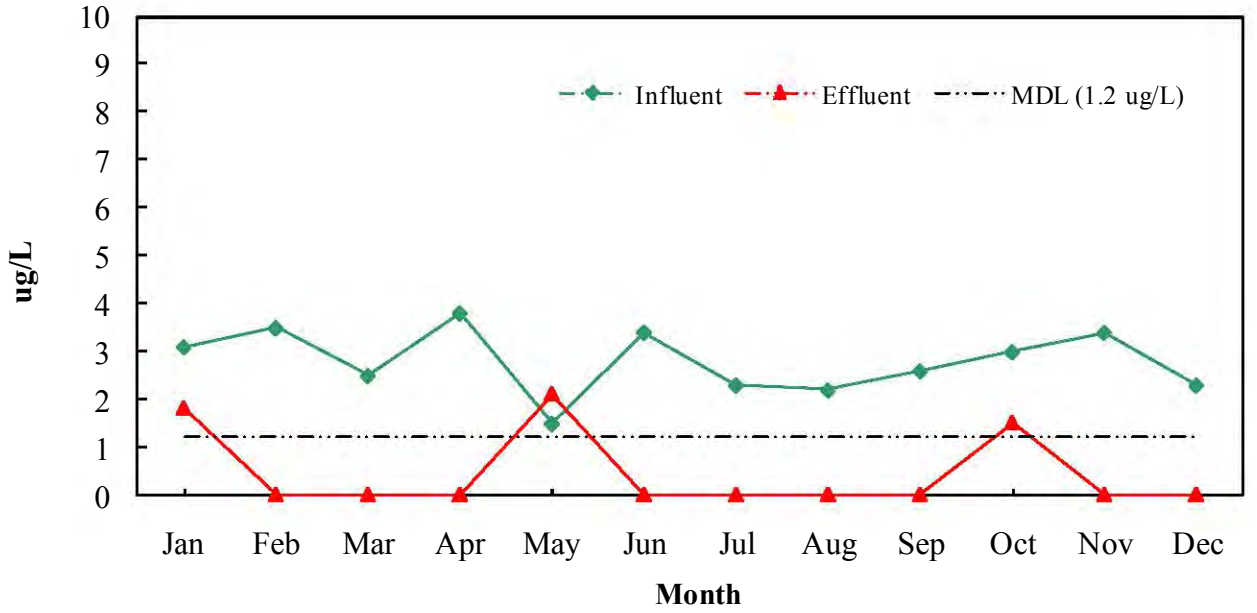
2010 South Bay Water Reclamation Plant
Monthly Averages
Beryllium



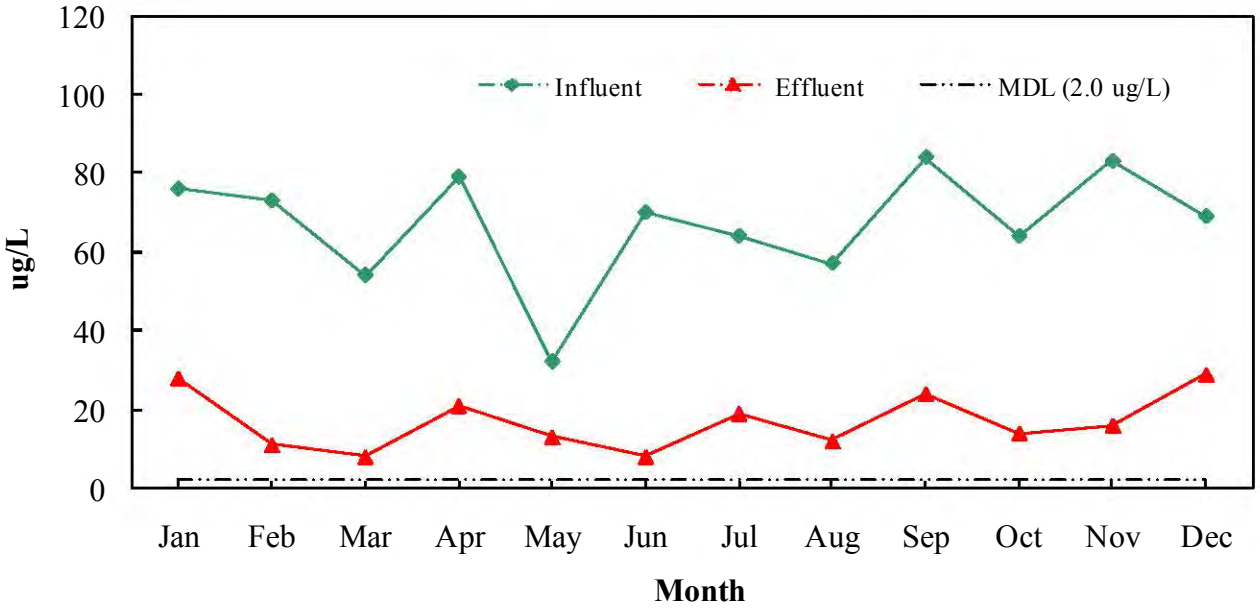
2010 South Bay Water Reclamation Plant
Monthly Averages
Cadmium



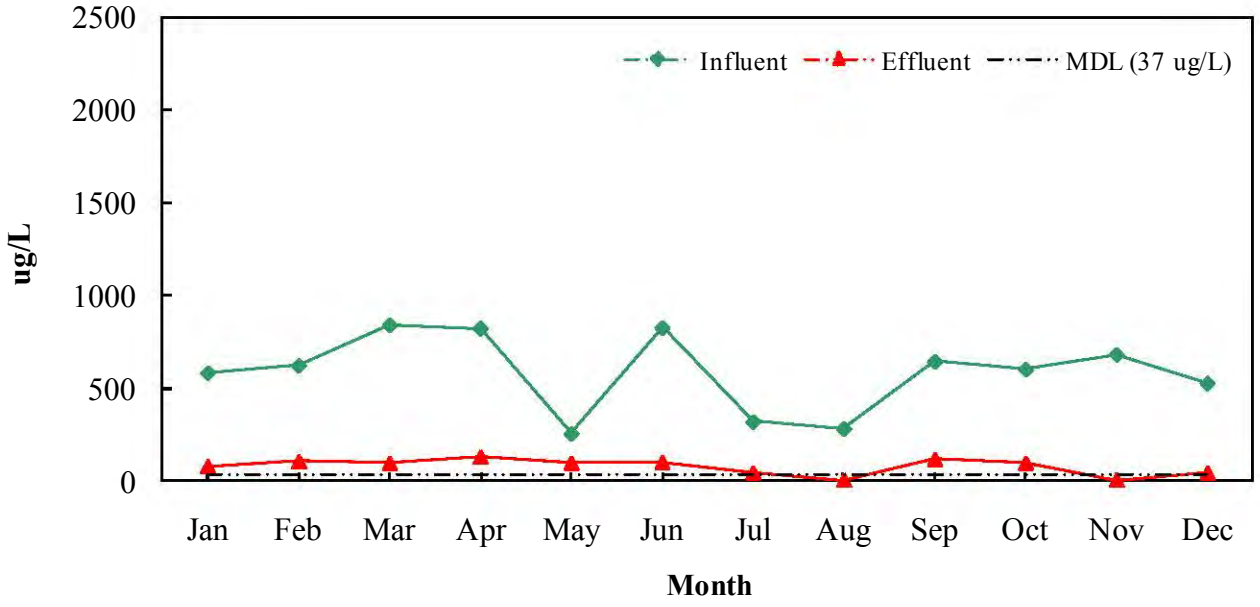
2010 South Bay Water Reclamation Plant
Monthly Averages
Chromium



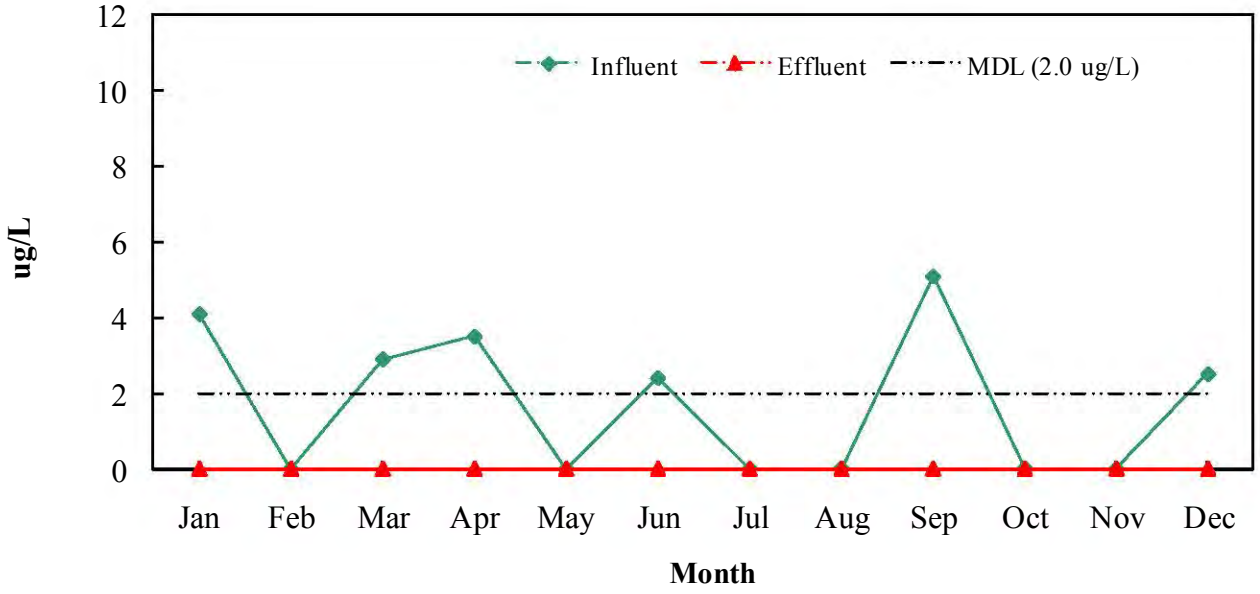
2010 South Bay Water Reclamation Plant
Monthly Averages
Copper



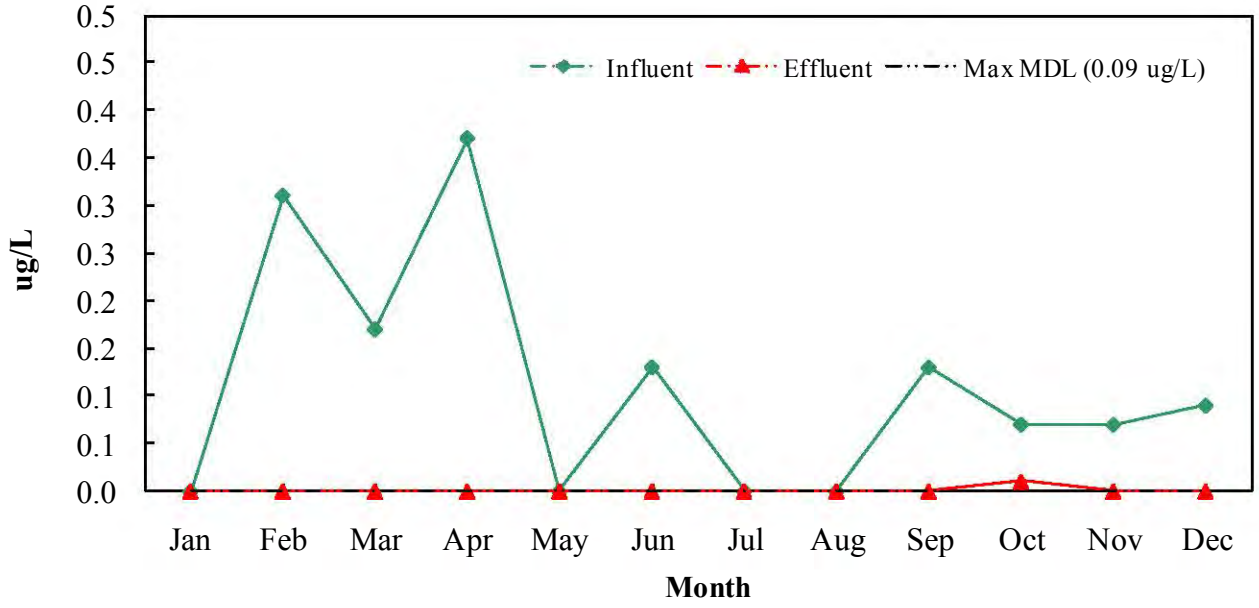
2010 South Bay Water Reclamation Plant
Monthly Averages
Iron

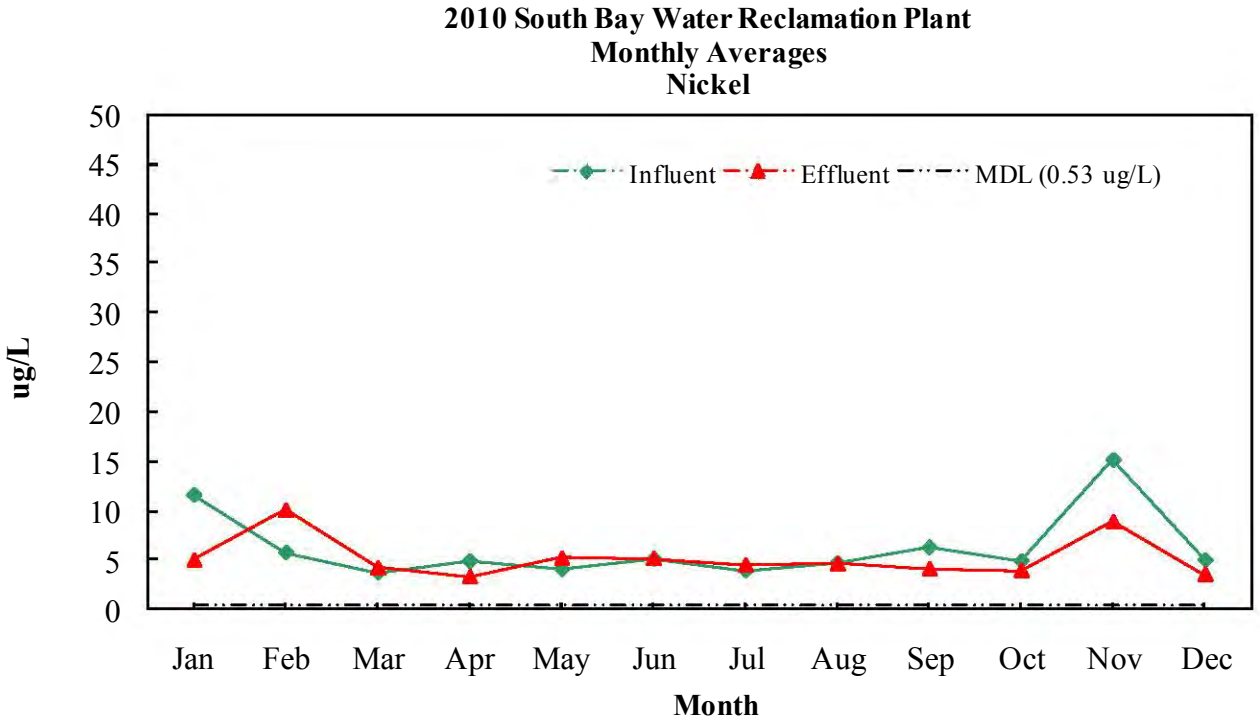


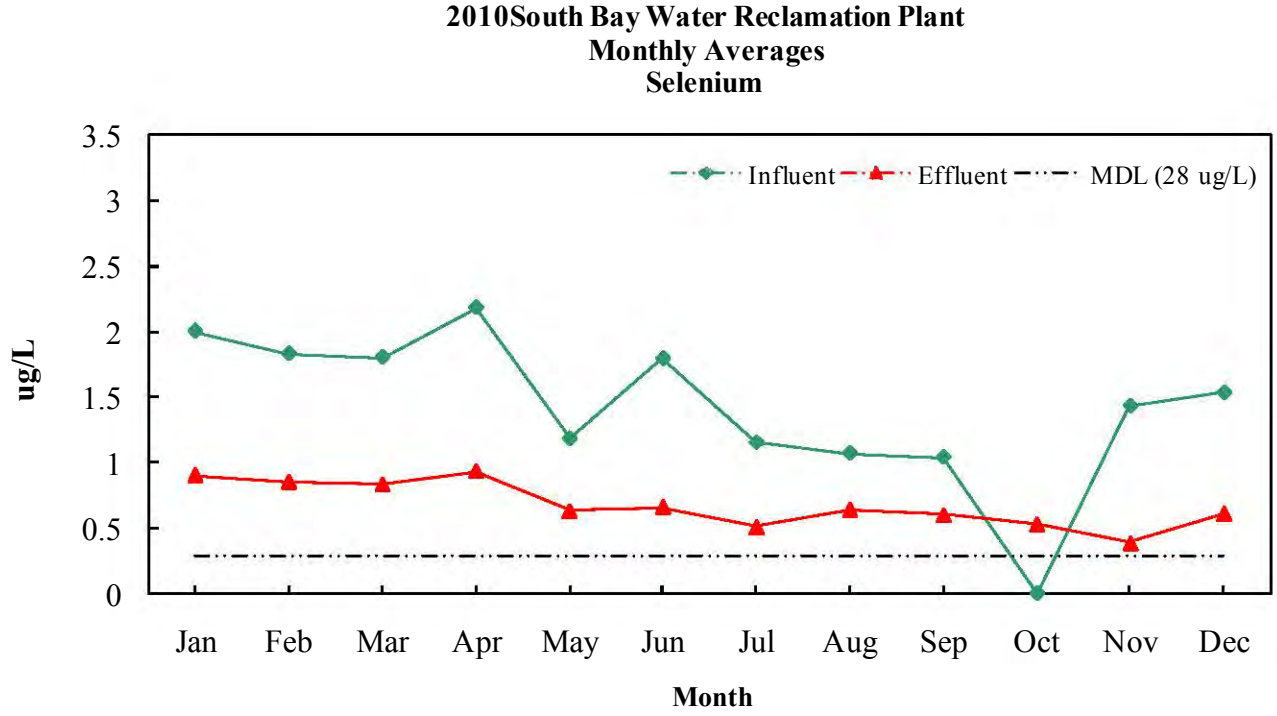
2010 South Bay Water Reclamation Plant
Monthly Averages
Lead



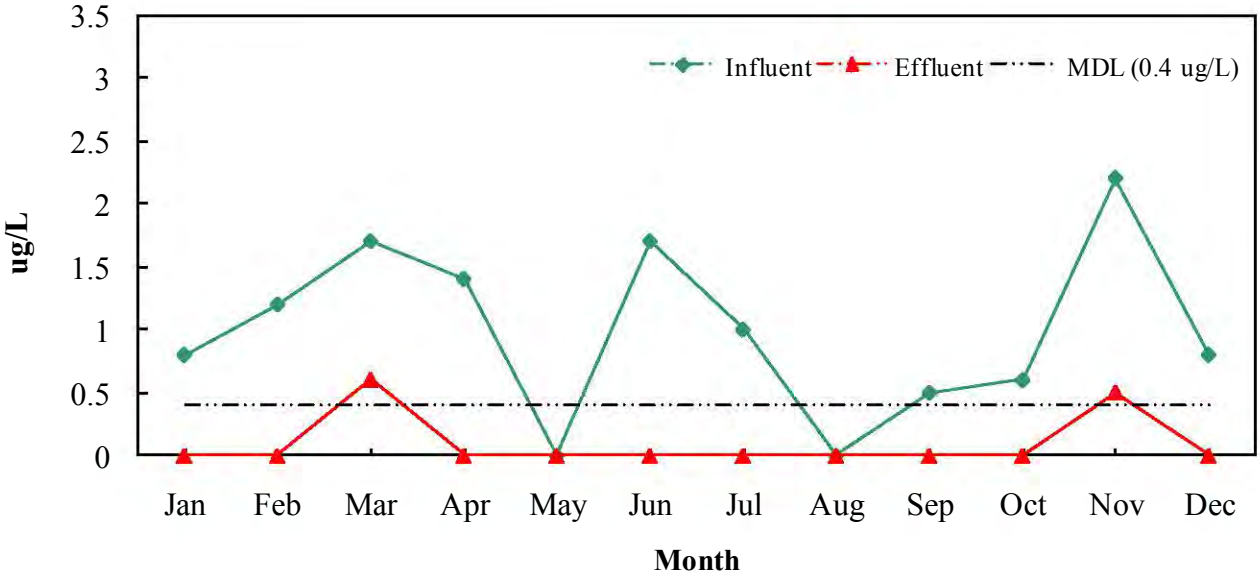
2010 South Bay Water Reclamation Plant
Monthly Averages
Mercury



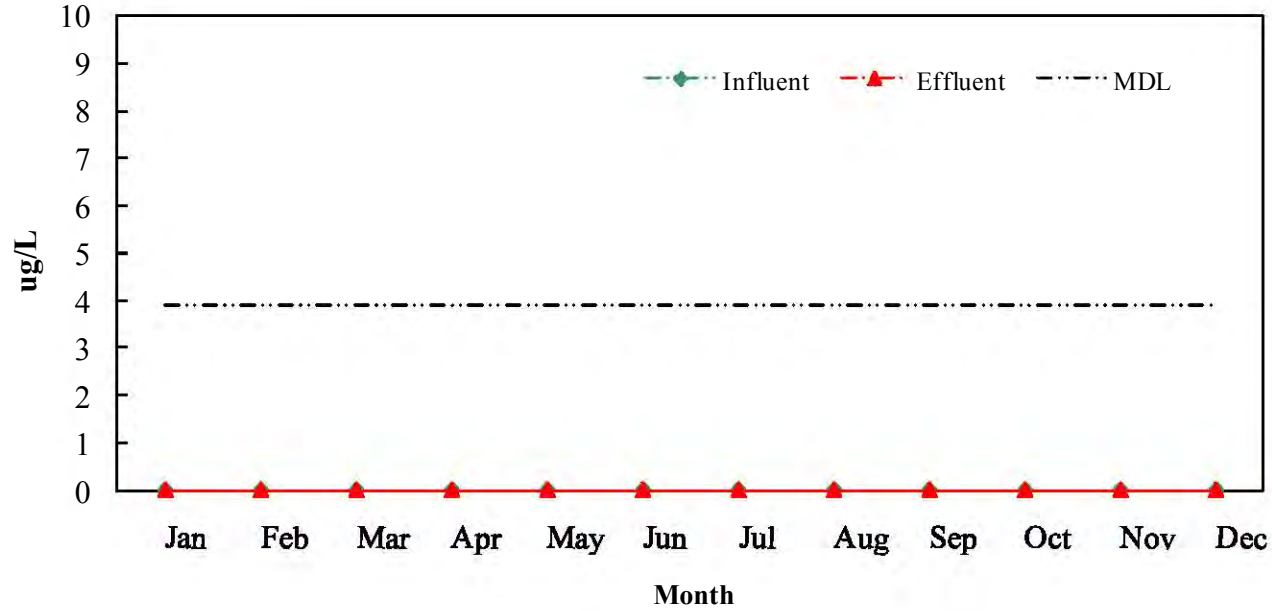

2010 South Bay Water Reclamation Plant
Monthly Averages
Nickel
Influent
Effluent
MDL (0.53 ug/L)
ug/L
50
45
40
35
30
25
20
15
10
5
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month


2010South Bay Water Reclamation Plant
Monthly Averages
Selenium
Influent
Effluent
MDL (28 ug/L)
ug/L
3.5
3
2.5
2
1.5
1
0.5
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month

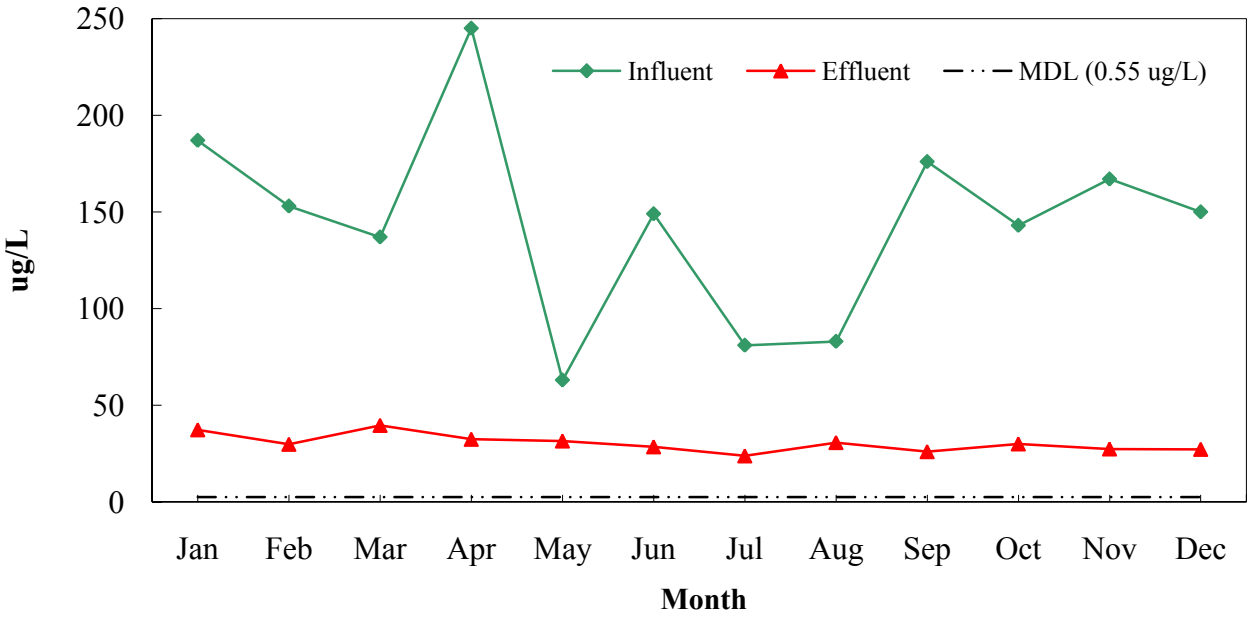
2010 South Bay Water Reclamation Plant
Monthly Averages
Silver



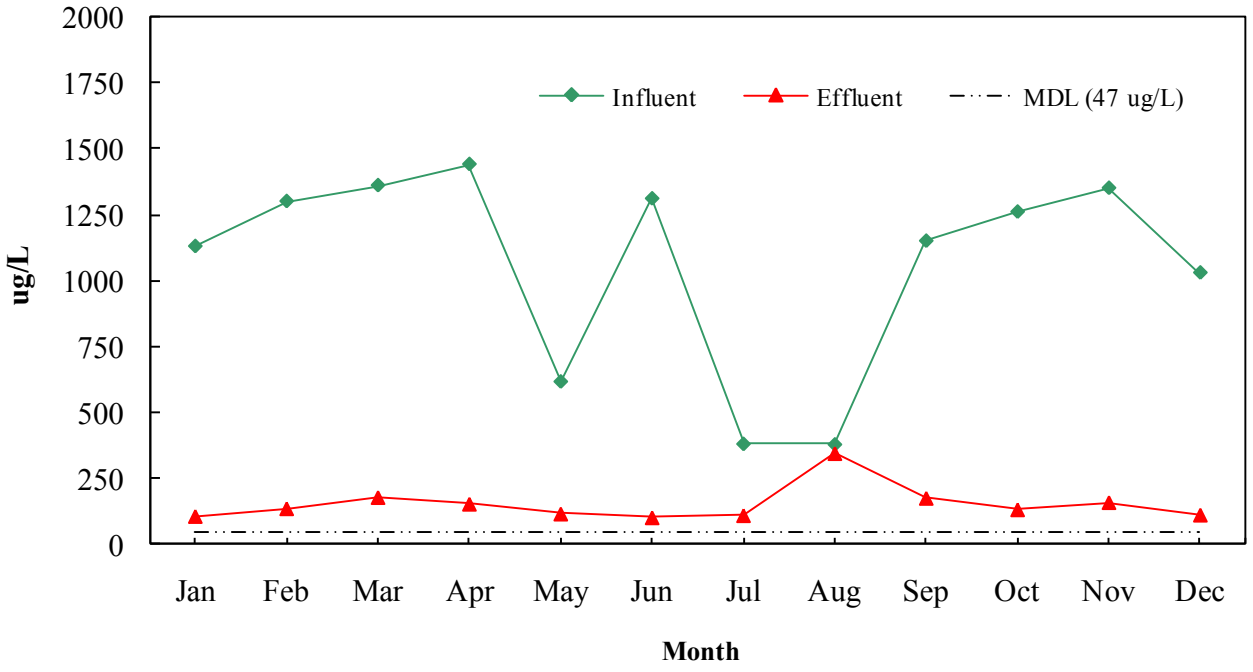
2010 South Bay Water Reclamation Plant
Monthly Averages
Thallium



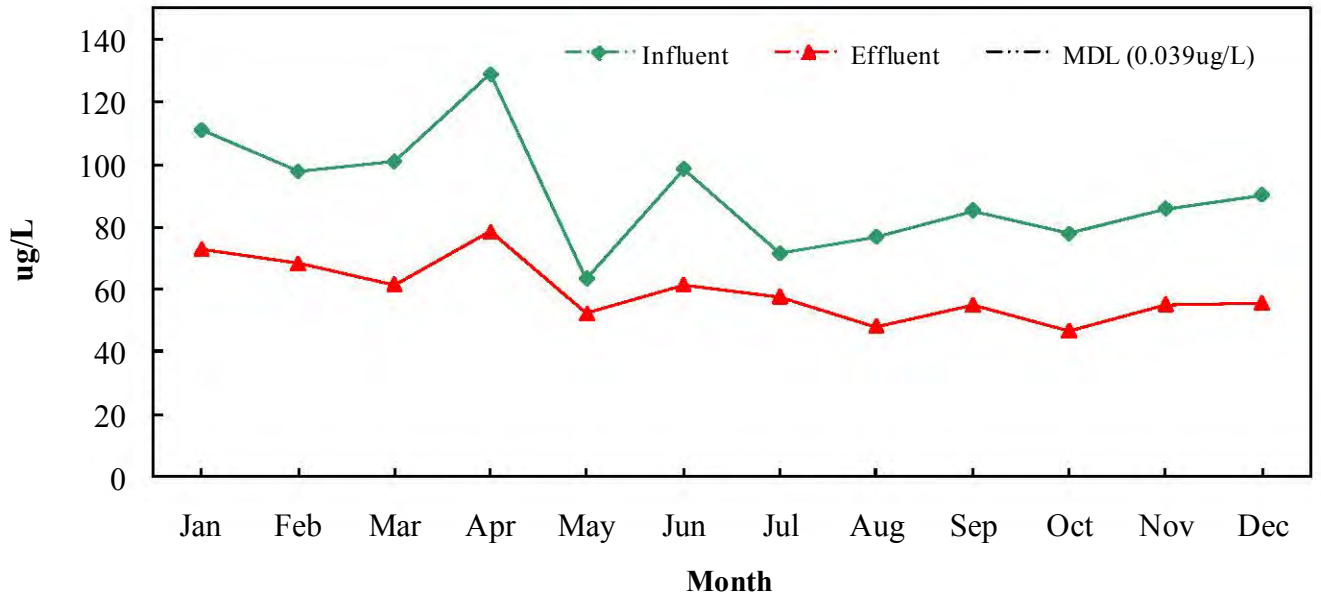
2010 South Bay Water Reclamation Plant
Monthly Averages
Zinc



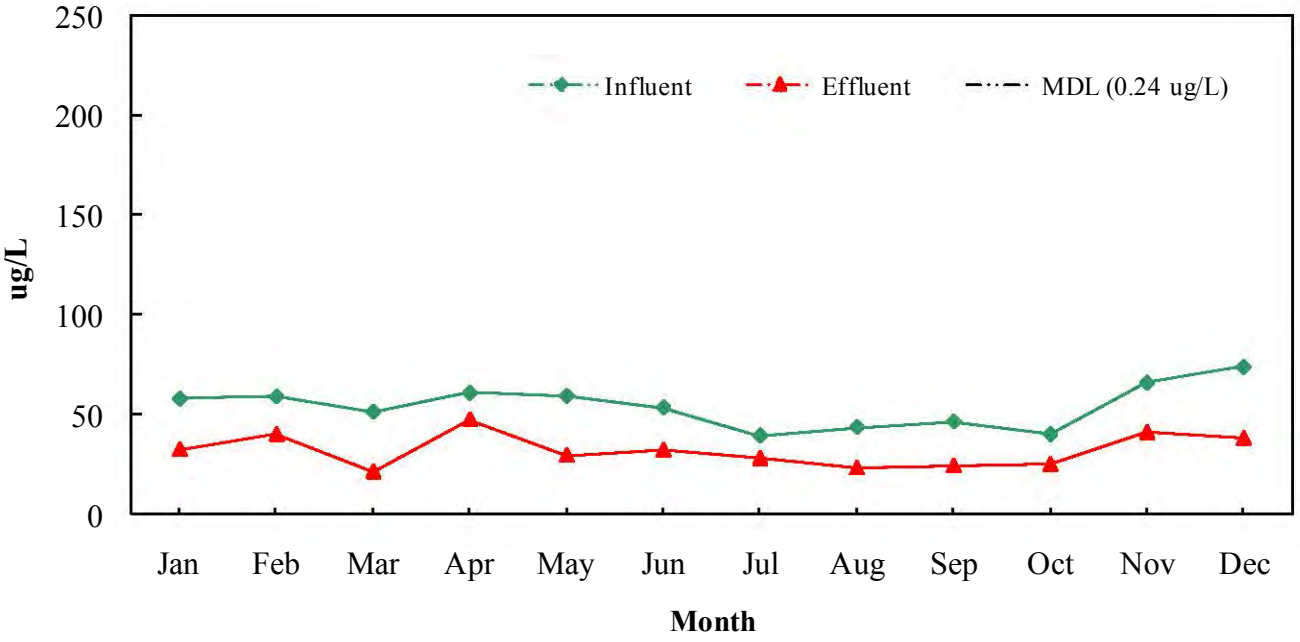
2010 South Bay Water Reclamation Plant
Monthly Averages
Aluminum



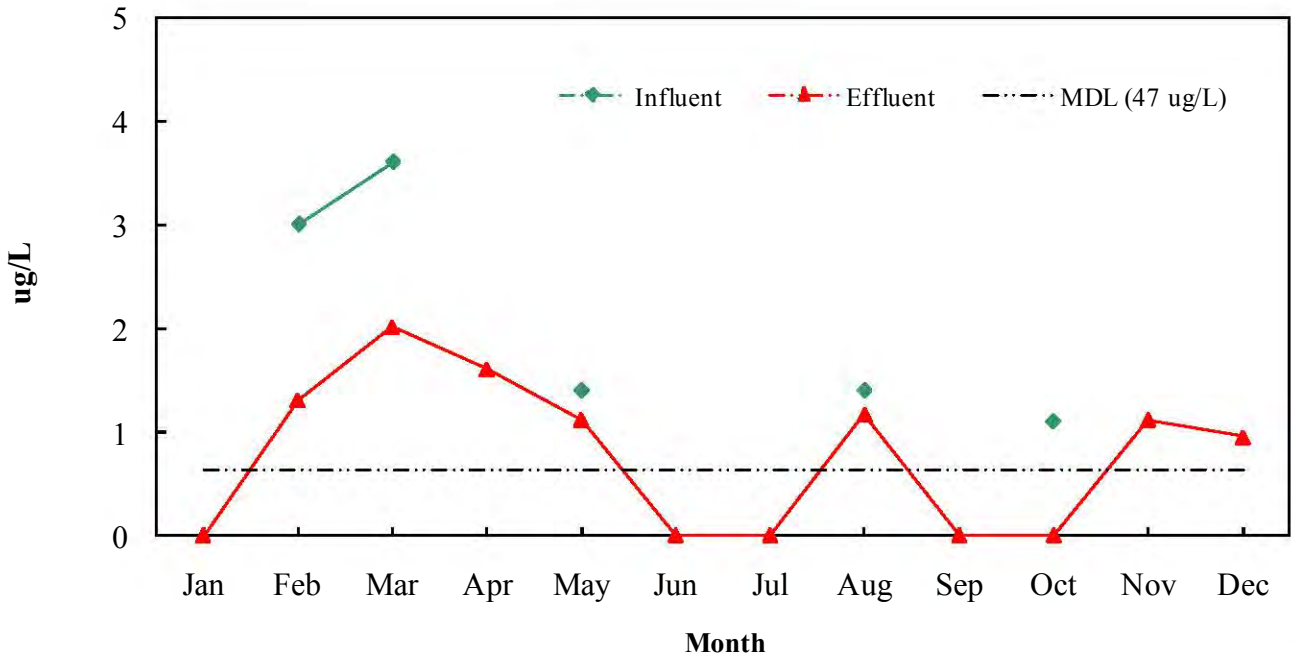
2010 South Bay Water Reclamation Plant
Monthly Averages
Barium



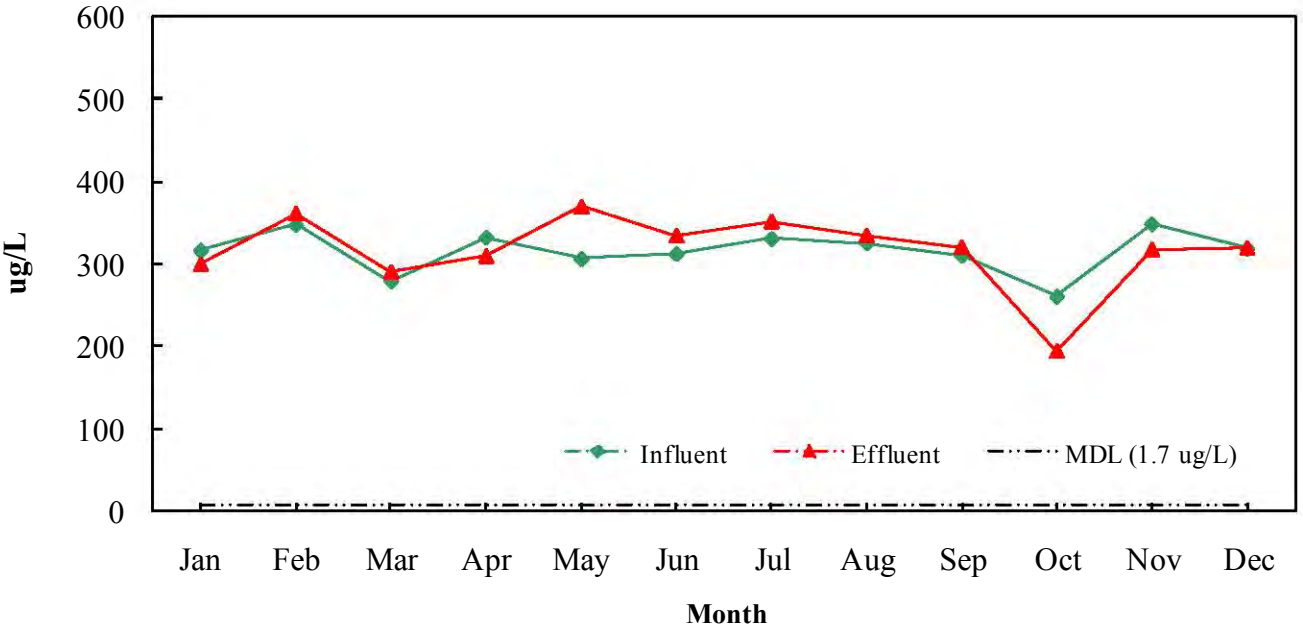
2010 South Bay Water Reclamation Plant
Monthly Averages
Manganese



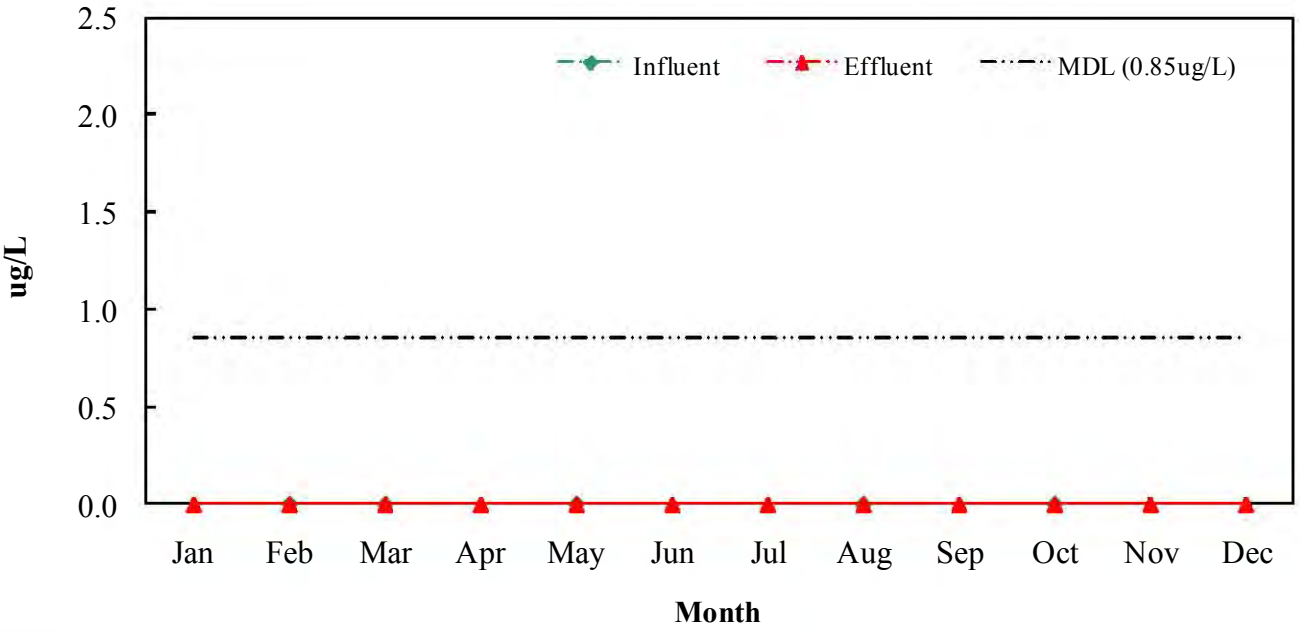
2010 South Bay Water Reclamation Plant
Monthly Averages
Vanadium



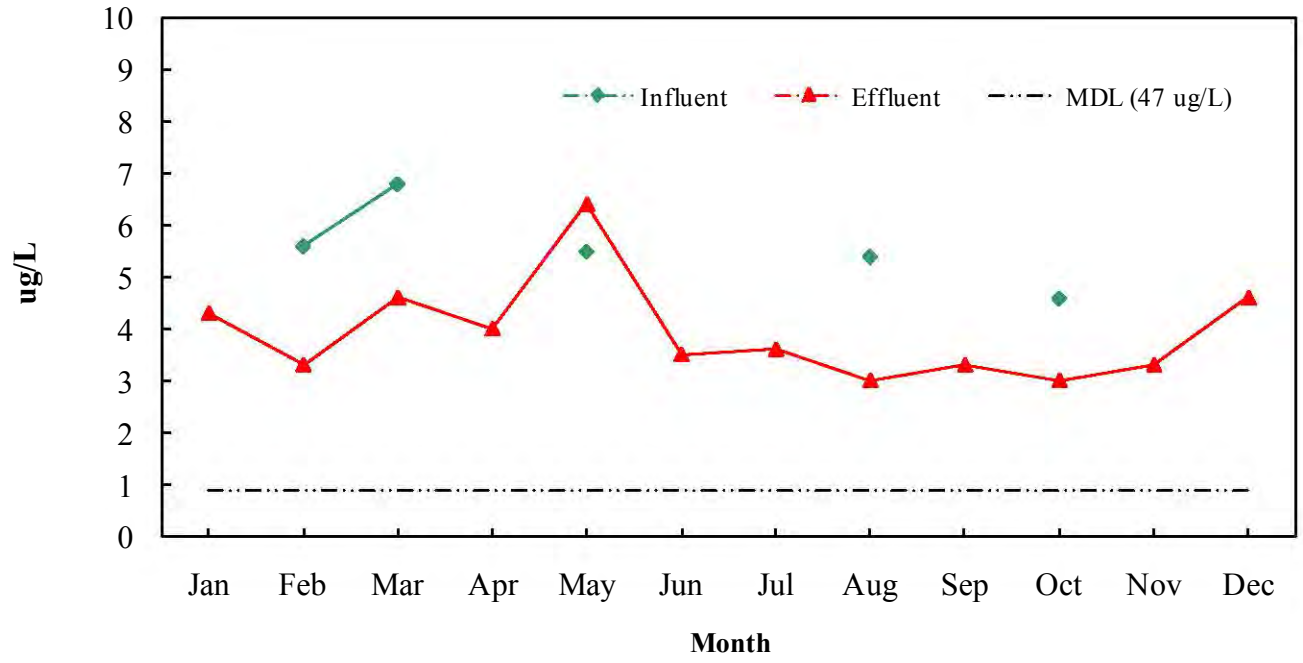
2010 South Bay Water Reclamation Plant
Monthly Averages
Boron



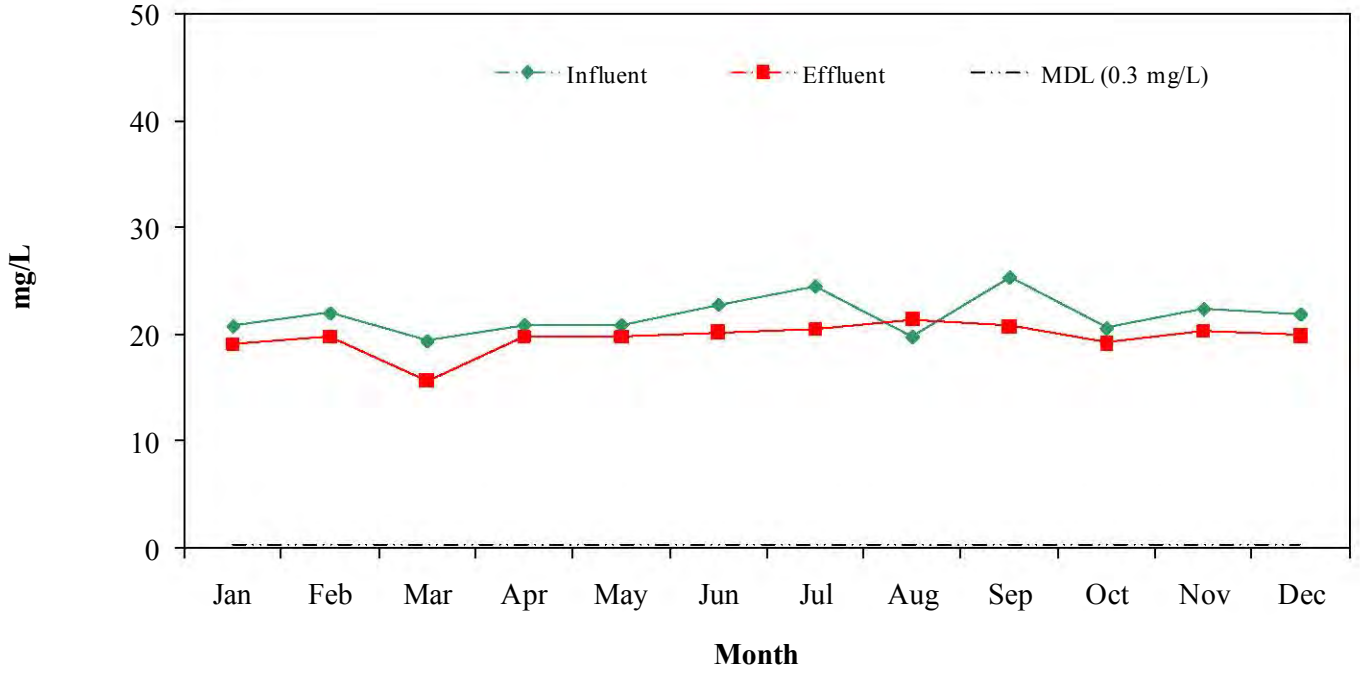
2010 South Bay Water Reclamation Plant
Monthly Averages
Cobalt



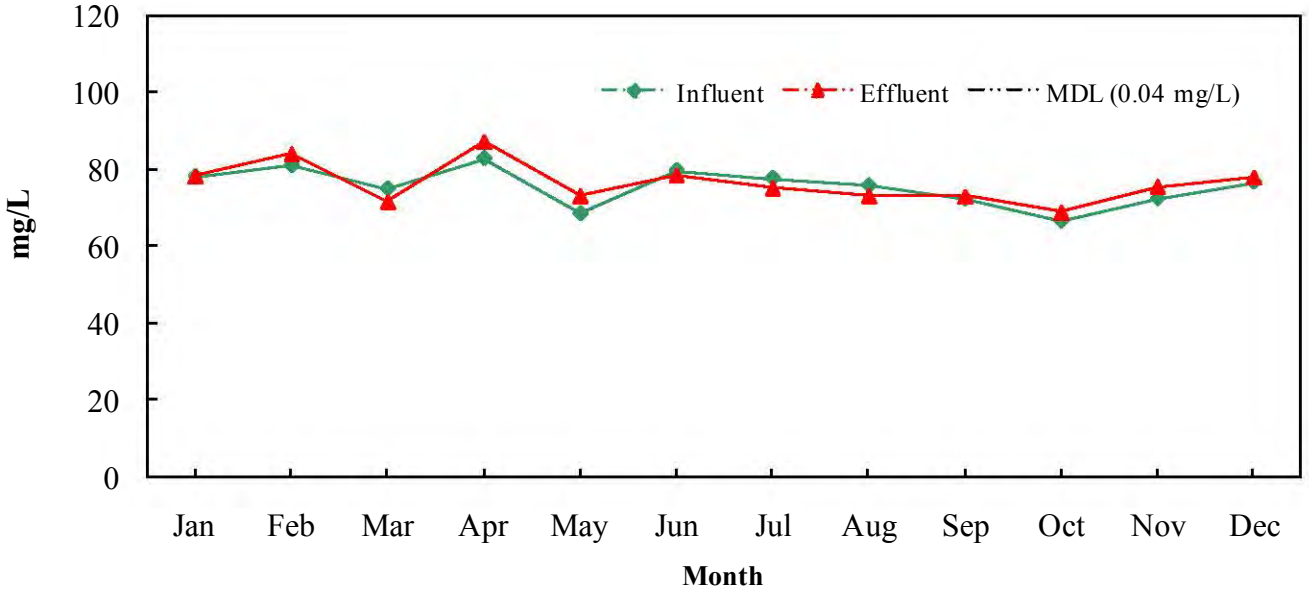
2010 South Bay Water Reclamation Plant
Monthly Averages
Molybdenum



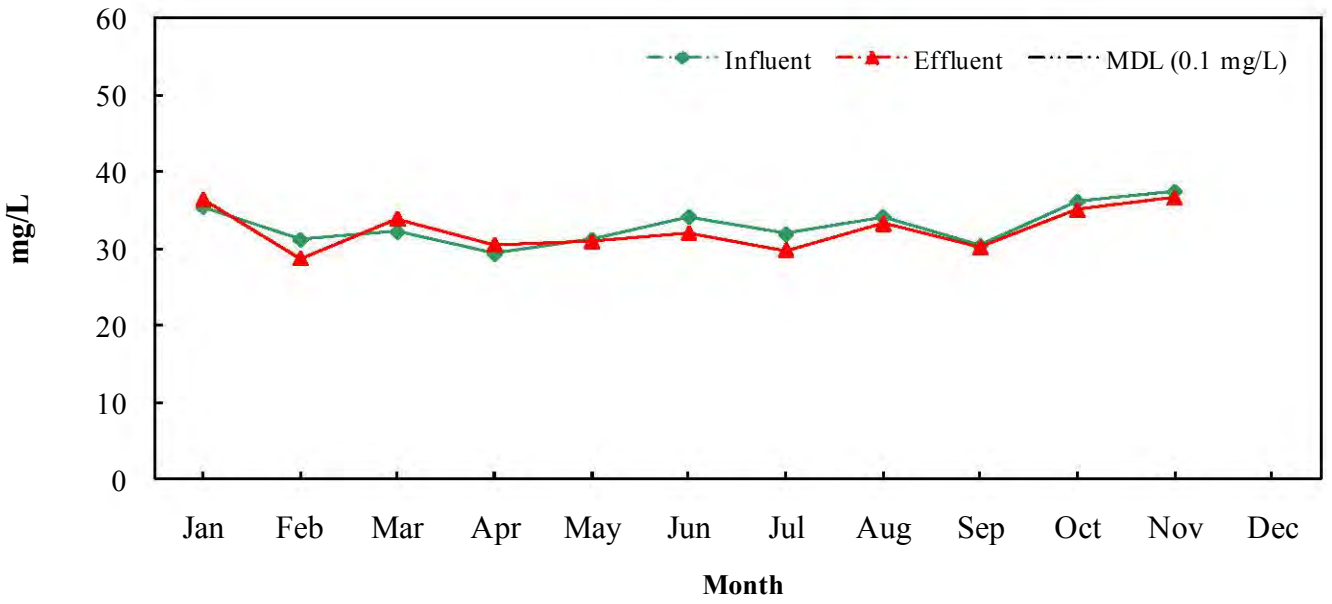
2010 South Bay Water Reclamation Plant
Monthly Averages
Potassium



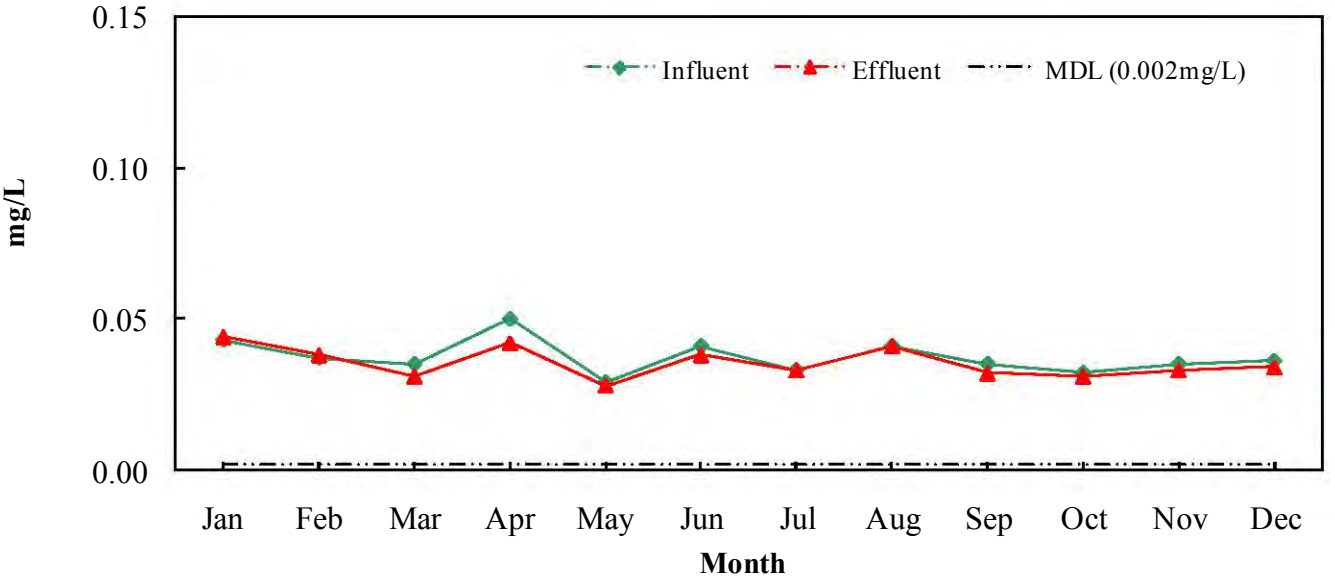
2010 South Bay Water Reclamation Plant
Monthly Averages
Calcium



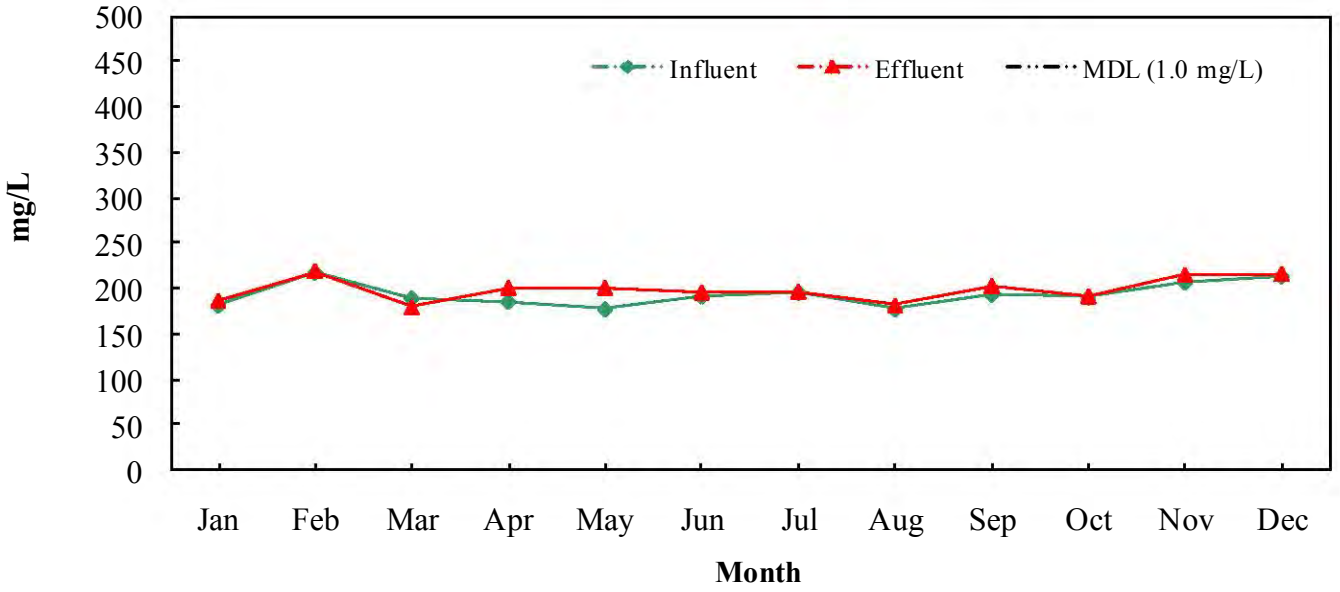
2010 South Bay Water Reclamation Plant
Monthly Averages
Magnesium



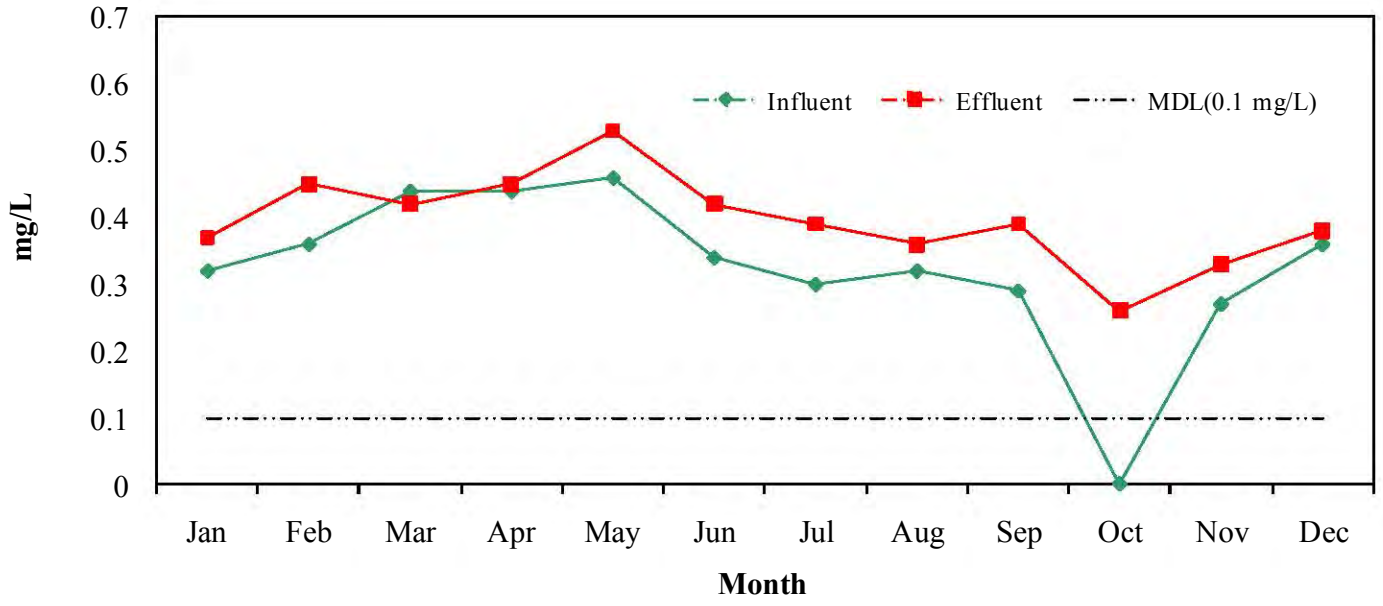
2010 South Bay Water Reclamation Plant
Monthly Averages
Lithium



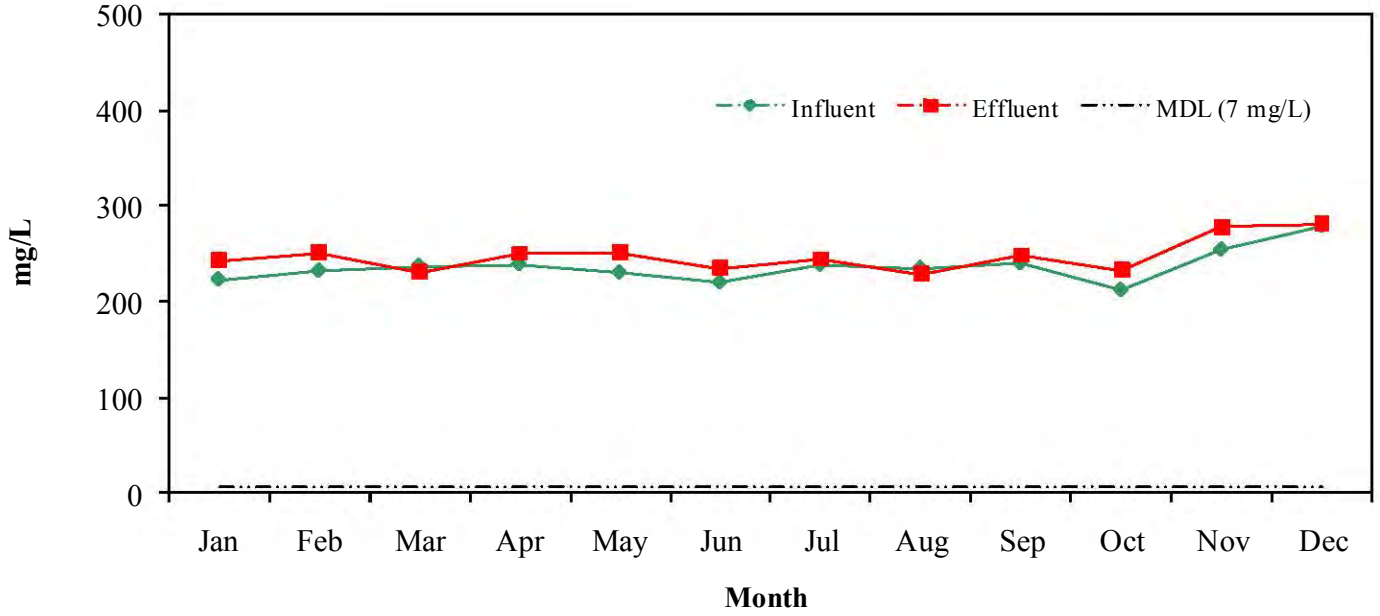
2010 South Bay Water Reclamation Plant
Monthly Averages
Sodium



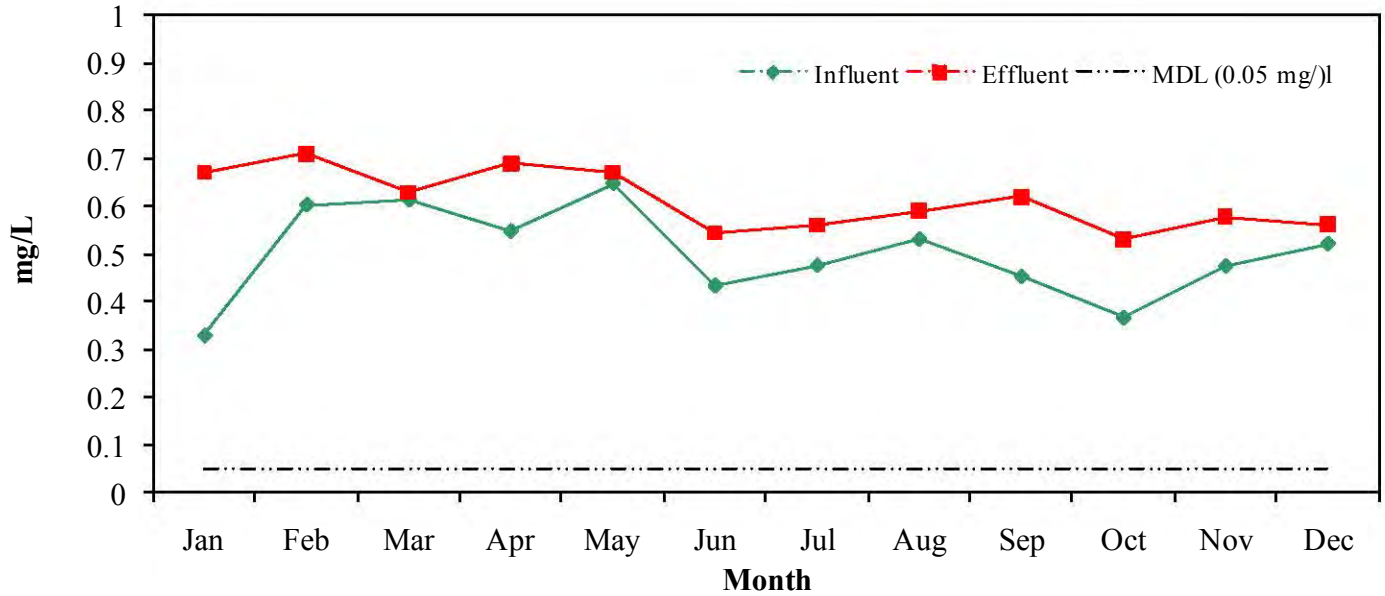
2010 South Bay Water Reclamation Plant
Monthly Averages
Bromide



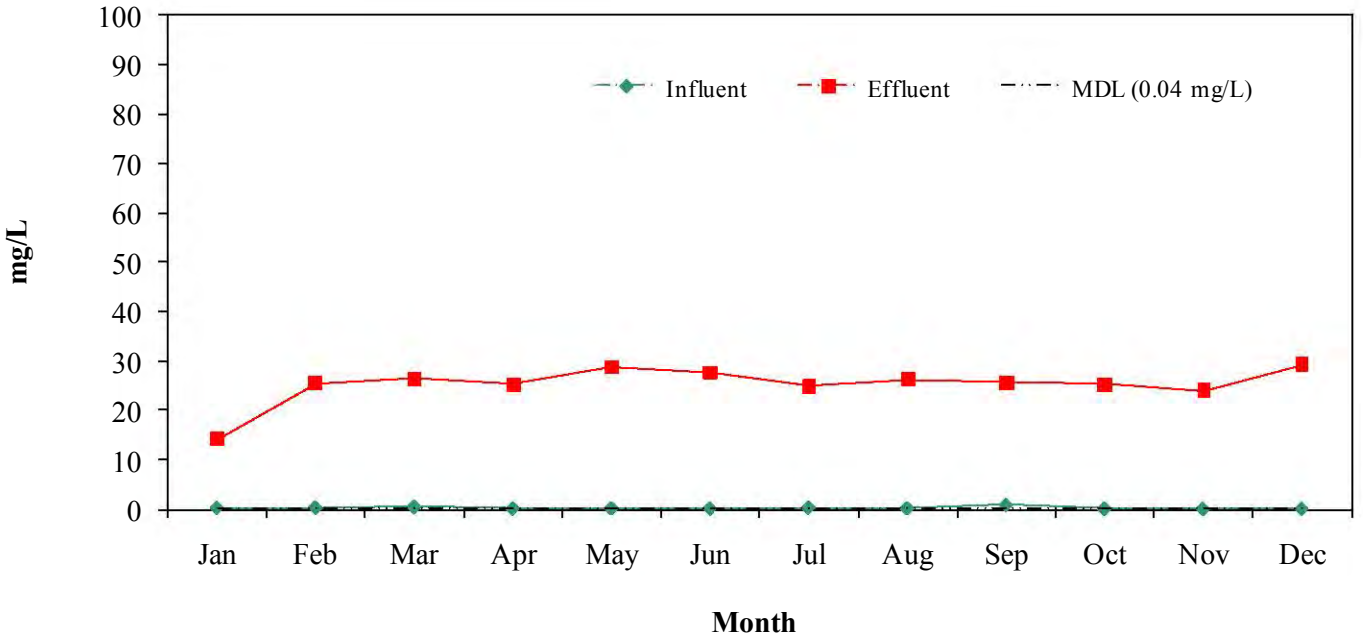
2010 South Bay Water Reclamation Plant
Monthly Averages
Chloride



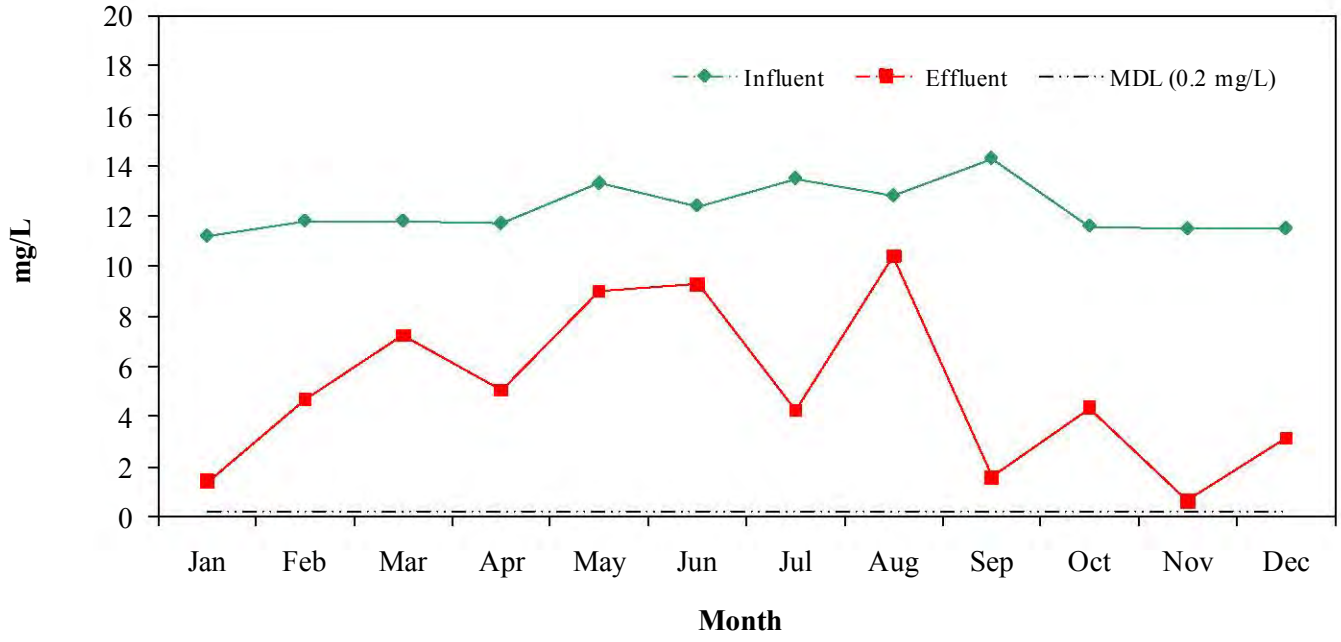
2010 South Bay Water Reclamation Plant
Monthly Averages
Fluoride



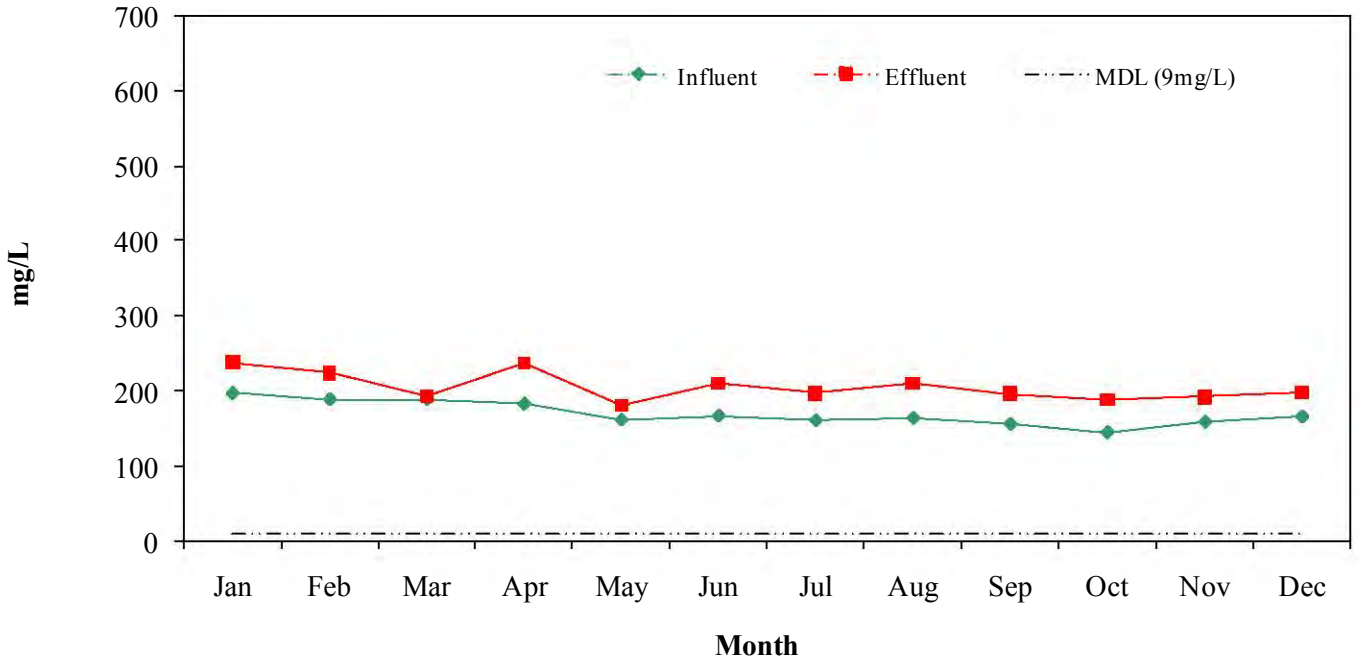
2010 South Bay Water Reclamation Plant
Monthly Average
Nitrate



2010 South Bay Water Reclamation Plant
Monthly Averages
O-Phosphate



2010 South Bay Water Reclamation Plant
Monthly Averages
Sulfate



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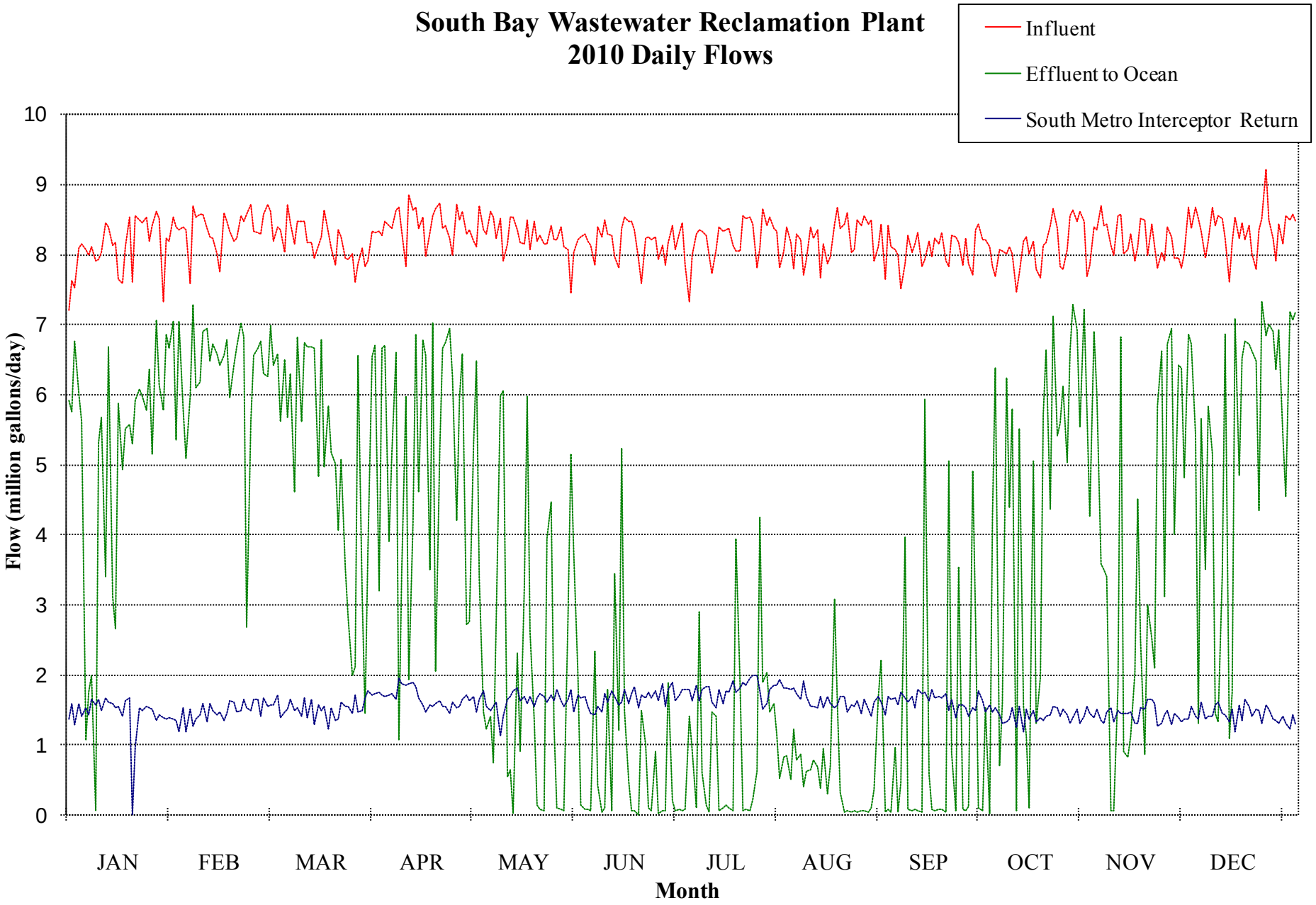
E. Daily Values of Selected Parameters.

Daily values of selected parameters (e.g. TSS, Flow, TSS Removals, etc.) are tabulated and presented graphically; statistical summary information is provided.


South Bay Wastewater Reclamation Plant
2010 Daily Flows
Influent
Effluent to Ocean
South Metro Interceptor Return
Flow (million gallons/day)
0
1
2
3
4
5
6
7
8
9
10
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Month

Daily Influent Flows (mgd) – 2010

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	7.21	8.54	8.71	8.33	8.19	8.22	8.32	8.06	8.42	8.12	8.40	8.67	
2	7.62	8.39	8.62	8.32	8.12	8.26	8.45	8.40	8.12	7.82	8.36	8.51	
3	7.52	8.36	8.20	8.34	8.69	8.29	7.84	8.17	8.07	7.68	8.69	8.33	
4	8.09	8.40	8.39	8.27	8.36	8.20	7.33	7.79	7.99	8.08	8.42	7.95	
5	8.15	8.35	8.36	8.47	8.29	8.14	7.99	8.30	7.50	8.06	8.43	8.20	
6	8.08	7.58	8.03	8.42	8.62	7.84	8.29	8.22	7.88	8.02	8.14	8.68	
7	7.99	8.69	8.72	8.38	8.54	8.39	8.35	7.71	8.27	8.11	7.99	8.42	
8	8.12	8.53	8.45	8.63	8.24	8.25	8.33	7.94	8.03	8.02	8.55	8.56	
9	7.92	8.58	8.15	8.67	8.51	8.49	8.28	8.39	8.16	7.46	8.58	8.52	
10	7.93	8.57	8.47	8.34	7.91	8.30	8.00	8.24	8.32	7.73	8.02	8.24	
11	8.04	8.37	8.47	7.82	8.15	8.27	7.72	8.35	7.82	8.19	8.08	7.61	
12	8.45	8.26	8.47	8.86	8.54	7.98	8.07	7.66	7.93	8.25	8.30	8.17	
13	8.39	8.23	8.18	8.64	8.53	7.81	8.40	8.15	8.20	8.02	7.92	8.53	
14	8.14	8.01	8.18	8.68	8.35	8.37	8.34	7.87	7.97	8.20	8.12	8.23	
15	8.17	7.74	7.95	8.37	8.18	8.54	8.35	7.98	8.24	7.78	8.52	8.46	
16	7.64	8.60	8.14	8.53	8.15	8.48	8.37	8.43	8.16	7.66	8.50	8.22	
17	7.29	5.79	8.26	7.97	8.49	8.47	8.14	8.68	8.32	8.14	8.00	8.42	
18	8.11	8.34	8.64	8.31	8.08	8.35	8.06	8.38	7.92	8.18	8.44	8.02	
19	8.54	8.19	8.31	8.55	8.47	7.94	8.06	8.44	7.83	8.42	8.12	7.78	
20	7.61	8.23	8.09	8.65	8.19	7.59	8.56	8.60	8.27	8.65	7.81	8.36	
21	8.55	8.56	7.86	8.73	8.27	8.24	8.51	8.03	8.25	8.38	8.03	8.51	
22	8.49	8.48	8.35	8.37	8.15	8.25	8.54	8.07	8.18	7.82	7.91	9.21	
23	8.46	8.57	8.26	8.42	8.15	8.22	8.43	8.49	7.84	7.79	8.40	8.50	
24	8.53	8.72	7.95	8.23	8.41	8.25	7.80	8.42	8.23	8.07	8.26	8.24	
25	8.19	8.34	7.93	7.99	8.21	7.94	8.09	8.55	7.87	8.55	7.96	7.92	
26	8.42	8.31	8.02	8.72	8.21	8.14	8.66	8.43	7.71	8.64	7.96	8.43	
27	8.61	8.29	7.60	8.50	8.40	7.84	8.42	8.49	8.36	8.47	7.81	8.15	
28	8.52	8.58	7.88	8.62	8.11	8.18	8.54	7.91	8.43	8.62	8.01	8.56	
29	7.32		8.10	8.29	8.08	8.41	8.37	8.12	8.21	8.48	8.68	8.50	
30	8.24		7.83	8.36	7.45	8.07	8.34	8.43	8.21	7.68	8.37	8.58	
31	8.19		7.92		8.04		7.81	7.65		7.85		8.48	Annual Summary
Average	8.08	8.27	8.21	8.43	8.26	8.19	8.22	8.20	8.09	8.09	8.23	8.35	8.22
Minimum	7.21	5.79	7.60	7.82	7.45	7.59	7.33	7.65	7.50	7.46	7.81	7.61	5.79
Maximum	8.61	8.72	8.72	8.86	8.69	8.54	8.66	8.68	8.43	8.65	8.69	9.21	9.21
Total	250.53	231.60	254.49	252.78	256.08	245.72	254.76	254.35	242.71	250.94	246.78	258.96	3,000

Daily Effluent to Ocean Flows (mgd) 2010

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	5.91	7.05	6.27	6.54	5.32	1.99	0.09	0.82	0.09	0.03	6.90	5.43	
2	5.76	5.35	6.98	6.70	6.48	0.14	0.07	0.84	0.05	4.27	6.01	1.31	
3	6.76	7.05	6.43	3.20	3.38	0.08	0.08	0.50	0.96	6.38	3.59	5.66	
4	6.02	5.79	6.59	6.67	1.47	0.09	1.41	1.23	0.04	0.71	3.51	3.51	
5	5.61	5.09	5.61	6.71	1.23	0.07	0.93	0.78	0.47	1.59	3.40	5.84	
6	1.06	5.98	6.51	3.91	1.41	2.34	0.11	0.86	3.97	6.24	0.06	5.16	
7	1.75	7.28	5.68	5.16	0.75	0.42	2.90	0.41	0.08	4.39	0.07	1.46	
8	2.00	6.09	6.30	6.61	2.75	0.05	0.61	0.63	0.07	5.79	1.84	1.34	
9	0.06	6.18	4.62	1.07	5.98	0.10	0.14	0.65	0.08	0.06	6.82	3.45	
10	5.32	6.91	6.82	3.47	6.05	1.79	0.05	0.78	0.06	5.52	0.90	6.86	
11	5.67	6.95	5.61	5.98	0.54	0.07	1.48	0.69	0.05	1.56	0.83	1.08	
12	3.40	6.49	6.75	1.94	0.65	3.44	1.41	0.39	5.94	1.13	1.13	1.76	
13	6.69	6.73	6.69	4.16	0.03	1.21	0.07	0.95	0.58	0.10	2.04	7.08	
14	3.13	6.58	6.69	6.86	2.32	5.23	0.10	0.30	0.09	5.05	4.51	4.86	
15	2.66	6.43	6.66	4.61	0.90	1.49	0.15	0.71	0.07	1.31	2.49	6.53	
16	5.87	6.57	4.84	6.78	3.29	0.49	0.10	3.08	0.08	1.97	0.86	6.76	
17	4.94	6.79	6.78	6.57	5.97	0.07	0.06	1.58	0.08	5.72	3.00	6.72	
18	5.51	5.96	4.98	3.50	2.61	0.07	3.95	0.33	0.05	6.64	2.52	6.63	
19	5.58	6.43	5.83	7.03	1.36	0.01	1.85	0.05	5.05	4.37	2.10	6.48	
20	5.29	6.69	5.17	2.06	0.15	1.49	0.06	0.07	0.88	7.13	5.84	4.34	
21	5.91	7.03	5.01	5.21	0.09	1.01	0.08	0.05	0.06	5.41	6.63	7.33	
22	6.08	6.82	4.06	6.67	0.06	0.10	0.07	0.06	3.55	5.59	3.13	6.84	
23	5.97	2.67	5.08	6.75	3.95	0.06	0.23	0.05	0.08	6.12	6.72	7.00	
24	5.78	5.62	3.53	6.94	4.48	0.90	0.63	0.06	0.06	5.04	6.94	6.90	
25	6.36	6.57	2.83	6.26	1.30	0.03	4.24	0.07	0.13	6.63	4.01	6.37	
26	5.16	6.66	1.99	4.21	0.11	0.07	1.90	0.05	4.91	7.28	6.42	6.92	
27	7.06	6.77	2.12	5.95	0.08	0.07	2.04	0.11	2.78	6.92	6.39	5.40	
28	6.13	6.30	6.56	6.58	0.07	1.89	1.48	0.37	0.11	5.53	4.81	4.56	
29	5.77	6.27	3.10	2.71	2.88	0.21	1.59	1.67	0.06	7.23	6.86	7.19	
30	6.87		1.45	2.76	5.16	0.07	1.15	2.22	1.54	5.78	6.72	7.06	
31	6.66		3.75		3.74		0.53	0.04		4.27		7.18	Annual Summary
Average	5.00	6.32	5.20	5.12	2.41	0.84	0.95	0.66	1.07	4.38	3.90	5.32	3.43
Minimum	0.06	2.67	1.45	1.07	0.03	0.01	0.05	0.04	0.04	0.03	0.06	1.08	0.01
Maximum	7.06	7.28	6.98	7.03	6.48	5.23	4.24	3.08	5.94	7.28	6.94	7.33	7.33
Total	156.74	183.10	161.29	153.57	74.56	25.05	29.56	20.40	32.02	135.76	117.05	165.01	1,254

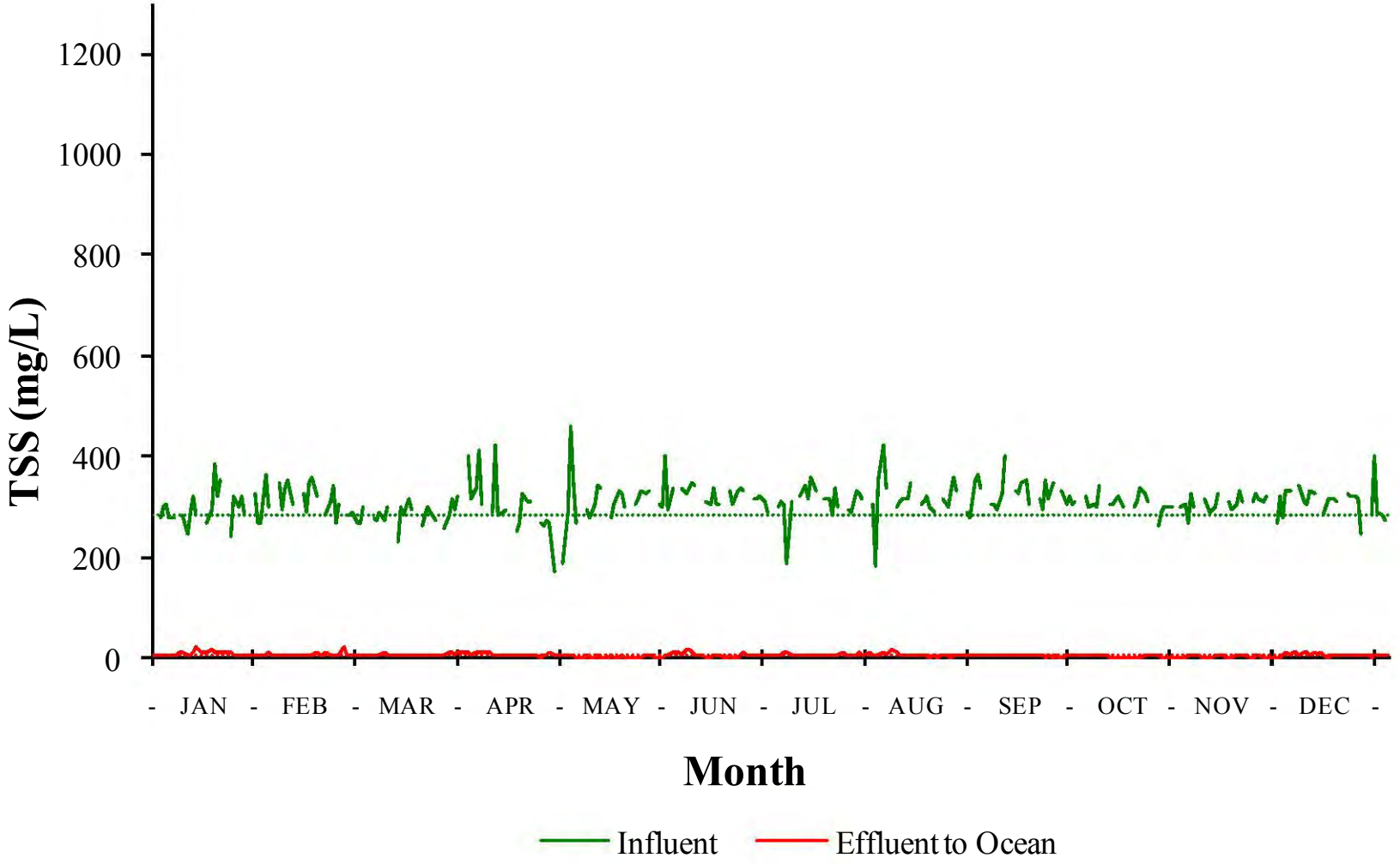
South Metro Interceptor[5] Flows (mgd) 2010

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	1.37	1.38	1.56	1.72	1.70	1.72	1.71	1.82	1.70	1.57	1.40	1.41	
2	1.60	1.36	1.57	1.74	1.47	1.67	1.80	1.82	1.66	1.47	1.51	1.37	
3	1.30	1.20	1.58	1.76	1.65	1.69	1.80	1.80	1.68	1.54	1.35	1.61	
4	1.59	1.54	1.72	1.72	1.78	1.55	1.79	1.81	1.57	1.44	1.32	1.38	
5	1.42	1.19	1.40	1.70	1.56	1.45	1.64	1.74	1.75	1.31	1.48	1.41	
6	1.54	1.52	1.47	1.71	1.49	1.44	1.86	1.65	1.67	1.33	1.53	1.41	
7	1.44	1.28	1.52	1.73	1.56	1.55	1.64	1.91	1.62	1.38	1.34	1.58	
8	1.66	1.37	1.65	1.66	1.61	1.48	1.79	1.69	1.70	1.53	1.50	1.61	
9	1.57	1.44	1.49	1.96	1.13	1.74	1.84	1.56	1.53	1.25	1.46	1.45	
10	1.66	1.60	1.54	1.88	1.42	1.62	1.84	1.56	1.79	1.55	1.45	1.44	
11	1.50	1.34	1.42	1.86	1.65	1.78	1.62	1.53	1.73	1.20	1.45	1.34	
12	1.67	1.59	1.67	1.87	1.69	1.69	1.53	1.69	1.76	1.51	1.48	1.51	
13	1.61	1.49	1.40	1.90	1.77	1.58	1.80	1.53	1.64	1.38	1.32	1.20	
14	1.60	1.44	1.66	1.83	1.81	1.62	1.60	1.70	1.80	1.50	1.31	1.57	
15	1.53	1.48	1.29	1.67	1.63	1.80	1.77	1.60	1.67	1.34	1.53	1.35	
16	1.56	1.36	1.57	1.57	1.70	1.59	1.75	1.54	1.70	1.40	1.52	1.66	
17	1.41	1.46	1.50	1.47	1.60	1.73	1.91	1.57	1.68	1.36	1.65	1.56	
18	1.63	1.64	1.55	1.57	1.69	1.83	1.76	1.70	1.74	1.41	1.65	1.41	
19	1.67	1.61	1.24	1.56	1.56	1.54	1.81	1.69	1.50	1.43	1.60	1.51	
20	0.00	1.48	1.54	1.59	1.67	1.72	1.89	1.47	1.65	1.55	1.27	1.50	
21	0.97	1.49	1.35	1.63	1.74	1.67	1.85	1.57	1.40	1.53	1.31	1.31	
22	1.53	1.66	1.38	1.55	1.69	1.75	1.96	1.55	1.58	1.41	1.44	1.58	
23	1.49	1.53	1.61	1.55	1.62	1.67	2.00	1.63	1.57	1.51	1.49	1.51	
24	1.56	1.49	1.56	1.45	1.72	1.77	1.99	1.46	1.54	1.43	1.30	1.38	
25	1.53	1.65	1.55	1.62	1.64	1.64	1.78	1.65	1.42	1.31	1.46	1.36	
26	1.51	1.65	1.46	1.54	1.79	1.87	1.51	1.51	1.53	1.40	1.39	1.31	
27	1.36	1.41	1.72	1.55	1.63	1.56	1.60	1.42	1.49	1.51	1.34	1.42	
28	1.44	1.68	1.48	1.65	1.56	1.80	1.80	1.61	1.77	1.32	1.38	1.31	
29	1.40		1.50	1.71	1.65	1.90	1.86	1.69	1.63	1.42	1.38	1.23	
30	1.37		1.67	1.64	1.79	1.63	1.86	1.62	1.48	1.55	1.55	1.43	
31	1.40		1.78		1.47		1.93	1.43		1.45		1.30	Annual Summary
Average	1.45	1.48	1.53	1.68	1.63	1.67	1.78	1.63	1.63	1.43	1.44	1.43	1.56
Minimum	0.00	1.19	1.24	1.45	1.13	1.44	1.51	1.42	1.40	1.20	1.27	1.20	0.00
Maximum	1.67	1.68	1.78	1.96	1.81	1.90	2.00	1.91	1.80	1.57	1.65	1.66	2.00
Total	44.89	41.33	47.40	50.36	50.44	50.05	55.29	50.52	48.95	44.29	43.16	44.42	571

5 South Metro Interceptor is the point at which any return stream (e.g. removed biosolids) are returned to the Metro System.

South Bay Wastewater Reclamation Plant

2010 Total Suspended Solids

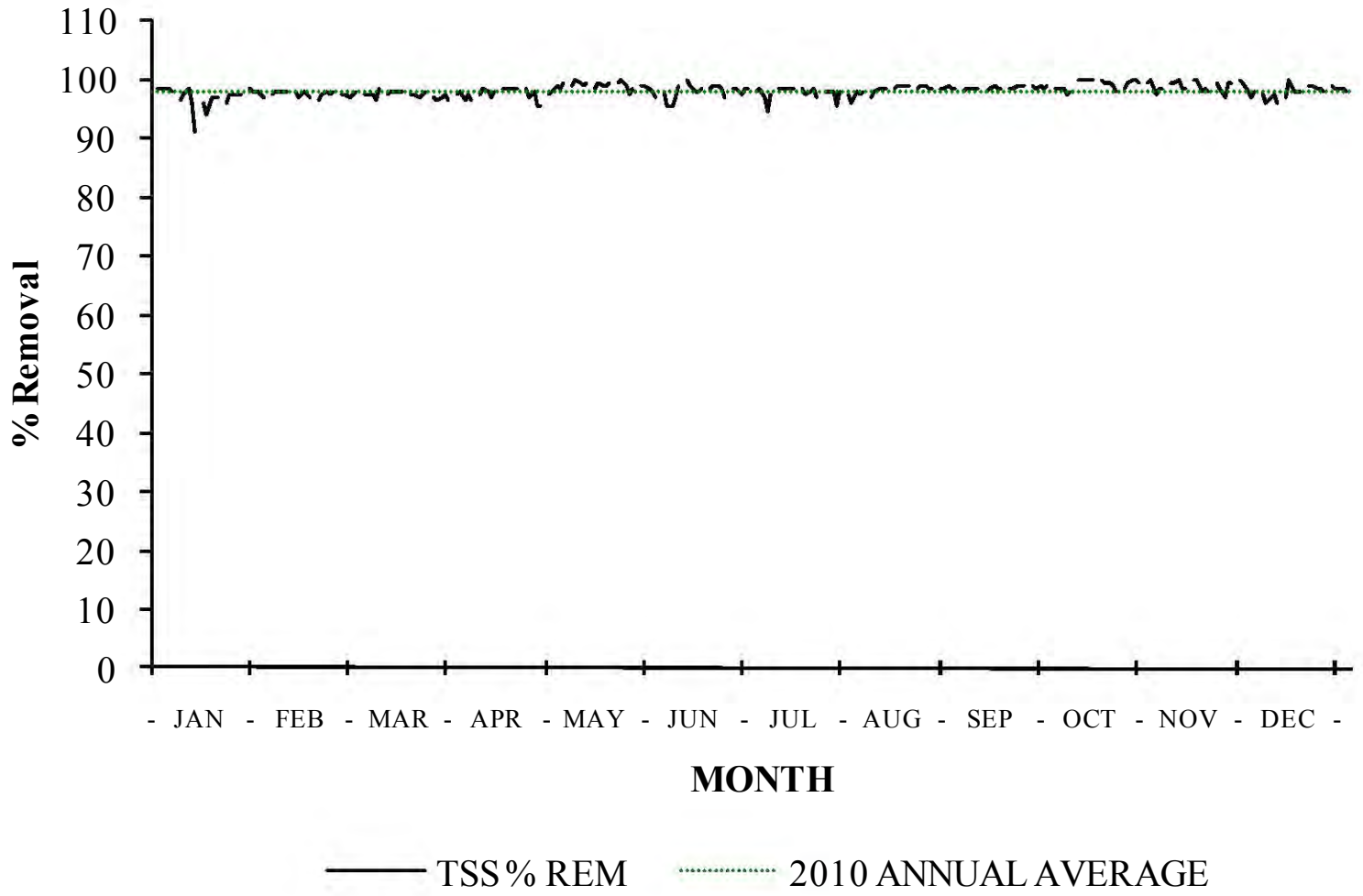


Daily TSS values – 2010

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
Day	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF	EFF
1		4.32	268	4.67	290	6.83	324	10.7		6.89	402	6.00	290	4.60	304	7.83	364	5.10		5.75	304	0.00	330	9.50
2		4.46	266	5.13	268	7.71		12.3		4.70	296	6.30		6.95	180	7.50	336	4.80		4.00	266	6.10	332	5.80
3	280	4.75	362	8.33	266	6.67		11.0	280	6.11	336	9.50		6.48	356	6.67		5.06	320	4.38	326	4.82		10.6
4	298	3.88	298	9.40	300	5.83	402	10.6	298	4.10		11.0	302	6.33	422	9.80		4.70	300	4.75	300	4.62		12.7
5	306	4.62		7.00		6.25	314	5.62	306	4.60		9.25	310	5.30	338	7.33	304	5.30	308	5.13		4.92	344	7.80
6	280	4.60		8.80		5.83	340	11.0	280	1.90	336	6.63	306	9.20		11.4	308	4.40	298	7.88		3.10	310	11.8
7	278	5.29	350	8.20	278	6.33	410	10.2	278	NR	328	14.6	188	10.5		15.3	294	4.40	342	6.75	314	2.30	306	9.00
8		6.50	294	6.40	274	6.83	304	10.8		NR	338	14.60	312	8.33	300	9.00	326	4.70		5.67	292	1.80	334	8.17
9		9.17	336	6.60	292	6.67		10.4		3.60	350	10.2		4.63	310	6.50	402	6.17		5.75	294	0.00	326	12.4
10	286	9.60	352	7.40	272	9.33		9.07	286	0.00	342	4.10		6.37	316	4.50		5.65	308	0.00	300	4.53		5.82
11	246	5.70	308	6.46	300	5.00	292	7.50	246	1.50		7.20	320	4.90	316	5.33		6.71	306	0.00	328	4.25		9.75
12	288	4.67		6.21		4.98	424	6.75	288	3.90		5.07	342	5.00	346	5.33	334	6.17	324	0.00		3.69	282	8.80
13	320	13.2		6.82		4.84	286	5.29	320	2.20	312	0.00	314	4.50		4.68	328	4.67	310	0.00		0.00	316	
14	286	24.8	326	7.17	230	5.20	288	8.57	286	2.65	304	3.10	360	4.71		4.85	348	4.33	302	0.00	312	0.00	318	6.00
15		9.58	290	8.50	298	6.50	294	5.43		2.50	338	6.13	330	5.40	308	4.17	354	4.83		0.00	296	0.00	318	6.33
16		13.1	350	7.17	286	6.33		5.20		3.80	308	5.62		5.23	310	3.80	306	4.33		0.00	306	6.57	312	6.50
17	268	10.2	360	8.33	318	5.67		4.33	268	1.80	308	5.30		4.31	322	3.80		8.60	300	0.00	330	5.50		5.60
18	296	17.2	324	9.00	296	5.50	254	3.80	296	3.50		2.25	314	4.13	302	3.40		5.67	310	2.20	312	6.50		4.63
19	386	11.6		6.50		7.67	266	4.50	386	3.80		2.40	318	7.17	290	3.60	318	4.38	338	1.70		6.29	328	4.00
20	320	9.00		8.08		5.09	326	4.90	320	1.90	330	4.60	282	5.14		2.90	296	4.25	328	3.90		3.50	322	4.00
21	356	11.0	286	10.4	264	6.00	312	5.00	356	2.50	308	3.50	340	5.43		4.40	352	3.13	312	6.80	312	1.50	322	4.30
22		13.0	312	7.50	282	7.00	312	5.22		1.90	332	3.40	302	8.67	318	4.38	316	3.67		4.38	326	5.57	316	4.40
23		12.4	342	6.00	302	8.67		4.20		2.20	336	5.25		10.5	302	3.60	350	3.25		3.69	316	8.83	244	4.70
24	240	9.00	270	7.17	288	7.33		4.03	240	0.00	334	10.5		7.83	330	3.30		3.79	262	4.20	310	1.60		4.94
25	322	8.50	304	6.67	272	5.83	270	3.40	322	3.10		7.36	294	5.43	358	4.50		2.99	292	2.00	324	1.90		3.60
26	302	8.00		21.5		6.13	262	7.70	302	7.90		8.14	292	5.63	332	4.20	332	3.20	300	0.00		1.65	284	3.50
27	324	8.00		7.33		6.20	276	6.00	324	4.80	316	4.10	332	7.29		4.69	304	4.13	300	0.00		0.00	402	5.30
28	282	6.83	284	7.00	258	7.17	268	11.5	282	4.10	316	4.25	328	14.0		5.12	322	3.90	300	1.70	270	0.00	292	4.90
29		6.71			282	9.33	172	7.67		1.90	320	7.43	314	6.83	288	3.70	304	4.00		0.00	324	1.50	284	4.50
30		5.33			318	9.09		5.95		2.80	310	4.60		6.68	280	3.90	310	3.63		0.00	278	5.14	276	5.30
31	326	4.63			294	7.83			326	2.70				10.3	352	3.70			300	1.60				4.20
Ave	300	8.70	314	7.85	284	6.63	305	7.29	300	3.01	327	6.41	309	6.70	317	5.59	328	4.66	308	2.65	306	3.21	314	6.51
Min	240	3.88	266	4.67	230	4.84	172	3.40	240	0.00	296	0.00	188	4.13	180	2.90	294	2.99	262	0.00	266	0.00	244	3.50
Max	386	24.8	362	21.5	318	9.33	424	12.3	386	7.90	402	14.6	360	14.0	422	15.3	402	8.60	342	7.88	330	8.83	402	12.7

Annual Summary	
INF	EFF
309	5.77
172	0.00
424	24.8

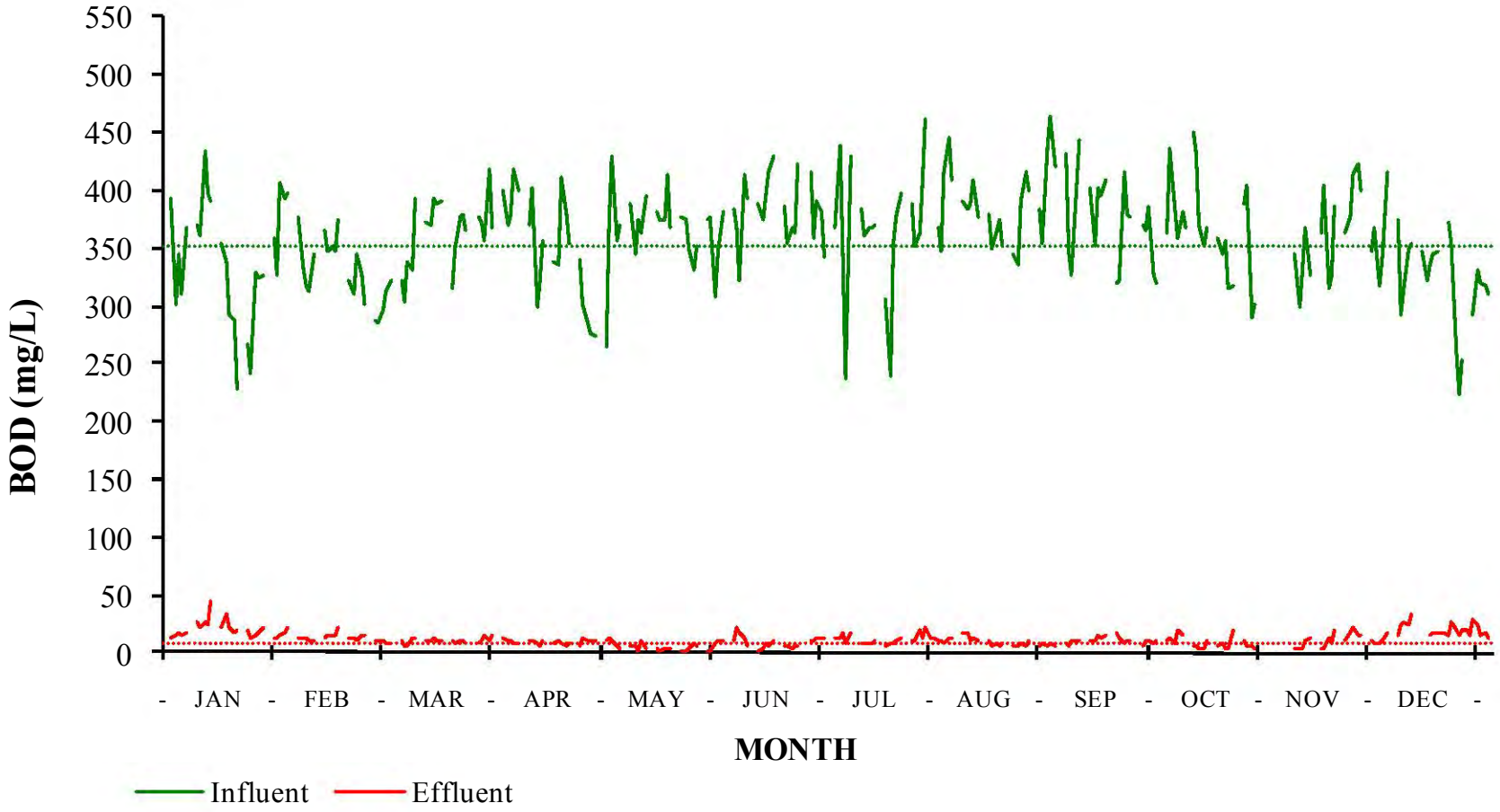
South Bay Wastewater Reclamation Plant
2010 TSS Percent Removal



2010 TSS Percent Removals

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1		98.3	97.6	96.7		98.5	98.4	97.4	98.6		100	97.1	
2		98.1	97.1		97.5	97.9		95.8	98.6		97.7	98.3	
3	98.3	97.7	97.5		97.9	97.2		98.1		98.6	98.5		
4	98.7	96.8	98.1	97.4	99.1		97.9	97.7		98.4	98.5		
5	98.5			98.2	98.7		98.3	97.8	98.3	98.3		97.7	
6	98.4			96.8	99.3	98.0	97.0		98.6	97.4		96.2	
7	98.1	97.7	97.7	97.5		95.5	94.4		98.5	98.0	99.3	97.1	
8		97.8	97.5	96.4		95.7	97.3	97.0	98.6		99.4	97.6	
9		98.0	97.7		98.8	97.1		97.9	98.5		100	96.2	
10	96.6	97.9	96.6		100	98.8		98.6		100	98.5		
11	97.7	97.9	98.3	97.4	99.5		98.5	98.3		100	98.7		
12	98.4			98.4	98.9		98.5	98.5	98.2	100		96.9	
13	95.9			98.2	99.3	100	98.6		98.6	100		100	
14	91.3	97.8	97.7	97.0		99.0	98.7		98.8	100	100	98.1	
15		97.1	97.8	98.2		98.2	98.4	98.6	98.6		100	98.0	
16		98.0	97.8		98.6	98.2		98.8	98.6		97.9	97.9	
17	96.2	97.7	98.2		99.4	98.3		98.8		100	98.3		
18	94.2	97.2	98.1	98.5	98.9		98.7	98.9		99.3	97.9		
19	97.0			98.3	98.8		97.7	98.8	98.6	99.5		98.8	
20	97.2			98.5	99.4	98.6	98.2		98.6	98.8		98.8	
21	96.9	96.4	97.7	98.4		98.9	98.4		99.1	97.8	99.5	98.7	
22		97.6	97.5	98.3		99.0	97.1	98.6	98.8		98.3	98.6	
23		98.2	97.1		99.3	98.4		98.8	99.1		97.2	98.1	
24	96.3	97.3	97.5		100	96.9		99.0		98.4	99.5		
25	97.4	97.8	97.9	98.7	99.1		98.2	98.7		99.3	99.4		
26	97.4			97.1	97.6		98.1	98.7	99.0	100		98.8	
27	97.5			97.8	98.6	98.7	97.8		98.6	100		98.7	
28	97.6	97.5	97.2	95.7		98.7	95.7		98.8	99.4	100	98.3	
29			96.7	95.5		97.7	97.8	98.7	98.7		99.5	98.4	
30			97.1		99.1	98.5		98.6	98.8		98.2	98.1	
31	98.6		97.3		99.1			98.9		99.5			Annual Summary
Average	97.0	97.6	97.6	97.6	98.9	98.1	97.8	98.3	98.7	99.2	98.9	98.0	98.1
Minimum	91.3	96.4	96.6	95.5	97.5	95.5	94.4	95.8	98.2	97.4	97.2	96.2	91.3
Maximum	98.7	98	98.3	98.7	100	100	98.7	99.0	99.1	100	100	100.0	100

South Bay Wastewater Reclamation Plant
2010 Biochemical Oxygen Demand



Daily BOD Values 2010

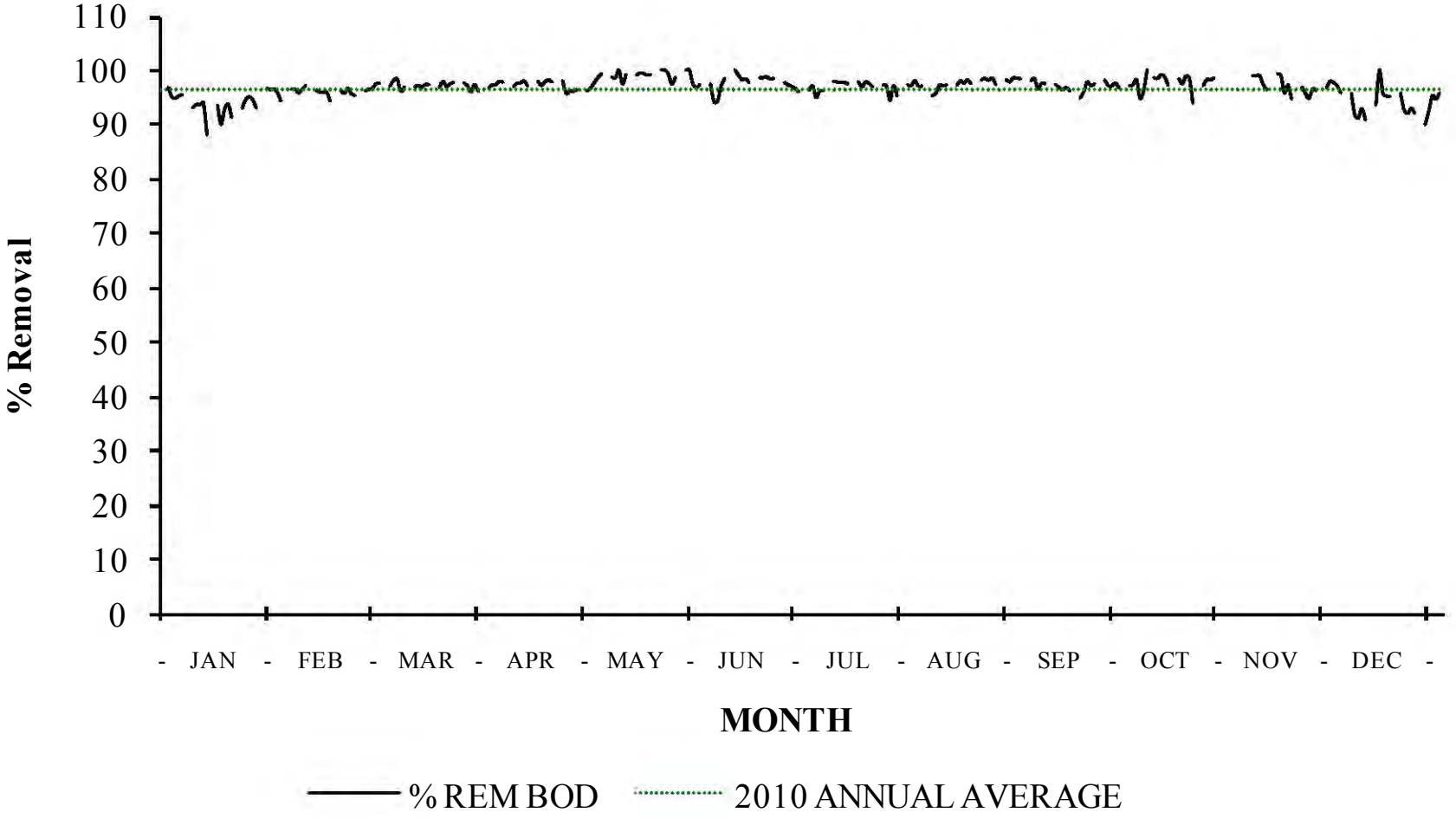
	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
Day	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF	EFF
1			326	11.6	286	10	368	14.2			309	7.63	343	13.4	367	9.82	464	6.95			395#	6.09#	341	9.8
2			406	13.8	297	9.72			265	10.1	347	11			348	9.92	420	6.58			280#	6.45#	417	17.3
3	394	12.4	394	16.2	312	7.88			372	12	381	10			417	7.99			364	10.3	379^	7.45^		
4	301	14.5	397	22.3	321	7.69	400	12.9	429	9.8			368	13.5	446	12.8			437	11.5	370	10.1		
5	344	17.6					371	10.1	357	4.89			439	12.7	410	11.9	431	8.2	384	6.88			375	15.8
6	311	14.6					380	10.1	371	2.66	384	9.84	343	17			348	5.37	359	18.4			293	24
7	368	16.4	376	13	323	9.47	418	8.57			367	21.1	238	9.02			326	11.2	382	14.6	345	3.64	313	27.3
8			332	11.5	304	5.73	401	8.79			323	18.2	429	16.1	391	18.3	405	9.73	367		298	2.95	350	24.6
9			317	13.1	337	5.38			389	4.94	413	12.3			384	16.1	443	11			332	3.39	354	32.1
10	371	25.3	312	10.8	331	12.7			345	4.76	392	5.98			389	10.6			451	6.29	368	9.78		
11	362	22.6	346	9.79	392	12.3	370	11.3	375	ND			383	7.93	408	11.7			432	6.51	326	11.7		
12	435	27.3					402	9.69	364	9.26			362	7.84	378	10.2	403	10.6	371	3.03			347	21.8
13	398	23.8					300	7.09	395	3.24	389	ND	367	8.31			352	11.1	351	4.5			323	
14	390	45.7	366	13.3	373	11.2	321	6.27			374	3.76	367	8.1			403	14.5	368	10.1	363	2.5	335	14.2
15			347	13.8	370	10.4	357	10.1			395	6.98	370	9.33	380	10.6	395	12.5			405	3.71	346	16.3
16			352	14.2	392	12.1			382	3.4	417	6.67			350	6.69	410	15.6			314	13	347	16.5
17	353	22.6	348	13.9	389	10.2			375	2.05	429	9.82			365	8.7			359	5.62	326	8.8		17.7
18	337	33.3	375	21	391	10.3	337	6.92	374	2.36			306	6.43	375	6.7			344	8.62	386	20.1		16.9
19	293	20.7					335	9.29	413	3.73			239	7.31	351	8.75	320	16.2	356	3.91			372	15.6
20	287	17.7					411	8.66	367	3.05	387	5.4	354	7.66			323	12.8	315	4.46			355	25.8
21	229	19.6	322	11.7	315	9.99	379	6.84			353	4.86	377	9.17			417	9.06	318	19	364	11.1	257	20.2
22			311	13.1	349	7.26	354	7.64			367	4.46	397	12.2	344	6.06	379	10.7			376	16.1	224	15.5
23			346	11.3	377	11.2			378	0	364	6.06			335	5.11	376	9.45			414	21.3	254	19.9
24	267	18.5	327	13.9	380	9.56			374	0	422	6.2			390	7.14			388	10.9	423	14.5		18.7
25	242	13	301	13.8	366	8.2	340	6.56	349	2.46			389	10.6	417	6.07			404	6.75	401	14.9		14.9
26	328	15.9					302	12.9	332	8.41			351	10.3	400	10.5	371	6.69	290	5.22			293	28.9
27	325	17.7					286	10.8	351	4.71	416	9.41	364	19.9			365	10.4	301	4.17			330	24.6
28	326	22.4	287	10.7	378	8.81	275	10.6			359	9.57	408	11.5			385	11	468#	7.47#	347	11.2	319	15
29					372	10.8	273	9.94			391	11.6	462	21.5	384	6.63	327	7.81			367	7.46	318	16.7
30					356	14.1			374	ND	382	12.5		11.5	354	7.55	319	10.1			318	7.28	310	13.1
31	359	11.7			419	11			376	ND				12.2	437	6.18			356#	2.78#				
Ave	334	20.6	344	13.6	353	9.83	351	9.49	369	4.17	380	8.79	365	11.5	383	9.39	381	10.3	367	7.66	311	10.2	326	19.3
Min	229	11.7	287	9.79	286	5.38	273	6.27	265	ND	309	3.76	238	6.43	335	5.11	319	5.37	290	3.03	298	2.50	224	9.80
Max	435	45.7	406	22.3	419	14.1	418	14.2	429	12.0	429	21.1	462	21.5	446	18.3	464	16.2	451	19.0	423	21.3	417	32.1

Annual Summary	
INF	EFF
355	11.2
224	ND
464	45.7

= No check sample was run with the batch and the blank did not meet QC criteria of <0.2 mg/L DO Results not used in computation of average.depletion.

^ = QC check sample result is 148 mg/L acceptance range is 198 ± 30.5 Results not used in computation of average.

South Bay Wastewater Reclamation Plant
2010 BOD Percent Removal



2010 BOD Percent Removals

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1		96.4	96.5	96.1		97.5	96.1	97.3	98.5			97.1	
2		96.6	96.7		96.2	96.8		97.1	98.4			95.9	
3	96.9	95.9	97.5		96.8	97.4		98.1		97.2			
4	95.2	94.4	97.6	96.8	97.7		96.3	97.1		97.4	97.3		
5	94.9			97.3	98.6		97.1	97.1	98.1	98.2		95.8	
6	95.3			97.3	99.3	97.4	95.0		98.5	94.9		91.8	
7	95.5	96.5	97.1	97.9		94.3	96.2		96.6	96.2	98.9	91.3	
8		96.5	98.1	97.8		94.4	96.2	95.3	97.6	100.0	99.0	93.0	
9		95.9	98.4		98.7	97.0		95.8	97.5		99.0	90.9	
10	93.2	96.5	96.2		98.6	98.5		97.3		98.6	97.3		
11	93.8	97.2	96.9	96.9	100		97.9	97.1		98.5	96.4		
12	93.7			97.6	97.5		97.8	97.3	97.4	99.2		93.7	
13	94.0			97.6	99.2	100.0	97.7		96.8	98.7		100	
14	88.3	96.4	97.0	98.0		99.0	97.8		96.4	97.3	99.3	95.8	
15		96.0	97.2	97.2		98.2	97.5	97.2	96.8		99.1	95.3	
16		96.0	96.9		99.1	98.4		98.1	96.2		95.9	95.2	
17	93.6	96.0	97.4		99.5	97.7		97.6		98.4	97.3		
18	90.1	94.4	97.4	97.9	99.4		97.9	98.2		97.5	94.8		
19	92.9			97.2	99.1		96.9	97.5	94.9	98.9		95.8	
20	93.8			97.9	99.2	98.6	97.8		96.0	98.6		92.7	
21	91.4	96.4	96.8	98.2		98.6	97.6		97.8	94.0	97.0	92.1	
22		95.8	97.9	97.8		98.8	96.9	98.2	97.2		95.7	93.1	
23		96.7	97.0		100	98.3		98.5	97.5		94.9	92.2	
24	93.1	95.7	97.5		100	98.5		98.2		97.2	96.6		
25	94.6	95.4	97.8	98.1	99.3		97.3	98.5		98.3	96.3		
26	95.2			95.7	97.5		97.1	97.4	98.2	98.2		90.1	
27	94.6			96.2	98.7	97.7	94.5		97.2	98.6		92.5	
28	93.1	96.3	97.7	96.1		97.3	97.2		97.1		96.8	95.3	
29			97.1	96.4		97.0	95.3	98.3	97.6		98.0	94.7	
30			96.0		100	96.7		97.9	96.8		97.7	95.8	
31	96.7		97.4		100			98.6					Annual Summary
Average	93.8	96.05	97.2	97.3	98.8	97.7	96.9	97.6	97.2	97.8	97.2	94.1	96.8
Minimum	88.3	94.38	96.0	95.7	96.2	94.3	94.5	95.3	94.9	94.0	94.8	90.1	88.3
Maximum	96.9	97.17	98.4	98.2	100	100	97.9	99	98.5	100	99.3	100	100

F. Toxicity Testing: South Bay Water Reclamation Plant 2010

INTRODUCTION

The City of San Diego‟s Toxicology Laboratory (CSDTL) conducted aquatic toxicity tests (bioassays) as required by its NPDES Permit No. CA0109045, Order No. R9-2006-0067 for the South Bay Water Reclamation Plant (SBWRP). The testing requirements are designed to determine the acute and chronic toxicity of effluent samples collected from the SBWRP. In accordance with the above Order, the City also conducted toxicity tests of the combined effluent samples for the SBWRP and adjacent International Wastewater Treatment Plant (IWTP). This chapter presents summaries and discussion of all toxicity tests conducted in 2010.

Toxicity testing of wastewater effluent measures the bioavailability of toxicants in a complex mixture, accounts for interactions among potential toxicants, and integrates the effects of all constituents. Acute and chronic bioassays are characterized by the duration of exposure of test organisms to a toxicant as well as the adverse effect (measured response) produced as the result of exposure to a toxicant.

Acute toxicity testing consists of a short-term exposure period, usually 96 hours or less, and the acute effect refers to mortality of the test organism. The City of San Diego is required to conduct acute toxicity tests of SBWRP effluent on a quarterly schedule.

Chronic toxicity testing, in the classic sense, refers to long-term exposure of the test organism to a potential toxicant. This may involve exposing the test organism for its entire reproductive life cycle, which may exceed 12 months for organisms such as fish. In general, chronic tests are inherently more sensitive to toxicants than acute tests in that adverse effects are detected at lower toxicant concentrations. The City of San Diego is required to conduct monthly critical/early life stage chronic tests of SBWRP effluent that are intermediate between the acute and chronic toxicity testing protocols discussed above. These test results serve as short-term estimates of chronic toxicity.

MATERIALS & METHODS

Test Material

SBWRP Effluent

Acute toxicity tests of SBWRP effluent were conducted on a quarterly schedule, while chronic toxicity tests were conducted on a monthly schedule in 2010. Twenty-four hour, flow-weighted, effluent composite samples were collected at the in-stream sampling site (designated SB_Outfall_00) for the SBWRP and stored at 4 ºC until test initiation.

All tests were initiated within 36 hours of sample collection. Exposure concentrations consisted of 3.88, 7.75, 15.5, 31.0, and 62.0% (nominal) for the acute tests and 0.26, 0.53, 1.05, 2.10, and 4.20% for the chronic tests. Dilution water for all tests (effluent and reference toxicant) was

obtained from the Scripps Institution of Oceanography (SIO), filtered, held at 4 ºC, and used within 96 hours of collection. Detailed descriptions for all toxicity tests are provided in the City of San Diego Toxicology Laboratory Quality Assurance Manual (City of San Diego 2010).

Combined Effluent

The City also conducted chronic and acute toxicity tests of combined effluent from the SBWRP and IWTP in accordance with the quarterly testing schedule stated in Order No. R9-2006-0067. Composite samples for these bioassays were collected during the same 24-hour sampling period by SBWRP and IWTP personnel at their respective facilities and combined in the laboratory in accordance with a ratio that is proportional to the flow from each treatment plant at the time of sample collection.

Effluent samples were stored at 4 ºC and testing was initiated within 36 hours of sample collection. Acute toxicity test concentrations consisted of 3.88, 7.75, 15.5, 31.0, and 62.0% (nominal) effluent. Chronic toxicity test concentrations consisted of 0.26, 0.53, 1.05, 2.10, and 4.20%. Dilution water for all tests (effluent and reference toxicant) was obtained from SIO, filtered, held at 4 ºC, and used within 96 hours of collection. Detailed methodology for all toxicity testing is described in the City of San Diego Toxicology Laboratory Quality Assurance Manual (City of San Diego 2010).

Acute Bioassays

Topsmelt Survival Bioassay

Acute bioassays using the incumbent most-sensitive species, the topsmelt *Atherinops affinis*, were conducted on a quarterly basis during 2010 in accordance with EPA/600/4-90/027F (USEPA 1993). Larval topsmelt (9-14 days old) were purchased from Aquatic Bio Systems (Fort Collins, CO), and acclimated to test temperature and salinity for at least 24 hours. Upon test initiation, the topsmelt (10 per replicate) were exposed for 96 hours in a static-renewal system to the effluent exposure series. Dilution water and brine controls were also tested. The test solutions were renewed at 48 hours and the organisms were fed once each day.

Simultaneous reference toxicant testing was performed using reagent grade copper chloride. Test concentrations consisted of 56, 100, 180, 320, and 560 µg/L copper. Dilution water was obtained from SIO, filtered, held at 4 ºC, and used within 96 hours of collection. Upon conclusion of the exposure period, percent survival was recorded. Tests were declared valid if control mortality did not exceed 10%. The data were analyzed using a multiple comparison procedure and point estimation method prescribed by USEPA (1993). ToxCalc (Tidepool Scientific Software 2002) and CETIS (Tidepool Scientific Software 2010) were used for all statistical analyses.

Mysid Survival Bioassay

Acute bioassays using the mysid shrimp *Mysidopsis bahia* were conducted as a part of the mandated multiple-species screening effort during the last three quarters of 2010 in accordance with EPA/600/4-90/027F (USEPA 1993). Larval mysids (4-5 days old) were purchased from Aquatic Bio Systems (Fort Collins, CO), and acclimated to test temperature and salinity for at least 24 hours. Upon test initiation, the mysids (10 per replicate) were exposed for 96 hours in a

static-renewal system to the effluent exposure series. Dilution water and brine controls were also tested. The test solutions were renewed at 48 hours and the organisms were fed once daily.

Simultaneous reference toxicant testing was performed using reagent grade copper chloride. Test concentrations consisted of 56, 100, 180, 320, and 560 µg/L copper. A SIO seawater control was also tested. At the end of the exposure period, percent survival was recorded. Tests were declared valid if control mortality did not exceed 10%. The data were analyzed using a multiple comparison procedure and point estimation method prescribed by USEPA (1993). ToxCalc (Tidepool Scientific Software 2002) and CETIS (Tidepool Scientific Software 2010) were used for all statistical analyses.

Chronic Bioassays

Kelp Germination and Growth Test

Chronic bioassays using the giant kelp *Macrocystis pyrifera* were conducted in accordance with USEPA protocol EPA/600/R-95/136 (USEPA 1995). Zoospores were obtained from the reproductive blades (sporophylls) of adult kelp plants at the kelp beds near La Jolla, California one day prior to test initiation. The zoospores were exposed in a static system for 48 hours to the effluent exposure series. A receiving water control was also tested.

Simultaneous reference toxicant testing was performed using reagent grade copper chloride. The concentrations of copper in the exposure series were 5.6, 10, 18, 32, 56, 100, and 180 µg/L. A SIO seawater control was also tested. At the end of the exposure period, 100 zoospores from each replicate were examined and the percent germination was recorded. In addition, germ-tube length was measured and recorded for 10 of the germinated zoospores.

The data were analyzed in accordance with "Flowchart for statistical analysis of giant kelp, *Macrocystis pyrifera*, germination data" and "Flowchart for statistical analysis of giant kelp, *Macrocystis pyrifera*, growth data" (see USEPA 1995). ToxCalc (Tidepool Scientific Software 2002) and CETIS (Tidepool Scientific Software 2010) were used for all statistical analyses.

Red Abalone Development Bioassay

Chronic bioassays using the red abalone *Haliotis rufescens* were conducted each month during 2010 in accordance with USEPA protocol EPA/600/R-95/136 (USEPA 1995). Test organisms were purchased from Cultured Abalone (Goleta, California), and shipped via overnight delivery to the CSDTL. Mature male and female abalones were placed in gender-specific natural seawater tanks and held at 15 ºC. For each test event, spawning was induced in 6-8 abalones in gender-specific vessels. Eggs and sperm were retained and examined under magnification to ensure good quality. Once deemed acceptable, the sperm stock was used to fertilize the eggs, and a specific quantity of fertilized embryos was added to each test replicate and exposed to the effluent series for 48 hours. A receiving water control was also tested. At the end of the test period, 100 embryos were examined and the number of normally and abnormally developed embryos was recorded.

Simultaneous reference toxicant testing was performed using reagent grade zinc sulfate. The concentrations of zinc in the exposure series were 10, 18, 32, 56, and 100 µg/L. A SIO seawater control was also tested.

The percentage of normally developed embryos for each replicate was arcsine square root transformed. The data were analyzed in accordance with "Flowchart for statistical analysis of red abalone *Haliotis rufescens*, development data" (see USEPA 1995). ToxCalc (Tidepool Scientific Software 2002) and CETIS (Tidepool Scientific Software 2010) were used for all statistical analyses.

Beginning in June 2010, the red abalone tests were scored both inclusive and exclusive of unicellular embryos, which can be indicative of poor animal quality. As shown in previous studies, the inclusive scoring method induced greater variability and reduced test sensitivity. Moreover, data from past and present studies showed no association between the distribution of unicellular embryos and exposure to the reference toxicant, which further support the use of the exclusive method in scoring the red abalone tests.

Topsmelt Survival and Growth Bioassays

Chronic bioassays using the topsmelt *Atherinops affinis* were conducted in accordance with EPA/600/R-95/136 (USEPA 1995). Larval topsmelt (9-14 days old) were purchased from Aquatic Bio Systems (Fort Collins, CO) and exposed for seven days in a static-renewal system to the effluent. The test endpoints are survival and growth (dry biomass).

Simultaneous reference toxicant testing was performed using reagent grade copper chloride. The concentrations of copper in the exposure series were 32, 56, 100, 180, and 320 µg/L. A SIO seawater control was also tested.

Upon conclusion of the exposure period, percent survival and dry biomass were recorded. ToxCalc (Tidepool Scientific Software 2002) and CETIS (Tidepool Scientific Software 2010) were used for all statistical analyses.

RESULTS & DISCUSSION

Acute Toxicity of SBWRP Effluent

In accordance with Order No. R9-2006-0067, the City initiated a biennial re-screening study in 2010 to re-evaluate the sensitivity of topsmelt and mysids. The re-screening effort was completed during the fourth quarter of 2010, and the acute test results showed that topsmelt and mysids exhibited similar sensitivity to the SBWRP effluent. Therefore, the City will continue to use the topsmelt, which has previously shown greater responses to SBWRP effluent, for routine monitoring of acute toxicity until the next scheduled re-screening event. All acute toxicity tests of SBWRP effluent conducted in 2010 were within NPDES permit performance goals (Table T.1).

Chronic Toxicity of SBWRP Effluent

In accordance with Order No. R9-2006-0067, the City initiated a biennial re-screening study in 2010 to re-evaluate the sensitivity of giant kelp, red abalone, and topsmelt. The re-screening effort was completed in November 2010 and the chronic test results showed that red abalone continue to exhibit the greatest sensitivity to SBWRP effluent. Therefore, the City will continue to use the red abalone for routine monitoring of chronic toxicity until the next scheduled re-screening event. All chronic toxicity tests of SBWRP effluent conducted in 2010 were within NPDES permit performance goals (Table T.2).

Combined Effluent Toxicity

The City also conducted chronic and acute bioassays for the SBWRP/IWTP combined effluent samples in accordance with the quarterly testing schedule stated in Order No. R9-2006-0067. Although this combined effluent testing is a requirement of the SBWRP monitoring program, there are no compliance limits or performance goals for these data.

During the last three quarters of 2010, the City also conducted a chronic re-screening study to compare the sensitivity of giant kelp, red abalone and topsmelt to the combined effluent. The results showed the giant kelp to be the most sensitive species to the chronic combined effluent toxicity. Therefore, the City will use the giant kelp for subsequent monitoring. The results for all combined effluent bioassays performed in 2010 are summarized in Tables T.3 and T.4.

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Table T.1
Results of acute toxicity tests of SBWRP effluent conducted quarterly in 2010. Data are presented as acute toxic units (TUa). The NPDES permit performance goal is 3.1 TUa.

Sample Date	Topsmelt 96-Hour Survival	Mysid 96-Hour Survival
01/10/2010	<1.6	-
05/16/2010	<1.6	<1.6
07/11/2010	<1.6	<1.6
10/24/2010	<1.5	<1.5
N	4	3
No. in compliance	4	3
Mean TUa	<1.6	<1.6

Table T.2
Results of chronic toxicity testing of SBWRP effluent conducted monthly in 2010. Data are presented as chronic toxic units (TUc). NPDES permit performance goal is 95.6 TUc.

Sample Date	Giant Kelp		Red Abalone		Topsmelt	
	Germination	Growth	Development		Survival	Growth
			Exclusive	Inclusive		
01/20/2010	-	-	-	23.8	-	-
02/16/2010	-	-	-	N.V.	-	-
02/25/2010	-	-	-	N.V.	-	-
03/09/2010	-	-	-	N.V.	-	-
03/14/2010	-	-	-	23.8	-	-
03/15/2010	-	-	-	23.8	-	-
04/12/2010	-	-	-	23.8	-	-
05/11/2010	-	-	-	N.V.	-	-
05/24/2010	-	-	-	N.V.	-	-
05/26/2010	-	-	-	N.V.	-	-
06/06/2010	-	-	23.8	23.8	-	-
07/19/2010	-	-	23.8	23.8	-	-
08/09/2010	-	-	23.8	23.8	-	-
08/22/2010	-	-	23.8	23.8	-	-
09/07/2010	-	-	-	-	23.8	23.8
09/12/2010	23.8	23.8	23.8	23.8	-	-
10/12/2010	23.8	23.8	47.6	47.6	23.8	23.8
11/01/2010	23.8	23.8	23.8	23.8	23.8	23.8
12/13/2010	-	-	N.V.	N.V.	-	-
12/19/2010	-	-	47.6	23.8	-	-
N	3	3	8	12	3	3
No. in compliance	3	3	8	12	3	3
Mean TUc	23.8	23.8	27.2	26.0	23.8	23.8

N.V.: Test not valid

Table T.3
Results of acute toxicity tests of SBWRP/IWTP combined effluent samples conducted in 2010. Data are presented as acute toxic units (TUa).

Sample Date	Topsmelt 96-Hour Survival
01/31/2010	2.8
04/18/2010	5.9
08/02/2010	3.2
12/05/2010	<1.6

Table T.4
Results of chronic toxicity tests of SBWRP/IWTP combined effluent samples conducted in 2010. Data are presented as chronic toxic units (TUc).

Sample Date	Giant Kelp		Red Abalone		Topsmelt	
	Germination	Growth	Development		Survival	Growth
			Exclusive	Inclusive		
01/20/2010	-	-	-	23.8	-	-
06/06/2010	23.8	>384.6	47.6	47.6	23.8	23.8
08/23/2010	23.8	23.8	23.8	23.8	23.8	23.8
10/13/2010	47.6	47.6	23.8	23.8	23.8	23.8