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 2008 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)**	**2008 Mass Emissions (lbs/day)[1]**	**2008 Average Concentration**	**Units**
Flow (MGD)			***3.2***	MGD
Total Suspended Solids	3,700	**113**	***4.23***	mg/L
Total Suspended Solids (uncharacteristic)	*3,700*	*232*	*8.7*	*mg/L*
BOD	3,700	**217**	**8.12**	mg/L
BOD (uncharacteristic)	*3,700*	*606*	*22.7*	*mg/L*
Oil & Grease	3,100	107	4	mg/L

Effluent Limitations Based on 2005 California Ocean Plan				
Constituent/Property	**Limit: Daily Maximum (lbs/day)**	**2008 Mass Emissions (lbs/day)[1]**	**2008 Average Concentration**	**Units**
Arsenic	350	0.025	0.94	ug/L
Cadmium	48	0.003	0.1	ug/L
Chromium	96	0.040	1.5	ug/L
Copper	120	0.4	16	ug/L
Lead	96	0.029	1.1	ug/L
Mercury	1.9	0.0	0	ug/L
Nickel	2.4	0.26	9.92	ug/L
Selenium	720	0.025	0.95	ug/L
Silver	32	0.005	0.2	ug/L
Zinc	860	0.9	34.5	ug/L
Cyanide	48	0.053	0.002	mg/L
Residual Chlorine	96	1.1	0.04	mg/L
Ammonia	29,000	312.4	11.7	mg/L
Non-Chor. Phenols	1,400	0.2	7.9	ug/L
Chlorinated Phenols	48	0.0	0	ug/L
Endosulfan	0.21	0.000	0	ng/L
Endrin	0.05	0.00003	1	ng/L
hexachlorocyclohexanes *(HCH)	0.1	0.0001	2	ng/L
* (all as Lindane, the gamma isomer)				

Effluent Limitations Based on 2005 California Ocean Plan				
Constituent/Property	Limit: Daily Maximum (lbs/day)	2008 Mass Emissions (lbs/day)[1]	2008 Average Concentration	Units
Acrolein	2,600	0	0	ug/L
Antimony	14,000	0.00	0	ug/L
Bis(2-chloroethoxy) methane	53	0.00	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	0.035	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	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	0.14	5.3	ug/L
1,1,2,2-tetrachloroethane	27	0.005	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	0	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	0.06	2.4	ug/L
DDT	0.002	0.000027	1	ng/L
1,4-dichlorobenzene	210	0.045	1.7	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	0.03	1	ug/L
1,3-dichloropropene	110	0	0	ug/L
Dieldrin	0.00048	0.00000	0	ng/L
2,4-dinitrotoluene	31	0	0	ug/L
1,2-diphenylhydrazine	1.9	0.0	0	ug/L

Effluent Limitations Based on 2005 California Ocean Plan				
Constituent/Property	Limit: Daily Maximum (lbs/day)	2008 Mass Emissions (lbs/day)[1]	2008 Average Concentration	Units
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] Metric tons of 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[5](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[6]	
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			

[5] Hexavalent Chromium limit met as Total Chromium.

[6] Permit shows $2.9x10^{-1}$ 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)[7]	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

[7] 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 ANNUAL

From 01-JAN-2008 To 31-DEC-2008

Monthly Averages - Adverse Impacts Excluded

Biochemical Oxygen Demand Concentration
(24-hour composite)

	Influent Flow	Daily Influent Value (mg/L)	Daily Influent Value (lbs/Day)	Effluent Flow	Daily Effluent Value (mg/L)	Daily Effluent Value (lbs/Day)	Percent Removal BOD (%)
JANUARY -2008	8.8	328	24073	6.2	6.0	310	98.2
FEBRUARY -2008	8.8	315	23118	6.5	5.8	314	98.2
MARCH -2008	8.8	310	22752	4.4	8.6	316	97.2
APRIL -2008	8.8	313	22972	2.9	8.9	215	97.1
MAY -2008	8.8	327	23999	1.9	11.0	174	96.7
JUNE -2008	8.7	345	25033	1.1	21.1	194	94.4
JULY -2008	8.6	325	23310	0.9	19.6	147	94.1
AUGUST -2008	8.6	319	22880	0.6	3.4	17	98.8
SEPTEMBER-2008	8.4	297	20807	1.2	2.4	24	99.2
OCTOBER -2008	8.5	309	21905	1.8	2.0	30	99.3
NOVEMBER -2008	8.5	314	22259	5.0	5.0	209	98.4
DECEMBER -2008	8.7	299	21695	6.1	3.6	183	98.8
Average	8.7	317	22900	3.2	8.12	178	97.5

Monthly Averages - Uncharacteristic Data Included

Biochemical Oxygen Demand Concentration
(24-hour composite)

	Influent Flow	Daily Influent Value (mg/L)	Daily Influent Value (lbs/Day)	Effluent Flow	Daily Effluent Value (mg/L)	Daily Effluent Value (lbs/Day)	Percent Removal BOD (%)
JANUARY -2008	8.8	328	24073	6.2	6.0	310	98.2
FEBRUARY -2008	8.8	315	23118	6.5	5.8	314	98.2
MARCH -2008	8.8	310	22752	4.4	10.5	385	96.6
APRIL -2008	8.8	313	22972	2.9	20.7	501	93.4
MAY -2008	8.8	327	23999	1.9	58.9	933	82.0
JUNE -2008	8.7	345	25033	1.1	70.5	647	79.6
JULY -2008	8.6	325	23310	0.9	50.5	379	84.5
AUGUST -2008	8.6	319	22880	0.6	33.7	169	89.4
SEPTEMBER-2008	8.4	297	20807	1.2	5.4	54	98.2
OCTOBER -2008	8.5	309	21905	1.8	2.1	32	99.3
NOVEMBER -2008	8.5	314	22259	5.0	5.0	209	98.4
DECEMBER -2008	8.7	299	21695	6.1	3.6	183	98.8
Average	8.7	317	22900	3.2	22.7	343	93.1

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

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

SOUTH BAY WATER RECLAMATION PLANT
SEWAGE ANNUAL

From 01-JAN-2008 To 31-DEC-2008
Total Suspended Solids Concentration
(24-hour composite)
No Impacts on Influent Data

	Influent Flow (MGD)	Daily Influent TSS (mg/L)	Daily Influent VSS (mg/L)	Percent VSS (%)	Daily Influent Mass Emission (lbs/Day)
JANUARY -2008	8.8	337	298	88.4	24733
FEBRUARY -2008	8.8	294	257	87.4	21577
MARCH -2008	8.8	254	223	87.8	18642
APRIL -2008	8.8	281	250	89.0	20623
MAY -2008	8.8	299	265	88.6	21944
JUNE -2008	8.7	305	268	87.9	22130
JULY -2008	8.6	288	254	88.2	20657
AUGUST -2008	8.6	263	232	88.2	18863
SEPTEMBER-2008	8.4	267	235	88.0	18705
OCTOBER -2008	8.5	263	227	86.3	18644
NOVEMBER -2008	8.5	285	253	88.8	20204
DECEMBER -2008	8.7	277	236	85.2	20099
Average	8.7	284	250		20568

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

VSS = Volatile Suspended Solids
TSS = Total Suspended Solids

nd=not detected; NS=not sampled; NA=not analyzed

SOUTH BAY WATER RECLAMATION PLANT
SEWAGE ANNUAL

From 01-JAN-2008 To 31-DEC-2008
Total Suspended Solids Concentration
(24-hour composite)

Monthly Averages - Adverse Impacts Excluded

	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 -2008	6.2	4.4	3.6	81.8	228	98.7	98.8
FEBRUARY -2008	6.5	4.1	3.5	85.4	222	98.6	98.6
MARCH -2008	4.4	4.5	3.8	84.0	165	98.0	98.3
APRIL -2008	2.9	3.8	3.0	78.1	92	98.5	98.8
MAY -2008	1.9	7.0	5.7	81.0	110	98.0	97.8
JUNE -2008	1.1	9.4	8.0	80.0	86	96.6	97.0
JULY -2008	0.9	13.4	11.0	80.7	101	94.4	95.7
AUGUST -2008	0.6	<1.4	<1.6	0.0	0	100.0	100.0
SEPTEMBER-2008	1.2	<1.4	<1.6	0.0	0	100.0	100.0
OCTOBER -2008	1.8	<1.4	<1.6	0.0	0	100.0	100.0
NOVEMBER -2008	5.0	2.2	1.7	72.7	92	99.2	99.4
DECEMBER -2008	6.1	1.4	<1.6	0.0	71	99.5	100.0
Average	3.2	4.2	3.4		96	98.4	98.7

Monthly Averages - Uncharacteristic Data Included

	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 -2008	6.2	4.4	3.6	81.8	228	98.7	98.8
FEBRUARY -2008	6.5	4.1	3.5	85.4	222	98.6	98.6
MARCH -2008	4.4	5.0	4.2	84.0	183	98.0	98.1
APRIL -2008	2.9	7.3	5.7	78.1	177	97.4	97.7
MAY -2008	1.9	19.5	15.8	81.0	309	93.5	94.0
JUNE -2008	1.1	29.5	23.6	80.0	271	90.3	91.2
JULY -2008	0.9	19.7	15.9	80.7	148	93.2	93.7
AUGUST -2008	0.6	8.8	6.4	72.7	44	96.7	97.2
SEPTEMBER-2008	1.2	2.5	1.9	76.0	25	99.1	99.2
OCTOBER -2008	1.8	<1.4	<1.6	0.0	0	100.0	100.0
NOVEMBER -2008	5.0	2.2	1.6	72.7	92	99.2	99.4
DECEMBER -2008	6.1	1.4	<1.6	0.0	71	99.5	100.0
Average	3.2	8.7	6.9		148	97.0	97.3

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

VSS = Volatile Suspended Solids
TSS = Total Suspended Solids

nd=not detected; NS=not sampled; NA=not analyzed

SOUTH BAY WATER RECLAMATION PLANT

From 01-JAN-2008 To 31-DEC-2008

Effluent to Ocean Outfall
(SB_OUTFALL_00)

Monthly Averages - Adverse Impacts Excluded

	Flow	pH	Settleable Solids	Biochemical Oxygen Demand	Total Suspended Solids	Volatile Suspended Solids	Total Dissolved Solids
Units:	(mgd)		(ml/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
Limit:	15						
JANUARY -2008	6.22	7.30	ND	6.03	4.35	3.64	877
FEBRUARY -2008	6.50	7.32	ND	5.84	4.11	3.54	926
MARCH -2008	4.38	7.30	ND	8.61	4.51	3.82	907
APRIL -2008	2.87	7.39	ND	8.92	3.82	3.04	901
MAY -2008	1.86	7.39	ND	11.0	7.01	5.71	913
JUNE -2008	1.10	7.45	ND	21.1	9.43	8.06	
JULY -2008	0.86	7.40	ND	19.6	13.4	11.0	1140
AUGUST -2008	0.56	7.38	ND	3.40	<1.40	<1.60	
SEPTEMBER-2008	1.19	7.39	ND	2.43	<1.40	<1.60	1060
OCTOBER -2008	1.78	7.38	ND	2.02	<1.40	<1.60	913
NOVEMBER -2008	5.03	7.35	ND	4.95	2.16	1.71	871
DECEMBER -2008	6.07	7.23	ND	3.56	1.44	<1.60	922
Average	3.20	7.36	ND	8.12	4.23	3.42	881

Monthly Averages - Uncharacteristic Data Included

	Flow	pH	Settleable Solids	Biochemical Oxygen Demand	Total Suspended Solids	Volatile Suspended Solids	Total Dissolved Solids
Units:	(mgd)		(ml/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
Limit:	15						
JANUARY -2008	6.22	7.30	ND	6.03	4.35	3.64	877
FEBRUARY -2008	6.50	7.32	ND	5.84	4.11	3.54	926
MARCH -2008	4.38	7.30	ND	10.50	5.00	4.16	907
APRIL -2008	2.87	7.39	ND	20.70	7.26	5.71	958
MAY -2008	1.86	7.39	ND	58.90	19.50	15.80	1130
JUNE -2008	1.10	7.45	ND	70.50	29.50	23.60	1170
JULY -2008	0.86	7.40	ND	50.50	19.70	15.90	1180
AUGUST -2008	0.56	7.38	ND	33.70	8.82	6.44	1130
SEPTEMBER-2008	1.19	7.39	ND	5.44	2.54	1.90	979
OCTOBER -2008	1.78	7.38	ND	2.12	<1.40	<1.60	959
NOVEMBER -2008	5.03	7.35	ND	4.95	2.16	<1.60	872
DECEMBER -2008	6.07	7.23	ND	3.56	1.44	<1.60	922
Average	3.20	7.36	ND	22.73	8.70	6.72	1000

SOUTH BAY WATER RECLAMATION PLANT

From 01-JAN-2008 To 31-DEC-2008

Effluent to Ocean Outfall
(SB_OUTFALL_OO)
Monthly Averages - Adverse Impacts Excluded

Units: Limit:	Oil & Grease (mg/L)	Outfall Temperature (C)	Residual Chlorine (mg/L)	Turbidity (NTU)	Dissolved Oxygen (mg/L)
JANUARY -2008	<1.2	21.8	0.12	2.22	6.57
FEBRUARY -2008	4.4	21.5	0.03	2.06	6.91
MARCH -2008	4.7	22.2	0.08	2.54	6.55
APRIL -2008	3.3	23.0	0.09	2.80	6.31
MAY -2008	9.0	22.4	<0.03	3.80	0.04
JUNE -2008	6.6	23.9	<0.03	6.88	2.65
JULY -2008	5.7	25.7	ND	9.87	2.07
AUGUST -2008	4.9	26.8	<0.03	1.15	1.99
SEPTEMBER-2008	3.0	26.1	0.03	1.51	4.17
OCTOBER -2008	2.5	26.2	0.05	1.30	4.12
NOVEMBER -2008	2.5	24.6	0.06	1.60	5.25
DECEMBER -2008	1.5	20.6	0.06	1.40	6.10
Average	4.0	23.7	0.04	3.09	4.39

Monthly Averages - Uncharacteristic Data Included

Units: Limit:	Oil & Grease (mg/L)	Outfall Temperature (C)	Residual Chlorine (mg/L)	Turbidity (NTU)	Dissolved Oxygen (mg/L)
JANUARY -2008	<1.2	21.8	0.12	2.22	6.57
FEBRUARY -2008	4.4	21.5	0.03	2.06	6.91
MARCH -2008	4.7	22.2	0.08	2.97	6.55
APRIL -2008	3.3	23.0	0.09	5.67	6.31
MAY -2008	9.0	22.4	<0.03	15.50	0.04
JUNE -2008	6.6	23.9	<0.03	20.30	2.65
JULY -2008	5.7	25.7	ND	22.00	2.07
AUGUST -2008	4.9	26.8	<0.03	44.00	1.99
SEPTEMBER-2008	3.0	26.1	0.03	3.23	4.17
OCTOBER -2008	2.5	26.2	0.05	1.22	4.12
NOVEMBER -2008	2.5	24.6	0.06	1.67	5.25
DECEMBER -2008	1.5	20.6	0.06	1.37	6.10
Average	4.0	23.7	0.04	10.18	4.39

nd=not detected; NS=not sampled; NA=not analyzed.

SOUTH BAY WATER RECLAMATION PLANT

ANNUAL SEWAGE

From 01-JAN-2008 To 31-DEC-2008

Influent to Plant
(SB_INF_02)

No Impacts on Influent Data

Units:	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 -2008	8.81	7.46	912	328	337	298	NR
FEBRUARY -2008	8.83	7.45	943	315	294	257	151
MARCH -2008	8.78	7.49	935	310	254	223	NR
APRIL -2008	8.79	7.58	922	313	281	250	NR
MAY -2008	8.77	7.59	920	327	299	265	178
JUNE -2008	8.74	7.56	960	345	305	268	NR
JULY -2008	8.61	7.57	954	325	288	254	NR
AUGUST -2008	8.58	7.55	962	319	263	232	194
SEPTEMBER-2008	8.39	7.57	955	297	267	235	NR
OCTOBER -2008	8.51	7.59	948	309	263	227	202
NOVEMBER -2008	8.50	7.62	912	314	285	253	NR
DECEMBER -2008	8.73	7.55	911	299	277	236	NR
Average	8.67	7.55	936	317	284	250	

* = Monitored Quarterly

nd=not detected; NS=not sampled; NA=not analyzed.

SOUTH BAY WATER RECLAMATION PLANT
ANNUAL SEWAGE
Trace Metals

From: 01-JAN-2008 To: 31-DEC-2008

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:				110000		480*
JANUARY -2008	813	130	ND	ND	0.85	0.63
FEBRUARY -2008	968	208	ND	ND	0.72	0.54
MARCH -2008	1040	ND	ND	ND	0.66	0.42
APRIL -2008	1100	72	ND	ND	0.71	0.41
MAY -2008	929	318	ND	ND	0.89	2.19
JUNE -2008	1130	183	ND	ND	0.87	1.22
JULY -2008	887	169	ND	ND	0.61	1.96
AUGUST -2008	957	134	ND	ND	0.78	1.57
SEPTEMBER-2008	599	111	ND	ND	0.56	0.50
OCTOBER -2008	994	123	ND	ND	1.00	0.69
NOVEMBER -2008	858	109	ND	ND	0.71	0.57
DECEMBER -2008	1410	183	ND	ND	0.93	0.60
AVERAGE	974	145	ND	ND	0.77	0.94

Analyte:	Barium	Barium	Beryllium	Beryllium	Boron	Boron
MAX MDL Units:	.039 ug/L	.039 ug/L	.022 ug/L	.022 ug/L	1.7 ug/L	1.7 ug/L
Source:	Influent	Effluent	Influent	Effluent	Influent	Effluent
Month/Limit:				3.1		
JANUARY -2008	87.6	53.5	NR	ND	311	324
FEBRUARY -2008	83.5	59.8	ND	ND	285	340
MARCH -2008	90.2	54.4	ND	ND	318	347
APRIL -2008	100.0	60.1	NR	ND	291	323
MAY -2008	81.4	28.9	ND	ND	293	445
JUNE -2008	96.1	40.8	NR	ND	325	216
JULY -2008	95.6	22.9	NR	ND	315	431
AUGUST -2008	95.6	42.3	ND	ND	346	409
SEPTEMBER-2008	76.5	52.8	NR	ND	294	327
OCTOBER -2008	97.6	64.6	ND	ND	335	379
NOVEMBER -2008	89.2	56.8	ND	ND	335	359
DECEMBER -2008	103.0	64.5	NR	ND	399	255
AVERAGE	91.4	50.1	ND	ND	321	346

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:		96*		190*		
JANUARY -2008	ND	ND	2.5	1.6	NR	ND
FEBRUARY -2008	ND	ND	2.3	1.7	ND	2.5
MARCH -2008	ND	ND	2.7	ND	ND	ND
APRIL -2008	ND	ND	2.6	1.5	NR	ND
MAY -2008	ND	ND	2.4	3.2	ND	1.1
JUNE -2008	ND	ND	3.3	1.4	NR	ND
JULY -2008	ND	0.6	2.0	4.6	NR	1.3
AUGUST -2008	<0.5	ND	2.5	2.1	ND	ND
SEPTEMBER-2008	ND	ND	2.2	ND	NR	ND
OCTOBER -2008	<0.5	ND	3.2	ND	ND	ND
NOVEMBER -2008	ND	ND	4.5	1.4	ND	ND
DECEMBER -2008	ND	ND	3.4	ND	NR	ND
AVERAGE	<0.0	0.1	2.8	1.5	ND	0.4

* = 6 Month Median performance goal. All others are monthly average performance goals.

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

SOUTH BAY WATER RECLAMATION PLANT
ANNUAL SEWAGE
Trace Metals

From: 01-JAN-2008 To: 31-DEC-2008

Analyte:	Copper	Copper	Iron	Iron	Lead	Lead
MAX MDL Units:	.63 ug/L	.63 ug/L	37 ug/L	37 ug/L	2 ug/L	2 ug/L
Source:	Influent	Effluent	Influent	Effluent	Influent	Effluent
Month/Limit:		97				19*
JANUARY -2008	63	18	503	85	ND	ND
FEBRUARY -2008	49	8	487	58	ND	ND
MARCH -2008	57	12	685	136	2.4	ND
APRIL -2008	56	7	708	131	ND	ND
MAY -2008	62	34	565	1930	ND	ND
JUNE -2008	81	25	706	896	ND	ND
JULY -2008	70	19	589	2020	ND	2.0
AUGUST -2008	80	16	495	952	2.1	ND
SEPTEMBER-2008	51	11	378	78	ND	ND
OCTOBER -2008	62	10	432	<37	8.4	ND
NOVEMBER -2008	72	14	680	53	9.1	ND
DECEMBER -2008	68	13	858	43	5.3	10.8
AVERAGE	64	16	591	532	2.3	1.1

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:				38*		
JANUARY -2008	56.2	18.5	ND	ND	NR	3.5
FEBRUARY -2008	49.8	21.8	0.17	ND	4.9	3.3
MARCH -2008	56.4	33.0	ND	ND	6.3	3.9
APRIL -2008	69.5	27.8	0.18	ND	NR	3.1
MAY -2008	40.6	134.0	0.23	ND	8.2	10.4
JUNE -2008	42.0	74.1	0.35	ND	NR	6.3
JULY -2008	38.4	102.0	0.14	ND	NR	9.4
AUGUST -2008	38.5	92.5	ND	ND	7.7	5.2
SEPTEMBER-2008	32.0	16.2	0.18	ND	NR	6.4
OCTOBER -2008	35.1	17.6	0.13	ND	6.8	3.1
NOVEMBER -2008	33.6	15.5	0.21	ND	6.6	3.2
DECEMBER -2008	54.0	25.8	ND	ND	NR	4.8
AVERAGE	45.5	48.2	0.13	ND	6.8	5.2

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:		480*		1400*		52*
JANUARY -2008	4.54	2.61	1.78	0.68	0.8	ND
FEBRUARY -2008	3.66	1.91	1.50	0.59	ND	ND
MARCH -2008	5.16	3.52	1.63	0.49	1.8	1.0
APRIL -2008	4.94	4.95	1.92	0.69	1.3	ND
MAY -2008	6.14	18.50	1.53	2.48	2.7	ND
JUNE -2008	12.00	28.40	1.87	1.26	0.6	0.7
JULY -2008	5.04	29.30	1.54	2.75	1.0	0.6
AUGUST -2008	14.50	12.70	1.51	1.18	1.4	ND
SEPTEMBER-2008	5.52	4.18	1.15	0.34	0.8	ND
OCTOBER -2008	8.07	4.14	1.04	ND	0.8	ND
NOVEMBER -2008	8.54	5.73	1.31	0.34	1.0	ND
DECEMBER -2008	5.99	3.15	1.48	0.60	2.3	ND
AVERAGE	7.01	9.92	1.52	0.95	1.2	0.2

* = 6 Month Median performance goal. All others are monthly average performance goals.

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

SOUTH BAY WATER RECLAMATION PLANT
ANNUAL SEWAGE
Trace Metals

From: 01-JAN-2008 To: 31-DEC-2008

Analyte:	Thallium	Thallium	Vanadium	Vanadium	Zinc	Zinc
MAX MDL Units:	3.9 ug/L	3.9 ug/L	.64 ug/L	.64 ug/L	.41 ug/L	.41 ug/L
Source:	Influent	Effluent	Influent	Effluent	Influent	Effluent
Month/Limit:						1100*
JANUARY -2008	6.1	ND	NR	ND	143	28.3
FEBRUARY -2008	3.9	<3.9	1.0	0.8	118	42.7
MARCH -2008	ND	ND	1.5	ND	139	28.2
APRIL -2008	ND	ND	NR	ND	167	34.6
MAY -2008	ND	ND	1.9	2.2	136	38.6
JUNE -2008	ND	ND	NR	ND	175	39.4
JULY -2008	ND	ND	NR	1.6	155	34.5
AUGUST -2008	ND	ND	1.5	0.8	168	29.9
SEPTEMBER-2008	ND	ND	NR	ND	100	30.5
OCTOBER -2008	ND	ND	ND	ND	156	37.7
NOVEMBER -2008	ND	ND	1.1	ND	160	32.6
DECEMBER -2008	ND	ND	NR	ND	163	37.5
AVERAGE	0.8	0.0	1.2	0.5	148	34.5

* = 6 Month Median performance goal. All others are monthly average performance goals.

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

SOUTH BAY WATER RECLAMATION PLANT
ANNUAL SEWAGE

Cations

From 01-JAN-2008 To 31-DEC-2008

	Calcium		Magnesium		Lithium	
MDL:	.04	mg/L	.1	mg/L	.002	mg/L
	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.
JANUARY -2008	68.8	66.3	NR	26.5	0.035	0.034
FEBRUARY -2008	75.9	75.5	33.1	31.5	0.032	0.032
MARCH -2008	72.9	73.0	30.6	30.1	0.031	0.031
APRIL -2008	77.9	75.5	NR	29.8	0.036	0.037
MAY -2008	69.4	101.0	31.0	45.3	0.028	0.074
JUNE -2008	72.3	77.7	32.0	34.7	0.030	0.047
JULY -2008	69.0	92.2	31.6	45.1	0.030	0.076
AUGUST -2008	68.3	80.9	32.7	39.4	0.032	0.057
SEPTEMBER-2008	61.1	57.2	31.4	27.5	0.029	0.027
OCTOBER -2008	82.4	81.5	37.7	35.7	0.041	0.038
NOVEMBER -2008	62.1	60.4	27.6	27.7	0.030	0.030
DECEMBER -2008	60.2	64.5	24.5	25.3	0.033	0.031
Average:	70.0	75.5	31.2	33.2	0.032	0.043

	Sodium		Potassium	
MDL:	1	mg/L	.3	mg/L
	Inf.	Eff.	Inf.	Eff.
JANUARY -2008	165	169	18.3	16.4
FEBRUARY -2008	193	201	19.3	17.9
MARCH -2008	189	194	19.6	17.8
APRIL -2008	197	197	21.7	18.9
MAY -2008	183	347	21.4	26.9
JUNE -2008	188	234	22.6	21.7
JULY -2008	182	320	18.9	26.0
AUGUST -2008	189	272	22.2	23.4
SEPTEMBER-2008	174	166	20.2	15.8
OCTOBER -2008	230	220	25.9	22.3
NOVEMBER -2008	162	159	18.3	19.5
DECEMBER -2008	169	171	18.1	16.7
Average:	185	221	20.5	20.3

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

SOUTH BAY WATER RECLAMATION PLANT
ANNUAL SEWAGE

Anions

From: 01-JAN-2008 To: 31-DEC-2008

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 -2008	NR	0.318	NR	218	NR	0.427
FEBRUARY -2008	0.494	0.480	231	244	0.597	0.610
MARCH -2008	NR	ND	NR	242	NR	0.623
APRIL -2008	NR	0.360	NR	239	NR	0.711
MAY -2008	0.401	0.515	216	354	0.519	0.747
JUNE -2008	NR	0.490	NR	295	NR	0.635
JULY -2008	NR	0.487	NR	369	NR	0.698
AUGUST -2008	0.392	0.460	230	315	0.615	0.740
SEPTEMBER-2008	NR	0.562	NR	234	NR	0.771
OCTOBER -2008	0.352	0.374	221	233	0.574	0.554
NOVEMBER -2008	NR	0.200	NR	234	NR	0.625
DECEMBER -2008	NR	0.360	NR	236	NR	0.690
AVERAGE	0.410	0.384	225	268	0.576	0.653

Analyte:	Nitrate	Nitrate	Ortho Phosph	Ortho Phosphate	Sulfate	Sulfate
MDL Units:	.04	.04	.2	.2	9	9
Source:	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
Month/Limit:	INFLUENT	EFFLUENT	INFLUENT	EFFLUENT	INFLUENT	EFFLUENT
JANUARY -2008	NR	27.2	NR	5.74	NR	185
FEBRUARY -2008	ND	24.6	10.90	4.16	161	192
MARCH -2008	NR	25.9	NR	6.04	NR	189
APRIL -2008	NR	56.0	NR	5.41	NR	201
MAY -2008	0.5	ND	13.10	5.27	145	374
JUNE -2008	NR	13.3	NR	4.25	NR	266
JULY -2008	NR	0.1	NR	6.02	NR	362
AUGUST -2008	0.2	0.2	13.70	11.30	160	237
SEPTEMBER-2008	NR	27.9	NR	5.22	NR	195
OCTOBER -2008	0.2	29.8	12.50	6.13	158	201
NOVEMBER -2008	NR	ND	NR	12.60	NR	174
DECEMBER -2008	NR	32.8	NR	4.09	NR	203
AVERAGE	0.2	19.8	12.55	6.35	156	232

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

SOUTH BAY WATER RECLAMATION PLANT
ANNUAL SEWAGE

Ammonia-Nitrogen and Total Cyanides

From: 01-JAN-2008 To: 31-DEC-2008

	Ammonia-N	Ammonia-N	Cyanides,Total	Cyanides,Total
MDL:	.3 MG/L	.3 MG/L	.002 MG/L	.002 MG/L
Source:	SB_INF_02	SB_OUTFALL_00	SB_INF_02	SB_OUTFALL_00
Goal/Limit:		570		0.096
JANUARY -2008	NR	0.3	ND	0.004
FEBRUARY -2008	29.8	ND	ND	ND
MARCH -2008	NR	0.3	ND	0.002
APRIL -2008	NR	0.7	ND	0.003
MAY -2008	33.8	41.5	ND	0.005
JUNE -2008	38.8	22.5	ND	0.004
JULY -2008	35.0	39.1	0.004	0.004
AUGUST -2008	36.1	25.9	ND	ND
SEPTEMBER-2008	NR	8.2	ND	0.002
OCTOBER -2008	33.8	<0.3	ND	ND
NOVEMBER -2008	38.5	2.1	ND	ND
DECEMBER -2008	31.6	ND	ND	0.003
Average:	34.7	11.7	0.000	0.002

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

SOUTH BAY WATER RECLAMATION PLANT
ANNUAL SEWAGE

Effluent to the Ocean
(SB_OUTFALL_00)

Radioactivity

Analyzed by: TestAmerica Laboratories Richland

From 01-JAN-2008 To 31-DEC-2008

Source	Month	Gross Alpha Radiation	Gross Beta Radiation
SB_OUTFALL_00	JANUARY - 2008	1.4±0.9	17.9±3.7
SB_OUTFALL_00	FEBRUARY -2008	1.7±1.1	15.2±3.3
SB_OUTFALL_00	MARCH - 2008	1.1±0.8	15.3±4.3
SB_OUTFALL_00	APRIL - 2008	0.9±0.8	20.2±3.9
SB_OUTFALL_00	MAY - 2008	1.8±1.1	25.3±5.5
SB_OUTFALL_00	JUNE - 2008	2.9±1.4	23.3±4.7
SB_OUTFALL_00	JULY - 2008	2.5±1.3	26.8±5.9
SB_OUTFALL_00	AUGUST - 2008	2.1±2.2	23.5±5.4
SB_OUTFALL_00	SEPTEMBER-2008	1.8±1.4	17.0±3.6
SB_OUTFALL_00	OCTOBER - 2008	1.1±1.4	19.4±4.1
SB_OUTFALL_00	NOVEMBER -2008	2.2±1.7	24.4±4.2
SB_OUTFALL_00	DECEMBER -2008	0.4±1.6	21.5±4.1
AVERAGE		1.7±1.3	20.8±4.4

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

Units in picocuries/liter (pCi/L)

SOUTH BAY WATER RECLAMATION PLANT
ANNUAL SEWAGE

Chlorinated Pesticide Analysis

From 01-JAN-2008 To 31-DEC-2008

Analyte	MDL	Units	EFF JAN	EFF FEB	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
Dieldrin	3	NG/L	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
BHC, Beta isomer	3	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BHC, Gamma isomer	5	NG/L	ND	<5	12	5	ND	ND	10	ND	ND	ND	ND	2
BHC, Delta isomer	3	NG/L	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
p,p-DDE	4	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7	1
p,p-DDT	8	NG/L	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
o,p-DDE	5	NG/L	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
Heptachlor	8	NG/L	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
Alpha (cis) Chlordane	3	NG/L	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
Alpha Chlordene		NG/L	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
Oxychlordane	6	NG/L	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
Cis Nonachlor	3	NG/L	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
Beta Endosulfan	2	NG/L	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
Endrin	2	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	1
Endrin aldehyde	9	NG/L	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
Methoxychlor	10	NG/L	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
PCB 1016	4000	NG/L	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
PCB 1232	360	NG/L	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
PCB 1248	2000	NG/L	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
PCB 1260	2000	NG/L	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
Aldrin + Dieldrin	7	NG/L	0	0	0	0	0	0	0	0	0	0	0	0
Hexachlorocyclohexanes	7	NG/L	0	0	12	5	0	0	10	0	0	0	0	2
DDT and derivatives	8	NG/L	0	0	0	0	0	0	0	0	0	0	7	1
Chlordane + related cmpds.	6	NG/L	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
Endosulfans	6	NG/L	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
Chlorinated Hydrocarbons	4000	NG/L	0	0	12	5	0	0	10	0	0	0	13	4

nd=not detected; NS=not sampled; NA=not analyzed

"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
ANNUAL SEWAGE

Chlorinated Pesticide Analysis

From 01-JAN-2008 To 31-DEC-2008

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	35	ND	9
BHC, Beta isomer	3	NG/L	ND	ND	ND	ND	ND
BHC, Gamma isomer	5	NG/L	ND	80	ND	ND	20
BHC, Delta isomer	3	NG/L	ND	ND	25	ND	6
p,p-DDD	3	NG/L	ND	ND	7	ND	2
p,p-DDE	4	NG/L	ND	5	14	23	11
p,p-DDT	8	NG/L	ND	ND	14	ND	4
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	42	ND	11
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	14	ND	4
Beta Endosulfan	2	NG/L	ND	ND	27	ND	7
Endosulfan Sulfate	6	NG/L	ND	ND	ND	ND	ND
Endrin	2	NG/L	ND	ND	9	ND	2
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	80	60	0	35
DDT and derivatives	8	NG/L	0	5	35	23	16
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	41	0	10
Heptachlors	8	NG/L	0	0	42	0	11
Chlorinated Hydrocarbons	4000	NG/L	0	85	187	23	74

nd=not detected; NS=not sampled; NA=not analyzed

"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
ANNUAL SEWAGE

INFLUENT(SB_INF_02) & EFFLUENT(SB_OUTFALL_00)

Organophosphorus Pesticides

EPA Method 614/622 (with additions)

From 01-JAN-2008 To 31-DEC-2008

Analyte	MDL	Units	Effluent 13-MAY-2008 P424847	Effluent 07-OCT-2008 P443475	Influent 13-MAY-2008 P424842	Influent 07-OCT-2008 P443470
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	0.8	ND	ND	ND
Dibrom	.2	UG/L	ND	ND	ND	ND
Ethoprop	.04	UG/L	ND	ND	ND	ND
Phorate	.04	UG/L	ND	ND	ND	ND
Sulfotepp	.04	UG/L	ND	ND	ND	ND
Disulfoton	.02	UG/L	ND	ND	ND	ND
Dimethoate	.04	UG/L	ND	ND	ND	ND
Ronnel	.03	UG/L	ND	ND	ND	ND
Trichloronate	.04	UG/L	ND	ND	ND	ND
Merphos	.09	UG/L	ND	ND	ND	ND
Dichlofenthion	.03	UG/L	ND	ND	ND	ND
Tokuthion	.06	UG/L	ND	ND	ND	ND
Stirophos	.03	UG/L	ND	ND	ND	ND
Bolstar	.07	UG/L	ND	ND	ND	ND
Fensulfothion	.07	UG/L	ND	ND	ND	ND
EPN	.09	UG/L	ND	ND	ND	ND
Coumaphos	.15	UG/L	ND	ND	ND	ND
Mevinphos, e isomer	.05	UG/L	ND	ND	ND	ND
Mevinphos, z isomer	.3	UG/L	ND	ND	ND	ND
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	0.8	0.0	0.0	0.0

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

SOUTH BAY WATER RECLAMATION PLANT
ANNUAL SEWAGE

Tributyl Tin Analysis

From 01-JAN-2008 To 31-DEC-2008

Analyte	MDL	Units	EFF FEB	EFF MAY	EFF AUG	EFF 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

Analyte	MDL	Units	INF FEB	INF MAY	INF AUG	INF 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
NS=not sampled
NA=not analyzed

SOUTH BAY WATER RECLAMATION PLANT
ANNUAL SEWAGE

Acid Extractables

From 01-JAN-2008 To 31-DEC-2008

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	Average
2-chlorophenol	1.76	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-dichlorophenol	1.95	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	1.75	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pentachlorophenol	5.87	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenol	2.53	UG/L	ND	ND	ND	ND	32.7	18.4	25.8	18.0	ND	ND	ND	ND	7.9
2-nitrophenol	1.88	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	6.07	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-nitrophenol	3.17	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-methyl-4,6-dinitrophenol	4.29	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Chlorinated Phenols	5.87	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	6.07	UG/L	0.0	0.0	0.0	0.0	32.7	18.4	25.8	18.0	0.0	0.0	0.0	0.0	7.9
Total Phenols	6.07	UG/L	0.0	0.0	0.0	0.0	32.7	18.4	25.8	18.0	0.0	0.0	0.0	0.0	7.9
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)	4.4	UG/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-methylphenol(3-MP is unresolved)	4.22	UG/L	ND	ND	ND	ND	7.5	9.1	4.3	34.9	ND	ND	ND	ND	4.7
2,4,5-trichlorophenol	1.66	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

nd=not detected; NS=not sampled; NA=not analyzed

SOUTH BAY WATER RECLAMATION PLANT
ANNUAL SEWAGE

Acid Extractables

From 01-JAN-2008 To 31-DEC-2008

Analyte	MDL	Units	INF FEB	INF MAY	INF AUG	INF OCT	Average
2-chlorophenol	1.76	UG/L	ND	ND	ND	ND	ND
2,4-dichlorophenol	1.95	UG/L	ND	ND	ND	ND	ND
4-chloro-3-methylphenol	1.67	UG/L	ND	ND	ND	ND	ND
2,4,6-trichlorophenol	1.75	UG/L	ND	ND	ND	ND	ND
Pentachlorophenol	5.87	UG/L	ND	ND	ND	ND	ND
Phenol	2.53	UG/L	28.3	30.2	32.0	35.8	31.6
2-nitrophenol	1.88	UG/L	ND	ND	ND	ND	ND
2,4-dimethylphenol	2.01	UG/L	ND	ND	ND	ND	ND
2,4-dinitrophenol	6.07	UG/L	ND	ND	ND	ND	ND
4-nitrophenol	3.17	UG/L	ND	ND	ND	ND	ND
2-methyl-4,6-dinitrophenol	4.29	UG/L	ND	ND	ND	ND	ND
Total Chlorinated Phenols	5.87	UG/L	0.0	0.0	0.0	0.0	0.0
Total Non-Chlorinated Phenols	6.07	UG/L	28.3	30.2	32.0	35.8	31.6
Total Phenols	6.07	UG/L	28.3	30.2	32.0	35.8	31.6
2-methylphenol	2.15	UG/L	ND	ND	ND	ND	ND
3-methylphenol(4-MP is unresolved)	4.4	UG/L	NA	NA	NA	NA	NA
4-methylphenol(3-MP is unresolved)	4.22	UG/L	109	100.0	75.1	107	97.8
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
ANNUAL SEWAGE

Priority Pollutants Base/Neutrals

From 01-JAN-2008 To 31-DEC-2008

Analyte	MDL	Units	EFF FEB	EFF MAY	EFF AUG	EFF OCT	EFF Average
bis(2-chloroethyl) ether	2.62	UG/L	ND	ND	ND	ND	ND
Bis-(2-chloroisopropyl) ether	8.95	UG/L	ND	ND	ND	ND	ND
N-nitrosodi-n-propylamine	1.63	UG/L	ND	ND	ND	ND	ND
Nitrobenzene	1.6	UG/L	ND	ND	ND	ND	ND
Hexachloroethane	3.55	UG/L	ND	ND	ND	ND	ND
Isophorone	1.93	UG/L	ND	ND	ND	ND	ND
bis(2-chloroethoxy)methane	1.57	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	2.87	UG/L	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	1.25	UG/L	ND	ND	ND	ND	ND
Acenaphthylene	2.02	UG/L	ND	ND	ND	ND	ND
Dimethyl phthalate	3.26	UG/L	ND	ND	ND	ND	ND
2,6-dinitrotoluene	1.93	UG/L	ND	ND	ND	ND	ND
Acenaphthene	2.2	UG/L	ND	ND	ND	ND	ND
2,4-dinitrotoluene	1.49	UG/L	ND	ND	ND	ND	ND
Fluorene	2.43	UG/L	ND	ND	ND	ND	ND
4-chlorophenyl phenyl ether	3.62	UG/L	ND	ND	ND	ND	ND
Diethyl phthalate	6.97	UG/L	ND	ND	5.0	ND	1.3
N-nitrosodiphenylamine	3.48	UG/L	ND	ND	ND	ND	ND
4-bromophenyl phenyl ether	4.04	UG/L	ND	ND	ND	ND	ND
Hexachlorobenzene	4.8	UG/L	ND	ND	ND	ND	ND
Phenanthrene	4.15	UG/L	ND	ND	ND	ND	ND
Anthracene	4.04	UG/L	ND	ND	ND	ND	ND
Di-n-butyl phthalate	6.49	UG/L	ND	ND	ND	ND	ND
N-nitrosodimethylamine	2.01	UG/L	ND	ND	ND	ND	ND
Fluoranthene	6.9	UG/L	ND	ND	ND	ND	ND
Pyrene	5.19	UG/L	ND	ND	ND	ND	ND
Benzidine	1.52	UG/L	ND	ND	ND	ND	ND
Butyl benzyl phthalate	4.77	UG/L	ND	ND	ND	ND	ND
Chrysene	7.49	UG/L	ND	ND	ND	ND	ND
Benzo[A]anthracene	7.68	UG/L	ND	ND	ND	ND	ND
Bis-(2-ethylhexyl) phthalate	10.43	UG/L	ND	ND	ND	ND	ND
Di-n-octyl phthalate	8.59	UG/L	ND	ND	ND	ND	ND
3,3-dichlorobenzidine	2.44	UG/L	ND	ND	ND	ND	ND
Benzo[K]fluoranthene	7.36	UG/L	ND	ND	ND	ND	ND
3,4-benzo(B)fluoranthene	6.63	UG/L	ND	ND	ND	ND	ND
Benzo[A]pyrene	6.53	UG/L	ND	ND	ND	ND	ND
Indeno(1,2,3-CD)pyrene	6.27	UG/L	ND	ND	ND	ND	ND
Dibenzo(A,H)anthracene	6.19	UG/L	ND	ND	ND	ND	ND
Benzo[G,H,I]perylene	6.5	UG/L	ND	ND	ND	ND	ND
1,2-diphenylhydrazine	2.49	UG/L	ND	ND	ND	ND	ND
Polynuc. Aromatic Hydrocarbons	7.68	UG/L	0.0	0.0	0.0	0.0	0.0
Base/Neutral Compounds	10.43	UG/L	0.0	0.0	5.0	0.0	1.3
1-methylnaphthalene	2.18	UG/L	ND	ND	ND	ND	ND
2-methylnaphthalene	2.25	UG/L	ND	ND	ND	ND	ND
2,6-dimethylnaphthalene	3.31	UG/L	ND	ND	ND	ND	ND
2,3,5-trimethylnaphthalene	4.4	UG/L	ND	ND	ND	ND	ND
1-methylphenanthrene	6.29	UG/L	ND	ND	ND	ND	ND
Benzo[e]pyrene	7.67	UG/L	ND	ND	ND	ND	ND
Perylene	6.61	UG/L	ND	ND	ND	ND	ND
Biphenyl	2.43	UG/L	ND	ND	ND	ND	ND

nd=not detected; NS=not sampled; NA=not analyzed

SOUTH BAY WATER RECLAMATION PLANT
ANNUAL SEWAGE

Priority Pollutants Base/Neutrals

From 01-JAN-2008 To 31-DEC-2008

Analyte	MDL	Units	INF FEB	INF MAY	INF AUG	INF OCT	Average
bis(2-chloroethyl) ether	2.62	UG/L	ND	ND	ND	ND	ND
Bis-(2-chloroisopropyl) ether	8.95	UG/L	ND	ND	ND	ND	ND
N-nitrosodi-n-propylamine	1.63	UG/L	ND	ND	ND	ND	ND
Nitrobenzene	1.6	UG/L	ND	ND	ND	ND	ND
Hexachloroethane	3.55	UG/L	ND	ND	ND	ND	ND
Isophorone	1.93	UG/L	ND	ND	ND	ND	ND
bis(2-chloroethoxy)methane	1.57	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	2.87	UG/L	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	1.25	UG/L	ND	ND	ND	ND	ND
Acenaphthylene	2.02	UG/L	ND	ND	ND	ND	ND
Dimethyl phthalate	3.26	UG/L	ND	ND	ND	ND	ND
2,6-dinitrotoluene	1.93	UG/L	ND	ND	ND	ND	ND
Acenaphthene	2.2	UG/L	ND	ND	ND	ND	ND
2,4-dinitrotoluene	1.49	UG/L	ND	ND	ND	ND	ND
Fluorene	2.43	UG/L	ND	ND	ND	ND	ND
4-chlorophenyl phenyl ether	3.62	UG/L	ND	ND	ND	ND	ND
Diethyl phthalate	6.97	UG/L	ND	ND	3.6	ND	0.9
N-nitrosodiphenylamine	3.48	UG/L	ND	ND	ND	ND	ND
4-bromophenyl phenyl ether	4.04	UG/L	ND	ND	ND	ND	ND
Hexachlorobenzene	4.8	UG/L	ND	ND	ND	ND	ND
Phenanthrene	4.15	UG/L	ND	ND	ND	ND	ND
Anthracene	4.04	UG/L	ND	ND	ND	ND	ND
Di-n-butyl phthalate	6.49	UG/L	ND	ND	ND	ND	ND
N-nitrosodimethylamine	2.01	UG/L	ND	ND	ND	ND	ND
Fluoranthene	6.9	UG/L	ND	ND	ND	ND	ND
Pyrene	5.19	UG/L	ND	ND	ND	ND	ND
Benzidine	1.52	UG/L	ND	ND	ND	ND	ND
Butyl benzyl phthalate	4.77	UG/L	ND	ND	ND	ND	ND
Chrysene	7.49	UG/L	ND	ND	ND	ND	ND
Benzo[A]anthracene	7.68	UG/L	ND	ND	ND	ND	ND
Bis-(2-ethylhexyl) phthalate	10.43	UG/L	16.3	40.6	19.4	12.6	22.2
Di-n-octyl phthalate	8.59	UG/L	ND	ND	ND	ND	ND
3,3-dichlorobenzidine	2.44	UG/L	ND	ND	ND	ND	ND
Benzo[K]fluoranthene	7.36	UG/L	ND	ND	ND	ND	ND
3,4-benzo(B)fluoranthene	6.63	UG/L	ND	ND	ND	ND	ND
Benzo[A]pyrene	6.53	UG/L	ND	ND	ND	ND	ND
Indeno(1,2,3-CD)pyrene	6.27	UG/L	ND	ND	ND	ND	ND
Dibenzo(A,H)anthracene	6.19	UG/L	ND	ND	ND	ND	ND
Benzo[G,H,I]perylene	6.5	UG/L	ND	ND	ND	ND	ND
1,2-diphenylhydrazine	2.49	UG/L	ND	ND	ND	ND	ND
Polynuc. Aromatic Hydrocarbons	7.68	UG/L	0.0	0.0	0.0	0.0	0.0
Base/Neutral Compounds	10.43	UG/L	16.3	40.6	23.0	12.6	23.1
1-methylnaphthalene	2.18	UG/L	ND	ND	ND	ND	ND
2-methylnaphthalene	2.25	UG/L	ND	ND	ND	ND	ND
2,6-dimethylnaphthalene	3.31	UG/L	ND	ND	ND	ND	ND
2,3,5-trimethylnaphthalene	4.4	UG/L	ND	ND	ND	ND	ND
1-methylphenanthrene	6.29	UG/L	ND	ND	ND	ND	ND
Benzo[e]pyrene	7.67	UG/L	ND	ND	ND	ND	ND
Perylene	6.61	UG/L	ND	ND	ND	ND	ND
Biphenyl	2.43	UG/L	ND	ND	ND	ND	ND

nd=not detected; NS=not sampled; NA=not analyzed

SOUTH BAY WATER RECLAMATION PLANT
ANNUAL SEWAGE
Priority Pollutants Purgeables
From 01-JAN-2008 To 31-DEC-2008

Analyte	MDL	Units	EFF FEB	EFF MAY	EFF AUG	EFF OCT	EFF Average
Dichlorodifluoromethane		UG/L	ND	ND	ND	ND	ND
Chloromethane	1	UG/L	ND	ND	ND	ND	ND
Vinyl chloride	1	UG/L	ND	ND	ND	ND	ND
Bromomethane	1	UG/L	ND	ND	ND	ND	ND
Chloroethane	1	UG/L	ND	ND	ND	ND	ND
Trichlorofluoromethane	1	UG/L	ND	ND	ND	ND	ND
Acrolein	11.4	UG/L	ND	ND	ND	ND	ND
1,1-dichloroethane	1	UG/L	ND	ND	ND	ND	ND
Methylene chloride	1	UG/L	ND	4.4*	1.4	1.6	1.0
trans-1,2-dichloroethene	1	UG/L	ND	ND	ND	ND	ND
1,1-dichloroethene	1	UG/L	ND	ND	ND	ND	ND
Acrylonitrile	13.8	UG/L	ND	ND	ND	ND	ND
Chloroform	1	UG/L	1.7	2.9	3.6	1.3	2.4
1,1,1-trichloroethane	1	UG/L	ND	ND	ND	ND	ND
Carbon tetrachloride	1	UG/L	ND	ND	ND	ND	ND
Benzene	1	UG/L	ND	ND	ND	ND	ND
1,2-dichloroethane	1	UG/L	ND	ND	ND	ND	ND
Trichloroethene	1	UG/L	ND	ND	ND	ND	ND
1,2-dichloropropane	1	UG/L	ND	ND	ND	ND	ND
Bromodichloromethane	1	UG/L	ND	ND	ND	0.6	0.2
2-chloroethylvinyl ether	1.1	UG/L	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	1	UG/L	ND	ND	ND	ND	ND
Toluene	1	UG/L	ND	14.8	6.2	ND	5.3
trans-1,3-dichloropropene	1	UG/L	ND	ND	ND	ND	ND
1,1,2-trichloroethane	1	UG/L	ND	ND	ND	ND	ND
Tetrachloroethene	1.1	UG/L	ND	ND	ND	ND	ND
Dibromochloromethane	1	UG/L	ND	ND	ND	ND	ND
Chlorobenzene	1	UG/L	ND	ND	ND	ND	ND
Ethylbenzene	1	UG/L	ND	0.7	0.9	ND	0.4
Bromoform	1	UG/L	ND	ND	ND	ND	ND
1,1,2,2-tetrachloroethane	1	UG/L	ND	0.8	ND	ND	0.2
1,3-dichlorobenzene	1	UG/L	ND	ND	ND	ND	ND
1,4-dichlorobenzene	1	UG/L	ND	3.2	2.6	1.0	1.7
1,2-dichlorobenzene	1	UG/L	ND	ND	ND	ND	ND
Halomethane Purgeable Cmpnds	1	UG/L	0.0	0.0	0.0	0.0	0.0
Total Dichlorobenzenes	1	UG/L	0.0	0.0	0.0	0.0	0.0
Total Chloromethanes	1	UG/L	1.7	2.9	5.0	2.9	3.1
Purgeable Compounds	13.8	UG/L	1.7	22.4	14.7	4.5	10.8
Methyl Iodide	1	UG/L	ND	ND	ND	ND	ND
Carbon disulfide	1	UG/L	ND	1.6	5.0	ND	1.7
Acetone	20	UG/L	ND	561	333	ND	224
Allyl chloride	1	UG/L	ND	ND	ND	ND	ND
Methyl tert-butyl ether	1	UG/L	ND	<0.4	0.4	ND	0.1
Chloroprene	1.4	UG/L	ND	ND	ND	ND	ND
1,2-dibromoethane	3.3	UG/L	ND	ND	ND	ND	ND
2-butanone	6.3	UG/L	ND	21.6	6.7	ND	7.1
Methyl methacrylate	4.6	UG/L	ND	ND	ND	ND	ND
2-nitropropane	12	UG/L	ND	ND	ND	ND	ND
4-methyl-2-pentanone	6.1	UG/L	ND	ND	2.3	ND	0.6
meta,para xylenes	3.1	UG/L	ND	2.8	3.7	ND	1.6
ortho-xylene	3.4	UG/L	ND	2.3	2.3	ND	1.2
Isopropylbenzene	4.4	UG/L	ND	0.7	0.4	ND	0.3
Styrene	4.7	UG/L	ND	ND	ND	ND	ND
Benzyl chloride	7.2	UG/L	ND	ND	ND	ND	ND
1,2,4-trichlorobenzene	1.52	UG/L	ND	ND	ND	ND	ND

* = Batch did not meet QC criteria, blank contamination, the blank value for this batch was 3.05 UG/L.

nd=not detected; NS=not sampled; NA=not analyzed

SOUTH BAY WATER RECLAMATION PLANT
ANNUAL SEWAGE
Priority Pollutants Purgeables
From 01-JAN-2008 To 31-DEC-2008

Analyte	MDL	Units	INF FEB	INF MAY	INF AUG	INF OCT	INF Average
Dichlorodifluoromethane		UG/L	ND	ND	ND	ND	ND
Chloromethane	1	UG/L	ND	ND	8.6	ND	2.2
Vinyl chloride	1	UG/L	ND	ND	ND	ND	ND
Bromomethane	1	UG/L	ND	ND	ND	ND	ND
Chloroethane	1	UG/L	ND	ND	ND	ND	ND
Trichlorofluoromethane	1	UG/L	ND	ND	ND	ND	ND
Acrolein	11.4	UG/L	ND	ND	ND	ND	ND
1,1-dichloroethane	1	UG/L	ND	ND	ND	ND	ND
Methylene chloride	1	UG/L	2.1	4.9*	1.9	1.6	1.9
trans-1,2-dichloroethene	1	UG/L	ND	ND	ND	ND	ND
1,1-dichloroethene	1	UG/L	ND	ND	ND	ND	ND
Acrylonitrile	13.8	UG/L	ND	ND	ND	ND	ND
Chloroform	1	UG/L	4.2	3.1	8.2	3.4	4.7
1,1,1-trichloroethane	1	UG/L	ND	ND	ND	ND	ND
Carbon tetrachloride	1	UG/L	ND	ND	ND	ND	ND
Benzene	1	UG/L	ND	ND	ND	ND	ND
1,2-dichloroethane	1	UG/L	ND	ND	ND	ND	ND
Trichloroethene	1	UG/L	ND	ND	ND	ND	ND
1,2-dichloropropane	1	UG/L	ND	ND	ND	ND	ND
Bromodichloromethane	1	UG/L	ND	ND	ND	ND	ND
2-chloroethylvinyl ether	1.1	UG/L	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	1	UG/L	ND	ND	ND	ND	ND
Toluene	1	UG/L	ND	0.8	0.8	0.7	0.6
trans-1,3-dichloropropene	1	UG/L	ND	ND	ND	ND	ND
1,1,2-trichloroethane	1	UG/L	ND	ND	ND	ND	ND
Tetrachloroethene	1.1	UG/L	ND	ND	ND	ND	ND
Dibromochloromethane	1	UG/L	ND	ND	ND	ND	ND
Chlorobenzene	1	UG/L	ND	ND	ND	ND	ND
Ethylbenzene	1	UG/L	ND	ND	ND	ND	ND
Bromoform	1	UG/L	ND	ND	ND	ND	ND
1,1,2,2-tetrachloroethane	1	UG/L	ND	ND	ND	ND	ND
1,3-dichlorobenzene	1	UG/L	ND	ND	ND	ND	ND
1,4-dichlorobenzene	1	UG/L	1.3	1.4	2.1	2.1	1.7
1,2-dichlorobenzene	1	UG/L	ND	ND	ND	ND	ND
Halomethane Purgeable Cmpnds	1	UG/L	0.0	0.0	8.6	0.0	2.2
Total Dichlorobenzenes	1	UG/L	0.0	0.0	0.0	0.0	0.0
Total Chloromethanes	1	UG/L	6.3	3.1	18.7	5.0	8.3
Purgeable Compounds	13.8	UG/L	7.6	5.3	21.6	7.8	10.6
Methyl Iodide	1	UG/L	ND	ND	ND	ND	ND
Carbon disulfide	1	UG/L	ND	3.0	3.6	0.9	1.9
Acetone	20	UG/L	111	174	134	197	154
Allyl chloride	1	UG/L	ND	ND	ND	ND	ND
Methyl tert-butyl ether	1	UG/L	ND	ND	ND	ND	ND
Chloroprene	1.4	UG/L	ND	ND	ND	ND	ND
1,2-dibromoethane	3.3	UG/L	ND	ND	ND	ND	ND
2-butanone	6.3	UG/L	ND	ND	ND	7.7	1.9
Methyl methacrylate	4.6	UG/L	ND	ND	ND	ND	ND
2-nitropropane	12	UG/L	ND	ND	ND	ND	ND
4-methyl-2-pentanone	6.1	UG/L	ND	ND	ND	ND	ND
meta,para xylenes	3.1	UG/L	ND	ND	ND	ND	ND
ortho-xylene	3.4	UG/L	ND	ND	ND	ND	ND
Isopropylbenzene	4.4	UG/L	ND	ND	ND	ND	ND
Styrene	4.7	UG/L	ND	0.5	ND	ND	0.1
Benzyl chloride	7.2	UG/L	ND	ND	ND	ND	ND
1,2,4-trichlorobenzene	1.52	UG/L	ND	ND	ND	ND	ND

* = Batch did not meet QC criteria, blank contamination, the blank value for this batch was 3.05 UG/L.

nd=not detected; NS=not sampled; NA=not analyzed

SOUTH BAY WATER RECLAMATION PLANT
ANNUAL SEWAGE
Dioxin and Furan Analysis
From 01-JAN-2008 To 31-DEC-2008

Analyte	MDL	Units	Equiv	INF JAN P412336	INF FEB P414553	INF MAR P419823	INF APR P421614
2,3,7,8-tetra CDD	500	PG/L	1.000	ND	ND	ND	ND
1,2,3,7,8-penta CDD	500	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8_hexa_CDD	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDD	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDD	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDD	500	PG/L	0.010	ND	ND	ND	ND
octa CDD	1000	PG/L	0.001	ND	ND	ND	ND
2,3,7,8-tetra CDF	250	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8-penta CDF	500	PG/L	0.050	ND	ND	ND	ND
2,3,4,7,8-penta CDF	500	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDF	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDF	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDF	500	PG/L	0.100	ND	ND	ND	ND
2,3,4,6,7,8-hexa CDF	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDF	500	PG/L	0.010	ND	ND	ND	ND
1,2,3,4,7,8,9-hepta CDF	500	PG/L	0.010	ND	ND	ND	ND
octa CDF	1000	PG/L	0.001	ND	ND	ND	ND

Analyte	MDL	Units	Equiv	INF MAY P424842	INF JUN P429204	INF JUL P432070	INF AUG P435068
2,3,7,8-tetra CDD	500	PG/L	1.000	ND	ND	ND	ND
1,2,3,7,8-penta CDD	500	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8_hexa_CDD	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDD	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDD	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDD	500	PG/L	0.010	ND	ND	ND	ND
octa CDD	1000	PG/L	0.001	ND	ND	ND	ND
2,3,7,8-tetra CDF	250	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8-penta CDF	500	PG/L	0.050	ND	ND	ND	ND
2,3,4,7,8-penta CDF	500	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDF	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDF	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDF	500	PG/L	0.100	ND	ND	ND	ND
2,3,4,6,7,8-hexa CDF	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDF	500	PG/L	0.010	ND	ND	ND	ND
1,2,3,4,7,8,9-hepta CDF	500	PG/L	0.010	ND	ND	ND	ND
octa CDF	1000	PG/L	0.001	ND	ND	ND	ND

Analyte	MDL	Units	Equiv	INF SEP P440210	INF OCT P443470	INF NOV P449150	INF DEC P452127
2,3,7,8-tetra CDD	500	PG/L	1.000	ND	ND	ND	ND
1,2,3,7,8-penta CDD	500	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8_hexa_CDD	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDD	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDD	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDD	500	PG/L	0.010	ND	ND	ND	ND
octa CDD	1000	PG/L	0.001	ND	ND	ND	ND
2,3,7,8-tetra CDF	250	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8-penta CDF	500	PG/L	0.050	ND	ND	ND	ND
2,3,4,7,8-penta CDF	500	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDF	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDF	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDF	500	PG/L	0.100	ND	ND	ND	ND
2,3,4,6,7,8-hexa CDF	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDF	500	PG/L	0.010	ND	ND	ND	ND
1,2,3,4,7,8,9-hepta CDF	500	PG/L	0.010	ND	ND	ND	ND
octa CDF	1000	PG/L	0.001	ND	ND	ND	ND

Above are permit required CDD/CDF isomers.
ND= not detected, NA= not analyzed, NS= not sampled

SOUTH BAY WATER RECLAMATION PLANT
ANNUAL SEWAGE
Dioxin and Furan Analysis
From 01-JAN-2008 To 31-DEC-2008

Analyte	MDL	Units	Equiv	EFF JAN P412340	EFF FEB P414558	EFF MAR P419826	EFF APR P421618
2,3,7,8-tetra CDD	500	PG/L	1.000	ND	ND	ND	ND
1,2,3,7,8-penta CDD	500	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8_hexa_CDD	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDD	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDD	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDD	500	PG/L	0.010	ND	ND	ND	ND
octa CDD	1000	PG/L	0.001	ND	ND	ND	ND
2,3,7,8-tetra CDF	250	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8-penta CDF	500	PG/L	0.050	ND	ND	ND	ND
2,3,4,7,8-penta CDF	500	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDF	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDF	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDF	500	PG/L	0.100	ND	ND	ND	ND
2,3,4,6,7,8-hexa CDF	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDF	500	PG/L	0.010	ND	ND	ND	ND
1,2,3,4,7,8,9-hepta CDF	500	PG/L	0.010	ND	ND	ND	ND
octa CDF	1000	PG/L	0.001	ND	ND	ND	ND

Analyte	MDL	Units	Equiv	EFF MAY P424847	EFF JUN P429208	EFF JUL P432074	EFF AUG P435073
2,3,7,8-tetra CDD	500	PG/L	1.000	ND	ND	ND	ND
1,2,3,7,8-penta CDD	500	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8_hexa_CDD	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDD	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDD	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDD	500	PG/L	0.010	ND	ND	ND	ND
octa CDD	1000	PG/L	0.001	ND	ND	ND	ND
2,3,7,8-tetra CDF	250	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8-penta CDF	500	PG/L	0.050	ND	ND	ND	ND
2,3,4,7,8-penta CDF	500	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDF	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDF	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDF	500	PG/L	0.100	ND	ND	ND	ND
2,3,4,6,7,8-hexa CDF	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDF	500	PG/L	0.010	ND	ND	ND	ND
1,2,3,4,7,8,9-hepta CDF	500	PG/L	0.010	ND	ND	ND	ND
octa CDF	1000	PG/L	0.001	ND	ND	ND	ND

Analyte	MDL	Units	Equiv	EFF SEP P440214	EFF OCT P443475	EFF NOV P449153	EFF DEC P452131
2,3,7,8-tetra CDD	500	PG/L	1.000	ND	ND	ND	ND
1,2,3,7,8-penta CDD	500	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8_hexa_CDD	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDD	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDD	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDD	500	PG/L	0.010	ND	ND	ND	ND
octa CDD	1000	PG/L	0.001	ND	ND	ND	ND
2,3,7,8-tetra CDF	250	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8-penta CDF	500	PG/L	0.050	ND	ND	ND	ND
2,3,4,7,8-penta CDF	500	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDF	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDF	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDF	500	PG/L	0.100	ND	ND	ND	ND
2,3,4,6,7,8-hexa CDF	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDF	500	PG/L	0.010	ND	ND	ND	ND
1,2,3,4,7,8,9-hepta CDF	500	PG/L	0.010	ND	ND	ND	ND
octa CDF	1000	PG/L	0.001	ND	ND	ND	ND

Above are permit required CDD/CDF isomers.
ND= not detected, NA= not analyzed, NS= not sampled

SOUTH BAY WATER RECLAMATION PLANT
ANNUAL SEWAGE
Dioxin and Furan Analysis
From 01-JAN-2008 To 31-DEC-2008

Analyte	MDL	Units	Equiv	INF TCCD JAN P412336	INF TCCD FEB P414553	INF TCCD MAR P419823	INF TCCD APR P421614
2,3,7,8-tetra CDD	500	PG/L	1.000	ND	ND	ND	ND
1,2,3,7,8-penta CDD	500	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8_hexa_CDD	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDD	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDD	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDD	500	PG/L	0.010	ND	ND	ND	ND
octa CDD	1000	PG/L	0.001	ND	ND	ND	ND
2,3,7,8-tetra CDF	250	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8-penta CDF	500	PG/L	0.050	ND	ND	ND	ND
2,3,4,7,8-penta CDF	500	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDF	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDF	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDF	500	PG/L	0.100	ND	ND	ND	ND
2,3,4,6,7,8-hexa CDF	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDF	500	PG/L	0.010	ND	ND	ND	ND
1,2,3,4,7,8,9-hepta CDF	500	PG/L	0.010	ND	ND	ND	ND
octa CDF	1000	PG/L	0.001	ND	ND	ND	ND

Analyte	MDL	Units	Equiv	INF TCCD MAY P424842	INF TCCD JUN P429204	INF TCCD JUL P432070	INF TCCD AUG P435068
2,3,7,8-tetra CDD	500	PG/L	1.000	ND	ND	ND	ND
1,2,3,7,8-penta CDD	500	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8_hexa_CDD	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDD	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDD	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDD	500	PG/L	0.010	ND	ND	ND	ND
octa CDD	1000	PG/L	0.001	ND	ND	ND	ND
2,3,7,8-tetra CDF	250	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8-penta CDF	500	PG/L	0.050	ND	ND	ND	ND
2,3,4,7,8-penta CDF	500	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDF	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDF	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDF	500	PG/L	0.100	ND	ND	ND	ND
2,3,4,6,7,8-hexa CDF	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDF	500	PG/L	0.010	ND	ND	ND	ND
1,2,3,4,7,8,9-hepta CDF	500	PG/L	0.010	ND	ND	ND	ND
octa CDF	1000	PG/L	0.001	ND	ND	ND	ND

Analyte	MDL	Units	Equiv	INF TCCD SEP P440210	INF TCCD OCT P443470	INF TCCD NOV P449150	INF TCCD DEC P452127
2,3,7,8-tetra CDD	500	PG/L	1.000	ND	ND	ND	ND
1,2,3,7,8-penta CDD	500	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8_hexa_CDD	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDD	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDD	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDD	500	PG/L	0.010	ND	ND	ND	ND
octa CDD	1000	PG/L	0.001	ND	ND	ND	ND
2,3,7,8-tetra CDF	250	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8-penta CDF	500	PG/L	0.050	ND	ND	ND	ND
2,3,4,7,8-penta CDF	500	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDF	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDF	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDF	500	PG/L	0.100	ND	ND	ND	ND
2,3,4,6,7,8-hexa CDF	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDF	500	PG/L	0.010	ND	ND	ND	ND
1,2,3,4,7,8,9-hepta CDF	500	PG/L	0.010	ND	ND	ND	ND
octa CDF	1000	PG/L	0.001	ND	ND	ND	ND

Above are permit required CDD/CDF isomers.

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

SOUTH BAY WATER RECLAMATION PLANT
ANNUAL SEWAGE
Dioxin and Furan Analysis

From 01-JAN-2008 To 31-DEC-2008

Analyte	MDL	Units	Equiv	EFF TCCD JAN P412340	EFF TCCD FEB P414558	EFF TCCD MAR P419826	EFF TCCD APR P421618
2,3,7,8-tetra CDD	500	PG/L	1.000	ND	ND	ND	ND
1,2,3,7,8-penta CDD	500	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8_hexa_CDD	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDD	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDD	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDD	500	PG/L	0.010	ND	ND	ND	ND
octa CDD	1000	PG/L	0.001	ND	ND	ND	ND
2,3,7,8-tetra CDF	250	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8-penta CDF	500	PG/L	0.050	ND	ND	ND	ND
2,3,4,7,8-penta CDF	500	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDF	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDF	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDF	500	PG/L	0.100	ND	ND	ND	ND
2,3,4,6,7,8-hexa CDF	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDF	500	PG/L	0.010	ND	ND	ND	ND
1,2,3,4,7,8,9-hepta CDF	500	PG/L	0.010	ND	ND	ND	ND
octa CDF	1000	PG/L	0.001	ND	ND	ND	ND

Analyte	MDL	Units	Equiv	EFF TCCD MAY P424847	EFF TCCD JUN P429208	EFF TCCD JUL P432074	EFF TCCD AUG P435073
2,3,7,8-tetra CDD	500	PG/L	1.000	ND	ND	ND	ND
1,2,3,7,8-penta CDD	500	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8_hexa_CDD	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDD	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDD	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDD	500	PG/L	0.010	ND	ND	ND	ND
octa CDD	1000	PG/L	0.001	ND	ND	ND	ND
2,3,7,8-tetra CDF	250	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8-penta CDF	500	PG/L	0.050	ND	ND	ND	ND
2,3,4,7,8-penta CDF	500	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDF	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDF	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDF	500	PG/L	0.100	ND	ND	ND	ND
2,3,4,6,7,8-hexa CDF	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDF	500	PG/L	0.010	ND	ND	ND	ND
1,2,3,4,7,8,9-hepta CDF	500	PG/L	0.010	ND	ND	ND	ND
octa CDF	1000	PG/L	0.001	ND	ND	ND	ND

Analyte	MDL	Units	Equiv	EFF TCCD SEP P440214	EFF TCCD OCT P443475	EFF TCCD NOV P449153	EFF TCCD DEC P452131
2,3,7,8-tetra CDD	500	PG/L	1.000	ND	ND	ND	ND
1,2,3,7,8-penta CDD	500	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8_hexa_CDD	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDD	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDD	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDD	500	PG/L	0.010	ND	ND	ND	ND
octa CDD	1000	PG/L	0.001	ND	ND	ND	ND
2,3,7,8-tetra CDF	250	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8-penta CDF	500	PG/L	0.050	ND	ND	ND	ND
2,3,4,7,8-penta CDF	500	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDF	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDF	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDF	500	PG/L	0.100	ND	ND	ND	ND
2,3,4,6,7,8-hexa CDF	500	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDF	500	PG/L	0.010	ND	ND	ND	ND
1,2,3,4,7,8,9-hepta CDF	500	PG/L	0.010	ND	ND	ND	ND
octa CDF	1000	PG/L	0.001	ND	ND	ND	ND

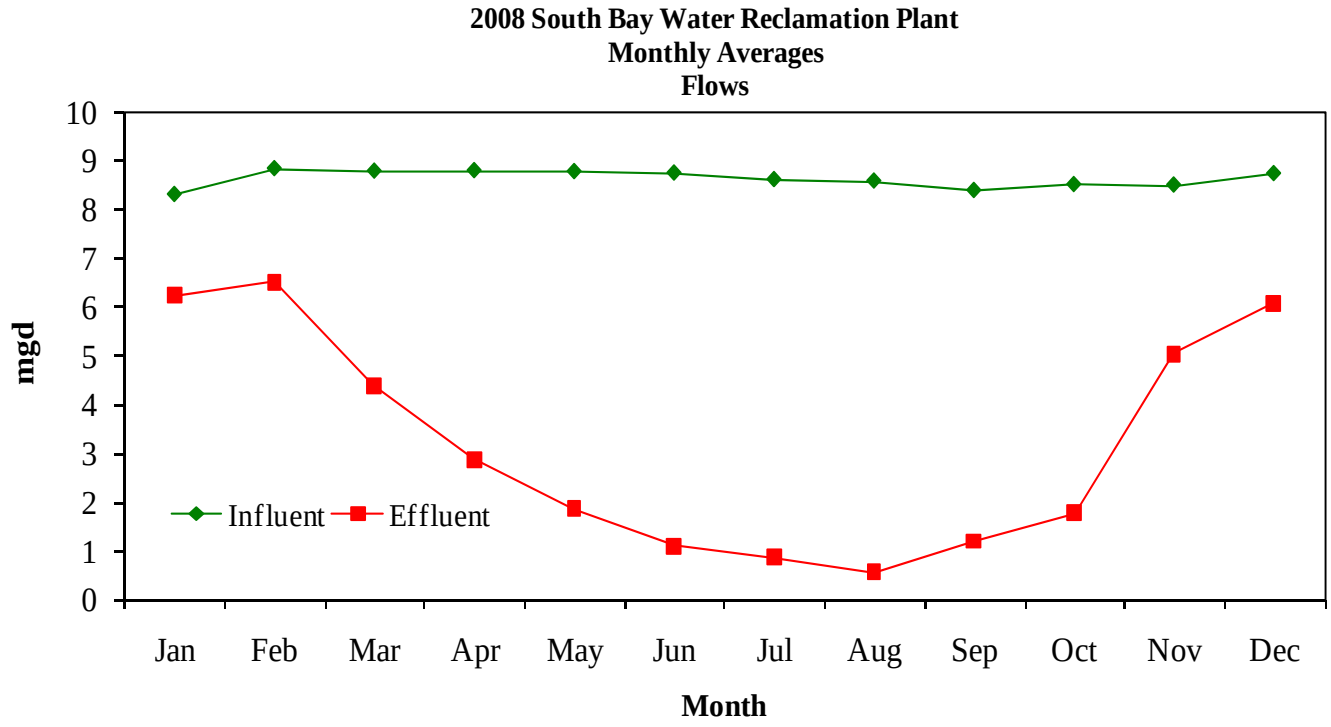
Above are permit required CDD/CDF isomers.

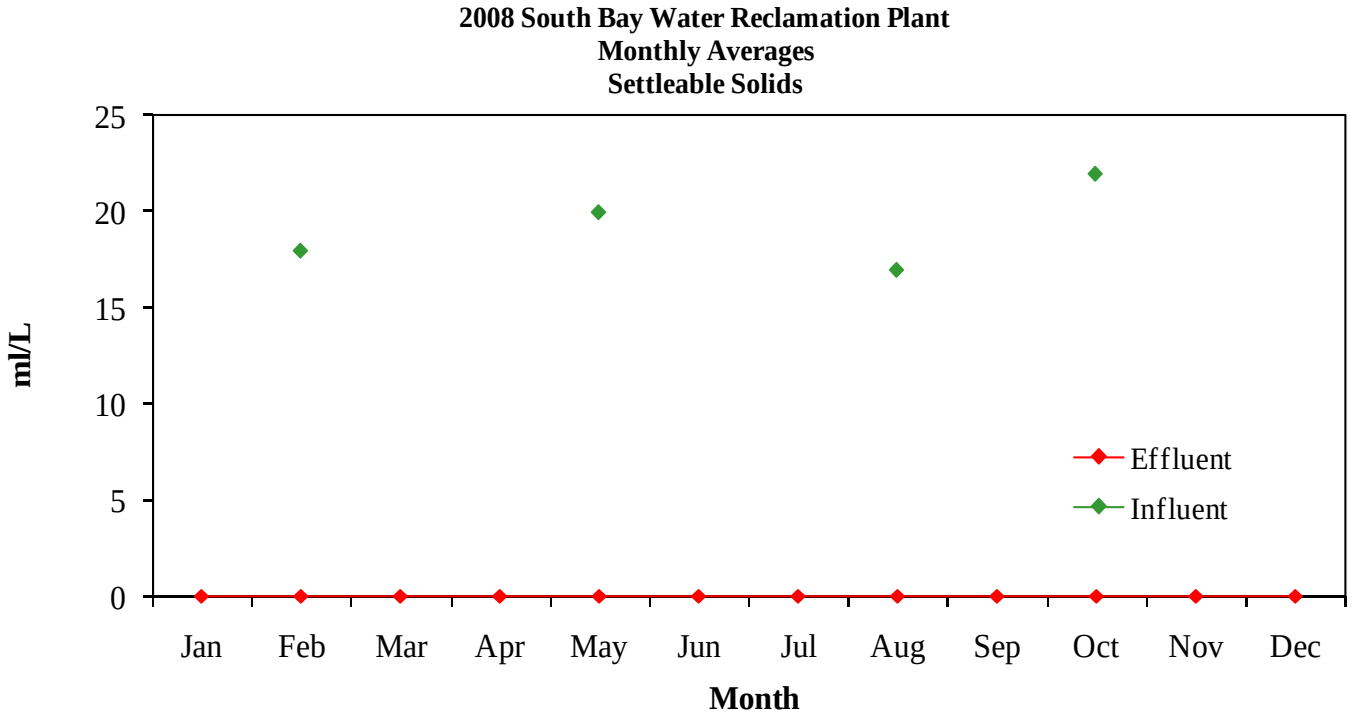
nd= not detected, NA= not analyzed, NS= not sampled

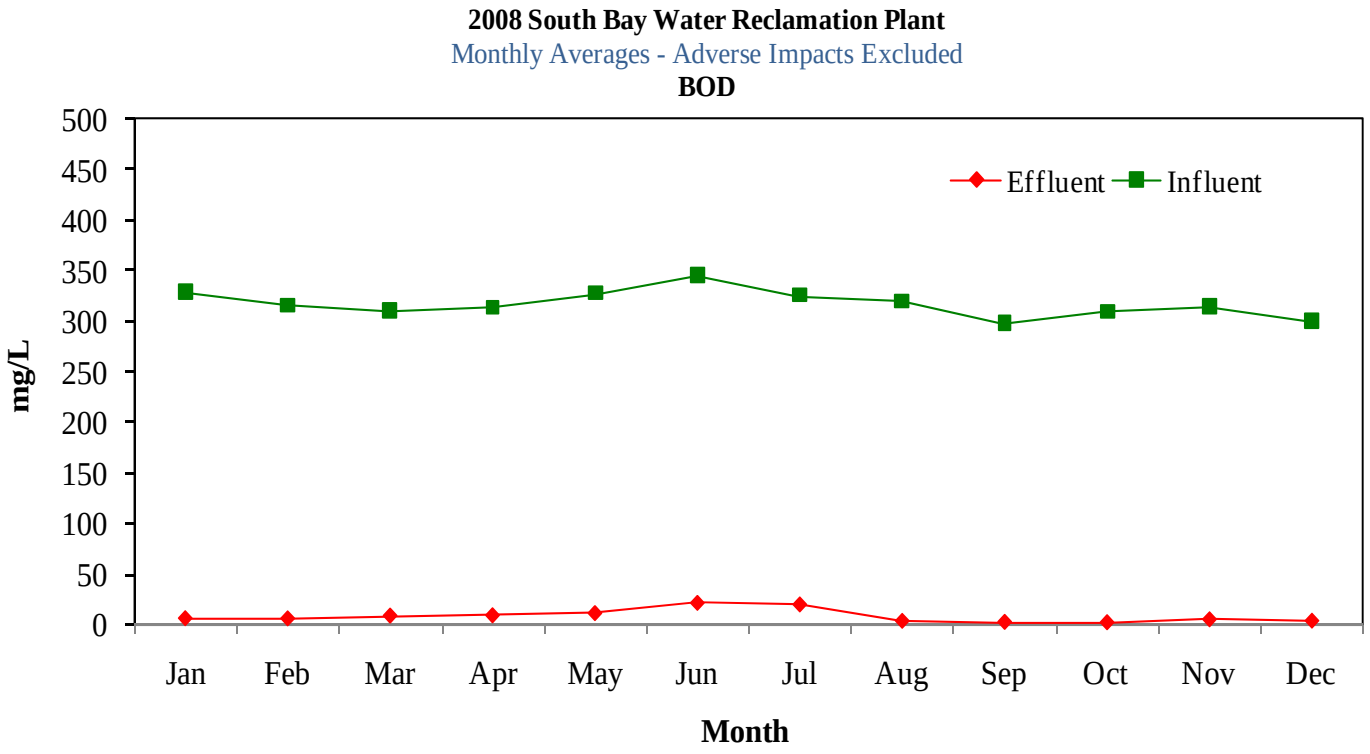
D. Influent and Effluent Graphs

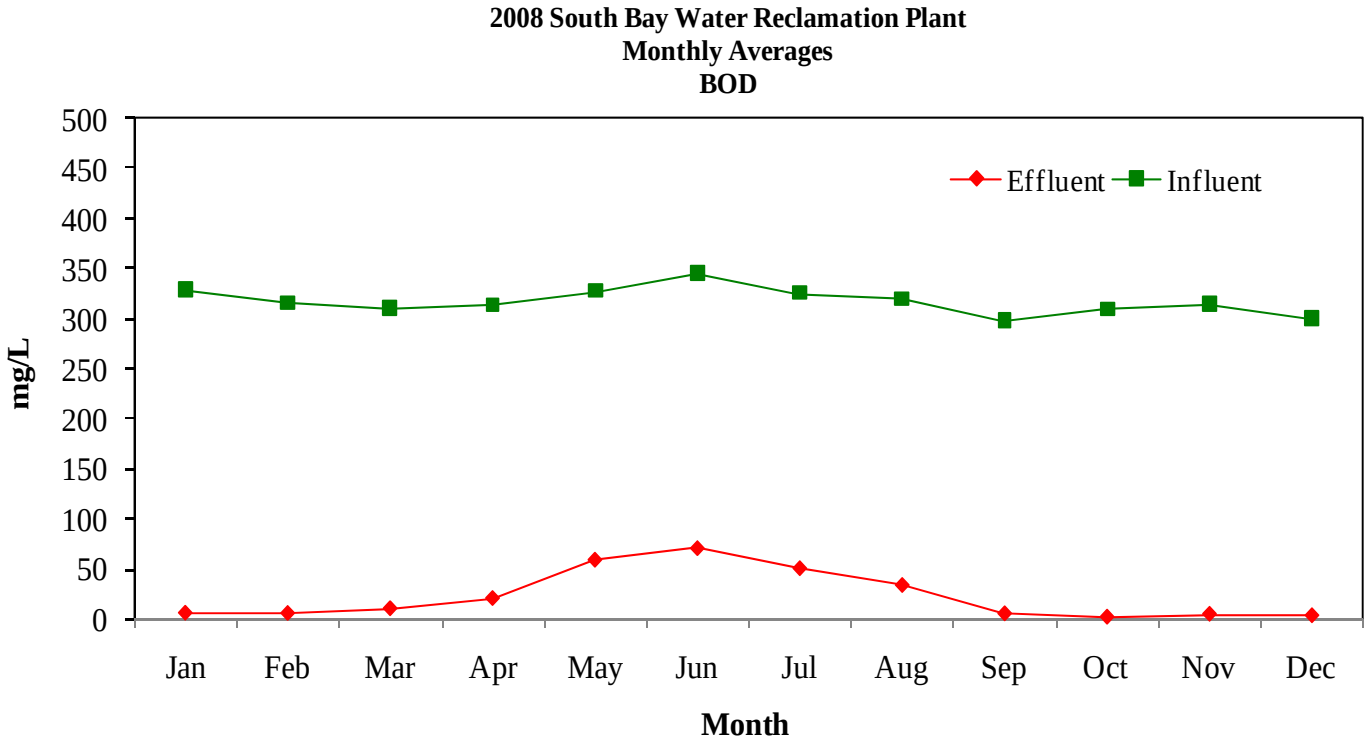
Graphs of monthly averages for permit parameters with measurable concentration averages.

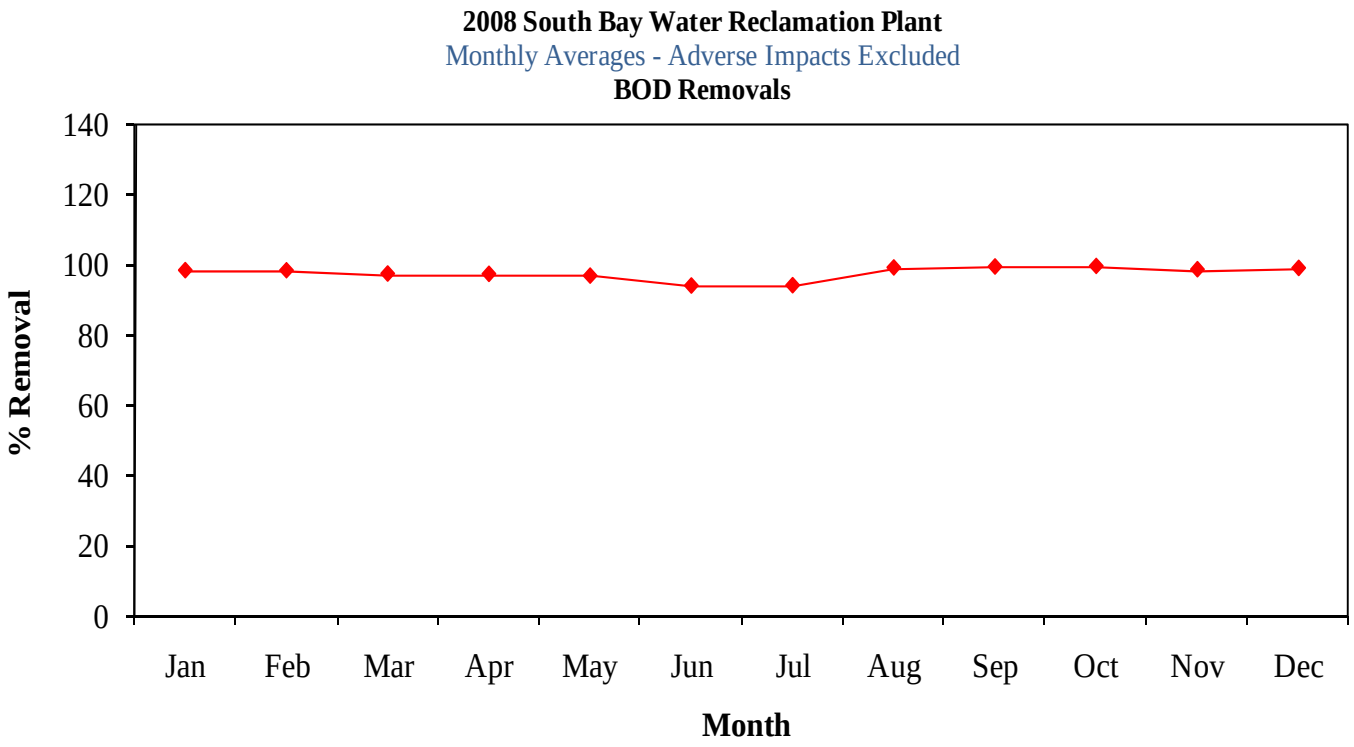
Where possible, the influent and effluent values of a given parameter have been included on the same graph so that removals and other relationships are readily apparent. Please note that many of the graphs are on expanded scales. That is, they normally don't go to zero concentrations but show, in magnified 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.

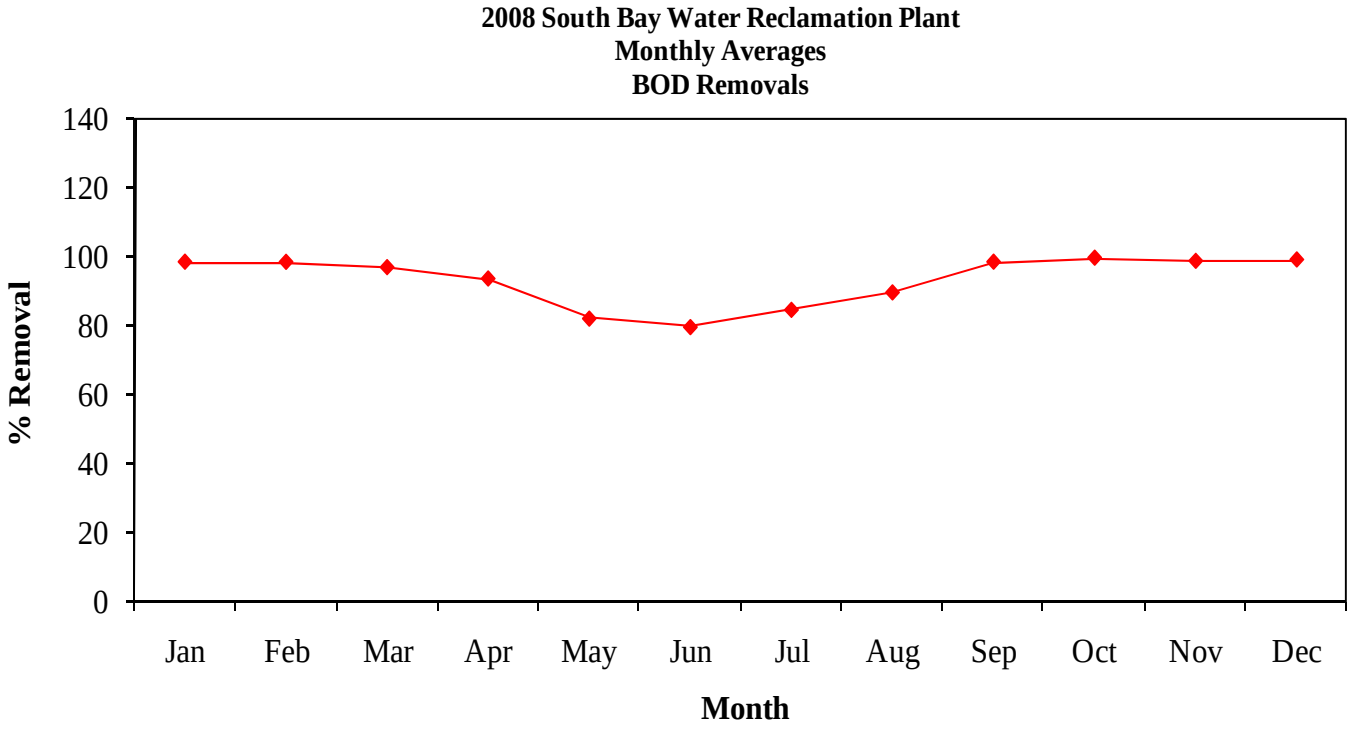

2008 South Bay Water Reclamation Plant
Monthly Averages
Flows
mgd
10
9
8
7
6
5
4
3
2
1
0
Influent
Effluent
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month

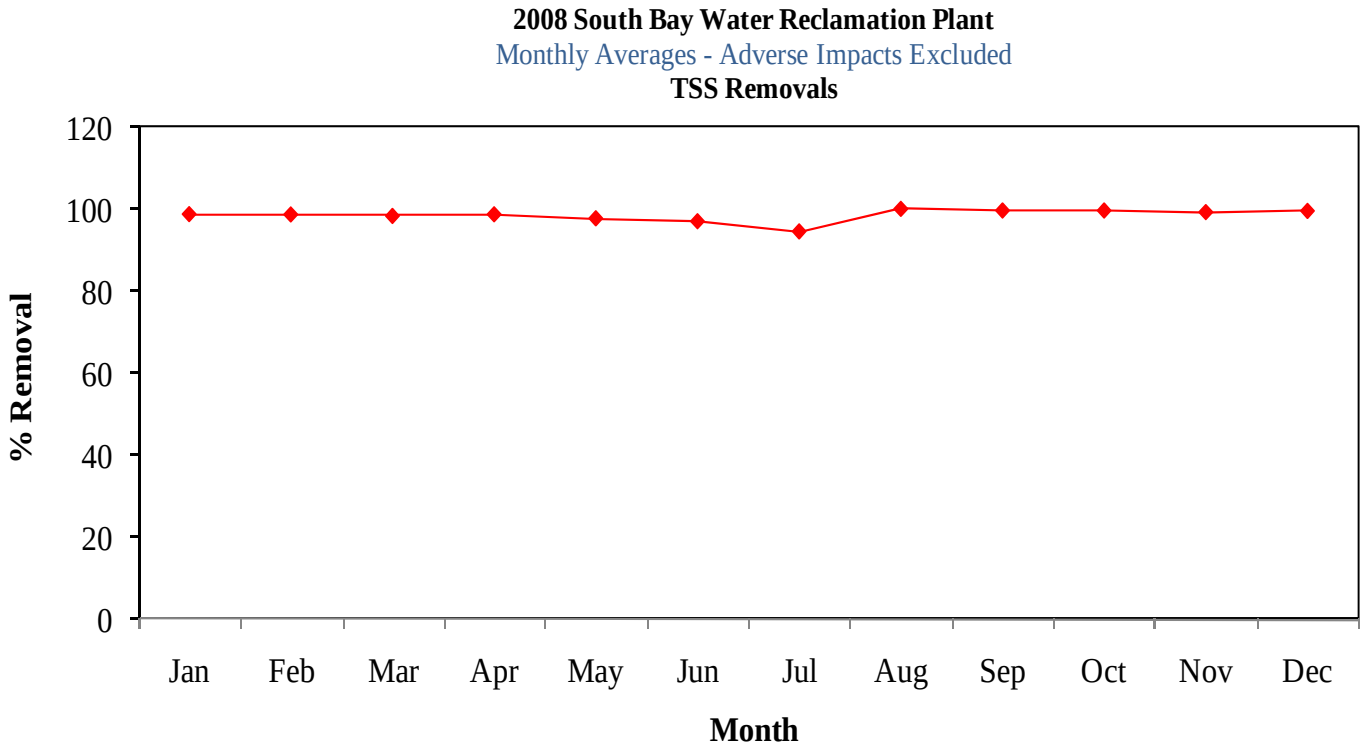

2008 South Bay Water Reclamation Plant
Monthly Averages
Settleable Solids
ml/L
25
20
15
10
5
0
Effluent
Influent
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month

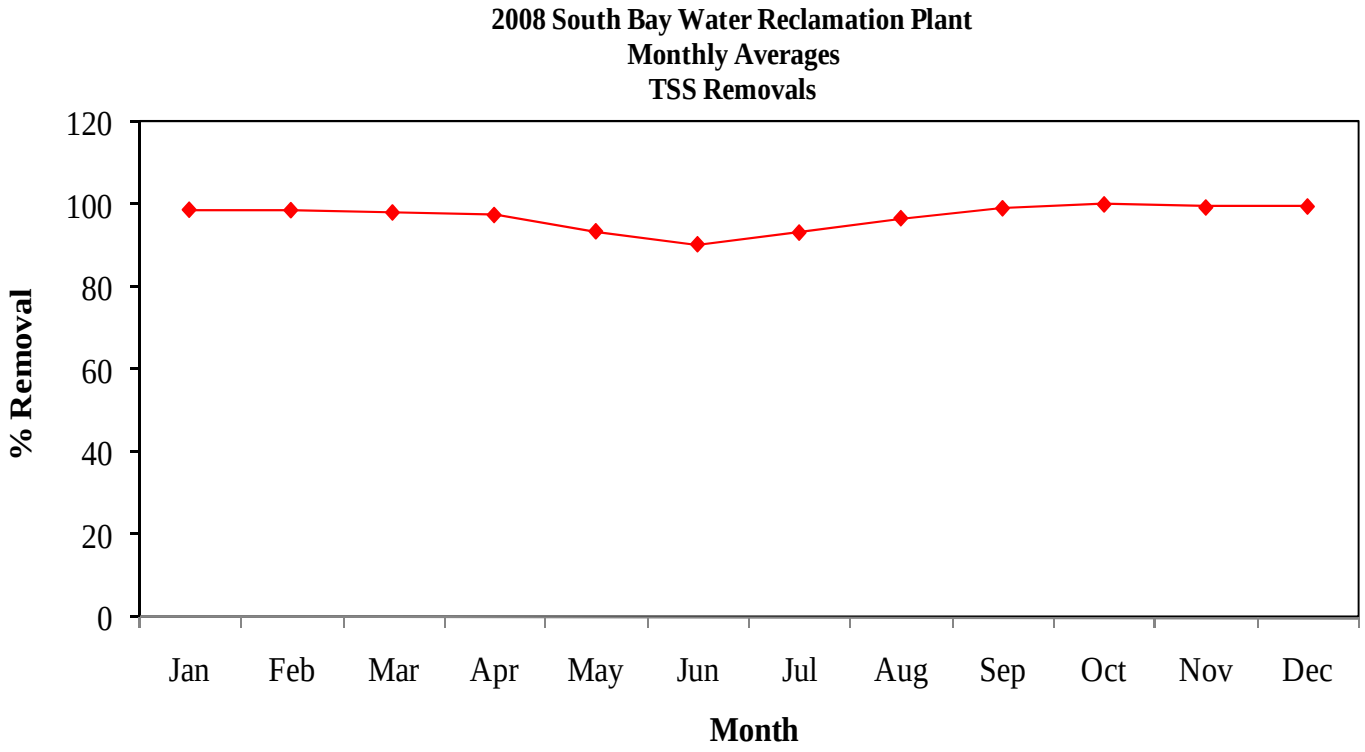

2008 South Bay Water Reclamation Plant
Monthly Averages - Adverse Impacts Excluded
BOD
500
450
400
350
300
250
200
150
100
50
0
mg/L
Effluent
Influent
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month


2008 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

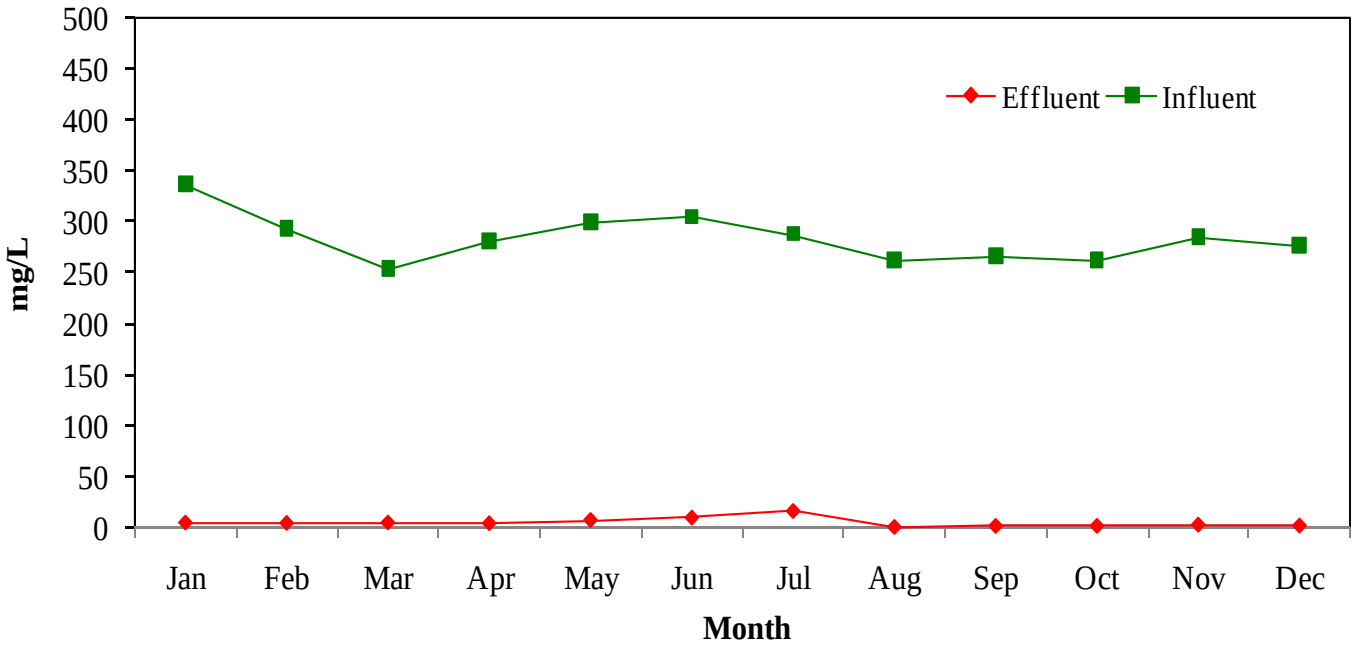

2008 South Bay Water Reclamation Plant
Monthly Averages - Adverse Impacts Excluded
BOD Removals
% Removal
140
120
100
80
60
40
20
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month


2008 South Bay Water Reclamation Plant
Monthly Averages
BOD Removals
% Removal
140
120
100
80
60
40
20
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month

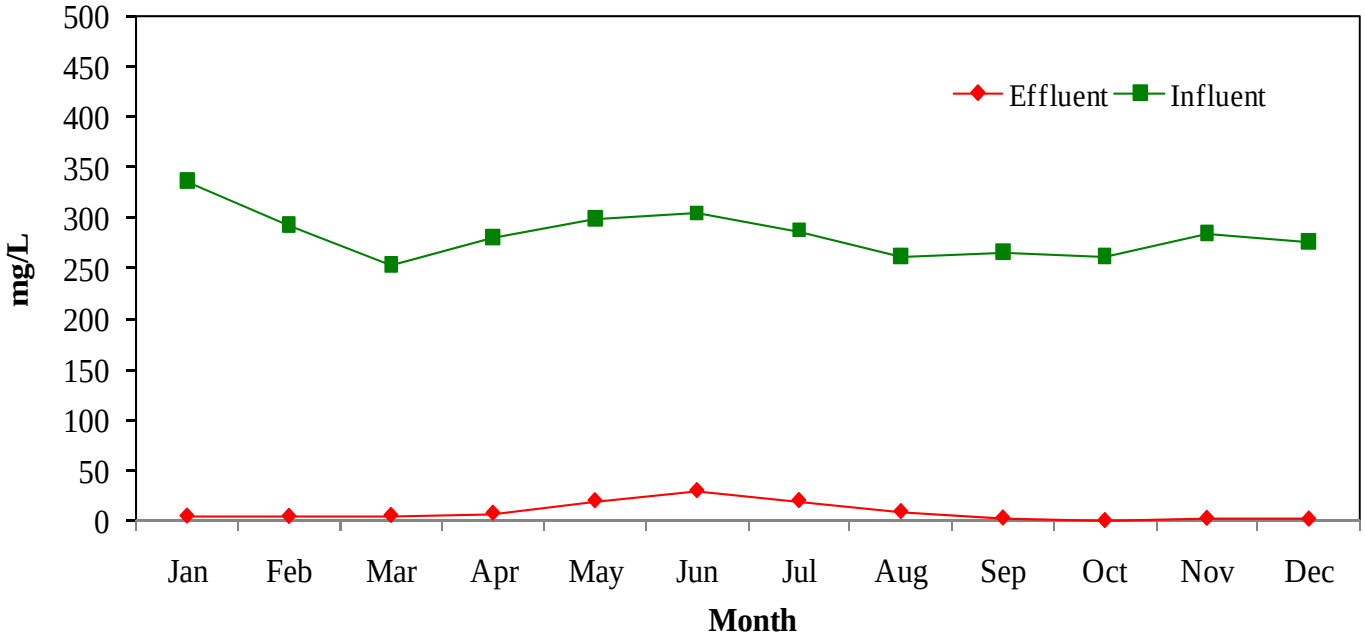

2008 South Bay Water Reclamation Plant
Monthly Averages - Adverse Impacts Excluded
TSS Removals
% Removal
120
100
80
60
40
20
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month


2008 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

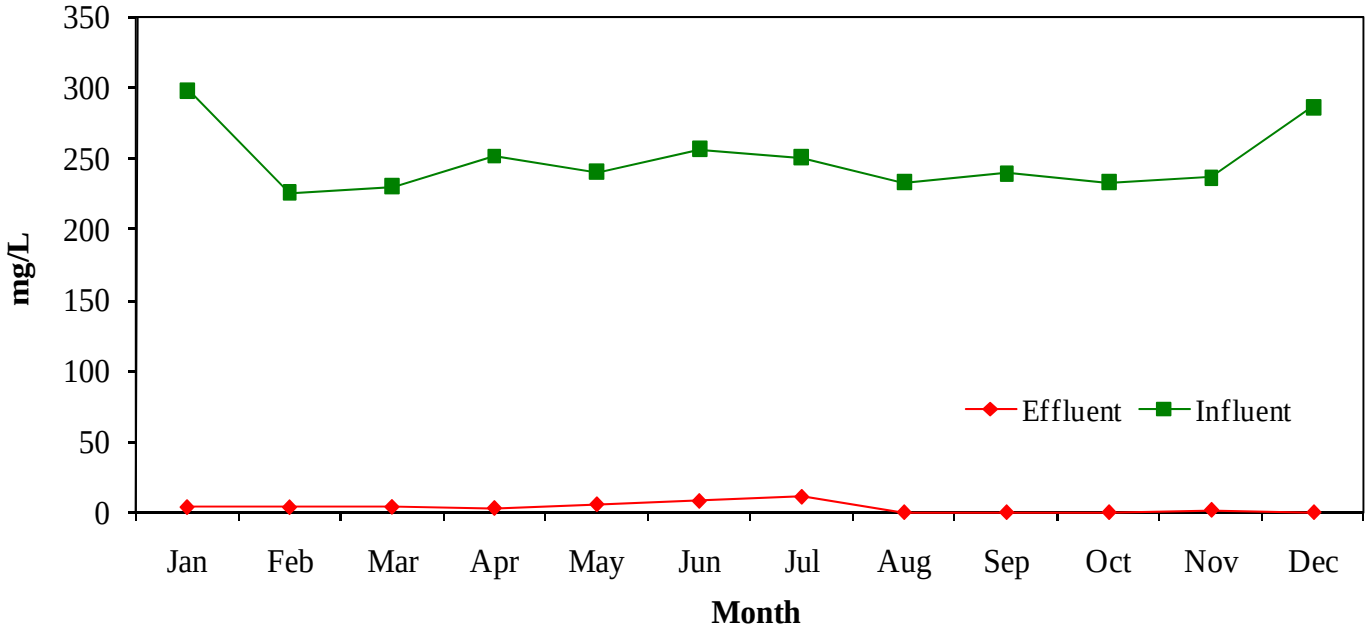
2008 South Bay Water Reclamation Plant
Monthly Averages -Adverse Impacts Excluded
TSS



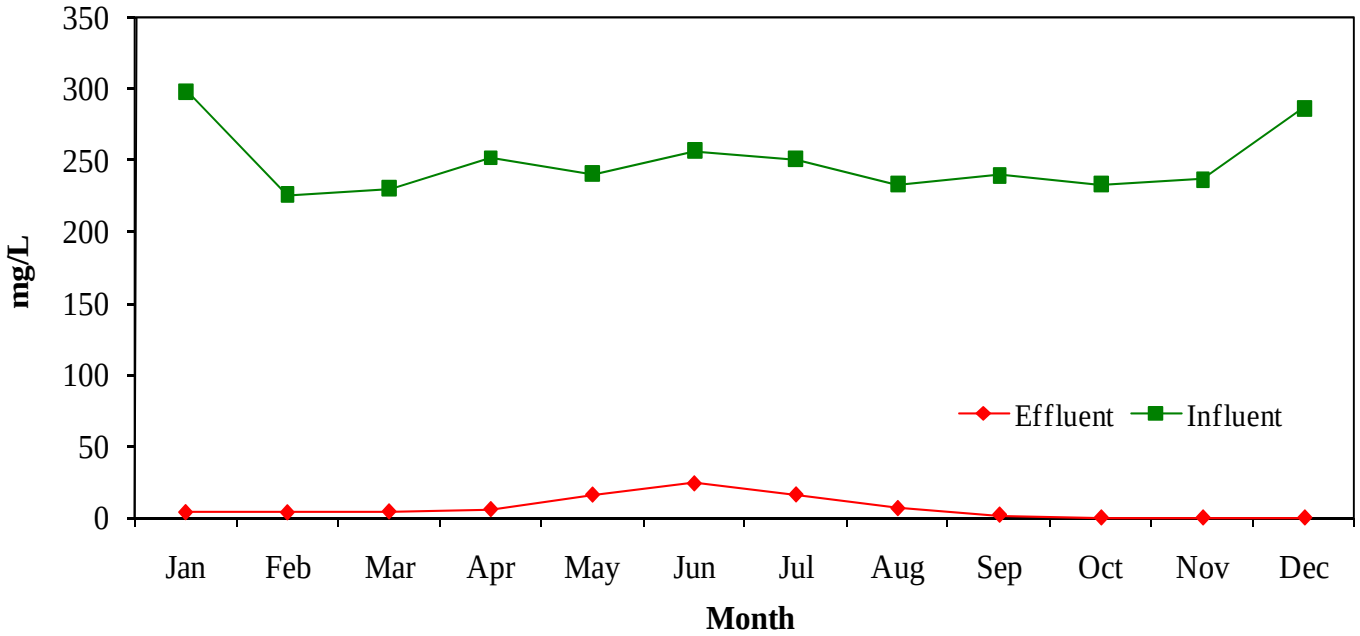
2008 South Bay Water Reclamation Plant
Monthly Averages
TSS



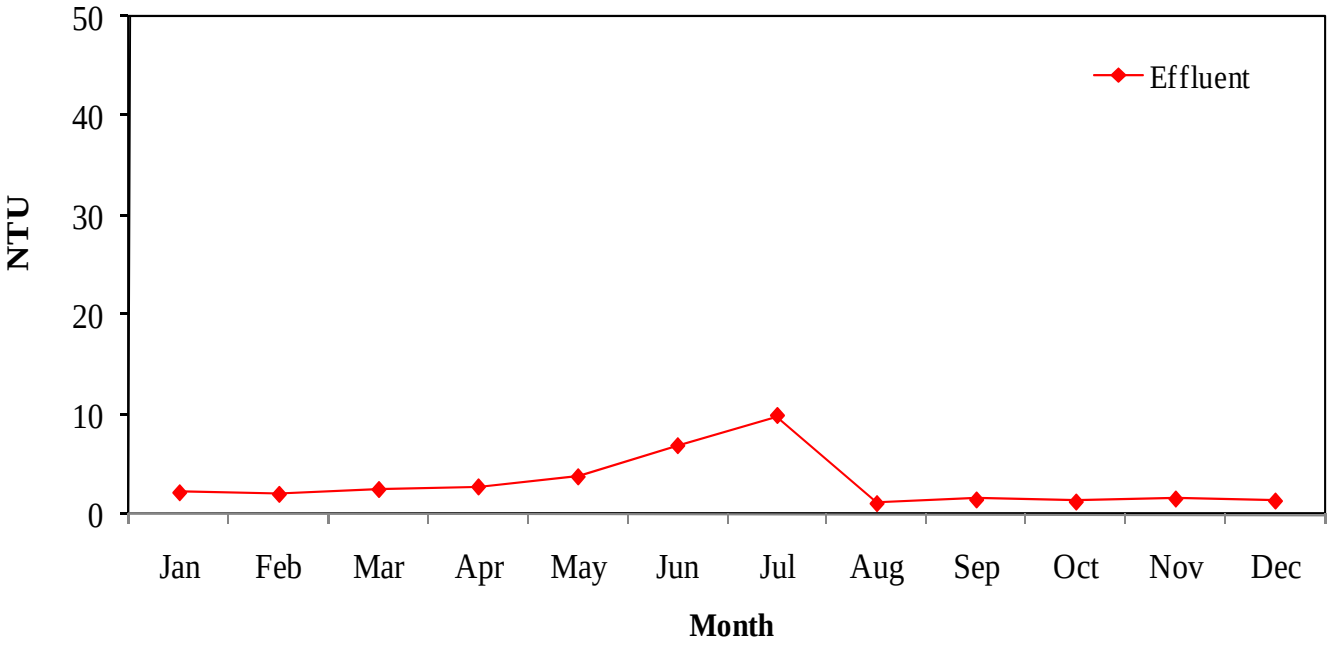
2008 South Bay Water Reclamation Plant
Monthly Averages - Adverse Impacts Excluded
VSS



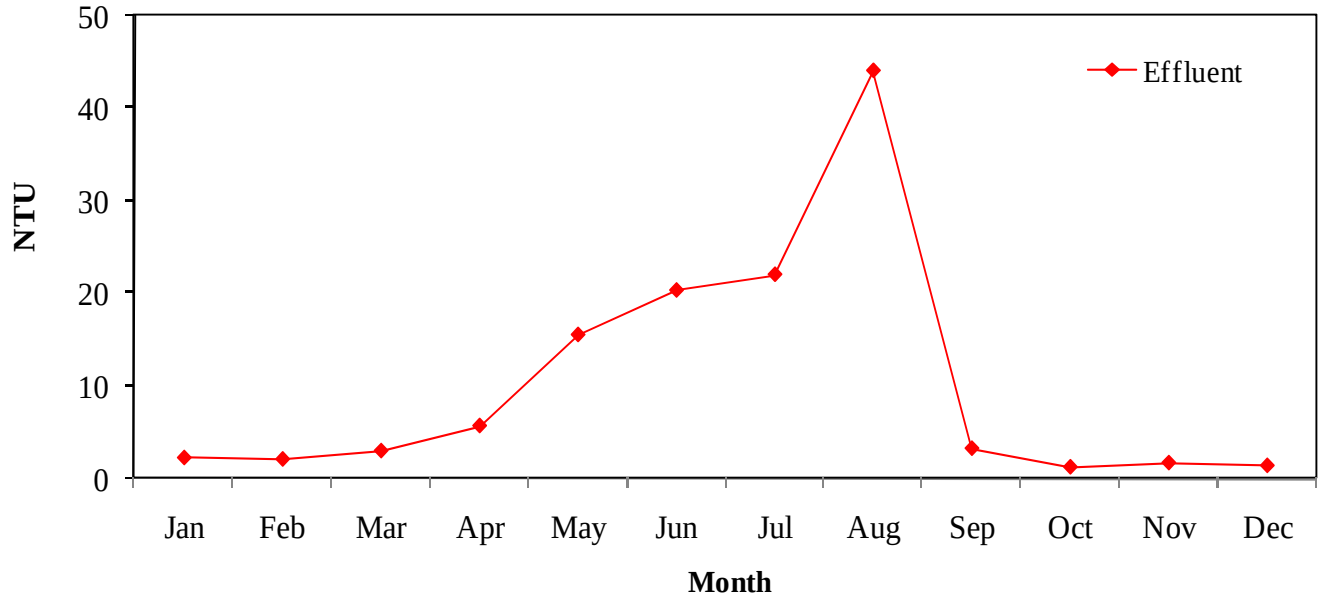
2008 South Bay Water Reclamation Plant
Monthly Averages
VSS



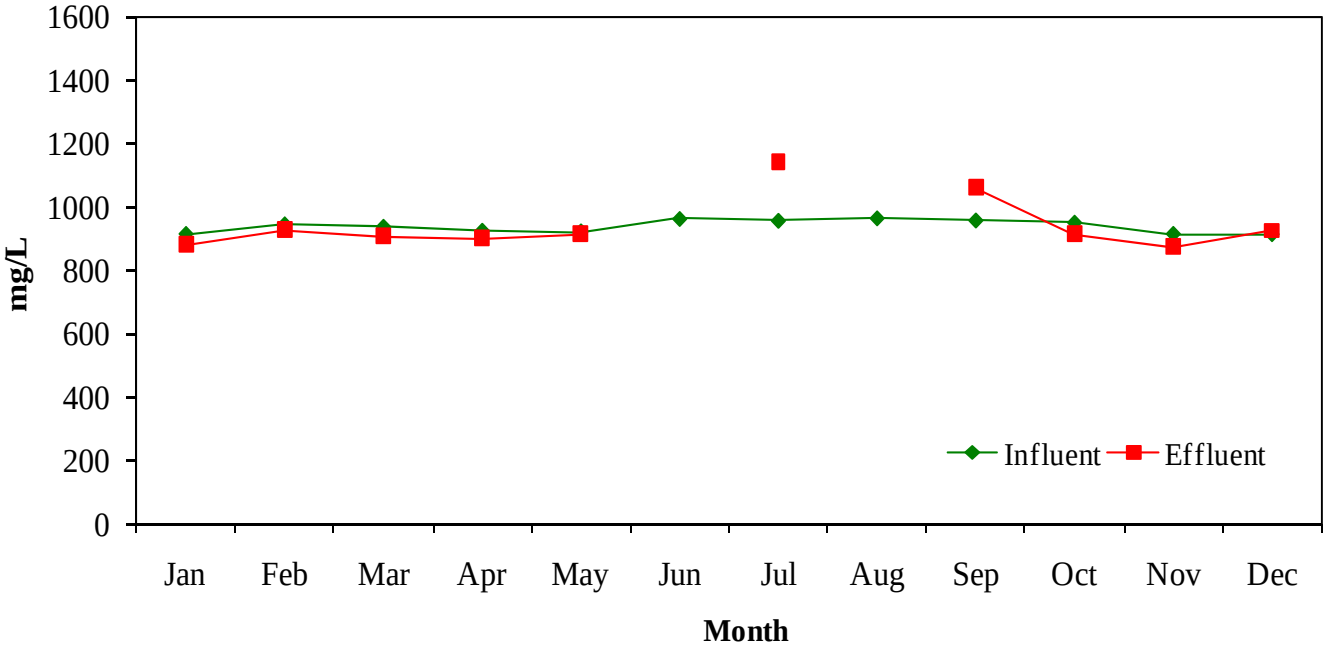
2008 South Bay Water Reclamation Plant
Monthly Averages - Adverse Impacts Excluded
Turbidity



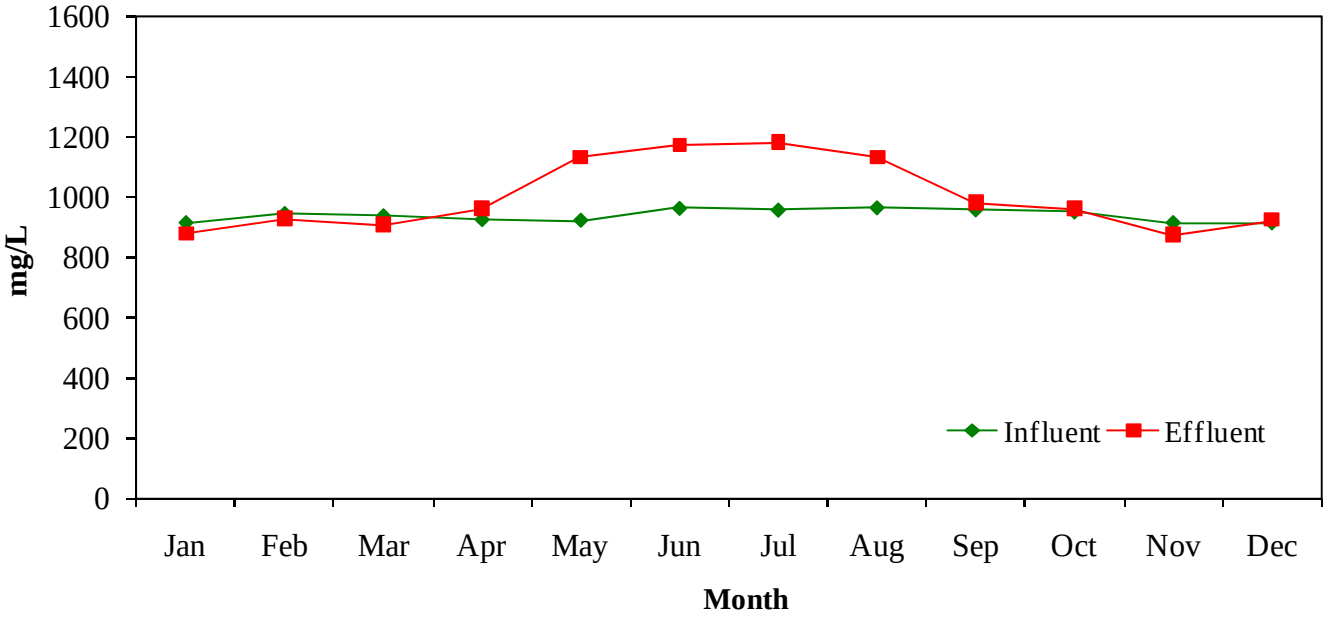
2008 South Bay Water Reclamation Plant
Monthly Averages
Turbidity

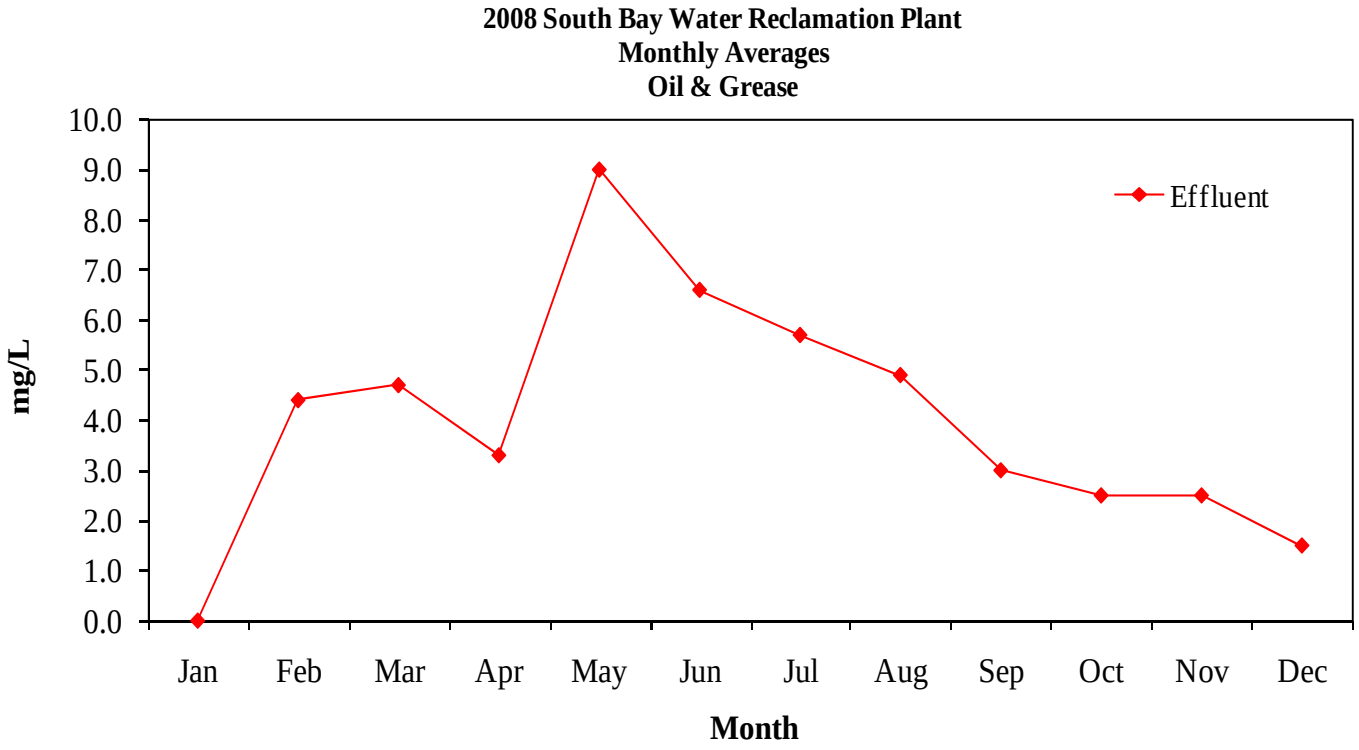


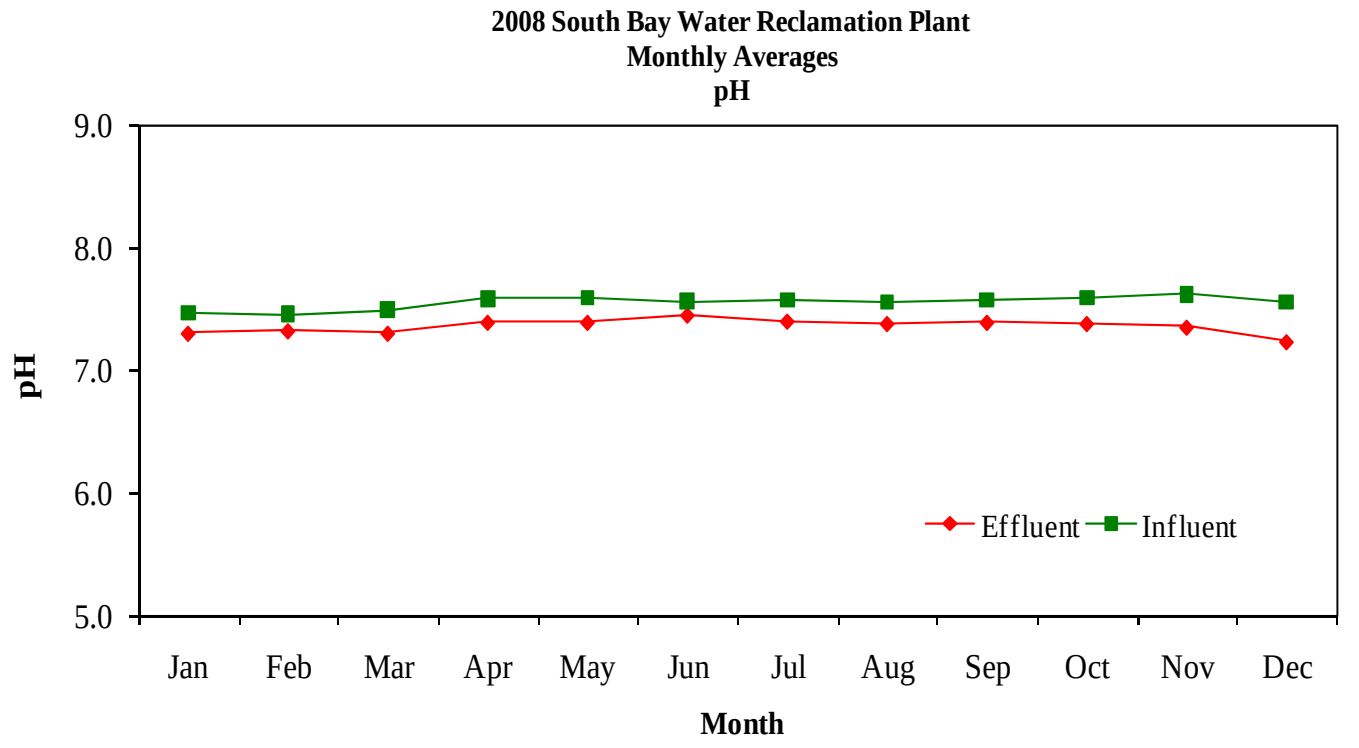
2008 South Bay Water Reclamation Plant
Monthly Averages - Adverse Impacts Excluded
Total Dissolved Solids

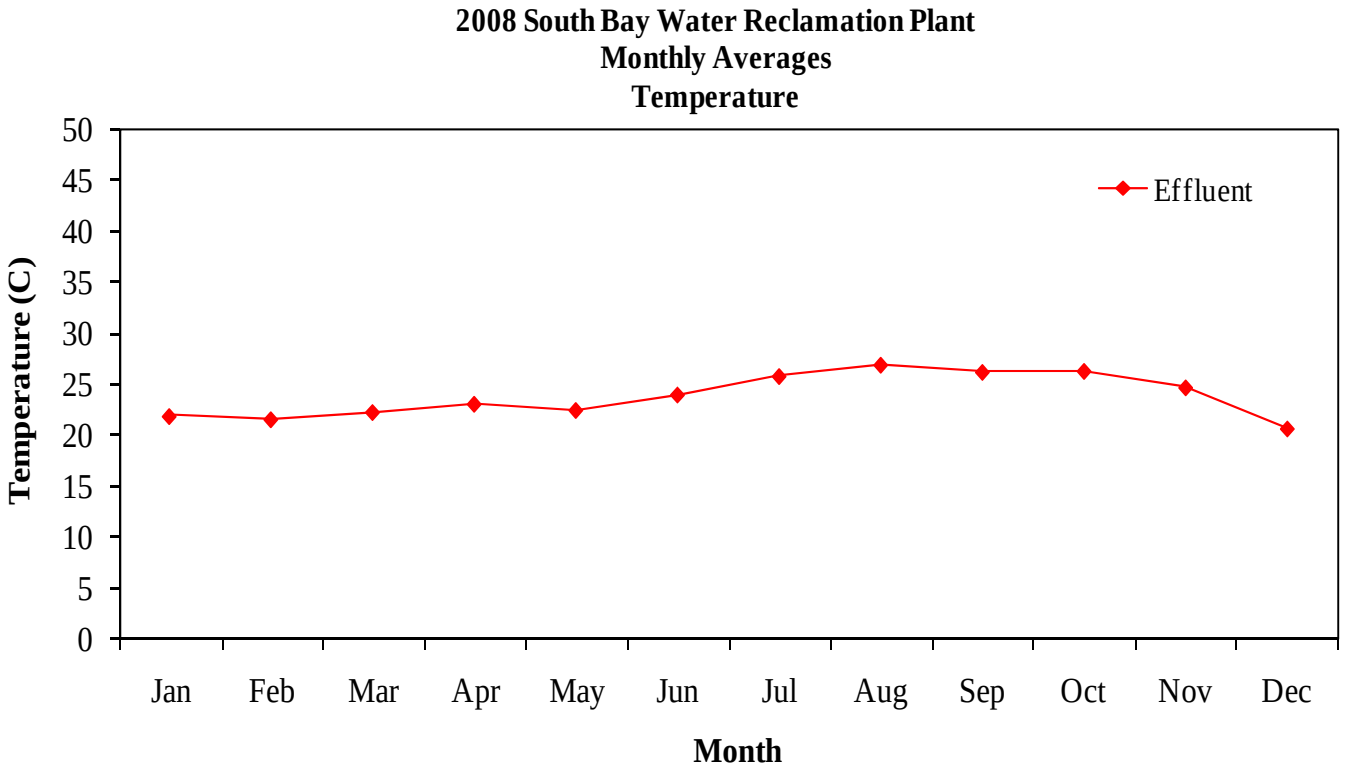


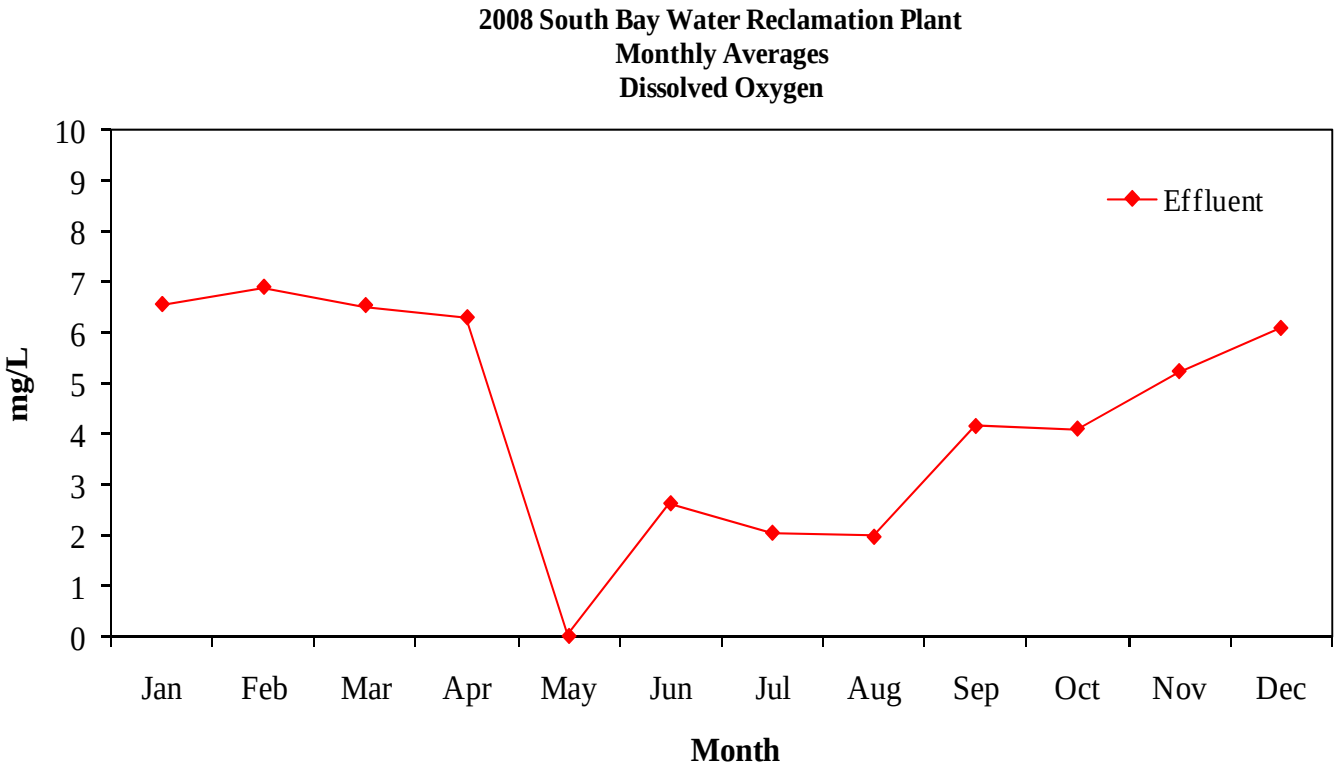
2008 South Bay Water Reclamation Plant
Monthly Averages
Total Dissolved Solids



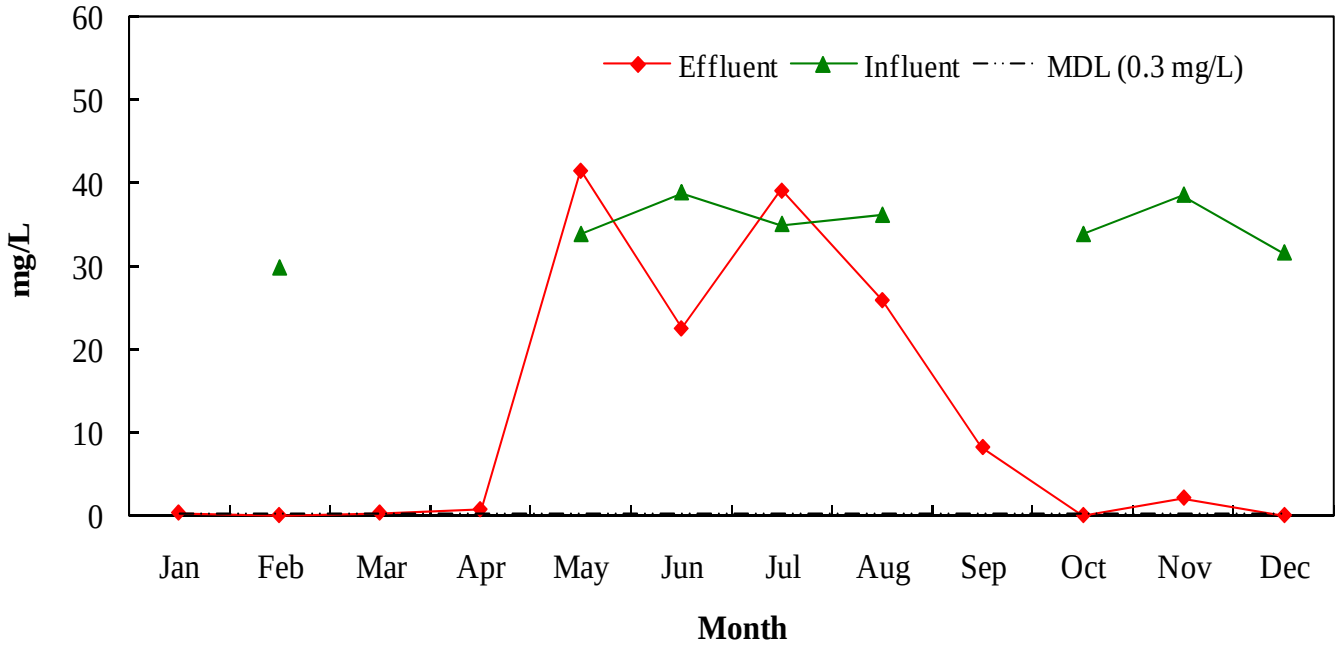

2008 South Bay Water Reclamation Plant
Monthly Averages
Oil & Grease
mg/L
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
Effluent
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month


2008 South Bay Water Reclamation Plant
Monthly Averages
pH
pH
9.0
8.0
7.0
6.0
5.0
Effluent
Influent
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month

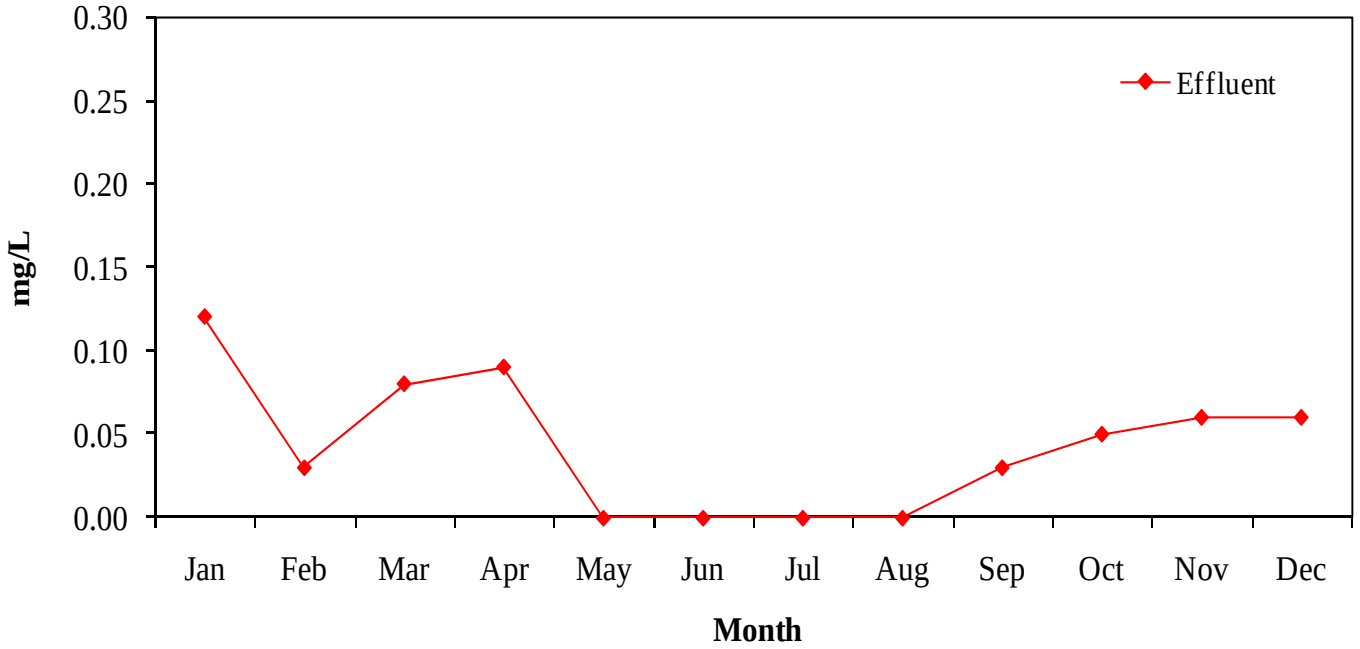

2008 South Bay Water Reclamation Plant
Monthly Averages
Temperature
Temperature (C)
50
45
40
35
30
25
20
15
10
5
0
Effluent
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month

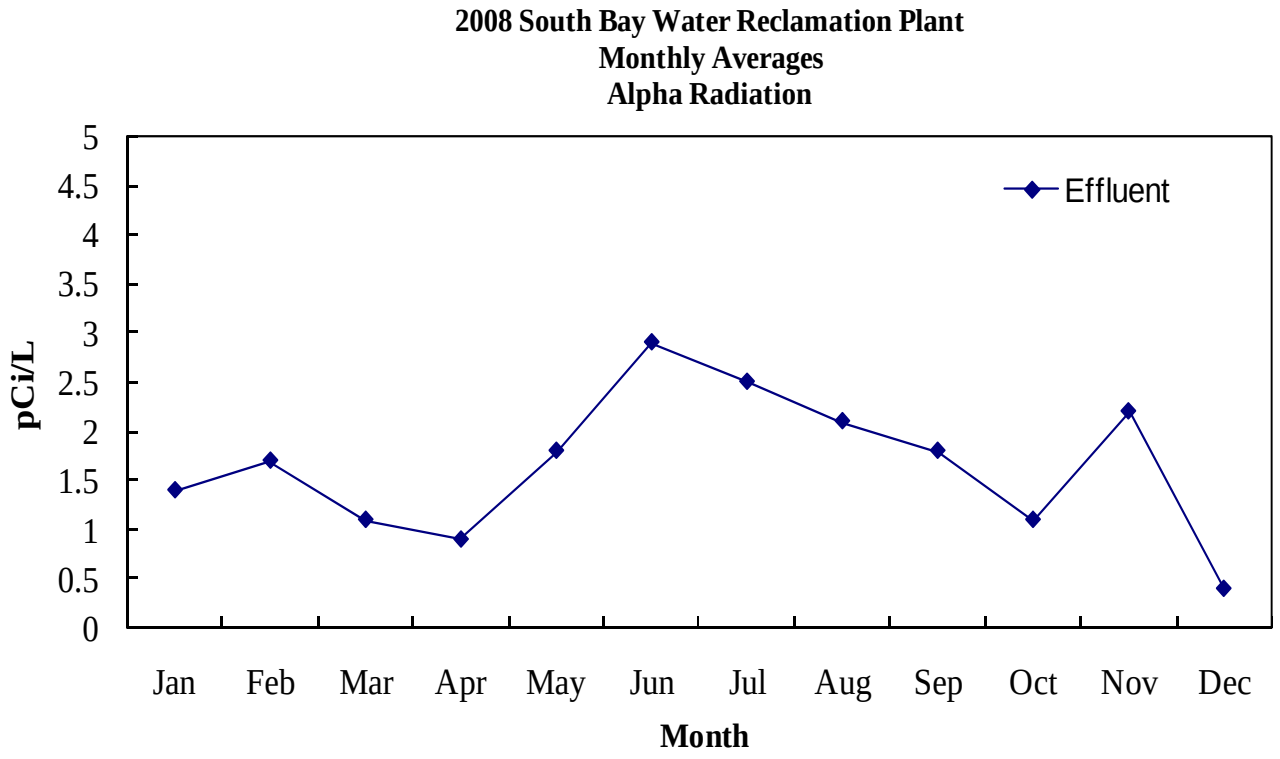

2008 South Bay Water Reclamation Plant
Monthly Averages
Dissolved Oxygen
mg/L
10
9
8
7
6
5
4
3
2
1
0
Effluent
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month

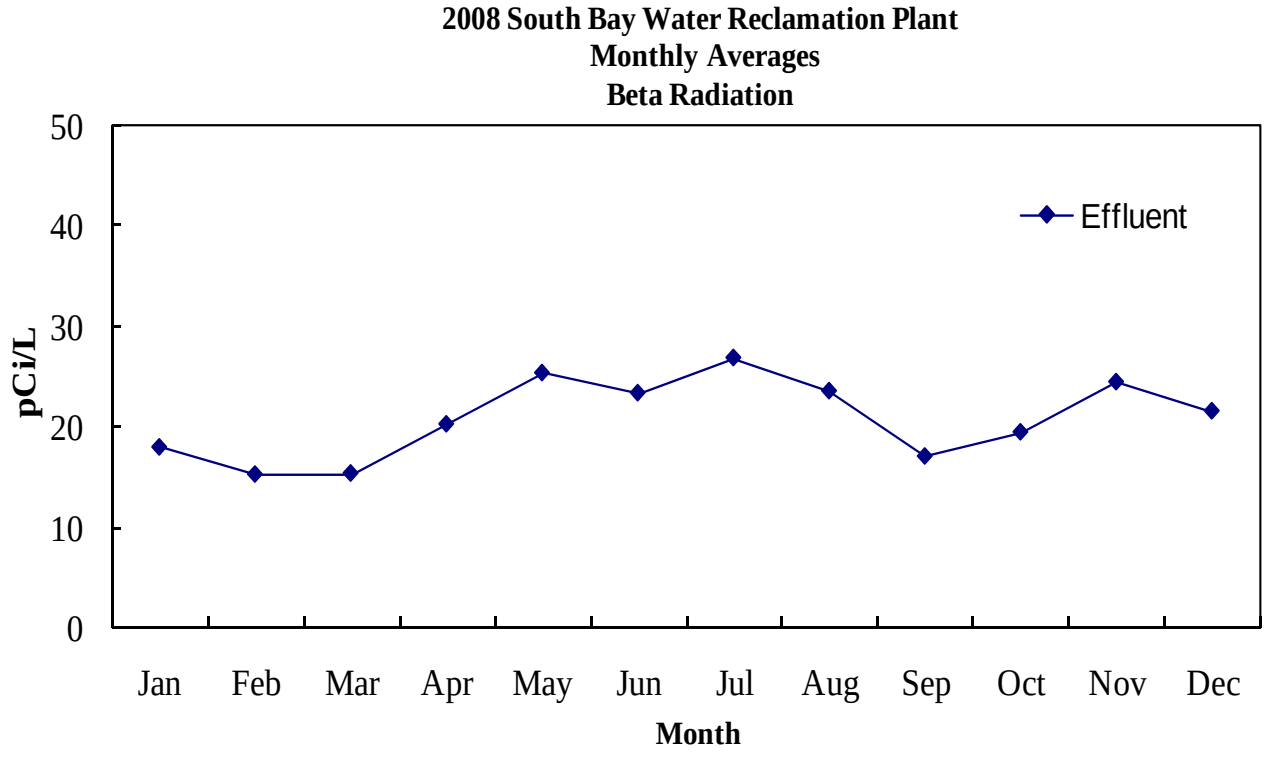
2008 South Bay Water Reclamation Plant
Monthly Averages
Ammonia-N



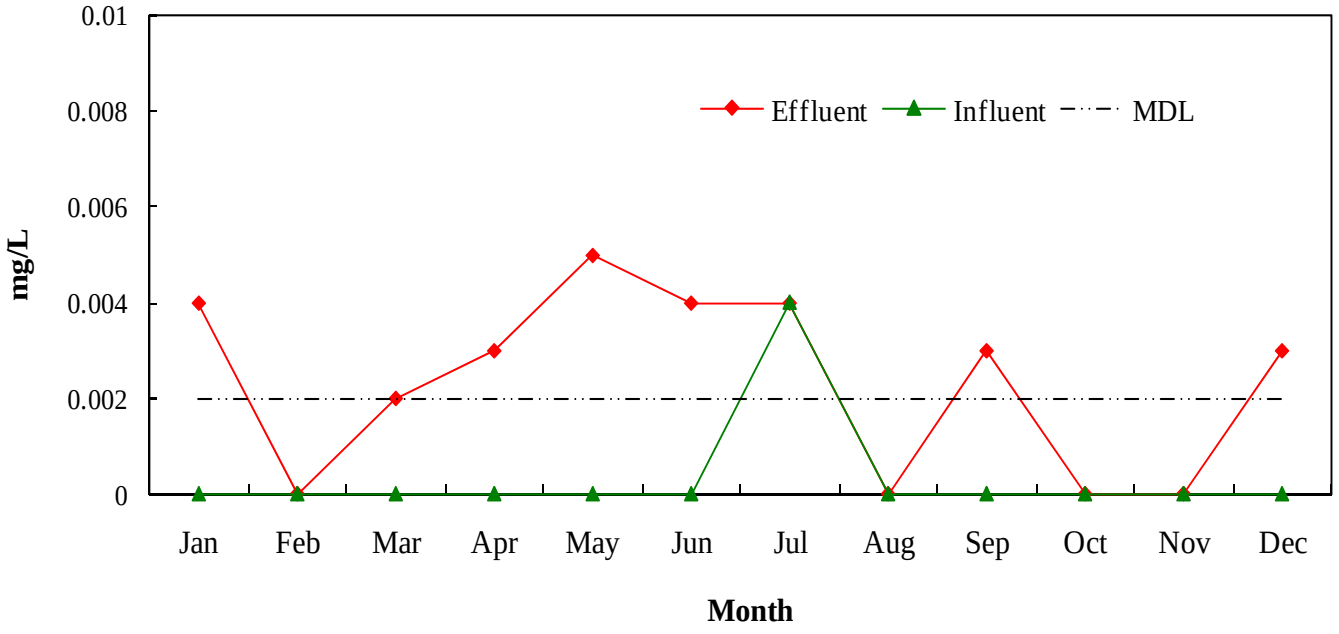
2008 South Bay Water Reclamation Plant
Monthly Averages
Residual Chlorine



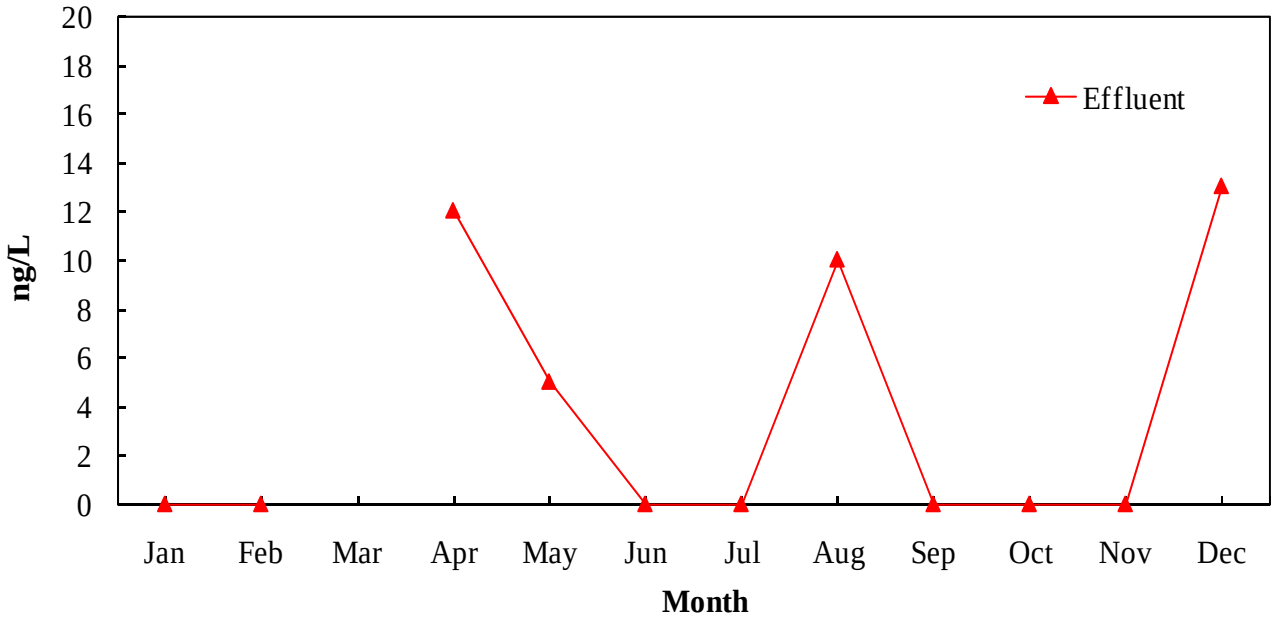

2008 South Bay Water Reclamation Plant
Monthly Averages
Alpha Radiation
pCi/L
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
Effluent
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month


2008 South Bay Water Reclamation Plant
Monthly Averages
Beta Radiation
pCi/L
50
40
30
20
10
0
Effluent
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month

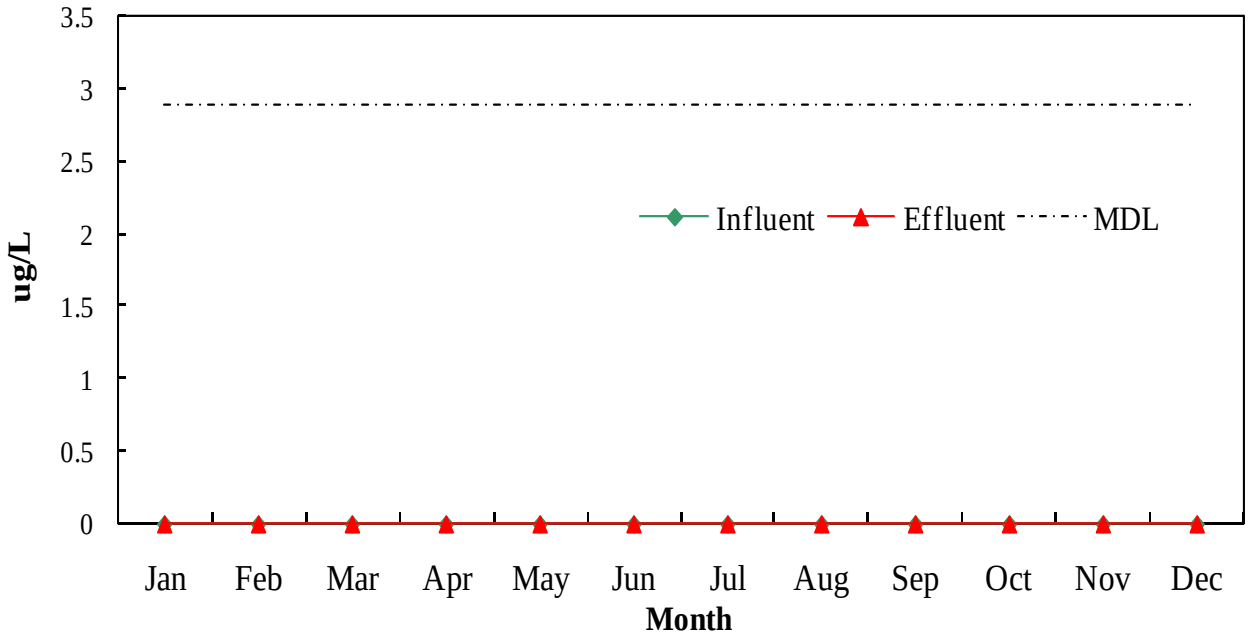
2008 South Bay Water Reclamation Plant
Monthly Averages
Total Cyanides



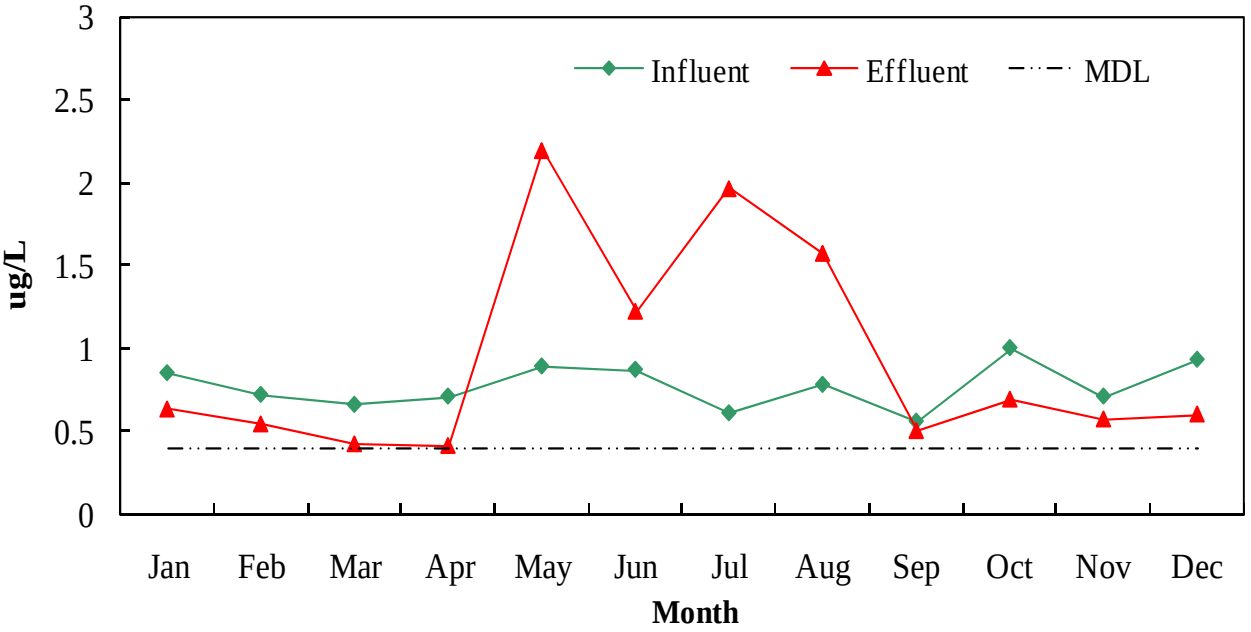
2008 South Bay Water Reclamation Plant
Monthly Averages
Total Chlorinated Hydrocarbons



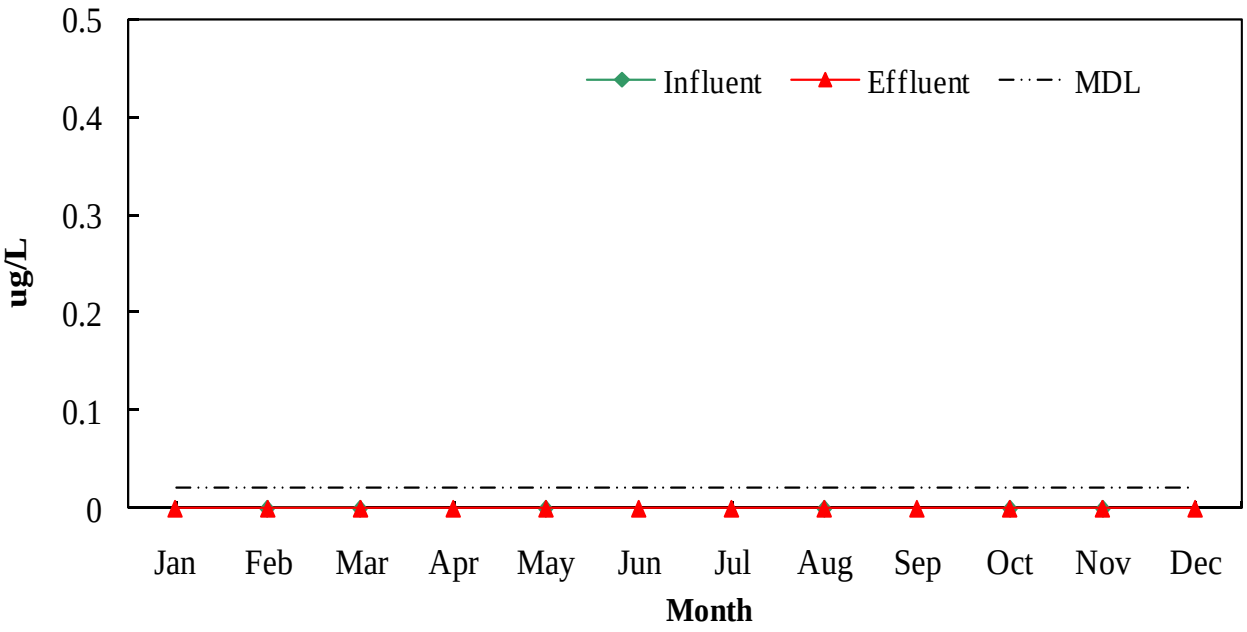
2008 South Bay Water Reclamation Plant
Monthly Averages
Antimony



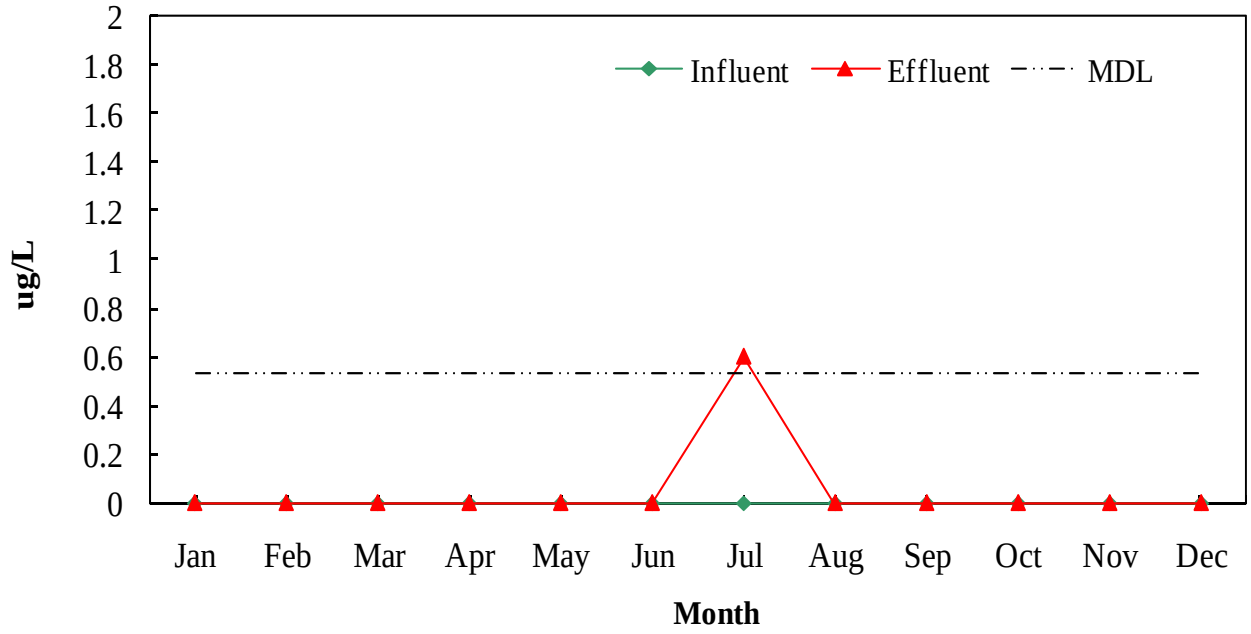
2008 South Bay Water Reclamation Plant
Monthly Averages
Arsenic

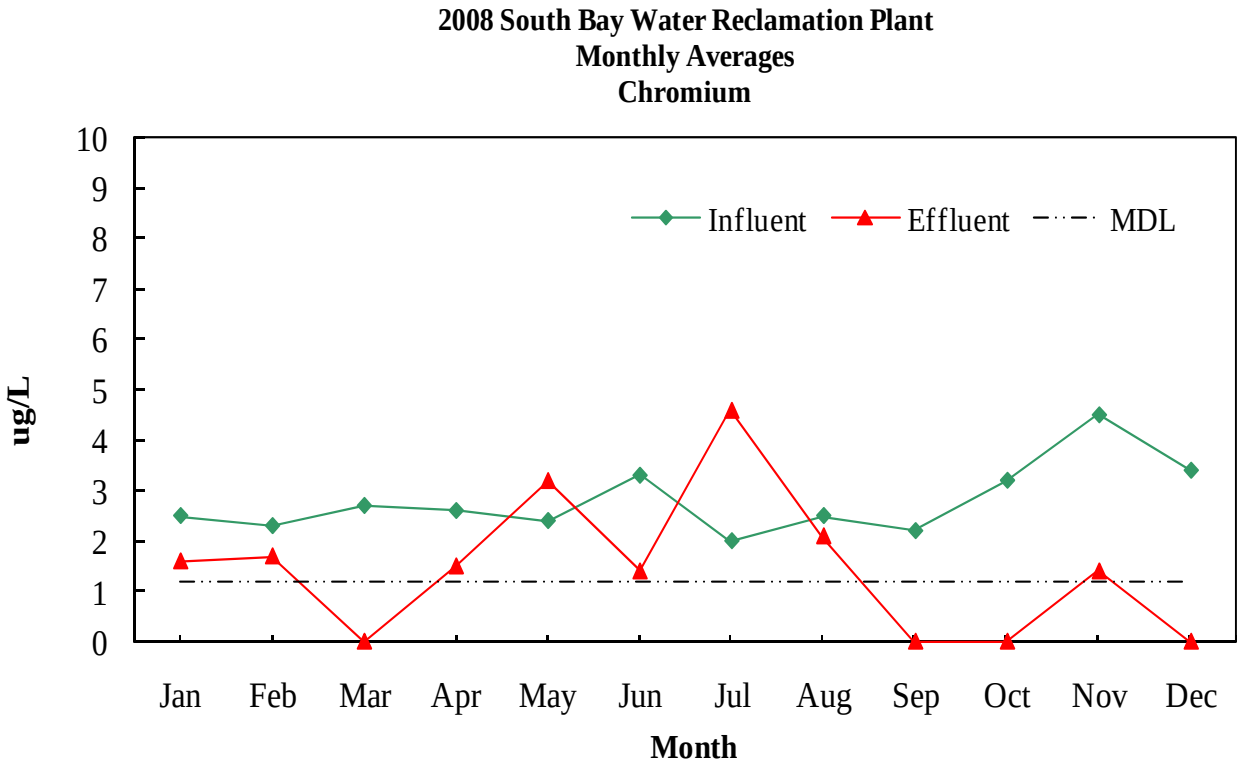


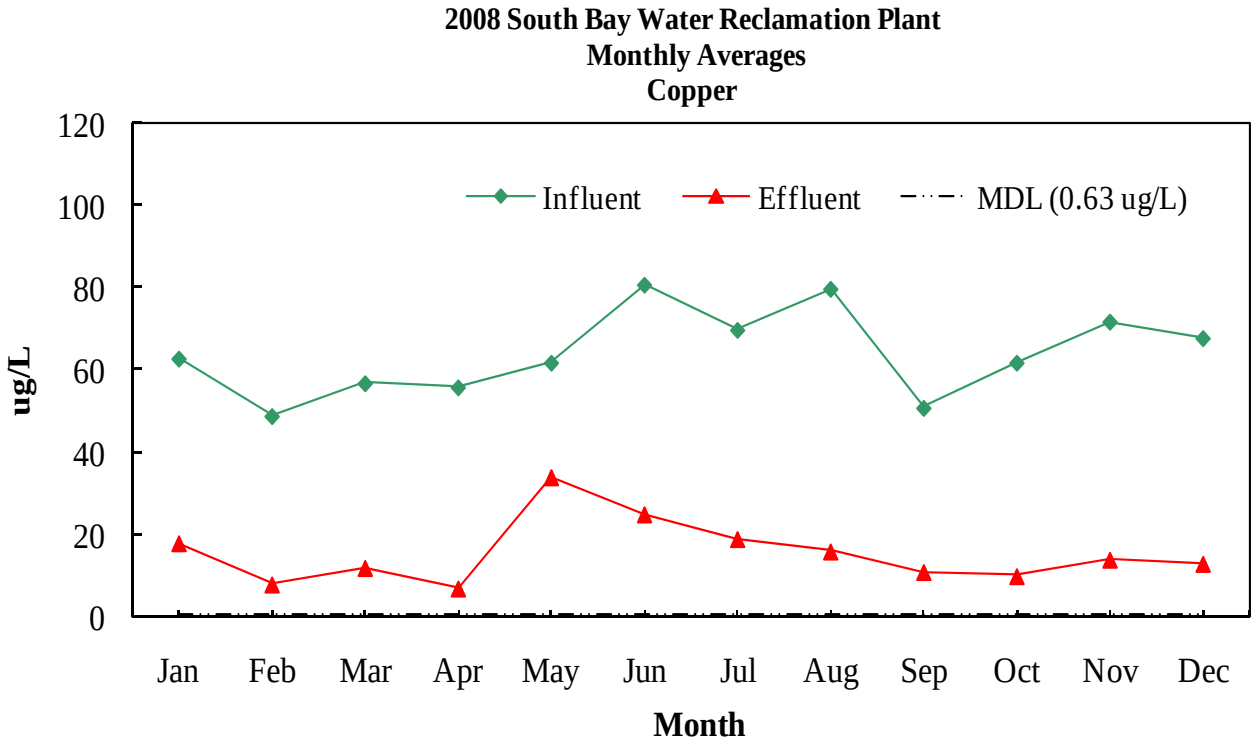
2008 South Bay Water Reclamation Plant
Monthly Averages
Beryllium



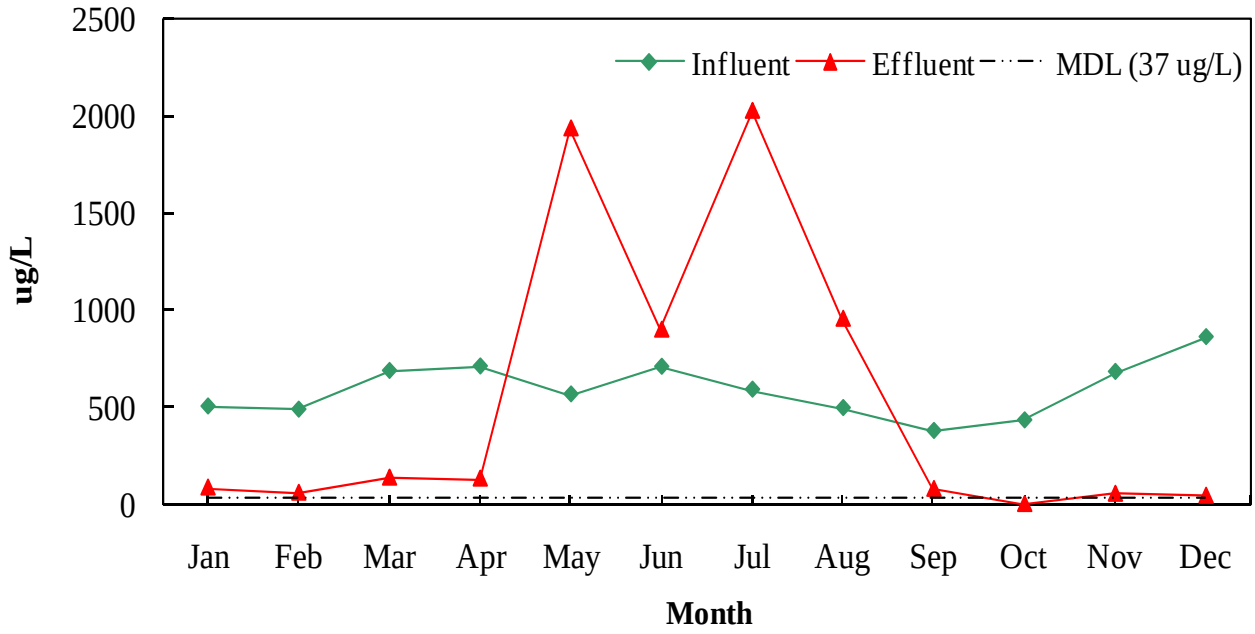
2008 South Bay Water Reclamation Plant
Monthly Averages
Cadmium



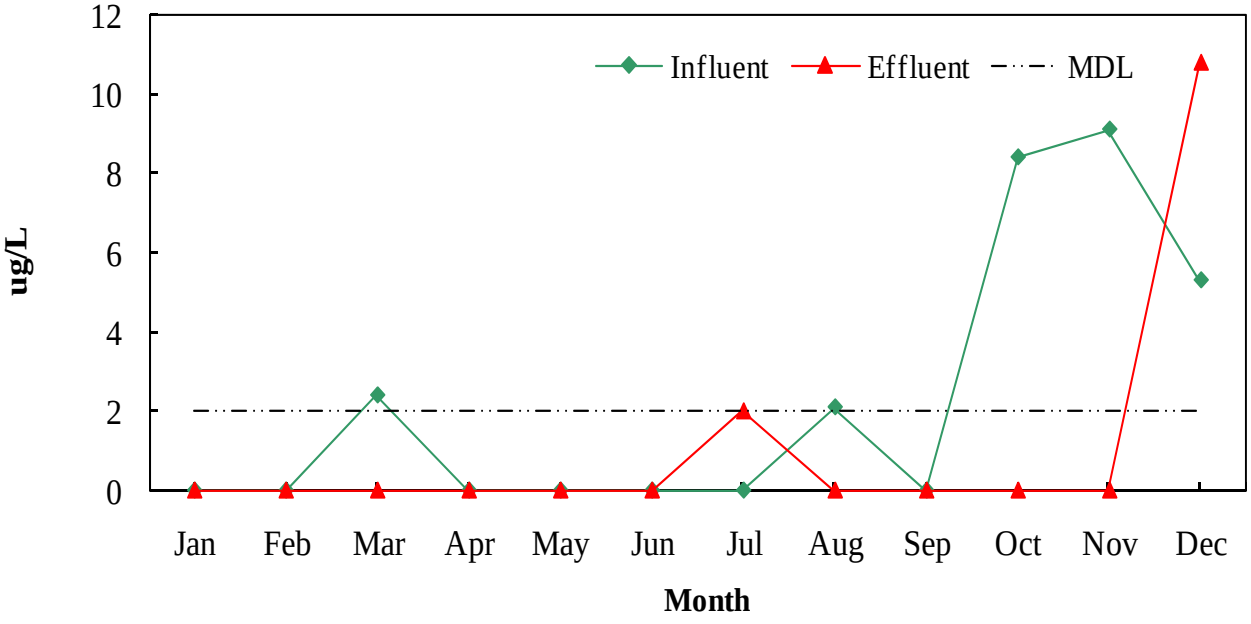

2008 South Bay Water Reclamation Plant
Monthly Averages
Chromium
ug/L
10
9
8
7
6
5
4
3
2
1
0
Influent
Effluent
MDL
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month

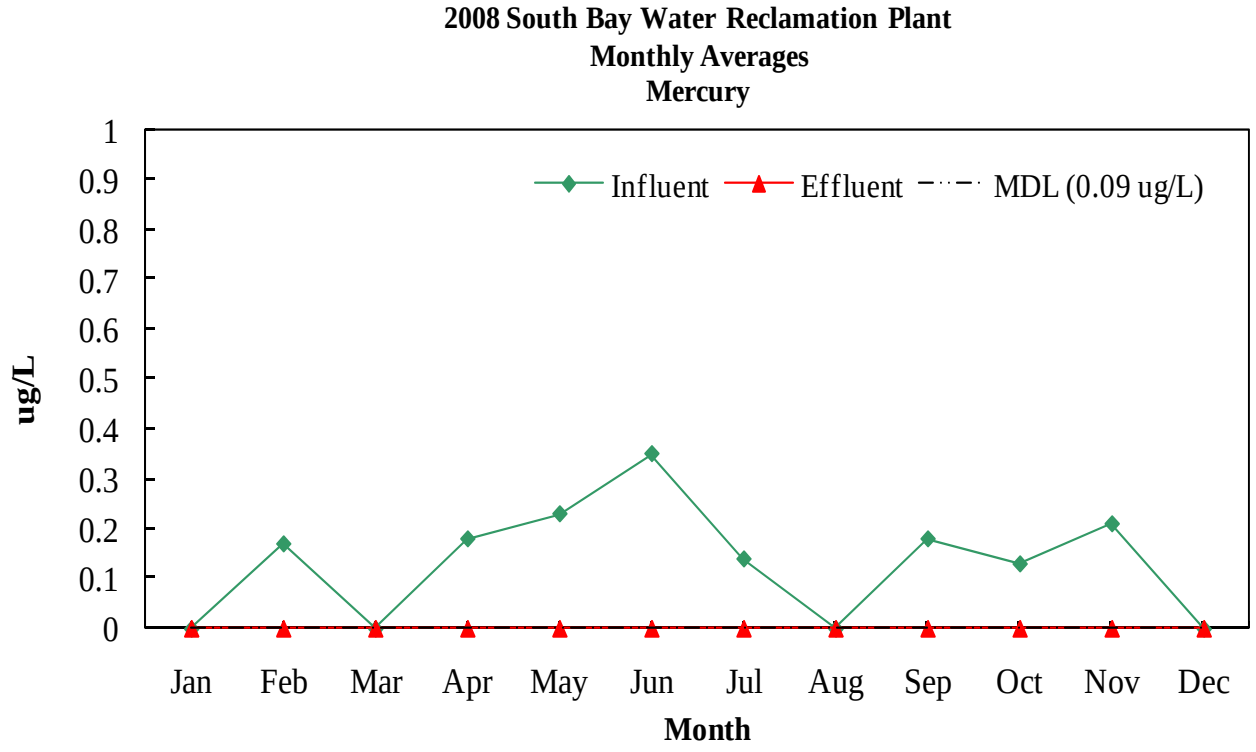

2008 South Bay Water Reclamation Plant
Monthly Averages
Copper
ug/L
120
100
80
60
40
20
0
Influent
Effluent
MDL (0.63 ug/L)
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month

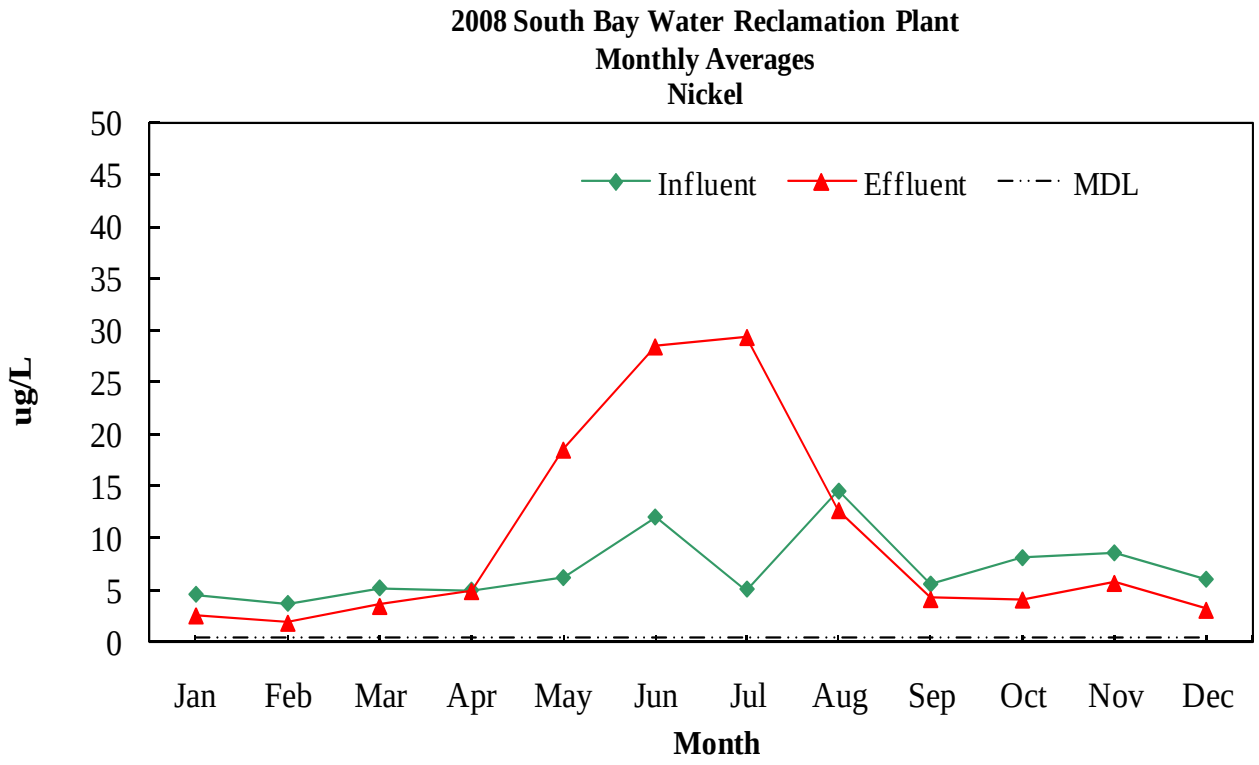
2008 South Bay Water Reclamation Plant
Monthly Averages
Iron

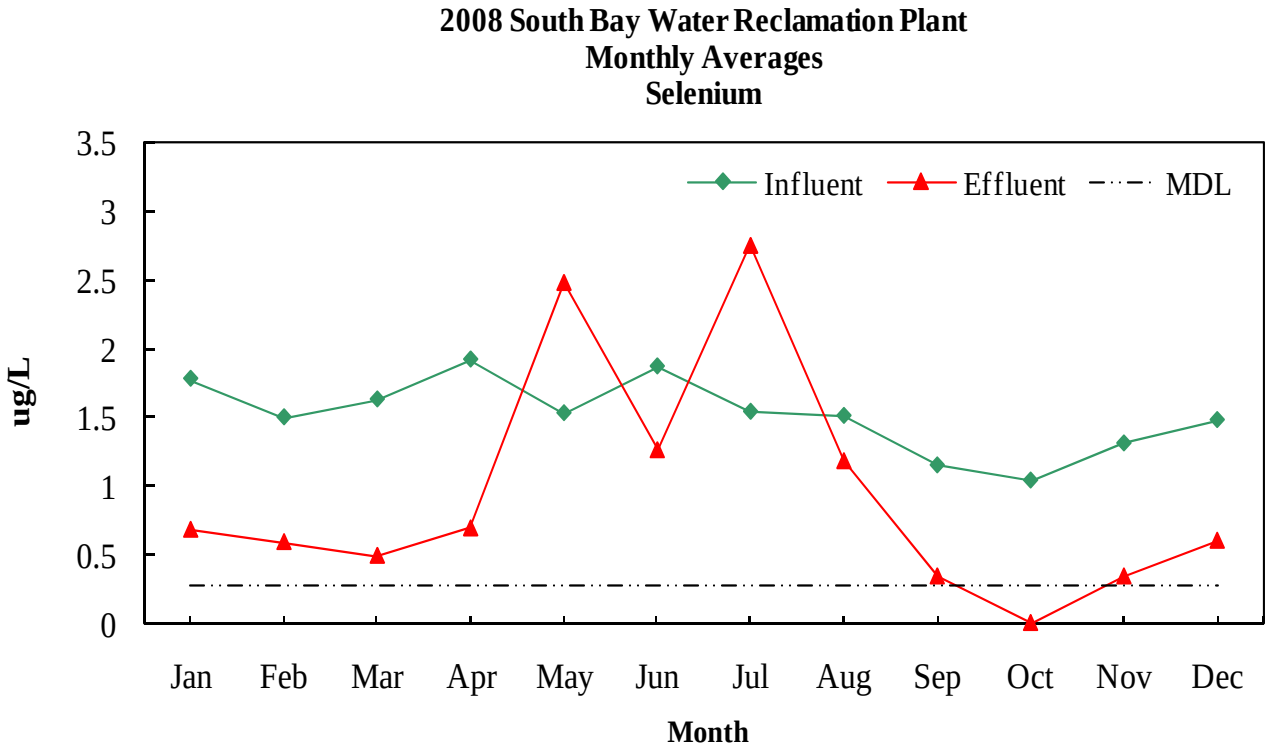


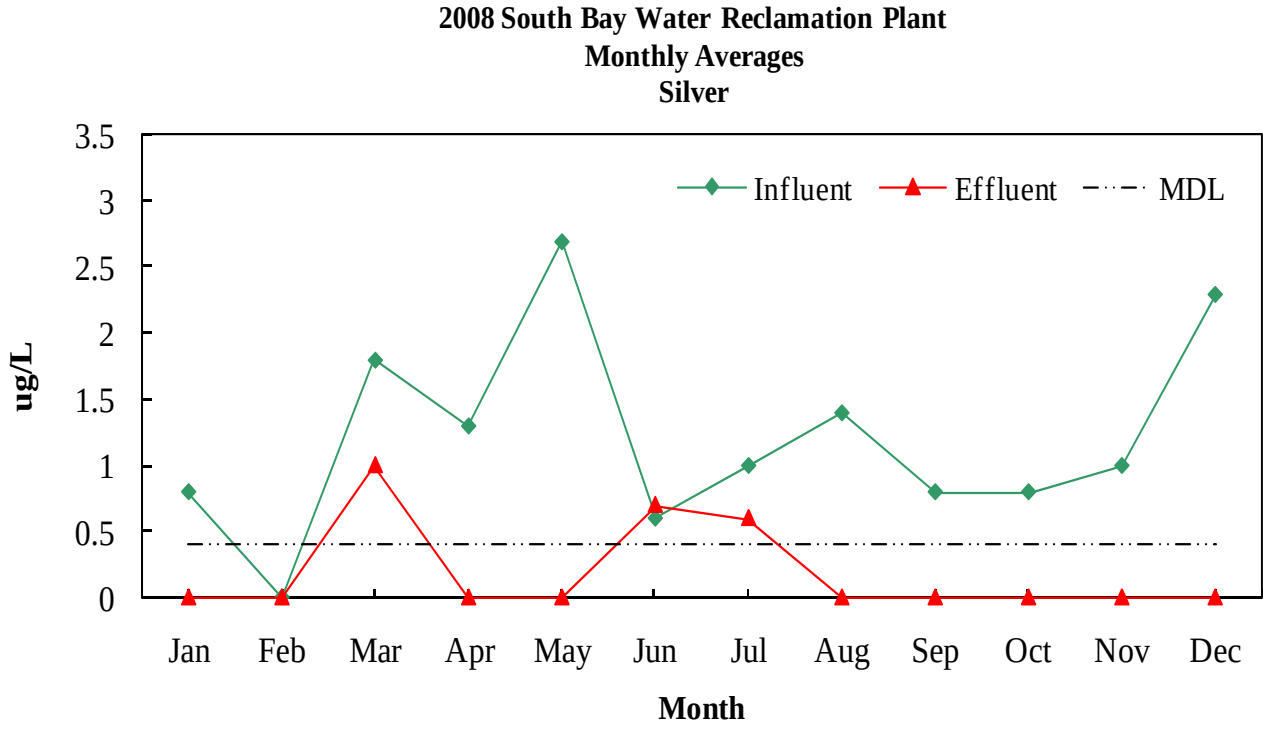
2008 South Bay Water Reclamation Plant
Monthly Averages
Lead



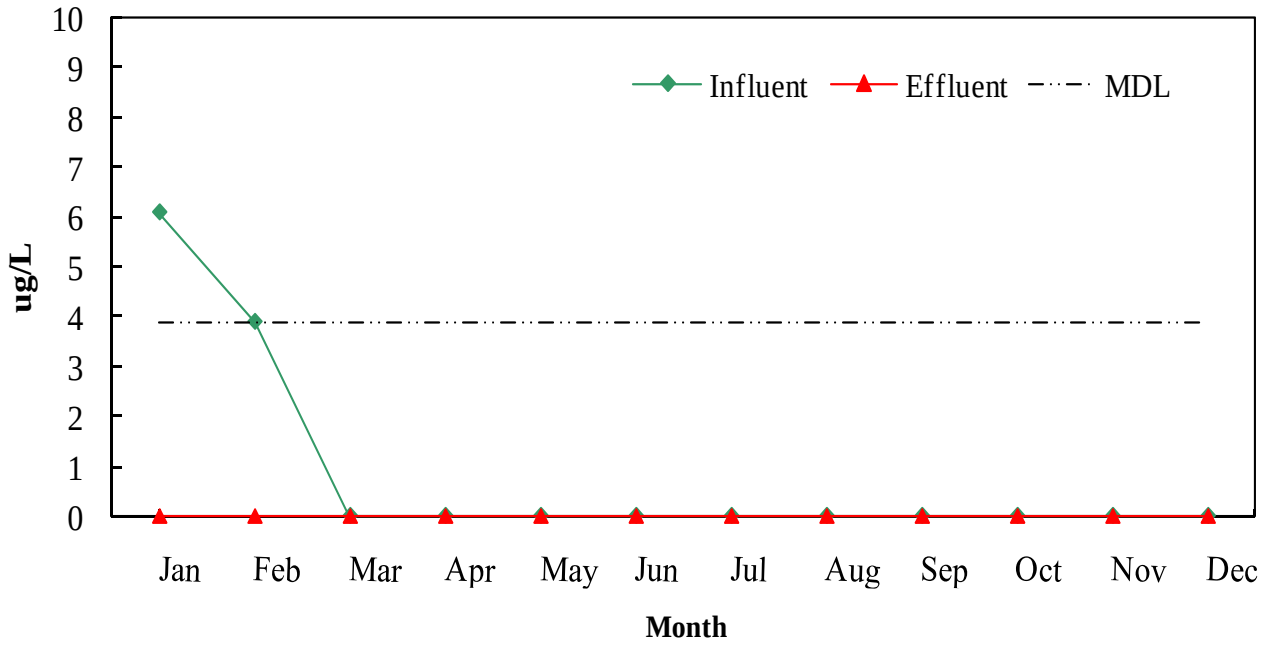

2008 South Bay Water Reclamation Plant
Monthly Averages
Mercury
Influent
Effluent
MDL (0.09 ug/L)
ug/L
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month


2008 South Bay Water Reclamation Plant
Monthly Averages
Nickel
Influent
Effluent
MDL
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

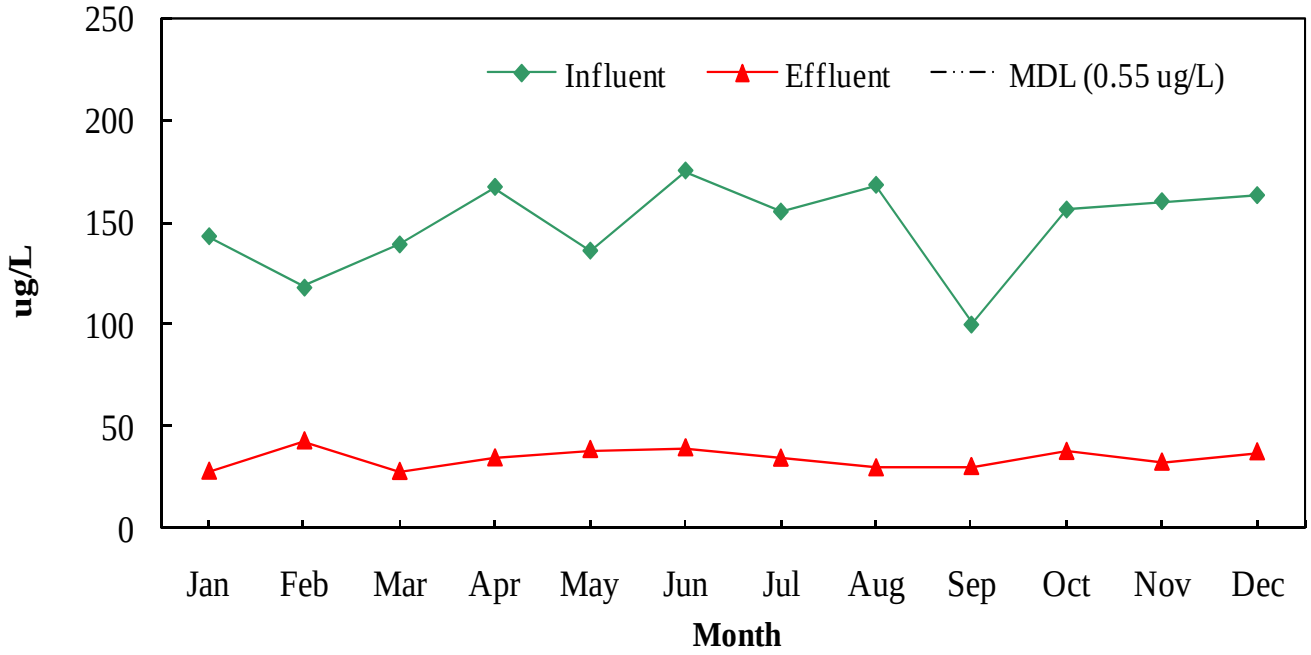

2008 South Bay Water Reclamation Plant
Monthly Averages
Selenium
Influent
Effluent
MDL
ug/L
3.5
3
2.5
2
1.5
1
0.5
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month


2008 South Bay Water Reclamation Plant
Monthly Averages
Silver
Influent
Effluent
MDL
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

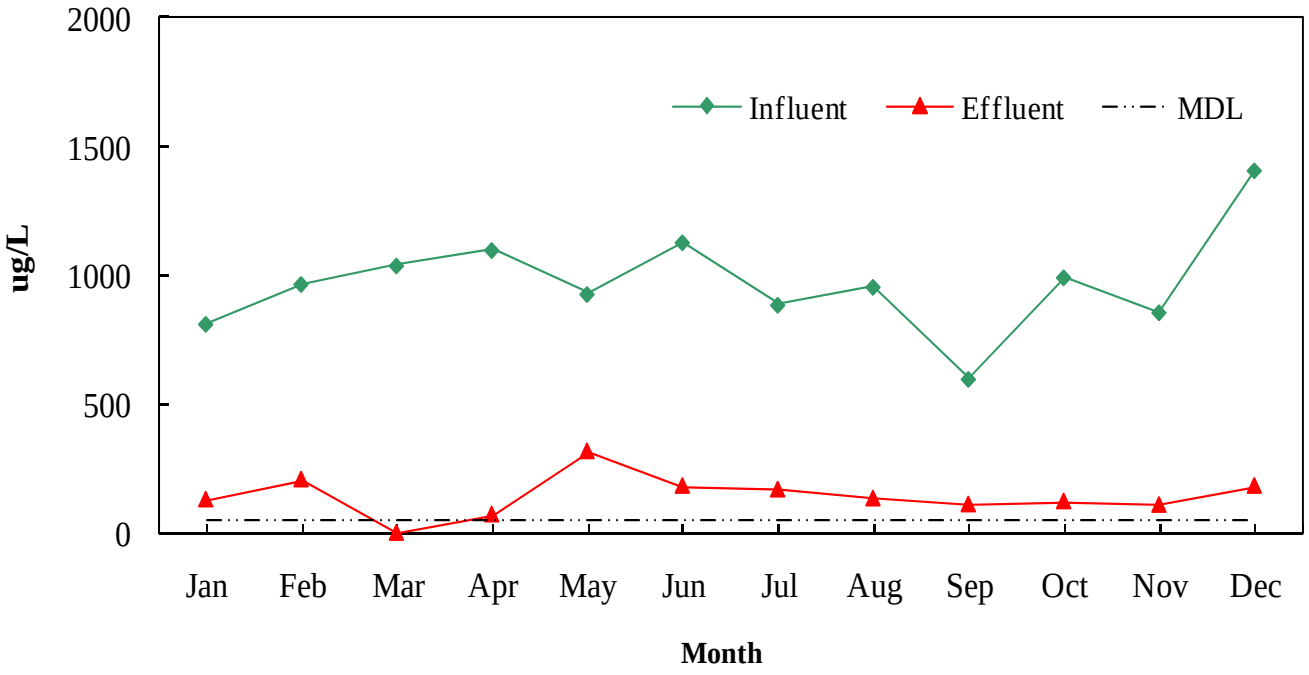
2008 South Bay Water Reclamation Plant
Monthly Averages
Thallium



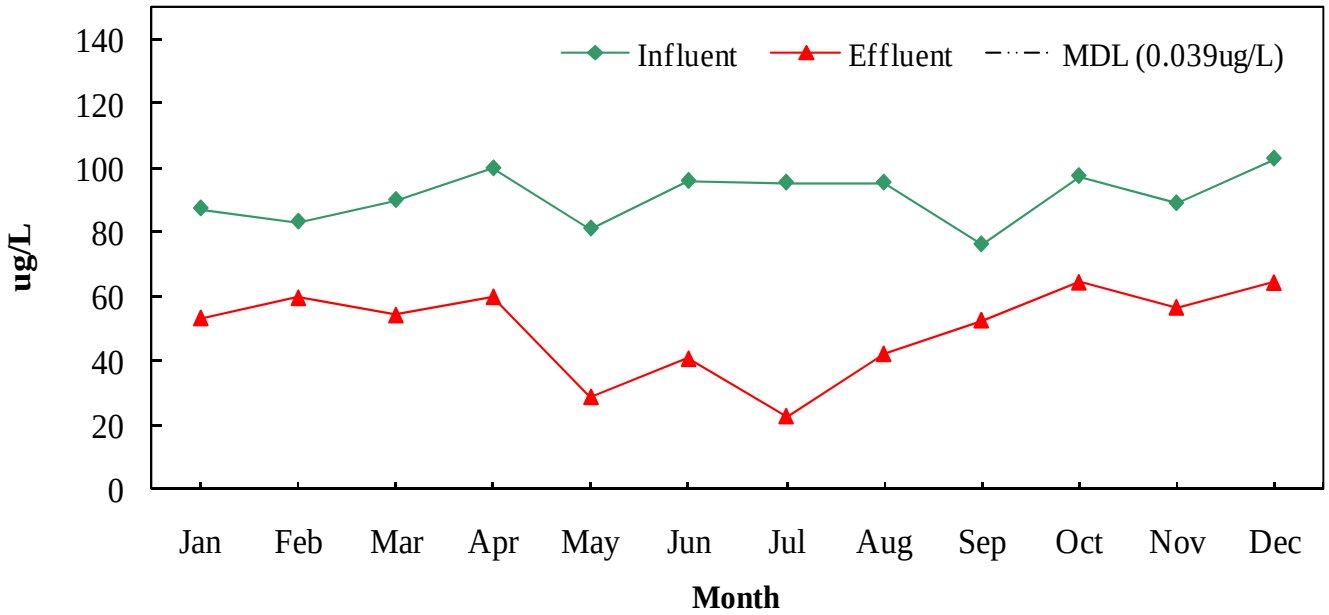
2008 South Bay Water Reclamation Plant
Monthly Averages
Zinc



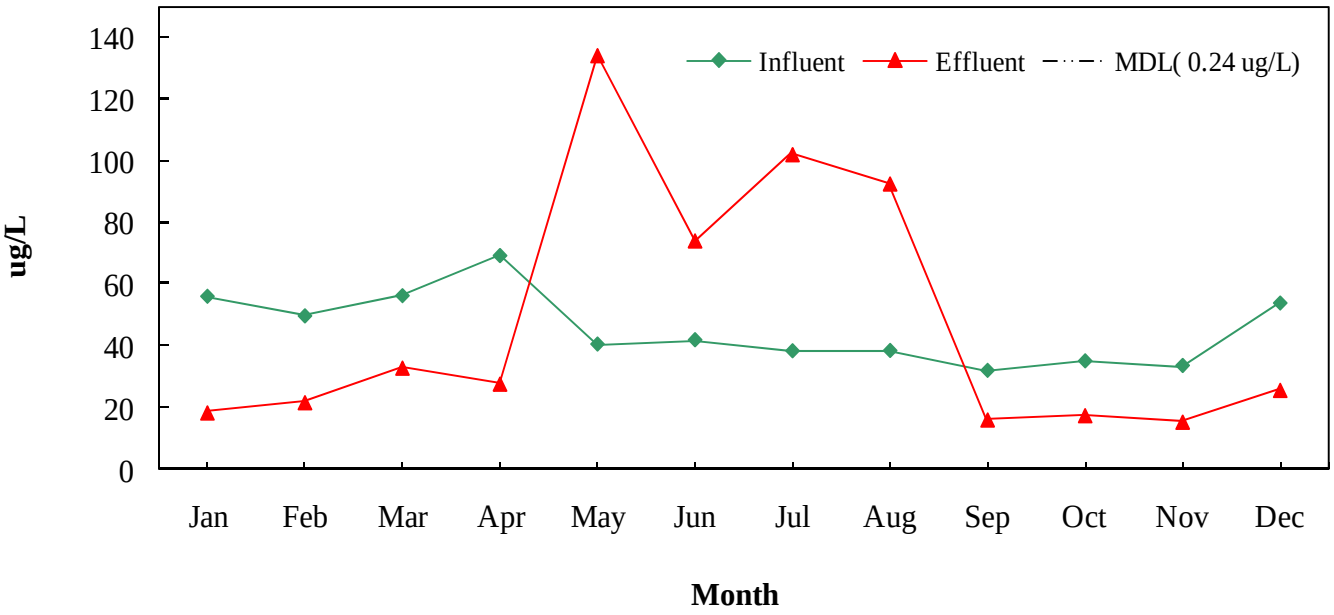
2008 South Bay Water Reclamation Plant
Monthly Averages
Aluminum



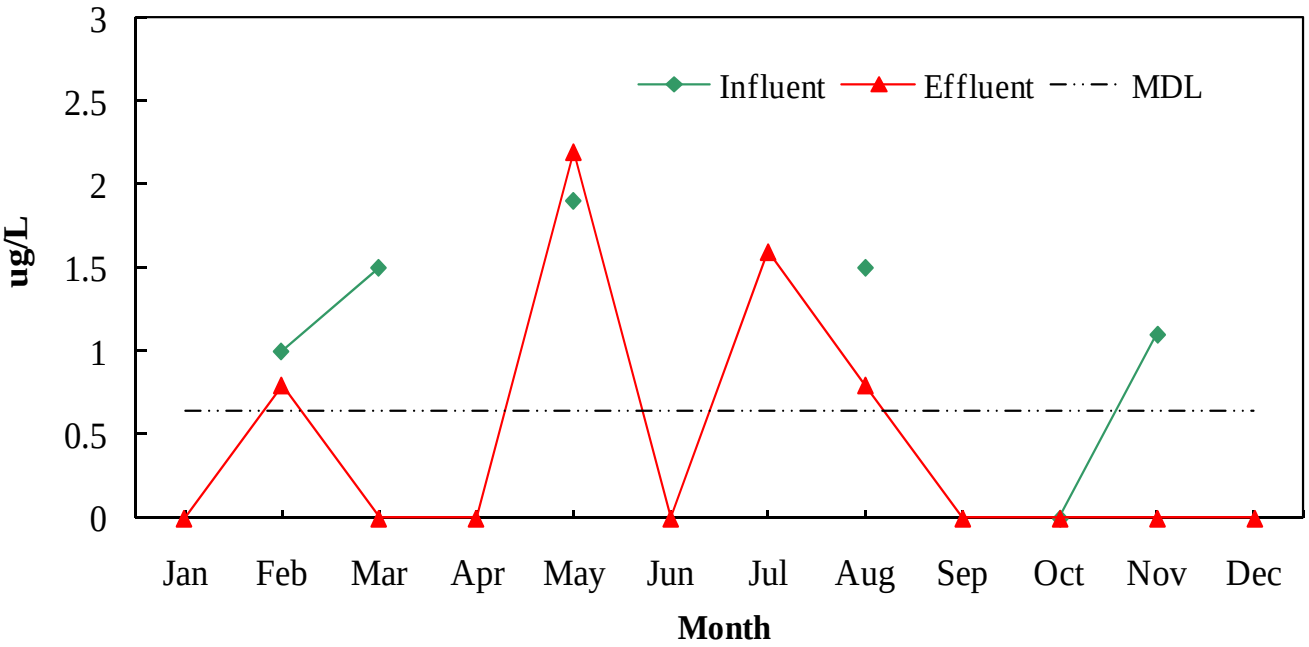
2008 South Bay Water Reclamation Plant
Monthly Averages
Barium

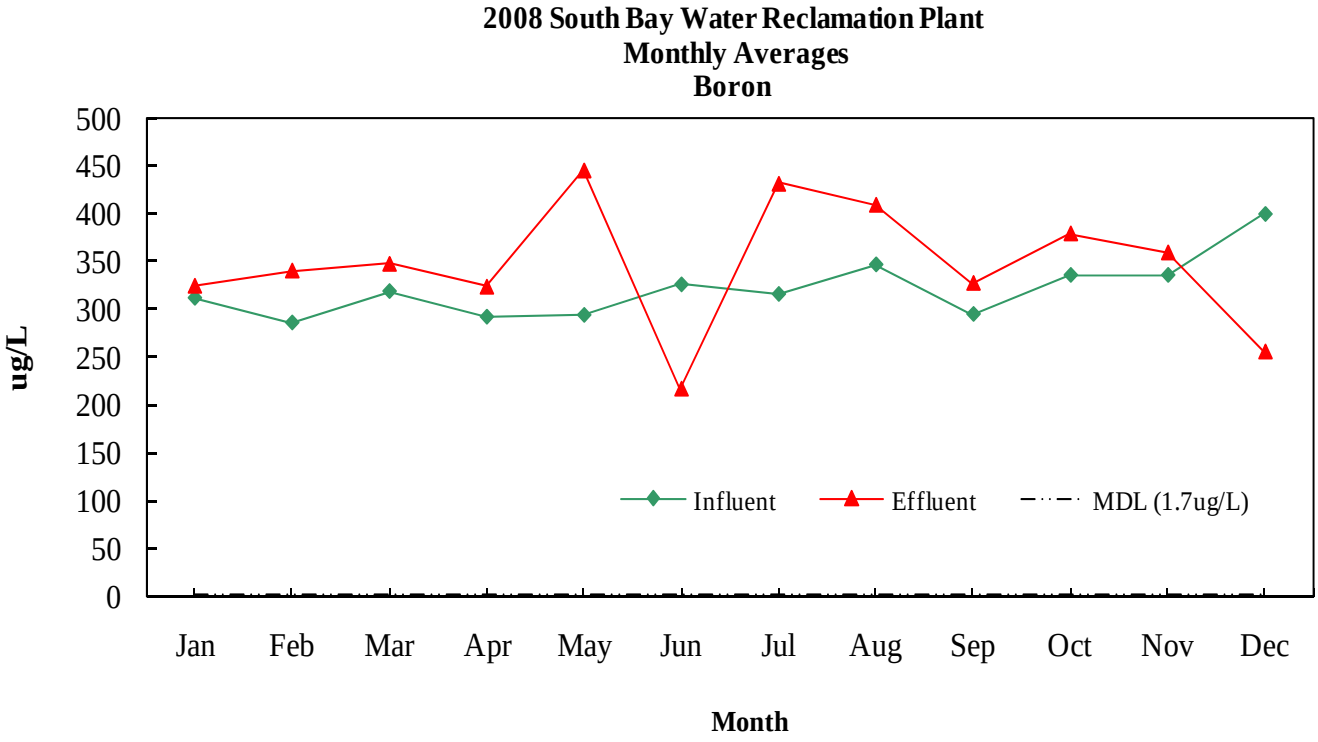


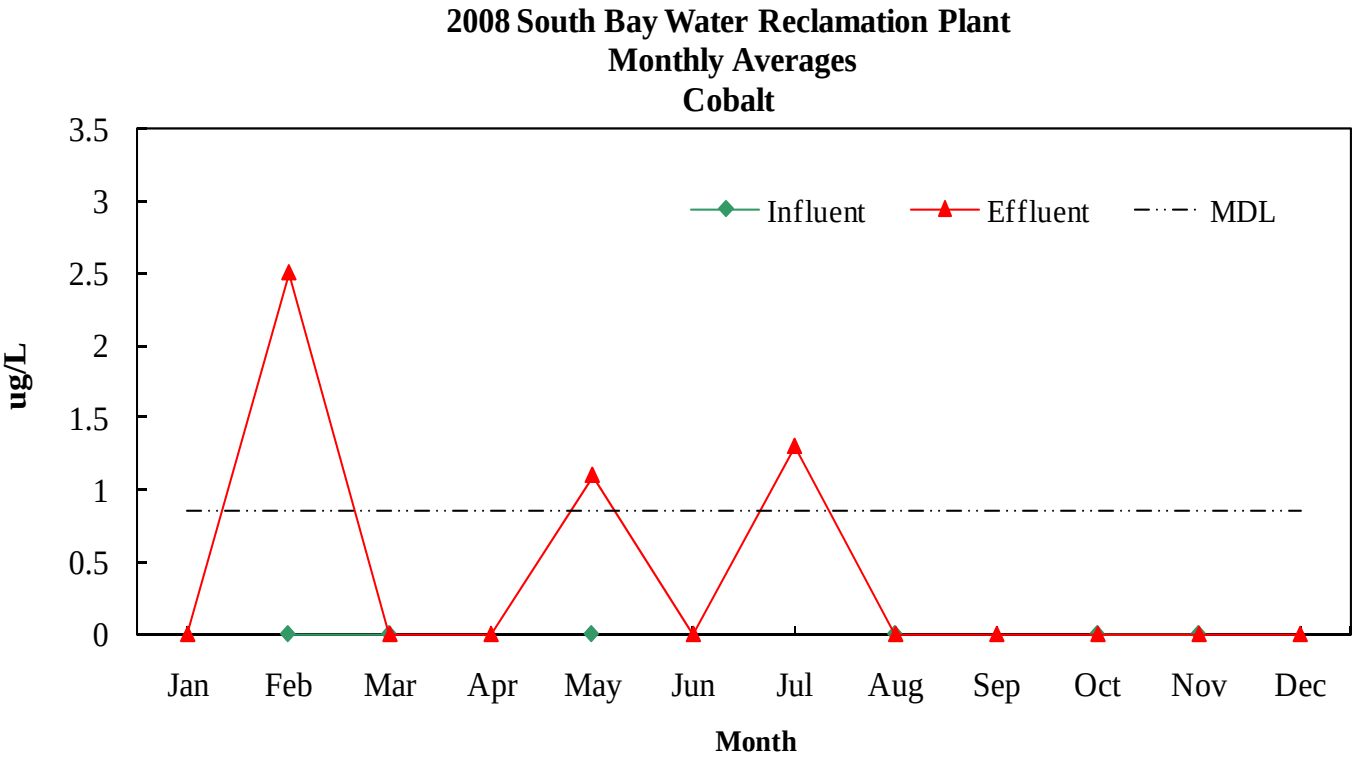
2008 South Bay Water Reclamation Plant
Monthly Averages
Manganese

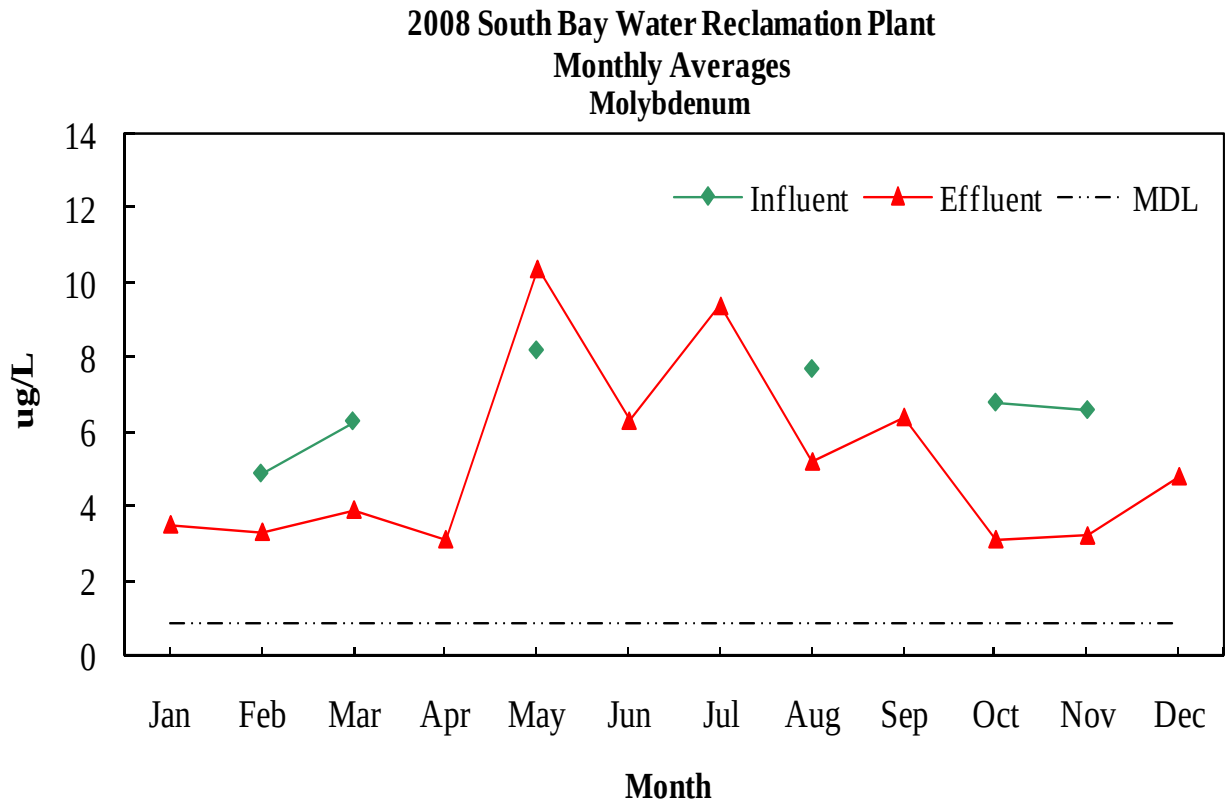


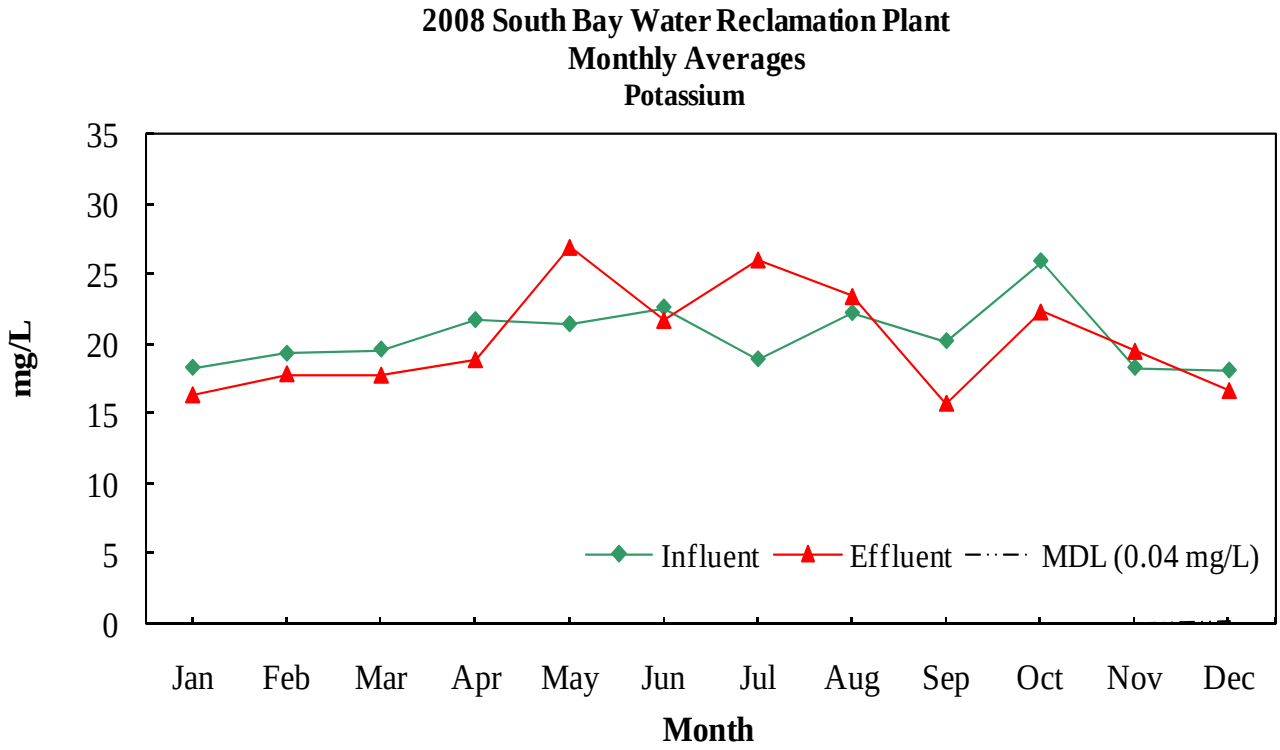
2008 South Bay Water Reclamation Plant
Monthly Averages
Vanadium

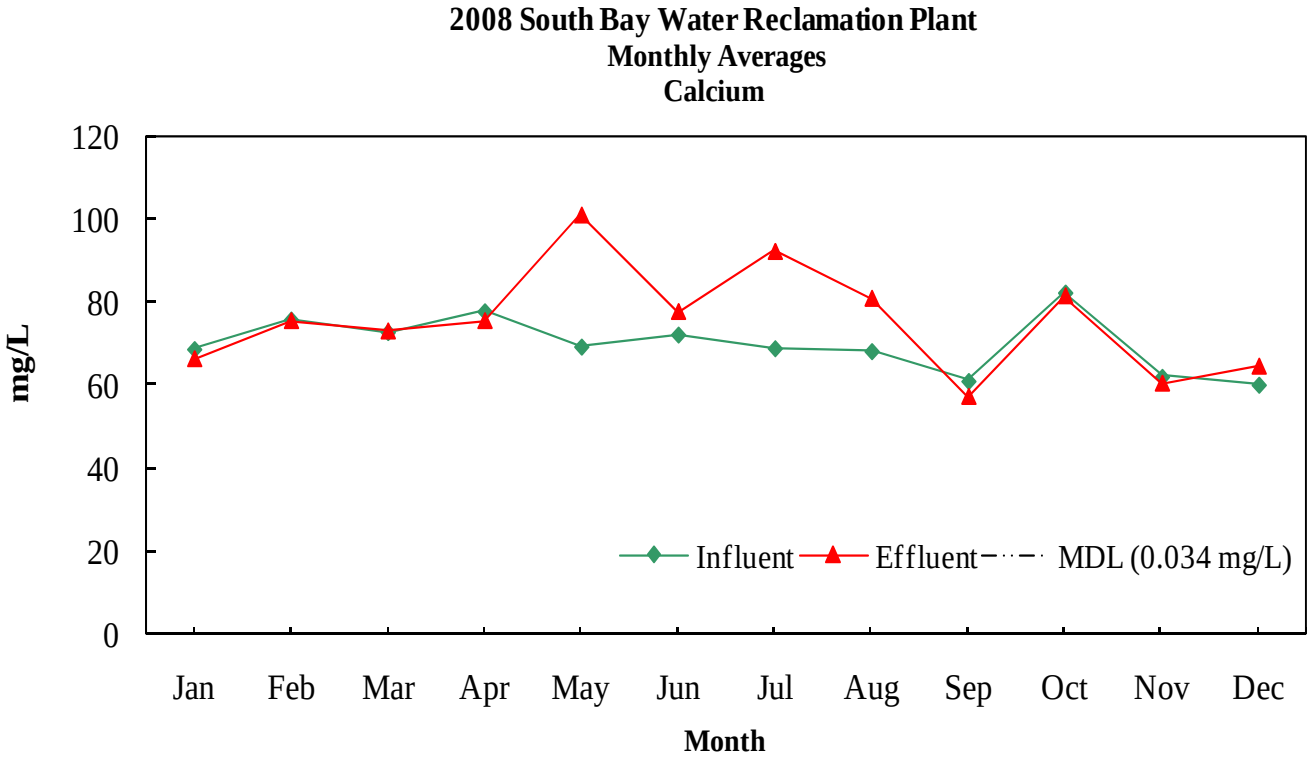


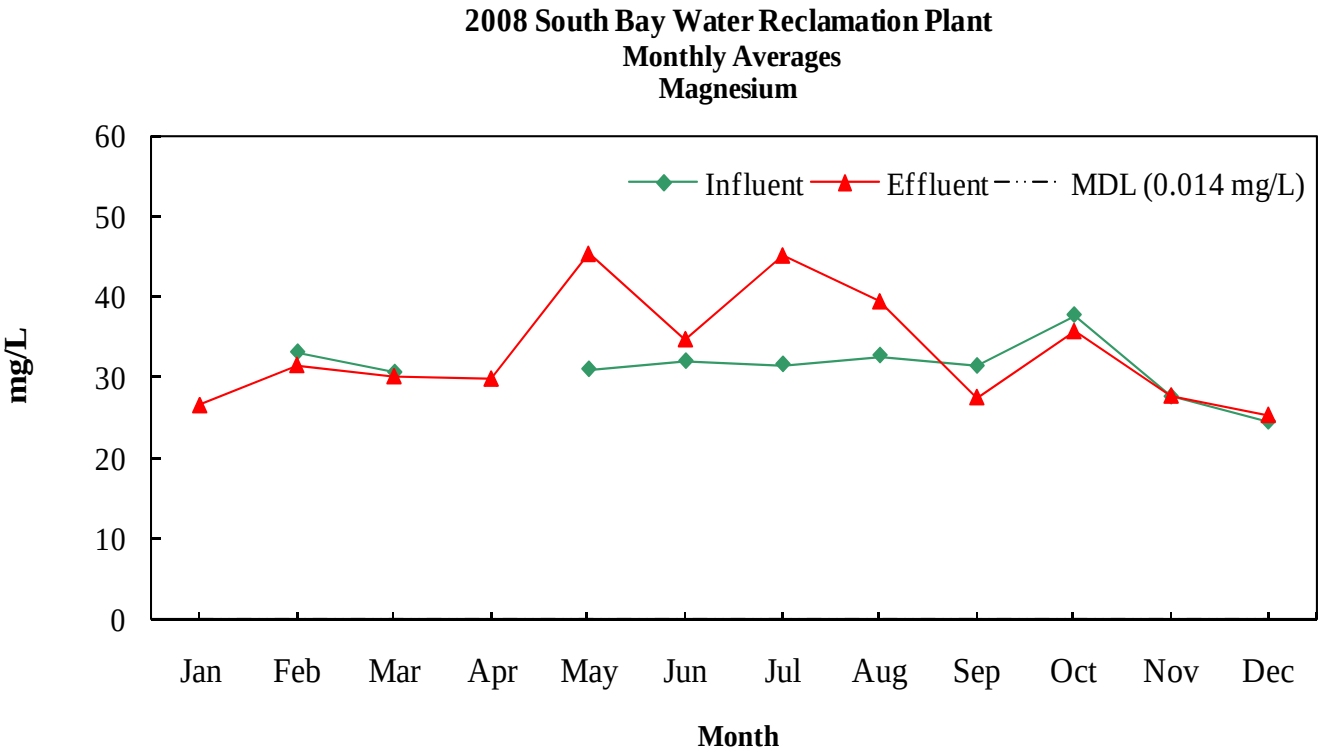

2008 South Bay Water Reclamation Plant
Monthly Averages
Boron
ug/L
500
450
400
350
300
250
200
150
100
50
0
Influent
Effluent
MDL (1.7ug/L)
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month

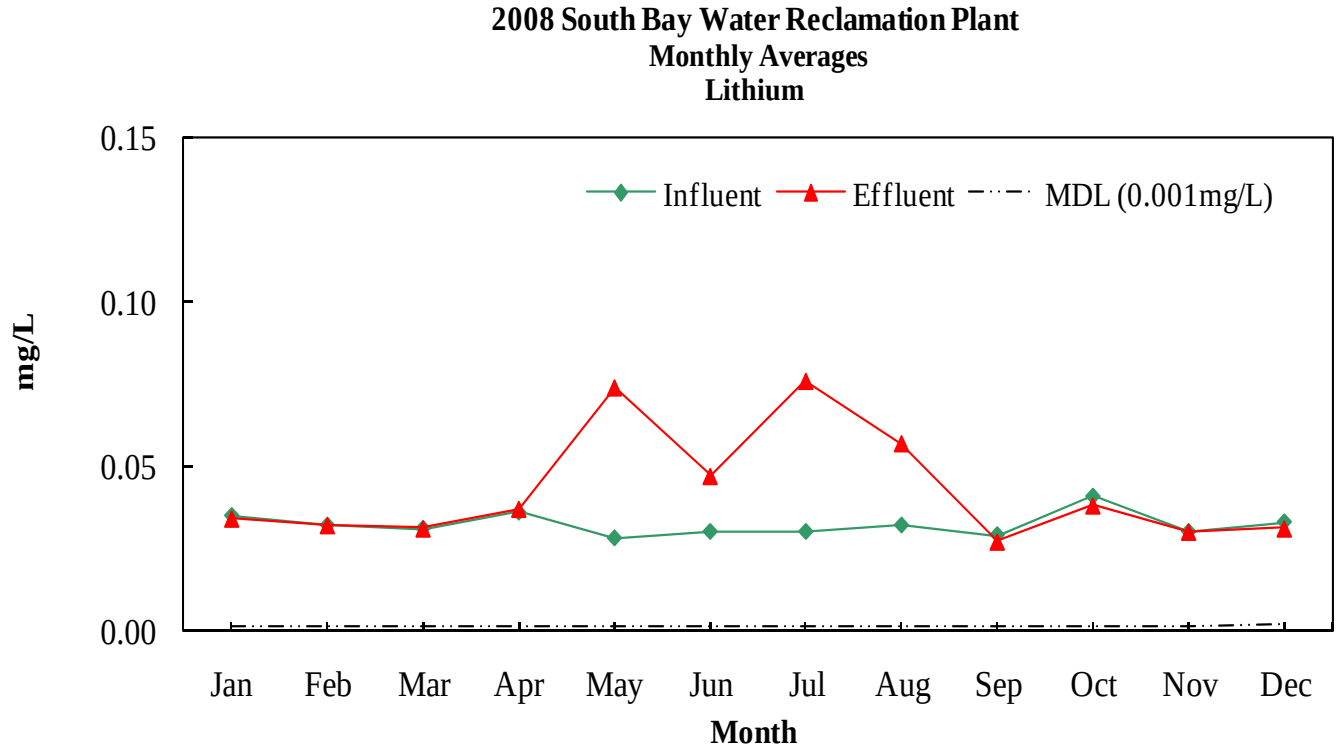

2008 South Bay Water Reclamation Plant
Monthly Averages
Cobalt
ug/L
3.5
3
2.5
2
1.5
1
0.5
0
Influent
Effluent
MDL
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month

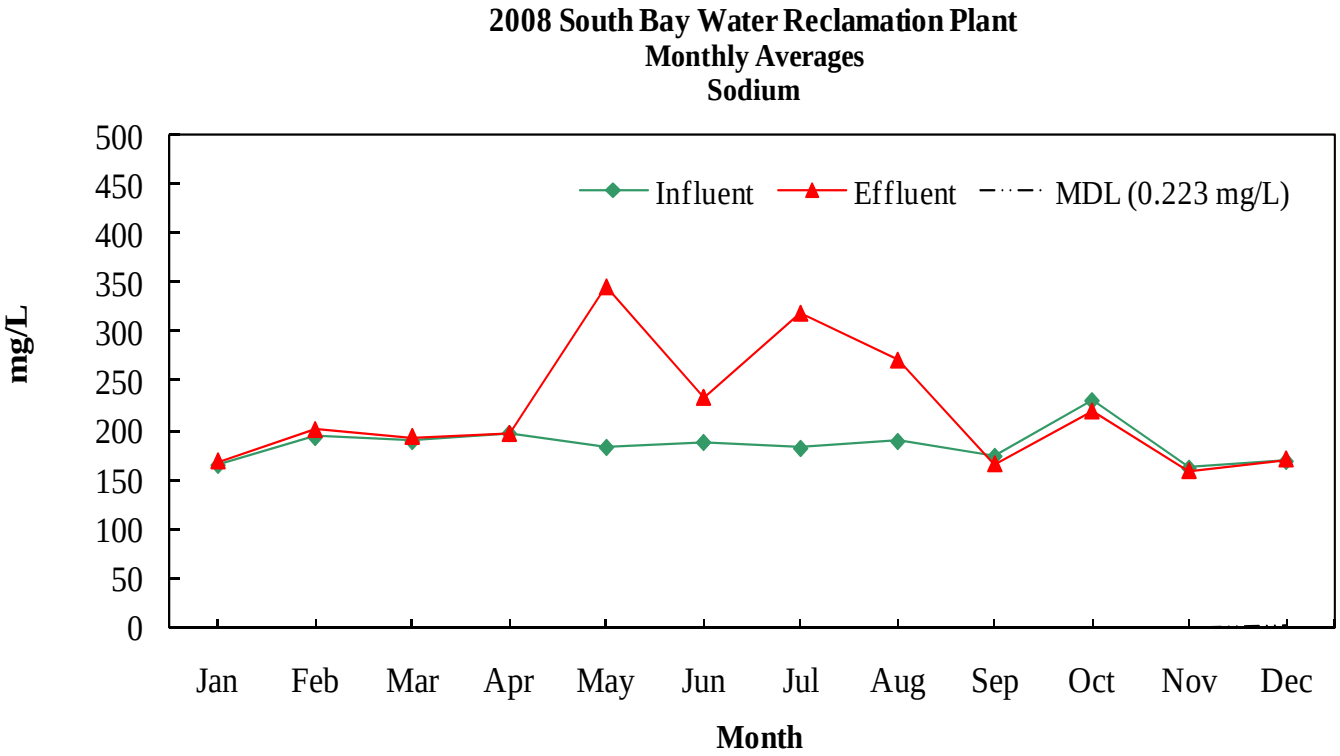

2008 South Bay Water Reclamation Plant
Monthly Averages
Molybdenum
ug/L
14
12
10
8
6
4
2
0
Influent
Effluent
MDL
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month

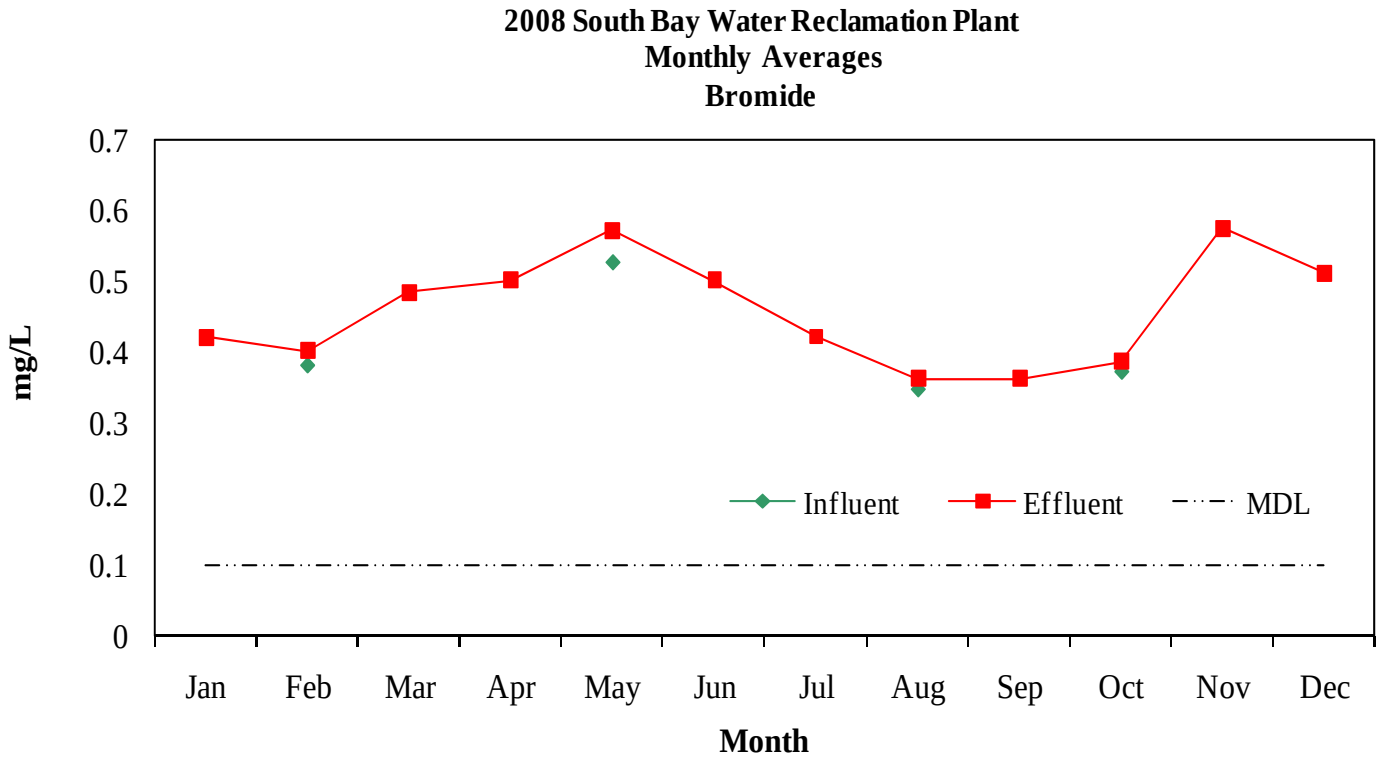

2008 South Bay Water Reclamation Plant
Monthly Averages
Potassium
mg/L
35
30
25
20
15
10
5
0
Influent
Effluent
MDL (0.04 mg/L)
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month

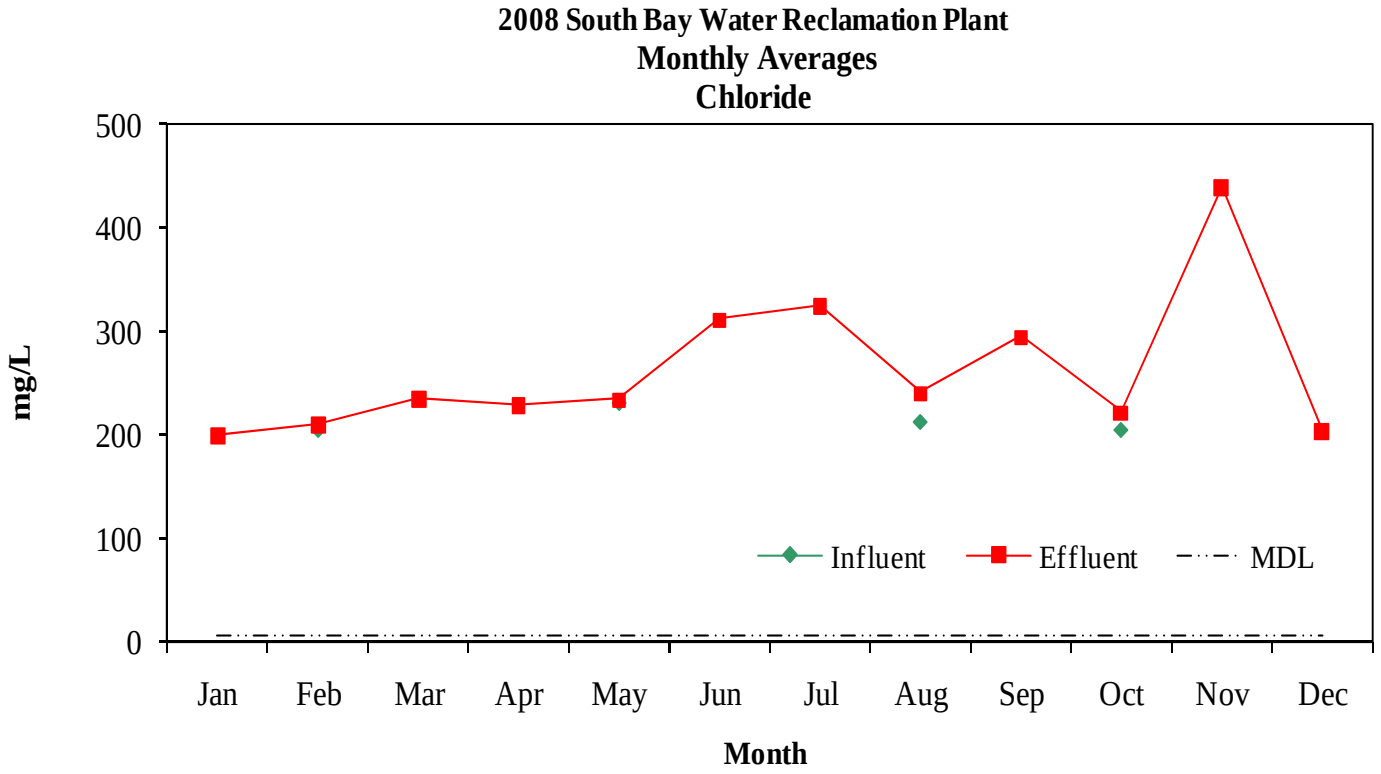

2008 South Bay Water Reclamation Plant
Monthly Averages
Calcium
120
100
80
60
40
20
0
mg/L
Influent
Effluent
MDL (0.034 mg/L)
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month


2008 South Bay Water Reclamation Plant
Monthly Averages
Magnesium
60
50
40
30
20
10
0
mg/L
Influent
Effluent
MDL (0.014 mg/L)
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month

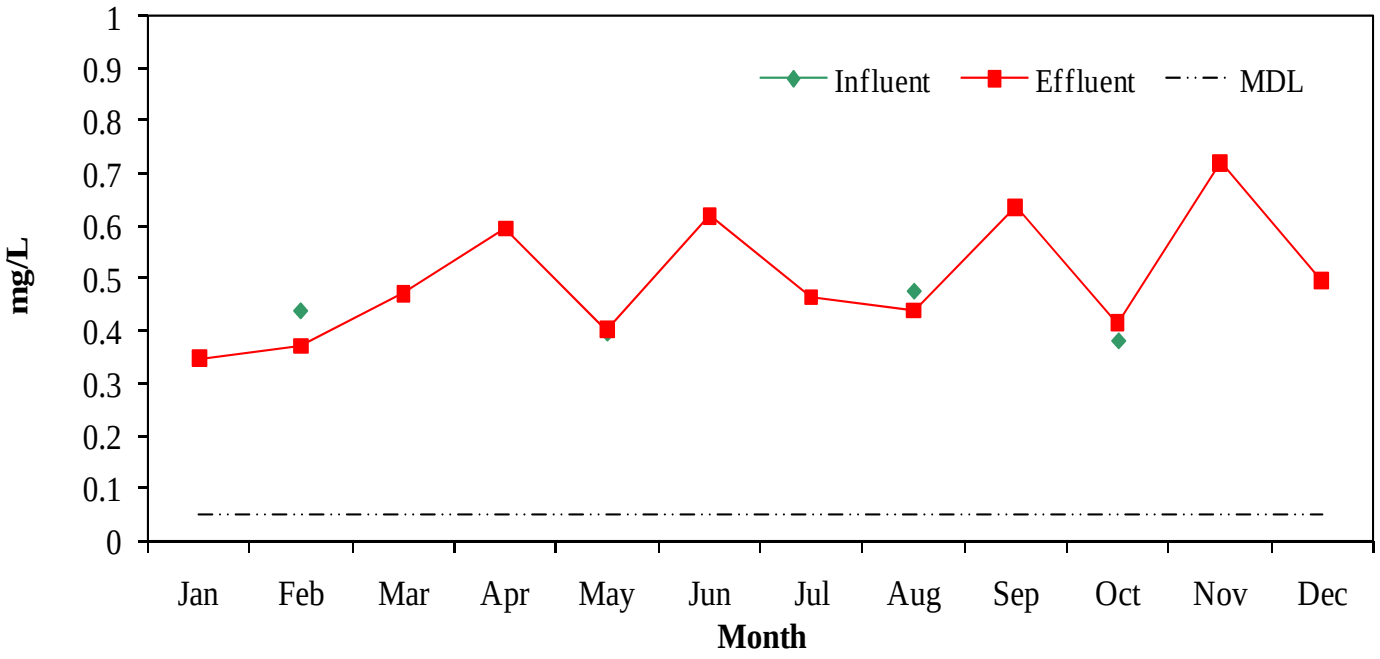

2008 South Bay Water Reclamation Plant
Monthly Averages
Lithium
0.15
0.10
0.05
0.00
mg/L
Influent
Effluent
MDL (0.001mg/L)
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month


2008 South Bay Water Reclamation Plant
Monthly Averages
Sodium
500
450
400
350
300
250
200
150
100
50
0
mg/L
Influent
Effluent
MDL (0.223 mg/L)
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month

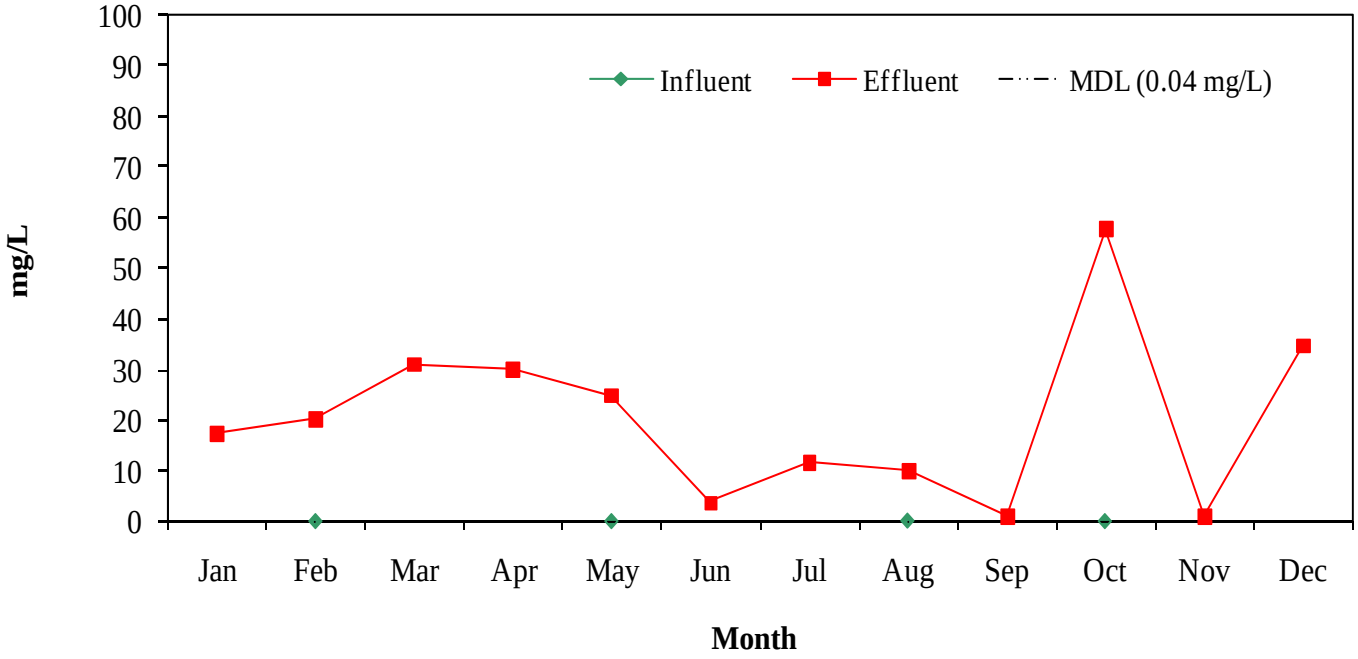

2008 South Bay Water Reclamation Plant
Monthly Averages
Bromide
mg/L
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
Influent
Effluent
MDL
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month

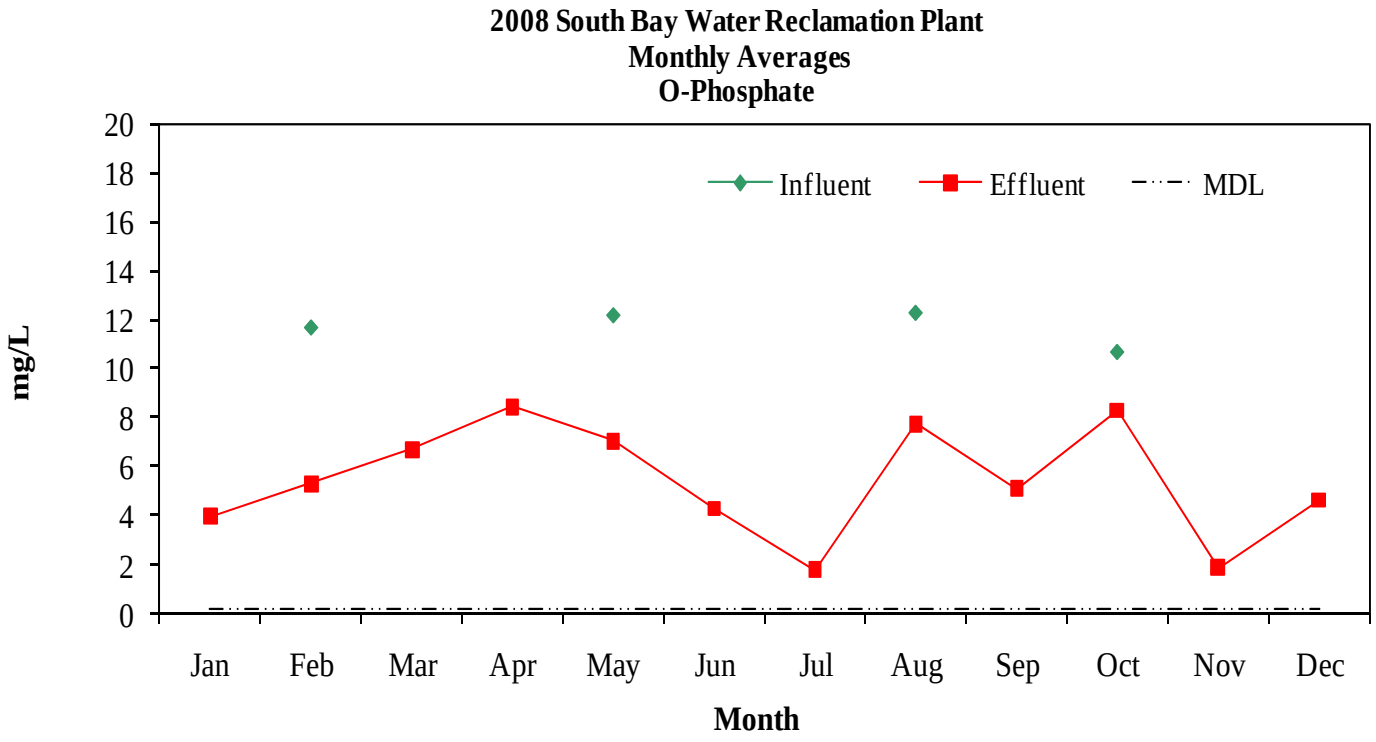

2008 South Bay Water Reclamation Plant
Monthly Averages
Chloride
mg/L
500
400
300
200
100
0
Influent
Effluent
MDL
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month

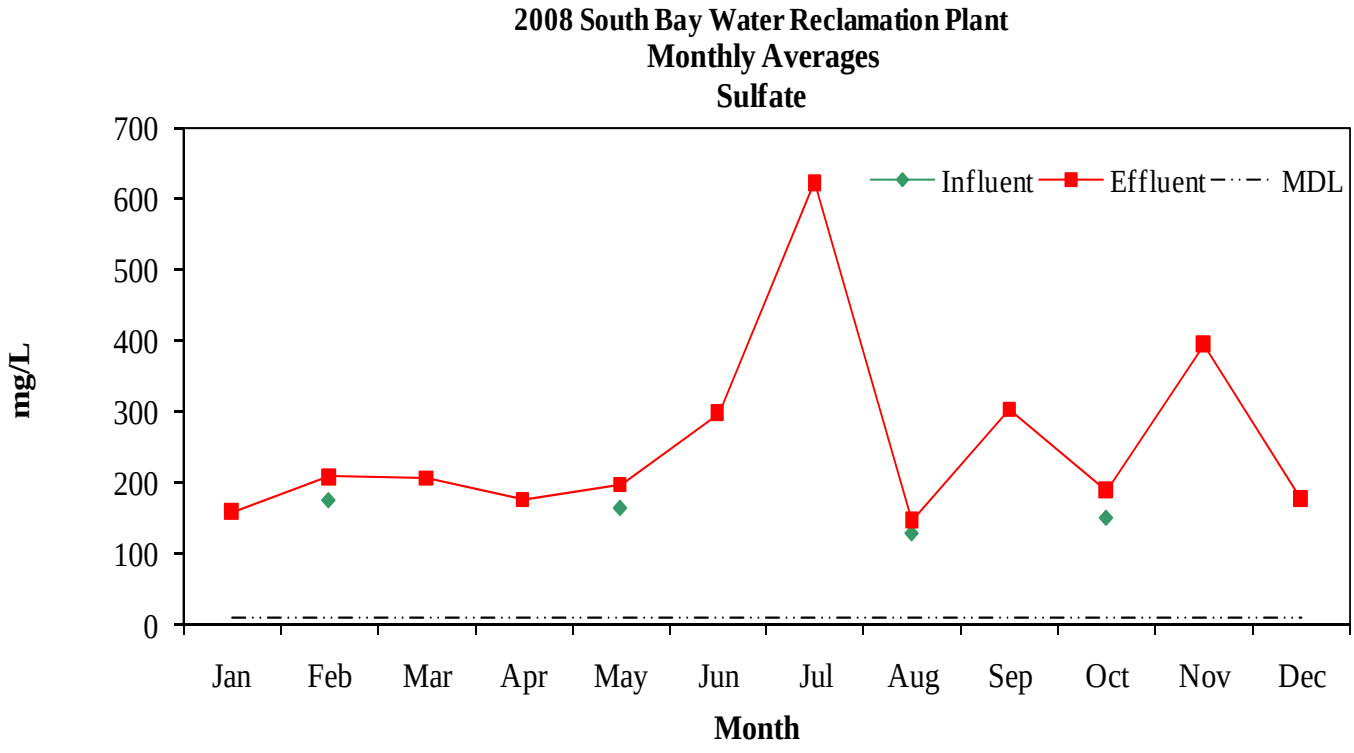
2008 South Bay Water Reclamation Plant
Monthly Averages
Fluoride



2008 South Bay Water Reclamation Plant
Monthly Average
Nitrate




2008 South Bay Water Reclamation Plant
Monthly Averages
O-Phosphate
mg/L
20
18
16
14
12
10
8
6
4
2
0
Influent
Effluent
MDL
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month


2008 South Bay Water Reclamation Plant
Monthly Averages
Sulfate
mg/L
700
600
500
400
300
200
100
0
Influent
Effluent
MDL
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month

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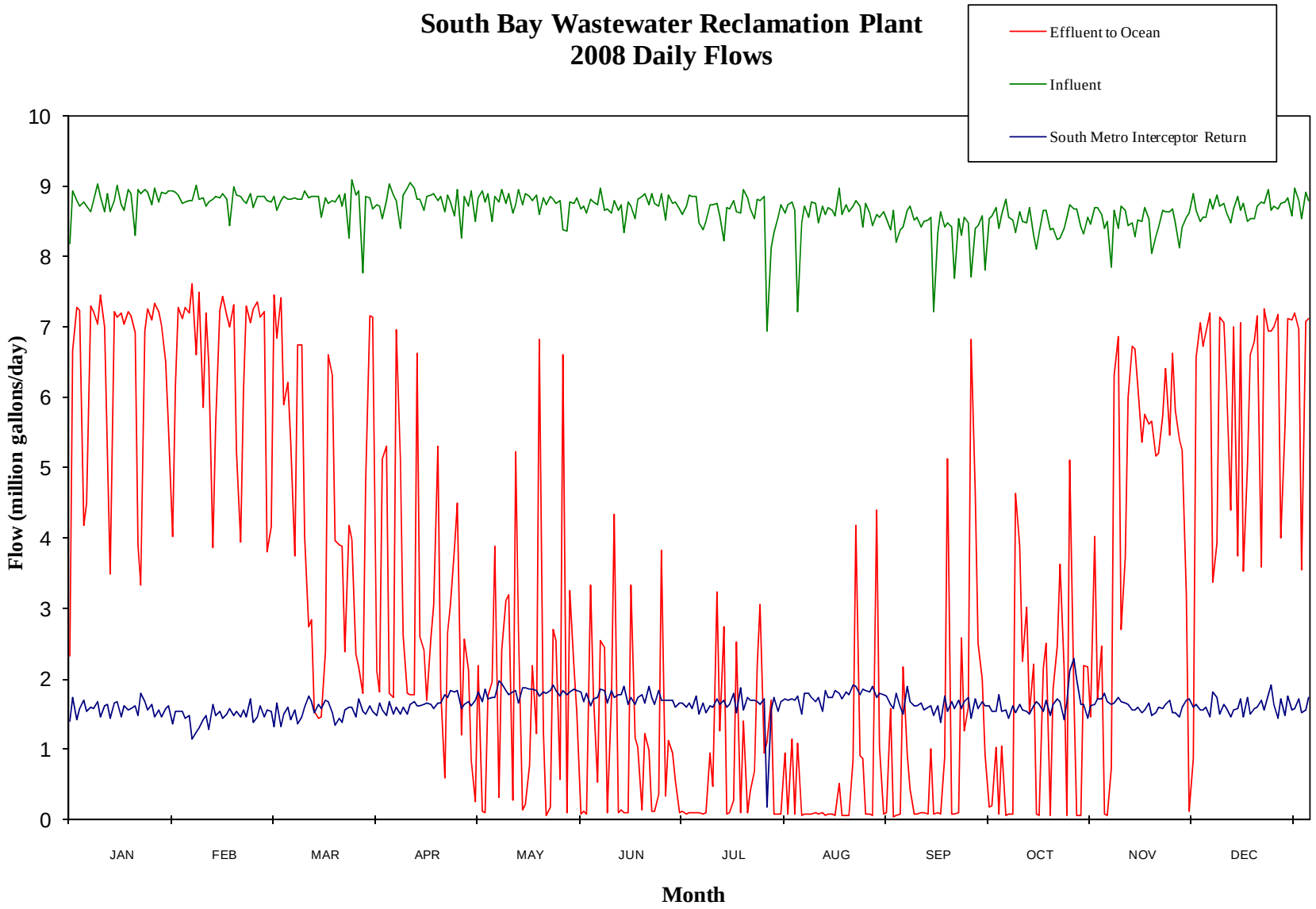
E. Daily Values of Selected Parameters.

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
2008 Daily Flows
Effluent to Ocean
Influent
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 Effluent to Ocean Flows (mgd) 2008

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	2.33	6.18	7.46	1.83	0.12	0.09	0.11	0.08	0.09	1.05	0.06	7.20	
2	6.66	7.27	6.85	5.13	0.11	3.33	0.11	1.09	2.18	0.07	0.74	3.38	
3	7.27	7.11	7.41	5.30	1.76	1.80	0.10	0.06	0.94	0.09	6.31	3.93	
4	7.23	7.27	5.89	1.81	1.96	0.54	0.10	0.09	0.44	0.08	6.86	7.14	
5	4.19	7.20	6.22	1.74	3.88	2.56	0.09	0.09	0.09	4.64	2.70	7.06	
6	4.49	7.61	5.38	6.96	0.33	2.45	0.10	0.09	0.09	3.88	3.74	6.16	
7	7.29	6.61	3.76	5.13	2.41	0.10	0.95	0.10	0.10	2.26	6.00	4.41	
8	7.22	7.49	6.75	2.62	3.13	1.75	0.48	0.09	0.11	3.03	6.72	6.99	
9	7.03	5.86	6.75	1.80	3.20	4.35	3.23	0.10	0.08	1.53	6.69	3.75	
10	7.46	7.20	4.02	1.79	0.29	0.11	1.28	0.06	1.02	2.21	6.17	7.05	
11	6.99	6.46	2.74	1.79	5.22	0.14	2.75	0.09	0.09	0.08	5.36	3.54	
12	5.20	3.87	2.84	6.62	2.72	0.11	0.08	0.08	0.10	0.07	5.76	5.05	
13	3.49	5.62	1.54	2.60	0.14	0.10	0.10	0.06	0.08	2.16	5.62	6.61	
14	7.21	7.24	1.45	2.42	0.22	3.33	0.29	0.52	0.90	2.52	5.67	6.81	
15	7.13	7.43	1.46	1.71	0.77	1.18	2.53	0.06	5.13	0.07	5.16	7.16	
16	7.19	7.16	2.40	2.58	2.19	1.03	0.11	0.07	0.09	1.86	5.21	3.60	
17	7.29	5.79	6.61	3.07	1.23	0.15	1.41	0.07	0.08	2.47	5.73	7.26	
18	7.22	7.32	6.32	5.31	6.82	1.24	0.10	0.86	0.10	3.64	6.41	6.95	
19	7.15	5.23	3.97	1.86	1.27	1.00	0.42	4.19	2.58	2.16	5.47	6.95	
20	6.92	3.94	3.91	0.61	0.06	0.12	0.69	0.92	1.27	0.06	6.62	7.00	
21	3.90	6.08	3.89	2.67	0.18	0.13	2.20	0.87	1.60	5.11	5.81	7.18	
22	3.33	7.29	2.40	3.05	2.71	0.36	3.07	0.08	6.82	1.79	5.40	4.01	
23	6.94	7.06	4.19	3.87	2.55	3.83	0.96	0.08	4.64	0.07	5.25	5.57	
24	7.25	7.25	3.98	4.50	0.59	0.35	1.12	0.07	2.52	0.07	3.20	7.12	
25	7.10	7.35	2.36	1.21	6.61	1.13	1.71	4.40	1.99	2.20	0.13	7.10	
26	7.33	7.14	2.18	2.57	0.11	0.96	0.09	1.06	0.94	2.17	0.87	7.19	
27	7.21	7.21	1.81	2.13	3.26	0.57	0.09	0.09	0.19	1.46	6.56	6.96	
28	7.01	3.82	4.81	0.86	2.17	0.10	0.08	0.11	0.21	4.02	7.05	3.55	
29	6.50	4.17	7.16	0.26	1.54	0.12	0.95	1.59	1.03	1.73	6.73	7.07	
30	5.59		7.13	2.19	0.09	0.08	0.09	0.05	0.08	2.47	6.92	7.12	
31	4.02		2.12		0.13		1.16	0.07		0.08		7.17	Annual Summary
Average	6.23	6.46	4.38	2.87	1.86	1.10	0.86	0.56	1.19	1.78	5.03	6.07	3.19
Minimum	2.33	3.82	1.45	0.26	0.06	0.08	0.08	0.05	0.08	0.06	0.06	3.38	0.05
Maximum	7.46	7.61	7.46	6.96	6.82	4.35	3.23	4.40	6.82	5.11	7.05	7.26	7.61
Total	193.14	187.23	135.76	85.99	57.77	33.11	26.55	17.24	35.58	55.10	150.92	188.04	1,166

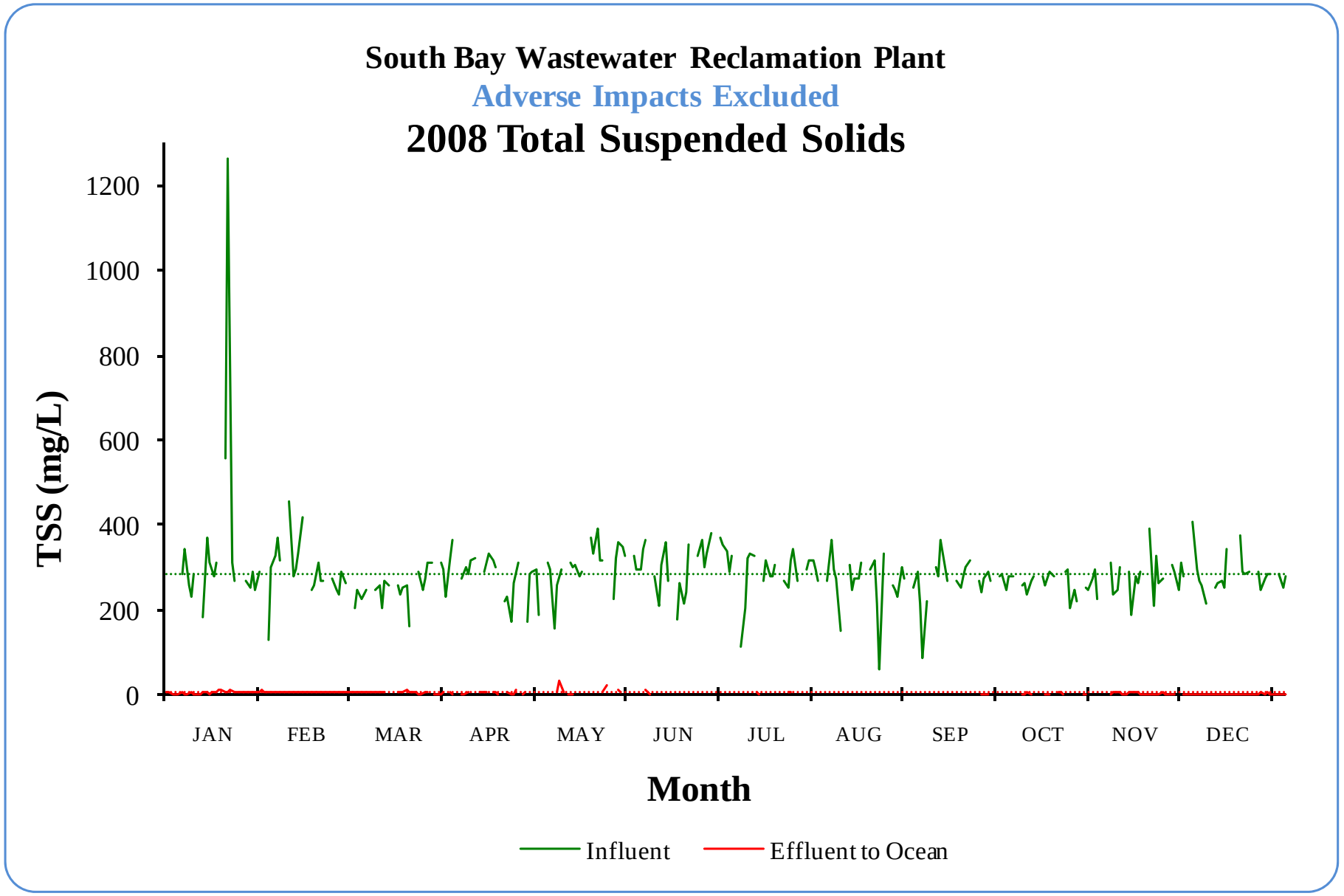
Daily Influent Flows (mgd) – 2008

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	8.19	8.92	8.86	8.72	8.95	8.62	8.88	8.67	8.39	8.60	8.51	8.82	
2	8.95	8.89	8.66	8.55	8.78	8.82	8.86	7.21	8.43	8.82	7.86	8.69	
3	8.81	8.76	8.81	8.81	8.91	8.78	8.87	8.48	8.67	8.56	8.66	8.89	
4	8.73	8.78	8.86	9.04	8.51	8.75	8.49	8.73	8.73	8.53	8.40	8.73	
5	8.79	8.80	8.82	8.89	8.87	8.99	8.39	8.57	8.52	8.35	8.72	8.76	
6	8.72	8.80	8.83	8.81	8.78	8.67	8.51	8.79	8.57	8.64	8.67	8.63	
7	8.65	9.02	8.85	8.41	8.96	8.68	8.75	8.76	8.42	8.50	8.44	8.49	
8	8.81	8.82	8.82	8.89	8.77	8.63	8.74	8.48	8.50	8.48	8.48	8.68	
9	9.05	8.85	8.82	8.98	8.90	8.80	8.76	8.72	8.52	8.70	8.28	8.86	
10	8.87	8.72	8.95	9.06	8.63	8.67	8.59	8.61	8.57	8.30	8.53	8.67	
11	8.65	8.79	8.85	8.99	8.74	8.75	8.23	8.71	7.22	8.10	8.51	8.77	
12	8.91	8.83	8.87	8.83	8.97	8.34	8.70	8.66	8.35	8.34	8.70	8.51	
13	8.64	8.87	8.86	8.82	8.74	8.79	8.68	8.59	8.64	8.66	8.55	8.54	
14	8.80	8.85	8.86	8.66	8.90	8.72	8.81	8.99	8.43	8.67	8.05	8.55	
15	9.02	8.90	8.56	8.86	8.86	8.55	8.65	8.60	8.48	8.39	8.28	8.73	
16	8.74	8.83	8.85	8.88	8.81	8.83	8.62	8.74	8.42	8.40	8.43	8.79	
17	8.66	8.45	8.77	8.91	8.88	8.87	8.96	8.64	7.70	8.25	8.67	8.77	
18	8.97	9.01	8.80	8.80	8.61	8.90	8.85	8.73	8.54	8.26	8.64	8.96	
19	8.90	8.88	8.78	8.86	8.84	8.75	8.68	8.80	8.31	8.40	8.65	8.66	
20	8.30	8.86	8.88	8.64	8.75	8.90	8.55	8.72	8.56	8.57	8.68	8.72	
21	8.96	8.81	8.72	8.89	8.87	8.77	8.83	8.42	8.48	8.75	8.48	8.69	
22	8.91	8.77	8.90	8.79	8.82	8.72	8.80	8.77	7.72	8.68	8.12	8.77	
23	8.96	8.91	8.26	8.58	8.76	8.91	8.86	8.62	8.40	8.68	8.42	8.78	
24	8.93	8.70	9.10	8.97	8.80	8.52	6.94	8.44	8.45	8.43	8.57	8.84	
25	8.75	8.86	8.89	8.26	8.38	8.89	8.12	8.60	8.58	8.33	8.62	8.59	
26	8.99	8.86	8.94	8.87	8.37	8.77	8.34	8.57	7.81	8.56	8.90	8.99	
27	8.78	8.87	7.78	8.73	8.79	8.78	8.57	8.65	8.55	8.46	8.66	8.80	
28	8.93	8.80	8.87	8.94	8.76	8.69	8.74	8.55	8.58	8.70	8.51	8.55	
29	8.91	8.78	8.84	8.51	8.85	8.60	8.62	8.39	8.70	8.70	8.57	8.92	
30	8.95		8.69	8.85	8.68	8.73	8.74	8.66	8.41	8.60	8.57	8.81	
31	8.95		8.75		8.72		8.79	8.21		8.40		8.72	Annual Summary
Average	8.81	8.83	8.78	8.79	8.77	8.74	8.61	8.58	8.39	8.51	8.50	8.73	8.67
Minimum	8.19	8.45	7.78	8.26	8.37	8.34	6.94	7.21	7.22	8.10	7.86	8.49	6.94
Maximum	9.05	9.02	9.10	9.06	8.97	8.99	8.96	8.99	8.73	8.82	8.90	8.99	9.10
Total	273.18	255.99	272.10	263.80	271.96	262.19	266.92	266.08	251.65	263.81	255.13	270.68	3,173

South Metro Interceptor[8] Flows (mgd) 2008

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	1.41	1.55	1.32	1.66	1.69	1.80	1.67	1.71	1.60	1.54	1.68	1.46	
2	1.75	1.54	1.66	1.57	1.86	1.62	1.59	1.76	1.51	1.57	1.65	1.82	
3	1.42	1.55	1.33	1.48	1.73	1.72	1.76	1.51	1.89	1.45	1.67	1.74	
4	1.58	1.45	1.51	1.69	1.74	1.74	1.50	1.80	1.68	1.63	1.74	1.51	
5	1.71	1.48	1.60	1.51	1.75	1.85	1.66	1.79	1.62	1.53	1.68	1.65	
6	1.55	1.16	1.42	1.61	1.97	1.84	1.52	1.75	1.62	1.65	1.67	1.59	
7	1.60	1.25	1.57	1.50	1.93	1.67	1.63	1.68	1.66	1.57	1.64	1.46	
8	1.58	1.30	1.37	1.61	1.84	1.84	1.61	1.74	1.56	1.55	1.57	1.56	
9	1.68	1.42	1.46	1.50	1.78	1.75	1.73	1.54	1.61	1.50	1.56	1.58	
10	1.46	1.48	1.61	1.64	1.82	1.78	1.64	1.83	1.62	1.62	1.60	1.72	
11	1.63	1.29	1.76	1.68	1.84	1.78	1.70	1.74	1.49	1.69	1.52	1.46	
12	1.64	1.64	1.68	1.63	1.67	1.89	1.61	1.75	1.63	1.64	1.57	1.75	
13	1.45	1.48	1.52	1.63	1.87	1.65	1.64	1.84	1.38	1.55	1.67	1.50	
14	1.66	1.54	1.64	1.64	1.88	1.75	1.79	1.80	1.76	1.70	1.48	1.58	
15	1.69	1.45	1.59	1.67	1.85	1.65	1.52	1.72	1.54	1.49	1.53	1.61	
16	1.46	1.51	1.71	1.64	1.86	1.75	1.88	1.81	1.68	1.64	1.60	1.71	
17	1.63	1.58	1.68	1.58	1.84	1.77	1.57	1.77	1.59	1.73	1.58	1.56	
18	1.56	1.49	1.53	1.66	1.76	1.66	1.75	1.92	1.71	1.68	1.64	1.78	
19	1.58	1.54	1.35	1.67	1.82	1.90	1.71	1.89	1.58	1.42	1.70	1.91	
20	1.62	1.46	1.45	1.77	1.79	1.75	1.71	1.77	1.68	1.69	1.53	1.65	
21	1.48	1.57	1.38	1.75	1.84	1.64	1.68	1.86	1.74	2.11	1.53	1.44	
22	1.79	1.47	1.57	1.84	1.91	1.83	1.65	1.83	1.44	2.29	1.47	1.73	
23	1.68	1.73	1.60	1.81	1.83	1.70	1.73	1.82	1.72	1.99	1.60	1.48	
24	1.57	1.38	1.60	1.83	1.76	1.70	0.19	1.89	1.58	1.65	1.70	1.76	
25	1.65	1.47	1.47	1.58	1.83	1.70	1.57	1.74	1.68	1.65	1.73	1.57	
26	1.47	1.62	1.72	1.65	1.77	1.71	1.75	1.79	1.63	1.45	1.60	1.58	
27	1.57	1.47	1.55	1.69	1.82	1.60	1.55	1.77	1.62	1.63	1.64	1.72	
28	1.47	1.56	1.51	1.62	1.85	1.67	1.68	1.76	1.54	1.65	1.56	1.52	
29	1.58	1.55	1.62	1.71	1.83	1.67	1.73	1.65	1.54	1.73	1.56	1.57	
30	1.63		1.55	1.82	1.82	1.60	1.71	1.59	1.78	1.72	1.61	1.74	
31	1.37		1.49		1.68		1.72	1.80		1.80		1.55	Annual Summary
Average	1.59	1.48	1.54	1.65	1.81	1.73	1.62	1.76	1.62	1.66	1.61	1.62	1.64
Minimum	1.37	1.16	1.32	1.48	1.67	1.60	0.19	1.51	1.38	1.42	1.47	1.44	0.19
Maximum	1.79	1.73	1.76	1.84	1.97	1.90	1.88	1.92	1.89	2.29	1.74	1.91	2.29
Total	48.92	42.98	47.82	49.64	56.23	51.98	50.15	54.62	48.68	51.51	48.28	50.26	601

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



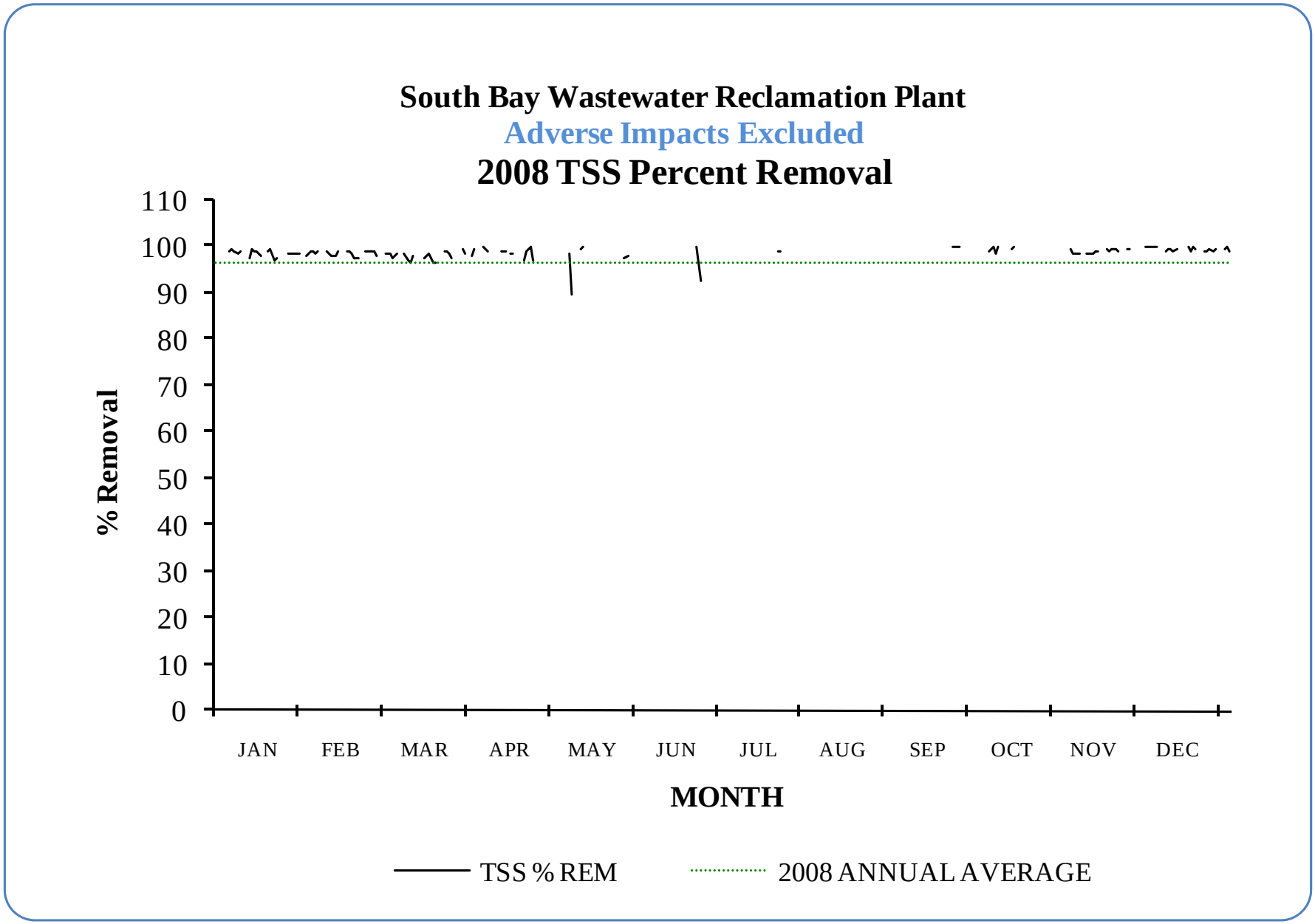
- The Jan 21 1,260 value for influent is off-scale.

Daily TSS values – 2008

Adverse Impacts Excluded

	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	260	6.0		8.0		3.0	232		188		326		335				288		278				296	ND
2		4.1		3.0	206	2.8	323	6.4			296	5.8	287				214	4.4	280				270	ND
3	247	2.3	128	2.8	246	3.5	366	2.5			296		324		268		89				312	1.7	256	ND
4		2.2	302	3.2	224	3.8			313		342				362		222				238	3.3	216	ND
5		2.1	324	3.1	238	5.8			293	1.7	362	11.0			294				256	2.5	244	3.9		ND
6	282	3.4	368	5.1	248	3.8	271	ND	156			2.5	113		272				262	ND	302	4.3		ND
7	342	1.7	318	3.9		7.2	299	1.6	258	4.1			204		150		298		234	3.6		1.9	250	2.3
8	256	2.4		3.7		4.3	283	3.4	297	31.0	276		319				276		268	ND		1.9	262	1.8
9	233	3.1		3.3	244	3.6	316			2.6	209	2.7	333	12.8			362		281		290	4.2	266	1.7
10	283	2.5	456	4.6	256	7.3	320				307		325		304		302			ND	186	2.9	252	2.5
11		1.7	280	3.8	205	7.5			312	2.1	359			2.7	246		270				276	4.1	344	1.9
12		2.1	292	5.8	270	5.7		2.9	300	ND	270				274				278		260	2.6		2.0
13	184	5.0	330	6.3	255		289	3.4	305				269		273				258	1.8	290	2.4		1.5
14	368	2.7	416	3.4			313	3.4	279			7.7	316		310		266		290	ND		2.0		1.6
15	308	2.4		4.3			330		290		179		277	46.0			252	1.9	284			1.8	372	ND
16	278	3.1		3.0	258	7.0	315	4.1		7.0	260		278				278		278		390	1.6	290	2.2
17	310	6.0	248	3.0	235	4.4	298	4.5			217		304		294		302			4.4	210	2.2	286	ND
18		8.5	258	2.9	250	3.8		2.1	367	ND	242				318		314			4.0	324	2.2	290	1.7
19		8.4	310	4.5	256	8.6			330		354				214	ND		ND	288	ND	264	1.9		2.2
20	554	6.0	266	7.1	163	5.6	221		392				270		60				294		274	2.8		1.7
21	1260	6.3	270	6.1		4.5	229	6.8	315				254	2.9	334		266		206	ND		2.3	290	2.5
22	310	10.0		3.8		4.0	170	2.0	316	7.4	329		316	2.7			239	ND	246			2.1	246	2.6
23	270	6.3		3.2	287	2.5	260	ND		20.0	365	26.9	342				274	ND	222		306	1.8	274	1.9
24		5.2	272	3.3	248	2.3	312	9.7			299		270		258		288	ND			288	1.9	284	2.7
25		4.8	244	2.8	272	4.7			227	ND	334				248	ND	266			ND	248		286	1.7
26		4.9	236	2.8	312	7.5		ND	323		378				230				250	ND	312			2.4
27	266	4.4	290	2.9	310		173	5.8	361	8.7			294		300				246		276	2.1		1.6
28	250	4.3	262	5.2		2.1	284		346	6.1			314		272		280		272	ND		2.2	284	2.0
29	289	4.6		4.2		1.5	289		324		370		316				284		296			ND	250	ND
30	248	3.5			309	1.6	293	9.2			353		296				244		224	ND	406	ND	280	2.2
31	288	5.0			293	3.9							270		251								258	2.0
Ave	337	4.4	294	4.1	254	4.5	281	3.8	300	7.0	306	9.4	288	13.4	263	0.0	267	1.1	263	1.1	285	2.3	277	1.4
Min	184	1.7	128	2.8	163	1.5	170	0.0	156	0.0	179	2.5	113	2.7	60	0.0	89	0.0	206	0.0	186	0.0	216	0.0
Max	1260	10.0	456	8.0	312	8.6	366	9.7	392	31.0	378	26.9	342	46.0	362	0.0	362	4.4	296	4.4	406	4.3	372	2.7

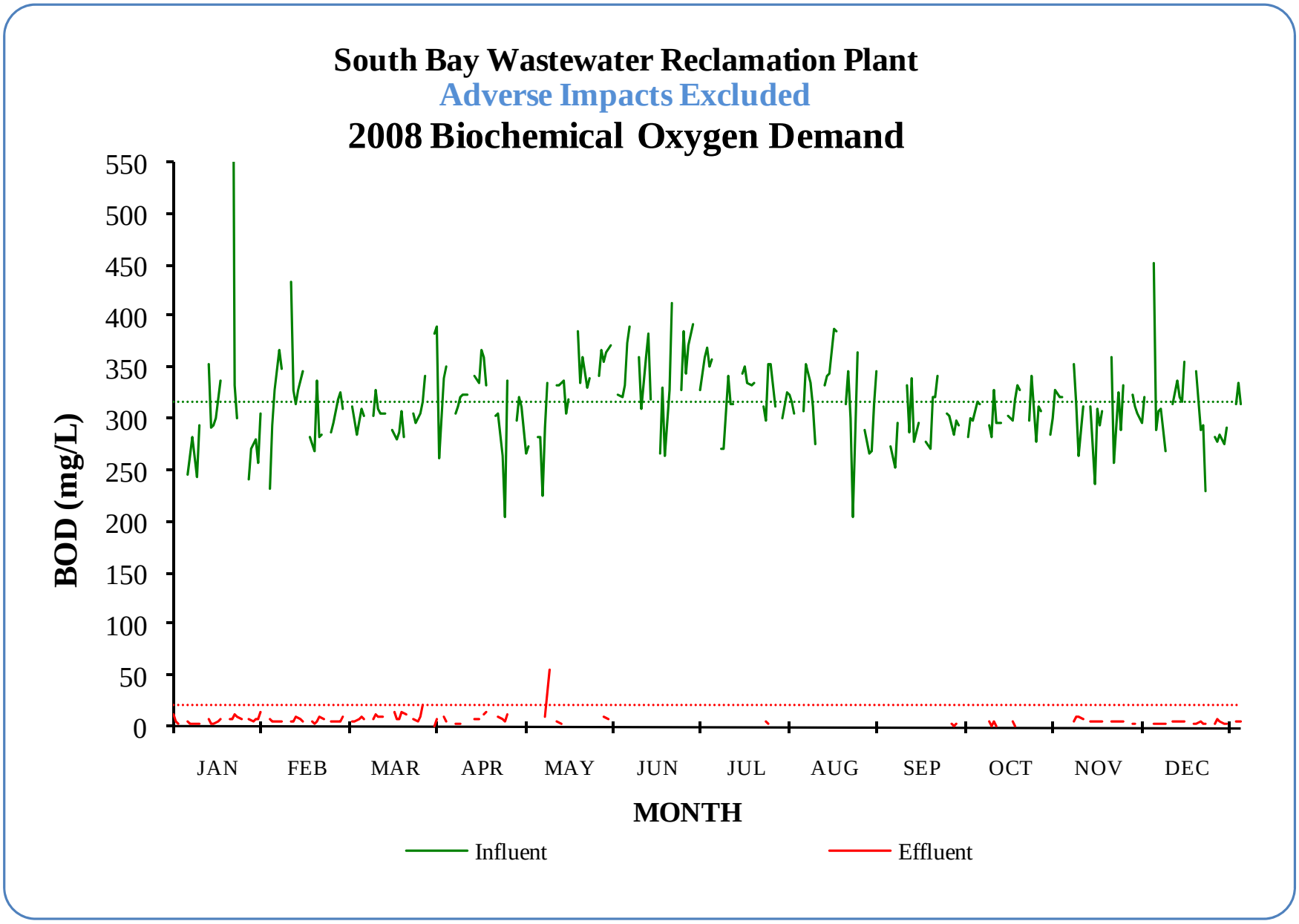
Annual Summary	
Influen	Effluent
285	4.37
59.7	0.00
1260	46.0


South Bay Wastewater Reclamation Plant
Adverse Impacts Excluded
2008 TSS Percent Removal
% Removal
110
100
90
80
70
60
50
40
30
20
10
0
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
MONTH
TSS % REM
2008 ANNUAL AVERAGE

2008 TSS Percent Removals

Adverse Impacts Excluded

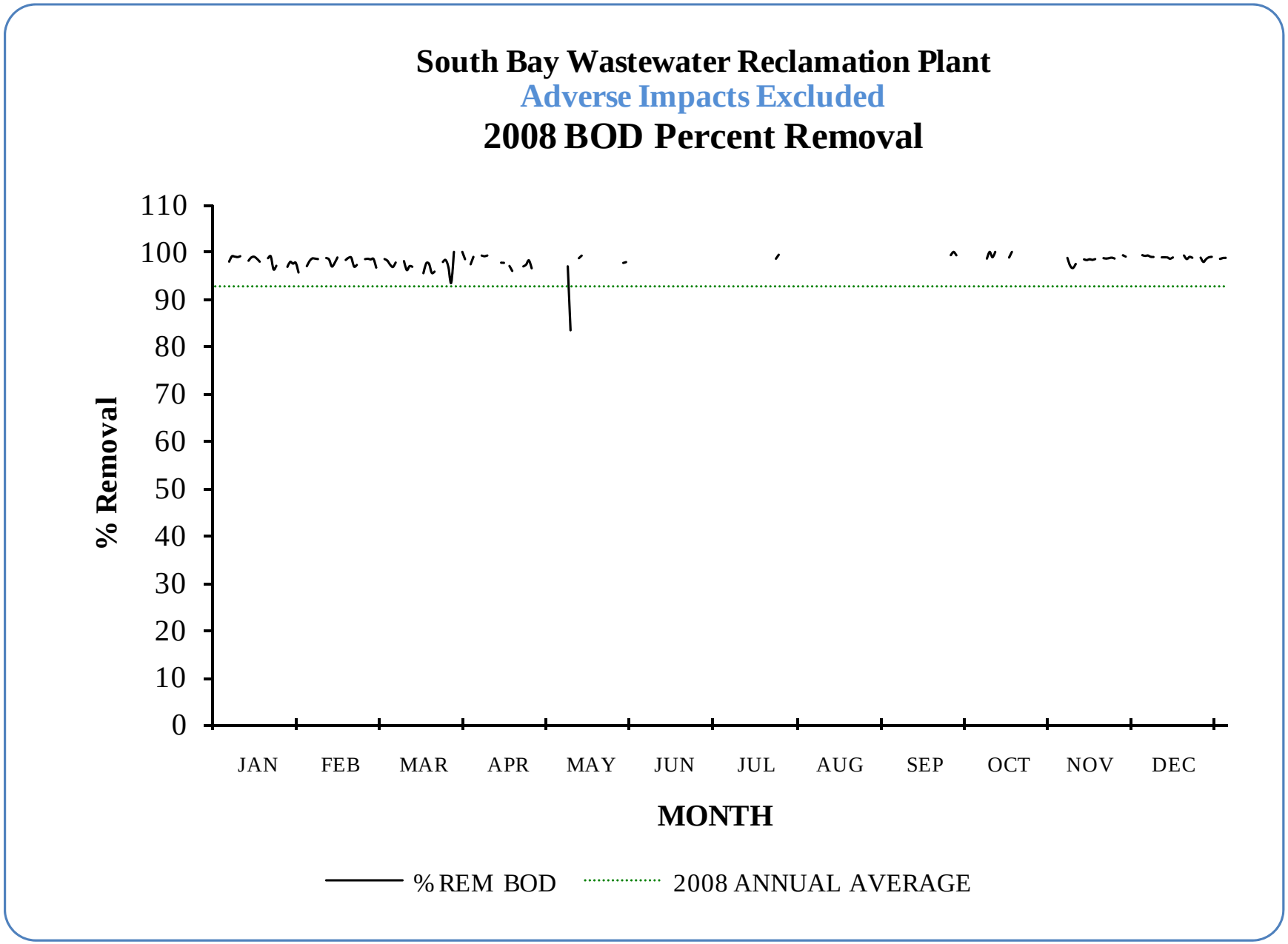
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	97.7											100.0	
2			98.6	98.0		98.0			97.9			100.0	
3	99.1	97.8	98.6	99.3							99.5	100.0	
4		98.9	98.3								98.6	100.0	
5		99.0	97.6		99.4	97.0				99.0	98.4		
6	98.8	98.6	98.5	100.0						100.0	98.6		
7	99.5	98.8		99.5	98.4					98.5		99.1	
8	99.1			98.8	89.6					100.0		99.3	
9	98.7		98.5			98.7	96.2				98.6	99.4	
10	99.1	99.0	97.2								98.4	99.0	
11		98.6	96.3		99.3						98.5	99.4	
12		98.0	97.9		100.0						99.0		
13	97.3	98.1		98.8						99.3	99.2		
14	99.3	99.2		98.9						100.0			
15	99.2						83.4		99.2			100.0	
16	98.9		97.3	98.7							99.6	99.2	
17	98.1	98.8	98.1	98.5							99.0	100.0	
18		98.9	98.5		100.0						99.3	99.4	
19		98.5	96.6					100.0		100.0	99.3		
20	98.9	97.3	96.6								99.0		
21	99.5	97.7		97.0			98.9			100.0		99.1	
22	96.8			98.8	97.6		99.1		100.0			98.9	
23	97.7		99.1	100.0		92.6			100.0		99.4	99.3	
24		98.8	99.1	96.9					100.0		99.3	99.0	
25		98.9	98.3		100.0			100.0				99.4	
26		98.8	97.6							100.0			
27	98.3	99.0		96.6	97.6						99.2		
28	98.3	98.0			98.2					100.0		99.3	
29	98.4											100.0	
30	98.6		99.5	96.9						100.0	100.0	99.2	
31	98.3		98.7									99.2	Annual Summary
Average	98.5	98.5	98.0	98.5	98.0	96.6	94.4	100.0	99.4	99.7	99.0	99.5	98.4
Minimum	96.8	97.3	96.3	96.6	89.6	92.6	83.4	100.0	97.9	98.5	98.4	98.9	83.4
Maximum	99.5	99.2	99.5	100.0	100.0	98.7	99.1	100.0	100.0	100.0	100.0	100.0	100.0


South Bay Wastewater Reclamation Plant
Adverse Impacts Excluded
2008 Biochemical Oxygen Demand
BOD (mg/L)
550
500
450
400
350
300
250
200
150
100
50
0
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
MONTH
Influent
Effluent

Daily BOD Values 2008

Adverse Impacts Excluded

	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	290	10.9					261		274		324		370						316				288	2.4		
2		3.5			311	4.7	339	8.8			320	9.2	352				274	5.5	314				308	2.3		
3	304	2.3	232	7.0	299	5.5	352	3.7			333		358		308		252				353	4.5	310	3.2		
4			293	5.6	284	7.6			281		375				354		295				315	9.2	268	2.9		
5			329	4.5	310	9.8			282	4.6	389	10.8			334				294	4.1	264	9.0				
6	246	5.0	368	5.2	303	6.8	306	2.4	224				270		313				281	ND	312	7.9				
7	264	2.5	348	5.2			313	2.9	292	8.9			270		275		332		329	3.7			314	3.6		
8	282	2.8					322	2.4	334	55.2	360		342				287		295				337	3.9		
9	244	2.6			302	5.9	324				309	2.7	314	14.6			339		296		313	4.9	320	3.7		
10	293	2.7	434	5.6	327	12.5	323				361		314		333		278				237	4.1	316	4.5		
11			328	5.2	309	9.3			333	4.4	382				342		295				309	4.8	355	4.1		
12			314	9.6	304	9.5			333	2.6	319				344				303		294	4.9				
13	354	6.5	327	7.7	305		341	7.7	337				343		387				299	3.5	308	4.7				
14	292	3.4	346	4.1			334	7.7	305				351		386		277		319	ND				2.4		
15	293	3.0					368		318		267		336	57.4			271	2.1	333				346	2.6		
16	300	4.3			288	12.9	361	10.7			331		332				320		327		360	4.7	288	4.3		
17	338	6.9	281	4.7	280	6.7	332	13.3			263		336		315		322				257	3.6	294	3.1		
18			268	3.3	286	7.1			385	3.2	329				347		342				326	4.3	229	2.8		
19			337	4.0	308	13.6			334		412				300	3.2			297	ND	289	3.5				
20	562	7.4	282	8.7	281	11.7	303		359				311		205				342		332	4.6				
21	856	8.0	285	7.8			305	9.3	331				299	4.3	364		305		278	2.1			282	3.4		
22	332	12.2					263	7.0	339	10.9	329		354	2.1			302	2.1	313				278	5.9		
23	300	8.8			306	6.5	204	3.6			386	61.8	354				285	ND	308		323	2.3	285	4.3		
24		6.8	286	4.3	296	5.0	337	11.6			344		312		289		298	2.1			313	3.1	276	3.1		
25			295	4.2	304	9.7			341	4.5	372				266	3.6	294				306		291	3.0		
26			318	5.0	316	20.6			368		393				268				285	2.1	296					
27	240	7.5	325	4.8	342		297	21.8	355	8.2			300		314				301		320	3.3				
28	271	5.7	309	###			321		365	7.8			325		347		283		328	3.6			315	4.6		
29	280	6.9					313		372		327		323				300		322				334	4.3		
30	256	5.9			383	ND	267	20.7			359		317				297		320	3.2	453	3.1	315	3.9	Annual	Summary
31	305	13.2			390	5.9							306										242	3.5	Influen	Effluent
Ave	329	6.0	315	5.8	311	8.6	313	8.9	327	11.0	345	21.1	326	19.6	320	3.4	298	2.4	309	2.2	314	4.8	300	3.6	317	8.1
Min	240	2.3	232	3.3	280	0.0	204	2.4	224	2.6	263	2.7	270	2.1	205	3.2	252	2.1	278	0.0	237	2.3	229	2.3	204	0.00
Max	856	13.2	434	###	390	20.6	368	21.8	385	55.2	412	61.8	370	57	387	4	342	5.5	342	4.1	453	9.2	355	5.9	856	62


South Bay Wastewater Reclamation Plant
Adverse Impacts Excluded
2008 BOD Percent Removal
% Removal
110
100
90
80
70
60
50
40
30
20
10
0
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
MONTH
% REM BOD
2008 ANNUAL AVERAGE

2008 BOD Percent Removals

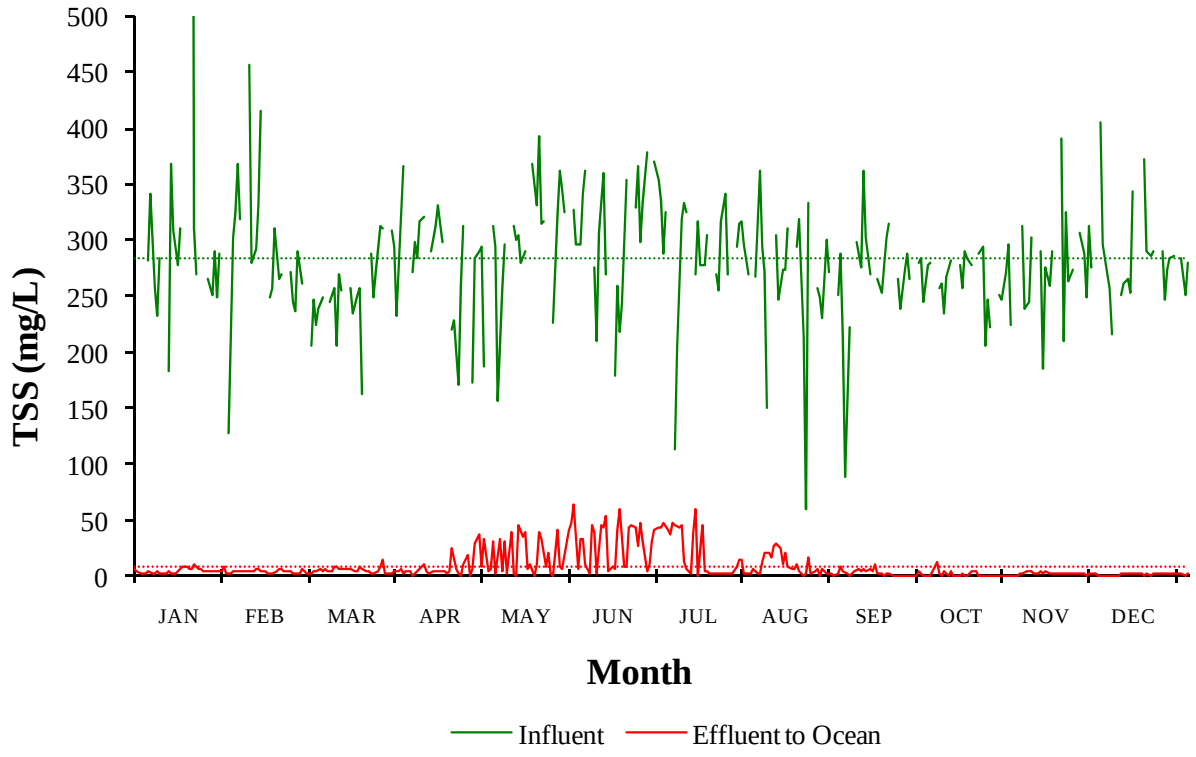
Adverse Impacts Excluded

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	96.2											99.2	
2			98.5	97.4		97.1			98.0			99.2	
3	99.2	97.0	98.2	99.0							98.7	99.0	
4		98.1	97.3								97.1	98.9	
5		98.6	96.8		98.4	97.2				98.6	96.6		
6	98.0	98.6	97.8	99.2						100.0	97.5		
7	99.1	98.5		99.1	97.0					98.9			
8	99.0			99.2	83.5					100.0		98.9	
9	98.9		98.1			99.1	95.4				98.4	98.8	
10	99.1	98.7	96.2								98.3	98.6	
11		98.4	97.0		98.7						98.5	98.8	
12		96.9	96.9		99.2						98.3		
13	98.2	97.7		97.7						98.8	98.5		
14	98.8	98.8		97.7						100.0			
15	99.0						82.9		99.2				
16	98.6		95.5	97.0							98.7	98.5	
17	98.0	98.3	97.6	96.0							98.6	99.0	
18		98.8	97.5		99.2						98.7	98.8	
19		98.8	95.6					98.9		100.0	98.8		
20	98.7	96.9	95.8								98.6		
21	99.1	97.3		97.0			98.6			99.2			
22	96.3			97.3	96.8		99.4		99.3			97.9	
23	97.1		97.9	98.2		84.0			100.0		99.3	98.5	
24		98.5	98.3	96.6					99.3		99.0	98.9	
25		98.6	96.8		98.7			98.7				99.0	
26		98.4	93.5							99.3			
27	96.9	98.5		92.7	97.7						99.0		
28	97.9	96.7			97.9					98.9			
29	97.5											98.7	
30	97.7		100.0	92.2						99.0	99.3	98.7	
31	95.7		98.5									98.6	Annual Summary
Average	98.0	98.1	97.2	97.1	96.7	94.4	94.1	98.8	99.2	99.3	98.4	98.8	97.5
Minimum	95.7	96.7	93.5	92.2	83.5	84.0	82.9	98.7	98.0	98.6	96.6	97.9	82.9
Maximum	99.2	98.8	100.0	99.2	99.2	99.1	99.4	98.9	100.0	100.0	99.3	99.2	100.0

The Charts/Tables including the comprehensive set of uncharacteristic data follows. This data is reported for completeness, but we do not consider it an appropriate characterization of SBWRP Effluent.

South Bay Wastewater Reclamation Plant

2008 Total Suspended Solids

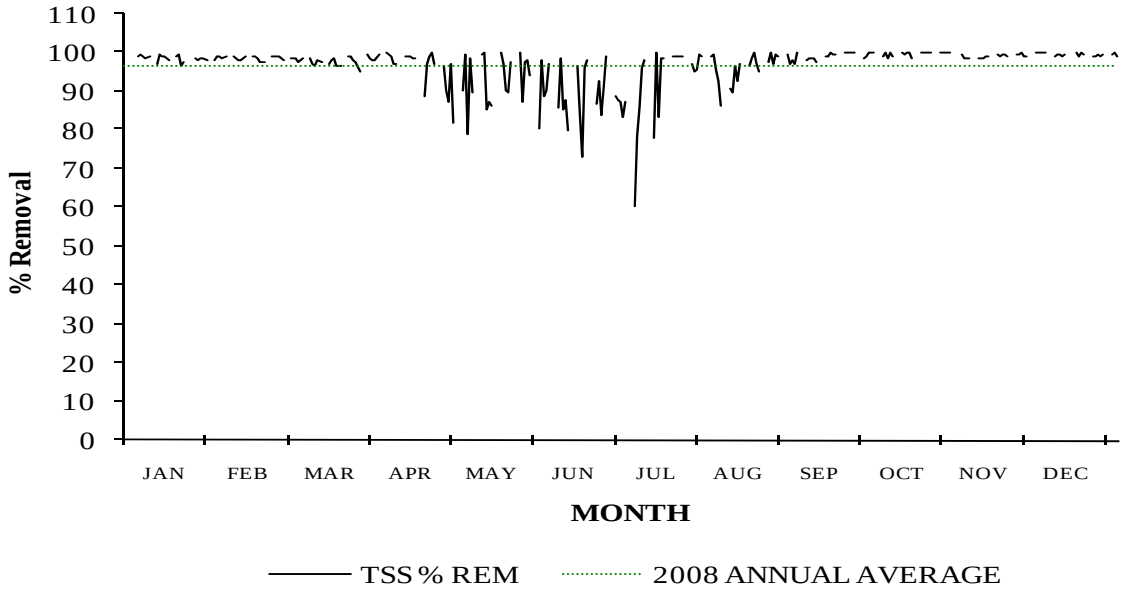


Daily TSS values – 2008 includes uncharacteristic data

	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	260	6.0		8.0		3.0	232	4.0	188	34.0	326	64.0	335	43.0		1.7	288	8.7	278	ND		ND	296	ND
2		4.1		3.0	206	2.8	323	6.4		4.1	296	5.8	287	48.0		5.6	214	4.4	280	ND		1.8	270	ND
3	247	2.3	128	2.8	246	3.5	366	2.5		5.8	296	34.0	324	41.3	268	2.0	89	2.8		3.2	312	1.7	256	ND
4		2.2	302	3.2	224	3.8		4.4	313	31.0	342	33.0		37.5	362	2.3	222	ND		11.5	238	3.3	216	ND
5		2.1	324	3.1	238	5.8		3.1	293	1.7	362	11.0		48.0	294	12.3		1.6	256	2.5	244	3.9		ND
6	282	3.4	368	5.1	248	3.8	271	ND	156	33.0		2.5	113	45.0	272	20.0		3.6	262	ND	302	4.3		ND
7	342	1.7	318	3.9		7.2	299	1.6	258	4.1		46.0	204	44.0	150	21.0	298	6.0	234	3.6		1.9	250	2.3
8	256	2.4		3.7		4.3	283	3.4	297	31.0	276	38.7	319	46.0		17.3	276	3.7	268	ND		1.9	262	1.8
9	233	3.1		3.3	244	3.6	316	8.7		2.6	209	2.7	333	12.8		27.0	362	5.4	281	3.3	290	4.2	266	1.7
10	283	2.5	456	4.6	256	7.3	320	9.6		40.0	307	46.0	325	5.6	304	29.0	302	4.4		ND	186	2.9	252	2.5
11		1.7	280	3.8	205	7.5		3.5	312	2.1	359	44.0		2.7	246	25.0	270	7.0		ND	276	4.1	344	1.9
12		2.1	292	5.8	270	5.7		2.9	300	ND	270	54.0		39.0	274	9.6		3.1	278		260	2.6		2.0
13	184	5.0	330	6.3	255	6.3	289	3.4	305	45.0		4.8	269	59.0	273	20.7		9.6	258	1.8	290	2.4		1.5
14	368	2.7	416	3.4		5.8	313	3.4	279	36.0		7.7	316		310	8.8	266	3.0	290	ND		2.0		1.6
15	308	2.4		4.3		5.3	330	3.2	290	40.0	179	6.2	277	46.0		6.4	252	1.9	284	ND		1.8	372	ND
16	278	3.1		3.0	258	7.0	315	4.1		7.0	260	41.0	278	3.9		6.3	278	ND	278	4.1	390	1.6	290	2.2
17	310	6.0	248	3.0	235	4.4	298	4.5		9.8	217	59.0	304	3.8	294	10.8	302	2.2		4.4	210	2.2	286	ND
18		8.5	258	2.9	250	3.8		2.1	367	ND	242	9.0		2.7	318	4.3	314	2.1		4.0	324	2.2	290	1.7
19		8.4	310	4.5	256	8.6		3.6	330	9.3	354	7.8		2.8	214	ND		ND	288	ND	264	1.9		2.2
20	554	6.0	266	7.1	163	5.6	221	25.0	392	39.0		43.5	270	2.7	60	1.9		ND	294	ND	274	2.8		1.7
21	1260	6.3	270	6.1		4.5	229	6.8	315	32.0		45.6	254	2.9	334	16.0	266	ND	206	ND		2.3	290	2.5
22	310	10.0		3.8		4.0	170	2.0	316	7.4	329	43.0	316	2.7		2.2	239	ND	246	ND		2.1	246	2.6
23	270	6.3		3.2	287	2.5	260	ND		20.0	365	26.9	342	2.6		3.1	274	ND	222	ND	306	1.8	274	1.9
24		5.2	272	3.3	248	2.3	312	9.7		2.2	299	48.0	270	2.6	258	5.8	288	ND		ND	288	1.9	284	2.7
25		4.8	244	2.8	272	4.7		19.1	227	ND	334	30.0		2.1	248	ND	266	ND		ND	248	ND	286	1.7
26		4.9	236	2.8	312	7.5		ND	323	42.0	378	4.1		2.2	230	7.1		ND	250	ND	312	3.0		2.4
27	266	4.4	290	2.9	310	15.3	173	5.8	361	8.7		11.3	294	8.0	300	1.6		ND	246	ND	276	2.1		1.6
28	250	4.3	262	5.2		2.1	284	28.5	346	6.1		31.0	314	15.3	272	2.7	280	4.0	272	ND		2.2	284	2.0
29	289	4.6		4.2		1.5	289	37.5	324	19.0	370	42.0	316	13.5		1.7	284	2.7	296	ND		ND	250	ND
30	248	3.5			309	1.6	293	9.2		42.0	353	43.0	296	1.8		ND	244	ND	224	ND	406	ND	280	2.2
31	288	5.0			293	3.9				48.0			270	2.7	251	1.5				ND			258	2.0
Ave	331	4.3	294	4.1	258	4.9	282	8.1	300	23.1	308	30.0	288	18.6	263	9.5	266	4.2	262	4.3	291	2.5	277	2.0
Min	184	1.7	128	2.8	163	1.5	170	1.6	156	1.7	179	2.5	113	1.8	60	1.5	89	1.6	206	1.8	186	1.6	216	1.5
Max	1260	10.0	456	8.0	312	15.3	366	37.5	392	48.0	378	64.0	342	59.0	362	29.0	362	9.6	296	11.5	406	4.3	372	2.7

Annual Summary	
Influent	Effluent
285	9.63
59.7	1.50
1260	64.0

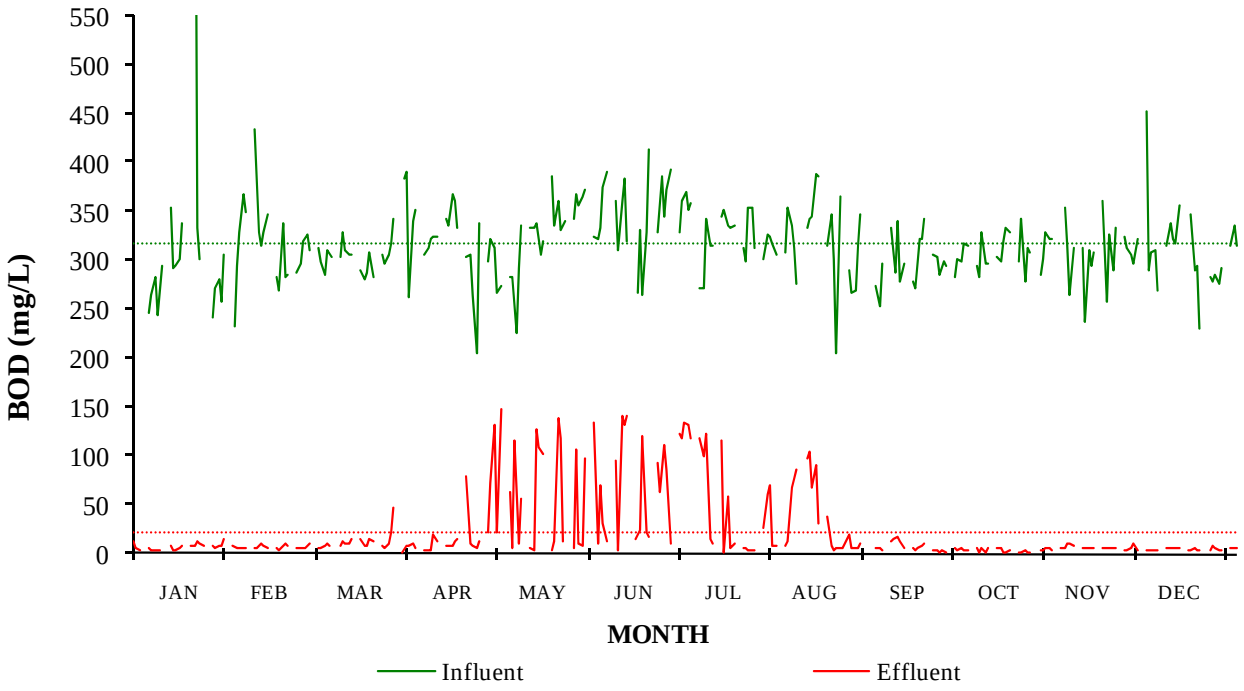
South Bay Wastewater Reclamation Plant
2008 TSS Percent Removal



2008 TSS Percent Removals - includes uncharacteristic data

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	97.7			98.3	81.9	80.4	87.2		97.0	100.0		100.0	
2			98.6	98.0		98.0	83.3		97.9	100.0		100.0	
3	99.1	97.8	98.6	99.3		88.5	87.3	99.3	96.9		99.5	100.0	
4		98.9	98.3		90.1	90.4		99.4	100.0		98.6	100.0	
5		99.0	97.6		99.4	97.0		95.8		99.0	98.4		
6	98.8	98.6	98.5	100.0	78.8		60.2	92.6		100.0	98.6		
7	99.5	98.8		99.5	98.4		78.4	86.0	98.0	98.5		99.1	
8	99.1			98.8	89.6	86.0	85.6		98.7	100.0		99.3	
9	98.7		98.5	97.2		98.7	96.2		98.5	98.8	98.6	99.4	
10	99.1	99.0	97.2	97.0		85.0	98.3	90.5	98.6		98.4	99.0	
11		98.6	96.3		99.3	87.7		89.8	97.4		98.5	99.4	
12		98.0	97.9		100.0	80.0		96.5		100.0	99.0		
13	97.3	98.1	97.5	98.8	85.2		78.1	92.4		99.3	99.2		
14	99.3	99.2		98.9	87.1		100.0	97.2	98.9	100.0			
15	99.2			99.0	86.2	96.6	83.4		99.2	100.0		100.0	
16	98.9		97.3	98.7		84.2	98.6		100.0	98.5	99.6	99.2	
17	98.1	98.8	98.1	98.5		72.8	98.8	96.3	99.3		99.0	100.0	
18		98.9	98.5		100.0	96.3		98.7	99.3		99.3	99.4	
19		98.5	96.6		97.2	97.8		100.0		100.0	99.3		
20	98.9	97.3	96.6	88.7	90.1		99.0	96.8		100.0	99.0		
21	99.5	97.7		97.0	89.8		98.9	95.2	100.0	100.0		99.1	
22	96.8			98.8	97.6	86.9	99.1		100.0	100.0		98.9	
23	97.7		99.1	100.0		92.6	99.2		100.0	100.0	99.4	99.3	
24		98.8	99.1	96.9		83.9	99.0	97.8	100.0		99.3	99.0	
25		98.9	98.3		100.0	91.0		100.0	100.0		100.0	99.4	
26		98.8	97.6		87.0	98.9		96.9		100.0	99.0		
27	98.3	99.0	95.1	96.6	97.6		97.3	99.5		100.0	99.2		
28	98.3	98.0		90.0	98.2		95.1	99.0	98.6	100.0		99.3	
29	98.4			87.0	94.1	88.6	95.7		99.0	100.0		100.0	
30	98.6		99.5	96.9		87.8	99.4		100.0	100.0	100.0	99.2	
31	98.3		98.7				99.0					99.2	Annual Summary
Average	98.5	98.5	97.9	97.0	92.8	89.5	92.0	96.0	99.0	99.7	99.1	99.5	96.6
Minimum	96.8	97.3	95.1	87.0	78.8	72.8	60.2	86.0	96.9	98.5	98.4	98.9	60.2
Maximum	99.5	99.2	99.5	100.0	100.0	98.9	100.0	100.0	100.0	100.0	100.0	100.0	100.0

South Bay Wastewater Reclamation Plant
2008 Biochemical Oxygen Demand

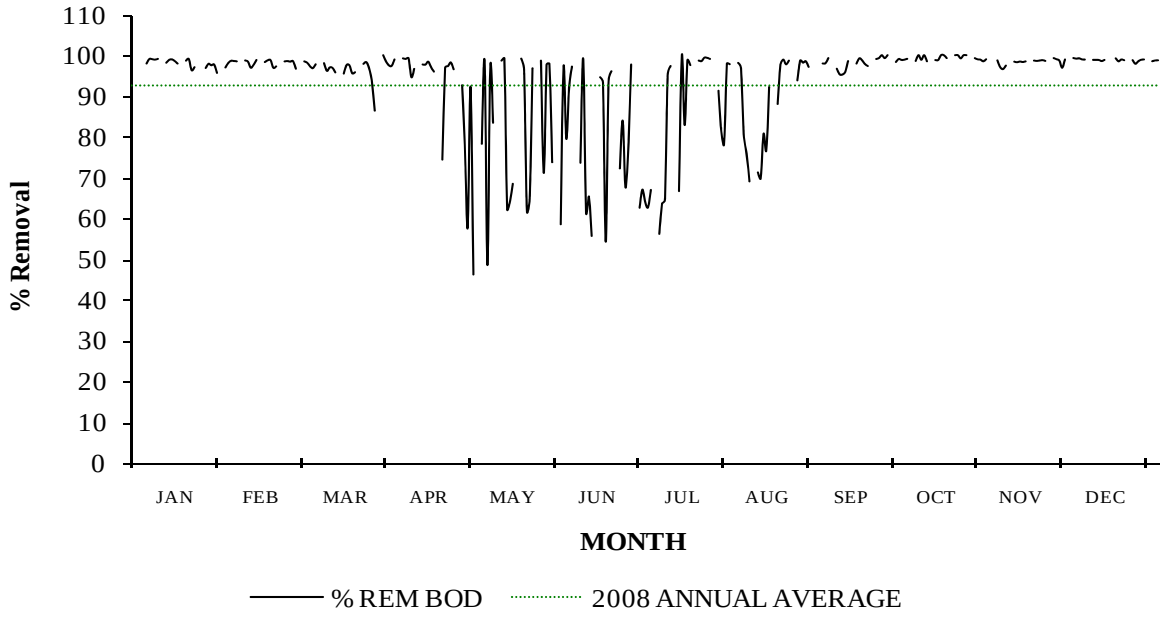


Daily BOD Values 2008 - includes uncharacteristic data

	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	290	10.9					261	6.4	274	147	324	134	370	133					316	3.4			288	2.4
2		3.5			311	4.7	339	8.8			320	9.2	352	131			274	5.5	314	2.8		4.3	308	2.3
3	304	2.3	232	7.0	299	5.5	352	3.7			333	68.1	358	118	308	5.8	252	4.9			353	4.5	310	3.2
4			293	5.6	284	7.6			281	60.9	375	29.0			354	11.1	295	2.1			315	9.2	268	2.9
5			329	4.5	310	9.8			282	4.6	389	10.8			334	65.6			294	4.1	264	9.0		
6	246	5.0	368	5.2	303	6.8	306	2.4	224	115			270	118	313	75.4			281	ND	312	7.9		
7	264	2.5	348	5.2			313	2.9	292	8.9			270	97.9	275	84.9	332	11.0	329	3.7			314	3.6
8	282	2.8					322	2.4	334	55.2	360	94.7	342	121.0			287	13.4	295				337	3.9
9	244	2.6			302	5.9	324	17.4			309	2.7	314	14.6			339	16.0	296	4.4	313	4.9	320	3.7
10	293	2.7	434	5.6	327	12.5	323	10.8			361	139	314	8.3	333	95.5	278	11.3			237	4.1	316	4.5
11			328	5.2	309	9.3			333	4.4	382	132			342	103	295	4.3			309	4.8	355	4.1
12			314	9.6	304	9.5			333	2.6	319	141			344	66.3			303	3.6	294	4.9		
13	354	6.5	327	7.7	305	12.8	341	7.7	337	127			343	114	387	89.7			299	3.5	308	4.7		
14	292	3.4	346	4.1			334	7.7	305	109			351		386	30.0	277	5.7	319	ND				2.4
15	293	3.0					368	5.9	318	100	267	14.4	336	57.4			271	2.1	333	ND			346	2.6
16	300	4.3			288	12.9	361	10.7			331	22.0	332	4.1			320	4.1	327	2.3	360	4.7	288	4.3
17	338	6.9	281	4.7	280	6.7	332	13.3			263	120	336	8.1	315	37.6	322	7.0			257	3.6	294	3.1
18			268	3.3	286	7.1			385	3.2	329	20.2			347	7.9	342	9.1			326	4.3	229	2.8
19			337	4.0	308	13.6			334	11.9	412	16.2			300	3.2			297	ND	289	3.5		
20	562	7.4	282	8.7	281	11.7	303	77.4	359	137			311	4.1	205	4.6			342	ND	332	4.6		
21	856	8.0	285	7.8			305	9.3	331	116			299	4.3	364	4.8	305	2.8	278	2.1			282	3.4
22	332	12.2					263	7.0	339	10.9	329	91.1	354	2.1		4.5	302	2.1	313	ND			278	5.9
23	300	8.8			306	6.5	204	3.6			386	61.8	354	2.3		10.2	285	ND	308	ND	323	2.3	285	4.3
24		6.8	286	4.3	296	5.0	337	11.6			344	111	312	2.9	289	17.8	298	2.1			313	3.1	276	3.1
25			295	4.2	304	9.7			341	4.5	372	84.9			266	3.6	294	ND			306	4.1	291	3.0
26			318	5.0	316	20.6			368	106	393	9.0			268	4.9			285	2.1	296	9.1		
27	240	7.5	325	4.8	342	46.4	297	21.8	355	8.2			300	26.1	314	4.6			301	3.1	320	3.3		
28	271	5.7	309	10.2			321	72.2	365	7.8			325	60.6	347	9.9	283	4.7	328	3.6			315	4.6
29	280	6.9					313	132	372	97.4	327	122	323	70.0			300	2.8	322	4.8			334	4.3
30	256	5.9			383	ND	267	20.7			359	118	317	6.6			297	3.5	320	3.2	453	3.1	315	3.9
31	305	13.2			390	5.9							306	6.7									242	3.5
Ave	329	6.0	315	5.8	311	10.5	313	20.7	327	58.9	345	70.5	326	50.5	320	33.7	298	5.4	309	2.2	314	4.9	300	3.6
Min	240	2.3	232	3.3	280	4.7	204	2.4	224	2.6	263	2.7	270	2.1	205	3.2	252	2.1	278	2.1	237	2.3	229	2.3
Max	856	13.2	434	10.2	390	46.4	368	132.0	385	147.0	412	141.0	370	133	387	103	342	16.0	342	4.8	453	9.2	355	5.9

Annual Summary	
Influent	Effluent
317	22.7
204	2.06
856	147

South Bay Wastewater Reclamation Plant
2008 BOD Percent Removal



BOD % Removal - includes uncharacteristic data

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	96.2			97.5	46.4	58.6	64.1			98.9		99.2	
2			98.5	97.4		97.1	62.8		98.0	99.1		99.2	
3	99.2	97.0	98.2	99.0		79.5	67.0	98.1	98.0		98.7	99.0	
4		98.1	97.3		78.3	92.3		96.9	99.3		97.1	98.9	
5		98.6	96.8		98.4	97.2		80.4		98.6	96.6		
6	98.0	98.6	97.8	99.2	48.7		56.3	75.9		100.0	97.5		
7	99.1	98.5		99.1	97.0		63.7	69.1	96.7	98.9			
8	99.0			99.2	83.5	73.7	64.6		95.3	100.0		98.9	
9	98.9		98.1	94.6		99.1	95.4		95.3	98.5	98.4	98.8	
10	99.1	98.7	96.2	96.7		61.5	97.4	71.3	95.9		98.3	98.6	
11		98.4	97.0		98.7	65.4		69.9	98.6		98.5	98.8	
12		96.9	96.9		99.2	55.8		80.7		98.8	98.3		
13	98.2	97.7	95.8	97.7	62.3		66.8	76.8		98.8	98.5		
14	98.8	98.8		97.7	64.3		100.0	92.2	98.0	100.0			
15	99.0			98.4	68.6	94.6	82.9		99.2	100.0			
16	98.6		95.5	97.0		93.4	98.8		98.7	99.3	98.7	98.5	
17	98.0	98.3	97.6	96.0		54.4	97.6	88.1	97.8		98.6	99.0	
18		98.8	97.5		99.2	93.9		97.7	97.4		98.7	98.8	
19		98.8	95.6		96.4	96.1		98.9		100.0	98.8		
20	98.7	96.9	95.8	74.5	61.8		98.7	97.8		100.0	98.6		
21	99.1	97.3		97.0	65.0		98.6	98.7	99.1	99.2			
22	96.3			97.3	96.8	72.3	99.4		99.3	100.0		97.9	
23	97.1		97.9	98.2		84.0	99.4		100.0	100.0	99.3	98.5	
24		98.5	98.3	96.6		67.7	99.1	93.8	99.3		99.0	98.9	
25		98.6	96.8		98.7	77.2		98.7	100.0		98.7	99.0	
26		98.4	93.5		71.2	97.7		98.2		99.3	96.9		
27	96.9	98.5	86.4	92.7	97.7		91.3	98.5		99.0	99.0		
28	97.9	96.7		77.5	97.9		81.4	97.1	98.3	98.9			
29	97.5			57.8	73.8	62.7	78.3		99.1	98.5		98.7	
30	97.7		100.0	92.2		67.1	97.9		98.8	99.0	99.3	98.7	
31	95.7		98.5				97.8					98.6	Annual Summary
Average	98.0	98.1	96.6	93.3	81.1	79.2	85.2	88.9	98.2	99.3	98.4	98.8	92.9
Minimum	95.7	96.7	86.4	57.8	46.4	54.4	56.3	69.1	95.3	98.5	96.6	97.9	46.4
Maximum	99.2	98.8	100.0	99.2	99.2	99.1	100.0	98.9	100.0	100.0	99.3	99.2	100.0

F. Toxicity Bioassays

Toxicity Testing: South Bay Water Reclamation Plant 2008

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 requirement is designed to determine the acute and chronic toxicity of effluent samples collected from the SBWRP. In accordance with the above Order, the City also conducts toxicity tests of 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 2008.

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

The acute toxicity tests were conducted on a quarterly schedule, while the chronic toxicity tests were conducted on a monthly schedule in 2008. 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.

In July 2007, a significant decrease in SBWRP discharge volume was observed concurrently with an increase in both acute and chronic effluent toxicity. Consequently, steps were taken to investigate whether backflow infiltration of the lesser treated IWTP effluent was contributing or causing contamination of the SB_Outfall_00 sampling site. Subsequent toxicity testing events were modified to test two discrete samples during the same time periods to assess the potential effects of IWTP infiltration.

One of the above samples was collected as described above from the SB_Outfall_00 site. The second sample, designated SB_Outfall_01, was a flow-proportioned composite sample taken from multiple upstream locations known to be free from hydraulic backflow during low SBWRP outflow (discharge) conditions. The latter sample is considered to accurately represent final SBWRP effluent. This parallel testing program continued into the current reporting period, and the last set of parallel samples was tested in May 2008.

All toxicity 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. Exposure concentrations for the chronic tests consisted of 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 2008).

SBWRP/IWTP 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.

The acute and chronic toxicity tests of combined effluent were both conducted quarterly in 2008. 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 2008).

Acute Bioassays

Topsmelt Survival Bioassay

The topsmelt acute bioassay was conducted in accordance with EPA/600/4-90/027F (USEPA 1993). Larval *Atherinops affinis* (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 software (Tidepool Scientific Software 2002) was used for all statistical analyses.

Mysid Survival Bioassay

The mysid acute bioassay was conducted in accordance with EPA/600/4-90/027F (USEPA 1993). Larval *Mysidopsis bahia* (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 software (Tidepool Scientific Software 2002) was used for all statistical analyses.

Chronic Bioassays

Red Abalone Development Bioassay

Chronic bioassays using the red abalone, *Haliotis rufescens*, were conducted in accordance with 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 abalone were placed in separate 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 software (Tidepool Scientific Software 2002) was used for all statistical analyses.

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). Kelp zoospores were obtained from the reproductive blades (sporophylls) of adult *Macrocystis* plants, which were collected from 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.

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 software (Tidepool Scientific Software 2002) was used for all statistical analyses.

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 a commercial vendor and exposed for seven days in a static-renewal system to effluent exposure series. 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 reference toxicant control consisting of SIO dilution water was also tested. Upon conclusion of the exposure period, percent survival and dry biomass were recorded.

The data were analyzed using ToxCalc (Tidepool ScientificSoftware, 2002) in accordance with the appropriate USEPA flowcharts for statistical analysis of topsmelt survival and growth test data by hypothesis testing and point estimation (USEPA 1995; pp.105-106).

RESULTS & DISCUSSION

Acute Toxicity of SBWRP Effluent

In accordance with Order No. R9-2006-0067 the City used the topsmelt to monitor acute SBWRP effluent toxicity through the second quarter of 2008. In addition, SB_Outfall_01 samples were collected and tested in parallel with the SB_Outfall_00 samples in March and May 2008 to assess the impact of reduced flow on acute toxicity. In September, a re-screening study was initiated to re-evaluate the sensitivity of topsmelt and mysids. The re-screening effort continued through the last quarter of 2008 and will be completed in the first quarter of 2009. All SBWRP effluent samples tested during the current reporting period were within NPDES permit performance goals (Table T.1).

Chronic Toxicity of SBWRP Effluent

In accordance with Order No. R9-2006-0067, the City conducted monthly red abalone chronic toxicity tests using samples collected from SB_Outfall_00. In addition, SB_Outfall_01 samples were collected and tested in parallel with the SB_Outfall_00 samples from January to May 2008 to assess the impact of reduced flow on chronic toxicity. In June, a re-screening study was initiated to re-evaluate the sensitivity of giant kelp, red abalone, and topsmelt. The results supported the continuing use of red abalone for subsequent routine monitoring. All chronic toxicity tests in 2008 were within NPDES permit performance goals (Table T.2).

Toxicity of SBWRP/IWTP Combined Effluent

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. However, due to a staff oversight, the chronic toxicity test was not conducted during the third quarter. Although this combined effluent testing is a requirement of the SBWRP monitoring program, there are no compliance limits or performance goals for these data.

In March 2008, the City also conducted a chronic re-screening study to compare the sensitivity of the giant kelp, red abalone, and topsmelt to the combined effluent. The results showed red abalone to be most sensitive species to combined effluent toxicity. Therefore, the City will use the red abalone for subsequent monitoring. The results for all combined effluent bioassays performed in 2008 are summarized in Tables T.3 and T.4.

REFERENCES

City of San Diego. (2008). Quality Assurance Manual for Bioassay Testing. Metropolitan Wastewater Department, Environmental Monitoring and Technical Services Division, San Diego, CA

Tidepool Scientific Software. (2002). ToxCalc Toxicity Information Management System Database Software

USEPA. (1993). Methods for Measuring Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms. Fourth Edition. C.I. Weber (ed). Environmental Monitoring and Support Laboratory, U.S. Environmental Protection Agency, Cincinnati, OH. EPA/600/4-90/027F

USEPA. (1995). Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms. Chapman, G.A., D.L. Denton, and J.M. Lazorchak (eds). Environmental Monitoring and Support Laboratory, U.S. Environmental Protection Agency, Cincinnati, OH, EPA/600/R-95/136

Table T.1
Results of acute toxicity tests of SBWRP effluent conducted quarterly in 2008. Data are presented as acute toxic units (TUa). The NPDES permit performance goal is 3.1 TUa.

Sample Date	Sample Site	Topsmelt 96-Hour Survival	Mysid 96-Hour Survival
3/16/2008	SB_Outfall_00	<1.6	-
3/16/2008	SB_Outfall_01	<1.6	-
5/18/2008	SB_Outfall_00	<1.6	-
5/18/2008	SB_Outfall_01	<1.6	-
9/7/2008	SB_Outfall_00	<1.6	<1.6
11/16/2008	SB_Outfall_00	<1.6	<1.6
N		6	2
No. in compliance		6	2
Mean TUa		<1.6	<1.6

Table T.2
Results of chronic toxicity testing of SBWRP effluent conducted monthly in 2008. Data are presented as chronic toxic units (TUc). NPDES permit performance goal is 95.6 TUc.

Sample Date	Sample Site	Giant Kelp		Red Abalone	Topsmelt	
		Germination	Growth	Development	Survival	Growth
1/7/2008	SB_Outfall_00	-	-	23.8	-	-
1/7/2008	SB_Outfall_01	-	-	23.8	-	-
2/24/2008	SB_Outfall_00	-	-	23.8	-	-
3/4/2008	SB_Outfall_00	-	-	23.8	-	-
3/4/2008	SB_Outfall_01	-	-	23.8	-	-
4/13/2008	SB_Outfall_00	-	-	23.8	-	-
4/13/2008	SB_Outfall_01	-	-	23.8	-	-
5/13/2008	SB_Outfall_00	-	-	95.2	-	-
5/13/2008	SB_Outfall_01	-	-	23.8	-	-
6/3/2008	SB_Outfall_00	23.8	23.8	47.6	23.8	23.8
7/7/2008	SB_Outfall_00	-	-	23.8	-	-
8/4/2008	SB_Outfall_00	-	-	23.8	-	-
9/2/2008	SB_Outfall_00	-	-	47.6	-	-
10/14/2008	SB_Outfall_00	-	-	23.8	-	-
11/4/2008	SB_Outfall_00	-	-	23.8	-	-
12/9/200/	SB_Outfall_00	-	-	23.8	-	-
N		1	1	16	1	1
No. in compliance		1	1	16	1	1
Mean TUc		23.8	23.8	31.2	23.8	23.8

Table T.3
Results of acute toxicity tests of SBWRP/IWTP combined effluent samples conducted in 2008. Data are presented as acute toxic units (TUa).

Sample Date	Topsmelt 96-Hour Survival
3/16/2008	3.8
6/22/2008	5.1
9/14/2008	5.6
10/19/2008	4.2

Table T.4
Results of chronic toxicity tests of SBWRP/IWTP combined effluent samples conducted in 2008. Data are presented as chronic toxic units (TUc).

Sample Date	Giant Kelp		Red Abalone	Topsmelt	
	Germination	Growth	Development	Survival	Growth
3/4/2008	23.8	95.2	47.6	23.8	23.8
7/7/2008	-	-	47.6	-	-
12/9/2008	-	-	384.6	-	-

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