

2015 Annual Report and Summary for the South Bay Wastewater Reclamation Plant & Ocean Outfall



NPDES No. CA 0109045
Order No. R9-2013-0006
&
Order No. 2000-203



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City of San Diego
Public Utilities Department

2015 Annual Report and Summary
for the
South Bay Wastewater
Reclamation Plant & Ocean Outfall

This report consists of the 2015 South Bay Water Reclamation Plant and Ocean Outfall Annual Reports and Summary, as specified in discharge Order No. R9-2013-0006, NPDES Permit No. CA0109045.

Section I is an Executive Summary providing general background information regarding the review and summary of findings and conclusions for 2015.

Section II through IX contain reports and information for 2015 as listed in the Table of Contents.

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City of San Diego
Public Utilities Department
Environmental Monitoring & Technical Services Division

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Credits and Acknowledgements

**South Bay Wastewater Reclamation Plant and Ocean Outfall Annual
Monitoring Report
2015**

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Introduction

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I. Introduction

A. Executive Summary:

Purpose:

This report meets the annual reporting requirements of Monitoring and Reporting Program (MRP) in Order No. R9-2013-0006 (NPDES Permit No. CA0109045), Order No. R9-2013-0006 superseded R9-2006-0067 on April 3, 2013. This report contains summaries for Order No. 2000-203 relating to the production and purveyance of recycled water at the South Bay Water Reclamation Plant (SBWRP). It also serves as an historical record and reference of operational and compliance metrics.

Background:

The South Bay Water Reclamation Plant (SBWRP) is located at the intersection of Dairy Mart and Monument Roads in the Tijuana River Valley. The plant relieves the South Metro Sewer Interceptor System and provides local wastewater treatment services and reclaimed water to the South Bay. The plant opened in May 2002 and has a wastewater treatment capacity of 15 million gallons a day. The plant shares the South Bay Ocean Outfall (SBOO) with the International Wastewater Treatment Plant operated by the U.S. Section of the International Boundary and Water Commission (IBWC). While the plant has been operating since May 2002, distribution of reclaimed water started 4-years later in July 2006. The volume reclaimed and distributed varies depending on demand for recycled water.

During 2015, the plant received and treated 2.7 billion gallons of wastewater, reclaiming 71% or 1.9 billion gallons. Seventy-one percent of the reclaimed water was beneficially reused by the Otay Water District, the International Treatment Plant, or used for in-plant processes. Between the months of May thru October more than seventy percent of the reclaimed water was reused.

Key metrics for 2015	Daily Average Flow (mgd)	Total Annual Flow (million gallons)
Influent to plant (Raw Wastewater Treated)	7.47	2,724
Effluent to Ocean Outfall	3.49	1,274
Reclaimed Water Produced	5.35	1,954
Beneficial Reuse (recycled water distributed)	2.62	954
Sludge and returns to South Metro Interceptor (SMI)	1.31	479
Plant Use of Reclaimed Water	0.84	308

For a detailed discussion of the plant and treatment process see sections I. F., Plant Facility Operation Report, and Chapter III. Plant Operations Summary.

B. Explanatory Notes:

The past year's data are presented in tabular and graphical form. We include annual monitoring results, special items and discussions itemized in the permits. This document is comprehensive, including supporting information on monitoring methods, frequency and changes in analyses, long-term tables of selected analytes, operational data, background analyses and treatment plant process control. Where the permit sets limits or requests the analysis of various groups of compounds (such as chlorinated and non-chlorinated phenols, PCBs, hexachlorocyclohexanes, etc.) we have provided summaries and averages of these groups and also of the individual compounds.

The Recycled Water Users Summary Report as described in Permit No. 2000-203 is submitted separately from this report. However, we do include summary information and an evaluation of the Water Reclamation and beneficial reuse integral to the operations of the plant. Section 7 contains a thorough presentation and evaluation of the Reclaimed Water process information and monitoring data.

For averaging purposes, "less than" and "not detected" (nd) values were treated as zero. In many parts of the report, zero values are found. Our computer system reads "less than" values as zero for summaries, and in computing averages. In those areas where zeros are found the reader can find appropriate method detection limits (MDL) in the table of data. Because "less than" values are averaged as zero, values in summary tables may be less than detection limits; these are simple numeric means (or minimums). The data tables may also contain values expressed as a <X (less than), where X represents the MDL.

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

Where possible, the influent and effluent values of a given parameter have been included on the same graph to make the removals and other relationships readily apparent. Please note that many of the graphs are on expanded scales where the y-axes (concentration) do not start at zero, but instead are scaled to highlight the range of concentrations where variation takes place. These expanded scales make differences and some trends obvious that might normally not be noticed; however, they also may inadvertently place more weight on relatively minor changes or trends than deserved. Please reference the chart axis scales.

C. Reporting Definitions

a. Estimated Concentrations (“E” Qualifier)

The “E” qualifier stands for “estimated value,” and is used in data reduction to flag data that have a lower concentration than normally acceptable for monitoring programs, or the method under federal regulations or ELAP requirements, but the qualitative identification has high certainty. Using normal detection limit criteria, useful information would be lost. In making determinations and reporting data there are circumstances where, due to the nature of the analysis and the needs of the customer, the certainty in quantification can be less than the requirements necessary for general environmental monitoring and reporting for regulatory compliance.

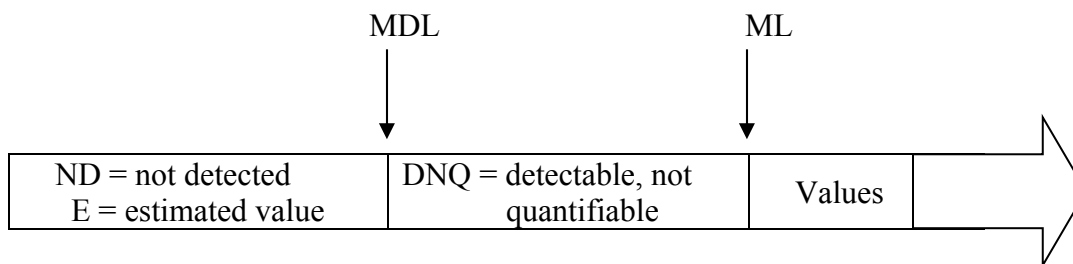
Data annotated with an “E” followed by a value (always less than the reported MDL) are estimated values. Data annotated in this manner have an uncertainty in concentrations unacceptable for compliance determinations or other concentration dependent conclusions.

b. Detected, but not qualified (“DNQ” Qualifier)

The “DNQ” qualifier is used for NPDES effluent reporting. DNQ is for analytical results that are less than the minimum level (ML), but greater than or equal to the MDL. Data annotated with DNQ will include a value, and the method’s MDL.

Summary of E and DNQ qualifiers

- E qualifier data in LIMS will have an “E” in the qualifier column, a value in the result value column, and the MDL deleted.
- DNQ qualifier data in LIMS will have a “DNQ” in the qualifier column, a value in the result value column, and the MDL.



D. Overview of the Metropolitan Wastewater (Metro) System

The City operates wastewater facilities to transport, treat, reclaim, reuse, and discharge wastewater and its by-products collected from the Metropolitan Wastewater System (the System). The System serves a population of approximately 3.2 million people providing for conveyance, treatment, reuse, and disposal of wastewater within a 450 square mile service area. The Metro System currently consists of several service areas including the City of San Diego (serviced by the Municipal Sub-System) and the 15-regional Participating Agencies. Wastewater treatment for the System is provided at the North City Water Reclamation Plant (NCWRP), the South Bay Water Reclamation Plant (SBWRP), and the Point Loma Wastewater Treatment Plant (PLWTP). Solids treatment and handling provided at the PLWTP and the Metro Biosolids Center (MBC). The City of San Diego contributes approximately 65% of the flow in the Metro System with the remainder coming from the Participating Agencies.

Each Participating Agency is responsible for the wastewater collection system within its boundaries to the point of discharge to the System. Wastewater flows from the Municipal Sub-System compose approximately 65% of the Metro Sub-System flows. All System facilities are owned by the City of San Diego and are managed by PUD.

A map detailing major facilities in the System and the participating agencies is included.

The System is a complex system of pipelines and pump stations that collect wastewater and convey it for treatment and disposal or reuse. The PLWTP serves as the terminus for the System and is capable of treating all flows generated within the System. Within the System are two water reclamation plants, the NCWRP and the SBWRP, that pull flow from the sewers for treatment and reuse. The System also includes the Metro Biosolids Center (MBC) that treats and disposes of all treatment process solids material removed by the treatment plants.

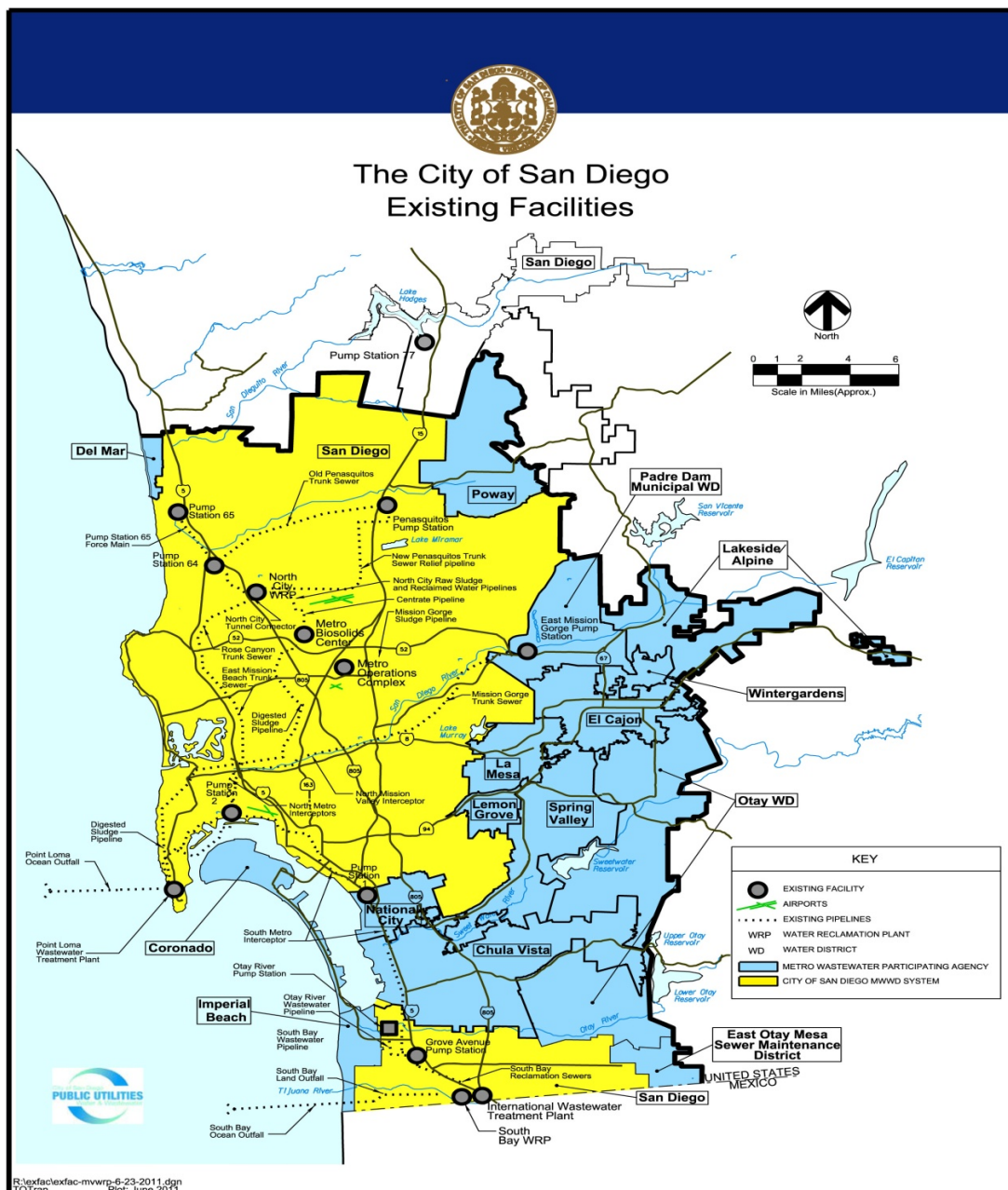
The PLWTP is the largest of the wastewater treatment plants in the System. The PLWTP is an advanced primary treatment WWTP that uses chemical addition to increase performance of the primary clarifiers and is the terminus for the System. The PLWTP discharges effluent through the Point Loma Ocean Outfall (PLOO). As an advanced primary treatment WWTP, performance is not measured entirely by effluent quality, but also against the California Ocean Plan and the Basin Plan that address the water quality and beneficial uses of the Pacific Ocean.

The plant has a rated capacity of 240 million gallons per day (mgd) and currently operates at 144 mgd. The NCWRP has a rated capacity of 30 mgd and currently operates at a nominal flow-rate of 15.4 mgd. The SBWRP has a rated capacity of 15 mgd and is currently treating a nominal 8.0 mgd. The PLWTP is a modern primary treatment facility and the NCWRP and SBWRP are both modern tertiary treatment facilities.

The other two facilities, the NCWRP and the SBWRP are scalping plants that divert water from the System and treat it for reclamation purposes. Both plants currently operate as secondary treatment plants and reclaim water to tertiary standards to meet demand. Demand will fluctuate depending on the time of year and the type and number of customers. The NCWRP returns all secondary effluent that is not reclaimed back to the System for treatment at the PLWTP. However, the solids that are removed, either by sedimentation or biological oxidation, are pumped to the MBC for further treatment. The

SBWRP discharges excess secondary effluent to the SBOO and returns all solids removed from the sewage to the System for transport to the PLWTP. Performance of both water reclamation plants is measured by each facility's ability to treat reclaimed water to the required standards when discharging to the reclaimed system. Performance of the SBWRP is also measured via secondary treatment standards, as defined in the facility's NPDES permit, when discharging to the South Bay Ocean Outfall (SBOO).

The MBC processes primary and secondary solids from the NCWRP through anaerobic digestion and dewatering, and processes the digested biosolids from the PLWTP through dewatering. The dewatered biosolids are beneficially used as cover at a local landfill or used as a soil amendment for agricultural purposes. The centrate from the centrifuges is returned to the sewer and treated at the PLWTP. Performance of this facility is measured by the quality of the solids product generated for use or disposal.



ISO 14001 Certification

Wastewater Treatment and Disposal Division (formerly called Operations and Maintenance Division) and the Monitoring and Reporting Programs operated by the Environmental Monitoring and Technical Services Division are certified in ISO¹ 14001, Environmental Management Systems.



¹ International Standards Organization

E. Overview of SBWRP

The **South Bay Water Reclamation Plant (SBWRP)** relieves the South Metro Sewer Interceptor System and provides local wastewater treatment services and reclaimed or recycled water to the South Bay. The plant opened in May 2002 and has a wastewater treatment capacity of 15 million gallons a day. The plant design incorporates the newest technologies and provides advanced treatment for up to 15 million gallons of wastewater per day.



The advanced treatment meets tertiary or reclaimed water standards including disinfection. The SBWRP treatment process is a state-of-the-art implementation of traditional secondary treatment using activated-sludge. Much of the secondary effluent is reclaimed and beneficially reused after tertiary filtration through anthracite coal beds and disinfection with high-intensity ultraviolet (UV) light. The plant shares the South Bay Ocean Outfall (SBOO) with the International Wastewater Treatment Plant (IWTP) operated by the U.S. Section of the International Boundary and Water Commission (IBWC).

Treatment processes consist of mechanical bulky debris and grit removal at the headworks using standard traveling bar screens and aerated grit chambers. The removed debris is then dewatered and taken to landfills. Suspended solids of wastewater are removed by primary sedimentation. Scum removal is concurrent with primary sedimentation. Primary effluent is followed by industry standard aerated activated sludge secondary treatment. Secondary clarifiers allow settling and removal of the remainder of the solids (also called sludge) that is returned to the Metro System via the South Metro Interceptor and is pumped to the Point Loma WWTP. The resultant secondary effluent is either discharged to the South Bay Ocean Outfall or directed to tertiary treatment in the plant.

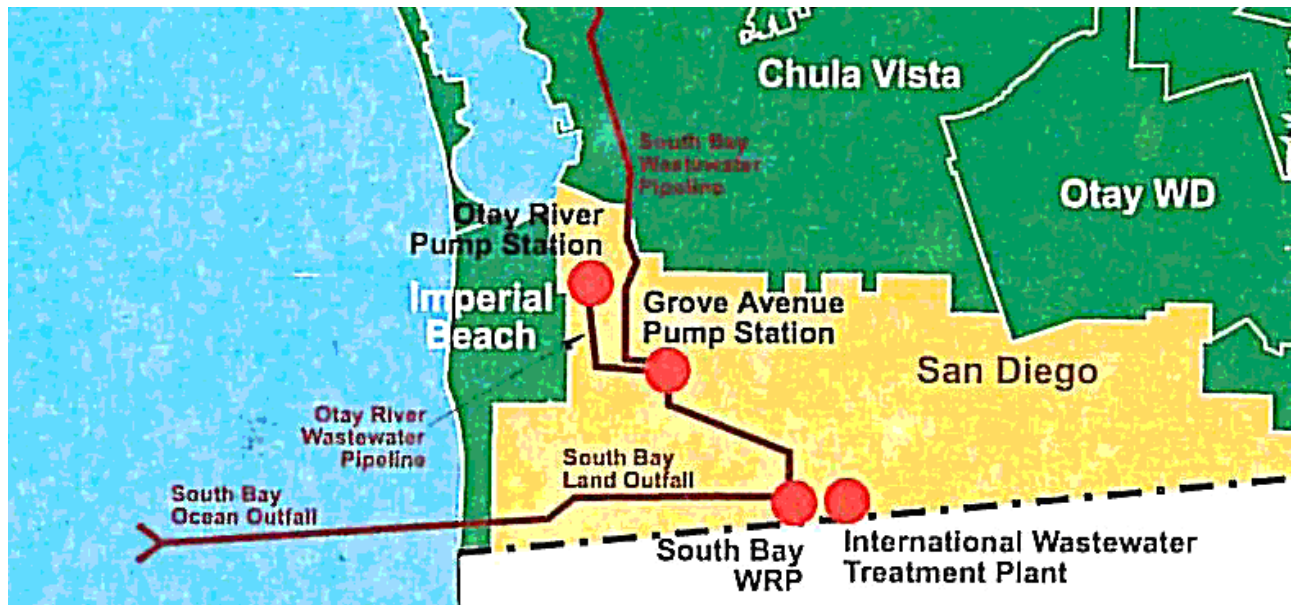


In 2015, approximately three quarters of the influent treated was directed to tertiary treatment. Tertiary treatment consists of running the secondary effluent through anthracite coal beds where it is filtered of remaining solids as it passes through the layered medium. The filtered water then passes through chambers where it is disinfected through exposure to high-energy ultraviolet light (UV). At this stage the "reclaimed" water meets California Title 22 full body contact requirements. Recycled or reclaimed water is beneficially reused for in-plant processes at SBWRP, at the nearby International Wastewater Treatment Plant and an increasing percentage of the recycled water is distributed to the Otay Water District for non-potable beneficial reuse off-setting demands for traditional potable water sources.

South Bay Ocean Outfall (SBOO)

The South Bay Water Reclamation Plant (SBWRP) is located at 2411 Dairy Mart Road, San Diego, CA 92154. It sits at the intersection of Dairy Mart and Monument Roads in the Tijuana River Valley just meters north of the U.S.-Mexico International border. The plant provides additional treatment capacity and reclaimed water for the southern service area of the Metro System (South Metro Sewer Interceptor System).

The South Bay Ocean Outfall extends approximately 3.5 miles offshore and discharges effluent in approximately 100 feet of water. The outfall tunnel has an 11 foot diameter and is 19,000 feet long.



F. Discussion of Compliance Record

The South Bay Water Reclamation Plant operates with two separate permits. NPDES Permit No. CA0109045/ Order No. 2013-0006 (with addenda) provides for the treatment and disposition of wastewater via the shared South Bay Ocean Outfall and Reclaimed Water Permit No. 2000-203 (with addenda) provides for water reclamation.

South Bay Ocean Outfall:

There were no discharge limitations exceeded for the South Bay Ocean outfall in 2015.

Recycled (Reclaimed) Water: This is the tenth year of plant operation that reclaimed water was produced and distributed

Chloride

The monthly average chloride limit was exceeded in 3 out of 12 months in 2015. In 2015, the monitoring of chloride continued at an accelerated schedule of weekly sampling and analysis. The monthly average was calculated as a running 30-day average and the calculated values above the 260 mg/L limit are shown in the table below. The increase in the concentration of chloride in the reclaimed water to levels just above the monthly average limit is attributable to a similar increase in the chloride concentration of the influent to the plant from the wastewater collections system. The chloride limit is based on a Secondary MCL for aesthetics, i.e. taste, but is not a health concern. Reclaimed water from the SBWRP is not used for human consumption.

30 day running average chloride above 260 mg/L in 2015			
Date	30-Day Avg.	Date	30-Day Avg.
6-Oct-15	279	4-Nov-15	346
13-Oct-15	349	8-Dec-15	262
20-Oct-15	348		
27-Oct-15	345		

Sulfate

The monthly average sulfate limit was exceeded in 8 out of 12 months in 2015. In 2015, the monitoring of sulfate continued at an accelerated schedule of weekly sampling and analysis. The monthly average was calculated as a running 30-day average and the calculated values above the 250 mg/L limit are shown in the table below. Reclaimed water from the SBWRP is not used for human consumption.

30 day running average sulfate above 250 mg/L in 2015			
Date	30-Day Avg.	Date	30-Day Avg.
7-Jan-15	256	21-Apr-15	262
13-Jan-15	256	28-Apr-15	261
20-Jan-15	257	5-May-15	258
27-Jan-15	260	15-Sep-15	253
10-Feb-15	263	22-Sep-15	254
17-Feb-15	265	29-Sep-15	255
12-Mar-15	259	6-Oct-15	255
17-Mar-15	260	13-Oct-15	258
24-Mar-15	258	20-Oct-15	259
1-Apr-15	257	27-Oct-15	260
7-Apr-15	259	4-Nov-15	254
14-Apr-15	261		

Coliform

The 7-day median coliform value exceeded the limit of 2.2 most probable number (MPN/100mL) on February 10 with a value of 4.5 MPN, on March 26, 27, 28, 30 and 31 with values of 4.5, 4.5, 7.8, 13 and 13 MPN, respectively, and on April 1, 2, 3, 4, 5, 6 and 7 with values of 13, 7.8, 7.8, 7.8, 7.8, 7.8 and 6.8 MPN, respectively. The number of total coliform bacteria exceeded an MPN of 23/100 mL in more than one sample within a 30-day period on April 4 and March 30, with values of 33 and 49 MPN, respectively.

Total Dissolved Solids (TDS)

The daily maximum total TDS value exceeded the limit of 1300 mg/L on October 6 and 13 with values of 1540 mg/L and 1660 mg/L respectively.

Reclaimed Water Permit No. 2000-203

Month	Number of measures exceeding limits.	Comments: (see monthly report for further details.)
January 2015	4	The 30-day average value for Sulfate exceeded the limit of 250 mg/L on 4 days.
February 2015	3	The 30-day average value for Sulfate exceeded the limit of 250 mg/L on 2 days. 7-day median coliform value exceeded the limit of 2.2 MPN with values of 4.5 MPN.
March 2015	8	The 30-day average value for Sulfate exceeded the limit of 250 mg/L on 3 days. 7-day median coliform value exceeded the limit of 2.2 MPN on 5 days with values of 4.5, 4.5, 7.8, 13, and 13 MPN.
April 2015	13	The 30-day average value for Sulfate exceeded the limit of 250 mg/L on 5 days. 7-day median coliform value exceeded the limit of 2.2 MPN on 7 days with values of 13, 7.8, 7.8, 7.8, 7.8, 7.8, and 6.8 MPN. Samples collected on April 4 and March 30 exceeded the number of total coliform bacteria of MPN of 23/100mL within a 30-day period, with values of 33 and 49 MPN, respectively.
May 2015	1	The 30-day average value for Sulfate exceeded the limit of 250 mg/L on 1 day.
June 2015	none	
July 2015	none	
August 2015	none	
September 2015	4	The 30-day average value for Sulfate exceeded the limit of 250 mg/L on 3 days. The 30-day average value for Manganese exceeded the limit of 50 ug/L on 1 day.
October 2015	13	The 30-day average value for Sulfate exceeded the limit of 250 mg/L on 4 days. The 30-day average value for percent sodium exceeded the limit of 60% on 1 day. The 30-day average value for Chloride exceeded the limit of 260 mg/L on 4 days. The daily maximum value also exceeded the limit of 300 mg/L with values of 469 mg/l and 575 mg/L on October 6 and 13, respectively. The daily maximum value for TDS exceeded the limit of 1300 mg/L on 2 days.
November 2015	3	The 30-day average value for Sulfate exceeded the limit of 250 mg/L on 1 day. The 30-day average value for percent sodium exceeded the limit of 60% on 1 day.

Reclaimed Water Permit No. 2000-203		
Month	Number of measures exceeding limits.	Comments: (see monthly report for further details.)
		The 30-day average value for Chloride exceeded the limit of 260 mg/L on 1 day.
December 2015	1	The 30-day average value for Chloride exceeded the limit of 260 mg/L on 1 day.
Total:	50	

Ranges of Major Constituents in Reclaimed Water, 2015.

Waste Discharge and Water Recycling Requirements for the South Bay Water Reclamation Plant (Order No. 2000-203)			
Parameter	Permit Limits		Measured Values CY 2015
BOD ₅	Monthly Average	30 mg/L	<2 - 8
	Daily Maximum	45 mg/L	38
Total Dissolved Solids (TDS)	Monthly Average	1,200 mg/L	980 - 1120
	Daily Maximum	1,300 mg/L	1,660*
Sulfate	Monthly Average	250 mg/L	175 – 265*
	Daily Maximum	300 mg/L	277
MBAS	Monthly Average	0.5 mg/L	0.10 – 0.15
	Daily Maximum	0.7 mg/L	0.15
Iron	Monthly Average	0.3 mg/L	0.036 – 0.147
	Daily Maximum	0.4 mg/L	0.26
Fluoride	Monthly Average	1.0 mg/L	0.41 – 0.58
	Daily Maximum	1.2 mg/L	0.6
Total Coliform	Daily Maximum	MPN 240/100-mLs	<1.8 – 49

*Measured parameter exceeded permit limit.

G. Plant Facility Operation Report

SOUTH BAY WATER RECLAMATION PLANT 2015 ANNUAL FACILITY REPORT

Prepared by Plant Superintendent Ernesto Molas

This facility report summarizes some of the key operational considerations involved in the facility operation of the South Bay Water Reclamation Plant (SBWRP) during calendar year 2015. Numerical data and analysis presented in this section are based on plant staff work. Refer to the laboratory data in this document for validated results for official reporting purposes.

Influent Sampling:

Plant staff continues to implement a preventive maintenance program of switching and cleaning of the sample delivery pumps on a regular basis to ensure consistency in samples.

Basin Utilization:

The number of basins online for each unit processes meets the plant's overflow rates and detention time design criteria ranges which are as follows:

- 3 Primary Tanks on line with 2 offline as backups
- 4 Aeration Basin on line with 4 offline as backups
- 5 Secondary Basin on line with 4 as offline as backups

Influent Flows:

The design capacity of the plant is 15 million gallons per day (MGD), with a peak capacity of 18 MGD. The average daily influent flow treated during 2015 was 7.43 MGD. Effluent flow discharged to the ocean outfall was 3.49 MGD. Total reclaimed water usage was 3.46 MGD with 2.62 MGD of it was sold to customers and the remaining 0.84 MGD was used internally for filter backwashing and as utility water for plant equipment and processes.

Solids Handling:

The influent screening and washer/compaction units operated well, with adequate on-site hopper capacity. Approximately 23.76 tons of screenings were disposed of through the end of December 2015. Grit storage capacity was also adequate with 59.27 tons of grit hauled off site. All primary scum was returned to the MWW collection system (for treatment at the Pt. Loma WWTP facility) by routing the scum collection discharge to the blended sludge pump wet well. Primary and secondary sludge is also routed to the collection system via the blended sludge pumps. The activated sludge process was maintained through the use of high capacity wasting directly from the aeration basins to the blended sludge pumps during the full period of 2015 operation. Average daily totals for blended sludge volumes returned to the Pt. Loma facility via the South Metro Interceptor were 1.32 MGD.

Secondary Performance:

Secondary treatment performance for TSS and BOD has been an average TSS of 11.89 mg/L and BOD of 17.04 mg/L for 2015. Average secondary effluent turbidity was 3.16 NTU. MCRT has typically been maintained between 5 to 7 days.

Tertiary Processes:

The average filter effluent turbidity for 2015 was 0.82 NTU. All seven filters were available for operation. An average of 4 to 5 filters were on line to meet the RW demand.

Chlorine is added at the UV influent to control algae growth. The total chlorine residual is maintained at equal or below 0.5 mg/l. The frequency of chlorine addition is 12 hrs/day.

Water Reclamation & Distribution:

The average delivery rate to Otay Storage tank during 2015 was 2.62 MGD. During summer months, the average delivery rate was 3.3 to 4.2 mgd and 1 to 2.0 mgd during the winter months.

Discussion of compliance record:

Coliform

The 7-day median coliform value exceeded the limit of 2.2 most probable number (MPN/100mL) on February 10 with a value of 4.5 MPN, on March 26, 27, 28, 30 and 31 with values of 4.5, 4.5, 7.8, 13 and 13 MPN, respectively, and on April 1, 2, 3, 4, 5, 6 and 7 with values of 13, 7.8, 7.8, 7.8, 7.8, 7.8 and 6.8 MPN, respectively. The number of total coliform bacteria exceeded an MPN of 23/100 mL in more than one sample within a 30-day period on April 4 and March 30, with values of 33 and 49 MPN, respectively.

Total Dissolved Solids (TDS)

The daily maximum total TDS value exceeded the limit of 1300 mg/L on October 6 and 13 with values of 1540 mg/L and 1660 mg/L respectively.

Sulfate

The 30-day average value for Sulfate exceeded the limit of 250 mg/L on 23 days this year. In response to the increase in sulfate at the treatment plant, monitoring of food processing industries tributary to the SBWRP was increased to multiple times a week starting on September 10, 2015. Results of these studies are allowing us to work collaboratively with industries to refine their processes to reduce unnecessary discharges that could lead to elevated sulfate in recycled water.

Percent Sodium (%Na)

On October 6, 2015 the 30-day running average value for percent sodium exceeded the monthly average limit of 60% with a value of 69.1%.

Chloride

The 30-day average value for chloride exceeded the permit limit of 260 mg/L on 6 days. On October 6, 13, 20 and 27 the 30-day running average value for chloride exceeded the monthly average limit of 260 mg/L with values of 279 mg/L, 349 mg/L, 348 mg/L and 345 mg/L respectively, also on October 6 and 13 the daily maximum value exceeded the limit of 300 mg/L with values of 469 mg/l and 575 mg/L respectively.

The elevated concentration of sodium, chloride and TDS on October 6, 2015 and chloride and TDS on October 13, 2015 in the recycled water sample was investigated by reviewing treatment plant operational data including chemical usage and influent monitoring data. Data on treatment plant operations was normal and no likely cause for this increase was identified. An evaluation of biological and facility process activities is being planned to further investigate this anomaly.

In addition to source control, the Department is installing new instrumentation at the SBWRP, including pH and conductivity meters, to provide increased monitoring of the influent to the treatment plant. To better manage dissolved ions that contribute to the TDS in the recycled water Electrodialysis Reversal (EDR) units are currently anticipated to be on-line in April 2016. The elevated sodium, sulfate and chloride levels in recycled water are expected to be reduced through the removal of dissolved ions by the EDR units.

Vector Control:

The presence of midge flies has been an on-going issue with the potential to adversely affect effluent quality, primarily at the secondary clarifiers and tertiary filters. Plant staff continues to rotate secondary clarifiers to disrupt midge flies larvae production. Control measures also include lowering the water level of a secondary clarifier to expose the larvae adhering to the side walls so they can be hosed down and removed. The staff also washes the sides of the filter during its backwash cycle to disrupt the midge fly from reproducing. The effort to gain full control over this problem continues.

Engineering Projects:

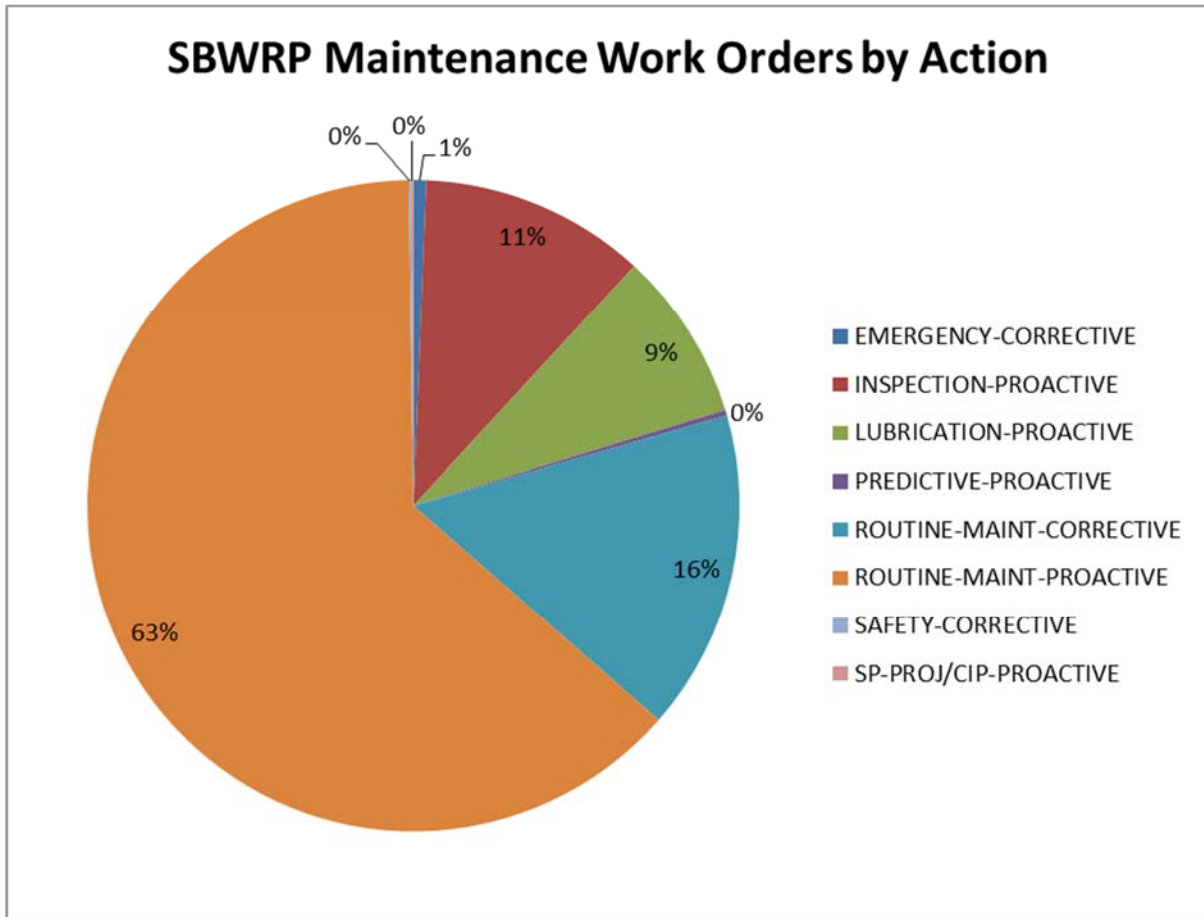
During 2015, the Engineering group for the Wastewater Treatment and Disposal Division (WWTD) provided engineer support for the plant. Their support is mainly on-demand (no resident engineer) so the on-going and completed projects identified below were accomplished by a combination of plant staff and by the WWTD engineering group.

1. Sludge Pumps Replacement Project – The original five (5) Primary Sludge Pumps are pneumatically operated pumps and will be replaced with two (2) electrical motorized pumps and grinders to lower the maintenance cost. Design was completed in October 2015. Awaiting NTP for Construction.
2. Service Air Compressor Replacement Project – The two (2) air compressors currently use large amounts of reclaimed water (RW) for cooling. When the Sludge Pumps Replacement Project is completed, the two (2) air compressors will be replaced with an air cooled type compressors eliminating the need to use RW for cooling. Design was completed in October 2015. Awaiting NTP for Construction.
3. Jockey Pump project- Pump and VFD were installed. Start-up and testing was completed in March 2015.
4. Demineralization project (EDR) - Project consists the installation of two (2) trailer-mounted Electrodialysis Reversal (EDR) equipment(existing), three (3) feed pumps, chemical tanks and associated pumps as well as associated piping and valves. This is a Design-Build project. The NTP of Construction was in December 2014. Expect completion by March 30, 2016.

Maintenance Report 2015:

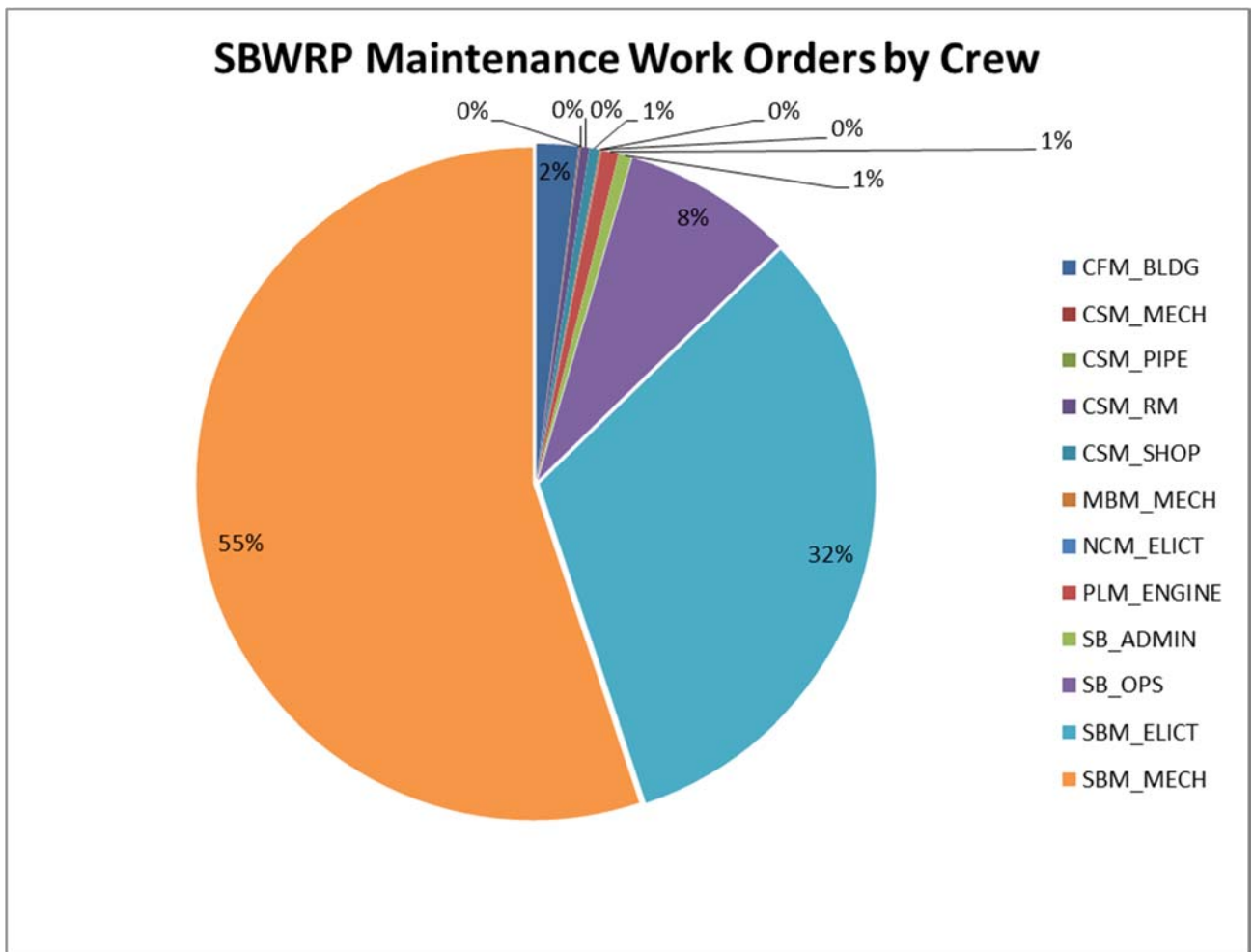
South Bay Maintenance Work Orders by Action

Action	Work Order Count
EMERGENCY-CORRECTIVE	27
INSPECTION-PROACTIVE	482
LUBRICATION-PROACTIVE	363
PREDICTIVE-PROACTIVE	12
ROUTINE-MAINT-CORRECTIVE	684
ROUTINE-MAINT-PROACTIVE	2723
SAFETY-CORRECTIVE	4
SP-PROJ/CIP-PROACTIVE	6



South Bay Maintenance Work Orders by Crew

Crew	Work Order Count
CFM_BLDG	87
CSM_MECH	2
CSM_PIPE	1
CSM_RM	18
CSM_SHOP	21
MBM_MECH	3
NCM_ELICT	1
PLM_ENGINE	35
SB_ADMIN	27
SB_OPS	352
SBM_ELICT	1383
SBM_MECH	2371



H. Correlation of Results to Plant Conditions

In 2015 the amount of system flows treated at the SBWRP averaged 8 million gallons per day.

Annual Totals

Year	SBWRP Influent (million gals)	SBWRP Discharge to South Bay Outfall (million gals)	SBWRP Distributed Recycled Water (million gals)	System Return Stream (million gals)	Net removed from Metro* (million gals)
2015	2,724	1,274	956	479	2,230
2014	2,908	1,075	1,216	586	2,291
2013	2,948	1,171	1,172	590	2,343
2012	2,942	1,194	1,247	479	2,441
2011	3,001	1,288	1,177	505	2,465
2010	3,003	1,248	1,156	571	2,404
2009	3,050	958	1,501	564	2,459
2008	3,173	1,167	1,388	601	2,555
2007	3,158	1,467	1,101	527	2,568

*The net removed from Metro is the sum of discharge water to SB Outfall and Distributed water.

Comparative flow data:

low stream	2011		2012		2013		2014		2015	
	Daily Average	Annual Total	Daily Average	Annual Total	Daily Average	Annual Total	Daily Average	Annual Total	Daily Average	Annual Total
Influent	8.22	3,000	8.04	2,942	8.08	2,948	7.97	2,908	7.47	2,724
RW (Reclaimed Water) Produced	5.89	2,154	6.01	2,200	5.96	2,176	6.02	2,199	5.35	1,954
RW Distributed	3.22	1,177	3.4	1,247	3.20	1,172	3.32	1,216	2.62	954
RW In-plant use	0.97	353	0.86	316	0.77	282	0.94	344	0.84	308
Total reuse	4.19	1,530	4.26	1,563	3.97	1,454	4.26	1,560	3.46	1,262
Effluent to SBOO	3.54	1,288	3.27	1,194	3.22	1,171	2.96	1,075	3.49	1,274
Return to SMI	1.38	505	1.31	479	1.62	590	1.60	586	1.31	479

- 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

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A. Mass Emissions

Mass Emissions of Effluent Using 2015 Monthly Averages

DISCHARGE SPECIFICATIONS from NPDES Permit No. CA0109045/RWQCB Order No. 2013-0006 effective on April 4, 2013 with limits on pollutant discharges.				
Effluent Limitations Based on Secondary Treatment Standards				
Constituent/Property	Limit: Monthly Average (30 day) (lbs/day)	2015 Mass Emissions (lbs/day) ^[1]	2015 Average Concentration	Units
Flow (MGD)			3.49	MGD
Total Suspended Solids	3,753	233	8	mg/L
BOD	3,753	466	16	mg/L
Oil & Grease	3,128	67	2.3	mg/L

Effluent Limitations Based on 2009 California Ocean Plan				
Constituent/Property	Limit: Daily Maximum (lbs/day)	2015 Mass Emissions (lbs/day) ^[1]	2015 Average Concentration	Units
Arsenic	350	0.023	0.8	ug/L
Cadmium	48	0	0.03	ug/L
Chromium	96	0.03	1.1	ug/L
Copper	120	0.3	12	ug/L
Lead	96	0.006	0.2	ug/L
Mercury	1.9	0.00000	0	ug/L
Nickel	240	0.13	4.48	ug/L
Selenium	720	0.022	0.77	ug/L
Silver	32	0	0	ug/L
Zinc	860	0.9	31.3	ug/L
Cyanide	48	0.029	0.001	mg/L
Residual Chlorine	96	1.5	0.05	mg/L
Ammonia	29,000	72.8	2.5	mg/L
Non-Chor. Phenols	1,400	0	0	ug/L
Chlorinated Phenols	48	0	0	ug/L
Endosulfan	0.22	0.00000	0	ng/L
Endrin	0.048	0.00	0	ng/L
hexachlorocyclohexanes *(HCH)	0.096	0.0	0	ng/L

* (all as Lindane, the gamma isomer)

Effluent Limitations Based on 2009 California Ocean Plan				
Constituent/Property	Limit: 30-Day Average (lbs/day)	2015 Mass Emissions (lbs/day) ^[1]	2015 Average Concentration	Units
Acrolein	2,600	0	0	ug/L
Antimony	14,000	0.035	1.2	ug/L
Bis(2-chloroethoxy) methane	53	0	0	ug/L
Bis(2-chloroisopropyl) ether	14,000	0	0	ug/L
Chlorobenzene	6,800	0	0	ug/L
Chromium (III)	--	--	--	
di-n-butyl phthalate	42,000	0	0	ug/L
dichlorobenzenes	61,000	0	0	ug/L
1,1-dichloroethylene	11	0	0	ug/L
Diethyl phthalate	390,000	0	0	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	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	0	ug/L
1,1,2,2-tetrachloroethane	27	0	0	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	0.0004	0.015	ug/L
Bis(2-chloroethyl)ether	0.54	0.00	0	ug/L
Bis(2-ethylhexyl)phthalate	42	0.12	4	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	0.01	0.4	ug/L
DDT	0.002	0.000	0	ng/L
1,4-dichlorobenzene	210	0	0	ug/L
3,3-dichlorobenzidine	0.097	0.000	0	ug/L
1,2-dichloroethane	330	0	0	ug/L
Dichlorobromomethane	74	0.000	0	ug/L
Dichloromethane (methylene chloride)	5,400	0.000	0	ug/L
1,3-dichloropropene	110	0	0	ug/L
Dieldrin	0.00048	0.00000	0	ng/L

Effluent Limitations Based on 2009 California Ocean Plan				
Constituent/Property	Limit: 30-Day Average (lbs/day)	2015 Mass Emissions (lbs/day) ^[1]	2015 Average Concentration	Units
2,4-dinitrotoluene	31	0	0	ug/L
1,2-diphenylhydrazine	1.9	0.0	0	ug/L
Halomethanes	1,500	0.000	0	ug/L
Heptachlor	0.0006	0.0000	0	ng/L
Heptachlor epoxide	0.00024	0.00000	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	0	ug/L
N-nitrosodiphenylamine	30	0	0	ug/L
PAHs	0.11	0.00	0	ug/L
PCBs	0.00023	0.00000	0	ng/L
TCDD equivalents	0.000000048	0.000000000	0	pg/L
Tetrachloroethylene	24	0	0	ug/L
Toxaphene	0.0025	0.0000	0	ng/L
Trichloroethylene	320	0	0	ug/L
2,4,6-trichlorophenol	3.5	0.0	0	ug/L
Vinyl Chloride	430	0	0	ug/L

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

B. Discharge Limits

DISCHARGE SPECIFICATIONS from NPDES Permit No. CA0109045/RWQCB Order No. R9-2013-0006 effective on April 4, 2013 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		3,753	5,630		6,255
Total Suspended Solids	mg/L		30	45		50
	lb/day		3,753	5,630		6,255
pH	pH units		Within the limits of 6.0 - 9.0 at all times.			

Effluent Limitations based on 2009 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		3,128	5,004		9,383
Settleable Solids	mL/L		1	1.5		3
Turbidity	NTU		75	100		225
Total Residual Chlorine(TRC)	mg/L	0.19			0.76	5.7
	lb/day	24			96	718
Copper, Total Recoverable	ug/L	98			960	2,700
	lb/day	12			120	340

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 performance goals listed in the following table. Performance goal constituents shall also be monitored at E-001.

Performance Goals Based on 2009 California Ocean Plan				
Constituent	Units	6-month Median	Daily Maximum	Instantaneous Maximum
Arsenic	ug/L	480	2,800	7,400
	lb/day	60	350	920
Cadmium	ug/L	96	380	960
	lb/day	12	48	120
Chromium ² (Hexavalent)	ug/L	190	760	1900
	lb/day	24	96	240
Lead	ug/L	190	760	1,900
	lb/day	24	96	240
Mercury	ug/L	3.8	15.0	38
	lb/day	0.47	1.9	4.8
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	1,200	6,900	18,000
	lb/day	140	860	2300
Cyanide	mg/L	0.096	0.38	0.96
	lb/day	12	48	120
Ammonia (expressed as Nitrogen)	mg/L	57	230	570
	lb/day	7200	29,000	72,000
Acute Toxicity	TUa		3.1 ³	
Chronic Toxicity	TUc		96	
Phenolic Compounds(non-chlorinated)	ug/L	2,900	11,000	29,000
	lb/day	360	1400	3600
Chlorinated Phenolics	ug/L	96	380	960
	lb/day	12	48	120
Endosulfan	ng/L	860	1,700	2,600
	lb/day	0.11	0.21	0.32
Endrin	ng/L	190	380	570
	lb/day	0.024	0.048	0.072
HCH (hexachlorocyclohexanes)	ng/L	380	760	1,100
	lb/day	0.04	0.096	0.14
Radioactivity	Not to exceed limits specified in Title 17 California Code of Regulations Section 30253, Standards for Protection Against Radiation			

² Hexavalent Chromium limit met as Total Chromium.

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

Performance Goals Based on 2009 California Ocean Plan Continued		
Constituent	Monthly Average (30-Day)	
	ug/L	lbs/day
Acrolein	21,000	2600
Antimony	110,000	14,000
Bis(2-chloroethoxy) methane	420	53
Bis(2-chloroisopropyl) ether	110,000	14,000
Chlorobenzene	54,000	6800
Chromium (III) ⁴	18,000,000	2,300,000
di-n-butyl phthalate	330,000	42,000
Dichlorobenzenes	490,000	61,000
Diethyl phthalate	3,100,000	390,000
Dimethyl phthalate	78,000,000	9,800,000
4,6-dinitro-2-methylphenol	21,000	2600
2,4-dinitrophenol	3800	480
Ethylbenzene	390,000	49,000
Fluoranthene	1,400	180
Hexachlorocyclopentadiene	5,500	690
Nitrobenzene	470	59
Thallium	190	24
Toluene	8,100,000	1,000,000
Tributyltin	0.13	0.020
1,1,1-trichloroethane	52,000,000	6,500,000
Acrylonitrile	9.6	1.2
Benzene	560	71
Benzidine	0.0066	82,000
Beryllium	3.1	0.39
Bis(2-chloroethyl)ether	4.3	0.54
Bis(2-ethylhexyl)phthalate	330	42
Carbon Tetrachloride	86	11
Chloroform	12,000	1500
1,4-dichlorobenzene	1,700	210
3,3-dichlorobenzidine	0.77	0.097
1,2-dichloroethane	2,700	330
1,1-dichloroethylene	86	11
Dichlorobormomethane	590	74
Dichloromethane	43,000	5400
1,3-dichloropropene	850	110
2,4-dinitrotoluene	250	31
1,2-diphenylhydrazine	15	1.9
Halomethanes	12,000	1500

Performance Goals Based on 2009 California Ocean Plan Continued		
Constituent	Monthly Average (30-Day)	
	ug/L	lbs/day
Hexachlorobenzene	0.02	0.0025
Hexachlorobutadiene	1,300	170
Hexachloroethane	240	30
Isophorone	70,000	8700
N-nitrosodimethylamine	700	87
N-nitrosodi-N-propylamine	36	4.5
N-nitrosodiphenylamine	240	30
PAHs	0.84	0.11
1,1,2,2-tetrachloroethane	220	27
Tetrachloroethylene	190	24
Trichloroethylene	2,600	320
1,1,2-trichloroethane	900	110
2,4,6-trichlorophenol	28	3.5
Vinyl Chloride	3,400	430

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

	pg/L	lbs/day
TCDD equivalents	0.37	0.000000047

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

C. Influent and Effluent Data Summaries

The results of all analyses performed on the SBWRP influent and effluent are summarized in tables with monthly and annual averages (and in some cases annual totals) calculated. Data that have 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 INFLUENT and EFFLUENT

Annual 2015

Biochemical Oxygen Demand Concentration
(24-hour composite)

Source:	Influent Flow	Daily Influent Value	Daily Influent Value	Effluent Flow	Daily Effluent Value	Daily Effluent Value	Percent Removal BOD
Month/ Units:	(MGD)	(mg/L)	(lbs/Day)	(MGD)	(mg/L)	(lbs/Day)	(%)
=====	=====	=====	=====	=====	=====	=====	=====
JANUARY -2015	7.71	329	21155	5.17	18	776	94.5
FEBRUARY -2015	7.84	327	21381	4.36	18	655	94.5
MARCH -2015	7.93	322	21296	4.32	23	829	92.9
APRIL -2015	7.84	355	23212	2.68	18	402	94.9
MAY -2015	7.64	369	23512	4.09	16	546	95.7
JUNE -2015	7.62	382	24276	1.97	12	197	96.9
JULY -2015	7.55	334	21031	2.75	13	298	96.1
AUGUST -2015	7.67	346	22133	2.08	23	399	93.4
SEPTEMBER-2015	7.58	319	20166	3.03	18	455	94.4
OCTOBER -2015	7.53	345	21666	3.17	9	238	97.4
NOVEMBER -2015	7.43	374	23175	4.73	10	394	97.3
DECEMBER -2015	5.29	375	16544	3.56	11	327	97.1
=====	=====	=====	=====	=====	=====	=====	=====
Average	7.47	348	21629	3.49	16	460	95.4

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

ND=not detected

SOUTH BAY WATER RECLAMATION PLANT
SEWAGE INFLUENT and EFFLUENT

Annual 2015

Total Suspended Solids Concentration
(24-hour composite)

Source:	Influent Flow	Influent Daily TSS	Influent Daily VSS	Percent VSS	Influent Daily Mass Emission
Month/ Units:	(MGD)	(mg/L)	(mg/L)	(%)	(lbs/Day)
JANUARY -2015	7.71	281	261	92.9	18069
FEBRUARY -2015	7.84	267	240	89.9	17458
MARCH -2015	7.93	271	249	91.9	17923
APRIL -2015	7.84	271	251	92.6	17719
MAY -2015	7.64	271	249	91.9	17267
JUNE -2015	7.62	289	264	91.3	18366
JULY -2015	7.55	261	239	91.6	16434
AUGUST -2015	7.67	252	232	92.1	16120
SEPTEMBER-2015	7.58	273	249	91.2	17258
OCTOBER -2015	7.53	274	250	91.2	17207
NOVEMBER -2015	7.43	286	265	92.7	17722
DECEMBER -2015	5.29	267	246	92.1	11780
Average	7.47	272	250		16944

Total Suspended Solids Concentration
(24-hour composite)

Source:	Effluent Flow	Daily Effluent TSS	Daily Effluent VSS	Percent VSS	Daily Effluent Mass Emission	Percent Removal TSS	Percent Removal VSS
Month/ Units:	(MGD)	(mg/L)	(mg/L)	(%)	(lbs/Day)	(%)	(%)
JANUARY -2015	5.17	8.4	7.4	88.1	362	97.0	97.2
FEBRUARY -2015	4.36	6.2	5.4	87.1	225	97.7	97.8
MARCH -2015	4.32	6.5	5.8	89.2	234	97.6	97.7
APRIL -2015	2.68	6.7	6.1	91.0	150	97.5	97.6
MAY -2015	4.09	6.9	6.1	88.4	235	97.5	97.6
JUNE -2015	1.97	8.3	7.4	89.2	136	97.1	97.2
JULY -2015	2.75	7.2	6.5	90.3	165	97.2	97.3
AUGUST -2015	2.08	7.0	6.2	88.6	121	97.2	97.3
SEPTEMBER-2015	3.03	11.4	10.3	90.4	288	95.8	95.9
OCTOBER -2015	3.17	9.3	8.4	90.3	246	96.6	96.6
NOVEMBER -2015	4.73	7.8	7.1	91.0	308	97.3	97.3
DECEMBER -2015	3.56	9.7	8.8	90.7	288	96.4	96.4
Average	3.49	8.0	7.1		230	97.1	97.2

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

VSS= Volatile Suspended Solids
TSS= Total Suspended Solids

SOUTH BAY WATER RECLAMATION PLANT

Annual 2015

Effluent to Ocean Outfall
(SB_OUTFALL_01)

Analyte:	Flow	pH	Settleable Solids	Biochemical Oxygen Demand	Total Suspended Solids	Volatile Suspended Solids	Total Dissolved Solids
Units:	(mgd)	(pH)	(ml/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
=====	=====	=====	=====	=====	=====	=====	=====
JANUARY -2015	5.17	7.27	ND	18	8.4	7.4	1060
FEBRUARY -2015	4.36	7.31	ND	18	6.2	5.4	1070
MARCH -2015	4.32	7.31	ND	23	6.5	5.8	1080
APRIL -2015	2.68	7.25	ND	18	6.7	6.1	1100
MAY -2015	4.09	7.27	ND	16	6.9	6.1	1020
JUNE -2015	1.97	7.27	<0.1	12	8.3	7.4	1050
JULY -2015	2.75	7.29	ND	13	7.2	6.5	1030
AUGUST -2015	2.08	7.45	ND	23	7.0	6.2	1070
SEPTEMBER-2015	3.03	7.35	0.1	18	11.4	10.3	1080
OCTOBER -2015	3.17	7.30	ND	9	9.3	8.4	1080
NOVEMBER -2015	4.73	7.34	ND	10	7.8	7.1	1070
DECEMBER -2015	3.56	7.26	ND	11	9.7	8.8	979
=====	=====	=====	=====	=====	=====	=====	=====
Average	3.49	7.31	<0.1	16	8.0	7.1	1057

Analyte:	Oil & Grease	Outfall Temperature	Residual Chlorine	Turbidity	Dissolved Oxygen
Units:	(mg/L)	(°C)	(mg/L)	(NTU)	(mg/L)
=====	=====	=====	=====	=====	=====
JANUARY -2015	2.1	23.7	0.05	3.77	2.04
FEBRUARY -2015	2.3	23.7	0.03	3.24	1.91
MARCH -2015	2.1	24.5	0.04	3.03	2.79
APRIL -2015	2.4	25.4	0.05	3.06	2.17
MAY -2015	0.0	25.3	0.03	3.01	2.09
JUNE -2015	1.6	26.4	0.04	3.47	2.25
JULY -2015	1.4	27.9	0.04	3.17	2.24
AUGUST -2015	1.5	28.4	0.03	2.84	3.16
SEPTEMBER-2015	1.2	28.9	0.11	5.89	2.56
OCTOBER -2015	4.7	28.1	0.05	4.00	1.79
NOVEMBER -2015	3.1	25.7	0.05	3.24	2.15
DECEMBER -2015	5.2	23.3	0.05	3.71	2.88
=====	=====	=====	=====	=====	=====
Average	2.3	25.9	0.05	3.54	2.34

ND=not detected
NR=not required

SOUTH BAY WATER RECLAMATION PLANT

Annual 2015

Influent to Plant
(SB_INF_02)

Analyte:	Flow	pH	Total Dissolved Solids	Biochemical Oxygen Demand	Total Suspended Solids	Volatile Suspended Solids	Turbidity
Units:	(mgd)	(pH)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(NTU)
=====	=====	=====	=====	=====	=====	=====	=====
JANUARY -2015	7.71	NR	1110	329	281	261	NR
FEBRUARY -2015	7.84	7.65	1090	327	267	240	180
MARCH -2015	7.93	NR	1090	322	271	249	NR
APRIL -2015	7.84	NR	1090	355	271	251	NR
MAY -2015	7.64	7.54	1050	369	271	249	197
JUNE -2015	7.62	NR	1020	382	289	264	NR
JULY -2015	7.55	NR	1050	334	261	239	NR
AUGUST -2015	7.67	7.36	1070	346	252	232	191
SEPTEMBER-2015	7.58	NR	1070	319	273	249	NR
OCTOBER -2015	7.53	7.53	1080	345	274	250	198
NOVEMBER -2015	7.43	NR	1110	374	286	265	NR
DECEMBER -2015	5.29	NR	1050	375	267	246	NR
=====	=====	=====	=====	=====	=====	=====	=====
Average	7.47	7.52	1073	348	272	250	192

ND=not detected

NR=not required

SOUTH BAY WATER RECLAMATION PLANT
ANNUAL SEWAGE

Trace Metals

Annual 2015

Analyte:	Aluminum	Aluminum	Antimony	Antimony	Arsenic	Arsenic
MDL Units:	23.8 UG/L	23.8 UG/L	2.44 UG/L	2.44 UG/L	.06 UG/L	.06 UG/L
Source:	Influent	Effluent	Influent	Effluent	Influent	Effluent
Month/Limit:						2800
=====	=====	=====	=====	=====	=====	=====
JANUARY -2015	711	46	2.5	ND	0.4	0.7
FEBRUARY -2015	557	ND	ND	<2.4	1.1	0.6
MARCH -2015	718	<24	4.0	<2.4	0.9	0.7
APRIL -2015	540	31	4.5	<2.4	0.6	0.5
MAY -2015	322	55	ND	4.1	0.2	0.7
JUNE -2015	697	166	ND	ND	0.8	0.9
JULY -2015	622	212	ND	ND	0.8	0.8
AUGUST -2015	704	ND	ND	ND	1.2	1.0
SEPTEMBER-2015	222	ND	ND	<2.4	1.0	1.1
OCTOBER -2015	662	31	<2.4	3.0	1.3	0.9
NOVEMBER -2015	916	52	4.0	4.0	1.3	1.0
DECEMBER -2015	555	48	5.0	3.0	0.9	0.8
=====	=====	=====	=====	=====	=====	=====
AVERAGE	602	53	1.7	1.2	0.9	0.8

Analyte:	Barium	Barium	Beryllium	Beryllium	Boron	Boron
MDL Units:	.7 UG/L	.7 UG/L	.05 UG/L	.05 UG/L	1.4 UG/L	1.4 UG/L
Source:	Influent	Effluent	Influent	Effluent	Influent	Effluent
Month/Limit:						
=====	=====	=====	=====	=====	=====	=====
JANUARY -2015	135	93.3	ND	0.18	308	304
FEBRUARY -2015	127	92.6	ND	ND	300	309
MARCH -2015	131	89.9	ND	ND	305	314
APRIL -2015	135	102	ND	ND	322	325
MAY -2015	106	94.5	ND	ND	321	322
JUNE -2015	128	81.5	ND	ND	357	357
JULY -2015	104	70.5	ND	ND	336	369
AUGUST -2015	124	80.2	ND	ND	347	331
SEPTEMBER-2015	106	85.2	ND	ND	301	317
OCTOBER -2015	130	90.6	<0.05	ND	360	346
NOVEMBER -2015	120	87.1	ND	ND	323	317
DECEMBER -2015	86.6	58.6	ND	ND	361	350
=====	=====	=====	=====	=====	=====	=====
AVERAGE	119	85.5	<0.05	0.015	328	330

Analyte:	Cadmium	Cadmium	Chromium	Chromium	Cobalt	Cobalt
MDL Units:	.26 UG/L	.26 UG/L	.54 UG/L	.54 UG/L	.24 UG/L	.24 UG/L
Source:	Influent	Effluent	Influent	Effluent	Influent	Effluent
Month/Limit:		48		760		
=====	=====	=====	=====	=====	=====	=====
JANUARY -2015	0.33	<0.26	3.2	0.7	0.95	0.58
FEBRUARY -2015	0.37	ND	2.8	0.6	0.76	0.46
MARCH -2015	0.43	<0.26	3.8	1.8	0.84	0.52
APRIL -2015	0.38	ND	2.7	1.1	NR	0.40
MAY -2015	ND	<0.26	1.6	0.7	0.94	0.38
JUNE -2015	ND	ND	4.5	1.8	NR	0.51
JULY -2015	ND	ND	3.9	1.3	NR	0.61
AUGUST -2015	ND	ND	4.3	ND	0.48	ND
SEPTEMBER-2015	0.30	<0.26	2.5	1.2	NR	0.55
OCTOBER -2015	0.30	ND	7.6	0.9	7.95	0.40
NOVEMBER -2015	0.60	0.30	4.7	2.0	NR	0.50
DECEMBER -2015	ND	ND	4.3	1.6	NR	0.60
=====	=====	=====	=====	=====	=====	=====
AVERAGE	0.23	0.03	3.8	1.1	1.99	0.46

ND= not detected

NR= not required

SOUTH BAY WATER RECLAMATION PLANT
ANNUAL SEWAGE

Trace Metals

Annual 2015

Analyte:	Copper		Iron		Lead	
MDL Units:	2.16 UG/L	2.16 UG/L	15.6 UG/L	15.6 UG/L	1.68 UG/L	1.68 UG/L
Source:	Influent	Effluent	Influent	Effluent	Influent	Effluent
Month/Limit:	960				760	
JANUARY -2015	89	12	798	64	4.0	ND
FEBRUARY -2015	74	7	802	42	2.0	ND
MARCH -2015	94	12	795	192	1.8	ND
APRIL -2015	82	12	694	67	1.9	ND
MAY -2015	51	18	289	55	ND	ND
JUNE -2015	84	12	703	45	3.1	ND
JULY -2015	89	12	805	70	2.9	ND
AUGUST -2015	98	21	820	108	ND	ND
SEPTEMBER-2015	57	11	342	100	2.0	ND
OCTOBER -2015	93	9	953	59	4.0	ND
NOVEMBER -2015	103	12	954	62	2.0	2.0
DECEMBER -2015	72	9	553	64	ND	ND
AVERAGE	82	12	709	77	2.0	0.2

Analyte:	Manganese		Mercury		Molybdenum	
MDL Units:	.78 UG/L	.78 UG/L	0.013 UG/L	.005 UG/L	.32 UG/L	.32 UG/L
Source:	Influent	Effluent	Influent	Effluent	Influent	Effluent
Month/Limit:			15.00			
JANUARY -2015	86.3	51.8	0.217	ND	10.3	4.29
FEBRUARY -2015	90.0	60.2	0.125	ND	6.91	3.61
MARCH -2015	114	45.5	0.489	0.005	6.87	3.73
APRIL -2015	89.6	51.1	0.085	ND	NR	3.53
MAY -2015	78.1	29.3	0.130	ND	0.70	3.93
JUNE -2015	90.4	23.5	0.090	ND	NR	2.42
JULY -2015	79.3	40.0	0.096	ND	NR	3.42
AUGUST -2015	88.5	55.5	0.083	0.005	7.43	3.15
SEPTEMBER-2015	64.4	41.8	0.077	0.005	NR	4.50
OCTOBER -2015	70.0	22.0	0.065	ND	8.45	4.00
NOVEMBER -2015	81.5	28.5	0.097	ND	7.9	4.70
DECEMBER -2015	72.3	26.2	0.055	ND	NR	3.90
AVERAGE	83.7	39.6	0.134	<0.005	6.94	3.77

ND= not detected
NR= not required

SOUTH BAY WATER RECLAMATION PLANT
ANNUAL SEWAGE

Trace Metals

Annual 2015

Analyte:	Nickel		Selenium		Silver	
MDL Units:	.53 UG/L	.53 UG/L	.08 UG/L	.08 UG/L	.73 UG/L	.73 UG/L
Source:	Influent	Effluent	Influent	Effluent	Influent	Effluent
Month/Limit:	1900		5700		250	
JANUARY -2015	5.08	3.17	1.35	0.84	ND	ND
FEBRUARY -2015	4.29	2.67	2.19	1.05	ND	ND
MARCH -2015	4.10	2.30	1.95	0.94	ND	ND
APRIL -2015	4.48	3.54	1.87	0.97	ND	ND
MAY -2015	4.02	3.12	1.18	1.03	ND	ND
JUNE -2015	4.73	2.54	1.65	0.73	ND	ND
JULY -2015	5.00	3.00	1.36	0.69	0.75	ND
AUGUST -2015	13.8	10.8	1.78	0.62	ND	ND
SEPTEMBER-2015	7.80	6.85	1.30	0.62	ND	ND
OCTOBER -2015	9.10	7.60	2.04	0.69	<0.73	ND
NOVEMBER -2015	5.80	4.00	1.58	0.72	ND	ND
DECEMBER -2015	5.40	4.20	1.13	0.37	0.90	ND
AVERAGE	6.13	4.48	1.62	0.77	0.14	0.0

Analyte:	Thallium		Vanadium		Zinc	
MDL Units:	3.12 UG/L	3.12 UG/L	.45 UG/L	.45 UG/L	4.19 UG/L	4.19 UG/L
Source:	Influent	Effluent	Influent	Effluent	Influent	Effluent
Month/Limit:					6900	
JANUARY -2015	ND	ND	2.10	0.96	176	30.0
FEBRUARY -2015	ND	ND	1.81	0.63	159	18.1
MARCH -2015	ND	ND	NR	0.68	174	26.4
APRIL -2015	ND	ND	NR	0.84	153	24.4
MAY -2015	ND	ND	1.47	0.88	114	33.8
JUNE -2015	ND	ND	NR	0.66	173	30.6
JULY -2015	ND	ND	NR	1.03	181	33.0
AUGUST -2015	ND	ND	0.50	ND	171	17.5
SEPTEMBER-2015	ND	ND	1.20	0.95	95.0	26.0
OCTOBER -2015	ND	ND	2.15	1.10	183	32.0
NOVEMBER -2015	ND	ND	3.20	1.20	189	52.0
DECEMBER -2015	ND	ND	NR	1.40	131	52.0
AVERAGE	ND	ND	1.78	0.86	158	31.3

ND= not detected

NR= not required

SOUTH BAY WATER RECLAMATION PLANT
Annual Sewage Cations

Annual 2015

Source:		Calcium .04 mg/L		Magnesium .1 mg/L		Lithium .002 mg/L	
MDL/Units:							
Source:		INF	EFF	INF	EFF	INF	EFF
=====		=====	=====	=====	=====	=====	=====
JANUARY	-2015	86.9	87.2	33.9	32.1	0.055	0.051
FEBRUARY	-2015	82.2	88.0	30.7	31.7	0.058	0.049
MARCH	-2015	80.2	76.7	29.6	27.7	0.052	0.046
APRIL	-2015	83.1	88.5	30.9	31.3	0.047	0.045
MAY	-2015	82.9	86.6	29.1	28.3	0.052	0.050
JUNE	-2015	78.5	80.4	30.9	29.0	0.049	0.045
JULY	-2015	67.0	71.9	26.9	26.5	0.041	0.039
AUGUST	-2015	73.5	74.6	30.4	31.7	0.054	0.046
SEPTEMBER	-2015	86.8	88.2	33.3	32.9	0.042	0.042
OCTOBER	-2015	79.8	85.9	30.8	31.9	0.049	0.049
NOVEMBER	-2015	64.9	66.7	29.9	29.3	0.047	0.049
DECEMBER	-2015	60.4	64.3	29.8	30.2	0.041	0.043
=====		=====	=====	=====	=====	=====	=====
Average:		77.2	79.9	30.5	30.2	0.049	0.046

Source:		Sodium 1 mg/L		Potassium .3 mg/L	
MDL/Units:					
Source:		INF	EFF	INF	EFF
=====		=====	=====	=====	=====
JANUARY	-2015	203	207	20.2	18.0
FEBRUARY	-2015	184	199	18.2	17.3
MARCH	-2015	188	186	16.7	14.8
APRIL	-2015	211	207	20.1	18.3
MAY	-2015	213	207	23.0	19.9
JUNE	-2015	203	214	21.9	19.5
JULY	-2015	180	196	20.1	19.1
AUGUST	-2015	201	216	20.4	19.6
SEPTEMBER	-2015	220	228	20.2	19.2
OCTOBER	-2015	216	227	18.7	18.1
NOVEMBER	-2015	190	181	18.8	16.9
DECEMBER	-2015	186	201	18.3	17.3
=====		=====	=====	=====	=====
Average:		200	206	19.7	18.2

ND=not detected

INF= Influent
EFF= Effluent

SOUTH BAY WATER RECLAMATION PLANT
ANNUAL SEWAGE

Anions

Annual 2015

Analyte:	Bromide	Bromide	Chloride	Chloride	Fluoride	Fluoride
MDL:	.1	.1	7	7	.05	.05
Units:	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
Source:	INFLUENT	EFFLUENT	INFLUENT	EFFLUENT	INFLUENT	EFFLUENT
=====	=====	=====	=====	=====	=====	=====
JANUARY -2015	0.2	0.3	235	238	0.36	0.43
FEBRUARY -2015	0.2	0.3	237	243	0.43	0.60
MARCH -2015	0.3	0.3	249	246	0.42	0.56
APRIL -2015	0.3	0.3	232	237	0.34	0.58
MAY -2015	0.3	0.3	232	222	0.33	0.53
JUNE -2015	0.4	0.2	218	246	0.26	0.55
JULY -2015	0.4	0.2	243	237	0.30	0.52
AUGUST -2015	0.2	0.3	215	252	0.29	0.51
SEPTEMBER-2015	0.2	0.2	222	223	0.23	0.45
OCTOBER -2015	0.2	0.2	219	232	0.18	0.42
NOVEMBER -2015	0.4	0.3	252	237	0.26	0.50
DECEMBER -2015	0.3	0.4	235	263	0.26	0.50
=====	=====	=====	=====	=====	=====	=====
AVERAGE	0.3	0.3	232	240	0.31	0.51

Analyte:	Nitrate	Nitrate	O-Phosphate	O-Phosphate	Sulfate	Sulfate
MDL:	.04	.04	.2	.2	9	9
Units:	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
Source:	INFLUENT	EFFLUENT	INFLUENT	EFFLUENT	INFLUENT	EFFLUENT
=====	=====	=====	=====	=====	=====	=====
JANUARY -2015	0.92	38.9	10.5	0.7	219	258
FEBRUARY -2015	0.05	26.4	10.8	0.9	211	261
MARCH -2015	0.08	43.3	10.4	ND	203	246
APRIL -2015	0.16	30.5	11.2	0.6	197	253
MAY -2015	<0.04	46.7	10.3	0.9	186	240
JUNE -2015	0.19	43.7	10.6	0.9	157	229
JULY -2015	1.21	51.6	10.5	1.6	151	190
AUGUST -2015	1.09	39.7	8.8	1.9	189	208
SEPTEMBER-2015	2.29	44.6	11.0	5.4	208	254
OCTOBER -2015	1.29	61.2	10.9	6.2	212	254
NOVEMBER -2015	2.00	61.0	11.4	3.8	167	223
DECEMBER -2015	2.54	63.7	10.7	1.7	135	182
=====	=====	=====	=====	=====	=====	=====
AVERAGE	0.99	45.9	10.6	2.1	186	233

ND= not detected

SOUTH BAY WATER RECLAMATION PLANT
ANNUAL SEWAGE

Ammonia-Nitrogen and Total Cyanides

Annual 2015

Analyte:	Ammonia-N	Ammonia-N	Total Cyanides	Total Cyanides
MDL/Units:	.3 MG/L	.3 MG/L	.002 MG/L	.002 MG/L
Source:	SB_INF_02	SB_OUTFALL_01	SB_INF_02	SB_OUTFALL_01
=====	=====	=====	=====	=====
JANUARY -2015	31.9	2.3	ND	ND
FEBRUARY -2015	39.1	9.2	ND	ND
MARCH -2015	32.6	1.0	ND	ND
APRIL -2015	36.1	6.7	ND	0.002
MAY -2015	40.7	ND	ND	ND
JUNE -2015	31.8	ND	ND	0.003
JULY -2015	28.1	ND	ND	0.003
AUGUST -2015	34.5	10.4	ND	ND
SEPTEMBER-2015	34.4	0.8	ND	ND
OCTOBER -2015	34.5	ND	ND	ND
NOVEMBER -2015	37.1	ND	ND	ND
DECEMBER -2015	32.4	ND	ND	ND
=====	=====	=====	=====	=====
Average:	34.4	2.5	ND	0.001

ND= not detected

SOUTH BAY WATER RECLAMATION PLANT
Radioactivity
Effluent to the Ocean (SB_OUTFALL_01)

Analyzed by: TestAmerica Laboratories Richland

Annual 2015

Month		Gross Alpha Radiation	Gross Beta Radiation
=====	=====	=====	=====
JANUARY	-2015	2.0 ± 4.5	19.4 ± 4.3
FEBRUARY	-2015	3.5 ± 6.8	23.3 ± 11.0
MARCH	-2015	2.2 ± 4.0	20.4 ± 4.0
APRIL	-2015	0.8 ± 4.3	24.5 ± 4.6
MAY	-2015	2.9 ± 4.2	20.7 ± 4.3
JUNE	-2015	-2.7 ± 4.3	21.2 ± 4.4
JULY	-2015	1.1 ± 4.4	21.5 ± 4.2
AUGUST	-2015	1.5 ± 6.0	17.9 ± 5.0
SEPTEMBER	-2015	1.1 ± 4.6	19.0 ± 5.0
OCTOBER	-2015	1.7 ± 3.7	23.1 ± 4.7
NOVEMBER	-2015	2.8 ± 3.1	20.7 ± 4.9
DECEMBER	-2015	3.1 ± 4.2	19.7 ± 4.6
=====	=====	=====	=====
AVERAGE		1.7 ± 4.5	21.0 ± 5.1

Units in picocuries/liter (pCi/L)

SOUTH BAY WATER RECLAMATION PLANT
SEWAGE ANNUAL - Chlorinated Pesticide Analysis

Annual 2015

Source:			EFFLUENT												
Date:			JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Avg
Analyte	MDL	Units													
=====															
Aldrin	4	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	4.3	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BHC, Alpha isomer	.2	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BHC, Beta isomer	2	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BHC, Gamma isomer	.34	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BHC, Delta isomer	2	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
p,p-DDD	4	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
p,p-DDE	1.4	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
p,p-DDT	3	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
o,p-DDD	4	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
o,p-DDE	2	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
o,p-DDT	2.4	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	.6	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor epoxide	9.4	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Alpha (cis) Chlordane	1.4	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Gamma (trans) Chlordane	1.3	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Alpha Chlordene	0	NG/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gamma Chlordene	0	NG/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oxychlordane	2	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trans Nonachlor	1.1	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cis Nonachlor	4	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Alpha Endosulfan	1.5	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Beta Endosulfan	3.1	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan Sulfate	7	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	6	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin aldehyde	5.4	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mirex	2.3	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methoxychlor	20	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toxaphene	250	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB 1016	250	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB 1221	2000	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB 1232	750	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB 1242	250	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB 1248	250	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB 1254	500	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB 1260	500	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB 1262	500	NG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
=====															
Aldrin + Dieldrin	4.3	NG/L	0	0	0	0	0	0	0	0	0	0	0	0	0
Hexachlorocyclohexanes	2	NG/L	0	0	0	0	0	0	0	0	0	0	0	0	0
DDT and derivatives	4	NG/L	0	0	0	0	0	0	0	0	0	0	0	0	0
Chlordane + related cmpds.	2	NG/L	0	0	0	0	0	0	0	0	0	0	0	0	0
Polychlorinated biphenyls	2000	NG/L	0	0	0	0	0	0	0	0	0	0	0	0	0
Endosulfans	7	NG/L	0	0	0	0	0	0	0	0	0	0	0	0	0
=====															
Heptachlors	9.4	NG/L	0	0	0	0	0	0	0	0	0	0	0	0	0
=====															
Chlorinated Hydrocarbons	2000	NG/L	0	0	0	0	0	0	0	0	0	0	0	0	0

ND=not detected
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
SEWAGE ANNUAL - Chlorinated Pesticide Analysis

Annual 2015

Source:			INFLUENT				Avg
Date:			FEB	MAY	AUG	OCT	
Analyte	MDL	Units					
=====	=====	=====	=====	=====	=====	=====	=====
Aldrin	4	NG/L	ND	ND	ND	ND	ND
Dieldrin	4.3	NG/L	ND	ND	ND	ND	ND
BHC, Alpha isomer	.2	NG/L	ND	ND	ND	ND	ND
BHC, Beta isomer	2	NG/L	ND	ND	ND	ND	ND
BHC, Gamma isomer	.34	NG/L	ND	ND	ND	ND	ND
BHC, Delta isomer	2	NG/L	ND	ND	ND	ND	ND
p,p-DDD	4	NG/L	ND	ND	ND	ND	ND
p,p-DDE	1.4	NG/L	ND	ND	ND	ND	ND
p,p-DDT	3	NG/L	ND	ND	ND	ND	ND
o,p-DDD	4	NG/L	ND	ND	ND	ND	ND
o,p-DDE	2	NG/L	ND	ND	ND	ND	ND
o,p-DDT	2.4	NG/L	ND	ND	ND	ND	ND
Heptachlor	.6	NG/L	ND	ND	ND	ND	ND
Heptachlor epoxide	9.4	NG/L	ND	ND	ND	ND	ND
Alpha (cis) Chlordane	1.4	NG/L	ND	ND	ND	ND	ND
Gamma (trans) Chlordane	1.3	NG/L	ND	ND	ND	ND	ND
Alpha Chlordene	0	NG/L	NA	NA	NA	NA	NA
Gamma Chlordene	0	NG/L	NA	NA	NA	NA	NA
Oxychlordane	2	NG/L	ND	ND	ND	ND	ND
Trans Nonachlor	1.1	NG/L	ND	ND	ND	ND	ND
Cis Nonachlor	4	NG/L	ND	ND	ND	ND	ND
Alpha Endosulfan	1.5	NG/L	ND	ND	ND	ND	ND
Beta Endosulfan	3.1	NG/L	ND	ND	ND	ND	ND
Endosulfan Sulfate	7	NG/L	ND	ND	ND	ND	ND
Endrin	6	NG/L	ND	ND	ND	ND	ND
Endrin aldehyde	5.4	NG/L	ND	ND	ND	ND	ND
Mirex	2.3	NG/L	ND	ND	ND	ND	ND
Methoxychlor	20	NG/L	ND	ND	ND	ND	ND
Toxaphene	250	NG/L	ND	ND	ND	ND	ND
PCB 1016	250	NG/L	ND	ND	ND	ND	ND
PCB 1221	2000	NG/L	ND	ND	ND	ND	ND
PCB 1232	750	NG/L	ND	ND	ND	ND	ND
PCB 1242	250	NG/L	ND	ND	ND	ND	ND
PCB 1248	250	NG/L	ND	ND	ND	ND	ND
PCB 1254	500	NG/L	ND	ND	ND	ND	ND
PCB 1260	500	NG/L	ND	ND	ND	ND	ND
PCB 1262	500	NG/L	ND	ND	ND	ND	ND
=====	=====	=====	=====	=====	=====	=====	=====
Aldrin + Dieldrin	4.3	NG/L	0	0	0	0	0
Hexachlorocyclohexanes	2	NG/L	0	0	0	0	0
DDT and derivatives	4	NG/L	0	0	0	0	0
Chlordane + related cmpds.	2	NG/L	0	0	0	0	0
Polychlorinated biphenyls	2000	NG/L	0	0	0	0	0
Endosulfans	7	NG/L	0	0	0	0	0
=====	=====	=====	=====	=====	=====	=====	=====
Heptachlors	9.4	NG/L	0	0	0	0	0
=====	=====	=====	=====	=====	=====	=====	=====
Chlorinated Hydrocarbons	2000	NG/L	0	0	0	0	0

ND=not detected
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
Organophosphorus PesticidesEPA Method 614/622 (with additions)

INFLUENT(SB_INF_02) & EFFLUENT(SB_OUTFALL_01)

Annual 2015

Source:		Effluent	Effluent	Influent	Influent
Date:		05-MAY-2015	06-OCT-2015	07-MAY-2015	06-OCT-2015
Analyte	MDL Units	P778749	P807375	P783699	P807370
Demeton O	.15 UG/L	ND	ND	ND	ND
Demeton S	.08 UG/L	ND	ND	ND	ND
Diazinon	.03 UG/L	ND	ND	ND	ND
Guthion	.15 UG/L	ND	ND	ND	ND
Malathion	.03 UG/L	ND	ND	ND	ND
Parathion	.03 UG/L	ND	ND	ND	ND
Dichlorvos	.05 UG/L	ND	ND	ND	0.28
Disulfoton	.02 UG/L	ND	ND	ND	ND
Dimethoate	.04 UG/L	ND	ND	ND	ND
Stirophos	.03 UG/L	ND	ND	ND	ND
Coumaphos	.15 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	.15 UG/L	0.0	0.0	0.0	0.28

ND=not detected

SOUTH BAY WATER RECLAMATION PLANT
ANNUAL SEWAGE - Tributyl Tin Analysis

Annual 2015

Source:			EFFLUENT				
Date:			FEB	MAY	AUG	OCT	
Analyte	MDL	Units					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

Source:			INFLUENT				
Date:			FEB	MAY	AUG	OCT	
Analyte	MDL	Units					Average
=====	===	=====	=====	=====	=====	=====	=====
Dibutyltin	7	UG/L	ND	ND	ND	ND	ND
Monobutyltin	16	UG/L	ND	ND	ND	ND	ND
Tributyltin	2	UG/L	ND	ND	ND	ND	ND

ND=not detected

SOUTH BAY WATER RECLAMATION PLANT
SEWAGE ANNUAL - Acid Extractables

Annual 2015

Source:															EFFLUENT											
Date:																										
Analyte	MDL	Units	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVG											
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====											
2-Chlorophenol	1.32	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND											
2,4-Dichlorophenol	1.01	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND											
4-Chloro-3-methylphenol	1.67	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND											
2,4,6-Trichlorophenol	1.65	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND											
Pentachlorophenol	1.12	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND											
Phenol	1.76	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND											
2-Nitrophenol	1.55	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND											
2,4-Dimethylphenol	2.01	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND											
2,4-Dinitrophenol	2.16	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND											
4-Nitrophenol	1.14	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND											
2-Methyl-4,6-dinitrophenol	1.52	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND											
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====											
Total Chlorinated Phenols	1.67	UG/L	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0											
Total Non-Chlorinated Phenols	2.16	UG/L	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0											
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====											
Total Phenols	2.16	UG/L	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0											

Additional analytes determined

=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
2-Methylphenol	2.15	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3-Methylphenol(4-MP is unresolved)		UG/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methylphenol(3-MP is unresolved)	2.11	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	1.66	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Source:																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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Additional analytes determined

=====	=====	=====	=====	=====	=====	=====	=====
2-Methylphenol	2.15	UG/L	ND	ND	ND	ND	ND
3-Methylphenol(4-MP is unresolved)		UG/L	NA	NA	NA	NA	NA
4-Methylphenol(3-MP is unresolved)	2.11	UG/L	139	130	117	144	133
2,4,5-Trichlorophenol	1.66	UG/L	ND	ND	ND	ND	ND

ND=not detected
NA=not analyzed

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

Annual 2015

Source:			EFFLUENT				
Date:			FEB	MAY	AUG	OCT	
Analyte	MDL	Units					AVG
=====	=====	=====	=====	=====	=====	=====	=====
Bis-(2-chloroethyl) ether	1.38	UG/L	ND	ND	ND	ND	ND
Bis-(2-chloroisopropyl) ether	1.16	UG/L	ND	ND	ND	ND	ND
N-nitrosodi-n-propylamine	1.16	UG/L	ND	ND	ND	ND	ND
Nitrobenzene	1.6	UG/L	ND	ND	ND	ND	ND
Hexachloroethane	1.32	UG/L	ND	ND	ND	ND	ND
Isophorone	1.53	UG/L	ND	ND	ND	ND	ND
Bis-(2-chloroethoxy) methane	1.01	UG/L	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	1.52	UG/L	ND	ND	ND	ND	ND
Naphthalene	1.65	UG/L	ND	ND	ND	ND	ND
Hexachlorobutadiene	1.64	UG/L	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	1.25	UG/L	ND	ND	ND	ND	ND
Acenaphthylene	1.77	UG/L	ND	ND	ND	ND	ND
Dimethyl phthalate	1.44	UG/L	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	1.53	UG/L	ND	ND	ND	ND	ND
Acenaphthene	1.8	UG/L	ND	ND	ND	ND	ND
2,4-Dinitrotoluene	1.36	UG/L	ND	ND	ND	ND	ND
Fluorene	1.61	UG/L	ND	ND	ND	ND	ND
4-Chlorophenyl phenyl ether	1.57	UG/L	ND	ND	ND	ND	ND
Diethyl phthalate	3.05	UG/L	ND	ND	ND	ND	ND
N-nitrosodiphenylamine	3.48	UG/L	ND	ND	ND	ND	ND
4-Bromophenyl phenyl ether	1.4	UG/L	ND	ND	ND	ND	ND
Hexachlorobenzene	1.48	UG/L	ND	ND	ND	ND	ND
Phenanthrene	1.34	UG/L	ND	ND	ND	ND	ND
Anthracene	1.29	UG/L	ND	ND	ND	ND	ND
Di-n-butyl phthalate	3.96	UG/L	ND	ND	ND	ND	ND
N-nitrosodimethylamine	1.27	UG/L	ND	ND	ND	ND	ND
Fluoranthene	1.33	UG/L	ND	ND	ND	ND	ND
Pyrene	1.43	UG/L	ND	ND	ND	ND	ND
Benzidine	1.52	UG/L	ND	ND	ND	ND	ND
Butyl benzyl phthalate	2.84	UG/L	ND	ND	ND	ND	ND
Chrysene	1.16	UG/L	ND	ND	ND	ND	ND
Benzo[a]anthracene	1.1	UG/L	ND	ND	ND	ND	ND
Bis-(2-ethylhexyl) phthalate	8.96	UG/L	ND	ND	15.8	ND	4.0
Di-n-octyl phthalate	1	UG/L	ND	ND	ND	ND	ND
3,3-Dichlorobenzidine	2.44	UG/L	ND	ND	ND	ND	ND
Benzo[k]fluoranthene	1.49	UG/L	ND	ND	ND	ND	ND
3,4-Benzo(b)fluoranthene	1.35	UG/L	ND	ND	ND	ND	ND
Benzo[a]pyrene	1.25	UG/L	ND	ND	ND	ND	ND
Indeno(1,2,3-CD)pyrene	1.14	UG/L	ND	ND	ND	ND	ND
Dibenzo(a,h)anthracene	1.01	UG/L	ND	ND	ND	ND	ND
Benzo[g,h,i]perylene	1.09	UG/L	ND	ND	ND	ND	ND
1,2-Diphenylhydrazine	1.37	UG/L	ND	ND	ND	ND	ND
=====	=====	=====	=====	=====	=====	=====	=====
Polynuc. Aromatic Hydrocarbons	1.77	UG/L	0.0	0.0	0.0	0.0	0.0
=====	=====	=====	=====	=====	=====	=====	=====
Base/Neutral Compounds	8.96	UG/L	0.0	0.0	15.8	0.0	4.0

Additional analytes determined

=====	=====	=====	=====	=====	=====	=====	=====
1-Methylnaphthalene	2.18	UG/L	ND	ND	ND	ND	ND
2-Methylnaphthalene	2.14	UG/L	ND	ND	ND	ND	ND
2,6-Dimethylnaphthalene	2.16	UG/L	ND	ND	ND	ND	ND
2,3,5-Trimethylnaphthalene	2.18	UG/L	ND	ND	ND	ND	ND
1-Methylphenanthrene	1.46	UG/L	ND	ND	ND	ND	ND
Benzo[e]pyrene	1.44	UG/L	ND	ND	ND	ND	ND
Perylene	1.41	UG/L	ND	ND	ND	ND	ND
Biphenyl	2.29	UG/L	ND	ND	ND	ND	ND

ND=not detected

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

Annual 2015

Source:			INFLUENT				
Date:			FEB	MAY	AUG	OCT	
Analyte	MDL	Units					AVG
=====	=====	=====	=====	=====	=====	=====	=====
Bis-(2-chloroethyl) ether	1.38	UG/L	ND	ND	ND	ND	ND
Bis-(2-chloroisopropyl) ether	1.16	UG/L	ND	ND	ND	ND	ND
N-nitrosodi-n-propylamine	1.16	UG/L	ND	ND	ND	ND	ND
Nitrobenzene	1.6	UG/L	ND	ND	ND	ND	ND
Hexachloroethane	1.32	UG/L	ND	ND	ND	ND	ND
Isophorone	1.53	UG/L	ND	ND	ND	ND	ND
Bis-(2-chloroethoxy) methane	1.01	UG/L	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	1.52	UG/L	ND	ND	ND	ND	ND
Naphthalene	1.65	UG/L	ND	ND	ND	ND	ND
Hexachlorobutadiene	1.64	UG/L	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	1.25	UG/L	ND	ND	ND	ND	ND
Acenaphthylene	1.77	UG/L	ND	ND	ND	ND	ND
Dimethyl phthalate	1.44	UG/L	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	1.53	UG/L	ND	ND	ND	ND	ND
Acenaphthene	1.8	UG/L	ND	ND	ND	ND	ND
2,4-Dinitrotoluene	1.36	UG/L	ND	ND	ND	ND	ND
Fluorene	1.61	UG/L	ND	ND	ND	ND	ND
4-Chlorophenyl phenyl ether	1.57	UG/L	ND	ND	ND	ND	ND
Diethyl phthalate	3.05	UG/L	4.7	8.5	4.5	5.3	5.8
N-nitrosodiphenylamine	3.48	UG/L	ND	ND	ND	ND	ND
4-Bromophenyl phenyl ether	1.4	UG/L	ND	ND	ND	ND	ND
Hexachlorobenzene	1.48	UG/L	ND	ND	ND	ND	ND
Phenanthrene	1.34	UG/L	ND	ND	ND	ND	ND
Anthracene	1.29	UG/L	ND	ND	ND	ND	ND
Di-n-butyl phthalate	3.96	UG/L	ND	ND	ND	ND	ND
N-nitrosodimethylamine	1.27	UG/L	ND	ND	ND	ND	ND
Fluoranthene	1.33	UG/L	ND	ND	ND	ND	ND
Pyrene	1.43	UG/L	ND	ND	ND	ND	ND
Benidine	1.52	UG/L	ND	ND	ND	ND	ND
Butyl benzyl phthalate	2.84	UG/L	3.0	ND	DNQ3.0	ND	0.8
Chrysene	1.16	UG/L	ND	ND	ND	ND	ND
Benzo[a]anthracene	1.1	UG/L	ND	ND	ND	ND	ND
Bis-(2-ethylhexyl) phthalate	8.96	UG/L	13.2	28.2	34.0	33.6	27.3
Di-n-octyl phthalate	1	UG/L	ND	ND	ND	ND	ND
3,3-Dichlorobenzidine	2.44	UG/L	ND	ND	ND	ND	ND
Benzo[k]fluoranthene	1.49	UG/L	ND	ND	ND	ND	ND
3,4-Benzo(b)fluoranthene	1.35	UG/L	ND	ND	ND	ND	ND
Benzo[a]pyrene	1.25	UG/L	ND	ND	ND	ND	ND
Indeno(1,2,3-CD)pyrene	1.14	UG/L	ND	ND	ND	ND	ND
Dibenzo(a,h)anthracene	1.01	UG/L	ND	ND	ND	ND	ND
Benzo[g,h,i]perylene	1.09	UG/L	ND	ND	ND	ND	ND
1,2-Diphenylhydrazine	1.37	UG/L	ND	ND	ND	ND	ND
=====	=====	=====	=====	=====	=====	=====	=====
Polynuc. Aromatic Hydrocarbons	1.77	UG/L	0.0	0.0	0.0	0.0	0.0
=====	=====	=====	=====	=====	=====	=====	=====
Base/Neutral Compounds	8.96	UG/L	20.9	36.7	38.5	38.9	33.9

Additional analytes determined

=====	=====	=====	=====	=====	=====	=====
1-Methylnaphthalene	2.18	UG/L	ND	ND	ND	ND
2-Methylnaphthalene	2.14	UG/L	ND	ND	ND	ND
2,6-Dimethylnaphthalene	2.16	UG/L	ND	ND	ND	ND
2,3,5-Trimethylnaphthalene	2.18	UG/L	ND	ND	ND	ND
1-Methylphenanthrene	1.46	UG/L	ND	ND	ND	ND
Benzo[e]pyrene	1.44	UG/L	ND	ND	ND	ND
Perylene	1.41	UG/L	ND	ND	ND	ND
Biphenyl	2.29	UG/L	ND	ND	ND	ND

ND=not detected

DNQ= (Detected but not quantified). Estimated analyte concentration below calibration range.

SOUTH BAY WATER RECLAMATION PLANT
SEWAGE ANNUAL Priority Pollutants Purgeables

Annual 2015

Source:			EFFLUENT				
Analyte	MDL	Units	FEB	MAY	AUG	OCT	AVG
Dichlorodifluoromethane	.66	UG/L	ND	ND	ND	ND	ND
Chloromethane	.5	UG/L	ND	ND	ND	ND	ND
Vinyl chloride	.4	UG/L	ND	ND	ND	ND	ND
Bromomethane	.7	UG/L	ND	ND	ND	ND	ND
Chloroethane	.9	UG/L	ND	ND	ND	ND	ND
Trichlorofluoromethane	.3	UG/L	ND	ND	ND	ND	ND
Acrolein	1.3	UG/L	ND	ND	ND	ND	ND
1,1-Dichloroethane	.4	UG/L	ND	ND	ND	ND	ND
Methylene chloride	.3	UG/L	ND	ND	ND	ND	ND
trans-1,2-dichloroethene	.6	UG/L	ND	ND	ND	ND	ND
1,1-Dichloroethene	.4	UG/L	ND	ND	ND	ND	ND
Acrylonitrile	.7	UG/L	ND	ND	ND	ND	ND
Chloroform	.2	UG/L	ND	1.5	DNQ	0.7	DNQ1.7
1,1,1-Trichloroethane	.4	UG/L	ND	ND	ND	ND	ND
Carbon tetrachloride	.4	UG/L	ND	ND	ND	ND	ND
Benzene	.4	UG/L	ND	ND	ND	ND	ND
1,2-Dichloroethane	.5	UG/L	ND	ND	ND	ND	ND
Trichloroethene	.7	UG/L	ND	ND	ND	ND	ND
1,2-Dichloropropane	.3	UG/L	ND	ND	ND	ND	ND
Bromodichloromethane	.5	UG/L	ND	ND	ND	ND	ND
2-Chloroethylvinyl ether	1.1	UG/L	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	.3	UG/L	ND	ND	ND	ND	ND
Toluene	.4	UG/L	ND	ND	ND	ND	ND
trans-1,3-dichloropropene	.5	UG/L	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	.5	UG/L	ND	ND	ND	ND	ND
Tetrachloroethene	1.1	UG/L	ND	ND	ND	ND	ND
Dibromochloromethane	.6	UG/L	ND	ND	ND	ND	ND
Chlorobenzene	.4	UG/L	ND	ND	ND	ND	ND
Ethylbenzene	.3	UG/L	ND	ND	ND	ND	ND
Bromoform	.5	UG/L	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	.5	UG/L	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	.5	UG/L	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	.4	UG/L	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	.4	UG/L	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	1.52	UG/L	ND	ND	ND	ND	ND
Halomethane Purgeable Cmpnds	.7	UG/L	0.0	0.0	0.0	0.0	0.0
Total Dichlorobenzenes	.5	UG/L	0.0	0.0	0.0	0.0	0.0
Total Chloromethanes	.5	UG/L	0.0	1.5	0.0	0.0	0.4
Purgeable Compounds	1.3	UG/L	0.0	1.5	0.0	0.0	0.4
Additional analytes determined							
Methyl Iodide	.6	UG/L	ND	ND	ND	ND	ND
Carbon disulfide	.6	UG/L	ND	ND	ND	ND	ND
Acetone	4.5	UG/L	ND	ND	ND	ND	ND
Allyl chloride	.6	UG/L	ND	ND	ND	ND	ND
Methyl tert-butyl ether	.4	UG/L	ND	ND	ND	ND	ND
Chloroprene	.4	UG/L	ND	ND	ND	ND	ND
1,2-Dibromoethane	.3	UG/L	ND	ND	ND	ND	ND
2-Butanone	6.3	UG/L	ND	ND	ND	ND	ND
Methyl methacrylate	.8	UG/L	ND	ND	ND	ND	ND
2-Nitropropane	12	UG/L	ND	ND	ND	ND	ND
4-Methyl-2-pentanone	1.3	UG/L	ND	ND	ND	ND	ND
meta,para xylenes	.6	UG/L	ND	ND	ND	ND	ND
ortho-xylene	.4	UG/L	ND	ND	ND	ND	ND
Isopropylbenzene	.3	UG/L	ND	ND	ND	ND	ND
Styrene	.3	UG/L	ND	ND	ND	ND	ND
Benzyl chloride	1.1	UG/L	ND	ND	ND	ND	ND

ND= not detected

DNQ= (Detected but not quantified). Estimated analyte concentration below calibration range.

SOUTH BAY WATER RECLAMATION PLANT
SEWAGE ANNUAL Priority Pollutants Purgeables

Annual 2015

Source:			INFLUENT				
Analyte	MDL	Units	FEB	MAY	AUG	OCT	AVG
=====							
Dichlorodifluoromethane	.66	UG/L	ND	ND	ND	ND	ND
Chloromethane	.5	UG/L	ND	ND	ND	ND	ND
Vinyl chloride	.4	UG/L	ND	ND	ND	ND	ND
Bromomethane	.7	UG/L	ND	ND	ND	ND	ND
Chloroethane	.9	UG/L	ND	ND	ND	ND	ND
Trichlorofluoromethane	.3	UG/L	ND	ND	ND	ND	ND
Acrolein	1.3	UG/L	ND	ND	ND	ND	ND
1,1-Dichloroethane	.4	UG/L	ND	ND	ND	ND	ND
Methylene chloride	.3	UG/L	ND	DNQ0.8	DNQ0.6	DNQ0.4*	ND
trans-1,2-dichloroethene	.6	UG/L	ND	ND	ND	ND	ND
1,1-Dichloroethene	.4	UG/L	ND	ND	ND	ND	ND
Acrylonitrile	.7	UG/L	ND	ND	ND	ND	ND
Chloroform	.2	UG/L	1.5	2.5	DNQ1.8	2.0	1.5
1,1,1-Trichloroethane	.4	UG/L	ND	ND	ND	ND	ND
Carbon tetrachloride	.4	UG/L	ND	ND	ND	ND	ND
Benzene	.4	UG/L	ND	ND	ND	ND	ND
1,2-Dichloroethane	.5	UG/L	ND	ND	ND	ND	ND
Trichloroethene	.7	UG/L	ND	ND	ND	ND	ND
1,2-Dichloropropane	.3	UG/L	ND	ND	ND	ND	ND
Bromodichloromethane	.5	UG/L	ND	ND	ND	ND	ND
2-Chloroethylvinyl ether	1.1	UG/L	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	.3	UG/L	ND	ND	ND	ND	ND
Toluene	.4	UG/L	ND	ND	DNQ0.5	DNQ0.4	ND
trans-1,3-dichloropropene	.5	UG/L	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	.5	UG/L	ND	ND	ND	ND	ND
Tetrachloroethene	1.1	UG/L	ND	ND	ND	ND	ND
Dibromochloromethane	.6	UG/L	ND	ND	ND	ND	ND
Chlorobenzene	.4	UG/L	ND	ND	ND	ND	ND
Ethylbenzene	.3	UG/L	ND	ND	ND	ND	ND
Bromoform	.5	UG/L	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	.5	UG/L	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	.5	UG/L	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	.4	UG/L	ND	ND	ND	DNQ0.4	ND
1,2-Dichlorobenzene	.4	UG/L	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	1.52	UG/L	ND	ND	ND	ND	ND
=====							
Halomethane Purgeable Cmpnds	.7	UG/L	0.0	0.0	0.0	0.0	0.0
=====							
Total Dichlorobenzenes	.5	UG/L	0.0	0.0	0.0	0.0	0.0
=====							
Total Chloromethanes	.5	UG/L	1.5	2.5	0.0	2.0	1.5
=====							
Purgeable Compounds	1.3	UG/L	1.5	2.5	0.0	2.8	1.5

Additional analytes determined

=====							
Methyl Iodide	.6	UG/L	ND	ND	ND	ND	ND
Carbon disulfide	.6	UG/L	4.9	DNQ2.5	1.6	4.2	2.7
Acetone	4.5	UG/L	203	154	108	147	153
Allyl chloride	.6	UG/L	ND	ND	ND	ND	ND
Methyl tert-butyl ether	.4	UG/L	1.0	ND	ND	ND	<0.4
Chloroprene	.4	UG/L	ND	ND	ND	ND	ND
1,2-Dibromoethane	.3	UG/L	ND	ND	ND	ND	ND
2-Butanone	6.3	UG/L	DNQ6.5	ND	ND	ND	ND
Methyl methacrylate	.8	UG/L	ND	ND	ND	ND	ND
2-Nitropropane	12	UG/L	ND	ND	ND	ND	ND
4-Methyl-2-pentanone	1.3	UG/L	ND	ND	ND	ND	ND
meta,para xylenes	.6	UG/L	ND	ND	ND	ND	ND
ortho-xylene	.4	UG/L	ND	ND	ND	ND	ND
Isopropylbenzene	.3	UG/L	ND	ND	ND	ND	ND
Styrene	.3	UG/L	ND	ND	ND	ND	ND
Benzyl chloride	1.1	UG/L	ND	ND	ND	ND	ND

ND= not detected

DNQ= (Detected but not quantified). Estimated analyte concentration below calibration range.

*= The Response factor RSD of 59.5% is above 15% calibration criteria limit; therefore sample is not included in averages.

SOUTH BAY WATER RECLAMATION PLANT
Annual Sewage Dioxin and Furan Analysis

Annual 2015

Source:				INF	INF	INF	INF
Date:				JAN	FEB	MAR	APR
Analyte	MDL	Units	Equiv	P754673	P756049	P770704	P775460
=====							
2,3,7,8-tetra CDD	.86	PG/L	1.000	ND	ND	ND	ND
1,2,3,7,8-penta CDD	1.1	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8_hexa_CDD	.66	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDD	.62	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDD	.46	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDD	.49	PG/L	0.010	DNQ18.1	DNQ21.6	DNQ14.8	29.1
octa CDD	1.4	PG/L	0.001	220	230	160	220
2,3,7,8-tetra CDF	.48	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8-penta CDF	.61	PG/L	0.050	ND	ND	ND	ND
2,3,4,7,8-penta CDF	.66	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDF	.44	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDF	.39	PG/L	0.100	DNQ1.31	ND	ND	ND
1,2,3,7,8,9-hexa CDF	.36	PG/L	0.100	ND	ND	ND	ND
2,3,4,6,7,8-hexa CDF	.36	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDF	1.6	PG/L	0.010	DNQ4.03	DNQ3.38	DNQ3.02	DNQ4.36
1,2,3,4,7,8,9-hepta CDF	.83	PG/L	0.010	ND	ND	ND	ND
octa CDF	.738	PG/L	0.001	DNQ14.0	8.0	DNQ7.82	DNQ13.2

Source:				INF	INF	INF	INF
Date:				MAY	JUN	JUL	AUG
Analyte	MDL	Units	Equiv	P783699	P787468	P793713	P795178
=====							
2,3,7,8-tetra CDD	.86	PG/L	1.000	ND	DNQ1.18	ND	ND
1,2,3,7,8-penta CDD	1.1	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8_hexa_CDD	.66	PG/L	0.100	ND	ND	DNQ1.5	DNQ1.4
1,2,3,6,7,8-hexa CDD	.62	PG/L	0.100	ND	DNQ3.11	DNQ4.3	DNQ9.4
1,2,3,7,8,9-hexa CDD	.46	PG/L	0.100	ND	ND	DNQ3.3	DNQ2.9
1,2,3,4,6,7,8-hepta CDD	.49	PG/L	0.010	DNQ20.4	25.8	DNQ39.0	DNQ54.0
octa CDD	1.4	PG/L	0.001	170	230	150	140
2,3,7,8-tetra CDF	.48	PG/L	0.100	DNQ1.47	DNQ1.05	DNQ1.7	DNQ0.99
1,2,3,7,8-penta CDF	.61	PG/L	0.050	ND	ND	DNQ0.87	ND
2,3,4,7,8-penta CDF	.66	PG/L	0.500	ND	ND	DNQ0.67	ND
1,2,3,4,7,8-hexa CDF	.44	PG/L	0.100	ND	ND	DNQ1.3	DNQ10.0
1,2,3,6,7,8-hexa CDF	.39	PG/L	0.100	ND	DNQ1.58	DNQ1.3	DNQ1.3
1,2,3,7,8,9-hexa CDF	.36	PG/L	0.100	ND	ND	DNQ0.92	DNQ0.92
2,3,4,6,7,8-hexa CDF	.36	PG/L	0.100	ND	ND	DNQ1.2	DNQ0.82
1,2,3,4,6,7,8-hepta CDF	1.6	PG/L	0.010	DNQ4.14	DNQ5.56	DNQ6.0	DNQ5.0
1,2,3,4,7,8,9-hepta CDF	.83	PG/L	0.010	ND	ND	ND	ND
octa CDF	.738	PG/L	0.001	DNQ10.2	DNQ15.7	DNQ15.0	DNQ9.3

Source:				INF	INF	INF	INF
Date:				SEP	OCT	NOV	DEC
Analyte	MDL	Units	Equiv	P804539	P807370	P815297	P822496
=====							
2,3,7,8-tetra CDD	.86	PG/L	1.000	ND	DNQ0.77	ND	ND
1,2,3,7,8-penta CDD	1.1	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8_hexa_CDD	.66	PG/L	0.100	ND	DNQ0.95	DNQ2.2	ND
1,2,3,6,7,8-hexa CDD	.62	PG/L	0.100	DNQ1.6	DNQ2.6	DNQ4.3	ND
1,2,3,7,8,9-hexa CDD	.46	PG/L	0.100	DNQ0.68	DNQ2.1	DNQ3.5	ND
1,2,3,4,6,7,8-hepta CDD	.49	PG/L	0.010	35.0	DNQ31.0	74.0	DNQ20.3
octa CDD	1.4	PG/L	0.001	300	270	530	150
2,3,7,8-tetra CDF	.48	PG/L	0.100	DNQ1.3	DNQ1.4	DNQ1.4	ND
1,2,3,7,8-penta CDF	.61	PG/L	0.050	DNQ0.61	ND	DNQ2.3	ND
2,3,4,7,8-penta CDF	.66	PG/L	0.500	DNQ0.66	ND	ND	ND
1,2,3,4,7,8-hexa CDF	.44	PG/L	0.100	DNQ0.59	DNQ1.4	DNQ2.6	ND
1,2,3,6,7,8-hexa CDF	.39	PG/L	0.100	DNQ0.52	DNQ1.2	DNQ2.4	ND
1,2,3,7,8,9-hexa CDF	.36	PG/L	0.100	DNQ0.55	DNQ0.95	DNQ2.3	ND
2,3,4,6,7,8-hexa CDF	.36	PG/L	0.100	ND	ND	DNQ2.6	ND
1,2,3,4,6,7,8-hepta CDF	1.6	PG/L	0.010	DNQ3.9	ND	DNQ6.8	DNQ5.94
1,2,3,4,7,8,9-hepta CDF	.83	PG/L	0.010	ND	ND	ND	ND
octa CDF	.738	PG/L	0.001	DNQ14.0	DNQ16.0	19.0	DNQ12.9

ND= not detected

DNQ= (Detected but not quantified). Estimated analyte concentration below calibration range.

Above are permit required CDD/CDF isomers.

SOUTH BAY WATER RECLAMATION PLANT
Annual Sewage Dioxin and Furan Analysis

Annual 2015

Source:				EFF	EFF	EFF	EFF
Date:				JAN	FEB	MAR	APR
Analyte	MDL	Units	Equiv	P754677	P756054	P770708	P775464
2,3,7,8-tetra CDD	.86	PG/L	1.000	ND	ND	ND	ND
1,2,3,7,8-penta CDD	1.1	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8_hexa_CDD	.66	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDD	.62	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDD	.46	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDD	.49	PG/L	0.010	ND	ND	ND	ND
octa CDD	1.4	PG/L	0.001	ND	ND	DNQ7.69	DNQ6.71
2,3,7,8-tetra CDF	.48	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8-penta CDF	.61	PG/L	0.050	ND	ND	ND	ND
2,3,4,7,8-penta CDF	.66	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDF	.44	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDF	.39	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDF	.36	PG/L	0.100	ND	ND	ND	ND
2,3,4,6,7,8-hexa CDF	.36	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDF	1.6	PG/L	0.010	ND	ND	ND	ND
1,2,3,4,7,8,9-hepta CDF	.83	PG/L	0.010	ND	ND	ND	ND
octa CDF	.738	PG/L	0.001	ND	ND	ND	ND

Source:				EFF	EFF	EFF	EFF
Date:				MAY	JUN	JUL	AUG
Analyte	MDL	Units	Equiv	P778749	P787472	P793717	P795183
2,3,7,8-tetra CDD	.86	PG/L	1.000	ND	ND	ND	ND
1,2,3,7,8-penta CDD	1.1	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8_hexa_CDD	.66	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDD	.62	PG/L	0.100	ND	ND	DNQ0.55	ND
1,2,3,7,8,9-hexa CDD	.46	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDD	.49	PG/L	0.010	ND	ND	DNQ2.3	DNQ2.0
octa CDD	1.4	PG/L	0.001	DNQ7.77	ND	DNQ10.0	DNQ11.0
2,3,7,8-tetra CDF	.48	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8-penta CDF	.61	PG/L	0.050	ND	ND	ND	ND
2,3,4,7,8-penta CDF	.66	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDF	.44	PG/L	0.100	ND	ND	DNQ0.46	DNQ0.66
1,2,3,6,7,8-hexa CDF	.39	PG/L	0.100	ND	ND	DNQ0.44	ND
1,2,3,7,8,9-hexa CDF	.36	PG/L	0.100	ND	ND	DNQ0.41	ND
2,3,4,6,7,8-hexa CDF	.36	PG/L	0.100	ND	ND	DNQ0.25	ND
1,2,3,4,6,7,8-hepta CDF	1.6	PG/L	0.010	ND	ND	DNQ1.2	DNQ1.0
1,2,3,4,7,8,9-hepta CDF	.83	PG/L	0.010	ND	ND	ND	ND
octa CDF	.738	PG/L	0.001	ND	ND	DNQ5.1	DNQ3.7

Source:				EFF	EFF	EFF	EFF
Date:				SEP	OCT	NOV	DEC
Analyte	MDL	Units	Equiv	P804543	P807375	P815301	P822500
2,3,7,8-tetra CDD	.86	PG/L	1.000	ND	ND	ND	ND
1,2,3,7,8-penta CDD	1.1	PG/L	0.500	ND	ND	DNQ3.8	ND
1,2,3,4,7,8_hexa_CDD	.66	PG/L	0.100	ND	ND	DNQ2.9	ND
1,2,3,6,7,8-hexa CDD	.62	PG/L	0.100	ND	ND	DNQ3.0	ND
1,2,3,7,8,9-hexa CDD	.46	PG/L	0.100	ND	DNQ0.95	DNQ2.9	ND
1,2,3,4,6,7,8-hepta CDD	.49	PG/L	0.010	DNQ2.1	DNQ2.6	DNQ3.3	ND
octa CDD	1.4	PG/L	0.001	DNQ8.0	DNQ12.0	DNQ15.0	ND
2,3,7,8-tetra CDF	.48	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8-penta CDF	.61	PG/L	0.050	ND	DNQ0.75	ND	ND
2,3,4,7,8-penta CDF	.66	PG/L	0.500	ND	ND	DNQ4.400	ND
1,2,3,4,7,8-hexa CDF	.44	PG/L	0.100	DNQ0.63	DNQ0.96	DNQ2.9	ND
1,2,3,6,7,8-hexa CDF	.39	PG/L	0.100	ND	DNQ0.86	DNQ2.9	ND
1,2,3,7,8,9-hexa CDF	.36	PG/L	0.100	ND	DNQ1.0	DNQ2.2	ND
2,3,4,6,7,8-hexa CDF	.36	PG/L	0.100	ND	DNQ0.84	DNQ2.8	ND
1,2,3,4,6,7,8-hepta CDF	1.6	PG/L	0.010	DNQ0.62	ND	DNQ3.2	ND
1,2,3,4,7,8,9-hepta CDF	.83	PG/L	0.010	ND	DNQ1.0	DNQ1.6	ND
octa CDF	.738	PG/L	0.001	DNQ2.5	DNQ3.5	DNQ50.0	ND

ND= not detected

DNQ= (Detected but not quantified). Estimated analyte concentration below calibration range.

Above are permit required CDD/CDF isomers.

SOUTH BAY WATER RECLAMATION PLANT
Annual Sewage Dioxin and Furan Analysis

Annual 2015

Source:				INF	INF	INF	INF
Date:				TCCD	TCCD	TCCD	TCCD
Analyte	MDL	Units	Equiv	JAN	FEB	MAR	APR
				P754673	P756049	P770704	P775460
2,3,7,8-tetra CDD	.86	PG/L	1.000	ND	ND	ND	ND
1,2,3,7,8-penta CDD	1.1	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDD	.66	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDD	.62	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDD	.46	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDD	.49	PG/L	0.010	DNQ0.181	DNQ0.216	DNQ0.148	0.291
octa CDD	1.4	PG/L	0.001	0.22	0.23	0.16	0.22
2,3,7,8-tetra CDF	.48	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8-penta CDF	.61	PG/L	0.050	ND	ND	ND	ND
2,3,4,7,8-penta CDF	.66	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDF	.44	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDF	.39	PG/L	0.100	DNQ0.131	ND	ND	ND
1,2,3,7,8,9-hexa CDF	.36	PG/L	0.100	ND	ND	ND	ND
2,3,4,6,7,8-hexa CDF	.36	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDF	1.6	PG/L	0.010	DNQ0.04	DNQ0.034	DNQ0.03	DNQ0.044
1,2,3,4,7,8,9-hepta CDF	.83	PG/L	0.010	ND	ND	ND	ND
octa CDF	.738	PG/L	0.001	DNQ0.014	0.008	DNQ0.008	DNQ0.013

Source:				INF	INF	INF	INF
Date:				TCCD	TCCD	TCCD	TCCD
Analyte	MDL	Units	Equiv	MAY	JUN	JUL	AUG
				P783699	P787468	P793713	P795178
2,3,7,8-tetra CDD	.86	PG/L	1.000	ND	DNQ1.18	ND	ND
1,2,3,7,8-penta CDD	1.1	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDD	.66	PG/L	0.100	ND	ND	DNQ0.15	DNQ0.14
1,2,3,6,7,8-hexa CDD	.62	PG/L	0.100	ND	DNQ0.311	DNQ0.43	DNQ0.94
1,2,3,7,8,9-hexa CDD	.46	PG/L	0.100	ND	ND	DNQ0.33	DNQ0.29
1,2,3,4,6,7,8-hepta CDD	.49	PG/L	0.010	DNQ0.204	0.258	DNQ0.39	DNQ0.54
octa CDD	1.4	PG/L	0.001	0.17	0.23	0.15	0.14
2,3,7,8-tetra CDF	.48	PG/L	0.100	DNQ0.147	DNQ0.105	DNQ0.17	DNQ0.099
1,2,3,7,8-penta CDF	.61	PG/L	0.050	ND	ND	DNQ0.044	ND
2,3,4,7,8-penta CDF	.66	PG/L	0.500	ND	ND	DNQ0.335	ND
1,2,3,4,7,8-hexa CDF	.44	PG/L	0.100	ND	ND	DNQ0.13	DNQ1.0
1,2,3,6,7,8-hexa CDF	.39	PG/L	0.100	ND	DNQ0.158	DNQ0.13	DNQ0.13
1,2,3,7,8,9-hexa CDF	.36	PG/L	0.100	ND	ND	DNQ0.092	DNQ0.092
2,3,4,6,7,8-hexa CDF	.36	PG/L	0.100	ND	ND	DNQ0.12	DNQ0.082
1,2,3,4,6,7,8-hepta CDF	1.6	PG/L	0.010	DNQ0.041	DNQ0.056	DNQ0.06	DNQ0.05
1,2,3,4,7,8,9-hepta CDF	.83	PG/L	0.010	ND	ND	ND	ND
octa CDF	.738	PG/L	0.001	DNQ0.01	DNQ0.016	DNQ0.015	DNQ0.009

Source:				INF	INF	INF	INF
Date:				TCCD	TCCD	TCCD	TCCD
Analyte	MDL	Units	Equiv	SEP	OCT	NOV	DEC
				P804539	P807370	P815297	P822496
2,3,7,8-tetra CDD	.86	PG/L	1.000	ND	DNQ0.77	ND	ND
1,2,3,7,8-penta CDD	1.1	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDD	.66	PG/L	0.100	ND	DNQ0.095	DNQ0.22	ND
1,2,3,6,7,8-hexa CDD	.62	PG/L	0.100	DNQ0.16	DNQ0.26	DNQ0.43	ND
1,2,3,7,8,9-hexa CDD	.46	PG/L	0.100	DNQ0.068	DNQ0.21	DNQ0.35	ND
1,2,3,4,6,7,8-hepta CDD	.49	PG/L	0.010	0.35	DNQ0.31	0.74	DNQ0.203
octa CDD	1.4	PG/L	0.001	0.3	0.27	0.53	0.15
2,3,7,8-tetra CDF	.48	PG/L	0.100	DNQ0.13	DNQ0.14	DNQ0.14	ND
1,2,3,7,8-penta CDF	.61	PG/L	0.050	DNQ0.02	ND	DNQ0.115	ND
2,3,4,7,8-penta CDF	.66	PG/L	0.500	DNQ0.18	ND	ND	ND
1,2,3,4,7,8-hexa CDF	.44	PG/L	0.100	DNQ0.059	DNQ0.14	DNQ0.26	ND
1,2,3,6,7,8-hexa CDF	.39	PG/L	0.100	DNQ0.052	DNQ0.12	DNQ0.24	ND
1,2,3,7,8,9-hexa CDF	.36	PG/L	0.100	DNQ0.053	DNQ0.095	DNQ0.23	ND
2,3,4,6,7,8-hexa CDF	.36	PG/L	0.100	ND	ND	DNQ0.26	ND
1,2,3,4,6,7,8-hepta CDF	1.6	PG/L	0.010	DNQ0.039	ND	DNQ0.068	DNQ0.059
1,2,3,4,7,8,9-hepta CDF	.83	PG/L	0.010	ND	ND	ND	ND
octa CDF	.738	PG/L	0.001	DNQ0.014	DNQ0.016	0.019	DNQ0.013

ND= not detected

DNQ= (Detected but not quantified). Estimated analyte concentration below calibration range.

Above are permit required CDD/CDF isomers.

SOUTH BAY WATER RECLAMATION PLANT
Annual Sewage Dioxin and Furan Analysis

Annual 2015

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

Source:				EFF	EFF	EFF	EFF
				TCCD	TCCD	TCCD	TCCD
Date:				JAN	FEB	MAR	APR
Analyte	MDL	Units	Equiv	P754677	P756054	P770708	P775464
=====							
2,3,7,8-tetra CDD	.86	PG/L	1.000	ND	ND	ND	ND
1,2,3,7,8-penta CDD	1.1	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8_hexa_CDD	.66	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDD	.62	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDD	.46	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDD	.49	PG/L	0.010	ND	ND	ND	ND
octa CDD	1.4	PG/L	0.001	ND	ND	DNQ0.008	DNQ0.007
2,3,7,8-tetra CDF	.48	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8-penta CDF	.61	PG/L	0.050	ND	ND	ND	ND
2,3,4,7,8-penta CDF	.66	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDF	.44	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDF	.39	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDF	.36	PG/L	0.100	ND	ND	ND	ND
2,3,4,6,7,8-hexa CDF	.36	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDF	1.6	PG/L	0.010	ND	ND	ND	ND
1,2,3,4,7,8,9-hepta CDF	.83	PG/L	0.010	ND	ND	ND	ND
octa CDF	.738	PG/L	0.001	ND	ND	ND	ND

Source:				EFF	EFF	EFF	EFF
				TCCD	TCCD	TCCD	TCCD
Date:				MAY	JUN	JUL	AUG
Analyte	MDL	Units	Equiv	P778749	P787472	P793717	P795183
=====							
2,3,7,8-tetra CDD	.86	PG/L	1.000	ND	ND	ND	ND
1,2,3,7,8-penta CDD	1.1	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8_hexa_CDD	.66	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDD	.62	PG/L	0.100	ND	ND	DNQ0.055	ND
1,2,3,7,8,9-hexa CDD	.46	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDD	.49	PG/L	0.010	ND	ND	DNQ0.023	DNQ0.02
octa CDD	1.4	PG/L	0.001	DNQ0.008	ND	DNQ0.01	DNQ0.011
2,3,7,8-tetra CDF	.48	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8-penta CDF	.61	PG/L	0.050	ND	ND	ND	ND
2,3,4,7,8-penta CDF	.66	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDF	.44	PG/L	0.100	ND	ND	DNQ0.046	DNQ0.066
1,2,3,6,7,8-hexa CDF	.39	PG/L	0.100	ND	ND	DNQ0.044	ND
1,2,3,7,8,9-hexa CDF	.36	PG/L	0.100	ND	ND	DNQ0.041	ND
2,3,4,6,7,8-hexa CDF	.36	PG/L	0.100	ND	ND	DNQ0.025	ND
1,2,3,4,6,7,8-hepta CDF	1.6	PG/L	0.010	ND	ND	DNQ0.012	DNQ0.01
1,2,3,4,7,8,9-hepta CDF	.83	PG/L	0.010	ND	ND	ND	ND
octa CDF	.738	PG/L	0.001	ND	ND	DNQ0.005	DNQ0.004

Source:				EFF	EFF	EFF	EFF
				TCCD	TCCD	TCCD	TCCD
Date:				SEP	OCT	NOV	DEC
Analyte	MDL	Units	Equiv	P804543	P807375	P815301	P822500
=====							
2,3,7,8-tetra CDD	.86	PG/L	1.000	ND	ND	ND	ND
1,2,3,7,8-penta CDD	1.1	PG/L	0.500	ND	ND	DNQ1.9	ND
1,2,3,4,7,8_hexa_CDD	.66	PG/L	0.100	ND	ND	DNQ0.29	ND
1,2,3,6,7,8-hexa CDD	.62	PG/L	0.100	ND	ND	DNQ0.3	ND
1,2,3,7,8,9-hexa CDD	.46	PG/L	0.100	ND	DNQ0.095	DNQ0.29	ND
1,2,3,4,6,7,8-hepta CDD	.49	PG/L	0.010	DNQ0.021	DNQ0.026	DNQ0.033	ND
octa CDD	1.4	PG/L	0.001	DNQ0.008	DNQ0.012	DNQ0.015	ND
2,3,7,8-tetra CDF	.48	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8-penta CDF	.61	PG/L	0.050	ND	DNQ0.038	ND	ND
2,3,4,7,8-penta CDF	.66	PG/L	0.500	ND	ND	DNQ2.2	ND
1,2,3,4,7,8-hexa CDF	.44	PG/L	0.100	DNQ0.063	DNQ0.096	DNQ0.29	ND
1,2,3,6,7,8-hexa CDF	.39	PG/L	0.100	ND	DNQ0.086	DNQ0.29	ND
1,2,3,7,8,9-hexa CDF	.36	PG/L	0.100	ND	DNQ0.1	DNQ0.22	ND
2,3,4,6,7,8-hexa CDF	.36	PG/L	0.100	ND	DNQ0.084	DNQ0.28	ND
1,2,3,4,6,7,8-hepta CDF	1.6	PG/L	0.010	DNQ0.006	ND	DNQ0.032	ND
1,2,3,4,7,8,9-hepta CDF	.83	PG/L	0.010	ND	DNQ0.01	DNQ0.016	ND
octa CDF	.738	PG/L	0.001	DNQ0.003	DNQ0.004	DNQ0.05	ND

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

DNQ= (Detected but not quantified). Estimated analyte concentration below calibration range.

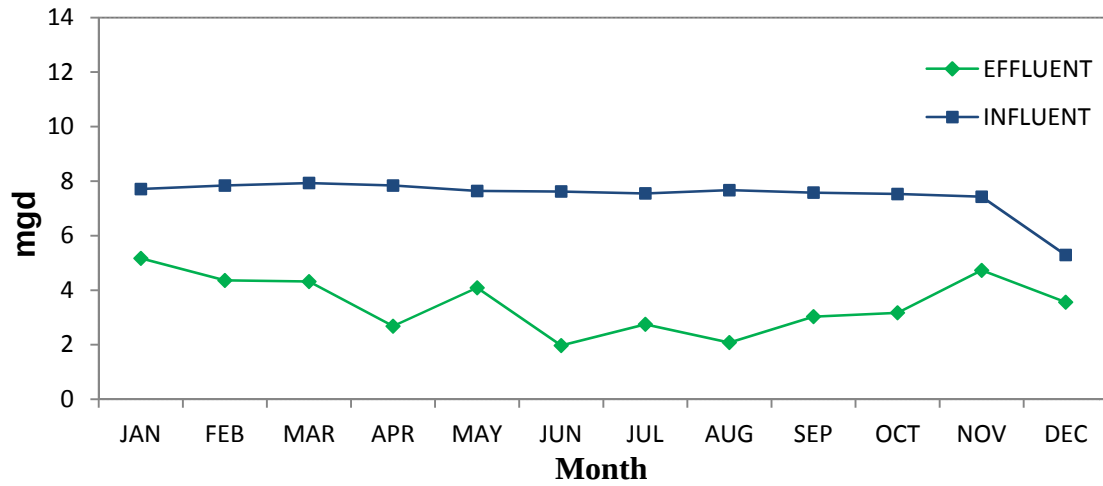
D. Influent and Effluent Graphs

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

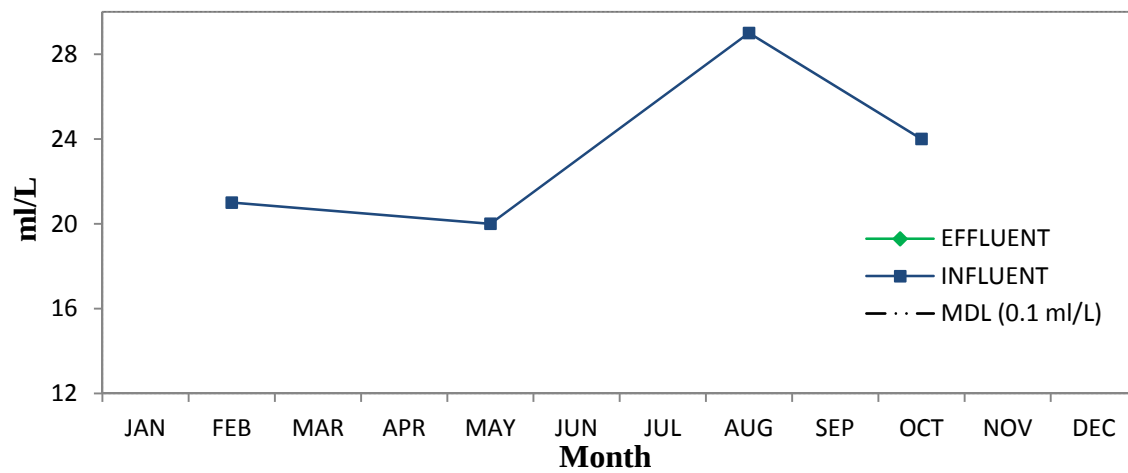
Where possible, the influent and effluent values of a given parameter have been included on the same graph so that removals and other relationships are readily apparent. Please note that many of the graphs are on expanded scales. Please note that many of the graphs are on expanded scales where the y-axes (concentration) do not start at zero, but instead are scaled to highlight the range of concentrations where variation takes place. These expanded scales make differences and some trends obvious that might normally not be noticed; however, they also may inadvertently place more weight on relatively minor changes or trends than deserved. Frequent reference to the scales and the actual differences in concentrations is therefore necessary.

2015 South Bay Water Reclamation Plant Monthly Averages

Flows

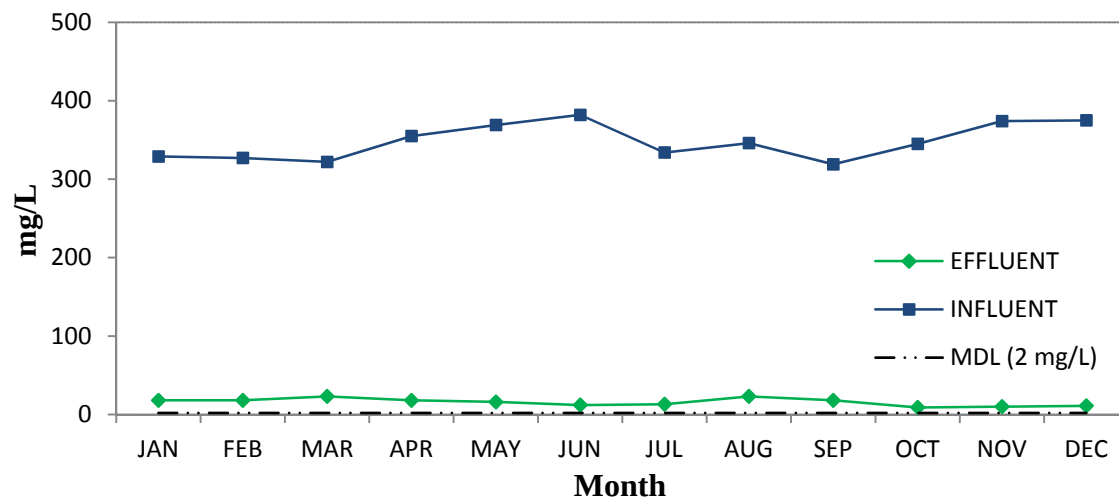


Settleables Solids

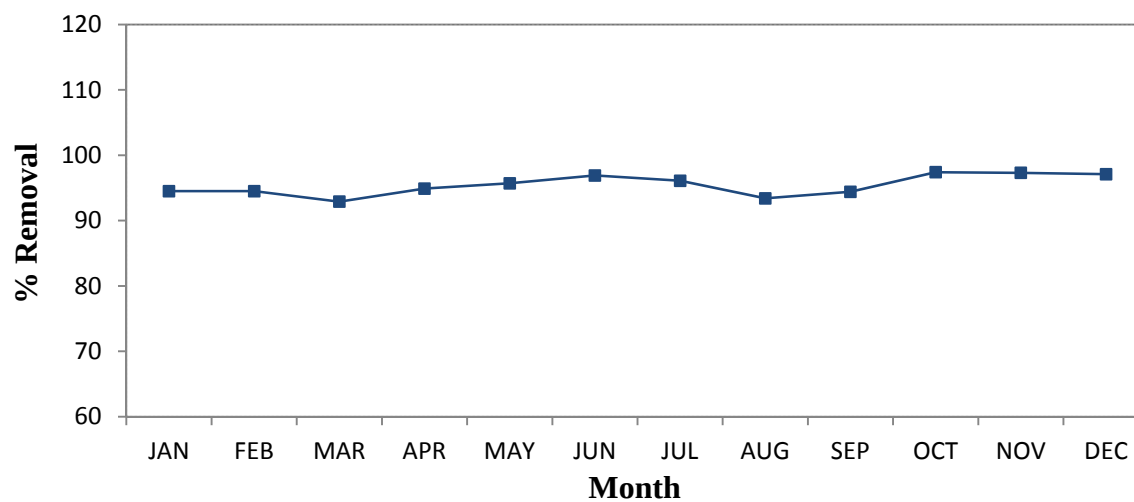


2015 South Bay Water Reclamation Plant Monthly Averages

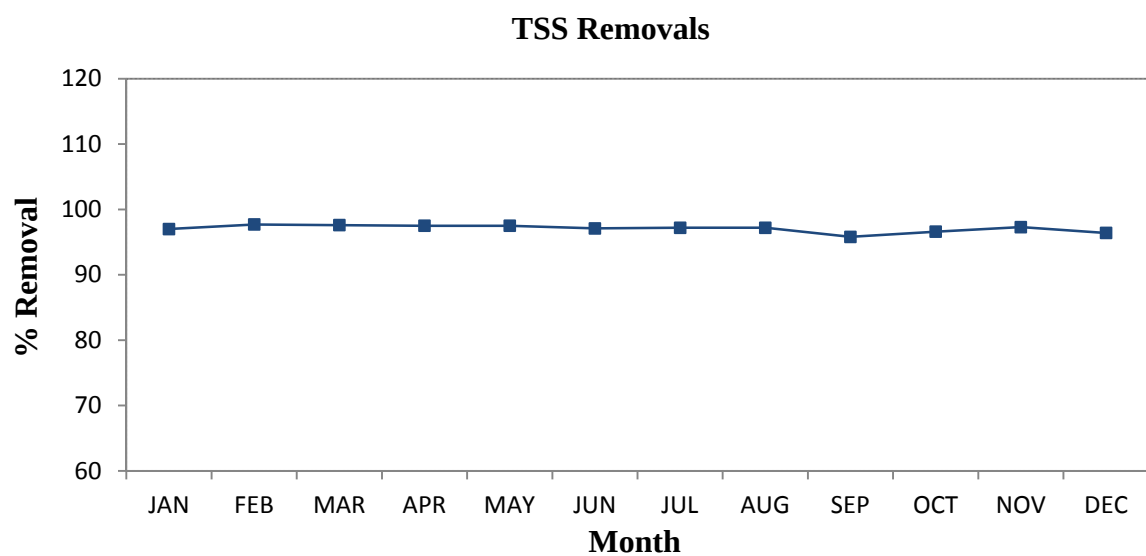
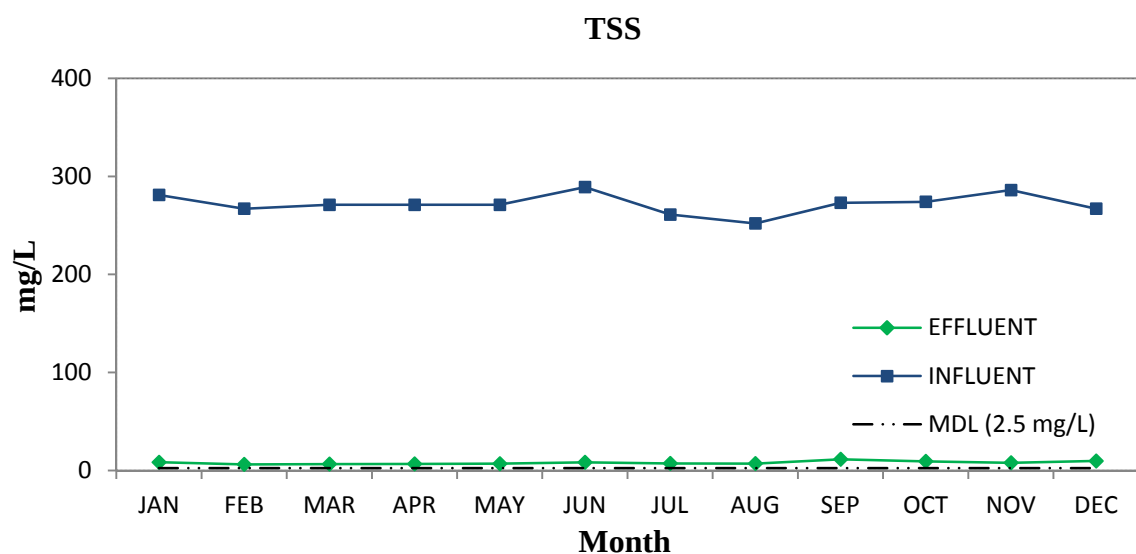
BOD



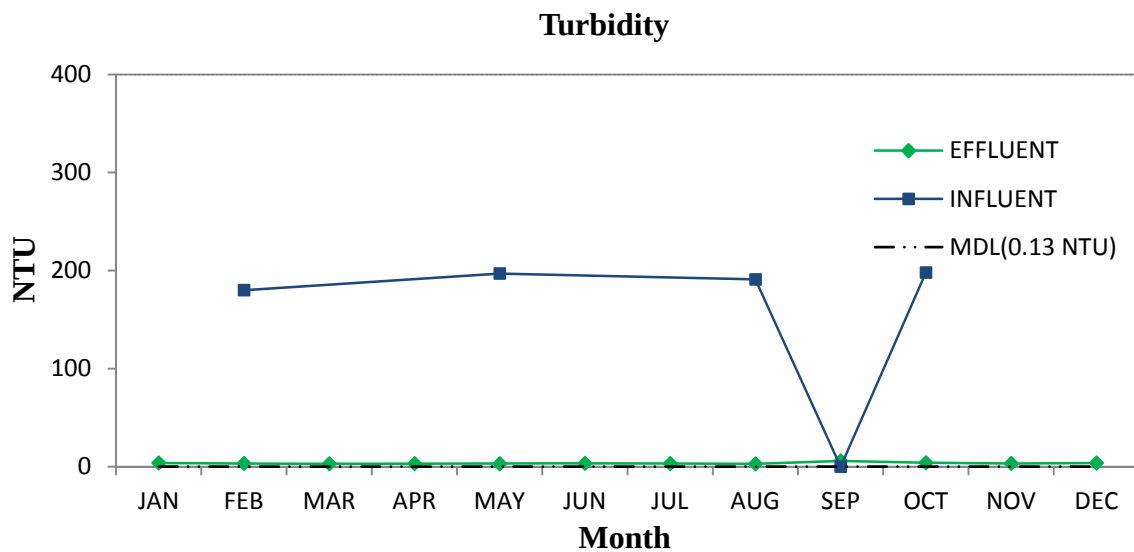
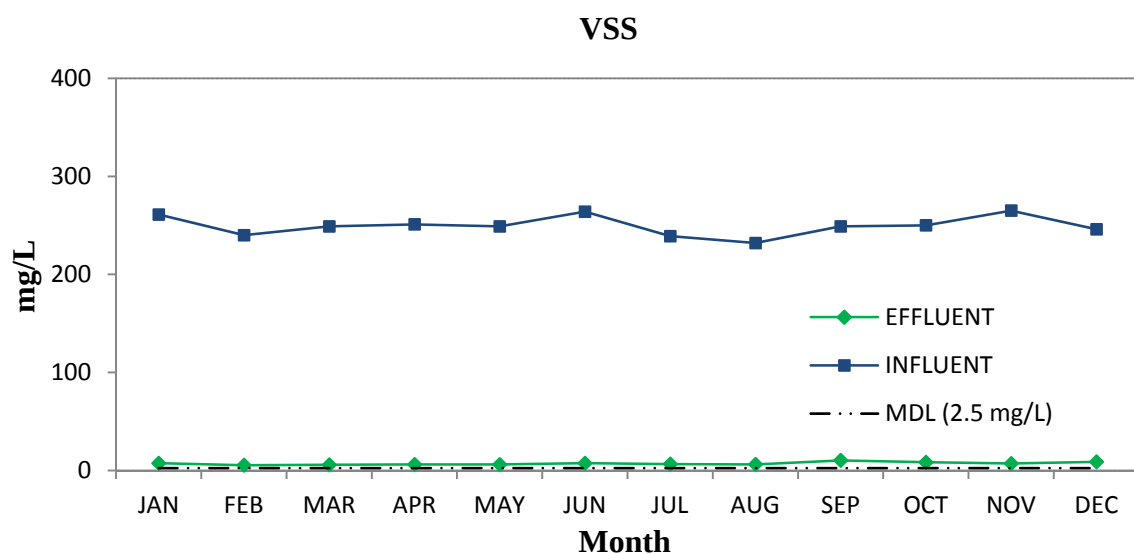
BOD Removals



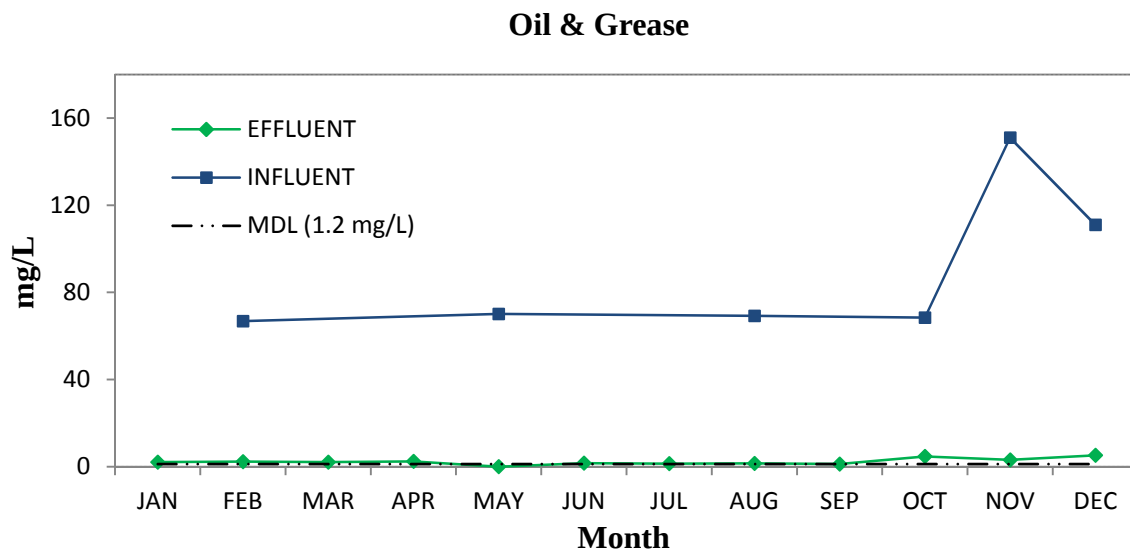
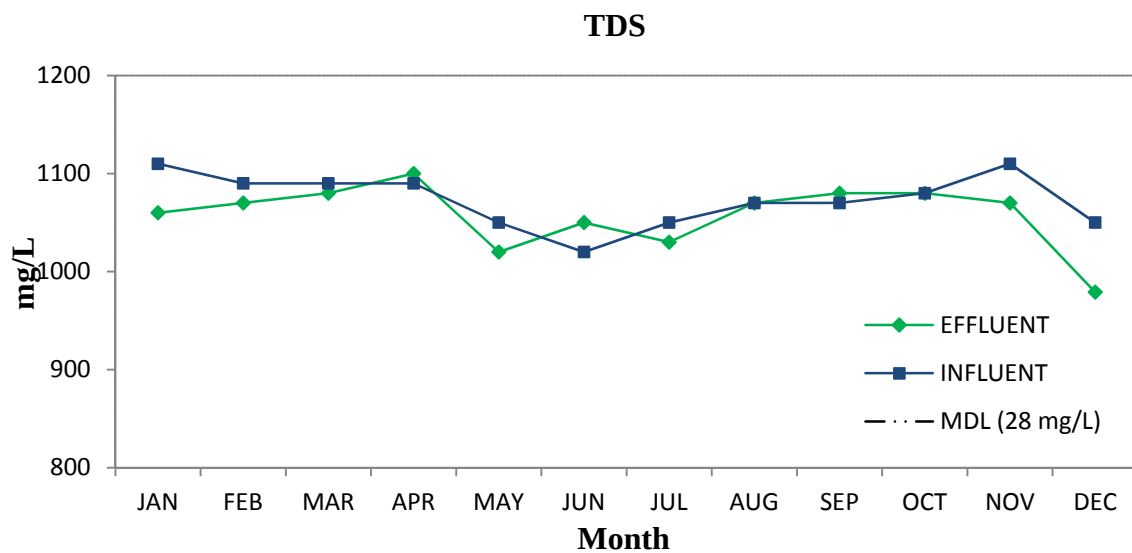
2015 South Bay Water Reclamation Plant Monthly Averages



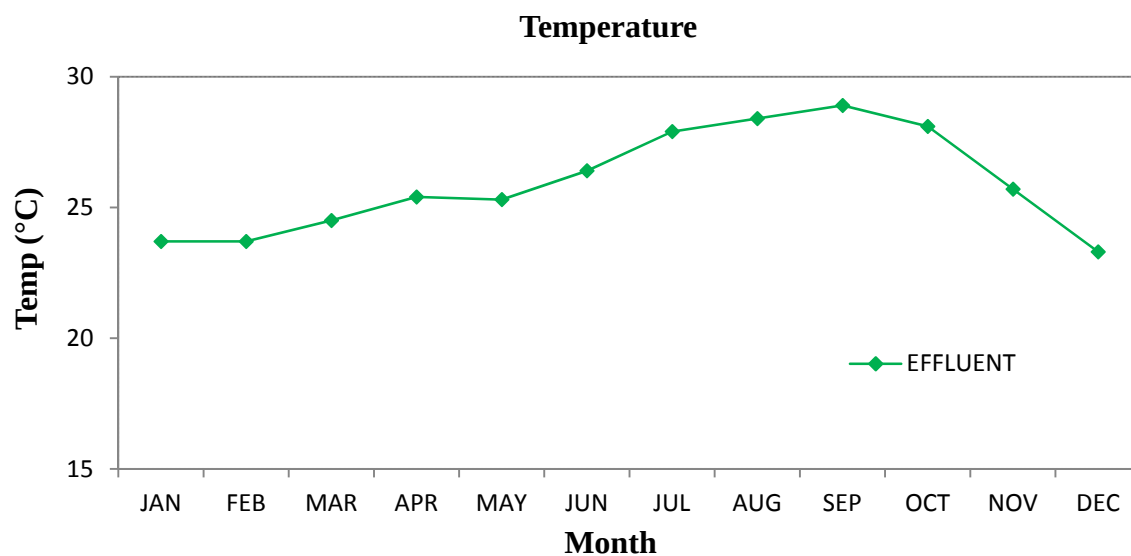
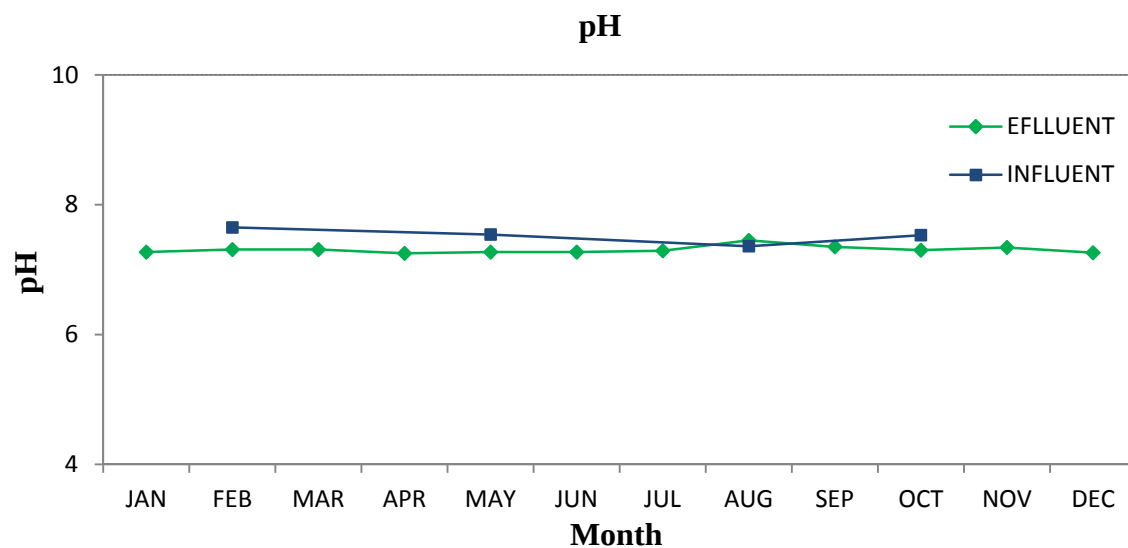
2015 South Bay Water Reclamation Plant Monthly Averages



2015 South Bay Water Reclamation Plant Monthly Averages

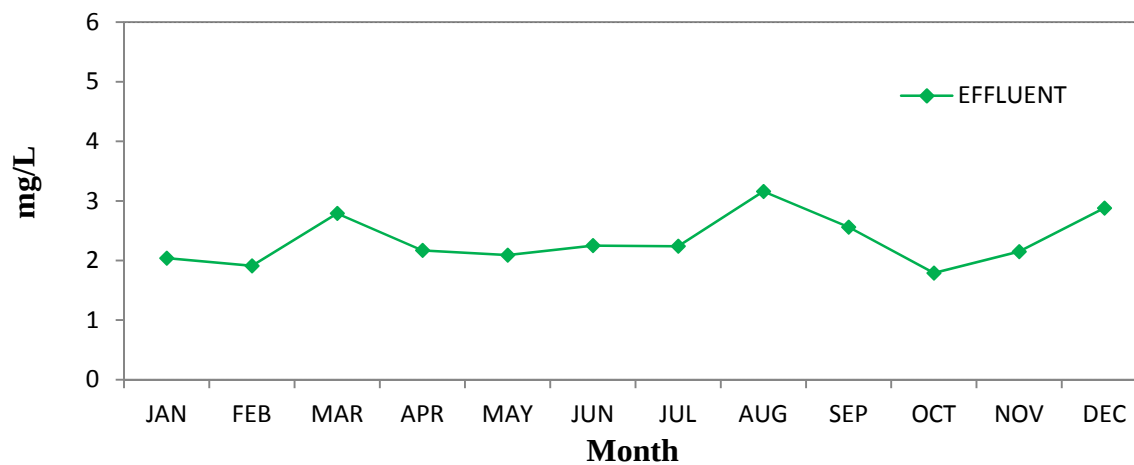


2015 South Bay Water Reclamation Plant Monthly Averages

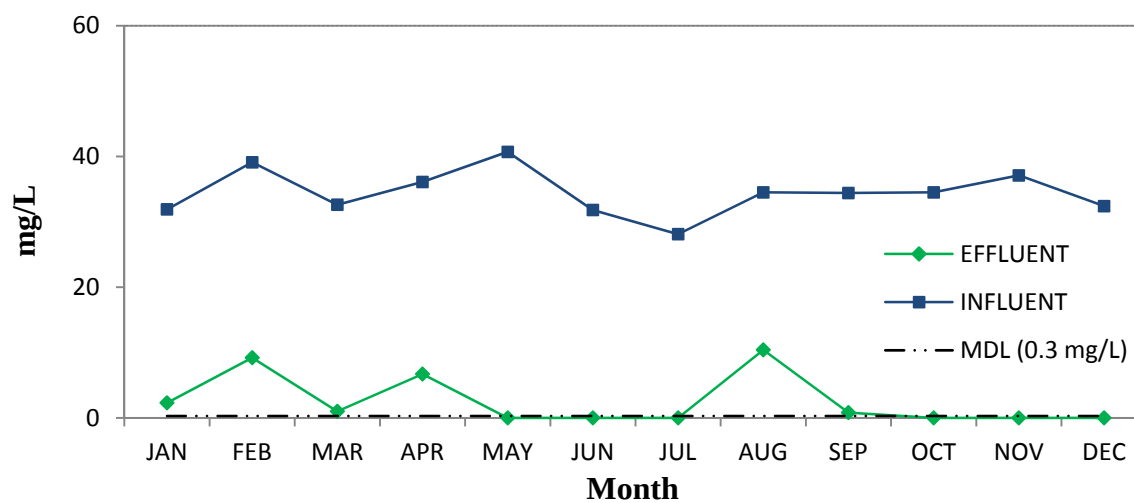


2015 South Bay Water Reclamation Plant Monthly Averages

Dissolved Oxygen

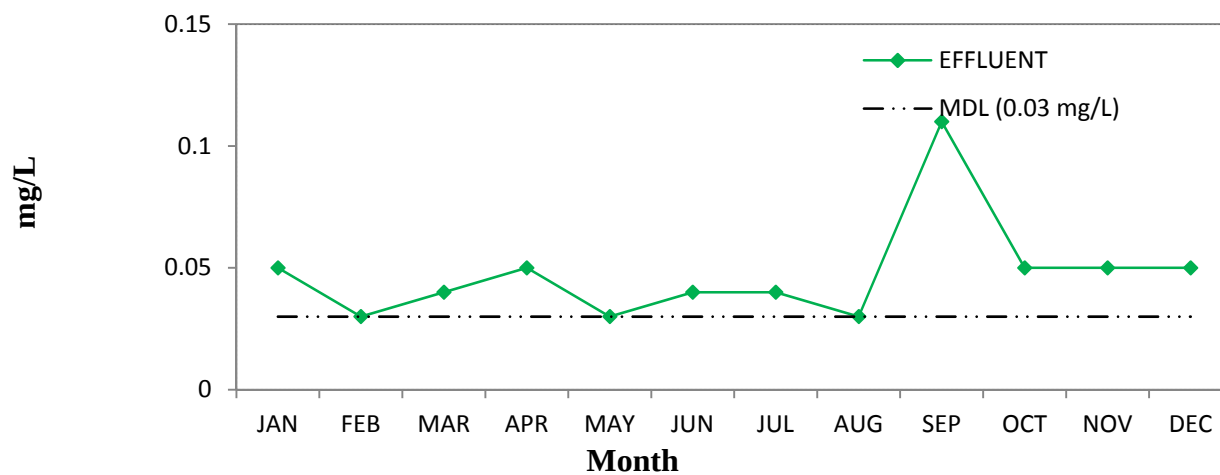


Ammonia-N

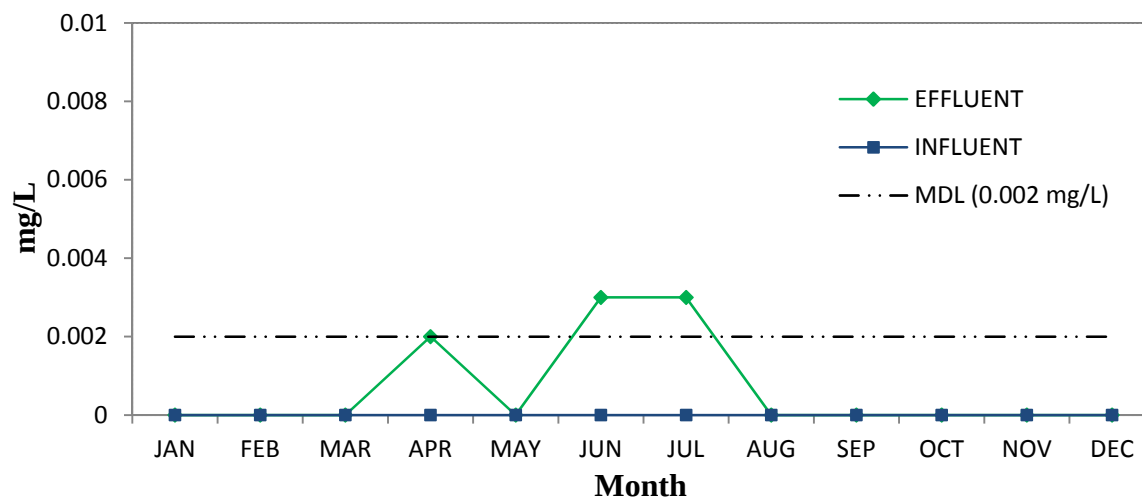


2015 South Bay Water Reclamation Plant Monthly Averages

Residual Chlorine

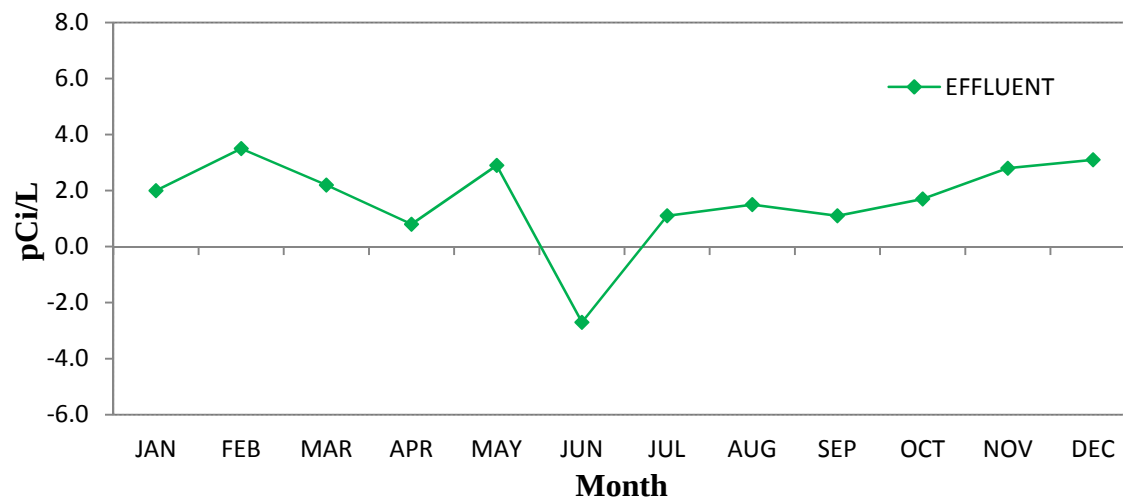


Total Cyanides

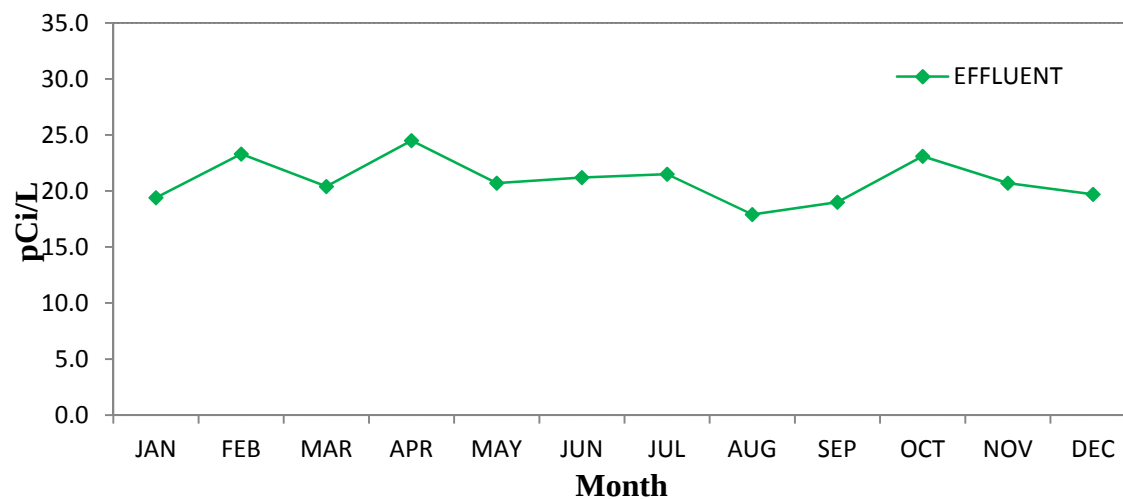


2015 South Bay Water Reclamation Plant Monthly Averages

Alpha Radiation

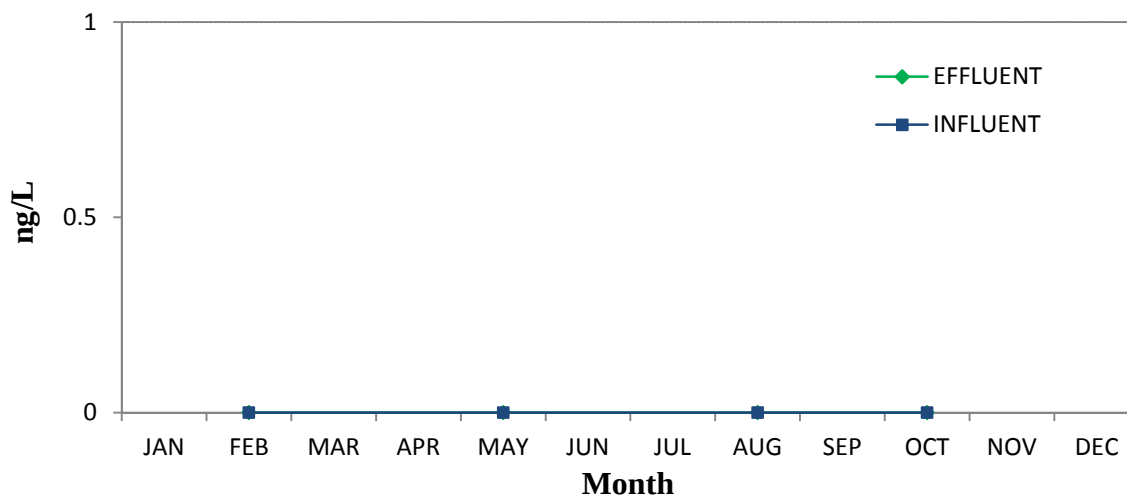


Beta Radiation

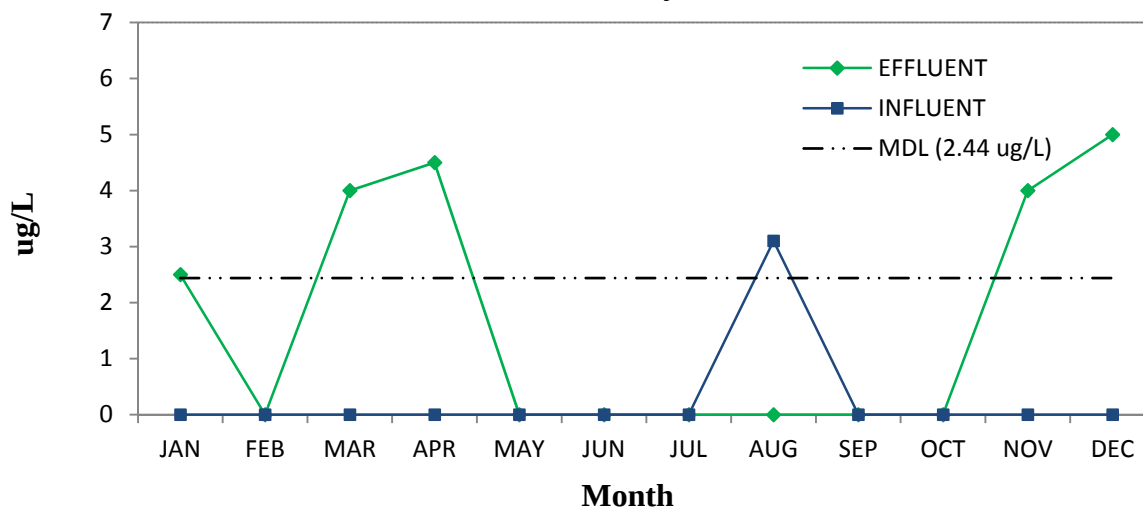


2015 South Bay Water Reclamation Plant Monthly Averages

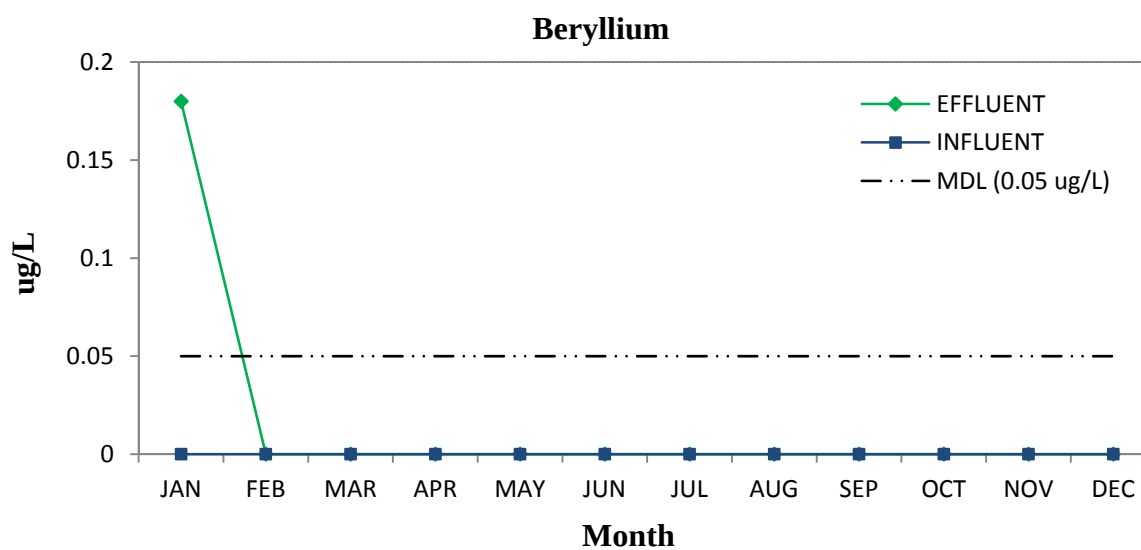
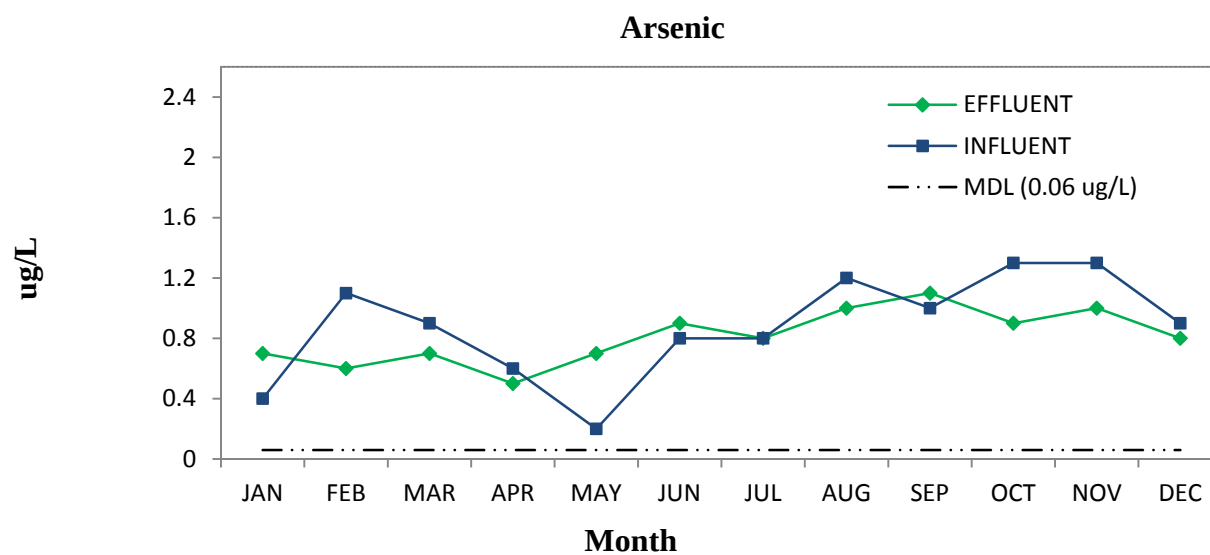
Total Chlorinated Hydrocarbons



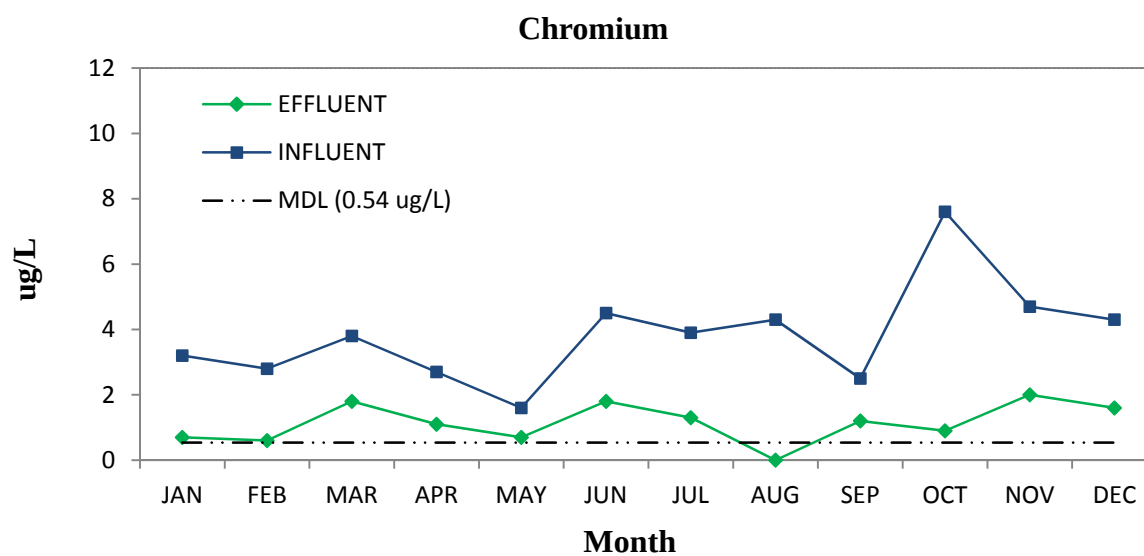
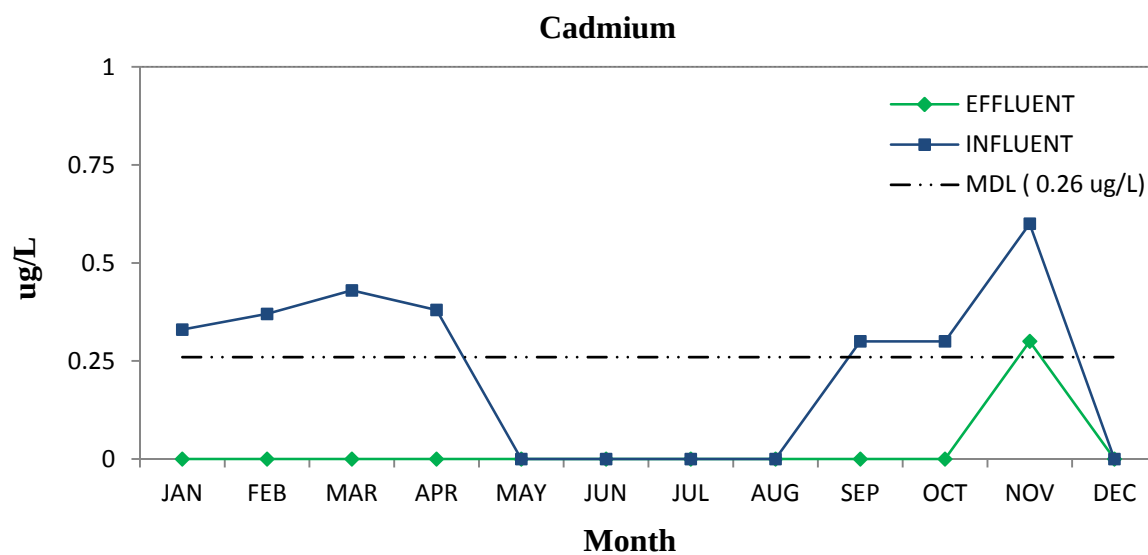
Antimony



2015 South Bay Water Reclamation Plant Monthly Averages

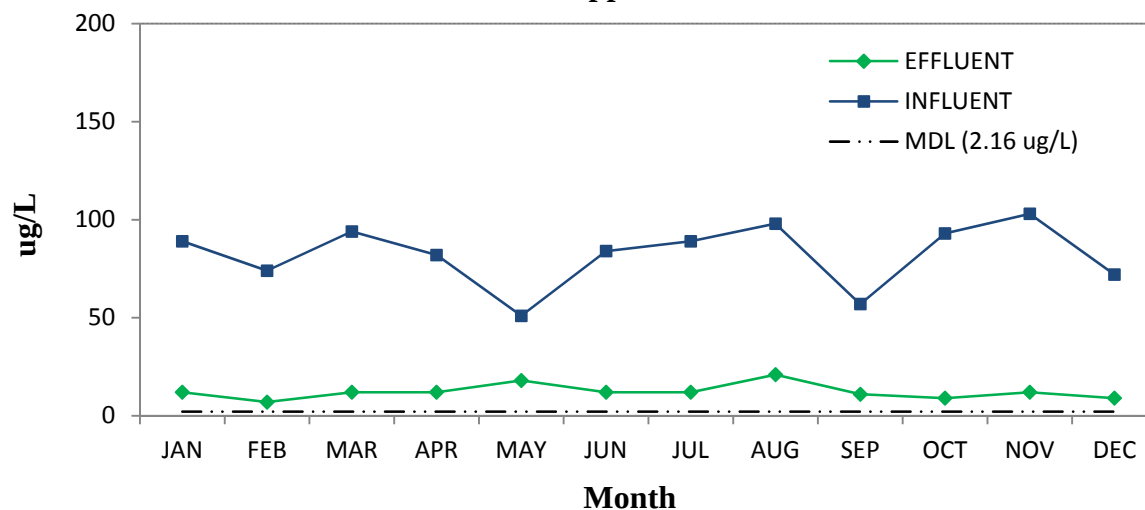


2015 South Bay Water Reclamation Plant Monthly Averages

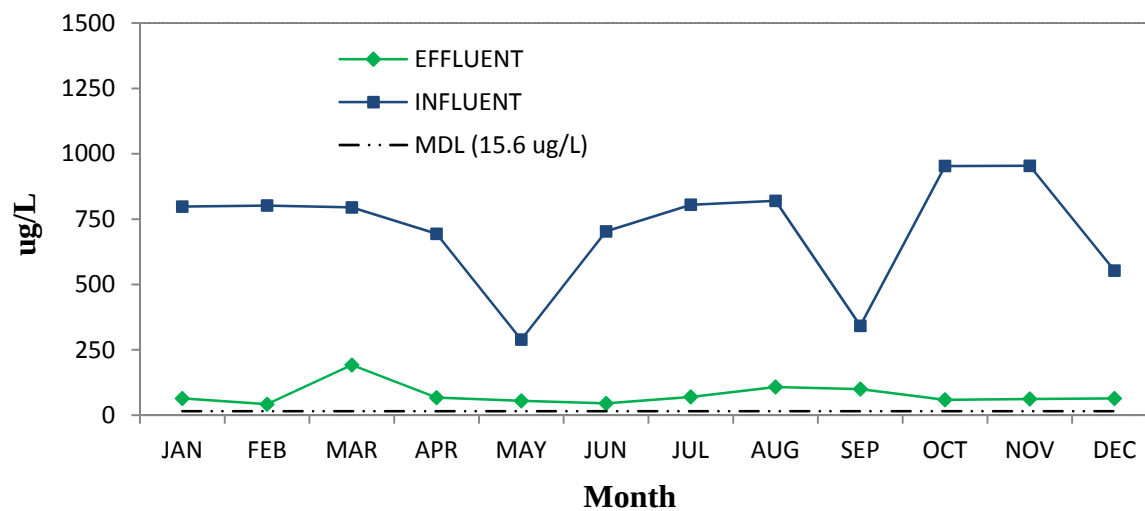


2015 South Bay Water Reclamation Plant Monthly Averages

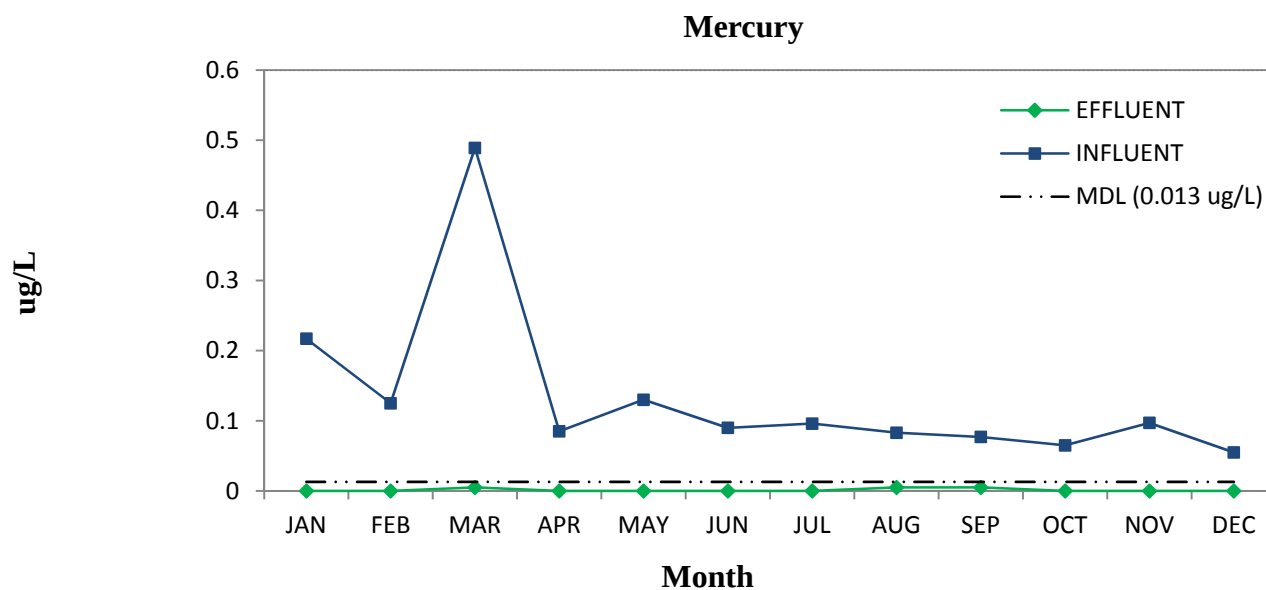
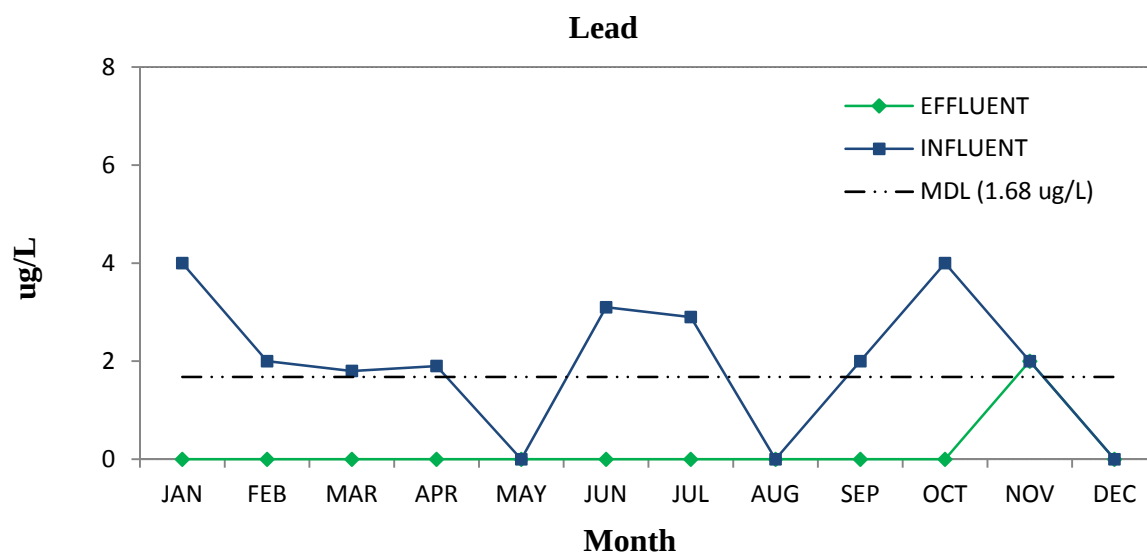
Copper



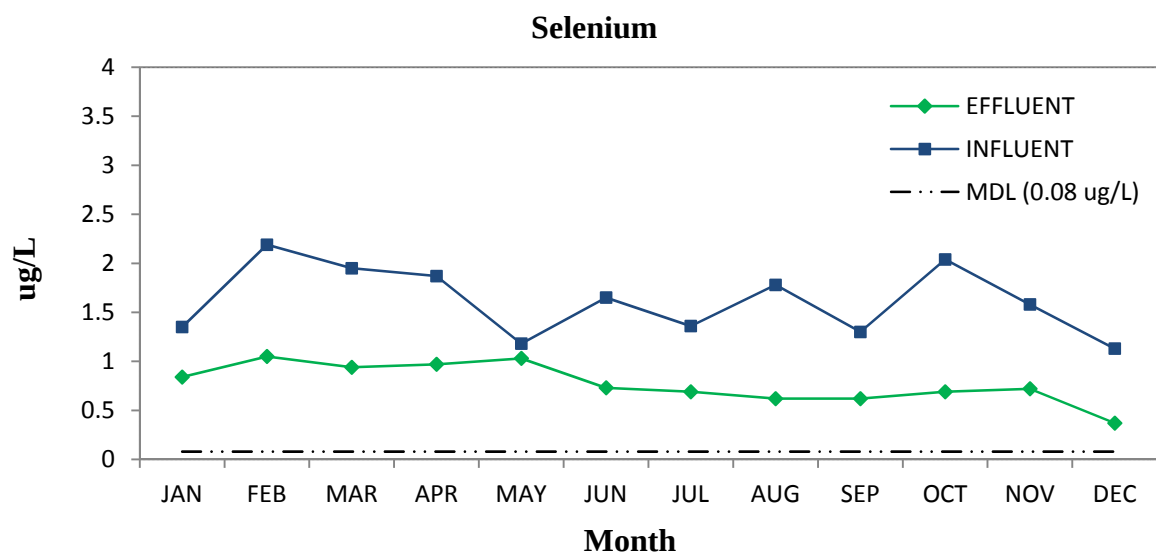
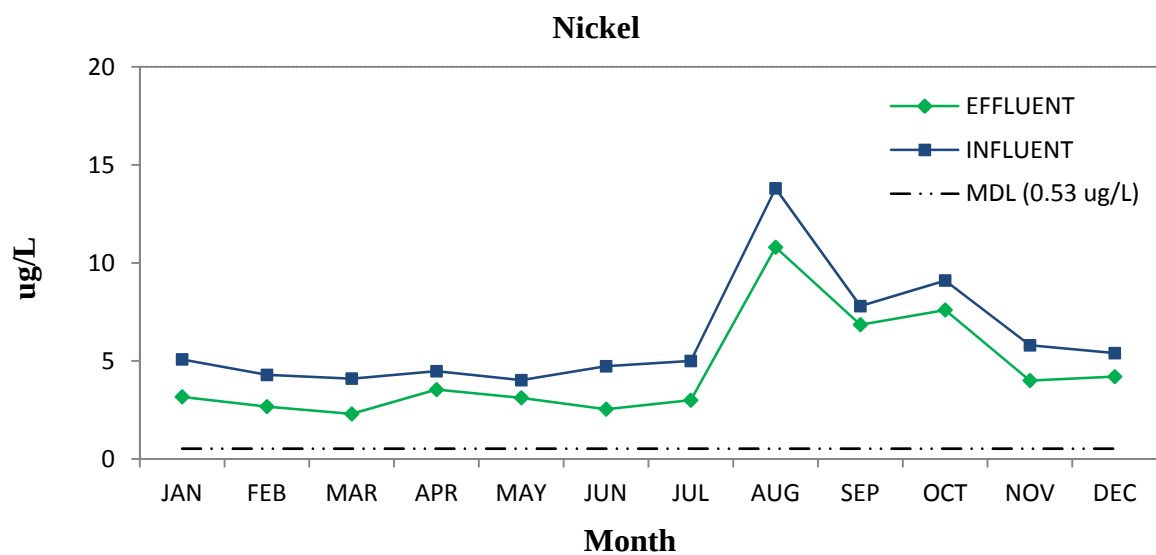
Iron



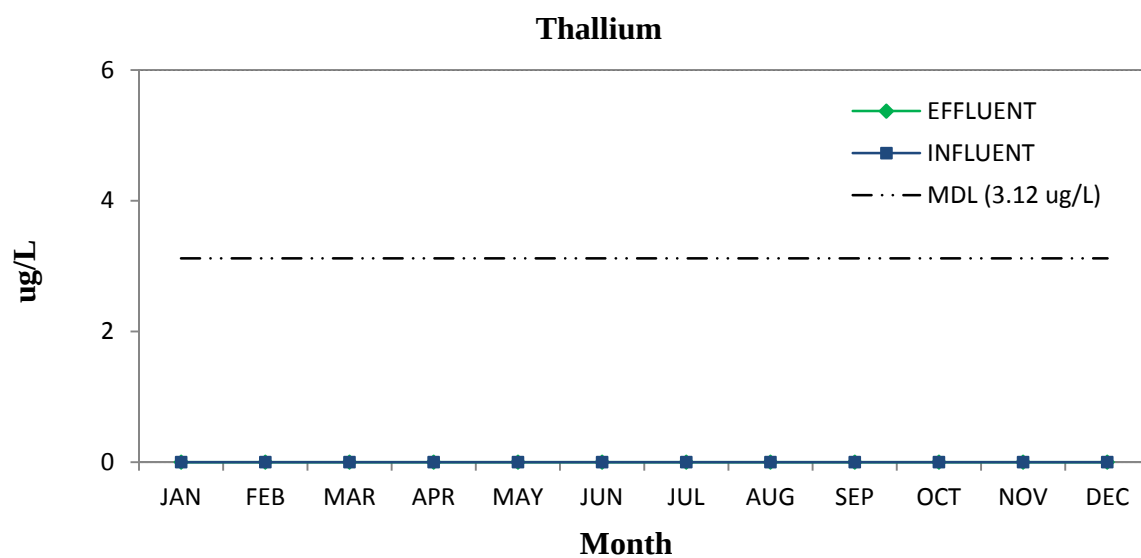
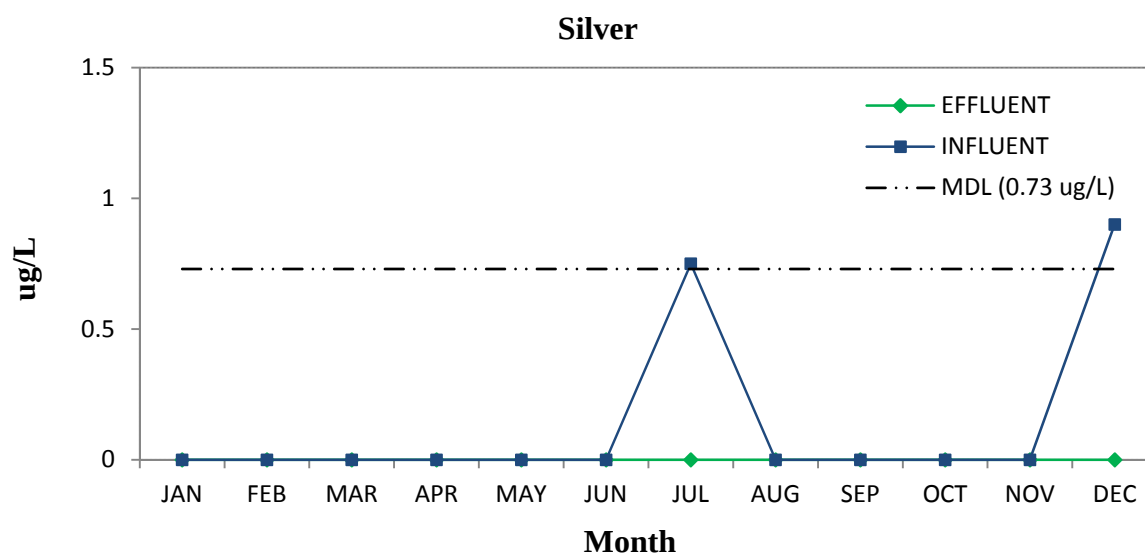
2015 South Bay Water Reclamation Plant Monthly Averages



2015 South Bay Water Reclamation Plant Monthly Averages

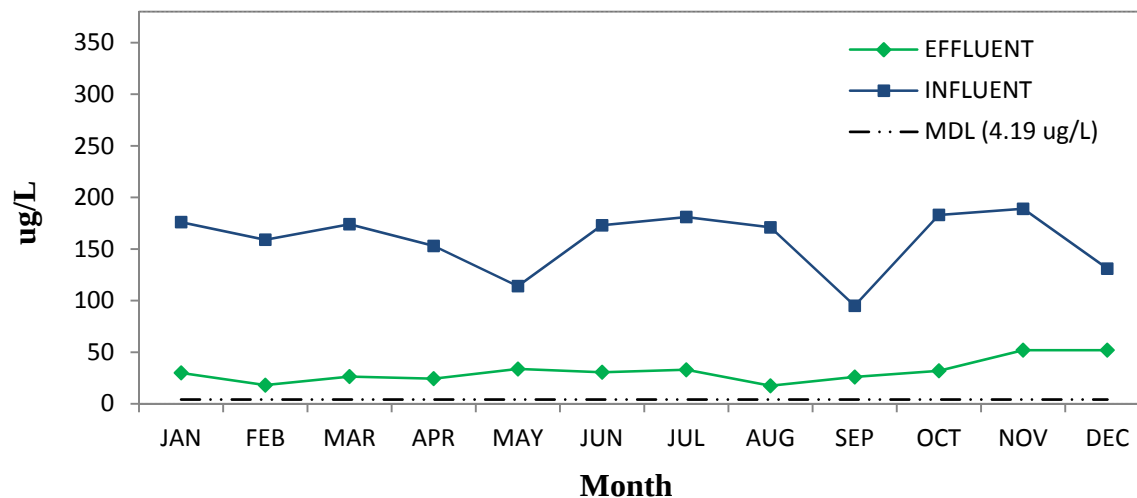


2015 South Bay Water Reclamation Plant Monthly Averages

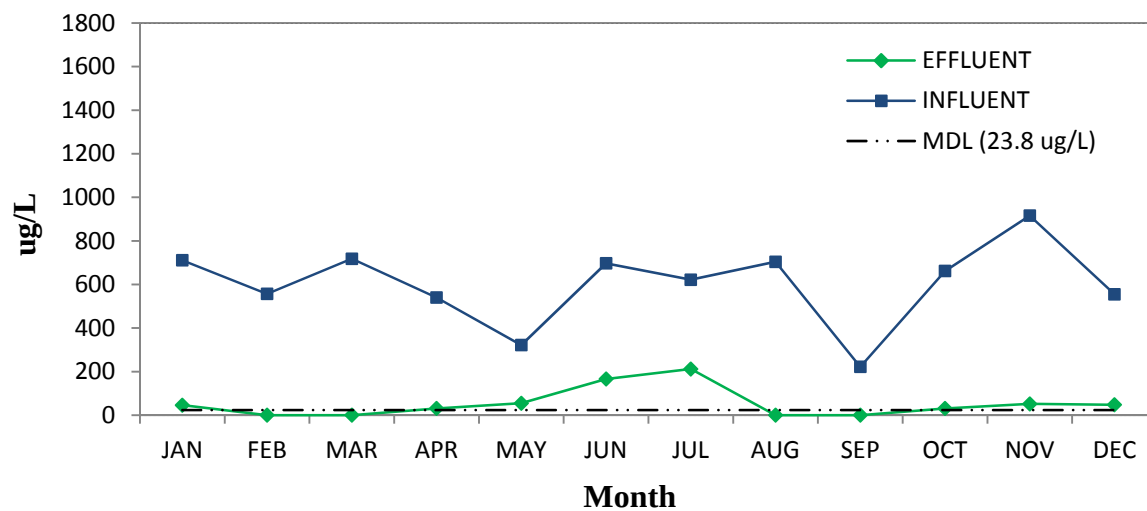


2015 South Bay Water Reclamation Plant Monthly Averages

Zinc

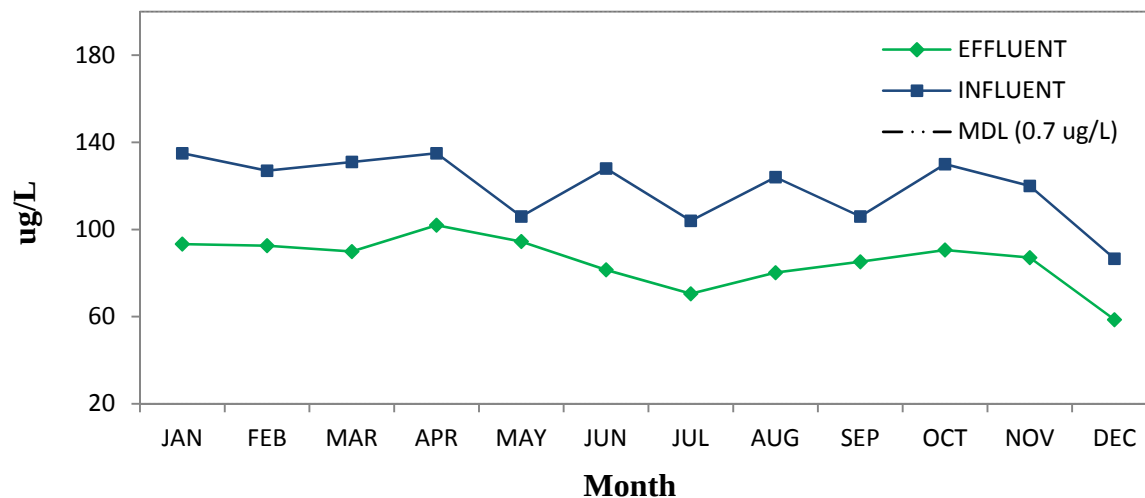


Aluminum

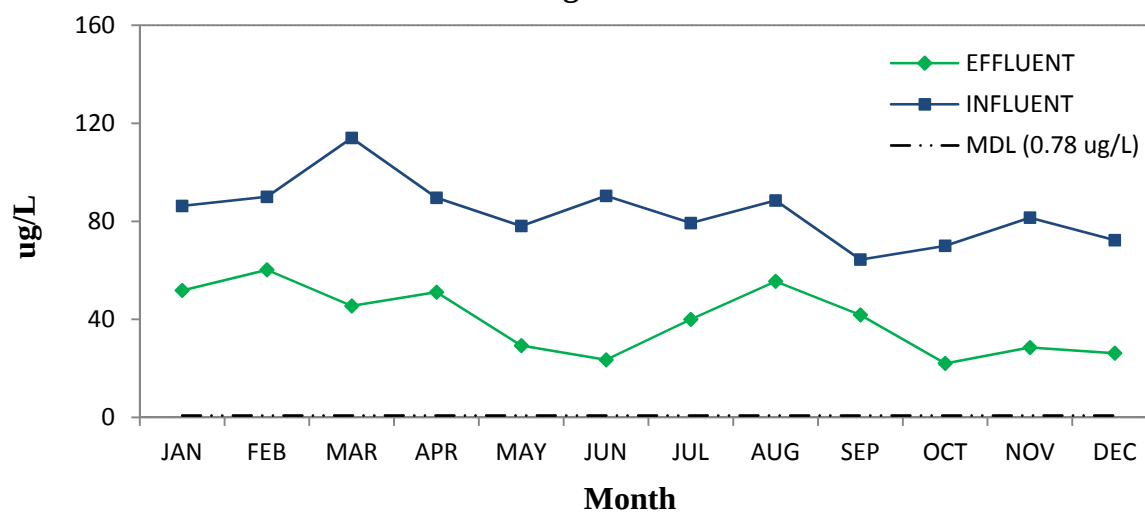


2015 South Bay Water Reclamation Plant Monthly Averages

Barium

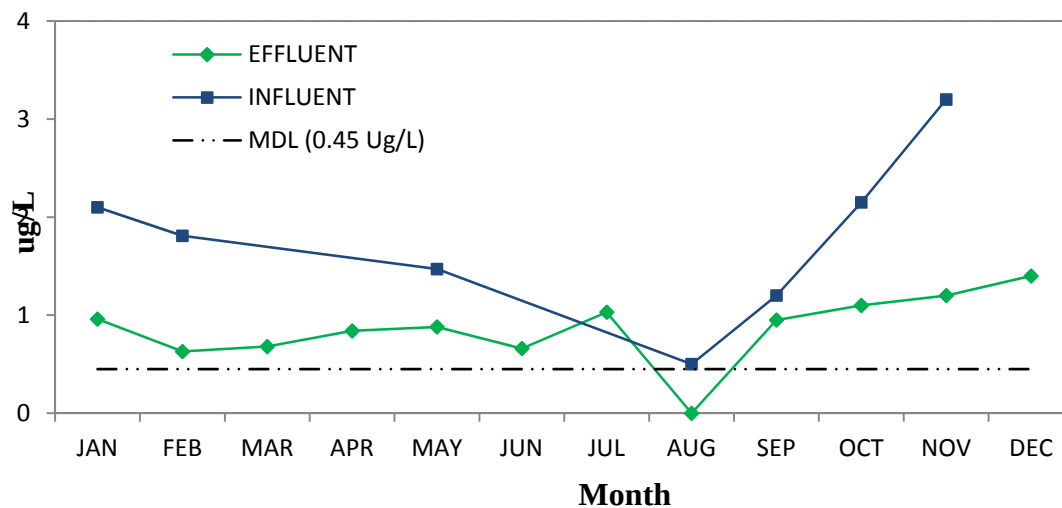


Manganese

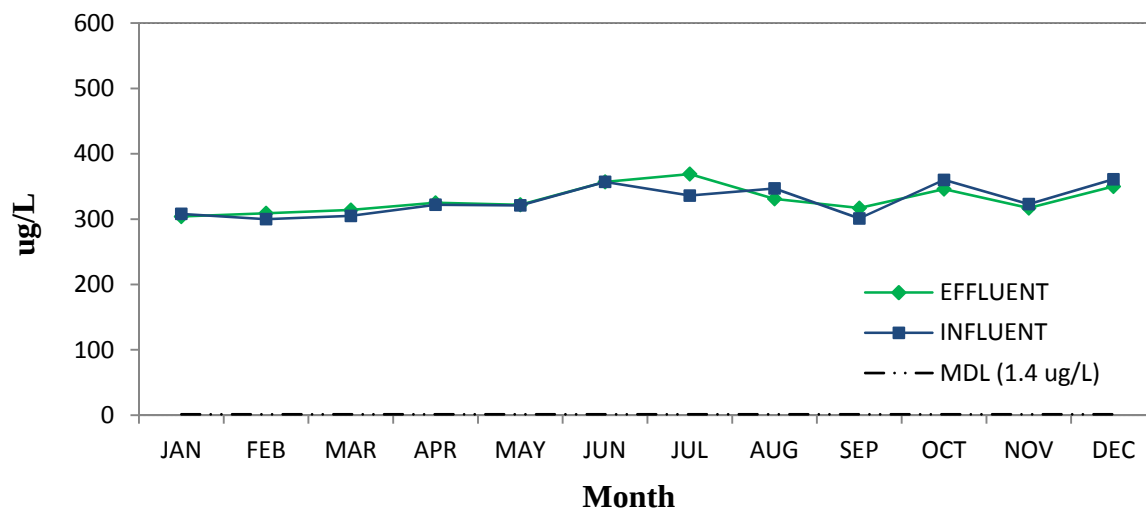


2015 South Bay Water Reclamation Plant Monthly Averages

Vanadium

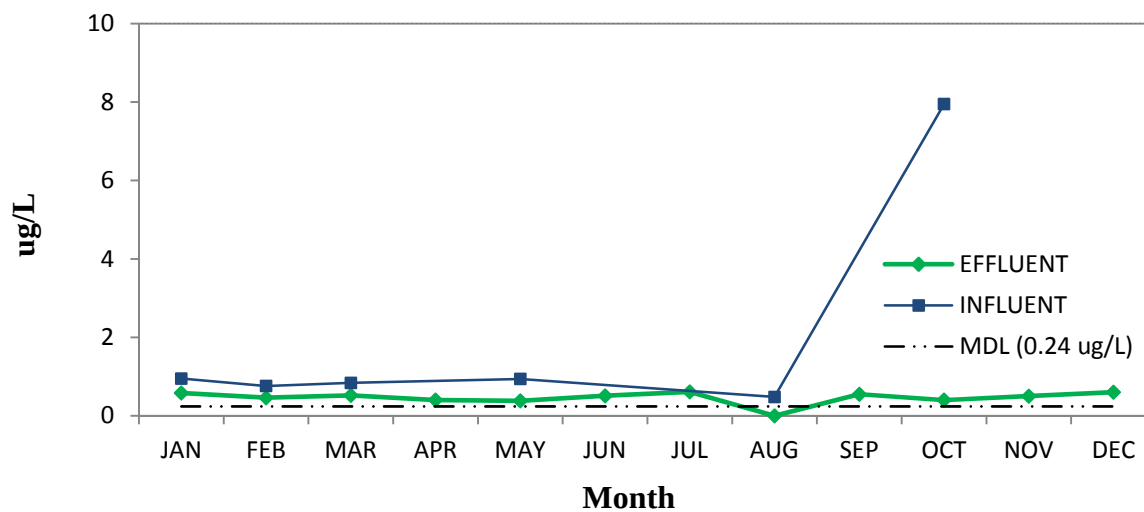


Boron

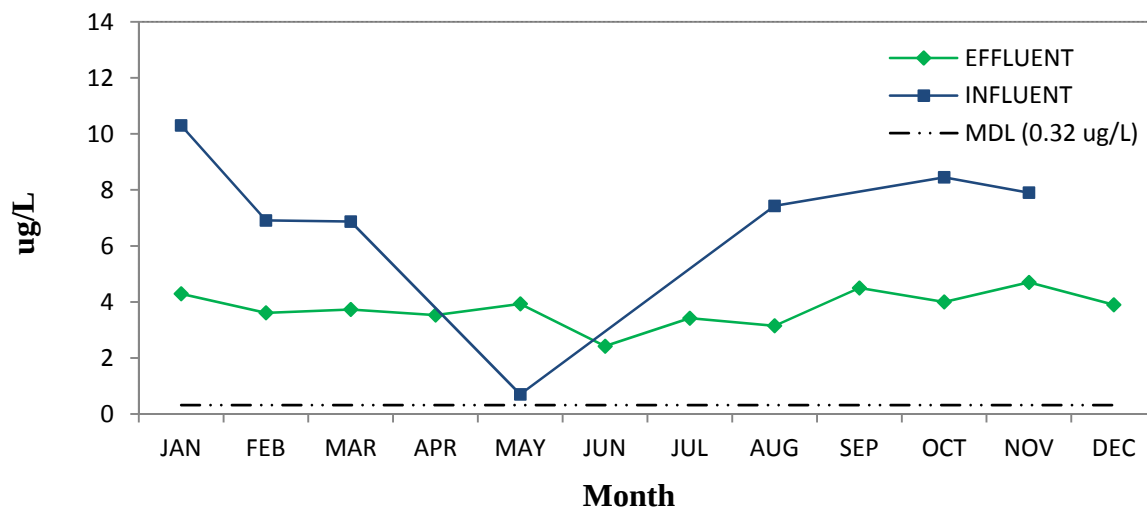


2015 South Bay Water Reclamation Plant Monthly Averages

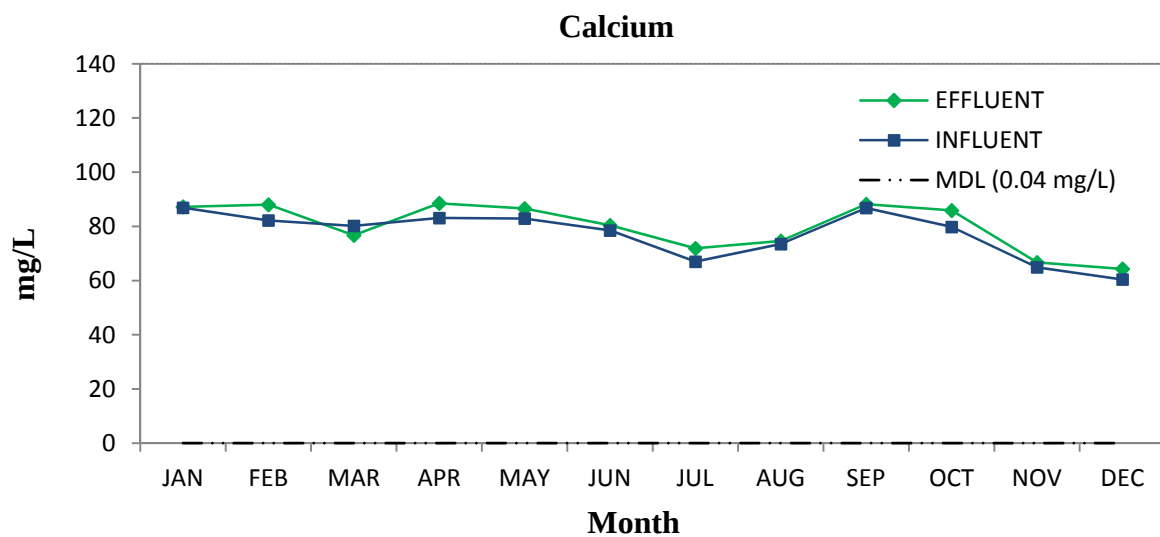
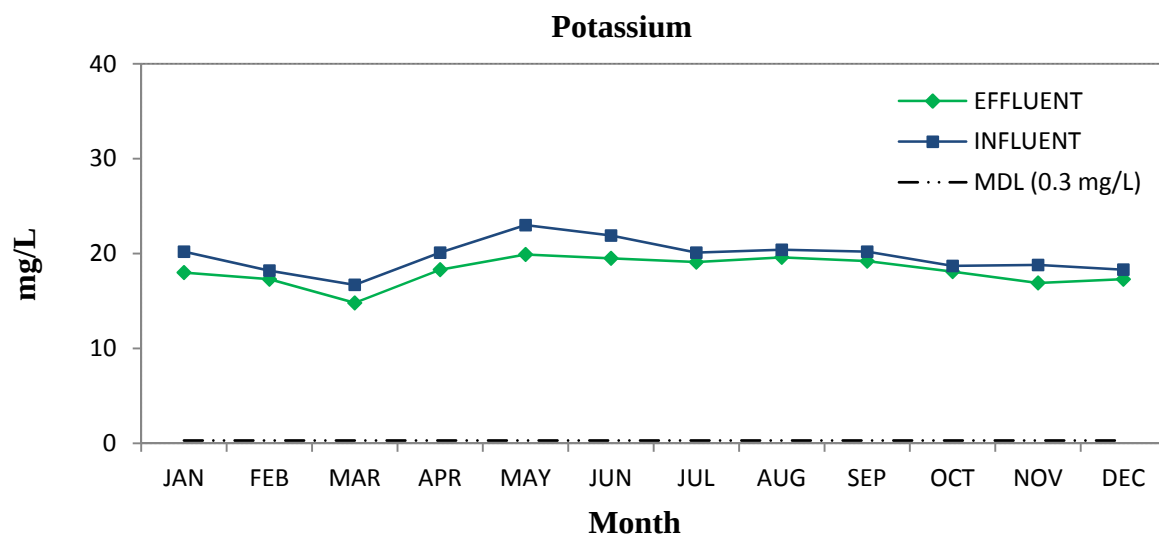
Cobalt



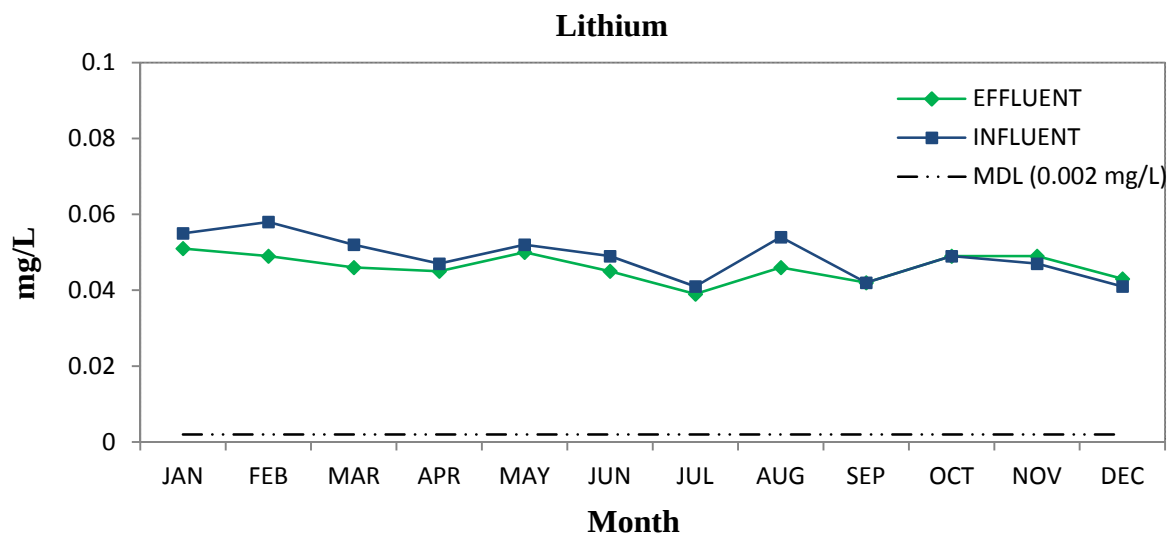
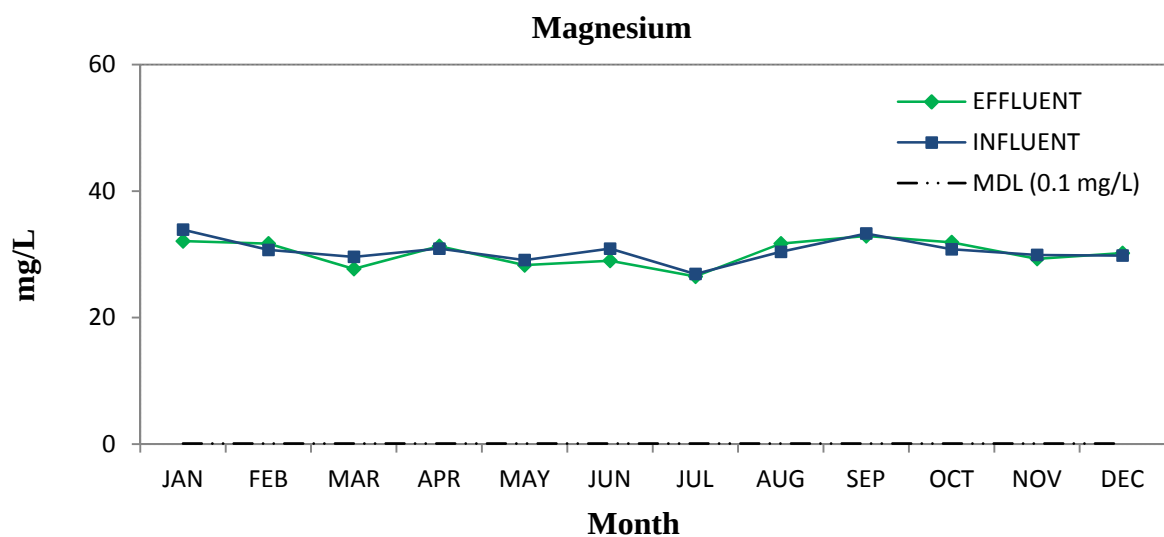
Molybdenum



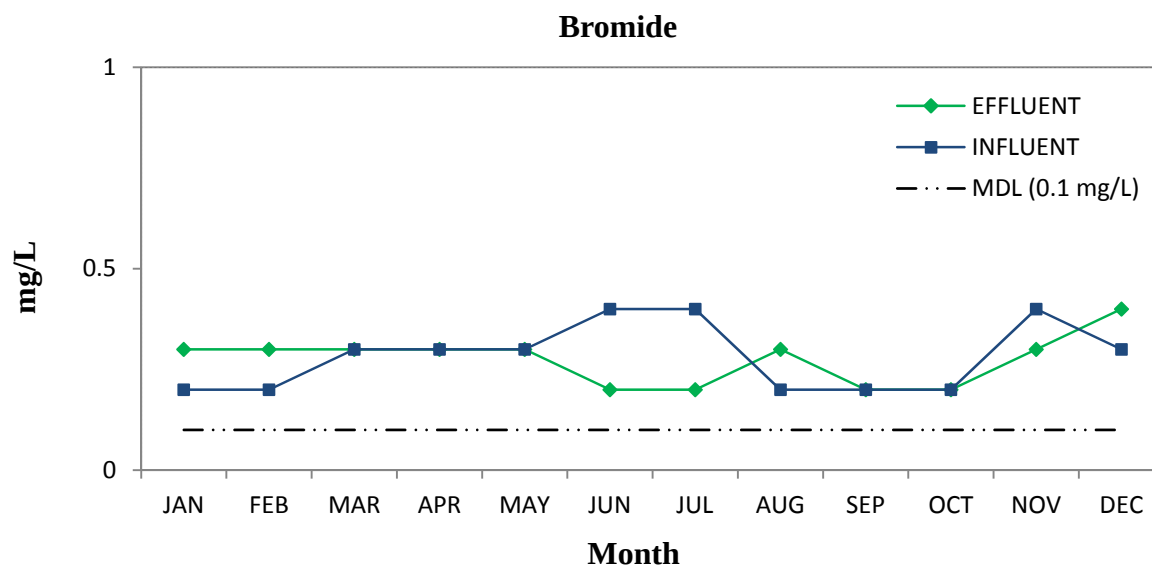
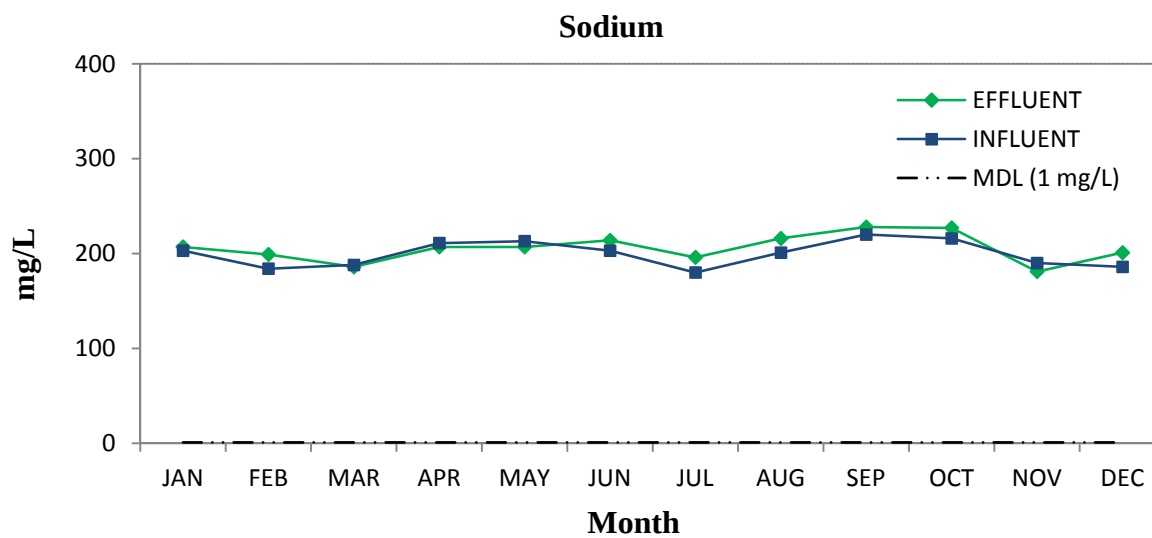
2015 South Bay Water Reclamation Plant Monthly Averages



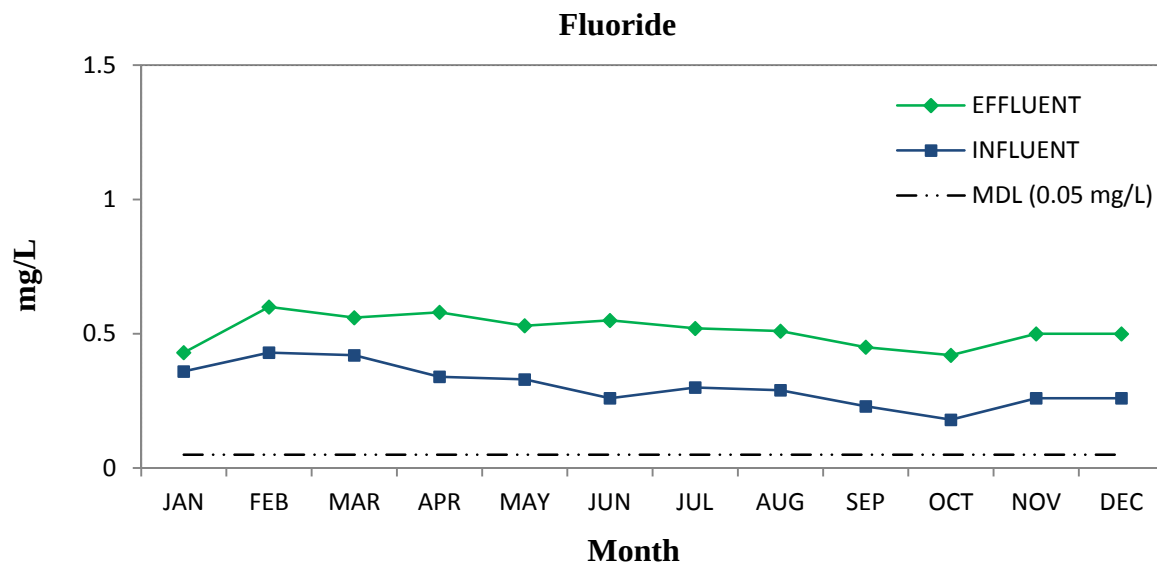
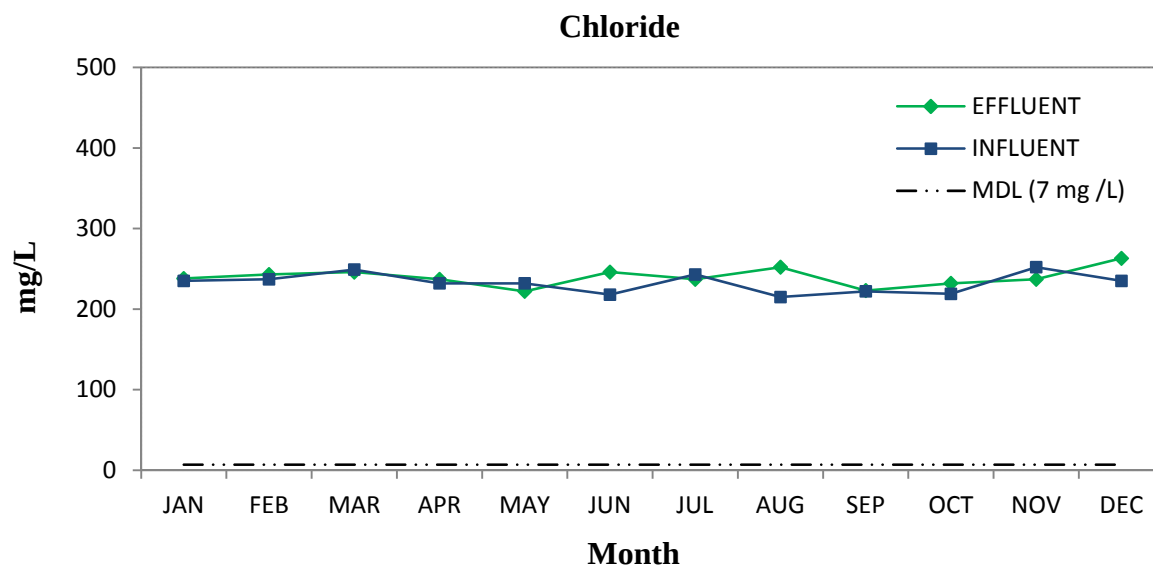
2015 South Bay Water Reclamation Plant Monthly Averages



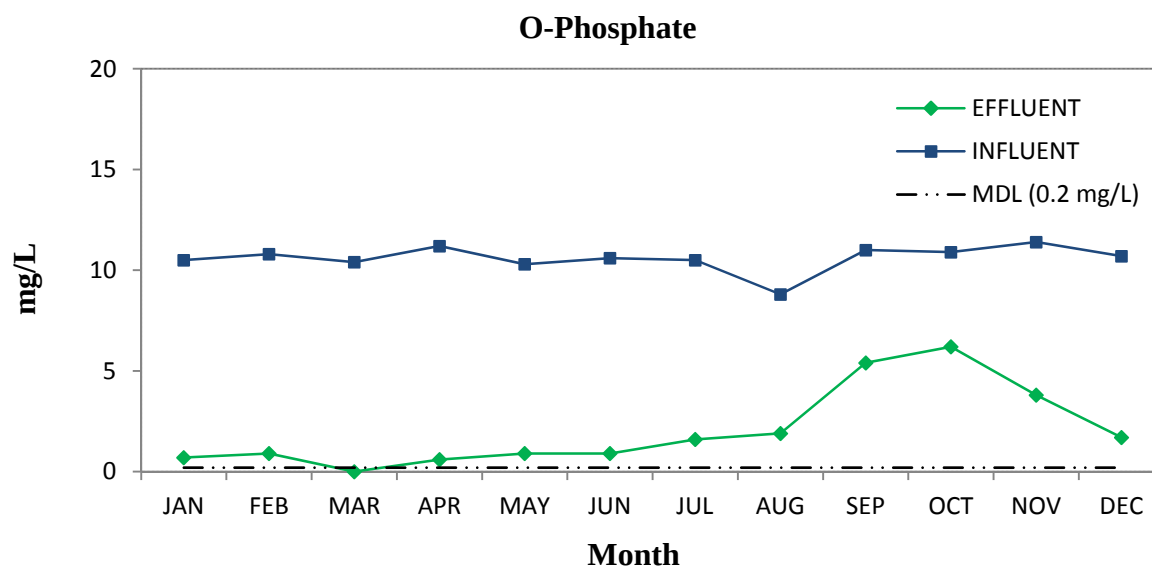
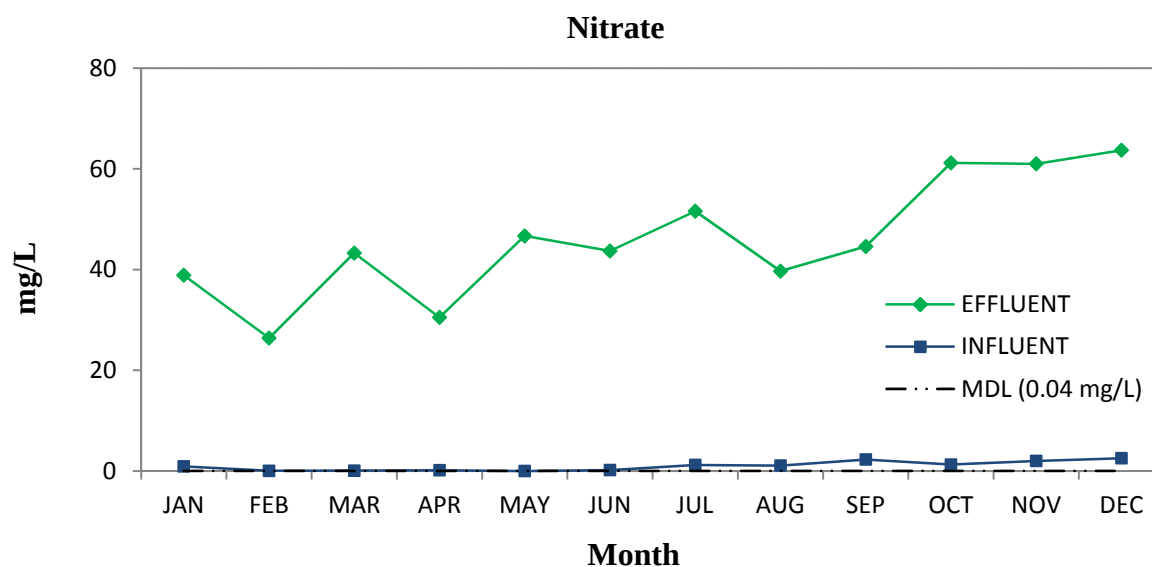
2015 South Bay Water Reclamation Plant Monthly Averages



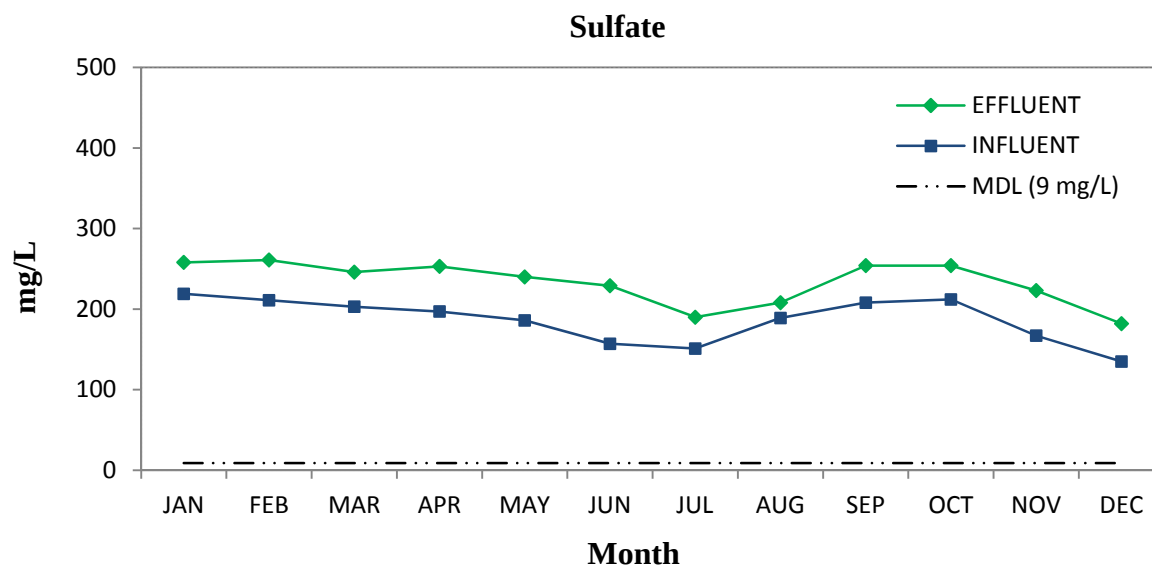
2015 South Bay Water Reclamation Plant Monthly Averages



2015 South Bay Water Reclamation Plant Monthly Averages



2015 South Bay Water Reclamation Plant Monthly Averages

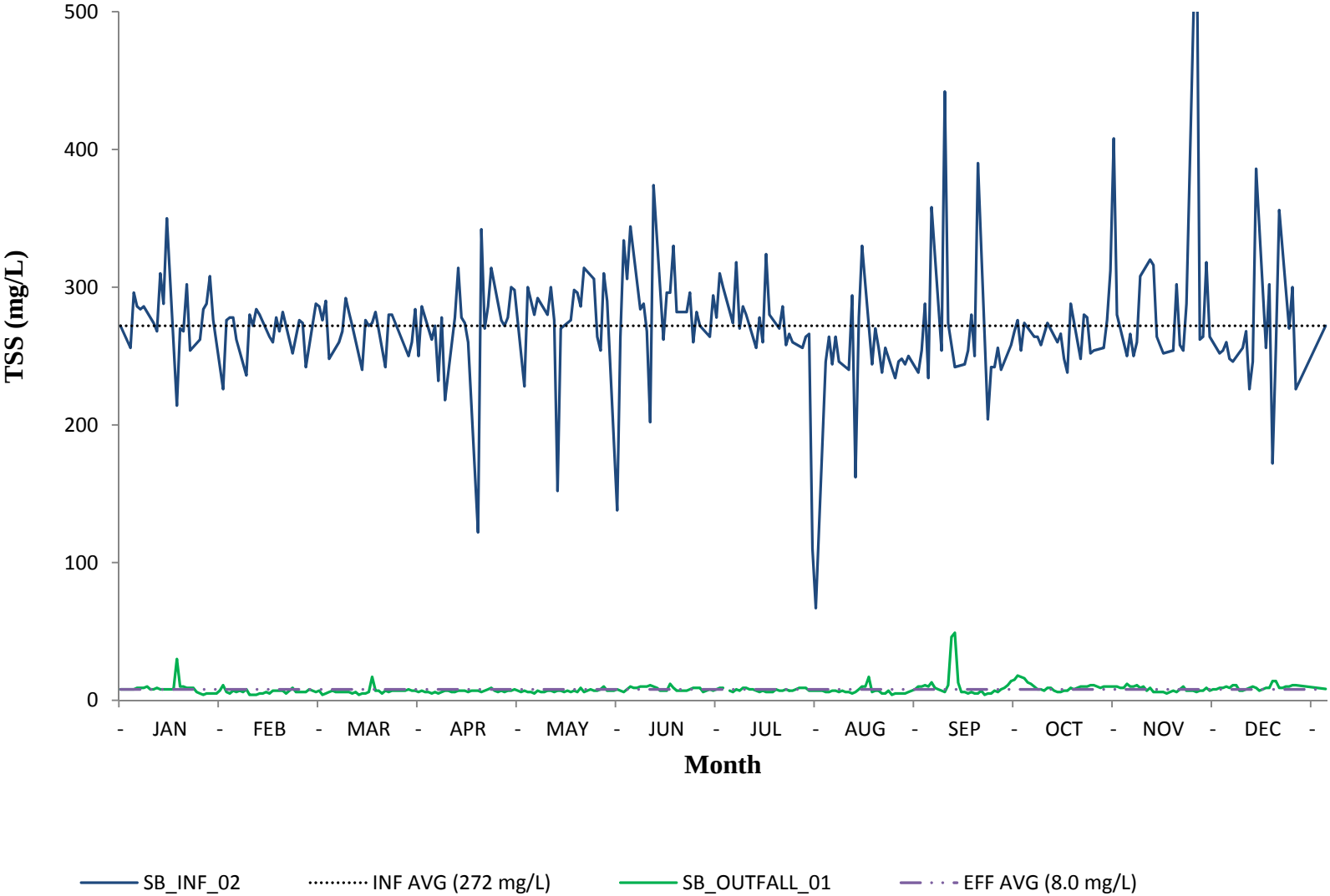


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E. Daily Values of Selected Parameters.

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

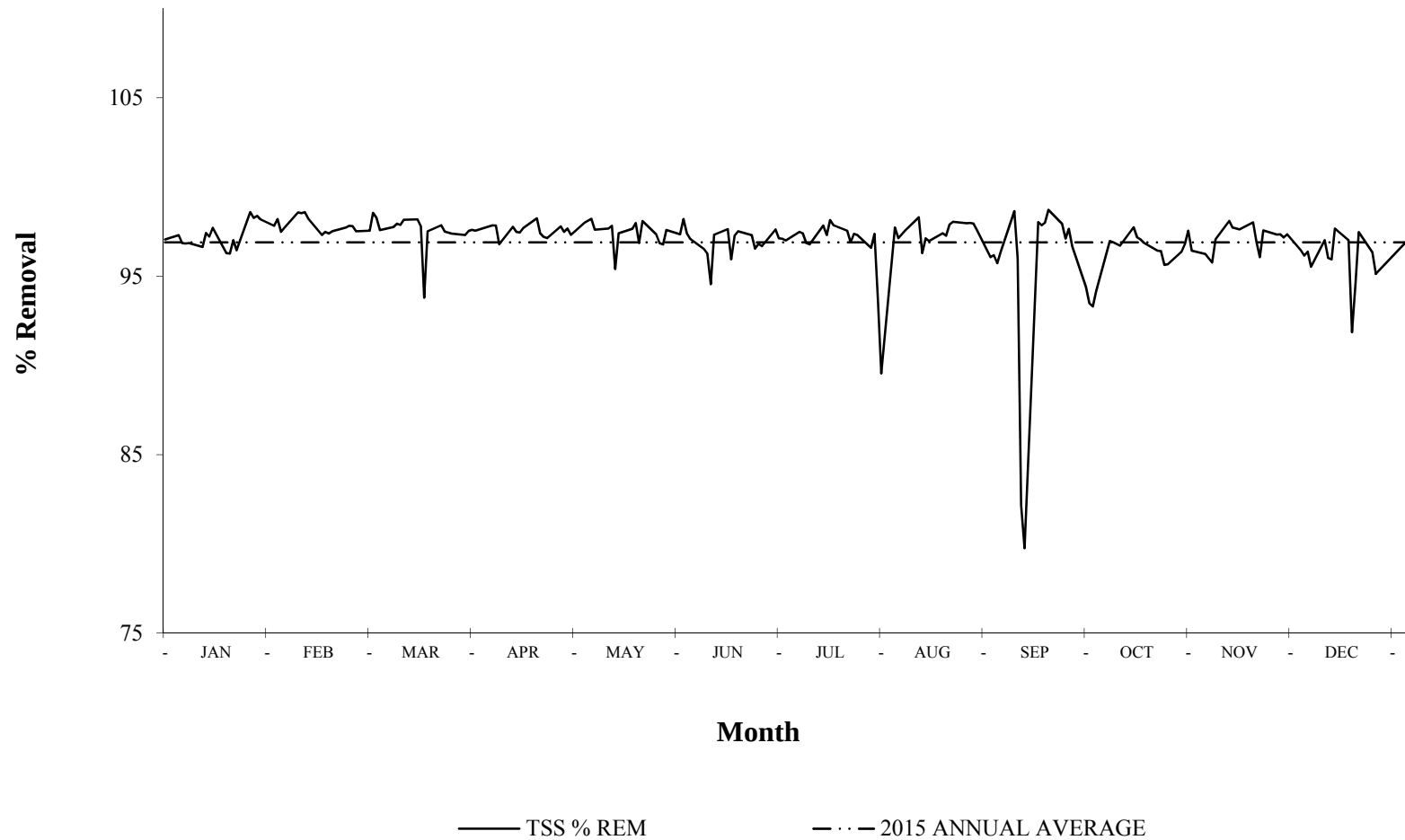
South Bay Wastewater Reclamation Plant
2015 Total Suspended Solids



2015 Total Suspended Solids

Day	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec			
	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	272	8.0	226	11.0	288	6.0	250	6.0		7.0	264	7.0	310	9.0		7.0	288	11.0	274	16.0	250	12.0	260	10.0		
2		8.0	276	6.0	286	7.0	286	7.0		6.0	334	6.0	300	9.0	246	6.0	234	10.0		13.0	266	10.0	248	9.0		
3		8.0	278	5.0	276	4.0		6.0	228	7.0	306	8.0			264	6.0	358	13.0		12.0	250	10.0	246	11.0		
4	256	8.0	278	7.0	290	5.0		6.0	300	6.0	344	10.0		7.0	244	7.0		9.0	264	10.0	260	11.0		11.0		
5	296	8.0	262	6.0	248	6.0	262	5.0		6.0		9.0	274	6.0	264	7.0		8.0	264	8.0	308	9.0		7.0		
6	286	9.0		7.0		7.0	272	6.0	280	5.0		9.0	318	8.0	246	6.0	254	7.0	258	8.0		10.0	256	7.0		
7	284	9.0		6.0		6.0	232	5.0	292	7.0	284	10.0	270	7.0		7.0	442	6.0		7.0		7.0	268	8.0		
8	286	9.0	236	8.0	260	6.0	278	6.0		6.0	288	10.0	286	9.0		6.0	274	11.0	274	9.0	320	9.0	226	9.0		
9		10.0	280	4.0	268	6.0	218	7.0		6.0	268	10.0	280	9.0	240	6.0	258	46.0		9.0	316	6.0	246	10.0		
10		8.0	272	4.0	292	6.0		7.0	280	7.0	202	11.0		8.0	294	5.0	242	49.0		7.0	264	6.0	386	9.0		
11	274	8.0	284	4.0	282	6.0		6.0	300	7.0	374	10.0		8.0	162	6.0		13.0	260	6.0	258	6.0		7.0		
12	268	9.0	280	5.0	272	5.0	278	6.0	276	6.0		9.0	256	7.0	278	8.0		6.0	266	6.0	252	6.0		8.0		
13	310	8.0		5.0		6.0	314	7.0	152	7.0		7.0	278	6.0	330	10.0	244	6.0	248	7.0		5.0	256	9.0		
14	288	8.0		6.0		4.0	278	7.0	270	7.0	262	7.0	260	7.0		10.0	254	5.0	238	7.0		6.0	302	9.0		
15	350	8.0	264	5.0	240	5.0	274	7.0		6.0	296	7.0	324	6.0		17.0	280	6.0	288	9.0	254	7.0	172	14.0		
16		8.0	260	7.0	276	5.0	260	6.0		7.0	296	12.0	280	6.0	244	6.0	250	5.0		8.0	302	6.0	256	14.0		
17		8.0	278	7.0	272	6.0		7.0	276	6.0	330	9.0		6.0	270	7.0	390	5.0		9.0	258	8.0	356	9.0		
18	214	30.0	268	7.0	274	17.0		7.0	298	7.0	282	7.0		8.0	256	7.0		7.0	248	10.0	254	10.0		9.0		
19	270	10.0	282	7.0	282	7.0	122	7.0	296	6.0		7.0	270	7.0	238	5.0		4.0	280	10.0	288	7.0		10.0		
20	268	10.0		5.0		7.0	342	6.0	286	9.0		7.0	286	7.0	256	5.0	204	5.0	278	10.0		7.0	270	10.0		
21	302	9.0		7.0		5.0	270	7.0	314	6.0	282	7.0	258	8.0		7.0	242	5.0	252	11.0		7.0	300	11.0		
22	254	9.0	252	9.0	242	7.0	286	8.0		7.0	296	8.0	266	7.0		4.0	242	7.0	254	11.0	588	6.0	226	11.0		
23		9.0	264	6.0	280	6.0	314	9.0		8.0	260	9.0	260	7.0	234	5.0	256	6.0		10.0	262	7.0				
24		6.0	276	6.0	280	7.0		7.0	306	7.0	282	9.0		8.0	246	5.0	240	8.0		9.0	264	7.0				
25	262	5.0	274	6.0	274	7.0		6.0	264	7.0	272	9.0		9.0	248	5.0		9.0	256	10.0	318	9.0				
26	284	4.0	242	6.0	268	7.0	276	7.0	254	8.0		6.0	256	9.0	244	5.0		11.0	276	10.0	264	7.0				
27	288	5.0		8.0		7.0	272	6.0	310	10.0		7.0	264	9.0	250	6.0	258	14.0	312	10.0		8.0				
28	308	5.0		7.0		7.0	278	7.0	290	7.0	264	8.0	266	7.0		7.0	268	15.0	408	10.0		8.0				
29	276	5.0			250	8.0	300	7.0		7.0	294	7.0	110	7.0		8.0	276	18.0	280	10.0	252	9.0				
30		5.0			260	7.0	298	8.0		7.0	278	8.0	67	7.0	238	10.0	254	17.0		9.0	254	9.0	Annual Summary			
31		7.0			284	7.0			138	8.0				7.0	254	10.0				9.0			272	8.3	INF	EFF
Ave	281	8.4	267	6.3	271	6.5	271	6.6	271	6.9	289	8.3	261	7.5	252	7.0	273	11.4	274	9.4	286	7.8	267	9.5	272	8.0
Min	214	4.0	226	4.0	240	4.0	122	5.0	138	5.0	202	6.0	67	6.0	162	4.0	204	4.0	238	6.0	250	5.0	172	7.0	67	4.0
Max	350	30.0	284	11.0	292	17.0	342	9.0	314	10.0	374	12.0	324	9.0	330	17.0	442	49.0	408	16.0	588	12.0	386	14.0	588	49.0

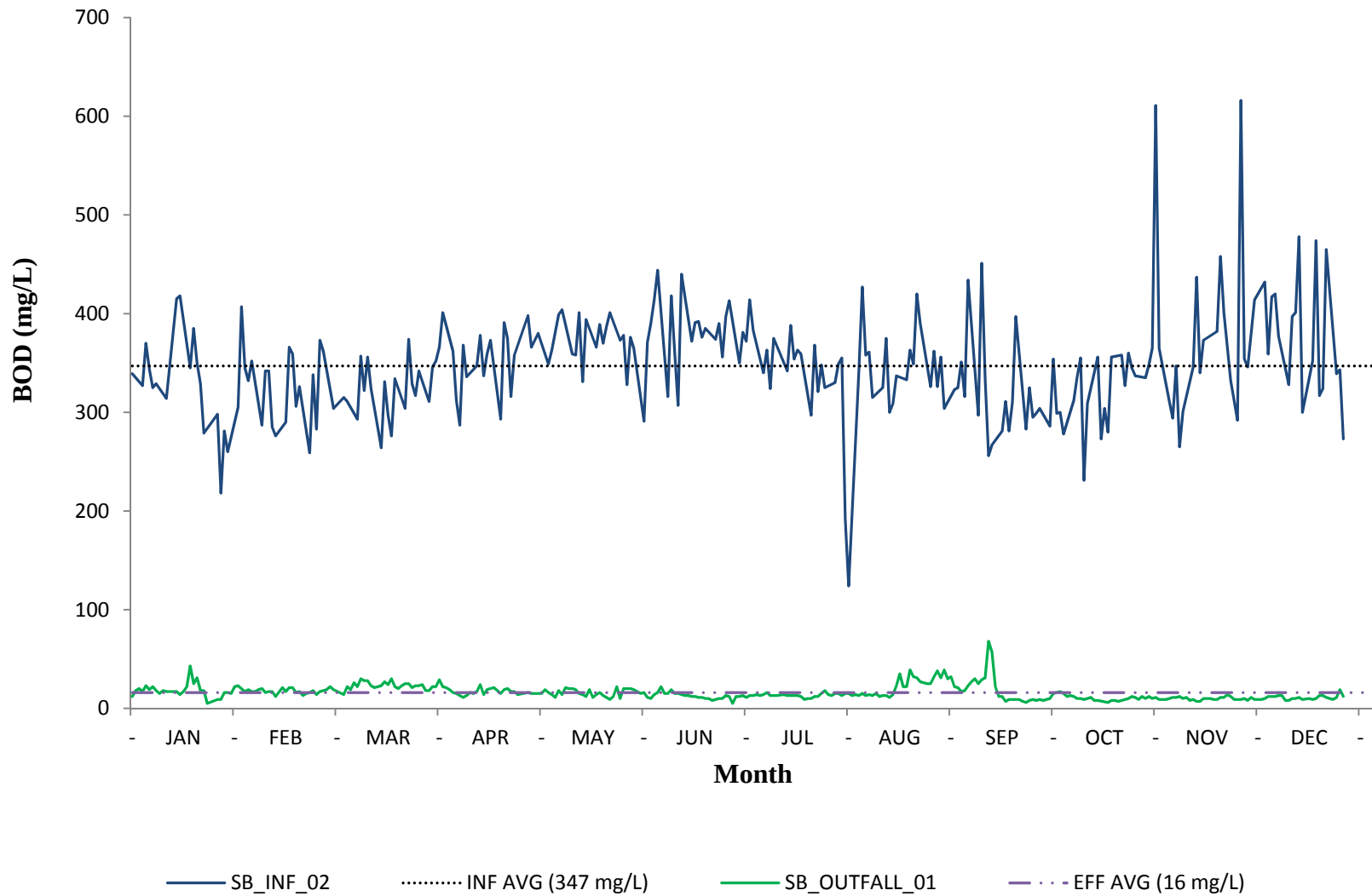
South Bay Wastewater Reclamation Plant 2015 TSS Percent Removal



2015 TSS Percent Removals

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	97.1	95.1	97.9	97.6		97.3	97.1		96.2	94.2	95.2	96.2	
2		97.8	97.6	97.6		98.2	97.0	97.6	95.7		96.2	96.4	
3		98.2	98.6		96.9	97.4		97.7	96.4		96.0	95.5	
4	96.9	97.5	98.3		98.0	97.1		97.1		96.2	95.8		
5	97.3	97.7	97.6	98.1			97.8	97.3		97.0	97.1		
6	96.9			97.8	98.2		97.5	97.6	97.2	96.9		97.3	
7	96.8			97.8	97.6	96.5	97.4		98.6			97.0	
8	96.9	96.6	97.7	97.8		96.5	96.9		96.0	96.7	97.2	96.0	
9		98.6	97.8	96.8		96.3	96.8	97.5	82.2		98.1	95.9	
10		98.5	97.9		97.5	94.6		98.3	79.8		97.7	97.7	
11	97.1	98.6	97.9		97.7	97.3		96.3		97.7	97.7		
12	96.6	98.2	98.2	97.8	97.8		97.3	97.1		97.7	97.6		
13	97.4			97.8	95.4		97.8	97.0	97.5	97.2		96.5	
14	97.2			97.5	97.4	97.3	97.3		98.0	97.1		97.0	
16	97.7	98.1	97.9	97.4		97.6	98.1		97.9	96.9	97.2	91.9	
16		97.3	98.2	97.7		95.9	97.9	97.5	98.0		98.0	94.5	
17		97.5	97.8		97.8	97.3		97.4	98.7		96.9	97.5	
18	86.0	97.4	93.8		97.7	97.5		97.3		96.0	96.1		
19	96.3	97.5	97.5	94.3	98.0		97.4	97.9		96.4	97.6		
20	96.3			98.2	96.9		97.6	98.0	97.5	96.4		96.3	
21	97.0			97.4	98.1	97.5	96.9		97.9	95.6		96.3	
22	96.5	96.4	97.1	97.2		97.3	97.4		97.1	95.7	99.0	95.1	
23		97.7	97.9	97.1		96.5	97.3	97.9	97.7		97.3		
24		97.8	97.5		97.7	96.8		98.0	96.7		97.3		
25	98.1	97.8	97.4		97.3	96.7		98.0		96.1	97.2		
26	98.6	97.5	97.4	97.5	96.9		96.5	98.0		96.4	97.3		
27	98.3			97.8	96.8		96.6	97.6	94.6	96.8			
28	98.4			97.5	97.6	97.0	97.4		94.4	97.5			
29	98.2		96.8	97.7		97.6	93.6		93.5	96.4	96.4		
30			97.3	97.3		97.1	89.6	95.8	93.3		96.5		
31			97.5		94.2			96.1				96.9	Annual Summary
Average	96.7	97.6	97.5	97.4	97.3	97.0	96.8	97.4	95.2	96.5	97.1	96.1	96.9
Minimum	86.0	95.1	93.8	94.3	94.2	94.6	89.6	95.8	79.8	94.2	95.2	91.9	79.8
Maximum	98.6	98.6	98.6	98.2	98.2	98.2	98.1	98.3	98.7	97.7	99.0	97.7	99.0

South Bay Wastewater Reclamation Plant 2015 Biochemical Oxygen Demand

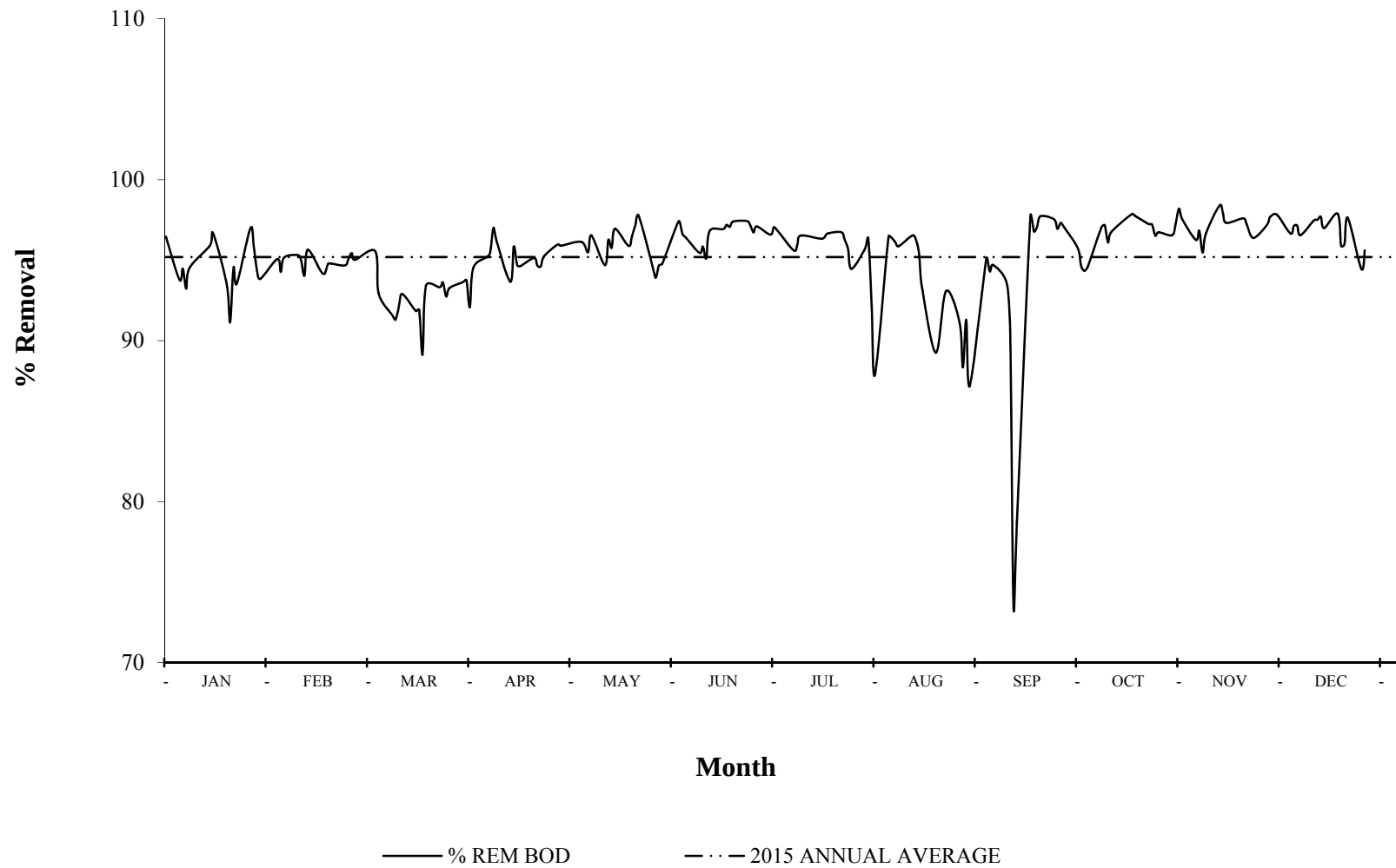


2015 Biochemical Oxygen Demand

Day	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec			
	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	339	12	305	23	304	19	366	29	15	371	11	414	13	14	351	17	278	15	311	10	417	12				
2		18	407					401	22	19	390	10	383	13	342	13	316	18	12	294	11	420	12			
3		20	345	17					21	349	16	414	14	14	427	15	434	23	13	347	11	377	13			
4	327	17	332	19	315	14		19	363	14	444	16		13	358	13	27	312	12	265	12		13			
5	370	23	352	17	311	22	362	16	11		22	340	14	361	14	30	336	10	301	10		8				
6	344	19		17		19	312	15	399	18		15	363	16	315	13	297	25	355	10	11	328	8			
7	325	22		19		26	287	13	404	14	316	15	324	13		15	451	29	231	9	8	397	10			
8	329	18	287	20	293	22	368	11		21	418	19	375	13		12	334	31	309	10	346	9	401	10		
9		15	342	16	357	30	336	13		20	361	15		13	325	13	256	68		11	437	7	478	11		
10		18	342	17	322	28		16	359	20	307	15			375	13	267	57		8	340	7	300	9		
11	314	17	285	17	356	28		15	358	19	440	14		14	300	11		22	356	8	373	10				
12			276	12	324	23	347	17	401	15		13	342	13	309	14		12	273	0				10		
13						21	378	24	331	14		13	388	13	337	23	281	12	304	0	10	352	9			
14	415	17		21			337	14	394	12	372	12	354	13		35	311	7	280	6	9	474	10			
15	418	14	290	17	264	23	359	19		19	391	12	363	13		22	281	9	356	8	382	9	317	13		
16		17	366	21	331	27	373	20		11	392	11	359	12	333	22	310	9		8	458	11	324	13		
17		22	359	21	297	24		21	366	14	376	11		9	363	39	397	9		7	401	11	465	11		
18	345	43	306	16	276	30		18	389	16	385	10		10	349	32		9	358	8		14				
19	385	25	326	17	334	22	293	15	370	13		10	297	10	420	31		7	327	9	332	12		9		
20	350	31		13		20	391	19	387	11		8	368	12	390	27	283	6	360	10		9	339	11		
21	329	18		15		23	375	20	401	9	374	9	321	12		26	325	8	345	12	292	9	343	19		
22	279	18	259	16	304	25	316	17		12	390	10	348	15		25	295	9	337	11	616	9	273	12		
23		5	338	18	374	25	358	17		22	356	10	325	18	326	25	299	8		9	354	10				
24			283	14	329	21		14	373	10	397	13		14	362	32	304	9		12	346	8				
25			373	17	317	23			378	20	413	12		13	326	38		8	335	10		11				
26	298	9	362	18	342	23			328	20		5	330	15	356	31		9	348	12	414	9				
27	218	9		19		24	398	16	376	20		12	349	15	304	39	286	10	365	10		9				
28	281	16		22		18	366	15	365	19	350	12	355	13		30	354	15	611	11		9				
29	260	16			311	18				17	381	13	192	15		32	299	16	365	9	432	10				
30		15			346	22	380			15	372	11	124	15	323	22	300	17		9	359	12				
31		22			352	22			291	16				13	325	21			9							
Avg	329	18	327	18	322	23	355	18	369	16	382	12	334	13	347	23	320	18	327	9	370	10	375	11	347	16
Min	218	5	259	12	264	14	287	11	291	9	307	5	124	9	300	11	256	6	231	0	265	7	273	8	124	0
Max	418	43	407	23	374	30	401	29	404	22	444	22	414	18	427	39	451	68	611	15	616	14	478	19	616	68

Annual Summary
INF EFF

South Bay Wastewater Reclamation Plant 2015 BOD Percent Removal



2015 BOD Percent Removals

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	96.5	92.5	93.8	92.1		97.0	96.9		95.2	94.6	96.8	97.1	
2				94.5		97.4	96.6	96.2	94.3		96.3	97.1	
3		95.1			95.4	96.6		96.5	94.7		96.8	96.6	
4	94.8	94.3	95.6		96.1	96.4		96.4		96.2	95.5		
5	93.8	95.2	92.9	95.6			95.9	96.1		97.0	96.7		
6	94.5			95.2	95.5		95.6	95.9	91.6	97.2		97.6	
7	93.2			95.5	96.5	95.3	96.0		93.6	96.1		97.5	
8	94.5	93.0	92.5	97.0		95.5	96.5		90.7	96.8	97.4	97.5	
9		95.3	91.6	96.1		95.8		96.0	73.4		98.4	97.7	
10		95.0	91.3		94.4	95.1		96.5	78.7		97.9	97.0	
11	94.6	94.0	92.1		94.7	96.8		96.3		97.8	97.3		
12		95.7	92.9	95.1	96.3		96.2	95.5					
13				93.7	95.8		96.6	93.2	95.7			97.4	
14	95.9			95.8	97.0	96.8	96.3		97.7	97.9		97.9	
15	96.7	94.1	91.3	94.7		96.9	96.4		96.8	97.8	97.6	95.9	
16		94.3	91.8	94.6		97.2	96.7	93.4	97.1		97.6	96.0	
17		94.2	91.9		96.2	97.1		89.3	97.7		97.3	97.6	
18	87.5	94.8	89.1		95.9	97.4		90.8		97.8			
19	93.5	94.8	93.4	94.9	96.5		96.6	92.6		97.2	96.4		
20	91.1			95.1	97.2		96.7	93.1	97.9	97.2		96.8	
21	94.5			94.7	97.8	97.6	96.3		97.5	96.5	96.9	94.5	
22	93.5	93.8	91.8	94.6		97.4	95.7		96.9	96.7	98.5	95.6	
23		94.7	93.3	95.3		97.2	94.5	92.3	97.3		97.2		
24		95.1	93.6		97.3	96.7		91.2	97.0		97.7		
25		95.4	92.7		94.7	97.1		88.3		97.0			
26	97.0	95.0	93.3		93.9		95.5	91.3		96.6	97.8		
27	95.9			96.0	94.7		95.7	87.2	96.5	97.3			
28	94.3			95.9	94.8	96.6	96.3		95.8	98.2			
29	93.8		94.2			96.6	92.2		94.6	97.5	97.7		
30			93.6			97.0	87.9	93.2	94.3		96.7		
31			93.8		94.5			93.5					
Annual Summary													
Average	94.2	94.54	92.7	95.1	95.8	96.7	95.6	93.4	93.9	97.0	97.2	96.9	95.2
Minimum	87.5	92.46	89.1	92.1	93.9	95.1	87.9	87.2	73.4	94.6	95.5	94.5	73.4
Maximum	97.0	95.7	95.6	97.0	97.8	97.6	96.9	96.5	97.9	98.2	98.5	97.9	98.5

F. Toxicity Testing: South Bay Water Reclamation Plant 2015

INTRODUCTION

The City of San Diego's Toxicology Laboratory (CSDTL) conducted and oversaw aquatic toxicity testing (bioassays) of effluent from the South Bay Water Reclamation Plant (SBWRP) during calendar year 2015 as required by Order No. R9-2013-0006, NPDES Permit No. CA0109045, and as amended by Order No. R9-2014-0071. The current testing requirements are designed to determine the chronic toxicity of effluent samples collected from the SBWRP. This chapter presents summaries and discussion of all toxicity tests conducted in the calendar year 2015.

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 animals. Annual acute toxicity testing of SBWRP effluent is not required under Order No. R9-2013-0006, as amended by Order No. R9-2014-0071.

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 quarterly 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.

When not performed by the CSDTL, toxicity analyses in 2015 were performed by the CSDTL's external contract lab for toxicology services, Nautilus Environmental (4340 Vandever Ave, San Diego, CA 92120). Nautilus Environmental is accredited in accordance with NELAP by the State of Oregon Environmental Laboratory Accreditation Program (Certificate No. 4053). It is also certified by the California State Water Resources Control Board Environmental Laboratory Accreditation Program (Certificate No. 1802), and the State of Washington Department of Ecology (Lab ID C552).

MATERIALS & METHODS

Test Materials

SBWRP Effluent

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 between 0 – 6 °C with minimal light exposure until test initiation. All tests were initiated within 36 hours of sample collection. The exposure series consisted 0.26, 0.53, 1.05, 2.10, and 4.20% effluent 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 approximately 15 °C, and used within 96 hours of collection or frozen to produce hypersaline brine. Detailed descriptions for all toxicity test procedures are provided in the City of San Diego Toxicology Laboratory Quality Assurance Manual (City of San Diego 2014).

Chronic Bioassays

Red Abalone Development

During the current reporting period (January–December 2015), chronic bioassays using the red abalone *Haliotis rufescens* were conducted for the SBWRP effluent as part of the biennial sensitivity re-screening in accordance with USEPA protocol EPA/600/R-95/136 (USEPA 1995).

Test organisms were purchased from Cultured Abalone (Goleta, California), and/or American Abalone Farm (Davenport, California), and shipped via overnight delivery to the CSDTL or Nautilus Environmental. Mature male and female abalones were placed in gender-specific natural seawater tanks and held at 15 ± 1 °C. For each test event, spawning was induced in 6-10 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 approximately 48 hours. A SIO water control was also tested.

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

At the end of the exposure period, 100 randomly-selected embryos were examined and the number of normally and abnormally developed embryos was recorded. The percentage of normally developed embryos for each replicate was arcsine square root transformed. Data were analyzed in accordance with “Flowchart for statistical analysis of red abalone *Haliotis rufescens*, development data” (USEPA 1995).

Kelp Germination and Growth

During the current reporting period (January–December 2015), chronic bioassays using the giant kelp, *Macrocystis pyrifera*, were conducted for the SBWRP effluent on a

quarterly basis in accordance with USEPA protocol EPA/600/R-95/136 (USEPA 1995). Two giant kelp bioassays were also conducted as part of the biennial sensitivity re-screening of the SBWRP effluent.

Kelp zoospores were obtained from the reproductive blades (sporophylls) of adult *Macrocystis* plants at the kelp beds near La Jolla, California one day prior to test initiation. The zoospores were exposed in a static system for 48 ± 3 hours to the effluent exposure series. A SIO water control was also tested.

Simultaneous reference toxicant testing was performed using reagent grade copper chloride. The exposure series consisted of 5.6, 10, 18, 32, 100, 180 and 320 $\mu\text{g/L}$ copper at the CSDTL laboratory and 10, 32, 100, 180, 320, and 560 $\mu\text{g/L}$ copper at Nautilus Environmental. A SIO seawater control was also tested.

At the end of the exposure period, 100 randomly-selected 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.

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).

Topsmelt Survival and Growth

During the current reporting period (January–December 2015), chronic bioassays using the topsmelt, *Atherinops affinis*, were conducted for the SBWRP effluent as part of the biennial sensitivity re-screening in accordance with EPA/600/R-95/136 (USEPA 1995).

Larval topsmelt (9-14 days old) were purchased from Aquatic Bio Systems (Fort Collins, CO) and exposed to the effluent exposure series for seven days in a static-renewal system. 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 $\mu\text{g/L}$. A SIO seawater control was also tested.

Upon conclusion of the exposure period, percent survival and dry biomass were recorded. Data were analyzed in accordance with “Flowchart for statistical analysis of the topsmelt, *Atherinops affinis*, larval survival data” and “Flowchart for statistical analysis of the topsmelt, *Atherinops affinis*, larval growth data” (USEPA 1995).

Statistical Methods

All data were analyzed using a combination of multiple comparison and point estimation methods prescribed by USEPA (1995). ToxCalc (Tidepool Scientific Software 2002) and Comprehensive Environmental Toxicity Information System (CETIS) Software (Tidepool Scientific 2010 & 2013) were used for statistical analyses. In addition, all multi-concentration tests were subjected to an evaluation of the concentration-response relationship.

In accordance with USEPA guidelines on method variability, the lower “Percent Minimum Significant Difference” (PMSD) bound was also evaluated for chronic toxicity test data in order to minimize Type 1 error (i.e., false positives). Although PMSD bounds have not been established for the topsmelt, percentiles of PMSD for a comparable method using the inland silverside (*Menidia beryllina*) may be considered (Hemmer 1992). If the relative difference between an exposure concentration and the control was smaller than the 10th percentile PMSD value listed for the test method in the USEPA guidance document, then the exposure concentration was further evaluated using other EPA-approved statistical strategies (USEPA 2000).

RESULTS & DISCUSSION

Chronic Toxicity of SBWRP Effluent

In 2015, the City conducted chronic bioassays of the SBWRP effluent in accordance with the biennial species sensitivity re-screening requirement using the red abalone, giant kelp, and topsmelt. The giant kelp was selected as the most sensitive species for continued monitoring. All tests met the test acceptability criteria and the NPDES permit’s chronic toxicity performance goal (Table T.1).

REFERENCES

City of San Diego. 2014. Quality Assurance Manual. City of San Diego Ocean Monitoring Program, Metropolitan Wastewater Department, Environmental Monitoring and Technical Services Division, San Diego, CA

Hemmer, MJ, DP Middaugh, V Comparetta. 1992. Comparative Acute Sensitivity of Larval Topsmelt, *Atherinops affinis*, and Inland Silverside, *Menidia beryllina*, to 11 Chemicals. Environmental Toxicology and Chemistry, 11(3): 401-408.

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

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USEPA. 1995. Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms. U.S. Environmental Protection Agency, Environmental Monitoring and Support Laboratory, Cincinnati, OH, EPA/600/R-95/136.

USEPA. 2000. Understanding and Accounting for Method Variability in Whole Effluent Toxicity Applications Under the National Pollutant Discharge Elimination System Program. U.S. Environmental Protection Agency, Office of Water (4203), EPA 833-R-00-003.

Table T.1

Results of SBWRP effluent chronic toxicity tests conducted in 2015. Data are presented as chronic toxic units (TUc).

Sample Date	Red Abalone		Giant Kelp		Topsmelt	
	Development		Germination	Growth	Survival	Growth
	Exclusive	Inclusive				
02/16/2015	<23.8	<23.8	<23.8	47.6	-	-
03/02/2015	<23.8	<23.8	47.6	<23.8	<23.8	<23.8
04/20/2015	<23.8	<23.8	<23.8	95.2	-	-
05/31/2015	-	-	-	-	<23.8	<23.8
06/02/2015	-	<23.8	<23.8	<23.8	-	-
08/11/2015	-	-	<23.8	<23.8	-	-
10/06/2015	-	-	<23.8	<23.8	-	-
N	3	4	6	6	2	2
No. in compliance	3	4	6	6	2	2
Mean TUc	<23.8	<23.8	27.8	39.7	<23.8	<23.8

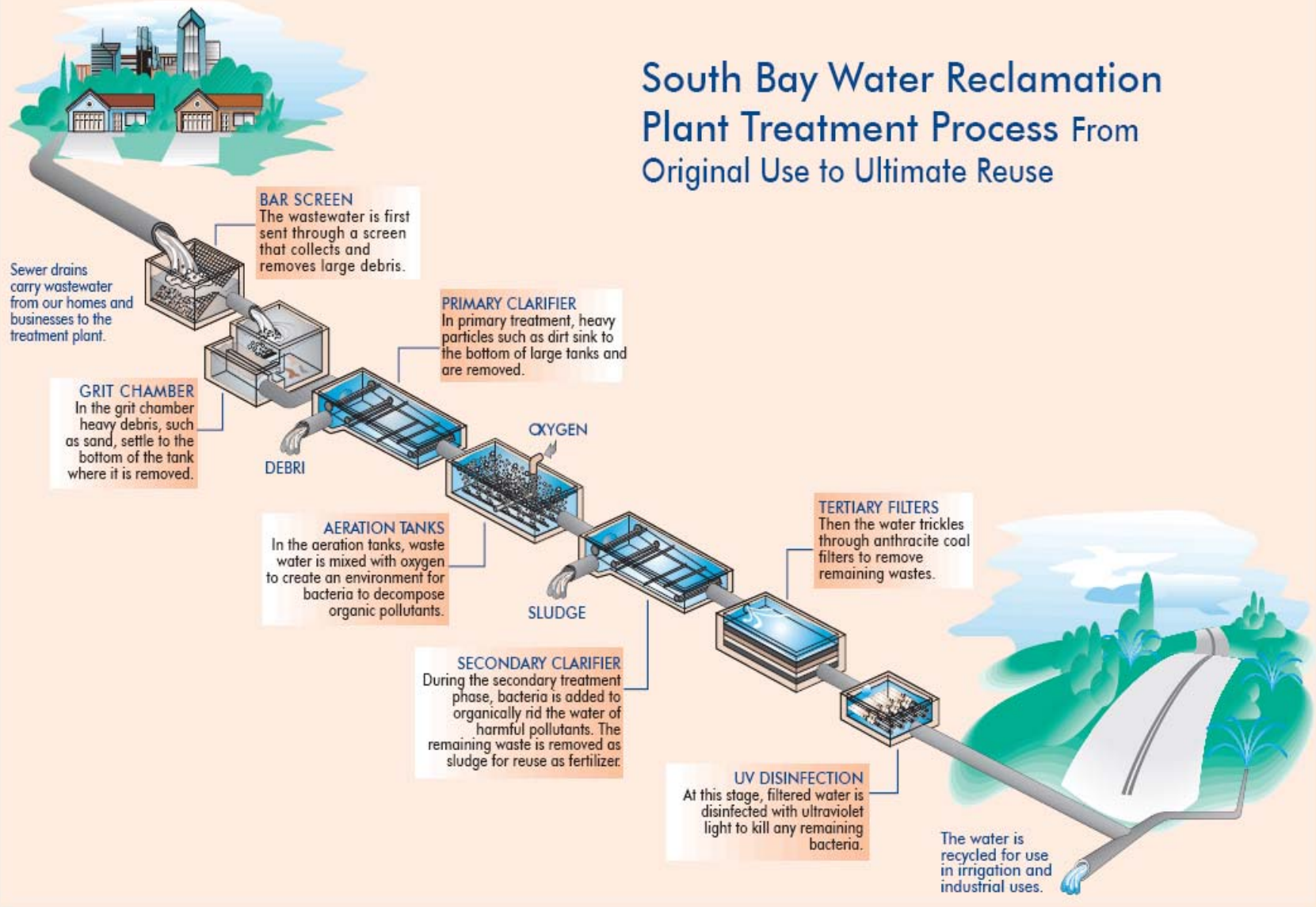
NPDES permit performance goal: 96 TUc

III. Plant Operations Summary

- A. Flows
- B. Rain Days
- C. Chemical Report
- D. Facilities Out of Service Report

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South Bay Water Reclamation Plant Treatment Process From Original Use to Ultimate Reuse



Overview of the Wastewater Treatment Process

Please see the treatment process flow diagram on the preceding page.

Debris, large particulates, and sand are removed in the headworks by mechanical bar-screens and aerated grit removal systems. The process then consists of classical primary sedimentation and secondary treatment by activated sludge. While secondary effluent may be discharged directly to the ocean outfall the usual process directs the treated secondary effluent to reclamation and beneficial reuse by tertiary treatment and disinfection. Even if not beneficially reused, most of the flow goes through tertiary treatment. Tertiary treatment consists of filtration through Anthracite Coal Beds followed by disinfection with high intensity UV (ultraviolet) light. At this stage the "reclaimed" water meets California Title 22 full body contact requirements.

Untreated wastewater (Influent) enters the plant's Headworks from the South Bay region. In the Headworks, the wastewater passes through large, rake-like Bar Screens to remove solid debris and floating material (called "Rags") such as cloth, wood, and plastic material. These "rags" are dewatered and trucked to a landfill.

Following the headworks, the screened wastewater then passes through aerated Grit Chambers where heavier solids such as sand, gravel, coffee grounds and eggshells settle out and are removed. The grit is then dewatered and taken to landfills.

Wastewater then flows into the Primary Sedimentation Basins where the sedimentation process starts. Solids sink to the bottom of the tanks and "scum" (grease and cooking oils) float to the surface. "Raw Sludge" which has settled to the bottom of the basins is returned to the sewer system and sent to the Point Loma Wastewater Treatment Plant. Similarly, the scum is skimmed from the surface and returned to the sewer system.

The wastewater then enters Anoxic Zone Chambers that are oxygen depleted. The wastewater mixes with bacteria ("Bugs") that eat soluble organic material. The wastewater then flows into Aeration Basins where diffused air is pumped into the water. Here, the bugs begin to ingest and digest the organic solids while increasing in number and density.

Wastewater flows from the Aeration Basin into the Secondary Clarifiers where the bacteria and digested solids settle to the bottom as "Secondary Sludge." Some of this Sludge and any remaining scum are removed and returned to the sewer system for treatment at the Point Loma Wastewater Treatment Plant. The remaining sludge is returned to the Anoxic Basins and again mixed with the wastewater.

The water, now treated to a Secondary Treatment level, can either be discharged into the ocean through the South Bay Ocean Outfall or moved on to Tertiary Treatment for reclaimed water applications and beneficial reuse⁵.

In Tertiary Treatment, the treated wastewater (effluent) flows into Anthracite Coal Beds where it is filtered of remaining solids as it passes through the coal medium. The filtered water then passes through chambers where it is disinfected through exposure to high-intensity UV (ultraviolet) light.

⁵ The Recycled Water Users Summary Report as described in Permit No. 2000-203 is submitted separately.

SBWRP Annual Monitoring Report
2015 Flow Report

SBWRP FLOWS

(Million Gallons / Day)

Mon	Influent	Outfall	Secondary Effluent	South Metro Interceptor Return	Recycled Production	Distributed Recycled	Dilution Water Added Recycled	Recycled Plant Internal use
01	7.71	5.17	2.49	1.44	4.68	1.05	.00	.94
02	7.84	4.36	2.33	1.53	4.74	1.89	.00	.82
03	7.93	4.32	2.06	1.53	5.09	2.00	.00	.82
04	7.84	2.68	2.23	1.54	4.88	3.58	.00	.84
05	7.64	4.09	2.47	1.39	4.49	2.09	.00	.78
06	7.62	1.97	1.30	1.55	5.68	4.05	.00	.96
07	7.55	2.75	.92	1.47	5.98	3.28	.00	.87
08	7.67	2.08	.64	1.31	6.46	4.18	.00	.84
09	7.58	3.03	1.10	1.12	6.23	3.36	.00	.94
10	7.53	3.17	.94	1.10	6.40	3.27	.00	.90
11	7.43	4.73	1.69	1.02	5.52	1.66	.00	.82
12	5.29	3.56	1.06	.77	4.06	1.00	.01	.57
avg	7.47	3.49	1.60	1.31	5.35	2.62	.00	.84

(Million Gallons / Month)

Mon	Influent	Outfall	Secondary Effluent	South Metro Interceptor Return	Recycled Production	Distributed Recycled	Dilution Water Added Recycled	Recycled Plant Internal use
01	239.09	160.40	77.22	44.78	145.08	32.66	.00	29.24
02	219.52	121.97	65.31	42.72	132.77	53.01	.00	23.04
03	245.76	133.99	63.90	47.43	157.72	62.06	.00	25.53
04	235.17	80.52	66.81	46.31	146.28	107.48	.00	25.11
05	236.69	126.90	76.67	43.15	139.13	64.66	.00	24.25
06	228.49	59.05	39.03	46.64	170.35	121.42	.00	28.87
07	233.92	85.28	28.57	45.72	185.29	101.55	.00	27.01
08	237.69	64.55	19.78	40.62	200.37	129.56	.00	26.03
09	227.39	90.85	33.09	33.52	186.85	100.92	.00	28.15
10	233.32	98.25	29.11	34.03	198.42	101.31	.00	27.98
11	223.01	141.86	50.64	30.48	165.72	49.83	.00	24.66
12	163.97	110.41	32.98	23.76	125.96	31.07	.33	17.72
avg	227.00	106.17	48.59	39.93	162.83	79.63	.03	25.63
sum	2724.02	1274.03	583.11	479.16	1953.94	955.53	.33	307.59

A. Flows

Effluent flows (mgd) 2015													
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	3.52	6.59	6.27	3.25	2.01	3.16	1.25	1.28	1.27	0.96	5.83	6.58	
2	5.51	6.29	6.50	2.22	1.95	1.97	1.60	5.31	1.40	2.16	6.35	2.75	
3	6.28	6.51	6.17	2.92	1.78	1.99	2.68	1.82	0.21	1.85	1.83	2.87	
4	6.41	3.47	6.29	2.16	1.99	2.04	3.08	1.38	1.01	5.33	3.14	2.68	
5	6.40	2.11	6.45	2.12	2.12	1.69	5.54	2.98	1.30	5.44	6.39	6.50	
6	6.66	2.13	6.34	3.76	3.71	1.54	1.92	1.50	2.65	5.89	6.62	6.16	
7	6.34	5.71	6.33	2.32	1.96	1.77	1.80	0.71	6.08	6.59	6.13	2.17	
8	6.11	6.05	6.33	4.49	3.05	4.83	1.12	0.25	5.89	6.69	4.84	3.48	
9	6.28	3.65	6.28	2.16	3.00	2.13	2.09	3.47	6.46	3.44	5.09	2.78	
10	3.69	2.44	6.46	2.12	6.30	2.10	1.49	3.10	6.64	6.63	6.72	2.33	
11	1.89	5.08	6.16	2.12	5.87	1.87	1.17	0.40	4.93	6.36	4.30	4.94	
12	2.40	3.42	3.18	2.06	6.35	1.59	4.28	3.80	1.65	0.93	5.97	6.22	
13	6.13	1.93	2.24	4.24	4.26	1.28	2.48	0.10	1.53	1.04	3.95	6.40	
14	6.13	2.07	2.19	2.58	3.18	1.25	3.11	1.50	1.10	0.99	2.45	5.99	
15	6.21	5.52	4.36	2.20	6.13	1.26	0.45	3.82	0.70	3.71	6.51	6.72	
16	6.33	5.77	3.43	2.23	6.15	1.31	0.76	4.70	0.47	0.90	3.84	4.46	
17	6.19	2.91	3.42	2.08	6.27	1.92	0.97	3.64	1.58	0.77	5.66	6.23	
18	6.18	3.68	2.97	2.05	6.16	2.56	0.88	6.72	5.77	3.86	4.05	6.30	
19	6.02	2.11	2.22	2.07	4.94	2.30	4.82	2.95	6.24	3.73	4.87	6.20	
20	6.41	2.09	2.16	2.50	5.40	1.08	6.10	1.39	3.48	1.05	3.23	6.62	
21	6.19	2.94	3.00	3.07	6.26	1.81	6.36	0.50	4.42	6.25	1.41	6.29	
22	6.44	6.18	6.10	3.90	4.67	2.73	4.29	0.68	5.45	3.93	1.71	3.38	
23	2.88	6.39	3.20	2.15	5.02	1.31	6.35	0.71	3.86	1.23	4.30	0.00	
24	1.98	6.47	2.04	2.38	5.98	1.17	2.80	1.51	0.95	0.82	4.51	0.00	
25	2.01	6.33	3.90	1.94	3.56	1.10	2.44	0.34	0.99	5.42	6.46	0.00	
26	4.58	3.88	2.19	2.73	4.59	1.05	6.19	1.99	0.94	4.45	4.61	0.00	
27	6.19	3.98	2.19	5.21	3.04	1.06	1.39	2.07	5.12	0.95	6.41	0.00	
28	2.71	6.27	3.68	3.16	2.02	5.18	1.36	1.26	2.52	1.84	4.26	0.00	
29	6.31		6.41	2.30	1.97	2.05	3.75	0.36	0.93	1.27	6.38	0.00	
30	4.04		3.29	2.03	1.97	1.95	1.56	0.43	5.31	2.15	4.04	0.00	
31	5.98		2.24		5.24		1.20	3.88		1.62		2.36	
Average	5.17	4.36	4.32	2.68	4.09	1.97	2.75	2.08	3.03	3.17	4.73	3.56	Annual Summary
Minimum	1.89	1.93	2.04	1.94	1.78	1.05	0.45	0.10	0.21	0.77	1.41	0.00	3.49
Maximum	6.66	6.59	6.50	5.21	6.35	5.18	6.36	6.72	6.64	6.69	6.72	6.72	0.00
Total	160.40	121.97	133.99	80.52	126.90	59.05	85.28	64.55	90.85	98.25	141.86	110.41	6.72
													1,274

South Bay Water Reclamation Plant

Influent Flows (mgd) 2015

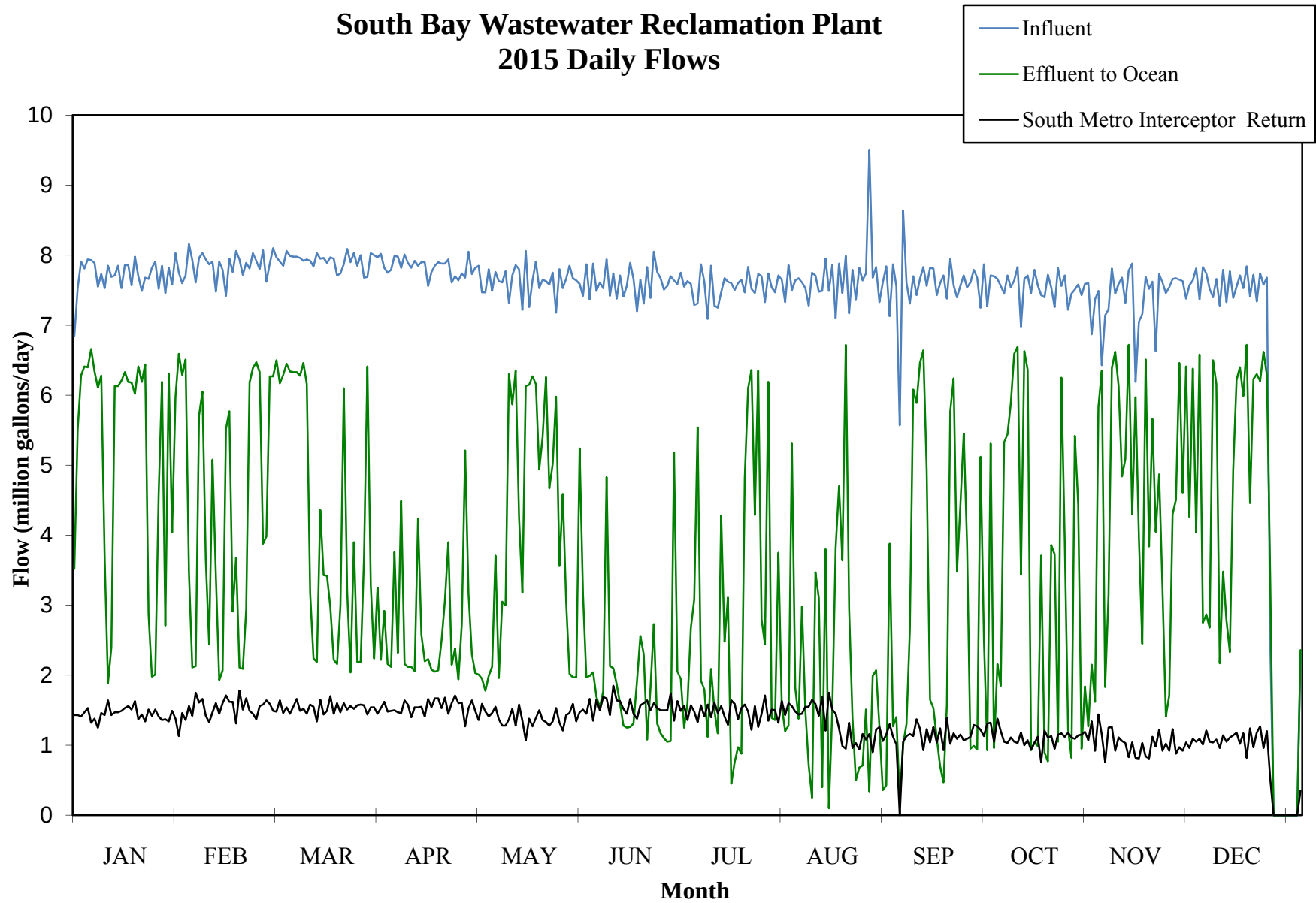
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	6.85	7.75	8.10	7.97	7.85	7.42	7.55	7.86	7.87	7.70	7.49	7.37	
2	7.53	7.60	7.97	8.02	7.47	7.87	7.63	7.50	7.55	7.66	6.43	7.83	
3	7.91	7.71	7.91	7.82	7.47	7.37	7.59	7.64	5.57	7.56	7.14	7.74	
4	7.81	8.16	7.85	7.75	7.80	7.88	7.29	7.67	8.64	7.45	7.23	7.52	
5	7.94	7.93	8.06	7.79	7.49	7.49	7.31	7.61	7.61	7.71	7.81	7.40	
6	7.93	7.61	7.99	7.99	7.76	7.61	7.87	7.53	7.31	7.54	7.45	7.66	
7	7.89	7.96	7.98	7.98	7.63	7.53	7.62	7.28	7.70	7.64	7.59	7.28	
8	7.55	8.03	7.98	7.82	7.61	7.94	7.09	7.75	7.43	7.83	7.68	7.79	
9	7.73	7.94	7.96	8.01	7.77	7.42	7.85	7.71	7.66	6.98	7.32	7.33	
10	7.53	7.87	7.92	7.89	7.32	7.74	7.28	7.48	7.83	7.66	7.78	7.77	
11	7.85	7.91	7.94	7.82	7.71	7.38	7.25	7.49	7.56	7.71	7.88	7.39	
12	7.69	7.48	7.92	7.92	7.86	7.71	7.47	7.95	7.82	7.46	6.19	7.55	
13	7.71	7.91	7.84	7.85	7.80	7.41	7.67	7.49	7.81	7.79	7.05	7.71	
14	7.85	7.79	8.03	7.90	7.22	7.56	7.62	7.86	7.43	7.57	7.16	7.53	
15	7.53	7.42	7.95	7.90	8.06	7.89	7.60	7.10	7.60	7.43	7.69	7.84	
16	7.86	7.95	7.96	7.56	7.26	7.66	7.50	7.88	7.71	7.40	7.52	7.41	
17	7.86	7.76	7.89	7.76	7.64	7.20	7.60	7.46	7.38	7.72	7.62	7.72	
18	7.57	8.06	7.97	7.85	7.91	7.65	7.65	7.99	7.95	7.54	6.63	7.34	
19	7.98	7.94	7.95	7.90	7.53	7.31	7.47	7.17	7.57	7.26	7.73	7.74	
20	7.70	7.72	7.71	7.88	7.65	7.83	7.83	7.79	7.40	7.82	7.61	7.58	
21	7.49	7.89	7.74	7.88	7.63	7.39	7.52	7.36	7.56	7.56	7.46	7.68	
22	7.68	7.81	7.87	7.94	7.58	8.05	7.46	7.82	7.71	7.71	7.54	2.44	
23	7.66	8.03	8.09	7.61	7.75	7.76	7.73	7.64	7.54	7.22	7.66	0.00	
24	7.82	7.92	7.90	7.70	7.18	7.67	7.70	7.74	7.61	7.45	7.67	0.00	
25	7.91	7.80	8.03	7.64	7.80	7.51	7.33	9.50	7.79	7.51	7.65	0.00	
26	7.52	8.07	7.85	7.74	7.53	7.56	7.74	7.68	7.68	7.58	7.63	0.00	
27	7.85	7.62	8.00	7.68	7.66	7.70	7.54	7.83	7.25	7.43	7.38	0.00	
28	7.46	7.88	7.68	8.05	7.85	7.64	7.47	7.33	7.87	7.59	7.57	0.00	
29	7.82		7.69	7.73	7.67	7.59	7.71	7.61	7.27	7.60	7.64	0.00	
30	7.58		8.03	7.82	7.64	7.75	7.65	7.84	7.71	6.87	7.81	0.00	
31	8.03		8.00		7.59		7.33	7.13		7.37		2.35	Annual Summary
Average	7.71	7.84	7.93	7.84	7.64	7.62	7.55	7.67	7.58	7.53	7.43	5.29	7.46
Minimum	6.85	7.42	7.68	7.56	7.18	7.20	7.09	7.10	5.57	6.87	6.19	0.00	0.00
Maximum	8.03	8.16	8.10	8.05	8.06	8.05	7.87	9.50	8.64	7.83	7.88	7.84	9.50
Total	239.09	219.52	245.76	235.17	236.69	228.49	233.92	237.69	227.39	233.32	223.01	163.97	2,724

South Bay Water Reclamation Plant

Blended Sludge Discharge to South Metro Interceptor (mgd) 2015

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	1.43	1.13	1.49	1.45	1.36	1.51	1.56	1.60	1.12	1.05	1.44	1.09	
2	1.43	1.46	1.48	1.53	1.59	1.45	1.36	1.56	1.01	1.38	1.15	1.01	
3	1.41	1.36	1.64	1.62	1.48	1.66	1.57	1.48	0.00	1.20	0.76	1.21	
4	1.47	1.56	1.46	1.48	1.41	1.35	1.48	1.44	1.05	1.05	1.25	1.05	
5	1.53	1.42	1.54	1.49	1.46	1.65	1.33	1.45	1.13	1.03	1.26	1.04	
6	1.32	1.75	1.45	1.50	1.55	1.50	1.57	1.55	1.16	1.11	0.92	1.08	
7	1.38	1.61	1.55	1.47	1.37	1.69	1.41	1.55	1.13	1.05	1.11	0.96	
8	1.25	1.66	1.66	1.46	1.28	1.67	1.58	1.65	1.37	1.03	1.06	1.14	
9	1.46	1.42	1.49	1.64	1.28	1.43	1.40	1.59	1.24	1.18	1.03	1.05	
10	1.43	1.33	1.52	1.58	1.37	1.85	1.61	1.42	0.93	1.00	0.83	1.11	
11	1.64	1.47	1.45	1.40	1.52	1.64	1.46	1.69	1.23	1.07	1.04	1.14	
12	1.43	1.60	1.58	1.54	1.28	1.63	1.56	1.21	1.04	0.94	0.82	1.18	
13	1.47	1.45	1.55	1.54	1.58	1.52	1.41	1.75	1.26	1.03	0.81	1.02	
14	1.47	1.60	1.34	1.55	1.35	1.45	1.29	1.51	1.04	1.12	1.03	1.17	
15	1.49	1.71	1.65	1.41	1.07	1.66	1.64	1.45	1.24	0.76	0.84	0.82	
16	1.53	1.62	1.44	1.66	1.38	1.45	1.59	1.24	0.93	1.21	0.81	1.24	
17	1.56	1.62	1.49	1.54	1.27	1.38	1.37	0.99	1.39	1.11	1.12	0.97	
18	1.51	1.31	1.70	1.67	1.39	1.57	1.53	0.95	1.02	1.13	0.98	1.18	
19	1.63	1.78	1.45	1.67	1.50	1.60	1.58	1.32	1.17	0.95	1.22	1.27	
20	1.37	1.51	1.60	1.53	1.36	1.64	1.48	0.96	1.09	1.15	0.92	0.96	
21	1.44	1.67	1.47	1.68	1.33	1.50	1.22	1.03	1.15	1.17	1.02	1.20	
22	1.34	1.49	1.60	1.45	1.28	1.60	1.56	0.94	1.07	1.12	0.92	0.52	
23	1.51	1.45	1.51	1.60	1.34	1.53	1.26	1.16	1.09	1.18	1.23	0.00	
24	1.42	1.37	1.56	1.71	1.53	1.50	1.45	1.08	1.12	1.11	0.88	0.00	
25	1.51	1.56	1.52	1.60	1.32	1.50	1.71	1.16	1.29	1.09	0.97	0.00	
26	1.41	1.58	1.57	1.61	1.21	1.50	1.35	0.90	1.27	1.14	0.92	0.00	
27	1.36	1.64	1.58	1.27	1.43	1.74	1.51	1.22	1.22	1.15	1.04	0.00	
28	1.37	1.59	1.57	1.53	1.46	1.35	1.50	1.26	1.13	1.19	0.96	0.00	
29	1.34		1.44	1.64	1.59	1.63	1.32	1.06	1.31	1.07	1.09	0.00	
30	1.49		1.54	1.49	1.34	1.49	1.63	1.15	1.32	1.34	1.05	0.00	
31	1.38		1.54		1.47		1.43	1.30		0.92		0.35	Annual Summary
Average	1.44	1.53	1.53	1.54	1.39	1.55	1.47	1.31	1.12	1.10	1.02	0.77	1.31
Minimum	1.25	1.13	1.34	1.27	1.07	1.35	1.22	0.90	0.00	0.76	0.76	0.00	0.00
Maximum	1.64	1.78	1.70	1.71	1.59	1.85	1.71	1.75	1.39	1.38	1.44	1.27	1.85
Total	44.78	42.72	47.43	46.31	43.15	46.64	45.72	40.62	33.52	34.03	30.48	23.76	479

South Bay Wastewater Reclamation Plant 2015 Daily Flows

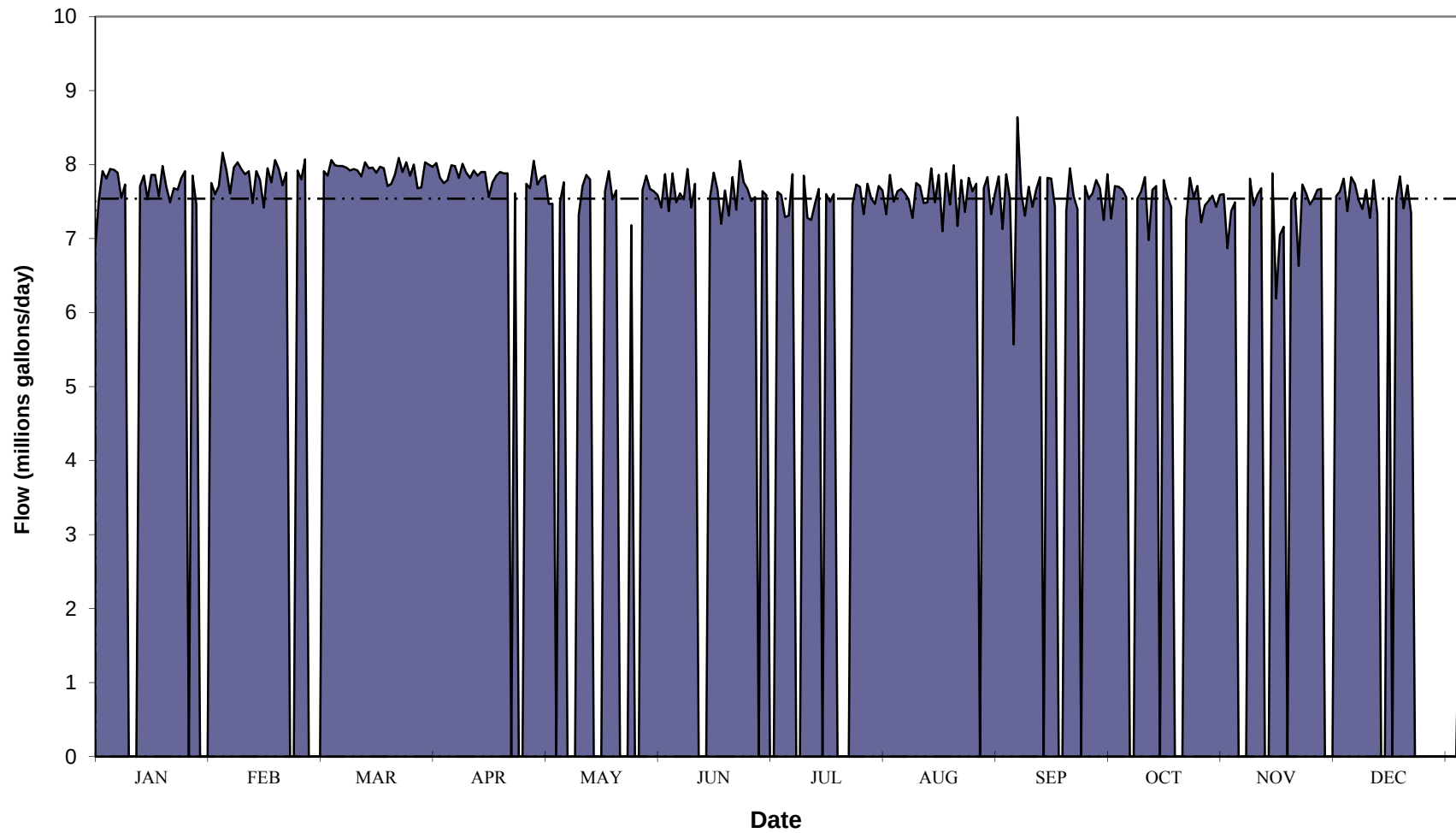


South Bay Water Reclamation Plant

Influent Dry Weather Flows (mgd) 2015

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	6.85	7.75		7.97	7.85	7.42		7.86	7.87	7.70	7.49	7.37	
2	7.53	7.60		8.02	7.47	7.87	7.63	7.50	7.55	7.66		7.83	
3	7.91	7.71	7.91	7.82	7.47	7.37	7.59	7.64	5.57	7.56		7.74	
4	7.81	8.16	7.85	7.75		7.88	7.29	7.67	8.64			7.52	
5	7.94	7.93	8.06	7.79	7.49	7.49	7.31	7.61	7.61		7.81	7.40	
6	7.93	7.61	7.99	7.99	7.76	7.61	7.87	7.53	7.31	7.54	7.45	7.66	
7	7.89	7.96	7.98	7.98		7.53		7.28	7.70	7.64	7.59	7.28	
8	7.55	8.03	7.98	7.82		7.94		7.75	7.43	7.83	7.68	7.79	
9	7.73	7.94	7.96	8.01		7.42	7.85	7.71	7.66	6.98		7.33	
10		7.87	7.92	7.89	7.32	7.74	7.28	7.48	7.83	7.66			
11		7.91	7.94	7.82	7.71		7.25	7.49		7.71	7.88		
12		7.48	7.92	7.92	7.86		7.47	7.95	7.82		6.19	7.55	
13	7.71	7.91	7.84	7.85	7.80		7.67	7.49	7.81	7.79	7.05		
14	7.85	7.79	8.03	7.90		7.56		7.86	7.43	7.57	7.16	7.53	
15	7.53	7.42	7.95	7.90		7.89	7.60	7.10		7.43		7.84	
16	7.86	7.95	7.96	7.56		7.66	7.50	7.88			7.52	7.41	
17	7.86	7.76	7.89	7.76	7.64	7.20	7.60	7.46	7.38		7.62	7.72	
18	7.57	8.06	7.97	7.85	7.91	7.65		7.99	7.95		6.63	7.34	
19	7.98	7.94	7.95	7.90	7.53	7.31		7.17	7.57	7.26	7.73		
20	7.70	7.72	7.71	7.88	7.65	7.83		7.79	7.40	7.82	7.61		
21	7.49	7.89	7.74	7.88		7.39		7.36		7.56	7.46		
22	7.68		7.87			8.05	7.46	7.82	7.71	7.71	7.54		
23	7.66		8.09	7.61		7.76	7.73	7.64	7.54	7.22	7.66		
24	7.82	7.92	7.90		7.18	7.67	7.70	7.74	7.61	7.45	7.67		
25	7.91	7.80	8.03			7.51	7.33		7.79	7.51			
26		8.07	7.85	7.74		7.56	7.74	7.68	7.68	7.58		0.00	
27	7.85		8.00	7.68	7.66		7.54	7.83	7.25	7.43		0.00	
28	7.46		7.68	8.05	7.85	7.64	7.47	7.33	7.87	7.59	7.57		
29			7.69	7.73	7.67	7.59	7.71	7.61	7.27	7.60	7.64	0.00	
30			8.03	7.82	7.64		7.65	7.84	7.71	6.87	7.81	0.00	
31			8.00		7.59		7.33	7.13		7.37		2.35	Annual Summary
Average	7.71	7.84	7.92	7.85	7.63	7.62	7.55	7.61	7.58	7.52	7.46	5.78	7.54
Minimum	6.85	7.42	7.68	7.56	7.18	7.20	7.25	7.10	5.57	6.87	6.19	0.00	0.00
Maximum	7.98	8.16	8.09	8.05	7.91	8.05	7.87	7.99	8.64	7.83	7.88	7.84	8.64
Total	185	188	230	212	145	191	174	228	197	188	157	116	2210

South Bay Wastewater Reclamation Plant 2015 Daily Influent Dry Weather Flows

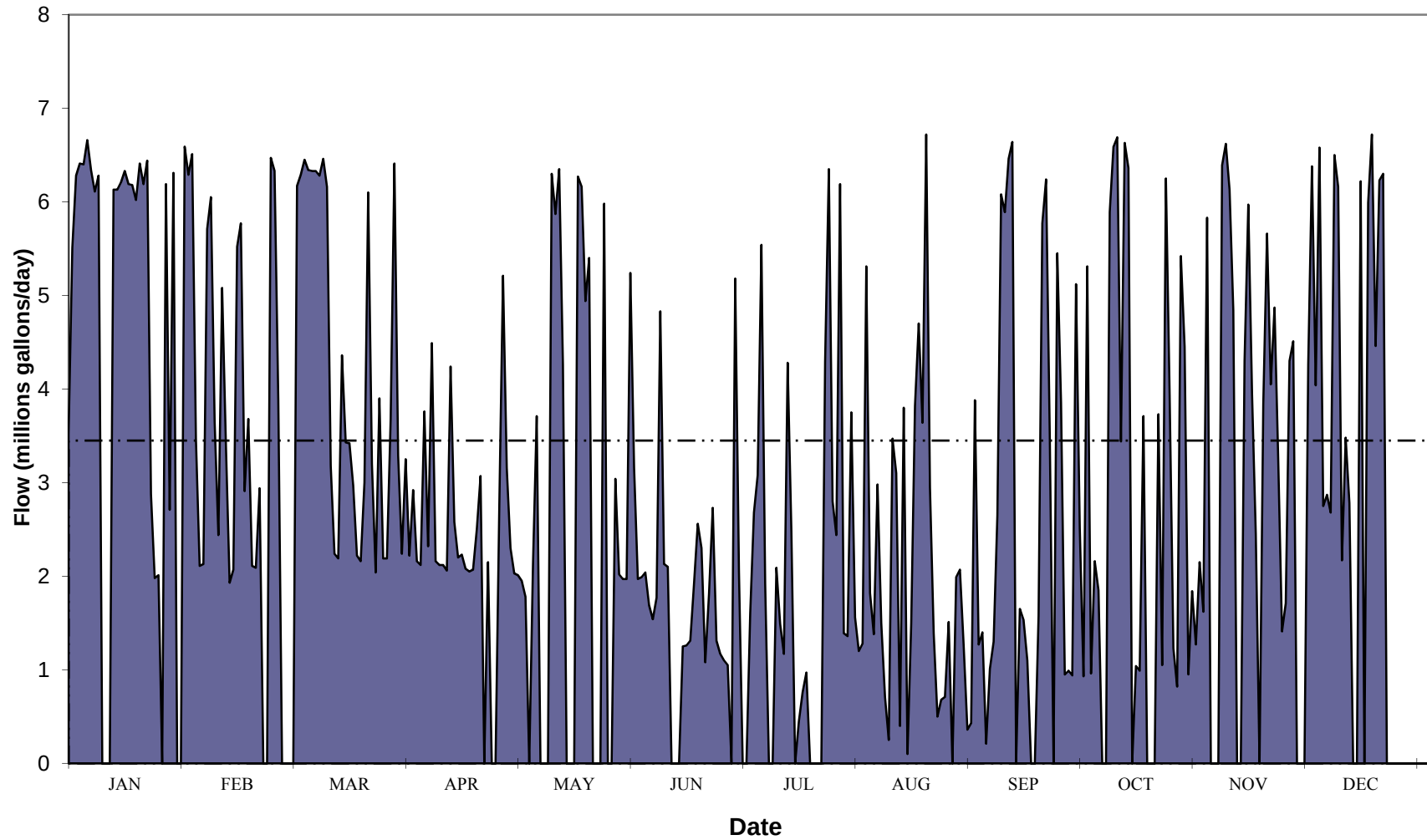


South Bay Water Reclamation Plant

Effluent Dry Weather Flows (mgd) 2015

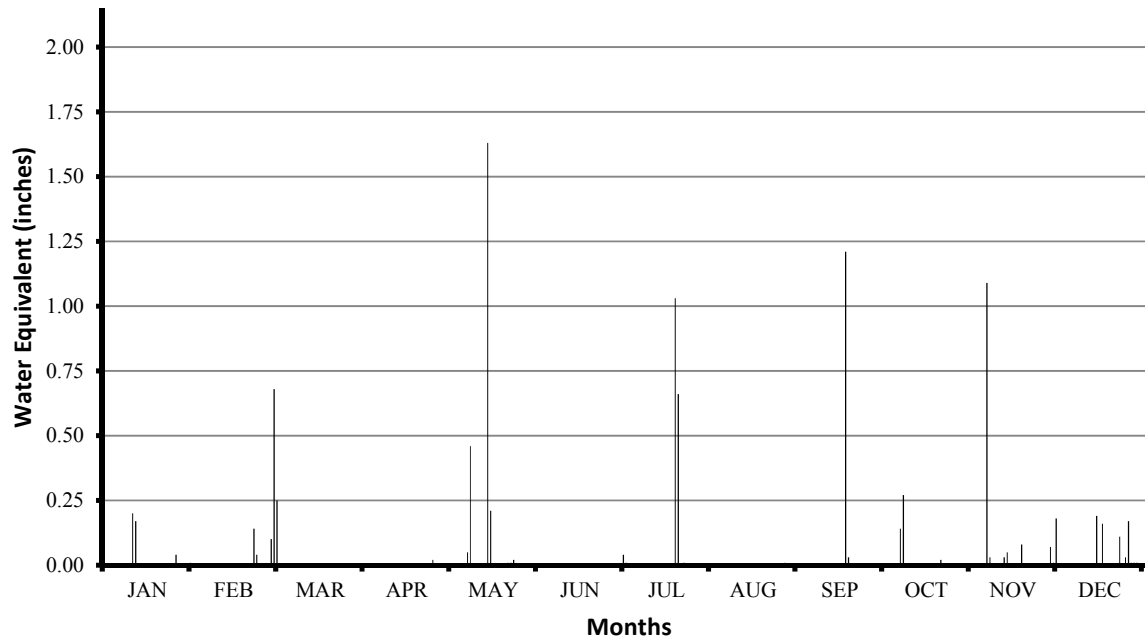
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	3.52	6.59		3.25	2.01	3.16		1.28	1.27	0.96	5.83	6.58	
2	5.51	6.29		2.22	1.95	1.97	1.60	5.31	1.40	2.16		2.75	
3	6.28	6.51	6.17	2.92	1.78	1.99	2.68	1.82	0.21	1.85		2.87	
4	6.41	3.47	6.29	2.16		2.04	3.08	1.38	1.01			2.68	
5	6.40	2.11	6.45	2.12	2.12	1.69	5.54	2.98	1.30		6.39	6.50	
6	6.66	2.13	6.34	3.76	3.71	1.54	1.92	1.50	2.65	5.89	6.62	6.16	
7	6.34	5.71	6.33	2.32		1.77		0.71	6.08	6.59	6.13	2.17	
8	6.11	6.05	6.33	4.49		4.83		0.25	5.89	6.69	4.84	3.48	
9	6.28	3.65	6.28	2.16		2.13	2.09	3.47	6.46	3.44		2.78	
10		2.44	6.46	2.12	6.30	2.10	1.49	3.10	6.64	6.63			
11		5.08	6.16	2.12	5.87		1.17	0.40		6.36	4.30		
12		3.42	3.18	2.06	6.35		4.28	3.80	1.65		5.97	6.22	
13	6.13	1.93	2.24	4.24	4.26		2.48	0.10	1.53	1.04	3.95		
14	6.13	2.07	2.19	2.58		1.25		1.50	1.10	0.99	2.45	5.99	
15	6.21	5.52	4.36	2.20		1.26	0.45	3.82		3.71		6.72	
16	6.33	5.77	3.43	2.23		1.31	0.76	4.70			3.84	4.46	
17	6.19	2.91	3.42	2.08	6.27	1.92	0.97	3.64	1.58		5.66	6.23	
18	6.18	3.68	2.97	2.05	6.16	2.56		6.72	5.77		4.05	6.30	
19	6.02	2.11	2.22	2.07	4.94	2.30		2.95	6.24	3.73	4.87		
20	6.41	2.09	2.16	2.50	5.40	1.08		1.39	3.48	1.05	3.23		
21	6.19	2.94	3.00	3.07		1.81		0.50		6.25	1.41		
22	6.44		6.10			2.73	4.29	0.68	5.45	3.93	1.71		
23	2.88		3.20	2.15		1.31	6.35	0.71	3.86	1.23	4.30		
24	1.98	6.47	2.04		5.98	1.17	2.80	1.51	0.95	0.82	4.51		
25	2.01	6.33	3.90			1.10	2.44		0.99	5.42			
26		3.88	2.19	2.73		1.05	6.19	1.99	0.94	4.45		0.00	
27	6.19		2.19	5.21	3.04		1.39	2.07	5.12	0.95		0.00	
28	2.71		3.68	3.16	2.02	5.18	1.36	1.26	2.52	1.84	4.26		
29	6.31		6.41	2.30	1.97	2.05	3.75	0.36	0.93	1.27	6.38	0.00	
30			3.29	2.03	1.97		1.56	0.43	5.31	2.15	4.04	0.00	
31			2.24		5.24		1.20	3.88		1.62		2.36	Annual Summary
Average	5.51	4.13	4.18	2.68	4.07	2.05	2.60	2.14	3.09	3.24	4.51	3.71	3.45
Minimum	1.98	1.93	2.04	2.03	1.78	1.05	0.45	0.10	0.21	0.82	1.41	0.00	0.00
Maximum	6.66	6.59	6.46	5.21	6.35	5.18	6.35	6.72	6.64	6.69	6.62	6.72	6.72
Total	137.8	99.2	121	72	77.3	51.3	59.8	64.2	80.3	81.0	94.7	74.3	1014

South Bay Wastewater Reclamation Plant 2015 Daily Effluent to Ocean Dry Weather Flows



B. Rain Days

**San Diego Precipitation -2015
Daily Rainfall - Lindbergh Field**



San Diego Precipitation – 2015

Daily Rainfall – Lindbergh Field

Total Annual Precipitation = 9.89

Maximum=1.63

Trace=0

First Quarter		Second Quarter		Third Quarter		Fourth Quarter	
Date	Rain	Date	Rain	Date	Rain	Date	Rain
10-Jan-15	T	22-Apr-15	T	1-Jul-15	0.01	4-Oct-15	0.14
11-Jan-15	0.2	24-Apr-15	T	7-Jul-15	T	5-Oct-15	0.27
12-Jan-15	0.17	25-Apr-15	0.02	8-Jul-15	T	12-Oct-15	T
26-Jan-15	0.04	4-May-15	T	14-Jul-15	T	16-Oct-15	T
29-Jan-15	T	7-May-15	0.05	18-Jul-15	1.03	17-Oct-15	T
30-Jan-15	T	8-May-15	0.46	19-Jul-15	0.66	18-Oct-15	0.02
31-Jan-15	0.01	9-May-15	T	20-Jul-15	T	2-Nov-15	T
22-Feb-15	0.14	14-May-15	1.63	21-Jul-15	0.01	3-Nov-15	1.09
23-Feb-15	0.04	15-May-15	0.21	25-Aug-15	0.01	4-Nov-15	0.03
27-Feb-15	T	16-May-15	T	11-Sep-15	T	9-Nov-15	0.03
28-Feb-15	0.1	21-May-15	0.01	15-Sep-15	1.21	10-Nov-15	0.05
1-Mar-15	0.68	22-May-15	0.01	16-Sep-15	0.03	15-Nov-15	0.08
2-Mar-15	0.25	23-May-15	0.02	21-Sep-15	T	25-Nov-15	0.07
		25-May-15	T			26-Nov-15	0.01
		26-May-15	T			27-Nov-15	0.18
		11-Jun-15	T			10-Dec-15	T
		12-Jun-15	T			11-Dec-15	0.19
		13-Jun-15	T			13-Dec-15	0.16
		27-Jun-15	T			19-Dec-15	0.11
		30-Jun-15	0.04			20-Dec-15	T
						21-Dec-15	0.03
						22-Dec-15	0.17
						23-Dec-15	0.01
						24-Dec-15	0.01
						25-Dec-15	0.01
						28-Dec-15	0.19
TOTALS	1.63		2.45		2.96		2.85

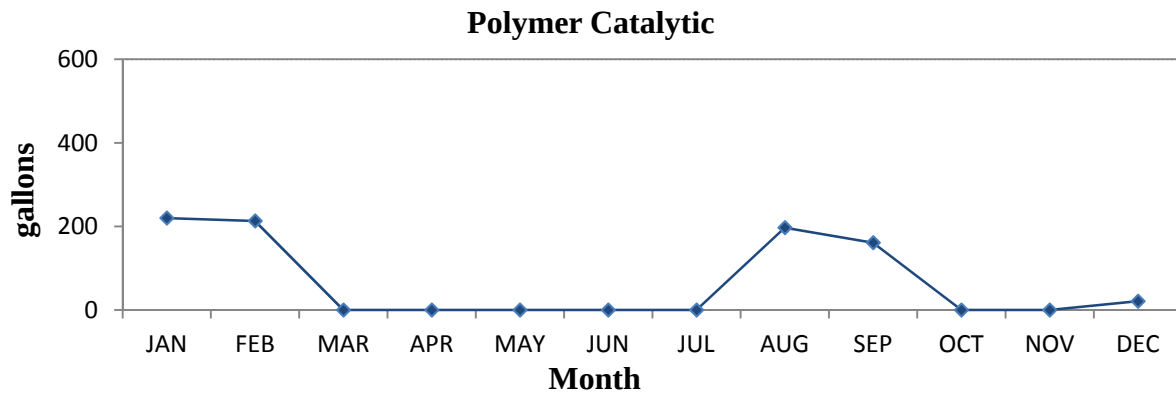
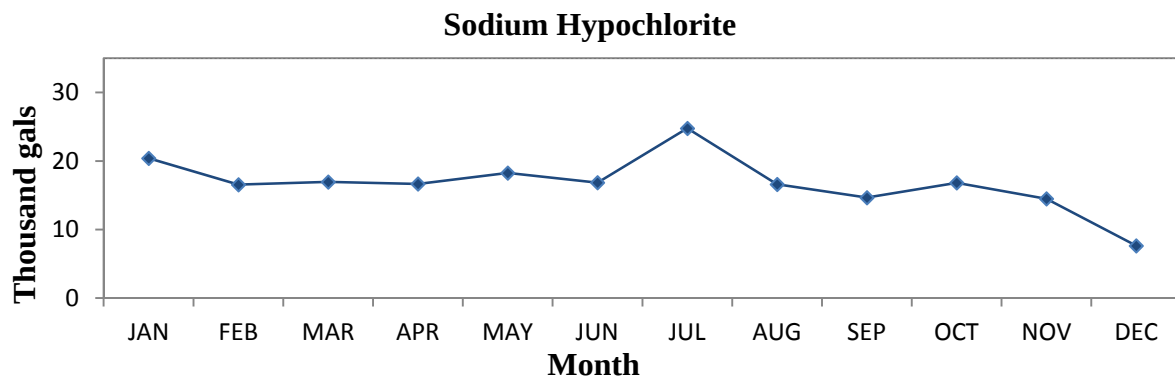
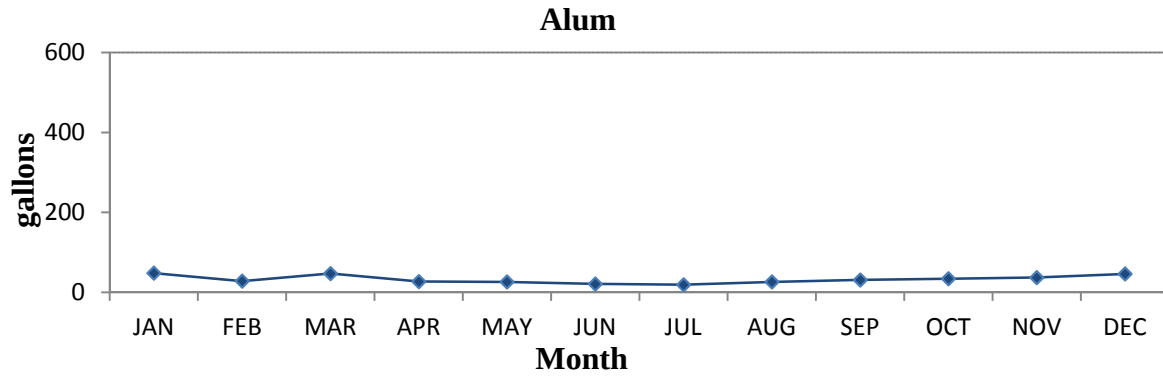
C. Chemical Report

South Bay Water Reclamation Plant - Annual Chemical Usage Report

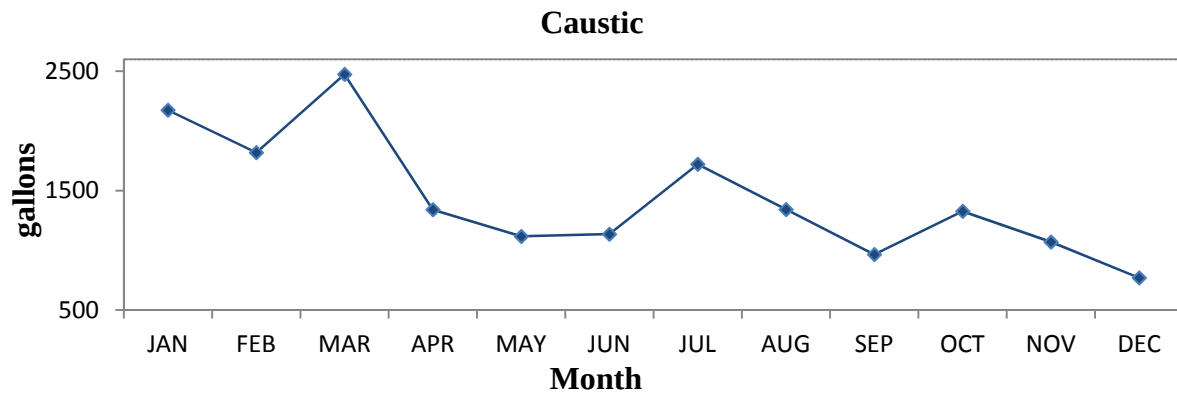
2015

Date	Hypochlorite Gallons	Alum Chloride Gallons	Polymer Cationic Gallons	Sodium Hydroxide Gallons
Jan-15	20,405	48	220	2,174
Feb-15	16,554	28	213	1,819
Mar-15	16,952	47	0	2,474
Apr-15	16,663	27	0	1,340
May-15	18,260	26	0	1,117
Jun-15	16,846	21	0	1,136
Jul-15	24,778	19	0	1,721
Aug-15	16,607	26	197	1,342
Sep-15	14,670	31	161	965
Oct-15	16,821	34	0	1,327
Nov-15	14,495	37	0	1,070
Dec-15	7,633	46	21	769
AVG	16,724	33	68	1,438
SUM	200,684	390	812	17,255

**South Bay Water Reclamation Plant
2015 Monthly Chemical Usage**



**South Bay Water Reclamation Plant
2015 Monthly Chemical Usage**



D. Facilities Out of Service Report

Barscreens

	FROM	TO	REASON
Barscreen 1	2/11/2015	4/10/2015	Please replace all valves and solenoids on water system to screen.

Primary Sedimentation

	FROM	TO	REASON
Pri Sed 1	3/4/2015	3/5/2015	Remove extra link from tank chain.
Pri Sed 1	3/4/2015	4/14/2015	Fabricate 2 saddle for 12" scum trough pipe to fit provided ring gear; SBWRP to provide ring gear sample.
Pri Sed 2	1/2/2015	5/18/2016	Tank 2 PSL draw off valve 10MOV7041 Gen Fail. Troubleshoot and repair.
Pri Sed 2	2/5/2015	5/18/2016	Scum trough keeps failing in forward position at each cycle and causing the scum strategy to fail
Pri Sed 2	5/4/2015	5/6/2015	Drain valve in Primary Gallery will not open or close. Stuck at 50%
Pri Sed 3	4/10/2015	4/10/2015	Valves 10 MOV 7043 and 10 MOV 7053 in GEN FAIL shutting down primary sludge pumps strategy.
Pri Sed 4	7/2/2015	9/3/2015	#4 draw off valve (10-mov-7061) repeatedly fail on gen -fail. Please investigate and repair as necessary
Pri Sed 4	12/24/2015	12/29/2015	Drain valve from tank to plant drain pumps broken and needs to be repaired, Operations will need to be there at start of work.
Pri Sed 5	1/26/2015	7/11/2016	Need confined space entry for tank cleaning and also inspection of sump to see if vector needed to clean.
Pri Sed 5	12/14/2015	2/17/2016	The bracket holding the shaft in place came off. A new stainless steel bracket needs to be welded back on.

Aeration Basins

	FROM	TO	REASON
Aer. Basin 1	12/9/2015	3/22/2016	A-BASIN 1. Prepare Basin 1 to go online. Test run and verify all 3 mixers work, 15A211, 15A212, and 15A213. Troubleshoot and repair any problems.
Aer. Basin 2	2/10/2015	7/11/2016	AB 2 has a leaky grid piping that needs to be repaired to allow the minimum air flow of 2200 cfm needed for blow down in order to complete the Quarterly Fine Bubble Diffuser System pm. Please repair the leaky grid piping. WR #15-000338
Aer. Basin 3	2/10/2015	7/11/2016	AB 3 has a leaky grid piping that needs to be repaired to allow the minimum air flow of 2200 cfm needed for blow down in order to complete the Quarterly Fine Bubble Diffuser System pm. Please repair the leaky grid piping.
Aer. Basin 3	8/18/2015	9/3/2015	Do probe has been cleaned but still reading 8 needs to be calibrated zone 2
Aer. Basin 5	2/10/2015	7/11/2016	AB 5 has a leaky grid piping that needs to be repaired to allow the minimum air flow of 2200 cfm needed for blow down in order to complete the Quarterly Fine Bubble Diffuser System pm. Please repair the leaky grid piping.
Aer. Basin 5	2/23/2015	2/24/2015	We continue to get a GEN FAIL alarm on AB 5 air flow control valve. Please troubleshoot and repair.
Aer. Basin 5	2/27/2015	2/27/2015	Retrieve EIM nameplate data to enable ordering a new actuator. When it arrives, R&R bad EIM actuator with new, set-up and test, to ensure it works and turnover to Operations.
Aer. Basin 5	10/22/2015	11/2/2015	Aeration Basin #5 - Flow Control Valve will not work in Auto. Gen Fails.
Aer. Basin 7	2/10/2015	7/11/2016	AB 7 has a leaky grid piping that needs to be repaired to allow the minimum air flow of 2200 cfm needed for blow down in order to complete the Quarterly Fine Bubble Diffuser System pm. Please repair the leaky grid piping.
Aer. Basin 8	2/10/2015	7/11/2016	AB 8 has a leaky grid piping that needs to be repaired to allow the minimum air flow of 2200 cfm needed for blow down in order to complete the Quarterly Fine Bubble Diffuser System pm. Please repair the leaky grid piping.

Secondary Clarifiers

	FROM	TO	REASON
Sec. Clar. 1	4/29/2015	5/14/2015	Replace scum trough shaft with stainless steel material as per sample to be delivered.
Sec. Clar. 1	6/24/2015	8/3/2015	Scum collector actuator shaft gear mesh with barrel ring gear not fully engaged, and will cause premature wear. Adjust and fully engage both gear.
Sec. Clar. 1	7/27/2015	7/31/2015	Secondary Tank #1 scum trough failed and will not move.
Sec. Clar. 1	7/29/2015	7/31/2015	Modify scum trough shaft with pattern provided.
Sec. Clar. 1	8/3/2015	8/14/2015	Set Limits.
Sec. Clar. 1	10/5/2015	10/6/2015	Tipping trough worm gear is "skipping" off the drum. It appears the bracket has come loose. Repair as necessary.
Sec. Clar. 1	7/27/2015	7/31/2015	Secondary #1 Sludge Drive - Shear Pin Fail
Sec. Clar. 1	9/29/2015	9/29/2015	Shear Pin Failure. Will not reset.
Sec. Clar. 2	7/27/2015	7/27/2015	Failing Up.
Sec. Clar. 2	10/26/2015	11/20/2015	Please adjust position set points, tripping at each cycle.
Sec. Clar. 2	9/10/2015	9/10/2015	Secondary Tank #3 Scum Trough needs the Rotational Limits Adjusted. Please repair.
Sec. Clar. 3	12/1/2015	12/8/2015	SCUM COLLECTOR 3's declutch lever for the EIM actuator on the scum collector is not functioning. The actuator motor turns but does not engage the scum collector. Troubleshoot and repair.
Sec. Clar. 4	2/13/2015	2/17/2015	#4 2ndary scum actuator missing switch.
Sec. Clar. 4	5/11/2015	10/21/2015	Scum collector actuator shaft gear mesh with barrel ring gear not fully engaged, and will cause premature wear on both gears. Adjust and engage both gears.
Sec. Clar. 4	10/23/2015	10/23/2015	Replace EIM actuator with new Rotork actuator and test/calibrate unit. This work will be done by electrical maintenance with the support of Rotork.
Sec. Clar. 4	12/8/2015	12/8/2015	Trough needs to be adjusted.
Sec. Clar. 5	2/23/2015	2/24/2015	Cannot clear an SSC CLTR 5 ACTUATOR FAIL alarm. Please troubleshoot.
Sec. Clar. 5	5/11/2015	6/25/2015	Scum collector actuator shaft gear mesh with barrel ring gear not fully engaged, and will cause premature wear. Adjust and fully engage both gear.
Sec. Clar. 7	4/21/2015	6/15/2015	Control power failure, troubleshoot and repair.
Sec. Clar. 7	6/24/2015	6/24/2015	Sludge drive slipping alarm continuously. Shear pin replaced.
Sec. Clar. 7	6/24/2015	6/24/2015	Sludge drive slipping replace shear pin.
Sec. Clar. 8	4/13/2015	4/15/2015	While performing Monthly WO 15-12083, discovered that actuator shaft for secondary clarifier tank #8 tipping weir was not turning at all.
Sec. Clar. 8	4/14/2015	4/29/2015	The worm and rack gears are unevenly worn, not allowing the tipping weir it's full range of motion. The actuator drive shaft is also rusted and should be replaced with stainless. The motor was very strained and may need additional attention, but it may be corrected with replacement of the mechanical parts.
Sec. Clar. 8	4/14/2015	4/27/2015	Replace scum trough shaft with stainless steel material as per sample and fit with provided spiral worm gear.

Sec. Clar. 8	4/24/2015	7/15/2015	Fabricate 2 saddle for 14" scum trough pipe to fit provided ring gear; SBWRP to provide ring gear sample.
Sec. Clar. 8	4/30/2015	4/30/2015	Shear pin broke, replace shear pin.
Sec. Clar. 8	5/13/2015	6/3/2015	Scum trough binding up during scumming operations.
Sec. Clar. 8	5/27/2015	5/27/2015	Please adjust trough limits so we can put tank online.
Sec. Clar. 9	5/14/2015	5/19/2015	The shaft key to the actuator is too long and is cutting into the plastic grease cap.
Sec. Clar. 9	9/10/2015	9/10/2015	Secondary Tank #9 Scum Through is tilting without receiving a command from DCS and spilling over when Tank 8 is scumming. Please repair or adjust to upright position.
Sec. Clar. 9	9/21/2015	9/21/2015	Scum trough gear worn out, replace.
Sec. Clar. 9	9/21/2015	3/10/2016	Adjust trough limits.

Tertiary Filters

	FROM	TO	REASON
Ter. Filter 1	4/24/2015	4/24/2015	No power to valves 25 MOV 216 and 25 MOV 218.
Ter. Filter 1	5/13/2015	5/18/2015	Filter #1 Backwash Inlet Valve - 25MOV-218 not communicating with DCS. Showing in LOCAL and GEN FAIL but actually in Remote and has power.
Ter. Filter 1	8/18/2015	8/18/2015	Connect the combined filter effluent flow sample pipe to the inlet pipe to filter #1 turbidity meter. High priority, Cheryl is aware of this emergency work.
Ter. Filter 1	9/23/2015	9/23/2015	Assist contractors in cleaning filter feed tank.
Ter. Filter 3	5/4/2015	5/4/2015	SB25MOV234 on Gen Fail, troubleshoot and repair.
Ter. Filter 3	10/15/2015	6/22/2016	Filter #3 - Filter Level High High alarm. The level is not high enough to cause this alarm. This alarm is crucial as we cannot depend on bubbler levels and this alarm will let us know if Filter will overflow.
Ter. Filter 4	12/29/2015	4/19/2016	Filter #4 - Filter Level High High alarm. The level is not high enough to cause this alarm. This alarm is crucial as we cannot depend on bubbler levels and this alarm will let us know if Filter will overflow.
Ter. Filter 5	12/14/2015	12/14/2015	Filter #5 - WW VALVE 25-MOV-255 has no DCS control. WR 15-003387
Ter. Filter 5	12/29/2015	12/31/2015	FILTERS 5,6,7 - Valves all Gen Fail
Ter. Filter 6	1/15/2015	1/15/2015	SB25MOV265 failing on torque, adjust as necessary.
Ter. Filter 6	9/4/2015	9/23/2015	Breaker 29 tripping at panel 20 LP1 sect 2 (Blower Room MCC) that controls power to lower gullet valves 25 MOV 257 - 267- 277.
Ter. Filter 7	10/2/2015	10/2/2015	Lost DCS control of all valves to Filters 5 through 7 and secondary tanks 6 through 9, all valves in GEN Fail.

FACILITIES OOS BY PROCESS

Bar Screens

	FROM	TO
Barscreen 1	2/11/2014	4/10/2014

Primary Sedimentation

	FROM	TO
Pri Sed 1	3/4/2015	3/5/2015
	3/4/2015	4/14/2015
Pri Sed 2	1/2/2015	5/18/2016
	2/5/2015	5/18/2016
	5/4/2015	5/6/2015
Pri Sed 3	4/10/2015	4/10/2015
Pri Sed 4	7/2/2015	9/3/2015
	12/24/2015	12/29/2015
Pri Sed 5	1/26/2015	7/11/2016
	12/14/2015	2/17/2016

Aeration Basins

	FROM	TO
Aer. Basin 1	12/9/2015	3/22/2016
Aer. Basin 2	2/10/2015	7/11/2016
Aer. Basin 3	2/10/2015	7/11/2016
	8/18/2015	9/3/2015
Aer. Basin 5	2/10/2015	7/11/2016
	2/23/2015	2/24/2015
	2/27/2015	2/27/2015
	10/22/2015	11/2/2015
Aer. Basin 7	2/10/2015	7/11/2016
Aer. Basin 8	2/10/2015	7/11/2016

Secondary Clarifiers

	FROM	TO
Sec. Clar. 1	4/29/2015	5/14/2015
	6/24/2015	8/3/2015
	7/27/2015	7/31/2015
	7/29/2015	7/31/2015
	8/3/2015	8/14/2015
	10/5/2015	10/6/2015
	7/27/2015	7/31/2015

	9/29/2015	9/29/2015
Sec. Clar. 2	7/27/2015	7/27/2015
	10/26/2015	11/20/2015
	9/10/2015	9/10/2015
Sec. Clar. 3	12/1/2015	12/8/2015
Sec. Clar. 4	2/13/2015	2/17/2015
	5/11/2015	10/21/2015
	10/23/2015	10/23/2015
	12/8/2015	12/8/2015
Sec. Clar. 5	2/23/2015	2/24/2015
	5/11/2015	6/25/2015
Sec. Clar. 7	4/21/2015	6/15/2015
	6/24/2015	6/24/2015
	6/24/2015	6/24/2015
Sec. Clar. 8	4/13/2015	4/15/2015
	4/14/2015	4/29/2015
	4/14/2015	4/27/2015
	4/24/2015	7/15/2015
	4/30/2015	4/30/2015
	5/13/2015	6/3/2015
	5/27/2015	5/27/2015
Sec. Clar. 9	5/14/2015	5/19/2015
	9/10/2015	9/10/2015
	9/21/2015	9/21/2015
	9/21/2015	3/10/2016

Tertiary Filter

	FROM	TO
Ter. Filter 1	4/24/2015	4/24/2015
	5/13/2015	5/18/2015
	8/18/2015	8/18/2015
	9/23/2015	9/23/2015
Ter. Filter 3	5/4/2015	5/4/2015
	10/15/2015	6/22/2016
Ter. Filter 4	12/29/2015	4/19/2016
Ter. Filter 5	12/14/2015	12/14/2015
	12/29/2015	12/31/2015
Ter. Filter 6	1/15/2015	1/15/2015
	9/4/2015	9/23/2015
Ter. Filter 7	10/2/2015	10/2/2015

IV. Combined Ocean Outfall Data

As of 2014 Combine Outfall (IWTP) samples are no longer analyzed; therefore no data available.

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V. Ocean Monitoring Data Summary

- A. Ocean Sediment Chemistry Data Tables.
- B. Fish Tissue Chemistry Data Tables.
- C. Seawaters Chemistry Data Tables.

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Maps, with sampling sites labeled, are included in this section.

Summary of Sampling Technique⁶:

Sediments

Benthic sediment is obtained using a 0.1m², chain-rigged Tandem van Veen grab sampler deployed from a City ocean monitoring vessel. Sediment samples are collected from the top 2 cm of an undisturbed grab surface and then placed into an appropriately labeled sample container. Subsamples are placed on ice and subsequently shipped to the laboratory for chemical analysis. Preservatives are used in accordance with the requirements of 40 CFR and our Quality Assurance Plan. Sediment concentrations are based on the dry weight of a sample.

Fish Tissue

Several species of flat fish and rock fish are taken by Otter trawls and/or rig fishing. The dissected muscle and liver tissues are frozen and delivered to the laboratory for analysis. Tissue samples are kept frozen until prepared for analyses.

⁶ For complete description of the sampling protocols, dissections, equipment, vessels, etc. related to the sampling of ocean sediments and fish, please refer to the City of San Diego, Annual Receiving Waters Monitoring Report 2011

A. Ocean Sediment Chemistries.

The data for Biochemical Oxygen Demand (BOD) and Total Volatile Solids (TVS), all measures of organic enrichment, as well as total sulfides and temperature, are all presented by quarter and averaged. The quarterly particle size analysis does not lend itself to summarization and each quarter's analysis is presented separately. For the data from all the metals, cyanide, radiation and all of the numerous organic priority pollutant analyses (except dioxin, presented by quarter) only the average of the four quarters is presented here; the values for each quarter has been reported in the Quarterly Monitoring Reports.

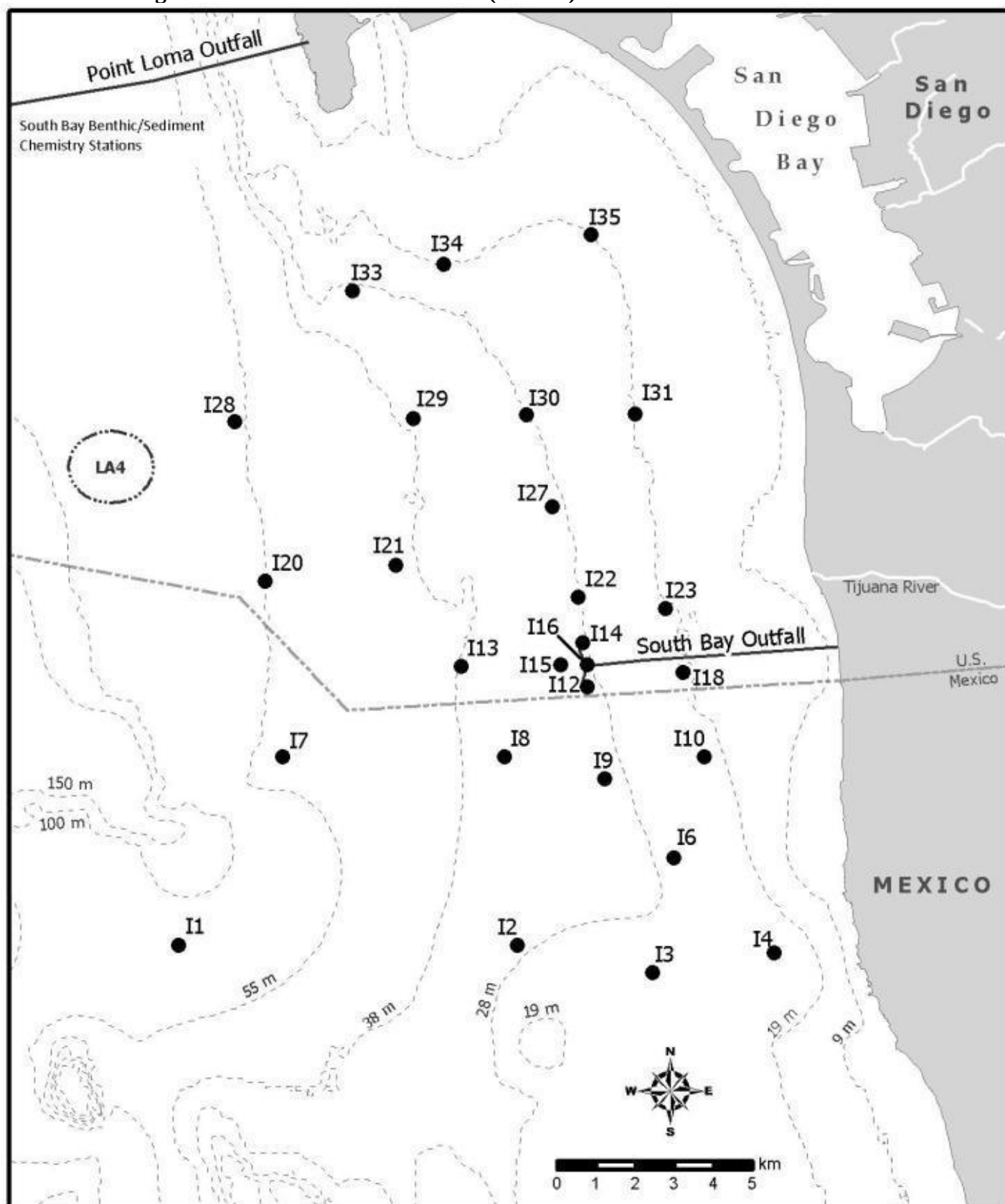
Station

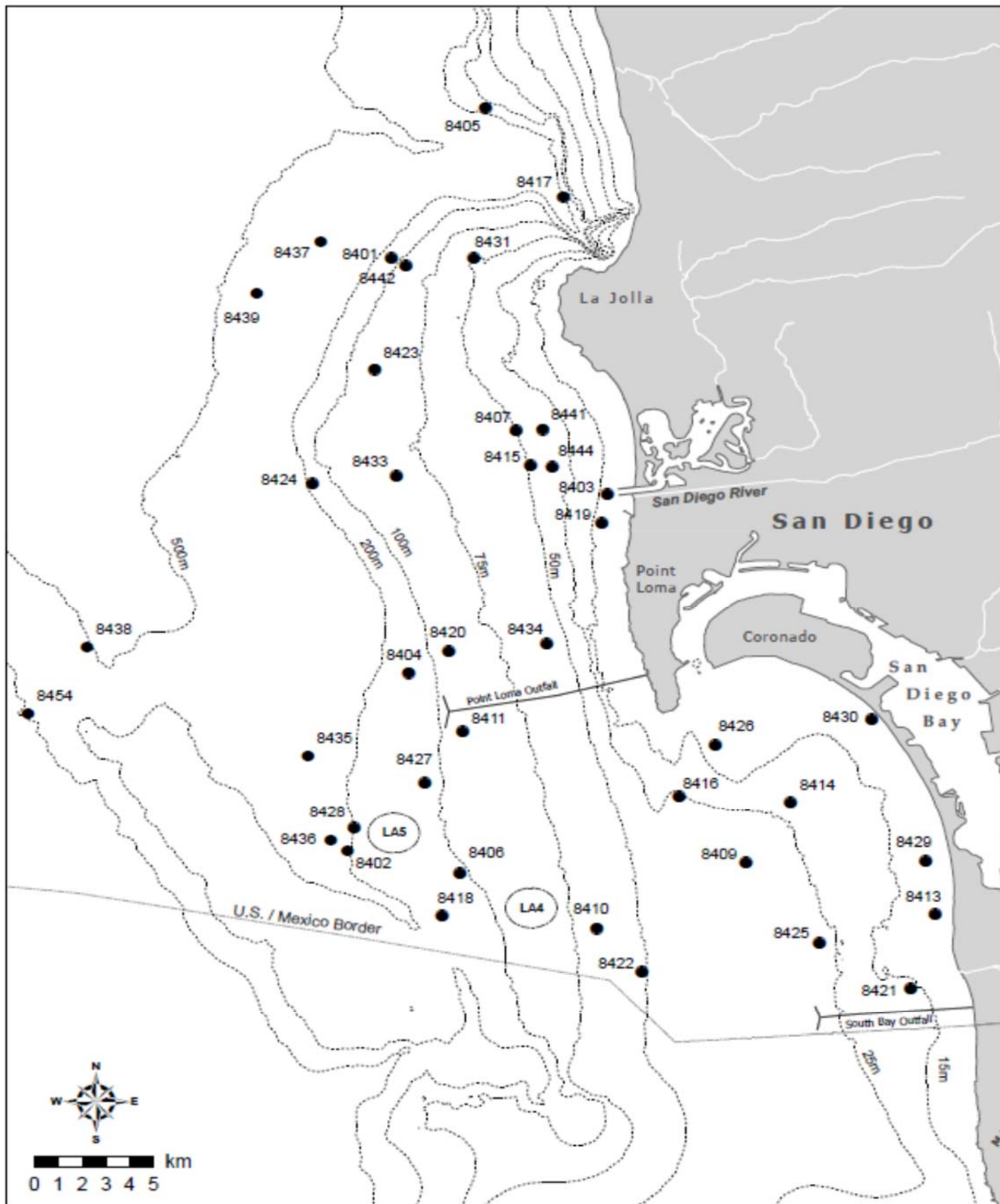
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I-2	I-13	I-27
I-3	I-14	I-28
I-4	I-15	I-29
I-6	I-16	I-30
I-7	I-18	I-31
I-8	I-20	I-33
I-9	I-21	I-34
I-10	I-22	I-35

2015 Random Stations

Station	Sample Date	Station	Sample Date	Station	Sample Date
8401	20-Jul-15	8417	20-Jul-15	8431	20-Jul-15
8402	15-Jul-15	8418	15-Jul-15	8433	30-Jul-15
8403	20-Jul-15	8419	20-Jul-15	8434	14-Jul-15
8404	14-Jul-15	8420	14-Jul-15	8435	10-Jul-15
8405	20-Jul-15	8421	07-Jul-15	8436	15-Jul-15
8406	15-Jul-15	8422	07-Jul-15	8437	23-Jul-15
8407	20-Jul-15	8423	23-Jul-15	8438	10-Jul-15
8409	15-Jul-15	8424	23-Jul-15	8439	23-Jul-15
8410	07-Jul-15	8425	07-Jul-15	8441	20-Jul-15
8411	14-Jul-15	8426	15-Jul-15	8442	20-Jul-15
8413	07-Jul-15	8427	10-Jul-15	8444	30-Jul-15
8414	15-Jul-15	8428	15-Jul-15	8454	21-Jul-15
8415	30-Jul-15	8429	07-Jul-15		
8416	14-Jul-15	8430	15-Jul-15		

SBWRP Regular Fixed Grid Ocean sediment (benthic) stations





SOUTH BAY OCEAN OUTFALL MONITORING
SEDIMENT ANNUAL - International Stations

Sulfide and Total Volatile Solids Analysis

Annual 2015

Source:		I-1	I-2	I-3	I-4	I-6	I-7	I-8	I-9	I-10
Date:		2015	2015	2015	2015	2015	2015	2015	2015	2015
Analyte	MDL Units	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg
=====	===	=====	=====	=====	=====	=====	=====	=====	=====	=====
Sulfides-Total	.14 MG/KG	1.05	0.41	0.20	5.18	0.28	<0.14	0.60	1.31	1.90
Total Volatile Solids	.11 WT%	0.90	0.45	0.30	0.65	0.40	0.50	0.55	1.05	0.75

Source:		I-12	I-13	I-14	I-15	I-16	I-18	I-20	I-21	I-22
Date:		2015	2015	2015	2015	2015	2015	2015	2015	2015
Analyte	MDL Units	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg
=====	===	=====	=====	=====	=====	=====	=====	=====	=====	=====
Sulfides-Total	.14 MG/KG	2.04	<0.14	4.70	1.98	1.46	3.05	<0.14	0.23	1.94
Total Volatile Solids	.11 WT%	0.65	0.45	1.15	0.65	0.70	0.75	0.45	0.50	0.95

Source:		I-23	I-27	I-28	I-29	I-30	I-31	I-33	I-34	I-35
Date:		2015	2015	2015	2015	2015	2015	2015	2015	2015
Analyte	MDL Units	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg
=====	===	=====	=====	=====	=====	=====	=====	=====	=====	=====
Sulfides-Total	.14 MG/KG	2.17	3.64	3.21	1.03	2.39	1.30	2.70	1.05	6.69
Total Volatile Solids	.11 WT%	0.95	0.95	1.70	1.05	1.05	0.70	1.20	0.65	1.60

ND= not detected

SOUTH BAY OCEAN OUTFALL MONITORING
SEDIMENT ANNUAL- Grain Size
(all values are in percent distribution)

Annual 2015

Source:		I-1	I-1	I-2	I-2	I-3	I-3	I-4
Sample ID:		P754198	P794620	P754218	P794659	P754226	P794667	P754232
Analyte	Units	05-JAN-2015	06-JUL-2015	05-JAN-2015	06-JUL-2015	05-JAN-2015	06-JUL-2015	05-JAN-2015
=====	=====	=====	=====	=====	=====	=====	=====	=====
>0.5 to 1.0		0.000	0.000	0.000	0.000	0.000	0.000	0.000
>1.0 to 2.0		0.000	0.000	0.000	0.000	0.000	0.000	0.000
>2.0 to 3.9		0.111	0.108	0.000	0.000	0.000	0.000	0.000
>3.9 to 7.8		2.280	2.360	0.313	0.492	0.000	0.000	0.746
>7.8 to 15.6		2.940	3.150	1.200	1.470	0.211	0.000	0.909
>15.6 to 31		1.020	1.080	0.600	0.822	0.000	0.000	0.249
>31 to 62.5		3.250	3.040	0.307	0.181	0.000	0.000	5.350
>62.5 to 125		37.400	35.100	3.070	2.080	0.913	0.061	33.500
>125 to 250		47.700	49.400	31.300	26.900	18.500	3.860	33.500
>250 to 500		5.360	5.800	53.400	57.400	59.800	31.200	22.800
>500 to 1000		0.000	0.000	9.700	10.600	19.500	52.200	2.970
>1000 to 2000		0.000	0.000	0.056	0.060	1.050	12.300	0.000
>2000*		ND	ND	ND	ND	ND	ND	ND
=====	=====	=====	=====	=====	=====	=====	=====	=====
Totals:		100.061	100.038	99.946	100.005	99.974	99.621	100.024

Source:		I-4	I-6	I-6	I-7	I-7	I-8	I-8
Sample ID:		P794670	P754236	P794674	P754244	P794678	P754247	P794684
Analyte	Units	06-JUL-2015	05-JAN-2015	06-JUL-2015	05-JAN-2015	06-JUL-2015	05-JAN-2015	06-JUL-2015
=====	=====	=====	=====	=====	=====	=====	=====	=====
>0.5 to 1.0		0.000	0.000	0.000	0.000	0.000	0.000	0.000
>1.0 to 2.0		0.000	0.000	0.000	0.000	0.000	0.000	0.000
>2.0 to 3.9		0.000	0.000	0.000	0.000	0.000	0.000	0.000
>3.9 to 7.8		0.597	0.128	0.011	0.131	0.894	0.299	0.337
>7.8 to 15.6		1.720	0.748	0.741	0.810	3.430	1.180	1.320
>15.6 to 31		1.110	0.209	0.624	0.219	1.850	0.789	0.740
>31 to 62.5		3.720	0.800	0.606	0.000	1.050	0.844	0.162
>62.5 to 125		23.900	2.530	1.260	0.370	1.840	3.920	1.410
>125 to 250		28.000	12.800	8.910	4.270	5.270	26.200	13.100
>250 to 500		32.700	53.600	53.900	37.000	24.000	55.800	56.500
>500 to 1000		8.120	27.600	31.700	47.400	41.200	10.900	25.000
>1000 to 2000		0.052	1.560	2.270	9.800	19.000	0.060	1.380
>2000*		ND	ND	ND	ND	ND	ND	ND
=====	=====	=====	=====	=====	=====	=====	=====	=====
Totals:		99.919	99.975	100.022	100.000	98.534	99.992	99.949

*=A value in this field reflects a percentage of 30 grams remaining on a 2000 micron sieve. This value must be subtracted from the total percentage.

SOUTH BAY OCEAN OUTFALL MONITORING
SEDIMENT ANNUAL- Grain Size
(all values are in percent distribution)

Annual 2015

Source:		I-9	I-9	I-10	I-10	I-12	I-12	I-13
Sample ID:		P754252	P794691	P754200	P794625	P754205	P794630	P754335
Analyte	Units	05-JAN-2015	06-JUL-2015	05-JAN-2015	06-JUL-2015	05-JAN-2015	06-JUL-2015	06-JAN-2015
=====	=====	=====	=====	=====	=====	=====	=====	=====
>0.5 to 1.0		0.000	0.000	0.000	0.000	0.000	0.000	0.000
>1.0 to 2.0		0.000	0.000	0.000	0.000	0.000	0.000	0.000
>2.0 to 3.9		0.161	0.155	0.132	0.160	0.000	0.000	0.000
>3.9 to 7.8		2.460	2.290	1.450	2.280	0.317	0.582	0.117
>7.8 to 15.6		2.320	2.230	1.030	1.850	1.130	1.750	0.709
>15.6 to 31		0.971	1.020	0.029	0.143	0.750	1.170	0.198
>31 to 62.5		13.400	14.400	6.130	5.880	2.700	4.120	0.023
>62.5 to 125		64.300	63.200	65.200	64.900	16.100	23.600	0.889
>125 to 250		15.500	15.300	24.200	23.400	32.600	34.600	5.590
>250 to 500		0.888	1.350	1.820	1.450	39.900	28.800	42.200
>500 to 1000		0.000	0.000	0.000	0.000	6.470	5.400	45.600
>1000 to 2000		0.000	0.000	0.000	0.000	0.000	0.000	4.720
>2000*		ND	ND	ND	ND	ND	ND	ND
=====	=====	=====	=====	=====	=====	=====	=====	=====
Totals:		100.000	99.945	99.991	100.063	99.967	100.022	100.046

Source:		I-14	I-14	I-15	I-15	I-16	I-16	I-18
Sample ID:		P754340	P794640	P754212	P794644	P754343	P794648	P754347
Analyte	Units	06-JAN-2015	06-JUL-2015	05-JAN-2015	06-JUL-2015	06-JAN-2015	06-JUL-2015	06-JAN-2015
=====	=====	=====	=====	=====	=====	=====	=====	=====
>0.5 to 1.0		0.000	0.000	0.000	0.000	0.000	0.000	0.000
>1.0 to 2.0		0.000	0.000	0.000	0.000	0.000	0.000	0.000
>2.0 to 3.9		0.169	0.141	0.000	0.000	0.000	0.000	0.124
>3.9 to 7.8		2.530	2.180	0.548	0.280	1.000	0.334	1.430
>7.8 to 15.6		2.160	1.950	1.450	1.160	1.510	1.460	1.010
>15.6 to 31		0.791	0.743	1.130	0.936	0.787	1.090	0.035
>31 to 62.5		11.500	10.600	6.230	2.520	4.620	1.640	7.990
>62.5 to 125		63.000	60.900	23.500	7.340	32.200	6.980	68.600
>125 to 250		18.200	21.400	32.200	20.000	37.500	29.400	19.500
>250 to 500		1.630	2.050	30.200	54.300	19.400	48.500	1.300
>500 to 1000		0.000	0.000	4.700	13.200	2.980	10.600	0.000
>1000 to 2000		0.000	0.000	0.000	0.380	0.000	0.070	0.000
>2000*		ND	ND	ND	ND	ND	ND	ND
=====	=====	=====	=====	=====	=====	=====	=====	=====
Totals:		99.980	99.964	99.958	100.116	99.997	100.074	99.989

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SOUTH BAY OCEAN OUTFALL MONITORING
SEDIMENT ANNUAL- Grain Size
(all values are in percent distribution)

Annual 2015

Source:		I-18	I-20	I-20	I-21	I-21	I-22	I-22
Sample ID:		P794657	P754223	P794802	P754355	P794808	P754357	P794812
Analyte	Units	06-JUL-2015	05-JAN-2015	07-JUL-2015	06-JAN-2015	07-JUL-2015	06-JAN-2015	07-JUL-2015
=====	=====	=====	=====	=====	=====	=====	=====	=====
>0.5 to 1.0		0.000	0.000	0.000	0.000	0.000	0.000	0.000
>1.0 to 2.0		0.000	0.000	0.000	0.000	0.000	0.000	0.000
>2.0 to 3.9		0.154	0.000	0.000	0.000	0.000	0.000	0.117
>3.9 to 7.8		1.950	0.012	0.687	0.288	0.292	1.640	2.350
>7.8 to 15.6		1.310	0.789	2.490	1.190	1.100	2.010	3.120
>15.6 to 31		0.030	0.365	1.410	0.820	0.658	1.120	1.590
>31 to 62.5		7.260	0.000	0.797	0.733	0.471	8.890	9.670
>62.5 to 125		69.900	0.195	1.370	1.450	1.810	45.200	43.200
>125 to 250		18.700	2.600	7.870	5.920	10.600	32.000	31.000
>250 to 500		0.768	14.800	26.300	34.200	53.200	9.070	8.770
>500 to 1000		0.000	70.900	40.600	48.200	30.300	0.117	0.111
>1000 to 2000		0.000	10.400	17.300	7.140	1.650	0.000	0.000
>2000*		ND	ND	ND	ND	ND	ND	ND
=====	=====	=====	=====	=====	=====	=====	=====	=====
Totals:		100.072	100.061	98.824	99.941	100.081	100.047	99.928

Source:		I-27	I-27	I-28	I-29	I-30	I-30	I-31
Sample ID:		P754367	P794821	P754315	P794835	P754323	P794837	P754330
Analyte	Units	06-JAN-2015	07-JUL-2015	06-JAN-2015	07-JUL-2015	06-JAN-2015	07-JUL-2015	06-JAN-2015
=====	=====	=====	=====	=====	=====	=====	=====	=====
>0.5 to 1.0		0.000	0.000	0.000	0.000	0.000	0.000	0.000
>1.0 to 2.0		0.000	0.000	0.000	0.000	0.000	0.000	0.000
>2.0 to 3.9		0.155	0.182	0.356	0.123	0.129	0.277	0.279
>3.9 to 7.8		1.990	2.940	4.940	2.570	1.910	2.620	1.800
>7.8 to 15.6		1.780	2.450	8.490	4.910	2.190	2.500	0.839
>15.6 to 31		0.820	0.741	5.450	4.030	1.200	1.080	0.000
>31 to 62.5		13.000	10.800	16.500	19.300	14.400	13.500	5.150
>62.5 to 125		67.900	66.700	26.000	43.100	66.000	63.200	72.900
>125 to 250		13.700	15.400	9.180	21.100	13.500	15.500	18.300
>250 to 500		0.647	0.781	8.670	4.860	0.659	1.300	0.668
>500 to 1000		0.000	0.000	17.500	0.000	0.000	0.000	0.000
>1000 to 2000		0.000	0.000	2.940	0.000	0.000	0.000	0.000
>2000*		ND	ND	ND	ND	ND	ND	ND
=====	=====	=====	=====	=====	=====	=====	=====	=====
Totals:		99.992	99.994	100.026	99.993	99.988	99.977	99.936

*=A value in this field reflects a percentage of 30 grams remaining on a 2000 micron sieve. This value must be subtracted from the total percentage.

SOUTH BAY OCEAN OUTFALL MONITORING
SEDIMENT ANNUAL- Grain Size
(all values are in percent distribution)

Annual 2015

Source:		I-31	I-33	I-33	I-34	I-34	I-35	I-35
Sample ID:		P794842	P754490	P796491	P754494	P796495	P754503	P796500
Analyte	Units	07-JUL-2015	07-JAN-2015	15-JUL-2015	07-JAN-2015	15-JUL-2015	07-JAN-2015	15-JUL-2015
>0.5 to 1.0		0.000	0.000	0.000	0.000	0.000	0.000	0.000
>1.0 to 2.0		0.000	0.000	0.000	0.000	0.000	0.000	0.000
>2.0 to 3.9		0.286	0.118	0.140	0.000	0.000	0.105	0.000
>3.9 to 7.8		1.960	2.290	2.690	0.000	0.541	2.280	2.150
>7.8 to 15.6		0.939	2.540	3.030	0.000	1.490	6.950	6.830
>15.6 to 31		0.000	0.798	0.943	0.000	0.889	8.350	7.210
>31 to 62.5		4.910	4.270	3.820	0.238	0.895	23.000	19.100
>62.5 to 125		72.600	53.200	47.600	4.450	5.090	40.300	41.100
>125 to 250		18.600	34.000	37.700	44.800	43.200	17.000	20.400
>250 to 500		0.676	2.820	4.020	45.100	42.500	1.960	3.290
>500 to 1000		0.000	0.000	0.000	5.370	5.350	0.000	0.000
>1000 to 2000		0.000	0.000	0.000	0.000	0.000	0.000	0.000
>2000*		ND	ND	ND	ND	ND	ND	ND
Totals:		99.971	100.036	99.943	99.958	99.955	99.945	100.080

*=A value in this field reflects a percentage of 30 grams remaining on a 2000 micron sieve. This value must be subtracted from the total percentage.

SOUTH BAY OCEAN OUTFALL MONITORING
SEDIMENT Grain Size (Sieve)
(All values are in percent distribution)

Annual 2015

Source:		I-13	I-23	I-23	I-28	I-29
Sample ID:		P794634	P754364	P794816	P794829	P754318
Analyte	MDL Units	06-JUL-2015	06-JAN-2015	07-JUL-2015	07-JUL-2015	06-JAN-2015
<63 microns, Phi<4		3.4	9.9	10.5	21.8	2.2
>63 to 125 microns, Phi>4		4.5	2.7	50.0	22.1	0.3
>125 to 250 microns, Phi>3		0.5	2.5	14.2	4.4	0.6
>250 to 500 microns, Phi>2		44.8	27.6	18.0	11.4	13.0
>500 to 1000 microns, Phi>1		46.1	34.8	5.9	19.2	70.3
>1000 to 2000 microns, Phi>0		0.3	12.9	0.9	11.9	13.3
>2000 microns, Phi>-1		0.4	9.7	0.6	9.2	0.4
Totals:		100.0	100.1	100.1	100.0	100.1

SOUTH BAY WATER RECLAMATION PLANT
SEDIMENT ANNUAL - International Stations

Total Organic Carbon/Total Nitrogen

Annual 2015

Source:		I-1	I-2	I-3	I-4	I-6	I-7
Date:		2015	2015	2015	2015	2015	2015
Analyte	MDL Units	Avg	Avg	Avg	Avg	Avg	Avg
=====	=====	=====	=====	=====	=====	=====	=====
Total Nitrogen	.01 WT%	0.025	0.012	<0.010	0.013	<0.010	0.010
Total Organic Carbon	.04 WT%	0.161	0.067	<0.040	0.092	0.062	0.052

Source:		I-8	I-9	I-10	I-12	I-13	I-14
Date:		2015	2015	2015	2015	2015	2015
Analyte	MDL Units	Avg	Avg	Avg	Avg	Avg	Avg
=====	=====	=====	=====	=====	=====	=====	=====
Total Nitrogen	.01 WT%	<0.010	0.024	0.017	0.014	0.010	0.034
Total Organic Carbon	.04 WT%	0.058	0.178	0.136	0.099	0.071	0.197

Source:		I-15	I-16	I-18	I-20	I-21	I-22
Date:		2015	2015	2015	2015	2015	2015
Analyte	MDL Units	Avg	Avg	Avg	Avg	Avg	Avg
=====	=====	=====	=====	=====	=====	=====	=====
Total Nitrogen	.01 WT%	0.015	0.019	0.013	<0.010	0.013	0.020
Total Organic Carbon	.04 WT%	0.107	0.124	0.141	ND	0.100	0.182

Source:		I-23	I-27	I-28	I-29	I-30	I-31
Date:		2015	2015	2015	2015	2015	2015
Analyte	MDL Units	Avg	Avg	Avg	Avg	Avg	Avg
=====	=====	=====	=====	=====	=====	=====	=====
Total Nitrogen	.01 WT%	0.023	0.019	0.050	0.021	0.024	0.019
Total Organic Carbon	.04 WT%	0.894	0.172	0.526	0.218	0.194	0.126

Source:		I-33	I-34	I-35
Date:		2015	2015	2015
Analyte	MDL Units	Avg	Avg	Avg
=====	=====	=====	=====	=====
Total Nitrogen	.01 WT%	0.017	<0.010	0.030
Total Organic Carbon	.04 WT%	0.371	0.130	0.328

ND=not detected

SOUTH BAY WASTEWATER RECLAMATION PLANT
SEDIMENT ANNUAL - International Stations

Trace Metals

Annual 2015

Source:			I-1	I-2	I-3	I-4	I-6
Date:			2015	2015	2015	2015	2015
Analyte	MDL	Units	Average	Average	Average	Average	Average
=====	=====	=====	=====	=====	=====	=====	=====
Aluminum	2	MG/KG	3270	1830	819	2860	1110
Antimony	.3	MG/KG	<0.3	ND	ND	ND	ND
Arsenic	.33	MG/KG	0.90	0.61	1.20	1.13	4.31
Beryllium	.01	MG/KG	0.05	0.01	0.01	0.03	0.02
Cadmium	.06	MG/KG	ND	ND	ND	ND	ND
Chromium	.1	MG/KG	7.7	8.5	5.4	7.7	8.3
Copper	.2	MG/KG	1.1	0.7	ND	0.7	ND
Iron	9	MG/KG	4120	2130	1510	3890	3970
Lead	.8	MG/KG	1.7	1.1	0.9	1.6	1.8
Manganese	.08	MG/KG	47.7	17.5	6.99	39.6	10.7
Mercury	.004	MG/KG	0.005	<0.004	ND	ND	ND
Nickel	.1	MG/KG	3.4	1.6	0.9	2.4	1.3
Selenium	.24	MG/KG	<0.24	<0.24	ND	ND	ND
Silver	.04	MG/KG	ND	ND	<0.0	ND	ND
Thallium	.5	MG/KG	0.9	0.8	1.2	<0.5	1.6
Tin	.3	MG/KG	0.3	0.7	0.3	0.3	1.3
Zinc	.25	MG/KG	8.8	4.3	1.9	7.2	3.4

Source:			I-7	I-8	I-9	I-10	I-12
Date:			2015	2015	2015	2015	2015
Analyte	MDL	Units	Average	Average	Average	Average	Average
=====	=====	=====	=====	=====	=====	=====	=====
Aluminum	2	MG/KG	1640	2040	8390	6560	4470
Antimony	.3	MG/KG	ND	ND	0.4	<0.3	ND
Arsenic	.33	MG/KG	5.33	2.20	1.64	1.53	1.57
Beryllium	.01	MG/KG	0.03	0.03	0.06	0.05	0.03
Cadmium	.06	MG/KG	ND	ND	ND	ND	ND
Chromium	.1	MG/KG	9.8	9.6	12.8	11.1	8.4
Copper	.2	MG/KG	ND	ND	2.8	1.7	1.3
Iron	9	MG/KG	7220	4370	8590	7500	5560
Lead	.8	MG/KG	2.7	1.6	1.7	1.8	1.4
Manganese	.08	MG/KG	23.3	23.7	86.4	78.5	53.9
Mercury	.004	MG/KG	ND	<0.004	ND	<0.004	<0.004
Nickel	.1	MG/KG	1.6	1.6	5.0	3.9	3.3
Selenium	.24	MG/KG	ND	<0.24	<0.24	<0.24	<0.24
Silver	.04	MG/KG	ND	ND	ND	ND	ND
Thallium	.5	MG/KG	0.8	1.0	1.1	1.3	ND
Tin	.3	MG/KG	1.3	0.4	0.4	0.5	0.7
Zinc	.25	MG/KG	6.5	7.3	21.2	16.9	15.4

ND= not detected

SOUTH BAY WASTEWATER RECLAMATION PLANT
SEDIMENT ANNUAL - International Stations

Trace Metals

Annual 2015

Source:			I-13	I-14	I-15	I-16	I-18
Date:			2015	2015	2015	2015	2015
Analyte	MDL	Units	Average	Average	Average	Average	Average
=====	=====	=====	=====	=====	=====	=====	=====
Aluminum	2	MG/KG	1390	6360	4130	4630	6890
Antimony	.3	MG/KG	ND	<0.3	ND	<0.3	0.5
Arsenic	.33	MG/KG	6.35	1.43	2.03	1.49	1.89
Beryllium	.01	MG/KG	0.03	0.05	0.04	0.04	0.04
Cadmium	.06	MG/KG	ND	ND	ND	ND	ND
Chromium	.1	MG/KG	10.3	9.5	10.5	8.8	12.8
Copper	.2	MG/KG	ND	2.3	1.1	1.5	1.9
Iron	9	MG/KG	6750	6140	5770	5720	8120
Lead	.8	MG/KG	2.8	1.6	2.0	1.6	1.8
Manganese	.08	MG/KG	18.3	65.6	46.7	57.1	95.3
Mercury	.004	MG/KG	ND	ND	<0.004	<0.004	ND
Nickel	.1	MG/KG	2.1	4.4	3.8	4.2	4.7
Selenium	.24	MG/KG	ND	<0.24	ND	ND	ND
Silver	.04	MG/KG	<0.04	ND	ND	ND	ND
Thallium	.5	MG/KG	ND	ND	ND	ND	ND
Tin	.3	MG/KG	1.0	0.7	0.9	0.9	0.8
Zinc	.25	MG/KG	5.8	14.9	11.3	12.7	15.5

Source:			I-20	I-21	I-22	I-23	I-27
Date:			2015	2015	2015	2015	2015
Analyte	MDL	Units	Average	Average	Average	Average	Average
=====	=====	=====	=====	=====	=====	=====	=====
Aluminum	2	MG/KG	1800	2260	5910	4180	7140
Antimony	.3	MG/KG	ND	0.4	0.4	ND	ND
Arsenic	.33	MG/KG	3.42	9.05	1.67	2.18	1.51
Beryllium	.01	MG/KG	0.02	0.03	0.04	ND	ND
Cadmium	.06	MG/KG	ND	ND	ND	<0.06	ND
Chromium	.1	MG/KG	6.3	13.3	10.5	8.1	11.7
Copper	.2	MG/KG	ND	0.2	2.1	1.9	2.8
Iron	9	MG/KG	5450	9180	6110	5310	7470
Lead	.8	MG/KG	2.0	3.9	2.0	1.9	2.1
Manganese	.08	MG/KG	21.6	24.2	66.1	53.1	76.1
Mercury	.004	MG/KG	ND	0.004	<0.004	ND	<0.004
Nickel	.1	MG/KG	2.3	3.0	4.0	2.6	4.2
Selenium	.24	MG/KG	ND	ND	<0.24	ND	ND
Silver	.04	MG/KG	ND	ND	ND	ND	ND
Thallium	.5	MG/KG	ND	ND	ND	ND	ND
Tin	.3	MG/KG	0.6	0.6	0.9	0.8	1.1
Zinc	.25	MG/KG	6.0	8.1	16.6	12.9	18.0

ND= not detected

SOUTH BAY WASTEWATER RECLAMATION PLANT
SEDIMENT ANNUAL - International Stations

Trace Metals

Annual 2015

Source:			I-28	I-29	I-30	I-31	I-33
Date:			2015	2015	2015	2015	2015
Analyte	MDL	Units	Average	Average	Average	Average	Average
=====	=====	=====	=====	=====	=====	=====	=====
Aluminum	2	MG/KG	7350	5060	7670	4340	5490
Antimony	.3	MG/KG	0.4	0.3	0.4	ND	<0.3
Arsenic	.33	MG/KG	2.20	3.21	1.48	1.00	1.82
Beryllium	.01	MG/KG	0.06	ND	ND	0.02	ND
Cadmium	.06	MG/KG	<0.06	ND	ND	ND	ND
Chromium	.1	MG/KG	13.0	11.3	12.9	8.6	9.9
Copper	.2	MG/KG	5.1	2.1	3.2	3.6	3.2
Iron	9	MG/KG	9390	9160	7880	4540	7250
Lead	.8	MG/KG	3.9	2.9	2.3	1.7	3.4
Manganese	.08	MG/KG	83.9	60.7	80.7	61.2	83.4
Mercury	.004	MG/KG	0.020	0.006	0.005	ND	0.019
Nickel	.1	MG/KG	6.8	3.7	4.4	2.3	3.3
Selenium	.24	MG/KG	<0.24	<0.24	<0.24	ND	<0.24
Silver	.04	MG/KG	<0.04	ND	ND	ND	ND
Thallium	.5	MG/KG	ND	ND	ND	ND	ND
Tin	.3	MG/KG	1.6	1.1	0.9	1.0	1.2
Zinc	.25	MG/KG	22.3	14.6	19.6	17.5	23.8

Source:			I-34	I-35
Date:			2015	2015
Analyte	MDL	Units	Average	Average
=====	=====	=====	=====	=====
Aluminum	2	MG/KG	2090	12100
Antimony	.3	MG/KG	ND	1.3
Arsenic	.33	MG/KG	1.58	2.68
Beryllium	.01	MG/KG	0.01	0.09
Cadmium	.06	MG/KG	ND	0.09
Chromium	.1	MG/KG	4.1	20.5
Copper	.2	MG/KG	1.2	7.8
Iron	9	MG/KG	3280	14900
Lead	.8	MG/KG	1.8	5.7
Manganese	.08	MG/KG	31.2	160
Mercury	.004	MG/KG	<0.004	0.024
Nickel	.1	MG/KG	1.3	7.5
Selenium	.24	MG/KG	ND	<0.24
Silver	.04	MG/KG	ND	ND
Thallium	.5	MG/KG	ND	ND
Tin	.3	MG/KG	0.7	1.5
Zinc	.25	MG/KG	7.6	42.7

ND= not detected

SOUTH BAY OCEAN OUTFALL MONITORING
SEDIMENT ANNUAL Chlorinated Pesticide Analysis - International Stations

Annual 2015

Source:			I-1	I-2	I-3	I-4	I-6	I-7	I-8	I-9
Date:			2015	2015	2015	2015	2015	2015	2015	2015
Analyte	MDL	Units	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
Aldrin	70	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	340	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
BHC, Alpha isomer	100	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
BHC, Beta isomer	50	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
BHC, Gamma isomer	190	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
BHC, Delta isomer	220	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
p,p-DDD	160	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
p,p-DDE	260	NG/KG	<90	ND	ND	ND	ND	ND	<260	<260
p,p-DDT	70	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
o,p-DDD	100	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
o,p-DDE	60	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
o,p-DDT	110	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	120	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor epoxide	300	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Alpha (cis) Chlordane	160	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Gamma (trans) Chlordane	190	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Alpha Chlordene		NG/KG	NA	NA	NA	NA	NA	NA	NA	NA
Gamma Chlordene		NG/KG	NA	NA	NA	NA	NA	NA	NA	NA
Oxychlordane	1200	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Trans Nonachlor	240	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Cis Nonachlor	380	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Alpha Endosulfan	720	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Beta Endosulfan	780	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan Sulfate	1100	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	510	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Endrin aldehyde	2400	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Mirex	60	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Methoxychlor	90	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
Aldrin + Dieldrin	340	NG/KG	0	0	0	0	0	0	0	0
Hexachlorocyclohexanes	220	NG/KG	0	0	0	0	0	0	0	0
DDT and derivatives	260	NG/KG	0	0	0	0	0	0	0	0
Chlordane + related cmpds.	1200	NG/KG	0	0	0	0	0	0	0	0
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
Chlorinated Hydrocarbons	2400	NG/KG	0	0	0	0	0	0	0	0

ND=not detected
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 OCEAN OUTFALL MONITORING
SEDIMENT ANNUAL Chlorinated Pesticide Analysis - International Stations

Annual 2015

Source:			I-10	I-12	I-13	I-14	I-15	I-16	I-18	I-20
Date:			2015	2015	2015	2015	2015	2015	2015	2015
Analyte	MDL	Units	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
Aldrin	70	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	340	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
BHC, Alpha isomer	100	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
BHC, Beta isomer	50	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
BHC, Gamma isomer	190	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
BHC, Delta isomer	220	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
p,p-DDD	160	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
p,p-DDE	260	NG/KG	ND	ND	ND	335	<260	ND	ND	ND
p,p-DDT	70	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
o,p-DDD	100	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
o,p-DDE	60	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
o,p-DDT	110	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	120	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor epoxide	300	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Alpha (cis) Chlordane	160	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Gamma (trans) Chlordane	190	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Alpha Chlordene		NG/KG	NA	NA	NA	NA	NA	NA	NA	NA
Gamma Chlordene		NG/KG	NA	NA	NA	NA	NA	NA	NA	NA
Oxychlordane	1200	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Trans Nonachlor	240	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Cis Nonachlor	380	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Alpha Endosulfan	720	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Beta Endosulfan	780	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan Sulfate	1100	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	510	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Endrin aldehyde	2400	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Mirex	60	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Methoxychlor	90	NG/KG	ND	300	ND	ND	ND	ND	ND	ND
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
Aldrin + Dieldrin	340	NG/KG	0	0	0	0	0	0	0	0
Hexachlorocyclohexanes	220	NG/KG	0	0	0	0	0	0	0	0
DDT and derivatives	260	NG/KG	0	0	0	335	0	0	0	0
Chlordane + related cmpds.	1200	NG/KG	0	0	0	0	0	0	0	0
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
Chlorinated Hydrocarbons	2400	NG/KG	0	300	0	335	0	0	0	0

ND=not detected
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 OCEAN OUTFALL MONITORING
SEDIMENT ANNUAL Chlorinated Pesticide Analysis - International Stations

Annual 2015

Source:			I-21	I-22	I-23	I-27	I-28	I-29	I-30	I-31
Date:			2015	2015	2015	2015	2015	2015	2015	2015
Analyte	MDL	Units	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
Aldrin	70	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	340	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
BHC, Alpha isomer	100	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
BHC, Beta isomer	50	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
BHC, Gamma isomer	190	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
BHC, Delta isomer	220	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
p,p-DDD	160	NG/KG	ND	ND	ND	ND	ND	<160	ND	<160
p,p-DDE	260	NG/KG	ND	E248	<90	E183	655	350	E385	<260
p,p-DDT	70	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
o,p-DDD	100	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
o,p-DDE	60	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
o,p-DDT	110	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	120	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor epoxide	300	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Alpha (cis) Chlordane	160	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Gamma (trans) Chlordane	190	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Alpha Chlordene		NG/KG	NA	NA	NA	NA	NA	NA	NA	NA
Gamma Chlordene		NG/KG	NA	NA	NA	NA	NA	NA	NA	NA
Oxychlordane	1200	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Trans Nonachlor	240	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Cis Nonachlor	380	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Alpha Endosulfan	720	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Beta Endosulfan	780	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan Sulfate	1100	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	510	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Endrin aldehyde	2400	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Mirex	60	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Methoxychlor	90	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
Aldrin + Dieldrin	340	NG/KG	0	0	0	0	0	0	0	0
Hexachlorocyclohexanes	220	NG/KG	0	0	0	0	0	0	0	0
DDT and derivatives	260	NG/KG	0	0	0	0	655	350	0	0
Chlordane + related cmpds.	1200	NG/KG	0	0	0	0	0	0	0	0
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
Chlorinated Hydrocarbons	2400	NG/KG	0	0	0	0	655	350	0	0

ND=not detected

NA=not analyzed

E=estimated value, value is less than the Method Detection Limit but confirmed by GC/MS-MS

Standards for alpha and gamma chlordene are no longer available in the U.S. for the analysis of these compounds.

SOUTH BAY OCEAN OUTFALL MONITORING
SEDIMENT ANNUAL Chlorinated Pesticide Analysis - International Stations

Annual 2015

Source:			I-33	I-34	I-35
Date:			2015	2015	2015
Analyte	MDL	Units	Avg	Avg	Avg
=====	=====	=====	=====	=====	=====
Aldrin	70	NG/KG	ND	ND	ND
Dieldrin	340	NG/KG	ND	ND	ND
BHC, Alpha isomer	100	NG/KG	ND	ND	ND
BHC, Beta isomer	50	NG/KG	ND	ND	ND
BHC, Gamma isomer	190	NG/KG	ND	ND	ND
BHC, Delta isomer	220	NG/KG	ND	ND	ND
p,p-DDD	160	NG/KG	ND	ND	<160
p,p-DDE	260	NG/KG	ND	ND	550
p,p-DDT	70	NG/KG	ND	ND	ND
o,p-DDD	100	NG/KG	ND	ND	ND
o,p-DDE	60	NG/KG	ND	ND	ND
o,p-DDT	110	NG/KG	ND	ND	ND
Heptachlor	120	NG/KG	ND	ND	ND
Heptachlor epoxide	300	NG/KG	ND	ND	ND
Alpha (cis) Chlordane	160	NG/KG	ND	ND	ND
Gamma (trans) Chlordane	190	NG/KG	ND	ND	ND
Alpha Chlordene		NG/KG	NA	NA	NA
Gamma Chlordene		NG/KG	NA	NA	NA
Oxychlordane	1200	NG/KG	ND	ND	ND
Trans Nonachlor	240	NG/KG	ND	ND	ND
Cis Nonachlor	380	NG/KG	ND	ND	ND
Alpha Endosulfan	720	NG/KG	ND	ND	ND
Beta Endosulfan	780	NG/KG	ND	ND	ND
Endosulfan Sulfate	1100	NG/KG	ND	ND	ND
Endrin	510	NG/KG	ND	ND	ND
Endrin aldehyde	2400	NG/KG	ND	ND	ND
Mirex	60	NG/KG	ND	ND	ND
Methoxychlor	90	NG/KG	ND	ND	ND
=====	=====	=====	=====	=====	=====
Aldrin + Dieldrin	340	NG/KG	0	0	0
Hexachlorocyclohexanes	220	NG/KG	0	0	0
DDT and derivatives	260	NG/KG	0	0	550
Chlordane + related cmpds.	1200	NG/KG	0	0	0
=====	=====	=====	=====	=====	=====
Chlorinated Hydrocarbons	2400	NG/KG	0	0	550

ND=not detected
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 OCEAN OUTFALL MONITORING
SEDIMENT ANNUAL - PCB Congeners (I-1 to I-35)

Annual 2015

Source: Date: Analyte	MDL	Units	I-1 2015 Avg	I-2 2015 Avg	I-3 2015 Avg	I-4 2015 Avg	I-6 2015 Avg	I-7 2015 Avg
=====	===	=====	=====	=====	=====	=====	=====	=====
PCB 18	90	NG/KG	ND	ND	ND	ND	ND	ND
PCB 28	60	NG/KG	ND	ND	ND	ND	ND	ND
PCB 52	90	NG/KG	ND	ND	ND	ND	ND	ND
PCB 49	70	NG/KG	ND	ND	ND	ND	ND	ND
PCB 44	100	NG/KG	ND	ND	ND	ND	ND	ND
PCB 37	90	NG/KG	ND	ND	ND	ND	ND	ND
PCB 74	100	NG/KG	ND	ND	ND	ND	ND	ND
PCB 70	60	NG/KG	ND	ND	ND	ND	ND	ND
PCB 66	100	NG/KG	ND	ND	ND	ND	ND	ND
PCB 101	100	NG/KG	ND	ND	ND	ND	ND	ND
PCB 99	120	NG/KG	ND	ND	ND	ND	ND	ND
PCB 119	80	NG/KG	ND	ND	ND	ND	ND	ND
PCB 87	200	NG/KG	ND	ND	ND	ND	ND	ND
PCB 110	110	NG/KG	ND	ND	ND	ND	ND	ND
PCB 81	130	NG/KG	ND	ND	ND	ND	ND	ND
PCB 151	80	NG/KG	ND	ND	ND	ND	ND	ND
PCB 77	110	NG/KG	ND	ND	ND	ND	ND	ND
PCB 149	110	NG/KG	ND	ND	ND	ND	ND	ND
PCB 123	130	NG/KG	ND	ND	ND	ND	ND	ND
PCB 118	90	NG/KG	ND	ND	ND	ND	ND	ND
PCB 114	130	NG/KG	ND	ND	ND	ND	ND	ND
PCB 105	50	NG/KG	ND	ND	ND	ND	ND	ND
PCB 138	80	NG/KG	ND	ND	ND	ND	ND	ND
PCB 158	70	NG/KG	ND	ND	ND	ND	ND	ND
PCB 187	110	NG/KG	ND	ND	ND	ND	ND	ND
PCB 183	60	NG/KG	ND	ND	ND	ND	ND	ND
PCB 126	70	NG/KG	ND	ND	ND	ND	ND	ND
PCB 128	80	NG/KG	ND	ND	ND	ND	ND	ND
PCB 167	30	NG/KG	ND	ND	ND	ND	ND	ND
PCB 177	70	NG/KG	ND	ND	ND	ND	ND	ND
PCB 201	70	NG/KG	ND	ND	ND	ND	ND	ND
PCB 156	90	NG/KG	ND	ND	ND	ND	ND	ND
PCB 157	100	NG/KG	ND	ND	ND	ND	ND	ND
PCB 180	80	NG/KG	ND	ND	ND	ND	ND	ND
PCB 170	80	NG/KG	ND	ND	ND	ND	ND	ND
=====	===	=====	=====	=====	=====	=====	=====	=====
Total PCB's	200	NG/KG	0	0	0	0	0	0

ND=not detected

SOUTH BAY OCEAN OUTFALL MONITORING
SEDIMENT ANNUAL - PCB Congeners (I-1 to I-35)

Annual 2015

Source:			I-8	I-9	I-10	I-12	I-13	I-14
Date:			2015	2015	2015	2015	2015	2015
Analyte	MDL	Units	Avg	Avg	Avg	Avg	Avg	Avg
=====	===	=====	=====	=====	=====	=====	=====	=====
PCB 18	90	NG/KG	ND	ND	ND	ND	110	ND
PCB 28	60	NG/KG	ND	ND	ND	ND	130	ND
PCB 52	90	NG/KG	ND	ND	ND	ND	<90	ND
PCB 49	70	NG/KG	ND	ND	ND	ND	<70	ND
PCB 44	100	NG/KG	ND	ND	ND	ND	<100	ND
PCB 37	90	NG/KG	ND	ND	ND	ND	<90	ND
PCB 74	100	NG/KG	ND	ND	ND	ND	<100	ND
PCB 70	60	NG/KG	ND	ND	ND	ND	80	ND
PCB 66	100	NG/KG	ND	ND	ND	ND	<100	ND
PCB 101	100	NG/KG	ND	ND	ND	ND	ND	ND
PCB 99	120	NG/KG	ND	ND	ND	ND	ND	ND
PCB 119	80	NG/KG	ND	ND	ND	ND	ND	ND
PCB 87	200	NG/KG	ND	ND	ND	ND	ND	ND
PCB 110	110	NG/KG	ND	ND	ND	ND	ND	210
PCB 81	130	NG/KG	ND	ND	ND	ND	ND	ND
PCB 151	80	NG/KG	ND	ND	ND	ND	ND	ND
PCB 77	110	NG/KG	ND	ND	ND	ND	ND	ND
PCB 149	110	NG/KG	ND	ND	ND	ND	ND	ND
PCB 123	130	NG/KG	ND	ND	ND	ND	ND	ND
PCB 118	90	NG/KG	ND	ND	ND	ND	ND	220
PCB 114	130	NG/KG	ND	ND	ND	ND	ND	ND
PCB 105	50	NG/KG	ND	ND	ND	ND	ND	ND
PCB 138	80	NG/KG	ND	ND	ND	ND	ND	ND
PCB 158	70	NG/KG	ND	ND	ND	ND	ND	ND
PCB 187	110	NG/KG	ND	ND	ND	ND	ND	ND
PCB 183	60	NG/KG	ND	ND	ND	ND	ND	ND
PCB 126	70	NG/KG	ND	ND	ND	ND	ND	ND
PCB 128	80	NG/KG	ND	ND	ND	ND	ND	ND
PCB 167	30	NG/KG	ND	ND	ND	ND	ND	ND
PCB 177	70	NG/KG	ND	ND	ND	ND	ND	ND
PCB 201	70	NG/KG	ND	ND	ND	ND	ND	ND
PCB 156	90	NG/KG	ND	ND	ND	ND	ND	ND
PCB 157	100	NG/KG	ND	ND	ND	ND	ND	ND
PCB 180	80	NG/KG	ND	ND	ND	ND	ND	ND
PCB 170	80	NG/KG	ND	ND	ND	ND	ND	ND
=====	===	=====	=====	=====	=====	=====	=====	=====
Total PCB's	200	NG/KG	0	0	0	0	320	430

ND=not detected

SOUTH BAY OCEAN OUTFALL MONITORING
SEDIMENT ANNUAL - PCB Congeners (I-1 to I-35)

Annual 2015

Source:			I-15	I-16	I-18	I-20	I-21	I-22
Date:			2015	2015	2015	2015	2015	2015
Analyte	MDL	Units	Avg	Avg	Avg	Avg	Avg	Avg
=====	====	=====	=====	=====	=====	=====	=====	=====
PCB 18	90	NG/KG	ND	170	ND	ND	ND	ND
PCB 28	60	NG/KG	ND	150	ND	ND	ND	ND
PCB 52	90	NG/KG	<90	<90	ND	ND	ND	ND
PCB 49	70	NG/KG	<70	<70	ND	ND	ND	ND
PCB 44	100	NG/KG	ND	<100	ND	ND	ND	ND
PCB 37	90	NG/KG	ND	<90	ND	ND	ND	ND
PCB 74	100	NG/KG	ND	<100	ND	ND	ND	ND
PCB 70	60	NG/KG	ND	85	ND	ND	ND	ND
PCB 66	100	NG/KG	ND	<100	ND	ND	ND	ND
PCB 101	100	NG/KG	ND	ND	ND	ND	ND	ND
PCB 99	120	NG/KG	ND	ND	ND	ND	ND	ND
PCB 119	80	NG/KG	ND	ND	ND	ND	ND	ND
PCB 87	200	NG/KG	ND	ND	ND	ND	ND	ND
PCB 110	110	NG/KG	ND	ND	ND	ND	ND	ND
PCB 81	130	NG/KG	ND	ND	ND	ND	ND	ND
PCB 151	80	NG/KG	ND	ND	ND	ND	ND	ND
PCB 77	110	NG/KG	ND	ND	ND	ND	ND	ND
PCB 149	110	NG/KG	ND	ND	ND	ND	ND	ND
PCB 123	130	NG/KG	ND	ND	ND	ND	ND	ND
PCB 118	90	NG/KG	ND	ND	ND	ND	ND	ND
PCB 114	130	NG/KG	ND	ND	ND	ND	ND	ND
PCB 105	50	NG/KG	ND	ND	ND	ND	ND	ND
PCB 138	80	NG/KG	ND	ND	ND	ND	ND	ND
PCB 158	70	NG/KG	ND	ND	ND	ND	ND	ND
PCB 187	110	NG/KG	ND	ND	ND	ND	ND	ND
PCB 183	60	NG/KG	ND	ND	ND	ND	ND	ND
PCB 126	70	NG/KG	ND	ND	ND	ND	ND	ND
PCB 128	80	NG/KG	ND	ND	ND	ND	ND	ND
PCB 167	30	NG/KG	ND	ND	ND	ND	ND	ND
PCB 177	70	NG/KG	ND	ND	ND	ND	ND	ND
PCB 201	70	NG/KG	ND	ND	ND	ND	ND	ND
PCB 156	90	NG/KG	ND	ND	ND	ND	ND	ND
PCB 157	100	NG/KG	ND	ND	ND	ND	ND	ND
PCB 180	80	NG/KG	ND	ND	ND	ND	ND	ND
PCB 170	80	NG/KG	ND	ND	ND	ND	ND	ND
=====	====	=====	=====	=====	=====	=====	=====	=====
Total PCB's	200	NG/KG	0	405	0	0	0	0

ND=not detected

SOUTH BAY OCEAN OUTFALL MONITORING
SEDIMENT ANNUAL - PCB Congeners (I-1 to I-35)

Annual 2015

Source:			I-23	I-27	I-28	I-29	I-30	I-31
Date:			2015	2015	2015	2015	2015	2015
Analyte	MDL	Units	Avg	Avg	Avg	Avg	Avg	Avg
=====	===	=====	=====	=====	=====	=====	=====	=====
PCB 18	90	NG/KG	ND	ND	ND	ND	ND	ND
PCB 28	60	NG/KG	ND	ND	ND	ND	ND	ND
PCB 52	90	NG/KG	ND	ND	ND	ND	ND	ND
PCB 49	70	NG/KG	ND	ND	ND	ND	ND	ND
PCB 44	100	NG/KG	ND	ND	ND	ND	ND	ND
PCB 37	90	NG/KG	ND	ND	ND	ND	ND	ND
PCB 74	100	NG/KG	<100	ND	ND	ND	ND	ND
PCB 70	60	NG/KG	85	ND	ND	ND	ND	ND
PCB 66	100	NG/KG	<100	ND	ND	ND	ND	ND
PCB 101	100	NG/KG	250	ND	ND	ND	ND	ND
PCB 99	120	NG/KG	ND	ND	ND	ND	ND	ND
PCB 119	80	NG/KG	ND	ND	ND	ND	ND	ND
PCB 87	200	NG/KG	ND	ND	ND	ND	ND	ND
PCB 110	110	NG/KG	310	<110	ND	ND	ND	ND
PCB 81	130	NG/KG	ND	ND	ND	ND	ND	ND
PCB 151	80	NG/KG	ND	ND	ND	ND	ND	ND
PCB 77	110	NG/KG	ND	ND	ND	ND	ND	ND
PCB 149	110	NG/KG	140	ND	ND	ND	ND	ND
PCB 123	130	NG/KG	ND	ND	ND	ND	ND	ND
PCB 118	90	NG/KG	280	<90	ND	ND	ND	ND
PCB 114	130	NG/KG	ND	ND	ND	ND	ND	ND
PCB 105	50	NG/KG	110	ND	ND	ND	ND	ND
PCB 138	80	NG/KG	160	<80	ND	ND	ND	ND
PCB 158	70	NG/KG	ND	ND	ND	ND	ND	ND
PCB 187	110	NG/KG	ND	ND	ND	ND	ND	ND
PCB 183	60	NG/KG	ND	ND	ND	ND	ND	ND
PCB 126	70	NG/KG	ND	ND	ND	ND	ND	ND
PCB 128	80	NG/KG	ND	ND	ND	ND	ND	ND
PCB 167	30	NG/KG	ND	ND	ND	ND	ND	ND
PCB 177	70	NG/KG	ND	ND	ND	ND	ND	ND
PCB 201	70	NG/KG	ND	ND	ND	ND	ND	ND
PCB 156	90	NG/KG	ND	ND	ND	ND	ND	ND
PCB 157	100	NG/KG	ND	ND	ND	ND	ND	ND
PCB 180	80	NG/KG	130	ND	ND	ND	ND	ND
PCB 170	80	NG/KG	ND	ND	ND	ND	ND	ND
=====	===	=====	=====	=====	=====	=====	=====	=====
Total PCB's	200	NG/KG	1465	0	0	0	0	0

ND=not detected

SOUTH BAY OCEAN OUTFALL MONITORING
SEDIMENT ANNUAL - PCB Congeners (I-1 to I-35)

Annual 2015

Source:			I-33	I-34	I-35
Date:			2015	2015	2015
Analyte	MDL	Units	Avg	Avg	Avg
=====	===	=====	=====	=====	=====
PCB 18	90	NG/KG	ND	ND	ND
PCB 28	60	NG/KG	ND	ND	<60
PCB 52	90	NG/KG	ND	ND	<90
PCB 49	70	NG/KG	ND	ND	<70
PCB 44	100	NG/KG	ND	ND	ND
PCB 37	90	NG/KG	ND	ND	ND
PCB 74	100	NG/KG	ND	ND	ND
PCB 70	60	NG/KG	ND	ND	<60
PCB 66	100	NG/KG	ND	ND	<100
PCB 101	100	NG/KG	ND	ND	ND
PCB 99	120	NG/KG	ND	ND	ND
PCB 119	80	NG/KG	ND	ND	ND
PCB 87	200	NG/KG	ND	ND	ND
PCB 110	110	NG/KG	ND	ND	ND
PCB 81	130	NG/KG	ND	ND	ND
PCB 151	80	NG/KG	ND	ND	ND
PCB 77	110	NG/KG	ND	ND	ND
PCB 149	110	NG/KG	ND	ND	ND
PCB 123	130	NG/KG	ND	ND	ND
PCB 118	90	NG/KG	ND	ND	ND
PCB 114	130	NG/KG	ND	ND	ND
PCB 105	50	NG/KG	ND	ND	ND
PCB 138	80	NG/KG	ND	ND	ND
PCB 158	70	NG/KG	ND	ND	ND
PCB 187	110	NG/KG	ND	ND	ND
PCB 183	60	NG/KG	ND	ND	ND
PCB 126	70	NG/KG	ND	ND	ND
PCB 128	80	NG/KG	ND	ND	ND
PCB 167	30	NG/KG	ND	ND	ND
PCB 177	70	NG/KG	ND	ND	ND
PCB 201	70	NG/KG	ND	ND	ND
PCB 156	90	NG/KG	ND	ND	ND
PCB 157	100	NG/KG	ND	ND	ND
PCB 180	80	NG/KG	ND	ND	ND
PCB 170	80	NG/KG	ND	ND	ND
=====	===	=====	=====	=====	=====
Total PCB's	200	NG/KG	0	0	0

ND=not detected

SOUTH BAY OCEAN OUTFALL MONITORING
SEDIMENT ANNUAL Base/Neutrals - International Stations

Annual 2015

Source:			I-1	I-2	I-3	I-4	I-6	I-7	I-8
Date:			2015	2015	2015	2015	2015	2015	2015
Analyte	MDL	Units	Avg	Avg	Avg	Avg	Avg	Avg	Avg
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
Acenaphthene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	30	UG/KG	ND	ND	ND	ND	ND	ND	ND
Anthracene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
Benzo[a]pyrene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
3,4-Benzo(b)fluoranthene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
Benzo[e]pyrene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
Benzo[g,h,i]perylene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
Benzo[k]fluoranthene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
Biphenyl	30	UG/KG	<30	<30	ND	ND	ND	ND	ND
Chrysene	40	UG/KG	ND	ND	ND	ND	ND	ND	ND
Dibenzo(a,h)anthracene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
2,6-Dimethylnaphthalene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
Fluorene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-CD)pyrene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
1-Methylphenanthrene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
1-Methylnaphthalene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
Naphthalene	30	UG/KG	ND	ND	ND	ND	ND	ND	ND
Perylene	30	UG/KG	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	30	UG/KG	ND	ND	ND	ND	ND	ND	ND
Pyrene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
2,3,5-Trimethylnaphthalene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
Base/Neutral Compounds			0	0	0	0	0	0	0

Source:			I-9	I-10	I-12	I-13	I-14	I-15	I-16
Date:			2015	2015	2015	2015	2015	2015	2015
Analyte	MDL	Units	Avg	Avg	Avg	Avg	Avg	Avg	Avg
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
Acenaphthene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	30	UG/KG	ND	ND	ND	ND	ND	ND	ND
Anthracene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
Benzo[a]pyrene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
3,4-Benzo(b)fluoranthene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
Benzo[e]pyrene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
Benzo[g,h,i]perylene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
Benzo[k]fluoranthene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
Biphenyl	30	UG/KG	<30	ND	ND	ND	ND	ND	ND
Chrysene	40	UG/KG	ND	ND	ND	ND	ND	ND	ND
Dibenzo(a,h)anthracene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
2,6-Dimethylnaphthalene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
Fluorene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-CD)pyrene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
1-Methylphenanthrene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
1-Methylnaphthalene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
Naphthalene	30	UG/KG	ND	ND	ND	ND	ND	ND	ND
Perylene	30	UG/KG	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	30	UG/KG	ND	ND	ND	ND	ND	ND	ND
Pyrene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
2,3,5-Trimethylnaphthalene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
Base/Neutral Compounds			0	0	0	0	0	0	0

ND=not detected

SOUTH BAY OCEAN OUTFALL MONITORING
SEDIMENT ANNUAL Base/Neutrals - International Stations

Annual 2015

Source:			I-18	I-20	I-21	I-22	I-23	I-27	I-28
Date:			2015	2015	2015	2015	2015	2015	2015
Analyte	MDL	Units	Avg	Avg	Avg	Avg	Avg	Avg	Avg
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
Acenaphthene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	30	UG/KG	ND	ND	ND	ND	ND	ND	ND
Anthracene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
Benzo[a]pyrene	20	UG/KG	ND	<20	ND	ND	ND	ND	ND
3,4-Benzo(b)fluoranthene	20	UG/KG	ND	<20	ND	ND	ND	ND	<20
Benzo[e]pyrene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
Benzo[g,h,i]perylene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
Benzo[k]fluoranthene	20	UG/KG	ND	<20	ND	ND	ND	ND	ND
Biphenyl	30	UG/KG	ND	<30	ND	<30	<30	ND	<30
Chrysene	40	UG/KG	ND	ND	ND	ND	ND	ND	<40
Dibenzo(a,h)anthracene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
2,6-Dimethylnaphthalene	20	UG/KG	ND	ND	ND	<20	ND	ND	ND
Fluoranthene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
Fluorene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-CD)pyrene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
1-Methylphenanthrene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
1-Methylnaphthalene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
Naphthalene	30	UG/KG	ND	ND	ND	ND	ND	ND	ND
Perylene	30	UG/KG	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	30	UG/KG	ND	ND	ND	ND	ND	ND	ND
Pyrene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
2,3,5-Trimethylnaphthalene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
Base/Neutral Compounds			0	0	0	0	0	0	0

Source:			I-29	I-30	I-31	I-33	I-34	I-35
Date:			2015	2015	2015	2015	2015	2015
Analyte	MDL	Units	Avg	Avg	Avg	Avg	Avg	Avg
=====	=====	=====	=====	=====	=====	=====	=====	=====
Acenaphthene	20	UG/KG	ND	ND	ND	ND	ND	ND
Acenaphthylene	30	UG/KG	ND	ND	ND	ND	ND	ND
Anthracene	20	UG/KG	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	20	UG/KG	ND	ND	ND	ND	ND	ND
Benzo[a]pyrene	20	UG/KG	ND	ND	ND	ND	ND	<20
3,4-Benzo(b)fluoranthene	20	UG/KG	ND	ND	ND	ND	ND	<20
Benzo[e]pyrene	20	UG/KG	ND	ND	ND	ND	ND	<20
Benzo[g,h,i]perylene	20	UG/KG	ND	ND	ND	ND	ND	<20
Benzo[k]fluoranthene	20	UG/KG	ND	ND	ND	ND	ND	ND
Biphenyl	30	UG/KG	<30	<30	ND	<30	<30	<30
Chrysene	40	UG/KG	ND	ND	ND	ND	ND	<40
Dibenzo(a,h)anthracene	20	UG/KG	ND	ND	ND	ND	ND	ND
2,6-Dimethylnaphthalene	20	UG/KG	<20	ND	ND	<20	<20	<20
Fluoranthene	20	UG/KG	<20	ND	ND	ND	ND	<20
Fluorene	20	UG/KG	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-CD)pyrene	20	UG/KG	ND	ND	ND	ND	ND	<20
1-Methylphenanthrene	20	UG/KG	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	20	UG/KG	ND	ND	ND	ND	ND	ND
1-Methylnaphthalene	20	UG/KG	ND	ND	ND	ND	ND	ND
Naphthalene	30	UG/KG	ND	ND	ND	ND	ND	ND
Perylene	30	UG/KG	ND	ND	ND	ND	ND	ND
Phenanthrene	30	UG/KG	ND	ND	ND	ND	ND	<30
Pyrene	20	UG/KG	<20	ND	ND	ND	ND	<20
2,3,5-Trimethylnaphthalene	20	UG/KG	ND	ND	ND	ND	ND	ND
=====	=====	=====	=====	=====	=====	=====	=====	=====
Base/Neutral Compounds			0	0	0	0	0	0

ND=not detected

SOUTH BAY OCEAN OUTFALL MONITORING
SEDIMENT ANNUAL - Random Stations

Sulfide and Total Volatile Solids Analysis

Annual 2015

Source:		8401	8402	8403	8404	8405	8406
Analyte	MDL Units	20-JUL-2015	15-JUL-2015	20-JUL-2015	14-JUL-2015	20-JUL-2015	15-JUL-2015
=====	=====	=====	=====	=====	=====	=====	=====
Sulfides-Total	.14 MG/KG	4.26	35.30	3.13	5.77	19.20	5.11
Total Volatile Solids	.11 WT%	2.30	5.10	0.80	2.70	2.80	1.50

Source:		8407	8409	8410	8411	8413	8414
Analyte	MDL Units	20-JUL-2015	15-JUL-2015	07-JUL-2015	14-JUL-2015	07-JUL-2015	15-JUL-2015
=====	=====	=====	=====	=====	=====	=====	=====
Sulfides-Total	.14 MG/KG	4.33	3.22	2.08	7.02	1.66	3.44
Total Volatile Solids	.11 WT%	2.60	1.30	1.20	2.10	0.90	1.40

Source:		8415	8416	8417	8418	8419	8420
Analyte	MDL Units	30-JUL-2015	14-JUL-2015	20-JUL-2015	15-JUL-2015	20-JUL-2015	14-JUL-2015
=====	=====	=====	=====	=====	=====	=====	=====
Sulfides-Total	.14 MG/KG	3.76	1.99	28.70	7.23	2.42	3.55
Total Volatile Solids	.11 WT%	2.20	1.20	3.30	3.30	0.90	2.10

Source:		8421	8422	8423	8424	8425	8426
Analyte	MDL Units	07-JUL-2015	07-JUL-2015	23-JUL-2015	23-JUL-2015	07-JUL-2015	15-JUL-2015
=====	=====	=====	=====	=====	=====	=====	=====
Sulfides-Total	.14 MG/KG	1.68	0.68	2.69	3.23	1.87	1.51
Total Volatile Solids	.11 WT%	0.80	0.70	2.80	3.10	0.90	0.60

Source:		8427	8428	8429	8430	8431	8433
Analyte	MDL Units	10-JUL-2015	15-JUL-2015	07-JUL-2015	15-JUL-2015	20-JUL-2015	30-JUL-2015
=====	=====	=====	=====	=====	=====	=====	=====
Sulfides-Total	.14 MG/KG	3.56	25.90	3.80	3.93	2.19	3.18
Total Volatile Solids	.11 WT%	2.25	5.10	0.90	0.80	2.60	3.00

Source:		8434	8435	8436	8437	8438	8439
Analyte	MDL Units	14-JUL-2015	10-JUL-2015	15-JUL-2015	23-JUL-2015	10-JUL-2015	23-JUL-2015
=====	=====	=====	=====	=====	=====	=====	=====
Sulfides-Total	.14 MG/KG	10.40	14.10	32.80	3.81	4.12	4.06
Total Volatile Solids	.11 WT%	2.40	7.90	6.60	5.30	7.90	5.70

Source:		8441	8442	8444	8454
Analyte	MDL Units	20-JUL-2015	20-JUL-2015	30-JUL-2015	21-JUL-2015
=====	=====	=====	=====	=====	=====
Sulfides-Total	.14 MG/KG	2.75	4.55	2.41	0.19
Total Volatile Solids	.11 WT%	1.30	2.70	1.00	5.90

ND=not detected

SOUTH BAY OCEAN OUTFALL MONITORING
SEDIMENT - Grain Size - Random Stations
(all values are in percent distribution)

Annual 2015

Source:		8401	8403	8404	8405	8406	8407
Date:		20-JUL-2015	20-JUL-2015	14-JUL-2015	20-JUL-2015	15-JUL-2015	20-JUL-2015
Analyte	MDL Units	P797182	P797186	P796379	P797194	P796452	P797196
=====	=====	=====	=====	=====	=====	=====	=====
>0.5 to 1.0		0.000	0.000	0.000	0.000	0.000	0.000
>1.0 to 2.0		0.000	0.000	0.000	0.000	0.000	0.000
>2.0 to 3.9		0.279	0.000	0.129	0.181	0.158	0.106
>3.9 to 7.8		4.200	0.585	4.350	5.380	4.600	3.540
>7.8 to 15.6		9.710	0.000	11.300	14.100	8.880	10.800
>15.6 to 31		6.270	0.000	6.690	8.250	4.820	8.210
>31 to 62.5		19.700	0.635	21.300	19.800	9.730	22.700
>62.5 to 125		39.200	26.100	46.500	42.600	34.100	43.100
>125 to 250		9.770	64.400	9.600	9.640	32.000	11.100
>250 to 500		3.510	8.170	0.134	0.141	5.710	0.567
>500 to 1000		5.420	0.077	0.000	0.000	0.000	0.000
>1000 to 2000		1.910	0.000	0.000	0.000	0.000	0.000
>2000*		ND	ND	ND	ND	ND	ND
=====	=====	=====	=====	=====	=====	=====	=====
Totals:		99.969	99.967	100.003	100.092	99.998	100.123

Source:		8409	8410	8411	8413	8414	8415
Date:		15-JUL-2015	07-JUL-2015	14-JUL-2015	07-JUL-2015	15-JUL-2015	30-JUL-2015
Analyte	MDL Units	P796457	P794772	P796387	P794780	P796459	P799062
=====	=====	=====	=====	=====	=====	=====	=====
>0.5 to 1.0		0.000	0.000	0.000	0.000	0.000	0.000
>1.0 to 2.0		0.000	0.000	0.000	0.000	0.000	0.000
>2.0 to 3.9		0.000	0.120	0.116	0.000	0.000	0.154
>3.9 to 7.8		1.770	3.800	3.350	0.819	2.810	3.900
>7.8 to 15.6		4.420	9.330	9.250	0.582	8.400	10.300
>15.6 to 31		4.060	5.140	6.990	0.374	7.570	7.300
>31 to 62.5		23.600	8.110	20.800	13.700	18.100	18.800
>62.5 to 125		53.800	17.000	45.300	56.500	37.400	43.600
>125 to 250		11.700	14.900	13.700	17.500	20.900	14.900
>250 to 500		0.693	22.000	0.579	6.300	4.860	1.070
>500 to 1000		0.000	18.000	0.000	4.170	0.000	0.000
>1000 to 2000		0.000	1.660	0.000	0.067	0.000	0.000
>2000*		ND	ND	ND	ND	ND	ND
=====	=====	=====	=====	=====	=====	=====	=====
Totals:		100.043	100.060	100.085	100.012	100.040	100.024

ND=not detected

*= A value in this field reflects a percentage of 30 grams remaining on a 2000 micron sieve. This value must be subtracted from the total percentage.

SOUTH BAY OCEAN OUTFALL MONITORING
SEDIMENT- Grain Size - Random Stations
(all values are in percent distribution)

Annual 2015

Source:		8416	8417	8418	8419	8420	8421
Date:		14-JUL-2015	20-JUL-2015	15-JUL-2015	20-JUL-2015	14-JUL-2015	07-JUL-2015
Analyte	MDL Units	P796389	P797202	P796466	P797208	P796397	P794783
=====	=====	=====	=====	=====	=====	=====	=====
>0.5 to 1.0		0.000	0.000	0.000	0.000	0.000	0.000
>1.0 to 2.0		0.000	0.000	0.000	0.000	0.000	0.000
>2.0 to 3.9		0.146	0.389	0.161	0.105	0.117	0.138
>3.9 to 7.8		2.650	6.580	5.560	0.591	3.530	1.990
>7.8 to 15.6		2.560	17.200	15.900	0.000	10.500	2.040
>15.6 to 31		0.339	9.450	9.440	0.027	9.060	1.060
>31 to 62.5		2.010	12.600	20.000	7.850	27.400	13.300
>62.5 to 125		43.800	31.300	38.900	64.600	40.600	64.800
>125 to 250		43.800	20.000	9.970	24.400	8.710	15.900
>250 to 500		4.680	2.600	0.186	2.450	0.158	0.756
>500 to 1000		0.000	0.000	0.000	0.000	0.000	0.000
>1000 to 2000		0.000	0.000	0.000	0.000	0.000	0.000
>2000*		ND	ND	ND	ND	ND	ND
=====	=====	=====	=====	=====	=====	=====	=====
Totals:		99.985	100.119	100.117	100.023	100.075	99.984

Source:		8422	8425	8426	8429	8431	8433
Date:		07-JUL-2015	07-JUL-2015	15-JUL-2015	07-JUL-2015	20-JUL-2015	30-JUL-2015
Analyte	MDL Units	P794787	P794794	P796469	P794799	P797212	P799068
=====	=====	=====	=====	=====	=====	=====	=====
>0.5 to 1.0		0.000	0.000	0.000	0.000	0.000	0.000
>1.0 to 2.0		0.000	0.000	0.000	0.000	0.000	0.000
>2.0 to 3.9		0.000	0.165	0.106	0.000	0.391	0.167
>3.9 to 7.8		0.498	2.470	0.875	1.260	5.020	5.000
>7.8 to 15.6		1.410	2.020	0.266	1.690	7.790	16.000
>15.6 to 31		0.807	0.668	0.000	1.340	4.120	14.700
>31 to 62.5		0.995	11.200	0.610	11.300	8.110	30.800
>62.5 to 125		4.750	67.700	26.700	56.100	20.800	28.700
>125 to 250		23.600	14.900	64.400	25.500	24.500	4.470
>250 to 500		51.600	0.859	7.070	2.750	21.100	0.082
>500 to 1000		15.800	0.000	0.000	0.000	8.090	0.000
>1000 to 2000		0.600	0.000	0.000	0.000	0.059	0.000
>2000*		ND	ND	ND	ND	ND	ND
=====	=====	=====	=====	=====	=====	=====	=====
Totals:		100.060	99.982	100.027	99.940	99.980	99.919

ND=not detected

*= A value in this field reflects a percentage of 30 grams remaining on a 2000 micron sieve. This value must be subtracted from the total percentage.

SOUTH BAY OCEAN OUTFALL MONITORING
SEDIMENT- Grain Size - Random Stations
(all values are in percent distribution)

Annual 2015

Source:		8434	8435	8436	8437	8438	8439
Date:		14-JUL-2015	10-JUL-2015	15-JUL-2015	23-JUL-2015	10-JUL-2015	23-JUL-2015
Analyte	MDL Units	P796401	P795468	P796485	P797731	P795469	P797732
=====	=====	=====	=====	=====	=====	=====	=====
>0.5 to 1.0		0.000	0.000	0.000	0.000	0.000	0.000
>1.0 to 2.0		0.000	0.000	0.000	0.000	0.000	0.000
>2.0 to 3.9		0.167	0.107	0.168	0.101	0.188	0.107
>3.9 to 7.8		4.650	5.630	7.520	5.060	8.840	5.810
>7.8 to 15.6		13.600	23.000	26.300	19.100	30.900	22.900
>15.6 to 31		10.700	18.100	17.000	13.200	15.900	15.500
>31 to 62.5		24.500	23.800	20.900	21.600	12.700	20.600
>62.5 to 125		36.900	23.600	21.500	33.400	20.000	27.700
>125 to 250		9.050	5.540	6.200	7.380	10.600	7.230
>250 to 500		0.531	0.102	0.522	0.104	0.802	0.159
>500 to 1000		0.000	0.000	0.000	0.000	0.000	0.000
>1000 to 2000		0.000	0.000	0.000	0.000	0.000	0.000
>2000*		ND	ND	ND	ND	ND	ND
=====	=====	=====	=====	=====	=====	=====	=====
Totals:		100.098	99.879	100.110	99.945	99.930	100.006

Source:		8441	8442	8444	8454
Date:		20-JUL-2015	20-JUL-2015	30-JUL-2015	21-JUL-2015
Analyte	MDL Units	P797217	P797225	P799072	P797322
=====	=====	=====	=====	=====	=====
>0.5 to 1.0		0.000	0.000	0.000	0.000
>1.0 to 2.0		0.000	0.000	0.000	0.000
>2.0 to 3.9		0.157	0.120	0.119	0.127
>3.9 to 7.8		3.720	4.420	3.030	5.590
>7.8 to 15.6		4.910	14.100	4.590	17.100
>15.6 to 31		1.700	10.900	1.730	9.730
>31 to 62.5		8.310	27.500	4.940	10.100
>62.5 to 125		58.800	38.000	41.400	21.300
>125 to 250		21.600	4.930	38.700	28.400
>250 to 500		0.793	0.000	5.430	7.630
>500 to 1000		0.000	0.000	0.000	0.077
>1000 to 2000		0.000	0.000	0.000	0.000
>2000*		ND	ND	ND	ND
=====	=====	=====	=====	=====	=====
Totals:		99.990	99.970	99.939	100.054

ND=not detected

*= A value in this field reflects a percentage of 30 grams remaining on a 2000 micron sieve. This value must be subtracted from the total percentage.

SOUTH BAY OCEAN OUTFALL MONITORING
SEDIMENT- Grain Size (Sieve) - Random Stations
(all values are in percent distribution)

Annual 2015

Source:		8402	8423	8424	8427	8428
Sample ID:		P796444	P797718	P797723	P795461	P796476
Analyte	MDL Units	15-JUL-2015	23-JUL-2015	23-JUL-2015	10-JUL-2015	15-JUL-2015
=====	===	=====	=====	=====	=====	=====
<63 microns, Phi<4		58.7	45.1	13.7	29.6	56.4
>63 to 125 microns, Phi>4		11.9	38.3	24.8	27.5	18.4
>125 to 250 microns, Phi>3		21.2	6.2	16.5	7.6	10.4
>250 to 500 microns, Phi>2		6.1	2.0	24.5	4.0	3.2
>500 to 1000 microns, Phi>1		0.8	1.3	10.4	8.5	2.5
>1000 to 2000 microns, Phi>0		0.4	1.2	3.5	20.1	3.3
>2000 microns, Phi>-1		0.9	5.8	6.5	2.7	5.8
=====	===	=====	=====	=====	=====	=====
Totals:		100.0	99.9	99.9	100.0	100.0

Source:		8430
Sample ID:		P796481
Analyte	MDL Units	15-JUL-2015
=====	===	=====
<63 microns, Phi<4		4.1
>63 to 125 microns, Phi>4		40.1
>125 to 250 microns, Phi>3		51.8
>250 to 500 microns, Phi>2		3.2
>500 to 1000 microns, Phi>1		0.6
>1000 to 2000 microns, Phi>0		0.2
>2000 microns, Phi>-1		0.0
=====	===	=====
Totals:		100.0

SOUTH BAY WATER RECLAMATION PLANT
SEDIMENT ANNUAL Total Organic Carbon/Total Nitrogen - Random Stations

Annual 2015

Source:			8401	8402	8403	8404	8405	8406
Analyte	MDL	Units	20-JUL-2015	15-JUL-2015	20-JUL-2015	14-JUL-2015	20-JUL-2015	15-JUL-2015
=====	=====	=====	=====	=====	=====	=====	=====	=====
Total Nitrogen	.004	WT%	0.015	0.087	ND	0.026	0.035	0.026
Total Organic Carbon	.04	WT%	0.61	1.39	0.21	0.62	0.64	0.37

Source:			8407	8409	8410	8411	8413	8414
Analyte	MDL	Units	20-JUL-2015	15-JUL-2015	07-JUL-2015	14-JUL-2015	07-JUL-2015	15-JUL-2015
=====	=====	=====	=====	=====	=====	=====	=====	=====
Total Nitrogen	.004	WT%	0.026	0.012	0.009	0.038	0.013	0.022
Total Organic Carbon	.04	WT%	0.61	0.33	0.39	0.44	0.17	0.31

Source:			8415	8416	8417	8418	8419	8420
Analyte	MDL	Units	30-JUL-2015	14-JUL-2015	20-JUL-2015	15-JUL-2015	20-JUL-2015	14-JUL-2015
=====	=====	=====	=====	=====	=====	=====	=====	=====
Total Nitrogen	.004	WT%	0.039	0.013	0.039	0.055	0.006	0.035
Total Organic Carbon	.04	WT%	0.57	0.20	0.78	0.97	0.20	0.55

Source:			8421	8422	8423	8424	8425	8426
Analyte	MDL	Units	07-JUL-2015	07-JUL-2015	23-JUL-2015	23-JUL-2015	07-JUL-2015	15-JUL-2015
=====	=====	=====	=====	=====	=====	=====	=====	=====
Total Nitrogen	.004	WT%	0.017	0.010	0.016	0.044	0.027	ND
Total Organic Carbon	.04	WT%	0.18	0.14	0.72	5.39	0.21	ND

Source:			8427	8428	8429	8430	8431	8433
Analyte	MDL	Units	10-JUL-2015	15-JUL-2015	07-JUL-2015	15-JUL-2015	20-JUL-2015	30-JUL-2015
=====	=====	=====	=====	=====	=====	=====	=====	=====
Total Nitrogen	.004	WT%	0.043	0.034	0.010	0.013	0.023	0.048
Total Organic Carbon	.04	WT%	0.97	1.42	0.15	0.15	4.55	0.80

Source:			8434	8435	8436	8437	8438	8439
Analyte	MDL	Units	14-JUL-2015	10-JUL-2015	15-JUL-2015	23-JUL-2015	10-JUL-2015	23-JUL-2015
=====	=====	=====	=====	=====	=====	=====	=====	=====
Total Nitrogen	.004	WT%	0.030	0.108	0.074	0.115	0.048	0.100
Total Organic Carbon	.04	WT%	0.58	2.63	1.87	1.39	2.87	1.40

Source:			8441	8442	8444	8454
Analyte	MDL	Units	20-JUL-2015	20-JUL-2015	30-JUL-2015	21-JUL-2015
=====	=====	=====	=====	=====	=====	=====
Total Nitrogen	.004	WT%	0.027	0.025	0.027	0.032
Total Organic Carbon	.04	WT%	0.31	0.63	0.21	3.55

ND=not detected

SOUTH BAY WASTEWATER RECLAMATION PLANT
ANNUAL OCEAN SEDIMENT - RANDOM

Trace Metals

Annual 2015

Source:			8401	8402	8403	8404	8405	8406	8407
Date:			20-JUL-2015	15-JUL-2015	20-JUL-2015	14-JUL-2015	20-JUL-2015	15-JUL-2015	20-JUL-2015
Analyte	MDL	Units							
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
Aluminum	2	MG/KG	8710	15100	4360	9720	10800	6080	11000
Antimony	.3	MG/KG	0.6	0.8	0.3	0.6	0.6	0.4	0.5
Arsenic	.33	MG/KG	2.35	2.65	1.27	2.36	2.79	2.00	3.10
Beryllium	.01	MG/KG	ND	ND	ND	ND	ND	ND	ND
Cadmium	.06	MG/KG	0.31	0.14	ND	0.24	0.36	ND	0.19
Chromium	.1	MG/KG	19.5	31.7	8.0	19.4	23.3	12.5	21.4
Copper	.2	MG/KG	5.8	20.4	1.1	7.5	7.5	5.2	7.4
Iron	9	MG/KG	12700	19700	6770	13400	15900	9350	15200
Lead	.8	MG/KG	4.7	8.4	1.7	5.2	6.2	3.9	5.8
Manganese	.08	MG/KG	98.5	153	92.6	103	128	67.3	150
Mercury	.004	MG/KG	0.023	0.082	<0.004	0.027	0.028	0.027	0.029
Nickel	.1	MG/KG	9.5	18.0	2.9	10.7	11.1	6.1	9.2
Selenium	.24	MG/KG	ND	0.39	ND	ND	ND	ND	ND
Silver	.04	MG/KG	ND	ND	ND	ND	ND	ND	ND
Thallium	.5	MG/KG	ND	ND	ND	0.5	ND	ND	ND
Tin	.3	MG/KG	0.8	1.6	ND	0.9	0.8	0.7	0.9
Zinc	.25	MG/KG	28.2	48.7	17.7	29.9	37.2	21.1	41.6

Source:			8409	8410	8411	8413	8414	8415	8416
Date:			15-JUL-2015	07-JUL-2015	14-JUL-2015	07-JUL-2015	15-JUL-2015	30-JUL-2015	14-JUL-2015
Analyte	MDL	Units							
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
Aluminum	2	MG/KG	8590	4790	8390	5720	9440	9380	4360
Antimony	.3	MG/KG	0.4	ND	0.8	<0.3	0.7	0.4	ND
Arsenic	.33	MG/KG	2.29	1.76	2.14	1.70	2.36	3.08	1.83
Beryllium	.01	MG/KG	ND	ND	ND	ND	ND	ND	ND
Cadmium	.06	MG/KG	ND	ND	0.07	ND	0.29	0.19	ND
Chromium	.1	MG/KG	14.7	9.4	15.9	13.5	15.8	18.4	7.8
Copper	.2	MG/KG	4.6	3.3	6.5	1.7	5.6	5.2	1.8
Iron	9	MG/KG	9770	6340	11200	9890	12000	13000	6000
Lead	.8	MG/KG	3.4	3.3	3.9	2.7	4.3	4.6	3.1
Manganese	.08	MG/KG	91.2	52.5	94.3	76.6	116	127	71.8
Mercury	.004	MG/KG	0.014	0.016	0.023	0.004	0.024	0.036	0.01
Nickel	.1	MG/KG	7.0	5.7	8.5	4.1	7.4	7.9	3.1
Selenium	.24	MG/KG	ND	ND	ND	ND	ND	ND	ND
Silver	.04	MG/KG	ND	ND	ND	ND	ND	ND	ND
Thallium	.5	MG/KG	ND	ND	ND	ND	ND	ND	ND
Tin	.3	MG/KG	0.6	0.5	0.7	0.5	1.1	0.8	0.5
Zinc	.25	MG/KG	24.0	14.8	26.4	15.9	28.8	30.5	13.3

ND= not detected

SOUTH BAY WASTEWATER RECLAMATION PLANT
ANNUAL OCEAN SEDIMENT - RANDOM

Trace Metals

Annual 2015

Source:			8417	8418	8419	8420	8421	8422	8423
Date:			20-JUL-2015	15-JUL-2015	20-JUL-2015	14-JUL-2015	07-JUL-2015	07-JUL-2015	23-JUL-2015
Analyte	MDL	Units							
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
Aluminum	2	MG/KG	11500	10800	4350	10500	6980	1880	10600
Antimony	.3	MG/KG	0.7	0.6	ND	0.6	ND	ND	0.5
Arsenic	.33	MG/KG	3.51	2.24	1.51	2.95	1.71	3.09	3.30
Beryllium	.01	MG/KG	ND	ND	ND	ND	ND	ND	ND
Cadmium	.06	MG/KG	0.33	0.07	ND	ND	ND	ND	ND
Chromium	.1	MG/KG	21.8	23.5	10.8	20.2	11.7	8.4	22.2
Copper	.2	MG/KG	8.3	11.0	0.7	7.3	2.5	ND	6.7
Iron	9	MG/KG	15800	14900	8700	14100	7310	6120	15700
Lead	.8	MG/KG	5.5	7.1	2.6	5.3	2.1	2.8	5.6
Manganese	.08	MG/KG	149	117	107	118	72.7	19.7	119
Mercury	.004	MG/KG	0.023	0.060	ND	0.027	0.004	ND	0.029
Nickel	.1	MG/KG	10.5	11.6	2.9	10.3	5.0	1.8	10.0
Selenium	.24	MG/KG	0.24	0.30	ND	ND	ND	ND	ND
Silver	.04	MG/KG	ND	ND	ND	ND	ND	ND	ND
Thallium	.5	MG/KG	ND	ND	ND	ND	ND	ND	ND
Tin	.3	MG/KG	0.7	1.7	0.4	0.8	0.5	0.6	0.9
Zinc	.25	MG/KG	38.3	34.6	15.1	31.1	16.4	7.4	32.3

Source:			8424	8425	8426	8427	8428	8429	8430
Date:			23-JUL-2015	07-JUL-2015	15-JUL-2015	10-JUL-2015	15-JUL-2015	07-JUL-2015	15-JUL-2015
Analyte	MDL	Units							
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
Aluminum	2	MG/KG	7080	7190	3220	6570	19000	6140	5330
Antimony	.3	MG/KG	0.4	0.4	ND	0.4	1.5	0.6	0.6
Arsenic	.33	MG/KG	3.52	1.99	1.58	3.19	3.06	2.30	1.79
Beryllium	.01	MG/KG	ND	ND	ND	ND	ND	ND	ND
Cadmium	.06	MG/KG	ND	0.06	ND	ND	0.15	ND	ND
Chromium	.1	MG/KG	11.9	12.2	6.4	19.0	36.8	11.5	8.9
Copper	.2	MG/KG	2.4	2.6	0.7	5.4	36.2	2.9	2.6
Iron	9	MG/KG	7360	7680	5180	12900	23200	7710	7210
Lead	.8	MG/KG	2.3	2.7	1.5	3.8	11.4	2.1	1.8
Manganese	.08	MG/KG	74.90	76.30	64.80	67.20	188.00	79.70	83.30
Mercury	.004	MG/KG	0.013	0.004	0.005	0.017	0.179	0.004	0.007
Nickel	.1	MG/KG	5.0	5.2	2.2	6.9	15.2	3.4	2.6
Selenium	.24	MG/KG	ND	ND	ND	0.25	0.46	ND	ND
Silver	.04	MG/KG	ND	ND	ND	ND	ND	ND	ND
Thallium	.5	MG/KG	ND	ND	ND	ND	ND	ND	ND
Tin	.3	MG/KG	0.5	0.4	ND	0.7	2.0	0.4	0.4
Zinc	.25	MG/KG	16.2	17.0	9.4	22.2	69.9	20.3	20.2

ND= not detected

SOUTH BAY WASTEWATER RECLAMATION PLANT
ANNUAL OCEAN SEDIMENT - RANDOM

Trace Metals

Annual 2015

Source:			8431	8433	8434	8435	8436	8437	8438
Date:			20-JUL-2015	30-JUL-2015	14-JUL-2015	10-JUL-2015	15-JUL-2015	23-JUL-2015	10-JUL-2015
Analyte	MDL	Units							
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
Aluminum	2	MG/KG	6300	12500	11400	17400	14700	13200	15800
Antimony	.3	MG/KG	0.7	1.0	0.9	1.2	1.3	1.0	1.7
Arsenic	.33	MG/KG	3.08	3.38	3.34	3.39	3.23	3.07	4.45
Beryllium	.01	MG/KG	ND	ND	ND	ND	ND	ND	ND
Cadmium	.06	MG/KG	ND	ND	0.20	0.21	0.16	0.32	0.51
Chromium	.1	MG/KG	17.2	24.5	21.5	38.3	32.1	30.9	58.3
Copper	.2	MG/KG	4.3	12.1	12.1	26.9	30.4	16.2	24.6
Iron	9	MG/KG	13900	16800	14100	20500	18500	17800	27000
Lead	.8	MG/KG	3.5	6.2	5.8	7.1	8.6	5.6	4.8
Manganese	.08	MG/KG	90.2	139	136	166	140	131	136
Mercury	.004	MG/KG	0.014	0.044	0.049	0.069	0.106	0.044	0.034
Nickel	.1	MG/KG	4.4	9.6	8.1	18.0	15.1	12.1	18.5
Selenium	.24	MG/KG	ND	ND	ND	0.74	0.72	0.64	1.23
Silver	.04	MG/KG	ND	ND	ND	ND	ND	ND	ND
Thallium	.5	MG/KG	ND	ND	ND	ND	ND	ND	ND
Tin	.3	MG/KG	0.7	1.3	1.3	1.5	1.5	1.1	1.0
Zinc	.25	MG/KG	28.5	42.4	41.7	58.3	54.5	46.4	60.7

Source:			8439	8441	8442	8444	8454
Date:			23-JUL-2015	20-JUL-2015	20-JUL-2015	30-JUL-2015	21-JUL-2015
Analyte	MDL	Units					
=====	=====	=====	=====	=====	=====	=====	=====
Aluminum	2	MG/KG	14200	4710	11200	3550	15200
Antimony	.3	MG/KG	1.3	0.5	1.0	0.5	2.6
Arsenic	.33	MG/KG	2.98	2.35	2.74	2.10	9.03
Beryllium	.01	MG/KG	ND	ND	ND	ND	0.06
Cadmium	.06	MG/KG	0.32	0.13	0.09	0.07	0.22
Chromium	.1	MG/KG	35.1	10.5	22.2	9.2	98.2
Copper	.2	MG/KG	18.4	2.9	9.3	1.9	16.6
Iron	9	MG/KG	18600	6460	14900	5940	40400
Lead	.8	MG/KG	5.2	2.6	4.8	2.3	5.5
Manganese	.08	MG/KG	141	76.3	126	70.8	89.6
Mercury	.004	MG/KG	0.038	0.011	0.031	0.009	0.024
Nickel	.1	MG/KG	13.7	2.9	7.9	2.2	16.2
Selenium	.24	MG/KG	0.76	ND	0.29	ND	1.18
Silver	.04	MG/KG	ND	ND	ND	ND	ND
Thallium	.5	MG/KG	ND	ND	ND	ND	ND
Tin	.3	MG/KG	1.1	0.5	1.0	0.5	1.1
Zinc	.25	MG/KG	51.1	17.4	36.9	13.9	52.7

ND= not detected

SOUTH BAY OCEAN OUTFALL MONITORING
SEDIMENT ANNUAL Chlorinated Pesticide Analysis - Random Stations

Annual 2015

Source:			8401	8402	8403	8404	8405	8406
Analyte	MDL	Units	20-JUL-2015	15-JUL-2015	20-JUL-2015	14-JUL-2015	20-JUL-2015	15-JUL-2015
=====	=====	=====	=====	=====	=====	=====	=====	=====
Aldrin	70	NG/KG	ND	ND	ND	ND	ND	ND
Dieldrin	340	NG/KG	ND	ND	ND	ND	ND	ND
BHC, Alpha isomer	100	NG/KG	ND	ND	ND	ND	ND	ND
BHC, Beta isomer	50	NG/KG	ND	ND	ND	ND	ND	ND
BHC, Gamma isomer	190	NG/KG	ND	ND	ND	ND	ND	ND
BHC, Delta isomer	220	NG/KG	ND	ND	ND	ND	ND	ND
p,p-DDD	160	NG/KG	ND	ND	ND	ND	ND	ND
p,p-DDE	260	NG/KG	630	570	ND	430	630	275
p,p-DDT	70	NG/KG	ND	ND	ND	ND	ND	ND
o,p-DDD	100	NG/KG	ND	ND	ND	ND	ND	ND
o,p-DDE	60	NG/KG	ND	ND	ND	ND	ND	ND
o,p-DDT	110	NG/KG	ND	ND	ND	ND	ND	ND
Heptachlor	120	NG/KG	ND	ND	ND	ND	ND	ND
Heptachlor epoxide	300	NG/KG	ND	ND	ND	ND	ND	ND
Alpha (cis) Chlordane	160	NG/KG	ND	ND	ND	ND	ND	ND
Gamma (trans) Chlordane	190	NG/KG	ND	ND	ND	ND	ND	ND
Alpha Chlordene		NG/KG	NA	NA	NA	NA	NA	NA
Gamma Chlordene		NG/KG	NA	NA	NA	NA	NA	NA
Oxychlordane	1200	NG/KG	ND	ND	ND	ND	ND	ND
Trans Nonachlor	240	NG/KG	ND	ND	ND	ND	ND	ND
Cis Nonachlor	380	NG/KG	ND	ND	ND	ND	ND	ND
Alpha Endosulfan	720	NG/KG	ND	ND	ND	ND	ND	ND
Beta Endosulfan	780	NG/KG	ND	ND	ND	ND	ND	ND
Endosulfan Sulfate	1100	NG/KG	ND	ND	ND	ND	ND	ND
Endrin	510	NG/KG	ND	ND	ND	ND	ND	ND
Endrin aldehyde	2400	NG/KG	ND	ND	ND	ND	ND	ND
Mirex	60	NG/KG	ND	ND	ND	ND	ND	ND
Methoxychlor	90	NG/KG	ND	ND	ND	ND	ND	ND
=====	=====	=====	=====	=====	=====	=====	=====	=====
Aldrin + Dieldrin	340	NG/KG	0	0	0	0	0	0
Hexachlorocyclohexanes	220	NG/KG	0	0	0	0	0	0
DDT and derivatives	260	NG/KG	630	570	0	430	630	275
Chlordane + related cmpds.	1200	NG/KG	0	0	0	0	0	0
=====	=====	=====	=====	=====	=====	=====	=====	=====
Chlorinated Hydrocarbons	2400	NG/KG	630	570	0	430	630	275

ND=not detected

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 OCEAN OUTFALL MONITORING
SEDIMENT ANNUAL Chlorinated Pesticide Analysis - Random Stations

Annual 2015

Source:			8407	8409	8410	8411	8413	8414
Analyte	MDL	Units	20-JUL-2015	15-JUL-2015	07-JUL-2015	14-JUL-2015	07-JUL-2015	15-JUL-2015
=====	=====	=====	=====	=====	=====	=====	=====	=====
Aldrin	70	NG/KG	ND	ND	ND	ND	ND	ND
Dieldrin	340	NG/KG	ND	ND	ND	ND	ND	ND
BHC, Alpha isomer	100	NG/KG	ND	ND	ND	ND	ND	ND
BHC, Beta isomer	50	NG/KG	ND	ND	ND	ND	ND	ND
BHC, Gamma isomer	190	NG/KG	ND	ND	ND	ND	ND	ND
BHC, Delta isomer	220	NG/KG	ND	ND	ND	ND	ND	ND
p,p-DDD	160	NG/KG	ND	270	ND	ND	ND	ND
p,p-DDE	260	NG/KG	460	2000	490	410	ND	E220
p,p-DDT	70	NG/KG	ND	ND	ND	ND	ND	ND
o,p-DDD	100	NG/KG	ND	ND	ND	ND	ND	ND
o,p-DDE	60	NG/KG	ND	ND	ND	ND	ND	ND
o,p-DDT	110	NG/KG	ND	ND	ND	ND	ND	ND
Heptachlor	120	NG/KG	ND	ND	ND	ND	ND	ND
Heptachlor epoxide	300	NG/KG	ND	ND	ND	ND	ND	ND
Alpha (cis) Chlordane	160	NG/KG	ND	ND	ND	ND	ND	ND
Gamma (trans) Chlordane	190	NG/KG	ND	ND	ND	ND	ND	ND
Alpha Chlordene		NG/KG	NA	NA	NA	NA	NA	NA
Gamma Chlordene		NG/KG	NA	NA	NA	NA	NA	NA
Oxychlordane	1200	NG/KG	ND	ND	ND	ND	ND	ND
Trans Nonachlor	240	NG/KG	ND	ND	ND	ND	ND	ND
Cis Nonachlor	380	NG/KG	ND	ND	ND	ND	ND	ND
Alpha Endosulfan	720	NG/KG	ND	ND	ND	ND	ND	ND
Beta Endosulfan	780	NG/KG	ND	ND	ND	ND	ND	ND
Endosulfan Sulfate	1100	NG/KG	ND	ND	ND	ND	ND	ND
Endrin	510	NG/KG	ND	ND	ND	ND	ND	ND
Endrin aldehyde	2400	NG/KG	ND	ND	ND	ND	ND	ND
Mirex	60	NG/KG	ND	ND	ND	ND	ND	ND
Methoxychlor	90	NG/KG	ND	ND	ND	ND	ND	ND
=====	=====	=====	=====	=====	=====	=====	=====	=====
Aldrin + Dieldrin	340	NG/KG	0	0	0	0	0	0
Hexachlorocyclohexanes	220	NG/KG	0	0	0	0	0	0
DDT and derivatives	260	NG/KG	460	2270	490	410	0	0
Chlordane + related cmpds.	1200	NG/KG	0	0	0	0	0	0
=====	=====	=====	=====	=====	=====	=====	=====	=====
Chlorinated Hydrocarbons	2400	NG/KG	460	2270	490	410	0	0

ND=not detected

NA=not analyzed

E=Estimated value below MDL, but qualified

Standards for alpha and gamma chlordene are no longer available in the U.S. for the analysis of these compounds.

SOUTH BAY OCEAN OUTFALL MONITORING
SEDIMENT ANNUAL Chlorinated Pesticide Analysis - Random Stations

Annual 2015

Source:			8415	8416	8417	8418	8419	8420
Analyte	MDL	Units	30-JUL-2015	14-JUL-2015	20-JUL-2015	15-JUL-2015	20-JUL-2015	14-JUL-2015
=====	=====	=====	=====	=====	=====	=====	=====	=====
Aldrin	70	NG/KG	ND	ND	ND	ND	ND	ND
Dieldrin	340	NG/KG	ND	ND	ND	ND	ND	ND
BHC, Alpha isomer	100	NG/KG	ND	ND	ND	ND	ND	ND
BHC, Beta isomer	50	NG/KG	ND	ND	ND	ND	ND	ND
BHC, Gamma isomer	190	NG/KG	ND	ND	ND	ND	ND	ND
BHC, Delta isomer	220	NG/KG	ND	ND	ND	ND	ND	ND
p,p-DDD	160	NG/KG	E140	<160	ND	ND	ND	ND
p,p-DDE	260	NG/KG	460	ND	400	490	ND	430
p,p-DDT	70	NG/KG	ND	ND	ND	ND	ND	ND
o,p-DDD	100	NG/KG	ND	ND	ND	ND	ND	ND
o,p-DDE	60	NG/KG	ND	ND	ND	ND	ND	ND
o,p-DDT	110	NG/KG	ND	ND	ND	ND	ND	ND
Heptachlor	120	NG/KG	ND	ND	ND	ND	ND	ND
Heptachlor epoxide	300	NG/KG	ND	ND	ND	ND	ND	ND
Alpha (cis) Chlordane	160	NG/KG	ND	ND	ND	ND	ND	ND
Gamma (trans) Chlordane	190	NG/KG	ND	ND	ND	ND	ND	ND
Alpha Chlordene		NG/KG	NA	NA	NA	NA	NA	NA
Gamma Chlordene		NG/KG	NA	NA	NA	NA	NA	NA
Oxychlordane	1200	NG/KG	ND	ND	ND	ND	ND	ND
Trans Nonachlor	240	NG/KG	ND	ND	ND	ND	ND	ND
Cis Nonachlor	380	NG/KG	ND	ND	ND	ND	ND	ND
Alpha Endosulfan	720	NG/KG	ND	ND	ND	ND	ND	ND
Beta Endosulfan	780	NG/KG	ND	ND	ND	ND	ND	ND
Endosulfan Sulfate	1100	NG/KG	ND	ND	ND	ND	ND	ND
Endrin	510	NG/KG	ND	ND	ND	ND	ND	ND
Endrin aldehyde	2400	NG/KG	ND	ND	ND	ND	ND	ND
Mirex	60	NG/KG	ND	ND	ND	ND	ND	ND
Methoxychlor	90	NG/KG	ND	ND	ND	ND	ND	ND
=====	=====	=====	=====	=====	=====	=====	=====	=====
Aldrin + Dieldrin	340	NG/KG	0	0	0	0	0	0
Hexachlorocyclohexanes	220	NG/KG	0	0	0	0	0	0
DDT and derivatives	260	NG/KG	460	0	400	490	0	430
Chlordane + related cmpds.	1200	NG/KG	0	0	0	0	0	0
=====	=====	=====	=====	=====	=====	=====	=====	=====
Chlorinated Hydrocarbons	2400	NG/KG	460	0	400	490	0	430

ND=not detected

NA=not analyzed

E=Estimated value below MDL, but qualified

Standards for alpha and gamma chlordene are no longer available in the U.S. for the analysis of these compounds.

SOUTH BAY OCEAN OUTFALL MONITORING
SEDIMENT ANNUAL Chlorinated Pesticide Analysis - Random Stations

Annual 2015

Source:			8421	8422	8423	8424	8425	8426
Analyte	MDL	Units	07-JUL-2015	07-JUL-2015	23-JUL-2015	23-JUL-2015	07-JUL-2015	15-JUL-2015
=====	=====	=====	=====	=====	=====	=====	=====	=====
Aldrin	70	NG/KG	ND	ND	ND	ND	ND	ND
Dieldrin	340	NG/KG	ND	ND	ND	ND	ND	ND
BHC, Alpha isomer	100	NG/KG	ND	ND	ND	ND	ND	ND
BHC, Beta isomer	50	NG/KG	ND	ND	ND	ND	ND	ND
BHC, Gamma isomer	190	NG/KG	ND	ND	ND	ND	ND	ND
BHC, Delta isomer	220	NG/KG	ND	ND	ND	ND	ND	ND
p,p-DDD	160	NG/KG	ND	ND	ND	ND	ND	ND
p,p-DDE	260	NG/KG	ND	ND	390	E265	E230	ND
p,p-DDT	70	NG/KG	ND	ND	ND	ND	ND	ND
o,p-DDD	100	NG/KG	ND	ND	ND	ND	ND	ND
o,p-DDE	60	NG/KG	ND	ND	ND	ND	ND	ND
o,p-DDT	110	NG/KG	ND	ND	ND	ND	ND	ND
Heptachlor	120	NG/KG	ND	ND	ND	ND	ND	ND
Heptachlor epoxide	300	NG/KG	ND	ND	ND	ND	ND	ND
Alpha (cis) Chlordane	160	NG/KG	ND	ND	ND	ND	ND	ND
Gamma (trans) Chlordane	190	NG/KG	ND	ND	ND	ND	ND	ND
Alpha Chlordene		NG/KG	NA	NA	NA	NA	NA	NA
Gamma Chlordene		NG/KG	NA	NA	NA	NA	NA	NA
Oxychlordane	1200	NG/KG	ND	ND	ND	ND	ND	ND
Trans Nonachlor	240	NG/KG	ND	ND	ND	ND	ND	ND
Cis Nonachlor	380	NG/KG	ND	ND	ND	ND	ND	ND
Alpha Endosulfan	720	NG/KG	ND	ND	ND	ND	ND	ND
Beta Endosulfan	780	NG/KG	ND	ND	ND	ND	ND	ND
Endosulfan Sulfate	1100	NG/KG	ND	ND	ND	ND	ND	ND
Endrin	510	NG/KG	ND	ND	ND	ND	ND	ND
Endrin aldehyde	2400	NG/KG	ND	ND	ND	ND	ND	ND
Mirex	60	NG/KG	ND	ND	ND	ND	ND	ND
Methoxychlor	90	NG/KG	ND	ND	ND	ND	ND	ND
=====	=====	=====	=====	=====	=====	=====	=====	=====
Aldrin + Dieldrin	340	NG/KG	0	0	0	0	0	0
Hexachlorocyclohexanes	220	NG/KG	0	0	0	0	0	0
DDT and derivatives	260	NG/KG	0	0	390	0	0	0
Chlordane + related cmpds.	1200	NG/KG	0	0	0	0	0	0
=====	=====	=====	=====	=====	=====	=====	=====	=====
Chlorinated Hydrocarbons	2400	NG/KG	0	0	390	0	0	0

ND=not detected

NA=not analyzed

E=Estimated value below MDL, but qualified

Standards for alpha and gamma chlordene are no longer available in the U.S. for the analysis of these compounds.

SOUTH BAY OCEAN OUTFALL MONITORING
SEDIMENT ANNUAL Chlorinated Pesticide Analysis - Random Stations

Annual 2015

Source:			8427	8428	8429	8430	8431	8433
Analyte	MDL	Units	10-JUL-2015	15-JUL-2015	07-JUL-2015	15-JUL-2015	20-JUL-2015	30-JUL-2015
=====	=====	=====	=====	=====	=====	=====	=====	=====
Aldrin	70	NG/KG	ND	ND	ND	ND	ND	ND
Dieldrin	340	NG/KG	ND	ND	ND	ND	ND	ND
BHC, Alpha isomer	100	NG/KG	ND	ND	ND	ND	ND	ND
BHC, Beta isomer	50	NG/KG	ND	ND	ND	ND	ND	ND
BHC, Gamma isomer	190	NG/KG	ND	ND	ND	ND	ND	ND
BHC, Delta isomer	220	NG/KG	ND	ND	ND	ND	ND	ND
p,p-DDD	160	NG/KG	ND	200	ND	ND	<160	220
p,p-DDE	260	NG/KG	280	510	260	ND	390	1000
p,p-DDT	70	NG/KG	ND	ND	ND	ND	ND	ND
o,p-DDD	100	NG/KG	ND	ND	ND	ND	ND	ND
o,p-DDE	60	NG/KG	ND	ND	ND	ND	ND	ND
o,p-DDT	110	NG/KG	ND	ND	ND	ND	ND	ND
Heptachlor	120	NG/KG	ND	ND	ND	ND	ND	ND
Heptachlor epoxide	300	NG/KG	ND	ND	ND	ND	ND	ND
Alpha (cis) Chlordane	160	NG/KG	ND	ND	ND	ND	ND	ND
Gamma (trans) Chlordane	190	NG/KG	ND	ND	ND	ND	ND	ND
Alpha Chlordene		NG/KG	NA	NA	NA	NA	NA	NA
Gamma Chlordene		NG/KG	NA	NA	NA	NA	NA	NA
Oxychlordane	1200	NG/KG	ND	ND	ND	ND	ND	ND
Trans Nonachlor	240	NG/KG	ND	ND	ND	ND	ND	ND
Cis Nonachlor	380	NG/KG	ND	ND	ND	ND	ND	ND
Alpha Endosulfan	720	NG/KG	ND	ND	ND	ND	ND	ND
Beta Endosulfan	780	NG/KG	ND	ND	ND	ND	ND	ND
Endosulfan Sulfate	1100	NG/KG	ND	ND	ND	ND	ND	ND
Endrin	510	NG/KG	ND	ND	ND	ND	ND	ND
Endrin aldehyde	2400	NG/KG	ND	ND	ND	ND	ND	ND
Mirex	60	NG/KG	ND	ND	ND	ND	ND	ND
Methoxychlor	90	NG/KG	ND	ND	ND	ND	ND	ND
=====	=====	=====	=====	=====	=====	=====	=====	=====
Aldrin + Dieldrin	340	NG/KG	0	0	0	0	0	0
Hexachlorocyclohexanes	220	NG/KG	0	0	0	0	0	0
DDT and derivatives	260	NG/KG	280	710	260	0	390	1220
Chlordane + related cmpds.	1200	NG/KG	0	0	0	0	0	0
=====	=====	=====	=====	=====	=====	=====	=====	=====
Chlorinated Hydrocarbons	2400	NG/KG	280	710	260	0	390	1220

ND=not detected

NA=not analyzed

E=Estimated value below MDL, but qualified

Standards for alpha and gamma chlordene are no longer available in the U.S. for the analysis of these compounds.

SOUTH BAY OCEAN OUTFALL MONITORING
SEDIMENT ANNUAL Chlorinated Pesticide Analysis - Random Stations

Annual 2015

Source:			8434	8435	8436	8437	8438	8439
Analyte	MDL	Units	14-JUL-2015	10-JUL-2015	15-JUL-2015	23-JUL-2015	10-JUL-2015	23-JUL-2015
=====	=====	=====	=====	=====	=====	=====	=====	=====
Aldrin	70	NG/KG	ND	ND	ND	ND	ND	ND
Dieldrin	340	NG/KG	ND	ND	ND	ND	ND	ND
BHC, Alpha isomer	100	NG/KG	ND	ND	ND	ND	ND	ND
BHC, Beta isomer	50	NG/KG	ND	ND	ND	ND	ND	ND
BHC, Gamma isomer	190	NG/KG	ND	ND	ND	ND	ND	ND
BHC, Delta isomer	220	NG/KG	ND	ND	ND	ND	ND	ND
p,p-DDD	160	NG/KG	ND	ND	180	ND	ND	ND
p,p-DDE	260	NG/KG	430	400	610	600	530	460
p,p-DDT	70	NG/KG	ND	ND	ND	ND	ND	ND
o,p-DDD	100	NG/KG	ND	ND	ND	ND	ND	ND
o,p-DDE	60	NG/KG	ND	ND	ND	ND	ND	ND
o,p-DDT	110	NG/KG	ND	ND	ND	ND	ND	ND
Heptachlor	120	NG/KG	ND	ND	ND	ND	ND	ND
Heptachlor epoxide	300	NG/KG	ND	ND	ND	ND	ND	ND
Alpha (cis) Chlordane	160	NG/KG	ND	ND	ND	ND	ND	ND
Gamma (trans) Chlordane	190	NG/KG	ND	ND	ND	ND	ND	ND
Alpha Chlordene		NG/KG	NA	NA	NA	NA	NA	NA
Gamma Chlordene		NG/KG	NA	NA	NA	NA	NA	NA
Oxychlordane	1200	NG/KG	ND	ND	ND	ND	ND	ND
Trans Nonachlor	240	NG/KG	ND	ND	ND	ND	ND	ND
Cis Nonachlor	380	NG/KG	ND	ND	ND	ND	ND	ND
Alpha Endosulfan	720	NG/KG	ND	ND	ND	ND	ND	ND
Beta Endosulfan	780	NG/KG	ND	ND	ND	ND	ND	ND
Endosulfan Sulfate	1100	NG/KG	ND	ND	ND	ND	ND	ND
Endrin	510	NG/KG	ND	ND	ND	ND	ND	ND
Endrin aldehyde	2400	NG/KG	ND	ND	ND	ND	ND	ND
Mirex	60	NG/KG	ND	ND	ND	ND	ND	ND
Methoxychlor	90	NG/KG	ND	ND	ND	ND	ND	ND
=====	=====	=====	=====	=====	=====	=====	=====	=====
Aldrin + Dieldrin	340	NG/KG	0	0	0	0	0	0
Hexachlorocyclohexanes	220	NG/KG	0	0	0	0	0	0
DDT and derivatives	260	NG/KG	430	400	790	600	530	460
Chlordane + related cmpds.	1200	NG/KG	0	0	0	0	0	0
=====	=====	=====	=====	=====	=====	=====	=====	=====
Chlorinated Hydrocarbons	2400	NG/KG	430	400	790	600	530	460

ND=not detected

NA=not analyzed

E=Estimated value below MDL, but qualified

Standards for alpha and gamma chlordene are no longer available in the U.S. for the analysis of these compounds.

SOUTH BAY OCEAN OUTFALL MONITORING
SEDIMENT ANNUAL Chlorinated Pesticide Analysis - Random Stations

Annual 2015

Source:			8441	8442	8444	8454
Analyte	MDL	Units	20-JUL-2015	20-JUL-2015	30-JUL-2015	21-JUL-2015
=====	=====	=====	=====	=====	=====	=====
Aldrin	70	NG/KG	ND	ND	ND	ND
Dieldrin	340	NG/KG	ND	ND	ND	ND
BHC, Alpha isomer	100	NG/KG	ND	ND	ND	ND
BHC, Beta isomer	50	NG/KG	ND	ND	ND	ND
BHC, Gamma isomer	190	NG/KG	ND	ND	ND	ND
BHC, Delta isomer	220	NG/KG	ND	ND	ND	ND
p,p-DDD	160	NG/KG	ND	ND	ND	ND
p,p-DDE	260	NG/KG	E190	490	<260	680
p,p-DDT	70	NG/KG	ND	ND	ND	ND
o,p-DDD	100	NG/KG	ND	ND	ND	ND
o,p-DDE	60	NG/KG	ND	ND	ND	ND
o,p-DDT	110	NG/KG	ND	ND	ND	ND
Heptachlor	120	NG/KG	ND	ND	ND	ND
Heptachlor epoxide	300	NG/KG	ND	ND	ND	ND
Alpha (cis) Chlordane	160	NG/KG	ND	ND	ND	ND
Gamma (trans) Chlordane	190	NG/KG	ND	ND	ND	ND
Alpha Chlordene		NG/KG	NA	NA	NA	NA
Gamma Chlordene		NG/KG	NA	NA	NA	NA
Oxychlordane	1200	NG/KG	ND	ND	ND	ND
Trans Nonachlor	240	NG/KG	ND	ND	ND	ND
Cis Nonachlor	380	NG/KG	ND	ND	ND	ND
Alpha Endosulfan	720	NG/KG	ND	ND	ND	ND
Beta Endosulfan	780	NG/KG	ND	ND	ND	ND
Endosulfan Sulfate	1100	NG/KG	ND	ND	ND	ND
Endrin	510	NG/KG	ND	ND	ND	ND
Endrin aldehyde	2400	NG/KG	ND	ND	ND	ND
Mirex	60	NG/KG	ND	ND	ND	ND
Methoxychlor	90	NG/KG	ND	ND	ND	ND
=====	=====	=====	=====	=====	=====	=====
Aldrin + Dieldrin	340	NG/KG	0	0	0	0
Hexachlorocyclohexanes	220	NG/KG	0	0	0	0
DDT and derivatives	260	NG/KG	0	490	0	680
Chlordane + related cmpds.	1200	NG/KG	0	0	0	0
=====	=====	=====	=====	=====	=====	=====
Chlorinated Hydrocarbons	2400	NG/KG	0	490	0	680

ND=not detected

NA=not analyzed

E=Estimated value below MDL, but qualified

Standards for alpha and gamma chlordene are no longer available in the U.S. for the analysis of these compounds.

SOUTH BAY OCEAN OUTFALL MONITORING
SEDIMENT ANNUAL - PCB Congeners Random Stations

Annual 2015

Source:			8401	8402	8403	8404	8405	8406	8407
Analyte	MDL	Units	20-JUL-2015	15-JUL-2015	20-JUL-2015	14-JUL-2015	20-JUL-2015	15-JUL-2015	20-JUL-2015
PCB 18	90	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 28	60	NG/KG	ND	82	ND	ND	ND	ND	ND
PCB 52	90	NG/KG	ND	640	ND	ND	ND	E25	ND
PCB 49	70	NG/KG	ND	200	ND	ND	ND	E16	ND
PCB 44	100	NG/KG	ND	ND	ND	ND	ND	E23	ND
PCB 37	90	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 74	100	NG/KG	ND	120	ND	ND	ND	ND	ND
PCB 70	60	NG/KG	ND	440	ND	ND	ND	E23	ND
PCB 66	100	NG/KG	ND	210	ND	ND	ND	E46	ND
PCB 101	100	NG/KG	ND	1000	ND	ND	ND	E100	ND
PCB 99	120	NG/KG	ND	480	ND	ND	ND	E34	ND
PCB 119	80	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 87	200	NG/KG	ND	440	ND	ND	ND	ND	ND
PCB 110	110	NG/KG	ND	1100	ND	ND	ND	ND	ND
PCB 81	130	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 151	80	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 77	110	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 149	110	NG/KG	ND	680	ND	ND	ND	120	ND
PCB 123	130	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 118	90	NG/KG	ND	1100	ND	ND	ND	75	ND
PCB 114	130	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 105	50	NG/KG	ND	450	ND	ND	ND	ND	ND
PCB 138	80	NG/KG	ND	820	ND	ND	ND	ND	ND
PCB 158	70	NG/KG	ND	120	ND	ND	ND	ND	ND
PCB 187	110	NG/KG	ND	140	ND	ND	ND	ND	ND
PCB 183	60	NG/KG	ND	76	ND	ND	ND	ND	ND
PCB 126	70	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 128	80	NG/KG	ND	260	ND	ND	ND	ND	ND
PCB 167	30	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 177	70	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 201	70	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 156	90	NG/KG	ND	190	ND	ND	ND	ND	ND
PCB 157	100	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 180	80	NG/KG	ND	330	ND	ND	ND	ND	ND
PCB 170	80	NG/KG	ND	ND	ND	ND	ND	ND	ND
Total PCB's	200	NG/KG	0	8878	0	0	0	195	0

ND=not detected

E=Estimated value below MDL, but qualified.

SOUTH BAY OCEAN OUTFALL MONITORING
SEDIMENT ANNUAL - PCB Congeners Random Stations

Annual 2015

Source:			8409	8410	8411	8413	8414	8415	8416
Analyte	MDL	Units	15-JUL-2015	07-JUL-2015	14-JUL-2015	07-JUL-2015	15-JUL-2015	30-JUL-2015	14-JUL-2015
=====	===	=====	=====	=====	=====	=====	=====	=====	=====
PCB 18	90	NG/KG	ND	ND	ND	530	ND	ND	ND
PCB 28	60	NG/KG	ND	ND	ND	380	ND	E58	ND
PCB 52	90	NG/KG	ND	ND	ND	ND	180	E58	ND
PCB 49	70	NG/KG	ND	ND	ND	150	70	E60	ND
PCB 44	100	NG/KG	ND	ND	ND	ND	E85	ND	ND
PCB 37	90	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 74	100	NG/KG	ND	ND	ND	E99	ND	ND	ND
PCB 70	60	NG/KG	ND	ND	ND	210	130	ND	ND
PCB 66	100	NG/KG	ND	ND	ND	180	ND	73	ND
PCB 101	100	NG/KG	ND	ND	ND	ND	360	ND	ND
PCB 99	120	NG/KG	ND	ND	ND	ND	130	ND	ND
PCB 119	80	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 87	200	NG/KG	ND	ND	ND	ND	E170	ND	ND
PCB 110	110	NG/KG	ND	ND	ND	ND	400	ND	ND
PCB 81	130	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 151	80	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 77	110	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 149	110	NG/KG	ND	ND	ND	ND	230	ND	ND
PCB 123	130	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 118	90	NG/KG	ND	ND	ND	ND	370	ND	ND
PCB 114	130	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 105	50	NG/KG	ND	ND	ND	ND	150	ND	ND
PCB 138	80	NG/KG	ND	ND	ND	ND	300	ND	ND
PCB 158	70	NG/KG	ND	ND	ND	ND	83	ND	ND
PCB 187	110	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 183	60	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 126	70	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 128	80	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 167	30	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 177	70	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 201	70	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 156	90	NG/KG	ND	ND	ND	ND	E68	ND	ND
PCB 157	100	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 180	80	NG/KG	ND	ND	ND	ND	130	ND	ND
PCB 170	80	NG/KG	ND	ND	ND	ND	ND	ND	ND
=====	===	=====	=====	=====	=====	=====	=====	=====	=====
Total PCB's	200	NG/KG	0	0	0	1450	2233	73	0

ND=not detected

E=Estimated value below MDL, but qualified.

SOUTH BAY OCEAN OUTFALL MONITORING
SEDIMENT ANNUAL - PCB Congeners Random Stations

Annual 2015

Source:			8417	8418	8419	8420	8421	8422	8423
Analyte	MDL	Units	20-JUL-2015	15-JUL-2015	20-JUL-2015	14-JUL-2015	07-JUL-2015	07-JUL-2015	23-JUL-2015
=====	===	=====	=====	=====	=====	=====	=====	=====	=====
PCB 18	90	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 28	60	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 52	90	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 49	70	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 44	100	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 37	90	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 74	100	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 70	60	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 66	100	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 101	100	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 99	120	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 119	80	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 87	200	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 110	110	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 81	130	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 151	80	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 77	110	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 149	110	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 123	130	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 118	90	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 114	130	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 105	50	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 138	80	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 158	70	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 187	110	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 183	60	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 126	70	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 128	80	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 167	30	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 177	70	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 201	70	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 156	90	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 157	100	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 180	80	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 170	80	NG/KG	ND	ND	ND	ND	ND	ND	ND
=====	===	=====	=====	=====	=====	=====	=====	=====	=====
Total PCB's	200	NG/KG	0	0	0	0	0	0	0

ND=not detected

SOUTH BAY OCEAN OUTFALL MONITORING
SEDIMENT ANNUAL - PCB Congeners Random Stations

Annual 2015

Source:			8424	8425	8426	8427	8428	8429	8430
Analyte	MDL	Units	23-JUL-2015	07-JUL-2015	15-JUL-2015	10-JUL-2015	15-JUL-2015	07-JUL-2015	15-JUL-2015
=====	===	=====	=====	=====	=====	=====	=====	=====	=====
PCB 18	90	NG/KG	ND	ND	ND	ND	110	ND	ND
PCB 28	60	NG/KG	ND	ND	ND	ND	66	ND	ND
PCB 52	90	NG/KG	ND	ND	ND	ND	120	ND	ND
PCB 49	70	NG/KG	ND	ND	ND	ND	84	ND	ND
PCB 44	100	NG/KG	ND	ND	ND	ND	E68	ND	ND
PCB 37	90	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 74	100	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 70	60	NG/KG	ND	ND	ND	ND	90	ND	ND
PCB 66	100	NG/KG	ND	ND	ND	ND	110	ND	ND
PCB 101	100	NG/KG	ND	ND	ND	120	240	ND	ND
PCB 99	120	NG/KG	ND	ND	ND	ND	120	ND	ND
PCB 119	80	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 87	200	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 110	110	NG/KG	ND	ND	ND	ND	270	ND	ND
PCB 81	130	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 151	80	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 77	110	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 149	110	NG/KG	ND	ND	ND	140	300	ND	ND
PCB 123	130	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 118	90	NG/KG	ND	ND	ND	170	280	ND	ND
PCB 114	130	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 105	50	NG/KG	ND	ND	ND	ND	140	ND	ND
PCB 138	80	NG/KG	ND	ND	ND	150	340	ND	ND
PCB 158	70	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 187	110	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 183	60	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 126	70	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 128	80	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 167	30	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 177	70	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 201	70	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 156	90	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 157	100	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 180	80	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 170	80	NG/KG	ND	ND	ND	ND	ND	ND	ND
=====	===	=====	=====	=====	=====	=====	=====	=====	=====
Total PCB's	200	NG/KG	0	0	0	580	2270	0	0

ND=not detected

E=Estimated value below MDL, but qualified.

SOUTH BAY OCEAN OUTFALL MONITORING
SEDIMENT ANNUAL - PCB Congeners Random Stations

Annual 2015

Source:			8431	8433	8434	8435	8436	8437	8438
Analyte	MDL	Units	20-JUL-2015	30-JUL-2015	14-JUL-2015	10-JUL-2015	15-JUL-2015	23-JUL-2015	10-JUL-2015
PCB 18	90	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 28	60	NG/KG	37	ND	ND	ND	ND	ND	ND
PCB 52	90	NG/KG	E36	ND	ND	ND	ND	ND	ND
PCB 49	70	NG/KG	E31	ND	ND	ND	ND	ND	ND
PCB 44	100	NG/KG	E37	ND	ND	ND	ND	ND	ND
PCB 37	90	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 74	100	NG/KG	E36	ND	ND	ND	ND	ND	ND
PCB 70	60	NG/KG	38	ND	ND	ND	ND	ND	ND
PCB 66	100	NG/KG	55	ND	ND	ND	ND	ND	ND
PCB 101	100	NG/KG	55	ND	ND	ND	100	ND	ND
PCB 99	120	NG/KG	E47	ND	ND	ND	E93	ND	ND
PCB 119	80	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 87	200	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 110	110	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 81	130	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 151	80	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 77	110	NG/KG	E35	ND	ND	ND	ND	ND	ND
PCB 149	110	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 123	130	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 118	90	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 114	130	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 105	50	NG/KG	35	ND	ND	ND	ND	ND	ND
PCB 138	80	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 158	70	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 187	110	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 183	60	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 126	70	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 128	80	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 167	30	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 177	70	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 201	70	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 156	90	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 157	100	NG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 180	80	NG/KG	ND	200	ND	ND	ND	ND	ND
PCB 170	80	NG/KG	ND	ND	ND	ND	ND	ND	ND
Total PCB's	200	NG/KG	220	200	0	0	100	0	0

ND=not detected

E=Estimated value below MDL, but qualified.

SOUTH BAY OCEAN OUTFALL MONITORING
SEDIMENT ANNUAL - PCB Congeners Random Stations

Annual 2015

Source:			8439	8441	8442	8444	8454
Analyte	MDL	Units	23-JUL-2015	20-JUL-2015	20-JUL-2015	30-JUL-2015	21-JUL-2015
=====	===	=====	=====	=====	=====	=====	=====
PCB 18	90	NG/KG	ND	ND	ND	ND	ND
PCB 28	60	NG/KG	ND	ND	ND	ND	ND
PCB 52	90	NG/KG	ND	ND	ND	ND	ND
PCB 49	70	NG/KG	ND	ND	ND	ND	ND
PCB 44	100	NG/KG	ND	ND	ND	ND	ND
PCB 37	90	NG/KG	ND	ND	ND	ND	ND
PCB 74	100	NG/KG	ND	ND	ND	ND	ND
PCB 70	60	NG/KG	ND	ND	ND	ND	ND
PCB 66	100	NG/KG	ND	ND	ND	ND	ND
PCB 101	100	NG/KG	ND	ND	ND	ND	ND
PCB 99	120	NG/KG	ND	ND	ND	ND	ND
PCB 119	80	NG/KG	ND	ND	ND	ND	ND
PCB 87	200	NG/KG	ND	ND	ND	ND	ND
PCB 110	110	NG/KG	ND	ND	ND	ND	ND
PCB 81	130	NG/KG	ND	ND	ND	ND	ND
PCB 151	80	NG/KG	ND	ND	ND	ND	ND
PCB 77	110	NG/KG	ND	ND	ND	ND	ND
PCB 149	110	NG/KG	ND	ND	ND	ND	ND
PCB 123	130	NG/KG	ND	ND	ND	ND	ND
PCB 118	90	NG/KG	ND	ND	ND	ND	ND
PCB 114	130	NG/KG	ND	ND	ND	ND	ND
PCB 105	50	NG/KG	ND	ND	ND	ND	ND
PCB 138	80	NG/KG	ND	ND	ND	ND	ND
PCB 158	70	NG/KG	ND	ND	ND	ND	ND
PCB 187	110	NG/KG	ND	ND	ND	ND	ND
PCB 183	60	NG/KG	ND	ND	ND	ND	ND
PCB 126	70	NG/KG	ND	ND	ND	ND	ND
PCB 128	80	NG/KG	ND	ND	ND	ND	ND
PCB 167	30	NG/KG	ND	ND	ND	ND	ND
PCB 177	70	NG/KG	ND	ND	ND	ND	ND
PCB 201	70	NG/KG	ND	ND	ND	ND	ND
PCB 156	90	NG/KG	ND	ND	ND	ND	ND
PCB 157	100	NG/KG	ND	ND	ND	ND	ND
PCB 180	80	NG/KG	ND	ND	ND	ND	ND
PCB 170	80	NG/KG	ND	ND	ND	ND	ND
=====	===	=====	=====	=====	=====	=====	=====
Total PCB's	200	NG/KG	0	0	0	0	0

ND=not detected

SOUTH BAY OCEAN OUTFALL MONITORING
SEDIMENT ANNUAL Base/Neutrals - Random Stations

Annual 2015

Source:			8401	8402	8403	8404	8405	8406
Analyte	MDL	Units	20-JUL-2015	15-JUL-2015	20-JUL-2015	14-JUL-2015	20-JUL-2015	15-JUL-2015
=====	===	=====	=====	=====	=====	=====	=====	=====
Acenaphthene	20	UG/KG	ND	ND	ND	ND	ND	ND
Acenaphthylene	30	UG/KG	ND	ND	ND	ND	ND	ND
Anthracene	20	UG/KG	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	20	UG/KG	ND	E20	ND	ND	ND	ND
Benzo[a]pyrene	20	UG/KG	ND	27	ND	ND	ND	ND
3,4-Benzo(b)fluoranthene	20	UG/KG	ND	33	ND	ND	ND	ND
Benzo[e]pyrene	20	UG/KG	ND	21	ND	ND	ND	E20
Benzo[g,h,i]perylene	20	UG/KG	ND	23	ND	ND	ND	E20
Benzo[k]fluoranthene	20	UG/KG	ND	E20	ND	ND	ND	ND
Biphenyl	30	UG/KG	E30	E30	ND	E30	ND	ND
Chrysene	40	UG/KG	ND	E40	ND	ND	ND	ND
Dibenzo(a,h)anthracene	20	UG/KG	ND	ND	ND	ND	ND	ND
2,6-Dimethylnaphthalene	20	UG/KG	E20	E20	ND	E20	E20	E20
Fluoranthene	20	UG/KG	ND	E20	ND	ND	ND	ND
Fluorene	20	UG/KG	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-CD)pyrene	20	UG/KG	ND	E20	ND	ND	ND	E20
1-Methylphenanthrene	20	UG/KG	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	20	UG/KG	ND	ND	ND	ND	ND	ND
1-Methylnaphthalene	20	UG/KG	ND	ND	ND	ND	ND	ND
Naphthalene	30	UG/KG	ND	ND	ND	ND	ND	ND
Perylene	30	UG/KG	ND	ND	ND	ND	ND	ND
Phenanthrene	30	UG/KG	ND	ND	ND	ND	ND	ND
Pyrene	20	UG/KG	ND	25	ND	ND	ND	E20
2,3,5-Trimethylnaphthalene	20	UG/KG	ND	ND	ND	ND	ND	ND
=====	===	=====	=====	=====	=====	=====	=====	=====
Base/Neutral Compounds			0	104	0	0	0	0

Source:			8407	8409	8410	8411	8413	8414
Analyte	MDL	Units	20-JUL-2015	15-JUL-2015	07-JUL-2015	14-JUL-2015	07-JUL-2015	15-JUL-2015
=====	===	=====	=====	=====	=====	=====	=====	=====
Acenaphthene	20	UG/KG	ND	ND	ND	ND	ND	ND
Acenaphthylene	30	UG/KG	ND	ND	ND	ND	ND	ND
Anthracene	20	UG/KG	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	20	UG/KG	ND	ND	<20	ND	ND	ND
Benzo[a]pyrene	20	UG/KG	ND	ND	<20	ND	ND	ND
3,4-Benzo(b)fluoranthene	20	UG/KG	ND	ND	ND	ND	ND	E20
Benzo[e]pyrene	20	UG/KG	<20	<20	ND	ND	ND	ND
Benzo[g,h,i]perylene	20	UG/KG	<20	ND	ND	ND	ND	E20
Benzo[k]fluoranthene	20	UG/KG	ND	ND	<20	ND	ND	ND
Biphenyl	30	UG/KG	<30	ND	ND	E30	ND	ND
Chrysene	40	UG/KG	ND	ND	<40	ND	ND	ND
Dibenzo(a,h)anthracene	20	UG/KG	ND	ND	ND	ND	ND	ND
2,6-Dimethylnaphthalene	20	UG/KG	<20	<20	ND	ND	ND	E20
Fluoranthene	20	UG/KG	E20	<20	ND	ND	ND	E20
Fluorene	20	UG/KG	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-CD)pyrene	20	UG/KG	ND	ND	ND	ND	ND	E20
1-Methylphenanthrene	20	UG/KG	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	20	UG/KG	ND	ND	ND	ND	ND	ND
1-Methylnaphthalene	20	UG/KG	ND	ND	ND	ND	ND	ND
Naphthalene	30	UG/KG	ND	ND	ND	ND	ND	ND
Perylene	30	UG/KG	ND	ND	ND	ND	ND	ND
Phenanthrene	30	UG/KG	ND	<30	ND	ND	ND	ND
Pyrene	20	UG/KG	<20	<20	ND	ND	ND	E20
2,3,5-Trimethylnaphthalene	20	UG/KG	ND	ND	ND	ND	ND	ND
=====	===	=====	=====	=====	=====	=====	=====	=====
Base/Neutral Compounds			0	0	0	0	0	0

ND=not detected
E=Estimated value below MDL, but qualified

SOUTH BAY OCEAN OUTFALL MONITORING
SEDIMENT ANNUAL Base/Neutrals - Random Stations

Annual 2015

Source:			8415	8416	8417	8418	8419	8420
Analyte	MDL	Units	30-JUL-2015	14-JUL-2015	20-JUL-2015	15-JUL-2015	20-JUL-2015	14-JUL-2015
=====	===	=====	=====	=====	=====	=====	=====	=====
Acenaphthene	20	UG/KG	ND	ND	ND	ND	ND	ND
Acenaphthylene	30	UG/KG	ND	ND	ND	ND	ND	ND
Anthracene	20	UG/KG	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	20	UG/KG	ND	ND	ND	ND	ND	ND
Benzo[a]pyrene	20	UG/KG	ND	ND	ND	E20	ND	ND
3,4-Benzo(b)fluoranthene	20	UG/KG	ND	ND	ND	E20	ND	ND
Benzo[e]pyrene	20	UG/KG	ND	ND	ND	E20	ND	ND
Benzo[g,h,i]perylene	20	UG/KG	ND	ND	ND	ND	ND	ND
Benzo[k]fluoranthene	20	UG/KG	ND	ND	ND	E20	ND	ND
Biphenyl	30	UG/KG	ND	E30	ND	ND	ND	ND
Chrysene	40	UG/KG	ND	ND	ND	E40	ND	ND
Dibenzo(a,h)anthracene	20	UG/KG	ND	ND	ND	ND	ND	ND
2,6-Dimethylnaphthalene	20	UG/KG	ND	E20	E20	ND	ND	E20
Fluoranthene	20	UG/KG	ND	ND	E20	E20	ND	ND
Fluorene	20	UG/KG	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-CD)pyrene	20	UG/KG	ND	ND	ND	ND	ND	ND
1-Methylphenanthrene	20	UG/KG	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	20	UG/KG	ND	ND	ND	ND	ND	ND
1-Methylnaphthalene	20	UG/KG	ND	ND	ND	ND	ND	ND
Naphthalene	30	UG/KG	ND	ND	ND	ND	ND	ND
Perylene	30	UG/KG	ND	ND	ND	ND	ND	ND
Phenanthrene	30	UG/KG	ND	ND	ND	ND	ND	ND
Pyrene	20	UG/KG	ND	ND	E20	E20	ND	ND
2,3,5-Trimethylnaphthalene	20	UG/KG	ND	ND	ND	ND	ND	ND
=====	===	=====	=====	=====	=====	=====	=====	=====
Base/Neutral Compounds			0	0	0	0	0	0

Source:			8421	8422	8423	8424	8425	8426
Analyte	MDL	Units	07-JUL-2015	07-JUL-2015	23-JUL-2015	23-JUL-2015	07-JUL-2015	15-JUL-2015
=====	===	=====	=====	=====	=====	=====	=====	=====
Acenaphthene	20	UG/KG	ND	ND	ND	ND	ND	ND
Acenaphthylene	30	UG/KG	ND	ND	ND	ND	ND	ND
Anthracene	20	UG/KG	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	20	UG/KG	ND	ND	ND	ND	ND	ND
Benzo[a]pyrene	20	UG/KG	ND	ND	ND	ND	ND	ND
3,4-Benzo(b)fluoranthene	20	UG/KG	ND	ND	ND	ND	ND	ND
Benzo[e]pyrene	20	UG/KG	ND	ND	ND	ND	ND	ND
Benzo[g,h,i]perylene	20	UG/KG	ND	ND	ND	ND	ND	ND
Benzo[k]fluoranthene	20	UG/KG	ND	ND	ND	ND	ND	ND
Biphenyl	30	UG/KG	ND	ND	ND	ND	ND	ND
Chrysene	40	UG/KG	ND	ND	ND	ND	ND	ND
Dibenzo(a,h)anthracene	20	UG/KG	ND	ND	ND	ND	ND	ND
2,6-Dimethylnaphthalene	20	UG/KG	ND	ND	ND	ND	ND	ND
Fluoranthene	20	UG/KG	ND	ND	ND	ND	ND	ND
Fluorene	20	UG/KG	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-CD)pyrene	20	UG/KG	ND	ND	ND	ND	ND	ND
1-Methylphenanthrene	20	UG/KG	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	20	UG/KG	ND	ND	ND	ND	ND	ND
1-Methylnaphthalene	20	UG/KG	ND	ND	ND	ND	ND	ND
Naphthalene	30	UG/KG	ND	ND	ND	ND	ND	ND
Perylene	30	UG/KG	ND	ND	ND	ND	ND	ND
Phenanthrene	30	UG/KG	ND	ND	ND	ND	ND	ND
Pyrene	20	UG/KG	ND	ND	ND	ND	ND	ND
2,3,5-Trimethylnaphthalene	20	UG/KG	ND	ND	ND	ND	ND	ND
=====	===	=====	=====	=====	=====	=====	=====	=====
Base/Neutral Compounds			0	0	0	0	0	0

ND=not detected
E=Estimated value below MDL, but qualified

SOUTH BAY OCEAN OUTFALL MONITORING
SEDIMENT ANNUAL Base/Neutrals - Random Stations

Annual 2015

Source:			8427	8428	8429	8430	8431	8433
Analyte	MDL	Units	10-JUL-2015	15-JUL-2015	07-JUL-2015	15-JUL-2015	20-JUL-2015	30-JUL-2015
=====	===	=====	=====	=====	=====	=====	=====	=====
Acenaphthene	20	UG/KG	ND	ND	ND	ND	ND	ND
Acenaphthylene	30	UG/KG	ND	ND	ND	ND	ND	ND
Anthracene	20	UG/KG	ND	E20	ND	ND	ND	ND
Benzo[a]anthracene	20	UG/KG	<20	24	ND	ND	ND	ND
Benzo[a]pyrene	20	UG/KG	<20	47	ND	ND	ND	ND
3,4-Benzo(b)fluoranthene	20	UG/KG	<20	69	ND	ND	ND	ND
Benzo[e]pyrene	20	UG/KG	<20	37	ND	ND	ND	ND
Benzo[g,h,i]perylene	20	UG/KG	<20	39	ND	ND	ND	ND
Benzo[k]fluoranthene	20	UG/KG	<20	31	ND	ND	ND	ND
Biphenyl	30	UG/KG	<30	E30	E30	ND	ND	ND
Chrysene	40	UG/KG	<40	E40	ND	ND	ND	ND
Dibenzo(a,h)anthracene	20	UG/KG	ND	E20	ND	ND	ND	ND
2,6-Dimethylnaphthalene	20	UG/KG	<20	E20	ND	ND	ND	ND
Fluoranthene	20	UG/KG	<20	29	ND	ND	ND	ND
Fluorene	20	UG/KG	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-CD)pyrene	20	UG/KG	<20	29	ND	ND	ND	ND
1-Methylphenanthrene	20	UG/KG	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	20	UG/KG	ND	ND	ND	ND	E20	ND
1-Methylnaphthalene	20	UG/KG	ND	ND	ND	ND	ND	ND
Naphthalene	30	UG/KG	ND	ND	ND	ND	ND	ND
Perylene	30	UG/KG	<30	E30	ND	ND	ND	ND
Phenanthrene	30	UG/KG	<30	E30	ND	ND	ND	ND
Pyrene	20	UG/KG	<20	37	ND	ND	ND	E20
2,3,5-Trimethylnaphthalene	20	UG/KG	ND	ND	ND	ND	ND	ND
=====	===	=====	=====	=====	=====	=====	=====	=====
Base/Neutral Compounds			0	342	0	0	0	0

Source:			8434	8435	8436	8437	8438	8439
Analyte	MDL	Units	14-JUL-2015	10-JUL-2015	15-JUL-2015	23-JUL-2015	10-JUL-2015	23-JUL-2015
=====	===	=====	=====	=====	=====	=====	=====	=====
Acenaphthene	20	UG/KG	ND	ND	ND	ND	ND	ND
Acenaphthylene	30	UG/KG	ND	ND	ND	ND	ND	ND
Anthracene	20	UG/KG	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	20	UG/KG	ND	ND	ND	ND	ND	ND
Benzo[a]pyrene	20	UG/KG	ND	E20	44	ND	ND	ND
3,4-Benzo(b)fluoranthene	20	UG/KG	ND	ND	57	ND	ND	ND
Benzo[e]pyrene	20	UG/KG	ND	E20	32	ND	ND	ND
Benzo[g,h,i]perylene	20	UG/KG	ND	E20	27	ND	ND	ND
Benzo[k]fluoranthene	20	UG/KG	ND	E20	25	ND	ND	ND
Biphenyl	30	UG/KG	E30	E30	ND	ND	E30	ND
Chrysene	40	UG/KG	ND	E40	E40	ND	ND	ND
Dibenzo(a,h)anthracene	20	UG/KG	ND	ND	ND	ND	ND	ND
2,6-Dimethylnaphthalene	20	UG/KG	E20	E20	E20	E20	ND	E20
Fluoranthene	20	UG/KG	ND	E20	E20	ND	ND	ND
Fluorene	20	UG/KG	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-CD)pyrene	20	UG/KG	E20	E20	23	ND	ND	ND
1-Methylphenanthrene	20	UG/KG	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	20	UG/KG	ND	ND	ND	ND	ND	ND
1-Methylnaphthalene	20	UG/KG	ND	ND	ND	ND	ND	ND
Naphthalene	30	UG/KG	ND	ND	ND	ND	ND	ND
Perylene	30	UG/KG	ND	ND	E30	ND	ND	ND
Phenanthrene	30	UG/KG	ND	ND	ND	ND	ND	ND
Pyrene	20	UG/KG	E20	20	E20	ND	ND	ND
2,3,5-Trimethylnaphthalene	20	UG/KG	ND	ND	ND	ND	ND	ND
=====	===	=====	=====	=====	=====	=====	=====	=====
Base/Neutral Compounds			0	20	208	0	0	0

ND=not detected

E=Estimated value below MDL, but qualified

SOUTH BAY OCEAN OUTFALL MONITORING
SEDIMENT ANNUAL Base/Neutrals - Random Stations

Annual 2015

Source:			8441	8442	8444	8454
Analyte	MDL	Units	20-JUL-2015	20-JUL-2015	30-JUL-2015	21-JUL-2015
=====	===	=====	=====	=====	=====	=====
Acenaphthene	20	UG/KG	ND	ND	ND	ND
Acenaphthylene	30	UG/KG	ND	ND	ND	ND
Anthracene	20	UG/KG	ND	ND	ND	ND
Benzo[a]anthracene	20	UG/KG	ND	ND	ND	ND
Benzo[a]pyrene	20	UG/KG	ND	ND	ND	ND
3,4-Benzo(b)fluoranthene	20	UG/KG	ND	ND	ND	ND
Benzo[e]pyrene	20	UG/KG	ND	ND	ND	ND
Benzo[g,h,i]perylene	20	UG/KG	ND	ND	ND	ND
Benzo[k]fluoranthene	20	UG/KG	ND	ND	ND	ND
Biphenyl	30	UG/KG	ND	ND	ND	E30
Chrysene	40	UG/KG	ND	ND	ND	ND
Dibenzo(a,h)anthracene	20	UG/KG	ND	ND	ND	ND
2,6-Dimethylnaphthalene	20	UG/KG	ND	E20	ND	E20
Fluoranthene	20	UG/KG	ND	ND	ND	ND
Fluorene	20	UG/KG	ND	ND	ND	ND
Indeno(1,2,3-CD)pyrene	20	UG/KG	ND	ND	ND	ND
1-Methylphenanthrene	20	UG/KG	ND	ND	ND	ND
2-Methylnaphthalene	20	UG/KG	ND	ND	ND	ND
1-Methylnaphthalene	20	UG/KG	ND	ND	ND	ND
Naphthalene	30	UG/KG	ND	ND	ND	ND
Perylene	30	UG/KG	ND	ND	ND	ND
Phenanthrene	30	UG/KG	ND	ND	ND	ND
Pyrene	20	UG/KG	ND	ND	ND	ND
2,3,5-Trimethylnaphthalene	20	UG/KG	ND	ND	ND	ND
=====	===	=====	=====	=====	=====	=====
Base/Neutral Compounds			0	0	0	0

ND=not detected

E=Estimated value below MDL, but qualified

B. Fish Tissue Data.

Fish were taken from the following stations during 2015. The fish were dissected, preserved by freezing, and each sample analyzed for PAHs, trace metals, chlorinated pesticides and PCBs. Lipids and total solids were also determined for each sample.

The reported values are annual averages. Results for individual sampling events are contained in the previously published quarterly reports.

Station

RF-3

RF-4

Station

TFZONE5 (SD-17 and/or SD-18)

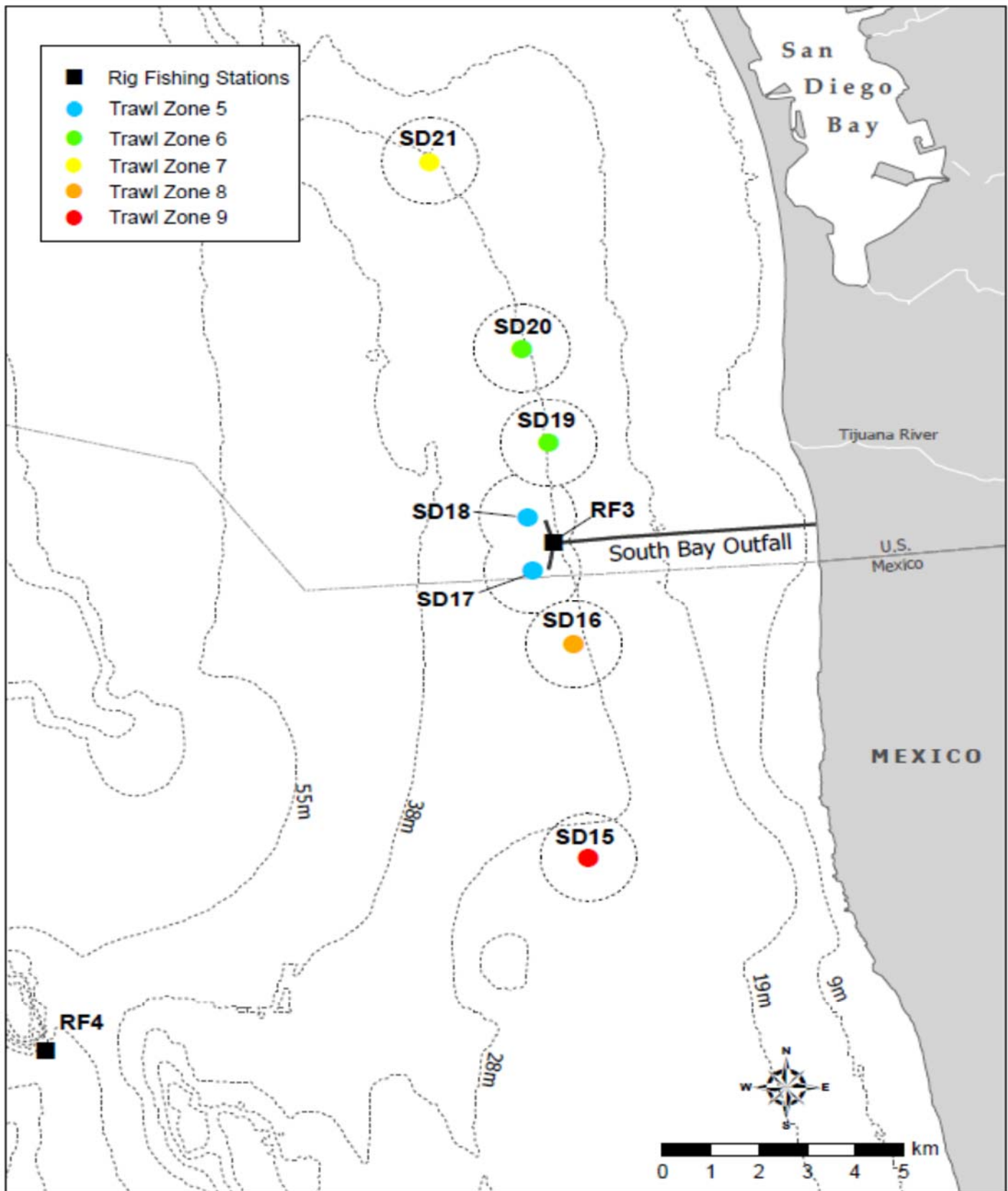
TFZONE6 (SD-19 and/or SD-20)

TFZONE7 (SD-21)

TFZONE8 (SD-16)

TFZONE9 (SD-15)

South Bay Rig Fishing and Trawl Stations



SOUTH BAY WATER RECLAMATION PLANT
TISSUE

FISH - Lipids & Total Solids

Annual 2015

Source:			RF-3	RF-4	TFZONE5	TFZONE6	TFZONE7	TFZONE8
Date:			2015	2015	2015	2015	2015	2015
Tissue Analyte	MDL	Units	Avg	Avg	Avg	Avg	Avg	Avg
=====	=====	=====	=====	=====	=====	=====	=====	=====
Liver Lipids	.09	WT%			7.2	13.2	21.8	3.6
Liver Total Solids	.4	WT%			27.2	39.6	58.8	27.0
=====	=====	=====	=====	=====	=====	=====	=====	=====
Muscle Lipids	.09	WT%	0.4	0.6				
Muscle Total Solids	.4	WT%	22.3	22.4				

Source:			TFZONE9
Date:			2015
Tissue Analyte	MDL	Units	Avg
=====	=====	=====	=====
Liver Lipids	.09	WT%	2.4
Liver Total Solids	.4	WT%	23.2
=====	=====	=====	=====
Muscle Lipids	.09	WT%	
Muscle Total Solids	.4	WT%	

ND= not detected

SOUTH BAY WATER RECLAMATION PLANT
ANNUAL FISH TISSUE - MUSCLE

Trace Metals

Annual 2015

Source:			RF-3	RF-4
Date:			2015	2015
Analyte	MDL	Units	Average	Average
=====	=====	=====	=====	=====
Aluminum	1.2	MG/KG	<1	3
Antimony	.1	MG/KG	ND	ND
Arsenic	.12	MG/KG	5.46	3.77
Beryllium	.002	MG/KG	ND	ND
Cadmium	.01	MG/KG	ND	ND
Chromium	.07	MG/KG	0.2	0.2
Copper	.043	MG/KG	0.2	0.1
Iron	.7	MG/KG	2	3
Lead	.07	MG/KG	ND	ND
Manganese	.02	MG/KG	<0.02	ND
Mercury	.002	MG/KG	0.1	0.2
Nickel	.06	MG/KG	<0.1	ND
Selenium	.06	MG/KG	0.29	0.36
Silver	.03	MG/KG	ND	ND
Thallium	.1	MG/KG	ND	0.1
Tin	.05	MG/KG	0.5	0.6
Zinc	.1	MG/KG	5.0	5.0
=====	=====	=====	=====	=====
Total Solids	.4	WT%	22.3	22.4

ND= not detected

SOUTH BAY WATER RECLAMATION PLANT
ANNUAL FISH TISSUE - LIVER

Trace Metals

Annual 2015

Source:			TFZONE5*	TFZONE6	TFZONE7	TFZONE8	TFZONE9*
Date:			2015	2015	2015	2015	2015
Analyte	MDL	Units	Average	Average	Average	Average	Average
=====	=====	=====	=====	=====	=====	=====	=====
Aluminum	1.2	MG/KG	NS	8	14	ND	NS
Antimony	.1	MG/KG	NS	ND	ND	ND	NS
Arsenic	.12	MG/KG	NS	4.15	6.80	4.60	NS
Beryllium	.002	MG/KG	NS	0.009	0.005	ND	NS
Cadmium	.01	MG/KG	NS	1.00	1.97	1.44	NS
Chromium	.07	MG/KG	NS	0.2	0.4	0.2	NS
Copper	.043	MG/KG	NS	4.8	4.3	8.6	NS
Iron	.7	MG/KG	NS	66	140	64	NS
Lead	.07	MG/KG	NS	ND	ND	ND	NS
Manganese	.02	MG/KG	NS	0.8	0.8	0.9	NS
Mercury	.002	MG/KG	0.067	0.062	0.076	0.057	0.035
Nickel	.06	MG/KG	NS	ND	0.2	ND	NS
Selenium	.06	MG/KG	0.92	0.75	0.89	0.65	0.69
Silver	.03	MG/KG	NS	0.1	ND	0.1	NS
Thallium	.1	MG/KG	NS	0.4	0.7	0.5	NS
Tin	.05	MG/KG	NS	1.2	1.7	0.6	NS
Zinc	.1	MG/KG	NS	32.8	25.3	75.0	NS
=====	=====	=====	=====	=====	=====	=====	=====
Total Solids	.4	WT%	27.2	39.6	58.8	27.0	23.2

*= Not enough fish collected after 5 trawls for a complete sample.

ND= not detected; NS= not sampled

SOUTH BAY WATER RECLAMATION PLANT
ANNUAL FISH LIVER - Chlorinated Pesticides

Annual 2015

Source:			TFZONE5	TFZONE6	TFZONE7	TFZONE8	TFZONE9
Date:			2015	2015	2015	2015	2015
Analyte	MDL	Units	Average Value	Average Value	Average Value	Average Value	Average Value
=====	====	=====	=====	=====	=====	=====	=====
Hexachlorobenzene	2.35	UG/KG	<2.35	<2.35	<2.35	<2.35	ND
BHC, Gamma isomer	13	UG/KG	ND	ND	ND	ND	ND
Heptachlor	1.23	UG/KG	ND	ND	ND	ND	ND
Aldrin	4.00	UG/KG	ND^	ND^	ND^	ND^	ND^
Heptachlor epoxide	4.11	UG/KG	ND	ND	ND	ND	ND
o,p-DDE	1.58	UG/KG	ND	ND	2.23	ND	ND
Alpha Endosulfan	16.5	UG/KG	ND^	ND^	ND^	ND^	ND^
Alpha (cis) Chlordane	1.79	UG/KG	ND	ND	ND	ND	ND
Trans Nonachlor	2.24	UG/KG	ND	<2.24	<2.24	ND	ND
p,p-DDE	2.07	UG/KG	51.0	133	247	19.3	21.0
Dieldrin	12.7	UG/KG	ND^	ND^	ND^	ND^	ND^
o,p-DDD	1.04	UG/KG	ND	ND	ND	ND	ND
Endrin	12.7	UG/KG	ND^	ND^	ND^	ND^	ND^
o,p-DDT	2.37	UG/KG	ND	ND	ND	ND	ND
p,p-DDD	2.1	UG/KG	ND	<2.10	<2.10	ND	ND
p,p-DDT	1.48	UG/KG	ND	ND	ND	ND	ND
Mirex	1.79	UG/KG	ND	ND	ND	ND	ND

ND= not detected

^= Data not reportable due to possible Alumina interference during cleanup process.

SOUTH BAY WATER RECLAMATION PLANT
ANNUAL FISH MUSCLE - Chlorinated Pesticides

Annual 2015

Source:			RF-3	RF-4
Date:			2015	2015
Analyte	MDL Units		Avg	Avg
=====	===	=====	=====	=====
Hexachlorobenzene	.42 UG/KG		<0.42	<0.42
BHC, Gamma isomer	.78 UG/KG		ND	ND
Heptachlor	.25 UG/KG		ND	ND
Aldrin	.44 UG/KG		ND^	ND^
Heptachlor epoxide	.28 UG/KG		ND	ND
o,p-DDE	.21 UG/KG		ND	ND
Alpha Endosulfan	1.89 UG/KG		ND^	ND^
Alpha (cis) Chlordane	.21 UG/KG		ND	ND
Trans Nonachlor	.2 UG/KG		ND	ND
p,p-DDE	.29 UG/KG		1.37	1.67
Dieldrin	.48 UG/KG		ND^	ND^
o,p-DDD	.23 UG/KG		ND	ND
Endrin	1.88 UG/KG		ND^	ND^
o,p-DDT	.23 UG/KG		ND	ND
p,p-DDD	.35 UG/KG		ND	ND
p,p-DDT	.33 UG/KG		ND	ND
Mirex	.32 UG/KG		ND	ND

ND= not detected

= Data not reportable due to possible Alumina interference during cleanup process.

SOUTH BAY WATER RECLAMATION PLANT
FISH LIVER - ANALYSIS of Poly Aromatic Hydrocarbon (PAH)

Annual 2015

Source:			TFZONE5	TFZONE6	TFZONE7	TFZONE8	TFZONE9*
Date:			2015	2015	2015	2015	2015
Analyte	MDL	Units	Avg	Avg	Avg	Avg	Avg
=====	=====	=====	=====	=====	=====	=====	=====
AceNaphthene	28.9	UG/KG	ND	ND	ND	ND	NA
AceNaphthylene	24.7	UG/KG	ND	ND	ND	ND	NA
Anthracene	25.3	UG/KG	ND	ND	ND	ND	NA
Benzo[a]anthracene	47.3	UG/KG	ND	ND	ND	ND	NA
Benzo[a]pyrene	42.9	UG/KG	ND	ND	ND	ND	NA
3,4-Benzo(b)fluoranthene	30.2	UG/KG	ND	ND	ND	ND	NA
Benzo[e]pyrene	41.8	UG/KG	ND	ND	ND	ND	NA
Benzo[g,h,i]perylene	27.2	UG/KG	ND	ND	ND	ND	NA
Benzo[k]fluoranthene	32	UG/KG	ND	ND	ND	ND	NA
Biphenyl	38	UG/KG	ND	ND	ND	ND	NA
Chrysene	18.1	UG/KG	ND	ND	ND	ND	NA
Dibenzo(a,h)anthracene	37.6	UG/KG	ND	ND	ND	ND	NA
2,6-DimethylNaphthalene	21.7	UG/KG	ND	ND	ND	ND	NA
Fluoranthene	19.9	UG/KG	ND	ND	ND	ND	NA
Fluorene	27.3	UG/KG	ND	ND	ND	ND	NA
Indeno(1,2,3-CD)pyrene	25.6	UG/KG	ND	ND	ND	ND	NA
1-MethylNaphthalene	27.9	UG/KG	ND	ND	ND	ND	NA
2-MethylNaphthalene	35.8	UG/KG	ND	ND	ND	ND	NA
1-MethylpheNAnthrene	17.4	UG/KG	20.0	<17.4	ND	ND	NA
Naphthalene	34.2	UG/KG	ND	ND	ND	ND	NA
Perylene	18.5	UG/KG	ND	ND	ND	ND	NA
PheNAnthrene	11.6	UG/KG	ND	ND	ND	ND	NA
Pyrene	9.1	UG/KG	ND	ND	ND	ND	NA
2,3,5-TrimethylNaphthalene	21.7	UG/KG	ND	ND	ND	ND	NA

*= Not enough sample for this analysis.

ND= not detected

NA= not analyzed

SOUTH BAY WATER RECLAMATION PLANT
ANNUAL FISH MUSCLE - Analysis of Poly Aromatic Hydrocarbon (PAH)

Annual 2015

Source:			RF-3	RF-4
Date:			2015	2015
Analyte	MDL	Units	Avg	Avg
=====	=====	=====	=====	=====
Acenaphthene	11.3	UG/KG	ND	ND
Acenaphthylene	9.1	UG/KG	ND	ND
Anthracene	8.4	UG/KG	ND	ND
Benzo[a]anthracene	15.9	UG/KG	ND	ND
Benzo[a]pyrene	18.3	UG/KG	ND	ND
3,4-Benzo(b)fluoranthene	26.8	UG/KG	ND	ND
Benzo[e]pyrene	40.6	UG/KG	ND	ND
Benzo[g,h,i]perylene	59.5	UG/KG	ND	ND
Benzo[k]fluoranthene	37.3	UG/KG	ND	ND
Biphenyl	19.9	UG/KG	ND	ND
Chrysene	23	UG/KG	ND	ND
Dibenzo(a,h)anthracene	40.3	UG/KG	ND	ND
2,6-Dimethylnaphthalene	19.5	UG/KG	ND	ND
Fluoranthene	12.9	UG/KG	ND	ND
Fluorene	11.4	UG/KG	ND	ND
Indeno(1,2,3-CD)pyrene	46.5	UG/KG	ND	ND
1-Methylnaphthalene	26.4	UG/KG	ND	ND
2-Methylnaphthalene	13.2	UG/KG	ND	ND
1-Methylphenanthrene	23.3	UG/KG	ND	ND
Naphthalene	17.4	UG/KG	<17.4	ND
Perylene	50.9	UG/KG	ND	ND
Phenanthrene	12.9	UG/KG	ND	ND
Pyrene	16.6	UG/KG	ND	ND
2,3,5-Trimethylnaphthalene	21.6	UG/KG	ND	ND

ND= not detected

SOUTH BAY WATER RECLAMATION PLANT
ANNUAL FISH LIVER - Analysis of Poly Chlorinated Biphenyls

Annual 2015

Source:			TFZONE5	TFZONE6	TFZONE7	TFZONE8	TFZONE9
Date:			12-OCT-2015	14-OCT-2015	14-OCT-2015	20-OCT-2015	20-OCT-2015
Analyte	MDL	Units	Value	Value	Value	Value	Value
=====	=====	=====	=====	=====	=====	=====	=====
PCB 18	.89	UG/KG	ND	ND	ND	ND	ND
PCB 28	1.12	UG/KG	ND	ND	<1.12	ND	ND
PCB 49	.45	UG/KG	ND	<0.45	0.93	ND	ND
PCB 37	.29	UG/KG	ND	ND	ND	ND	ND
PCB 70	.76	UG/KG	ND	ND	<0.76	ND	ND
PCB 101	2.31	UG/KG	<2.31	<2.31	4.40	ND	ND
PCB 119	1.04	UG/KG	ND	ND	ND	ND	ND
PCB 87	1.02	UG/KG	ND	ND	ND	ND	ND
PCB 110	2.18	UG/KG	ND	<2.18	<2.18	ND	ND
PCB 151	2.33	UG/KG	ND	<2.33	3.13	ND	ND
PCB 77	1.2	UG/KG	ND	ND	ND	ND	ND
PCB 149	1.6	UG/KG	E1.20	E2.50	6.67	ND	ND
PCB 123	1.49	UG/KG	ND	<1.49	<1.49	ND	ND
PCB 118	2.29	UG/KG	<2.29	5.33	18.90	<2.29	ND
PCB 114	2.1	UG/KG	ND	ND	ND	ND	ND
PCB 153/168	3.49	UG/KG	5.40	E18.9	48.5	<3.49	ND
PCB 105	2.63	UG/KG	ND	<2.63	2.93	ND	ND
PCB 138	2.18	UG/KG	ND	8.00	28.3	ND	ND
PCB 158	1.24	UG/KG	ND	<1.24	ND	ND	ND
PCB 187	1.25	UG/KG	3.10	8.30	22.1	1.73	ND
PCB 183	1.56	UG/KG	<1.56	<1.56	3.33	ND	ND
PCB 126	1.48	UG/KG	ND	ND	ND	ND	ND
PCB 128	1.81	UG/KG	ND	ND	2.47	ND	ND
PCB 167	.74	UG/KG	ND	<0.74	1.30	ND	ND
PCB 177	1.75	UG/KG	ND	<1.75	3.33	ND	ND
PCB 156	1.24	UG/KG	ND	ND	1.67	ND	ND
PCB 157	1	UG/KG	ND	ND	ND	ND	ND
PCB 180	2.49	UG/KG	ND	6.30	16.00	<2.49	ND
PCB 170	2.12	UG/KG	ND	<2.12	ND	ND	ND
PCB 169	1.15	UG/KG	ND	ND	ND	ND	ND
PCB 189	2.04	UG/KG	ND	ND	ND	ND	ND
PCB 194	11.4	UG/KG	ND	ND	ND	ND	ND
PCB 206	.67	UG/KG	ND	ND	ND	ND	ND

ND= not detected

DNQ= (Detected but not quantified). Estimated analyte concentration below calibration range.
E=estimated value, value is less than the Method Detection Limit but confirmed by GC/MS-MS.

SOUTH BAY WATER RECLAMATION PLANT
ANNUAL FISH MUSCLE - Analysis of Poly Chlorinated Biphenyls

Annual 2015

Source:			RF-3	RF-4
Date:			2015	2015
Analyte	MDL Units		Avg	Avg
=====	====	=====	=====	=====
PCB 18	.22 UG/KG		ND	ND
PCB 28	.18 UG/KG		ND	ND
PCB 49	.16 UG/KG		ND	ND
PCB 37	.15 UG/KG		ND	ND
PCB 70	.19 UG/KG		ND	ND
PCB 101	.25 UG/KG		ND	ND
PCB 119	.05 UG/KG		ND	ND
PCB 87	.23 UG/KG		ND	ND
PCB 110	.38 UG/KG		ND	ND
PCB 151	.12 UG/KG		ND	ND
PCB 77	.31 UG/KG		ND	ND
PCB 149	.3 UG/KG		ND	ND
PCB 123	.25 UG/KG		ND	ND
PCB 118	.31 UG/KG		ND	ND
PCB 114	.21 UG/KG		ND	ND
PCB 153/168	.56 UG/KG	<0.56	<0.56	
PCB 105	.19 UG/KG	ND	ND	
PCB 138	.3 UG/KG	ND	ND	
PCB 158	.13 UG/KG	ND	ND	
PCB 187	.47 UG/KG	ND	ND	
PCB 183	.46 UG/KG	ND	ND	
PCB 126	.36 UG/KG	ND	ND	
PCB 128	.29 UG/KG	ND	ND	
PCB 167	.17 UG/KG	ND	ND	
PCB 177	.49 UG/KG	ND	ND	
PCB 156	.23 UG/KG	ND	ND	
PCB 157	.14 UG/KG	ND	ND	
PCB 180	.42 UG/KG	<0.42	ND	
PCB 170	.41 UG/KG	ND	ND	
PCB 169	.23 UG/KG	ND	ND	
PCB 189	.36 UG/KG	ND	ND	
PCB 194	.61 UG/KG	ND	ND	
PCB 206	.14 UG/KG	ND	ND	

ND= not detected

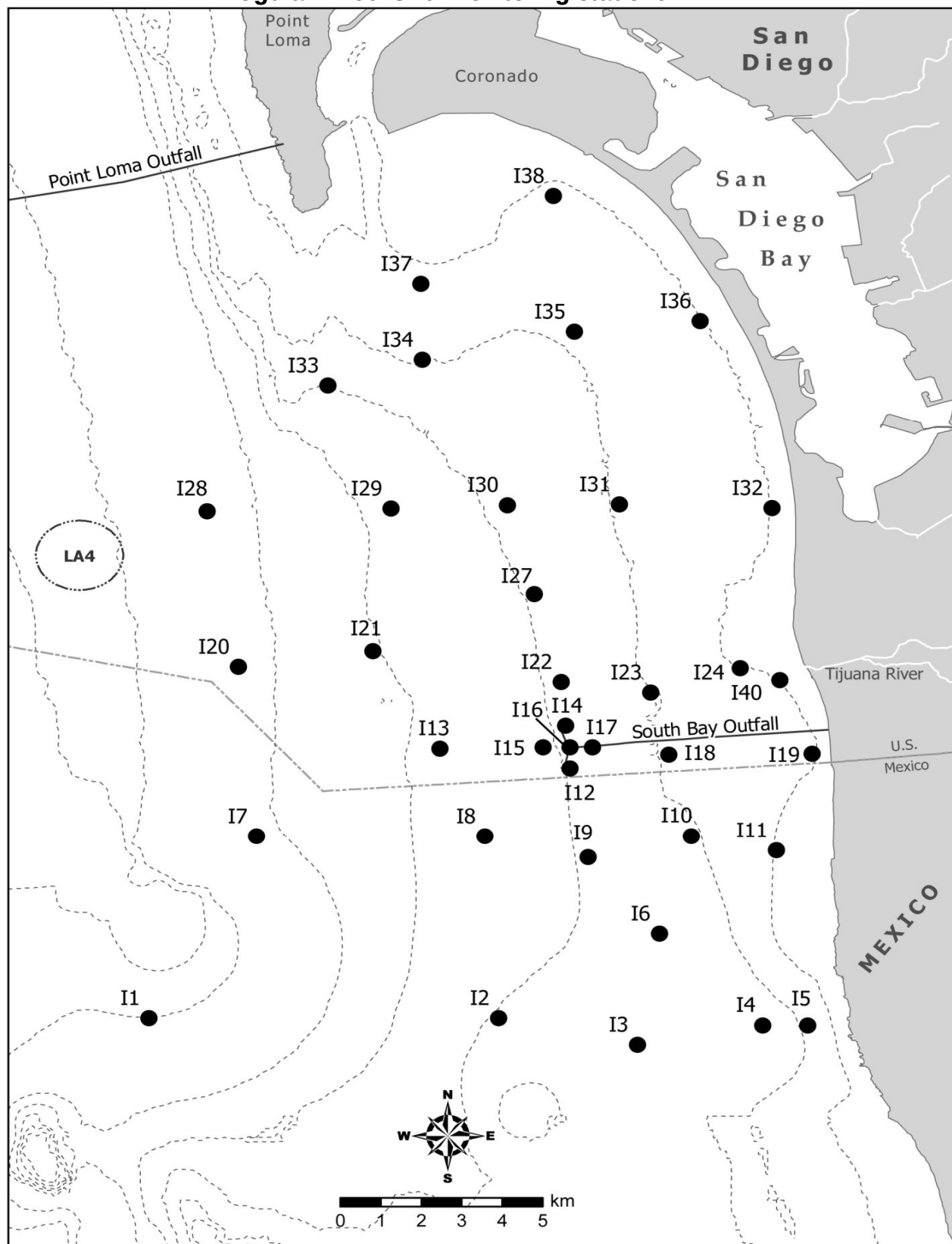
C. Seawater Data

Seawater is collected monthly at the following stations for analysis of total suspended solids (TSS) and Oil & Grease (O&G). Samples for TSS analysis are collected at 3 depths, sub-surface, mid-depth, and bottom, for each station shown in the following table. Oil and Grease samples are only collected from the 5 foot depth. The Oil & Grease analysis was changed to a Hexane Extractable Material (HEM) method. A report of analyses for each month is attached.

Table 1. Regular Fixed Grid Seawater sampling stations.

Station	Station
I-3	I-21
I-5	I-22
I-7	I-23
I-8	I-24
I-9	I-25
I-10	I-26
I-11	I-30
I-12	I-32
I-13	I-33
I-14	I-36
I-16	I-37
I-18	I-38
I-19	I-39
I-20	I-40

Regular Fixed Grid Monitoring Stations



South Bay Ocean Outfall Monitoring
Seawater Analysis for Total Suspended Solids and Hexane Extractable Material

Annual 2015

Analyte:		HEM	TSS
MDL:		1.4	2.5
SOURCE	SAMPLE DATE	mg/L	mg/L
=====	=====	=====	=====
I-3 2 M	03-FEB-2015	ND	ND
I-3 2 M	07-MAY-2015	ND	ND
I-3 2 M	04-AUG-2015	ND	<2.5
I-3 2 M	09-NOV-2015	ND	<2.5
I-3 18 M	03-FEB-2015		ND
I-3 18 M	07-MAY-2015		ND
I-3 18 M	04-AUG-2015		ND
I-3 18 M	09-NOV-2015		ND
I-3 27 M	03-FEB-2015		ND
I-3 27 M	07-MAY-2015		ND
I-3 27 M	04-AUG-2015		ND
I-3 27 M	09-NOV-2015		ND
I-5 2 M	03-FEB-2015	ND	ND
I-5 2 M	07-MAY-2015	ND	ND
I-5 2 M	04-AUG-2015	ND	ND
I-5 2 M	09-NOV-2015	ND	ND
I-5 6 M	03-FEB-2015		3.3
I-5 6 M	07-MAY-2015		ND
I-5 6 M	04-AUG-2015		ND
I-5 6 M	09-NOV-2015		3.2
I-5 11 M	03-FEB-2015		3.8
I-5 11 M	07-MAY-2015		2.8
I-5 11 M	04-AUG-2015		ND
I-5 11 M	09-NOV-2015		4.8
I-7 2 M	03-FEB-2015	ND	ND
I-7 2 M	07-MAY-2015	ND	ND
I-7 2 M	04-AUG-2015	ND	ND
I-7 2 M	09-NOV-2015	ND	ND
I-7 18 M	03-FEB-2015		ND
I-7 18 M	07-MAY-2015		ND
I-7 18 M	04-AUG-2015		ND
I-7 18 M	09-NOV-2015		ND
I-7 52 M	03-FEB-2015		ND
I-7 52 M	07-MAY-2015		2.6
I-7 52 M	04-AUG-2015		ND
I-7 52 M	09-NOV-2015		3.0
I-8 2 M	03-FEB-2015	ND	ND
I-8 2 M	07-MAY-2015	ND	ND
I-8 2 M	04-AUG-2015	ND	ND
I-8 2 M	09-NOV-2015	ND	ND
I-8 18 M	03-FEB-2015		ND

ND=not detected

South Bay Ocean Outfall Monitoring
Seawater Analysis for Total Suspended Solids and Hexane Extractable Material

Annual 2015

Analyte:		HEM	TSS
MDL:		1.4	2.5
SOURCE	SAMPLE DATE	mg/L	mg/L
=====	=====	=====	=====
I-8 18 M	07-MAY-2015		ND
I-8 18 M	04-AUG-2015		ND
I-8 18 M	09-NOV-2015		ND
I-8 37 M	03-FEB-2015		ND
I-8 37 M	07-MAY-2015		ND
I-8 37 M	04-AUG-2015		ND
I-8 37 M	09-NOV-2015		ND
I-9 2 M	03-FEB-2015	ND	ND
I-9 2 M	07-MAY-2015	ND	ND
I-9 2 M	04-AUG-2015	ND	ND
I-9 2 M	09-NOV-2015	ND	ND
I-9 18 M	03-FEB-2015		ND
I-9 18 M	07-MAY-2015		ND
I-9 18 M	04-AUG-2015		ND
I-9 18 M	09-NOV-2015		ND
I-9 27 M	03-FEB-2015		ND
I-9 27 M	07-MAY-2015		ND
I-9 27 M	04-AUG-2015		ND
I-9 27 M	09-NOV-2015		ND
I-10 2 M	03-FEB-2015	ND	ND
I-10 2 M	07-MAY-2015	ND	ND
I-10 2 M	04-AUG-2015	ND	2.6
I-10 2 M	09-NOV-2015	ND	ND
I-10 12 M	03-FEB-2015		3.8
I-10 12 M	07-MAY-2015		ND
I-10 12 M	04-AUG-2015		ND
I-10 12 M	09-NOV-2015		ND
I-10 18 M	03-FEB-2015		ND
I-10 18 M	07-MAY-2015		6.2
I-10 18 M	04-AUG-2015		ND
I-10 18 M	09-NOV-2015		ND
I-11 2 M	03-FEB-2015	ND	<2.5
I-11 2 M	07-MAY-2015	ND	ND
I-11 2 M	04-AUG-2015	ND	ND
I-11 2 M	09-NOV-2015	ND	ND
I-11 6 M	03-FEB-2015		ND
I-11 6 M	07-MAY-2015		ND
I-11 6 M	04-AUG-2015		ND
I-11 6 M	09-NOV-2015		ND
I-11 11 M	03-FEB-2015		ND
I-11 11 M	07-MAY-2015		4.6

ND=not detected

South Bay Ocean Outfall Monitoring
Seawater Analysis for Total Suspended Solids and Hexane Extractable Material

Annual 2015

Analyte:		HEM	TSS
MDL:		1.4	2.5
SOURCE	SAMPLE DATE	mg/L	mg/L
=====	=====	=====	=====
I-11 11 M	04-AUG-2015		ND
I-11 11 M	09-NOV-2015		10.0
I-12 2 M	04-FEB-2015	ND	ND
I-12 2 M	06-MAY-2015	ND	ND
I-12 2 M	05-AUG-2015	ND	ND
I-12 2 M	13-NOV-2015	ND	ND
I-12 18 M	04-FEB-2015		ND
I-12 18 M	06-MAY-2015		ND
I-12 18 M	05-AUG-2015		ND
I-12 18 M	13-NOV-2015		ND
I-12 27 M	04-FEB-2015		ND
I-12 27 M	06-MAY-2015		ND
I-12 27 M	05-AUG-2015		ND
I-12 27 M	13-NOV-2015		2.7
I-13 2 M	03-FEB-2015	ND	ND
I-13 2 M	07-MAY-2015	ND	ND
I-13 2 M	04-AUG-2015	ND	ND
I-13 2 M	09-NOV-2015	ND	ND
I-13 18 M	03-FEB-2015		ND
I-13 18 M	07-MAY-2015		ND
I-13 18 M	04-AUG-2015		ND
I-13 18 M	09-NOV-2015		ND
I-13 37 M	03-FEB-2015		ND
I-13 37 M	07-MAY-2015		ND
I-13 37 M	04-AUG-2015		ND
I-13 37 M	09-NOV-2015		3.5
I-14 2 M	04-FEB-2015	ND	ND
I-14 2 M	06-MAY-2015	ND	ND
I-14 2 M	05-AUG-2015	ND	ND
I-14 2 M	13-NOV-2015	ND	ND
I-14 18 M	04-FEB-2015		ND
I-14 18 M	06-MAY-2015		ND
I-14 18 M	05-AUG-2015		ND
I-14 18 M	13-NOV-2015		ND
I-14 27 M	04-FEB-2015		4.5
I-14 27 M	06-MAY-2015		3.4
I-14 27 M	05-AUG-2015		ND
I-14 27 M	13-NOV-2015		3.3
I-16 2 M	04-FEB-2015	ND	ND
I-16 2 M	06-MAY-2015	ND	ND
I-16 2 M	05-AUG-2015	ND	ND

ND=not detected

South Bay Ocean Outfall Monitoring
Seawater Analysis for Total Suspended Solids and Hexane Extractable Material

Annual 2015

Analyte:		HEM	TSS
MDL:		1.4	2.5
SOURCE	SAMPLE DATE	mg/L	mg/L
=====	=====	=====	=====
I-16 2 M	13-NOV-2015	ND	ND
I-16 18 M	04-FEB-2015		ND
I-16 18 M	06-MAY-2015		ND
I-16 18 M	05-AUG-2015		ND
I-16 18 M	13-NOV-2015		ND
I-16 27 M	04-FEB-2015		2.6
I-16 27 M	06-MAY-2015		ND
I-16 27 M	05-AUG-2015		ND
I-16 27 M	13-NOV-2015		2.6
I-18 2 M	04-FEB-2015	ND	ND
I-18 2 M	06-MAY-2015	ND	ND
I-18 2 M	05-AUG-2015	ND	ND
I-18 2 M	13-NOV-2015	ND	2.8
I-18 12 M	04-FEB-2015		ND
I-18 12 M	06-MAY-2015		3.2
I-18 12 M	05-AUG-2015		ND
I-18 12 M	13-NOV-2015		ND
I-18 18 M	04-FEB-2015		ND
I-18 18 M	06-MAY-2015		3.2
I-18 18 M	05-AUG-2015		ND
I-18 18 M	13-NOV-2015		2.5
I-19 2 M	04-FEB-2015	ND	ND
I-19 2 M	06-MAY-2015	ND	ND
I-19 2 M	05-AUG-2015	ND	ND
I-19 2 M	13-NOV-2015	ND	3.9
I-19 6 M	04-FEB-2015		2.6
I-19 6 M	06-MAY-2015		4.1
I-19 6 M	05-AUG-2015		ND
I-19 6 M	13-NOV-2015		4.8
I-19 11 M	04-FEB-2015		4.5
I-19 11 M	06-MAY-2015		10.6
I-19 11 M	05-AUG-2015		ND
I-19 11 M	13-NOV-2015		5.7
I-20 2 M	03-FEB-2015	ND	ND
I-20 2 M	07-MAY-2015	ND	ND
I-20 2 M	04-AUG-2015	ND	ND
I-20 2 M	09-NOV-2015	ND	ND
I-20 18 M	03-FEB-2015		ND
I-20 18 M	07-MAY-2015		ND
I-20 18 M	04-AUG-2015		ND
I-20 18 M	09-NOV-2015		ND

ND=not detected

South Bay Ocean Outfall Monitoring
Seawater Analysis for Total Suspended Solids and Hexane Extractable Material

Annual 2015

Analyte:		HEM	TSS
MDL:		1.4	2.5
SOURCE	SAMPLE DATE	mg/L	mg/L
=====	=====	=====	=====
I-20 55 M	03-FEB-2015		ND
I-20 55 M	07-MAY-2015		ND
I-20 55 M	04-AUG-2015		ND
I-20 55 M	09-NOV-2015		4.5
I-21 2 M	03-FEB-2015	ND	ND
I-21 2 M	07-MAY-2015	ND	ND
I-21 2 M	04-AUG-2015	ND	ND
I-21 2 M	09-NOV-2015	ND	ND
I-21 18 M	03-FEB-2015		ND
I-21 18 M	07-MAY-2015		ND
I-21 18 M	04-AUG-2015		ND
I-21 18 M	09-NOV-2015		ND
I-21 37 M	03-FEB-2015		ND
I-21 37 M	07-MAY-2015		ND
I-21 37 M	04-AUG-2015		ND
I-21 37 M	09-NOV-2015		ND
I-22 2 M	04-FEB-2015	ND	ND
I-22 2 M	06-MAY-2015	ND	ND
I-22 2 M	05-AUG-2015	ND	ND
I-22 2 M	13-NOV-2015	ND	ND
I-22 18 M	04-FEB-2015		ND
I-22 18 M	06-MAY-2015		ND
I-22 18 M	05-AUG-2015		ND
I-22 18 M	13-NOV-2015		ND
I-22 27 M	04-FEB-2015		5.6
I-22 27 M	06-MAY-2015		3.4
I-22 27 M	05-AUG-2015		ND
I-22 27 M	13-NOV-2015		2.8
I-23 2 M	04-FEB-2015	ND	ND
I-23 2 M	06-MAY-2015	ND	ND
I-23 2 M	05-AUG-2015	ND	ND
I-23 2 M	13-NOV-2015	ND	ND
I-23 12 M	04-FEB-2015		ND
I-23 12 M	06-MAY-2015		2.8
I-23 12 M	05-AUG-2015		ND
I-23 12 M	13-NOV-2015		ND
I-23 18 M	04-FEB-2015		ND
I-23 18 M	06-MAY-2015		3.1
I-23 18 M	05-AUG-2015		3.7
I-23 18 M	13-NOV-2015		4.8
I-24 2 M	04-FEB-2015	ND	<2.5

ND=not detected

South Bay Ocean Outfall Monitoring
Seawater Analysis for Total Suspended Solids and Hexane Extractable Material

Annual 2015

Analyte:		HEM	TSS
MDL:		1.4	2.5
SOURCE	SAMPLE DATE	mg/L	mg/L
=====	=====	=====	=====
I-24 2 M	06-MAY-2015	ND	<2.5
I-24 2 M	05-AUG-2015	ND	ND
I-24 2 M	13-NOV-2015	ND	<2.5
I-24 6 M	04-FEB-2015		2.7
I-24 6 M	06-MAY-2015		3.9
I-24 6 M	05-AUG-2015		4.5
I-24 6 M	13-NOV-2015		2.5
I-24 11 M	04-FEB-2015		9.9
I-24 11 M	06-MAY-2015		5.3
I-24 11 M	05-AUG-2015		9.4
I-24 11 M	13-NOV-2015		3.8
I-25 2 M	04-FEB-2015	ND	2.8
I-25 2 M	06-MAY-2015	ND	2.9
I-25 2 M	05-AUG-2015	ND	2.8
I-25 2 M	13-NOV-2015	ND	2.8
I-25 6 M	04-FEB-2015		ND
I-25 6 M	06-MAY-2015		4.1
I-25 6 M	05-AUG-2015		4.6
I-25 6 M	13-NOV-2015		3.2
I-25 9 M	04-FEB-2015		4.6
I-25 9 M	06-MAY-2015		7.6
I-25 9 M	05-AUG-2015		5.0
I-25 9 M	13-NOV-2015		2.9
I-26 2 M	04-FEB-2015	ND	ND
I-26 2 M	06-MAY-2015	ND	4.2
I-26 2 M	05-AUG-2015	ND	3.3
I-26 2 M	13-NOV-2015	ND	ND
I-26 6 M	04-FEB-2015		ND
I-26 6 M	06-MAY-2015		3.1
I-26 6 M	05-AUG-2015		4.7
I-26 6 M	13-NOV-2015		ND
I-26 9 M	04-FEB-2015		4.1
I-26 9 M	06-MAY-2015		6.1
I-26 9 M	05-AUG-2015		2.9
I-26 9 M	13-NOV-2015		3.3
I-30 2 M	05-FEB-2015	ND	ND
I-30 2 M	08-MAY-2015	ND	ND
I-30 2 M	06-AUG-2015	ND	ND
I-30 2 M	12-NOV-2015	ND	ND
I-30 18 M	05-FEB-2015		ND
I-30 18 M	08-MAY-2015		ND

ND=not detected

South Bay Ocean Outfall Monitoring
Seawater Analysis for Total Suspended Solids and Hexane Extractable Material

Annual 2015

Analyte:		HEM	TSS
MDL:		1.4	2.5
SOURCE	SAMPLE DATE	mg/L	mg/L
=====	=====	=====	=====
I-30 18 M	06-AUG-2015		ND
I-30 18 M	12-NOV-2015		ND
I-30 27 M	05-FEB-2015		2.7
I-30 27 M	08-MAY-2015		ND
I-30 27 M	06-AUG-2015		ND
I-30 27 M	12-NOV-2015		ND
I-32 2 M	05-FEB-2015	ND	2.9
I-32 2 M	08-MAY-2015	ND	3.1
I-32 2 M	06-AUG-2015	ND	3.0
I-32 2 M	12-NOV-2015	ND	ND
I-32 6 M	05-FEB-2015		5.6
I-32 6 M	08-MAY-2015		4.1
I-32 6 M	06-AUG-2015		ND
I-32 6 M	12-NOV-2015		3.2
I-32 9 M	05-FEB-2015		6.1
I-32 9 M	08-MAY-2015		5.1
I-32 9 M	06-AUG-2015		8.8
I-32 9 M	12-NOV-2015		5.0
I-33 2 M	05-FEB-2015	ND	ND
I-33 2 M	08-MAY-2015	ND	ND
I-33 2 M	06-AUG-2015	ND	ND
I-33 2 M	12-NOV-2015	ND	3.3
I-33 18 M	05-FEB-2015		ND
I-33 18 M	08-MAY-2015		ND
I-33 18 M	06-AUG-2015		2.7
I-33 18 M	12-NOV-2015		ND
I-33 27 M	05-FEB-2015		ND
I-33 27 M	08-MAY-2015		2.9
I-33 27 M	06-AUG-2015		3.6
I-33 27 M	12-NOV-2015		3.3
I-36 2 M	05-FEB-2015	ND	ND
I-36 2 M	08-MAY-2015	ND	6.0
I-36 2 M	06-AUG-2015	ND	3.3
I-36 2 M	12-NOV-2015	ND	3.9
I-36 6 M	05-FEB-2015		ND
I-36 6 M	08-MAY-2015		2.6
I-36 6 M	06-AUG-2015		ND
I-36 6 M	12-NOV-2015		6.2
I-36 11 M	05-FEB-2015		10.4
I-36 11 M	08-MAY-2015		4.0
I-36 11 M	06-AUG-2015		7.3

ND=not detected

South Bay Ocean Outfall Monitoring
Seawater Analysis for Total Suspended Solids and Hexane Extractable Material

Annual 2015

Analyte:		HEM	TSS
MDL:		1.4	2.5
SOURCE	SAMPLE DATE	mg/L	mg/L
=====	=====	=====	=====
I-36 11 M	12-NOV-2015		7.2
I-37 2 M	05-FEB-2015	ND	ND
I-37 2 M	08-MAY-2015	ND	<2.5
I-37 2 M	06-AUG-2015	ND	ND
I-37 2 M	12-NOV-2015	ND	ND
I-37 6 M	05-FEB-2015		ND
I-37 6 M	08-MAY-2015		ND
I-37 6 M	06-AUG-2015		ND
I-37 6 M	12-NOV-2015		3.4
I-37 11 M	05-FEB-2015		2.8
I-37 11 M	08-MAY-2015		ND
I-37 11 M	06-AUG-2015		ND
I-37 11 M	12-NOV-2015		4.1
I-38 2 M	05-FEB-2015	ND	ND
I-38 2 M	08-MAY-2015	ND	ND
I-38 2 M	06-AUG-2015	ND	ND
I-38 2 M	12-NOV-2015	ND	3.9
I-38 6 M	05-FEB-2015		ND
I-38 6 M	08-MAY-2015		ND
I-38 6 M	06-AUG-2015		ND
I-38 6 M	12-NOV-2015		4.8
I-38 11 M	05-FEB-2015		3.7
I-38 11 M	08-MAY-2015		6.9
I-38 11 M	06-AUG-2015		3.0
I-38 11 M	12-NOV-2015		8.6
I-39 2 M	04-FEB-2015	ND	ND
I-39 2 M	06-MAY-2015	ND	ND
I-39 2 M	05-AUG-2015	ND	3.2
I-39 2 M	13-NOV-2015	ND	ND
I-39 12 M	04-FEB-2015		ND
I-39 12 M	06-MAY-2015		3.8
I-39 12 M	05-AUG-2015		ND
I-39 12 M	13-NOV-2015		ND
I-39 18 M	04-FEB-2015		3.3
I-39 18 M	06-MAY-2015		5.6
I-39 18 M	05-AUG-2015		3.7
I-39 18 M	13-NOV-2015		ND
I-40 2 M	04-FEB-2015	ND	2.7
I-40 2 M	06-MAY-2015	ND	3.0
I-40 2 M	05-AUG-2015	ND	3.9
I-40 2 M	13-NOV-2015	ND	ND

ND=not detected

South Bay Ocean Outfall Monitoring
Seawater Analysis for Total Suspended Solids and Hexane Extractable Material

Annual 2015

Analyte:		HEM	TSS
MDL:		1.4	2.5
SOURCE	SAMPLE DATE	mg/L	mg/L
=====	=====	=====	=====
I-40 6 M	04-FEB-2015		ND
I-40 6 M	06-MAY-2015		3.5
I-40 6 M	05-AUG-2015		3.7
I-40 6 M	13-NOV-2015		9.4
I-40 9 M	04-FEB-2015		3.8
I-40 9 M	06-MAY-2015		9.4
I-40 9 M	05-AUG-2015		9.0
I-40 9 M	13-NOV-2015		7.4

ND=not detected

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VI. Annual Pretreatment Program Data

2015 Annual Pretreatment Program Sludge Analysis (QUARTERLY SLUDGE PROJECT)

SOUTH BAY WATER RECLAMATION PLANT

Order No. R9-2013-0006

NPDES Permit No.CA0109045

The Quarterly Sludge Project is part of the South Bay WRP NPDES (Permit No. CA0109045/ Order No. R9-2013-0006) monitoring requirements for the Metropolitan Sewerage System. The sampling plan is designed so as to provide a “snapshot” of all of the physical and chemical characteristics monitored of the wastewater treatment waste streams for a short interval of time (1-2 days). This is conducted quarterly.

The Quarterly Sludge Project was conducted four times during 2015. Sampling occurred on February 3, May 5, August 4, and October 6. Monthly composite samples of MBC dewatered sludge (belt-press dewatered) during the respective calendar months were taken and analyzed for a similar suite of parameters. The tables showing the results of these analyses follow in this section. Results relative to the Pt. Loma WWTP or North City Water Reclamation Plant are in the respective annual reports for those facilities.

* pH, Grease & Oils, temperature, and conductivity are determined from grab samples.

Abbreviations:

SB_INF_02	SBWRP influent
SB_OUTFALL_01	SBWRP effluent
SB_REC_WATER_34	SBWRP reclaim water
SB_PRIEFF_10	Primary Effluent
SB_SEC_EFF_29	Secondary effluent
SB_RSL_10	Primary Sed Tank to Sludge Line

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SOUTH BAY WATER RECLAMATION PLANT
Daily Parameters and Metals

Annual 2015

Source:		INFLUENT	INFLUENT	INFLUENT	INFLUENT	EFFLUENT
Date:		03-FEB-2015	07-MAY-2015	04-AUG-2015	06-OCT-2015	03-FEB-2015
Analyte	MDL Units					
Aluminum	23.8 UG/L	557	322	578	662	ND
Antimony	2.44 UG/L	ND	ND	ND	<2.4	<2.4
Arsenic	.06 UG/L	1.1	0.2	1.2	1.3	0.6
Barium	.7 UG/L	127	106	119	130	92.6
Beryllium	.05 UG/L	ND	ND	ND	<0.05	ND
Boron	1.4 UG/L	300	321	337	360	309
Cadmium	.26 UG/L	0.37	ND	ND	0.30	ND
Chromium	.54 UG/L	2.8	1.6	4.0	7.6	0.6
Cobalt	.24 UG/L	0.76	0.94	ND	7.95	0.46
Copper	2.16 UG/L	74	<2	109	93	7
Iron	15.6 UG/L	802	289	975	953	42
Lead	1.68 UG/L	2	ND	ND	4	ND
Manganese	.78 UG/L	90.0	78.1	91.4	70.0	60.2
Mercury	.013 UG/L	0.125	0.13	0.083	0.065	ND
Molybdenum	.32 UG/L	6.91	0.7	7.8	8.45	3.61
Nickel	.53 UG/L	4.29	4.02	14.0	9.1	2.67
Selenium	.08 UG/L	2.19	1.18	1.78	2.04	1.05
Silver	.73 UG/L	ND	ND	ND	<0.7	ND
Thallium	3.12 UG/L	ND	ND	ND	ND	ND
Vanadium	.45 UG/L	1.81	1.47	ND	2.15	0.63
Zinc	4.19 UG/L	159	114	161	183	18.1
Calcium Hardness	.1 MG/L	220	207	184	199	88
Magnesium Hardness	.412 MG/L	126	120	125	127	131
Total Hardness	.512 MG/L	331	327	309	326	351
Total Alkalinity (bicarbonate)	20 MG/L	373	384	342	352	213
Calcium	.04 MG/L	82.2	82.9	73.5	79.8	88.0
Lithium	.002 MG/L	0.058	0.052	0.054	0.049	0.049
Magnesium	.1 MG/L	30.7	29.1	30.4	30.8	31.7
Potassium	.3 MG/L	18.2	23.0	20.4	18.7	17.3
Sodium	1 MG/L	184	213	201	216	199
Bromide	.1 MG/L	0.2	0.3	0.3	0.1	0.3
Chloride	7 MG/L	242	230	223	214	243
Fluoride	.05 MG/L	0.43	0.28	0.28	0.17	0.6
Nitrate	.04 MG/L	0.07	ND	1.76	ND	26.4
Ortho Phosphate (as P04)	.2 MG/L	11.6	11.2	9.1	11.2	0.9
Sulfate	9 MG/L	221	182	172	196	261
Cyanide, Total	.002 MG/L	ND	ND	ND	ND	ND
BOD	2 MG/L	345	404	358	355	17
pH*	PH	7.65	7.54	7.36	7.53	7.39
Settleable Solids*	.1 ML/L	21.0	20.0	29.0	24.0	ND
Turbidity	.13 NTU	180	197	185	198	2.55
Total Kjeldahl Nitrogen	1.6 MG/L	62.8	28.2	46.8	53.6	11.8
Chlorine Residual, Total	.03 MG/L	NR	NR	NR	NR	ND
Ammonia-N	.3 MG/L	39.1	40.7	32.5	34.5	9.2
Sulfides-Total	.4 MG/L	5.76	6.51	3.42	10.2	ND
Total Suspended Solids	2.5 MG/L	278	292	244	258	4.9
Volatile Suspended Solids	2.5 MG/L	250	270	224	238	4.4
Total Dissolved Solids	28 MG/L	1160	1060	1070	1050	1100
MBAS (Surfactants)	.03 MG/L	10.1	9.18	9.49	10.9	0.15

*= These are grab samples.
^= Analyzed on May 5, 2015.

ND= Not Detected
NR= Not Required

Chromium results are for Total Chromium.

SOUTH BAY WATER RECLAMATION PLANT
Daily Parameters and Metals

Annual 2015

Source:		EFFLUENT	EFFLUENT	EFFLUENT
Date:		05-MAY-2015	04-AUG-2015	06-OCT-2015
Analyte	MDL Units			
Aluminum	23.8 UG/L	55	ND	31
Antimony	2.44 UG/L	4.1	ND	3.0
Arsenic	.06 UG/L	0.7	1.0	0.9
Barium	.7 UG/L	94.5	76.3	90.6
Beryllium	.05 UG/L	ND	ND	ND
Boron	1.4 UG/L	322	332	346
Cadmium	.26 UG/L	<0.26	ND	ND
Chromium	.54 UG/L	0.7	ND	0.9
Cobalt	.24 UG/L	0.38	ND	0.40
Copper	2.16 UG/L	18	12	9
Iron	15.6 UG/L	55	74	59
Lead	1.68 UG/L	ND	ND	ND
Manganese	.78 UG/L	29.3	61.7	22.0
Mercury	.013 UG/L	ND	0.005	ND
Molybdenum	.32 UG/L	3.93	3.3	4.0
Nickel	.53 UG/L	3.12	10.5	7.6
Selenium	.08 UG/L	1.03	0.62	0.69
Silver	.73 UG/L	ND	ND	ND
Thallium	3.12 UG/L	ND	ND	ND
Vanadium	.45 UG/L	0.88	ND	1.1
Zinc	4.19 UG/L	33.8	26.0	32.0
Calcium Hardness	.1 MG/L	216	187	215
Magnesium Hardness	.412 MG/L	117	131	131
Total Hardness	.512 MG/L	333	317	346
Total Alkalinity (bicarbonate)	20 MG/L	158	169	146
Calcium	.04 MG/L	86.6	74.6	85.9
Lithium	.002 MG/L	0.05	0.046	0.049
Magnesium	.1 MG/L	28.3	31.7	31.9
Potassium	.3 MG/L	19.9	19.6	18.1
Sodium	1 MG/L	207	216	227
Bromide	.1 MG/L	0.3	0.3	0.2
Chloride	7 MG/L	222	252	232
Fluoride	.05 MG/L	0.53	0.51	0.42
Nitrate	.04 MG/L	46.7	39.7	61.2
Ortho Phosphate (as P04)	.2 MG/L	0.9	1.9	6.2
Sulfate	9 MG/L	240	208	254
Cyanide, Total	.002 MG/L	ND	ND	ND
BOD	2 MG/L	11	13	10
pH*	PH	7.23	7.29	7.28
Settleable Solids*	.1 ML/L	ND	ND	ND
Turbidity	.13 NTU	2.66	2.64	2.97
Total Kjeldahl Nitrogen	1.6 MG/L	2.6	2.5	7.0
Chlorine Residual, Total	.03 MG/L	0.04	0.05	0.04
Ammonia-N	.3 MG/L	ND	0.6	ND
Sulfides-Total	.4 MG/L	ND	ND	0.56
Total Suspended Solids	2.5 MG/L	5.6	7.0	8.0
Volatile Suspended Solids	2.5 MG/L	5.3	6.6	7.5
Total Dissolved Solids	28 MG/L	1010	1140	1090
MBAS (Surfactants)	.03 MG/L	0.11	0.15	0.11

*= These are grab samples.

ND= Not Detected

NR= Not Required

Chromium results are for Total Chromium.

SOUTH BAY WATER RECLAMATION PLANT
Daily Parameters and Metals

Annual 2015

Source:		PRI EFF	PRI EFF	PRI EFF	PRI EFF	SEC_EFF
Date:		03-FEB-2015	05-MAY-2015	04-AUG-2015	06-OCT-2015	03-FEB-2015
Analyte	MDL Units					
=====	=====	=====	=====	=====	=====	=====
Aluminum	23.8 UG/L	193	234	253	272	ND
Antimony	2.44 UG/L	ND	ND	ND	ND	2.8
Arsenic	.06 UG/L	0.8	0.5	1.1	1.1	0.5
Barium	.7 UG/L	108	105	95.9	113	91.0
Beryllium	.05 UG/L	ND	ND	ND	ND	ND
Boron	1.4 UG/L	303	327	314	336	313
Cadmium	.26 UG/L	0.33	ND	ND	ND	ND
Chromium	.54 UG/L	1.8	1.6	2.0	2.7	ND
Cobalt	.24 UG/L	0.55	0.71	ND	0.80	0.32
Copper	2.16 UG/L	44	6	69	52	7
Iron	15.6 UG/L	324	186	384	374	48
Lead	1.68 UG/L	2	ND	ND	ND	ND
Manganese	.78 UG/L	94.8	67.0	83.7	65.7	57.5
Mercury	.013 UG/L	0.041	0.042	0.040	0.036	ND
Molybdenum	.32 UG/L	5.44	1.36	4.5	5.4	3.52
Nickel	.53 UG/L	3.36	3.82	12.0	8.20	2.46
Selenium	.08 UG/L	1.24	1.23	1.07	1.43	1.04
Silver	.73 UG/L	ND	ND	ND	ND	ND
Thallium	3.12 UG/L	ND	ND	ND	ND	ND
Vanadium	.45 UG/L	0.63	1.44	ND	1.20	0.49
Zinc	4.19 UG/L	74.6	90.7	93.0	86.0	19.8
=====	=====	=====	=====	=====	=====	=====
Calcium Hardness	.1 MG/L	86	206	190	206	218
Magnesium Hardness	.412 MG/L	132	119	131	132	130
Total Hardness	.512 MG/L	347	325	321	338	348
Total Alkalinity (bicarbonate)	20 MG/L	319	337	360	350	202
=====	=====	=====	=====	=====	=====	=====
Calcium	.04 MG/L	86.1	82.4	76.0	82.6	87.1
Lithium	.002 MG/L	0.049	0.053	0.050	0.049	0.049
Magnesium	.1 MG/L	32.2	29.0	31.9	31.9	31.5
Potassium	.3 MG/L	18.7	22.1	20.7	18.3	17.1
Sodium	1 MG/L	201	224	214	229	198
=====	=====	=====	=====	=====	=====	=====
Bromide	.1 MG/L	0.2	0.3	0.3	0.2	0.3
Chloride	7 MG/L	251	245	245	234	243
Fluoride	.05 MG/L	0.54	0.39	0.33	0.20	0.58
Nitrate	.04 MG/L	2.96	ND	ND	ND	25.9
Ortho Phosphate (as P04)	.2 MG/L	9.0	12.4	8.7	10.6	0.9
Sulfate	9 MG/L	271	191	180	213	261
Cyanide, Total	.002 MG/L	ND	ND	ND	ND	ND
BOD	2 MG/L	219	194	237	177	19
ph*	PH	7.70	7.65	7.59	7.73	7.44
Settleable Solids*	.1 ML/L	0.3	0.7	0.8	0.8	0.2
Turbidity	.13 NTU	100	114	148	193	3.76
Total Kjeldahl Nitrogen	1.6 MG/L	51.4	58.8	45.1	52.5	12.0
Ammonia-N	.3 MG/L	32.1	30.8	38.9	34.3	8.0
Sulfides-Total	.4 MG/L	0.73	2.39	1.95	1.85	ND
Total Suspended Solids	2.5 MG/L	108	120	91.7	120	8.2
Volatile Suspended Solids	2.5 MG/L	94.0	108	83.3	110	6.8
Total Dissolved Solids	28 MG/L	1170	1050	1060	1090	1090
MBAS (Surfactants)	.03 MG/L	0.79	4.50	4.83	3.77	0.16

*= These are grab samples.

ND= Not Detected

NR= Not Required

Chromium results are for Total Chromium.

SOUTH BAY WATER RECLAMATION PLANT
Daily Parameters and Metals

Annual 2015

Source:		SEC_EFF	SEC_EFF	SEC_EFF	REC_WATER	REC_WATER
Date:		05-MAY-2015	04-AUG-2015	06-OCT-2015	26-FEB-2015	05-MAY-2015
Analyte	MDL Units					
=====						
Aluminum	23.8 UG/L	ND	ND	57	NR	ND
Antimony	2.44 UG/L	2.6	ND	3.0	NR	ND
Arsenic	.06 UG/L	0.7	1.3	0.9	NR	0.8
Barium	.7 UG/L	100.000	74.800	94.500	NR	83.100
Beryllium	.05 UG/L	ND	ND	ND	NR	ND
Boron	1.4 UG/L	380	338	341	370	322
Cadmium	.26 UG/L	ND	ND	ND	NR	ND
Chromium	.54 UG/L	0.9	ND	1.1	NR	1.1
Cobalt	.24 UG/L	0.84	ND	0.70	NR	0.55
Copper	2.16 UG/L	11	12	12	NR	5
Iron	15.6 UG/L	54	99	90	105	42
Lead	1.68 UG/L	ND	ND	2	NR	ND
Manganese	.78 UG/L	32.00	49.40	30.20	41.00	24.10
Mercury	.013 UG/L	ND	ND	0.005	NR	ND
Molybdenum	.32 UG/L	3.74	3.10	3.90	NR	3.47
Nickel	.53 UG/L	3.60	11.00	7.90	NR	3.16
Selenium	.08 UG/L	0.84	0.58	0.68	NR	0.87
Silver	.73 UG/L	ND	ND	ND	NR	ND
Thallium	3.12 UG/L	ND	ND	ND	NR	ND
Vanadium	.45 UG/L	0.85	ND	1.40	NR	0.59
Zinc	4.19 UG/L	33.8	25.0	45.0	NR	27.2
=====						
Calcium Hardness	.1 MG/L	216	189	215	209#	215
Magnesium Hardness	.412 MG/L	116	132	132	121#	117
Total Hardness	.512 MG/L	332	321	347	330#	332
Total Alkalinity (bicarbonate)	20 MG/L	163	170	148	NR	168
=====						
Calcium	.04 MG/L	86.4	75.6	86.0	83.7#	86.3
Lithium	.002 MG/L	0.052	0.047	0.048	0.048#	0.051
Magnesium	.1 MG/L	28.3	32.2	32.1	29.3#	28.3
Potassium	.3 MG/L	19.9	19.2	17.7	15.8#	19.8
Sodium	1 MG/L	204	214	225	195#	207
=====						
Bromide	.1 MG/L	0.3	0.3	0.2	0.3**	0.2
Chloride	7 MG/L	218	253	233	245**	224
Fluoride	.05 MG/L	0.51	0.52	0.42	0.53**	0.55
Nitrate	.04 MG/L	44.30	35.30	63.60	22.3**	42.40
Ortho Phosphate (as P04)	.2 MG/L	1.0	1.9	5.9	ND**	1.2
Sulfate	9 MG/L	240	205	254	265**	239
Cyanide, Total	.002 MG/L	ND	ND	ND	NR	0.003
BOD	2 MG/L	12	17	10	5	2
pH*	PH	7.32	7.30	7.37	7.33	7.24
Settleable Solids*	.1 ML/L	ND	ND	ND	NR	NR
Turbidity	.13 NTU	NR	NR	NR	NR	1.29
Total Kjeldahl Nitrogen	1.6 MG/L	2.9	2.2	5.8	NR	2.1
Ammonia-N	.3 MG/L	0.6	0.4	ND	NR	ND
Sulfides-Total	.4 MG/L	ND	ND	ND	NR	ND
Total Suspended Solids	2.5 MG/L	6.8	7.5	10.8	7.6	ND
Volatile Suspended Solids	2.5 MG/L	6.0	7.0	10.5	6.4	ND
Total Dissolved Solids	28 MG/L	996	1020	1140	1010	1010
MBAS (Surfactants)	.03 MG/L	0.12	0.15	0.16	0.13^	0.12

*= These are grab samples.

#= Analyzed on February 10, 2015

**= Analyzed on February 10 and 17, 2015. This is an average value.

= Analyzed on February 4, 2015.

ND= Not Detected

NR= Not Required

Chromium results are for Total Chromium.

SOUTH BAY WATER RECLAMATION PLANT
Daily Parameters and Metals

Annual 2015

Source:		REC_WATER	REC_WATER
Date:		04-AUG-2015	06-OCT-2015
Analyte	MDL Units		
=====	=====	=====	=====
Aluminum	23.8 UG/L	ND	30
Antimony	2.44 UG/L	ND	ND
Arsenic	.06 UG/L	1.1	1.1
Barium	.7 UG/L	75.3	87.5
Beryllium	.05 UG/L	ND	ND
Boron	1.4 UG/L	341	333
Cadmium	.26 UG/L	ND	ND
Chromium	.54 UG/L	ND	2.4
Cobalt	.24 UG/L	ND	0.7
Copper	2.16 UG/L	10	13
Iron	15.6 UG/L	72	57
Lead	1.68 UG/L	ND	ND
Manganese	.78 UG/L	52.0	17.5
Mercury	.013 UG/L	ND	ND
Molybdenum	.32 UG/L	3.0	4.2
Nickel	.53 UG/L	10.0	7.6
Selenium	.08 UG/L	0.57	0.78
Silver	.73 UG/L	ND	ND
Thallium	3.12 UG/L	ND	ND
Vanadium	.45 UG/L	ND	1.0
Zinc	4.19 UG/L	24.0	37.0
=====	=====	=====	=====
Calcium Hardness	.1 MG/L	188	214
Magnesium Hardness	.412 MG/L	134	131
Total Hardness	.512 MG/L	322	345
Total Alkalinity (bicarbonate)	20 MG/L	175	159
=====	=====	=====	=====
Calcium	.04 MG/L	75.4	85.7
Lithium	.002 MG/L	0.047	0.048
Magnesium	.1 MG/L	32.4	31.7
Potassium	.3 MG/L	19.3	18.4
Sodium	1 MG/L	220	382
=====	=====	=====	=====
Bromide	.1 MG/L	0.4	0.1
Chloride	7 MG/L	258	469
Fluoride	.05 MG/L	0.52	0.39
Nitrate	.04 MG/L	39.7	55.0
Ortho Phosphate (as P04)	.2 MG/L	2.3	7.2
Sulfate	9 MG/L	205	253
Cyanide, Total	.002 MG/L	0.002	0.004
BOD	2 MG/L	ND	2
pH*	PH	7.31	7.23
Turbidity	.13 NTU	0.58	0.89
Total Kjeldahl Nitrogen	1.6 MG/L	ND	4.8
Ammonia-N	.3 MG/L	ND	ND
Sulfides-Total	.4 MG/L	ND	0.40
Total Suspended Solids	2.5 MG/L	ND	ND
Volatile Suspended Solids	2.5 MG/L	ND	ND
Total Dissolved Solids	28 MG/L	1050	1540
MBAS (Surfactants)	.03 MG/L	0.15	0.14

*= These are grab samples.

ND= Not Detected

NR= Not Required

Chromium results are for Total Chromium.

SOUTH BAY WATER RECLAMATION PLANT
Daily Parameters and Metals

Annual 2015

Source:		RAW SLUDGE	RAW SLUDGE	RAW SLUDGE	RAW SLUDGE
Date:		03-FEB-2015	05-MAY-2015	04-AUG-2015	06-OCT-2015
Analyte	MDL Units	P756083	P778776	P795212	P807402
=====					
Aluminum	119 UG/L	12200	18500	45400	14600
Antimony	12.2 UG/L	13.6	15.1	24.0	21.0
Arsenic	.6 UG/L	10.0	5.9	11.3	9.4
Barium	3.5 UG/L	883	1170	3170	911
Beryllium	.25 UG/L	ND	ND	0.700	ND
Boron	7 UG/L	352	335	1200	512
Cadmium	1.3 UG/L	2.62	5.71	12.90	4.30
Chromium	2.7 UG/L	68.8	131	209	72.7
Cobalt	1.2 UG/L	6.87	12.6	35.3	8.2
Copper	10.8 UG/L	1110	1810	5410	1360
Iron	78 UG/L	21800	36200	68100	20500
Lead	8.4 UG/L	48	70	149	71
Manganese	3.9 UG/L	534	673	1950	417
Mercury	.5 UG/L	0.233	1.160	7.15	12.0
Molybdenum	1.6 UG/L	42.4	67.4	158	55.7
Nickel	2.65 UG/L	73.1	118	294	114
Selenium	1 UG/L	15.8	1.04	5.6	2.61
Silver	3.65 UG/L	7.9	5.7	31.3	16.3
Thallium	15.6 UG/L	ND	ND	25.0	ND
Vanadium	2.25 UG/L	33.1	60.8	124	42.8
Zinc	21 UG/L	3330	4930	12500	3050
=====					
Calcium Hardness	.1 MG/L	283	247	235	232
Magnesium Hardness	.412 MG/L	151	136	151	147
Total Hardness	.512 MG/L	434	383	386	379
Total Alkalinity (bicarbonate)	20 MG/L	450	523	609	469
=====					
Calcium	.04 MG/L	114	99.1	94.0	93.1
Lithium	.002 MG/L	0.054	0.053	0.05	0.047
Magnesium	.1 MG/L	36.6	33.0	36.7	35.8
Potassium	.3 MG/L	27.8	31.3	28.1	24.0
Sodium	1 MG/L	206	208	208	217
=====					
Bromide	.1 MG/L	0.2	0.3	0.3	0.1
Chloride	7 MG/L	253	224	249	225
Fluoride	.05 MG/L	0.32	0.28	ND	ND
Nitrate	.04 MG/L	ND	ND	ND	0.17
Ortho Phosphate (as P04)	.2 MG/L	24.2	31.4	42.9	24.9
Sulfate	9 MG/L	143	78	42	111
Cyanide, Total	.002 MG/L	0.003	0.002	0.003	0.002
BOD	MG/L	NR	NR	NR	NR
pH	PH	NR	NR	NR	NR
Temperature	DEGREE_C	NR	NR	NR	NR
Grease/oil	MG/L	NR	NR	NR	NR
Settleable Solids	ML/L	NR	NR	NR	NR
Turbidity	NTU	NR	NR	NR	NR
Total Kjeldahl Nitrogen	1.6 MG/L	276	330	292	205
Chlorine Residual, Total	MG/L	NR	NR	NR	NR
Ammonia-N	MG/L	NR	NR	NR	NR
Sulfides-Total	.4 MG/L	35.7	45.1	33.6	31.9
Dissolved Oxygen	MG/L	NR	NR	NR	NR
Total Suspended Solids	MG/L	NR	NR	NR	NR
Volatile Suspended Solids	MG/L	NR	NR	NR	NR
Total Dissolved Solids	MG/L	NR	NR	NR	NR
MBAS (Surfactants)	MG/L	NR	NR	NR	NR

ND= Not Detected

NR= Not Required

Chromium results are for Total Chromium.

SOUTH BAY WATER RECLAMATION PLANT
Ammonia-Nitrogen and Total Cyanides

Annual 2015

Total Cyanide, MDL=0.002 mg/L

Source: Date	INF	EFF	PRI EFF	SEC EFF	RSL
=====	=====	=====	=====	=====	=====
03-FEB-2015	ND	ND	ND	ND	0.003
05-MAY-2015	NR	ND	ND	ND	0.002
07-MAY-2015	ND	NR	NR	NR	NR
04-AUG-2015	ND	ND	ND	ND	0.003
06-OCT-2015	ND	ND	ND	ND	0.002
=====	=====	=====	=====	=====	=====
AVERAGE	ND	ND	ND	ND	0.003

Ammonia as Nitrogen, MDL=0.3 mg/L

Source: Date	INF	EFF	PRI EFF	SEC EFF
=====	=====	=====	=====	=====
03-FEB-2015	39.1	9.2	32.1	8.0
05-MAY-2015	NR	ND	30.8	0.6
07-MAY-2015	40.7	NR	NR	NR
04-AUG-2015	32.5	0.6	38.9	0.4
06-OCT-2015	34.5	ND	34.3	ND
=====	=====	=====	=====	=====
AVERAGE	36.7	2.5	34.0	2.3

ND= Not Detected; NR= Not Required

SOUTH BAY WATER RECLAMATION PLANT
Radioactivity

Annual 2015

Source	Sample Date	Sample ID	Gross Alpha Radiation	Gross Beta Radiation
INF	03-FEB-2015	P756049	7.1 ± 6.8	25.5 ± 5.6
INF	07-MAY-2015	P783699	6.2 ± 5.3	26.8 ± 5.5
INF	04-AUG-2015	P795178	5.3 ± 5.5	19.1 ± 4.3
INF	06-OCT-2015	P807370	-2.1 ± 3.6	23.9 ± 4.8
AVERAGE			4.1 ± 5.3	23.8 ± 5.1

Source	Sample Date	Sample ID	Gross Alpha Radiation	Gross Beta Radiation
EFF	03-FEB-2015	P756054	3.5 ± 6.8	23.3 ± 11.0
EFF	05-MAY-2015	P778749	2.9 ± 4.2	20.7 ± 4.3
EFF	04-AUG-2015	P795183	1.5 ± 6.0	17.9 ± 5.0
EFF	06-OCT-2015	P807375	1.7 ± 3.7	23.1 ± 4.7
AVERAGE			2.4 ± 5.2	21.3 ± 6.3

Source	Sample Date	Sample ID	Gross Alpha Radiation	Gross Beta Radiation
PRI_EFF	03-FEB-2015	P756064	0.2 ± 8.7	38.9 ± 12.0
PRI_EFF	05-MAY-2015	P778759	2.7 ± 5.2	23.4 ± 4.9
PRI_EFF	04-AUG-2015	P795193	0.1 ± 5.5	21.2 ± 4.7
PRI_EFF	06-OCT-2015	P807385	2.6 ± 3.9	22.4 ± 4.1
AVERAGE			1.4 ± 5.8	26.5 ± 6.4

Source	Sample Date	Sample ID	Gross Alpha Radiation	Gross Beta Radiation
SEC_EFF	03-FEB-2015	P756069	0.3 ± 7.5	28.8 ± 10.0
SEC_EFF	05-MAY-2015	P778764	4.2 ± 4.3	23.4 ± 4.7
SEC_EFF	04-AUG-2015	P795198	0.6 ± 4.1	17.7 ± 4.6
SEC_EFF	06-OCT-2015	P807390	-0.7 ± 2.8	19.3 ± 3.6
AVERAGE			1.1 ± 4.8	22.3 ± 5.7

Source	Sample Date	Sample ID	Gross Alpha Radiation	Gross Beta Radiation
REC_WATER	03-FEB-2015	P756085*	NA	NA
REC_WATER	05-MAY-2015	P778778	2.4 ± 3.7	18.0 ± 4.1
REC_WATER	04-AUG-2015	P795214	-0.2 ± 4.1	22.8 ± 4.6
REC_WATER	06-OCT-2015	P807404	6.1 ± 6.9	21.0 ± 5.3
AVERAGE			2.8 ± 4.9	20.6 ± 4.7

*= No reclaimed water distributed, not used in average. Collection was switched from flow to time based composite during production shut down.

ND= Not Detected

NA= Not Analyzed

Units in picocuries/liter (pCi/L)

SOUTH BAY WATER RECLAMATION PLANT
Chlorinated Pesticide Analysis, EPA Method 608 (with additions)

Annual 2015

Source:			INF	INF	INF	INF	EFF	EFF
Date:			03-FEB-2015	07-MAY-2015	04-AUG-2015	06-OCT-2015	03-FEB-2015	05-MAY-2015
Analyte	MDL	Units	P756049	P783699	P795178	P807370	P756054	P778749
=====								
Aldrin	4	NG/L	ND	ND	ND	ND	ND	ND
BHC, Alpha isomer	.2	NG/L	ND	ND	ND	ND	ND	ND
BHC, Beta isomer	2	NG/L	ND	ND	ND	ND	ND	ND
BHC, Delta isomer	2	NG/L	ND	ND	ND	ND	ND	ND
BHC, Gamma isomer	.34	NG/L	ND	ND	ND	ND	ND	ND
Alpha (cis) Chlordane	1.4	NG/L	ND	ND	ND	ND	ND	ND
Gamma (trans) Chlordane	1.3	NG/L	ND	ND	ND	ND	ND	ND
Alpha Chlordene	0	NG/L	NA	NA	NA	NA	NA	NA
Gamma Chlordene	0	NG/L	NA	NA	NA	NA	NA	NA
Cis Nonachlor	4	NG/L	ND	ND	ND	ND	ND	ND
Dieldrin	4.3	NG/L	ND	ND	ND	ND	ND	ND
Endosulfan Sulfate	7	NG/L	ND	ND	ND	ND	ND	ND
Alpha Endosulfan	1.5	NG/L	ND	ND	ND	ND	ND	ND
Beta Endosulfan	3.1	NG/L	ND	ND	ND	ND	ND	ND
Endrin	6	NG/L	ND	ND	ND	ND	ND	ND
Endrin aldehyde	5.4	NG/L	ND	ND	ND	ND	ND	ND
Heptachlor	.6	NG/L	ND	ND	ND	ND	ND	ND
Heptachlor epoxide	9.4	NG/L	ND	ND	ND	ND	ND	ND
Methoxychlor	20	NG/L	ND	ND	ND	ND	ND	ND
Mirex	2.3	NG/L	ND	ND	ND	ND	ND	ND
o,p-DDD	4	NG/L	ND	ND	ND	ND	ND	ND
o,p-DDE	2	NG/L	ND	ND	ND	ND	ND	ND
o,p-DDT	2.4	NG/L	ND	ND	ND	ND	ND	ND
Oxychlordane	2	NG/L	ND	ND	ND	ND	ND	ND
PCB 1016	250	NG/L	ND	ND	ND	ND	ND	ND
PCB 1221	2000	NG/L	ND	ND	ND	ND	ND	ND
PCB 1232	750	NG/L	ND	ND	ND	ND	ND	ND
PCB 1242	250	NG/L	ND	ND	ND	ND	ND	ND
PCB 1248	250	NG/L	ND	ND	ND	ND	ND	ND
PCB 1254	500	NG/L	ND	ND	ND	ND	ND	ND
PCB 1260	500	NG/L	ND	ND	ND	ND	ND	ND
PCB 1262	500	NG/L	ND	ND	ND	ND	ND	ND
p,p-DDD	4	NG/L	ND	ND	ND	ND	ND	ND
p,p-DDE	1.4	NG/L	ND	ND	ND	ND	ND	ND
p,p-DDT	3	NG/L	ND	ND	ND	ND	ND	ND
Toxaphene	250	NG/L	ND	ND	ND	ND	ND	ND
Trans Nonachlor	1.1	NG/L	ND	ND	ND	ND	ND	ND
=====								
Aldrin + Dieldrin	4.3	NG/L	0	0	0	0	0	0
Hexachlorocyclohexanes	2	NG/L	0	0	0	0	0	0
DDT and derivatives	4	NG/L	0	0	0	0	0	0
Chlordane + related cmpds.	4	NG/L	0	0	0	0	0	0
Polychlorinated biphenyls	2000	NG/L	0	0	0	0	0	0
Endosulfans	7	NG/L	0	0	0	0	0	0
Heptachlors	9.4	NG/L	0	0	0	0	0	0
=====								
Chlorinated Hydrocarbons	2000	NG/L	0	0	0	0	0	0

ND=not detected
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
Chlorinated Pesticide Analysis, EPA Method 608 (with additions)

Annual 2015

Source:			EFF	EFF	PRI_EFF	PRI_EFF	PRI_EFF	PRI_EFF
Date:			04-AUG-2015	06-OCT-2015	03-FEB-2015	05-MAY-2015	04-AUG-2015	06-OCT-2015
Analyte	MDL	Units	P795183	P807375	P756064	P778759	P795193	P807385
=====								
Aldrin	4	NG/L	ND	ND	ND	ND	ND	ND
BHC, Alpha isomer	.2	NG/L	ND	ND	ND	ND	ND	ND
BHC, Beta isomer	2	NG/L	ND	ND	ND	ND	ND	ND
BHC, Delta isomer	2	NG/L	ND	ND	ND	ND	ND	ND
BHC, Gamma isomer	.34	NG/L	ND	ND	ND	ND	ND	ND
Alpha (cis) Chlordane	1.4	NG/L	ND	ND	ND	ND	ND	ND
Gamma (trans) Chlordane	1.3	NG/L	ND	ND	ND	ND	ND	ND
Alpha Chlordene	0	NG/L	NA	NA	NA	NA	NA	NA
Gamma Chlordene	0	NG/L	NA	NA	NA	NA	NA	NA
Cis Nonachlor	4	NG/L	ND	ND	ND	ND	ND	ND
Dieldrin	4.3	NG/L	ND	ND	ND	ND	ND	ND
Endosulfan Sulfate	7	NG/L	ND	ND	ND	ND	ND	ND
Alpha Endosulfan	1.5	NG/L	ND	ND	ND	ND	ND	ND
Beta Endosulfan	3.1	NG/L	ND	ND	ND	ND	ND	ND
Endrin	6	NG/L	ND	ND	ND	ND	ND	ND
Endrin aldehyde	5.4	NG/L	ND	ND	ND	ND	ND	ND
Heptachlor	.6	NG/L	ND	ND	ND	ND	ND	ND
Heptachlor epoxide	9.4	NG/L	ND	ND	ND	ND	ND	ND
Methoxychlor	20	NG/L	ND	ND	ND	ND	ND	ND
Mirex	2.3	NG/L	ND	ND	ND	ND	ND	ND
o,p-DDD	4	NG/L	ND	ND	ND	ND	ND	ND
o,p-DDE	2	NG/L	ND	ND	ND	ND	ND	ND
o,p-DDT	2.4	NG/L	ND	ND	ND	ND	ND	ND
Oxychlordane	2	NG/L	ND	ND	ND	ND	ND	ND
PCB 1016	250	NG/L	ND	ND	ND	ND	ND	ND
PCB 1221	2000	NG/L	ND	ND	ND	ND	ND	ND
PCB 1232	750	NG/L	ND	ND	ND	ND	ND	ND
PCB 1242	250	NG/L	ND	ND	ND	ND	ND	ND
PCB 1248	250	NG/L	ND	ND	ND	ND	ND	ND
PCB 1254	500	NG/L	ND	ND	ND	ND	ND	ND
PCB 1260	500	NG/L	ND	ND	ND	ND	ND	ND
PCB 1262	500	NG/L	ND	ND	ND	ND	ND	ND
p,p-DDD	4	NG/L	ND	ND	ND	ND	ND	ND
p,p-DDE	1.4	NG/L	ND	ND	ND	ND	ND	ND
p,p-DDT	3	NG/L	ND	ND	ND	ND	ND	ND
Toxaphene	250	NG/L	ND	ND	ND	ND	ND	ND
Trans Nonachlor	1.1	NG/L	ND	ND	ND	ND	ND	ND
=====								
Aldrin + Dieldrin	4.3	NG/L	0	0	0	0	0	0
Hexachlorocyclohexanes	2	NG/L	0	0	0	0	0	0
DDT and derivatives	4	NG/L	0	0	0	0	0	0
Chlordane + related cmpds.	4	NG/L	0	0	0	0	0	0
Polychlorinated biphenyls	2000	NG/L	0	0	0	0	0	0
Endosulfans	7	NG/L	0	0	0	0	0	0
Heptachlors	9.4	NG/L	0	0	0	0	0	0
=====								
Chlorinated Hydrocarbons	2000	NG/L	0	0	0	0	0	0

ND=not detected
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
Chlorinated Pesticide Analysis, EPA Method 608 (with additions)

Annual 2015

Source:			SEC_EFF	SEC_EFF	SEC_EFF	SEC_EFF	RSL	RSL
Date:			03-FEB-2015	05-MAY-2015	04-AUG-2015	06-OCT-2015	03-FEB-2015	05-MAY-2015
Analyte	MDL	Units	P756069	P778764	P795198	P807390	P756083	P778776
=====								
Aldrin	4	NG/L	ND	ND	ND	ND	ND	ND
BHC, Alpha isomer	.2	NG/L	ND	ND	ND	ND	ND	ND
BHC, Beta isomer	2	NG/L	ND	ND	ND	ND	ND	ND
BHC, Delta isomer	2	NG/L	ND	ND	ND	ND	ND	ND
BHC, Gamma isomer	.34	NG/L	ND	ND	ND	ND	ND	ND
Alpha (cis) Chlordane	1.4	NG/L	ND	ND	ND	ND	ND	ND
Gamma (trans) Chlordane	1.3	NG/L	ND	ND	ND	ND	ND	ND
Alpha Chlordene	0	NG/L	NA	NA	NA	NA	NA	NA
Gamma Chlordene	0	NG/L	NA	NA	NA	NA	NA	NA
Cis Nonachlor	4	NG/L	ND	ND	ND	ND	ND	ND
Dieldrin	4.3	NG/L	ND	ND	ND	ND	ND	ND
Endosulfan Sulfate	7	NG/L	ND	ND	ND	ND	ND	ND
Alpha Endosulfan	1.5	NG/L	ND	ND	ND	ND	ND	ND
Beta Endosulfan	3.1	NG/L	ND	ND	ND	ND	ND	ND
Endrin	6	NG/L	ND	ND	ND	ND	ND	ND
Endrin aldehyde	5.4	NG/L	ND	ND	ND	ND	ND	ND
Heptachlor	.6	NG/L	ND	ND	ND	ND	ND	ND
Heptachlor epoxide	9.4	NG/L	ND	ND	ND	ND	ND	ND
Methoxychlor	20	NG/L	ND	ND	ND	ND	ND	ND
Mirex	2.3	NG/L	ND	ND	ND	ND	ND	ND
o,p-DDD	4	NG/L	ND	ND	ND	ND	ND	ND
o,p-DDE	2	NG/L	ND	ND	ND	ND	ND	ND
o,p-DDT	2.4	NG/L	ND	ND	ND	ND	ND	ND
Oxychlordane	2	NG/L	ND	ND	ND	ND	ND	ND
PCB 1016	250	NG/L	ND	ND	ND	ND	ND	ND
PCB 1221	2000	NG/L	ND	ND	ND	ND	ND	ND
PCB 1232	750	NG/L	ND	ND	ND	ND	ND	ND
PCB 1242	250	NG/L	ND	ND	ND	ND	ND	ND
PCB 1248	250	NG/L	ND	ND	ND	ND	ND	ND
PCB 1254	500	NG/L	ND	ND	ND	ND	ND	ND
PCB 1260	500	NG/L	ND	ND	ND	ND	ND	ND
PCB 1262	500	NG/L	ND	ND	ND	ND	ND	ND
p,p-DDD	4	NG/L	ND	ND	ND	ND	ND	ND
p,p-DDE	1.4	NG/L	ND	ND	ND	ND	ND	ND
p,p-DDT	3	NG/L	ND	ND	ND	ND	ND	ND
Toxaphene	250	NG/L	ND	ND	ND	ND	ND	ND
Trans Nonachlor	1.1	NG/L	ND	ND	ND	ND	ND	ND
=====								
Aldrin + Dieldrin	4.3	NG/L	0	0	0	0	0	0
Hexachlorocyclohexanes	2	NG/L	0	0	0	0	0	0
DDT and derivatives	4	NG/L	0	0	0	0	0	0
Chlordane + related cmpds.	4	NG/L	0	0	0	0	0	0
Polychlorinated biphenyls	2000	NG/L	0	0	0	0	0	0
Endosulfans	7	NG/L	0	0	0	0	0	0
Heptachlors	9.4	NG/L	0	0	0	0	0	0
=====								
Chlorinated Hydrocarbons	2000	NG/L	0	0	0	0	0	0

ND=not detected
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
Chlorinated Pesticide Analysis, EPA Method 608 (with additions)

Annual 2015

Source:			RSL	RSL	REC_WATER	REC_WATER	REC_WATER
Date:			04-AUG-2015	06-OCT-2015	05-MAY-2015	04-AUG-2015	06-OCT-2015
Analyte	MDL	Units	P795212	P807402	P778778	P795214	P807404
=====	=====	=====	=====	=====	=====	=====	=====
Aldrin	4	NG/L	ND	ND	ND	ND	ND
BHC, Alpha isomer	.2	NG/L	ND	ND	ND	ND	ND
BHC, Beta isomer	2	NG/L	ND	ND	ND	ND	ND
BHC, Delta isomer	2	NG/L	ND	ND	ND	ND	ND
BHC, Gamma isomer	.34	NG/L	ND	ND	ND	ND	ND
Alpha (cis) Chlordane	1.4	NG/L	ND	ND	ND	ND	ND
Gamma (trans) Chlordane	1.3	NG/L	ND	ND	ND	ND	ND
Alpha Chlordene	0	NG/L	NA	NA	NA	NA	NA
Gamma Chlordene	0	NG/L	NA	NA	NA	NA	NA
Cis Nonachlor	4	NG/L	ND	ND	ND	ND	ND
Dieldrin	4.3	NG/L	ND	ND	ND	ND	ND
Endosulfan Sulfate	7	NG/L	ND	ND	ND	ND	ND
Alpha Endosulfan	1.5	NG/L	ND	ND	ND	ND	ND
Beta Endosulfan	3.1	NG/L	ND	ND	ND	ND	ND
Endrin	6	NG/L	ND	ND	ND	ND	ND
Endrin aldehyde	5.4	NG/L	ND	ND	ND	ND	ND
Heptachlor	.6	NG/L	ND	ND	ND	ND	ND
Heptachlor epoxide	9.4	NG/L	ND	ND	ND	ND	ND
Methoxychlor	20	NG/L	ND	ND	ND	ND	ND
Mirex	2.3	NG/L	ND	ND	ND	ND	ND
o,p-DDD	4	NG/L	ND	ND	ND	ND	ND
o,p-DDE	2	NG/L	ND	ND	ND	ND	ND
o,p-DDT	2.4	NG/L	ND	ND	ND	ND	ND
Oxychlordane	2	NG/L	ND	ND	ND	ND	ND
PCB 1016	250	NG/L	ND	ND	ND	ND	ND
PCB 1221	2000	NG/L	ND	ND	ND	ND	ND
PCB 1232	750	NG/L	ND	ND	ND	ND	ND
PCB 1242	250	NG/L	ND	ND	ND	ND	ND
PCB 1248	250	NG/L	ND	ND	ND	ND	ND
PCB 1254	500	NG/L	ND	ND	ND	ND	ND
PCB 1260	500	NG/L	ND	ND	ND	ND	ND
PCB 1262	500	NG/L	ND	ND	ND	ND	ND
p,p-DDD	4	NG/L	ND	ND	ND	ND	ND
p,p-DDE	1.4	NG/L	ND	ND	ND	ND	ND
p,p-DDT	3	NG/L	ND	ND	ND	ND	ND
Toxaphene	250	NG/L	ND	ND	ND	ND	ND
Trans Nonachlor	1.1	NG/L	ND	ND	ND	ND	ND
=====	=====	=====	=====	=====	=====	=====	=====
Aldrin + Dieldrin	4.3	NG/L	0	0	0	0	0
Hexachlorocyclohexanes	2	NG/L	0	0	0	0	0
DDT and derivatives	4	NG/L	0	0	0	0	0
Chlordane + related cmpds.	4	NG/L	0	0	0	0	0
Polychlorinated biphenyls	2000	NG/L	0	0	0	0	0
Endosulfans	7	NG/L	0	0	0	0	0
Heptachlors	9.4	NG/L	0	0	0	0	0
=====	=====	=====	=====	=====	=====	=====	=====
Chlorinated Hydrocarbons	2000	NG/L	0	0	0	0	0

During the first quarter of the 2015 a recycled water was not collected.

ND=not detected
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
Organophosphorus Pesticides by EPA Method 614/622 (with additions)

Annual 2015

Source:		INF	INF	EFF	EFF	PRI_EFF	PRI_EFF
Date:		07-MAY-2015	06-OCT-2015	05-MAY-2015	06-OCT-2015	05-MAY-2015	06-OCT-2015
Analyte	MDL Units	P783699	P807370	P778749	P807375	P778759	P807385
Demeton O	.15 UG/L	ND	ND	ND	ND	ND	ND
Demeton S	.08 UG/L	ND	ND	ND	ND	ND	ND
Diazinon	.03 UG/L	ND	ND	ND	ND	ND	ND
Guthion	.15 UG/L	ND	ND	ND	ND	ND	ND
Malathion	.03 UG/L	ND	ND	ND	ND	ND	ND
Parathion	.03 UG/L	ND	ND	ND	ND	ND	ND
Dichlorvos	.05 UG/L	ND	0.3	ND	ND	ND	DNQ0.1
Disulfoton	.02 UG/L	ND	ND	ND	ND	ND	ND
Dimethoate	.04 UG/L	ND	ND	ND	ND	ND	ND
Stirophos	.03 UG/L	ND	ND	ND	ND	ND	ND
Coumaphos	.15 UG/L	ND	ND	ND	ND	ND	ND
Chlorpyrifos	.03 UG/L	ND	ND	ND	ND	ND	ND
Thiophosphorus Pesticides	.15 UG/L	0.0	0.0	0.0	0.0	0.0	0.0
Demeton -O, -S	.15 UG/L	0.0	0.0	0.0	0.0	0.0	0.0
Total Organophosphorus Pesticides	.15 UG/L	0.0	0.3	0.0	0.0	0.0	0.0

Source:		SEC_EFF	SEC_EFF	RSL	RSL	REC_WATER	REC_WATER
Date:		05-MAY-2015	06-OCT-2015	05-MAY-2015	06-OCT-2015	05-MAY-2015	06-OCT-2015
Analyte	MDL Units	P778764	P807390	P778776	P807402	P778778	P807404
Demeton O	.15 UG/L	ND	ND	ND	ND	ND	ND
Demeton S	.08 UG/L	ND	ND	ND	ND	ND	ND
Diazinon	.03 UG/L	ND	ND	ND	ND	ND	ND
Guthion	.15 UG/L	ND	ND	ND	ND	ND	ND
Malathion	.03 UG/L	ND	ND	ND	ND	ND	ND
Parathion	.03 UG/L	ND	ND	ND	ND	ND	ND
Dichlorvos	.05 UG/L	ND	ND	ND	ND	ND	ND
Disulfoton	.02 UG/L	ND	ND	ND	ND	ND	ND
Dimethoate	.04 UG/L	ND	ND	ND	ND	ND	ND
Stirophos	.03 UG/L	ND	ND	ND	ND	ND	ND
Coumaphos	.15 UG/L	ND	ND	ND	ND	ND	ND
Chlorpyrifos	.03 UG/L	ND	ND	ND	ND	ND	ND
Thiophosphorus Pesticides	.15 UG/L	0.0	0.0	0.0	0.0	0.0	0.0
Demeton -O, -S	.15 UG/L	0.0	0.0	0.0	0.0	0.0	0.0
Total Organophosphorus Pesticides	.15 UG/L	0.0	0.0	0.0	0.0	0.0	0.0

ND=not detected

DNQ= (Detected but not quantified). Estimated analyte concentration below calibration range.

SOUTH BAY WATER RECLAMATION PLANT
Priority Pollutants Base/Neutral Compounds, EPA Method 625

Annual 2015

Source:			INF	INF	INF	INF
Date:			03-FEB-2015	07-MAY-2015	04-AUG-2015	06-OCT-2015
Analyte	MDL Units		P756049	P783699	P795178	P807370
=====	=====	=====	=====	=====	=====	=====
Acenaphthene	1.8 UG/L		ND	ND	ND	ND
Acenaphthylene	1.77 UG/L		ND	ND	ND	ND
Anthracene	1.29 UG/L		ND	ND	ND	ND
Benzidine	1.52 UG/L		ND	ND	ND	ND
Benzo[a]anthracene	1.1 UG/L		ND	ND	ND	ND
3,4-Benzo(b)fluoranthene	1.35 UG/L		ND	ND	ND	ND
Benzo[k]fluoranthene	1.49 UG/L		ND	ND	ND	ND
Benzo[a]pyrene	1.25 UG/L		ND	ND	ND	ND
Benzo[g,h,i]perylene	1.09 UG/L		ND	ND	ND	ND
4-Bromophenyl phenyl ether	1.4 UG/L		ND	ND	ND	ND
Bis-(2-chloroethoxy) methane	1.01 UG/L		ND	ND	ND	ND
Bis-(2-chloroethyl) ether	1.38 UG/L		ND	ND	ND	ND
Bis-(2-chloroisopropyl) ether	1.16 UG/L		ND	ND	ND	ND
4-Chlorophenyl phenyl ether	1.57 UG/L		ND	ND	ND	ND
2-Chloronaphthalene	1.87 UG/L		ND	ND	ND	ND
Chrysene	1.16 UG/L		ND	ND	ND	ND
Dibenzo(a,h)anthracene	1.01 UG/L		ND	ND	ND	ND
Butyl benzyl phthalate	2.84 UG/L		3.0	ND	DNQ3.0	ND
Di-n-butyl phthalate	3.96 UG/L		ND	ND	ND	ND
Bis-(2-ethylhexyl) phthalate	8.96 UG/L		13.2	28.2	34.0	33.6
Diethyl phthalate	3.05 UG/L		4.7	8.5	4.5	5.3
Dimethyl phthalate	1.44 UG/L		ND	ND	ND	ND
Di-n-octyl phthalate	1 UG/L		ND	ND	ND	ND
3,3-Dichlorobenzidine	2.44 UG/L		ND	ND	ND	ND
2,4-Dinitrotoluene	1.36 UG/L		ND	ND	ND	ND
2,6-Dinitrotoluene	1.53 UG/L		ND	ND	ND	ND
1,2-Diphenylhydrazine	1.37 UG/L		ND	ND	ND	ND
Fluoranthene	1.33 UG/L		ND	ND	ND	ND
Fluorene	1.61 UG/L		ND	ND	ND	ND
Hexachlorobenzene	1.48 UG/L		ND	ND	ND	ND
Hexachlorobutadiene	1.64 UG/L		ND	ND	ND	ND
Hexachlorocyclopentadiene	1.25 UG/L		ND	ND	ND	ND
Hexachloroethane	1.32 UG/L		ND	ND	ND	ND
Indeno(1,2,3-CD)pyrene	1.14 UG/L		ND	ND	ND	ND
Isophorone	1.53 UG/L		ND	ND	ND	ND
Naphthalene	1.65 UG/L		ND	ND	ND	ND
Nitrobenzene	1.6 UG/L		ND	ND	ND	ND
N-nitrosodimethylamine	1.27 UG/L		ND	ND	ND	ND
N-nitrosodi-n-propylamine	1.16 UG/L		ND	ND	ND	ND
N-nitrosodiphenylamine	3.48 UG/L		ND	ND	ND	ND
Phenanthrene	1.34 UG/L		ND	ND	ND	ND
Pyrene	1.43 UG/L		ND	ND	ND	ND
1,2,4-Trichlorobenzene	1.52 UG/L		ND	ND	ND	ND
=====	=====	=====	=====	=====	=====	=====
Polynuc. Aromatic Hydrocarbons	1.77 UG/L		0.0	0.0	0.0	0.0
=====	=====	=====	=====	=====	=====	=====
Base/Neutral Compounds	8.96 UG/L		20.9	36.7	38.5	38.9
Additional analytes determined						
=====	=====	=====	=====	=====	=====	=====
Benzo[e]pyrene	1.44 UG/L		ND	ND	ND	ND
Biphenyl	2.29 UG/L		ND	ND	ND	ND
2,6-Dimethylnaphthalene	2.16 UG/L		ND	ND	ND	ND
1-Methylnaphthalene	2.18 UG/L		ND	ND	ND	ND
1-Methylphenanthrene	1.46 UG/L		ND	ND	ND	ND
2-Methylnaphthalene	2.14 UG/L		ND	ND	ND	ND
2,3,5-Trimethylnaphthalene	2.18 UG/L		ND	ND	ND	ND
Perylene	1.41 UG/L		ND	ND	ND	ND
Pyridine	3.33 UG/L		ND	ND	ND	ND

ND= not detected

DNQ= Detected not quantifiable, result value less than minimum level (ML) but greater or equal MDL.

SOUTH BAY WATER RECLAMATION PLANT
Priority Pollutants Base/Neutral Compounds, EPA Method 625

Annual 2015

Source:			EFF	EFF	EFF	EFF
Date:			03-FEB-2015	05-MAY-2015	04-AUG-2015	06-OCT-2015
Analyte	MDL	Units	P756054	P778749	P795183	P807375
Acenaphthene	1.8	UG/L	ND	ND	ND	ND
Acenaphthylene	1.77	UG/L	ND	ND	ND	ND
Anthracene	1.29	UG/L	ND	ND	ND	ND
Benzidine	1.52	UG/L	ND	ND	ND	ND
Benzo[a]anthracene	1.1	UG/L	ND	ND	ND	ND
3,4-Benzo(b)fluoranthene	1.35	UG/L	ND	ND	ND	ND
Benzo[k]fluoranthene	1.49	UG/L	ND	ND	ND	ND
Benzo[a]pyrene	1.25	UG/L	ND	ND	ND	ND
Benzo[g,h,i]perylene	1.09	UG/L	ND	ND	ND	ND
4-Bromophenyl phenyl ether	1.4	UG/L	ND	ND	ND	ND
Bis-(2-chloroethoxy) methane	1.01	UG/L	ND	ND	ND	ND
Bis-(2-chloroethyl) ether	1.38	UG/L	ND	ND	ND	ND
Bis-(2-chloroisopropyl) ether	1.16	UG/L	ND	ND	ND	ND
4-Chlorophenyl phenyl ether	1.57	UG/L	ND	ND	ND	ND
2-Chloronaphthalene	1.87	UG/L	ND	ND	ND	ND
Chrysene	1.16	UG/L	ND	ND	ND	ND
Dibenzo(a,h)anthracene	1.01	UG/L	ND	ND	ND	ND
Butyl benzyl phthalate	2.84	UG/L	ND	ND	ND	ND
Di-n-butyl phthalate	3.96	UG/L	ND	ND	ND	ND
Bis-(2-ethylhexyl) phthalate	8.96	UG/L	ND	ND	15.8	ND
Diethyl phthalate	3.05	UG/L	ND	ND	ND	ND
Dimethyl phthalate	1.44	UG/L	ND	ND	ND	ND
Di-n-octyl phthalate	1	UG/L	ND	ND	ND	ND
3,3-Dichlorobenzidine	2.44	UG/L	ND	ND	ND	ND
2,4-Dinitrotoluene	1.36	UG/L	ND	ND	ND	ND
2,6-Dinitrotoluene	1.53	UG/L	ND	ND	ND	ND
1,2-Diphenylhydrazine	1.37	UG/L	ND	ND	ND	ND
Fluoranthene	1.33	UG/L	ND	ND	ND	ND
Fluorene	1.61	UG/L	ND	ND	ND	ND
Hexachlorobenzene	1.48	UG/L	ND	ND	ND	ND
Hexachlorobutadiene	1.64	UG/L	ND	ND	ND	ND
Hexachlorocyclopentadiene	1.25	UG/L	ND	ND	ND	ND
Hexachloroethane	1.32	UG/L	ND	ND	ND	ND
Indeno(1,2,3-CD)pyrene	1.14	UG/L	ND	ND	ND	ND
Isophorone	1.53	UG/L	ND	ND	ND	ND
Naphthalene	1.65	UG/L	ND	ND	ND	ND
Nitrobenzene	1.6	UG/L	ND	ND	ND	ND
N-nitrosodimethylamine	1.27	UG/L	ND	ND	ND	ND
N-nitrosodi-n-propylamine	1.16	UG/L	ND	ND	ND	ND
N-nitrosodiphenylamine	3.48	UG/L	ND	ND	ND	ND
Phenanthrene	1.34	UG/L	ND	ND	ND	ND
Pyrene	1.43	UG/L	ND	ND	ND	ND
1,2,4-Trichlorobenzene	1.52	UG/L	ND	ND	ND	ND
Polynuc. Aromatic Hydrocarbons	1.77	UG/L	0.0	0.0	0.0	0.0
Base/Neutral Compounds	8.96	UG/L	0.0	0.0	15.8	0.0
Additional analytes determined						
Benzo[e]pyrene	1.44	UG/L	ND	ND	ND	ND
Biphenyl	2.29	UG/L	ND	ND	ND	ND
2,6-Dimethylnaphthalene	2.16	UG/L	ND	ND	ND	ND
1-Methylnaphthalene	2.18	UG/L	ND	ND	ND	ND
1-Methylphenanthrene	1.46	UG/L	ND	ND	ND	ND
2-Methylnaphthalene	2.14	UG/L	ND	ND	ND	ND
2,3,5-Trimethylnaphthalene	2.18	UG/L	ND	ND	ND	ND
Perylene	1.41	UG/L	ND	ND	ND	ND
Pyridine	3.33	UG/L	ND	ND	ND	ND

ND= not detected

SOUTH BAY WATER RECLAMATION PLANT
Priority Pollutants Base/Neutral Compounds, EPA Method 625

Annual 2015

Source:			PRI_EFF	PRI_EFF	PRI_EFF	PRI_EFF
Date:			03-FEB-2015	05-MAY-2015	04-AUG-2015	06-OCT-2015
Analyte	MDL	Units	P756064	P778759	P795193	P807385
Acenaphthene	1.8	UG/L	ND	ND	ND	ND
Acenaphthylene	1.77	UG/L	ND	ND	ND	ND
Anthracene	1.29	UG/L	ND	ND	ND	ND
Benzidine	1.52	UG/L	ND	ND	ND	ND
Benzo[a]anthracene	1.1	UG/L	ND	ND	ND	ND
3,4-Benzo(b)fluoranthene	1.35	UG/L	ND	ND	ND	ND
Benzo[k]fluoranthene	1.49	UG/L	ND	ND	ND	ND
Benzo[a]pyrene	1.25	UG/L	ND	ND	ND	ND
Benzo[g,h,i]perylene	1.09	UG/L	ND	ND	ND	ND
4-Bromophenyl phenyl ether	1.4	UG/L	ND	ND	ND	ND
Bis-(2-chloroethoxy) methane	1.01	UG/L	ND	ND	ND	ND
Bis-(2-chloroethyl) ether	1.38	UG/L	ND	ND	ND	ND
Bis-(2-chloroisopropyl) ether	1.16	UG/L	ND	ND	ND	ND
4-Chlorophenyl phenyl ether	1.57	UG/L	ND	ND	ND	ND
2-Chloronaphthalene	1.87	UG/L	ND	ND	ND	ND
Chrysene	1.16	UG/L	ND	ND	ND	ND
Dibenzo(a,h)anthracene	1.01	UG/L	ND	ND	ND	ND
Butyl benzyl phthalate	2.84	UG/L	ND	ND	ND	ND
Di-n-butyl phthalate	3.96	UG/L	ND	ND	ND	ND
Bis-(2-ethylhexyl) phthalate	8.96	UG/L	ND	10.5	15.8	13.9
Diethyl phthalate	3.05	UG/L	ND	3.4	5.8	39.9
Dimethyl phthalate	1.44	UG/L	ND	ND	ND	ND
Di-n-octyl phthalate	1	UG/L	ND	ND	ND	ND
3,3-Dichlorobenzidine	2.44	UG/L	ND	ND	ND	ND
2,4-Dinitrotoluene	1.36	UG/L	ND	ND	ND	ND
2,6-Dinitrotoluene	1.53	UG/L	ND	ND	ND	ND
1,2-Diphenylhydrazine	1.37	UG/L	ND	ND	ND	ND
Fluoranthene	1.33	UG/L	ND	ND	ND	ND
Fluorene	1.61	UG/L	ND	ND	ND	ND
Hexachlorobenzene	1.48	UG/L	ND	ND	ND	ND
Hexachlorobutadiene	1.64	UG/L	ND	ND	ND	ND
Hexachlorocyclopentadiene	1.25	UG/L	ND	ND	ND	ND
Hexachloroethane	1.32	UG/L	ND	ND	ND	ND
Indeno(1,2,3-CD)pyrene	1.14	UG/L	ND	ND	ND	ND
Isophorone	1.53	UG/L	ND	ND	ND	ND
Naphthalene	1.65	UG/L	ND	ND	ND	ND
Nitrobenzene	1.6	UG/L	ND	ND	ND	ND
N-nitrosodimethylamine	1.27	UG/L	2.0	ND	ND	ND
N-nitrosodi-n-propylamine	1.16	UG/L	ND	ND	ND	ND
N-nitrosodiphenylamine	3.48	UG/L	ND	ND	ND	ND
Phenanthrene	1.34	UG/L	ND	ND	ND	ND
Pyrene	1.43	UG/L	ND	ND	ND	ND
1,2,4-Trichlorobenzene	1.52	UG/L	ND	ND	ND	ND
Polynuc. Aromatic Hydrocarbons	1.77	UG/L	0.0	0.0	0.0	0.0
Base/Neutral Compounds	8.96	UG/L	2.0	13.9	21.6	53.8
Additional analytes determined						
Benzo[e]pyrene	1.44	UG/L	ND	ND	ND	ND
Biphenyl	2.29	UG/L	ND	ND	ND	ND
2,6-Dimethylnaphthalene	2.16	UG/L	ND	ND	ND	ND
1-Methylnaphthalene	2.18	UG/L	ND	ND	ND	ND
1-Methylphenanthrene	1.46	UG/L	ND	ND	ND	ND
2-Methylnaphthalene	2.14	UG/L	ND	ND	ND	ND
2,3,5-Trimethylnaphthalene	2.18	UG/L	ND	ND	ND	ND
Perylene	1.41	UG/L	ND	ND	ND	ND
Pyridine	3.33	UG/L	ND	ND	ND	ND

ND= not detected

SOUTH BAY WATER RECLAMATION PLANT
Priority Pollutants Base/Neutral Compounds, EPA Method 625

Annual 2015

Source:			SEC_EFF	SEC_EFF	SEC_EFF	SEC_EFF
Date:			03-FEB-2015	05-MAY-2015	04-AUG-2015	06-OCT-2015
Analyte	MDL	Units	P756069	P778764	P795198	P807390
Acenaphthene	1.8	UG/L	ND	ND	ND	ND
Acenaphthylene	1.77	UG/L	ND	ND	ND	ND
Anthracene	1.29	UG/L	ND	ND	ND	ND
Benzidine	1.52	UG/L	ND	ND	ND	ND
Benzo[a]anthracene	1.1	UG/L	ND	ND	ND	ND
3,4-Benzo(b)fluoranthene	1.35	UG/L	ND	ND	ND	ND
Benzo[k]fluoranthene	1.49	UG/L	ND	ND	ND	ND
Benzo[a]pyrene	1.25	UG/L	ND	ND	ND	ND
Benzo[g,h,i]perylene	1.09	UG/L	ND	ND	ND	ND
4-Bromophenyl phenyl ether	1.4	UG/L	ND	ND	ND	ND
Bis-(2-chloroethoxy) methane	1.01	UG/L	ND	ND	ND	ND
Bis-(2-chloroethyl) ether	1.38	UG/L	ND	ND	ND	ND
Bis-(2-chloroisopropyl) ether	1.16	UG/L	ND	ND	ND	ND
4-Chlorophenyl phenyl ether	1.57	UG/L	ND	ND	ND	ND
2-Chloronaphthalene	1.87	UG/L	ND	ND	ND	ND
Chrysene	1.16	UG/L	ND	ND	ND	ND
Dibenzo(a,h)anthracene	1.01	UG/L	ND	ND	ND	ND
Butyl benzyl phthalate	2.84	UG/L	ND	ND	ND	ND
Di-n-butyl phthalate	3.96	UG/L	ND	ND	ND	ND
Bis-(2-ethylhexyl) phthalate	8.96	UG/L	ND	ND	14.0	ND
Diethyl phthalate	3.05	UG/L	ND	ND	ND	ND
Dimethyl phthalate	1.44	UG/L	ND	ND	ND	ND
Di-n-octyl phthalate	1	UG/L	ND	ND	ND	ND
3,3-Dichlorobenzidine	2.44	UG/L	ND	ND	ND	ND
2,4-Dinitrotoluene	1.36	UG/L	ND	ND	ND	ND
2,6-Dinitrotoluene	1.53	UG/L	ND	ND	ND	ND
1,2-Diphenylhydrazine	1.37	UG/L	ND	ND	ND	ND
Fluoranthene	1.33	UG/L	ND	ND	ND	ND
Fluorene	1.61	UG/L	ND	ND	ND	ND
Hexachlorobenzene	1.48	UG/L	ND	ND	ND	ND
Hexachlorobutadiene	1.64	UG/L	ND	ND	ND	ND
Hexachlorocyclopentadiene	1.25	UG/L	ND	ND	ND	ND
Hexachloroethane	1.32	UG/L	ND	ND	ND	ND
Indeno(1,2,3-CD)pyrene	1.14	UG/L	ND	ND	ND	ND
Isophorone	1.53	UG/L	ND	ND	ND	ND
Naphthalene	1.65	UG/L	ND	ND	ND	ND
Nitrobenzene	1.6	UG/L	ND	ND	ND	ND
N-nitrosodimethylamine	1.27	UG/L	ND	ND	ND	ND
N-nitrosodi-n-propylamine	1.16	UG/L	ND	ND	ND	ND
N-nitrosodiphenylamine	3.48	UG/L	ND	ND	ND	ND
Phenanthrene	1.34	UG/L	ND	ND	ND	ND
Pyrene	1.43	UG/L	ND	ND	ND	ND
1,2,4-Trichlorobenzene	1.52	UG/L	ND	ND	ND	ND
Polynuc. Aromatic Hydrocarbons	1.77	UG/L	0.0	0.0	0.0	0.0
Base/Neutral Compounds	8.96	UG/L	0.0	0.0	14.0	0.0
Additional analytes determined						
Benzo[e]pyrene	1.44	UG/L	ND	ND	ND	ND
Biphenyl	2.29	UG/L	ND	ND	ND	ND
2,6-Dimethylnaphthalene	2.16	UG/L	ND	ND	ND	ND
1-Methylnaphthalene	2.18	UG/L	ND	ND	ND	ND
1-Methylphenanthrene	1.46	UG/L	ND	ND	ND	ND
2-Methylnaphthalene	2.14	UG/L	ND	ND	ND	ND
2,3,5-Trimethylnaphthalene	2.18	UG/L	ND	ND	ND	ND
Perylene	1.41	UG/L	ND	ND	ND	ND
Pyridine	3.33	UG/L	ND	ND	ND	ND

ND= not detected

SOUTH BAY WATER RECLAMATION PLANT
Priority Pollutants Base/Neutral Compounds, EPA Method 625

Annual 2015

Source:			REC_WATER	REC_WATER	REC_WATER
Date:			05-MAY-2015	04-AUG-2015	06-OCT-2015
Analyte	MDL	Units	P778778	P795214	P807404
=====	=====	=====	=====	=====	=====
Acenaphthene	1.8	UG/L	ND	ND	ND
Acenaphthylene	1.77	UG/L	ND	ND	ND
Anthracene	1.29	UG/L	ND	ND	ND
Benzidine	1.52	UG/L	ND	ND	ND
Benzo[a]anthracene	1.1	UG/L	ND	ND	ND
3,4-Benzo(b)fluoranthene	1.35	UG/L	ND	ND	ND
Benzo[k]fluoranthene	1.49	UG/L	ND	ND	ND
Benzo[a]pyrene	1.25	UG/L	ND	ND	ND
Benzo[g,h,i]perylene	1.09	UG/L	ND	ND	ND
4-Bromophenyl phenyl ether	1.4	UG/L	ND	ND	ND
Bis-(2-chloroethoxy) methane	1.01	UG/L	ND	ND	ND
Bis-(2-chloroethyl) ether	1.38	UG/L	ND	ND	ND
Bis-(2-chloroisopropyl) ether	1.16	UG/L	ND	ND	ND
4-Chlorophenyl phenyl ether	1.57	UG/L	ND	ND	ND
2-Chloronaphthalene	1.87	UG/L	ND	ND	ND
Chrysene	1.16	UG/L	ND	ND	ND
Dibenzo(a,h)anthracene	1.01	UG/L	ND	ND	ND
Butyl benzyl phthalate	2.84	UG/L	ND	ND	ND
Di-n-butyl phthalate	3.96	UG/L	ND	ND	ND
Bis-(2-ethylhexyl) phthalate	8.96	UG/L	ND	ND	ND
Diethyl phthalate	3.05	UG/L	ND	7.4	17.3
Dimethyl phthalate	1.44	UG/L	ND	ND	ND
Di-n-octyl phthalate	1	UG/L	ND	ND	ND
3,3-Dichlorobenzidine	2.44	UG/L	ND	ND	ND
2,4-Dinitrotoluene	1.36	UG/L	ND	ND	ND
2,6-Dinitrotoluene	1.53	UG/L	ND	ND	ND
1,2-Diphenylhydrazine	1.37	UG/L	ND	ND	ND
Fluoranthene	1.33	UG/L	ND	ND	ND
Fluorene	1.61	UG/L	ND	ND	ND
Hexachlorobenzene	1.48	UG/L	ND	ND	ND
Hexachlorobutadiene	1.64	UG/L	ND	ND	ND
Hexachlorocyclopentadiene	1.25	UG/L	ND	ND	ND
Hexachloroethane	1.32	UG/L	ND	ND	ND
Indeno(1,2,3-CD)pyrene	1.14	UG/L	ND	ND	ND
Isophorone	1.53	UG/L	ND	ND	ND
Naphthalene	1.65	UG/L	ND	ND	ND
Nitrobenzene	1.6	UG/L	ND	ND	ND
N-nitrosodimethylamine	1.27	UG/L	ND	ND	ND
N-nitrosodi-n-propylamine	1.16	UG/L	ND	ND	ND
N-nitrosodiphenylamine	3.48	UG/L	ND	ND	ND
Phenanthrene	1.34	UG/L	ND	ND	ND
Pyrene	1.43	UG/L	ND	ND	ND
1,2,4-Trichlorobenzene	1.52	UG/L	ND	ND	ND
=====	=====	=====	=====	=====	=====
Polynuc. Aromatic Hydrocarbons	1.77	UG/L	0.0	0.0	0.0
=====	=====	=====	=====	=====	=====
Base/Neutral Compounds	8.96	UG/L	0.0	7.4	17.3

Additional analytes determined

=====	=====	=====	=====	=====	=====
Benzo[e]pyrene	1.44	UG/L	ND	ND	ND
Biphenyl	2.29	UG/L	ND	ND	ND
2,6-Dimethylnaphthalene	2.16	UG/L	ND	ND	ND
1-Methylnaphthalene	2.18	UG/L	ND	ND	ND
1-Methylphenanthrene	1.46	UG/L	ND	ND	ND
2-Methylnaphthalene	2.14	UG/L	ND	ND	ND
2,3,5-Trimethylnaphthalene	2.18	UG/L	ND	ND	ND
Perylene	1.41	UG/L	ND	ND	ND
Pyridine	3.33	UG/L	ND	ND	ND

During the first quarter of the 2015 a recycled water was not collected.
ND= not detected

SOUTH BAY WATER RECLAMATION PLANT
ACID EXTRACTABLE COMPOUNDS, EPA Method 625

Annual 2015

Source:			INF	INF	INF	INF	EFF
Date:			03-FEB-2015	07-MAY-2015	04-AUG-2015	06-OCT-2015	16-FEB-2015
Analyte	MDL	Units	P756049	P783699	P795178	P807370	P761263
=====							
2-Chlorophenol	1.32	UG/L	ND	ND	ND	ND	ND
2,4-Dichlorophenol	1.01	UG/L	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol	1.67	UG/L	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	1.65	UG/L	ND	ND	ND	ND	ND
Pentachlorophenol	1.12	UG/L	ND	ND	ND	ND	ND
Phenol	1.76	UG/L	49.9	54.8	48.7	50.0	ND
2-Nitrophenol	1.55	UG/L	ND	ND	ND	ND	ND
2,4-Dimethylphenol	2.01	UG/L	ND	ND	ND	ND	ND
2,4-Dinitrophenol	2.16	UG/L	ND	ND	ND	ND	ND
4-Nitrophenol	1.14	UG/L	ND	ND	ND	ND	ND
2-Methyl-4,6-dinitrophenol	1.52	UG/L	ND	ND	ND	ND	ND
=====							
Total Chlorinated Phenols	1.67	UG/L	0.0	0.0	0.0	0.0	0.0
Total Non-Chlorinated Phenols	2.16	UG/L	49.9	54.8	48.7	50.0	0.0
=====							
Total Phenols	2.16	UG/L	49.9	54.8	48.7	50.0	0.0

Additional analytes determined

=====							
2-Methylphenol	2.15	UG/L	ND	ND	ND	ND	ND
3-Methylphenol(4-MP is unresolved)		UG/L	NA	NA	NA	NA	NA
4-Methylphenol(3-MP is unresolved)	2.11	UG/L	139	130	117	144	ND
2,4,5-Trichlorophenol	1.66	UG/L	ND	ND	ND	ND	ND

Source:			EFF	EFF	EFF	PRI_EFF	PRI_EFF
Date:			05-MAY-2015	04-AUG-2015	06-OCT-2015	03-FEB-2015	05-MAY-2015
Analyte	MDL	Units	P778749	P795183	P807375	P756064	P778759
=====							
2-Chlorophenol	1.32	UG/L	ND	ND	ND	ND	ND
2,4-Dichlorophenol	1.01	UG/L	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol	1.67	UG/L	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	1.65	UG/L	ND	ND	ND	ND	ND
Pentachlorophenol	1.12	UG/L	ND	ND	ND	ND	ND
Phenol	1.76	UG/L	ND	ND	ND	4.5	43.9
2-Nitrophenol	1.55	UG/L	ND	ND	ND	ND	ND
2,4-Dimethylphenol	2.01	UG/L	ND	ND	ND	ND	ND
2,4-Dinitrophenol	2.16	UG/L	ND	ND	ND	ND	ND
4-Nitrophenol	1.14	UG/L	ND	ND	ND	ND	ND
2-Methyl-4,6-dinitrophenol	1.52	UG/L	ND	ND	ND	ND	ND
=====							
Total Chlorinated Phenols	1.67	UG/L	0.0	0.0	0.0	0.0	0.0
Total Non-Chlorinated Phenols	2.16	UG/L	0.0	0.0	0.0	4.5	43.9
=====							
Total Phenols	2.16	UG/L	0.0	0.0	0.0	4.5	43.9

Additional analytes determined

=====							
2-Methylphenol	2.15	UG/L	ND	ND	ND	ND	ND
3-Methylphenol(4-MP is unresolved)		UG/L	NA	NA	NA	NA	NA
4-Methylphenol(3-MP is unresolved)	2.11	UG/L	ND	ND	ND	4.0	107
2,4,5-Trichlorophenol	1.66	UG/L	ND	ND	ND	ND	ND

ND= not detected; NA= not analyzed

SOUTH BAY WATER RECLAMATION PLANT
ACID EXTRACTABLE COMPOUNDS, EPA Method 625

Annual 2015

Source:			PRI_EFF	PRI_EFF	SEC_EFF	SEC_EFF	SEC_EFF
Date:			04-AUG-2015	06-OCT-2015	03-FEB-2015	05-MAY-2015	04-AUG-2015
Analyte	MDL	Units	P795193	P807385	P756069	P778764	P795198
=====							
2-Chlorophenol	1.32	UG/L	ND	ND	ND	ND	ND
2,4-Dichlorophenol	1.01	UG/L	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol	1.67	UG/L	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	1.65	UG/L	ND	ND	ND	ND	ND
Pentachlorophenol	1.12	UG/L	ND	ND	ND	ND	ND
Phenol	1.76	UG/L	28.1	36.9	ND	ND	ND
2-Nitrophenol	1.55	UG/L	ND	ND	ND	ND	ND
2,4-Dimethylphenol	2.01	UG/L	ND	ND	ND	ND	ND
2,4-Dinitrophenol	2.16	UG/L	ND	ND	ND	ND	ND
4-Nitrophenol	1.14	UG/L	ND	ND	ND	ND	ND
2-Methyl-4,6-dinitrophenol	1.52	UG/L	ND	ND	ND	ND	ND
=====							
Total Chlorinated Phenols	1.67	UG/L	0.0	0.0	0.0	0.0	0.0
Total Non-Chlorinated Phenols	2.16	UG/L	28.1	36.9	0.0	0.0	0.0
=====							
Total Phenols	2.16	UG/L	28.1	36.9	0.0	0.0	0.0

Additional analytes determined

=====							
2-Methylphenol	2.15	UG/L	ND	ND	ND	ND	ND
3-Methylphenol(4-MP is unresolved)		UG/L	NA	NA	NA	NA	NA
4-Methylphenol(3-MP is unresolved)	2.11	UG/L	60.0	71.3	ND	ND	ND
2,4,5-Trichlorophenol	1.66	UG/L	ND	ND	ND	ND	ND

Source:			SEC_EFF	RSL	RSL	RSL	RSL
Date:			06-OCT-2015	03-FEB-2015	05-MAY-2015	04-AUG-2015	06-OCT-2015
Analyte	MDL	Units	P807390	P756083	P778776	P795212	P807402
=====							
2-Chlorophenol	1.32	UG/L	ND	ND	ND	ND	ND
2,4-Dichlorophenol	1.01	UG/L	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol	1.67	UG/L	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	1.65	UG/L	ND	ND	ND	ND	ND
Pentachlorophenol	1.12	UG/L	ND	ND	ND	ND	ND
Phenol	1.76	UG/L	ND	112	112	224	83.4
2-Nitrophenol	1.55	UG/L	ND	ND	ND	ND	ND
2,4-Dimethylphenol	2.01	UG/L	ND	ND	ND	ND	ND
2,4-Dinitrophenol	2.16	UG/L	ND	ND	ND	ND	ND
4-Nitrophenol	1.14	UG/L	ND	ND	ND	ND	ND
2-Methyl-4,6-dinitrophenol	1.52	UG/L	ND	ND	ND	ND	ND
=====							
Total Chlorinated Phenols	1.67	UG/L	0.0	0.0	0.0	0.0	0.0
Total Non-Chlorinated Phenols	2.16	UG/L	0.0	112	112	224	83.4
=====							
Total Phenols	2.16	UG/L	0.0	112	112	224	83.4

Additional analytes determined

=====							
2-Methylphenol	2.15	UG/L	ND	ND	ND	ND	ND
3-Methylphenol(4-MP is unresolved)		UG/L	NA	NA	NA	NA	NA
4-Methylphenol(3-MP is unresolved)	2.11	UG/L	ND	270	233	370	184
2,4,5-Trichlorophenol	1.66	UG/L	ND	ND	ND	ND	ND

ND= not detected; NA= not analyzed

SOUTH BAY WATER RECLAMATION PLANT
ACID EXTRACTABLE COMPOUNDS, EPA Method 625

Annual 2015

Source:			REC_WATER	REC_WATER	REC_WATER
Date:			05-MAY-2015	30-AUG-2015	06-OCT-2015
Analyte	MDL	Units	P778778	P803433	P807404
2-Chlorophenol	1.32	UG/L	ND	ND	ND
2,4-Dichlorophenol	1.01	UG/L	ND	ND	ND
4-Chloro-3-methylphenol	1.67	UG/L	ND	ND	ND
2,4,6-Trichlorophenol	1.65	UG/L	ND	ND	ND
Pentachlorophenol	1.12	UG/L	ND	ND	ND
Phenol	1.76	UG/L	ND	ND	ND
2-Nitrophenol	1.55	UG/L	ND	ND	ND
2,4-Dimethylphenol	2.01	UG/L	ND	ND	ND
2,4-Dinitrophenol	2.16	UG/L	ND	ND	ND
4-Nitrophenol	1.14	UG/L	ND	ND	ND
2-Methyl-4,6-dinitrophenol	1.52	UG/L	ND	ND	ND
Total Chlorinated Phenols	1.67	UG/L	0.0	0.0	0.0
Total Non-Chlorinated Phenols	2.16	UG/L	0.0	0.0	0.0
Total Phenols	2.16	UG/L	0.0	0.0	0.0
Additional analytes determined					
2-Methylphenol	2.15	UG/L	ND	ND	ND
3-Methylphenol(4-MP is unresolved)		UG/L	NA	NA	NA
4-Methylphenol(3-MP is unresolved)	2.11	UG/L	ND	ND	ND
2,4,5-Trichlorophenol	1.66	UG/L	ND	ND	ND

During the first quarter of the 2015 a recycled water was not collected.

ND= not detected; NA= not analyzed

SOUTH BAY WATER RECLAMATION PLANT
Priority Pollutants Purgeable Compounds, EPA Method 624 & 8260B

Annual 2015

Source:		INF	INF	INF	INF
Date:		03-FEB-2015	05-MAY-2015	04-AUG-2015	06-OCT-2015
Analyte	MDL Units	P756052	P778747	P795181	P807373
=====					
Acrolein	1.3 UG/L	ND	ND	ND	ND
Acrylonitrile	.7 UG/L	ND	ND	ND	ND
Benzene	.4 UG/L	ND	ND	ND	ND
Bromodichloromethane	.5 UG/L	ND	ND	ND	ND
Bromoform	.5 UG/L	ND	ND	ND	ND
Bromomethane	.7 UG/L	ND	ND	ND	ND
Carbon tetrachloride	.4 UG/L	ND	ND	ND	ND
Chlorobenzene	.4 UG/L	ND	ND	ND	ND
Chloroethane	.9 UG/L	ND	ND	ND	ND
2-Chloroethylvinyl ether	1.1 UG/L	ND	ND	ND	ND
Chloroform	.2 UG/L	1.5	2.5	DNQ1.8	2.0
Chloromethane	.5 UG/L	ND	ND	ND	ND
Dibromochloromethane	.6 UG/L	ND	ND	ND	ND
1,2-Dichlorobenzene	.4 UG/L	ND	ND	ND	ND
1,3-Dichlorobenzene	.5 UG/L	ND	ND	ND	ND
1,4-Dichlorobenzene	.4 UG/L	ND	ND	ND	DNQ0.4
Dichlorodifluoromethane	.66 UG/L	ND	ND	ND	ND
1,1-Dichloroethane	.4 UG/L	ND	ND	ND	ND
1,2-Dichloroethane	.5 UG/L	ND	ND	ND	ND
1,1-Dichloroethene	.4 UG/L	ND	ND	ND	ND
trans-1,2-dichloroethene	.6 UG/L	ND	ND	ND	ND
1,2-Dichloropropane	.3 UG/L	ND	ND	ND	ND
cis-1,3-dichloropropene	.3 UG/L	ND	ND	ND	ND
trans-1,3-dichloropropene	.5 UG/L	ND	ND	ND	ND
Ethylbenzene	.3 UG/L	ND	ND	ND	ND
Methylene chloride	.3 UG/L	ND	DNQ0.8	DNQ0.6	DNQ0.4*
1,1,2,2-Tetrachloroethane	.5 UG/L	ND	ND	ND	ND
Tetrachloroethene	1.1 UG/L	ND	ND	ND	ND
Toluene	.4 UG/L	ND	ND	DNQ0.5	DNQ0.4
1,1,1-Trichloroethane	.4 UG/L	ND	ND	ND	ND
1,1,2-Trichloroethane	.5 UG/L	ND	ND	ND	ND
Trichloroethene	.7 UG/L	ND	ND	ND	ND
Trichlorofluoromethane	.3 UG/L	ND	ND	ND	ND
1,2,4-Trichlorobenzene	.7 UG/L	ND	ND	ND	ND
Vinyl chloride	.4 UG/L	ND	ND	ND	ND
=====					
Halomethane Purgeable Cmpnds	.7 UG/L	0.0	0.0	0.0	0.0
=====					
Total Dichlorobenzenes	.5 UG/L	0.0	0.0	0.0	0.0
=====					
Total Chloromethanes	.5 UG/L	1.5	2.5	0.0	2.0
=====					
Purgeable Compounds	1.3 UG/L	1.5	2.5	0.0	2.0

Additional Analytes Determined

=====					
Acetone	4.5 UG/L	203.0	154.0	108.0	147.0
Allyl chloride	.6 UG/L	ND	ND	ND	ND
Benzyl chloride	1.1 UG/L	ND	ND	ND	ND
1,2-Dibromoethane	.3 UG/L	ND	ND	ND	ND
2-Butanone	6.3 UG/L	DNQ6.5	ND	ND	ND
Carbon disulfide	.6 UG/L	4.9	DNQ2.5	1.6	4.2
Chloroprene	.4 UG/L	ND	ND	ND	ND
Isopropylbenzene	.3 UG/L	ND	ND	ND	ND
Methyl Iodide	.6 UG/L	ND	ND	ND	ND
Methyl methacrylate	.8 UG/L	ND	ND	ND	ND
4-Methyl-2-pentanone	1.3 UG/L	ND	ND	ND	ND
meta,para xylenes	.6 UG/L	ND	ND	ND	ND
Methyl tert-butyl ether	.4 UG/L	1.0	ND	ND	ND
2-Nitropropane	12 UG/L	ND	ND	ND	ND
ortho-xylene	.4 UG/L	ND	ND	ND	ND
Styrene	.3 UG/L	ND	ND	ND	ND

ND= not detected

DNQ= (Detected but not quantified). Estimated analyte concentration below calibration range.

*= The Response factor RSD of 59.5% is above 15% calibration criteria limit; therefore sample is not included in averages.

SOUTH BAY WATER RECLAMATION PLANT
Priority Pollutants Purgeable Compounds, EPA Method 624 & 8260B

Annual 2015

Source:		EFF	EFF	EFF	EFF
Date:		03-FEB-2015	05-MAY-2015	04-AUG-2015	06-OCT-2015
Analyte	MDL Units	P756057	P778752	P795186	P807378
=====					
Acrolein	1.3 UG/L	ND	ND	ND	ND
Acrylonitrile	.7 UG/L	ND	ND	ND	ND
Benzene	.4 UG/L	ND	ND	ND	ND
Bromodichloromethane	.5 UG/L	ND	ND	ND	ND
Bromoform	.5 UG/L	ND	ND	ND	ND
Bromomethane	.7 UG/L	ND	ND	ND	ND
Carbon tetrachloride	.4 UG/L	ND	ND	ND	ND
Chlorobenzene	.4 UG/L	ND	ND	ND	ND
Chloroethane	.9 UG/L	ND	ND	ND	ND
2-Chloroethylvinyl ether	1.1 UG/L	ND	ND	ND	ND
Chloroform	.2 UG/L	ND	1.5	DNQ0.7	DNQ1.7
Chloromethane	.5 UG/L	ND	ND	ND	ND
Dibromochloromethane	.6 UG/L	ND	ND	ND	ND
1,2-Dichlorobenzene	.4 UG/L	ND	ND	ND	ND
1,3-Dichlorobenzene	.5 UG/L	ND	ND	ND	ND
1,4-Dichlorobenzene	.4 UG/L	ND	ND	ND	ND
Dichlorodifluoromethane	.66 UG/L	ND	ND	ND	ND
1,1-Dichloroethane	.4 UG/L	ND	ND	ND	ND
1,2-Dichloroethane	.5 UG/L	ND	ND	ND	ND
1,1-Dichloroethene	.4 UG/L	ND	ND	ND	ND
trans-1,2-dichloroethene	.6 UG/L	ND	ND	ND	ND
1,2-Dichloropropane	.3 UG/L	ND	ND	ND	ND
cis-1,3-dichloropropene	.3 UG/L	ND	ND	ND	ND
trans-1,3-dichloropropene	.5 UG/L	ND	ND	ND	ND
Ethylbenzene	.3 UG/L	ND	ND	ND	ND
Methylene chloride	.3 UG/L	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	.5 UG/L	ND	ND	ND	ND
Tetrachloroethene	1.1 UG/L	ND	ND	ND	ND
Toluene	.4 UG/L	ND	ND	ND	ND
1,1,1-Trichloroethane	.4 UG/L	ND	ND	ND	ND
1,1,2-Trichloroethane	.5 UG/L	ND	ND	ND	ND
Trichloroethene	.7 UG/L	ND	ND	ND	ND
Trichlorofluoromethane	.3 UG/L	ND	ND	ND	ND
1,2,4-Trichlorobenzene	.7 UG/L	ND	ND	ND	ND
Vinyl chloride	.4 UG/L	ND	ND	ND	ND
=====					
Halomethane Purgeable Cmpnds	.7 UG/L	0.0	0.0	0.0	0.0
=====					
Total Dichlorobenzenes	.5 UG/L	0.0	0.0	0.0	0.0
=====					
Total Chloromethanes	.5 UG/L	0.0	1.5	0.0	0.0
=====					
Purgeable Compounds	1.3 UG/L	0.0	1.5	0.0	0.0
Additional Analytes Determined					
=====					
Acetone	4.5 UG/L	ND	ND	ND	ND
Allyl chloride	.6 UG/L	ND	ND	ND	ND
Benzyl chloride	1.1 UG/L	ND	ND	ND	ND
1,2-Dibromoethane	.3 UG/L	ND	ND	ND	ND
2-Butanone	6.3 UG/L	ND	ND	ND	ND
Carbon disulfide	.6 UG/L	ND	ND	ND	ND
Chloroprene	.4 UG/L	ND	ND	ND	ND
Isopropylbenzene	.3 UG/L	ND	ND	ND	ND
Methyl Iodide	.6 UG/L	ND	ND	ND	ND
Methyl methacrylate	.8 UG/L	ND	ND	ND	ND
4-Methyl-2-pentanone	1.3 UG/L	ND	ND	ND	ND
meta,para xylenes	.6 UG/L	ND	ND	ND	ND
Methyl tert-butyl ether	.4 UG/L	ND	ND	ND	ND
2-Nitropropane	12 UG/L	ND	ND	ND	ND
ortho-xylene	.4 UG/L	ND	ND	ND	ND
Styrene	.3 UG/L	ND	ND	ND	ND

ND= not detected

DNQ= (Detected but not quantified). Estimated analyte concentration below calibration range.

SOUTH BAY WATER RECLAMATION PLANT
Priority Pollutants Purgeable Compounds, EPA Method 624 & 8260B

Annual 2015

Source:		PRI_EFF	PRI_EFF	PRI_EFF	PRI_EFF
Date:		03-FEB-2015	05-MAY-2015	04-AUG-2015	06-OCT-2015
Analyte	MDL Units	P756067	P778762	P795196	P807388
=====					
Acrolein	1.3 UG/L	ND	ND	ND	ND
Acrylonitrile	.7 UG/L	ND	ND	ND	ND
Benzene	.4 UG/L	ND	ND	ND	ND
Bromodichloromethane	.5 UG/L	ND	ND	ND	ND
Bromoform	.5 UG/L	ND	ND	ND	ND
Bromomethane	.7 UG/L	ND	ND	ND	ND
Carbon tetrachloride	.4 UG/L	ND	ND	ND	ND
Chlorobenzene	.4 UG/L	ND	ND	ND	ND
Chloroethane	.9 UG/L	ND	ND	ND	ND
2-Chloroethylvinyl ether	1.1 UG/L	ND	ND	ND	ND
Chloroform	.2 UG/L	1.6	1.0	DNQ1.2	DNQ0.9
Chloromethane	.5 UG/L	ND	ND	ND	ND
Dibromochloromethane	.6 UG/L	ND	ND	ND	ND
1,2-Dichlorobenzene	.4 UG/L	ND	ND	ND	ND
1,3-Dichlorobenzene	.5 UG/L	ND	ND	ND	ND
1,4-Dichlorobenzene	.4 UG/L	ND	ND	ND	ND
Dichlorodifluoromethane	.66 UG/L	ND	ND	ND	ND
1,1-Dichloroethane	.4 UG/L	ND	ND	ND	ND
1,2-Dichloroethane	.5 UG/L	ND	ND	ND	ND
1,1-Dichloroethene	.4 UG/L	ND	ND	ND	ND
trans-1,2-dichloroethene	.6 UG/L	ND	ND	ND	ND
1,2-Dichloropropane	.3 UG/L	ND	ND	ND	ND
cis-1,3-dichloropropene	.3 UG/L	ND	ND	ND	ND
trans-1,3-dichloropropene	.5 UG/L	ND	ND	ND	ND
Ethylbenzene	.3 UG/L	ND	ND	ND	ND
Methylene chloride	.3 UG/L	DNQ0.8	ND	DNQ0.4	ND
1,1,2,2-Tetrachloroethane	.5 UG/L	ND	ND	ND	ND
Tetrachloroethene	1.1 UG/L	ND	ND	ND	ND
Toluene	.4 UG/L	ND	ND	DNQ0.4	DNQ0.4
1,1,1-Trichloroethane	.4 UG/L	ND	ND	ND	ND
1,1,2-Trichloroethane	.5 UG/L	ND	ND	ND	ND
Trichloroethene	.7 UG/L	ND	ND	ND	ND
Trichlorofluoromethane	.3 UG/L	ND	ND	ND	ND
1,2,4-Trichlorobenzene	.7 UG/L	ND	ND	ND	ND
Vinyl chloride	.4 UG/L	ND	ND	ND	ND
=====					
Halomethane Purgeable Cmpnds	.7 UG/L	0.0	0.0	0.0	0.0
=====					
Total Dichlorobenzenes	.5 UG/L	0.0	0.0	0.0	0.0
=====					
Total Chloromethanes	.5 UG/L	1.6	1.0	0.0	0.0
=====					
Purgeable Compounds	1.3 UG/L	1.6	1.0	0.0	0.0
Additional Analytes Determined					
=====					
Acetone	4.5 UG/L	246	113	191	164
Allyl chloride	.6 UG/L	ND	ND	ND	ND
Benzyl chloride	1.1 UG/L	ND	ND	ND	ND
1,2-Dibromoethane	.3 UG/L	ND	ND	ND	ND
2-Butanone	6.3 UG/L	ND	ND	ND	ND
Carbon disulfide	.6 UG/L	DNQ1.8	DNQ1.1	1.8	1.8
Chloroprene	.4 UG/L	ND	ND	ND	ND
Isopropylbenzene	.3 UG/L	ND	ND	ND	ND
Methyl Iodide	.6 UG/L	ND	ND	ND	ND
Methyl methacrylate	.8 UG/L	ND	ND	ND	ND
4-Methyl-2-pentanone	1.3 UG/L	ND	ND	ND	ND
meta,para xylenes	.6 UG/L	ND	ND	ND	ND
Methyl tert-butyl ether	.4 UG/L	DNQ1.2	ND	ND	ND
2-Nitropropane	12 UG/L	ND	ND	ND	ND
ortho-xylene	.4 UG/L	ND	ND	ND	ND
Styrene	.3 UG/L	ND	ND	ND	ND

ND= not detected

DNQ= (Detected but not quantified). Estimated analyte concentration below calibration range.

SOUTH BAY WATER RECLAMATION PLANT
Priority Pollutants Purgeable Compounds, EPA Method 624 & 8260B

Annual 2015

Source:		SEC_EFF	SEC_EFF	SEC_EFF	SEC_EFF
Date:		03-FEB-2015	05-MAY-2015	04-AUG-2015	06-OCT-2015
Analyte	MDL Units	P756072	P778767	P795201	P807393
=====					
Acrolein	1.3 UG/L	ND	ND	ND	ND
Acrylonitrile	.7 UG/L	ND	ND	ND	ND
Benzene	.4 UG/L	ND	ND	ND	ND
Bromodichloromethane	.5 UG/L	ND	ND	ND	ND
Bromoform	.5 UG/L	ND	ND	ND	ND
Bromomethane	.7 UG/L	ND	ND	ND	ND
Carbon tetrachloride	.4 UG/L	ND	ND	ND	ND
Chlorobenzene	.4 UG/L	ND	ND	ND	ND
Chloroethane	.9 UG/L	ND	ND	ND	ND
2-Chloroethylvinyl ether	1.1 UG/L	ND	ND	ND	ND
Chloroform	.2 UG/L	ND	1.3	DNQ0.9	DNQ0.5
Chloromethane	.5 UG/L	ND	ND	ND	ND
Dibromochloromethane	.6 UG/L	ND	ND	ND	ND
1,2-Dichlorobenzene	.4 UG/L	ND	ND	ND	ND
1,3-Dichlorobenzene	.5 UG/L	ND	ND	ND	ND
1,4-Dichlorobenzene	.4 UG/L	ND	ND	ND	ND
Dichlorodifluoromethane	.66 UG/L	ND	ND	ND	ND
1,1-Dichloroethane	.4 UG/L	ND	ND	ND	ND
1,2-Dichloroethane	.5 UG/L	ND	ND	ND	ND
1,1-Dichloroethene	.4 UG/L	ND	ND	ND	ND
trans-1,2-dichloroethene	.6 UG/L	ND	ND	ND	ND
1,2-Dichloropropane	.3 UG/L	ND	ND	ND	ND
cis-1,3-dichloropropene	.3 UG/L	ND	ND	ND	ND
trans-1,3-dichloropropene	.5 UG/L	ND	ND	ND	ND
Ethylbenzene	.3 UG/L	ND	ND	ND	ND
Methylene chloride	.3 UG/L	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	.5 UG/L	ND	ND	ND	ND
Tetrachloroethene	1.1 UG/L	ND	ND	ND	ND
Toluene	.4 UG/L	ND	ND	ND	ND
1,1,1-Trichloroethane	.4 UG/L	ND	ND	ND	ND
1,1,2-Trichloroethane	.5 UG/L	ND	ND	ND	ND
Trichloroethene	.7 UG/L	ND	ND	ND	ND
Trichlorofluoromethane	.3 UG/L	ND	ND	ND	ND
1,2,4-Trichlorobenzene	.7 UG/L	ND	ND	ND	ND
Vinyl chloride	.4 UG/L	ND	ND	ND	ND
=====					
Halomethane Purgeable Cmpnds	.7 UG/L	0.0	0.0	0.0	0.0
=====					
Total Dichlorobenzenes	.5 UG/L	0.0	0.0	0.0	0.0
=====					
Total Chloromethanes	.5 UG/L	0.0	1.3	0.0	0.0
=====					
Purgeable Compounds	1.3 UG/L	0.0	1.3	0.0	0.0
Additional Analytes Determined					
=====					
Acetone	4.5 UG/L	ND	ND	ND	ND
Allyl chloride	.6 UG/L	ND	ND	ND	ND
Benzyl chloride	1.1 UG/L	ND	ND	ND	ND
1,2-Dibromoethane	.3 UG/L	ND	ND	ND	ND
2-Butanone	6.3 UG/L	ND	ND	ND	ND
Carbon disulfide	.6 UG/L	ND	ND	ND	ND
Chloroprene	.4 UG/L	ND	ND	ND	ND
Isopropylbenzene	.3 UG/L	ND	ND	ND	ND
Methyl Iodide	.6 UG/L	ND	ND	ND	ND
Methyl methacrylate	.8 UG/L	ND	ND	ND	ND
4-Methyl-2-pentanone	1.3 UG/L	ND	ND	ND	ND
meta,para xylenes	.6 UG/L	ND	ND	ND	ND
Methyl tert-butyl ether	.4 UG/L	ND	ND	ND	ND
2-Nitropropane	12 UG/L	ND	ND	ND	ND
ortho-xylene	.4 UG/L	ND	ND	ND	ND
Styrene	.3 UG/L	ND	ND	ND	ND

ND= not detected

DNQ= (Detected but not quantified). Estimated analyte concentration below calibration range.

SOUTH BAY WATER RECLAMATION PLANT
Priority Pollutants Purgeable Compounds, EPA Method 624 & 8260B

Annual 2015

Source:		REC_WATER	REC_WATER	REC_WATER	REC_WATER
Date:		03-FEB-2015	05-MAY-2015	04-AUG-2015	06-OCT-2015
Analyte	MDL Units	P756088	P778781	P795217	P807407
=====					
Acrolein	1.3 UG/L	ND	ND	ND	ND
Acrylonitrile	.7 UG/L	ND	ND	ND	ND
Benzene	.4 UG/L	ND	ND	ND	ND
Bromodichloromethane	.5 UG/L	ND	41.0	17.3	49.3
Bromoform	.5 UG/L	ND	1.9	DNQ1.3	DNQ1.7
Bromomethane	.7 UG/L	ND	ND	ND	ND
Carbon tetrachloride	.4 UG/L	ND	ND	ND	ND
Chlorobenzene	.4 UG/L	ND	ND	ND	ND
Chloroethane	.9 UG/L	ND	ND	ND	ND
2-Chloroethylvinyl ether	1.1 UG/L	ND	ND	ND	ND
Chloroform	.2 UG/L	ND	43.9	18.1	66.6
Chloromethane	.5 UG/L	ND	2.5	DNQ1.3	DNQ1.7
Dibromochloromethane	.6 UG/L	ND	17.8	8.8	22.5
1,2-Dichlorobenzene	.4 UG/L	ND	ND	ND	ND
1,3-Dichlorobenzene	.5 UG/L	ND	ND	ND	ND
1,4-Dichlorobenzene	.4 UG/L	ND	ND	ND	ND
Dichlorodifluoromethane	.66 UG/L	ND	ND	ND	ND
1,1-Dichloroethane	.4 UG/L	ND	ND	ND	ND
1,2-Dichloroethane	.5 UG/L	ND	ND	ND	ND
1,1-Dichloroethene	.4 UG/L	ND	ND	ND	ND
trans-1,2-dichloroethene	.6 UG/L	ND	ND	ND	ND
1,2-Dichloropropane	.3 UG/L	ND	ND	ND	ND
cis-1,3-dichloropropene	.3 UG/L	ND	ND	ND	ND
trans-1,3-dichloropropene	.5 UG/L	ND	ND	ND	ND
Ethylbenzene	.3 UG/L	ND	ND	ND	ND
Methylene chloride	.3 UG/L	DNQ0.8	ND	DNQ0.4	DNQ0.33*
1,1,2,2-Tetrachloroethane	.5 UG/L	ND	ND	ND	ND
Tetrachloroethene	1.1 UG/L	ND	ND	ND	ND
Toluene	.4 UG/L	ND	ND	ND	ND
1,1,1-Trichloroethane	.4 UG/L	ND	ND	ND	ND
1,1,2-Trichloroethane	.5 UG/L	ND	ND	ND	ND
Trichloroethene	.7 UG/L	ND	ND	ND	ND
Trichlorofluoromethane	.3 UG/L	ND	ND	ND	ND
1,2,4-Trichlorobenzene	.7 UG/L	ND	ND	ND	ND
Vinyl chloride	.4 UG/L	ND	ND	ND	ND
=====					
Halomethane Purgeable Cmpnds	.7 UG/L	0.0	4.4	0.0	0.0
=====					
Total Dichlorobenzenes	.5 UG/L	0.0	0.0	0.0	0.0
=====					
Total Chloromethanes	.5 UG/L	0.0	46.4	18.1	66.6
=====					
Purgeable Compounds	1.3 UG/L	0.0	107.1	44.2	138.4

Additional Analytes Determined

=====					
Acetone	4.5 UG/L	ND	ND	ND	DNQ5.4
Allyl chloride	.6 UG/L	ND	ND	ND	ND
Benzyl chloride	1.1 UG/L	ND	ND	ND	ND
1,2-Dibromoethane	.3 UG/L	ND	ND	ND	ND
2-Butanone	6.3 UG/L	ND	ND	ND	ND
Carbon disulfide	.6 UG/L	ND	ND	ND	ND
Chloroprene	.4 UG/L	ND	ND	ND	ND
Isopropylbenzene	.3 UG/L	ND	ND	ND	ND
Methyl Iodide	.6 UG/L	ND	ND	ND	ND
Methyl methacrylate	.8 UG/L	ND	ND	ND	ND
4-Methyl-2-pentanone	1.3 UG/L	ND	ND	ND	ND
meta,para xylenes	.6 UG/L	ND	ND	ND	ND
Methyl tert-butyl ether	.4 UG/L	ND	ND	ND	ND
2-Nitropropane	12 UG/L	ND	ND	ND	ND
ortho-xylene	.4 UG/L	ND	ND	ND	ND
Styrene	.3 UG/L	ND	ND	ND	ND

ND= not detected

DNQ= (Detected but not quantified). Estimated analyte concentration below calibration range.

*= The Response factor RSD of 59.5% is above 15% calibration criteria limit; therefore sample is not included in averages.

SOUTH BAY WATER RECLAMATION PLANT
Priority Pollutants Purgeable Compounds, EPA Method 624 & 8260B

Annual 2015

Source:		RSL	RSL	RSL	RSL
Date:		03-FEB-2015	05-MAY-2015	04-AUG-2015	06-OCT-2015
Analyte	MDL Units	P756083	P778776	P795212	P807402
=====					
Acrolein	1.3 UG/L	ND	ND	ND	ND
Acrylonitrile	.7 UG/L	ND	ND	ND	ND
Benzene	.4 UG/L	ND	ND	ND	ND*
Bromodichloromethane	.5 UG/L	ND	ND	ND	ND
Bromoform	.5 UG/L	ND	ND	ND	ND
Bromomethane	.7 UG/L	ND	ND	ND	ND
Carbon tetrachloride	.4 UG/L	ND	ND	ND	ND
Chlorobenzene	.4 UG/L	ND	ND	ND	ND*
Chloroethane	.9 UG/L	ND	ND	ND	ND
2-Chloroethylvinyl ether	1.1 UG/L	ND	ND	ND	ND
Chloroform	.2 UG/L	3.5	2.5	3.0	DNQ2.0
Chloromethane	.5 UG/L	ND	ND	ND	ND
Dibromochloromethane	.6 UG/L	ND	ND	ND	ND
1,2-Dichlorobenzene	.4 UG/L	ND	ND	ND	ND*
1,3-Dichlorobenzene	.5 UG/L	ND	ND	ND	ND
1,4-Dichlorobenzene	.4 UG/L	ND	ND	1.1	ND
Dichlorodifluoromethane	.66 UG/L	ND	ND	ND	ND
1,1-Dichloroethane	.4 UG/L	ND	ND	ND	ND*
1,2-Dichloroethane	.5 UG/L	ND	ND	ND	ND*
1,1-Dichloroethene	.4 UG/L	ND	ND	ND	ND*
trans-1,2-dichloroethene	.6 UG/L	ND	ND	ND	ND*
1,2-Dichloropropane	.3 UG/L	ND	ND	ND	ND*
cis-1,3-dichloropropene	.3 UG/L	ND	ND	ND	ND
trans-1,3-dichloropropene	.5 UG/L	ND	ND	ND	ND
Ethylbenzene	.3 UG/L	ND	ND	ND	ND*
Methylene chloride	.3 UG/L	DNQ1.0	ND	DNQ1.1	DNQ0.8
1,1,2,2-Tetrachloroethane	.5 UG/L	ND	ND	ND	ND*
Tetrachloroethene	1.1 UG/L	ND	ND	ND	ND
Toluene	.4 UG/L	ND	2.3	DNQ1.7	DNQ0.79*
1,1,1-Trichloroethane	.4 UG/L	ND	ND	ND	ND*
1,1,2-Trichloroethane	.5 UG/L	ND	ND	ND	ND*
Trichloroethene	.7 UG/L	ND	ND	ND	ND*
Trichlorofluoromethane	.3 UG/L	ND	ND	ND	ND
1,2,4-Trichlorobenzene	.7 UG/L	ND	ND	ND	ND
Vinyl chloride	.4 UG/L	ND	ND	ND	ND
=====					
Halomethane Purgeable Cmpnds	.7 UG/L	0.0	0.0	0.0	0.0
=====					
Total Dichlorobenzenes	.5 UG/L	0.0	0.0	0.0	0.0
=====					
Total Chloromethanes	.5 UG/L	3.5	2.5	4.1	0.0
=====					
Purgeable Compounds	1.3 UG/L	3.5	4.8	4.1	0.0

Additional Analytes Determined

=====					
Acetone	4.5 UG/L	475	80.8	177	81.9
Allyl chloride	.6 UG/L	ND	ND	ND	ND
Benzyl chloride	1.1 UG/L	ND	ND	ND	ND
1,2-Dibromoethane	.3 UG/L	ND	ND	ND	ND
2-Butanone	6.3 UG/L	15.2	ND	DNQ8.8	ND
Carbon disulfide	.6 UG/L	7.4	DNQ1.7	4.6	1.6
1,2,4-Trichlorobenzene	.7 UG/L	ND	ND	ND	ND
Chloroprene	.4 UG/L	ND	ND	ND	ND
Isopropylbenzene	.3 UG/L	ND	ND	ND	ND
Methyl Iodide	.6 UG/L	ND	ND	ND	ND
Methyl methacrylate	.8 UG/L	ND	ND	ND	ND
4-Methyl-2-pentanone	1.3 UG/L	ND	ND	ND	ND
meta,para xylenes	.6 UG/L	ND	ND	DNQ0.7	ND*
Methyl tert-butyl ether	.4 UG/L	ND	ND	ND	ND
2-Nitropropane	12 UG/L	ND	ND	ND	ND
ortho-xylene	.4 UG/L	ND	ND	DNQ0.4	ND*
Styrene	.3 UG/L	ND	ND	DNQ0.3	ND

ND= not detected

DNQ= (Detected but not quantified). Estimated analyte concentration below calibration range.

*= Recovery of compound in internal check and matrix spike sample outside method acceptance limits; value is not used in average calculations.

SOUTH BAY WATER RECLAMATION PLANT
Tributyl Tin Analysis

Annual 2015

Source:			INF	INF	INF	INF	EFF	EFF	EFF
Sample ID:			P756049	P783699	P795178	P807370	P756054	P778749	P795183
Analyte	MDL Units		03-FEB-2015	07-MAY-2015	04-AUG-2015	06-OCT-2015	03-FEB-2015	05-MAY-2015	04-AUG-2015
=====	===	=====	=====	=====	=====	=====	=====	=====	=====
Dibutyltin	7 UG/L		ND	ND	ND	ND	ND	ND	ND
Monobutyltin	16 UG/L		ND	ND	ND	ND	ND	ND	ND
Tributyltin	2 UG/L		ND	ND	ND	ND	ND	ND	ND

Source:			EFF	PRI_EFF	PRI_EFF	PRI_EFF	PRI_EFF	SEC_EFF	SEC_EFF
Sample ID:			P807375	P756064	P778759	P795193	P807385	P756069	P778764
Analyte	MDL Units		06-OCT-2015	03-FEB-2015	05-MAY-2015	04-AUG-2015	06-OCT-2015	03-FEB-2015	05-MAY-2015
=====	===	=====	=====	=====	=====	=====	=====	=====	=====
Dibutyltin	7 UG/L		ND	ND	ND	ND	ND	ND	ND
Monobutyltin	16 UG/L		ND	ND	ND	ND	ND	ND	ND
Tributyltin	2 UG/L		ND	ND	ND	ND	ND	ND	ND

Source:			SEC_EFF	SEC_EFF	REC_WATER	REC_WATER	REC_WATER
Sample ID:			P795198	P807390	P778778	P795214	P807404
Analyte	MDL Units		04-AUG-2015	06-OCT-2015	05-MAY-2015	04-AUG-2015	06-OCT-2015
=====	===	=====	=====	=====	=====	=====	=====
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

During the first quarter of the 2015 a recycled water was not collected.

ND=not detected

SOUTH BAY WATER RECLAMATION PLANT
Dioxin and Furan Analysis

Annual 2015

Source:				Influent	Influent TCDD	Effluent	Effluent TCDD
Date:				03-FEB-2015	03-FEB-2015	03-FEB-2015	03-FEB-2015
Analytes	MDL	Units	Equiv.	P756049	P756049	P756054	P756054
=====	=====	=====	=====	=====	=====	=====	=====
2,3,7,8-tetra CDD	.151	PG/L	1.000	ND	ND	ND	ND
1,2,3,7,8-penta CDD	.205	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8_hexa_CDD	.273	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDD	.291	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDD	.264	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDD	.360	PG/L	0.010	DNQ21.6	DNQ0.216	ND	ND
octa CDD	.667	PG/L	0.001	230	0.23	ND	ND
2,3,7,8-tetra CDF	.0985	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8-penta CDF	.152	PG/L	0.050	ND	ND	ND	ND
2,3,4,7,8-penta CDF	.151	PG/L	0.050	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDF	.168	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDF	.173	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDF	.187	PG/L	0.100	ND	ND	ND	ND
2,3,4,6,7,8-hexa CDF	.242	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDF	.197	PG/L	0.010	DNQ3.38	DNQ0.034	ND	ND
1,2,3,4,7,8,9-hepta CDF	.317	PG/L	0.010	ND	ND	ND	ND
octa CDF	.481	PG/L	0.001	8.0	0.008	ND	ND

Source:				Effluent	Effluent TCDD	Influent	Influent TCDD
Date:				05-MAY-2015	05-MAY-2015	07-MAY-2015	07-MAY-2015
Analytes	MDL	Units	Equiv.	P778749	P778749	P783699	P783699
=====	=====	=====	=====	=====	=====	=====	=====
2,3,7,8-tetra CDD	.177	PG/L	1.000	ND	ND	ND	ND
1,2,3,7,8-penta CDD	.270	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8_hexa_CDD	.350	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDD	.380	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDD	.332	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDD	.407	PG/L	0.010	ND	ND	DNQ20.4	DNQ0.204
octa CDD	.712	PG/L	0.001	DNQ7.77	DNQ0.008	170	0.17
2,3,7,8-tetra CDF	.122	PG/L	0.100	ND	ND	DNQ1.47	DNQ0.147
1,2,3,7,8-penta CDF	.186	PG/L	0.050	ND	ND	ND	ND
2,3,4,7,8-penta CDF	.190	PG/L	0.050	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDF	.205	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDF	.193	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDF	.207	PG/L	0.100	ND	ND	ND	ND
2,3,4,6,7,8-hexa CDF	.278	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDF	.256	PG/L	0.010	ND	ND	DNQ4.14	DNQ0.041
1,2,3,4,7,8,9-hepta CDF	.336	PG/L	0.010	ND	ND	ND	ND
octa CDF	.531	PG/L	0.001	ND	ND	DNQ10.2	DNQ0.01

ND= not detected

DNQ= (Detected but not quantified). Estimated analyte concentration below calibration range.

Analyzed by Frontier Analytical Laboratory

SOUTH BAY WATER RECLAMATION PLANT
Dioxin and Furan Analysis

Annual 2015

Source:				Influent	Influent TCDD	Effluent	Effluent TCDD
Date:				04-AUG-2015	04-AUG-2015	04-AUG-2015	04-AUG-2015
Analytes	MDL	Units	Equiv.	P795178	P795178	P795183	P795183
=====	=====	=====	=====	=====	=====	=====	=====
2,3,7,8-tetra CDD	.4	PG/L	1.000	ND	ND	ND	ND
1,2,3,7,8-penta CDD	4.6	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDD	.66	PG/L	0.100	DNQ1.4	DNQ0.14	ND	ND
1,2,3,6,7,8-hexa CDD	.62	PG/L	0.100	DNQ9.4	DNQ0.94	ND	ND
1,2,3,7,8,9-hexa CDD	.55	PG/L	0.100	DNQ2.9	DNQ0.29	ND	ND
1,2,3,4,6,7,8-hepta CDD	.69	PG/L	0.010	DNQ54.0	DNQ0.54	DNQ2.0	DNQ0.02
octa CDD	.37	PG/L	0.001	140	0.14	DNQ11.0	DNQ0.011
2,3,7,8-tetra CDF	.31	PG/L	0.100	DNQ0.99	DNQ0.099	ND	ND
1,2,3,7,8-penta CDF	.43	PG/L	0.050	ND	ND	ND	ND
2,3,4,7,8-penta CDF	.48	PG/L	0.050	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDF	.28	PG/L	0.100	DNQ10.0	DNQ1.0	DNQ0.66	DNQ0.066
1,2,3,6,7,8-hexa CDF	.25	PG/L	0.100	DNQ1.3	DNQ0.13	ND	ND
1,2,3,7,8,9-hexa CDF	.25	PG/L	0.100	DNQ0.92	DNQ0.092	ND	ND
2,3,4,6,7,8-hexa CDF	.23	PG/L	0.100	DNQ0.82	DNQ0.082	ND	ND
1,2,3,4,6,7,8-hepta CDF	1.3	PG/L	0.010	DNQ5.0	DNQ0.05	DNQ1.0	DNQ0.01
1,2,3,4,7,8,9-hepta CDF	2.0	PG/L	0.010	ND	ND	ND	ND
octa CDF	.32	PG/L	0.001	DNQ9.3	DNQ0.009	DNQ3.7	DNQ0.004

Source:				Influent	Influent TCDD	Effluent	Effluent TCDD
Date:				06-OCT-2015	06-OCT-2015	06-OCT-2015	06-OCT-2015
Analytes	MDL	Units	Equiv.	P807370	P807370	P807375	P807375
=====	=====	=====	=====	=====	=====	=====	=====
2,3,7,8-tetra CDD	.51	PG/L	1.000	DNQ0.770	DNQ0.770	ND	ND
1,2,3,7,8-penta CDD	4.7	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDD	.5	PG/L	0.100	DNQ0.950	DNQ0.095	ND	ND
1,2,3,6,7,8-hexa CDD	.47	PG/L	0.100	DNQ2.600	DNQ0.260	ND	ND
1,2,3,7,8,9-hexa CDD	.42	PG/L	0.100	DNQ2.100	DNQ0.210	DNQ0.950	DNQ0.095
1,2,3,4,6,7,8-hepta CDD	.86	PG/L	0.010	DNQ31.000	DNQ0.310	DNQ2.600	DNQ0.026
octa CDD	.5	PG/L	0.001	270.000	0.270	DNQ12.000	DNQ0.012
2,3,7,8-tetra CDF	.44	PG/L	0.100	DNQ1.400	DNQ0.140	ND	ND
1,2,3,7,8-penta CDF	.42	PG/L	0.050	ND	ND	DNQ0.750	DNQ0.038
2,3,4,7,8-penta CDF	.47	PG/L	0.050	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDF	.27	PG/L	0.100	DNQ1.400	DNQ0.140	DNQ0.960	DNQ0.096
1,2,3,6,7,8-hexa CDF	.25	PG/L	0.100	DNQ1.200	DNQ0.120	DNQ0.860	DNQ0.086
1,2,3,7,8,9-hexa CDF	.24	PG/L	0.100	DNQ0.950	DNQ0.095	DNQ1.000	DNQ0.100
2,3,4,6,7,8-hexa CDF	.22	PG/L	0.100	ND	ND	DNQ0.840	DNQ0.084
1,2,3,4,6,7,8-hepta CDF	8.4	PG/L	0.010	ND	ND	ND	ND
1,2,3,4,7,8,9-hepta CDF	3.4	PG/L	0.010	ND	ND	DNQ1.000	DNQ0.010
octa CDF	.4	PG/L	0.001	DNQ16.000	DNQ0.016	DNQ3.500	DNQ0.004

ND= not detected

DNQ= (Detected but not quantified). Estimated analyte concentration below calibration range.
Analyzed by TestAmerica Laboratories, Inc.

VII. Reclaimed Water Data Summary.

The results of all analyses performed on Reclaimed water are summarized in tables with monthly and annual averages (and in some cases annual totals) calculated. Graphs of monthly averages are presented.

- A. Reclaimed Water Data Summaries
- B. Reclaimed Water Graphs
- C. Daily Values of Selected Parameters
- D. Total Coliforms Data Summaries
- E. UV Performance Report

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A. Reclaimed Water Data Summaries

The results of all analyses performed on the SBWRP Reclaimed are summarized in tables with monthly and annual averages (and in some cases annual totals) calculated.

**South Bay Water Reclamation Plant
Annual Recycled Water Turbidity Report - 2015**

Data from in-plant meter

Month	1651 FLE AVG TURBIDITY NTU	1657 FLE MIN TURBIDITY NTU	1654 FLE MAX TURBIDITY NTU	1687 PCT. ABOVE 5 NTU (DURING RW DEL.) pct
Jan 2015	1.04	0.92	2.15	0.00
Feb 2015	1.30	1.02	2.25	0.00
Mar 2015	1.20	1.04	2.22	0.00
Apr 2015	0.94	0.82	2.48	0.00
May 2015	0.88	0.79	1.10	0.00
Jun 2015	0.92	0.85	1.86	0.00
Jul 2015	0.87	0.78	1.71	0.00
Aug 2015	1.10	0.80	2.22	0.00
Sep 2015	1.29	0.75	2.28	0.00
Oct 2015	0.65	0.59	1.07	0.00
Nov 2015	0.51	0.47	0.67	0.00
Dec 2015	0.83	0.56	2.23	0.00
Average	0.96	0.78	1.85	0.00

1657- Minimum Daily value is the average recorded value for the month.

1654- Maximum Daily value is the average recorded value for the month.

1687- Total Time for the month

Compliance monitoring point, values taken from DCS Point(S29A10203), located at the UV Vault in Area 29 (Tertiary UV Disinfection System)

SOUTH BAY WATER RECLAMATION PLANT

Annual 2015

Reclaim Water
(SB_REC_WATER_34)

Analyte:	Flow	pH	Biochemical Oxygen Demand	Total Suspended Solids	Volatile Suspended Solids	Total Dissolved Solids	Turbidity*
Units:	(mgd)		(mg/L)	(mg/L)	(mg/L)	(mg/L)	(NTU)
JANUARY -2015	1.05	7.29	4	<2.5	<2.5	1030	NR
FEBRUARY -2015	1.89	7.31	4	<2.5	<2.5	1050	1.72^
MARCH -2015	2.00	7.29	4	<2.5	<2.5	1060	NR
APRIL -2015	3.58	7.25	3	<2.5	<2.5	1050	NR
MAY -2015	2.09	7.27	<2	<2.5	<2.5	1030	1.29
JUNE -2015	4.05	7.23	<2	ND	ND	1040	NR
JULY -2015	3.28	7.29	<2	ND	ND	1020	NR
AUGUST -2015	4.18	7.37	2	ND	ND	1060	0.58
SEPTEMBER-2015	3.36	7.31	6	<2.5	<2.5	1070	NR
OCTOBER -2015	3.27	7.23	8	<2.5	<2.5	1120	0.89
NOVEMBER -2015	1.66	7.29	6	<2.5	<2.5	1050	NR
DECEMBER -2015	1.00	7.23	3	<2.5	<2.5	980	NR
Average	2.62	7.28	3	0.0	0.0	1047	0.92

^= No reclaimed water distributed, not used in average.

*= Not for compliance monitoring

ND=not detected

NR=not required

SOUTH BAY WATER RECLAMATION PLANT
SB_REC_WATER_34 Reclaimed Water- Annual Averages

Annual 2015

Analyte:	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron
MDL:	23.8	2.44	.06	.7	.05	1.4
Units:	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
=====	=====	=====	=====	=====	=====	=====
JANUARY -2015	25	ND	NR	90.1	ND	285
FEBRUARY -2015	NR	NR	NR	NR	NR	370
MARCH -2015	ND	2.8	NR	97.5	ND	306
APRIL -2015	NR	NR	NR	NR	NR	327
MAY -2015	ND	ND	0.8	83.1	ND	322
JUNE -2015	26	ND	NR	67.5	ND	329
JULY -2015	69	ND	NR	65.5	ND	340
AUGUST -2015	42	ND	1.1	74.1	ND	334
SEPTEMBER-2015	ND	3.0	NR	84.7	ND	303
OCTOBER -2015	120	5.5	1.1	93.5	3.68	345
NOVEMBER -2015	NR	NR	NR	NR	NR	315
DECEMBER -2015	NR	NR	NR	NR	NR	347
=====	=====	=====	=====	=====	=====	=====
Annual Average:	35	1.4	1.0	82.0	0.46	327

Analyte:	Cadmium	Chromium	Copper	Iron	Manganese	Mercury
MDL:	.26	.54	2.16	15.6	.78	.005
Units:	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
=====	=====	=====	=====	=====	=====	=====
JANUARY -2015	ND	ND	7.7	36	25.9	NR
FEBRUARY -2015	NR	NR	NR	105	41.0	NR
MARCH -2015	ND	1.52	10.1	46	45.2	NR
APRIL -2015	NR	NR	NR	49	47.5	NR
MAY -2015	ND	1.06	5.4	42	24.1	ND
JUNE -2015	ND	1.25	11.1	38	20.7	NR
JULY -2015	ND	0.95	21.8	147	28.5	NR
AUGUST -2015	ND	0.67	19.7	146	56.9	ND
SEPTEMBER-2015	0.4	1.10	6.0	46	28.0	NR
OCTOBER -2015	3.6	6.40	18.0	87	22.0	ND
NOVEMBER -2015	NR	NR	NR	45	18.4	NR
DECEMBER -2015	NR	NR	NR	39	26.3	NR
=====	=====	=====	=====	=====	=====	=====
Annual Average:	0.50	1.62	12.5	69	32.0	ND

Analyte:	Nickel	Selenium	Thallium	Chloride	Fluoride	Sulfate
MDL:	.53	.08	3.12	7	.05	9
Units:	UG/L	UG/L	UG/L	MG/L	MG/L	MG/L
=====	=====	=====	=====	=====	=====	=====
JANUARY -2015	2.90	NR	ND	245	0.55	260
FEBRUARY -2015	NR	NR	NR	245	0.53	265
MARCH -2015	2.28	NR	ND	251	0.58	258
APRIL -2015	NR	NR	NR	244	0.54	261
MAY -2015	3.16	0.87	ND	243	0.54	238
JUNE -2015	2.35	NR	ND	237	0.49	201
JULY -2015	3.15	NR	ND	247	0.50	189
AUGUST -2015	11.00	0.57	ND	244	0.51	233
SEPTEMBER-2015	6.70	NR	ND	231	0.45	255
OCTOBER -2015	11.20	0.78	3.5	373	0.41	260
NOVEMBER -2015	NR	NR	NR	258	0.47	214
DECEMBER -2015	NR	NR	NR	253	0.45	175
=====	=====	=====	=====	=====	=====	=====
Annual Average:	5.34	0.74	0.4	256	0.50	234

ND= Not Detected
NR= Not Required

SOUTH BAY WATER RECLAMATION PLANT
SB_REC_WATER_34 Reclaimed Water- Annual Averages

Annual 2015

Analyte:	Total Cyanides (surfactants)	MBAS	Percent Sodium	Calcium	Magnesium	Potassium
MDL:	.002	.03		.04	.1	.3
Units:	MG/L	MG/L	Calculated %	MG/L	MG/L	MG/L
=====	=====	=====	=====	=====	=====	=====
JANUARY -2015	NR	0.15	55.1*	87.0	31.9	17.7
FEBRUARY -2015	NR	0.13	54.8	83.7	29.3	15.8
MARCH -2015	NR	0.12	54.9	78.2	27.5	14.7
APRIL -2015	NR	0.14	54.8	87.7	30.9	18.1
MAY -2015	0.003	0.12	55.8	86.3	28.3	19.8
JUNE -2015	NR	0.14	57.1	78.0	27.8	19.4
JULY -2015	NR	0.13	58.8	69.7	29.0	18.8
AUGUST -2015	0.002	0.15	58.0	79.3	31.4	19.4
SEPTEMBER-2015	NR	0.13	56.5	87.6	32.3	18.7
OCTOBER -2015	0.004	0.14	69.1	85.7	31.7	18.4
NOVEMBER -2015	NR	0.13	57.7	66.3	31.1	17.8
DECEMBER -2015	NR	0.10	58.9	64.0	29.7	17.4
=====	=====	=====	=====	=====	=====	=====
Annual Average:	0.003	0.13	57.9	79.5	30.1	18.0

Analyte:	Sodium	Calcium Hardness	Magnesium Hardness	Total Hardness	Total Dissolved Solids	Lithium
MDL:	1	.04	.1	.1	100	.002
Units:	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
=====	=====	=====	=====	=====	=====	=====
JANUARY -2015	209	218	131	349	1030	0.05
FEBRUARY -2015	195	209	120	329	1050	0.05
MARCH -2015	183	196	113	309	1060	0.04
APRIL -2015	206	219	127	346	1050	0.05
MAY -2015	207	216	116	332	1030	0.05
JUNE -2015	205	195	114	309	1040	0.05
JULY -2015	208	174	119	293	1020	0.04
AUGUST -2015	214	198	129	327	1060	0.05
SEPTEMBER-2015	227	219	132	351	1070	0.04
OCTOBER -2015	382	214	130	344	1120	0.05
NOVEMBER -2015	199	166	128	294	1050	0.04
DECEMBER -2015	197	160	122	282	980	0.04
=====	=====	=====	=====	=====	=====	=====
Annual Average:	219	199	123	322	1047	0.05

Analyte:	Cobalt	Molybdenum	Vanadium	Nitrate	O-Phosphate	Tot Alkalinity (bicarbonate)
MDL:	.24	.32	.45	.04	.2	20
Units:	UG/L	UG/L	UG/L	MG/L	MG/L	MG/L
=====	=====	=====	=====	=====	=====	=====
JANUARY -2015	0.63	3.52	0.70	39.1	0.9	164
FEBRUARY -2015	NR	NR	NR	22.3	ND	216*
MARCH -2015	0.46	3.70	ND	23.0	1.1	165*
APRIL -2015	NR	NR	NR	30.2	0.9	206
MAY -2015	0.55	3.47	0.59	38.1	1.0	168
JUNE -2015	ND	2.95	0.69	38.0	1.2	160
JULY -2015	0.63	3.53	1.04	49.1	2.8	165
AUGUST -2015	ND	3.37	ND	34.5	1.6	206
SEPTEMBER-2015	0.40	3.50	1.20	41.7	7.8	153
OCTOBER -2015	4.15	8.40	4.70	55.2	5.8	158
NOVEMBER -2015	NR	NR	NR	55.3	2.5	178
DECEMBER -2015	NR	NR	NR	57.9	2.1	173
=====	=====	=====	=====	=====	=====	=====
Annual Average:	0.85	4.06	1.115	40.4	2.3	173

*= No reclaimed water distributed, not used in average.

ND= Not Detected
NR= Not Required

SOUTH BAY WATER RECLAMATION PLANT
Reclaimed Water

Annual 2015

Source:		SB_REC_WATER_34	SB_REC_WATER_34	SB_REC_WATER_34	SB_REC_WATER_34
Date:		26-FEB-2015	05-MAY-2015	04-AUG-2015	06-OCT-2015
Sample ID:	MDL Units	P769811	P778778	P795214	P807404
=====					
Aluminum	23.8 UG/L	NR	ND	ND	30
Antimony	2.44 UG/L	NR	ND	ND	ND
Arsenic	.06 UG/L	NR	0.8	1.1	1.1
Barium	.7 UG/L	NR	83.1	75.3	87.5
Beryllium	.05 UG/L	NR	ND	ND	ND
Boron	1.4 UG/L	370	322	341	333
Cadmium	.26 UG/L	NR	ND	ND	ND
Chromium	.54 UG/L	NR	1.1	ND	2.4
Cobalt	.24 UG/L	NR	0.55	ND	0.7
Copper	2.16 UG/L	NR	5	10	13
Iron	15.6 UG/L	105	42	72	57
Lead	1.68 UG/L	NR	ND	ND	ND
Manganese	.78 UG/L	41.0	24.1	52.0	17.5
Mercury	.005 UG/L	NR	ND	ND	ND
Molybdenum	.32 UG/L	NR	3.5	3.0	4.2
Nickel	.53 UG/L	NR	3.16	10.0	7.6
Selenium	.08 UG/L	NR	0.87	0.57	0.78
Silver	.73 UG/L	NR	ND	ND	ND
Thallium	3.12 UG/L	NR	ND	ND	ND
Vanadium	.45 UG/L	NR	0.59	ND	1.0
Zinc	4.19 UG/L	NR	27.2	24.0	37.0
=====					
Bromide	.1 MG/L	0.3**	0.2	0.4	0.1
Chloride	7 MG/L	245**	224	258	469
Fluoride	.05 MG/L	0.53**	0.55	0.52	0.39
Nitrate	.04 MG/L	22.3**	42.4	39.7	55.0
Ortho Phosphate (as P04)	.2 MG/L	ND**	1.2	2.3	7.2
Sulfate	9 MG/L	265**	239	205	253
=====					
Calcium	.04 MG/L	83.7#	86	75	86
Lithium	.002 MG/L	0.048#	0.051	0.047	0.048
Magnesium	.1 MG/L	29.3#	28	32	32
Potassium	.3 MG/L	15.8#	20	19	18
Sodium	1 MG/L	195#	207	220	382
=====					
Calcium Hardness	.1 MG/L	209#	215	188	214
Magnesium Hardness	.412 MG/L	121#	117	134	131
Total Hardness	.512 MG/L	330#	332	322	345
=====					
Cyanide, Total	.002 MG/L	NR	0.003	0.002	0.004
Sulfides-Total	.4 MG/L	NR	ND	ND	0.4
Total Kjeldahl Nitrogen	1.6 MG/L	NR	2.1	ND	4.8
Ammonia-N	.3 MG/L	7.2*	ND	ND	ND
Adjusted Sodium Adsorption	MG/L	NR	5.7	5.9	9.4
Percent Sodium	PERCENT	54.8	55.8	58.0	69.1
Total Organic Carbon	.3 MG/L	NR	11.7	12.3	10.9

*= No reclaimed water distributed, not used in average.

#= Analyzed on February 10, 2015

**= Analyzed on February 10 and 17, 2015. This is an average value.

ND= Not Detected

NR= Not Required

SOUTH BAY WATER RECLAMATION PLANT
Radioactivity

Annual 2015

Source	Sample Date	Sample ID	Gross Alpha Radiation	Gross Beta Radiation
=====	=====	=====	=====	=====
SB_REC_WATER_34	05-MAY-2015	P778778	2.4 ± 3.7	18.0 ± 4.1
SB_REC_WATER_34	04-AUG-2015	P795214	-0.2 ± 4.1	22.8 ± 4.6
SB_REC_WATER_34	06-OCT-2015	P807404	6.1 ± 6.9	21.0 ± 5.3

During the first quarter of 2015 no recycled water was collected.

Units in picocuries per Liter (pCi/L)

South Bay Water Reclamation Plant
Chlorinated Pesticides

Reclaimed Water

Annual 2015

Date:			05-MAY-2015	04-AUG-2015	06-OCT-2015
Analyte	MDL	Units	P778778	P795214	P807404
=====	=====	=====	=====	=====	=====
Aldrin	4	NG/L	ND	ND	ND
BHC, Alpha isomer	.2	NG/L	ND	ND	ND
BHC, Beta isomer	2	NG/L	ND	ND	ND
BHC, Delta isomer	2	NG/L	ND	ND	ND
BHC, Gamma isomer	.34	NG/L	ND	ND	ND
Alpha (cis) Chlordane	1.4	NG/L	ND	ND	ND
Gamma (trans) Chlordane	1.3	NG/L	ND	ND	ND
Alpha Chlordene	0	NG/L	NA	NA	NA
Gamma Chlordene	0	NG/L	NA	NA	NA
Cis Nonachlor	4	NG/L	ND	ND	ND
Dieldrin	4.3	NG/L	ND	ND	ND
Endosulfan Sulfate	7	NG/L	ND	ND	ND
Alpha Endosulfan	1.5	NG/L	ND	ND	ND
Beta Endosulfan	3.1	NG/L	ND	ND	ND
Endrin	6	NG/L	ND	ND	ND
Endrin aldehyde	5.4	NG/L	ND	ND	ND
Heptachlor	.6	NG/L	ND	ND	ND
Heptachlor epoxide	9.4	NG/L	ND	ND	ND
Methoxychlor	20	NG/L	ND	ND	ND
Mirex	2.3	NG/L	ND	ND	ND
o,p-DDD	4	NG/L	ND	ND	ND
o,p-DDE	2	NG/L	ND	ND	ND
o,p-DDT	2.4	NG/L	ND	ND	ND
Oxychlordane	2	NG/L	ND	ND	ND
PCB 1016	250	NG/L	ND	ND	ND
PCB 1221	2000	NG/L	ND	ND	ND
PCB 1232	750	NG/L	ND	ND	ND
PCB 1242	250	NG/L	ND	ND	ND
PCB 1248	250	NG/L	ND	ND	ND
PCB 1254	500	NG/L	ND	ND	ND
PCB 1260	500	NG/L	ND	ND	ND
PCB 1262	500	NG/L	ND	ND	ND
p,p-DDD	4	NG/L	ND	ND	ND
p,p-DDE	1.4	NG/L	ND	ND	ND
p,p-DDT	3	NG/L	ND	ND	ND
Toxaphene	250	NG/L	ND	ND	ND
Trans Nonachlor	1.1	NG/L	ND	ND	ND
=====	=====	=====	=====	=====	=====
Heptachlors	9.4	NG/L	0	0	0
Endosulfans	7	NG/L	0	0	0
Polychlorinated biphenyls	2000	NG/L	0	0	0
Chlordane + related cmpds.	4	NG/L	0	0	0
DDT and derivatives	4	NG/L	0	0	0
Hexachlorocyclohexanes	2	NG/L	0	0	0
Aldrin + Dieldrin	4.3	NG/L	0	0	0
=====	=====	=====	=====	=====	=====
Chlorinated Hydrocarbons	2000	NG/L	0	0	0

During the first quarter of 2015 no recycled water was collected.

ND= Not Detected; 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
Reclaimed Water

OrganoPhosphorous Analysis

Annual 2015

Sate:		05-MAY-2015	06-OCT-2015
Analyte	MDL Units	P778778	P807404
=====	=== =====	=====	=====
Demeton O	.15 UG/L	ND	ND
Demeton S	.08 UG/L	ND	ND
Diazinon	.03 UG/L	ND	ND
Guthion	.15 UG/L	ND	ND
Malathion	.03 UG/L	ND	ND
Parathion	.03 UG/L	ND	ND
Dichlorvos	.05 UG/L	ND	ND
Disulfoton	.02 UG/L	ND	ND
Dimethoate	.04 UG/L	ND	ND
Stirophos	.03 UG/L	ND	ND
Coumaphos	.15 UG/L	ND	ND
Chlorpyrifos	.03 UG/L	ND	ND
=====	=== =====	=====	=====
Thiophosphorus Pesticides	.15 UG/L	0.0	0.0
Demeton -O, -S	.15 UG/L	0.0	0.0
=====	=== =====	=====	=====
Total Organophosphorus Pesticides	.15 UG/L	0.0	0.0

ND= Not Detected

South Bay Water Reclamation Plant
Reclaimed Water

Organotins

Annual 2015

Source:			SB_REC_WATER_34	SB_REC_WATER_34	SB_REC_WATER_34
Date:			05-MAY-2015	04-AUG-2015	06-OCT-2015
Analyte	MDL	Units	P778778	P795214	P807404
=====	===	=====	=====	=====	=====
Tributyltin	2	UG/L	ND	ND	ND
Dibutyltin	7	UG/L	ND	ND	ND
Monobutyltin	16	UG/L	ND	ND	ND

During the first quarter of 2015 no recycled water was collected.

ND= Not Detected

South Bay Water Reclamation Plant
Reclaimed Water

Phenols

Annual 2015

Date:			05-MAY-2015	30-AUG-2015	06-OCT-2015
Analyte	MDL	Units	P778778	P803433	P807404
=====	=====	=====	=====	=====	=====
2-Chlorophenol	1.32	UG/L	ND	ND	ND
4-Chloro-3-methylphenol	1.67	UG/L	ND	ND	ND
2,4-Dichlorophenol	1.01	UG/L	ND	ND	ND
2,4-Dimethylphenol	2.01	UG/L	ND	ND	ND
2,4-Dinitrophenol	2.16	UG/L	ND	ND	ND
2-Methyl-4,6-dinitrophenol	1.52	UG/L	ND	ND	ND
2-Nitrophenol	1.55	UG/L	ND	ND	ND
4-Nitrophenol	1.14	UG/L	ND	ND	ND
Pentachlorophenol	1.12	UG/L	ND	ND	ND
Phenol	1.76	UG/L	ND	ND	ND
2,4,6-Trichlorophenol	1.65	UG/L	ND	ND	ND
Total Chlorinated Phenols	1.67	UG/L	0.0	0.0	0.0
=====	=====	=====	=====	=====	=====
Total Non-Chlorinated Phenols	2.16	UG/L	0.0	0.0	0.0
Total Phenols	2.16	UG/L	0.0	0.0	0.0

Additional analytes determined

=====	=====	=====	=====	=====	=====
2-Methylphenol	2.15	UG/L	ND	ND	ND
3-Methylphenol(4-MP is unresolved)		UG/L	NA	NA	NA
4-Methylphenol(3-MP is unresolved)	2.11	UG/L	ND	ND	ND
2,4,5-Trichlorophenol	1.66	UG/L	ND	ND	ND

During the first quarter of 2015 no recycled water was collected.

ND= not detected; NA= not analyzed

South Bay Water Reclamation Plant
Reclaimed water

Base/Neutrals

Annual 2015

Date:			05-MAY-2015	04-AUG-2015	06-OCT-2015
Analyte	MDL	Units	P778778	P795214	P807404
=====	=====	=====	=====	=====	=====
Acenaphthene	1.8	UG/L	ND	ND	ND
Acenaphthylene	1.77	UG/L	ND	ND	ND
Anthracene	1.29	UG/L	ND	ND	ND
Benztidine	1.52	UG/L	ND	ND	ND
Benzo[a]anthracene	1.1	UG/L	ND	ND	ND
3,4-Benzo(b)fluoranthene	1.35	UG/L	ND	ND	ND
Benzo[k]fluoranthene	1.49	UG/L	ND	ND	ND
Benzo[a]pyrene	1.25	UG/L	ND	ND	ND
Benzo[g,h,i]perylene	1.09	UG/L	ND	ND	ND
4-Bromophenyl phenyl ether	1.4	UG/L	ND	ND	ND
Bis-(2-chloroethoxy) methane	1.01	UG/L	ND	ND	ND
Bis-(2-chloroethyl) ether	1.38	UG/L	ND	ND	ND
Bis-(2-chloroisopropyl) ether	1.16	UG/L	ND	ND	ND
4-Chlorophenyl phenyl ether	1.57	UG/L	ND	ND	ND
2-Chloronaphthalene	1.87	UG/L	ND	ND	ND
Chrysene	1.16	UG/L	ND	ND	ND
Dibenzo(a,h)anthracene	1.01	UG/L	ND	ND	ND
Butyl benzyl phthalate	2.84	UG/L	ND	ND	ND
Di-n-butyl phthalate	3.96	UG/L	ND	ND	ND
Bis-(2-ethylhexyl) phthalate	8.96	UG/L	ND	ND	ND
Diethyl phthalate	3.05	UG/L	ND	7.4	17.3
Dimethyl phthalate	1.44	UG/L	ND	ND	ND
Di-n-octyl phthalate	1	UG/L	ND	ND	ND
3,3-Dichlorobenzidine	2.44	UG/L	ND	ND	ND
2,4-Dinitrotoluene	1.36	UG/L	ND	ND	ND
2,6-Dinitrotoluene	1.53	UG/L	ND	ND	ND
1,2-Diphenylhydrazine	1.37	UG/L	ND	ND	ND
Fluoranthene	1.33	UG/L	ND	ND	ND
Fluorene	1.61	UG/L	ND	ND	ND
Hexachlorobenzene	1.48	UG/L	ND	ND	ND
Hexachlorobutadiene	1.64	UG/L	ND	ND	ND
Hexachlorocyclopentadiene	1.25	UG/L	ND	ND	ND
Hexachloroethane	1.32	UG/L	ND	ND	ND
Indeno(1,2,3-CD)pyrene	1.14	UG/L	ND	ND	ND
Isophorone	1.53	UG/L	ND	ND	ND
Naphthalene	1.65	UG/L	ND	ND	ND
Nitrobenzene	1.6	UG/L	ND	ND	ND
N-nitrosodimethylamine	1.27	UG/L	ND	ND	ND
N-nitrosodi-n-propylamine	1.16	UG/L	ND	ND	ND
N-nitrosodiphenylamine	3.48	UG/L	ND	ND	ND
Phenanthrene	1.34	UG/L	ND	ND	ND
Pyrene	1.43	UG/L	ND	ND	ND
1,2,4-Trichlorobenzene	1.52	UG/L	ND	ND	ND
=====	=====	=====	=====	=====	=====
Polynuc. Aromatic Hydrocarbons	1.77	UG/L	0.0	0.0	0.0
=====	=====	=====	=====	=====	=====
Base/Neutral Compounds	8.96	UG/L	0.0	7.4	17.3

Additional analytes determined

=====	=====	=====	=====	=====	=====
Benzo[e]pyrene	1.44	UG/L	ND	ND	ND
Biphenyl	2.29	UG/L	ND	ND	ND
2,6-Dimethylnaphthalene	2.16	UG/L	ND	ND	ND
1-Methylnaphthalene	2.18	UG/L	ND	ND	ND
1-Methylphenanthrene	1.46	UG/L	ND	ND	ND
2-Methylnaphthalene	2.14	UG/L	ND	ND	ND
2,3,5-Trimethylnaphthalene	2.18	UG/L	ND	ND	ND
Perylene	1.41	UG/L	ND	ND	ND

During the first quarter of 2015 no recycled water was collected.

ND= Not Detected

SOUTH BAY WASTEWATER TREATMENT PLANT
Annual Priority Pollutants Purgeable Compounds, EPA Method 624 Report

Annual 2015

Source:		SB_REC_WATER_34	SB_REC_WATER_34	SB_REC_WATER_34	SB_REC_WATER_34
Date:		03-FEB-2015	05-MAY-2015	04-AUG-2015	06-OCT-2015
Analyte	MDL Units	P756088	P778781	P795217	P807407
Dichlorodifluoromethane	.66 UG/L	ND	ND	ND	ND
Chloromethane	.5 UG/L	ND	2.5	DNQ1.3	DNQ1.7
Vinyl chloride	.4 UG/L	ND	ND	ND	ND
Bromomethane	.7 UG/L	ND	ND	ND	ND
Chloroethane	.9 UG/L	ND	ND	ND	ND
Trichlorofluoromethane	.3 UG/L	ND	ND	ND	ND
Acrolein	1.3 UG/L	ND	ND	ND	ND
1,1-Dichloroethane	.4 UG/L	ND	ND	ND	ND
Methylene chloride	.3 UG/L	DNQ0.8	ND	DNQ0.4	DNQ0.3*
trans-1,2-dichloroethene	.6 UG/L	ND	ND	ND	ND
1,1-Dichloroethene	.4 UG/L	ND	ND	ND	ND
Acrylonitrile	.7 UG/L	ND	ND	ND	ND
Chloroform	.2 UG/L	ND	43.9	18.1	66.6
1,1,1-Trichloroethane	.4 UG/L	ND	ND	ND	ND
Carbon tetrachloride	.4 UG/L	ND	ND	ND	ND
Benzene	.4 UG/L	ND	ND	ND	ND
1,2-Dichloroethane	.5 UG/L	ND	ND	ND	ND
Trichloroethene	.7 UG/L	ND	ND	ND	ND
1,2-Dichloropropane	.3 UG/L	ND	ND	ND	ND
Bromodichloromethane	.5 UG/L	ND	41.0	17.3	49.3
2-Chloroethylvinyl ether	1.1 UG/L	ND	ND	ND	ND
cis-1,3-dichloropropene	.3 UG/L	ND	ND	ND	ND
Toluene	.4 UG/L	ND	ND	ND	ND
trans-1,3-dichloropropene	.5 UG/L	ND	ND	ND	ND
1,1,2-Trichloroethane	.5 UG/L	ND	ND	ND	ND
Tetrachloroethene	1.1 UG/L	ND	ND	ND	ND
Dibromochloromethane	.6 UG/L	ND	17.8	8.8	22.5
Chlorobenzene	.4 UG/L	ND	ND	ND	ND
Ethylbenzene	.3 UG/L	ND	ND	ND	ND
Bromoform	.5 UG/L	ND	1.9	DNQ1.3	DNQ1.7
1,1,2,2-Tetrachloroethane	.5 UG/L	ND	ND	ND	ND
1,3-Dichlorobenzene	.5 UG/L	ND	ND	ND	ND
1,4-Dichlorobenzene	.4 UG/L	ND	ND	ND	ND
1,2-Dichlorobenzene	.4 UG/L	ND	ND	ND	ND
1,2,4-Trichlorobenzene	.7 UG/L	ND	ND	ND	ND
Halomethane Purgeable Cmpnds	.7 UG/L	0.0	4.4	0.0	0.0
Total Dichlorobenzenes	.5 UG/L	0.0	0.0	0.0	0.0
Total Chloromethanes	.5 UG/L	0.0	46.4	18.1	66.6
Purgeable Compounds	1.3 UG/L	0.0	107.1	44.2	138.4
Additional analytes determined					
Methyl Iodide	.6 UG/L	ND	ND	ND	ND
Carbon disulfide	.6 UG/L	ND	ND	ND	ND
Acetone	4.5 UG/L	ND	ND	ND	DNQ5.4
Allyl chloride	.6 UG/L	ND	ND	ND	ND
Methyl tert-butyl ether	.4 UG/L	ND	ND	ND	ND
Chloroprene	.4 UG/L	ND	ND	ND	ND
1,2-Dibromoethane	.3 UG/L	ND	ND	ND	ND
2-Butanone	6.3 UG/L	ND	ND	ND	ND
Methyl methacrylate	.8 UG/L	ND	ND	ND	ND
2-Nitropropane	12 UG/L	ND	ND	ND	ND
4-Methyl-2-pentanone	1.3 UG/L	ND	ND	ND	ND
meta,para xylenes	.6 UG/L	ND	ND	ND	ND
ortho-xylene	.4 UG/L	ND	ND	ND	ND
Isopropylbenzene	.3 UG/L	ND	ND	ND	ND
Styrene	.3 UG/L	ND	ND	ND	ND
Benzyl chloride	1.1 UG/L	ND	ND	ND	ND

ND= not detected

DNQ= (Detected but not quantified). Estimated analyte concentration below calibration range.

*= The Response factor RSD of 59.5% is above 15% calibration criteria limit; therefore sample is not included in averages.

South Bay Water Reclamation Plant
Reclaimed Water

Benzidines

Annual 2015

Source:		SB_REC_WATER_34	SB_REC_WATER_34	SB_REC_WATER_34
Date:		05-MAY-2015	04-AUG-2015	06-OCT-2015
Analyte	MDL Units	P778778	P795214	P807404
=====	=====	=====	=====	=====
3,3-Dichlorobenzidine	2.44 UG/L	ND	ND	ND
Benzidine	1.52 UG/L	ND	ND	ND

During the first quarter of 2015 no recycled water was collected.

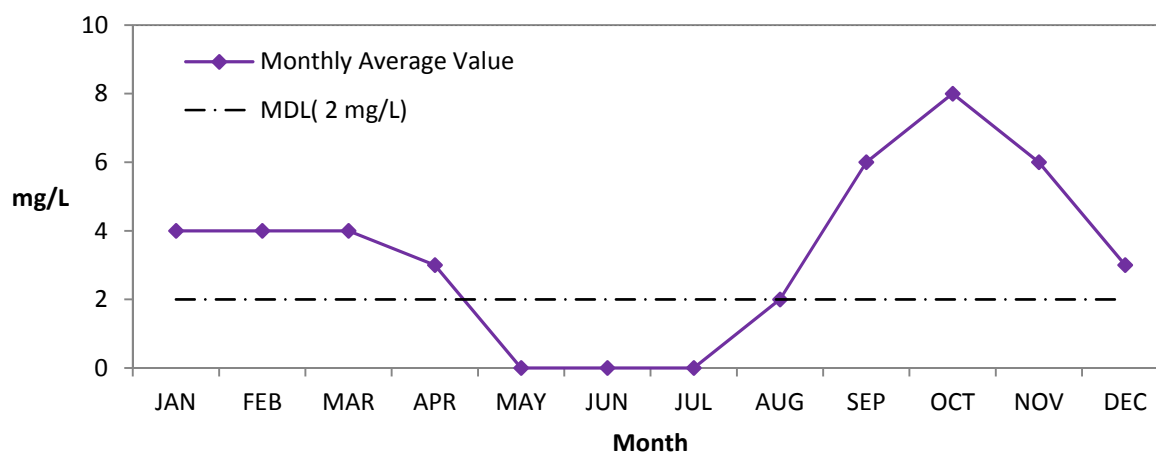
ND= Not Detected

B. Reclaimed Water Graphs

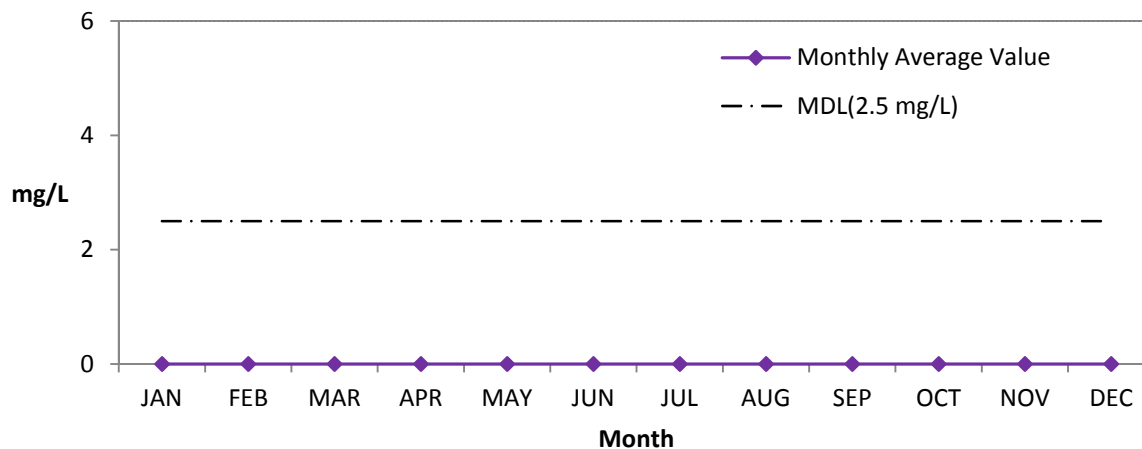
Graphs of monthly averages for permit parameters with measurable concentration averages.

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.

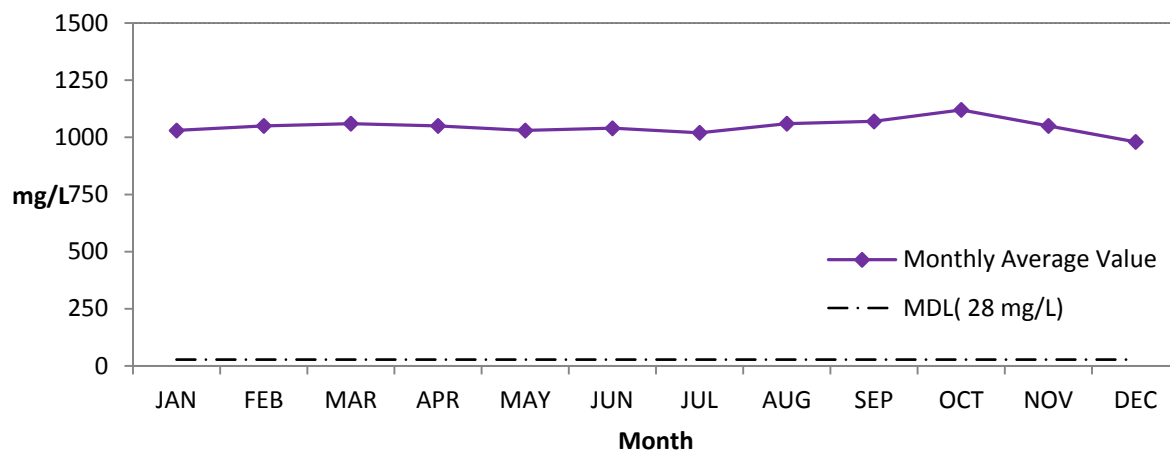
2015 South Bay Reclaimed Water Biological Oxygen Demand



Total Suspended Solids

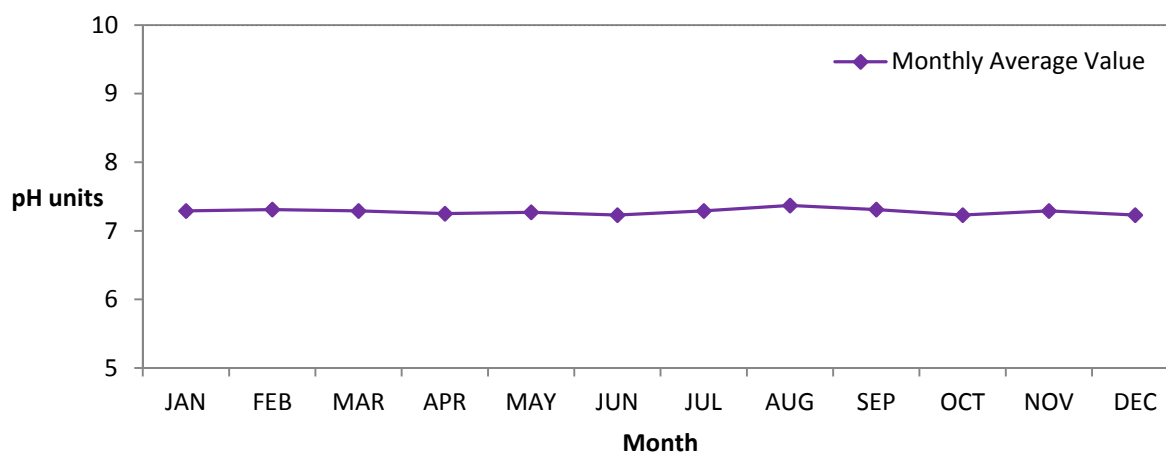


Total Dissolved Solids

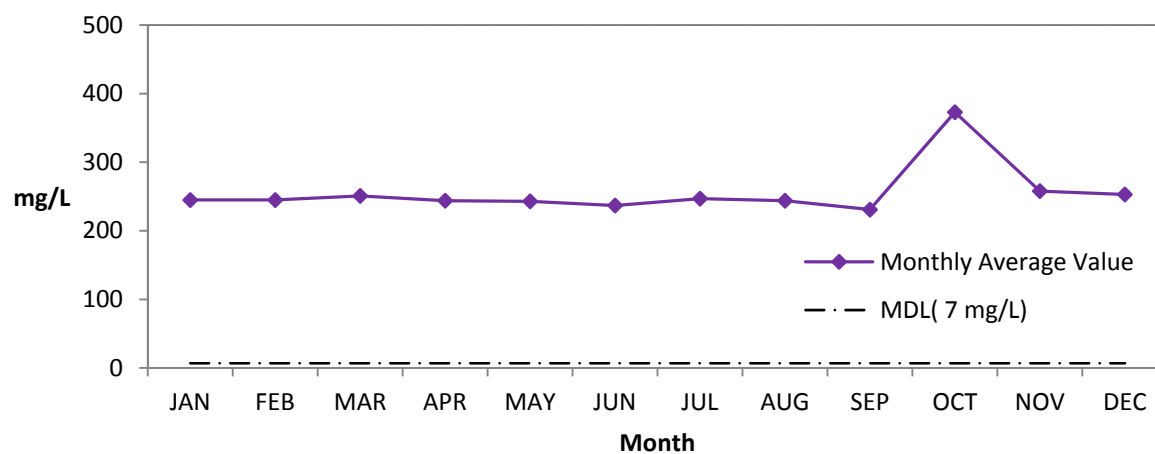


2015 South Bay Reclaimed Water

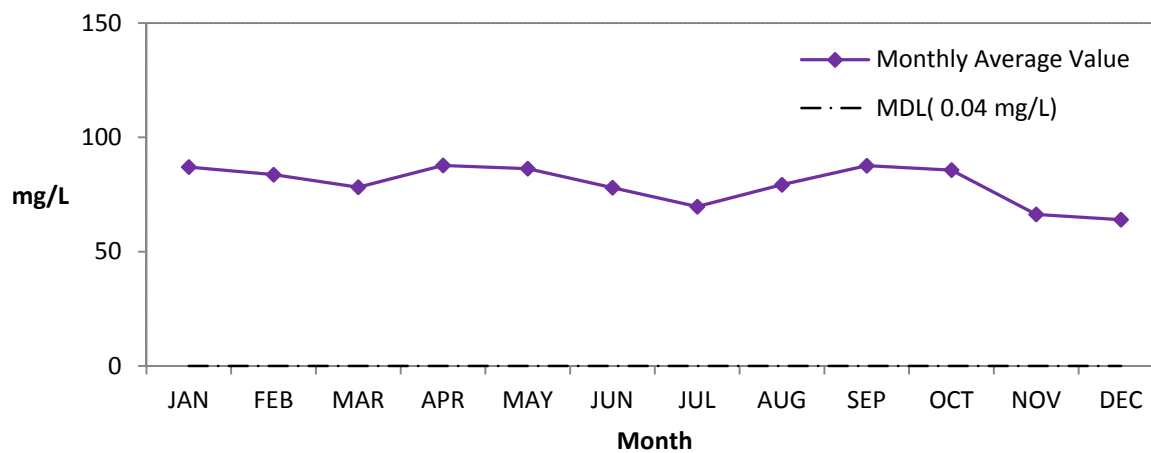
pH



Chloride

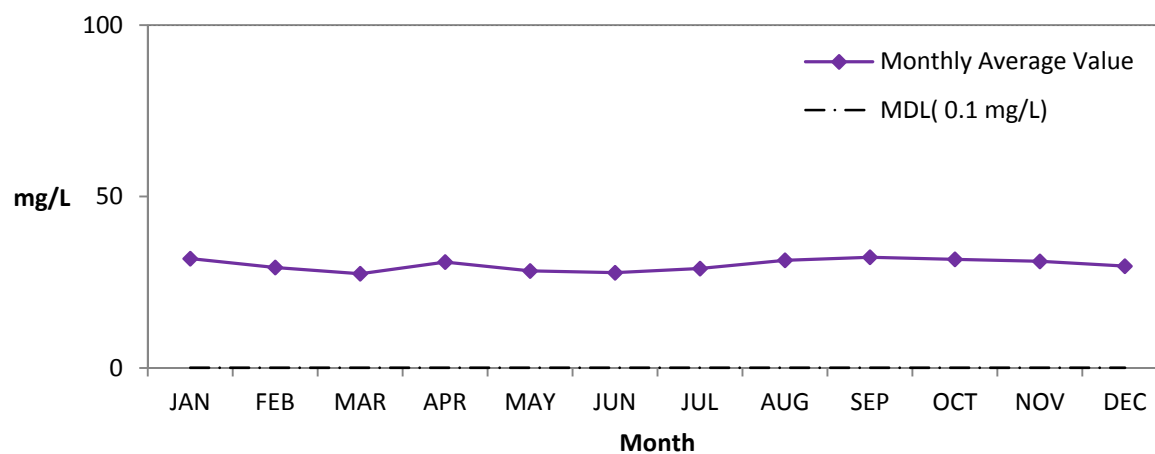


Calcium

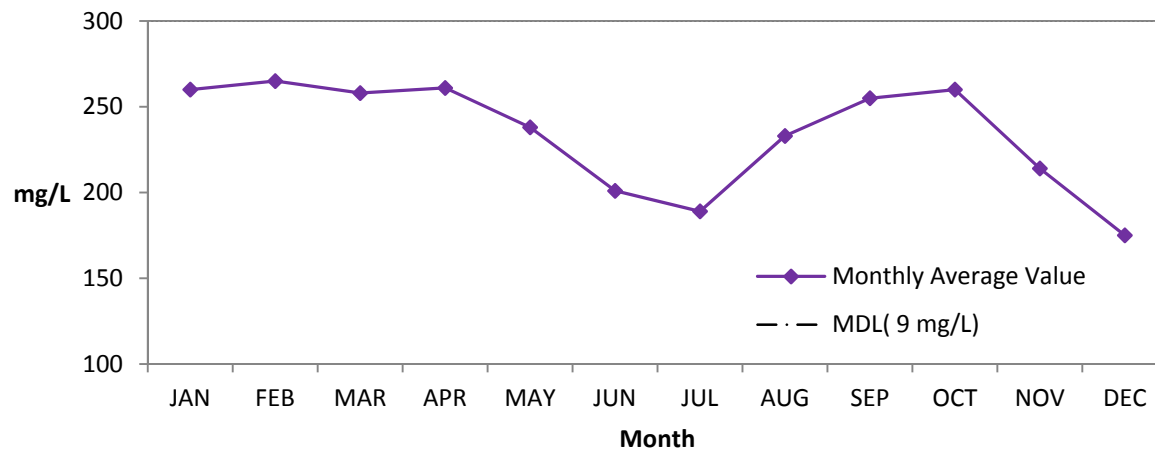


2015 South Bay Reclaimed Water

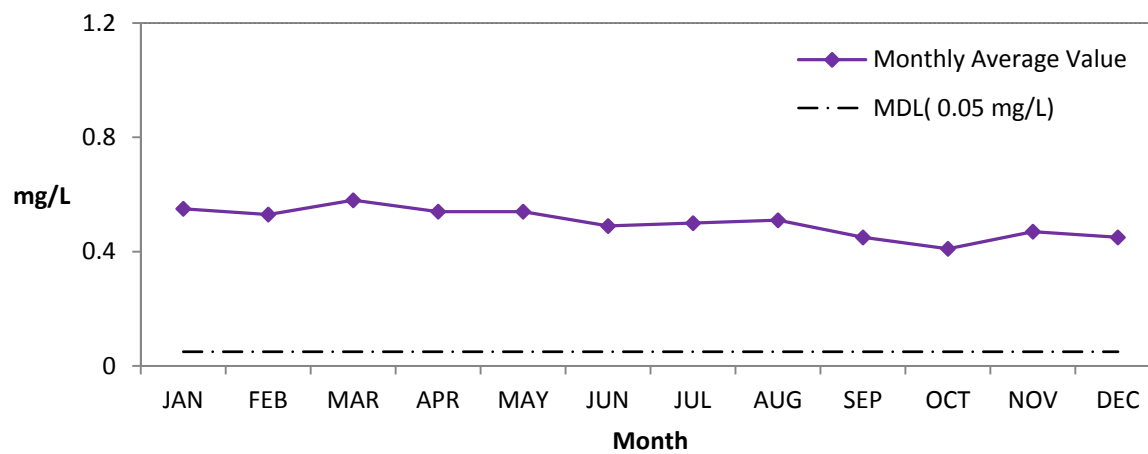
Magnesium



Sulfate

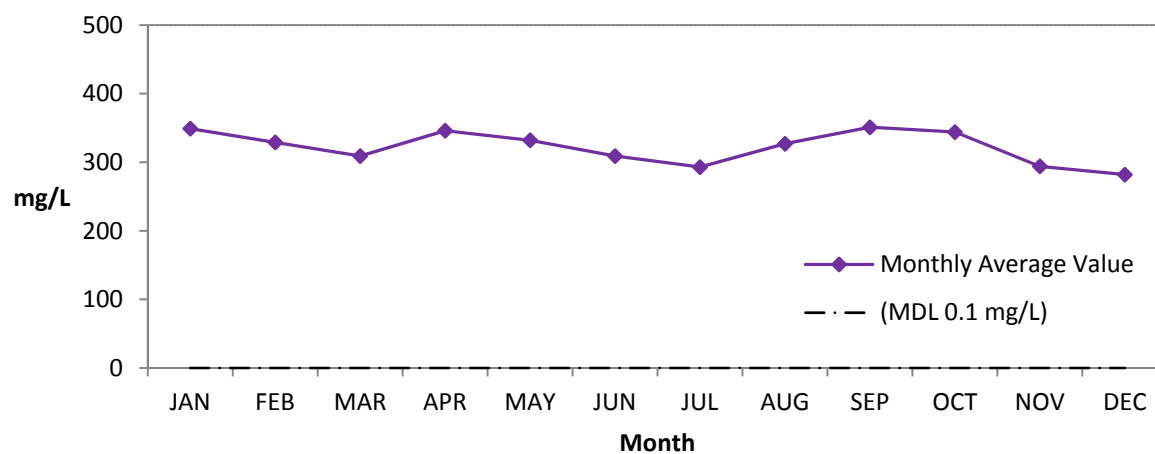


Fluoride

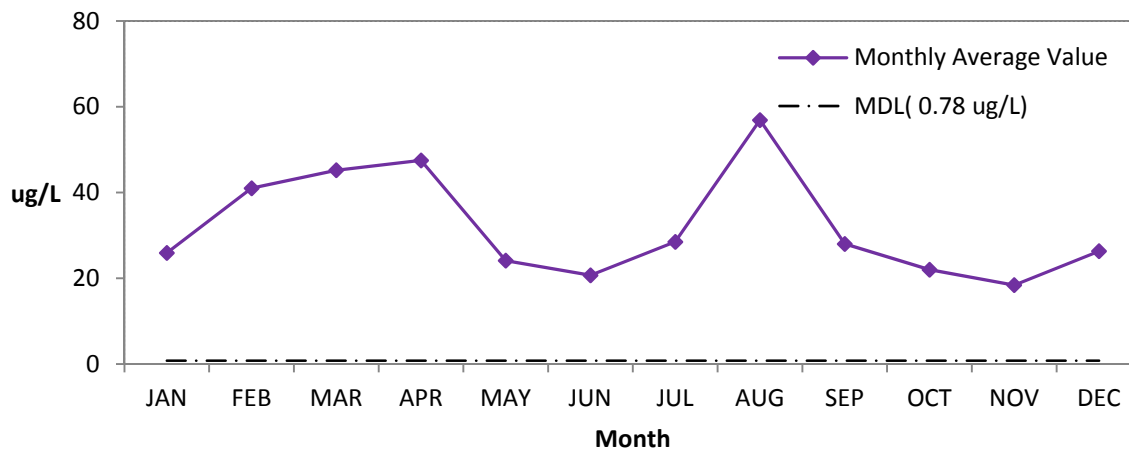


2015 South Bay Reclaimed Water

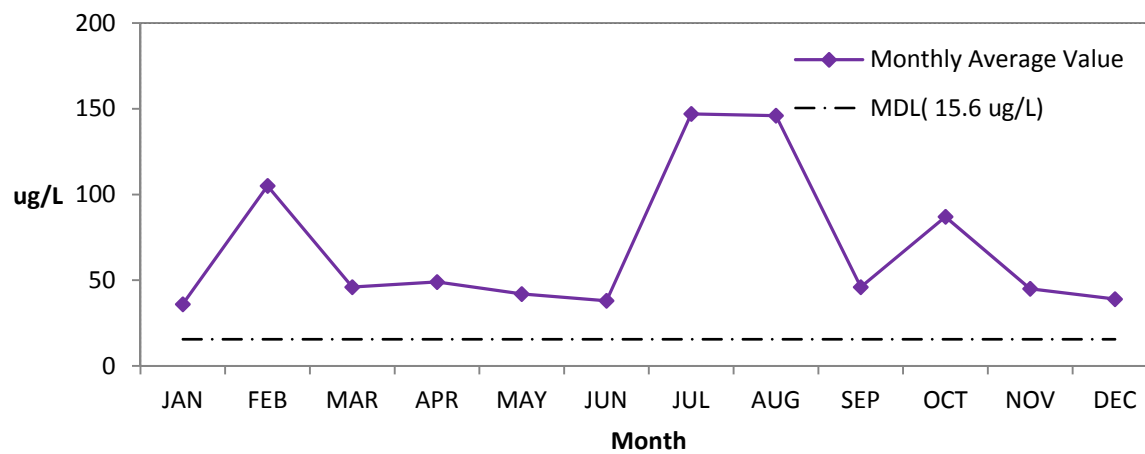
Total Hardness



Manganese

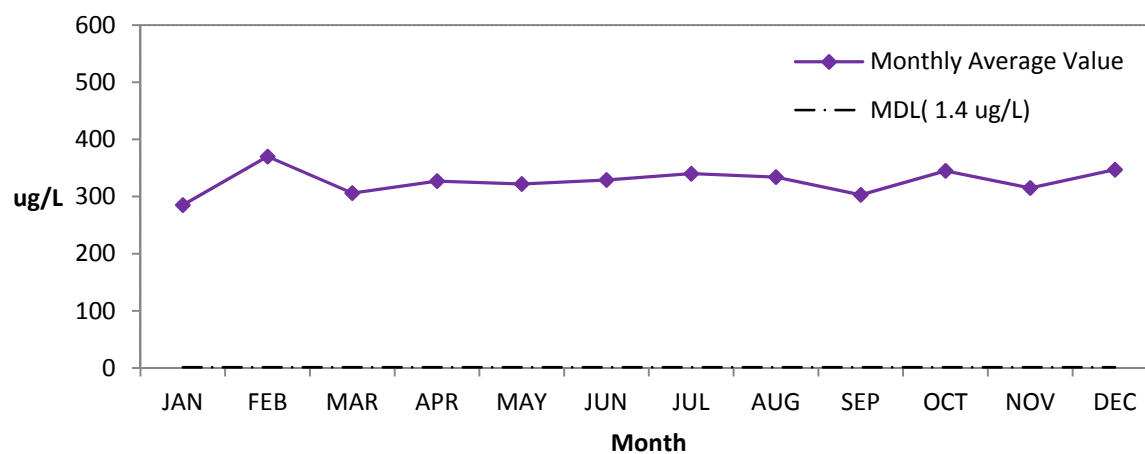


Iron

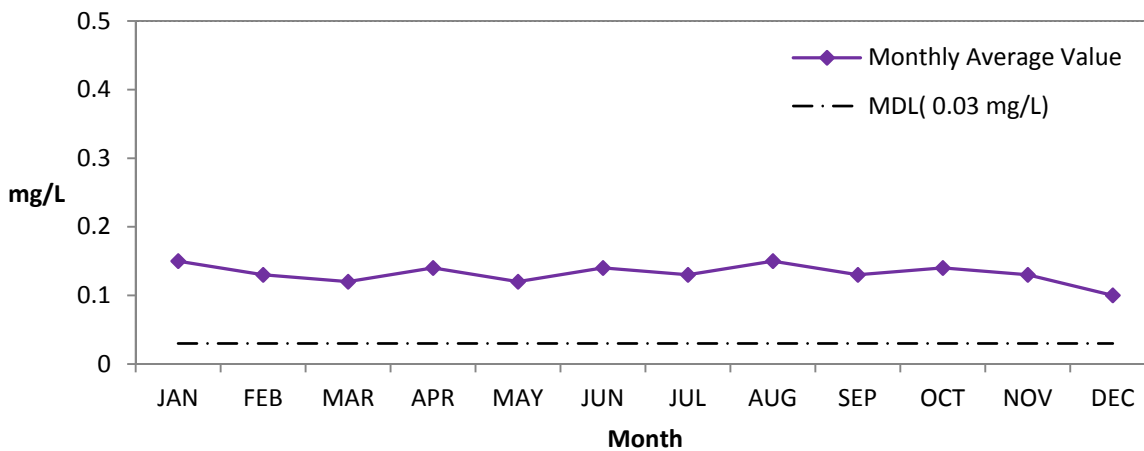


2015 South Bay Reclaimed Water

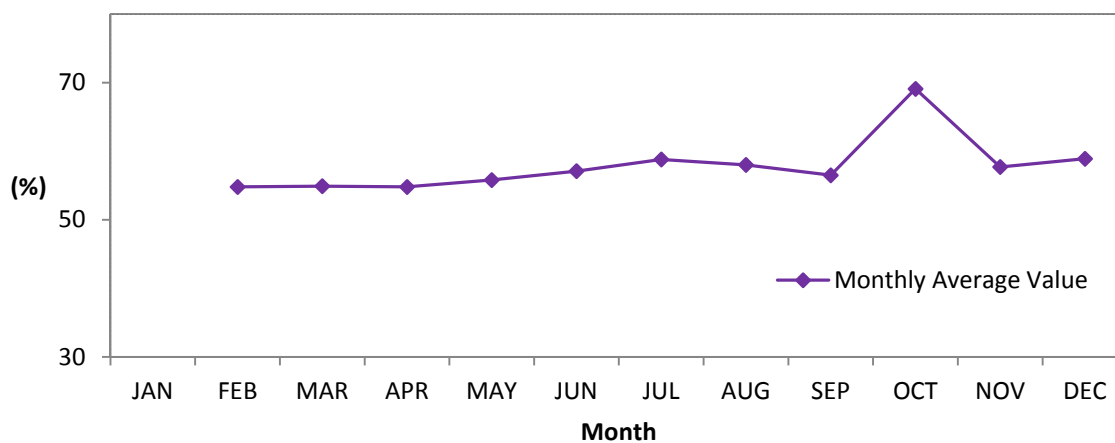
Boron



MBAS



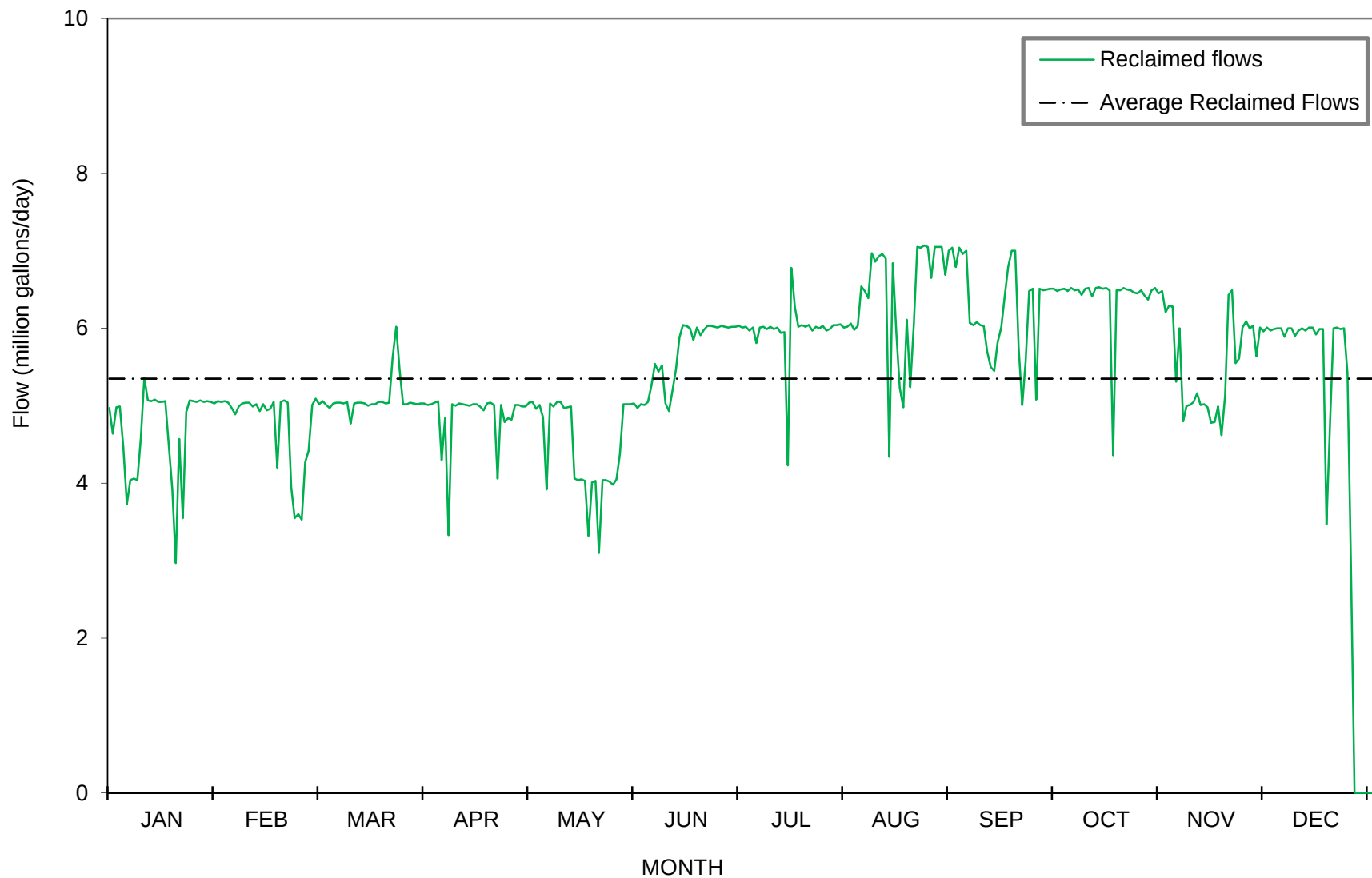
Percent Sodium



C. Daily Values of Selected Parameters.

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

South Bay Wastewater Reclamation Plant 2015 Reclaimed Production Flows



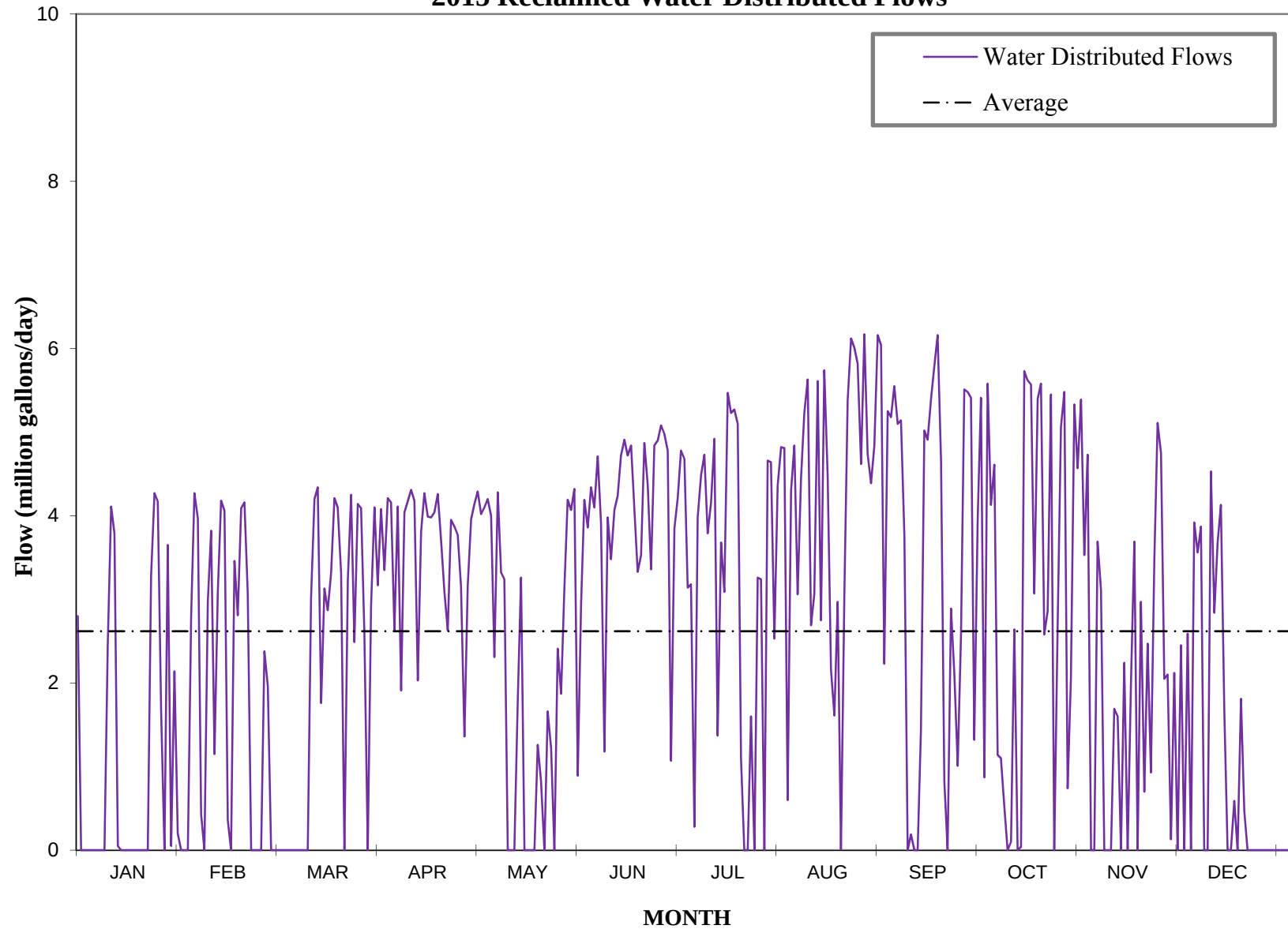
Recycled Produce Flows (mgd) 2015

Days	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	4.97	5.06	5.09	5.03	5.04	4.97	6.01	6.06	7.04	6.51	6.28	6.00	
2	4.64	5.05	5.02	5.01	5.05	5.02	6.02	5.98	6.96	6.48	5.31	6.00	
3	4.98	5.06	5.06	5.02	4.96	5.01	5.97	6.03	7.00	6.52	6.00	5.89	
4	4.99	5.04	5.01	5.04	5.01	5.05	6.01	6.54	6.07	6.49	4.80	6.00	
5	4.47	4.97	4.97	5.06	4.85	5.26	5.81	6.48	6.04	6.50	5.00	6.00	
6	3.73	4.89	5.03	4.30	3.92	5.54	6.01	6.39	6.08	6.43	5.01	5.90	
7	4.04	4.99	5.04	4.84	5.03	5.44	6.02	6.97	6.04	6.51	5.05	5.97	
8	4.06	5.03	5.04	3.33	4.99	5.52	5.99	6.86	6.03	6.52	5.16	6.00	
9	4.04	5.04	5.03	5.02	5.05	5.03	6.02	6.93	5.70	6.41	5.01	5.97	
10	4.58	5.04	5.05	5.00	5.05	4.93	5.99	6.96	5.50	6.52	5.02	6.01	
11	5.36	4.99	4.77	5.03	4.97	5.19	6.01	6.90	5.45	6.53	4.98	6.01	
12	5.07	5.02	5.03	5.02	4.98	5.47	5.94	4.34	5.82	6.51	4.78	5.92	
13	5.06	4.93	5.04	5.01	4.99	5.88	5.95	6.84	6.01	6.52	4.79	5.99	
14	5.08	5.02	5.04	5.00	4.06	6.04	4.23	5.95	6.41	6.49	4.99	5.99	
15	5.05	4.94	5.03	5.02	4.04	6.03	6.78	5.23	6.79	4.36	4.62	3.47	
16	5.05	4.96	5.00	5.02	4.05	6.00	6.27	4.98	7.00	6.49	5.13	4.74	
17	5.06	5.05	5.02	4.99	4.03	5.85	6.02	6.11	7.00	6.49	6.43	6.00	
18	4.48	4.20	5.02	4.94	3.32	6.01	6.04	5.24	5.75	6.52	6.49	6.01	
19	3.92	5.05	5.05	5.03	4.01	5.91	6.02	6.05	5.01	6.50	5.55	5.99	
20	2.97	5.07	5.05	5.04	4.03	5.98	6.04	7.05	5.58	6.49	5.61	6.00	
21	4.57	5.04	5.03	5.01	3.10	6.03	5.97	7.04	6.48	6.46	6.01	5.42	
22	3.55	3.95	5.04	4.06	4.04	6.03	6.02	7.07	6.51	6.45	6.09	2.95	
23	4.92	3.55	5.62	5.01	4.04	6.02	6.00	7.05	5.08	6.49	6.00	0.00	
24	5.07	3.60	6.02	4.79	4.02	6.01	6.03	6.65	6.51	6.42	6.03	0.00	
25	5.06	3.53	5.46	4.84	3.98	6.03	5.97	7.05	6.49	6.37	5.64	0.00	
26	5.05	4.27	5.02	4.82	4.05	6.02	5.99	7.05	6.50	6.49	6.01	0.00	
27	5.07	4.42	5.02	5.01	4.38	6.01	6.04	7.05	6.51	6.52	5.96	0.00	
28	5.05	5.01	5.04	5.01	5.02	6.02	6.04	6.69	6.51	6.45	6.01	0.00	
29	5.06		5.03	4.99	5.02	6.02	6.05	7.00	6.48	6.48	5.97	0.00	
30	5.05		5.02	4.99	5.02	6.03	6.01	7.04	6.50	6.21	5.99	0.00	Annual
31	5.03		5.03		5.03		6.02	6.79		6.29		1.73	Summary
Average	4.68	4.74	5.09	4.88	4.49	5.68	5.98	6.46	6.23	6.40	5.52	4.06	5.35
Minimum	2.97	3.53	4.77	3.33	3.10	4.93	4.23	4.34	5.01	4.36	4.62	0.00	0.00
Maximum	5.36	5.07	6.02	5.06	5.05	6.04	6.78	7.07	7.04	6.53	6.49	6.01	7.07
Total	145	133	158	146	139	170	185	200	187	198	166	126	1954

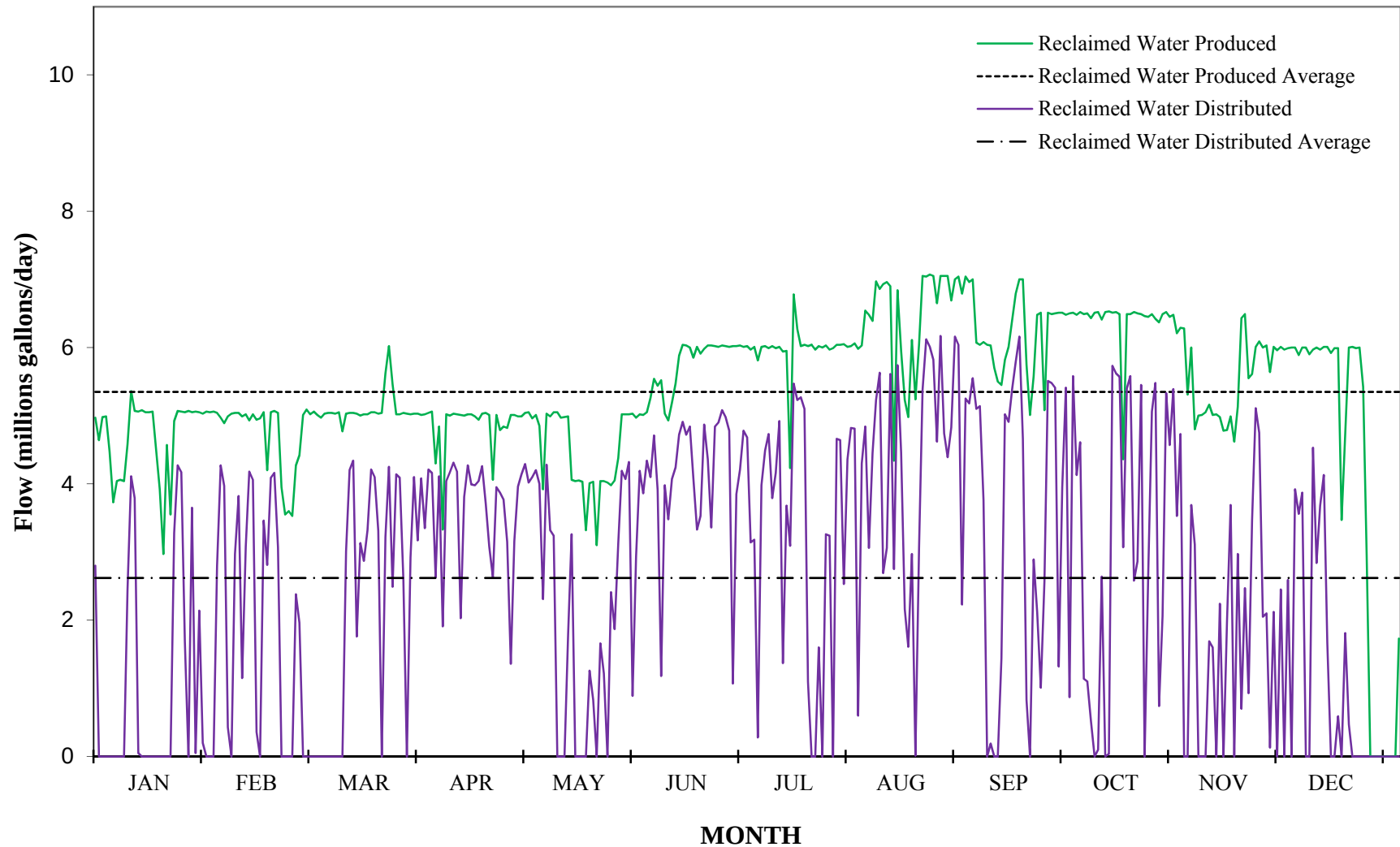
Recycled Distributed Flows (mgd) 2015

Days	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	2.80	0.00	0.00	3.17	4.29	2.93	4.78	4.81	5.25	5.58	0.00	0.00	
2	0.00	0.00	0.00	4.08	4.02	4.19	4.68	0.60	5.18	4.13	0.00	3.92	
3	0.00	0.00	0.00	3.35	4.10	3.86	3.14	4.30	5.55	4.61	3.69	3.56	
4	0.00	2.79	0.00	4.21	4.20	4.34	3.18	4.84	5.10	1.14	3.11	3.87	
5	0.00	4.27	0.00	4.16	4.00	4.10	0.28	3.06	5.14	1.10	0.00	0.00	
6	0.00	3.97	0.00	2.63	2.31	4.71	3.98	4.45	3.76	0.52	0.00	0.00	
7	0.00	0.43	0.00	4.11	4.28	3.91	4.49	5.23	0.00	0.00	0.00	4.53	
8	0.00	0.00	0.00	1.91	3.32	1.18	4.73	5.63	0.19	0.10	1.69	2.84	
9	0.00	2.97	0.00	4.04	3.24	3.98	3.79	2.69	0.00	2.64	1.60	3.68	
10	2.45	3.82	0.00	4.17	0.00	3.48	4.16	3.06	0.00	0.00	0.00	4.13	
11	4.11	1.15	0.00	4.31	0.00	4.07	4.92	5.61	1.44	0.04	2.24	1.67	
12	3.79	3.08	3.01	4.18	0.00	4.24	1.37	2.75	5.02	5.73	0.00	0.00	
13	0.05	4.18	4.20	2.03	1.79	4.72	3.68	5.74	4.91	5.62	1.98	0.00	
14	0.00	4.06	4.34	3.81	3.26	4.91	3.09	4.46	5.40	5.57	3.69	0.59	
15	0.00	0.36	1.76	4.27	0.00	4.72	5.47	2.16	5.79	3.07	0.00	0.00	
16	0.00	0.00	3.13	3.99	0.00	4.84	5.23	1.61	6.16	5.40	2.97	1.81	
17	0.00	3.46	2.87	3.98	0.00	4.08	5.27	2.97	4.66	5.58	0.70	0.47	
18	0.00	2.81	3.32	4.04	0.00	3.33	5.10	0.01	0.83	2.58	2.47	0.00	
19	0.00	4.09	4.21	4.26	1.26	3.53	1.10	3.07	0.00	2.86	0.93	0.00	
20	0.00	4.16	4.10	3.71	0.83	4.87	0.00	5.38	2.89	5.45	3.46	0.00	
21	0.00	3.07	3.31	3.08	0.00	4.36	0.00	6.12	2.12	0.00	5.11	0.00	
22	0.00	0.00	0.00	2.63	1.66	3.36	1.60	6.01	1.01	2.70	4.75	0.00	
23	3.28	0.00	3.22	3.95	1.22	4.84	0.00	5.82	2.57	5.06	2.05	0.00	
24	4.27	0.00	4.25	3.87	0.00	4.90	3.26	4.62	5.51	5.48	2.10	0.00	
25	4.17	0.00	2.49	3.77	2.41	5.08	3.24	6.17	5.48	0.74	0.13	0.00	
26	1.70	2.38	4.14	3.15	1.87	4.98	0.00	4.74	5.41	2.06	2.12	0.00	
27	0.00	1.96	4.09	1.36	3.13	4.78	4.66	4.39	1.32	5.33	0.00	0.00	
28	3.65	0.00	2.60	3.16	4.19	1.07	4.64	4.83	3.95	4.57	2.45	0.00	
29	0.05		0.00	3.96	4.07	3.85	2.53	6.16	5.41	5.39	0.00	0.00	
30	2.14		2.92	4.14	4.32	4.21	4.36	6.04	0.87	3.53	2.59	0.00	
31	0.20		4.10		0.89		4.82	2.23		4.73		0.00	Annual Summary
Average	1.05	1.89	2.00	3.58	2.09	4.05	3.28	4.18	3.36	3.27	1.66	1.00	2.62
Minimum	0.00	0.00	0.00	1.36	0.00	1.07	0.00	0.01	0.00	0.00	0.00	0.00	0.00
Maximum	4.27	4.27	4.34	4.31	4.32	5.08	5.47	6.17	6.16	5.73	5.11	4.53	6.17
Total	32.7	53.0	62.1	107.5	64.7	121.4	101.6	129.6	100.9	101.3	49.8	31.1	956

South Bay Wastewater Reclamation Plant 2015 Reclaimed Water Distributed Flows

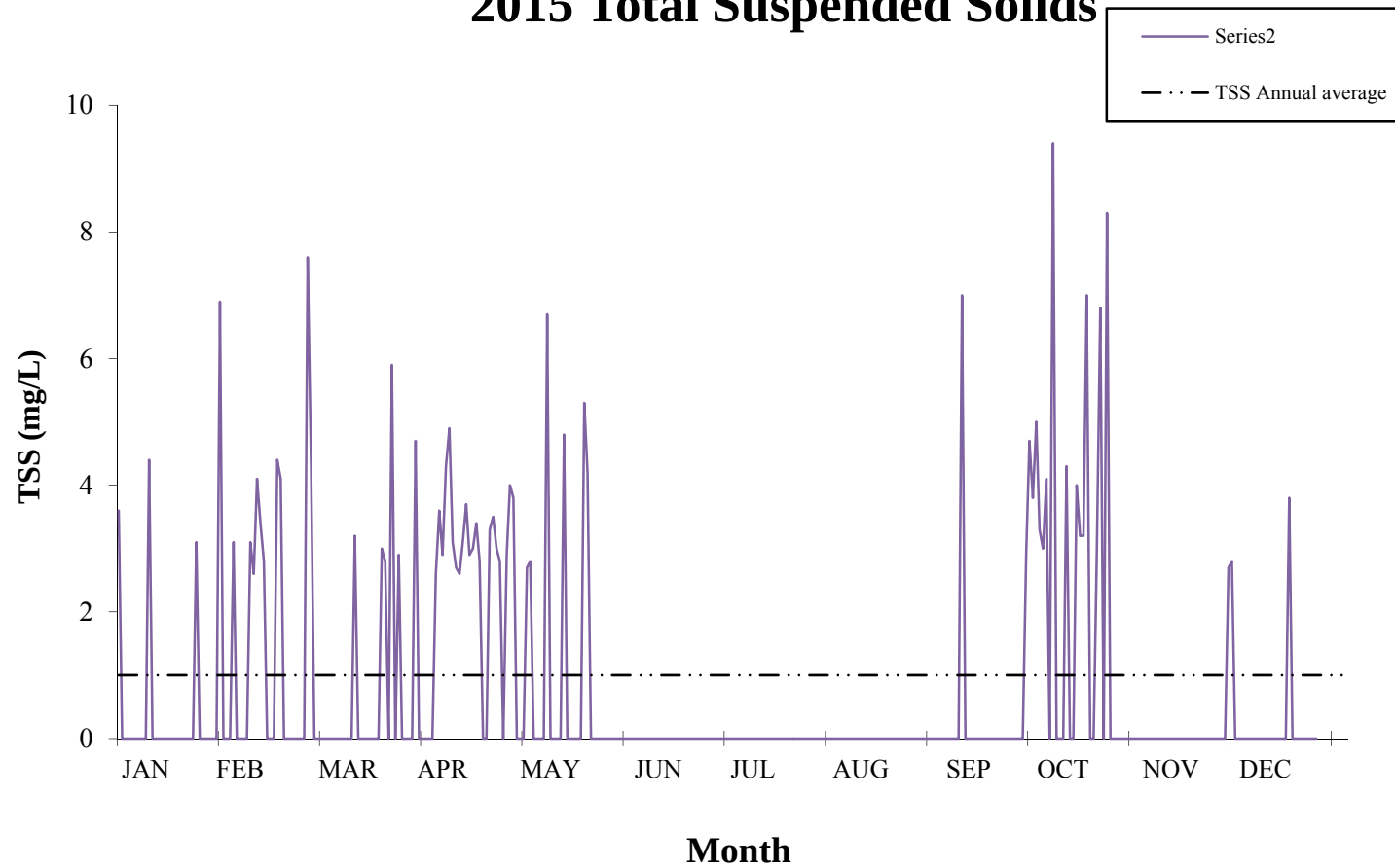


South Bay Wastewater Reclamation Plant 2015 Reclaimed Water Produced and Distributed Flows



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South Bay Wastewater Reclamation Plant 2015 Total Suspended Solids

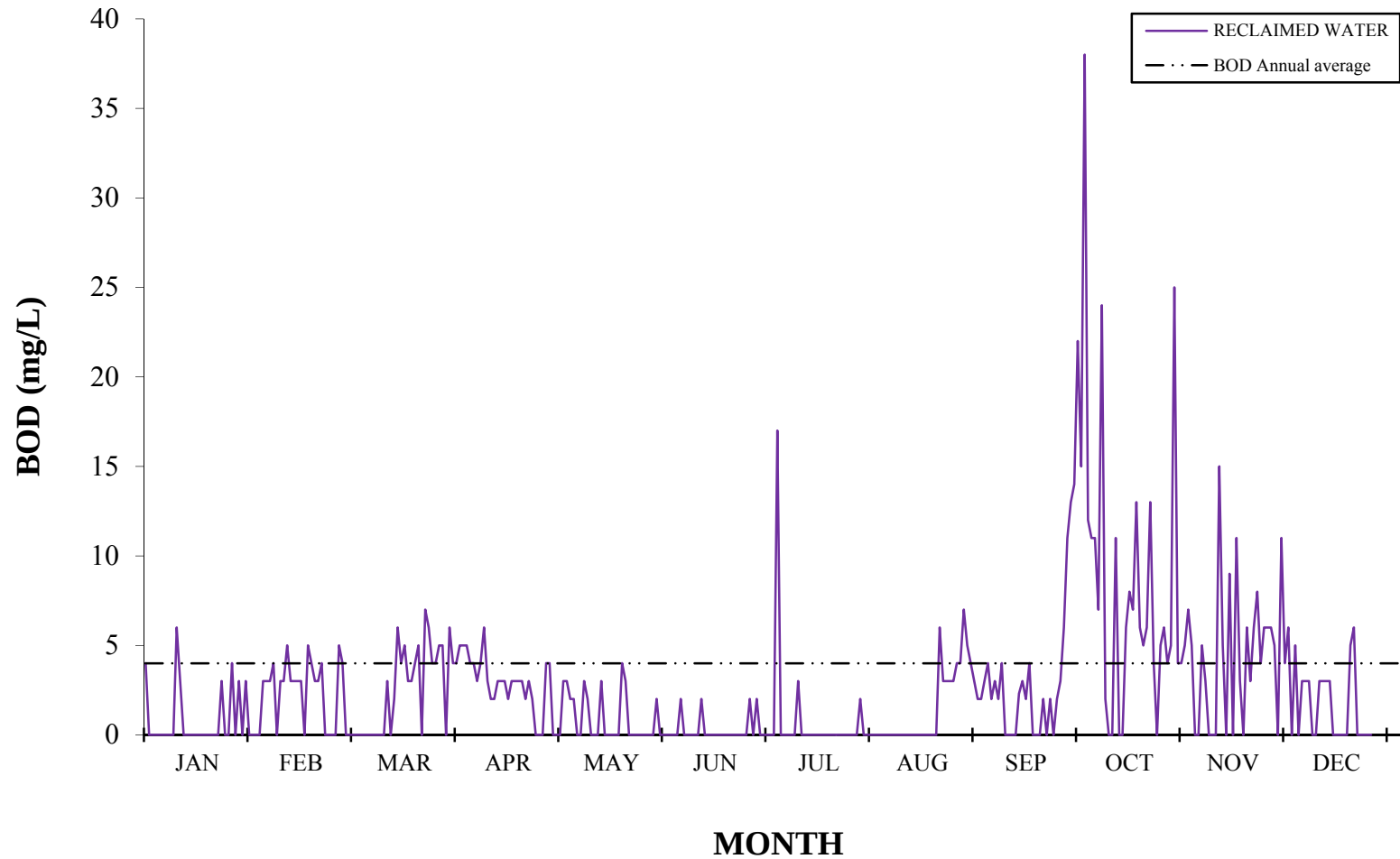


Daily Reclaimed Water TSS Values in 2015

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	3.6	ND*	ND*	ND	ND	ND	ND	ND	ND	3.3	ND*	ND*	
2	ND*	ND*	ND*	ND	2.7	ND	ND	ND	ND	3.0	ND*	ND	
3	ND*	ND*	ND*	ND	2.8	ND	ND	ND	ND	4.1	ND	ND	
4	ND*	3.1	ND*	ND	ND	ND	ND	ND	ND	ND	ND	ND	
5	ND*	ND	ND*	2.6	ND	ND	ND	ND	ND	9.4	ND*	ND*	
6	ND*	ND	ND*	3.6	ND*	ND	ND	ND	ND	ND	ND*	ND*	
7	ND*	ND	ND*	2.9	ND*	ND	ND	ND	ND*	ND*	ND*	ND	
8	ND*	ND*	ND*	4.3	6.7	ND	ND	ND	7.0	ND*	ND	ND	
9	ND*	3.1	ND*	4.9	ND	ND	ND	ND	2.9*	4.3	ND	ND	
10	4.4	2.6	ND*	3.1	ND*	ND	ND	ND	2.8*	ND*	ND	ND	
11	ND	4.1	ND*	2.7	ND*	ND	ND	ND	ND	ND*	ND	ND	
12	ND	3.4	3.2	2.6	ND*	ND	ND	ND	ND	4.0	ND*	ND*	
13	ND*	2.8	ND	3.1	4.8	ND	ND	ND	ND	3.2	ND	ND*	
14	ND*	ND	ND	3.7	ND	ND	ND	ND	ND	3.2	ND	3.8	
15	ND*	ND	ND	2.9	ND*	ND	ND	ND	ND	7.0	ND*	ND*	
16	ND*	ND*	ND	3.0	ND*	ND	ND	ND	ND	ND	ND	ND	
17	ND*	4.4	ND	3.4	ND*	ND	ND	ND	ND	ND	ND	ND	
18	ND*	4.1	ND	2.8	3.2*	ND	ND	ND*	ND	3.0	ND	ND*	
19	ND*	ND	ND	ND	5.3	ND	ND	ND	ND*	6.8	ND	ND*	
20	ND*	ND	3.0	ND	4.2	ND	ND*	ND	ND	ND	ND	ND*	
21	ND*	ND	2.8	3.3	3.2*	ND	ND*	ND	ND	8.3	ND	ND*	
22	ND*	ND*	ND*	3.5	ND	ND	ND	ND	ND	ND	ND	ND*	
23	ND	2.7*	5.9	3.0	ND	ND	ND	ND	ND	ND	ND		
24	3.1	ND*	ND	2.8	ND*	ND	ND	ND	ND	ND	ND		
25	ND	ND*	2.9	ND	ND	ND	ND	ND	ND	ND	ND*		
26	ND	7.6	ND	2.9	ND	ND	ND*	ND	ND	ND	2.7		
27	ND*	4.3	ND	4.0	ND	ND	ND	ND	2.9	ND	2.8		
28	ND	ND*	ND	3.8	ND	ND	ND	ND	4.7	ND	ND		
29	ND*		ND*	ND	ND	ND	ND	ND	3.8	ND	ND*		
30	ND		4.7	ND	ND	ND	ND	ND	5.0	ND	ND		
31	6.9		ND		ND*		ND	ND		ND		ND*	Annual Summary
Ave	1.6	2.2	1.3	2.3	1.4	0.0	0.0	0.0	0.9	2.2	0.3	0.3	1.0
Min	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
Max	6.9	7.6	5.9	4.9	6.7	0.0	0.0	0.0	7.0	9.4	2.8	3.8	9.4

*= No reclaimed water distributed, not used in average.

South Bay Wastewater Reclamation Plant 2015 Biochemical Oxygen Demand



Daily Reclaimed Water BOD Values in 2015

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	4	6*	4*	4	ND	ND	ND	ND	3	12	3*	ND*	
2	3*	8*	2*	5	3	ND	ND	ND	4	11	ND*	3	
3	3*	7*	2*	5	3	ND	17	ND	2	11	5	3	
4	3*	3	3*	5	2	ND	ND	ND	3	7	3	3	
5	4*	3	3*	4	2	2	ND	ND	2	24	ND*	ND*	
6	4*	3	3*	4	ND*	ND	ND	ND	4	2	ND*	ND*	
7	3*	4	4*	3	3*	ND	ND	ND	6*	ND*	ND*	3	
8	3*	7*	5*	4	3	ND	ND	ND	>11	ND*	15	3	
9	3*	3	7*	6	2	ND	3	ND	39*	11	5	3	
10	6	3	10*	3	6*	ND	ND*	ND	21*	ND*	ND	3	
11	3	5	8*	2	4*	2	ND	ND	2	ND*	9	9*	
12	3*	3	3	2	4*	ND	ND	ND	3	6	6*	ND*	
13	3*	3	ND	3	3	ND	ND	ND	2	8	11	ND*	
14	3*	3	2	3	ND	ND	ND	ND	4	7	3	ND	
15	3*	3	6	3	4*	ND	ND	ND	ND	13	ND*	8*	
16	3*	10*	4	2	5*	ND	ND	ND	ND	6	6	5	
17	3*	5	5	3	4*	ND	ND	ND	ND	5	3	6	
18	3*	4	3	3	6*	ND	ND	4*	2	6	6	ND*	
19	4*	3	3	3	4	ND	ND	6	ND*	13	8	ND*	
20	6*	3	4	3	3	ND	ND*	3	2	4	4	ND*	
21	4*	4	5	2	3*	ND	ND*	3	ND	>7	6	2*	
22	5*	8*	5*	3	ND	ND	ND	3	2	5	6	ND*	
23	3	6*	7	2	ND	ND	ND	3	3	6	6		
24	5*	6*	6	ND	ND*	ND	ND	4	6	4	5		
25	4*	ND*	4	3*	ND	2	ND	4	11	5	4*		
26	4	5	4	3*	ND	ND	2*	7	13	25	11		
27	3*	4	5	4	ND	2	2	5	14	4	4		
28	3	3*	5	4	ND	ND	ND	4	22	4	6		
29	4*		5*	2*	2	ND	ND	3	15	5	3*		
30	3		6	ND*	ND	ND	ND	2	38	7	5		
31	>8		4		2*		ND	2		5		4*	Annual Summary
Ave	4	4	4	3	1	0	1	2	6	8	6	3	4
Min	3	3	0	0	0	0	0	0	0	2	0	0	0
Max	6	5	7	6	4	2	17	7	38	25	15	6	38

*= No reclaimed water distributed, not used in average.

D. Total Coliform Data Summaries

2015 Annual South Bay Water Reclamation Plant Total Coliform Report (MPN/ 100 ml)

Sample Date	MPN/ 100 ml	7-Day Mean	30-Day Mean	Sample Date	MPN/ 100 ml	7-Day Mean	30-Day Mean	Sample Date	MPN/ 100 ml	7-Day Mean	30-Day Mean
01-Jan-2015	< 1.8	< 1.8	3.9	01-Mar-2015	PSD	PSD	PSD	01-May-2015	< 1.8	< 1.8	< 1.8
02-Jan-2015	PSD	PSD	PSD	02-Mar-2015	PSD	PSD	PSD	02-May-2015	< 1.8	< 1.8	< 1.8
03-Jan-2015	PSD	PSD	PSD	03-Mar-2015	PSD	PSD	PSD	03-May-2015	< 1.8	< 1.8	< 1.8
04-Jan-2015	PSD	PSD	PSD	04-Mar-2015	4.5	< 1.8	< 1.8	04-May-2015	< 1.8	< 1.8	< 1.8
05-Jan-2015	PSD	PSD	PSD	05-Mar-2015	PSD	PSD	PSD	05-May-2015	< 1.8	< 1.8	< 1.8
06-Jan-2015	PSD	PSD	PSD	06-Mar-2015	PSD	PSD	PSD	06-May-2015	< 1.8	< 1.8	< 1.8
07-Jan-2015	PSD	PSD	PSD	07-Mar-2015	PSD	PSD	PSD	07-May-2015	< 1.8	< 1.8	< 1.8
08-Jan-2015	PSD	PSD	PSD	08-Mar-2015	< 1.8	< 1.8	< 1.8	08-May-2015	< 1.8	< 1.8	< 1.8
09-Jan-2015	PSD	PSD	PSD	09-Mar-2015	PSD	PSD	PSD	09-May-2015	< 1.8	< 1.8	< 1.8
10-Jan-2015	< 1.8	< 1.8	3.9	10-Mar-2015	PSD	PSD	PSD	10-May-2015	2.0	< 1.8	< 1.8
11-Jan-2015	< 1.8	< 1.8	< 1.8	11-Mar-2015	PSD	PSD	PSD	11-May-2015	< 1.8	< 1.8	< 1.8
12-Jan-2015	< 1.8	< 1.8	< 1.8	12-Mar-2015	< 1.8	< 1.8	< 1.8	12-May-2015	< 1.8	< 1.8	< 1.8
13-Jan-2015	< 1.8	< 1.8	< 1.8	13-Mar-2015	2.0	< 1.8	< 1.8	13-May-2015	< 1.8	< 1.8	< 1.8
14-Jan-2015	PSD	PSD	PSD	14-Mar-2015	2.0	< 1.8	< 1.8	14-May-2015	< 1.8	< 1.8	< 1.8
15-Jan-2015	PSD	PSD	PSD	15-Mar-2015	< 1.8	< 1.8	< 1.8	15-May-2015	< 1.8	< 1.8	< 1.8
16-Jan-2015	PSD	PSD	PSD	16-Mar-2015	< 1.8	< 1.8	< 1.8	16-May-2015	< 1.8	< 1.8	< 1.8
17-Jan-2015	PSD	PSD	PSD	17-Mar-2015	< 1.8	< 1.8	< 1.8	17-May-2015	< 1.8	< 1.8	< 1.8
18-Jan-2015	PSD	PSD	PSD	18-Mar-2015	< 1.8	< 1.8	< 1.8	18-May-2015	PSD	PSD	PSD
19-Jan-2015	PSD	PSD	PSD	19-Mar-2015	23.0	3.9	2.3	19-May-2015	< 1.8	< 1.8	< 1.8
20-Jan-2015	PSD	PSD	PSD	20-Mar-2015	< 1.8	3.6	2.1	20-May-2015	< 1.8	< 1.8	< 1.8
21-Jan-2015	PSD	PSD	PSD	21-Mar-2015	4.5	3.9	1.9	21-May-2015	PSD	PSD	PSD
22-Jan-2015	PSD	PSD	PSD	22-Mar-2015	PSD	PSD	PSD	22-May-2015	< 1.8	< 1.8	< 1.8
23-Jan-2015	< 1.8	< 1.8	< 1.8	23-Mar-2015	2.0	4.2	2.0	23-May-2015	< 1.8	< 1.8	< 1.8
24-Jan-2015	< 1.8	< 1.8	< 1.8	24-Mar-2015	< 1.8	4.2	2.0	24-May-2015	< 1.8	< 1.8	< 1.8
25-Jan-2015	< 1.8	< 1.8	< 1.8	25-Mar-2015	17.0	6.6	2.4	25-May-2015	< 1.8	< 1.8	< 1.8
26-Jan-2015	< 1.8	< 1.8	< 1.8	26-Mar-2015	7.8	7.8	2.6	26-May-2015	< 1.8	< 1.8	< 1.8
27-Jan-2015	< 1.8	< 1.8	< 1.8	27-Mar-2015	23.0	7.8	3.4	27-May-2015	< 1.8	< 1.8	< 1.8
28-Jan-2015	< 1.8	< 1.8	< 1.8	28-Mar-2015	13.0	9.6	3.8	28-May-2015	< 1.8	< 1.8	< 1.8
29-Jan-2015	< 1.8	< 1.8	< 1.8	29-Mar-2015	PSD	PSD	PSD	29-May-2015	< 1.8	< 1.8	< 1.8
30-Jan-2015	< 1.8	< 1.8	< 1.8	30-Mar-2015	49.0	16	5.5	30-May-2015	< 1.8	< 1.8	< 1.8
31-Jan-2015	< 1.8	< 1.8	< 1.8	31-Mar-2015	7.8	17	5.6	31-May-2015	< 1.8	< 1.8	< 1.8
01-Feb-2015	< 1.8	< 1.8	< 1.8	01-Apr-2015	6.8	18	5.7	01-Jun-2015	< 1.8	< 1.8	< 1.8
02-Feb-2015	PSD	PSD	PSD	02-Apr-2015	2.0	16	5.7	02-Jun-2015	< 1.8	< 1.8	< 1.8
03-Feb-2015	PSD	PSD	PSD	03-Apr-2015	7.8	16	5.9	03-Jun-2015	< 1.8	< 1.8	< 1.8
04-Feb-2015	4.5	< 1.8	< 1.8	04-Apr-2015	33.0	17	7.0	04-Jun-2015	< 1.8	< 1.8	< 1.8
05-Feb-2015	< 1.8	< 1.8	< 1.8	05-Apr-2015	7.8	16	7.2	05-Jun-2015	< 1.8	< 1.8	< 1.8
06-Feb-2015	4.5	< 1.8	< 1.8	06-Apr-2015	< 1.8	9.3	7.2	06-Jun-2015	< 1.8	< 1.8	< 1.8
07-Feb-2015	11.0	2.9	< 1.8	07-Apr-2015	< 1.8	8.2	7.2	07-Jun-2015	< 1.8	< 1.8	< 1.8
08-Feb-2015	< 1.8	2.9	< 1.8	08-Apr-2015	< 1.8	7.2	7.2	08-Jun-2015	< 1.8	< 1.8	< 1.8
09-Feb-2015	< 1.8	2.9	< 1.8	09-Apr-2015	< 1.8	6.9	7.2	09-Jun-2015	< 1.8	< 1.8	< 1.8
10-Feb-2015	4.5	3.5	< 1.8	10-Apr-2015	< 1.8	5.8	7.1	10-Jun-2015	< 1.8	< 1.8	< 1.8
11-Feb-2015	< 1.8	2.9	< 1.8	11-Apr-2015	< 1.8	< 1.8	7.0	11-Jun-2015	< 1.8	< 1.8	< 1.8
12-Feb-2015	< 1.8	2.9	< 1.8	12-Apr-2015	< 1.8	< 1.8	7.0	12-Jun-2015	< 1.8	< 1.8	< 1.8
13-Feb-2015	< 1.8	2.2	< 1.8	13-Apr-2015	< 1.8	< 1.8	7.0	13-Jun-2015	< 1.8	< 1.8	< 1.8
14-Feb-2015	< 1.8	< 1.8	< 1.8	14-Apr-2015	< 1.8	< 1.8	6.9	14-Jun-2015	< 1.8	< 1.8	< 1.8
15-Feb-2015	4.0	< 1.8	< 1.8	15-Apr-2015	< 1.8	< 1.8	6.8	15-Jun-2015	< 1.8	< 1.8	< 1.8
16-Feb-2015	2.0	< 1.8	< 1.8	16-Apr-2015	< 1.8	< 1.8	6.8	16-Jun-2015	< 1.8	< 1.8	< 1.8
17-Feb-2015	2.0	< 1.8	< 1.8	17-Apr-2015	< 1.8	< 1.8	6.8	17-Jun-2015	< 1.8	< 1.8	< 1.8
18-Feb-2015	4.0	< 1.8	< 1.8	18-Apr-2015	< 1.8	< 1.8	6.8	18-Jun-2015	< 1.8	< 1.8	< 1.8
19-Feb-2015	< 1.8	< 1.8	< 1.8	19-Apr-2015	< 1.8	< 1.8	6.8	19-Jun-2015	< 1.8	< 1.8	< 1.8
20-Feb-2015	< 1.8	< 1.8	< 1.8	20-Apr-2015	< 1.8	< 1.8	6.1	20-Jun-2015	< 1.8	< 1.8	< 1.8
21-Feb-2015	< 1.8	< 1.8	< 1.8	21-Apr-2015	< 1.8	< 1.8	6.1	21-Jun-2015	< 1.8	< 1.8	< 1.8
22-Feb-2015	2.0	< 1.8	< 1.8	22-Apr-2015	< 1.8	< 1.8	5.9	22-Jun-2015	< 1.8	< 1.8	< 1.8
23-Feb-2015	PSD	PSD	PSD	23-Apr-2015	< 1.8	< 1.8	5.8	23-Jun-2015	< 1.8	< 1.8	< 1.8
24-Feb-2015	PSD	PSD	PSD	24-Apr-2015	< 1.8	< 1.8	5.8	24-Jun-2015	< 1.8	< 1.8	< 1.8
25-Feb-2015	PSD	PSD	PSD	25-Apr-2015	< 1.8	< 1.8	5.3	25-Jun-2015	< 1.8	< 1.8	< 1.8
26-Feb-2015	< 1.8	< 1.8	< 1.8	26-Apr-2015	< 1.8	< 1.8	5.0	26-Jun-2015	< 1.8	< 1.8	< 1.8
27-Feb-2015	< 1.8	< 1.8	< 1.8	27-Apr-2015	< 1.8	< 1.8	4.2	27-Jun-2015	< 1.8	< 1.8	< 1.8
28-Feb-2015	2.0	< 1.8	< 1.8	28-Apr-2015	< 1.8	< 1.8	3.8	28-Jun-2015	< 1.8	< 1.8	< 1.8
				29-Apr-2015	< 1.8	< 1.8	2.2	29-Jun-2015	< 1.8	< 1.8	< 1.8
				30-Apr-2015	< 1.8	< 1.8	1.9	30-Jun-2015	< 1.8	< 1.8	< 1.8

PSD= Plant Shut Down

Sample Date	MPN/ 100 ml	7-Day Mean	30-Day Mean	Sample Date	MPN/ 100 ml	7-Day Mean	30-Day Mean	Sample Date	MPN/ 100 ml	7-Day Mean	30-Day Mean
01-Jul-2015	< 1.8	< 1.8	< 1.8	01-Sep-2015	< 1.8	< 1.8	< 1.8	01-Nov-2015	< 1.8	< 1.8	< 1.8
02-Jul-2015	< 1.8	< 1.8	< 1.8	02-Sep-2015	< 1.8	< 1.8	< 1.8	02-Nov-2015	PSD	PSD	PSD
03-Jul-2015	< 1.8	< 1.8	< 1.8	03-Sep-2015	13.0	1.9	< 1.8	03-Nov-2015	< 1.8	< 1.8	< 1.8
04-Jul-2015	< 1.8	< 1.8	< 1.8	04-Sep-2015	4.5	2.5	< 1.8	04-Nov-2015	< 1.8	< 1.8	< 1.8
05-Jul-2015	< 1.8	< 1.8	< 1.8	05-Sep-2015	< 1.8	2.5	< 1.8	05-Nov-2015	< 1.8	< 1.8	< 1.8
06-Jul-2015	< 1.8	< 1.8	< 1.8	06-Sep-2015	< 1.8	2.5	< 1.8	06-Nov-2015	< 1.8	< 1.8	< 1.8
07-Jul-2015	< 1.8	< 1.8	< 1.8	07-Sep-2015	< 1.8	2.5	< 1.8	07-Nov-2015	< 1.8	< 1.8	< 1.8
08-Jul-2015	< 1.8	< 1.8	< 1.8	08-Sep-2015	< 1.8	2.5	< 1.8	08-Nov-2015	< 1.8	< 1.8	< 1.8
09-Jul-2015	< 1.8	< 1.8	< 1.8	09-Sep-2015	PSD	PSD	PSD	09-Nov-2015	< 1.8	< 1.8	< 1.8
10-Jul-2015	< 1.8	< 1.8	< 1.8	10-Sep-2015	PSD	PSD	PSD	10-Nov-2015	< 1.8	< 1.8	< 1.8
11-Jul-2015	< 1.8	< 1.8	< 1.8	11-Sep-2015	< 1.8	2.5	< 1.8	11-Nov-2015	< 1.8	< 1.8	< 1.8
12-Jul-2015	< 1.8	< 1.8	< 1.8	12-Sep-2015	< 1.8	< 1.8	< 1.8	12-Nov-2015	< 1.8	< 1.8	< 1.8
13-Jul-2015	< 1.8	< 1.8	< 1.8	13-Sep-2015	< 1.8	< 1.8	< 1.8	13-Nov-2015	< 1.8	< 1.8	< 1.8
14-Jul-2015	< 1.8	< 1.8	< 1.8	14-Sep-2015	< 1.8	< 1.8	< 1.8	14-Nov-2015	< 1.8	< 1.8	< 1.8
15-Jul-2015	< 1.8	< 1.8	< 1.8	15-Sep-2015	< 1.8	< 1.8	< 1.8	15-Nov-2015	2.0	< 1.8	< 1.8
16-Jul-2015	< 1.8	< 1.8	< 1.8	16-Sep-2015	< 1.8	< 1.8	< 1.8	16-Nov-2015	< 1.8	< 1.8	< 1.8
17-Jul-2015	< 1.8	< 1.8	< 1.8	17-Sep-2015	< 1.8	< 1.8	< 1.8	17-Nov-2015	< 1.8	< 1.8	< 1.8
18-Jul-2015	< 1.8	< 1.8	< 1.8	18-Sep-2015	< 1.8	< 1.8	< 1.8	18-Nov-2015	< 1.8	< 1.8	< 1.8
19-Jul-2015	< 1.8	< 1.8	< 1.8	19-Sep-2015	< 1.8	< 1.8	< 1.8	19-Nov-2015	< 1.8	< 1.8	< 1.8
20-Jul-2015	< 1.8	< 1.8	< 1.8	20-Sep-2015	< 1.8	< 1.8	< 1.8	20-Nov-2015	< 1.8	< 1.8	< 1.8
21-Jul-2015	< 1.8	< 1.8	< 1.8	21-Sep-2015	< 1.8	< 1.8	< 1.8	21-Nov-2015	< 1.8	< 1.8	< 1.8
22-Jul-2015	< 1.8	< 1.8	< 1.8	22-Sep-2015	< 1.8	< 1.8	< 1.8	22-Nov-2015	< 1.8	< 1.8	< 1.8
23-Jul-2015	< 1.8	< 1.8	< 1.8	23-Sep-2015	< 1.8	< 1.8	< 1.8	23-Nov-2015	< 1.8	< 1.8	< 1.8
24-Jul-2015	< 1.8	< 1.8	< 1.8	24-Sep-2015	< 1.8	< 1.8	< 1.8	24-Nov-2015	< 1.8	< 1.8	< 1.8
25-Jul-2015	< 1.8	< 1.8	< 1.8	25-Sep-2015	< 1.8	< 1.8	< 1.8	25-Nov-2015	< 1.8	< 1.8	< 1.8
26-Jul-2015	< 1.8	< 1.8	< 1.8	26-Sep-2015	< 1.8	< 1.8	< 1.8	26-Nov-2015	< 1.8	< 1.8	< 1.8
27-Jul-2015	< 1.8	< 1.8	< 1.8	27-Sep-2015	< 1.8	< 1.8	< 1.8	27-Nov-2015	< 1.8	< 1.8	< 1.8
28-Jul-2015	< 1.8	< 1.8	< 1.8	28-Sep-2015	< 1.8	< 1.8	< 1.8	28-Nov-2015	< 1.8	< 1.8	< 1.8
29-Jul-2015	< 1.8	< 1.8	< 1.8	29-Sep-2015	< 1.						

*= Missing data

E. UV Performance 2015

UV PERFORMANCE REPORT
CY 2015

Monthly Averages

	UV TRANSMIT TANCE	UV DOSE	UV BANK #1 POWER	UV BANK #2 POWER	UV BANK #3 POWER	UV BANK #4 POWER
Month	pct	U	pct	pct	pct	pct
Jan 2015	62.25	187.73	33.84	36.35	32.13	36.52
Feb 2015	60.50	184.37	36.43	38.57	37.86	39.96
Mar 2015	59.84	190.67	32.86	48.69	26.90	47.66
Apr 2015	61.22	182.13	36.38	39.69	36.03	41.38
May 2015	61.18	181.03	22.90	25.71	28.81	32.55
Jun 2015	60.80	184.89	40.03	42.13	38.33	41.57
Jul 2015	60.95	182.76	38.61	37.97	40.19	40.19
Aug 2015	59.11	181.25	41.26	40.39	43.48	43.10
Sep 2015	57.88	179.01	43.47	40.00	42.40	43.20
Oct 2015	65.18	185.95	26.65	34.87	26.94	36.52
Nov 2015	57.85	188.49	22.97	31.53	27.63	34.27
Dec 2015	58.91	131.28	18.77	25.13	19.68	25.81
Average	60.47	179.96	32.85	36.75	33.37	38.56

VIII. Other Required Information.

- A. Notes on Specific Analysis
- B. Report of Operator Certification.

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A. Notes on Specific Analyses:

1. It should be noted that some of the reference methods are equivalent. The organic priority pollutant analyses listed in E.P.A.'s Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846 (ref. c) are equivalent to the methods E.P.A. prescribes for water in Methods for Chemical Analysis for Water and Wastes, (ref.a). Specifically wastewater methods 3510 and 8270 (ref.d) together are the same as the water method 625 (ref.a), and Method 8260B (ref. c) is equivalent to Method 624 (ref.a). Methods 3550 and 8270 together are equivalent to the E.P.A. Contract Laboratory Program's (ref. aa) method for ultrasonication and gas chromatograph-mass spectrographic analysis. The E.P.A.'s metals analyses for water (ref.a) generally just refers to the procedure in Standard Methods (ref. b, bb).

B. Report of Operator Certification.

Operator Certifications:

The following lists all Wastewater Treatment Plant Operators working for the Operating Units of the Public Utilities Department and their California State certification status as of May 2015. Name, Classification, Certification Grade, Certification Number, and expiration date are shown for each operator.

South Bay Wastewater Reclamation Plant

OPERATOR CERTIFICATIONS

NAME	CERTIFICATION GRADE	EXPIRATION
ERNESTO MOLAS	GRADE V 7227	12/31/2015
KIP H. COOPER	GRADE V 9401	12/31/2015
LINDA RUIZ-LOPEZ	GRADE III 5660	12/31/2015
DOYLE R. SHANKLES	GRADE III 7232	6/30/2016
TERESA A. GARDNER	GRADE III 10657	12/31/2015
ALBERT J. JOHNSON	GRADE III 9638	6/30/2016
HERBERT A. DECATUR	GRADE III 28880	6/30/2015
CAROL D BRASSFIELD	GRADE II 9383	12/31/2015
DOUGLAS D. EVANS SR.	GRADE II 9844	6/30/2016
ROMEO C. MILLAN JR.	GRADE II 9846	6/30/2016
WILLIAM L. MERCADO	GRADE II 41838	10/20/2016

IX. Appendices

- A. Terms and Abbreviations used in this Report
- B. Methods of Analysis
- C. Frequency of Analysis and Type of Sample – 2015
- D. Laboratories Contributing Results used in this report
- E. Staff Contributing to this Report

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A. Terms and Abbreviations used in this Report

Along with standard abbreviations the following is a list of local/uncommon abbreviations and terms for the readers' reference.

PLANT TERMS

U.S.EPA	- United States Environmental Protection Agency.
NPDES	- National Pollutant Discharge Elimination System.
WWTP	- Wastewater Treatment Plant.
WRP	- Water Reclamation Plant.
PLWTP or PLWWTP	- Pt. Loma Wastewater Treatment Plant
PLR	- Point Loma Raw (influent to the plant).
PLE	- Point Loma Effluent (effluent from the plant).
N-1-P	- North Digester Number 1, Primary, Pt. Loma
N-2-P	- North Digester Number 2, Primary, Pt. Loma
C-1-P	- Central Digester Number 1, Primary, Pt. Loma
C-2-P	- Central Digester Number 2, Primary, Pt. Loma
S-1-P	- South Digester Number 1, Primary, Pt. Loma
S-2-P	- South Digester Number 2, Primary, Pt. Loma
Dig 7	- Digester Number 7, Primary, Pt. Loma
Dig 8	- Digester Number 8, Primary, Pt. Loma
DIG COMP	- Digested Biosolids Composite; a composite of grabs taken from each of the in-service digesters.
RAW COMP	- A Composite of Raw Sludge taken over the preceding 24 hrs.
NCWRP	- North City Water Reclamation Plant
N01-PS_INF	- The plant primary Influent from Pump Station 64
N01-PEN	- The plant primary Influent from the Penasquitos pump station.
N30-DFE	- Disinfected Final Effluent
N34-REC WATER	- Reclaimed Water.
N10-PSP COMB	- raw sludge
N15-WAS LCP	- Waste Activated Sludge – low capacity pumps
SBOO	- South Bay Ocean Outfall or South Bay Outfall
SB_INF_02	- The plant Influent
SB_OUTFALL_01	- The plant discharge to ocean effluent
SB_ITP_COMB_EFF	-The plant discharge to ocean and International Waste Treatment Plant combined effluents
SB_PRI_EFF_01	- The plant primary Influent
SB_SEC_EFF_00	-The plant secondary Influent
SB_REC_WATER_34	- Reclaimed Water
SB_RSL_10	- The plant primary sedimentation tank to raw sludge line
MBC	- Metro Biosolids Center
MBCDEWCN from these.	- Metro Biosolids Center Dewatering Centrifuges; typically the dewatered biosolids
MBC_COMBCN	- MBC Combined Centrate; the centrate from all the dewatering centrifuges. (The return stream from MBC to the sewer system.)
MBC_NC_DSL	- North City to Metropolitan Biosolids Center (MBC) Digested Sludge Line.
Dig 1	- MBC Digester number 1.
Dig 2	- MBC Digester number 2.
Dig 3	- MBC Digester number 3.
Biosolids	- In most cases Biosolids and digested (a processed) Sludge is synonymous.
Field Replicate	- Separate samples collected at approximately the same time from the same sample site.

UNITS

mg/L	milligrams per liter
ug/L	micrograms per liter = 0.001 mg/L
ng/L	nanograms per liter = 0.001 ug/L
mg/Kg	milligrams per kilogram
ug/Kg	micrograms per kilogram
ng/Kg	nanograms per kilogram
pg/L	picograms per liter
pg/Kg	picograms per kilogram
pCi/L or pCi/L	pico curies per liter
TU	toxicity units
ntu	nephelometric turbidity units
°C	degrees Celsius = degrees centigrade
MGD	million gallons per day
umhos/cm	micromhos per centimeter
uS	microsiemens = umhos
mils/100 mL	millions per 100 milliliters
nd	not detected
NA	not analyzed (when in a data column)
NR	not required
NS	not sampled

CHEMICAL TERMS & ABBREVIATIONS:

AA	Atomic Absorption Spectroscopy	MDL	Method Detection Limit
BOD	Biochemical Oxygen Demand	MSD	Mass Spectroscopy Detector
BOD ₅	5-Day Biochemical Oxygen Demand	NH ₃	Ammonia
CN ⁻	Cyanide	NH ₃ -N	Ammonia Nitrogen
COD	Chemical Oxygen Demand	NH ₄ ⁺	Ammonium ion
Cr ⁶⁺	Hexavalent Chromium	NO ₃ ⁻	Nitrate
D.O.	Dissolved Oxygen	PAD	Pulsed Amperometric Detector
DDD	Dichlorodiphenyldichloroethane (a.k.a. TDE-tetrachlorodiphenylethane)	PCB	Polychlorinated Biphenyls
DDE	Dichlorodiphenyldichloroethylene	PO ₄ ³⁻	Phosphate
DDT	Dichlorodiphenyltrichloroethane	SO ₄ ²⁻	Sulfate
FeCl ₃	Ferric Chloride	SS	Suspended Solids
G&O	Grease and Oil	TBT	Tributyl tin
GC	Gas chromatography.	TCH	Total Chlorinated Hydrocarbons (i.e. chlorinated pesticides & PCB's)
GC-ECD	Electron Capture Detector	TCLP	Toxicity Characteristic Leaching Procedure
GC-FID	Flame Ionization Detector	TDS	Total Dissolved Solids
GC-FPD	Flame Photometric Detector	TS	Total Solids
GC-MS	Mass Spectroscopy	TVS	Total Volatile Solids
H ₂ S	Hydrogen Sulfide	VSS	Volatile Suspended Solids
Hg	Mercury		
IC	Ion Chromatography		
ICP-AES	Inductively Coupled Plasma-Atomic Emission Spectroscopy		

B. Methods of Analysis

WASTEWATER INFLUENT and EFFLUENT (General)

Analyte	Description	Instrumentation	Reference ¹
Alkalinity	Selected Endpoint Titration	Mettler DL-21 & 25 Titrator Orion 950	(i) 2320 B
Ammonia Nitrogen	Distillation and Titration	Buchi Distillation Unit K-314, B-324, K-350 Orion 950 pH Meter Mettler DL25 titrator	(i) 4500-NH3 B & C
Biochemical Oxygen Demand (BOD-5 Day)	Dissolved Oxygen Meter with Dissolved Oxygen Probe	YSI-5000 DO Meter YSI-5100 DO Meter YSI 59 DO Meter (5905 Probe)	(i) 5210 B
Biochemical Oxygen Demand (BOD-Soluble)	Dissolved Oxygen Probe	YSI-5000 DO Meter YSI-5100 DO Meter YSI 59 DO Meter (5905 Probe)	(i) 5210 B
Chemical Oxygen Demand (COD)	Closed Reflux / Colorimetric	Hach DR-2010 UV/Vis spectrophotometer	HACH 8000
Conductivity	Conductivity Meter with Wheatstone Bridge probe	YSI-3100, YSI-3200, Orion 115A, Orion 250, Accumet Model 150	(g) 2510 B
Cyanide	Acid Digest/Distil./Colorimetric	Hach DR-4000/Vis	(i) 4500-CN E
Floating Particulates	Flotation Funnel	Mettler AX-105 Mettler AG 204 Balance	(g) 2530 B
Flow	Continuous Meter	Gould (pressure sensor), ADS (sonic sensor), or Venturi (velocity sensor)	
Hardness; Ca, Mg, Total	ICP-AES / Calculation	TJA IRIS	(a) 200.7 (h) 2340 B
Kjeldahl Nitrogen (TKN)	Macro-Digestion / Titration	Labconco digestion block Buchi B-324 distiller & Mettler DL25 titrator	(i) Digestion= 4500-Norg B
Oil and Grease	Hexane Extraction / Gravimetric	Mettler AX-105 Balance	(a) 1664A
Organic Carbon (TOC)	Catalytic Oxidation / IR (Water Production Laboratory)	Shimadzu ASI-5000	(f) 5310 B
pH	Hydrogen+Reference Electrode	Various models of pH meters.	(i) 4500-H+ B
Radiation (alpha & beta)	Alpha Spectroscopy Gamma Spectroscopy	Canberra 7401 (alpha) Canberra GC25185 (beta)	(h) 7110 B
Solids, Dissolved-Total	Gravimetric @ 180°C using analytical balance	Mettler AG204, AX105, AB204	(i) 2540 C
Solids, Settleable	Volumetric	Imhoff Cone	(i) 2540 F
Solids, Suspended-Total	Gravimetric @ 103-105°C	Mettler AG204, AX105, AB204	(i) 2540 D
Solids, Suspended-Volatile	Gravimetric @ 500°C	Mettler AG204, AX105, AB204	(i) 2540 E
Solids, Total	Gravimetric @ 103-105°C	Mettler AG204, AX105, AB204	(a) 160.3
Solids, Total-Volatile	Gravimetric @ 500°C	Mettler AG204, AX105, AB204	(a) 160.4
Temperature	Direct Reading	Fisher Digital Thermometer	(g) 2550 B
Turbidity	Nephelometer Turbidimeter	Hach 2100-N Meter Hach 2100-AN Meter	(g) 2130 B
Bromide, Chloride, Fluoride, Nitrate, Phosphate, Sulfate	Ion Chromatography	Dionex ICS-3000	(d) 300.0

¹ Reference listing is found following this listing of analytical methods.

WASTEWATER INFLUENT and EFFLUENT (Metals)

Analyte	Description	Instrumentation	Reference ¹
Aluminum	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(e) 200.7
Antimony	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(e) 200.7
Arsenic	Hydride Generation / AA	TJA Solaar M6	(h) 3114 C
Barium	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(e) 200.7
Beryllium	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(e) 200.7
Boron	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(e) 200.7
Cadmium	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(e) 200.7
Calcium	Acid Digestion / ICP-AES	TJA IRIS ADVANTAGE	(e) 200.7
Chromium	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(e) 200.7
Cobalt	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(e) 200.7
Copper	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(e) 200.7
Iron	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(e) 200.7
Lead	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(e) 200.7
Lithium	Acid Digestion / ICP-AES	TJA IRIS ADVANTAGE	(e) 200.7
Magnesium	Acid Digestion / ICP-AES	TJA IRIS ADVANTAGE	(e) 200.7
Manganese	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(e) 200.7
Mercury	Thermal / AA	Milestone DMA80	(g) 3112 B
Mercury	Cold Vapor Generation / AF	Leeman Hydra Gold	(w) 1613E and 245.7
Molybdenum	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(e) 200.7
Nickel	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(e) 200.7
Potassium	Acid Digestion / ICP-AES	TJA IRIS ADVANTAGE	(e) 200.7
Selenium	Hydride Generation / AA	TJA Solaar M6	(h) 3114 C
Silver	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(e) 200.7
Sodium	Acid Digestion / ICP-AES	TJA IRIS ADVANTAGE	(e) 200.7
Thallium	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(e) 200.7
Vanadium	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(e) 200.7
Zinc	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(e) 200.7

- 1 Reference listing is found following this listing of analytical

WASTEWATER INFLUENT and EFFLUENT (Organics)

Analyte	Description	Instrumentation	Reference¹
Acrolein and Acrylonitrile	Purge & Trap, GC-MSD	O-I Analytical Eclipse 4660/4552 Agilent-6890NGC /5973N MSD Capillary J&W DB-624	(c) 8260 B
Base/Neutral Extractables	Basic / CH ₂ Cl ₂ continuous extraction, GC-MSD	HP-6890GC / 5973MSD Capillary DB-5.625	(a) 625
Benzidines	Basic / CH ₂ Cl ₂ continuous extraction, GC-MSD	HP-6890GC / 5973MSD Capillary DB-5.625	(a) 625
Chlorinated Pesticides	CH ₂ Cl ₂ extraction, GC-ECD	Varian 3800 GC-ECD RTX-5/60m : RTX-1701/60m Varian 3800-Saturn 2000 DB-XLB Bruker 300-MS TQ	(a) 608
Dioxin	CH ₂ Cl ₂ extraction, GC/MS/MS	Varian Saturn -MS-MS Varian 3800 GC	(a) 8280A
Organophosphorus Pesticides	CH ₂ Cl ₂ extraction, hexane exchange, GC-PFPD	Varian 3800 GC-PFPD RTX-1 :RTX-50	(a) 622
Phenolic Compounds	Acidic / CH ₂ Cl ₂ continuous extraction, GC-MSD	HP-6890GC / 5973MSD Capillary DB-5.625	(a) 625
Purgeables (VOCs)	Purge & Trap, GC-MSD	O-I Analytical Eclipse 4660/4552 Agilent-6890NGC /5973N MSD Capillary J&W DB-624	(a) 8260B
Tri, Di, and Monobutyl Tin	CH ₂ Cl ₂ extraction, derivatization, hexane exchange, GC-FPD	Varian 3400 GC-FPD DB-1/30m : RTX-50	(l)

1 Reference listing is found following this listing of analytical methods.

LIQUID SLUDGE: Raw, Digested, and Filtrate (General)

Analyte	Description	Instrumentation	Reference¹
Alkalinity	Selected Endpoint Titration	Mettler DL-25 Titrator Orion 950	(g) 2320 B
Cyanide	Acid Digest-Distil / Colorimetric	Hach DR/4000V	(h) 4500-CN E
pH	Hydrogen+Reference Electrode	Various models of pH meters.	(c) 9010 B
Radiation (alpha & beta)	Alpha Spectroscopy Gamma Spectroscopy	Canberra 7401 (alpha) Canberra GC25185 (beta)	(h) 7110 B
Sulfides	Acid Digest-Distil / Titration	Class A Manual Buret	(c) 9030 B
Sulfides, reactive	Distillation / Titration	Class A Manual Buret	(c) 7.3.4.2
Solids, Total	Gravimetric @ 103-105°C	Mettler PB 4002-S Mettler PG 5002-S Mettler AB204	(i) 2540 B
Solids, Total-Volatile	Gravimetric @ 500°C	Mettler PB 4002-S Mettler PG 5002-S Mettler AB204	(i) 2540 E

LIQUID SLUDGE: Raw, Digested, and Filtrate (Metals)

Analyte	Description	Instrumentation	Reference ¹
Aluminum	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(c) 6010 B
Antimony	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(c) 6010 B
Arsenic	Hydride Generation / AA	TJA Solaar M6	(c) 7062
Beryllium	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(c) 6010 B
Barium	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(c) 6010 B
Boron	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(c) 6010 B
Cadmium	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(c) 6010 B
Chromium	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(c) 6010 B
Cobalt	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(c) 6010 B
Copper	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(c) 6010 B
Iron	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(c) 6010 B
Lead	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(c) 6010 B
Manganese	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(c) 6010 B
Mercury	Thermal / AA	Milestone DMA80	(c) 7471 A and 747.3
Mercury	TD / AA	Milestone DMA80	(c) 7471 A
Molybdenum	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(c) 6010 B
Nickel	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(c) 6010 B
Selenium	Hydride Generation / AA	TJA Solaar M6	(c) 7742
Silver	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(c) 6010 B
Thallium	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(c) 6010 B
Vanadium	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(c) 6010 B
Zinc	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(c) 6010 B

¹ Reference listing is found following this listing of analytical methods.

LIQUID SLUDGE: Raw, Digested, and Decant (Organics)

Analyte	Description	Instrumentation	Reference ¹
Acrolein and Acrylonitrile	Purge & Trap, GC-MSD	O-I Analytical Eclipse 4660/4552 Agilent-6890NGC /5973N MSD Capillary J&W DB-624	(c) 8260 B (b)
Base/Neutral Extractables	Basic / CH ₂ Cl ₂ continuous extraction, GC-MSD	HP-6890GC / 5973MSD Capillary DB-5.625	(a) 625 (b)
Benzidines	Basic / CH ₂ Cl ₂ continuous extraction, GC-MSD	HP-6890GC / 5973MSD Capillary DB-5.625	(a) 625
Chlorinated Pesticides	CH ₂ Cl ₂ extraction, GC-ECD	Varian 3800 GC-ECD RTX-5/60m : RTX-1701/60m Varian 3800-Saturn 2000 DB-XLB Bruker 300-MS TQ	(c) 8081 A
PCBs	CH ₂ Cl ₂ extraction, GC-ECD	Varian 3800 GC-ECD RTX-5/60m : RTX-1701/60m Varian 3800-Saturn 2000 DB-XLB Bruker 300-MS TQ	(c) 8082
Dioxin	CH ₂ Cl ₂ extraction	Varian GC-MS/MS	(c) 8280A
Organophosphorus Pesticides	CH ₂ Cl ₂ extraction, hexane exchange, GC-PFPD	Varian 3800 GC-PFPD RTX-1 : RTX-50	(a) 622
Phenolic Compounds	Acidic / CH ₂ Cl ₂ continuous extraction, GC-MSD	HP-6890GC / 5973MSD Capillary DB-5.625	(a) 625 (b)
Purgeables (VOCs)	Purge & Trap, GC-MSD	O-I Analytical Eclipse 4660/4552 Agilent-6890NGC /5973N MSD Capillary J&W DB-624	(c) 8260 B (b)
Tri, Di, and Monobutyl Tin	CH ₂ Cl ₂ extraction, derivatization, hexane exchange, GC-FPD	Varian 3400 GC-FPD DB-1/30m : RTX-50	(l)

LIQUID SLUDGE: Raw, Digested, and Decant (Digester Gases)

Analyte	Description	Instrumentation	Reference ¹
Methane	Gas Chromatography	SRI 8610C GC EG&G 100AGC	(i) 2720 C
Carbon Dioxide	Gas Chromatography	SRI 8610C GC EG&G 100AGC	(i) 2720 C
Hydrogen Sulfide	Colorimetric	Draeger H2S 2/a	

1 Reference listing is found following this listing of analytical methods.

DRIED SLUDGE: Metro Biosolids Center (General)

Analyte	Description	Instrumentation	Reference ¹
Cyanide	Acid Digest-Distillation Colorimetric	Hach DR/4000V UV/Vis	(c) 9010 A
Cyanide Reactive	Distillation / Colorimetric	Hach DR/4000V UV/Vis	(c) 7.3.3.2 and 9014
pH	Hydrogen+Reference Electrode	Various models of pH meters.	(c) 9045 C
Radiation (alpha & beta)	Alpha Spectroscopy Gamma Spectroscopy	Canberra 7401 (alpha) Canberra GC25185 (beta)	(h) 7110 B
Sulfides	Acid Digest-Distil / Titration	Class A Manual Buret	(c) 9030 B and 9034
Sulfides, reactive	Distillation / Titration	Class A Manual Buret	(c) 7.3.4.2 and 9034
Solids, Total	Gravimetric @ 103-105 C°	Denver PI-314, Mettler AB204	(i) 2540 B
Solids, Total-Volatile	Gravimetric @ 500 C°	Denver PI-314, Mettler AB204	(i) 2540 E

DRIED SLUDGE: Metro Biosolids Center (Metals)

Analyte	Description	Instrumentation	Reference ¹
Aluminum	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(c) 6010 B
Antimony	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(c) 6010 B
Arsenic	Hydride Generation / AA	TJA Solaar M6	(c) 7062
Barium	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(c) 6010 B
Beryllium	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(c) 6010 B
Boron	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(c) 6010 B
Cadmium	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(c) 6010 B
Chromium	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(c) 6010 B
Cobalt	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(c) 6010 B
Copper	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(c) 6010 B
Iron	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(c) 6010 B
Lead	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(c) 6010 B
Manganese	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(c) 6010 B
Mercury	Thermal / AA	Milestone DMA80	(c) 7471 A
Mercury	TD / AA	Leeman Hydra Gold	(c) 7471 A
Molybdenum	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(c) 6010 B
Nickel	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(c) 6010 B
Selenium	Hydride Generation / AA	TJA Solaar M6	(c) 7742
Silver	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(c) 6010 B
Thallium	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(c) 6010 B
Vanadium	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(c) 6010 B
Zinc	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(c) 6010 B

Waste Extraction Test (WET)	Extraction with Sodium Citrate ICP-AES	Burrel wrist action shaker TJA IRIS	(j) Section 66261.100
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1 Reference listing is found following this listing of analytical methods.

DRIED SLUDGE: Metro Biosolids Center (Organics)

Analyte	Description	Instrumentation	Reference ¹
Acrolein and Acrylonitrile	Purge & Trap, GC-MSD	O-I Analytical Eclipse 4660/4552 Agilent-6890NGC /5973N MSD Capillary J&W DB-624	(c) 8260 B
Base/Neutral Extractables	CH ₂ Cl ₂ /Acetone sonication extraction, GC-MSD	Agilent-7890GC / 5975MSD Capillary DB-5.625	(c) 8270 C (c) 3550 A
Chlorinated Pesticides	CH ₂ Cl ₂ extraction, GC-ECD	Varian 3800 GC-ECD RTX-5/60m : RTX-1701/60m Varian 3800-Saturn 2000 DB-XLB Bruker 300-MS TQ	(c) 8081 A
PCBs	CH ₂ Cl ₂ extraction, GC-ECD	Varian 3800 GC-ECD RTX-5/60m : RTX-1701/60m Varian 3800-Saturn 2000 DB-XLB Bruker 300-MS TQ	(c) 8082
Dioxin	Outside Contact (Test America)	GC-MS	(a) 8290
Organophosphorus Pesticides	CH ₂ Cl ₂ extraction, hexane exchange, GC-PFPD	Varian 3800 GC-PFPD DB-1/30m DB-608/30m	(c) 8141 A
Phenolic Compounds	CH ₂ Cl ₂ / Acetone sonication extraction, GC-MSD	HP-5890GC / 5972MSD Agilent-78906GC / 5975MSD Capillary DB-5.625	(c) 8270 C (c) 3550 A
Purgeables (VOCs)	Purge & Trap, GC-MSD	O-I Analytical Eclipse 4660/4552 Agilent-6890NGC /5973N MSD Capillary J&W DB-624	(c) 8260 B
Tri, Di, and Monobutyl Tin	CH ₂ Cl ₂ extraction, derivatization, hexane exchange, GC-FPD	Varian 3400 GC-FPD DB-1/30m DB-608/30m	(l)
Total Nitrogen (TN)	Combustion / GC-TCD	Carlo-Erba NC-2500 Porapak QS	(m) 9060

1 Reference listing is found following this listing of analytical methods.

OCEAN SEDIMENT (General)

Analyte	Description	Instrumentation	Reference ¹
Biochemical Oxygen Demand (BOD-5 Day)	Dissolved Oxygen Probe	YSI-5000 DO Meter	(g) 5210 B
Particle Size	Coarse fraction by sieve; fine fraction by laser scatter	Horiba LA-920	(q) 3-380
Sulfides	Acid Digest-Distil / IC-PAD	Dionex ICS 3000-PAD(Ag)	(k)
Solids, Total	Gravimetric @ 103-105 C°	AND HM-120	(g) 2540 B
Solids, Total-Volatile	Gravimetric @ 500 C°	AND HM-120	(g) 2540 E
Total Organic Carbon (TOC) and Total Nitrogen (TN)	Combustion / GC-TCD	Carlo-Erba NC-2500 Porapak QS	(c) 9060 (m)

OCEAN SEDIMENT (Metals)

Analyte	Description	Instrumentation	Reference ¹
Aluminum	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(c) 6010 B
Antimony	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(c) 6010 B
Arsenic	Hydride Generation / AA	TJA Solaar M6	(c) 7062
Beryllium	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(c) 6010 B
Cadmium	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(c) 6010 B
Chromium	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(c) 6010 B
Copper	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(c) 6010 B
Iron	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(c) 6010 B
Lead	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(c) 6010 B
Manganese	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(c) 6010 B
Mercury	Thermal / AA	Milestone DMA80	(c) 7471 A
Mercury	Cold Vapor Generation / AF	Leeman Hydra Gold	(c) 7471 A
Nickel	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(c) 6010 B
Selenium	Hydride Generation / AA	TJA Solaar M6	(c) 7742
Silver	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(c) 6010 B
Thallium	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(c) 6010 B
Tin	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(c) 6010 B
Zinc	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(c) 6010 B

OCEAN SEDIMENT (Organics)

Analyte	Description	Instrumentation	Reference ¹
Base/Neutral Extractables	CH ₂ Cl ₂ / Acetone ASE GC-MSD	Agilent-7890GC / 5975MSD Capillary DB-5.625	(c) 8270 C (b) 3545A
Chlorinated Pesticides	CH ₂ Cl ₂ extraction, GC-ECD/MS/MS	Varian Saturn GC-ECD/MS/MS DBXLB/60m	(c) 8081 A 3545A
PCBs as Congeners	CH ₂ Cl ₂ extraction, GC-ECD/MS/MS	Varian Saturn GC-ECD/MS/MS DBXLB/60m	(c) 8082 3545A
Organophosphorus Pesticides	CH ₂ Cl ₂ extraction, hexane exchange, GC-PFPD	Varian 3800 GC-PFPD RTX-1 : RTX-50	(c) 8141 A
Tri, Di, and Monobutyl Tin	CH ₂ Cl ₂ extraction, derivatization, hexane exchange, GC-FPD	Varian 3400 GC-FPD DB-1/30m : RTX 50	(l)

1 Reference listing is found following this listing of analytical methods.

FISH TISSUE: Liver, Muscle, and Whole (General)

Analyte	Description	Instrumentation	Reference ¹
Solids, Total	Freeze Drying Gravimetric	Labconco Freezone 6 Mettler AG-104 Balance	(n)
Lipids	Hexane/Acetone Extraction Gravimetric	Dionex ASE-200 Mettler AG-104 Balance	(o)

FISH TISSUE: Liver, Muscle, and Whole (Metals)

Analyte	Description	Instrumentation	Reference ¹
Aluminum	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(e) 200.3 / 200.7
Antimony	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(e) 200.3 / 200.7
Arsenic	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(e) 200.3 / 200.7
Beryllium	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(e) 200.3 / 200.7
Cadmium	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(e) 200.3 / 200.7
Chromium	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(e) 200.3 / 200.7
Copper	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(e) 200.3 / 200.7
Iron	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(e) 200.3 / 200.7
Lead	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(e) 200.3 / 200.7
Manganese	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(e) 200.3 / 200.7
Mercury	Thermal / AA	Milestone DMA80	(e) 7473
Mercury	Cold Vapor Generation / AF	Leeman PS Hydra Gold	(w) 1631E
Nickel	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(e) 200.3 / 200.7
Selenium	Hydride Generation / AA	TJA Solaar M6	(c) 7742
Silver	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(e) 200.3 / 200.7
Thallium	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(e) 200.3 / 200.7
Tin	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(e) 200.3 / 200.7
Zinc	Acid Digestion / ICP-AES	TJA IRIS INTREPID II	(e) 200.3 / 200.7

FISH TISSUE: Liver, Muscle, and Whole (Organics)

Analyte	Description	Instrumentation	Reference ¹
Base/Neutral Extractables	Basic / CH ₂ Cl ₂ ASE extraction, GC-MSD	Dionex ASE-200 Agilent-7890GC/5975 MSD Capillary DB-5625	(c) 3545 / 8270 C
Chlorinated Pesticides	CH ₂ Cl ₂ extraction, GC-ECD/MS/MS	Varian 3800 GC Saturn 2000 MS-Ion Trap DB-XLB/60m	(c) 3545 / 8081 A
PCBs	CH ₂ Cl ₂ extraction, hexane exchange, GC-ECD/MS/MS	Varian 3800 GC Saturn 2000 MS-Ion Trap DB-XLB/60m	(c) 3545 / 8082

¹ Reference listing is found following this listing of analytical methods.

Method References: Methods of Analysis Used to Produce the Data Presented in this Report.

- a) Methods for Chemical Analysis of Water and Wastes,
EPA, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio,
March 1979 (EPA-600/4-79-020), 1983 Revision, and March 1984 (EPA-600/4-84-017).
- b) U.S. EPA Contract Laboratory Program, Statement of Work for Organic Analysis,
Multi-Media, Multi-Concentration, 7/85 revision and 1/91 revision.
- c) Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,
U.S. EPA Office of Solid Waste and emergency Response,
Washington, D.C. 20460, November 1986, SW-846, Third Edition.
Revision 0 September 1994, December 1996, Revision 2
- d) The Determination of Inorganic Anions in Water by Ion Chromatography,
Revision 2.1, August 1993
- e) The Determination of Metals and Trace Elements in Water and Waste
Revision 4.4, EMMC Version, EMMC Methods Work Group, 1994
- f) Standard Methods for the Examination of Water and Wastewater,
APHA, AWWA, WPCF, 17th Edition, 1989.
- g) Standard Methods for the Examination of Water and Wastewater,
APHA, AWWA, WPCF, 18th Edition, 1992.
- h) Standard Methods for the Examination of Water and Wastewater,
APHA, AWWA, WPCF, 19th Edition, 1995.
- i) Standard Methods for the Examination of Water and Wastewater,
APHA, AWWA, WPCF, 20th Edition, 1998.
- j) Criteria for Identification of Hazardous and Extremely Hazardous Wastes,
California Code of Regulations (CCR), Title 22.
- k) DIONEX AU 107, R.D.Rocklin and E.L.Johnson, ANAL. CHEM., 1986, 55, 4
- l) Adaptation of method by the Naval Ocean Systems Center, San Diego, Marine Environment Branch, San
Diego, CA 92152-5000
- m) "TOC/TN in Marine Sediments...", SCCWRP Annual Report, 1990-1991, and 1991-1992.
- n) "A Guide to Freeze Drying for the Laboratory...", LABCONCO, 3-53-5/94-Rosse-5M-R3, 1994.
- o) "Lipids Content in Fish Tissues via Accelerated Solvent Extraction...", WWChem, EMTS/MWWD, 1998
- v) Procedures for Handling and Chemical Analysis of Sediment and Water Samples,
Russel H. Plumb, Jr., May 1981, EPA/Corp of Engineers Technical Committee on
Criteria for Dredged and Fill Material, EPA Contract 4805572010.

C. Frequency of Analysis and Type of Sample - 2015

1. Definitions.

D= 1/Day W= 1/Week M= 1/Month Q= 1/Quarter S= Semi-Annual

Constituent	Type of Sample	FREQUENCY OF ANALYSIS			
		Influent	Effluent	Comb_Effluent	Reclaim
Permit Required Testing					
Flow	Recorder/Totalizer	Continuous	Continuous		Continuous
Biochemical Oxygen Demand - Total (5-day)	24hr Composite	D	D	Q	D
Oil and Grease	Grab		W	Q	
pH	Grab		D	Q	D
Settleable Solids	Grab		W	Q	
Temperature			W	Q	
Total Suspended Solids	24hr Composite	D	D	Q	D
Volatile Suspended Solids	24hr Composite				D
Total Dissolved Solids	24hr Composite				M
Turbidity	24hr Composite		W	Q	W
Dissolved Oxygen	Grab		W	Q	
Total Residual Chlorine	Grab		W	Q	
As,Cd,Cr,Cu,Pb,Hg,Ni,Ag,Zn	24hr Composite	M	M	Q	
Sb, Be, Tl	24hr Composite		M	Q	
Se	24hr Composite		M	Q	
Fe, Mn, B					M
Anions (Chloride, Sulfate, Nitrate as N, Fluoride)	24hr Composite				M
Ammonia-Nitrogen	24hr Composite		M	Q	
MBAS	24hr Composite				M
Cyanide	24hr Composite	M	M	Q	
Acrolein and Acrylonitrile	Grab		Q	Q	
Base/Neutral Compounds	24hr Composite		Q	Q	
Benzidines	24hr Composite		Q	Q	
Dioxin	24hr Composite		M	Q	
Percent Sodium	24hr Composite				M
Pesticides, chlorinated	24hr Composite		M	Q	
Phenols, non-chlorinated	24hr Composite		M	Q	
Phenols, chlorinated	24hr Composite		M	Q	
Polychlorinated Biphenyls	24hr Composite		Q	Q	
Purgeable (Volatile) Compounds	Grab		Q	Q	
Tri, Di, & monobutyl tins	24hr Composite		Q	Q	
Radiation	24hr Composite		M	Q	
Toxicity (Acute & Chronic)*	24hr Composite		W	Q	

*Reported monthly in the Toxicity Testing Report by the Biology Section.

D= Daily W= Weekly M= Monthly Q= Quarterly S= Semi-Annual

Constituent	Type of Sample	FREQUENCY OF ANALYSIS			
		Influent	Effluent	Comb_Effluent	Reclaim
Additional Testing					
Total Dissolved Solids	24hr Composite	D			
Volatile Suspended Solids	24hr Composite	D			
Pesticides, organophosphorus	24hr Composite	S	S	S	S
Cations (Ca ²⁺ , Mg ²⁺ , Li ⁺ , Na ⁺ , K ⁺)	24hr Composite	M	M	Q	M
Anions	24hr Composite	M	M	Q	
Fe	24hr Composite	M	M	Q	
Oil and Grease	Grab	Q			Q
pH	Grab	D			
Settleable Solids	Grab	Q			
MBAS	24hr Composite	Q	Q	Q	
Turbidity	24hr Composite	Q			Continuos
Sb, Be, Tl	24hr Composite	M			M
Se	24hr Composite	M			M
Ammonia-Nitrogen	24hr Composite	Q			Q
Cyanide	24hr Composite				Q
Acrolein and Acrylonitrile	Grab	Q			Q
Base/Neutral Compounds	24hr Composite	Q			Q
Benzidines	24hr Composite	Q			Q
Dioxin	24hr Composite	M			Q
Pesticides, chlorinated	24hr Composite	Q			Q
Phenols, non-chlorinated	24hr Composite	Q			Q
Phenols, chlorinated	24hr Composite	Q			Q
Polychlorinated Biphenyls	24hr Composite	Q			Q
Tri, Di, & monobutyl tins	24hr Composite	Q			Q
Percent Sodium	24hr Composite		M	Q	
Purgeable (Volatile) Compounds	Grab	Q			Q
Radiation	24hr Composite	M			Q

D. Laboratories Contributing Results used in this report.

- | | |
|--|--|
| <p>i. Metropolitan Wastewater Chemistry Laboratory (EPA Lab Code: CA00380, ELAP Certificate: 1609)
5530 Kiowa Drive
La Mesa, CA 91942
(619)668-3212
<i>All results except those listed below.</i></p> | <p>vii. City of San Diego - Marine Microbiology and Vector Management
(EPA LabCode: CA01393, ELAP Certificate: 2185)
4918 Harbor Drive, Suite 101
San Diego, CA 92106
(619) 758-2312
<i>Microbiology</i></p> |
| <p>ii. Point Loma Wastewater Chemistry Laboratory (EPA Lab Code: CA01435, ELAP Certificate: 2474)
1902 Gatchell Road
San Diego, CA 92106
(619)221-8765
<i>Process control analyses and wet methods for the plant.</i></p> | <p>viii. City of San Diego - Toxicity Bioassay Laboratory
(EPA Lab Code: CA01302, ELAP Certificate: 1989)
4918 Harbor Drive, Suite 101
San Diego, CA 92106
(619) 758-2347
<i>Bioassays</i></p> |
| <p>iii. North City Wastewater Chemistry Laboratory (EPA Lab Code: CA01436, ELAP Certificate: 2477)
4949 Eastgate Mall
San Diego, CA 92121
(858)824-6009
<i>Process control analyses and wet methods for the plant.</i></p> | <p>ix. Frontier Analytical Laboratory
(EPA Lab Code:CA014455, NELAP- Certificate: 02113CA)
5172 Hillside Circle
El Dorado Hills, CA95762
(916) 934-0900</p> |
| <p>iv. Metro Biosolids Center Chemistry Laboratory (EPA Lab Code: CA01437, ELAP Certificate: 2478)
5240 Convoy Street
San Diego, CA 92111
(858)614-5834
<i>Process control analyses and wet methods for the plant.</i></p> | <p>x. Test America (EPA Lab code: WA00023, CA ELAP Certification: 2425)
2800 George Washington Way
Richland, WA 99354-1613
Telephone# (509) 375-3131
<i>Gross Alpha/Beta Radioactivity</i></p> |
| <p>v. South Bay Water Reclamation Plant (EPA Lab Code: CA01460, ELAP Certificate: 2539)
2411 Dairy Mart Road
San Diego, CA 92173
619.428.7349
<i>Process control analyses and wet methods for the plant.</i></p> | <p>xi. Test America
17461 Derian Ave Suite 100
Irvine, CA 92614
CA ELAP Certification: 2706
Telephone# (615) 726-0177</p> |
| <p>vi. City of San Diego - Water Quality Laboratory (EPA Lab Code: CA00080, ELAP Certificate: 1058)
5530 Kiowa Drive
La Mesa, CA 91942
(619)668-3237
<i>Total Organic Carbon in Wastewater</i></p> | |

Summary and Overview:

The Environmental Chemistry Services (ECS) Section of the Environmental Monitoring and Technical Services (EMTS) Division, Public Utilities Department, performs most of the NPDES and other permit analytical and reporting functions, as well as process control chemical and physical testing for the City of San Diego's E.W. Bloom Point Loma Wastewater Treatment Plant (PLWWTP), North City Water Reclamation Plant (NCWRP), South Bay Water Reclamation Plant (SBWRP), and the Metro Biosolids Center (MBC). The ECS laboratory staff also performs the chemical/physical testing of ocean sediment and fish tissue samples in support of the Ocean Monitoring Program for the City of San Diego's PLWWTP Ocean Outfall and SBWRP Ocean Outfall and the International Boundary and Water Commission's International Treatment Plant outfall. Additionally, laboratory staff provides environmental testing services to various customers, both internal to the City of San Diego and to other external agencies.

The QA/QC activities of the Laboratory are comprehensive and extensive. Of the 45,101 samples received in the Laboratory in 2015, approximately 40.3% were Quality Control (QC) samples, such as blanks, check samples, and standard reference materials. A total of 126 different analyses were performed throughout the year resulting in 259,759 analytical determinations that consist of 116,919 (~43.9%) QC determinations (e.g. blanks, laboratory replicates, matrix spikes, surrogates, etc.) used to determine the accuracy, precision, and performance of each analysis and batch.

There are five (5) separate laboratory facility locations, each is independently certified by the California ELAP (Environmental Laboratory Accreditation Program) for the fields of testing required under California regulations, and one of these laboratories also owns a certification for fields of testing under the Arizona Department of Health Services (ADHS). Copies of these certifications are included as Attachment 1. These are rigorous programs involving continuing independent blind performance testing, biannual comprehensive audits, and extensive documentation requirements. California ELAP and Arizona DHS certify fields of testing for Water, Wastewater, and Hazardous Materials with methods published in the Federal Register, or specifically approved in regulation by the United States Environmental Protection Agency (USEPA). Additionally, the Laboratory performs analyses using methods for which certification does not exist, such as ocean sediment and sea water determinations. These methods have been developed in-house, derived from, or in collaboration with other scientific laboratories (e.g. Scripps Institute of Oceanography, Southern California Coastal Water Research Project, et. al.) and have been used extensively in multi-agency EPA and State sponsored studies over the past several years. Methods of analysis developed for matrices and applications not within ELAP jurisdiction have been adapted from ELAP listed methods to which we apply generally accepted standards of performance and quality control.

Furthermore, the Treatment & Disposal Division and all Public Utilities Department Laboratories maintained International Standards Organization (ISO) 14001 Environmental Management Systems certification. Contract laboratories are also required to use only approved methods for which they hold certification, and/or are approved by the appropriate regulatory agency (e.g. San Diego RWQCB). Copies of their certifications are included as Attachment 2.

The following report summarizes the QA/QC activities during 2015 and documents the laboratory information and certifications for those laboratories which provided data used in NPDES and other permit monitoring or environmental testing during the year.

Laboratories Contributing Results used in this report.

Laboratory Name	EPA Lab Code	ADHS Cert#	ELAP Cert.#	Address	Phone #	Contribution
Alvarado Environmental* Chemistry Laboratory	CA00380	AZ0783	ELAP 1609	5530 Kiowa Drive L Mesa, CA 91942	(619)668-3212	All results except those listed below.
Pt. Loma Wastewater Chemistry Laboratory	CA01435		2474	1902 Gatchell Road San Diego, CA 92106	(619)221-8765	Process Control Analyses and wet method for the treatment plant.
North City Wastewater Chemistry Laboratory	CA01436		2477	4949 Eastgate Mall San Diego, CA 92121	(858)824-6009	Process Control Analyses and wet method for the treatment plant.
Metro Biosolids Center Chemistry Laboratory	CA01437		2478	5240 Convoy Street San Diego, CA 92111	(858)614-5834	Process Control Analyses and wet method for the treatment plant.
South Bay Wastewater Chemistry Laboratory	CA00080		2539	2411 Dairy Mart Road San Diego, CA 92173	(619)428-7349	Process Control Analyses and wet method for the treatment plant.
City of San Diego Water Quality Laboratory	CA01393		1058	5530 Kiowa Drive La Mesa, CA 91942	(619)668-3237	Total Organic Carbon in Wastewater
City of San Diego- Marine Microbiology	CA01302		2185	2392 Kincaid Road San Diego, CA 92101	(619)758-2312	Microbiology
City of San Diego Toxicology Laboratory			1989	2392 Kincaid Road San Diego, CA 92101	(619)758-2341	Bioassays
TestAmerica Laboratories, Inc			2425	2800 George Washington Way, Richland, WA 99354	(509)375-3131	Gross Alpha/Beta Radioactivity
TestAmerica Nashville Division			01168	2960 Foster Creighton Drive CA Nashville, TN 37204	(615)756-0177	Herbicides (2011)
Frontier Analytical Laboratory			02113	5172 Hillsdale Circle CA El Dorado Hills, CA 95762	(916)934-0900	Dioxin/Furan Wastewater and Solids
* Licenced & certification as Arizona Out-of-State Laboratory						

Facilities & Scope:

The Environmental Chemistry Services (ECS) comprises five geographically separated laboratories - the main laboratory facilities located at the Alvarado Joint Laboratory building in La Mesa and the four satellite chemistry laboratories located at Public Utilities treatment plants. Each maintains individual California Department of Drinking Water's Environmental Laboratory Accreditation Program (ELAP) certification in its respective Fields of Testing (FoT). The Alvarado laboratory is also certified by the state of Arizona as an out-of-state laboratory. Each laboratory also has its own USEPA Lab Code as shown in the following table.

Laboratory Facility	Laboratory	Address	Phone	EPA Lab. Code	ELAP Cert. No.
Alvarado Laboratory	Wastewater Chemistry Laboratory	5530 Kiowa Drive, La Mesa CA 91942	619.668.3215	CA00380	1609
Point Loma Satellite Lab	Pt. Loma Wastewater Chemistry Laboratory	1902 Gatchell Rd., San Diego, CA 92106	619.221.8765	CA01435	2474
North City Water Reclamation Plant Satellite Lab	North City Wastewater Chemistry Laboratory	4949 Eastgate Mall, San Diego, CA 92121	858.824.6009	CA01436	2477
Metro Biosolids Center Satellite Lab	Metro Biosolids Center Wastewater Chemistry Lab	5240 Convoy Street, San Diego, CA 92111	858.614.5834	CA01437	2478
South Bay Water Reclamation Plant Satellite Lab	South Bay Wastewater Chemistry Laboratory	2411 Dairy Mart Rd., San Diego CA 92154	619.428.7349	CA01460	2539

The information presented in this report applies to ECS, including all of the laboratories listed above, unless specified otherwise. The main office for ECS is headquartered at the Alvarado laboratory, which also houses the most extensive laboratory facilities of the section. Along with a variety of process control and wet chemistry analyses, the main laboratory also handles all of the trace metals, pesticides/organics determinations, and other analyses. The satellite laboratories are primarily dedicated to process control, wet chemistry, and other analyses to directly support operations of the co-located wastewater treatment plants.

Due to a divisional restructuring in October 2015, the North City Water Reclamation Plant Satellite Laboratory was shifted to the City of San Diego's Water Quality Chemistry Services (WQCS) Section that also consists of the Water Quality Laboratory. With this realignment, the Industrial Waste Laboratory (IWL) was similarly moved to become part of ECS. Final integration to include merging of ECS and IWL databases is anticipated in 2016. Please note that ECS QA data will include that of IWL for the reporting period of January to December 2016.

Environmental Chemistry Services performs most of the NPDES analytical monitoring requirements and other permit process control chemical and physical testing for the:

- E.W. Blom, Point Loma Wastewater Treatment Plant (PLWWTP), NPDES No. CA0107409/ Order No. R9-2009-0001, including the ocean monitoring program.
- North City Water Reclamation Plant (NCWRP), Order No. 97-03.
- Metro Biosolids Center (MBC), no permit, but monitoring requirements contained in Permit No. R9-2009-0001.
- South Bay Water Reclamation Plant (SBWRP), NPDES No. CA0109045/ Order No. R9-2013-0006.

- Ocean monitoring program for the International Boundary and Water Commission's International Treatment Plant.
- Other environmental testing services for various customers, both internal to the City of San Diego and other external public agencies.

A small portion of the analyses required for permit monitoring was outsourced to laboratories certified by ELAP, specifically:

- Gross Alpha- and Beta radiations to Test America Laboratories, Inc. (Richland Division)
- Herbicides to Test America Laboratories, Inc. (Nashville Division)
- Total organic carbon (TOC) and thallium in water to the Water Quality Laboratory, City of San Diego, Public Utilities Department.
- Dioxin and Furans in solids and wastewater was out sourced to Frontier Analytical, and Test America Laboratories.

The City of San Diego pays for additional QC samples (replicates, blanks, and spikes) as a routine quality check on contracted laboratory work. This is beyond the usual and customary practices with contract laboratory work.

Ocean Monitoring:

While there are no recognized State certifications for laboratory analyses of marine environmental samples (e.g. seawater, sediments, various tissues, etc.), the City of San Diego has been a leader in the development and standardization of analytical methods for determinations in these areas.

Many of the methods are novel approaches developed after extensive research and development from other published work (e.g. organotin analyses, sediment grain size, etc.) or adaptations of existing EPA methods (e.g. SW 846 Method 8082 for PCB congeners in sediments, etc.). In all of these cases, we participate in extensive inter-laboratory calibration studies. Some of the most extensive studies have involved several academic/research, public, and private laboratories under the umbrella of the Southern California Coastal Water Research Project (SCCWRP). These studies are repeated periodically as part of the Southern California Bight Regional Monitoring/Survey Project, which is a massive sampling and monitoring program, participated in by all of the major Publicly Owned Treatment Works (POTWs), California Water Resource Control Boards, and research organizations.

Our laboratory is a reference (referee) laboratory for the NRCC (National Research Council of Canada) CARP-2 Certified Reference Material (CRM) for fish tissue. This sample was adopted as the standard reference material for QC requirement of the Southern California Bight Regional Project, and also used worldwide as a standard reference material. Additionally, we have worked with NIST to develop a West Coast marine sediment and fish tissue standard reference material (SRM).

QA/QC Activities Summary:

Report for January 1, 2015 - December 31, 2015.7

The sample distribution for 2015 is significantly changed from 2014; QC sample log numbers were changed in 2015 to account for individual QC samples in batches from a single stock solution. Of the 259,759 analytical determinations made on 45,101 samples received by the Laboratory in 2015 (see table A.) 18,154 or 40.3% were Quality Control (QC) samples; 12.5% were blanks; and 27.7% were check or reference samples.

	Number of Samples	Percent of total samples
Table A. Samples		
Customer/Environmental samples	26,947	59.75%
Quality Control (QC) samples	18,154	40.25%
Total Samples	45,101	100.00%

QC Samples:

Blanks:

FIELD_BLANK	245		0.54%
REAGENT_BLANK	41		0.09%
TRIP BLANK	4		0.01%
METHOD_BLANK	5,367		11.90%
Total Blanks:	5,657		12.54%

Check samples:

External Check samples	5,831		12.93%
Internal Check samples	6,589		14.61%
Low Level MDL Verification	45		0.10%
SRMs (Standard Reference Material)	32		0.07%
Total Check Samples:	12,497		27.71%
Total QC Samples:	18,154		40.25%

A high level of Quality Control is used for laboratory determinations. Of the 259,759 determinations, 43.9% were QC (e.g. blanks, lab replicates, matrix spikes, surrogates, etc.). If calculated for the 259,759 customer determinations only, the percentage increases to 45.0%.

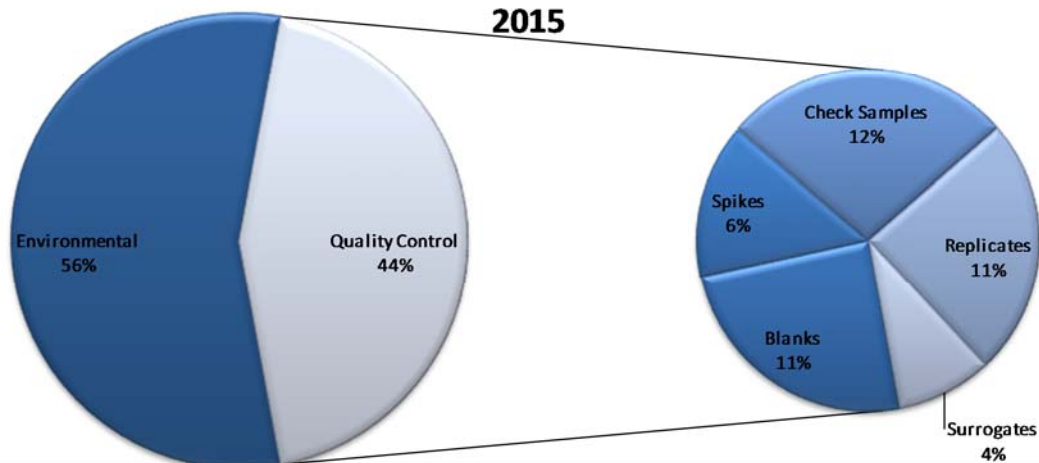
A small percentage (2.81%) of the total analytical batches did not meet internal QA review due to a variety of reasons - e.g. unsuccessful calibration, unacceptable QC performance, outside acceptance criteria, etc. Samples from analytical determinations that were rejected are either reanalyzed, the data is not reported, or data is reported but flagged as having not met data quality objectives and may not be suitable for compliance determination.

7 Data counts (metrics) were obtained on March 07, 2016 and do not include analyses that were underway, but incomplete as of that time. All table data is based on samples collected between January 1, 2015 and December 31, 2015. This data summary is comprehensive and includes all laboratory analyses work for all customers, projects, and programs unless otherwise indicated.

Table A.2. Analyses (results) - 2015

	Number	Percent of total	
Total number of analytes/results determined:	266,368	NA	
Total results not complete ² :	16,024	6.0%	
No. of results for Customer/Environmental Samples ^{1,3}:	259,759	97.5 %	
Total number of rejected results:	6,609	2.70%	
No. of results for blanks ³ :	28,606	10.7%	11.0%
No. of results for matrix spikes ³ :	17,179	6.4%	6.6%
No. of results for Check samples ³ :	32,007	12.0%	12.3%
No. of results for Replicates ³ :	28,539	10.7%	11.0%
No. of results for surrogates ³ :	10,588	4.0%	4.1%
Total QC analyses run ³ :	116,919	43.9 %	45.0 %

**Percent of QC to All Environmental Analyses (including Duplicate Analyses)
2015**



1 – matrix spike, replicates, surrogates are also part of the total for Customer/Environmental samples.

2 – as of March 07, 2016.

3 – percent of QC samples calculated from grand total of 259,759.

NOTE: Analysis, for metrics purposes used in this report, generally refers to a parameter determined in each sample in a batch. Determination of several metals in a sample (e.g. iron, nickel, lead) would equal as three (3) analyses in the expression of totals such as those in the Analyses table on the preceding page. This means of calculation that has been used for many years with batch and method, is a useful comparative measure of laboratory performance and is one of the fundamental constants in applying quality control measures.

	No. of Batches	Percent of total
Total number of analytical batches:	15,407	95.73%
Total number of rejected analytical batches:	235	1.46%
Incomplete batches (as of March 7, 2016):	452	2.81%

Outside laboratories

A small number of permit required analyses are contracted out, as summarized below.

Results from sub-contracted labs.		
Laboratory	Analytes	Total in-house Analytes
Frontier Analytical	2210	0.90%
San Diego Water Quality Laboratory	187	0.08%
Test America	2523	1.03%
Total outside results:	4,920	2.01%

QA Plan:

A copy of our Laboratory's current Quality Assurance Plan is included as Attachment 3. The Quality Assurance Plan was updated in March 2016.

Performance Testing (PT) Studies for 2015:

The Environmental Chemistry Services Laboratories participated in required ELAP and USEPA PT studies throughout the year. Each of the geographically separated laboratory facilities participated individually (as required by ELAP) in 19 PT studies for 2015. PT studies were purchased from ERA and Phenova and were successfully completed. When results submitted were determined to be outside of study acceptance limits, the laboratory reviewed its internal protocols, modified procedures as necessary, and participated in a subsequent study for the analytes in question. A PT study was completed with satisfactory results for all analytes by in-house chemistry laboratories.

The results of the Laboratory PT studies for 2015 are summarized in the following tables.

Alvarado Environmental Chemistry Laboratory: See attachment 6 for copy of reports.

PT Study	Number of Analytes	Number of Acceptable results	Success Rate (%)
HW-0115	1	1	100%
HW-0415	160	150	93.8%
HW-0715	47	47	100%
HW-1015	11	11	100%
WP-0115	26	26	100%
WP-0215	2	2	100%
WP-0315	70	65	92.9%
WP-0415	64	64	100%
WP-0715	1	1	100%
WP-0815	1	1	100%
WP-0915	2	2	100%
WP-1015	12	11	91.7%
Total analytes:	397	381	96%

North City Chemistry Laboratory: See attachment 7 for copy of reports.

PT Study	Number of Analytes	Number of Acceptable results	Success Rate (%)
WP-0415	14	14	100%
Total analytes:	14	14	100%

Metro Biosolids Center (MBC) Chemistry Laboratory: See attachment 8 for copy of reports.

PT Study	Number of Analytes	Number of Acceptable results	Success Rate (%)
WP-0315	5	5	100%
Total analytes:	5	5	100%

Pt. Loma Environmental Chemistry Laboratory: See attachment 9 for copy of reports.

PT Study	Number of Analytes	Number of Acceptable results	Success Rate (%)
WP-0315	12	12	100%
WP-0415	1	1	100%
Total analytes:	13	13	100%

South Bay Wastewater Chemistry Laboratory: See attachment 10 for copy of reports.

PT Study	Number of Analytes	Number of Acceptable results	Success Rate (%)
WP-0115	18	18	100%
WP-0315	1	1	100%
WS-222	1	1	100%
Total analytes:	20	20	100%

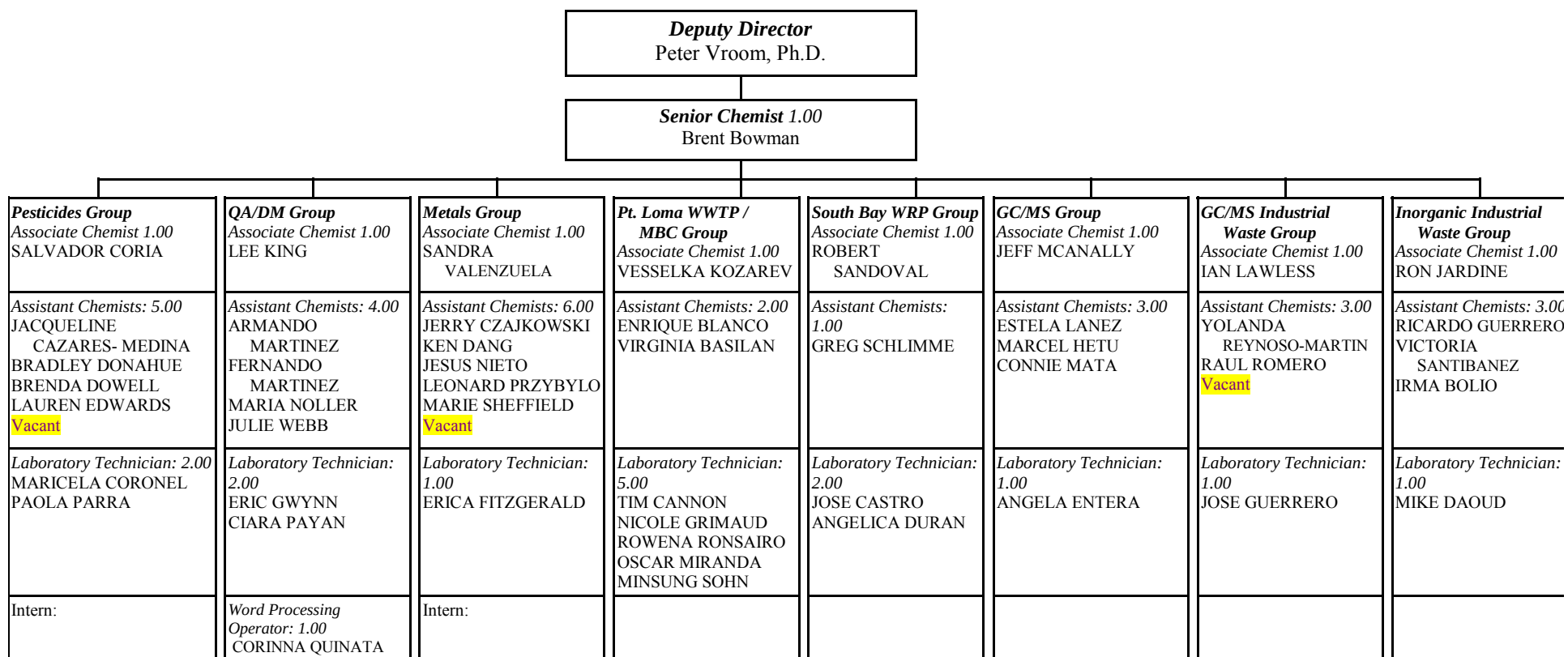
E. Staff Contributing to this Report

Staff Contributing to this Report in 2015

Initials	ID	First Name	Last Name	Signature
EB <i>EB</i>	EBALUYOT	Elvie	Baluyot	<i>Elvie Baluyot</i>
TB	TBAO	Tan	Bao	
VB <i>VB</i>	VBASILAN	Virginia	Basilan	<i>VBasilan</i>
EB <i>EB</i>	EBLANCO	Enrique	Blanco	<i>Enrique Blanco</i>
IB <i>IB</i>	IBOLIO	Irma	Bolio	<i>Irma Bolio</i>
BGB	BBOWMAN	Brent	Bowman	
TC <i>TC</i>	TJCANNON	Tim	Cannon	<i>Tim Cannon</i>
LC	LCARR	Laura	Carr	<i>Laura Carr</i>
JC <i>JC</i>	JCASTRO	Jose	Castro	<i>Jose Castro</i>
JCM	JCAZARES	Jacqueline	Cazares-Medina	<i>M. Jacqueline Cazares Medina</i>
NC	NCOGLAN	Nancy	Coglan	
SC	SCORIA	Salvador	Coria	
MC <i>MC</i>	MCORONEL	Maricela	Coronel	<i>Maricela Coronel</i>
JCM	JCZAJKOWSKI	Jerry	Czajkowski	
KD <i>KD</i>	KDANG	Ken	Dang	<i>Ken Dang</i>
MM	MMDAoud	Mike	Daoud	
BD <i>BD</i>	BDONAHUE	Brad	Donahue	<i>Brad Donahue</i>
BLD <i>BLD</i>	BDOWELL	Brenda	Dowell	<i>Brenda Dowell</i>
ACD <i>ACD</i>	ADURAN	Angelica	Duran	<i>Angelica Duran</i>
LBE <i>LBE</i>	LEDWARDS	Lauren	Edwards	<i>Lauren Edwards</i>
AJE <i>AJE</i>	AJENTERA	Angela	Entera	<i>Angela Entera</i>
JTF	JFINDLEY	Jeff	Findley	
EFITZ	EFITZGERALD	Erica	Fitzgerald	<i>Erica Fitzgerald</i>
KG	KGENZ	Kenneth	Genz	
NG <i>NG</i>	NGRIMAUD	Nicole	Grimaud	<i>Nicole Grimaud</i>
JGB <i>JGB</i>	JDGUERRERO	Jose	Guerrero	<i>Jose D. Guerrero</i>
RG	RGUERRERO	Ricardo	Guerrero	
EG	EGWYNN	Eric	Gwynn	
MH <i>MH</i>	MHETU	Marcel	Hetu	<i>Marcel Hetu</i>
RJ	RJARDINE	Ron	Jardine	
WLJ	WLJOHNSON	Wendy	Johnson	
LK <i>LK</i>	LKING	Lee	King	<i>Lee N. King</i>
VK <i>VK</i>	VKOZAREV	Vesselka	Kozarev	<i>V. Kozarev</i>
EL <i>EL</i>	ELANEZ	Estela	Lanez	<i>Estela V. Lanez</i>
CL	CLANZL	Caylyn	Lanzl	
ITL <i>ITL</i>	ILAWLESS	IAN	Lawless	<i>San Talara</i>
LL	LLI	Lin	Li	
AM <i>AM</i>	AMARTINEZ	Armando	Martinez	<i>Armando Martinez</i>
FM <i>FM</i>	FMARTINEZ	Fernando	Martinez	<i>Fernando Martinez</i>
CGM <i>CGM</i>	CONNIEM	Connie	Mata	<i>Connie Mata</i>
JM <i>JM</i>	JMCANALLY	Jeff	McAnally	<i>Jeff McAnally</i>
OM <i>OM</i>	OMIRANDASAND	Oscar	Miranda Sandoval	<i>Oscar Sandoval</i>
LN	LNANNINGA	Leslie	Nanninga	
JN <i>JN</i>	JNIETO	Jesus	Nieto	<i>Jesus Nieto</i>
MN <i>MN</i>	MNOLLER	Maria	Noller	<i>Maria Noller</i>
LP <i>LP</i>	LPANTOJA	Lorena	Pantoja	<i>Lorena Pantoja</i>
PP <i>PP</i>	PPARRA	Paola	Parra	<i>Paola Parra</i>
CP <i>CP</i>	CPAYAN	Ciara	Payan	<i>Ciara Payan</i>
LP <i>LP</i>	LPRZYBYLO	Leonard	Przybylo	<i>Leonard Przybylo</i>
CAQ	CQUINATA	Corinna	Quinata	<i>Corinna Quinata</i>
YXR <i>YXR</i>	YREYNOSOMAR	Yolanda	Reynoso Martin	<i>Yolanda Reynoso Martin</i>
RR	RROMERO	Raul	Romero	
RR <i>RR</i>	RRONSAIRO	Rowena	Ronsairo	<i>Rowena Ronsairo</i>
RS <i>RS</i>	RSANDOVAL	Robert	Sandoval	<i>Robert Sandoval</i>
VS	VSANTIBANEZ	Victoria	Santibanez	
GS <i>GS</i>	GSCHLIMME	Greg	Schlimme	<i>Greg Schlimme</i>
MS <i>MS</i>	MSHEFFIELD	Marie	Sheffield	<i>Marie Sheffield</i>
MS <i>MS</i>	MSOHN	Minsung	Sohn	<i>Minsung Sohn</i>
MRS <i>MRS</i>	MSTEWART	Michael	Stewart	<i>Michael Stewart</i>
OT	OTANJA	Olga	Tanja	
SV <i>SV</i>	SVALENZUELA	Sandra	Valenzuela	<i>Sandra Valenzuela</i>
JWB <i>JWB</i>	JWEBB	Julie	Webb	<i>Julie Webb</i>

Figure 1. Chemistry Laboratory Organization Chart.

Public Utilities Department
Environmental Monitoring and Technical Services Division
Environmental Chemistry Services



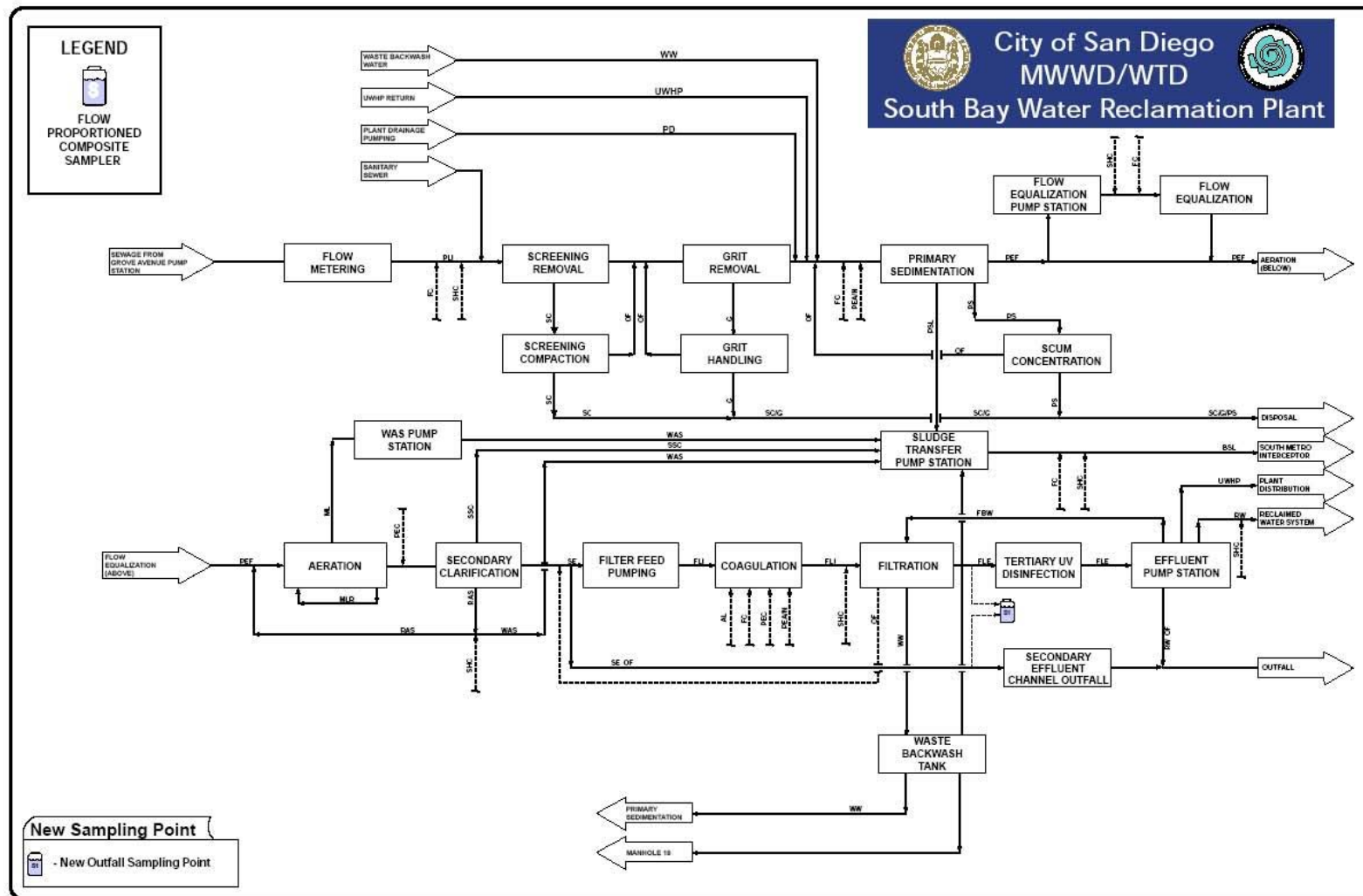


Figure 1 - New Effluent to Ocean Outfall Sample Point

South Bay Water Reclamation Plant
Effluent to Ocean Outfall Sampling System
June 2007

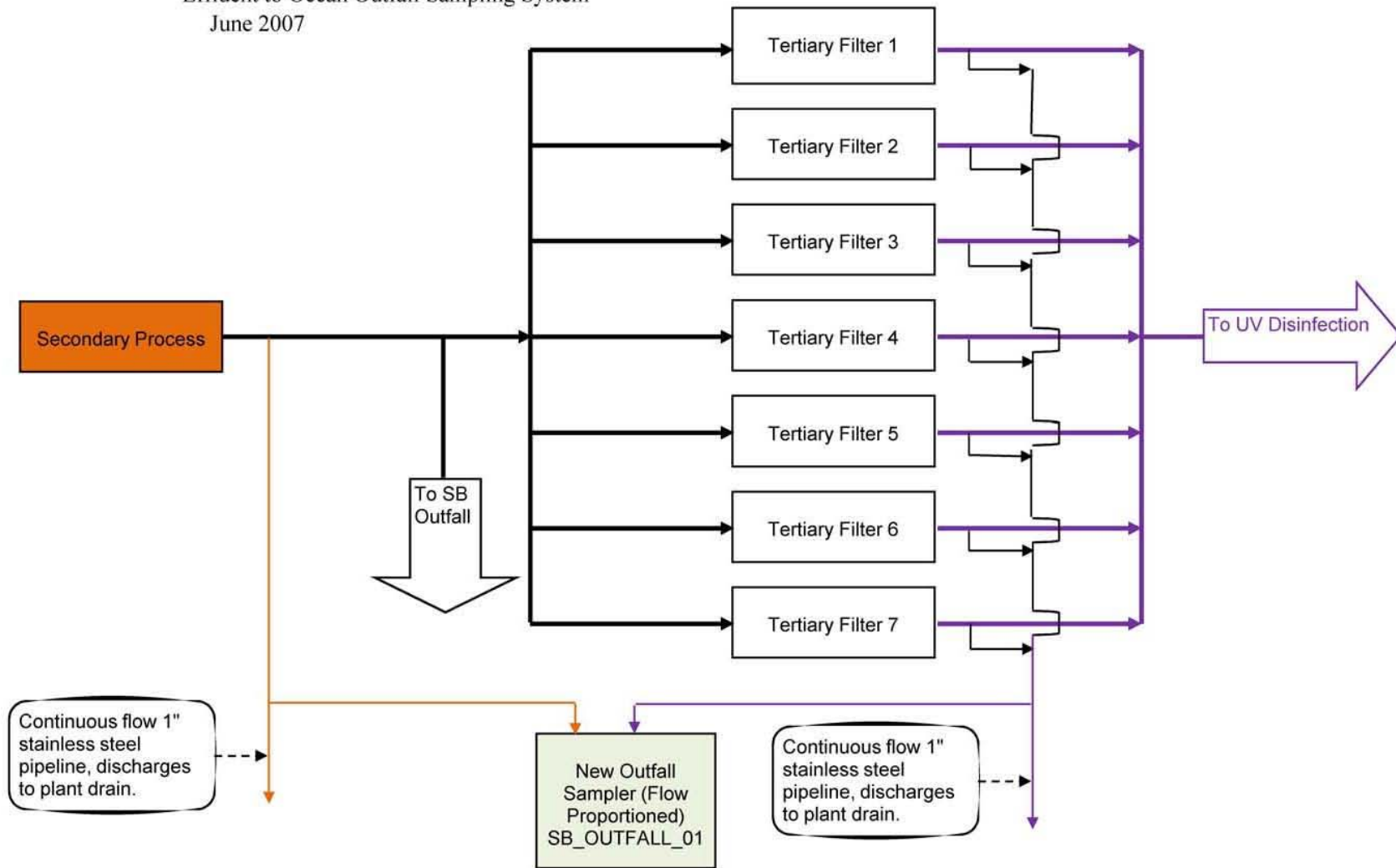


Figure 2 - Detail of Effluent Sampling System