2014 Annual Reports and Summary Point Loma Wastewater Treatment Plant & Ocean Outfall

City of San Diego
PUBLIC UTILITIES
Water & Wastewater

Monitoring and Reporting
Program No. R9-2009-0001
NPDES No. CA 0107409

CERTIFIED
Public Utilities Department
Continual Improvement, Prevention of Pollution, Regulatory Compliance
ISO 14001

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THE CITY OF SAN DIEGO

June 30, 2015

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

Attn: POTW Compliance Unit

Dear Mr. Gibson:

Enclosed is the 2014 Pt. Loma Wastewater Treatment Plant Ocean Outfall Annual Reports and Summary, as specified in discharge permit Order No. R9-2009-0001, NPDES No. CA0107409 (Point Loma).

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Sincerely,

Peter Vroom, Ph.D.
Deputy Director
Environmental Monitoring & Technical Services Division

BGB/caq

cc: EPA Region 9
San Diego County Department of Environmental Health
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File

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City of San Diego
Public Utilities Department

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I. Introduction

A. Executive Summary

Purpose:

This report meets the annual reporting requirements as specified in San Diego Regional Water Quality Control Board, Order No. R-2009-0001[1] (NPDES Permit No. CA0107409) for the E. W. Blom Point Loma Wastewater Treatment Plant (PLWTP). It also serves as a comprehensive historical record and reference of operational and compliance metrics.

Background:

The Point Loma Wastewater Treatment Plant is located at 1902 Gatchell Road, San Diego, California and is the main treatment facility in the Metropolitan Wastewater System. Located on a 40-acre site at the western end of Point Loma, the plant went into operation in 1963 to serve the growing needs of the region. The plant serves approximately 2.2 million people and treats approximately 152 million gallons (5-year average) of wastewater per day with a maximum capacity of 240 million gallons per day (mgd). In 1993, the outfall was extended from a length of two miles to its present length of four and half miles off the coast of Point Loma. The 12-foot diameter outfall pipe terminates at a depth of approximately 320 feet in the Pacific Ocean in a Y-shaped diffuser structure to ensure dispersal of effluent. The Advanced Primary[2] Treatment system includes chemically enhanced primary sedimentation and anaerobic biosolids processing. For a detailed discussion of the plant and treatment process see subsection D. and section III. Plant Operations Summary.

[1] This is a Clean Water Act section 301(h) modified permit (Clean Water Act), as modified by the Ocean Pollution Reduction Act of 1994 (OPRA).

[2] Sometimes called Chemically Enhanced Primary Treatment (CEPT).

The following table summarizes the 2014 results, as annual averages or annual ranges, of analyses obtained during the monitoring of the effluent at the PLWTP.

2014 NPDES Compliance Assessment for Conventional Pollutants for the Point Loma WWTP (Order No. R9-2009-0001/NPDES No. CA0107409)				
Parameter	**NPDES Permit Limits**		**Values and Annual Ranges**	**Note**
BOD_5	Mean Annual % Removal	≥ 58 %*	66.4%	System-wide (monthly averages).
TSS	Mean Monthly % Removal	≥ 80 %	90.6 – 93.6%	System-wide (monthly averages).
	Monthly Average	75 mg/L	23 – 32	
	Mass Emissions	13,598 mt/yr	5,204	
Oil and Grease	Monthly Average	25 mg/L	8.9 – 11.0	
		42,743 lbs/day	10,726 – 12,935	
	Weekly Average*	40 mg/L	7.9 – 14.2	
		68,388 lbs/day	8,941 – 17,071	
	Maximum at any time	75 mg/L	21.4	
		128,228 lbs/day	24,648	
Settleable Solids	Monthly Average	1.0 mL/L	ND – 0.4	
	Weekly Average*	1.5 mL/L	ND – 0.6	
	Maximum at any time	3.0 mL/L	1.9	
Turbidity	Monthly Average	75 NTU	33– 46	
	Weekly Average*	100 NTU	30.1 – 51.7	
	Maximum at any time	225 NTU	70.5	
pH	Range	6.0 – 9.0 pH	7.08-7.48	

* = **Weekly Average:** defined as the highest allowable average of daily discharges over a calendar week (Sunday through Saturday). Data averaged from 29-Dec-2013 to 27-Dec-2014 as per definition of weekly average definition.

Other Key metrics for 2014	Annual Daily Average	Annual Total (million gals.)
Effluent Flow (mgd)	139.2	50,815

Parameter	Annual Daily Average (mg/L)	System-wide Removal (%)	Plant Removal (%)	Annual Mass Emission (metric tons)
TSS[3]	27	92.5	92.0	5,204
BOD[4]	109	69.0	66.4	21,008

Compliance:

The major permit discharge limitations including flows, TSS and BOD removals were within discharge requirements. The required monitoring program creates over 15,000 opportunities to be in non-compliance, as well as several dozen annual Mass Emissions Benchmarks applicable to the discharge from the PLWTP.

[3] Total Suspended Solids; mg/L, i.e. parts per million
[4] Biochemical Oxygen Demand; mg/L

B. Explanatory Notes

The purpose of this document is to both meet the requirements of the Monitoring and Reporting Program (MRP) in Order No. R9-2009-0001, NPDES Permit No. CA0107409, and to provide a reference source and resource tools for both regulatory agencies and City staff and their consultants. To this end, the past year's data are presented in tabular and graphical form. Monitoring results only reported annually are presented, as well as the special items and discussions itemized in Order No. R9-2009-0001.

This document is comprehensive, including supporting information on analytical 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.

For averaging and other calculations, "less than" and "not detected" (nd) values were treated as zero. In many parts of the report zero values are found. Our Laboratory Information Management System reads "less than" values as zero in calculating summary values such as monthly or annual averages. When zeros are found, the reader can reasonably apply the method detection limits (MDL) in evaluating the 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. MDLs are typically included in the summary tables.

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 ±100% where the result is at or near the MDL. Only at concentrations approximately 5 times the MDL is the confidence interval at ±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 they deserve. Please reference the chart axis scales.

E" Qualifier, estimated concentrations:

Ocean data for chlorinated pesticides and PCB congeners contains data that are qualified with a prefixed "**E**" (see example below). This indicates Estimated concentrations. Analytical technique is sufficiently specific and sensitive enough (GC-MS-MS) so that qualitative identification has high confidence while the quantitative data are below 40CFR136 confidence intervals for MDL concentrations. The concentrations reported with this qualifier indicate that one or more tests identified the compound was present but below detection limits for quantification. When reported as part of annual averages, an "E" qualifier may accompany average concentration values either below or above MDLs.

Analyte	MDL	Units	SD-14 2001 Avg	SD-17 2001 Avg	SD-18 2001 Avg	SD-19 2001 Avg	SD-20 2001 Avg	SD-21 2001 Avg	RF-1 2001 Avg
Hexachlorobenzene	13.3	UG/KG	<13.3	<13.3	<13.3	<13.3	E3.7	<13.3	**E2.8**
BHC, Gamma isomer	100	UG/KG	ND	ND	ND	ND	ND	ND	ND
Heptachlor	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
Aldrin	133	UG/KG	ND	ND	ND	ND	ND	ND	ND
Heptachlor epoxide	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
o,p-DDE	13.3	UG/KG	<13.3	E43.5	<13.3	E107.0	<13.3	<13.3	**E22.0**
Alpha Endosulfan	133	UG/KG	ND	ND	ND	ND	ND	ND	ND
Alpha (cis) Chlordane	13.3	UG/KG	<13.3	<13.3	ND	<13.3	<13.3	ND	<13.3
Trans Nonachlor	20	UG/KG	E11.3	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0
p,p-DDE	13.3	UG/KG	713.0	1460.0	459.0	2030.0	618.0	693.0	712.0
Dieldrin	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
o,p-DDD	13.3	UG/KG	ND	ND	ND	<13.3	<13.3	<13.3	<13.3
Endrin	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
o,p-DDT	13.3	UG/KG	<13.3	ND	ND	<13.3	<13.3	ND	<13.3
p,p-DDD	13.3	UG/KG	E7.5	E5.5	<13.3	<13.3	E7.8	<13.3	E18.2
p,p-DDT	13.3	UG/KG	E5.9	<13.3	<13.3	<13.3	E5.4	<13.3	<13.3
Mirex	13.3	UG/KG	<13.3	ND	ND	ND	ND	ND	ND

nd= not detected
NA= not analyzed
NS= not sampled
E=estimated value, value is less than the Method Detection Limit but confirmed by GC/MS-MS

Variation in summary data in tables

Very small differences may occur (<0.1%), between tables for annual or monthly averages, totals, and other[5] statistical summary data due to rounding differences or how the underlying data are treated. For example, the computerized report programs may perform summary calculations using daily values (even though only monthly values display on the table) or monthly averages. There will be small rounding variation between the two approaches.

Typically, mass emissions reported in the monthly summary tables are calculated from the monthly averages shown in the table. In these tables, raw data are rounded one significant figure on the intermediate result. A calculation rounded only after the final result will generally be slightly different in the last significant figure. Additionally, statistical summary data of calculated values (e.g. mass emissions, dry tons, etc.) may be calculated from monthly averages or using the annual average data. This also may introduce variation that is statistically insignificant.

[5] e.g. mass emissions, percent removals, etc.

C. Overview of the 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 are provided at the PLWTP and the Metro Biosolids Center (MBC).

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 comprise 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 network 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.

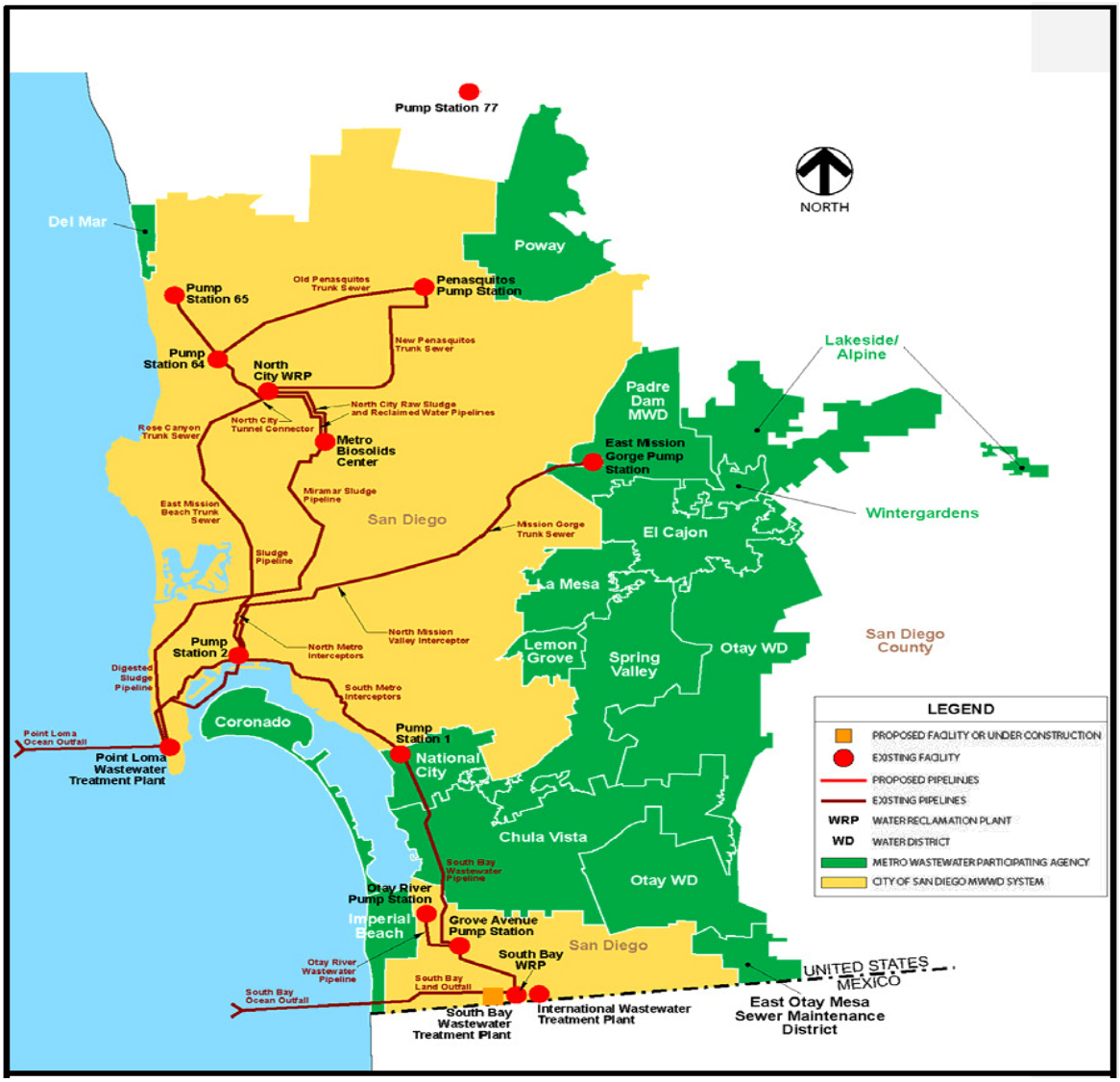
The PLWTP is the largest of the wastewater treatment plants in the System and is the terminus of the system. It is an advanced primary treatment WWTP that uses chemical addition to increase performance of the primary clarifiers. The PLWTP discharges effluent through the Point Loma Ocean Outfall (PLOO). As an advanced primary treatment WWTP, performance and effluent limits are singly determined by effluent quality, but also against the California Ocean Plan and the Basin Plan that, combined, 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 an average daily flow rate of 139 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 South Bay Ocean Outfall (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 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 is certified in ISO[6] 14001, Environmental Management Systems.

[6] International Organization for Standardization.

D. Overview of Point Loma Wastewater Treatment Plant

The Point Loma Wastewater Treatment Plant (PLWTP) is the largest treatment facility in the Metropolitan Wastewater System. The facility is located on a 40 acre site on the Fort Rosecrans military reservation and adjoins the Cabrillo National Monument at the southern tip of Point Loma in the City of San Diego. The plant was first put into operation in 1963 discharging primary treated wastewater 2.5 miles off the coast of Point Loma. In 1993, the existing outfall was lengthened to 4.5 miles which extends 320 feet below the surface in a Y-shaped diffuser to provide for a wide dispersal of effluent into ocean waters.

Presently, the plant is an advanced primary treatment plant capable of removing 85% to 90% of the influent solids and processes approximately 155 million gallons of sewage per day generated by about 2.2 million people. It is the terminal treatment plant in the Metro System. The removed solids are treated in anaerobic digesters before being pumped to the MBC. The current plant configuration can treat up to 240 mgd average daily flow and 432 mgd peak wet weather flow.

Removed solids are anaerobically digested on site. The digestion process yields two products: methane gas and digested biosolids. The methane gas is utilized onsite to fuel electrical generators that produce enough power to make the PLWTP energy self-sufficient. Additional co-generation of electrical power comes from on-site hydroelectric generator utilizing the millions of gallons of daily effluent flow and the energy in the approximately 90-foot drop from the plant to outfall. The plant sells the excess energy it produces to the local electricity grid, offsetting the energy costs at pump stations throughout the service area. The biosolids are conveyed, via a 17-mile pipeline, to the Metro Biosolids Center for dewatering and beneficial use (e.g. soil amendments and landfill cover) or disposal.

The Point Loma Wastewater Treatment Plant earned the 2013 Platinum Peak Performance Award from the National Association of Clean Water Agencies in recognition of twenty years of 100% compliance with National Pollution Discharge Elimination System permit requirements.

E. Discussion of Compliance Record

All permit limits and benchmarks are shown for reference in Chapter 2, Influent and Effluent Data, of this report.

Chemical and Physical Parameters

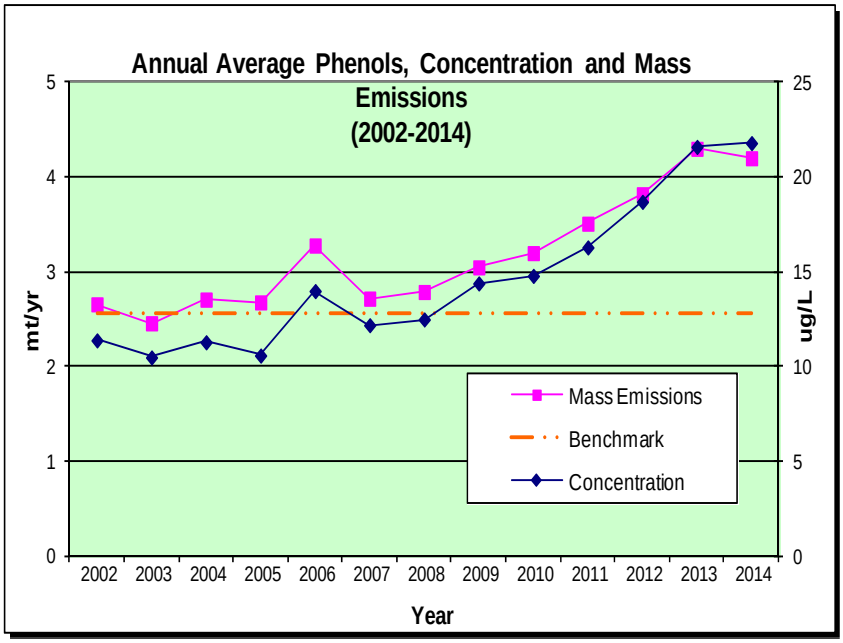
The Point Loma Wastewater Treatment Plant met the two key discharge limits based on annual performance, including BOD (Biochemical Oxygen Demand) annual average removal and TSS (Total Suspended Solids) mass emissions.

Annual Requirement	**2014 Annual Average System-wide Removal** (%)	Plant Removal (%)
BOD - met the required ≥58% BOD removal on both the system-wide (required) and plant-only basis.	69.0	66.4
	2014 Annual Mass Emission(metric tons)	
TSS - Mass emission of TSS shall be no greater than 15,000 mt/yr.	5,204	

Other chemical parameters, microbiology, and toxicity.

Note: Permit limits are detailed in Section 1 of this report and effluent data are presented in summary tables in section 2 of this report.

Mass Emissions Benchmarks:



All Mass Emissions Benchmarks were met with the continued exception of non-chlorinated phenols. The Mass Emissions Rate (MER) of 4.20 metric tons/year, for non-chlorinated phenols[7] was higher than the bench mark of 2.57 metric tons/year and lower than last year's 4.30 metric tons.
This was based on an average concentration of 21.8 ug/L, which represents approximately 23 pounds per day. On average the plant removed 17.1% of the phenol.

[7] All found was as phenol itself.

Tijuana Interceptor Closure Summary

The Tijuana Interceptor (emergency connection) continues to be a non-factor in the operation of the Metropolitan (Metro) Wastewater System and Point Loma WWTP operations. We received no flows from the connector during the year. There are no monitoring data to report and the previously included section discussing the interceptor in the annual reports has been discontinued.

According to the International Boundary Water Commission's staff reports and our flow meter section data, there was no flow of wastewater through the Tijuana Interceptor for 2014. IBWC staff reported that the emergency connection was not open during 2014.

No samples were taken the entire year of 2014.

F. Plant Facility Operation Report

POINT LOMA 2014 ANNUAL FACILITY REPORT
Document prepared under the direction of Plant Superintendent K.C. Shankles.

The facility report addresses Process Control concerns and considerations and summarizes Plant Operations and Engineering activities.

□ □ □

PROCESS CONTROL: FACTORS IMPACTING PLANT PERFORMANCE 2014
The following information is being reported in an effort to identify some of the factors, operational and otherwise, that may have impacted plant performance during 2014. Much of the information contained herein is based on assumptions regarding plant performance for this period. The main point of this effort is to continue identifying possible factors influencing plant performance which in turn will help to more effectively operate this facility. The information is presented in chronological order when possible. **Please note that the numerical values used here are largely based on analysis performed by Plant staff at the Process Laboratory and have not always been validated for official reporting purposes.**

Areas that will be covered include: influent temperature and seasonal impacts, sludge blanket levels in the sedimentation basins and raw sludge pumping volumes, plant performance and coagulation chemical application.

INFLUENT TEMPERATURE AND SEASONAL IMPACTS
Influent temperature variations at the Point Loma Facility are usually minimal throughout the year. The temperature of the influent flow, for 2014, ranged from 71.2 to 83.3degrees Fahrenheit. Typically, the influent temperature changes are very subtle as each season progresses. The most pronounced changes in this parameter occur during the winter, after the rainy season begins and during the summer, after periods of sustained warm weather. Temperature changes related to rain storms were normal in 2014. The effect of these temperature changes is difficult to analyze due to the number of variables affected by the rainfall. The average daily influent temperature was calculated for the same period of time seen previously in this report, and the results are recorded below.

For The Period from January 1 through December 31	
Year	Average Daily Influent Temperature
2004	76.7 degrees Fahrenheit
2005	76.8 degrees Fahrenheit
2006	77.0 degrees Fahrenheit
2007	77.0 degrees Fahrenheit
2008	77.5 degrees Fahrenheit
2009	77.6 degrees Fahrenheit
2010	77.0 degrees Fahrenheit
2011	76.3 degrees Fahrenheit
2012	77.4 degrees Fahrenheit
2013	77.6 degrees Fahrenheit
2014	78.8 degrees Fahrenheit

SLUDGE BLANKET LEVELS AND RAW SLUDGE PUMPING VOLUMES
In most circumstances it is assumed that maintaining lower sludge blanket levels in sedimentation basins and increased raw sludge pumping will produce a plant effluent with a lower total suspended solids (TSS) concentration. Review of data, for daily average sludge blanket levels and daily average total raw sludge pumped shows that the averages for the last ten years were too close to draw any conclusions about the validity of the above assumption.

The average effluent TSS concentration was calculated for, , 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013 and 2014. This average was then compared to the average sludge blanket level, for all basins in operation, and the average daily raw sludge pumping volume for this same period. The information below reflects the data gathered for this comparison.

For The Period from January 1 through December 31			
Year	Effluent TSS Average Concentration	Average Daily Sludge Blanket Level	Average Daily Raw Sludge Volume
2003	42.0 mg/L	158.0 inches	1.15 MGD
2004	42.6 mg/L	168.0 inches	1.09 MGD
2005	40.7 mg/L	159.0 inches	1.11 MGD
2006	34.9 mg/L	161.0 inches	0.99 MGD
2007	33.9 mg/L	166.0 inches	0.95 MGD
2008	32.2 mg/L	156.4 inches	1.04 MGD
2009	32.2 mg/L	166.2 inches	1.17 MGD
2010	37.1 mg/L	166.5 inches	1.15 MGD
2011	41.3 mg/L	165.5 inches	1.17 MGD
2012	37.1 mg/L	171.0 inches	1.18 MGD
2013	33.5 mg/L	172.0 inches	1.22 MGD
2014	27.3mg/L	165.0 inches	1.12 MGD

PLANT PERFORMANCE

The patented PRISC-CEPT (Peroxide Regeneration of Iron for Sulfide Control and Chemically Enhanced Primary Treatment) technology in partnership with US Peroxide was utilized in 2014. Essentially, the process consists of ferrous chloride addition at Pump Station 1 for hydrogen sulfide control, hydrogen peroxide addition at Pump Station 2 to regenerate the available iron, hydrogen peroxide addition upstream of PLWTP for regeneration of the available iron, and then ferric chloride addition at the plant for coagulation at a target dose rate of 10.5 mg/L, increased to 12.5 in August 2013. In addition, the PRISC process has been implemented upstream of PLWWTP and North City Water Reclamation Plant (NCWRP). City staff is looking at additional sites within the Metro System to implement the PRISC-CEPT process.

The table below demonstrates the average daily gallons of each chemical utilized in the treatment process at the Pump Stations as well as Point Loma Wastewater Treatment Plant for 2007 (baseline) and 2014. For comparison purposes, the average gallons per day from January 1 – December 31 will be utilized for both years. It should be noted that the ferric chloride and anionic polymer application at PLWTP is flow paced. The ferrous chloride used for hydrogen sulfide control at PLWTP is dependent on the digester gas hydrogen sulfide levels.

1/1 -12/31 2007 Daily Average	Ferric Chloride gallons	Ferrous Chloride gallons	Anionic Polymer lbs	Hydrogen Peroxide Gallons
Pump Station 1	0	4034	0	0
Pump Station 2	2317	0	0	0
PLWTP	6937*	1346	189*	0
Total	9254	5380	189	0

*Flow paced

1/1 – 12/31 2014 Daily Average	Ferric Chloride gallons	Ferrous Chloride gallons	Anionic Polymer Lbs	Hydrogen Peroxide gallons

Pump Station 1	0	4633	0	0
Pump Station 2	0	0	0	862
PLWTP	2995*	3167	199*	740
Total	2995	7800	199	1602

*Flow paced

The PRISC-CEPT technology has proven to provide TSS and BOD removal rates well above the permit requirements, while reducing the reliance on iron by regenerating the available iron, reducing the amount of iron in the effluent, and reducing costs.
Turbidity testing, at the sedimentation basin effluents, continued in 2014. This has continued to help identify basins where mechanical or other problems are occurring. Analysis of 24 hour discrete effluent samples for TSS concentration continues on an as-needed basis and is providing data on diurnal variations in plant performance. Data from this analytical work has been and will be used to help develop more effective chemical dosing strategies in the plant.

COAGULATION CHEMICAL APPLICATION

Data for ferric chloride and anionic polymer doses was reviewed to determine the impact that rates of product application have on plant performance. The average daily dose for each chemical was calculated and compared to the TSS and BOD concentrations and removal rates.

For The Period from January 1 through December 31						
Year	Ferric Chloride	Polymer	Average Effluent TSS Concentration	Average Effluent TSS Removal Rate	Average Effluent BOD Concentration	Average Effluent BOD Removal Rate
	Average Daily Dose					
2004	29.7 mg/L	0.17 mg/L	42.6 mg/L	85.2%	101.8 mg/L	60.2%
2005	26.5 mg/L	0.17 mg/L	40.7 mg/L	85.1%	104.5 mg/L	58.4%
2006	24.0 mg/L	0.14 mg/L	34.9 mg/L	87.7%	101.8 mg/L	62.3%
2007	24.0 mg/L	0.14 mg/L	33.9 mg/L	89.1%	95.3 mg/L	68.4%
2008	15.0 mg/L*	0.14 mg/L	32.2 mg/L	88.2%	96.0 mg/L	65.5%
2009	10.9 mg/L*	0.14 mg/	32.0 mg/L	89.6%	100 mg/L	65.5%
2010	10.7 mg/L*	0.14 mg/L	37.1 mg/L	88.3%	104 mg/L	63.6%
2011	10.5 mg/L*	0.14 mg/L	41.3 mg/L	87.5%	108 mg/L	62.0%
2012	10.4 mg/L*	0.14 mg/L	37.2 mg/L	89.4%	116 mg/L	62.0%
2013	11.3 mg/L	0.16 mg/L	33.5 mg/L	90.4%	106 mg/L	63.0%
2014	12.5 mg/L	0.17 mg/L	27.3 mg/L	92.1%	109 mg/L	66.4%

*PRISC related reduction

SPECIAL PROJECTS

On September 3, 2008 PLWTP initiated operation of a prototype effluent disinfection system. This was implemented because of a recent determination by USEPA that bacterial water quality objectives in the San Diego Region apply surface to bottom, up to three nautical miles from shore. USEPA's interpretation of the applicability of bacterial objectives was incorporated into the requirements of Order Number R9-2009-0001 NPDES Number CA0107409. In 2014, Environmental Monitoring and Technical Services (EMTS) along with Plant Staff collected samples and compiled data to determine the ability of the plant to comply with both the bacterial objectives and chlorine residual parameters in the NPDES permit. Continuous monitoring of the chlorine residual was incorporated into the new permit. Plant staff initiated a search to find an available technology that would provide reliable monitoring with the quality of the plant's effluent. This has proved to be very difficult due to the nature of the application, the effluent quality and available technology. Plant Staff continues to attempt to find an appropriate on line metering device. In 2012, Brown and Caldwell were commissioned to assist in finding a continuous monitor that will work with the plant's effluent characteristics.

There has been only occasional detectable total chlorine residual in the manual grabs of effluent. The in-line continuous monitoring equipment has not detected total chlorine residual in the effluent during this time period. A new monitoring technology was purchased to be installed and tested in 2015. If this unit is found to be successful the result of this new technology may allow the implementation of continuous chlorine residual monitoring at Point Loma. Laboratory testing according to the previously approved protocols is being continued.

CONCLUSIONS

Plant performance in the year of 2014 exceeded all NPDES Permit requirements.

ENGINEERING REPORT 2014

The following projects were progressing started at the Point Loma Wastewater facility during 2014:
Distributed Control System upgrade to Ovation
Grit Improvement Project
Digester Cleaning (N2P and C2P)
Digester Roof Repair N1P and N2P
South Effluent outfall Channel Repair
Beneficial Use of Digester Gas
Water Softener Replacement

Status of the Operations and Maintenance Manual

Point Loma WWTP:

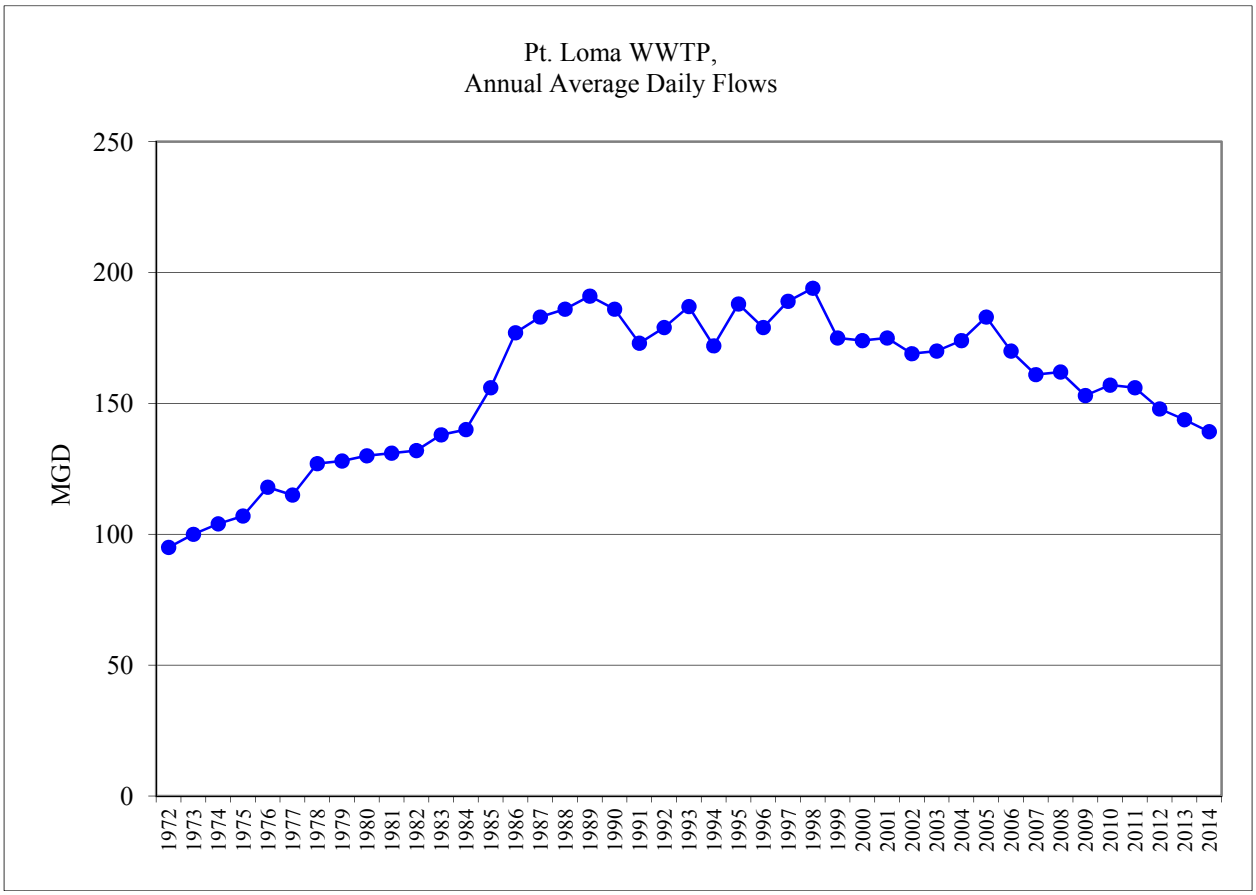
There is an approved O&M Manual for the PLWTP. Plant staff continues to review and update the Manual and Standard Operating Procedures (SOP's) as necessary to keep current with changes in equipment, processes, and standards of practice. New procedures are included as needs are identified. For example, PLWTP Staff, in conjunction with the Safety Staff, have developed and established a standard Lock-Out/Tag-Out Program to serve all PUD Facilities.

Plant Personnel continue the ISO certification and operate the PLWTP facility under the guidelines of the Environmental Management System established under our ISO 14001 program. This program has helped to organize and consolidate facility SOP's, and has been effective in enhancing plant personnel's awareness of industrial and environmental issues as they relate to the work place.

G. Correlation of Results to Plant Conditions

Flow

The 2014 daily average influent flow to the Point Loma WWTP was 139.2 MGD.



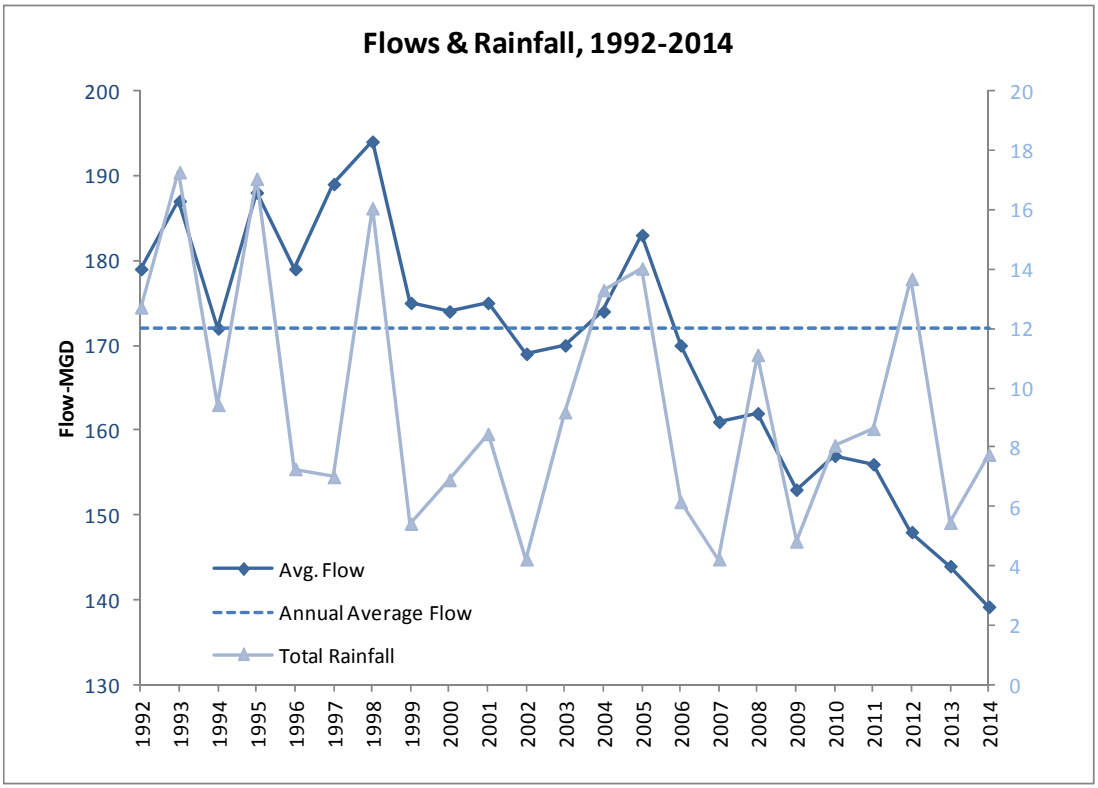
Despite predictions of water usage generated in the 1970s and '80s based on population growth, the data show a continued reduction in the wastewater flow. It appears that the reduced flows caused by drought-induced water conservation efforts have become permanent. In the past 20-years, there is no discernible increase in flows on a sustained basis. In fact, since 1987 the regression line shows a decrease in flow rates. Prior to 2007 there was a significant correlation between rainfall and flow rates (below graph).

In 2014 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)	System Return Stream (million gals)	Net removed from Metro (million gals)	SBWRP Distributed Recycled Water (million gals)	NCWRP Reclaimed Water Flow to Distribution System (million gals)
2014	2,908	1075	586	2,291	1,216	2,428
2013	2,948	1,171	590	2,343	1,172	2,182
2012	2,942	1,194	479	2,441	1,247	2,082
2011	3,000	1,288	505	2,465	1,177	1,831
2010	3,003	1,248	571	2,404	1,156	1,588
2009	3,042	957	564	2,458	1,501	1,672
2008	3,173	1,167	601	2,555	1,388	1,731
2007	3,158	1,467	527	2,568	1,101	1,630

It is likely that recycling water by North City Water Reclamation Plant is also having an impact on the total system flows. We have not yet quantified and evaluated these contributions.



Precipitation:

The total rainfall of 7.75 inches in 2014 was higher than the total rainfall of 5.46 inches in 2013.

Historical perspective:

The table on this page shows flows from 1972 to the present. New Parshall flumes were installed and calibrated in 1985 and fine-tuned over the next year; this accounts for the jump in flow rates from 1984 to 1986. Since 1986, multiple meters on the flumes have been calibrated yearly and closely match Venturi meter data at Pump Station II (see tables in the Plant Operations section).

A historical synopsis of changes to the flow rates and the factors effecting those changes are discussed comprehensively in previous Annual Reports. Those factors include:

- Weather patterns, drought, and water conservation;
- The Tijuana Interceptor;
- Water Reclamation and Reuse by the North City Water Reclamation Plant, and later, by the South Bay Water Reclamation Plant;
- Population;
- Industrial discharger.

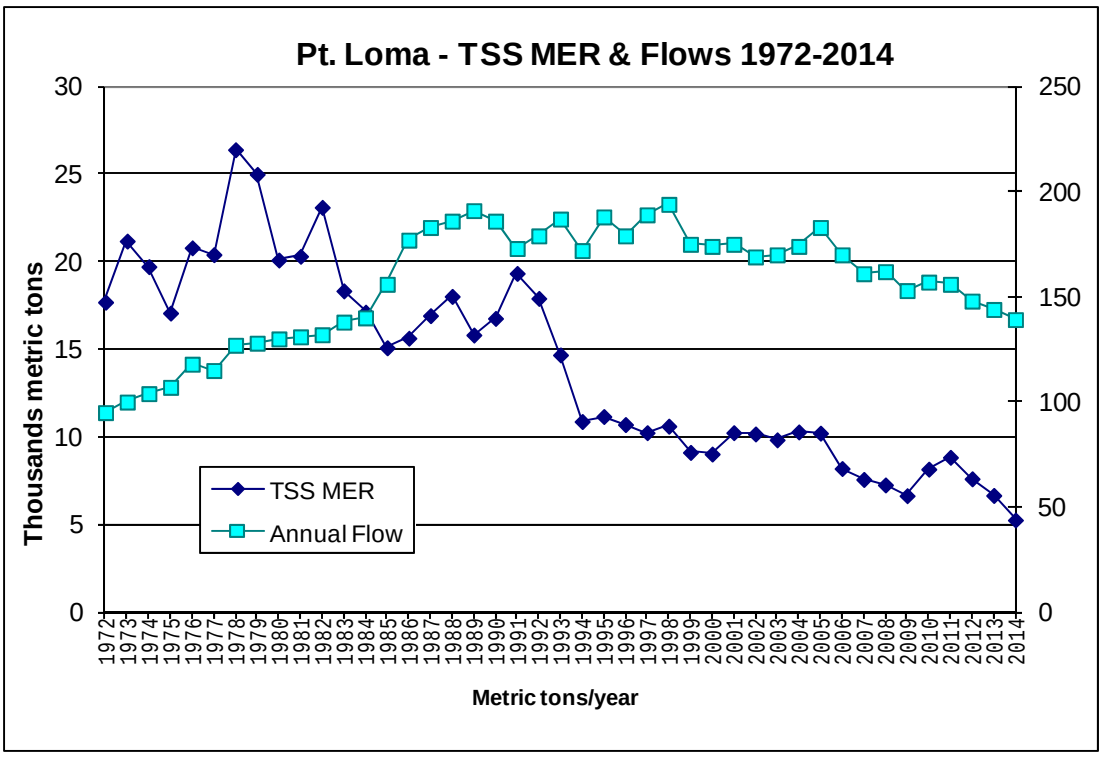
Weather and the various components of water conservation have emerged as more significant factors affecting flows, supplanting the historical role that population growth played.

Historical Average Daily Flows

YEAR	FLOW (MGD)	YEAR	FLOW (MGD)
1972	95	1993	187
1973	100	1994	172
1974	104	1995	188
1975	107	1996	179
1976	118	1997	189
1977	115	1998	194
1978	127	1999	175
1979	128	2000	174
1980	130	2001	175
1981	131	2002	169
1982	132	2003	170
1983	138	2004	174
1984	140	2005	183
1985	156	2006	170
1986	177	2007	161
1987	183	2008	162
1988	186	2009	153
1989	191	2010	157
1990	186	2011	156
1991	173	2012	148
1992	179	2013	144
		2014	139

Suspended Solids, Volatile Suspended Solids and Percent Suspended Solids Removal:

Year 2014 data showed that influent TSS concentrations ranged from 246 to 502 mg/L and averaged 348 mg/L.


Pt. Loma - TSS MER & Flows 1972-2014
Thousands metric tons
Metric tons/year
TSS MER
Annual Flow
0
5
10
15
20
25
30
0
50
100
150
200
250
1972
1973
1974
1975
1976
1977
1978
1979
1980
1981
1982
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1984
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1987
1988
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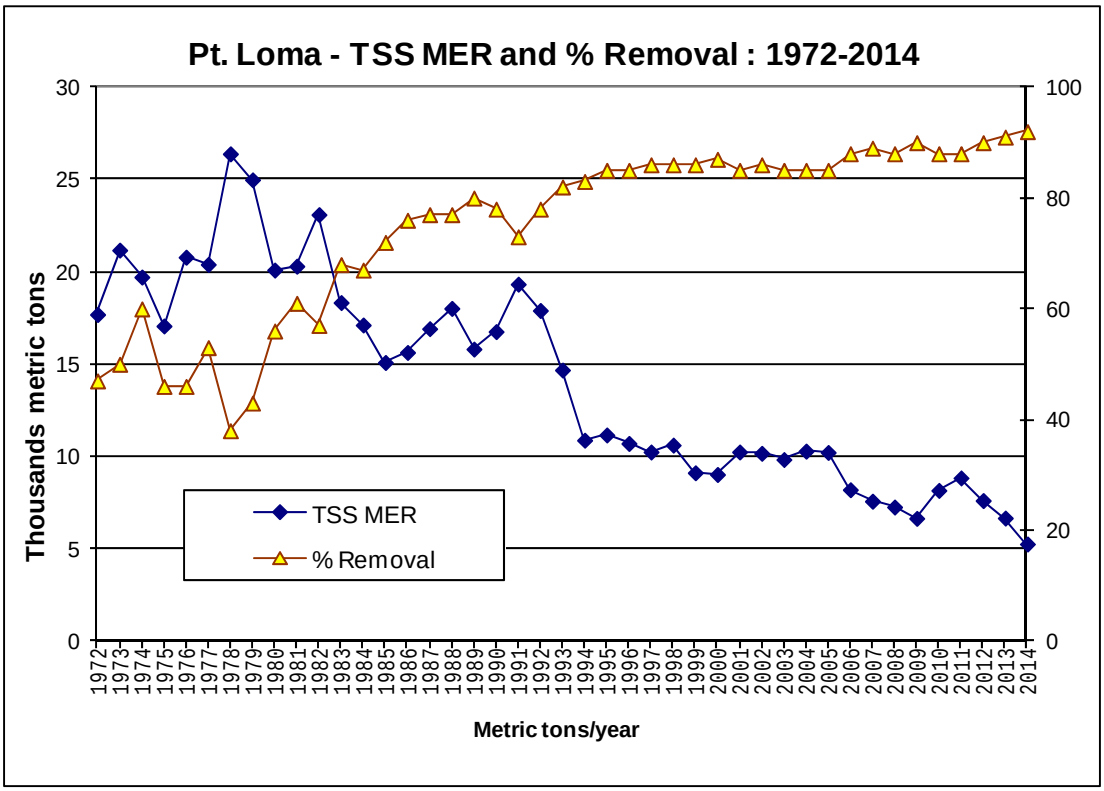
Pt. Loma - TSS MER and % Removal : 1972-2014
Thousands metric tons
Metric tons/year
TSS MER
% Removal
0
5
10
15
20
25
30
0
20
40
60
80
100
1972
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2013
2014

The historical picture of changes in the annual TSS removals and MER and the factors effecting those changes are discussed comprehensively in previous Annual Reports. The factors include:

- Changes in base industries (e.g., tuna canneries);
- Weather and infiltration;
- Sludge handling;
- Water reclamation plants;
- Population changes;
- Tijuana Interceptor.

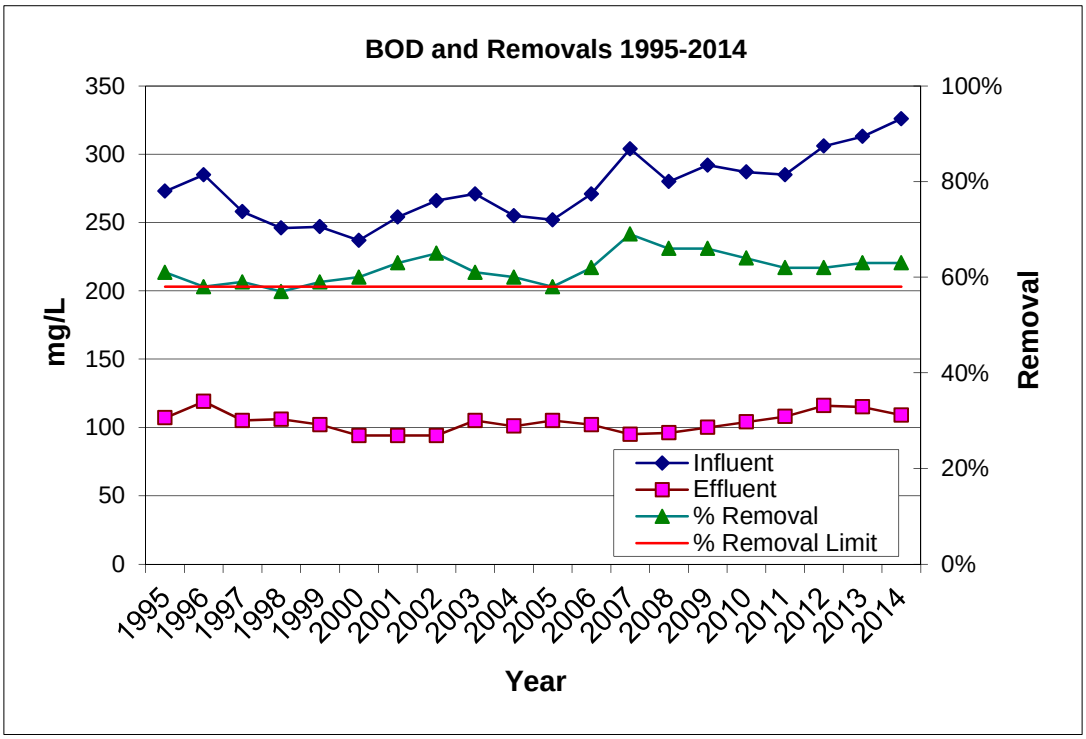
Effluent TSS concentrations also correlate similarly to the MER pattern.

SUSPENDED SOLIDS TRENDS
AVERAGE DAILY SOLIDS

Year	Flow, Annual Average Daily (mgd)	Rainfall, Annual Total (inches)	TSS INFLUENT (mg/L)	TSS EFFLUENT (mg/L)	TSS % Removal	TSS Mass Emission (lbs/day)	TSS Mass Emission (metric tons /year)
1972	95		257	135	47	106,600	17,697
1973	100		310	154	50	127,947	21,183
1974	104		346	138	60	119,143	19,726
1975	107		215	115	46	103,135	17,075
1976	118		238	127	46	125,281	20,799
1977	115		273	128	53	123,277	20,410
1978	127		245	151	38	159,428	26,396
1979	128		248	143	43	150,933	24,989
1980	130		255	113	56	121,088	20,103
1981	131		289	114	61	122,705	20,316
1982	132		296	126	57	139,563	23,107
1983	138		310	98	68	110,789	18,343
1984	140		272	90	67	103,175	17,129
1985	156		251	70	72	91,190	15,098
1986	177		261	64	76	94,476	15,642
1987	183		289	67	77	102,257	16,930
1988	186		303	70	77	108,587	18,027
1989	191	3.8	305	60	80	95,576	15,824
1990	186	7.29	307	65	78	101,301	16,772
1991	173	13.46	295	81	73	116,810	19,340
1992	179	12.71	317	72	78	107,903	17,914
1993	187	17.26	298	55	82	88,724	14,690
1994	172	9.43	276	46	83	65,777	10,890
1995	188	17.04	289	43	85	67,492	11,174
1996	179	7.27	295	43	85	64,541	10,715
1997	189	7	284	39	86	61,923	10,252
1998	194	16.05	278	39	86	64,171	10,624
1999	175	5.43	273	38	86	55,130	9,128
2000	174	6.9	278	37	87	54,413	9,034
2001	175	8.45	275	43	85	61,931	10,254
2002	169	4.23	287	44	86	61,493	10,181
2003	170	9.18	285	42	85	59,459	9,844
2004	174	12.69	291	43	85	62,028	10,298
2005	183	14.02	274	41	85	61,768	10,227
2006	170	6.16	287	35	88	49,581	8,209
2007	161	4.23	319	34	89	45,822	7,586
2008	162	11.11	277	32	88	43,802	7,272
2009	153	4.83	308	32	90	40,214	6,658
2010	157	8.06	323	37	88	49,361	8,172
2011	156	8.62	332	42	88	53,439	8,848
2012	148	13.67	354	37	90	46,039	7,622
2013	144	5.46	349	34	91	40,311	6,674
2014	139.2	7.75	348	27	92	31,830	5,270

(In the table there is more scatter in the data before 1980 because monthly averages were calculated using only the two suspended solids values done on "complete analysis" days, rather than averaging all of the daily test results).

BOD – Biochemical Oxygen Demand



BOD Concentration mg/L

	Influent	Effluent	% Removal		Influent	Effluent	% Removal
1995 - Total	273	107	61%	2005 - Total	252	105	58%
Adjusted Total*	270	107	60%	System-wide Total	269	105	61%
Soluble	99	79	20%	Soluble	88	75	15%
1996 - Total	285	119	58%	2006 - Total	271	102	62%
Adjusted Total*	283	119	58%	System-wide Total	295	102	65%
Soluble	104	89	14%	Soluble	87	73	16%
1997 - Total	258	105	59%	2007 - Total	304	95	69%
Adjusted Total*	256	105	59%	System-wide Total	317	95	70%
Soluble	92	79	14%	Soluble	85	69	19%
1998 - Total	246	106	57%	2008 - Total	280	96	66%
Adjusted Total*	244	106	57%	System-wide Total	296	96	68%
Soluble	89	81	9%	Soluble	85	69	19%
1999- Total	247	102	59%	2009 - Total	292	100	66%
System-wide Total	251	102	59%	System-wide Total	310	100	68%
Soluble	96	79	18%	Soluble	76	68	11%
2000 - Total	237	94	60%	2010 - Total	287	104	64%
System-wide Total	248	94	62%	System-wide Total	312	104	66%
Soluble	84	69	18%	Soluble	72	70	3%
2001 - Total	254	94	63%	2011 - Total	285	108	62%
System-wide Total	270	94	65%	System-wide Total	312	108	66%
Soluble	84	58	31%	Soluble	77	73	5%
2002 - Total	266	94	65%	2012- Total	306	116	62%
System-wide Total	287	94	67%	System-wide Total	328	116	65%
Soluble	86	59	31%	Soluble	84	79	3%
2003 - Total	271	105	61%	2013- Total	313	115	63%
System-wide Total	292	105	64%	System-wide Total	328	115	65%
Soluble	86	70	19%	Soluble	84	81	4%
2004 - Total	255	101	60%	2014- Total	326	109	66%
System-wide Total	273	101	63%	System-wide Total	352	109	69%
Soluble	80	70	12%	Soluble	92	82	10%

H. Special Studies

Partial Disinfection System Status Report

Regulatory History:
On August 13, 2008 Addendum No. 2 to Order No. R9-2002-0025 (NPDES NO. CA0107409) was approved by the San Diego Regional Water Control Board. This addendum permitted the use of sodium hypochlorite (NaOCl) in a prototype partial disinfection system of Point Loma Ocean Outfall (PLOO) effluent.

On August 1, 2010 Order No. R9-2009-001 became effective requiring continuous monitoring of residual chlorine within 180 days.

The system:
Since sodium hypochlorite solution was already in use for odor control at the Point Loma facility, metering pumps and distribution piping were installed and connected to an existing bulk storage tank. Administration of concentrated hypochlorite solution is accomplished by a feed system that adds a flow-proportional dose of hypochlorite necessary to achieve a predetermined nominal concentration of hypochlorite in effluent. The hypochlorite solution is delivered by tanker truck in concentrate form (~12.5%) and added to the hypochlorite bulk storage. Hypochlorite solution is added to the feed tanks on demand. Hypochlorite and carrier water are injected into the effluent channel just after sedimentation tanks at the mid-point of the effluent channel.

Operations:
The first administration of hypochlorite solution began on September 3, 2008. Hypochlorite feed started at an initial rate calculated to obtain a nominal dose of 6 ppm hypochlorite in effluent. An 8.0 ppm dose rate was obtained on the September 4, 2008. Between September 17 and the 24th, feed rates were incrementally increased to a nominal dose of 11 ppm. On October 1, 2008 the dose was increased to 12ppm. During September and October 2008 the system was shutdown several times to make minor repairs and to make modifications in the feed system to allow for better mixing of the hypochlorite within the effluent. By the end of October 2008 the system was back in continuous operation and nominal chlorine feed rates was maintained at 12 ppm until February 2009. From February 25th, 2009 to April 4, 2012 the nominal feed rate target remained at 10 ppm. In April 2012 the target dose was gradually increased during the year from 10 ppm to 20 ppm. The dose was lowered to a nominal feed rate target of 18 ppm on 10/20/2012 and adjusted manually. In 2013 the dose rate continued to be manually adjusted daily according to flow, lowered during high flow and increased during low flow. January 2013 started with a flow rate around 18 mg/L and went as high as 50 mg/L in November. The dosage was then lowered below 20 mg/L due to one bulk sodium hypochlorite tank out for repairs. As a result of an analysis of compliance in the ocean, in August of 2014, the dose rate was reduced to 15 ppm and in October 2014 it was reduced to 6 ppm. It has remained at 6 ppm since October 2014.

Monitoring:
Monitoring in accordance with Addendum 2 was initiated on September 3, 2008, coincidental with the initial use of hypochlorite, and has continued. This monitoring consists of 4 daily grab samples taken during the work day at 2 hour intervals.

Pilot testing of and use of in-line continuous monitoring equipment for chlorine residual monitoring began in the winter of 2010. The first summary report of instrument output from the in-line continuous monitoring equipment is included in the monthly SMR.

Summary reports of the 2014 instantaneous maximum values of both the in-line continuous monitoring and the laboratory analysis of daily manual grabs are included in this annual report. There has been only occasional detectable total chlorine residual in the manual grabs of effluent. The in-line continuous monitoring equipment has not detected total chlorine residual in the effluent during this time period. An investigation continues to determine the efficacy of total residual chlorine continuous monitoring of advanced primary effluent. We are currently evaluating a 2013 report from Brown and Caldwell that was commissioned in 2012 to assist in finding a continuous monitor that will work with the plant's effluent characteristics.

No impacts on conventional monitoring parameters, e.g. BOD, pH, TSS and turbidity, have been observed.

II. Influent and Effluent Data Summary

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

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 Bioassays

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A. Mass Emissions

Mass Emissions of Effluent Using 2014 Monthly Averages

DISCHARGE SPECIFICATIONS from NPDES Permit No. CA0107409/RWQCB Order No. R9-2009-0001 effective on August 1, 2010 with limits on pollutant discharges.

Constituent/Property	Benchmarks (mt/yr)	2014 Mass Emissions (mt/yr)	2014 Concentration	Units
Flow (MGD)			**139.2**	MGD
Total Suspended Solids	13,598	5,204	27	mg/L
BOD	-	21,008	109	mg/L
Arsenic	0.88	0.16	0.81	ug/L
Cadmium	1.4	0.00	0.00	ug/L
Chromium	14.2	0.19	1.0	ug/L
Copper	26	2.31	12	ug/L
Lead	14.2	0.15	0.8	ug/L
Mercury	0.19	0.001	0.0070	ug/L
Nickel	11.3	0.96	5.0	ug/L
Selenium	0.44	0.21	1.11	ug/L
Silver	2.8	0.00	0.00	ug/L
Zinc	18.3	3.85	20	ug/L
Cyanide	1.57	0.39	0.002	mg/L
Residual Chlorine	--	9.06	0.047	mg/L
Ammonia	8018	6,649	34.5	mg/L
Non-Chor. Phenols	2.57	4.20	21.8	ug/L
Chlorinated Phenols	1.73	0.00	0.0	ug/L
Endosulfan	0.006	0.0000	0	ng/L
Endrin	0.008	0.00	0	ng/L
hexachlorocyclohexanes *(HCH)	0.025	0.0000	0	ng/L
* (all as Lindane, the gamma isomer)				
Acrolein	17.6	0.00	0	ug/L
Antimony	56.6	0.00	0.0	ug/L
Bis(2-chloroethoxy) methane	1.5	0.00	0	ug/L
Bis(2-chloroisopropyl) ether	1.61	0.00	0	ug/L
Chlorobenzene	1.7	0.00	0.4	ug/L
Chromium (III)	--	--		
di-n-butyl phthalate	1.33	0.00	0	ug/L
dichlorobenzenes	2.8	0.00	0	ug/L
1,1-dichloroethylene	0.79	0.00	0	ug/L
Diethyl phthalate	6.23	0.54	2.8	ug/L
Dimethyl phthalate	1.59	0.00	0	ug/L
4,6-dinitro-2-methylphenol	6.8	0.00	0	ug/L
2,4-dinitrophenol	11.9	0.00	0	ug/L
Ethylbenzene	2.04	0.00	0	ug/L
Fluoranthene	0.62	0.00	0	ug/L
Hexachlorocyclopentadiene	B	0.00	0	ug/L

Constituent/Property	Benchmarks (mt/yr)	2014 Mass Emissions (mt/yr)	2014 Concentration	Units
Nitrobenzene	2.07	0.00	0	ug/L
Thallium	36.8	0.00	0.0	ug/L
Toluene	3.31	0.19	DNQ1	ug/L
1,1,2,2-tetrachloroethane	1.95	0.00	0	ug/L
Tributyltin	0.001	0.00	0	ug/L
1,1,1-trichloroethane	2.51	0.00	0	ug/L
1,1,2-trichloroethane	1.42	0.00	0	ug/L
Acrylonitrile	5.95	0.00	0	ug/L
Aldrin	0.006	0.00	0	ng/L
Benzene	1.25	0.00	0	ug/L
Benzidine	12.5	0.00	0	ug/L
Beryllium	1.42	0.000	0.000	ug/L
Bis(2-chloroethyl) ether	1.61	0.00	0	ug/L
Bis(2-ethylhexyl) phthalate	2.89	1.98	10.3	ug/L
Carbon Tetrachloride	0.79	0.00	0	ug/L
Chlordane	0.014	0.0000	0	ng/L
Chloroform	2.19	0.44	2.3	ug/L
DDT	0.043	0.00	0	ng/L
1,4-dichlorobenzene	1.25	0.12	DNQ0.2	ug/L
3,3-dichlorobenzidine	4.67	0.00	0	ug/L
1,2-dichloroethane	0.79	0.00	0	ug/L
Dichloromethane (Methylene Chloride)	13.7	0.21	1.1	ug/L
1,3-dichloropropene	1.42	0.00	0	ug/L
Dieldrin	0.011	0.00	0	ng/L
2,4-dinitrotoluene	1.61	0.00	0	ug/L
1,2-diphenylhydrazine	1.52	0.00	0	ug/L
Halomethanes	5.86	1.73	9	ug/L
Heptachlor	0.001	0.00000	0	ng/L
Heptachlor epoxide	0.024	0.00	0	ng/L
Hexachlorobenzene	0.54	0.00	0	ug/L
Hexachlorobutadiene	0.054	0.00	0	ug/L
Hexachloroethane	1.13	0.00	0	ug/L
Isophorone	0.71	0.00	0	ug/L
N-nitrosodimethylamine	0.76	0.00	0	ug/L
N-nitrosodiphenylamine	1.47	0.00	0	ug/L
PAHs	15.45	0.00	0	ug/L
PCBs	0.275	0.00	0	ng/L
TCDD equivalents	--	0.000000000	0.000	pg/L
Tetrachloroethylene	4	0.00	0	ug/L
Toxaphene	0.068	0.00	0	ng/L
Trichloroethylene	1.56	0.00	0	ug/L
2,4,6-trichlorophenol	0.96	0.00	0	ug/L
Vinyl Chloride	0.4	0.00	0	ug/L

DNQ= Detected not quantified.

B. Discharge Limits

NPDES Permit No. CA0107409/RWQCB Order No. R9-2009-0001

DISCHARGE SPECIFICATIONS from NPDES Permit No. CA0107409/RWQCB Order No. R9-2009-0001 effective on August 1, 2010 with limits on pollutant discharges.
The discharge of waste through the Point Loma Ocean Outfall containing pollutants in excess of the following effluent limitations are prohibited:

NPDES Permit No. CA0107409/RWQCB Order No. R9-2009-0001 as modified by addendum 2 to the order

Constituent	Units	6-month Median	30-day Average	7-Day Average	Daily Maximum	Instantaneous Maximum
Biochemical Oxygen Demand BOD_5 @ 20°C	% removal[8]	The "Mean Annual Percent Removal" limit for BOD is 58%. There is no mass emission limit.				
Total Suspended Solids	% removal[1]		>80			
	mg/L		75[4]			
	metric tons/year		15,000[9]			
	metric tons/year		13,598[10]			
pH	pH units	Within the limits of 6.0 - 9.0 at all times.				
Grease & Oil	mg/L		25	40		75
	lb/day		42,743	68,388		128,228
Settleable Solids	mL/L		1.0	1.5		3.0
Turbidity	NTU		75	100		225
Acute Toxicity	TUa				6.42	
Arsenic	ug/L	1,000			5,900	16,000
Cadmium	ug/L	210			820	2,100
Chromium[11] (Hexavalent)	ug/L	410			1,600	4,100
Copper	ug/L	210			2,100	5,700
Lead	ug/L	410			1,600	4,100
Mercury	ug/L	8.1			33	82
Nickel	ug/L	1,000			4,100	10,000
Selenium	ug/L	3,100			12,000	31,000
Silver	ug/L	110			540	1,000
Zinc	ug/L	2,500			15,000	39,400
Cyanide	mg/L	0.2			0.8	2.1
Total Residual Chlorine(TRC)	mg/L	0.41			1.6	12
Ammonia	mg/L	120			490	1,200
Chronic Toxicity	TUc				205	
Phenolic Compounds (non- chlorinated)	ug/L	6,200			25,000	62,000
Chlorinated Phenolics	ug/L	210			820	2,100
Endosulfan	ng/L	1,800			3,700	5,500
Endrin	ng/L	410			820	1,200

1 To be calculated on a system-wide basis, as provided In Addendum No.1 to Order No. R9-2002-0025.
2 To be achieved on permit effective date through December 31, 2013. Applies only to TSS discharges from POTWs owned and operated by the Discharger and the Discharger's wastewater generated in the Metro System service area; does not apply to wastewater (and the resulting TSS) generated in Mexico which, as a result of upset or shutdown, is treated at and discharged from Point loma WTP.
3 To be achieved on January 1, 2014. Applies only to TSS discharges from POTWs owned and operated by the Discharger and the Discharger's wastewater generated in the Metro System service area; does not apply to wastewater (and the resulting TSS) generated in Mexicowhich, as a result of upset or shutdown, is treated at and discharged from Point loma WTP.
4 Based on average monthly performance data (1990 through 1994) for the Point loma WTP provided by the Discharger for the 1995 301 (h) application.

NPDES Permit No. CA0107409/RWQCB Order No. R9-2009-0001 as modified by addendum 2 to the order						
Constituent	Units	6-month Median	30-day Average	7-Day Average	Daily Maximum	Instantaneous Maximum
		820			1,600	2,500

LIMITATIONS FOR PROTECTION OF HUMAN HEALTH--NONCARCINOGENS		
Constituent	Units	Monthly Average (30-Day)
Acrolein	ug/L	45,000
Antimony	ug/L	250,000
Bis(2-chloroethoxy) methane	ug/L	900
Bis(2-chloroisopropyl) ether	ug/L	250,000
Chlorobenzene	ug/L	120,000
Chromium (III)[12]	ug/L	39,000,000
di-n-butyl phthalate	ug/L	720,000
dichlorobenzenes	ug/L	1,000,000
Diethyl phthalate	ug/L	6,800,000
Dimethyl phthalate	ug/L	170,000,000
4,6-dinitro-2-methylphenol	ug/L	45,000
2,4-dinitrophenol	ug/L	820
Ethylbenzene	ug/L	840,000
Fluoranthene	ug/L	3,100
Hexachlorocyclopentadiene	ug/L	12,000
Nitrobenzene	ug/L	1,000
Thallium	ug/L	400
Toluene	ug/L	17,000,000
Tributyltin	ug/L	0.29
1,1,1-trichloroethane	ug/L	110,000,000

LIMITATIONS FOR PROTECTION OF HUMAN HEALTH—CARCINOGENS		
Constituent	Units	Monthly Average (30-Day)
Acrylonitrile	ug/L	21
Aldrin	ng/L	4.5
Benzene	ug/L	1,200
Benzidine	ug/L	0.014
Beryllium	ug/L	6.8
Bis(2-chloroethyl)ether	ug/L	9.2
Bis(2-ethylhexyl)phthalate	ug/L	720
Carbon Tetrachloride	ug/L	180
Chlordane	ng/L	4.7
Chloroform	ug/L	27,000
DDT	ng/L	35
1,1,2,2-tetrachloroethane	ug/L	470
1,1-dichloroethylene	ug/L	200
1,1,2-trichloroethane	ug/L	1,900
1,4-dichlorobenzene	ug/L	3,700
3,3-dichlorobenzidine	ug/L	1.7
1,2-dichloroethane	ug/L	5,700
Dichloromethane	ug/L	92,000
1,3-dichloropropene	ug/L	1,800
Dieldrin	ng/L	8.20
2,4-dinitrotoluene	ug/L	530
1,2-diphenylhydrazine	ug/L	33
Halomethanes	ug/L	27,000
Heptachlor	ng/L	10
Hexachlorobenzene	ug/L	0.043
Hexachlorobutadiene	ug/L	2,900
Hexachloroethane	ug/L	510
Isophorone	ug/L	150,000
N-nitrosodimethylamine	ug/L	1,500
N-nitrosodiphenylamine	ug/L	510
PAHs	ug/L	1.80
PCBs	ng/L	3.90
TCDD equivalents	pg/L	0.8
Tetrachloroethylene	ug/L	410
Toxaphene	ng/L	430
Trichloroethylene	ug/L	5,500
Vinyl Chloride	ug/L	7,400

C. Influent and Effluent Data Summaries

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

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Point Loma Wastewater Treatment Plant

POINT LOMA WASTEWATER TREATMENT PLANT
SEWAGE ANNUAL

From 01-JAN-2014 To 31-DEC-2014

Biochemical Oxygen Demand Concentration
(24-hour composite)

Units:	Flow (MGD)	Daily Influent Value (mg/L)	Daily Influent Value (lbs/Day)	Daily Effluent Value (mg/L)	Daily Effluent Value (lbs/Day)	Percent Removal BOD (%)
JANUARY -2014	141.0	324	381005	109	128177	66.4
FEBRUARY -2014	144.5	319	384436	116	139795	63.6
MARCH -2014	145.1	317	383612	104	125854	67.2
APRIL -2014	140.7	344	403663	112	131425	67.4
MAY -2014	137.7	348	399649	121	138959	65.2
JUNE -2014	135.7	319	361024	106	119964	66.8
JULY -2014	137.3	307	351540	104	119089	66.1
AUGUST -2014	134.1	334	373544	110	123023	67.1
SEPTEMBER-2014	135.6	327	369806	108	122138	67.0
OCTOBER -2014	135.5	326	368403	109	123178	66.6
NOVEMBER -2014	135.9	346	392158	110	124675	68.2
DECEMBER -2014	147.7	304	374473	100	123182	67.1
Average	139.2	326	378609	109	126622	66.6

Total Suspended Solids Concentration
(24-hour composite)

Units	Flow (MGD)	Daily Influent TSS (mg/L)	Daily Influent VSS (mg/L)	Percent VSS of TSS (%)	Daily Influent Value (lbs/Day)	Daily Effluent TSS (mg/L)	Daily Effluent VSS (mg/L)	Percent VSS of TSS (%)	Daily Effluent Value (lbs/Day)
JANUARY -2014	141.0	342	300	87.7	402171	27	22	81.5	31750
FEBRUARY -2014	144.5	341	301	88.3	410949	32	26	81.3	38564
MARCH -2014	145.1	342	301	88.0	413866	26	21	80.8	31463
APRIL -2014	140.7	359	318	88.6	421264	25	21	84.0	29336
MAY -2014	137.7	362	316	87.3	415727	23	18	78.3	26414
JUNE -2014	135.7	350	309	88.3	396108	26	22	84.6	29425
JULY -2014	137.3	344	301	87.5	393908	25	20	80.0	28627
AUGUST -2014	134.1	343	300	87.5	383609	29	24	82.8	32433
SEPTEMBER-2014	135.6	351	306	87.2	396947	29	24	82.8	32796
OCTOBER -2014	135.5	356	310	87.1	402305	29	24	82.8	32772
NOVEMBER -2014	135.9	351	302	86.0	397826	30	24	80.0	34002
DECEMBER -2014	147.7	338	290	85.8	416354	28	23	82.1	34491
Average	139.2	348	305		404253	27	22		31839

Analyte: Units:	Percent Removal TSS (%)	Percent Removal VSS (%)
JANUARY -2014	92.1	92.7
FEBRUARY -2014	90.6	91.4
MARCH -2014	92.4	93.0
APRIL -2014	93.0	93.4
MAY -2014	93.6	94.3
JUNE -2014	92.6	92.9
JULY -2014	92.7	93.4
AUGUST -2014	91.5	92.0
SEPTEMBER-2014	91.7	92.2
OCTOBER -2014	91.9	92.3
NOVEMBER -2014	91.5	92.1
DECEMBER -2014	91.7	92.1
Average	92.1	92.7

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.

POINT LOMA WASTEWATER TREATMENT PLANT

Systemwide BOD Removals

2014 Annual

MONTH	Pt. Loma Influent Mass Emissions	NCWRP PS64 Mass Emissions	NCWRP Penasquitos Mass Emissions	MBC Return Mass Emissions	NCWRP Return Mass Emissions	Total Return Mass Emissions	Pt. Loma Effluent Mass Emissions	System wide Adjusted BOD Removals	Pt. Loma Daily BOD Removals	Pt. Loma Daily BOD Eff Conc.
14-01	380,379	20,646	12,867	4,585	881	5,466	128,170	68.5	66.2	109
14-02	384,816	22,432	13,946	4,314	891	5,206	139,790	66.4	63.6	116
14-03	381,852	22,083	12,875	3,584	809	4,393	126,108	69.4	66.9	104
14-04	404,168	22,817	11,965	4,317	1,141	5,458	131,131	69.7	67.4	112
14-05	400,085	22,613	13,834	5,205	6,705	11,910	138,816	67.3	65.3	121
14-06	360,592	28,116	11,549	4,819	1,176	5,995	120,622	69.4	66.5	107
14-07	351,054	24,019	12,004	4,995	1,051	6,047	119,277	68.5	65.9	104
14-08	373,361	26,592	14,778	6,883	1,303	8,186	123,226	69.5	66.8	110
14-09	369,510	23,440	16,058	6,317	612	6,928	122,644	69.5	66.8	108
14-10	368,635	26,757	13,212	6,438	1,030	7,468	123,335	69.1	66.4	109
14-11	391,295	26,271	11,239	4,353	1,443	5,796	124,372	70.5	68.1	110
14-12	371,991	21,718	16,144	3,331	493	3,824	122,791	69.7	66.9	100
avg	378,145	23,959	13,373	4,928	1,461	6,390	126,690	69.0	66.4	109

Systemwide TSS Removals

2014 Annual

MONTH	Pt. Loma Influent Mass Emissions Lbs/day	NCWRP PS64 Mass Emissions Lbs/day	NCWRP Penasquitos Mass Emissions Lbs/day	MBC Return Mass Emissions Lbs/day	NCWRP Return Mass Emissions Lbs/day	Total Return Mass Emissions Lbs/day	Pt. Loma Effluent Mass Emissions Lbs/day	System wide Adjusted TSS Removals	Pt. Loma Daily TSS Removals	Pt. Loma Daily TSS Eff Conc. mg/L
14-01	402,949	20,369	17,407	10,745	1,641	12,386	32,082	92.5	92.0	27
14-02	410,447	23,379	19,314	10,513	2,107	12,620	38,375	91.3	90.6	32
14-03	413,509	22,081	17,348	8,038	2,084	10,122	31,661	92.8	92.3	26
14-04	421,426	23,255	16,125	11,663	2,763	14,426	29,442	93.3	92.9	25
14-05	416,321	22,322	16,710	14,856	11,230	26,085	26,208	93.8	93.6	23
14-06	396,339	28,592	15,032	12,907	2,323	15,229	29,744	92.9	92.4	26
14-07	394,364	25,614	18,056	13,779	1,543	15,322	28,449	93.2	92.7	25
14-08	383,927	27,211	18,433	20,424	7,918	28,342	31,982	91.9	91.6	29
14-09	397,105	24,141	20,892	23,957	1,371	25,328	33,266	92.0	91.6	29
14-10	401,776	26,720	16,088	20,384	1,228	21,612	32,144	92.3	91.9	28
14-11	396,895	27,459	13,665	9,206	2,260	11,467	34,159	91.9	91.3	30
14-12	415,955	20,221	19,218	6,530	1,284	7,814	34,446	92.2	91.6	28
avg	404,251	24,280	17,357	13,584	3,146	16,729	31,830	92.5	92.0	27

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.

POINT LOMA WASTEWATER TREATMENT PLANT

2014 Annual

Effluent to Ocean Outfall
(PLE)

Analyte:		Settleable	Biochemical Oxygen	Hexane Extractable		Floating	
	pH	Solids	Demand	Material	Temperature	Particulates	Turbidity
Units:		(ml/L)	(mg/L)	(mg/L)	(C)	(mg/L)	(NTU)
JANUARY -2014	7.29	<0.1	109	11.0	24.2	ND	34
FEBRUARY -2014	7.31	0.1	116	8.9	24.0	ND	33
MARCH -2014	7.27	0.1	104	9.5	24.1	ND	33
APRIL -2014	7.26	<0.1	112	9.4	25.2	ND	34
MAY -2014	7.28	0.1	121	10.3	26.3	ND	38
JUNE -2014	7.26	0.1	106	10.1	26.9	ND	44
JULY -2014	7.19	0.1	104	10.9	28.3	ND	44
AUGUST -2014	7.20	0.3	110	10.2	28.5	ND	44
SEPTEMBER-2014	7.30	0.4	108	10.9	28.8	ND	46
OCTOBER -2014	7.31	0.3	109	10.3	28.7	ND	40
NOVEMBER -2014	7.30	0.3	110	9.1	26.8	ND	37
DECEMBER -2014	7.27	0.2	100	10.6	25.4	ND	33
Average	7.27	0.2	109	10.1	26.4	ND	38

Influent to Plant
(PLR)

Analyte:		Settleable	Biochemical Oxygen	Hexane Extractable		Floating	
	pH	Solids	Demand	Material	Temperature	Particulates	Turbidity
Units:		(ml/L)	(mg/L)	(mg/L)	(C)	(mg/L)	(NTU)
JANUARY -2014	7.43	17.00	324	53.0	23.9	<1.40	130
FEBRUARY -2014	7.49	18.80	319	50.7	23.7	1.58	136
MARCH -2014	7.46	17.90	317	49.8	23.9	<1.40	134
APRIL -2014	7.42	20.20	344	51.8	24.6	<1.40	143
MAY -2014	7.44	21.50	348	56.5	25.8	<1.40	138
JUNE -2014	7.42	22.80	319	53.9	26.4	<1.40	147
JULY -2014	7.36	20.00	307	50.1	27.7	<1.40	133
AUGUST -2014	7.37	19.60	334	48.9	27.8	<1.40	132
SEPTEMBER-2014	7.37	21.00	327	51.9	28.2	<1.40	138
OCTOBER -2014	7.40	20.90	326	52.1	28.1	<1.40	147
NOVEMBER -2014	7.39	20.60	346	46.5	26.7	<1.40	148
DECEMBER -2014	7.42	17.90	304	50.1	25.0	1.42	131
Average	7.41	19.9	326	51.3	26.0	0.3	138

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

POINT LOMA WASTEWATER TREATMENT PLANT
ANNUAL SEWAGE
Trace Metals

2014 Annual

Analyte:	Antimony	Antimony	Arsenic	Arsenic	Beryllium	Beryllium	Cadmium	Cadmium
MDL	2.9	2.9	.06	.06	.05	.05	.53	.53
Units	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Source:	PLR	PLE	PLR	PLE	PLR	PLE	PLR	PLE
JANUARY -2014	ND	ND	1.31	0.85	<0.022	ND	ND	ND
FEBRUARY -2014	ND	ND	1.08	0.76	<0.022	ND	ND	ND
MARCH -2014	ND	ND	1.33	0.56	0.028	<0.022	ND	ND
APRIL -2014	<2.9	ND	1.36	0.71	0.035	<0.022	<0.53	ND
MAY -2014	<2.9	<2.9	1.28	0.84	ND	ND	ND	ND
JUNE -2014	ND	<2.9	1.27	0.86	ND	ND	<0.53	ND
JULY -2014	<2.4	ND	1.18	0.82	ND	ND	<0.26	<0.26
AUGUST -2014	ND	ND	1.16	0.78	ND	ND	<0.26	ND
SEPTEMBER-2014	<2.4	ND	1.18	0.86	ND	ND	0.34	ND
OCTOBER -2014	2.7	<2.4	1.43	1.00	ND	ND	<0.26	ND
NOVEMBER -2014	<2.4	<2.4	1.18	0.79	ND	ND	<0.26	ND
DECEMBER -2014	2.9	<2.4	1.48	0.92	ND	ND	<0.26	ND
AVERAGE	0.5	0.0	1.27	0.81	0.005	0.000	0.03	0.00

Analyte:	Chromium	Chromium	Copper	Copper	Iron	Iron	Lead	Lead
MDL	1.2	1.2	2.16	2.16	37	37	2	2
Units	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Source:	PLR	PLE	PLR	PLE	PLR	PLE	PLR	PLE
JANUARY -2014	4.6	ND	110.0	12.0	7830	2630	3.3	ND
FEBRUARY -2014	4.7	ND	124.0	11.9	8890	2710	2.3	ND
MARCH -2014	4.4	<1.2	109.0	17.3	7570	2630	3.9	ND
APRIL -2014	7.6	<1.2	152.0	11.0	10300	2440	2.7	ND
MAY -2014	6.3	<1.2	116.0	11.7	8950	2350	3.6	ND
JUNE -2014	5.4	<1.2	113.0	11.5	9160	2370	3.4	<2.0
JULY -2014	6.9	2.0	112.0	10.3	9090	2260	6.7	6.1
AUGUST -2014	6.0	1.7	112.0	11.1	9380	2370	6.4	1.8
SEPTEMBER-2014	5.7	2.0	114.0	13.1	8910	2500	4.0	<1.7
OCTOBER -2014	6.5	1.8	116.0	10.9	10500	2180	4.3	<1.7
NOVEMBER -2014	6.7	2.0	112.0	12.7	9100	2380	4.5	<1.7
DECEMBER -2014	6.3	1.9	101.0	10.0	8570	2530	3.3	1.8
AVERAGE	5.9	1.0	115.9	12.0	9021	2446	4.0	0.8

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

POINT LOMA WASTEWATER TREATMENT PLANT
ANNUAL SEWAGE
Trace Metals

2014 Annual

Analyte:	Nickel	Nickel	Selenium	Selenium	Silver	Silver	Thallium	Thallium
MDL	.53	.53	.08	.08	.73	.73	3.9	3.9
Units	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Source:	PLR	PLE	PLR	PLE	PLR	PLE	PLR	PLE
JANUARY -2014	9.1	6.0	1.49	1.15	<0.4	ND	ND	ND
FEBRUARY -2014	11.2	6.3	1.77	1.17	<0.4	ND	ND	ND
MARCH -2014	9.6	5.5	1.89	1.22	0.7	<0.4	ND	ND
APRIL -2014	9.7	5.3	2.17	1.21	ND	ND	ND	ND
MAY -2014	8.9	5.4	1.94	1.18	0.8	<0.4	ND	ND
JUNE -2014	8.2	4.7	1.96	1.10	<0.7	ND	ND	ND
JULY -2014	7.5	4.3	1.55	0.90	<0.7	ND	ND	ND
AUGUST -2014	9.3	4.5	1.63	0.83	0.8	ND	ND	ND
SEPTEMBER-2014	7.5	4.6	1.94	1.07	<0.7	ND	ND	ND
OCTOBER -2014	8.4	4.5	1.42	1.03	<0.7	ND	ND	ND
NOVEMBER -2014	6.8	4.3	1.77	1.23	<0.7	ND	ND	ND
DECEMBER -2014	7.1	4.1	1.78	1.24	<0.7	ND	ND	ND
AVERAGE	8.6	5.0	1.78	1.11	0.2	0.0	ND	ND

Analyte:	Zinc	Zinc	Mercury	Mercury
MDL	4.19	4.19	.5	.5
Units	UG/L	UG/L	NG/L	NG/L
Source:	PLR	PLE	PLR	PLE
JANUARY -2014	158	19	82.4	8.4
FEBRUARY -2014	184	24	112.1	9.3
MARCH -2014	174	22	91.8	4.0
APRIL -2014	220	18	74.0	6.0
MAY -2014	179	20	67.7	5.9
JUNE -2014	181	20	141*	4.7*
JULY -2014	194	20	210.0	12.1
AUGUST -2014	179	21	132^	9.0^
SEPTEMBER-2014	172	20	148	7.1
OCTOBER -2014	174	16	78.9	5.7
NOVEMBER -2014	163	19	106#	6.0#
DECEMBER -2014	148	18	96.3	4.6
AVERAGE	177	20	106.8	7.0

* = The percent recovery of 68 for the spike samples in this batch were below the acceptance range of 71-125%.
Value not used in average computations.

^ = The percent recovery of 67 for the spike samples in this batch were below the acceptance range of 71-125%.
Value not used in average computations.

= The percent recovery of 61 for the spike samples in this batch were below the acceptance range of 71-125%.
Value not used in average computations.

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

POINT LOMA WASTEWATER TREATMENT PLANT
Ammonia-Nitrogen and Total Cyanides

2014 Annual

Analyte:	Ammonia-N	Ammonia-N	Cyanide, Total	Cyanide, Total
MDL/Units:	.3 MG/L	.3 MG/L	.002 MG/L	.002 MG/L
Source:	PLR	PLE	PLR	PLE
Limit:		123		0.200
JANUARY -2014	35.7	35.1	ND	<0.0020
FEBRUARY -2014	33.5	33.3	<0.0020	0.0020
MARCH -2014	34.6	33.7	<0.0020	0.0031
APRIL -2014	34.6	35.0	<0.0020	0.0033
MAY -2014	37.4	36.1	0.0020	0.0030
JUNE -2014	36.3	34.9	<0.0020	0.0030
JULY -2014	35.0	34.2	<0.0020	0.0032
AUGUST -2014	34.7	33.7	<0.0020	<0.0020
SEPTEMBER-2014	34.5	35.1	<0.0020	0.0024
OCTOBER -2014	35.0	35.4	0.0020	<0.0020
NOVEMBER -2014	33.7	34.2	<0.0020	0.0020
DECEMBER -2014	33.8	33.4	<0.0020	0.0023
Average:	34.9	34.5	0.0003	0.0020

Analyte:	Chlorine Residual, Total
MDL/Units:	.03 MG/L
Source:	PLE
Limit:	
JANUARY -2014	ND
FEBRUARY -2014	0.130
MARCH -2014	0.111
APRIL -2014	0.100
MAY -2014	0.071
JUNE -2014	0.050
JULY -2014	0.099
AUGUST -2014	<0.030
SEPTEMBER-2014	ND
OCTOBER -2014	ND
NOVEMBER -2014	ND
DECEMBER -2014	ND
Average:	0.047

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

POINT LOMA WASTEWATER TREATMENT PLANT
ANNUAL SEWAGE
Radioactivity

2014 Annual

Analyzed by: TestAmerica Laboratories Richland

Source	Month	Gross Alpha Radiation	Gross Beta Radiation
PLR	JANUARY -2014	8.0±8.4	26.1±9.9
PLR	FEBRUARY -2014	6.5±7.4	25.7±7.4
PLR	MARCH -2014	4.4±9.6	34.5±9.9
PLR	APRIL -2014	0.6±11.2	30.5±9.3
PLR	MAY -2014	10.2±8.6	28.9±8.8
PLR	JUNE -2014	2.1±8.8	22.5±7.7
PLR	JULY -2014	7.5±11.5	20.7±11.5
PLR	AUGUST -2014	3.7±7.4	32.5±7.6
PLR	SEPTEMBER-2014	0.8±6.5	29.9±7.5
PLR	OCTOBER -2014	0.2±8.2	34.5±7.8
PLR	NOVEMBER -2014	2.8±6.2	29.3±6.2
PLR	DECEMBER -2014	6.5±9.3	35.8±7.8
AVERAGE		3.1±8.6	29.2±8.4

Source	Month	Gross Alpha Radiation	Gross Beta Radiation
PLE	JANUARY -2014	2.4±8.2	25.7±8.6
PLE	FEBRUARY -2014	0.9±7.1	29.1±7.9
PLE	MARCH -2014	1.1±8.3	22.2±7.2
PLE	APRIL -2014	4.8±8.4	23.6±6.8
PLE	MAY -2014	1.2±8.3	30.7±9.1
PLE	JUNE -2014	4.9±8.3	25.3±8.2
PLE	JULY -2014	2.1±8.1	29.6±12.0
PLE	AUGUST -2014	0.7±7.1	29.2±6.7
PLE	SEPTEMBER-2014	3.5±8.5	34.9±8.5
PLE	OCTOBER -2014	3.5±6.6	29.5±7.5
PLE	NOVEMBER -2014	0.3±5.8	32.0±6.4
PLE	DECEMBER -2014	12.5±9.3	33.7±7.3
AVERAGE		3.2±7.8	28.8±8.0

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

Units in picocuries/liter (pCi/L)

POINT LOMA WASTEWATER TREATMENT PLANT
SEWAGE ANNUAL - Chlorinated Pesticide Analysis

2014 Annual

Source Month Analyte	MDL	Units	PLE JAN Avg	PLE FEB Avg	PLE MAR Avg	PLE APR Avg	PLE MAY Avg	PLE JUN Avg	PLE JUL Avg	PLE AUG Avg	PLE SEP Avg	PLE OCT Avg	PLE NOV Avg	PLE DEC Avg	PLE Average
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	DNQ1	ND	ND	ND	ND	ND	ND	ND	DNQ.08
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	<4	ND	ND	ND	ND	ND	ND	ND	0
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; NS=not sampled; NA=not analyzed

POINT LOMA WASTEWATER TREATMENT PLANT
SEWAGE ANNUAL - Chlorinated Pesticide Analysis

2014 Annual

Source Month Analyte	MDL	Units	PLR JAN Avg	PLR FEB Avg	PLR MAR Avg	PLR APR Avg	PLR MAY Avg	PLR JUN Avg	PLR JUL Avg	PLR AUG Avg	PLR SEP Avg	PLR OCT Avg	PLR NOV Avg	PLR DEC Avg	PLR Average
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	DNQ4	ND	ND	ND	ND	ND	ND	ND	DNQ.3
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	36	2	ND	ND	ND	ND	ND	ND	3
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	36	2	0	0	0	0	0	0	3
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	36	2	0	0	0	0	0	0	4

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

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

POINT LOMA WASTEWATER TREATMENT PLANT / METROBIOSOLIDS CENTER
SLUDGE PROJECT- ANNUAL SUMMARY
Organophosphorus Pesticides
2014 Annual

Source			PLE	PLE	PLE	PLE	PLE	PLE
Date			05-JAN-2014	04-FEB-2014	19-MAR-2014	06-APR-2014	06-MAY-2014	11-JUN-2014
Analyte	MDL	Units	P691888	P695680	P703944	P709176	P712448	P717770
Demeton O	.15	UG/L	ND	ND	ND	ND	ND	ND
Demeton S	.403	UG/L	ND	ND	ND	ND	ND	ND
Diazinon	.03	UG/L	ND	ND	ND	ND	ND	DNQ0.1
Guthion	.15	UG/L	ND	ND	ND	ND	ND	ND
Malathion	.051	UG/L	ND	ND	ND	ND	DNQ0.06	ND
Parathion	.032	UG/L	ND	ND	ND	ND	ND	ND
Chlorpyrifos	.034	UG/L	ND	ND	ND	ND	ND	ND
Coumaphos	.15	UG/L	ND	ND	ND	ND	ND	ND
Dichlorvos	.05	UG/L	ND	ND	ND	ND	ND	ND
Dimethoate	.189	UG/L	ND	ND	ND	ND	ND	ND
Disulfoton	.175	UG/L	ND	ND	ND	ND	ND	ND
Stirophos	.034	UG/L	ND	ND	ND	ND	ND	ND
Thiophosphorus Pesticides	.15	UG/L	0.00	0.00	0.00	0.00	0.00	0.00
Demeton -O, -S	.403	UG/L	0.00	0.00	0.00	0.00	0.00	0.00
Total Organophosphorus Pesticides	.403	UG/L	0.00	0.00	0.00	0.00	0.00	0.00

			PLE	PLE*	PLE*	PLE*	PLE*	PLE*
			09-JUL-2014	05-AUG-2014	10-SEP-2014	07-OCT-2014	11-NOV-2014	10-DEC-2014
Analyte	MDL	Units	P722751	P723690	P733264	P734686	P743398	P748302
Demeton O	.15	UG/L	ND	ND	ND	ND	ND	ND
Demeton S	.403	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	.051	UG/L	ND	DNQ0.12	ND	ND	ND	ND
Parathion	.032	UG/L	ND	ND	ND	ND	ND	ND
Chlorpyrifos	.034	UG/L	ND	ND	ND	ND	ND	ND
Coumaphos	.15	UG/L	ND	ND	ND	ND	ND	ND
Dichlorvos	.05	UG/L	DNQ0.1	ND	ND	<0.05	ND	ND
Dimethoate	.189	UG/L	ND	ND	ND	ND	ND	ND
Disulfoton	.175	UG/L	ND	ND	ND	ND	ND	ND
Stirophos	.034	UG/L	ND	ND	ND	ND	ND	ND
Thiophosphorus Pesticides	.15	UG/L	0.00	0.00	0.00	0.00	0.00	0.00
Demeton -O, -S	.403	UG/L	0.00	0.00	0.00	0.00	0.00	0.00
Total Organophosphorus Pesticides	.403	UG/L	0.00	0.00	0.00	0.00	0.00	0.00

* = Samples analyzed under GC-MS TripleQuad.

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

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

POINT LOMA WASTEWATER TREATMENT PLANT / METROBIOSOLIDS CENTER
SLUDGE PROJECT- ANNUAL SUMMARY
Organophosphorus Pesticides
2014 Annual

Analyte	MDL	Units	PLR 05-JAN-2014 P691891	PLR 04-FEB-2014 P695686	PLR 19-MAR-2014 P703947	PLR 06-APR-2014 P709179	PLR 06-MAY-2014 P712454	PLR 11-JUN-2014 P717773
Demeton O	.15	UG/L	ND	ND	ND	ND	ND	ND
Demeton S	.403	UG/L	ND	ND	ND	ND	ND	ND
Diazinon	.03	UG/L	ND	ND	ND	ND	ND	DNQ0.2
Guthion	.15	UG/L	ND	ND	ND	ND	ND	ND
Malathion	.051	UG/L	DNQ0.03	ND	ND	ND	ND	ND
Parathion	.032	UG/L	ND	ND	ND	ND	ND	ND
Chlorpyrifos	.034	UG/L	ND	DNQ0.1	ND	ND	ND	ND
Coumaphos	.15	UG/L	ND	ND	ND	ND	ND	ND
Dichlorvos	.05	UG/L	ND	ND	ND	ND	ND	ND
Dimethoate	.189	UG/L	ND	ND	ND	ND	ND	ND
Disulfoton	.175	UG/L	ND	ND	ND	ND	ND	ND
Stirophos	.034	UG/L	ND	ND	ND	ND	ND	ND
Thiophosphorus Pesticides	.15	UG/L	0.00	0.00	0.00	0.00	0.00	0.00
Demeton -O, -S	.403	UG/L	0.00	0.00	0.00	0.00	0.00	0.00
Total Organophosphorus Pesticides	.403	UG/L	0.00	0.00	0.00	0.00	0.00	0.00

Analyte	MDL	Units	PLR 09-JUL-2014 P722754	PLR* 05-AUG-2014 P723696	PLR* 10-SEP-2014 P733267	PLR* 07-OCT-2014 P734692	PLR* 11-NOV-2014 P743401	PLR* 10-DEC-2014 P748305
Demeton O	.15	UG/L	ND	ND	ND	ND	ND	ND
Demeton S	.403	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	.051	UG/L	ND	DNQ0.07	ND	ND	ND	ND
Parathion	.032	UG/L	ND	ND	ND	ND	ND	ND
Chlorpyrifos	.034	UG/L	ND	ND	ND	ND	ND	ND
Coumaphos	.15	UG/L	ND	ND	ND	ND	ND	ND
Dichlorvos	.05	UG/L	DNQ0.1	ND	ND	ND	ND	ND
Dimethoate	.189	UG/L	ND	ND	ND	ND	ND	ND
Disulfoton	.175	UG/L	ND	ND	ND	ND	ND	ND
Stirophos	.034	UG/L	ND	ND	ND	ND	ND	ND
Thiophosphorus Pesticides	.15	UG/L	0.00	0.07	0.00	0.00	0.00	0.00
Demeton -O, -S	.403	UG/L	0.00	0.00	0.00	0.00	0.00	0.00
Total Organophosphorus Pesticides	.403	UG/L	0.10	0.07	0.00	0.00	0.00	0.00

* = Samples analyzed under GC-MS TripleQuad.

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

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

POINT LOMA WASTEWATER TREATMENT PLANT
ANNUAL SEWAGE MONTHLY - Tributyl Tin analysis

2014 Annual

Source			PLE	PLE	PLE	PLE	PLE	PLE	PLE	PLE	PLE	PLE	PLE	PLE	
Month			JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	
Analyte	MDL	Units													Average
Dibutyltin	7	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monobutyltin	16	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tributyltin	2	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Source			PLR	PLR	PLR	PLR	PLR	PLR	PLR	PLR	PLR	PLR	PLR	PLR	
Month			JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	
Analyte	MDL	Units													Average
Dibutyltin	7	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monobutyltin	16	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tributyltin	2	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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

POINT LOMA WASTEWATER TREATMENT PLANT
SEWAGE ANNUAL - Acid Extractables

2014 Annual

Source			PLE	PLE	PLE	PLE	PLE	PLE	PLE	PLE	PLE	PLE	PLE	PLE	
Month			JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	
Analyte	MDL	Units	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Average
2-Chlorophenol	1.32	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-Dichlorophenol	1.01	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
2-Methyl-4,6-dinitrophenol	1.52	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
4-Nitrophenol	1.14	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	19.5	22.8	20.0	22.8	23.9	25.7	26.8	25.1	18.4	19.7	21.6	15.7	21.8
2,4,6-Trichlorophenol	1.65	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	19.5	22.8	20.0	22.8	23.9	25.7	26.8	25.1	18.4	19.7	21.6	15.7	21.8
Phenols	2.16	UG/L	19.5	22.8	20.0	22.8	23.9	25.7	26.8	25.1	18.4	19.7	21.6	15.7	21.8
Additional Analytes Determined;															
2-Methylphenol	2.15	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol(3-MP is unresolved)	2.11	UG/L	62.0	63.7	53.6	62.9	52.1	57.2	62.5	53.0	35.9	39.0	47.6	37.9	52.3
2,4,5-Trichlorophenol	1.66	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Source			PLR	PLR	PLR	PLR	PLR	PLR	PLR	PLR	PLR	PLR	PLR	PLR	
Month			JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	
Analyte	MDL	Units	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Average
2-Chlorophenol	1.32	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-Dichlorophenol	1.01	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
2-Methyl-4,6-dinitrophenol	1.52	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
4-Nitrophenol	1.14	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	23.1	23.3	21.5	26.6	27.4	27.0	28.9	25.8	28.8	27.1	29.7	26.5	26.3
2,4,6-Trichlorophenol	1.65	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	23.1	23.3	21.5	26.6	27.4	27.0	28.9	25.8	28.8	27.1	29.7	26.5	26.3
Phenols	2.16	UG/L	23.1	23.3	21.5	26.6	27.4	27.0	28.9	25.8	28.8	27.1	29.7	26.5	26.3
Additional Analytes Determined;															
2-Methylphenol	2.15	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol(3-MP is unresolved)	2.11	UG/L	68.3	54.9	49.0	63.0	48.1	47.8	57.0	49.1	50.3	50.7	60.9	51.9	54.3
2,4,5-Trichlorophenol	1.66	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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

POINT LOMA WASTEWATER TREATMENT PLANT
SEWAGE ANNUAL Priority Pollutants Base/Neutrals

2014 Annual

Source			PLE	PLE	PLE	PLE	PLE	PLE	PLE	PLE	PLE	PLE	PLE	PLE	PLE
Month			JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	
Analyte	MDL	Units	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Average
Acenaphthene	1.8	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	1.77	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1.29	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzidine	1.52	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	1.1	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3,4-Benzo(b)fluoranthene	1.35	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[k]fluoranthene	1.49	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]pyrene	1.25	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[g,h,i]perylene	1.09	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Bromophenyl phenyl ether	1.4	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bis-(2-chloroethoxy) methane	1.01	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bis-(2-chloroethyl) ether	1.38	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bis-(2-chloroisopropyl) ether	1.16	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chlorophenyl phenyl ether	1.57	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloronaphthalene	1.87	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	1.16	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzo(a,h)anthracene	1.01	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Butyl benzyl phthalate	2.84	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butyl phthalate	3.96	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bis-(2-ethylhexyl) phthalate	8.96	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethyl phthalate	3.05	UG/L	<3.1	3.7	4.8	3.6	4.0	5.2	5.1	5.8	<3.1	ND	4.1	3.7	3.3
Dimethyl phthalate	1.44	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-octyl phthalate	1	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3,3-Dichlorobenzidine	2.44	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrotoluene	1.36	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	1.53	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Diphenylhydrazine	1.37	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	1.33	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluorene	1.61	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	1.48	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	1.64	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	1.25	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	1.32	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-CD)pyrene	1.14	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isophorone	1.53	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	1.65	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	1.6	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-nitrosodimethylamine	1.27	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-nitrosodi-n-propylamine	1.16	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-nitrosodiphenylamine	3.48	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	1.34	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	1.43	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	1.52	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Polynuc. Aromatic Hydrocarbons	1.77	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
Base/Neutral Compounds	8.96	UG/L	0.0	3.7	4.8	3.6	4.0	5.2	5.1	5.8	0.0	0.0	4.1	3.7	3.3
Additional Analytes Determined;															
Benzo[e]pyrene	1.44	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Biphenyl	2.29	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,6-Dimethylnaphthalene	2.16	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1-Methylnaphthalene	2.18	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1-Methylphenanthrene	1.46	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	2.14	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,3,5-Trimethylnaphthalene	2.18	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perylene	1.41	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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

POINT LOMA WASTEWATER TREATMENT PLANT
SEWAGE ANNUAL Priority Pollutants Base/Neutrals

2014 Annual

Source			PLR	PLR	PLR	PLR	PLR	PLR	PLR	PLR	PLR	PLR	PLR	PLR	PLR
Month			JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	
Analyte	MDL	Units	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Average
Acenaphthene	1.8	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	1.77	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1.29	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzidine	1.52	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	1.1	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3,4-Benzo(b)fluoranthene	1.35	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[k]fluoranthene	1.49	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]pyrene	1.25	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[g,h,i]perylene	1.09	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Bromophenyl phenyl ether	1.4	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bis-(2-chloroethoxy) methane	1.01	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bis-(2-chloroethyl) ether	1.38	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bis-(2-chloroisopropyl) ether	1.16	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chlorophenyl phenyl ether	1.57	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloronaphthalene	1.87	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	1.16	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzo(a,h)anthracene	1.01	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Butyl benzyl phthalate	2.84	UG/L	ND	3.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.3
Di-n-butyl phthalate	3.96	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bis-(2-ethylhexyl) phthalate	8.96	UG/L	10.3	11.2	12.4	ND	ND	17.2	16.9	20.7	<8.96	9.21	12.1	13.2	10.3
Diethyl phthalate	3.05	UG/L	3.5	ND	4.7	3.2	3.2	3.5	3.6	4.7	<3.1	ND	3.4	3.9	2.8
Dimethyl phthalate	1.44	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-octyl phthalate	1	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3,3-Dichlorobenzidine	2.44	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrotoluene	1.36	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	1.53	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Diphenylhydrazine	1.37	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	1.33	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluorene	1.61	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	1.48	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	1.64	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	1.25	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	1.32	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-CD)pyrene	1.14	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isophorone	1.53	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	1.65	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	1.6	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-nitrosodimethylamine	1.27	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-nitrosodi-n-propylamine	1.16	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-nitrosodiphenylamine	3.48	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	1.34	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	1.43	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	1.52	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Polynuc. Aromatic Hydrocarbons	1.77	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
Base/Neutral Compounds	8.96	UG/L	13.8	14.8	17.1	3.2	3.2	20.7	20.5	25.4	0.0	9.2	15.5	17.1	13.4
Additional Analytes Determined;															
Benzo[e]pyrene	1.44	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Biphenyl	2.29	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,6-Dimethylnaphthalene	2.16	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1-Methylnaphthalene	2.18	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1-Methylphenanthrene	1.46	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	2.14	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,3,5-Trimethylnaphthalene	2.18	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perylene	1.41	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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

POINT LOMA WASTEWATER TREATMENT PLANT
SEWAGE ANNUAL Priority Pollutants Purgeables

2014 Annual

Source			PLE	PLE	PLE	PLE	PLE	PLE	PLE	PLE	PLE	PLE	PLE	PLE	PLE
Month			JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	
Analyte	MDL	Units	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Average
Acrolein	1.3	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	.7	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	.4	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	.5	UG/L	DNQ0.6	<0.5	DNQ0.9	ND	ND	ND	DNQ0.6	ND	ND	ND	ND	ND	DNQ.2
Bromoform	.5	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	.7	UG/L	0.9	ND	1.1	ND	0.8	0.8	1.2	1.6	ND	ND	ND	ND	0.5
Carbon tetrachloride	.4	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	.4	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	.9	UG/L	1.6	1.3	2.0	1.3	1.8	1.6	1.8	3.1	ND	ND	ND	ND	1.2
Chloroform	.2	UG/L	6.1	5.6	8.6	6.2	6.1	7.2	9.4	7.6	4.7	3.2	1.8	3.9	5.9
Chloromethane	.5	UG/L	10.9	8.1	11.2	7.8	11.1	13.2	10.9	16.9	6.1	3.1	ND	2.2	8.5
Dibromochloromethane	.6	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	.4	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	.5	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	.4	UG/L	ND	ND	DNQ0.4	DNQ0.6	ND	DNQ0.4	<0.4	ND	ND	ND	ND	ND	DNQ.1
Dichlorodifluoromethane	.66	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	.4	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	.5	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	.4	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-dichloroethene	.6	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	.3	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	.3	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-dichloropropene	.5	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	.3	UG/L	ND	<0.3	DNQ0.5	DNQ0.4	DNQ0.4	ND	ND	ND	ND	DNQ0.4	ND	DNQ0.3	DNQ.2
Methylene chloride	.3	UG/L	1.3	DNQ0.9	1.2	1.5	1.0	1.3	2.0	1.4	1.5	1.4	DNQ0.8	1.3	DNQ1.3
1,1,2,2-Tetrachloroethane	.5	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	1.1	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	.4	UG/L	1.6	DNQ1.8	2.1	2.1	1.4	1.3	1.2	1.1	2.0	1.3	DNQ0.9	1.3	1.5
1,1,1-Trichloroethane	.4	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	.5	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	.7	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	.3	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	.4	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Halomethane Purgeable Cmpnds	.7	UG/L	11.8	8.1	12.3	7.8	11.9	14.0	12.1	18.5	6.1	3.1	0.0	2.2	9.0
Dichlorobenzenes	.5	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 Chloromethanes	.5	UG/L	18.3	14.6	21.0	15.5	18.2	21.7	22.3	25.9	12.3	7.7	2.6	7.4	15.6
Purgeable Compounds	1.3	UG/L	22.4	15.0	26.2	18.9	22.2	25.4	26.5	31.7	14.3	9.0	1.8	8.7	19.3
Additional Analytes Determined;															
Acetone	4.5	UG/L	829	703	634	560	740	549	518	1820	528	862	531	409	724
Allyl chloride	.6	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzyl chloride	1.1	UG/L	ND	ND	ND	ND	ND	ND	ND	DNQ1.3	ND	ND	ND	ND	0.1
2-Butanone	6.3	UG/L	ND	DNQ9.4	11.4	DNQ9.0	16.7	DNQ8.3	DNQ8.8	20.0	DNQ10.	13.5	<6.3	<6.3	9.0
Carbon disulfide	.6	UG/L	3.4	2.6	2.9	3.4	3.8	4.8	5.2	4.5	4.4	3.7	2.1	2.8	3.6
Chloroprene	.4	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	.3	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	.3	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Iodide	.6	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl methacrylate	.8	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl tert-butyl ether	.4	UG/L	ND	3.1	DNQ0.4	DNQ0.5	DNQ0.5	ND	DNQ0.5	ND	<0.4	ND	ND	ND	0.4
2-Nitropropane	12	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ortho-xylene	.4	UG/L	ND	ND	DNQ0.8	DNQ0.5	DNQ0.5	ND	ND	ND	ND	ND	ND	ND	0.2
Styrene	.3	UG/L	<0.3	DNQ0.5	DNQ0.6	DNQ0.6	DNQ0.4	ND	ND	ND	ND	DNQ0.5	ND	ND	0.2
1,2,4-Trichlorobenzene	1.52	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
meta,para xylenes	.6	UG/L	ND	ND	DNQ1.6	DNQ1.1	DNQ1.0	ND	ND	ND	ND	ND	ND	ND	0.3
2-Chloroethylvinyl ether	1.1	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-pentanone	1.3	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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

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

POINT LOMA WASTEWATER TREATMENT PLANT
SEWAGE ANNUAL Priority Pollutants Purgeables

2014 Annual

Source			PLR	PLR	PLR	PLR	PLR	PLR	PLR	PLR	PLR	PLR	PLR	PLR	PLR
Month			JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	
Analyte	MDL	Units	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Average
Acrolein	1.3	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	.7	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	.4	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	.5	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	.5	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	.7	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	.4	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	.4	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	.9	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	.2	UG/L	1.9	2.2	2.8	2.5	2.4	2.0	2.0	2.1	2.4	2.4	2.0	2.5	2.3
Chloromethane	.5	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	.6	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	.4	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	.5	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	.4	UG/L	ND	ND	DNQ0.4	DNQ0.6	DNQ0.5	DNQ0.4	DNQ0.5	ND	ND	ND	ND	ND	DNQ.2
Dichlorodifluoromethane	.66	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	.4	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	.5	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	.4	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-dichloroethene	.6	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	.3	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	.3	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-dichloropropene	.5	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	.3	UG/L	DNQ0.7	ND	DNQ0.4	DNQ0.4	1.1	ND	DNQ0.8	ND	ND	ND	ND	DNQ.3	DNQ.3
Methylene chloride	.3	UG/L	DNQ0.9	DNQ1.3	DNQ1.0	1.5	1.3	DNQ1.0	1.3	1.2	1.4	1.7	ND	1.0	1.1
1,1,2,2-Tetrachloroethane	.5	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	1.1	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	.4	UG/L	DNQ0.7	DNQ0.9	1.1	1.4	2.9	DNQ0.6	DNQ0.8	DNQ0.8	DNQ0.8	DNQ0.7	DNQ0.7	DNQ0.8	DNQ1
1,1,1-Trichloroethane	.4	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	.5	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	.7	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	.3	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	.4	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Halomethane Purgeable Cmpnds	.7	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
Dichlorobenzenes	.5	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 Chloromethanes	.5	UG/L	1.9	2.2	2.8	4.0	3.7	2.0	3.3	3.3	3.8	4.1	2.0	3.5	3.4
Purgeable Compounds	1.3	UG/L	1.9	2.2	3.9	5.4	7.7	2.0	4.1	3.3	3.8	4.1	2.0	3.5	3.4
Additional Analytes Determined;															
Acetone	4.5	UG/L	745	580	495	1100	285	386	940	936	574	336	909	315	633
Allyl chloride	.6	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzyl chloride	1.1	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	6.3	UG/L	ND	ND	11.5	DNQ7.6	10.4	DNQ7.9	DNQ7.0	16.5	DNQ9.1	DNQ7.5	ND	ND	6.5
Carbon disulfide	.6	UG/L	1.7	DNQ1.0	2.0	1.2	2.9	2.3	2.5	2.7	3.0	3.1	2.3	1.6	2.2
Chloroprene	.4	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	.3	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	.3	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Iodide	.6	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl methacrylate	.8	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl tert-butyl ether	.4	UG/L	DNQ0.8	3.5	DNQ0.6	DNQ0.5	DNQ0.7	ND	DNQ0.6	ND	ND	ND	ND	ND	0.6
2-Nitropropane	12	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ortho-xylene	.4	UG/L	ND	ND	DNQ0.5	ND	1.6	ND	ND	ND	ND	ND	ND	ND	0.2
Styrene	.3	UG/L	DNQ0.7	DNQ0.5	1.0	1.7	DNQ0.9	DNQ0.5	DNQ0.4	DNQ0.4	ND	DNQ0.8	ND	ND	0.6
1,2,4-Trichlorobenzene	1.52	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
meta,para xylenes	.6	UG/L	ND	DNQ0.6	DNQ0.9	DNQ0.7	3.0	ND	DNQ0.7	ND	ND	ND	ND	ND	0.5
2-Chloroethylvinyl ether	1.1	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-pentanone	1.3	UG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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

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

POINT LOMA WASTEWATER TREATMENT
EFFLUENT
Dioxin and Furan Analysis

ANALYZED BY: Frontier Analytical Laboratories

2014 Annual

Source			PLE	PLE	PLE	PLE	PLE	PLE	PLE	PLE
Month			JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG
Analyte	MDL	Units	P691421	P695680	P701809	P708925	P712448	P717495	P721248	P723690
2,3,7,8-tetra CDD	.155	PG/L	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,7,8-penta CDD	.254	PG/L	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,4,7,8_hexa_CDD	.31	PG/L	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDD	.315	PG/L	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDD	.287	PG/L	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDD	.53	PG/L	DNQ2.36	DNQ2.52	DNQ3.71	DNQ2.21	ND	DNQ2.65	DNQ3.57	ND
octa CDD	1.12	PG/L	DNQ16.0	DNQ15.0	DNQ21.0	DNQ19.0	ND	DNQ16.0	DNQ21.0	DNQ16.0
2,3,7,8-tetra CDF	.164	PG/L	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,7,8-penta CDF	.187	PG/L	ND	ND	ND	ND	ND	ND	DNQ4.04	ND
2,3,4,7,8-penta CDF	.178	PG/L	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDF	.19	PG/L	ND	ND	ND	ND	ND	ND	DNQ1.36	ND
1,2,3,6,7,8-hexa CDF	.211	PG/L	ND	ND	ND	ND	ND	DNQ1.68	DNQ3.38	ND
1,2,3,7,8,9-hexa CDF	.265	PG/L	ND	ND	ND	ND	ND	ND	ND	ND
2,3,4,6,7,8-hexa CDF	.217	PG/L	ND	ND	ND	ND	ND	ND	DNQ1.45	ND
1,2,3,4,6,7,8-hepta CDF	.225	PG/L	ND	ND	ND	ND	ND	ND	DNQ3.23	ND
1,2,3,4,7,8,9-hepta CDF	.317	PG/L	ND	ND	ND	ND	ND	ND	ND	ND
octa CDF	.579	PG/L	ND	ND	ND	ND	ND	ND	ND	ND

Source			PLE	PLE	PLE	PLE
Month			SEP	OCT	NOV	DEC
Analyte	MDL	Units	P731834	P734686	P741746	P747038
2,3,7,8-tetra CDD	.155	PG/L	ND	ND	ND	ND
1,2,3,7,8-penta CDD	.254	PG/L	ND	ND	ND	ND
1,2,3,4,7,8_hexa_CDD	.31	PG/L	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDD	.315	PG/L	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDD	.287	PG/L	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDD	.53	PG/L	DNQ3.77	DNQ2.75	DNQ4.52	DNQ2.46
octa CDD	1.12	PG/L	DNQ26.0	DNQ22.0	DNQ28.0	DNQ15.0
2,3,7,8-tetra CDF	.164	PG/L	ND	ND	ND	ND
1,2,3,7,8-penta CDF	.187	PG/L	ND	ND	ND	ND
2,3,4,7,8-penta CDF	.178	PG/L	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDF	.19	PG/L	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDF	.211	PG/L	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDF	.265	PG/L	ND	ND	ND	ND
2,3,4,6,7,8-hexa CDF	.217	PG/L	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDF	.225	PG/L	ND	ND	ND	ND
1,2,3,4,7,8,9-hepta CDF	.317	PG/L	ND	ND	ND	ND
octa CDF	.579	PG/L	ND	ND	ND	ND

Above are permit required CDD/CDF isomers.

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

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

POINT LOMA WASTEWATER TREATMENT
EFFLUENT
Dioxin and Furan Analysis

ANALYZED BY: Frontier Analytical Laboratories

2014 Annual

Source				PLE TCDD	PLE TCDD	PLE TCDD	PLE TCDD	PLE TCDD	PLE TCDD	PLE TCDD	PLE TCDD
Month				JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG
Analyte	MDL	Units	Equiv	P691421	P695680	P701809	P708925	P712448	P717495	P721248	P723690
2,3,7,8-tetra CDD	.155	PG/L	1.000	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,7,8-penta CDD	.254	PG/L	0.500	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,4,7,8_hexa_CDD	.31	PG/L	0.100	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDD	.315	PG/L	0.100	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDD	.287	PG/L	0.100	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDD	.53	PG/L	0.010	DNQ0.024	DNQ0.025	DNQ0.037	DNQ0.022	ND	DNQ0.027	DNQ0.036	ND
octa CDD	1.12	PG/L	0.001	DNQ0.016	DNQ0.015	DNQ0.021	DNQ0.019	ND	DNQ0.016	DNQ0.021	DNQ0.016
2,3,7,8-tetra CDF	.164	PG/L	0.100	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,7,8-penta CDF	.187	PG/L	0.050	ND	ND	ND	ND	ND	ND	DNQ0.202	ND
2,3,4,7,8-penta CDF	.178	PG/L	0.500	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDF	.19	PG/L	0.100	ND	ND	ND	ND	ND	ND	DNQ0.136	ND
1,2,3,6,7,8-hexa CDF	.211	PG/L	0.100	ND	ND	ND	ND	ND	DNQ0.168	DNQ0.338	ND
1,2,3,7,8,9-hexa CDF	.265	PG/L	0.100	ND	ND	ND	ND	ND	ND	ND	ND
2,3,4,6,7,8-hexa CDF	.217	PG/L	0.100	ND	ND	ND	ND	ND	ND	DNQ0.145	ND
1,2,3,4,6,7,8-hepta CDF	.225	PG/L	0.010	ND	ND	ND	ND	ND	ND	DNQ0.032	ND
1,2,3,4,7,8,9-hepta CDF	.317	PG/L	0.010	ND	ND	ND	ND	ND	ND	ND	ND
octa CDF	.579	PG/L	0.001	ND	ND	ND	ND	ND	ND	ND	ND

Source				PLE TCDD	PLE TCDD	PLE TCDD	PLE TCDD
Month				SEP	OCT	NOV	DEC
Analyte	MDL	Units	Equiv	P731834	P734686	P741746	P747038
2,3,7,8-tetra CDD	.155	PG/L	1.000	ND	ND	ND	ND
1,2,3,7,8-penta CDD	.254	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8_hexa_CDD	.31	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDD	.315	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDD	.287	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDD	.53	PG/L	0.010	DNQ0.038	DNQ0.028	DNQ0.045	DNQ0.025
octa CDD	1.12	PG/L	0.001	DNQ0.026	DNQ0.022	DNQ0.028	DNQ0.015
2,3,7,8-tetra CDF	.164	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8-penta CDF	.187	PG/L	0.050	ND	ND	ND	ND
2,3,4,7,8-penta CDF	.178	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDF	.19	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDF	.211	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDF	.265	PG/L	0.100	ND	ND	ND	ND
2,3,4,6,7,8-hexa CDF	.217	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDF	.225	PG/L	0.010	ND	ND	ND	ND
1,2,3,4,7,8,9-hepta CDF	.317	PG/L	0.010	ND	ND	ND	ND
octa CDF	.579	PG/L	0.001	ND	ND	ND	ND

Above are permit required CDD/CDF isomers.

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

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

POINT LOMA WASTEWATER TREATMENT
EFFLUENT
Dioxin and Furan Analysis

ANALYZED BY: Frontier Analytical Laboratories

2014 Annual

Source			PLR	PLR	PLR	PLR	PLR	PLR	PLR	PLR	PLR
Month			JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Analyte	MDL	Units	P691424	P695686	P701812	P708928	P712454	P717498	P721251	P723696	P731837
2,3,7,8-tetra CDD	.155	PG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,7,8-penta CDD	.254	PG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,4,7,8_hexa_CDD	.31	PG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDD	.315	PG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDD	.287	PG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDD	.53	PG/L	25.1	DNQ20.5	28.4	DNQ18.0	DNQ19.2	DNQ19.4	DNQ23.3	25.0	DNQ22.9
octa CDD	1.12	PG/L	210.0	210.0	210.0	200.0	200.0	190.0	190.0	190.0	200.0
2,3,7,8-tetra CDF	.164	PG/L	ND	ND	ND	ND	ND	ND	DNQ1.13	ND	ND
1,2,3,7,8-penta CDF	.187	PG/L	ND	ND	ND	ND	ND	DNQ3.03	DNQ3.09	ND	ND
2,3,4,7,8-penta CDF	.178	PG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDF	.19	PG/L	ND	ND	ND	ND	ND	DNQ2.10	DNQ1.37	ND	ND
1,2,3,6,7,8-hexa CDF	.211	PG/L	DNQ1.20	DNQ2.0	DNQ2.75	ND	ND	DNQ6.91	DNQ6.71	DNQ5.89	DNQ4.23
1,2,3,7,8,9-hexa CDF	.265	PG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,3,4,6,7,8-hexa CDF	.217	PG/L	ND	ND	ND	ND	ND	DNQ1.65	DNQ1.29	ND	ND
1,2,3,4,6,7,8-hepta CDF	.225	PG/L	DNQ4.620	DNQ4.88	DNQ6.23	DNQ4.86	ND	DNQ7.89	DNQ6.96	DNQ7.45	DNQ5.24
1,2,3,4,7,8,9-hepta CDF	.317	PG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND
octa CDF	.579	PG/L	DNQ12.4	DNQ12.0	DNQ11.1	DNQ9.65	ND	DNQ13.0	DNQ13.1	DNQ11.9	DNQ13.6

Source			PLR	PLR	PLR
Month			OCT	NOV	DEC
2,3,7,8-tetra CDD	.155	PG/L	ND	ND	ND
1,2,3,7,8-penta CDD	.254	PG/L	ND	ND	ND
1,2,3,4,7,8_hexa_CDD	.31	PG/L	ND	ND	ND
1,2,3,6,7,8-hexa CDD	.315	PG/L	ND	ND	ND
1,2,3,7,8,9-hexa CDD	.287	PG/L	ND	ND	ND
1,2,3,4,6,7,8-hepta CDD	.53	PG/L	DNQ21.3	DNQ22.3	DNQ18.1
octa CDD	1.12	PG/L	230.0	220.0	170.0
2,3,7,8-tetra CDF	.164	PG/L	ND	DNQ2.06	ND
1,2,3,7,8-penta CDF	.187	PG/L	ND	ND	ND
2,3,4,7,8-penta CDF	.178	PG/L	ND	ND	ND
1,2,3,4,7,8-hexa CDF	.19	PG/L	ND	ND	ND
1,2,3,6,7,8-hexa CDF	.211	PG/L	ND	ND	ND
1,2,3,7,8,9-hexa CDF	.265	PG/L	ND	ND	ND
2,3,4,6,7,8-hexa CDF	.217	PG/L	ND	ND	ND
1,2,3,4,6,7,8-hepta CDF	.225	PG/L	DNQ4.01	DNQ6.10	DNQ5.09
1,2,3,4,7,8,9-hepta CDF	.317	PG/L	ND	ND	ND
octa CDF	.579	PG/L	DNQ9.35	DNQ12.0	DNQ10.5

Above are permit required CDD/CDF isomers.

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

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

POINT LOMA WASTEWATER TREATMENT
EFFLUENT
Dioxin and Furan Analysis

ANALYZED BY: Frontier Analytical Laboratories

2014 Annual

Source				PLR TCDD	PLR TCDD	PLR TCDD	PLR TCDD	PLR TCDD	PLR TCDD	PLR TCDD	PLR TCDD
Month				JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG
2,3,7,8-tetra CDD	.155	PG/L	1.000	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,7,8-penta CDD	.254	PG/L	0.500	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,4,7,8_hexa_CDD	.31	PG/L	0.100	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDD	.315	PG/L	0.100	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDD	.287	PG/L	0.100	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDD	.53	PG/L	0.010	0.251	DNQ0.205	0.284	DNQ0.180	DNQ0.192	DNQ0.194	DNQ0.233	0.250
octa CDD	1.12	PG/L	0.001	0.210	0.210	0.210	0.200	0.200	0.190	0.190	0.190
2,3,7,8-tetra CDF	.164	PG/L	0.100	ND	ND	ND	ND	ND	ND	DNQ0.113	ND
1,2,3,7,8-penta CDF	.187	PG/L	0.050	ND	ND	ND	ND	ND	DNQ0.152	DNQ0.155	ND
2,3,4,7,8-penta CDF	.178	PG/L	0.500	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDF	.19	PG/L	0.100	ND	ND	ND	ND	ND	DNQ0.210	DNQ0.137	ND
1,2,3,6,7,8-hexa CDF	.211	PG/L	0.100	DNQ0.120	DNQ0.200	DNQ0.275	ND	ND	DNQ0.691	DNQ0.671	DNQ0.589
1,2,3,7,8,9-hexa CDF	.265	PG/L	0.100	ND	ND	ND	ND	ND	ND	ND	ND
2,3,4,6,7,8-hexa CDF	.217	PG/L	0.100	ND	ND	ND	ND	ND	DNQ0.165	DNQ0.129	ND
1,2,3,4,6,7,8-hepta CDF	.225	PG/L	0.010	DNQ0.046	DNQ0.049	DNQ0.062	DNQ0.049	ND	DNQ0.079	DNQ0.070	DNQ0.075
1,2,3,4,7,8,9-hepta CDF	.317	PG/L	0.010	ND	ND	ND	ND	ND	ND	ND	ND
octa CDF	.579	PG/L	0.001	DNQ0.012	DNQ0.012	DNQ0.011	DNQ0.010	ND	DNQ0.013	DNQ0.013	DNQ0.012

Source				PLR TCDD	PLR TCDD	PLR TCDD	PLR TCDD
Month				SEP	OCT	NOV	DEC
2,3,7,8-tetra CDD	.155	PG/L	1.000	ND	ND	ND	ND
1,2,3,7,8-penta CDD	.254	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8_hexa_CDD	.31	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDD	.315	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDD	.287	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDD	.53	PG/L	0.010	DNQ0.229	DNQ0.213	DNQ0.223	DNQ0.181
octa CDD	1.12	PG/L	0.001	0.200	0.230	0.220	0.170
2,3,7,8-tetra CDF	.164	PG/L	0.100	ND	ND	DNQ0.206	ND
1,2,3,7,8-penta CDF	.187	PG/L	0.050	ND	ND	ND	ND
2,3,4,7,8-penta CDF	.178	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDF	.19	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDF	.211	PG/L	0.100	DNQ0.423	ND	ND	ND
1,2,3,7,8,9-hexa CDF	.265	PG/L	0.100	ND	ND	ND	ND
2,3,4,6,7,8-hexa CDF	.217	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDF	.225	PG/L	0.010	DNQ0.052	DNQ0.040	DNQ0.061	DNQ0.051
1,2,3,4,7,8,9-hepta CDF	.317	PG/L	0.010	ND	ND	ND	ND
octa CDF	.579	PG/L	0.001	DNQ0.014	DNQ0.009	DNQ0.012	DNQ0.011

Above are permit required CDD/CDF isomers.

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

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

2014
Point Loma Treatment Plant

Bacteriological Parameters

The following are the monthly bacteriological results of the Point Loma Treatment Plant Effluent. The values are stated in terms of Most Probable Number (MPN) per 100 milliliters for the total and fecal coliform densities and in terms of Colony Forming Unit (CFU) per 100 millilitiers for enterococcus.

DATE	COLIFORM* (MPN Index/100ml)		ENTEROCOCCUS** (CFU/100 ml)
	Total	Fecal	
January 2, 2014	1,600,000	540,000	13,000e
January 7, 2014	>1.600.000	540,000	5,300
January 13, 2014	>1,600,000	>1,600,000	420,000
January 21, 2014	5,400,000	1,400,000	24,000
January 27, 2014	3,500,000	140,000	800e
Average	3,500,000	660,000	93,000

DATE	COLIFORM* (MPN Index/100ml)		ENTEROCOCCUS** (CFU/100 ml)
	Total	Fecal	
February 4, 2014	220,000	49,000	2,000
February 10, 2014	5,400,000	110,000	400e
February 18, 2014	1,100,000	220,000	20,000
February 25, 2014	1,300,000	790,000	7.000e
Average	2,000,000	290,000	7,000

DATE	COLIFORM* (MPN Index/100ml)		ENTEROCOCCUS** (CFU/100 ml)
	Total	Fecal	
March 4, 2014	230,000^	20,000^	310^
March 11, 2014	33,000	1,700	>6,000
March 18, 2014	330,000	3,300	100e
March 24, 2014	140,000	7,900	<100
Average	180,000	8,200	1,600

*Multiple tube Fermentation Technique (MTF) SM 9221B (Total Coliform) & SM9221E (Fecal coliform)
**Membrane Filtration (MF) – EPA 1600
"e", estimated value, plate count falls outside the acceptable range per EPA method guidelines.
^Method used for this analysis is IDEXX Quanti-Tray using colilert-18 and Enterolert reagents. This method measures *E. coli* density as opposed to fecal coliform, however, a statistical comparison study performed in the lab determined that the ratio is 1:1 for both indicators in this matrix.

DATE	COLIFORM* (MPN Index/100ml)		ENTEROCOCCUS** (CFU/100 ml)
	Total	Fecal	
April 1 2014	13,000	3,300	200e
April 7, 2014	33,000	2,200	400e
April 15, 2014	3,300	450	<100
April 21, 2014	49,000	1,100	<100
April 29, 2014	49,000	13,000	500e
Average	25,000	4,000	260

DATE	COLIFORM* (MPN Index/100ml)		ENTEROCOCCUS** (CFU/100 ml)
	Total	Fecal	
May 5, 2014	11,000	450	100e
May 12, 2014	>16,000,000	5,400,000	1,000,000e
May 20, 2014	49,000	1,100	1,300e
May 27, 2014	94,000	130	400e
Average	4,000,000	1,400,000	250,000

DATE	COLIFORM* (MPN Index/100ml)		ENTEROCOCCUS** (CFU/100 ml)
	Total	Fecal	
June 4, 2014	2,400,000	330,000	7,000e
June 10, 2014	4,900	450	<100
June 16, 2014	230,000	13,000	900e
June 24, 2014	23,000	4,900	<100
June 30, 2014	4,600	1,700	300e
Average	530,000	70,000	1,700

DATE	COLIFORM* (MPN Index/100ml)		ENTEROCOCCUS** (CFU/100 ml)
	Total	Fecal	
July 8, 2014	2,400,000	1,300,000	13,000e
July 14, 2014	33,000	1,400	<100
July 22, 2014	2,200	200	<100
July 28, 2014	22,000	11,000	300e
Average	610,000	330,000	3,400

*Multiple tube Fermentation Technique (MTF) SM 9221B (Total Coliform) & SM9221E (Fecal coliform)
**Membrane Filtration (MF) – EPA 1600
"e", estimated value, plate count falls outside the acceptable range per EPA method guidelines.

DATE	COLIFORM* (MPN Index/100ml)		ENTEROCOCCUS** (CFU/100 ml)
	Total	Fecal	
August 5, 2014	13,000	450	<100
August 12, 2014	54,000	680	700e
August 18, 2014	5,400,000	1,700,000	240,000
August 25, 2014	>16,000,000	3,500,000	33,000
Average	5,400,000	1,300,000	68,000

DATE	COLIFORM* (MPN Index/100ml)		ENTEROCOCCUS** (CFU/100 ml)
	Total	Fecal	
September 2, 2014	16,000,000	1,100,000	55,000
September 8, 2014	9,200,000	3,500,000	45,000
September 16, 2014	9,200,000	2,200,000	140,000e
September 22, 2014	9,200,000	2,200,000	19,000e
September 30, 2014	2,400,000	280,000	1,500e
Average	9,200,000	1,900,000	52,000

DATE	COLIFORM* (MPN Index/100ml)		ENTEROCOCCUS** (CFU/100 ml)
	Total	Fecal	
October 6, 2014	>16,000,000	3,500,000	90,000e
October 13, 2014	9,200,000	5,400,000	60,000e
October 20, 2014	3,500,000	3,500,000	33,000
October 27, 2014	16,000,000	9,200,000	180,000e
Average	11,000,000	5,400,000	91,000

*Multiple tube Fermentation Technique (MTF) SM 9221B (Total Coliform) & SM9221E (Fecal coliform)
**Membrane Filtration (MF) – EPA 1600
"e", estimated value, plate count falls outside the acceptable range per EPA method guidelines.

DATE	COLIFORM* (MPN Index/100ml)		ENTEROCOCCUS** (CFU/100 ml)
	Total	Fecal	
November 6, 2014	>16,000,000	2,100,000	22,000
November 12, 2014	3,300,000	3,300,000	38,000
November 17, 2014	9,200,000	1,700,000	45,000
November 24, 2014	9,200,000	1,300,000	90,000e
Average	7,400,000	2,100,000	49,000

DATE	COLIFORM* (MPN Index/100ml)		ENTEROCOCCUS** (CFU/100 ml)
	Total	Fecal	
December 1, 2014	3,500,000	1,300,000	70,000e
December 8, 2014	9,200,000	3,500,000	45,000
December 16, 2014	5,400,000	3,500,000	200,000
December 22, 2014	5,400,000	3,500,000	46,110^
December 29, 2014	5,400,000	2,400,000	250,000
Average	5,800,000	2,800,000	120,000

*Multiple tube Fermentation Technique (MTF) SM 9221B (Total Coliform) & SM9221E (Fecal coliform)
**Membrane Filtration (MF) – EPA 1600
"e", estimated value, plate count falls outside the acceptable range per EPA method guidelines.
^Method used for this analysis is IDEXX Quanti-Tray using Enterolert reagents (SM9223), values are stated in terms of MPN/100ml.

POINT LOMA WASTEWATER TREATMENT PLANT
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	Total Hardness		Calcium Hardness		Magnesium Hardness		Calcium		Magnesium	
MDL:		mg/L		mg/L		mg/L	.04	mg/L	.1	mg/L
	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.
JANUARY -2014	431	414	209	201	223	214	83.5	80.3	54.1	51.9
FEBRUARY -2014	443	448	220	222	224	226	88.0	89.0	54.3	54.9
MARCH -2014	440	440	216	215	224	225	86.3	86.0	54.5	54.6
APRIL -2014	451	451	223	223	228	228	89.4	89.4	55.3	55.5
MAY -2014	454	456	222	223	232	233	89.1	89.2	56.3	56.6
JUNE -2014	428	429	205	207	222	222	82.3	82.8	54.0	53.9
JULY -2014	379	375	178	176	201	198	71.3	70.6	48.8	48.1
AUGUST -2014	378	366	173	168	205	198	69.3	67.2	49.9	48.2
SEPTEMBER-2014	439	436	204	203	235	233	81.5	81.3	57.0	56.5
OCTOBER -2014	445	444	213	212	232	233	85.3	84.7	56.2	56.5
NOVEMBER -2014	414	422	209	211	205	211	83.8	84.6	49.8	51.2
DECEMBER -2014	464	463	233	233	230	230	93.5	93.3	55.9	55.9
Average:	431	429	209	208	222	221	83.6	83.2	53.8	53.7

	Alkalinity		Total Solids		Total Vol. Solids		Conductivity		Fluoride	
MDL:	20	mg/L	10	mg/L	100	mg/L	10umhos/cm		.05	mg/L
	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.
JANUARY -2014	306	294	1940	1630	550	290	2860	2890	0.81	0.83
FEBRUARY -2014	301	281	1970	1690	575	312	2860	2920	0.85	0.87
MARCH -2014	298	284	1980	1670	588	320	2880	2930	0.72	0.68
APRIL -2014	304	293	2030	1700	614	303	2890	2960	0.49	0.48
MAY -2014	320	303	2100	1780	610	311	3060	3110	0.67	0.67
JUNE -2014	266	267	2080	1730	620	303	2920	2970	0.80	0.77
JULY -2014	263	244	1970	1640	621	319	2800	2850	0.65	0.64
AUGUST -2014	286	275	2080	1770	622	330	2940	2990	0.57	0.67
SEPTEMBER-2014	302	295	2240	1910	690	402	3170	3200	0.91	0.91
OCTOBER -2014	302	292	2200	1810	661	342	3060	3070	0.77	0.79
NOVEMBER -2014	302	295	2120	1750	597	294	3030	3040	0.70	0.71
DECEMBER -2014	293	288	2120	1780	609	348	3000	2970	0.72	0.75
Average:	295	284	2069	1738	613	323	2956	2992	0.72	0.73

	Chloride		Bromide		Sulfate		Nitrate		Ortho Phosphate	
MDL:	7	mg/L	.1	mg/L	9	mg/L	.04	mg/L	.2	mg/L
	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.
JANUARY -2014	570	589	1.3	1.3	244	233	0.15	0.74	5.5	4.0
FEBRUARY -2014	558	587	1.2	1.3	254	244	0.05	0.44	3.0	3.5
MARCH -2014	570	582	1.1	1.3	247	240	1.05	1.56	4.2	3.0
APRIL -2014	559	593	1.2	1.2	256	243	0.06	0.68	6.0	5.5
MAY -2014	601	631	1.7	1.8	251	240	<0.04	1.32	4.6	5.5
JUNE -2014	588	618	1.4	1.4	220	204	ND	0.96	4.6	5.6
JULY -2014	572	603	1.3	1.3	183	170	0.05	0.33	5.7	6.3
AUGUST -2014	623	646	1.6	1.6	190	178	0.06	0.36	7.1	6.4
SEPTEMBER-2014	671	691	1.6	1.6	235	226	ND	1.18	6.6	6.7
OCTOBER -2014	631	650	1.5	1.5	242	232	ND	0.11	7.4	6.3
NOVEMBER -2014	607	626	1.4	1.5	257	244	ND	0.20	5.3	5.2
DECEMBER -2014	588	603	1.4	1.4	275	265	ND	0.26	4.4	4.7
Average:	595	618	1.4	1.4	238	227	0.12	0.68	5.4	5.2

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

POINT LOMA WASTEWATER TREATMENT PLANT
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	Lithium		Sodium		Potassium		Chemical Oxygen Demand		Soluble BOD	
MDL:	.002	mg/L	1	mg/L	.3	mg/L	18	mg/L	2	mg/L
	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.
JANUARY -2014	0.050	0.047	374	366	29.8	28.1	664	238	94	84
FEBRUARY -2014	0.050	0.048	361	377	28.2	28.0	646	223	90	79
MARCH -2014	0.048	0.046	361	375	27.3	26.9	704	237	87	82
APRIL -2014	0.051	0.050	373	390	28.9	28.9	759	244	90	85
MAY -2014	0.052	0.051	391	405	29.3	29.4	832	277	99	96
JUNE -2014	0.044	0.044	377	391	27.6	27.6	726	255	92	85
JULY -2014	0.037	0.037	357	368	26.7	26.5	728	234	84	80
AUGUST -2014	0.047	0.046	374	372	28.2	26.8	715	234	96	83
SEPTEMBER-2014	0.053	0.050	416	420	30.9	30.5	632	247	98	79
OCTOBER -2014	0.052	0.051	394	400	30.1	29.9	605	201	92	76
NOVEMBER -2014	0.059	0.055	368	384	29.1	29.8	743	230	94	81
DECEMBER -2014	0.057	0.056	385	391	29.4	29.1	694	237	82	71
Average:	0.05	0.05	378	387	28.8	28.5	704	238	92	82

	Total Disolved Solids		Floatables		Turbidity		Aluminum		Barium	
MDL:	28	mg/L	1.4	mg/L	.13	NTU	47	ug/L	.7	ug/L
	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.
JANUARY -2014	1670	1660	<1.40	ND	130	34	570	ND	96	38
FEBRUARY -2014	1640	1630	1.58	ND	136	33	656	ND	110	42
MARCH -2014	1620	1620	<1.40	ND	134	33	603	ND	100	38
APRIL -2014	1690	1680	<1.40	ND	143	34	799	ND	121	41
MAY -2014	1710	1710	<1.40	ND	138	38	597	ND	108	43
JUNE -2014	1710	1700	<1.40	ND	147	44	704	<47	103	39
JULY -2014	1600	1600	<1.40	ND	133	44	654	30	86	30
AUGUST -2014	1680	1680	<1.40	ND	132	44	628	40	87	31
SEPTEMBER-2014	1850	1810	<1.40	ND	138	46	671	87	102	43
OCTOBER -2014	1780	1740	<1.40	ND	147	40	667	43	115	44
NOVEMBER -2014	1690	1670	<1.40	ND	148	37	633	46	109	44
DECEMBER -2014	1710	1680	1.42	ND	131	33	617	47	111	46
Average:	1696	1682	0.25	ND	138	38	650	24	104	40

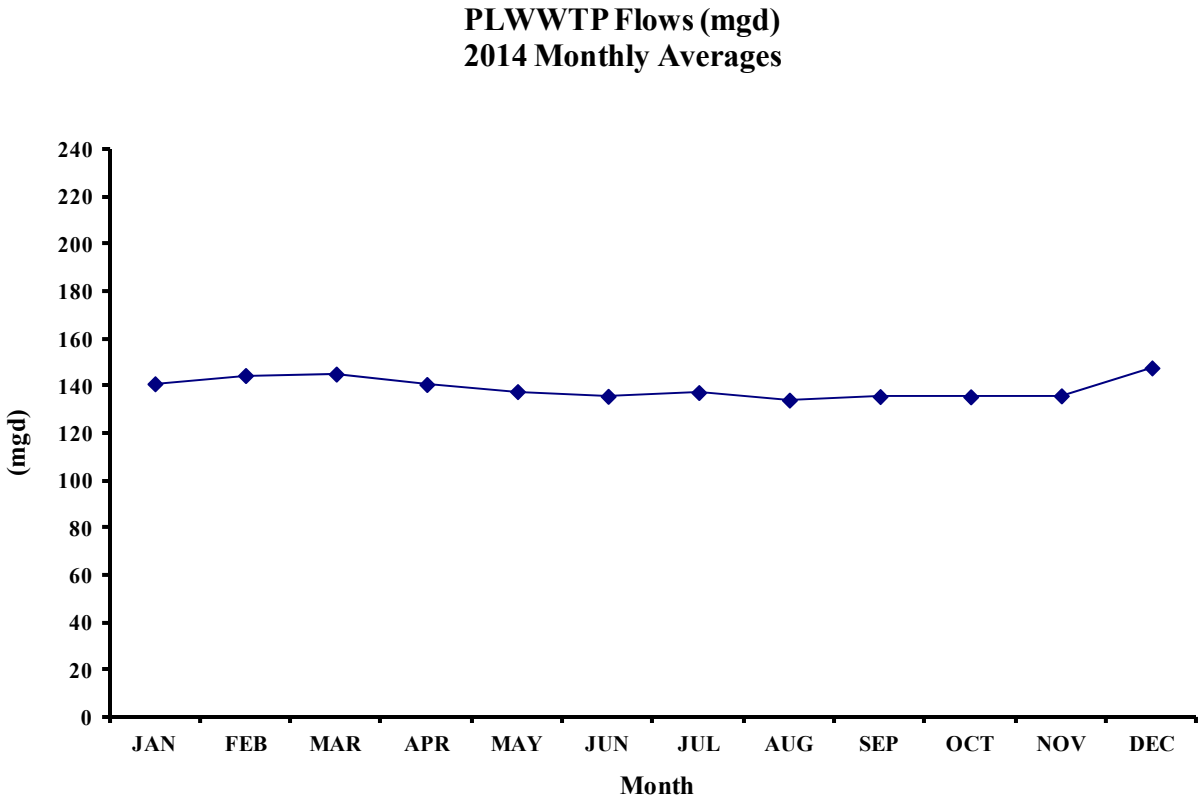
	Boron		Cobalt		Molybdenum		Manganese		Vanadium	
MDL:	7	ug/L	.85	ug/L	.89	ug/L	.78	ug/L	.64	ug/L
	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.
JANUARY -2014	387	385	<0.85	ND	6.81	4.83	120	111	4.71	0.82
FEBRUARY -2014	383	378	<0.85	ND	13.30	9.54	128	115	6.27	2.34
MARCH -2014	378	373	1.02	ND	7.52	5.58	235	170	6.67	2.01
APRIL -2014	387	380	1.15	ND	8.33	5.36	129	110	6.95	1.00
MAY -2014	383	381	1.04	ND	9.99	6.59	122	110	4.67	1.16
JUNE -2014	387	378	1.38	<0.850	9.35	5.73	120	111	4.89	0.75
JULY -2014	398	388	1.12	0.584	9.09	5.34	122	109	4.18	0.56
AUGUST -2014	409	400	1.64	1.140	8.84	5.45	120	110	4.33	0.55
SEPTEMBER-2014	432	421	1.58	1.130	9.87	5.83	124	114	4.40	0.85
OCTOBER -2014	399	399	1.29	0.755	9.98	6.48	116	107	4.90	1.09
NOVEMBER -2014	411	405	1.36	0.766	9.07	6.31	128	118	3.78	1.00
DECEMBER -2014	388	383	1.51	0.959	8.62	6.19	126	119	4.25	0.84
Average:	395	389	1.09	0.445	9.23	6.10	133	117	5.00	1.08

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

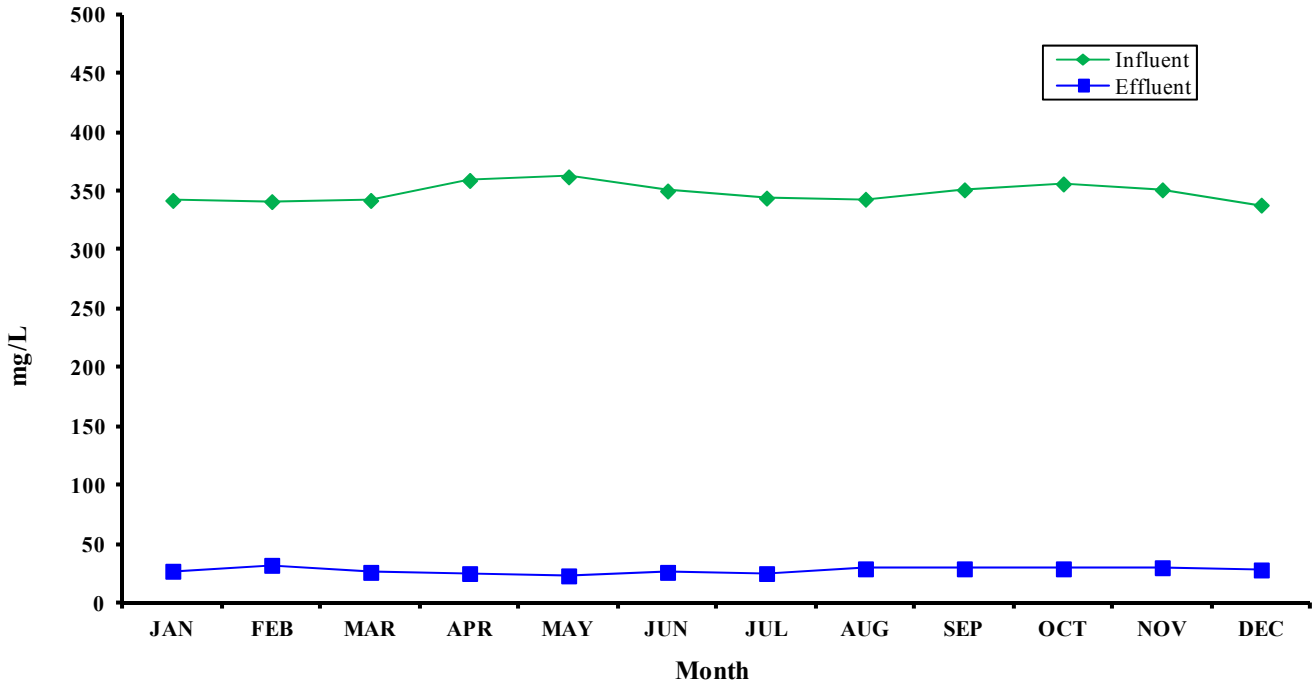
D. Influent and Effluent Graphs

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

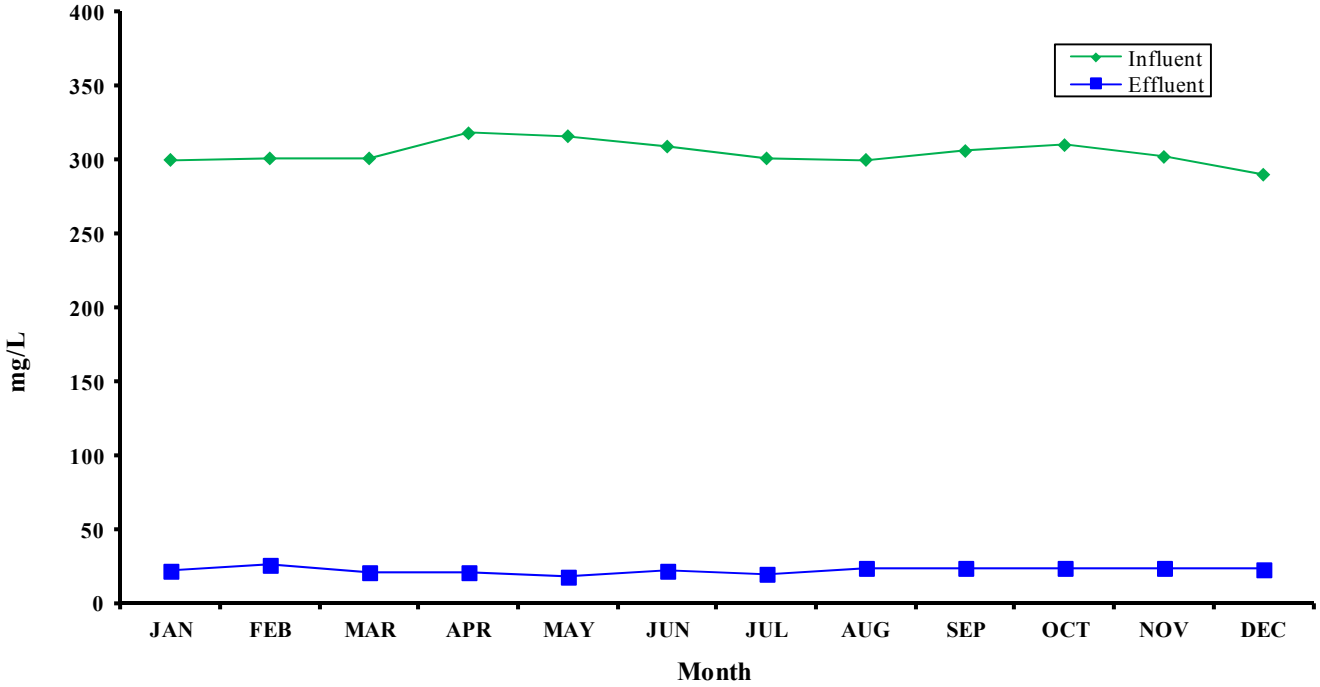
Where possible, the influent and effluent values of a given parameter have been included on the same graph so that removals and other relationships are readily apparent. Please note that many of the graphs are on expanded scales. That is, they may not go to zero concentrations but show, in magnified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



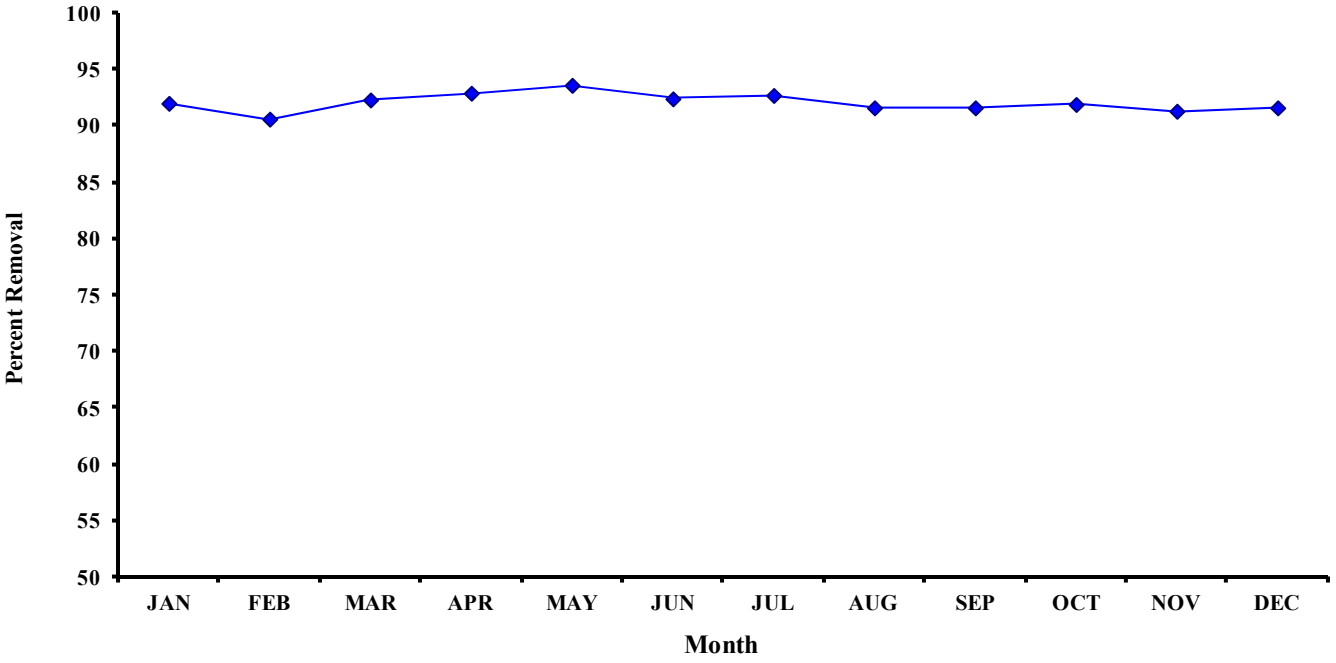
Total Suspended Solids (mg/L)
2014 Monthly Averages



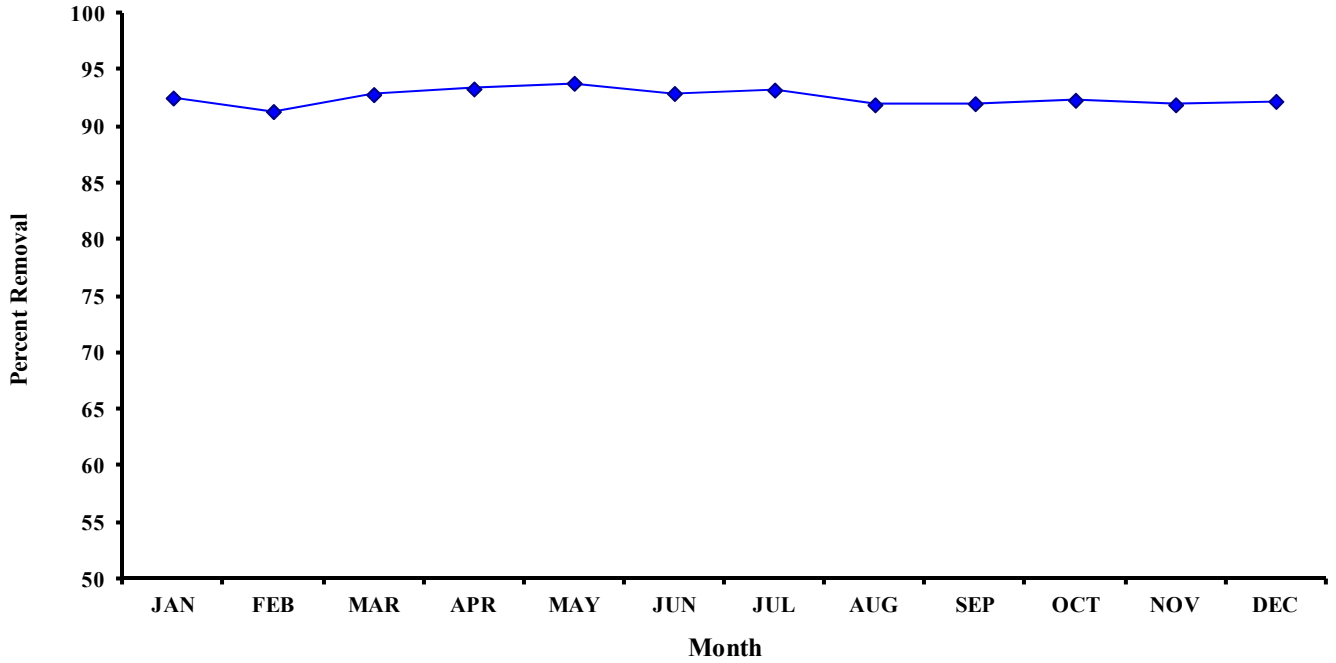
Volatile Suspended Solids (mg/L)
2014 Monthly Averages



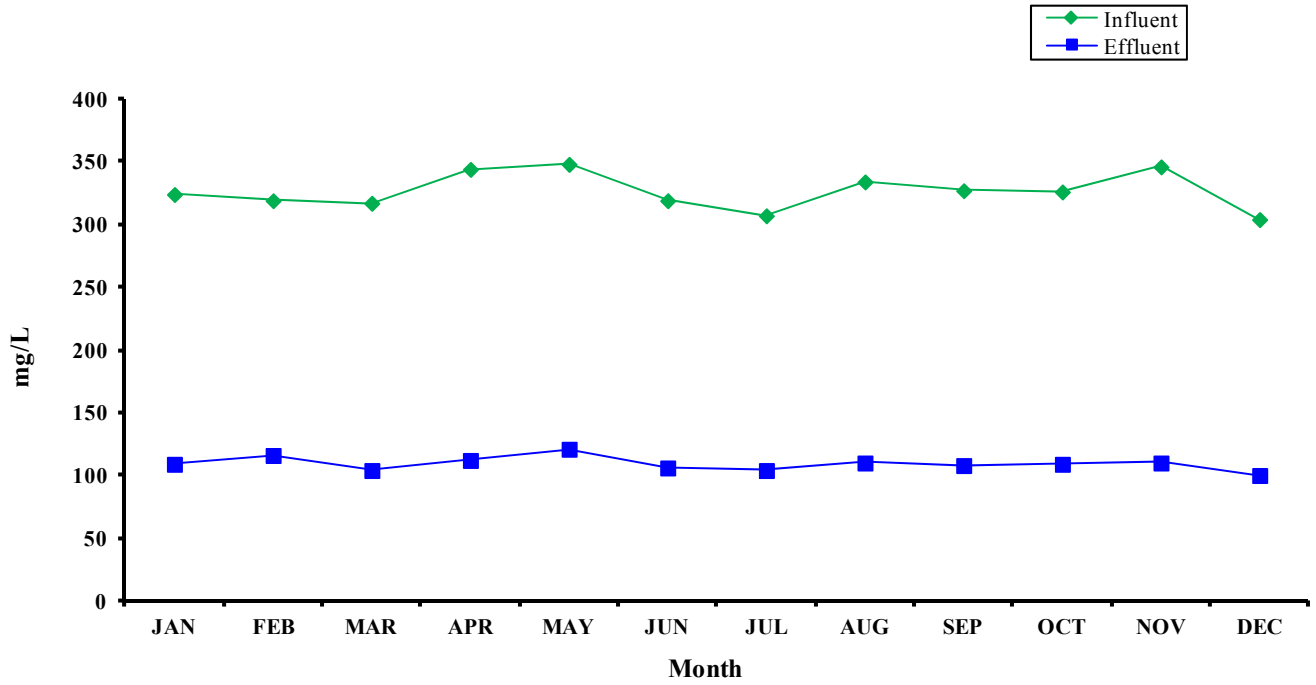
Total Suspended Solids (%) Removal
2014 Monthly Averages



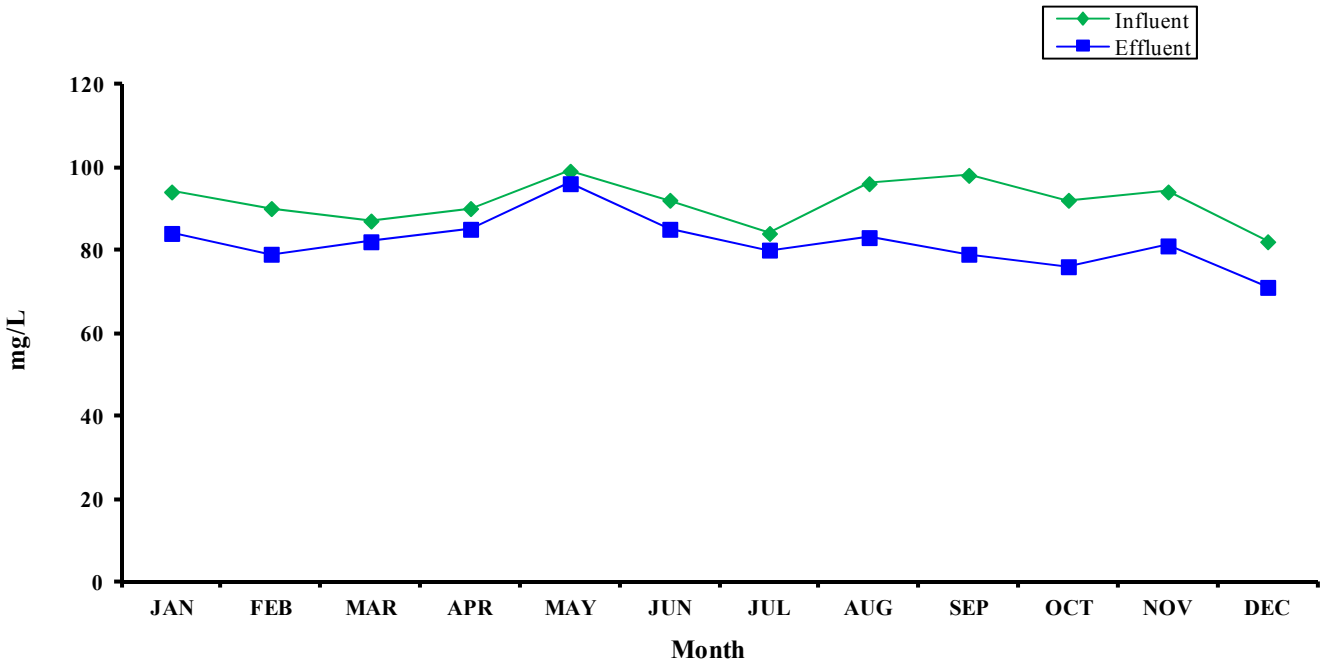
Total Suspended Solids (%) Removal
2014 Monthly Averages Systemwide



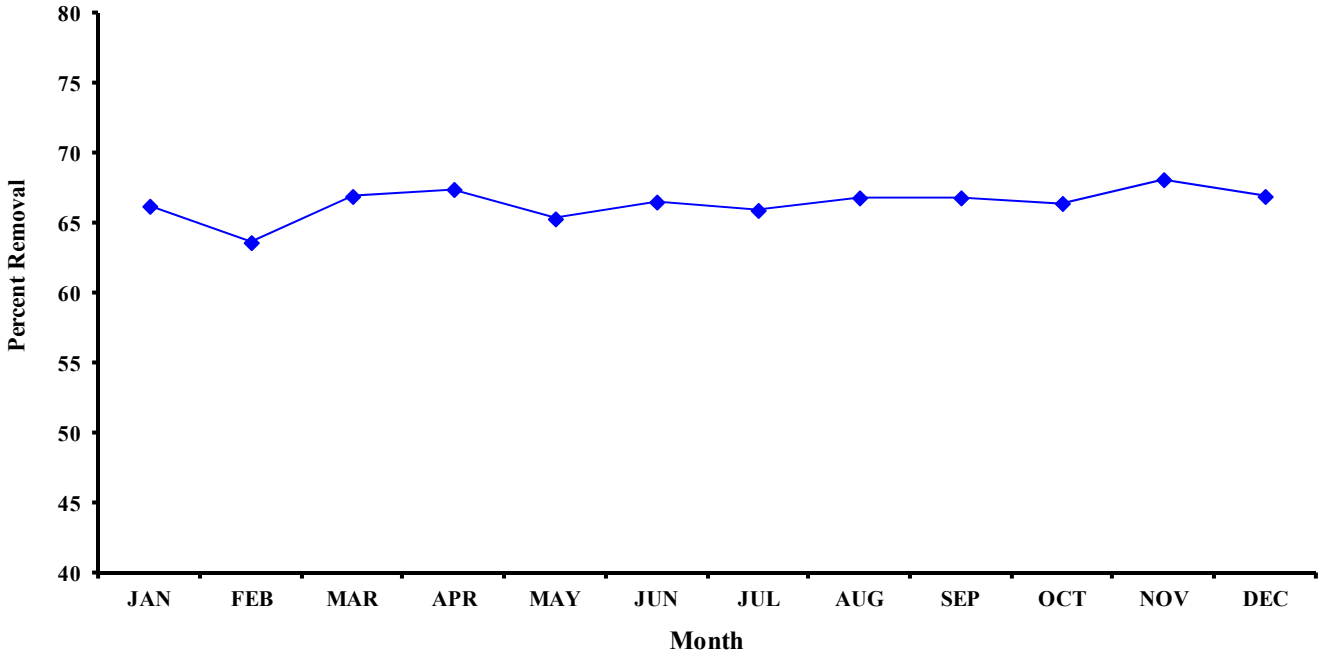
Biochemical Oxygen Demand
2014 Monthly Averages



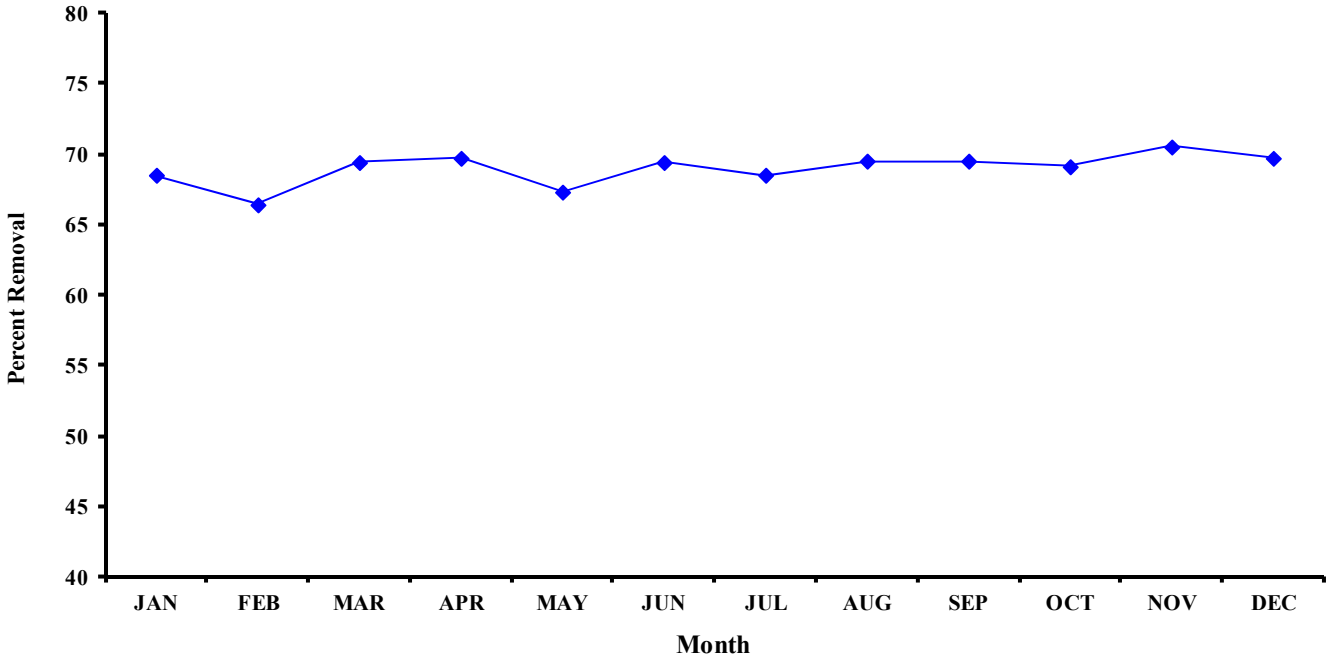
Soluble Biochemical Oxygen Demand
2014 Monthly Averages



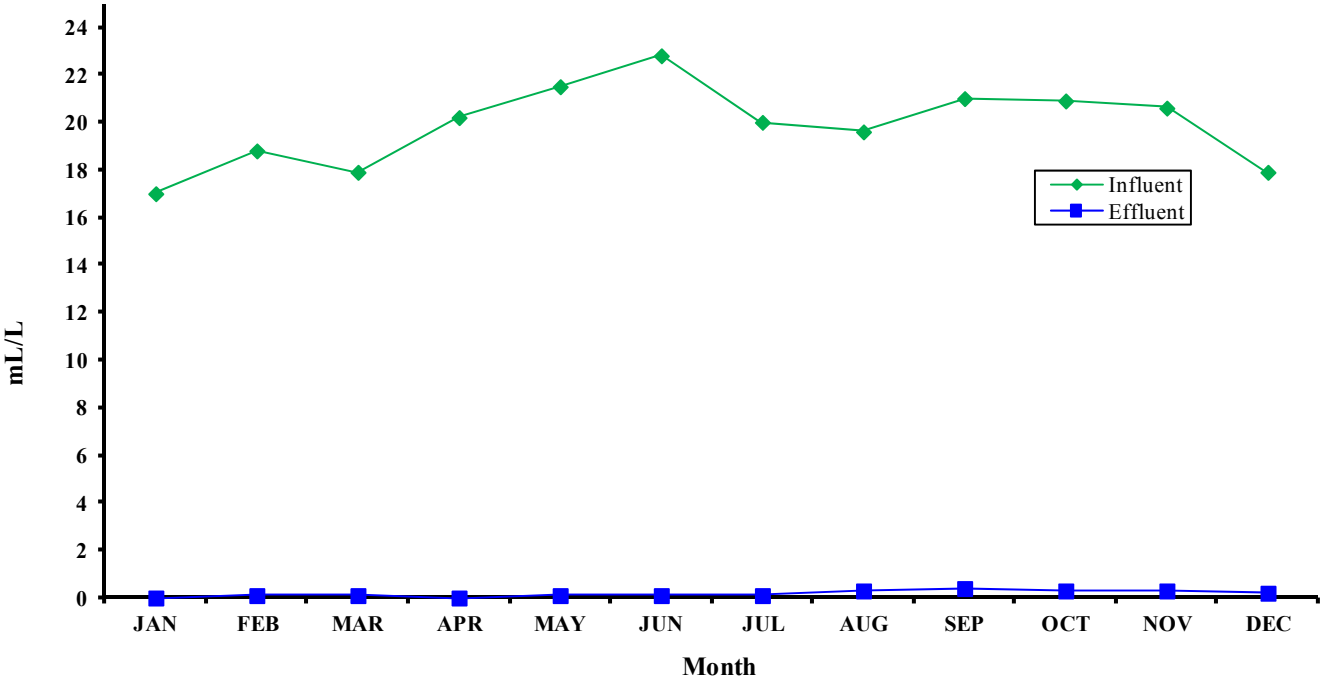
Biochemical Oxygen Demand (%) Removal
2014 Monthly Averages



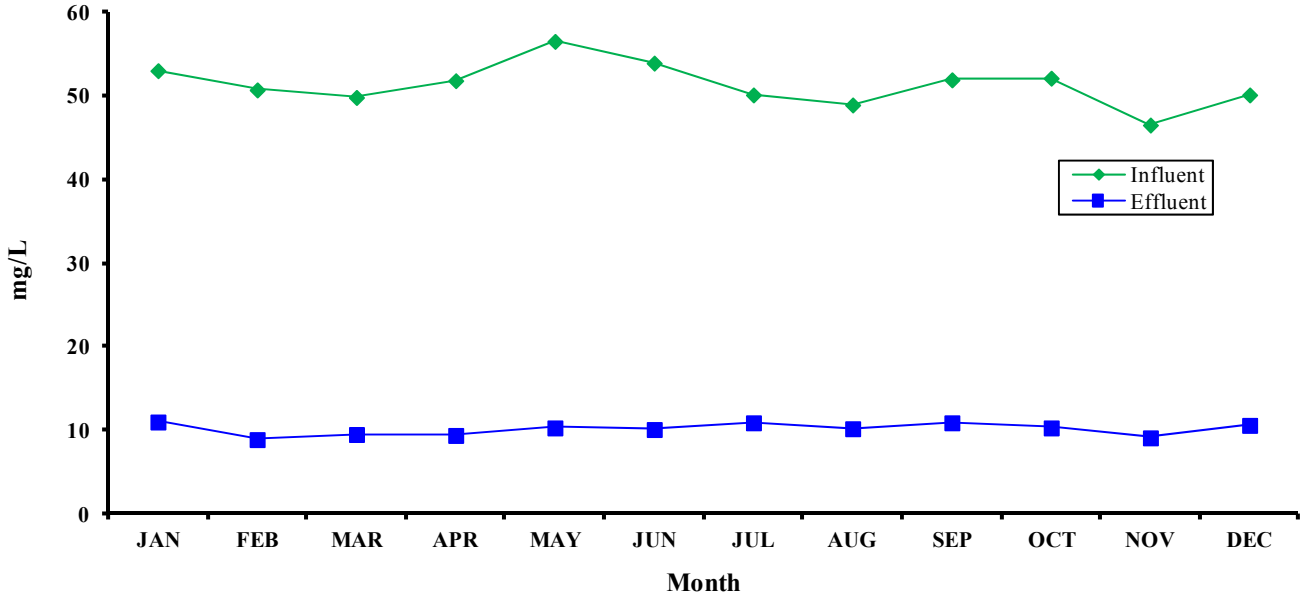
Biochemical Oxygen Demand (%) Removal
2014 Monthly Averages Systemwide



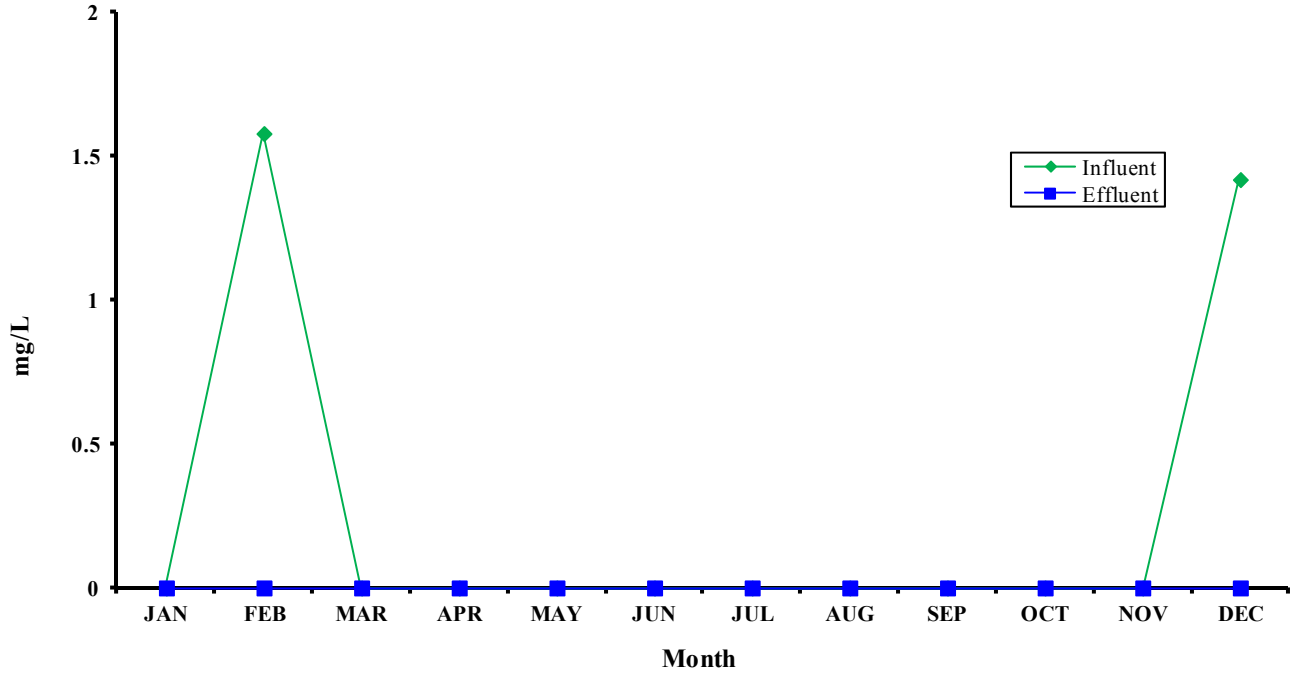
Settleable Solids (mL/L)
2014 Monthly Averages



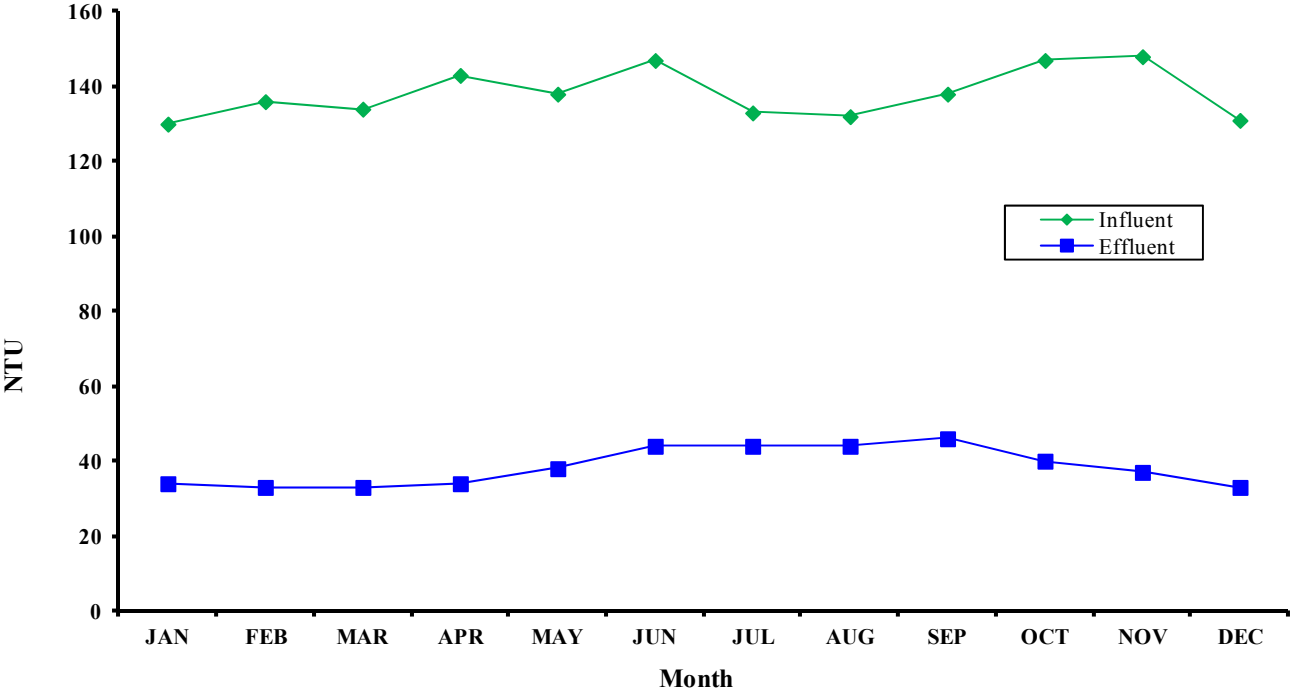
Hexane Extractable Material (mg/L)
2014 Monthly Averages



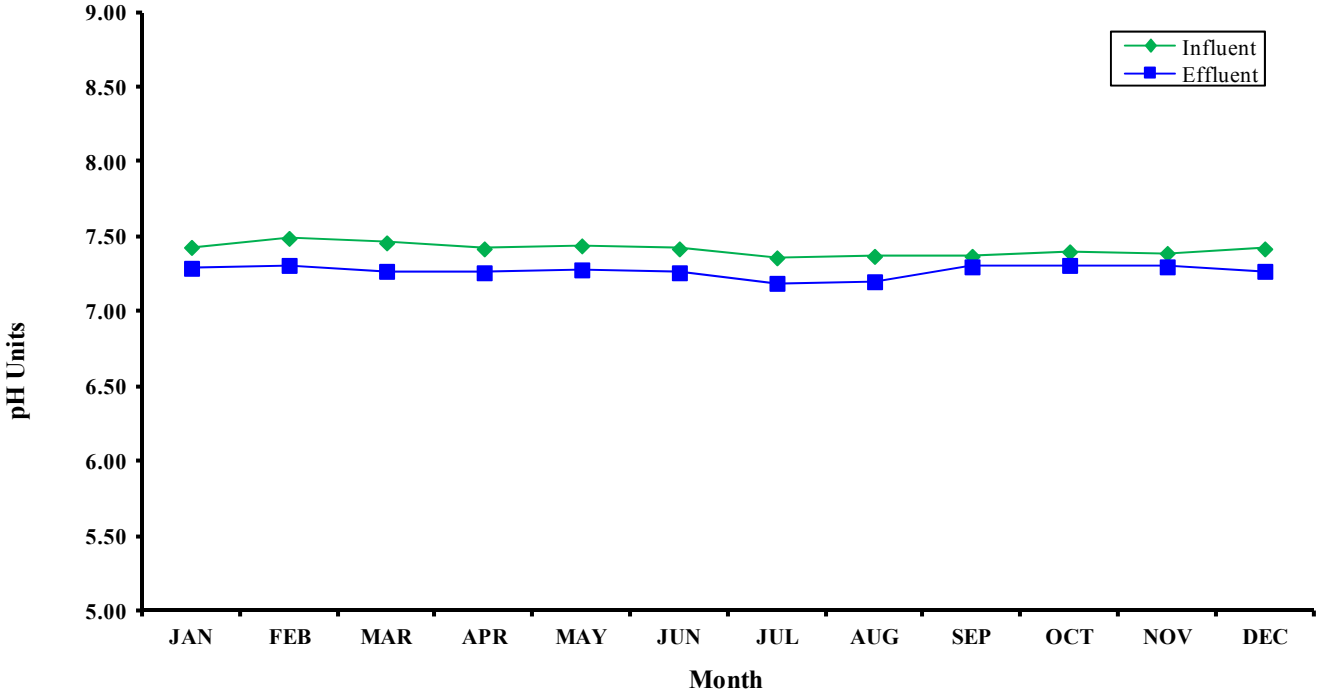
Floatables (mg/L)
2014 Monthly Averages



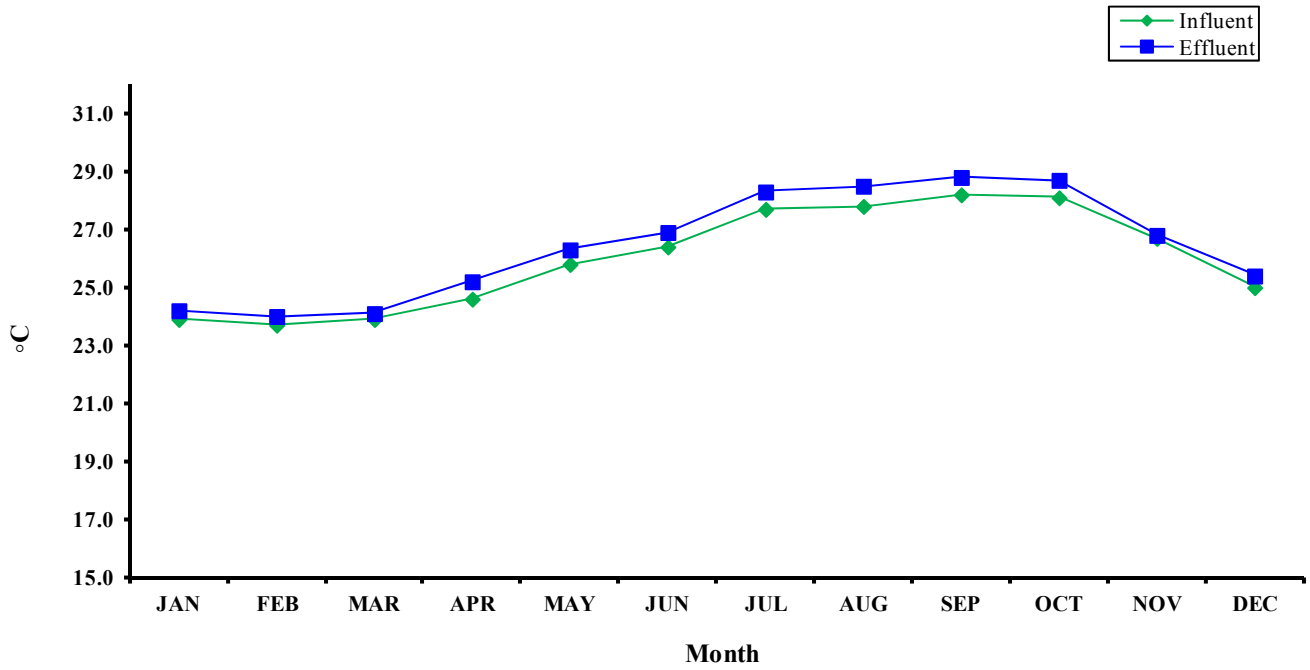
Turbidity (NTU)
2014 Monthly Averages



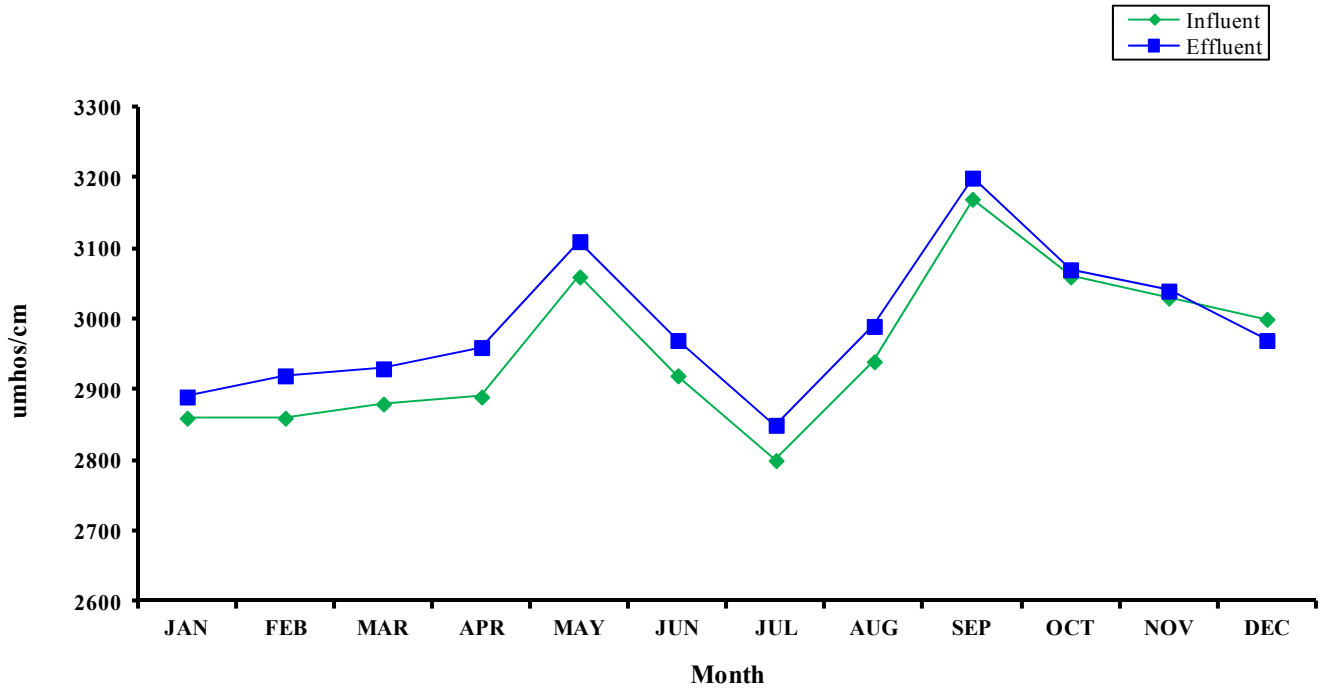
pH
2014 Monthly Averages



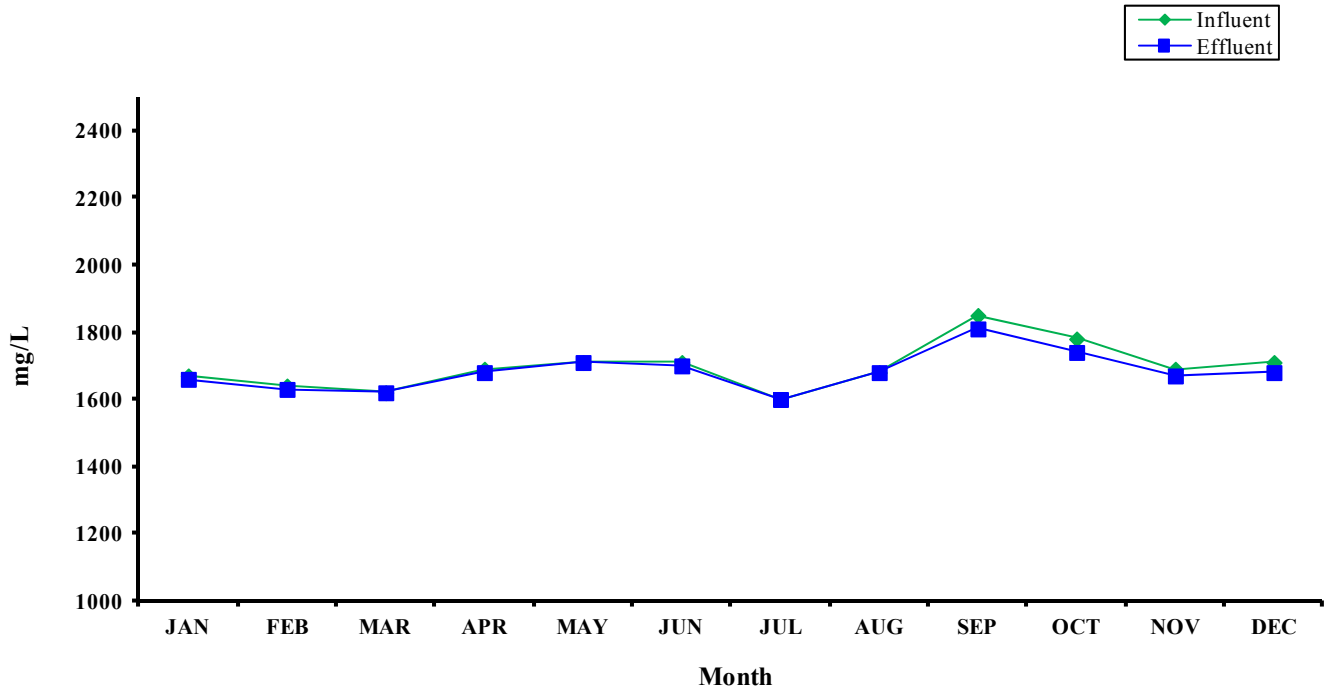
Temperature (°C)
2014 Monthly Averages



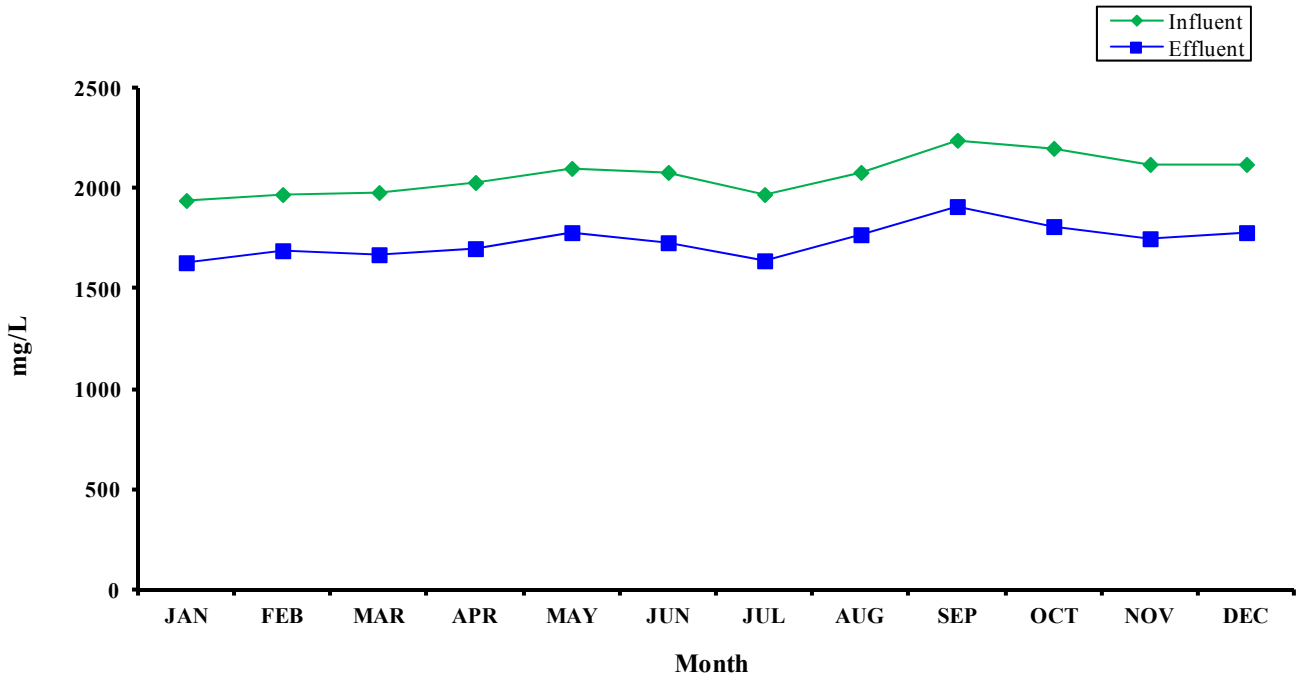
Conductivity (umhos/cm)
2014 Monthly Averages



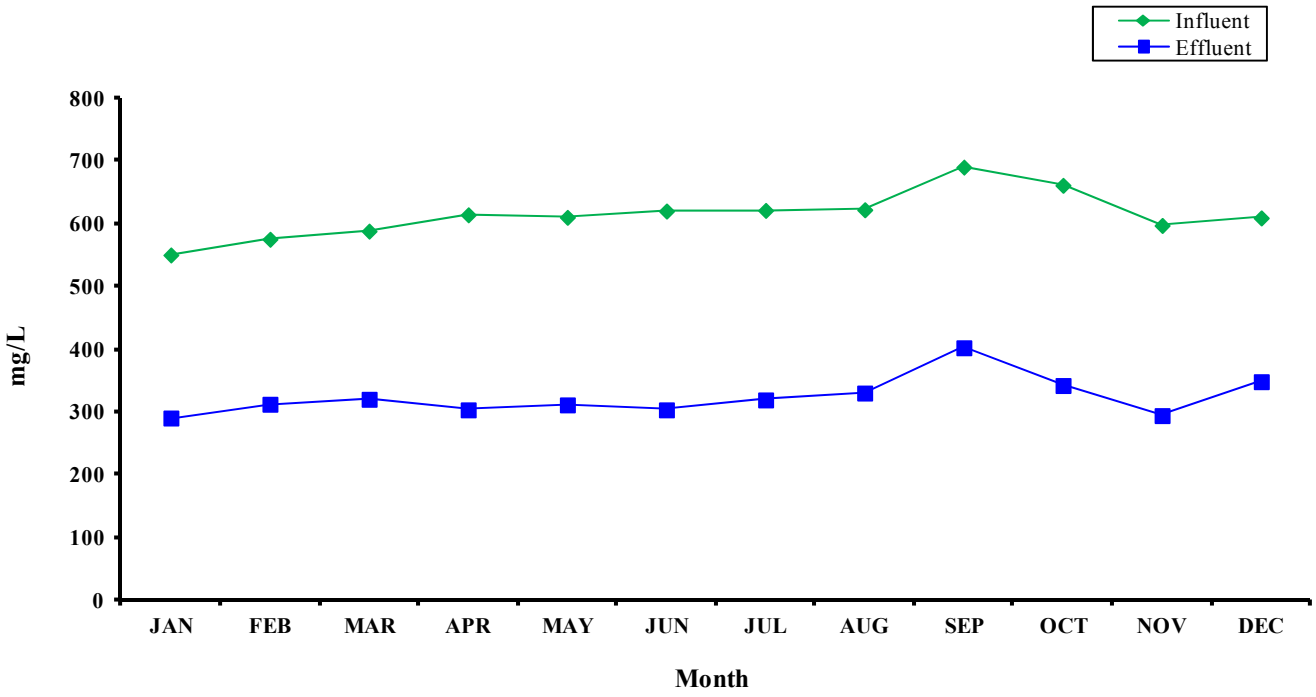
Total Dissolved Solids (mg/L)
2014 Monthly Averages



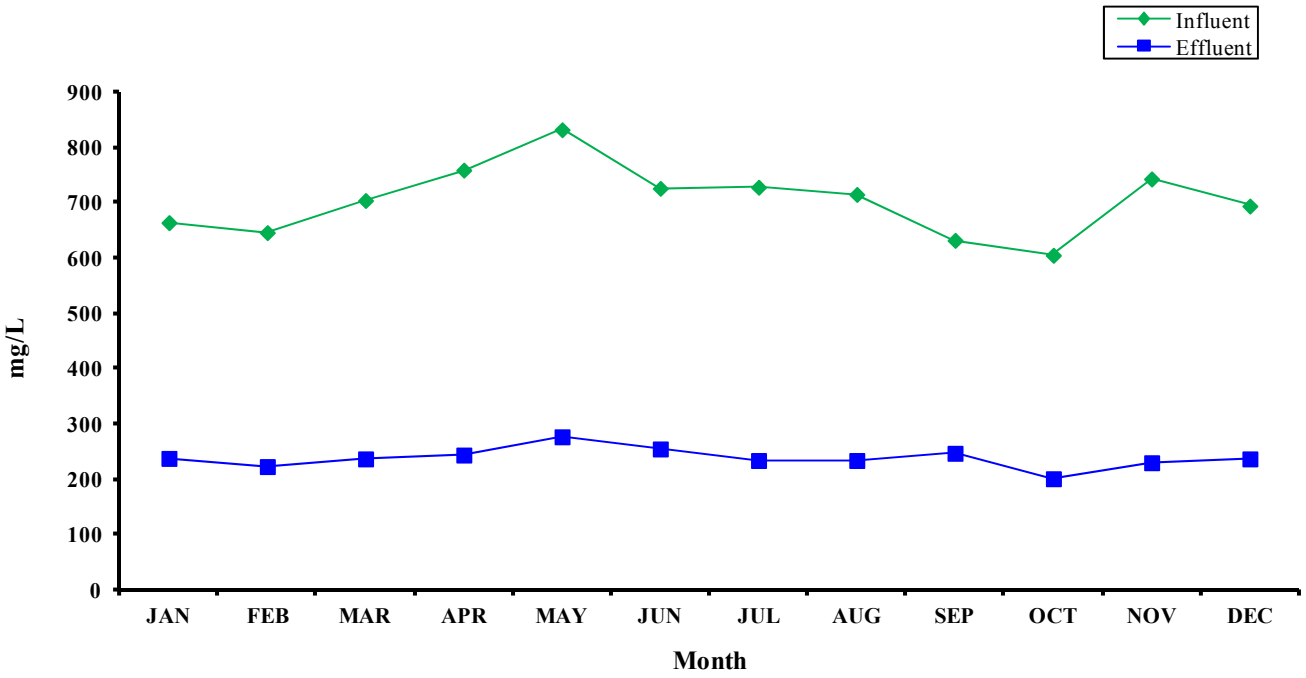
Total Solids (mg/L)
2014 Monthly Averages



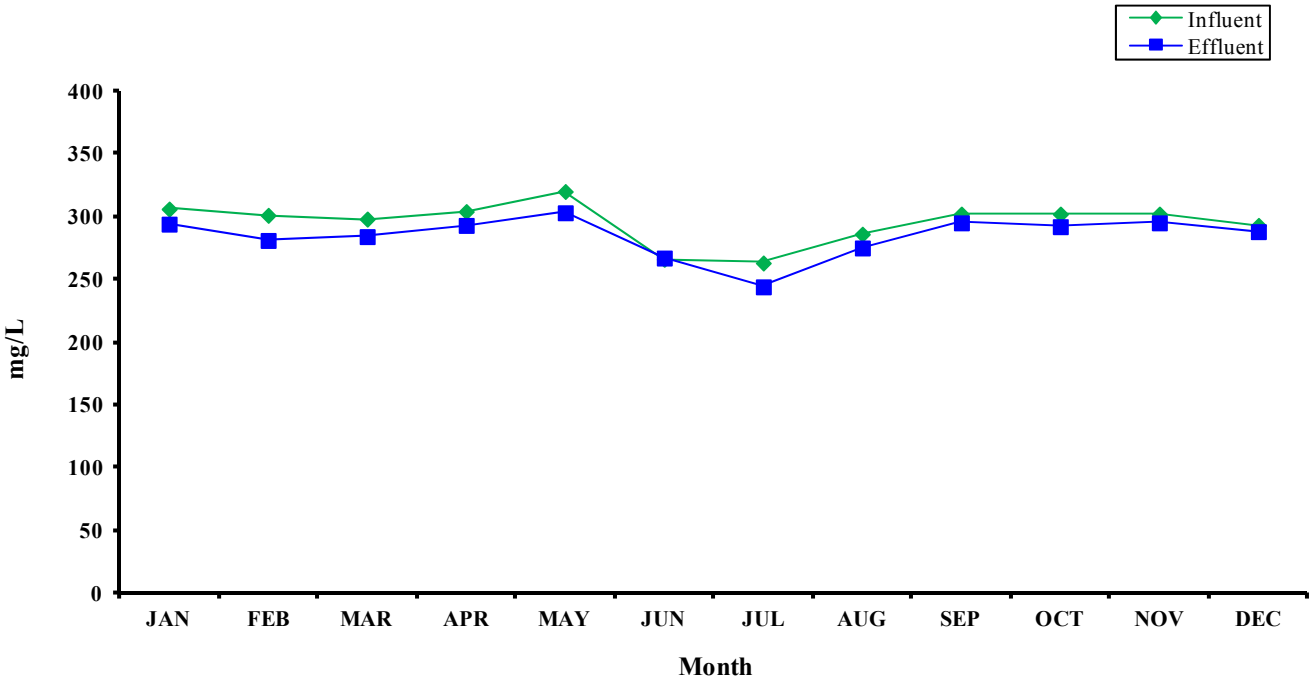
Total Volatile Solids (mg/L)
2014 Monthly Averages



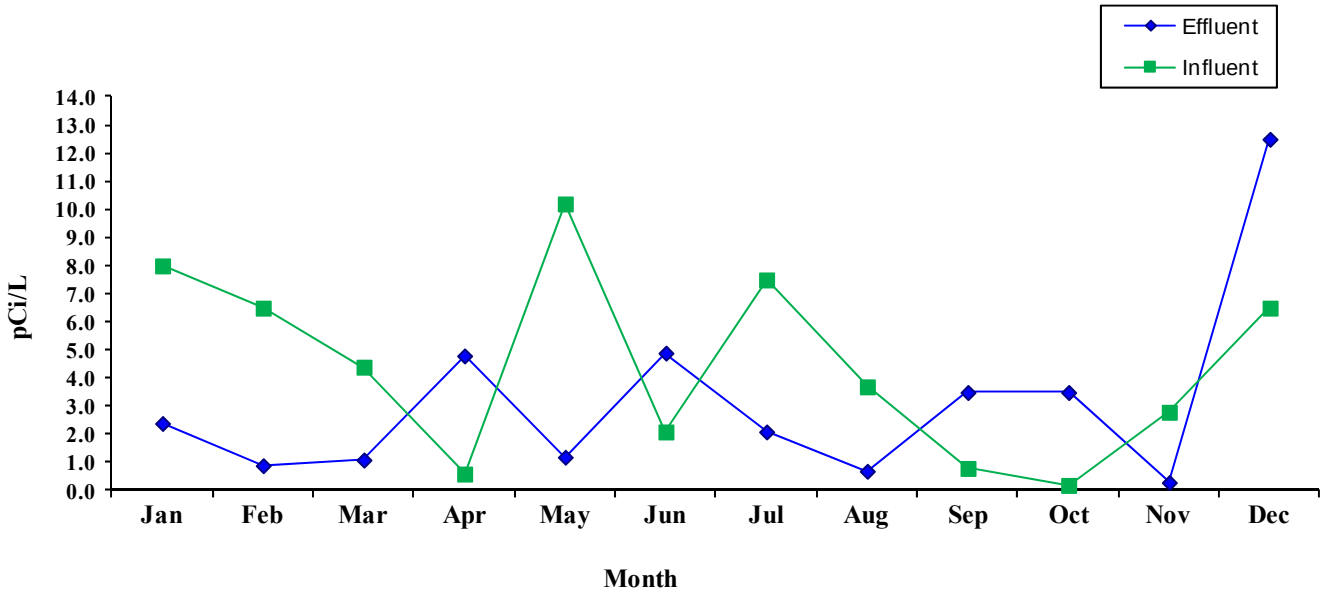
Chemical Oxygen Demand (mg/L)
2014 Monthly Averages



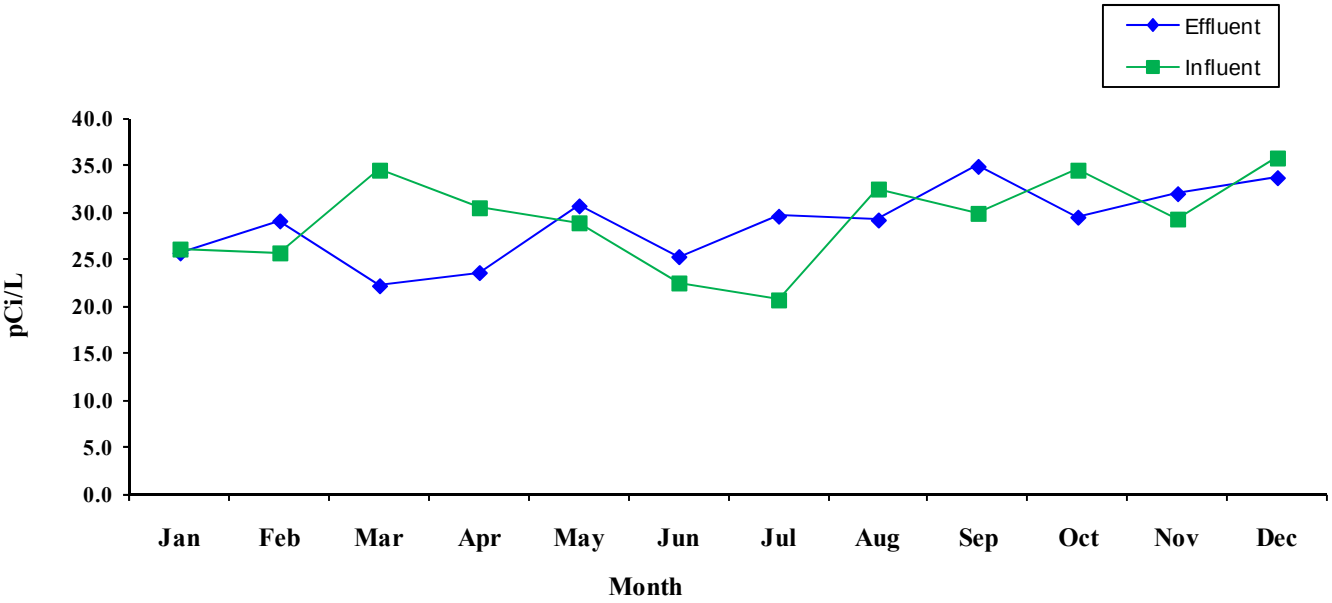
Alkalinity (mg/L)
2014 Monthly Averages

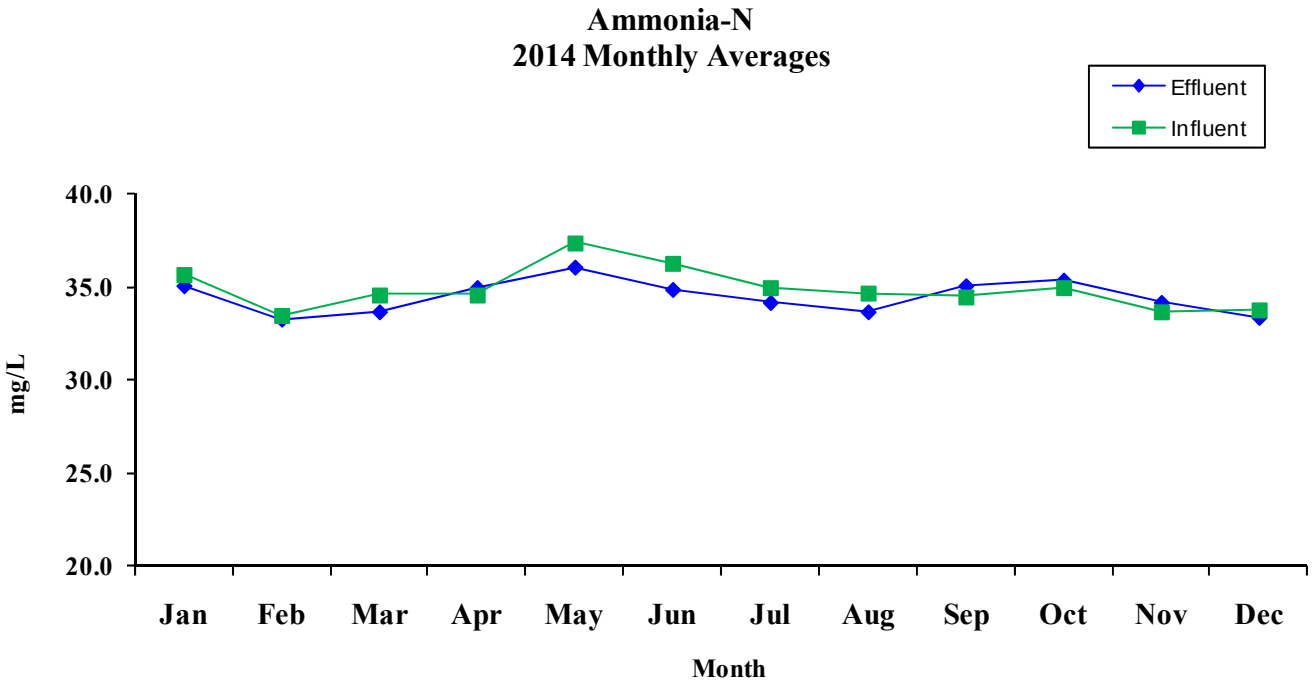


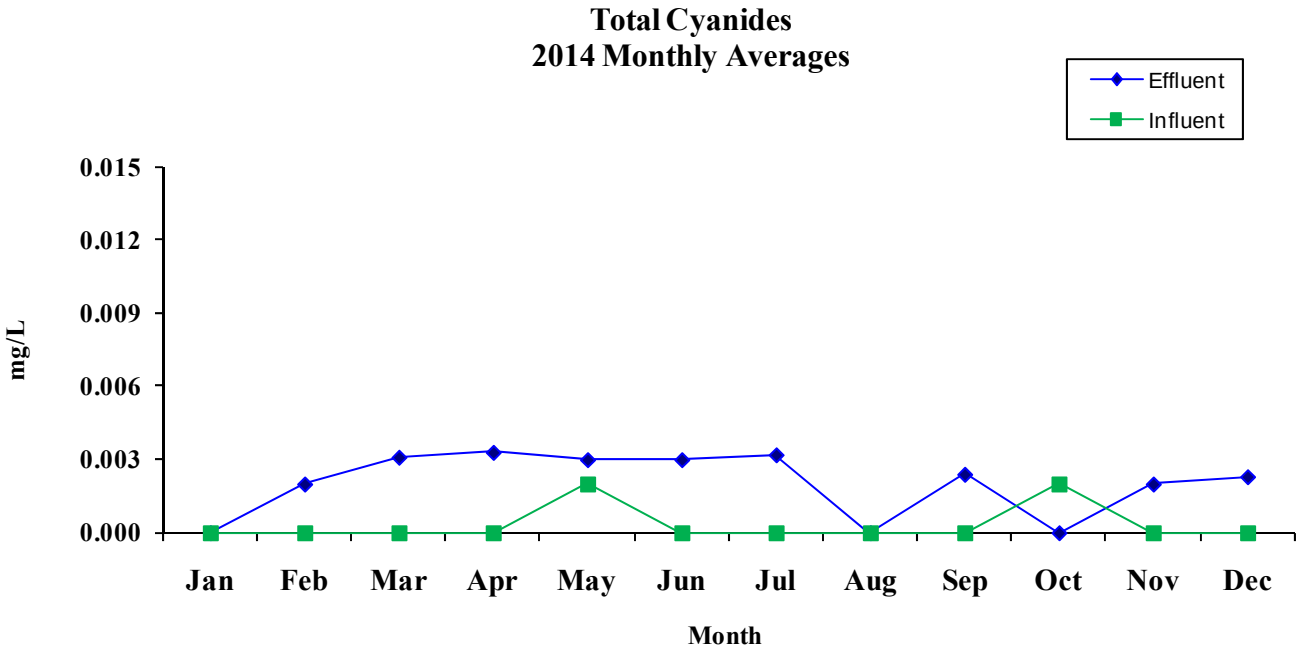
Alpha Radiation
2014 Monthly Averages

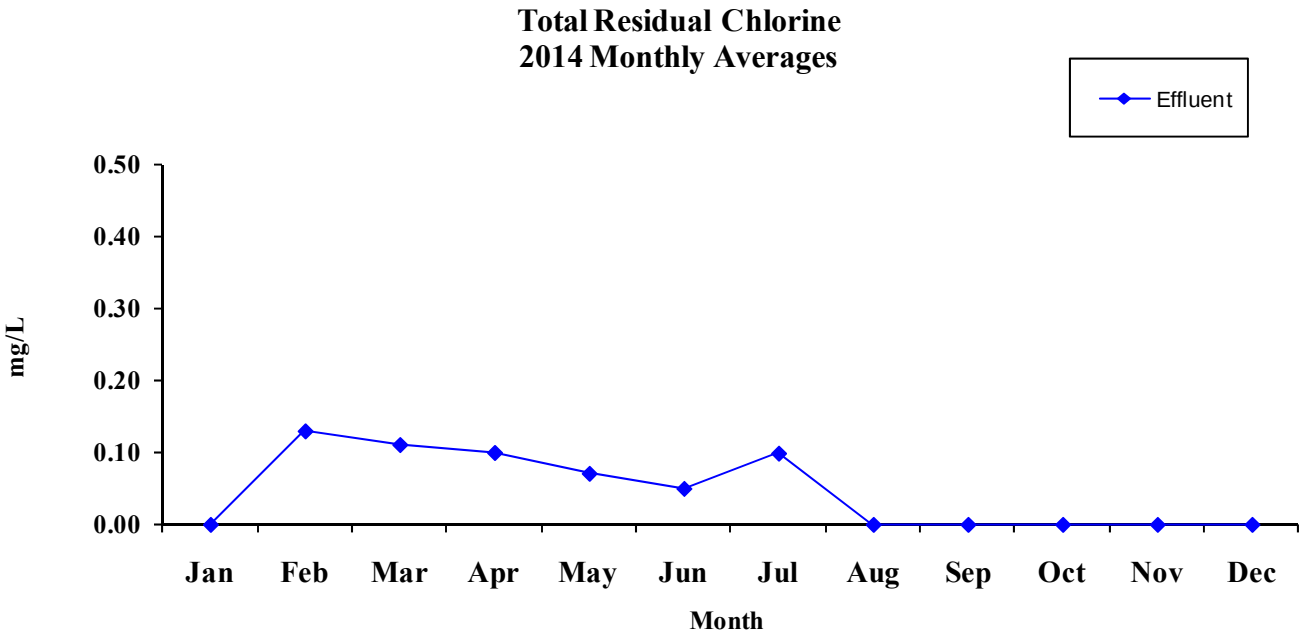


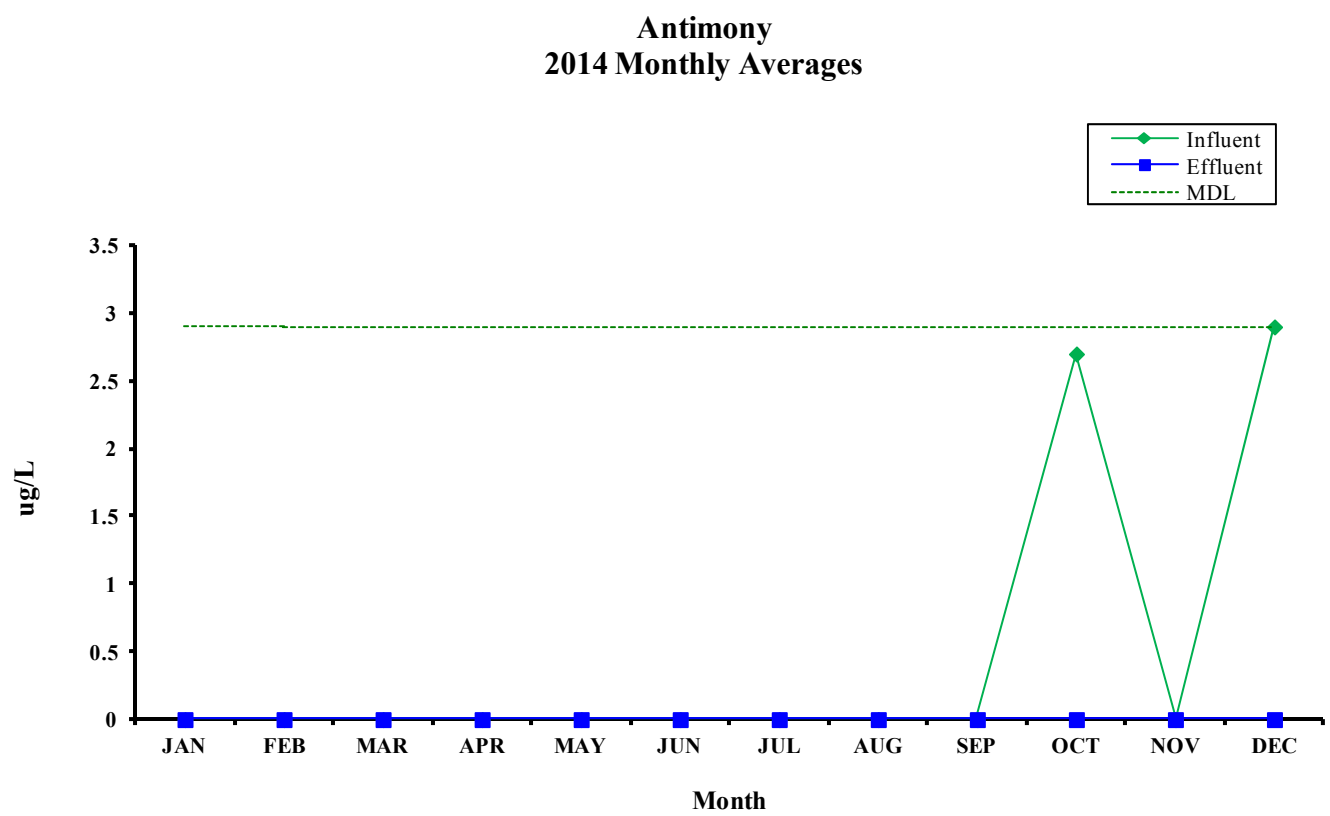
Beta Radiation
2014 Monthly Averages

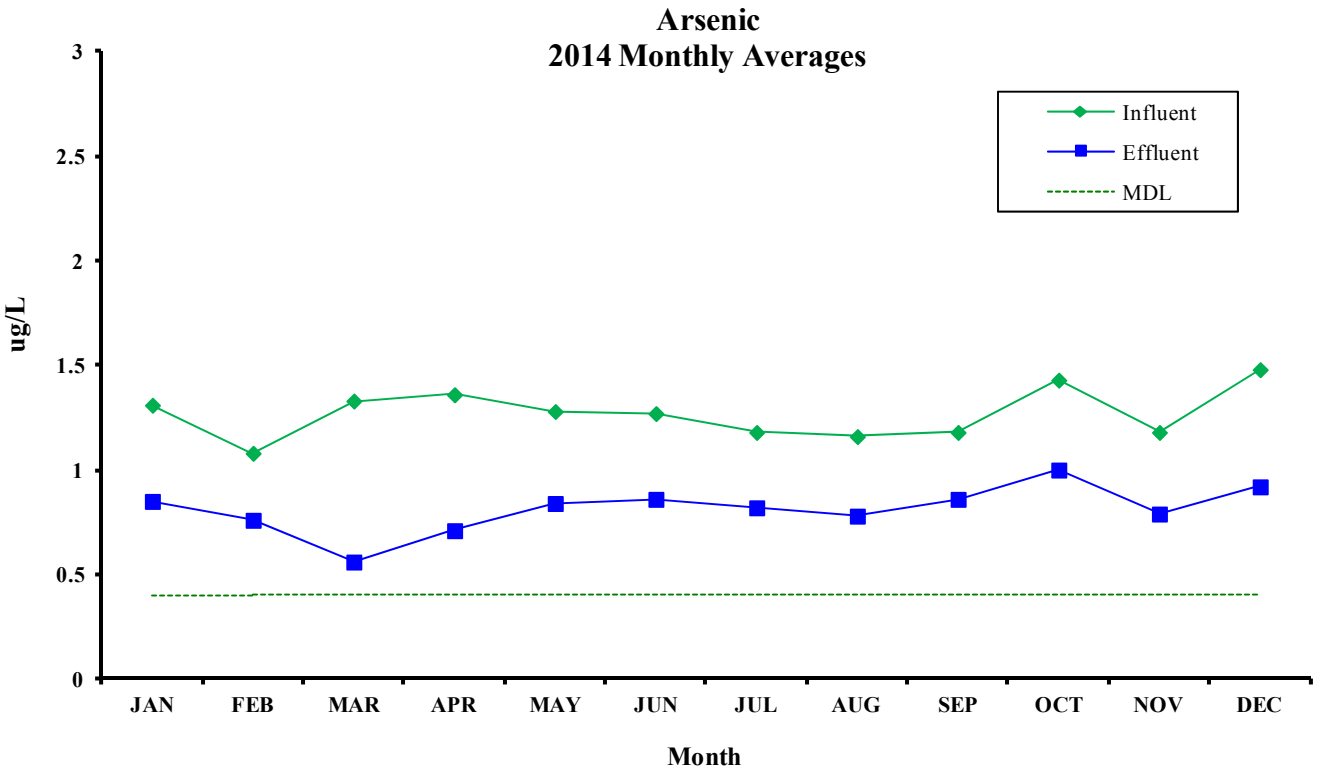


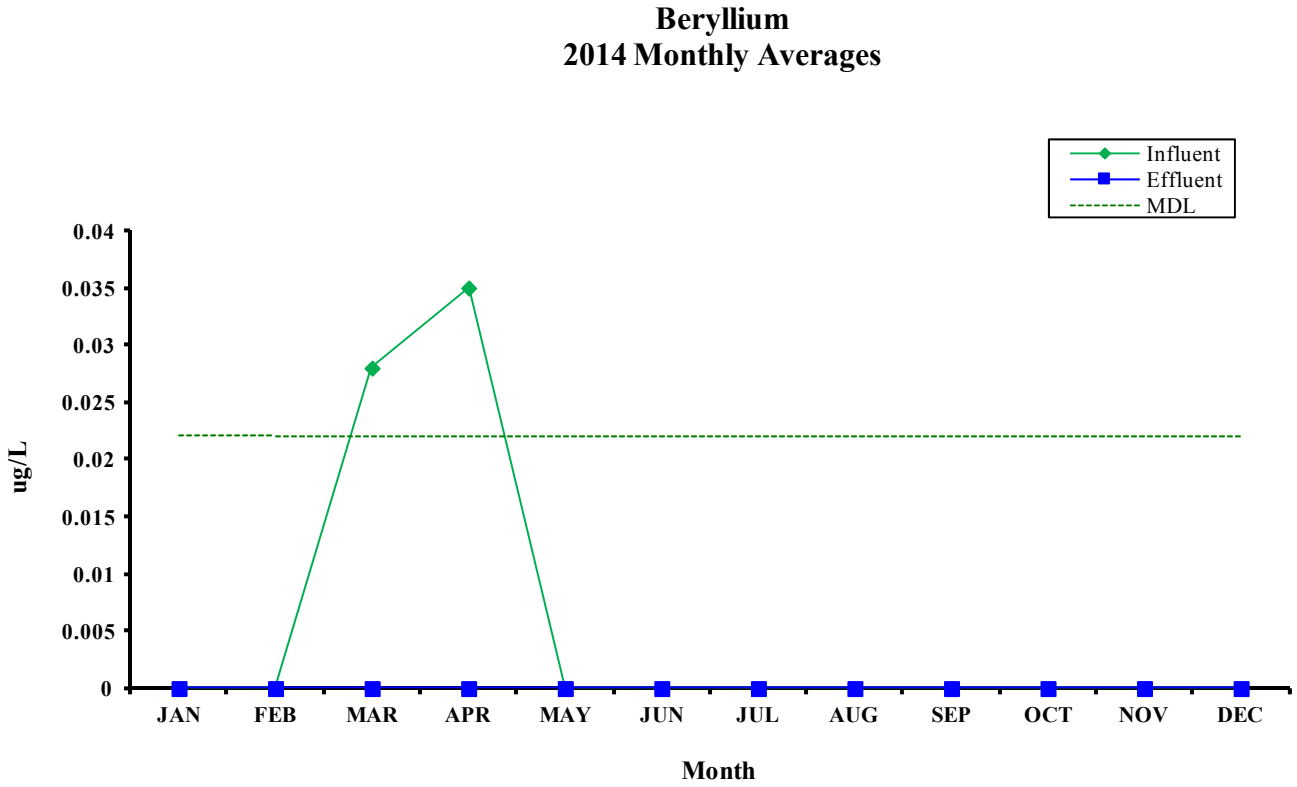

Ammonia-N
2014 Monthly Averages
Effluent
Influent
40.0
35.0
30.0
25.0
20.0
mg/L
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month


Total Cyanides
2014 Monthly Averages
Effluent
Influent
0.015
0.012
0.009
0.006
0.003
0.000
mg/L
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month

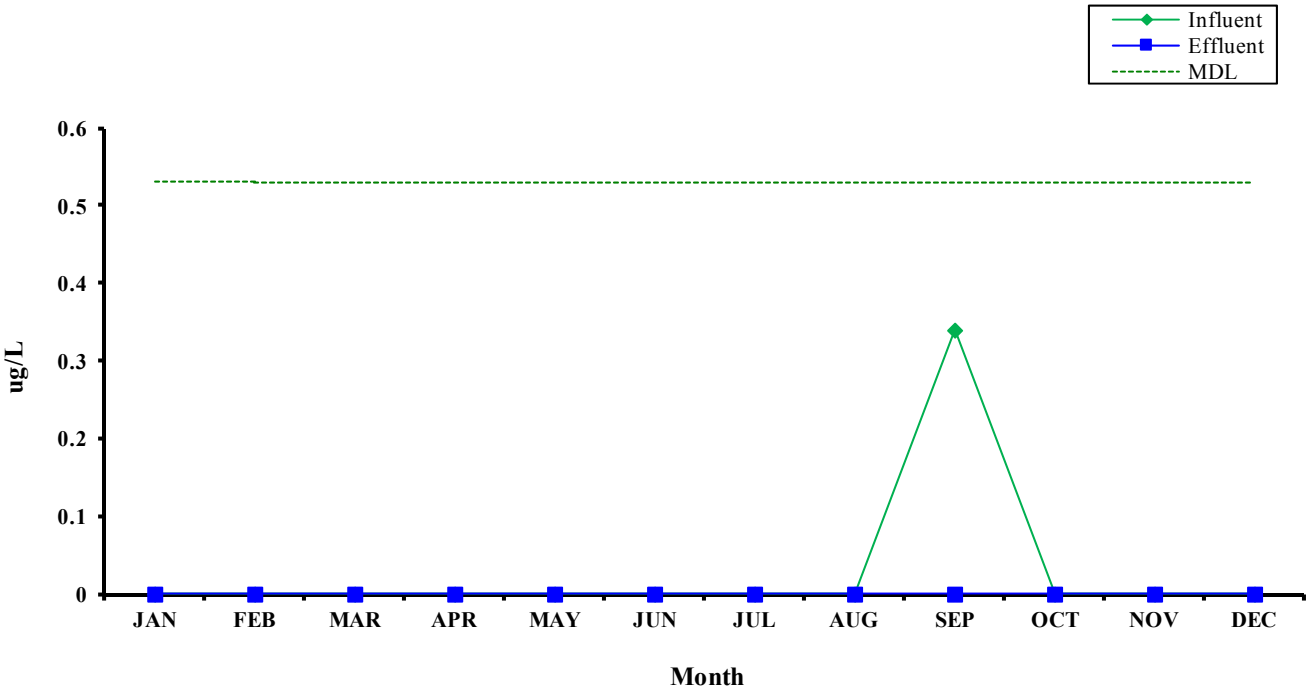

Total Residual Chlorine
2014 Monthly Averages
Effluent
0.50
0.40
0.30
0.20
0.10
0.00
mg/L
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month


Antimony
2014 Monthly Averages
Influent
Effluent
MDL
3.5
3
2.5
2
1.5
1
0.5
0
ug/L
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Month

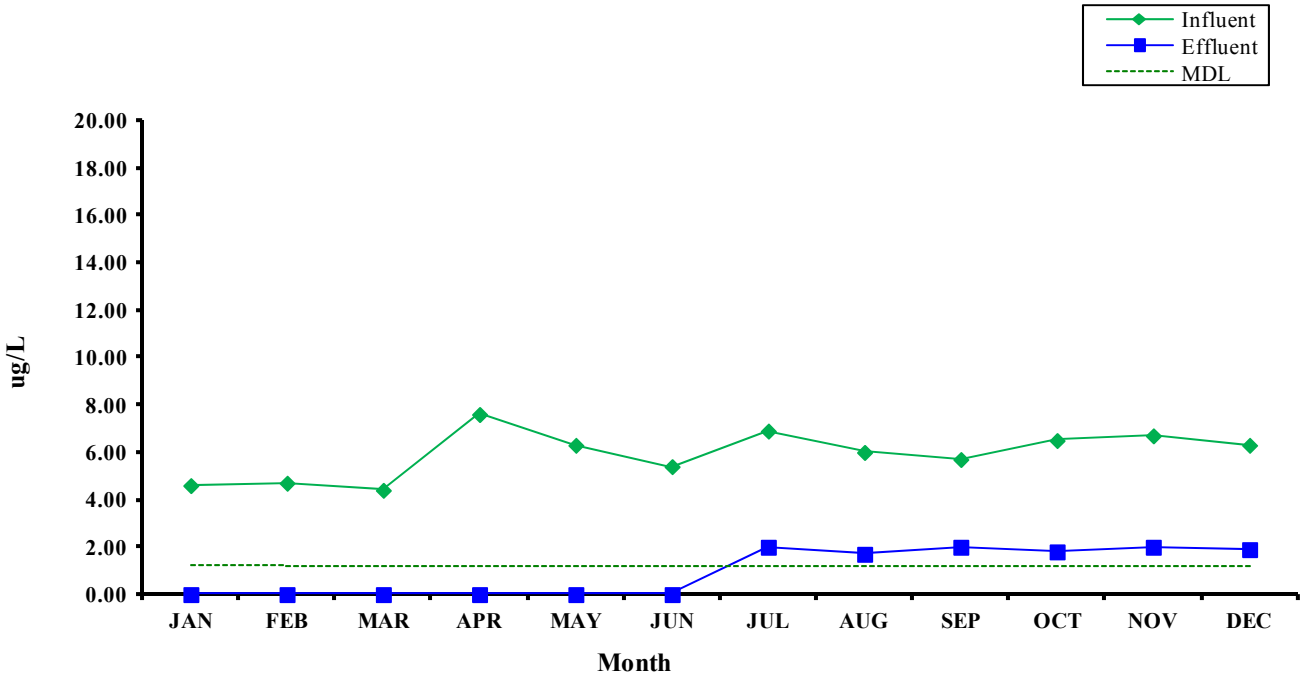

Arsenic
2014 Monthly Averages
Influent
Effluent
MDL
ug/L
3
2.5
2
1.5
1
0.5
0
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Month


Beryllium
2014 Monthly Averages
Influent
Effluent
MDL
ug/L
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Month

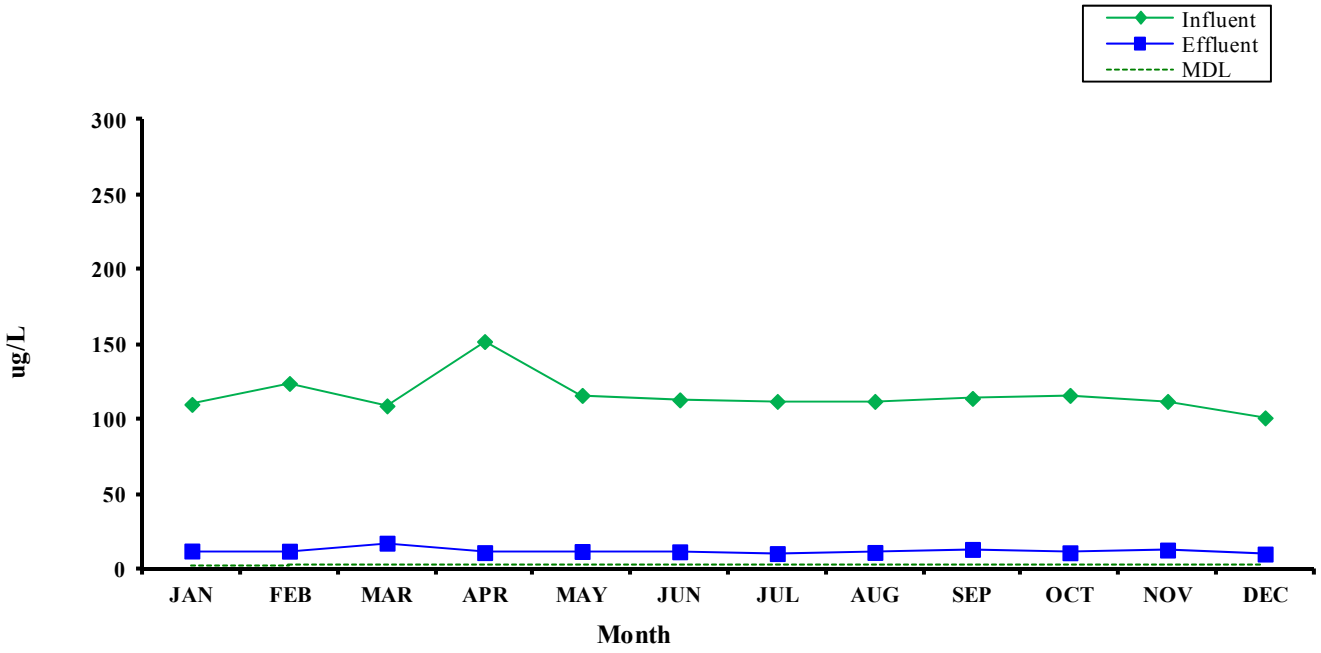
Cadmium
2014 Monthly Averages



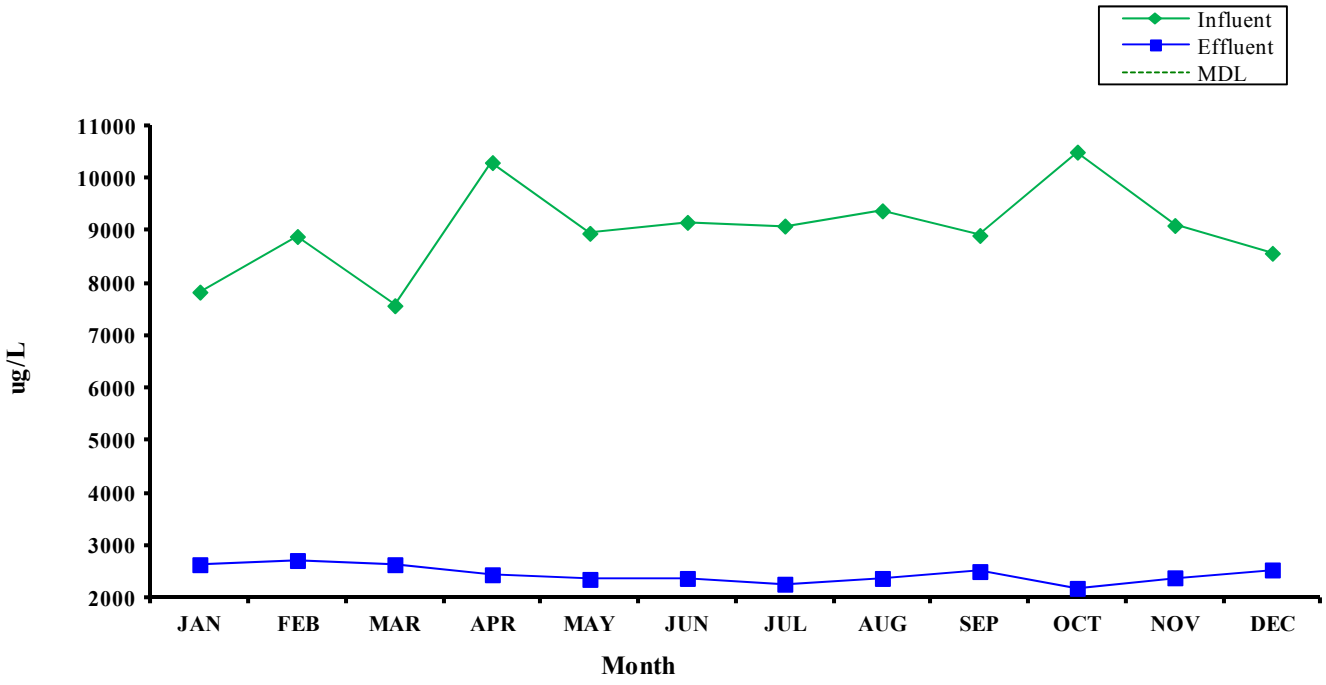
Chromium
2014 Monthly Averages



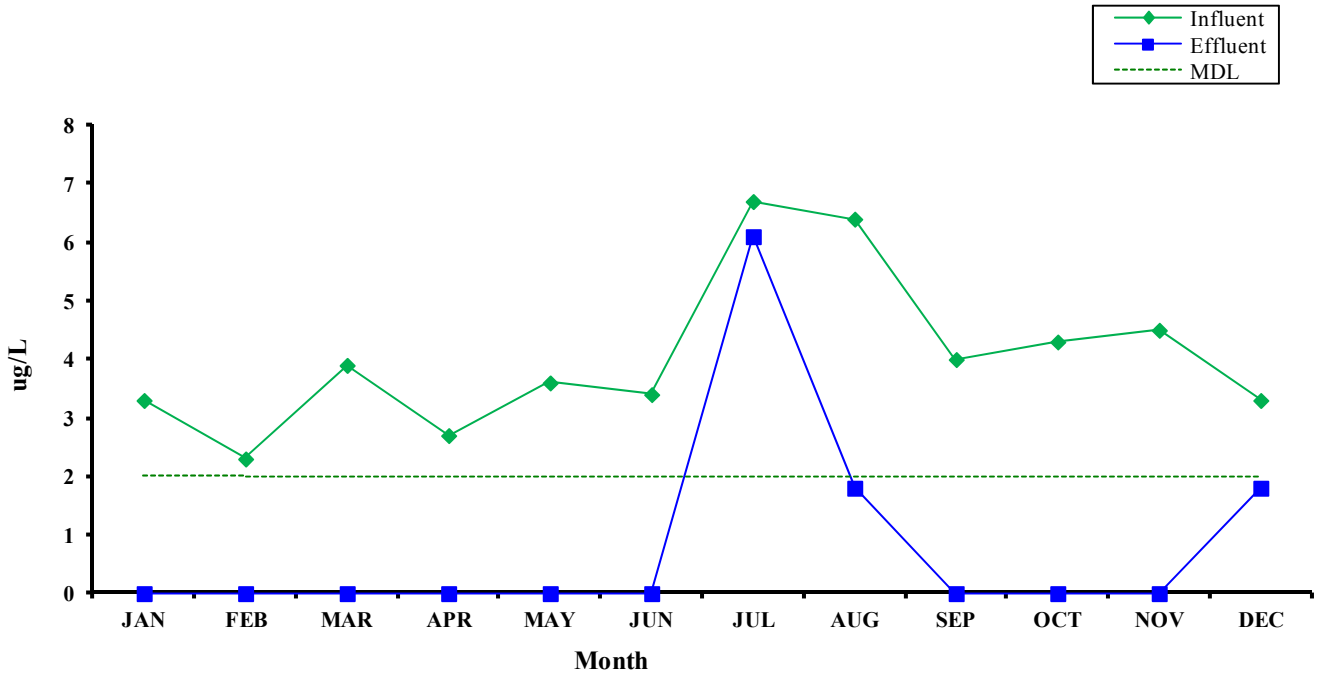
Copper
2014 Monthly Averages



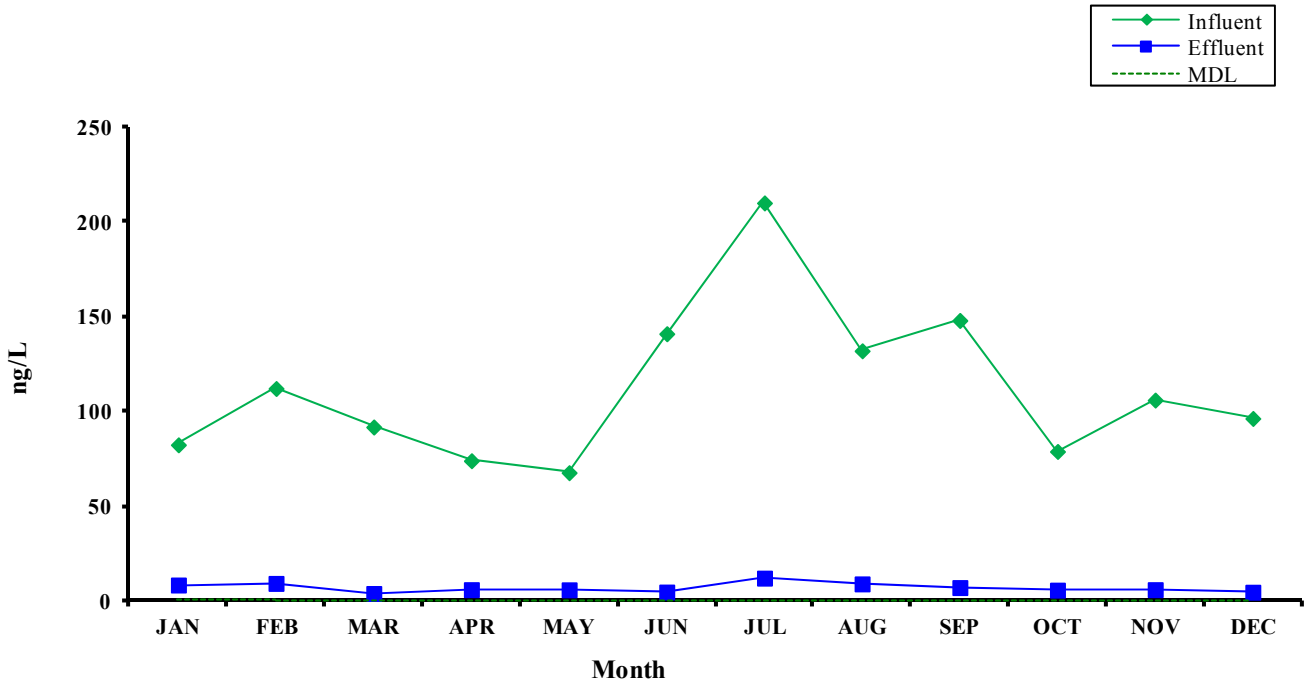
Iron
2014 Monthly Averages



Lead
2014 Monthly Averages

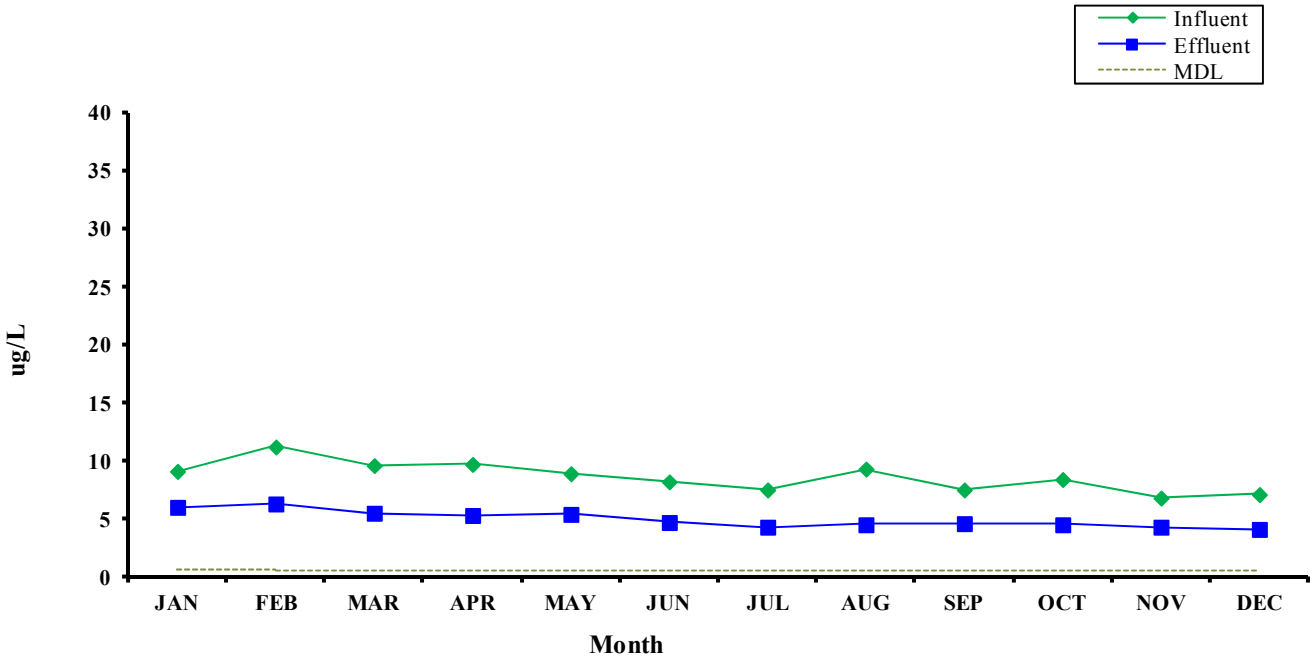


Mercury*
2014 Monthly Averages

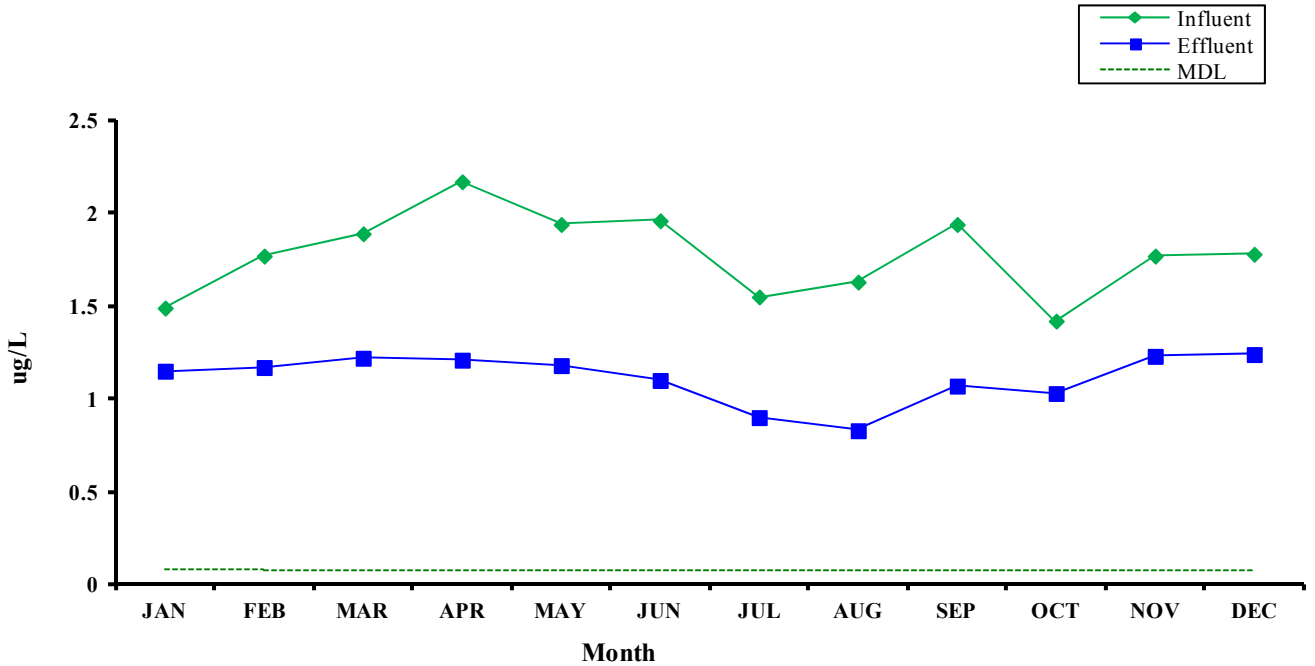


* = During the months of June, August and November The percent recovery for the spike samples were below the acceptance range of 71-125%.

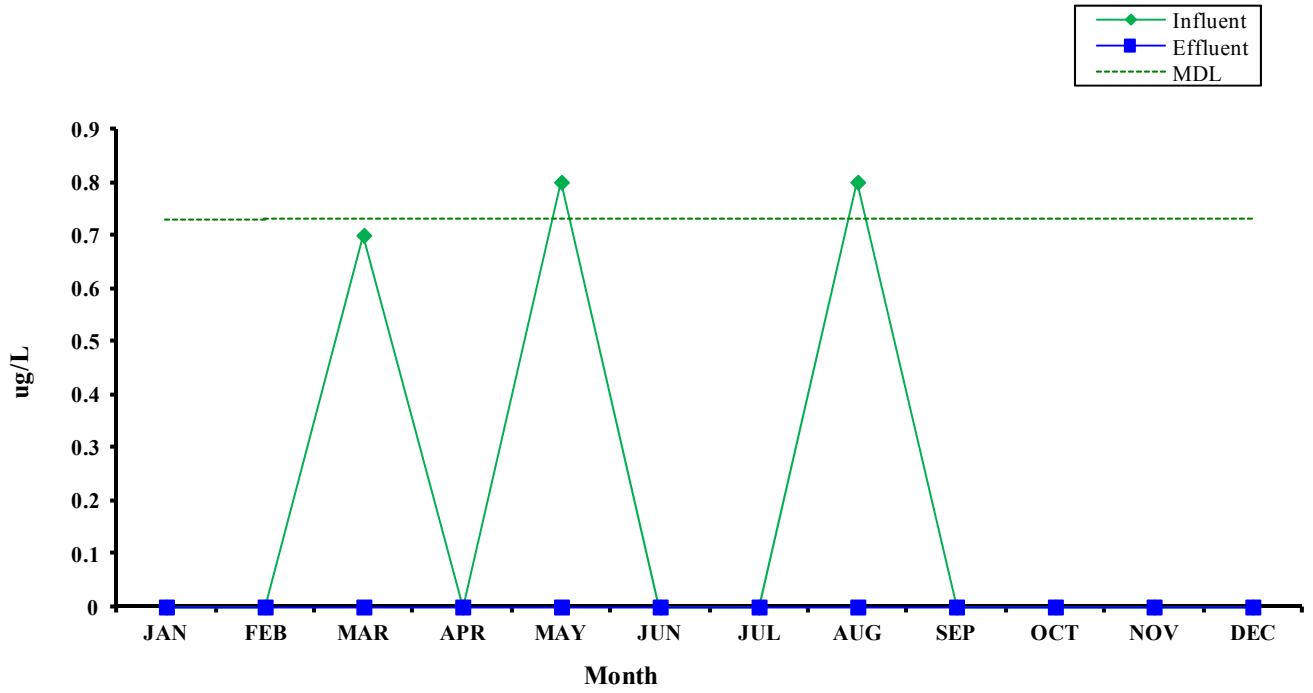
Nickel
2014 Monthly Averages



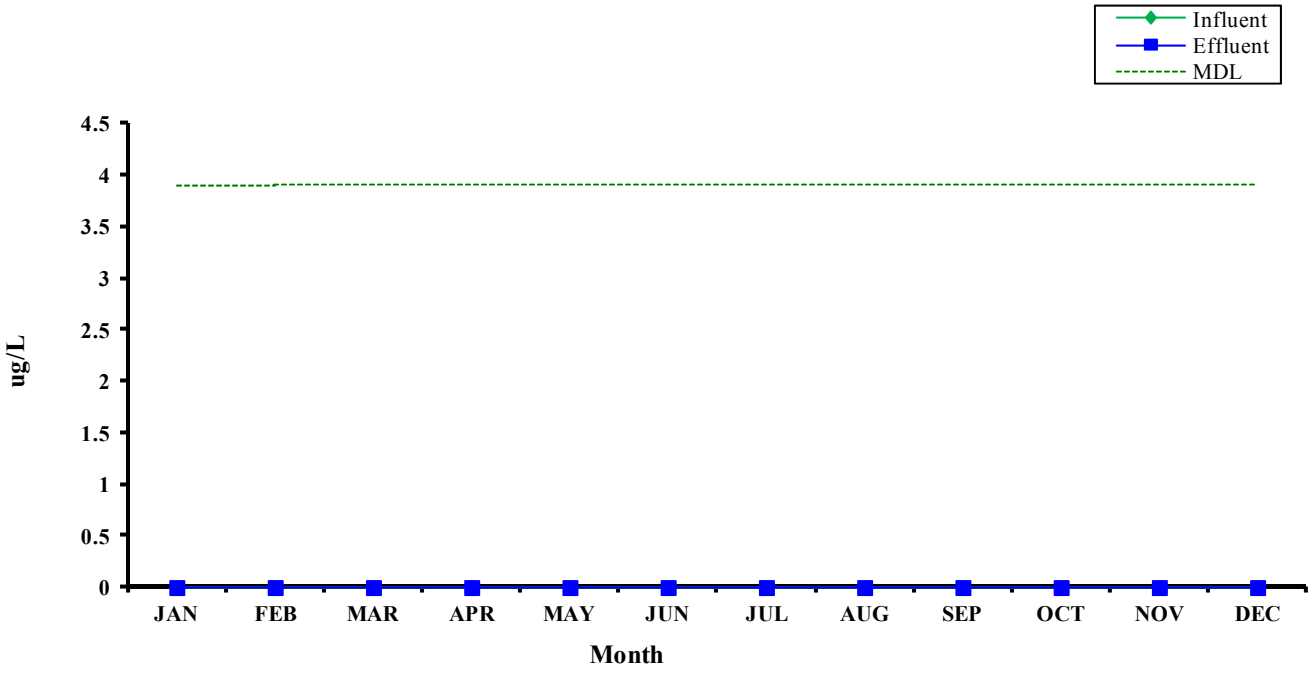
Selenium
2014 Monthly Averages



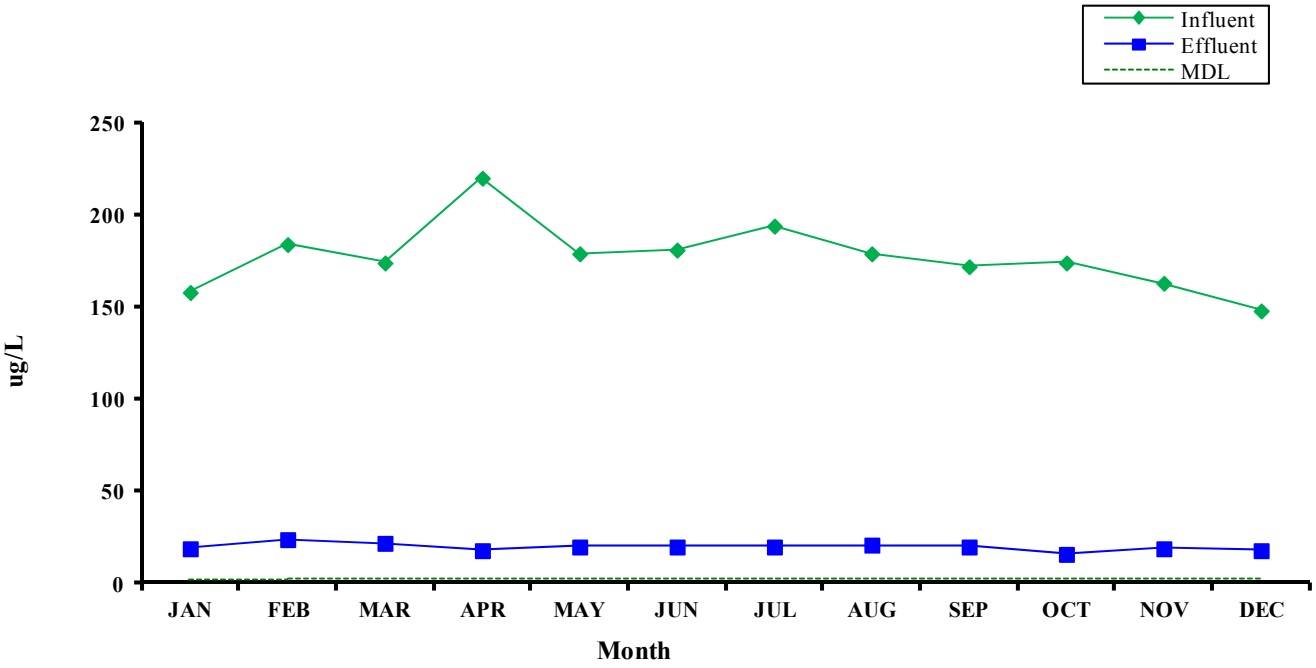
Silver
2014 Monthly Averages



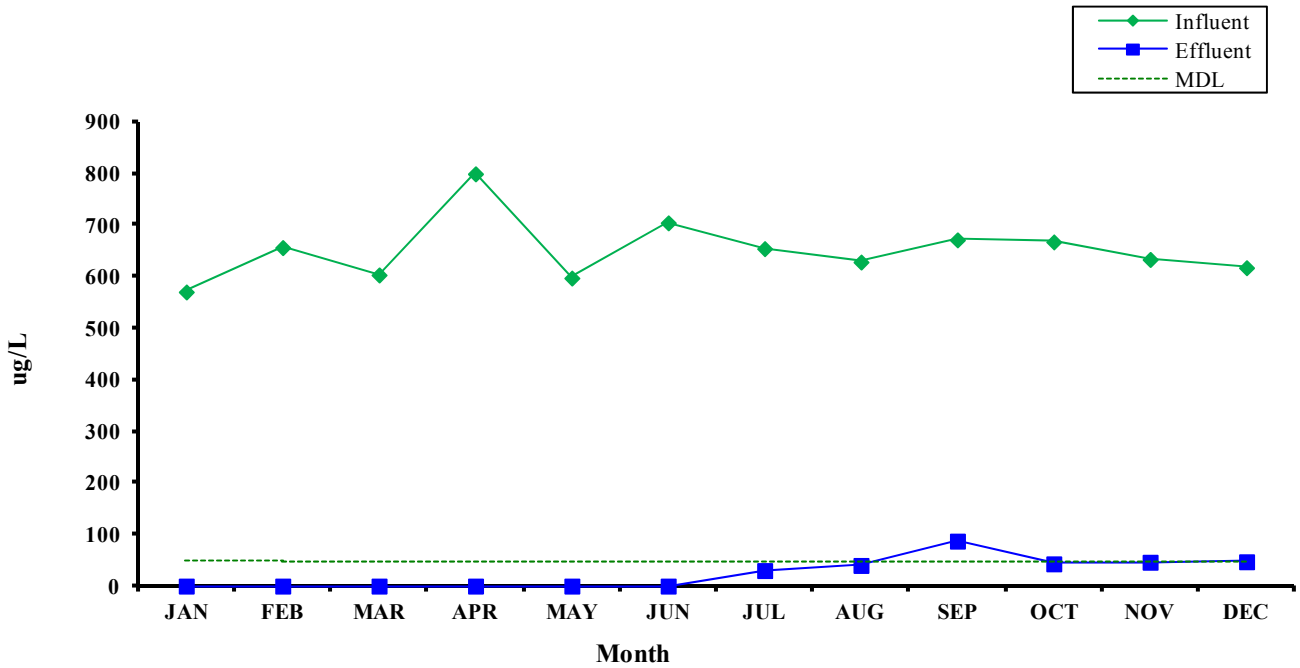
Thallium
2014 Monthly Averages



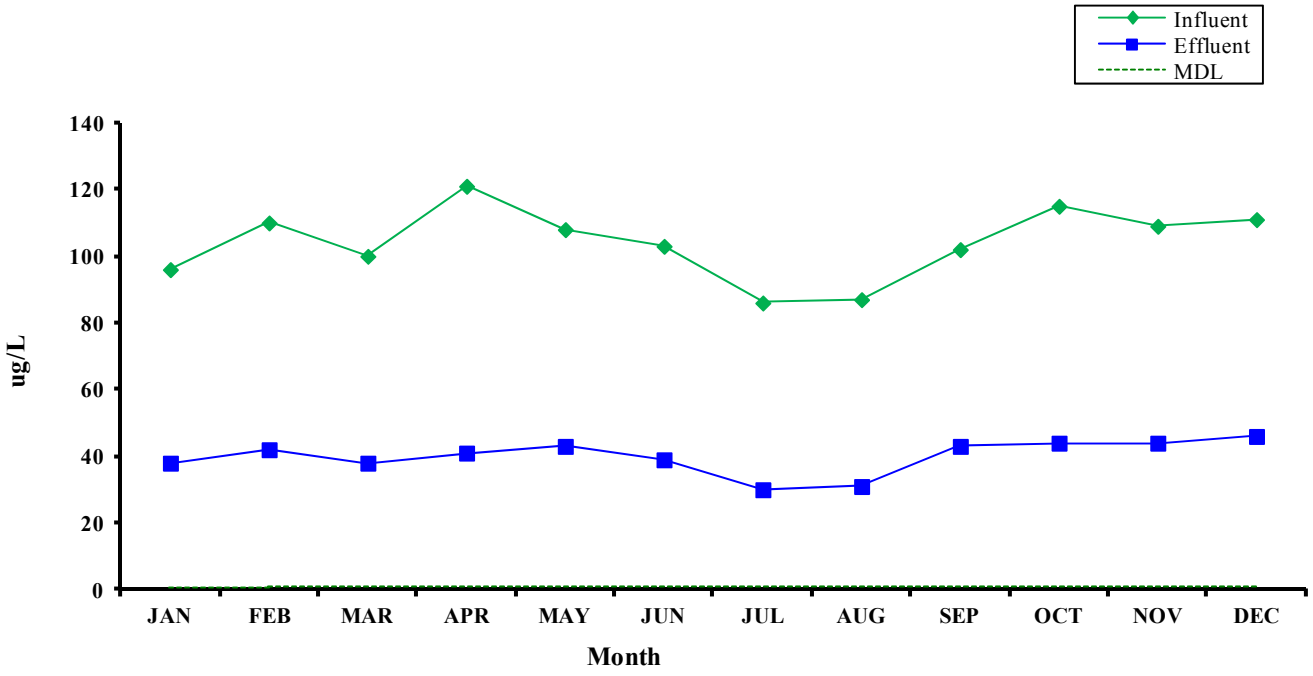
Zinc
2014 Monthly Averages



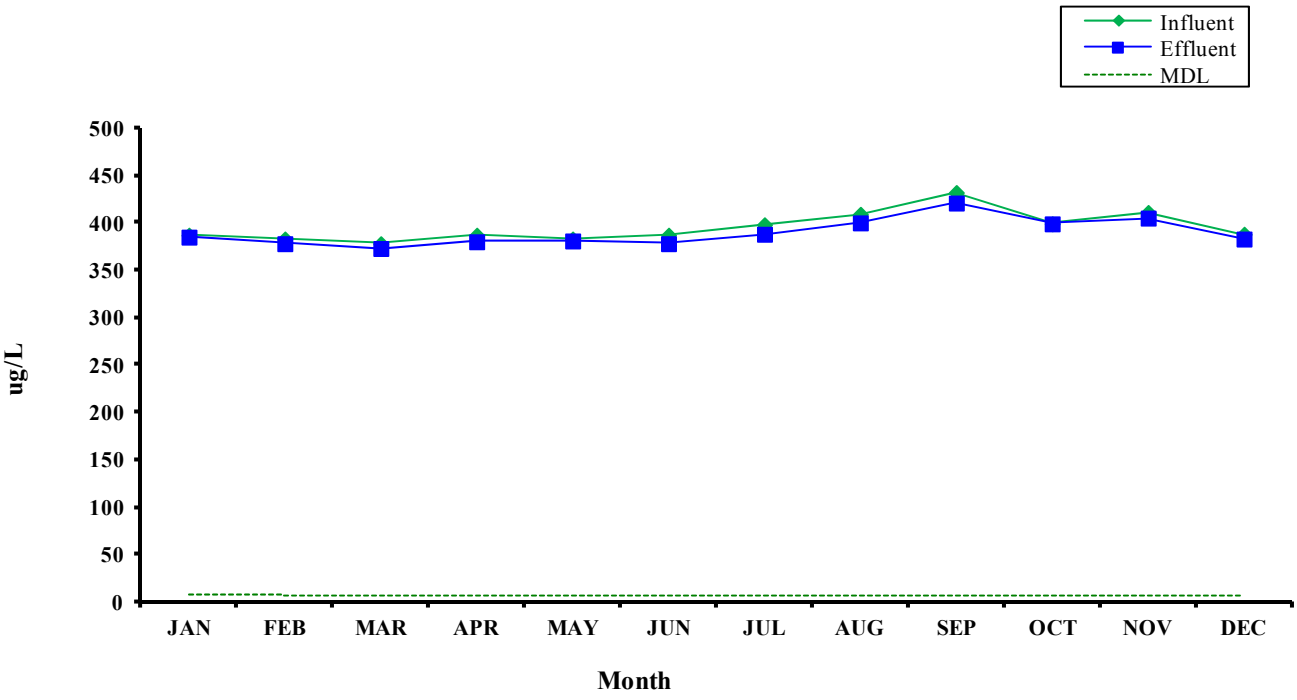
Aluminum
2014 Monthly Averages



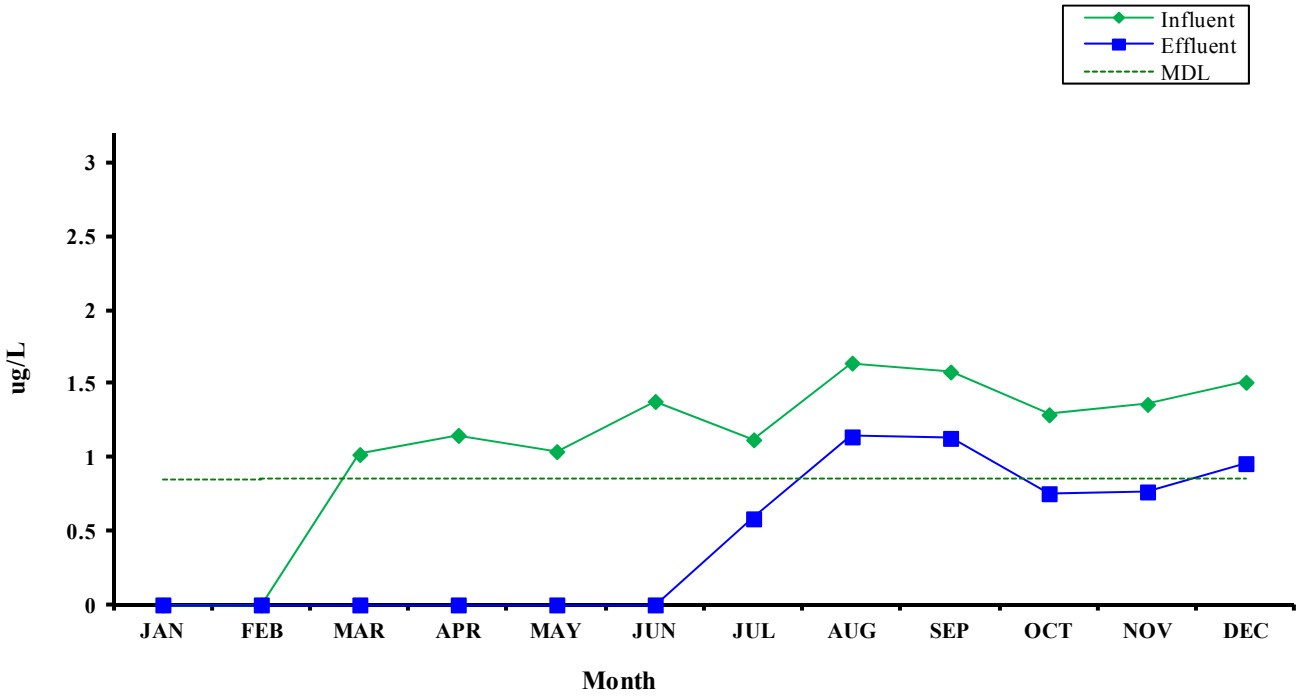
Barium
2014 Monthly Averages



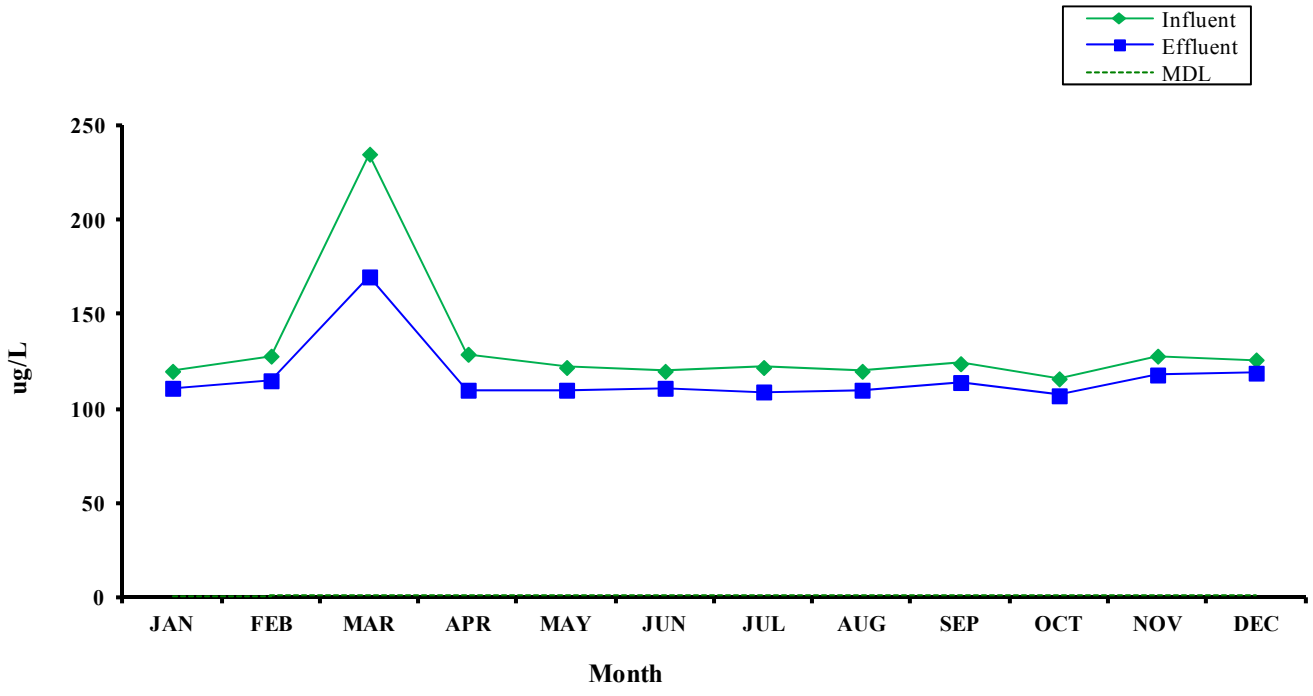
Boron
2014 Monthly Averages



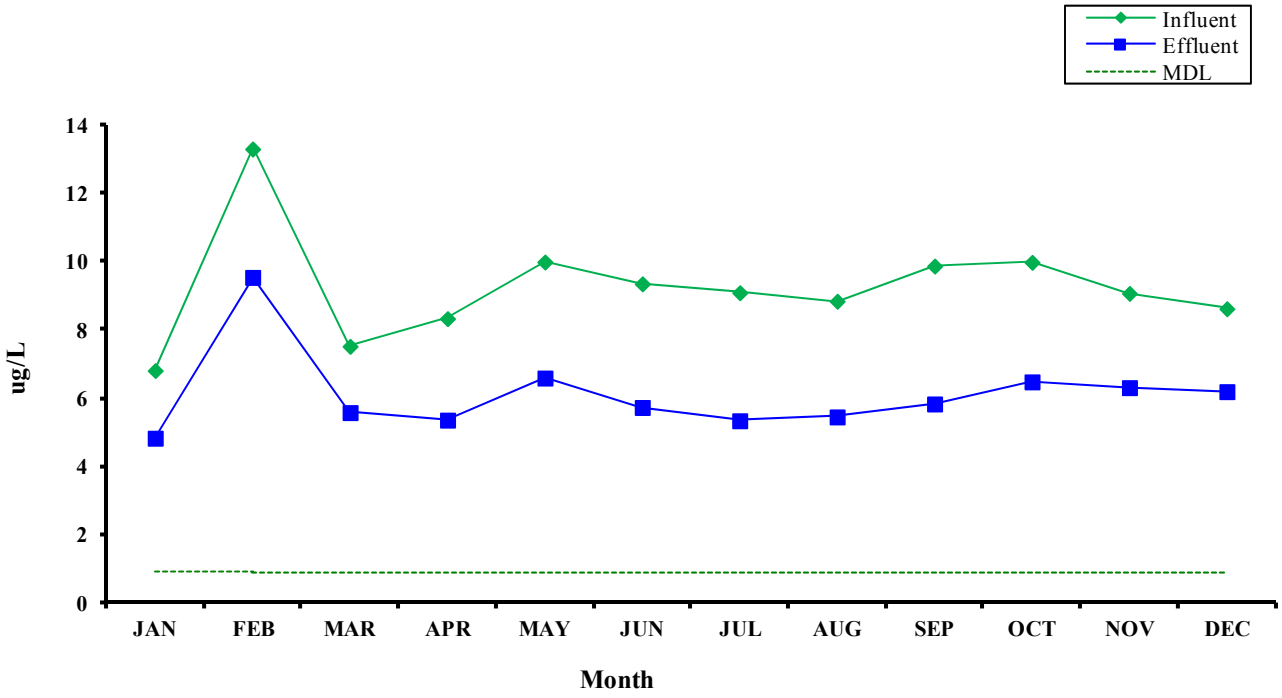
Cobalt
2014 Monthly Averages



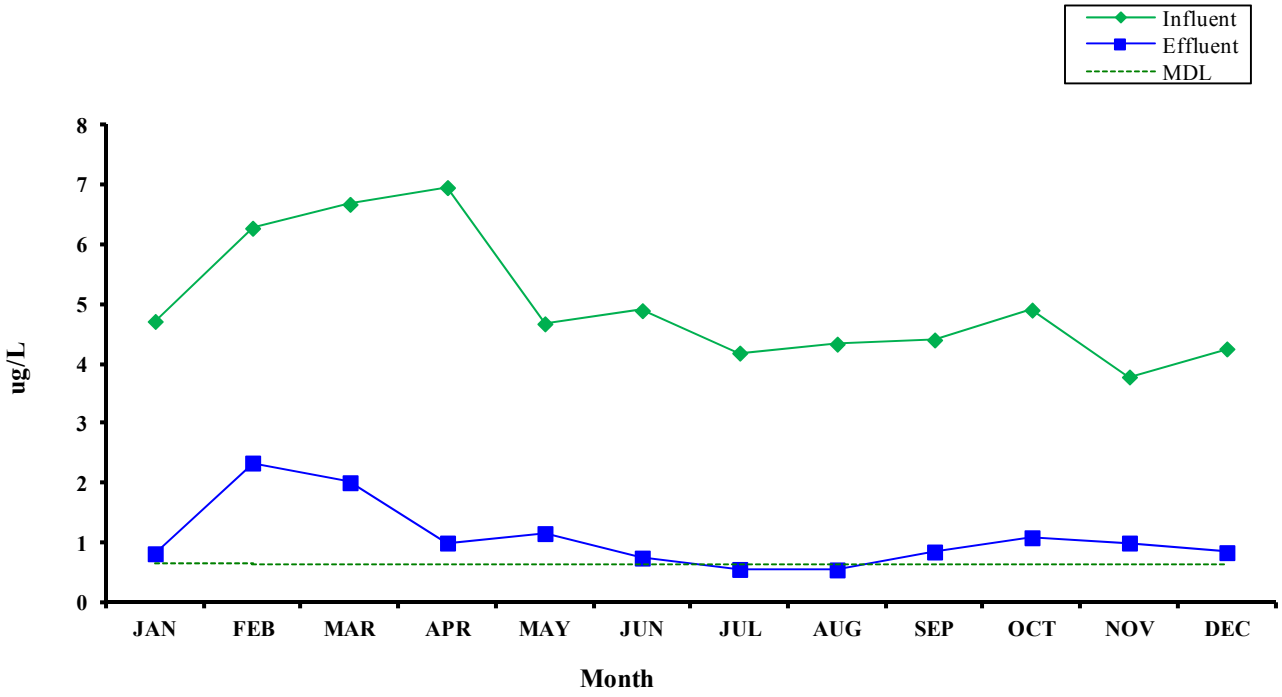
Manganese
2014 Monthly Averages



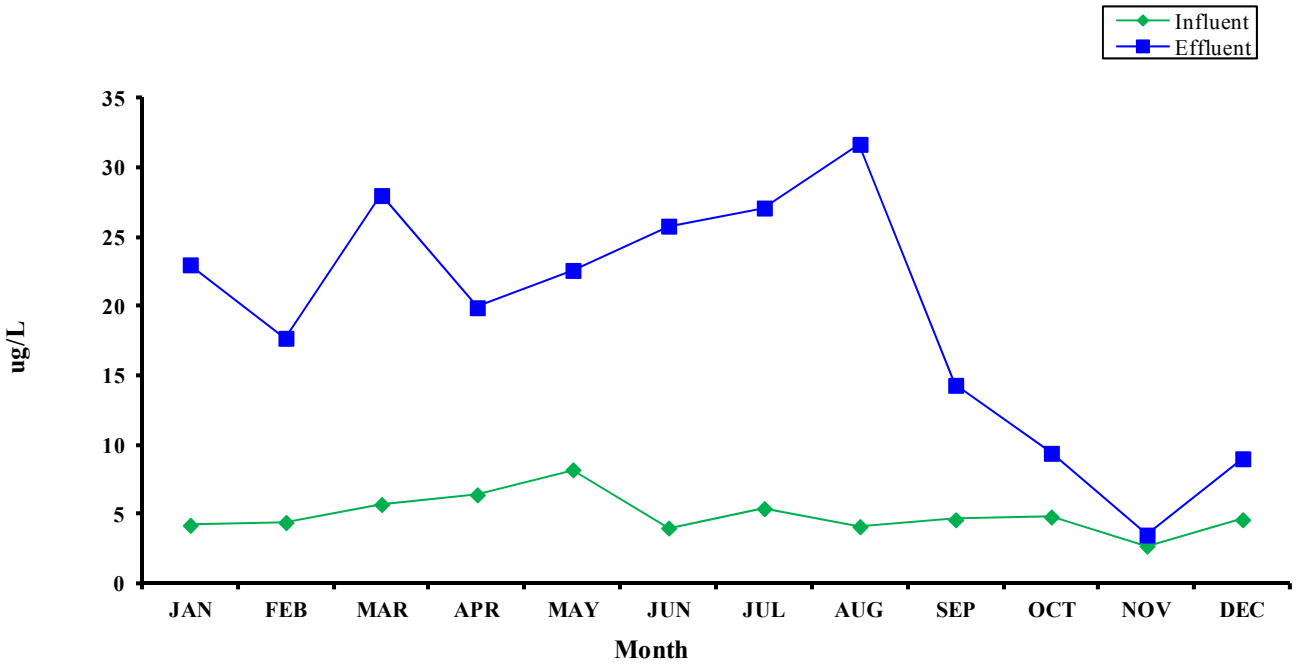
Molybdenum
2014 Monthly Averages



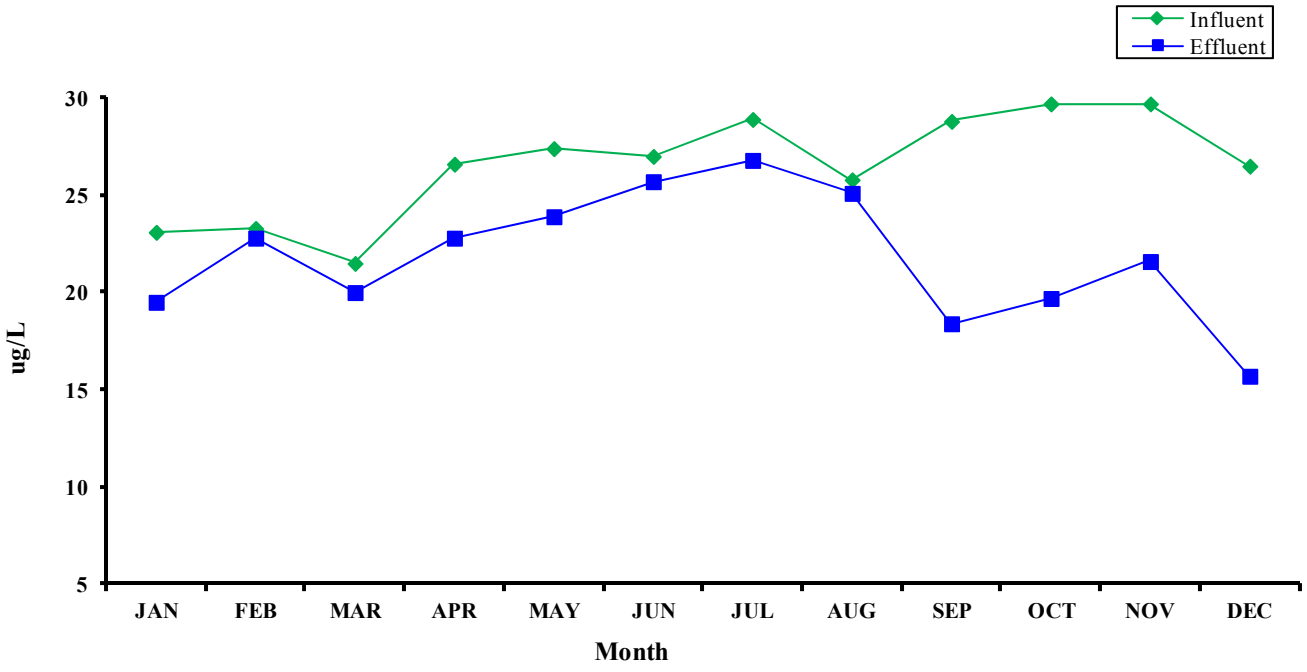
Vanadium
2014 Monthly Average



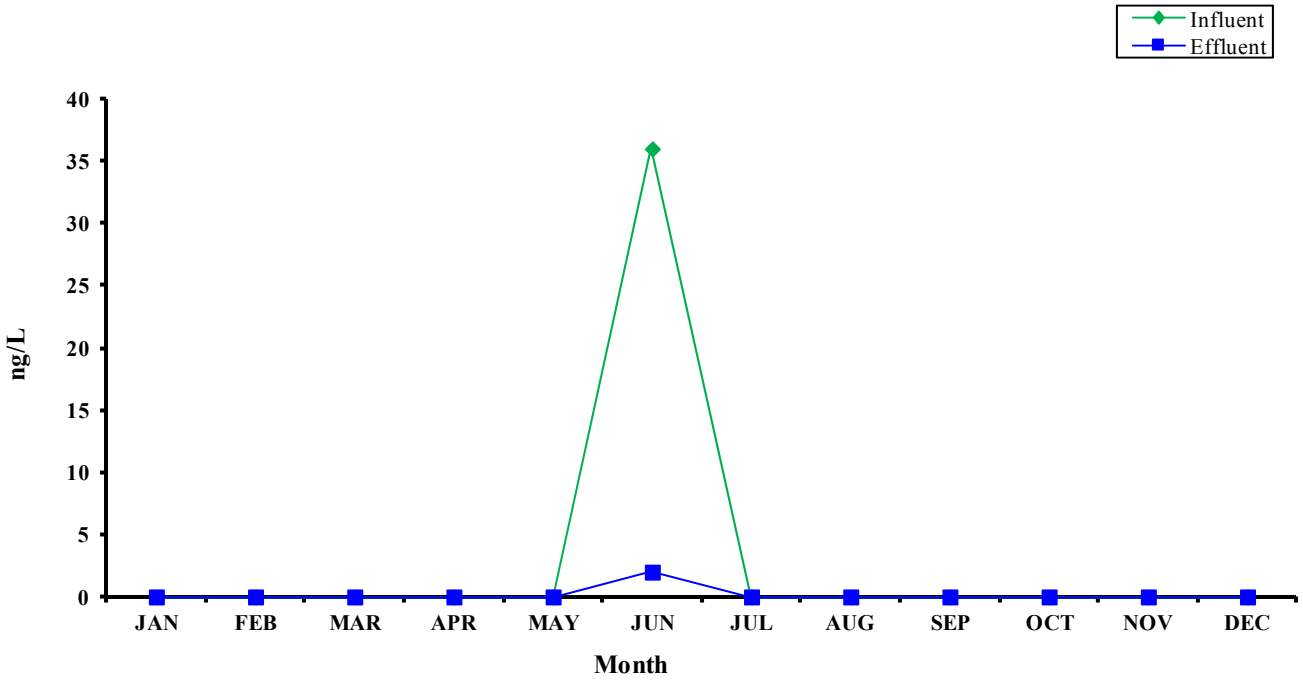
Purgeables Organic Compunds
2014 Monthly Averages



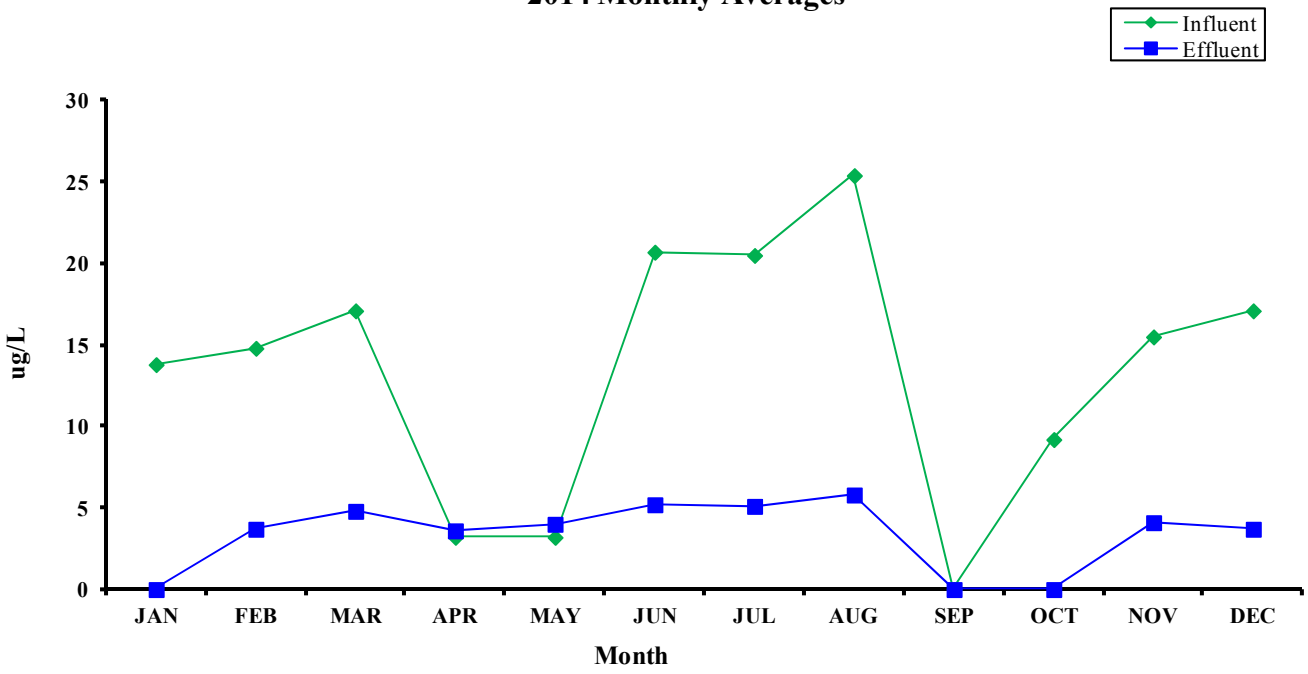
Phenols
2014 Monthly Averages



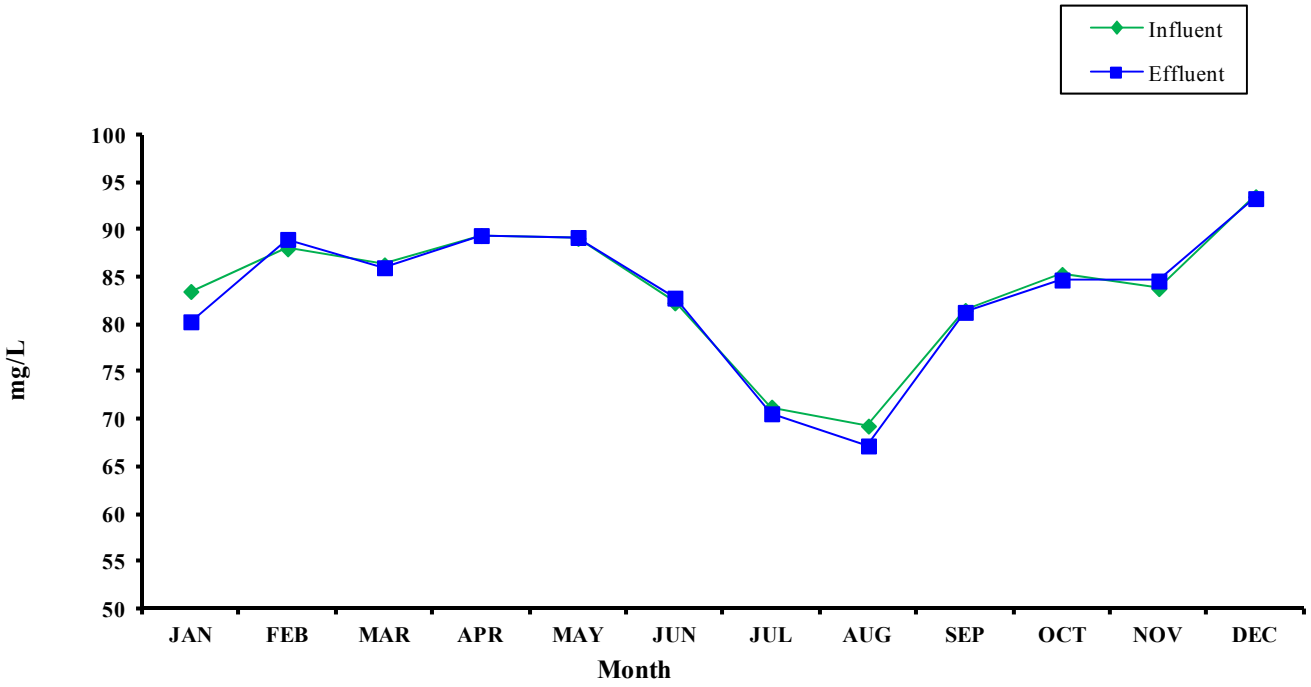
Total Chlorinated Hydrocarbons
2014 Monthly Averages



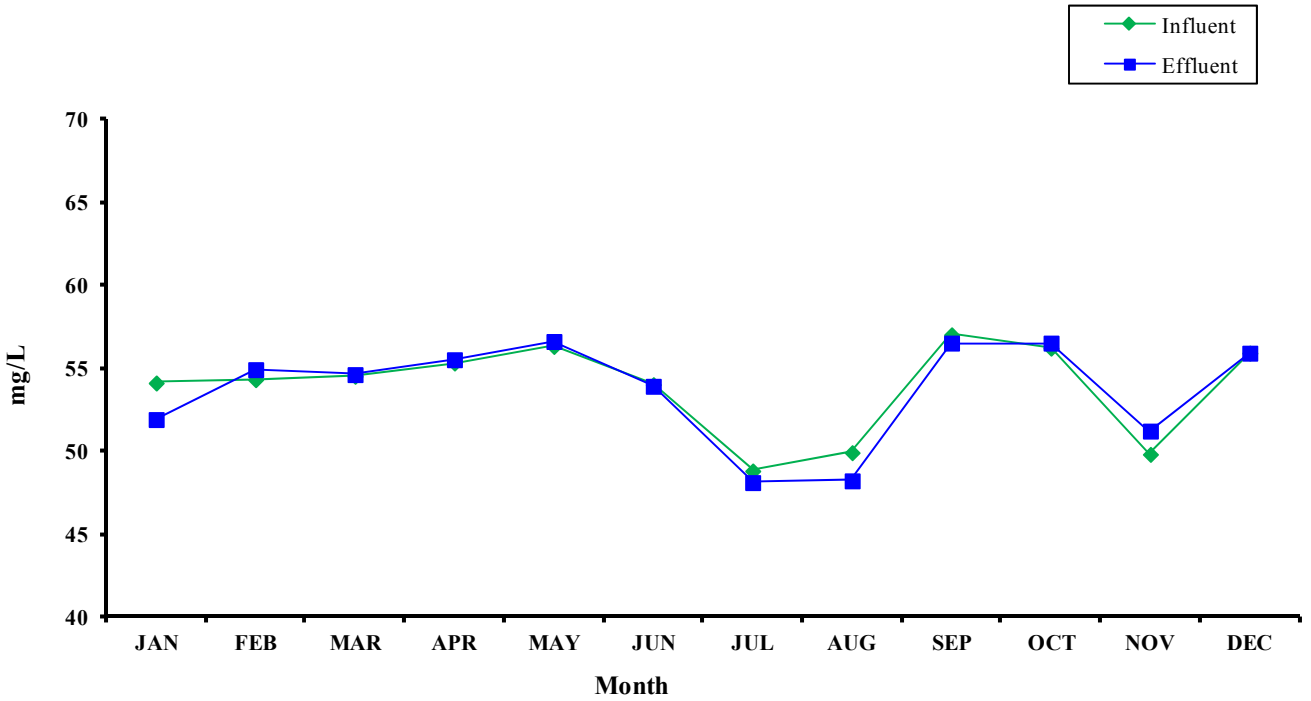
Base Neutrals
2014 Monthly Averages



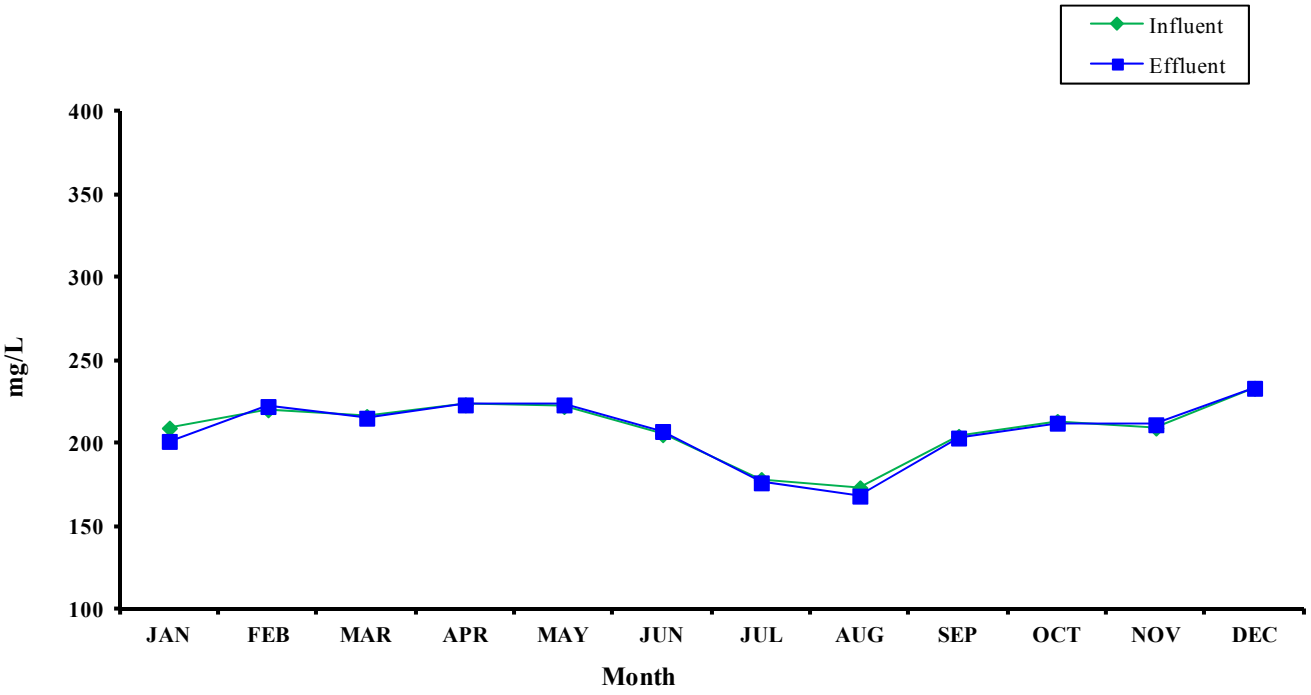
Calcium
2014 Monthly Averages



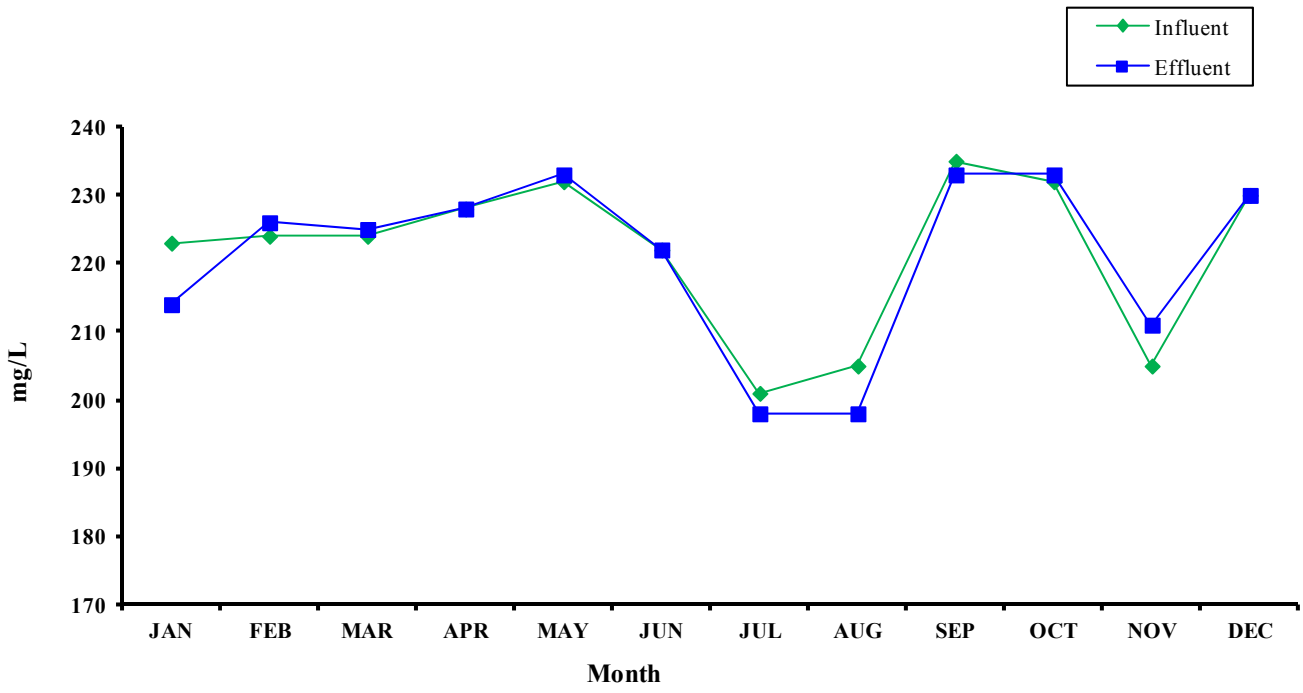
Magnesium
2014 Monthly Averages



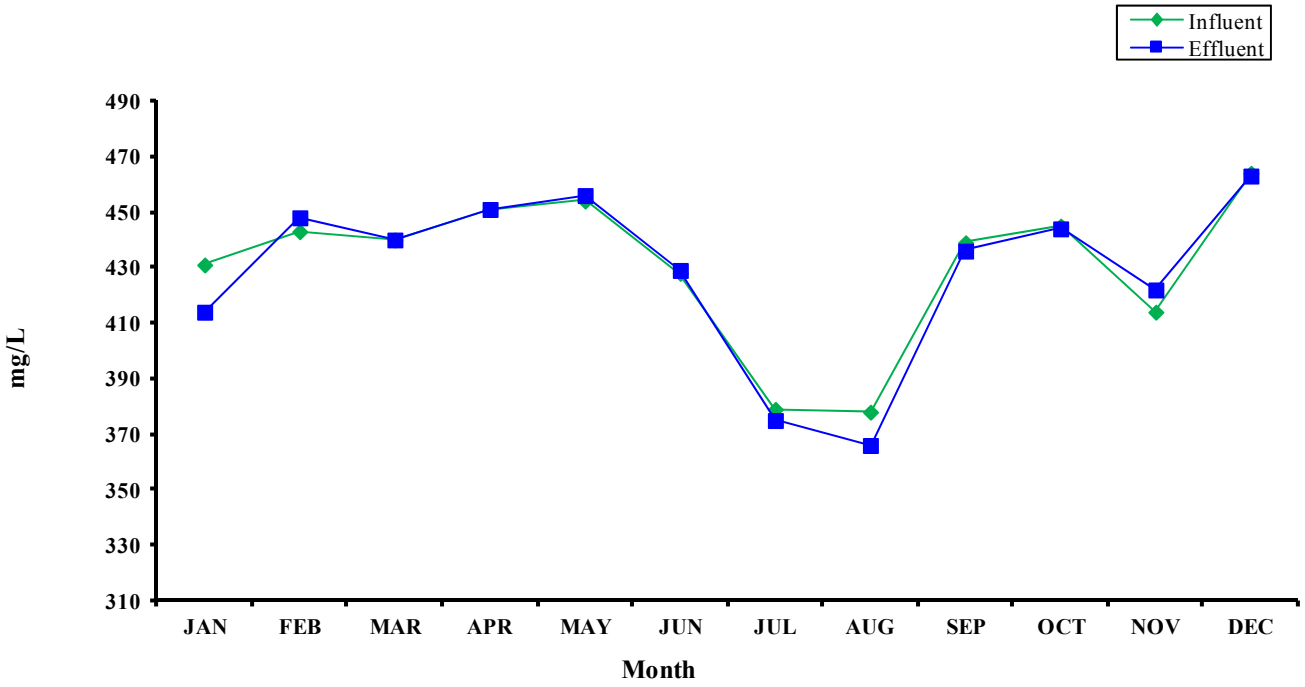
Calcium Hardness
2014 Monthly Averages



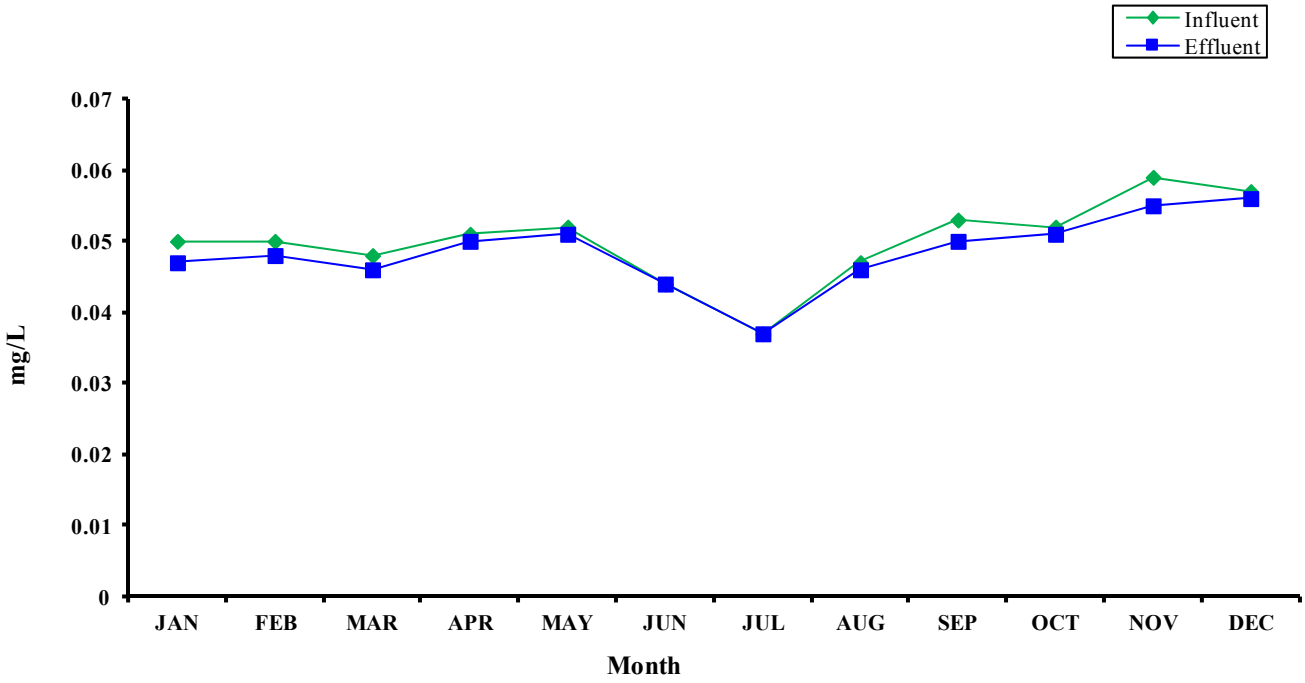
Magnesium Hardness
2014 Monthly Averages



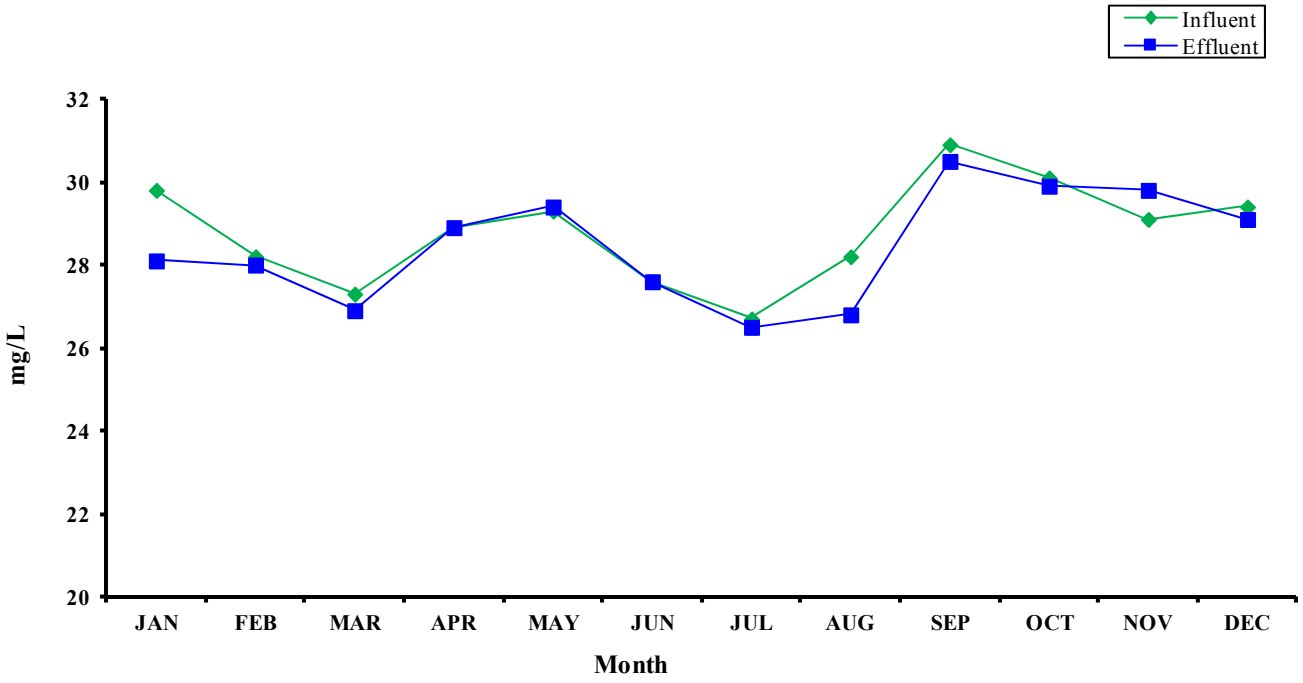
Total Hardness
2014 Monthly Averages



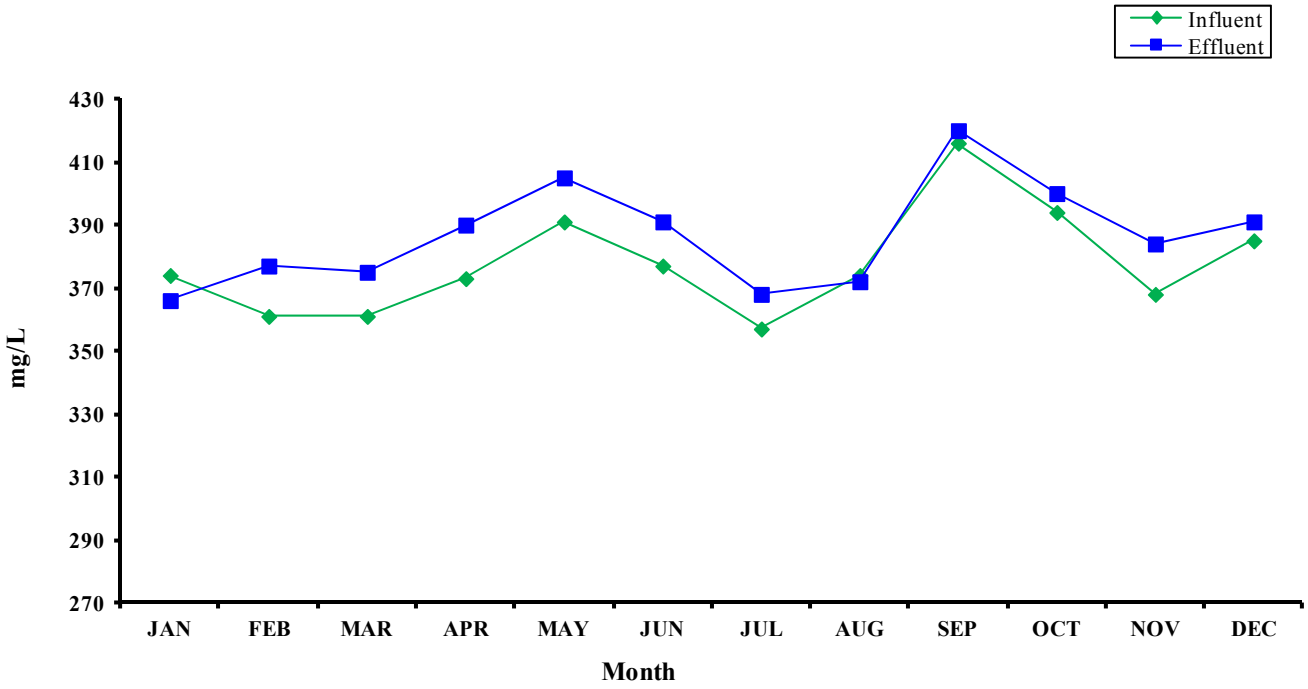
Lithium
2014 Monthly Averages



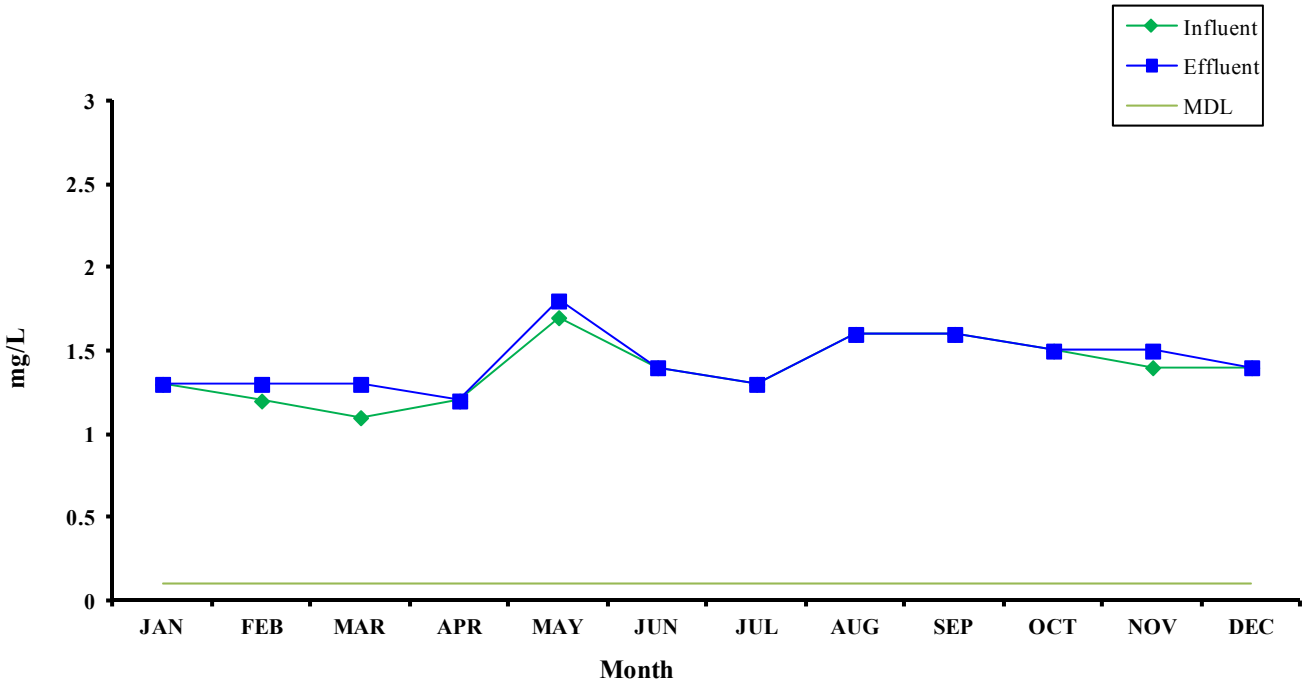
Potassium
2014 Monthly Averages



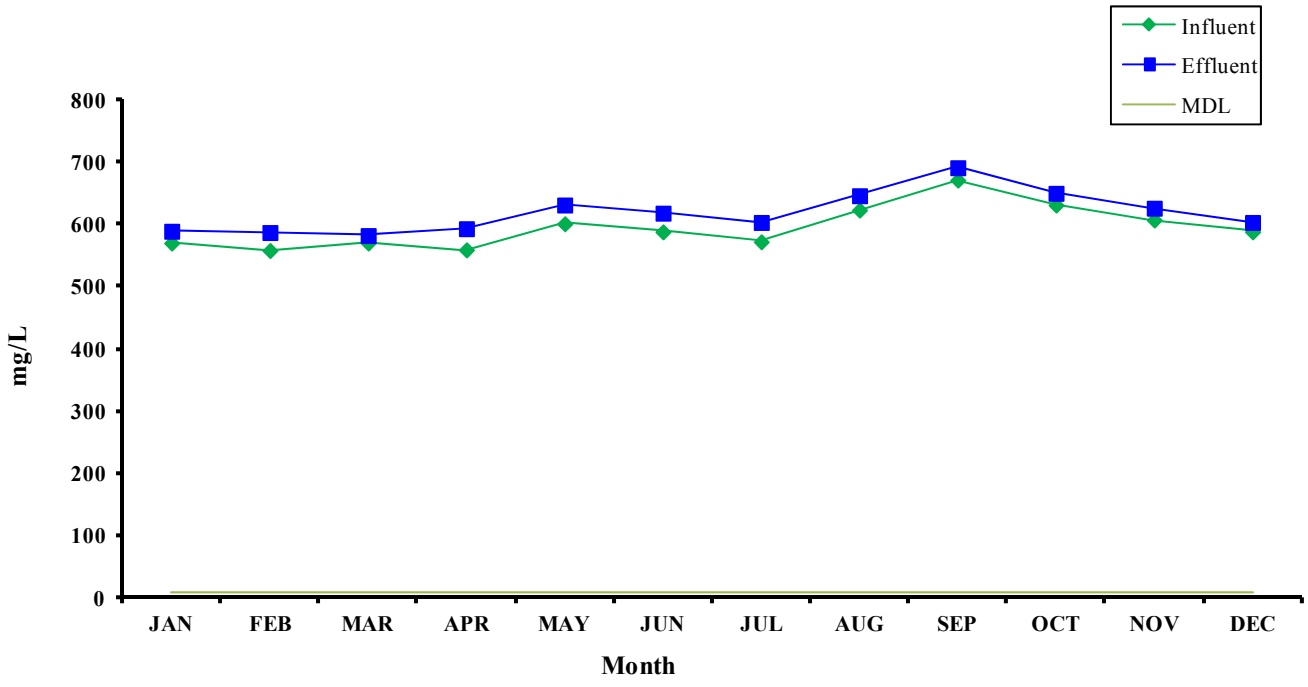
Sodium
2014 Monthly Averages



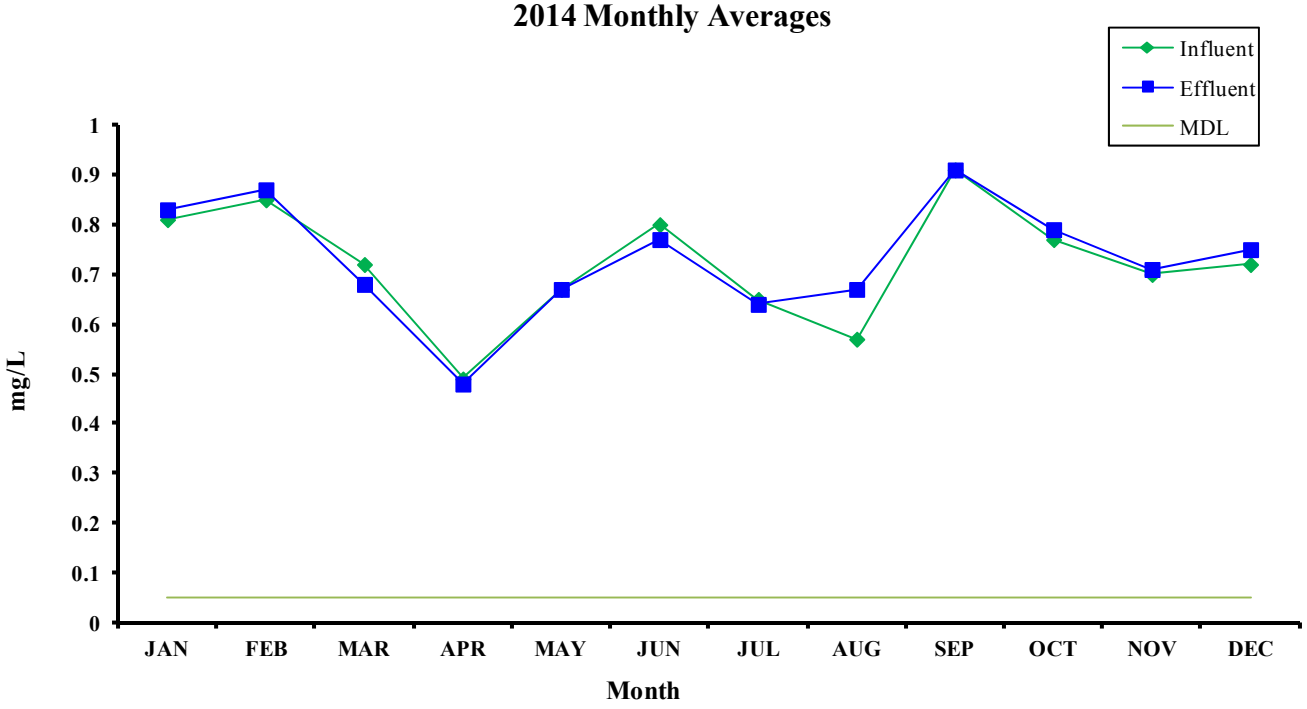
Bromide
2014 Monthly Averages



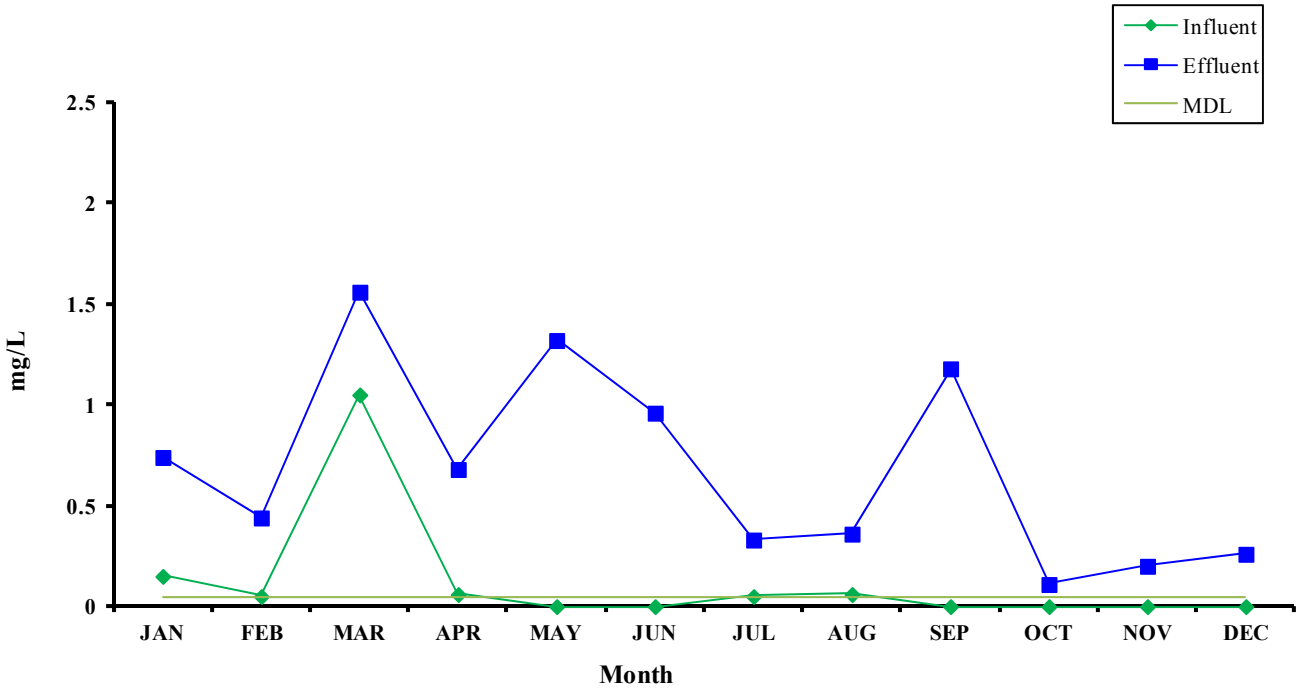
Chloride
2014 Monthly Averages



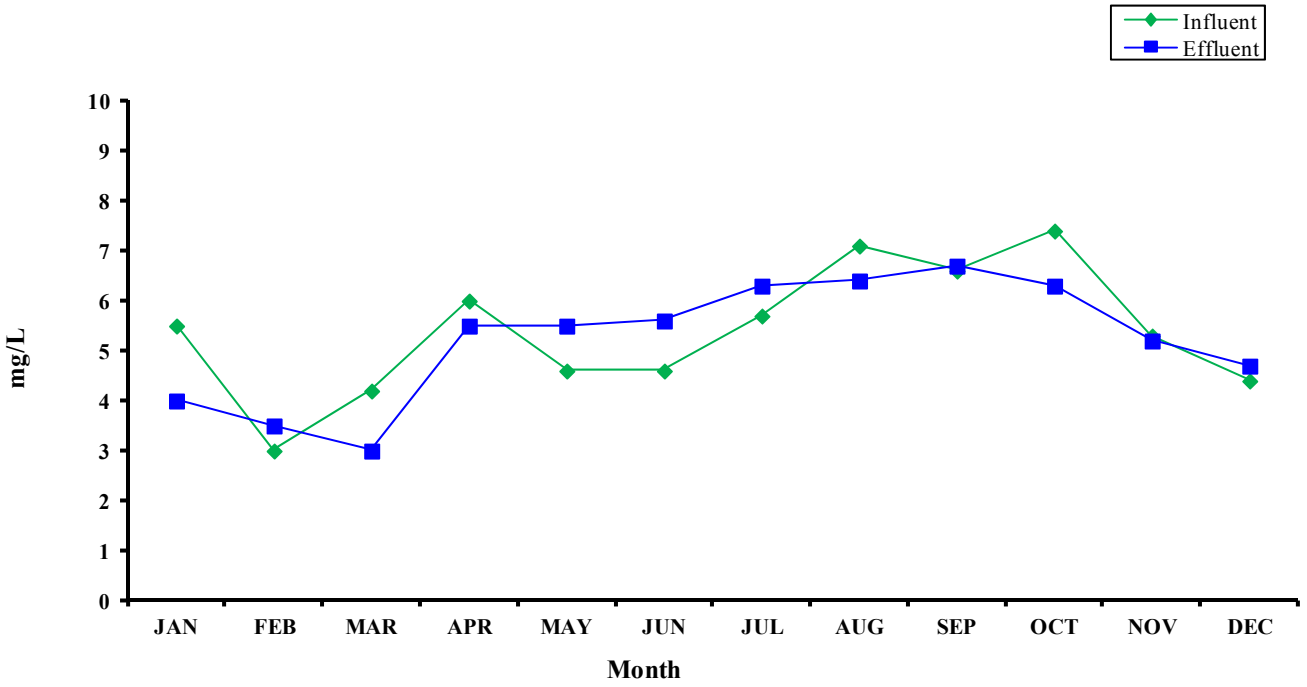
Fluoride
2014 Monthly Averages



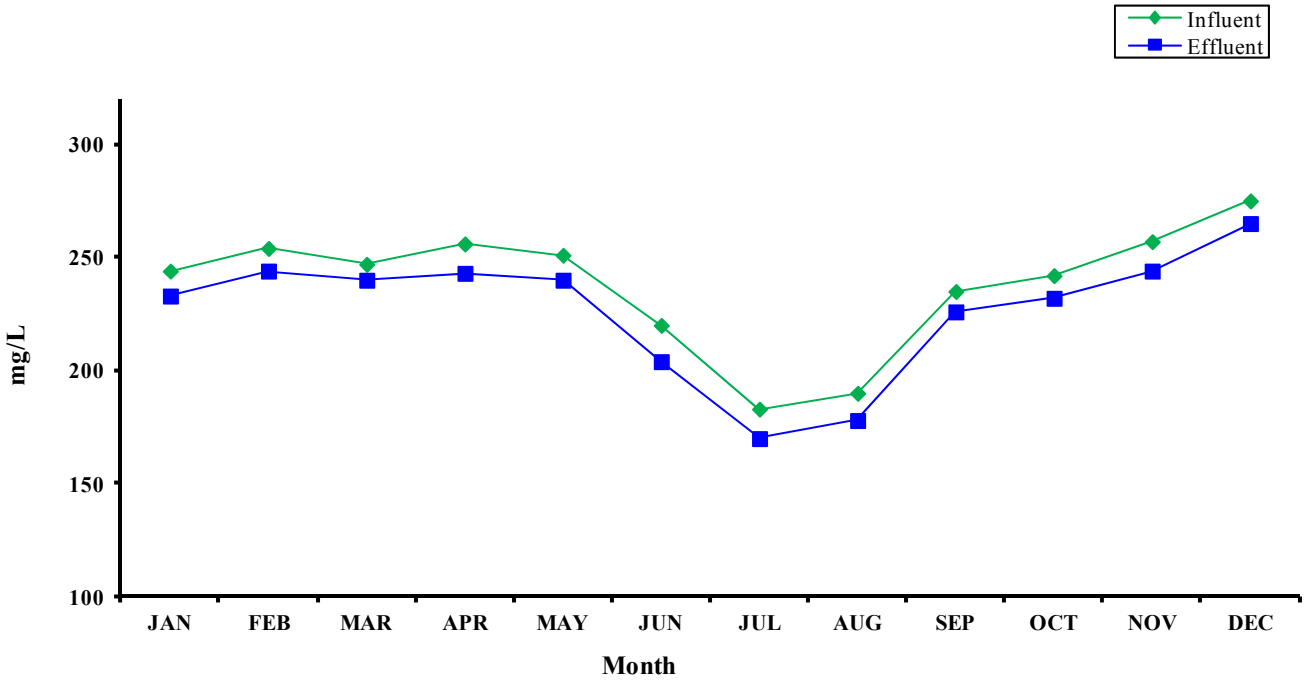
Nitrate
2014 Monthly Averages



O-Phosphate
2014 Monthly Averages



Sulfate
2014 Monthly Averages



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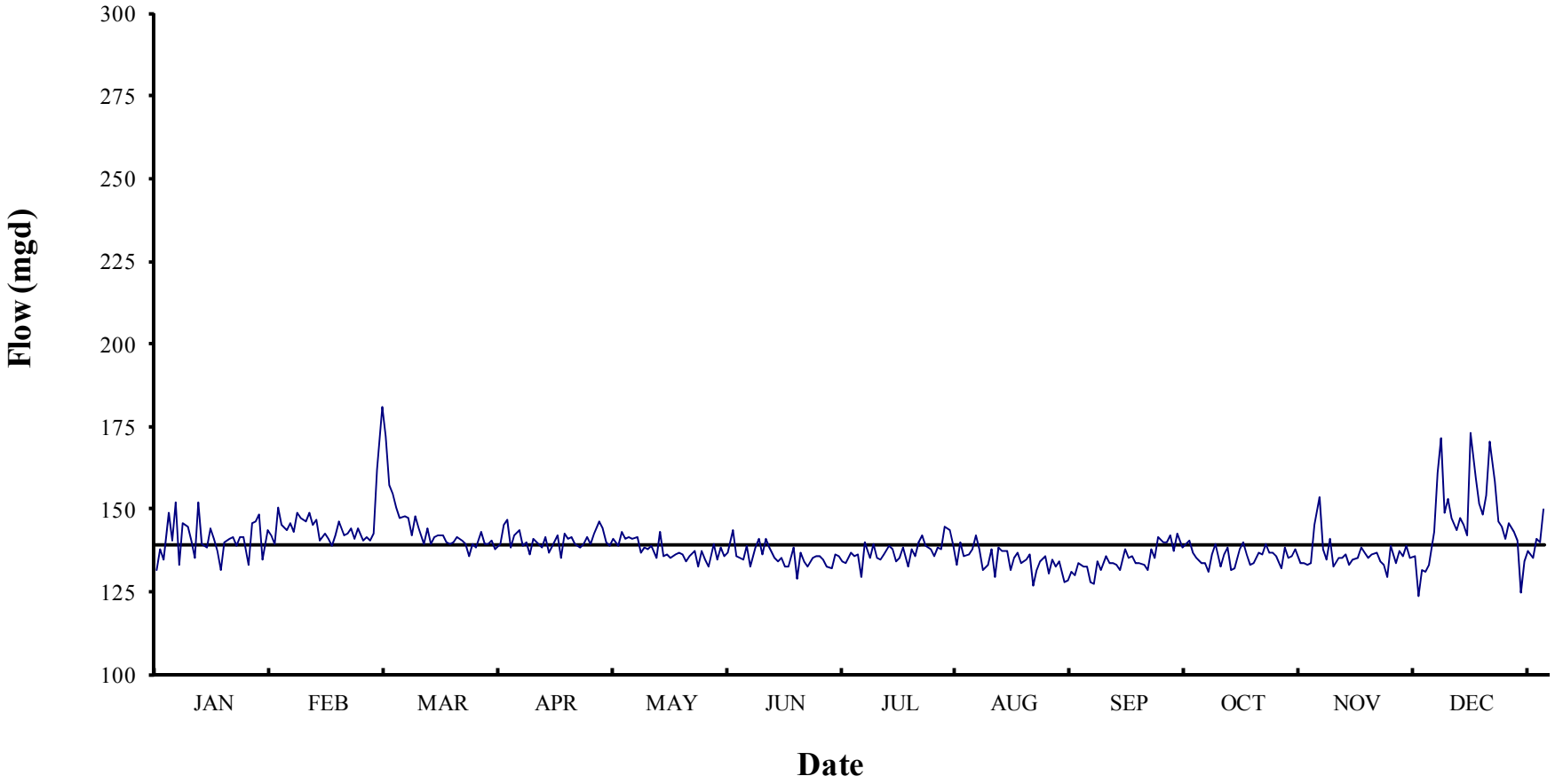
E. Daily Values of Selected Parameters

Daily values and statistical summaries of selected parameters (e.g. TSS, Flow, TSS Removals, etc.) are tabulated and presented graphically. The straight horizontal lines on the graphs in this section represent annual means for the constituent.

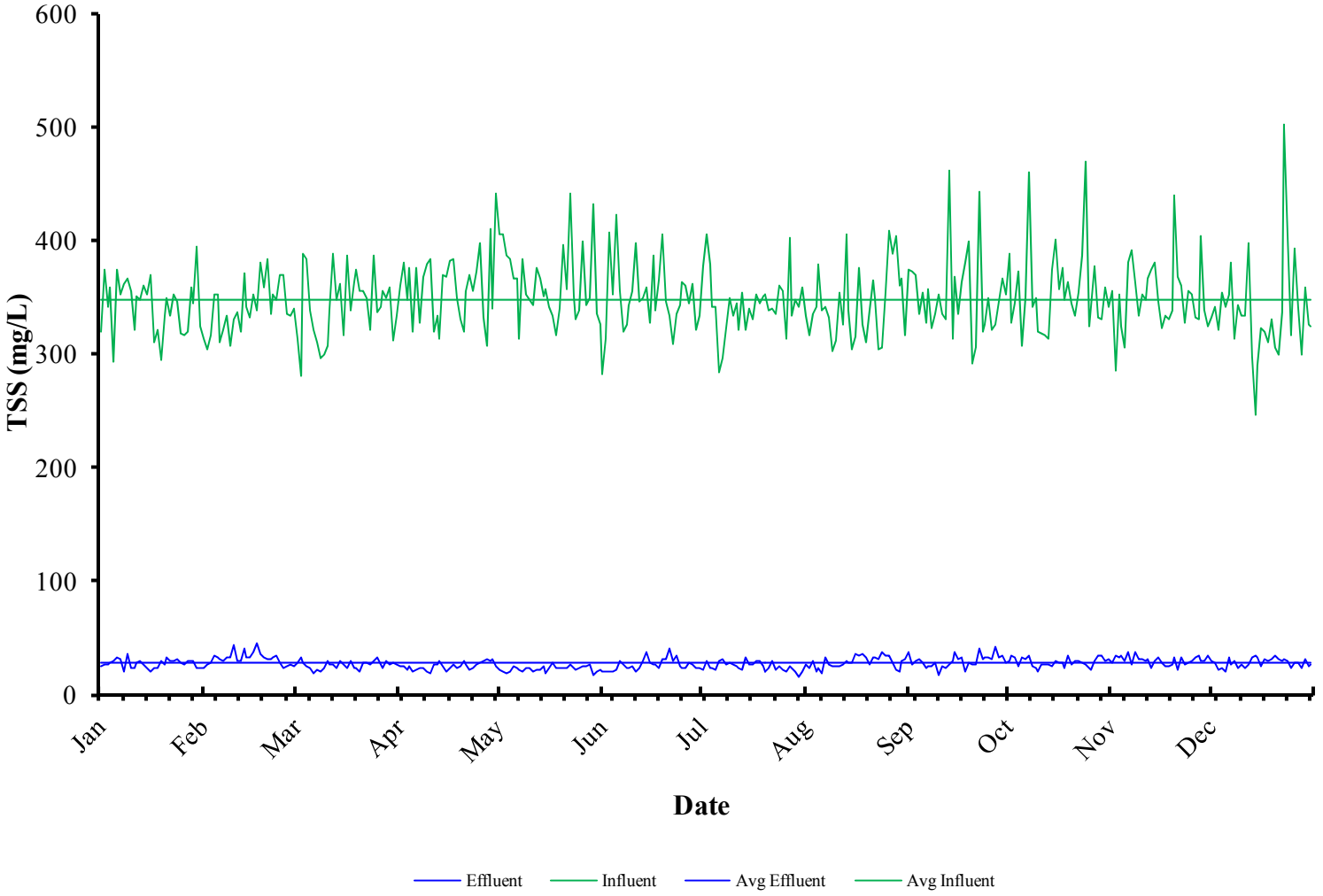
Point Loma Wastewater Treatment Plant
2014 Daily Flows (mgd)



Point Loma Wastewater Treatment Plant
2014 Flows (mgd)

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	131.6	139.6	181.1	139.6	141.1	143.6	133.6	136.1	132.6	135.5	145.1	133.1	
2	138.1	150.6	172.1	145.1	139.1	136.1	137.1	136.6	132.6	133.7	153.6	143.1	
3	134.6	145.4	157.1	147.1	143.1	135.6	136.1	138.1	128.1	133.6	138.1	161.1	
4	149.1	143.6	154.6	138.7	141.1	134.6	136.5	142.1	127.6	131.1	134.7	171.6	
5	140.6	146.0	150.6	142.1	141.9	139.0	129.6	138.1	134.1	136.6	141.1	149.1	
6	152.1	143.1	147.6	143.6	141.1	132.6	140.1	131.6	131.5	139.6	132.9	153.1	
7	133.2	149.1	148.1	139.1	141.9	138.6	135.2	133.1	135.6	132.9	135.1	147.6	
8	145.6	147.6	147.6	140.1	137.0	141.1	139.6	138.1	133.6	136.1	135.5	143.6	
9	144.8	146.6	142.1	136.6	138.6	136.6	135.1	129.6	133.6	138.3	136.6	147.6	
10	140.8	149.0	148.1	141.1	138.1	141.0	134.6	138.6	133.1	131.7	133.1	145.5	
11	135.6	145.5	144.1	139.6	139.1	138.6	136.6	137.4	131.6	132.0	134.6	142.1	
12	152.1	147.1	139.6	138.6	135.5	135.5	139.1	137.4	138.0	138.1	135.1	173.1	
13	139.7	140.4	144.1	141.6	143.0	134.1	138.1	131.6	135.1	140.0	138.6	159.6	
14	138.5	142.7	139.8	137.1	135.6	135.6	134.1	135.1	135.6	136.4	136.7	151.4	
15	144.2	141.1	141.6	139.1	136.6	132.5	135.1	137.1	133.6	133.4	135.1	148.6	
16	141.2	139.1	142.1	142.1	135.1	132.8	138.6	133.6	133.6	133.8	136.5	154.1	
17	137.6	142.1	142.1	135.5	136.6	138.4	132.5	134.6	133.1	137.1	137.1	170.6	
18	131.5	146.4	140.1	142.6	137.1	129.1	138.2	136.4	131.6	136.6	134.1	158.6	
19	140.1	142.1	139.5	141.1	136.4	136.8	135.9	127.1	138.0	139.6	133.1	146.2	
20	141.1	142.6	140.1	141.6	134.1	134.5	140.1	131.6	135.1	137.1	129.7	144.6	
21	141.6	144.1	141.7	139.5	136.1	132.5	142.1	134.1	141.6	137.1	138.9	141.1	
22	138.9	141.1	140.6	138.6	137.5	135.6	139.1	135.6	140.1	135.6	133.6	146.0	
23	141.6	144.4	139.6	139.6	132.9	136.1	137.9	130.6	140.1	132.1	137.6	143.2	
24	141.6	140.6	136.0	141.6	137.2	136.1	135.8	134.6	142.1	138.6	136.1	140.6	
25	133.1	141.7	139.5	139.6	134.6	134.6	138.7	132.6	137.6	135.1	139.1	125.1	
26	145.6	140.8	138.6	142.5	132.6	132.6	138.1	134.1	142.6	136.1	135.1	134.1	
27	146.6	142.6	143.0	146.6	139.6	132.1	144.5	128.1	138.6	138.1	136.1	137.6	
28	148.4	162.1	139.4	144.1	134.6	136.6	143.9	128.6	139.6	133.6	123.6	135.6	
29	134.7		139.6	140.2	138.6	136.1	139.1	131.1	140.6	133.9	131.6	141.1	
30	143.6		140.6	139.1	136.1	134.1	133.1	130.1	137.1	133.2	131.1	140.1	Annual
31	142.4		138.1		137.1		140.1	133.6		133.5		150.1	Summary
Average	141.0	144.5	145.1	140.7	137.7	135.7	137.3	134.1	135.6	135.5	135.9	147.7	139.2
Minimum	131.5	139.1	136.0	135.5	132.6	129.1	129.6	127.1	127.6	131.1	123.6	125.1	124
Maximum	152.1	162.1	172.1	147.1	143.1	141.1	144.5	142.1	142.6	140.0	153.6	173.1	181
Total	4369.5	4046.5	4317.0	4082.9	4127.0	3928.7	4123.7	4020.7	3935.1	4064.3	3933.4	4445.2	50815

Point Loma Wastewater Treatment Plant
2014 Total Suspended Solids



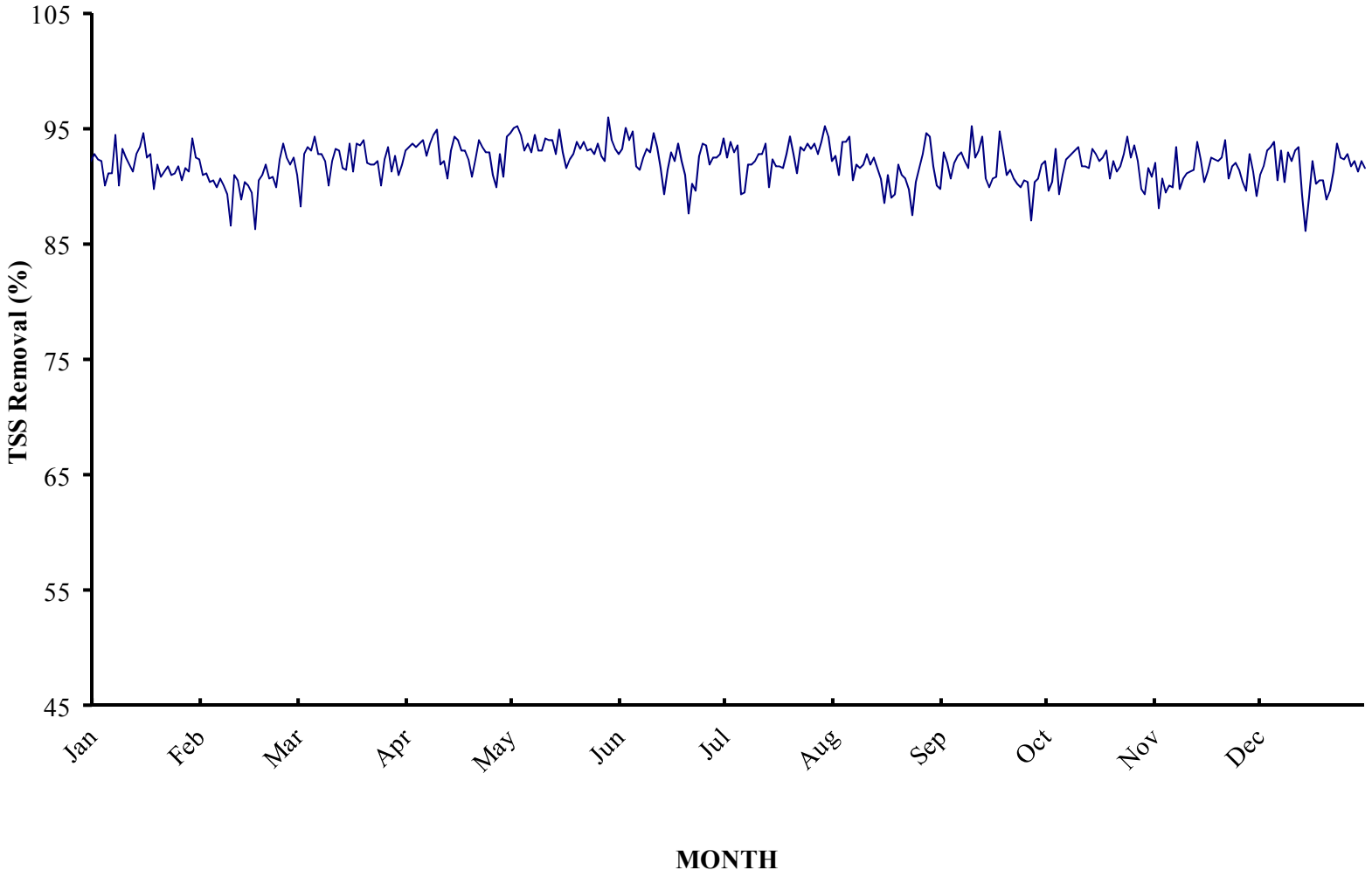
Point Loma Wastewater Treatment Plant

2014 Total Suspended Solids (mg/L)

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
Day	Inf	Eff	Inf	Eff	Inf	Eff	Inf	Eff	Inf	Eff	Inf	Eff	Inf	Eff	Inf	Eff	Inf	Eff	Inf	Eff	Inf	Eff	Inf	Eff
1	319	25	314	24	314	28	361	25	406	22	282	20	378	22	334	26	374	38	389	30	356	28	332	30
2	375	27	304	27	281	33	380	25	406	20	314	21	406	30	316	23	373	26	327	34	285	34	341	28
3	342	26	317	28	388	28	347	22	386	18	407	20	379	23	336	30	369	29	344	33	353	33	322	22
4	358	28	353	34	384	25	376	25	384	21	352	21	342	24	342	21	336	31	373	25	324	34	354	23
5	293	29	352	33	338	23	320	20	366	25	422	22	342	22	379	23	354	28	308	33	306	30	342	21
6	374	33	311	31	322	18	376	22	367	23	355	29	284	30	338	19	328	24	349	31	381	38	352	33
7	352	31	321	30	310	22	328	24	314	22	319	27	296	31	341	32	357	25	460	35	391	26	380	26
8	362	20	333	33	296	21	368	23	383	21	326	24	323	26	332	27	323	25	341	25	363	37	313	30
9	366	36	307	33	300	23	379	21	353	24	343	23	350	28	302	25	335	28	350	24	334	31	343	24
10	356	24	330	44	307	30	383	19	347	24	355	25	334	26	312	25	352	17	320	21	352	31	334	26
11	321	24	337	30	339	26	320	26	343	20	398	21	345	25	354	25	336	25	318	26	347	30	334	23
12	351	28	320	30	388	26	334	26	376	22	346	23	321	23	326	26	331	23	316	26	366	31	397	26
13	347	30	371	41	348	24	313	29	367	22	350	29	354	22	406	30	462	26	313	26	374	23	298	32
14	361	26	342	33	362	30	370	25	351	25	359	38	321	32	339	28	313	29	375	25	380	29	246	34
15	352	23	332	33	317	27	368	21	357	18	328	28	340	26	304	28	368	37	401	29	346	33	290	32
16	369	20	352	37	386	24	382	23	341	24	386	27	331	27	315	36	335	31	357	28	323	28	323	25
17	310	23	338	46	339	29	384	26	333	28	339	26	352	29	376	34	364	33	376	28	334	25	319	31
18	321	23	381	36	364	23	349	24	316	24	365	23	344	29	326	36	381	20	348	24	330	25	310	29
19	294	30	358	32	374	24	331	25	340	24	405	31	351	25	310	33	400	28	364	34	338	26	331	31
20	333	27	383	31	355	21	320	29	396	24	346	31	352	20	338	27	291	26	345	27	440	33	306	34
21	350	32	336	31	356	28	356	27	357	24	334	41	338	24	365	33	305	26	334	29	368	22	299	31
22	334	29	352	32	349	28	369	22	441	27	309	30	340	30	349	32	443	41	354	29	360	33	337	29
23	353	29	348	35	322	26	355	23	351	24	335	35	336	22	304	31	320	31	387	28	328	27	502	31
24	346	31	370	28	386	30	373	26	330	22	343	25	360	25	305	38	326	33	470	27	356	28	407	30
25	318	28	369	23	337	33	398	28	339	24	364	23	355	22	354	34	350	33	324	24	353	30	317	24
26	316	26	335	25	341	26	332	30	399	25	360	23	314	21	408	34	322	31	342	22	332	32	393	28
27	319	30	333	27	356	23	308	31	343	25	344	28	403	25	389	28	326	42	377	29	330	34	341	28
28	359	30	340	25	350	30	410	29	350	27	362	27	333	24	404	22	346	33	332	34	404	29	299	23
29	344	30			358	26	340	31	432	17	322	24	347	21	360	20	366	34	330	35	339	29	359	31
30	394	23			312	28	442	25	335	20	334	24	341	16	367	30	352	28	358	30	324	35	326	25
31	325	24			333	27			326	22			359	20	316	31			341	31			324	27
Avg	342	27	341	32	342	26	359	25	362	23	350	26	344	25	343	29	351	29	356	28	351	26	338	28
Min	293	20	304	23	281	18	308	19	314	17	282	20	284	16	302	19	291	17	308	21	285	22	246	21
Max	394	36	383	46	388	33	442	31	441	28	422	41	406	32	408	38	462	42	470	35	440	38	502	34

Summary	
Inf	Eff
348	27
246	16
502	46

Point Loma Wastewater Treatment Plant
2014 TSS Removal (%) at Point Loma

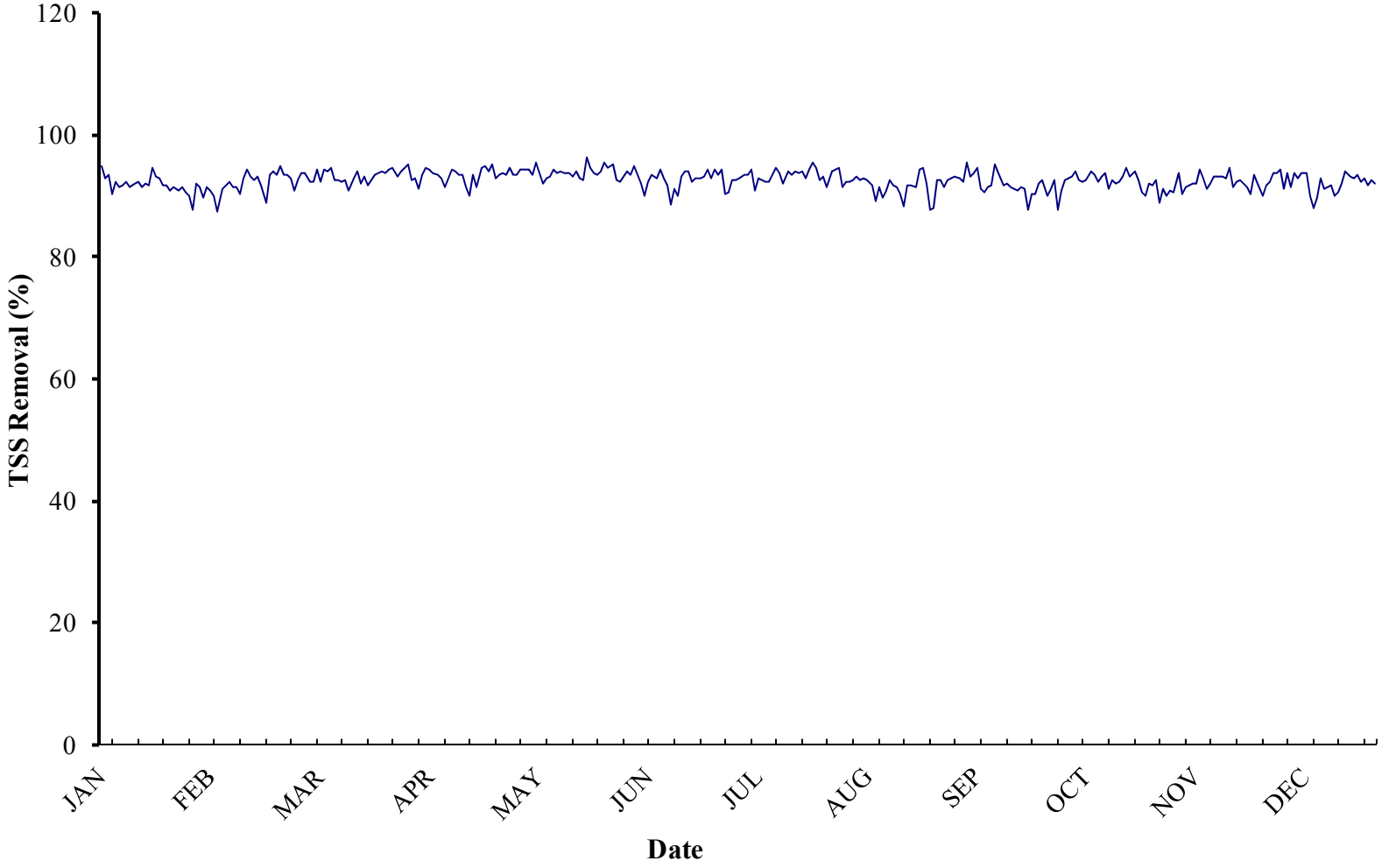


Point Loma Wastewater Treatment Plant

2014 Total Suspended Solids Removals (%) at Point Loma

Day	Jan % Rem	Feb % Rem	Mar % Rem	Apr % Rem	May % Rem	Jun % Rem	Jul % Rem	Aug % Rem	Sep % Rem	Oct % Rem	Nov % Rem	Dec % Rem	
1	92.2	92.4	91.1	93.1	94.6	92.9	94.2	92.2	89.8	92.3	92.1	91.0	
2	92.8	91.1	88.3	93.4	95.1	93.3	92.6	92.7	93.0	89.6	88.1	91.8	
3	92.4	91.2	92.8	93.7	95.3	95.1	93.9	91.1	92.1	90.4	90.7	93.2	
4	92.2	90.4	93.5	93.4	94.5	94.0	93.0	93.9	90.8	93.3	89.5	93.5	
5	90.1	90.6	93.2	93.8	93.2	94.8	93.6	93.9	92.1	89.3	90.2	93.9	
6	91.2	90.0	94.4	94.1	93.7	91.8	89.4	94.4	92.7	91.1	90.0	90.6	
7	91.2	90.7	92.9	92.7	93.0	91.5	89.5	90.6	93.0	92.4	93.4	93.2	
8	94.5	90.1	92.9	93.8	94.5	92.6	92.0	91.9	92.3	92.7	89.8	90.4	
9	90.2	89.3	92.3	94.5	93.2	93.3	92.0	91.7	91.6	93.1	90.7	93.0	
10	93.3	86.7	90.2	95.0	93.1	93.0	92.2	92.0	95.2	93.4	91.2	92.2	
11	92.5	91.1	92.3	91.9	94.2	94.7	92.8	92.9	92.6	91.8	91.4	93.1	
12	92.0	90.6	93.3	92.2	94.1	93.4	92.8	92.0	93.1	91.8	91.5	93.5	
13	91.4	88.9	93.1	90.7	94.0	91.7	93.8	92.6	94.4	91.7	93.9	89.3	
14	92.8	90.4	91.7	93.2	92.9	89.4	90.0	91.7	90.7	93.3	92.4	86.2	
15	93.5	90.1	91.5	94.3	95.0	91.5	92.4	90.8	89.9	92.8	90.5	89.0	
16	94.6	89.5	93.8	94.0	93.0	93.0	91.8	88.6	90.7	92.2	91.3	92.3	
17	92.6	86.4	91.4	93.2	91.6	92.3	91.8	91.0	90.9	92.6	92.5	90.3	
18	92.8	90.6	93.7	93.1	92.4	93.7	91.6	89.0	94.8	93.1	92.4	90.6	
19	89.8	91.1	93.6	92.4	92.9	92.3	92.9	89.4	93.0	90.7	92.3	90.6	
20	91.9	91.9	94.1	90.9	93.9	91.0	94.3	92.0	91.1	92.2	92.5	88.9	
21	90.9	90.8	92.1	92.4	93.3	87.7	92.9	91.0	91.5	91.3	94.0	89.6	
22	91.3	90.9	92.0	94.0	93.9	90.3	91.2	90.8	90.7	91.8	90.8	91.4	
23	91.8	89.9	91.9	93.5	93.2	89.6	93.5	89.8	90.3	92.8	91.8	93.8	
24	91.0	92.4	92.2	93.0	93.3	92.7	93.1	87.5	89.9	94.3	92.1	92.6	
25	91.2	93.8	90.2	93.0	92.9	93.7	93.8	90.4	90.6	92.6	91.5	92.4	
26	91.8	92.5	92.4	91.0	93.7	93.6	93.3	91.7	90.4	93.6	90.4	92.9	
27	90.6	91.9	93.5	89.9	92.7	91.9	93.8	92.8	87.1	92.3	89.7	91.8	
28	91.6	92.6	91.4	92.9	92.3	92.5	92.8	94.6	90.5	89.8	92.8	92.3	
29	91.3		92.7	90.9	96.1	92.5	93.9	94.4	90.7	89.4	91.4	91.4	
30	94.2		91.0	94.3	94.0	92.8	95.3	91.8	92.0	91.6	89.2	92.3	Annual
31	92.6		91.9		93.3		94.4	90.2		90.9		91.7	Summary
Avg	92.0	90.6	92.3	92.9	93.6	92.4	92.7	91.6	91.6	91.9	91.3	91.6	92.1
Min	89.8	86.4	88.3	89.9	91.6	87.7	89.4	87.5	87.1	89.3	88.1	86.2	86.2
Max	94.6	93.8	94.4	95.0	96.1	95.1	95.3	94.6	95.2	94.3	94.0	93.9	96.1

Point Loma Wastewater Treatment Plant
2014 TSS Removal (%) Systemwide

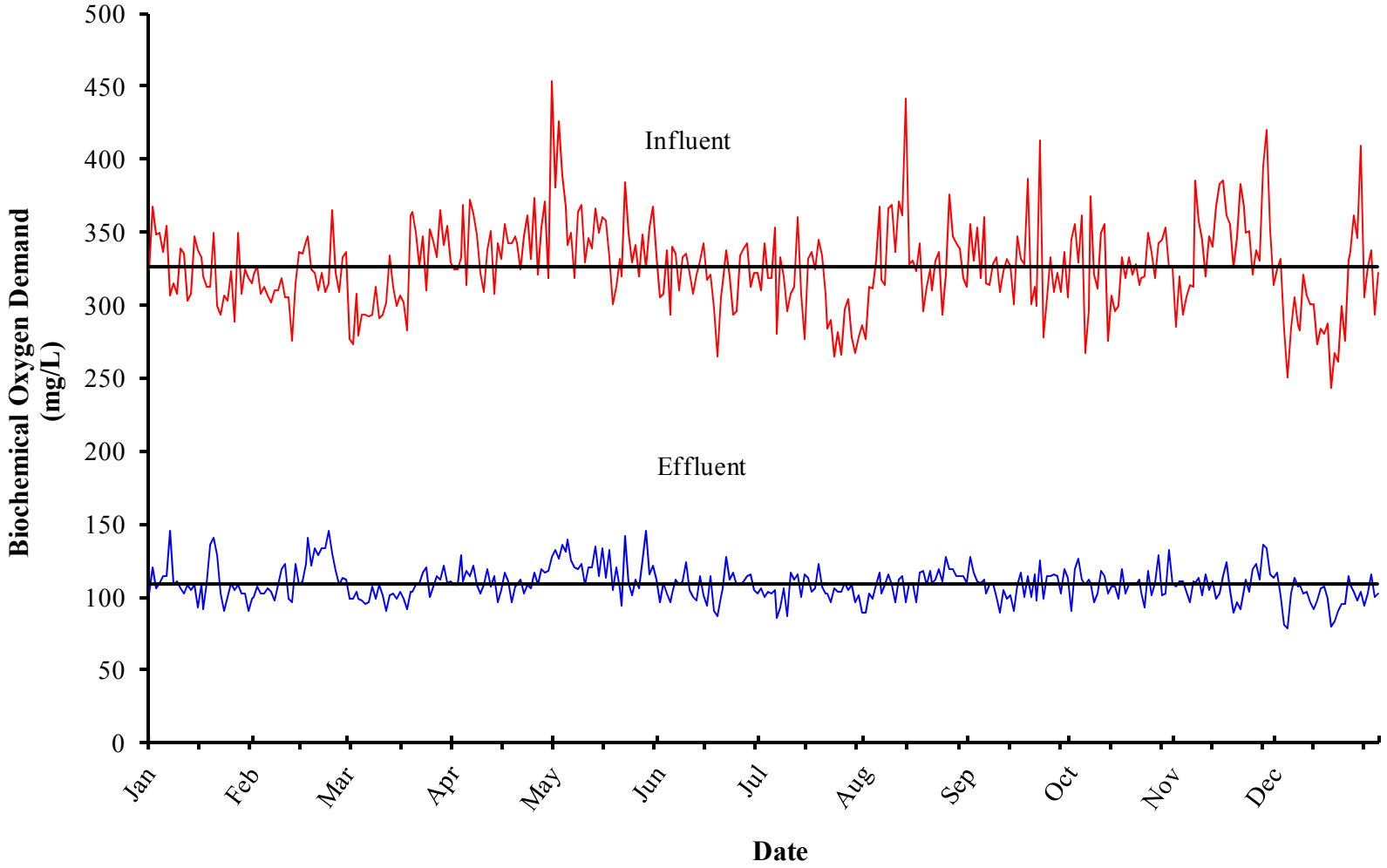


Point Loma Wastewater Treatment Plant

2014 Total Suspended Solids Removals (%) Systemwide

Day	Jan % Rem	Feb % Rem	Mar % Rem	Apr % Rem	May % Rem	Jun % Rem	Jul % Rem	Aug % Rem	Sep % Rem	Oct % Rem	Nov % Rem	Dec % Rem	
1	92.7	92.9	91.6	93.4	94.8	93.5	94.4	92.6	88.1	92.7	92.5	91.7	
2	93.2	91.8	88.8	93.8	94.0	93.9	92.8	93.1	92.6	90.0	88.7	92.4	
3	92.9	91.8	93.3	94.1	95.1	95.5	94.3	91.4	92.5	91.0	91.2	93.6	
4	92.4	90.9	93.9	93.7	93.0	94.5	93.5	94.1	91.5	92.7	90.1	93.8	
5	90.7	91.4	93.5	94.2	93.3	95.2	94.3	94.3	92.7	87.8	90.9	94.2	
6	91.6	90.8	94.8	94.6	93.8	92.5	90.3	94.7	92.9	90.8	90.6	91.2	
7	91.7	91.3	93.4	93.1	93.4	92.2	90.7	91.3	93.1	92.5	93.8	93.6	
8	94.8	90.6	93.3	94.1	94.6	93.2	92.5	92.3	92.8	93.0	90.2	91.3	
9	90.8	89.9	92.9	94.6	93.3	93.9	92.6	92.2	92.3	93.1	91.3	93.6	
10	93.8	87.6	90.8	95.3	93.3	93.4	92.8	92.7	95.5	94.1	91.6	92.9	
11	93.0	92.0	92.7	92.6	94.4	95.0	93.3	93.2	93.2	92.6	92.1	93.7	
12	92.6	91.4	93.6	92.8	94.3	93.5	93.4	92.7	93.6	92.3	92.1	93.8	
13	91.8	89.7	93.6	91.2	94.2	92.1	94.2	93.0	94.6	92.6	94.2	90.0	
14	93.1	91.3	92.4	93.5	93.4	89.9	90.9	92.6	91.0	93.9	92.8	87.9	
15	93.8	90.8	92.2	94.5	95.4	92.2	92.9	91.6	90.7	93.3	91.1	89.8	
16	94.9	90.1	94.2	94.3	93.6	93.5	92.5	89.1	91.5	92.4	92.0	93.0	
17	93.0	87.4	92.3	93.6	92.0	92.9	92.2	91.3	91.6	93.1	93.2	91.0	
18	93.3	91.2	94.2	93.5	93.0	94.2	92.2	89.8	95.1	93.6	93.1	91.4	
19	90.3	91.7	94.1	92.8	93.1	92.8	93.5	90.8	93.6	91.2	93.2	91.6	
20	92.4	92.2	94.6	91.5	94.2	91.8	94.7	92.5	91.6	92.7	92.9	89.9	
21	91.3	91.3	92.7	92.8	93.8	88.5	93.6	91.6	92.1	91.9	94.6	90.6	
22	91.7	91.3	92.5	94.4	94.0	91.0	92.0	91.3	91.3	92.3	91.4	92.0	
23	92.4	90.3	92.4	93.9	93.7	90.1	94.0	90.4	91.2	93.2	92.2	94.1	
24	91.5	92.8	92.7	93.4	93.8	93.2	93.5	88.4	90.8	94.6	92.5	93.1	
25	91.9	94.2	90.8	93.5	93.2	94.0	94.1	91.7	91.5	93.1	92.1	92.8	
26	92.2	93.2	92.9	91.5	94.1	94.0	93.8	91.6	91.2	94.0	91.4	93.4	
27	91.3	92.6	94.0	90.0	93.0	92.4	93.9	91.3	87.6	92.7	90.4	92.4	
28	92.0	93.1	92.0	93.3	92.7	92.8	93.0	94.3	90.4	90.5	93.5	92.9	
29	91.8		93.1	91.4	96.4	93.0	94.3	94.5	90.3	90.1	92.0	91.8	
30	94.5		91.6	94.7	94.6	93.2	95.4	92.0	92.0	92.0	90.1	92.6	Annual
31	93.2		92.6		93.7		94.7	87.7		91.6		91.9	Summary
Avg	92.5	91.3	92.8	93.3	93.8	92.9	93.2	91.9	92.0	92.3	91.9	92.2	92.5
Min	90.3	87.4	88.8	90.0	92.0	88.5	90.3	87.7	87.6	87.8	88.7	87.9	87.4
Max	94.9	94.2	94.8	95.3	96.4	95.5	95.4	94.7	95.5	94.6	94.6	94.2	96.4

Point Loma Wastewater Treatment Plant
2014 Biochemical Oxygen Demand



Point Loma Wastewater Treatment Plant

2014 Biochemical Oxygen Demand (mg/L)

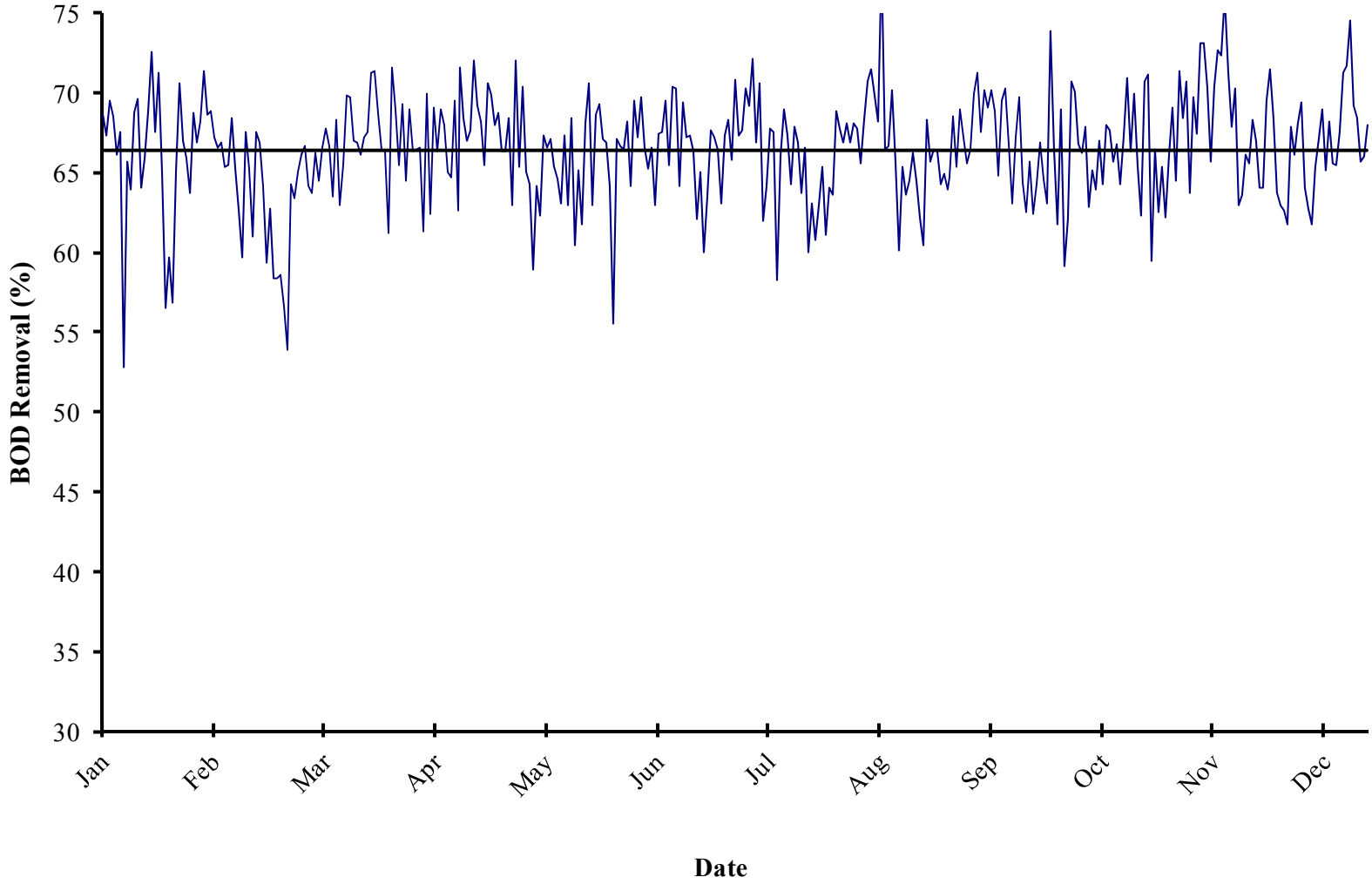
	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		Summary	
Day	Inf	Eff	Inf	Eff	Inf	Eff	Inf	Eff	Inf	Eff	Inf	Eff	Inf	Eff	Inf	Eff	Inf	Eff	Inf	Eff	Inf	Eff	Inf	Eff	Inf	Eff
1	325	102	321	100	277	99	325	109	381	132	306	97	310	106	277	89	355	128	345	90	285	107	325	117		
2	367	120	327	107	273	99	324	108	426	126	308	110	343	100	312	103	331	117	355	119	320	111	332	101		
3	348	106	308	103	308	104	333	129	389	136	338	103	318	104	311	99	353	111	329	126	294	111	284	81		
4	349	110	312	103	279	99	369	111	367	131	293	96	318	103	330	109	318	110	362	112	306	104	250	79		
5	336	114	307	106	293	98	314	118	341	140	340	103	353	105	367	117	360	112	267	109	314	97	284	103		
6	354	115	302	104	294	95	372	115	349	125	335	112	280	86	317	102	315	103	296	112	313	111	305	113		
7	307	145	310	98	292	97	363	122	318	120	310	108	333	93	314	108	314	108	375	110	385	110	286	107		
8	315	108	310	108	294	107	348	108	364	119	333	111	320	106	366	116	328	110	321	96	358	113	283	108		
9	308	111	319	119	312	99	322	103	369	123	335	124	296	87	369	108	333	100	311	103	345	101	321	103		
10	339	106	306	123	291	108	309	108	329	108	322	105	308	117	337	96	309	89	349	118	320	116	307	104		
11	335	102	305	99	293	101	338	119	346	120	308	100	313	112	371	112	323	105	356	114	347	105	301	96		
12	303	109	276	96	302	91	351	107	339	120	321	98	360	116	362	115	332	99	275	102	340	111	301	92		
13	308	105	315	123	334	101	308	115	366	135	330	114	308	100	441	96	327	101	307	107	368	99	273	98		
14	347	108	336	109	313	103	342	97	349	114	342	101	277	115	328	110	301	90	296	107	383	103	284	106		
15	338	93	335	111	299	99	332	105	360	133	317	94	332	113	330	110	347	108	300	99	386	114	280	107		
16	333	108	344	123	307	104	355	117	358	113	321	115	336	104	323	96	332	117	333	119	361	124	287	99		
17	320	92	347	141	302	99	343	111	333	132	298	91	325	106	342	117	328	100	319	102	355	105	243	80		
18	313	110	325	121	283	92	343	96	301	105	265	87	345	123	296	118	387	115	333	108	326	89	267	83		
19	313	136	322	134	361	104	347	107	313	120	306	100	334	107	313	108	301	100	321	110	346	96	261	91		
20	350	141	310	129	364	104	343	109	332	106	315	106	308	102	325	118	313	115	328	109	383	92	299	95		
21	299	129	322	133	349	109	325	112	320	94	338	128	284	103	310	110	299	98	314	112	368	105	276	95		
22	293	102	309	134	327	110	347	102	384	142	320	112	290	97	331	112	413	125	318	104	349	112	331	114		
23	307	90	315	145	347	117	361	109	350	110	293	117	265	106	336	119	278	99	320	93	351	104	336	109		
24	303	100	365	130	310	120	332	106	329	101	296	108	282	104	294	111	304	114	350	118	321	119	361	104		
25	323	110	322	118	352	100	374	117	341	112	334	108	266	104	321	127	333	114	336	101	338	123	346	98		
26	289	105	309	108	344	107	321	108	320	106	339	111	297	110	376	119	309	116	319	110	330	112	409	104		
27	349	109	333	113	333	115	353	119	348	125	343	115	304	105	347	119	322	115	342	129	395	136	305	94		
28	308	102	336	112	365	112	371	117	326	145	313	115	278	108	343	115	309	102	345	101	420	133	326	103		
29	324	103			341	121	318	118	353	116	322	105	267	96	339	114	337	119	353	102	352	116	338	116		
30	318	91			354	110	453	127	367	122	322	102	278	101	319	114	306	113	326	132	314	113	294	100		
31	315	99			329	111			334	112			286	89	313	110			327	110			322	103		
Avg	324	109	320	116	317	104	345	112	348	121	319	107	307	104	334	110	327	108	327	109	346	110	304	100	326	109
Min	289	90	276	96	273	91	308	96	301	94	265	87	265	86	277	89	278	89	267	90	285	89	243	79	243	79
Max	367	145	365	145	365	121	453	129	426	145	343	128	360	123	441	127	413	128	375	132	420	136	409	117	453	145

Point Loma Wastewater Treatment Plant

2014 Biochemical Oxygen Demand Removals (%) at Point Loma

Day	Jan % Rem	Feb % Rem	Mar % Rem	Apr % Rem	May % Rem	Jun % Rem	Jul % Rem	Aug % Rem	Sep % Rem	Oct % Rem	Nov % Rem	Dec % Rem	
1	68.6	68.8	64.2	66.4	65.3	68.2	65.8	67.8	63.9	73.9	62.5	64.0	
2	67.3	67.2	63.7	66.6	70.4	64.2	70.8	66.9	64.7	66.5	65.3	69.5	
3	69.5	66.5	66.2	61.3	65.0	69.5	67.3	68.1	68.5	61.7	62.2	71.5	
4	68.5	66.9	64.5	69.9	64.3	67.2	67.6	66.9	65.4	69.0	66.0	68.4	
5	66.1	65.4	66.5	62.4	58.9	69.7	70.3	68.1	68.9	59.1	69.1	63.7	
6	67.5	65.5	67.7	69.1	64.2	66.6	69.2	67.8	67.2	62.1	64.5	63.0	
7	52.8	68.4	66.7	66.3	62.3	65.2	72.1	65.6	65.6	70.7	71.4	62.6	
8	65.7	65.2	63.5	69.0	67.3	66.6	66.9	68.3	66.4	70.0	68.4	61.8	
9	63.9	62.6	68.3	68.0	66.6	62.9	70.6	70.7	69.9	66.8	70.7	67.9	
10	68.7	59.7	62.9	65.0	67.1	67.4	62.0	71.5	71.2	66.2	63.7	66.1	
11	69.6	67.5	65.5	64.7	65.3	67.5	64.2	69.8	67.5	67.9	69.7	68.1	
12	64.0	65.2	69.8	69.5	64.6	69.5	67.7	68.2	70.1	62.8	67.4	69.4	
13	65.9	61.0	69.7	62.6	63.1	65.5	67.5	78.2	69.1	65.1	73.1	64.0	
14	68.8	67.5	67.0	71.6	67.3	70.4	58.3	66.4	70.1	63.9	73.1	62.7	
15	72.5	66.9	66.9	68.4	63.0	70.3	66.0	66.7	68.8	67.0	70.4	61.8	
16	67.5	64.2	66.1	67.0	68.4	64.1	69.0	70.2	64.8	64.3	65.7	65.4	
17	71.2	59.3	67.2	67.6	60.4	69.4	67.3	65.7	69.5	68.0	70.4	67.1	
18	64.9	62.7	67.5	72.0	65.1	67.2	64.3	60.1	70.3	67.6	72.7	68.9	
19	56.5	58.4	71.2	69.2	61.7	67.3	67.9	65.4	66.8	65.7	72.3	65.1	
20	59.7	58.4	71.4	68.2	68.1	66.3	66.9	63.6	63.1	66.8	76.0	68.2	
21	56.8	58.6	68.7	65.5	70.6	62.1	63.7	64.5	67.2	64.3	71.4	65.6	
22	65.1	56.6	66.4	70.6	63.0	65.0	66.6	66.2	69.7	67.2	67.9	65.5	
23	70.6	53.9	66.3	69.8	68.6	60.0	60.0	64.5	64.4	70.9	70.3	67.5	
24	67.0	64.3	61.2	68.0	69.3	63.5	63.1	62.2	62.5	66.3	62.9	71.2	
25	65.9	63.4	71.6	68.7	67.1	67.6	60.8	60.4	65.7	69.9	63.6	71.7	
26	63.7	65.0	68.9	66.3	66.9	67.2	63.0	68.3	62.4	65.5	66.1	74.5	
27	68.7	66.1	65.5	66.3	64.1	66.4	65.4	65.7	64.3	62.3	65.6	69.2	
28	66.9	66.7	69.3	68.4	55.5	63.1	61.1	66.4	66.9	70.7	68.3	68.4	
29	68.2		64.5	62.9	67.1	67.3	64.0	66.3	64.6	71.1	67.0	65.7	
30	71.3		68.9	72.0	66.7	68.3	63.6	64.3	63.1	59.5	64.0	66.0	
31	68.6		66.3		66.4		68.8	64.9		66.4		68.0	Annual Summary
Avg	66.2	63.6	66.9	67.4	65.3	66.5	65.9	66.8	66.8	66.4	68.1	66.9	66.4
Min	52.8	53.9	61.2	61.3	55.5	60.0	58.3	60.1	62.4	59.1	62.2	61.8	52.8
Max	72.5	68.8	71.6	72.0	70.6	70.4	72.1	78.2	71.2	73.9	76.0	74.5	78.2

Point Loma Wastwater Treatment
2014 BOD Removal (%) at Point Loma

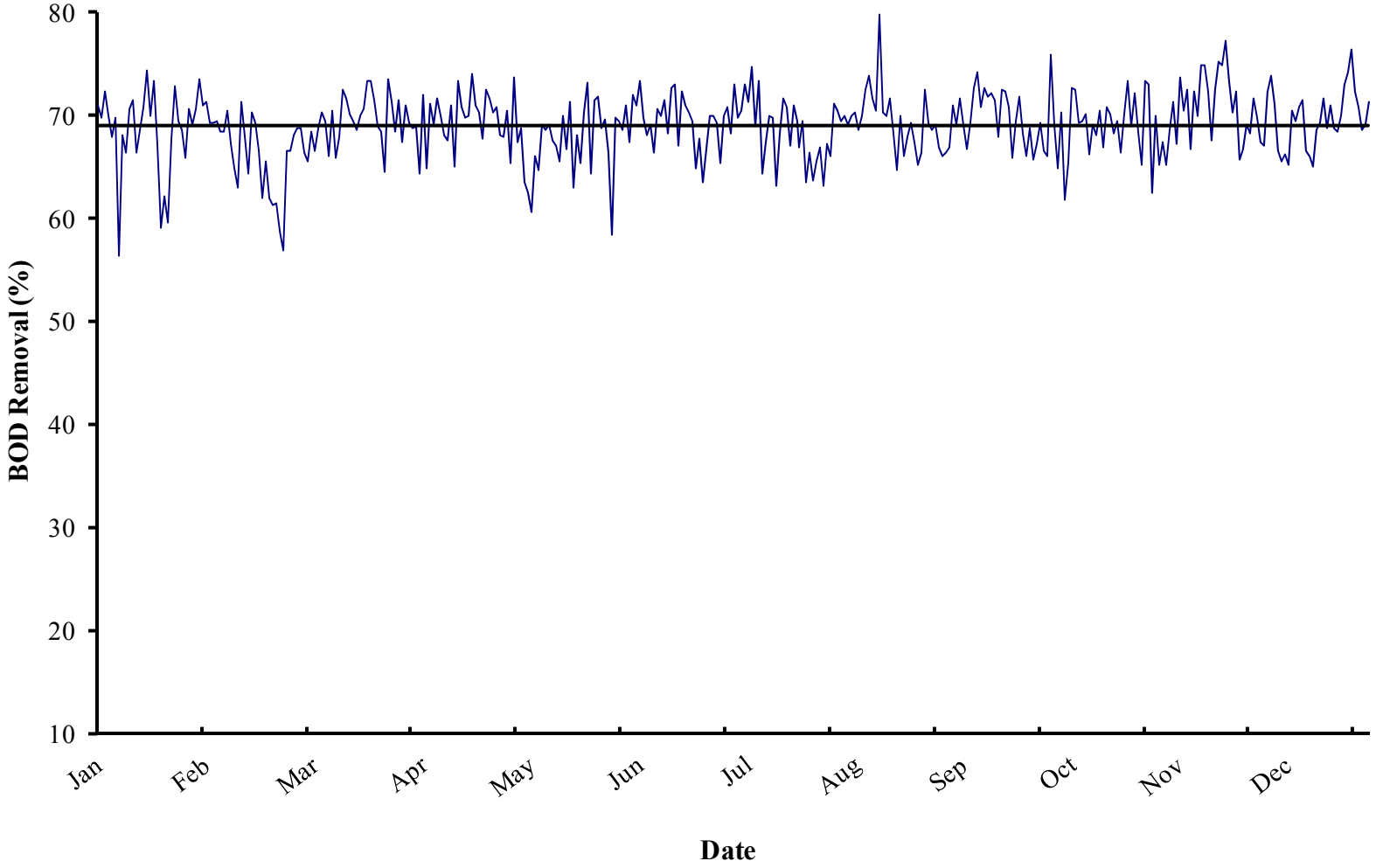


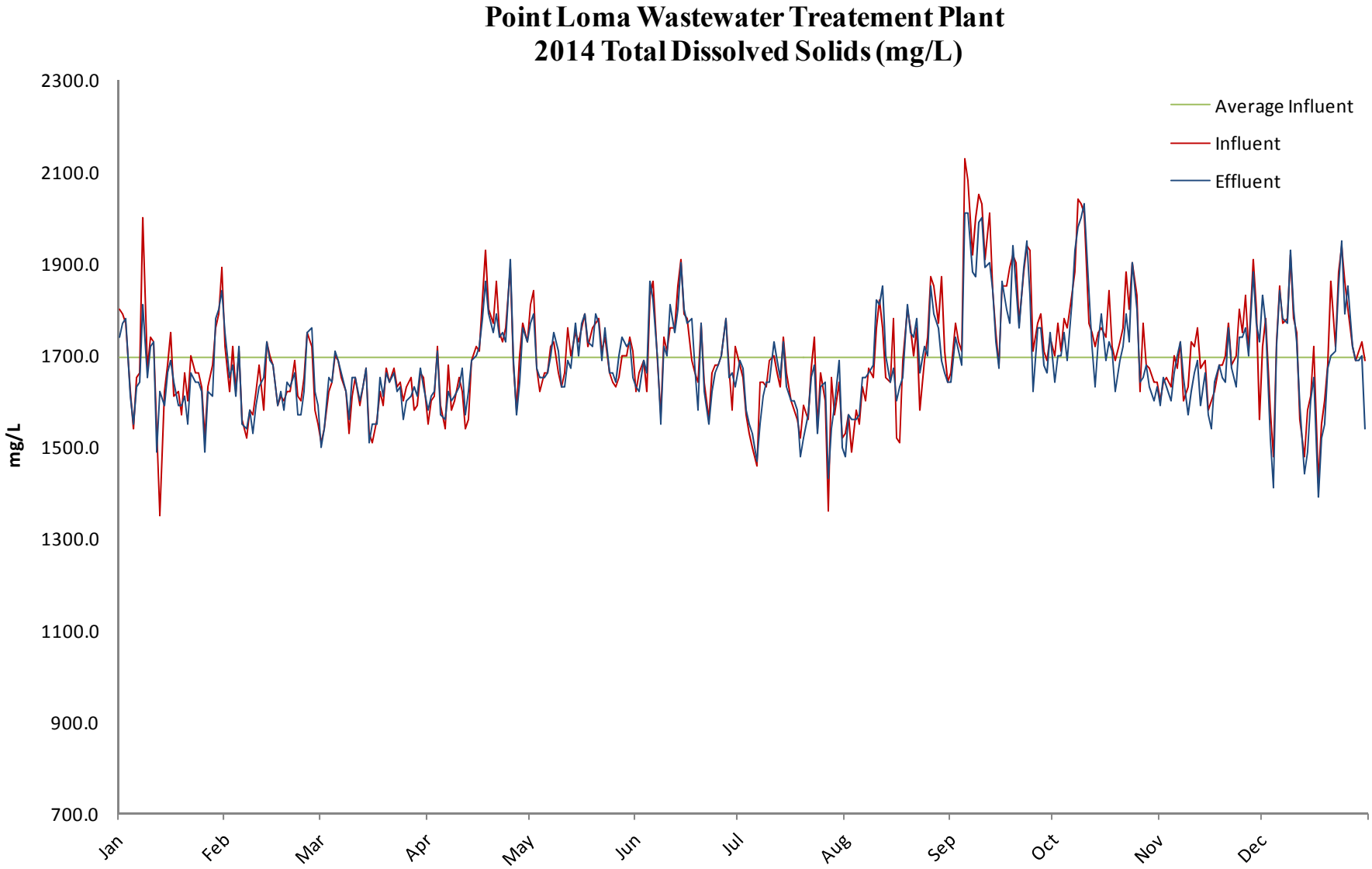
Point Loma Wastewater Treatment Plant

2014 Biochemical Oxygen Demand Removals (%) Systemwide

Day	Jan % Rem	Feb % Rem	Mar % Rem	Apr % Rem	May % Rem	Jun % Rem	Jul % Rem	Aug % Rem	Sep % Rem	Oct % Rem	Nov % Rem	Dec % Rem	
1	71.0	71.2	66.3	68.8	67.4	71.0	68.2	70.5	66.4	75.9	65.1	67.1	
2	69.7	69.2	65.6	68.9	68.7	67.3	72.9	69.5	66.9	69.1	67.3	72.3	
3	72.3	69.3	68.4	64.3	63.4	72.0	69.8	69.9	71.0	64.8	65.1	73.9	
4	70.0	69.5	66.5	71.9	62.5	70.9	70.4	69.1	69.0	70.2	68.5	71.1	
5	67.9	68.4	68.7	64.8	60.6	73.4	72.9	70.0	71.7	61.8	71.3	66.5	
6	69.8	68.4	70.3	71.1	66.0	69.7	71.2	70.2	69.0	65.3	67.2	65.6	
7	56.4	70.5	69.4	69.1	64.7	68.0	74.6	68.5	66.7	72.7	73.6	66.2	
8	68.0	67.2	66.0	71.6	69.0	69.1	68.9	70.0	69.3	72.4	70.4	65.2	
9	66.4	64.9	70.5	70.0	68.5	66.3	73.3	72.5	72.6	69.3	72.5	70.4	
10	70.6	63.0	65.8	68.1	69.1	70.6	64.4	73.9	74.1	69.4	66.7	69.5	
11	71.4	71.2	67.9	67.6	67.6	70.0	67.3	71.6	70.7	70.1	72.3	70.8	
12	66.3	67.9	72.4	71.0	67.1	71.5	70.0	70.5	72.7	66.2	69.9	71.4	
13	68.5	64.3	71.6	65.0	65.6	68.3	69.8	79.7	71.8	69.1	74.9	66.5	
14	70.7	70.3	70.1	73.3	69.9	72.6	63.1	70.3	72.1	68.0	74.9	66.0	
15	74.4	69.3	69.4	70.8	66.7	72.9	68.3	69.9	71.4	70.5	72.3	65.0	
16	70.0	66.6	68.5	69.8	71.2	67.1	71.6	71.7	67.9	66.8	67.6	68.5	
17	73.4	62.0	70.0	69.9	62.9	72.3	70.8	68.3	72.4	70.7	72.5	69.3	
18	67.1	65.6	70.6	74.0	68.1	70.9	67.0	64.7	72.3	70.1	75.1	71.7	
19	59.1	62.0	73.4	71.0	65.4	70.2	71.0	70.0	70.8	68.3	74.9	68.8	
20	62.1	61.3	73.3	70.2	70.2	69.5	69.4	66.0	65.9	69.4	77.3	70.9	
21	59.5	61.5	71.5	67.7	73.2	64.8	66.9	67.9	69.5	66.4	73.3	68.8	
22	67.7	58.8	68.9	72.5	64.3	67.7	69.4	69.2	71.8	70.1	70.2	68.4	
23	72.8	56.8	68.4	71.6	71.4	63.4	63.4	67.3	68.2	73.4	72.3	70.0	
24	69.5	66.6	64.5	70.3	71.8	66.7	66.4	65.2	66.1	68.9	65.7	73.0	
25	68.5	66.6	73.5	70.7	68.8	69.9	63.7	66.4	68.7	72.2	66.7	74.1	
26	65.8	68.1	71.2	68.1	69.6	69.9	65.6	72.4	65.7	68.4	69.1	76.3	
27	70.6	68.8	68.4	67.9	66.4	69.2	66.8	69.2	67.2	65.2	68.3	72.3	
28	69.1	68.8	71.4	70.5	58.4	65.4	63.2	68.6	69.2	73.3	71.7	70.8	
29	70.6		67.3	65.4	69.8	70.0	67.2	69.0	66.5	73.0	69.7	68.5	
30	73.5		71.0	73.7	69.4	70.8	66.1	66.9	66.0	62.5	67.4	69.0	Annual
31	71.0		69.2		68.6		71.1	66.0		70.0		71.3	Summary
Avg	68.5	66.4	69.4	69.7	67.3	69.4	68.5	69.5	69.5	69.1	70.5	69.7	68.9
Min	56.4	56.8	64.5	64.3	58.4	63.4	63.1	64.7	65.7	61.8	65.1	65.0	56.4
Max	74.4	71.2	73.5	74.0	73.2	73.4	74.6	79.7	74.1	75.9	77.3	76.3	79.7

Point Loma Wastewater Treatment Plant
2014 BOD Removal (%) Systemwide




Point Loma Wastewater Treatement Plant
2014 Total Dissolved Solids (mg/L)
2300.0
2100.0
1900.0
1700.0
1500.0
1300.0
1100.0
900.0
700.0
mg/L
Average Influent
Influent
Effluent
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

Point Loma Wastewater Treatment Plant

2014 Total Dissolved Solids (mg/L)

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
Day	Inf	Eff	Inf	Eff	Inf	Eff	Inf	Eff	Inf	Eff	Inf	Eff	Inf	Eff	Inf	Eff	Inf	Eff	Inf	Eff	Inf	Eff	Inf	Eff
1	1800	1740	1720	1750	1510	1500	1550	1580	1810	1770	1620	1630	1680	1690	1530	1480	1660	1640	1700	1640	1600	1590	1720	1830
2	1790	1770	1620	1650	1540	1540	1600	1610	1840	1790	1660	1620	1650	1670	1570	1570	1770	1740	1770	1700	1640	1650	1780	1770
3	1770	1780	1720	1680	1620	1650	1610	1620	1670	1670	1690	1690	1570	1580	1490	1560	1730	1710	1710	1700	1650	1630	1580	1520
4	1620	1610	1620	1610	1640	1640	1720	1710	1620	1650	1620	1660	1530	1550	1580	1560	1710	1680	1780	1750	1630	1600	1480	1410
5	1540	1550	1710	1720	1700	1710	1590	1570	1660	1650	1830	1860	1500	1530	1550	1570	2130	2010	1760	1690	1700	1660	1730	1720
6	1650	1630	1560	1550	1690	1690	1540	1560	1660	1660	1860	1820	1460	1470	1630	1650	2080	2010	1830	1810	1670	1700	1850	1840
7	1660	1640	1520	1540	1650	1660	1680	1620	1720	1700	1680	1690	1640	1550	1600	1650	1920	1880	1880	1930	1730	1730	1770	1780
8	2000	1810	1580	1580	1620	1620	1580	1600	1730	1750	1570	1550	1640	1610	1670	1660	2000	1870	2040	1980	1600	1650	1780	1770
9	1670	1650	1570	1530	1530	1560	1600	1610	1660	1710	1740	1720	1630	1640	1650	1680	2050	1990	2030	2000	1630	1570	1920	1930
10	1740	1720	1620	1590	1610	1650	1650	1630	1630	1630	1710	1700	1690	1640	1760	1820	2030	2000	2010	2030	1730	1620	1780	1800
11	1730	1730	1680	1630	1650	1650	1620	1670	1660	1630	1760	1810	1700	1730	1820	1810	1910	1890	1770	1840	1720	1660	1750	1730
12	1540	1490	1580	1650	1590	1600	1540	1570	1760	1690	1760	1750	1660	1690	1760	1850	2010	1900	1750	1720	1760	1690	1560	1590
13	1350	1620	1730	1730	1630	1630	1560	1620	1700	1670	1850	1800	1630	1650	1650	1700	1840	1840	1720	1630	1670	1590	1480	1440
14	1620	1590	1700	1690	1670	1670	1690	1690	1750	1770	1910	1900	1740	1730	1640	1640	1750	1730	1750	1730	1690	1660	1580	1490
15	1680	1660	1680	1680	1530	1510	1720	1700	1730	1700	1790	1800	1660	1630	1780	1670	1680	1670	1760	1790	1580	1570	1610	1600
16	1750	1690	1590	1590	1510	1550	1710	1720	1760	1770	1780	1770	1600	1600	1520	1600	1850	1860	1740	1690	1600	1540	1720	1650
17	1610	1640	1610	1620	1560	1550	1820	1780	1790	1790	1690	1780	1580	1600	1510	1630	1850	1800	1840	1730	1620	1640	1420	1390
18	1620	1590	1600	1580	1620	1650	1930	1860	1720	1730	1660	1670	1560	1580	1690	1650	1890	1770	1720	1710	1680	1680	1550	1520
19	1570	1590	1620	1640	1590	1610	1800	1790	1760	1720	1640	1580	1520	1480	1800	1810	1920	1940	1690	1620	1680	1650	1600	1550
20	1660	1610	1620	1630	1670	1660	1770	1750	1770	1790	1770	1770	1590	1520	1760	1750	1900	1850	1730	1690	1700	1640	1680	1670
21	1600	1550	1690	1660	1640	1640	1860	1790	1780	1770	1640	1620	1560	1570	1700	1740	1770	1760	1760	1720	1770	1760	1860	1700
22	1700	1660	1610	1570	1670	1660	1750	1740	1710	1690	1560	1550	1670	1650	1760	1780	1880	1890	1880	1790	1680	1670	1720	1710
23	1660	1640	1600	1570	1630	1620	1730	1750	1740	1760	1660	1620	1740	1680	1580	1660	1940	1950	1800	1730	1700	1630	1880	1850
24	1660	1640	1650	1620	1640	1630	1760	1730	1660	1660	1680	1660	1540	1530	1690	1720	1930	1830	1900	1900	1800	1740	1940	1950
25	1630	1620	1750	1750	1600	1560	1890	1910	1640	1660	1680	1680	1660	1630	1740	1700	1710	1620	1830	1800	1750	1740	1860	1790
26	1520	1490	1720	1760	1630	1600	1680	1690	1630	1640	1700	1700	1600	1640	1870	1850	1770	1760	1620	1640	1830	1760	1800	1850
27	1630	1620	1580	1620	1650	1610	1580	1570	1650	1700	1780	1780	1360	1430	1850	1790	1790	1760	1770	1650	1710	1700	1720	1720
28	1680	1610	1550	1590	1580	1630	1700	1640	1700	1740	1670	1650	1650	1540	1770	1760	1710	1680	1680	1680	1910	1880	1690	1690
29	1760	1780			1590	1610	1770	1760	1700	1720	1580	1660	1570	1590	1870	1690	1690	1660	1670	1630	1800	1770	1710	1690
30	1790	1800			1660	1670	1730	1730	1740	1730	1720	1630	1640	1690	1710	1660	1740	1750	1640	1600	1560	1730	1730	1700
31	1890	1840			1650	1630			1710	1650			1520	1500	1640	1640			1640	1630			1690	1540
Avg	1674	1657	1636	1635	1615	1618	1691	1686	1712	1708	1709	1704	1605	1600	1682	1687	1854	1815	1780	1747	1693	1670	1708	1684
Min	1350	1490	1520	1530	1510	1500	1540	1560	1620	1630	1560	1550	1360	1430	1490	1480	1660	1620	1620	1600	1560	1540	1420	1390
Max	2000	1840	1750	1760	1700	1710	1930	1910	1840	1790	1910	1900	1740	1730	1870	1850	2130	2010	2040	2030	1910	1880	1940	1950

Summary	
Influent	Effluent
1696	1684
1350	1390
2130	2030

Point Loma Wastewater Treatment Plant

2014 Instantaneous Maximum Chlorine (mg/L) - Laboratory Grab

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	
1	0	0.12	2.35	0.69	0.76	0.58	0.04	0.095	0	0	0	0	
2	0	0	0.07	0.455	0.75	0	0.44	0	0	0	0	0	
3	0	0	0.32	0.67	0	0.12	0.18	0.26	0	0	0	0	
4	0	0	0.07	0.055	0.34	0.03	0.34	0.12	0	0	0	0	
5	0	0	0	0.345	0	0.05	0.72	0	0	0	0	0	
6	0	0	0.52	0.295	0	0	0.23	0.08	0	0	0	0	
7	0	0.38	0.315	0	0.2	0.5	0	0	0	0	0	0	
8	0	0	0.52	0.21	0.08	0.32	0	0	0	0	0	0	
9	0	0	0.59	0.28	0.13	0	0.25	0	0	0	0	0	
10	0	0.05	0.2	0.34	0.335	0	0.15	0.13	0	0	0	0	
11	0	0.35	0.04	0.105	0.32	0.26	0.51	0	0	0	0	0	
12	0	0	0	0	0	0	0.59	0	0	0	0	0	
13	0	0.35	0.07	0.44		0	0.78	0	0	0	0	0	
14	0	0	0.25	0.13	0	0	0.28	0	0	0	0	0	
15	0	0.05	0.17	0.13	0	0	0.36	0.1	0	0	0	0	
16	0	0	1.12	0.09	0	0	0.49	0	0	0	0	0	
17	0	0	0.04	0.11	0.28	0	0.08	0	0	0	0	0	
18	0	0	0.13	0.1	0.32	0	0	0	0	0	0	0	
19	0	0	0.24	0.13	0.3	0.23	0.35	0	0	0	0	0	
20	0	1.32	0.04	0.25	0.2	0.815	1.13	0	0	0	0	0	
21	0	1.38	0.37	0	0.09	0	0.12	0	0	0	0	0	
22	0	0.755	0.17	0.39	0.03	0.26	0.3	0	0	0	0	0	
23	0	0.27	0.22	0.2	0	0	0	0	0	0	0	0	
24	0	0.26	0	0.1	0.49	0.28	0.23	0	0	0	0	0	
25	0	3.44	0	0.51	0.39	0.24	0.52	0	0	0	0	0	
26	0	0	0.24	0.49	0.28	0.07	0	0	0	0	0	0	
27	0	0.83	0.02	0.25	0	0.49	0	0	0	0	0	0	
28	0	0.845	0.5	0.39	0	0.08	0.07	0	0	0	0	0	
29	0		0.245	0.33	0	0.105	0	0	0	0	0	0	
30	0		0.35	0.16	0.055	0.07	0	0	0	0	0	0	Annual
31	0		0		0.07		0.26	0		0		0	Summary
Average	0.00	0.37	0.30	0.25	0.18	0.15	0.27	0.03	0.00	0.00	0.00	0.00	0.13
Maximum	0.00	3.44	2.35	0.69	0.76	0.82	1.13	0.26	0.00	0.00	0.00	0.00	3.44

Point Loma Wastewater Treatment Plant
2014 Instantaneous Maximum Chlorine (mg/L) - online meter

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
28	0.00	0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
29	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
30	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Annual
31	0.00		0.00		0.00		0.00	0.00		0.00		0.00	Summary
Avg	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Max	0.00	0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45

Continuous monitoring was initiated on February 1, 2011. To ensure daily monitoring of chlorine residual, during periods when the continuous monitoring equipment was off-line or down for maintenance, monitoring of chlorine was accomplished by the on-site laboratory following the schedule previously stipulated in Addendum No. 2 of Order R9-2002-0025.

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F. Toxicity Bioassays

Toxicity Testing: Point Loma Wastewater Treatment Plant 2014

INTRODUCTION

The City of San Diego's Toxicology Laboratory (CSDTL) conducted aquatic toxicity tests (bioassays) as required by NPDES Permit No. CA0107409, Order No. R9-2009-0001 for the Point Loma Wastewater Treatment Plant (PLWTP). The testing requirements are designed to determine the acute and chronic toxicity of effluent samples collected from the PLWTP. This chapter presents summaries and discussion of all toxicity tests conducted in calendar year 2014.

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. The City of San Diego is required to conduct acute toxicity tests of PLWTP effluent on a semiannual schedule.

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

MATERIALS & METHODS

Test Materials

Twenty-four hour, flow-weighted, composite effluent samples were collected at the PLWTP and stored at 4 ºC until test initiation. All tests were initiated within 36 hours of sample collection. The effluent exposure series consisted of 3.88, 7.75, 15.5, 31.0, and 62.0% (nominal) for the acute tests and 0.15, 0.27, 0.49, 0.88, and 1.56% for the chronic tests. Unimpacted receiving water from station B8 was used as dilution water in accordance with permit requirements. The B8 receiving water samples were collected from a depth of 2 m, stored at 15 ºC until chronic test initiation, and used for test initiation within 96 hours of collection or frozen to produce hypersaline brine. For the acute tests, receiving water may be collect and stored at 4 ºC for up to two weeks prior to test initiation. The station coordinates are as follows:

Collection Location	Latitude/Longitude	Depth (m)
B-8	32° 45.50' N, 117° 20.77' W	88.4

Dilution water for the acute and chronic reference toxicant tests was obtained from the Scripps Institution of Oceanography (SIO), filtered, held at 15 ºC, and used within 96 hours of collection or frozen to produce hypersaline brine. Detailed descriptions for all toxicity tests are provided in the City of San Diego Toxicology Laboratory Quality Assurance Manual (City of San Diego 2014).

Acute Bioassays

Topsmelt Survival Bioassay

During the current reporting period (January–December 2014), acute bioassays using the topsmelt *Atherinops affinis* were conducted as a part of the routine monitoring effort in February and the mandated multiple-species screening effort in August in accordance with USEPA protocol EPA-821-R02-012 (USEPA 2002).

Larval topsmelt (9-14 days old) were purchased from Aquatic Bio Systems (Fort Collins, CO), and acclimated to test temperature and salinity for at least 24 hours. Upon test initiation, the topsmelt (10 per replicate) were exposed for 96 hours in a static-renewal system to the effluent exposure series. Receiving water and brine controls were also tested. The test solutions were renewed at 48 hours and the organisms were fed once daily.

Simultaneous reference toxicant testing was performed using reagent grade copper chloride plus a negative control (i.e., SIO seawater). Test concentrations consisted of 56, 100, 180, 320, and 560 µg/L copper. Dilution water was obtained from SIO, filtered, held at 15 ºC, and used within 96 hours of collection. Upon conclusion of the exposure period, percent survival was recorded. Tests were declared valid if control mortality did not exceed 10%. Data were analyzed using a combination of multiple comparison and point estimation methods prescribed by USEPA (2002). ToxCalc (Tidepool Scientific Software 2002) and CETIS (Tidepool Scientific Software 2010) were used for all statistical analyses. In addition, all multi-concentration tests conducted according to EPA-821-R02-012 were subjected to an evaluation of the concentration-response relationship.

Mysid Survival Bioassay

During the current reporting period (January–December 2014), acute bioassays using the mysid shrimp *Mysidopsis bahia*, were conducted as a part of the mandated multiple-species screening effort in August in accordance with USEPA protocol EPA-821-R02-012 (USEPA 2002).

Larval mysids (4-5 days old) were purchased from Aquatic Bio Systems (Fort Collins, CO), and acclimated to test temperature and salinity for at least 24 hours. Upon test initiation, the mysids (10 per replicate) were exposed for 96 hours in a static-renewal system to the effluent exposure series. Receiving water and brine controls were also tested. The test solutions were renewed at 48 hours and the organisms were fed once daily.

Simultaneous reference toxicant testing was performed using reagent grade copper chloride plus a negative control (i.e., SIO seawater). Test concentrations consisted of 56, 100, 180, 320, and 560 µg/L copper. Dilution water was obtained from SIO, filtered, held at 15 ºC, and used within 96 hours of collection. Upon conclusion of the exposure period, percent survival was recorded. Tests were declared valid if control mortality did not exceed 10%. Data were analyzed using a combination of multiple comparison and point estimation methods prescribed by USEPA (2002). ToxCalc (Tidepool Scientific Software 2002) and CETIS (Tidepool Scientific Software 2010) were used for all statistical analyses. In addition, all multi-concentration tests conducted according to EPA-821-R02-012 were subjected to an evaluation of the concentration-response relationship.

Chronic Bioassays

Kelp Germination and Growth Test

During the current reporting period (January–December 2014), chronic bioassays using the giant kelp, *Macrocystis pyrifera,* were conducted for the PLWTP effluent on a monthly basis in accordance with USEPA protocol EPA/600/R-95/136 (USEPA 1995).

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

Simultaneous reference toxicant testing was performed using reagent grade copper chloride. The exposure series consisted of 5.6, 10, 18, 32, 100, 180, and 320 µg/L copper. 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" (USEPA 1995). ToxCalc (Tidepool Scientific Software 2002) and CETIS (Tidepool Scientific Software 2010) were used for all statistical analyses.

In accordance with USEPA guidelines on method variability, the lower "Percent MSD" (PMSD) bound was also evaluated in order to minimize Type 1 error (i.e., false positive). 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 (i.e., 6.5 for germination and 7.9 for growth), then the exposure concentration was treated as if it did not differ significantly from control for the purpose of determining the NOEC (USEPA, 2000).

Red Abalone Development Bioassay

During the current reporting period (January–December 2014), chronic bioassays using the red abalone, *Haliotis rufescens*, were conducted for the PLWTP effluent on a monthly basis 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. Mature male and female abalones were placed in gender-specific natural seawater tanks and held at 15 ºC. For each test event, spawning was induced in 6-10 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 48 hours. A receiving 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). ToxCalc (Tidepool Scientific Software 2002) and CETIS (Tidepool Scientific Software 2010) were used for all statistical analyses.

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

In accordance with USEPA guidelines on method variability, the lower "Percent MSD" (PMSD) bound was also evaluated in order to minimize Type 1 error (i.e., false positive). If the relative difference between an exposure concentration and the control was smaller than the 10^{th} percentile PMSD value listed for the test method in the USEPA guidance document (i.e., 3.8), then the exposure concentration was treated as if it did not differ significantly from control for the purpose of determining the NOEC (USEPA, 2000).

Topsmelt Survival and Growth Bioassays

During the current reporting period (January–December 2014), chronic bioassays using the topsmelt, *Atherinops affinis*, were conducted for the PLWTP effluent as a part of the mandated multiple-species re-screening effort in accordance with EPA/600/R-95/136 (USEPA 1995).

Larval topsmelt (9-14 days old) were purchased from Aquatic Bio Systems (Fort Collins, CO) and exposed for seven days in a static-renewal system to the effluent. The test endpoints are survival and growth (dry biomass).

Simultaneous reference toxicant testing was performed using reagent grade copper chloride. The exposure series consisted of 32, 56, 100, 180, and 320 µg/L copper. 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). ToxCalc (Tidepool Scientific Software 2002) and CETIS (Tidepool Scientific Software 2010) were used for all statistical analyses.

In accordance with USEPA guidelines on method variability, the lower "Percent MSD" (PMSD) bound was also evaluated in order to minimize Type 1 error (i.e., false positive). 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 10^{th} percentile PMSD value listed for the inland silverside test method in the USEPA guidance document (i.e., 7.0 for 96-h survival and 12.0 for growth), then the exposure concentration was further evaluated using other EPA-approved statistical strategies (USEPA, 2000).

RESULTS & DISCUSSION

Acute Toxicity of PLWTP Effluent

In 2014, the City conducted semi-annual acute bioassays of the PLWTP effluent using the topsmelt and mysid shrimp. The latter species was tested as a part of the first of three mandated acute screening events. All tests met the acceptability criterion of >90% control survival and demonstrated compliance with permit standards (Table T.1). The results from three valid screening events will be reviewed during a subsequent reporting period to select the most sensitive species for subsequent monitoring.

Chronic Toxicity of PLWTP Effluent

In January and February 2014, the City conducted all routine chronic toxicity monitoring tests with the giant kelp as the primary test species. Beginning in March 2014, the City conducted three mandated chronic screening events using the giant kelp, red abalone and topsmelt. The results showed the greatest sensitivity in the giant kelp tests to PLWTP effluent when compared to the other methods.

Following the screening events, the City conducted all subsequent routine chronic toxicity monitoring tests with the giant kelp as the primary test species and continued to use the red abalone on a voluntary basis due to the ecological significance of the species. The previously described inclusive and exclusive scoring methods yielded identical findings (i.e. NOEC) in the effluent tests (Table T.2). All valid tests from 2014 were within compliance limits.

LITERATURE CITED

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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.

USEPA. 2002. Methods for measuring the acute toxicity of effluents and receiving waters to freshwater and marine organisms. Fifth Edition. U.S. Environmental Protection Agency, Office of Water (4303T), Washington, DC, EPA-821-R-02-012.

TABLE T.1

Results of PLWTP effluent semi-annual acute toxicity tests conducted in 2014. Data are presented as acute toxic units (TUa).

Sample Date	Topsmelt 96-Hour Bioassay	Mysid 96-Hour Bioassay
02/09/2014	-	2.98
08/19/2014	2.73	4.13
N	1	2
No. in compliance	1	2
Mean TUa	2.73	3.56

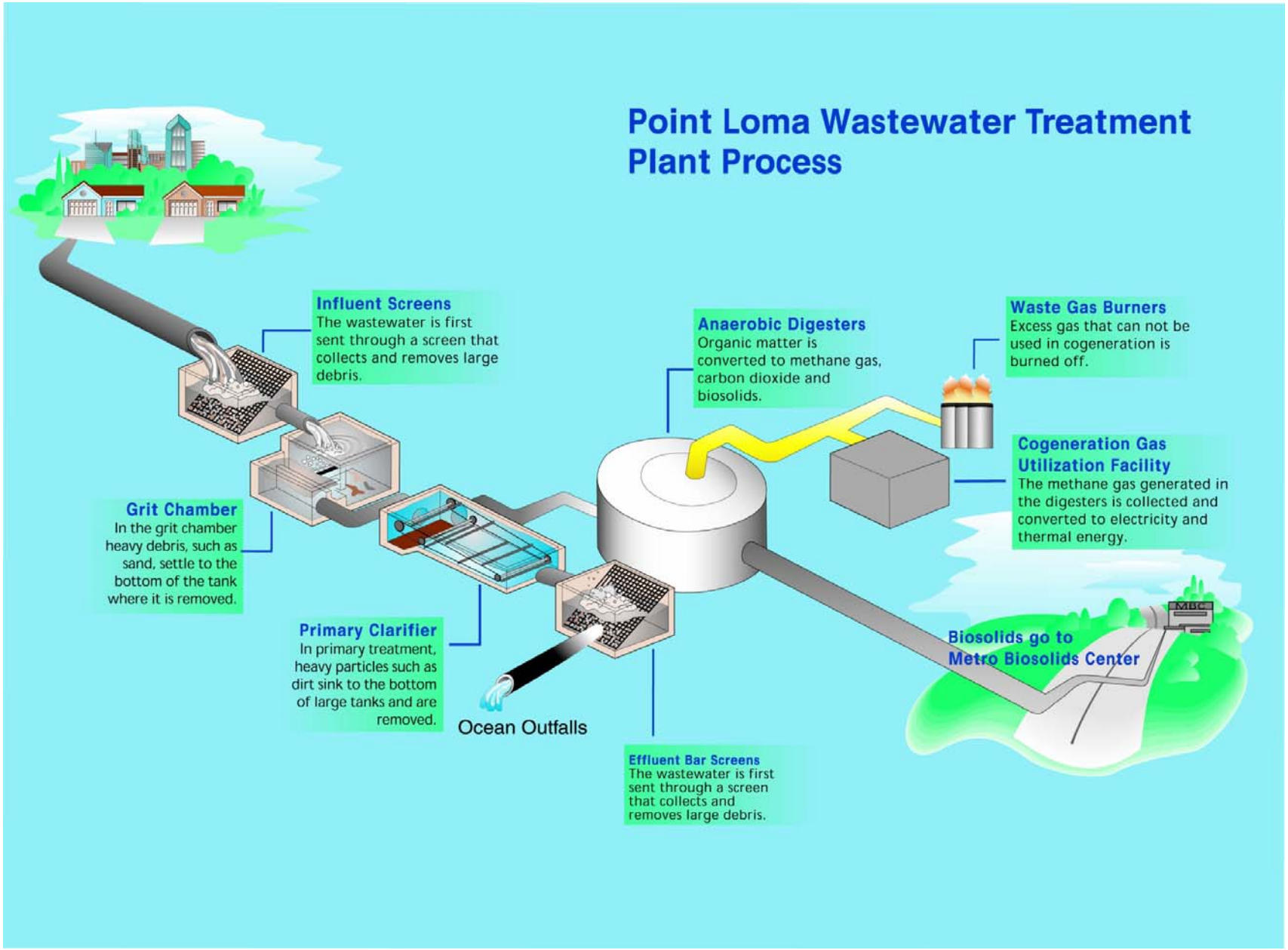
NPDES permit limit: 6.42 TUa

TABLE T.2

Results of PLWTP effluent monthly chronic toxicity tests conducted in 2014. Data are presented as chronic toxic units (TUc).

	Giant Kelp		Red Abalone		Topsmelt	
	Germination	Growth	Development		Survival	Growth
Sample Date			Exclusive	Inclusive		
01/13/2014	64	114	-	-	-	-
01/14/2014	-	-	64	64	-	-
02/04/2014	64	64	-	-	-	-
02/18/2014	-	-	64	64	-	-
03/10/2014	64	64	64	64	64	64
04/07/2014	-	-	-	-	64	64
04/13/2014	64	64	64	64	-	-
05/05/2014	64	64	64	64	-	-
06/09/2014	64	64	64	64	64	64
07/07/2014	64	64	64	64	-	-
08/04/2014	114	204	-	-	-	-
08/05/2014	-	-	64	64	-	-
09/08/2014	64	64	-	-	-	-
09/22/2014	-	-	64	64	-	-
10/06/2014	64	64	64	64	-	-
11/03/2014	64	64	64	64	-	-
12/08/2017	64	64	64	64	-	-
N	12	12	12	12	3	3
No. in Compliance	12	12	12	12	3	3
Mean TUc	68.2	79.8	64	64	64	64

NPDES permit limit: 205 TUc


Point Loma Wastewater Treatment Plant Process
Influent Screens
The wastewater is first sent through a screen that collects and removes large debris.
Grit Chamber
In the grit chamber heavy debris, such as sand, settle to the bottom of the tank where it is removed.
Primary Clarifier
In primary treatment, heavy particles such as dirt sink to the bottom of large tanks and are removed.
Ocean Outfalls
Effluent Bar Screens
The wastewater is first sent through a screen that collects and removes large debris.
Anaerobic Digesters
Organic matter is converted to methane gas, carbon dioxide and biosolids.
Waste Gas Burners
Excess gas that can not be used in cogeneration is burned off.
Cogeneration Gas Utilization Facility
The methane gas generated in the digesters is collected and converted to electricity and thermal energy.
Biosolids go to Metro Biosolids Center
MBC

POINT LOMA TREATMENT PLANT PROCESS FLOW DIAGRAM

Wastewater Laboratory Testing

S1 Suspended solids and B.O.D, as well as all permit required parameters tested to show plant removal efficiencies

S2 Contract specifications tests run on Ferric Chloride

S3 specification testing done.

S4 Total and volatile solids tested to later determine if solids reduction meets treatment standard

S5 Digester volatile acids, pH, and alkalinity tested to determine if this feed rate, temperature and mixing are in the correct balance for the right microbial population to digest the sludge

S6 Volatile solids tested and removal rates used to determine how well the sludge was stabilized and if it meets EPA standards for nuisance & biological hazard reduction.

S7 Final Biosolids tested for all EPA and health dept. standards to determine the best beneficial reuse options.

S8 Digester gas tested for percent methane, to determine if the microbial populations in the digester are in proper balance, and to indicate fuel value of digester gas. Hydrogen Sulfide tested to determine the corrosivity of the gas to the power generation equipment and air pollution potential.

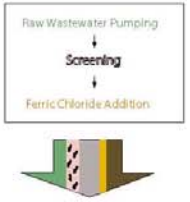
S9 % percent moisture tested to assure that landfill criteria are met

S10 All priority pollutants and other chemicals of concern are tested and the results compared to our discharge standards and reported to state and national regulators. The removal rates for solids on B.O.D. are used by Operations to guide adjustments to the treatment plant.

S11 Ocean water, sediments and fish tested to see if our discharge has an impact

Pump Station 1

Pump Station 2



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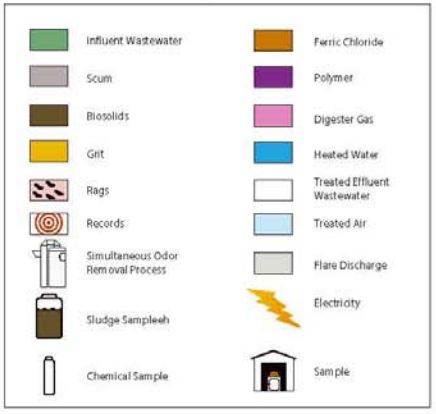
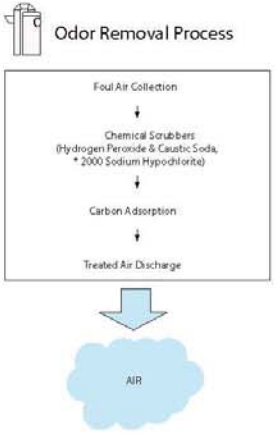
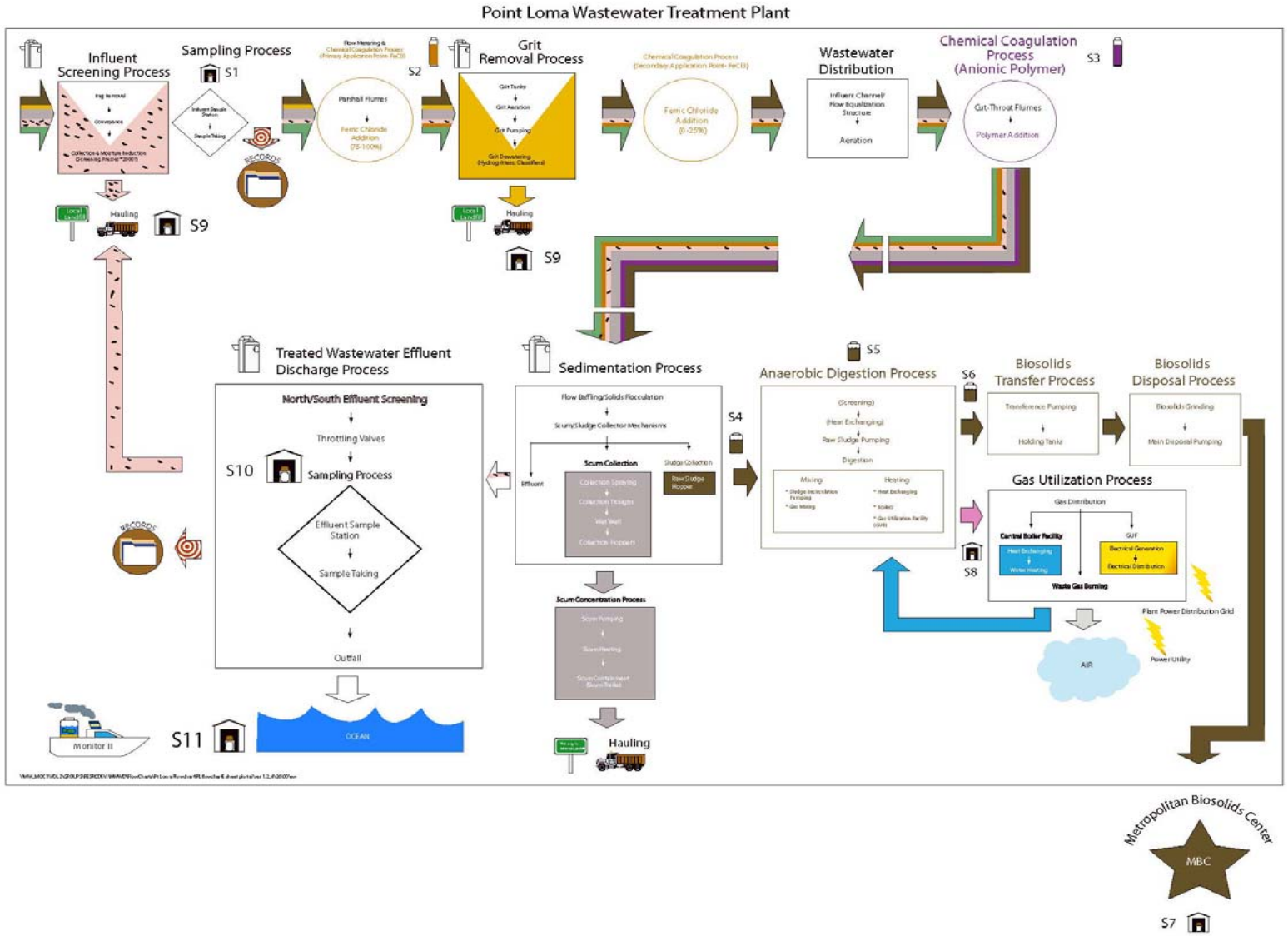


Odor Removal Process




Point Loma Wastewater Treatment Plant
Influent Screening Process
Sampling Process
S1
Grit Removal Process
S2
Chemical Coagulation Process (Anionic Polymer)
S3
Wastewater Distribution
Hauling
S9
Treated Wastewater Effluent Discharge Process
Sedimentation Process
S4
Anaerobic Digestion Process
S5
S6
Biosolids Transfer Process
Biosolids Disposal Process
Gas Utilization Process
S8
North/South Effluent Screening
Throttling Valves
S10
Sampling Process
Effluent Sample Station
Sample Taking
Outfall
Monitor II
S11
OCEAN
Scum Concentration Process
Hauling
Plant Power Distribution Grid
Power Utility
AIR
Metropolitan Biosolids Center
MBC
S7

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III. Plant Operations Summary
- A. Flows
- B. Rain Days
- C. Solids Production
- D. Chemical Usage
- E. Gas Production
- F. Graphs of Chemical Usage
- G. Grit Analyses
- H. Raw Sludge Data Summary
- I. Digester and Digested Sludge Data Summary

A. Flows

Point Loma Wastewater Treatment Plant Annual Monitoring Report
Flow Report - 2014

WASTEWATER FLOWS
Daily Average Flows - Millions of Gallons

Mon	Pt. L Gould	Pt. L ADS	PS#2 Flow	PS#2 Pumps	PS#1 Flows
01	141.0	141.5	141.8	128.4	51.5
02	144.5	146.9	145.4	127.6	51.6
03	145.1	147.5	145.3	137.8	53.0
04	140.7	145.8	138.8	127.6	50.4
05	137.7	140.4	135.1	122.2	50.1
06	135.7	137.7	134.5	120.8	51.2
07	137.3	132.2	137.8	116.3	49.4
08	134.1	136.4	132.5	123.0	46.7
09	135.6	137.2	134.7	120.3	50.0
10	135.5	130.2	137.0	122.3	54.3
11	135.9	128.1	137.7	113.0	51.2
12	147.7	145.2	148.9	136.6	54.0
avg	139.2	139.1	139.1	124.6	51.1

WASTEWATER FLOWS
Monthly Total Flows - Millions of Gallons

Mon	Pt. L Gould	Pt. L ADS	PS#2 Flow	PS#2 Pumps	PS#1 Flows
01	4,369	4,386	4,397	3,979	1,596
02	4,046	4,112	4,072	3,572	1,445
03	4,498	4,573	4,505	4,271	1,644
04	4,222	4,373	4,164	3,827	1,513
05	4,268	4,352	4,189	3,787	1,552
06	4,072	4,132	4,035	3,625	1,536
07	4,257	4,100	4,270	3,373	1,532
08	4,157	4,228	4,106	3,813	1,446
09	4,068	4,115	4,041	3,490	1,499
10	4,200	4,037	4,248	3,791	1,683
11	4,078	3,842	4,130	3,391	1,537
12	4,578	4,501	4,616	4,233	1,673
avg	4,235	4,229	4,231	3,763	1,555
sum	50,815	50,751	50,774	45,152	18,658

NOTES: The flows taken at the Pt. Loma WWTP are from the Parshall flumes at the headworks. Water depth in the flume is measured by 2 meters. The Gould meters measure water pressure. The ADS meters are sonar devices that measure the distance of the water level below the meter. The flows through Pump Station II(PS#2) are from venturi meters. PS#2 flow is the flow from the totalizer to which all of the venturi meters feed. PS#2 Pumps is the sum of the readings on the individual venturi meters which are connected to each of the pumps at the pump station. PS#1 is the flow from the venturi meters at Pump Station 1.

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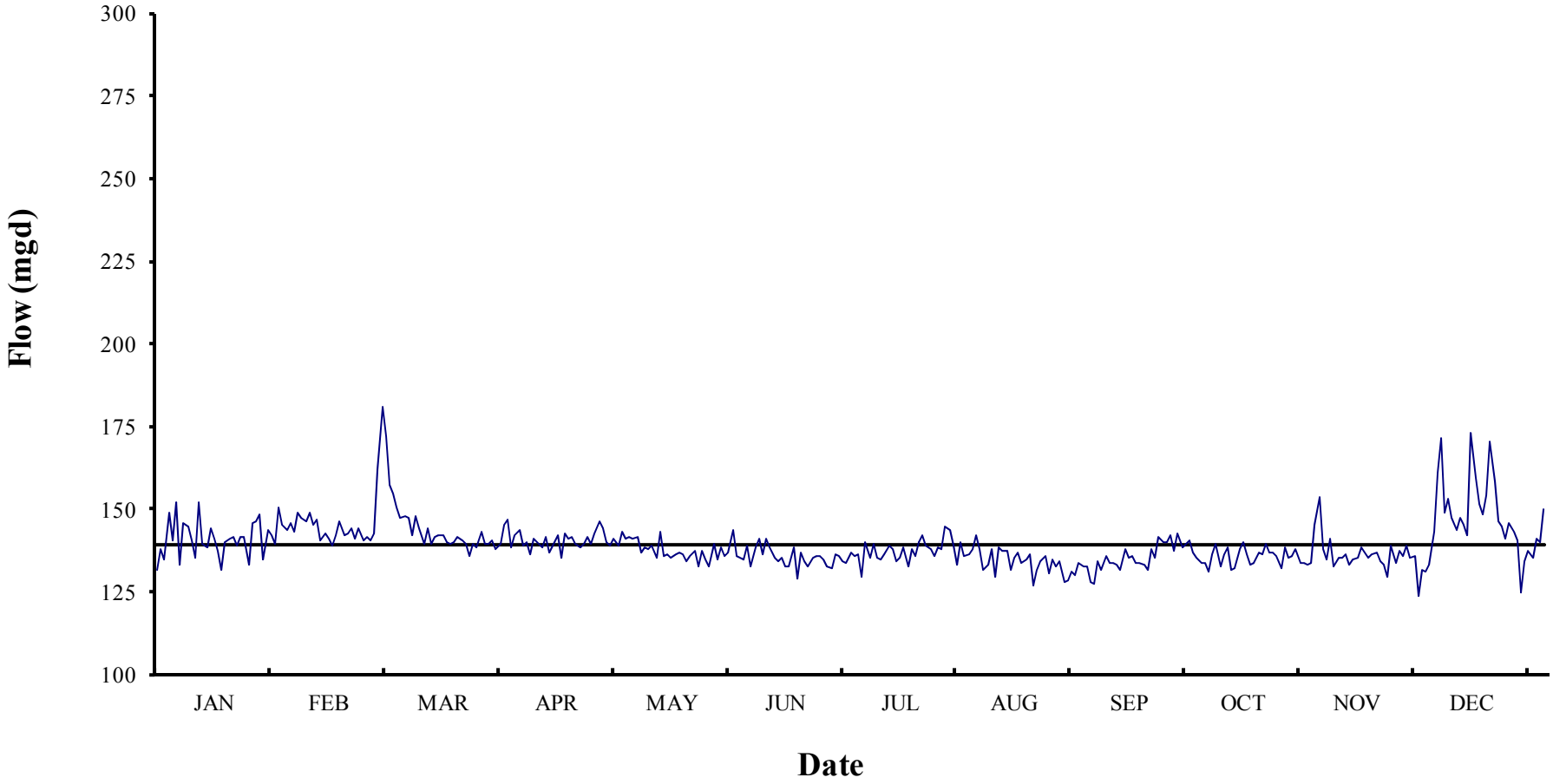
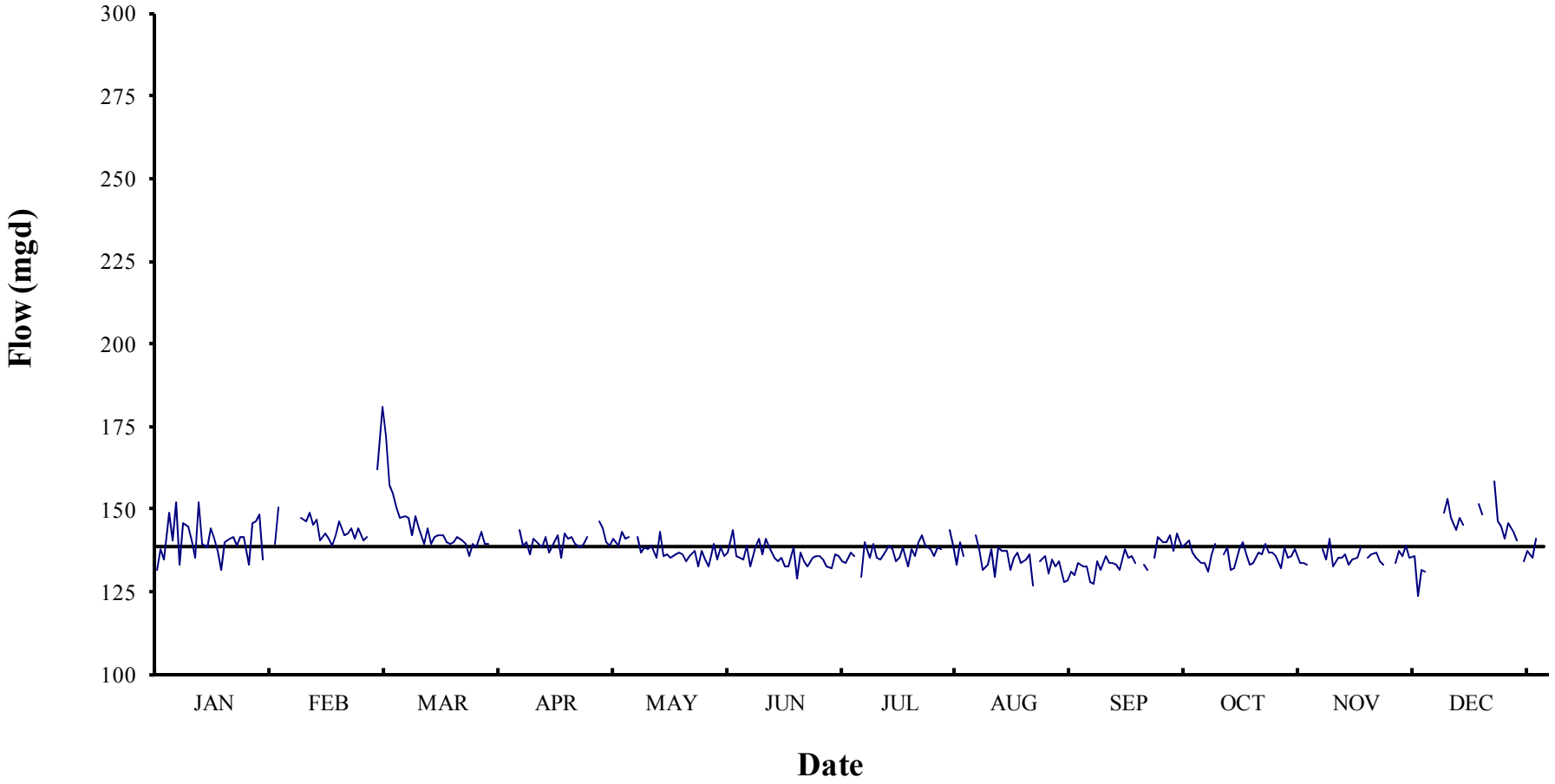
Point Loma Wastewater Treatment Plant
2014 Daily Flows (mgd)



Point Loma Wastewater Treatment Plant
2014 Flows (mgd)

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	131.6	139.6	181.1	139.6	141.1	143.6	133.6	136.1	132.6	135.5	145.1	133.1	
2	138.1	150.6	172.1	145.1	139.1	136.1	137.1	136.6	132.6	133.7	153.6	143.1	
3	134.6	145.4	157.1	147.1	143.1	135.6	136.1	138.1	128.1	133.6	138.1	161.1	
4	149.1	143.6	154.6	138.7	141.1	134.6	136.5	142.1	127.6	131.1	134.7	171.6	
5	140.6	146.0	150.6	142.1	141.9	139.0	129.6	138.1	134.1	136.6	141.1	149.1	
6	152.1	143.1	147.6	143.6	141.1	132.6	140.1	131.6	131.5	139.6	132.9	153.1	
7	133.2	149.1	148.1	139.1	141.9	138.6	135.2	133.1	135.6	132.9	135.1	147.6	
8	145.6	147.6	147.6	140.1	137.0	141.1	139.6	138.1	133.6	136.1	135.5	143.6	
9	144.8	146.6	142.1	136.6	138.6	136.6	135.1	129.6	133.6	138.3	136.6	147.6	
10	140.8	149.0	148.1	141.1	138.1	141.0	134.6	138.6	133.1	131.7	133.1	145.5	
11	135.6	145.5	144.1	139.6	139.1	138.6	136.6	137.4	131.6	132.0	134.6	142.1	
12	152.1	147.1	139.6	138.6	135.5	135.5	139.1	137.4	138.0	138.1	135.1	173.1	
13	139.7	140.4	144.1	141.6	143.0	134.1	138.1	131.6	135.1	140.0	138.6	159.6	
14	138.5	142.7	139.8	137.1	135.6	135.6	134.1	135.1	135.6	136.4	136.7	151.4	
15	144.2	141.1	141.6	139.1	136.6	132.5	135.1	137.1	133.6	133.4	135.1	148.6	
16	141.2	139.1	142.1	142.1	135.1	132.8	138.6	133.6	133.6	133.8	136.5	154.1	
17	137.6	142.1	142.1	135.5	136.6	138.4	132.5	134.6	133.1	137.1	137.1	170.6	
18	131.5	146.4	140.1	142.6	137.1	129.1	138.2	136.4	131.6	136.6	134.1	158.6	
19	140.1	142.1	139.5	141.1	136.4	136.8	135.9	127.1	138.0	139.6	133.1	146.2	
20	141.1	142.6	140.1	141.6	134.1	134.5	140.1	131.6	135.1	137.1	129.7	144.6	
21	141.6	144.1	141.7	139.5	136.1	132.5	142.1	134.1	141.6	137.1	138.9	141.1	
22	138.9	141.1	140.6	138.6	137.5	135.6	139.1	135.6	140.1	135.6	133.6	146.0	
23	141.6	144.4	139.6	139.6	132.9	136.1	137.9	130.6	140.1	132.1	137.6	143.2	
24	141.6	140.6	136.0	141.6	137.2	136.1	135.8	134.6	142.1	138.6	136.1	140.6	
25	133.1	141.7	139.5	139.6	134.6	134.6	138.7	132.6	137.6	135.1	139.1	125.1	
26	145.6	140.8	138.6	142.5	132.6	132.6	138.1	134.1	142.6	136.1	135.1	134.1	
27	146.6	142.6	143.0	146.6	139.6	132.1	144.5	128.1	138.6	138.1	136.1	137.6	
28	148.4	162.1	139.4	144.1	134.6	136.6	143.9	128.6	139.6	133.6	123.6	135.6	
29	134.7		139.6	140.2	138.6	136.1	139.1	131.1	140.6	133.9	131.6	141.1	
30	143.6		140.6	139.1	136.1	134.1	133.1	130.1	137.1	133.2	131.1	140.1	Annual
31	142.4		138.1		137.1		140.1	133.6		133.5		150.1	Summary
Average	141.0	144.5	145.1	140.7	137.7	135.7	137.3	134.1	135.6	135.5	135.9	147.7	139.2
Minimum	131.5	139.1	136.0	135.5	132.6	129.1	129.6	127.1	127.6	131.1	123.6	125.1	124
Maximum	152.1	162.1	172.1	147.1	143.1	141.1	144.5	142.1	142.6	140.0	153.6	173.1	181
Total	4369.5	4046.5	4317.0	4082.9	4127.0	3928.7	4123.7	4020.7	3935.1	4064.3	3933.4	4445.2	50815

Point Loma Wastewater Treatment Plant
2014 Daily Flows (mgd)



Point Loma Wastewater Treatment Plant
2014 Dry Weather Flows (mgd)

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	131.6	139.6	181.1		141.1	143.6	133.6	136.1	132.6	135.5			
2	138.1	150.6	172.1		139.1	136.1	137.1		132.6	133.7			
3	134.6		157.1	147.1	143.1	135.6	136.1		128.1	133.6	138.1		
4	149.1		154.6		141.1	134.6		142.1	127.6	131.1	134.7		
5	140.6	146.0	150.6		141.9	139.0	129.6	138.1	134.1	136.6	141.1	149.1	
6	152.1		147.6	143.6		132.6	140.1	131.6	131.5	139.6	132.9	153.1	
7	133.2		148.1	139.1	141.9	138.6	135.2	133.1	135.6		135.1	147.6	
8	145.6	147.6	147.6	140.1	137.0	141.1	139.6	138.1	133.6	136.1	135.5	143.6	
9	144.8	146.6	142.1	136.6	138.6	136.6	135.1	129.6	133.6	138.3	136.6	147.6	
10	140.8	149.0	148.1	141.1	138.1	141.0	134.6	138.6	133.1	131.7	133.1	145.5	
11	135.6	145.5	144.1	139.6	139.1	138.6	136.6	137.4	131.6	132.0	134.6		
12	152.1	147.1	139.6	138.6	135.5	135.5	139.1	137.4	138.0	138.1	135.1		
13	139.7	140.4	144.1	141.6	143.0	134.1	138.1	131.6	135.1	140.0	138.6		
14	138.5	142.7	139.8	137.1	135.6	135.6	134.1	135.1	135.6	136.4		151.4	
15	144.2	141.1	141.6	139.1	136.6	132.5	135.1	137.1	133.6	133.4	135.1	148.6	
16	141.2	139.1	142.1	142.1	135.1	132.8	138.6	133.6		133.8	136.5		
17	137.6	142.1	142.1	135.5	136.6	138.4	132.5	134.6	133.1	137.1	137.1		
18	131.5	146.4	140.1	142.6	137.1	129.1	138.2	136.4	131.6	136.6	134.1	158.6	
19	140.1	142.1	139.5	141.1	136.4	136.8	135.9	127.1		139.6	133.1	146.2	
20	141.1	142.6	140.1	141.6	134.1	134.5	140.1		135.1	137.1		144.6	
21	141.6	144.1	141.7	139.5	136.1	132.5	142.1	134.1	141.6	137.1		141.1	
22	138.9	141.1	140.6	138.6	137.5	135.6	139.1	135.6	140.1	135.6	133.6	146.0	
23	141.6	144.4	139.6	139.6	132.9	136.1	137.9	130.6	140.1	132.1	137.6	143.2	
24	141.6	140.6	136.0	141.6	137.2	136.1	135.8	134.6	142.1	138.6	136.1	140.6	
25	133.1	141.7	139.5		134.6	134.6	138.7	132.6	137.6	135.1	139.1		
26	145.6		138.6		132.6	132.6	138.1	134.1	142.6	136.1	135.1	134.1	
27	146.6		143.0	146.6	139.6	132.1		128.1	138.6	138.1	136.1	137.6	
28	148.4	162.1	139.4	144.1	134.6	136.6	143.9	128.6	139.6	133.6	123.6	135.6	
29	134.7		139.6	140.2	138.6	136.1	139.1	131.1	140.6	133.9	131.6	141.1	
30				139.1	136.1	134.1	133.1	130.1	137.1	133.2	131.1		Annual
31			138.1		137.1		140.1	133.6				150.1	Summary
Average	140.8	144.6	145.3	140.6	137.6	135.7	137.1	133.9	135.6	135.6	135.0	145.2	138.7
Minimum	131.5	139.1	136.0	135.5	132.6	129.1	129.6	127.1	127.6	131.1	123.6	134.1	124
Maximum	152.1	162.1	172.1	147.1	143.1	141.1	143.9	142.1	142.6	140.0	141.1	158.6	181
Total	4083.5	3182.0	4176.5	3375.0	3985.9	3928.7	3842.8	3614.4	3663.6	3797.8	3374.4	2905.0	44933

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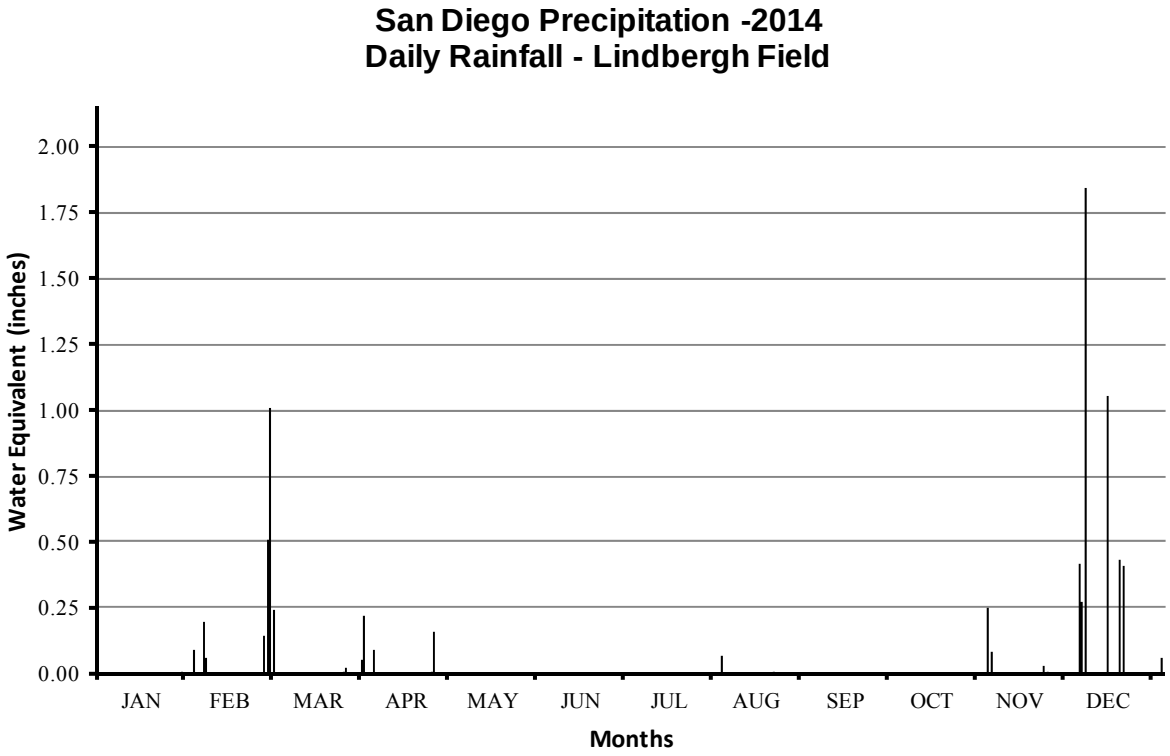
B. Rain Days


San Diego Precipitation -2014
Daily Rainfall - Lindbergh Field
Water Equivalent (inches)
2.00
1.75
1.50
1.25
1.00
0.75
0.50
0.25
0.00
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Months

San Diego Precipitation – 2014
Daily Rainfall – Lindbergh Field

Total Annual Precipitation=7.75 **Maximum=1.84** **Trace=0**

First Quarter		Second Quarter		Third Quarter		Fourth Quarter	
Date	Rain	Date	Rain	Date	Rain	Date	Rain
30-Jan-14	0.01	1-Apr-14	0.05	4-Jul-14	T	7-Oct-14	T
31-Jan-14	T	2-Apr-14	0.22	27-Jul-14	T	31-Oct-14	T
3-Feb-14	0.09	4-Apr-14	T	2-Aug-14	0.07	1-Nov-14	0.25
4-Feb-14	T	5-Apr-14	0.09	3-Aug-14	T	2-Nov-14	0.08
6-Feb-14	0.2	25-Apr-14	0.01	20-Aug-14	0.01	14-Nov-14	T
7-Feb-14	0.06	26-Apr-14	0.16	16-Sep-14	T	20-Nov-14	0.03
26-Feb-14	T	6-May-14	T	19-Sep-14	T	21-Nov-14	0.01
27-Feb-14	0.14					1-Dec-14	T
28-Feb-14	0.51					2-Dec-14	0.42
1-Mar-14	1.01					3-Dec-14	0.27
2-Mar-14	0.24					4-Dec-14	1.84
6-Mar-14	T					11-Dec-14	T
26-Mar-14	0.01					12-Dec-14	1.05
27-Mar-14	0.02					13-Dec-14	T
30-Mar-14	T					16-Dec-14	0.43
						17-Dec-14	0.41
						25-Dec-14	T
						30-Dec-14	0.06
TOTALS	2.29		0.53		0.08		4.85

C. Solids Production

Point Loma Annual Monitoring Report
Solids Report – TOTALS

From 01-JAN-2014 to 31-DEC-2014

Month	Pt. Loma Raw sludge Gallons	Dry Tons	Pt.Loma Digested Sludge Gallons	Dry Tons	MBC Combined Centrate Gallons	Dry Tons	MBC Dewatered Sludge Wet Tons	Dry Tons
01	34,976,262	6,101	34,976,262	3,396	64,949,650	830	10,773	2,868
02	31,403,196	5,405	31,403,196	3,101	58,560,842	776	8,948	2,666
03	34,815,958	5,892	34,815,958	3,230	65,777,900	867	9,103	2,758
04	32,744,883	5,651	32,744,883	3,252	65,043,480	922	11,766	3,402
05	37,143,971	6,157	37,143,971	3,710	65,167,834	1,069	11,258	3,244
06	33,127,657	5,653	33,127,657	3,283	62,141,747	1,028	9,747	2,748
07	34,209,604	5,816	34,209,604	3,417	63,439,255	1,126	11,145	3,109
08	34,004,422	5,767	34,004,422	3,369	61,468,833	1,116	10,557	2,870
09	32,958,021	5,709	32,958,021	3,357	60,651,497	1,121	10,864	2,926
10	34,490,804	5,930	34,490,804	3,483	64,687,076	1,122	11,758	3,213
11	33,163,580	5,574	33,163,580	3,219	63,910,697	879	9,625	2,652
12	33,904,937	6,101	33,904,937	3,483	62,208,666	887	12,034	3,302
avg	33,911,941	5,813	33,911,941	3,358	63,167,290	979	10,631	2,980
sum	406,943,295	69,756	406,943,295	40,300	758,007,477	11,746	127,577	35,758

Point Loma Annual Monitoring Report
Solids Report - Daily Averages by Month

From 01-JAN-2014 to 31-DEC-2014

Year Month	Pt. Loma Raw sludge Gallons	%TS	Dry Tons	Pt.Loma Digested Sludge Gallons	%TS	Dry Tons	MBC Combined Centrate Gallons	%TS	Dry Tons	MBC Dewatered Sludge Wet Tons	%TS	Dry Tons
14-01	1,128,267	4.2	199	1,128,267	2.3	110	2,095,150	0.31	26.9	348	26.6	92.5
14-02	1,121,543	4.1	192	1,121,543	2.4	112	2,091,459	0.32	28.5	320	29.8	95.2
14-03	1,123,095	4.1	189	1,123,095	2.2	104	2,121,868	0.32	28.0	294	30.3	89.0
14-04	1,091,496	4.1	189	1,091,496	2.4	108	2,168,116	0.34	30.7	392	28.9	113.4
14-05	1,198,193	4.0	202	1,198,193	2.4	122	2,102,188	0.39	34.1	363	28.8	104.7
14-06	1,104,255	4.1	184	1,104,255	2.4	111	2,071,392	0.40	34.2	325	28.2	91.6
14-07	1,103,536	4.1	187	1,103,536	2.4	111	2,046,428	0.43	36.4	360	27.9	100.3
14-08	1,096,917	4.1	189	1,096,917	2.4	110	1,982,866	0.44	35.8	341	27.2	92.6
14-09	1,098,601	4.2	190	1,098,601	2.4	112	2,021,717	0.44	37.4	362	26.9	97.5
14-10	1,112,607	4.1	193	1,112,607	2.4	114	2,086,680	0.42	35.7	379	27.3	103.6
14-11	1,105,453	4.0	189	1,105,453	2.3	109	2,130,357	0.33	29.2	321	27.6	88.4
14-12	1,093,708	4.3	205	1,093,708	2.5	117	2,006,731	0.34	28.8	388	27.4	106.5
avg	1,114,806	4.1	192	1,114,806	2.4	112	2,077,079	0.37	32.2	349	28.1	97.9

Note: A ton is a “short ton” or 2000 lbs of dry solids.
The mechanical condition of the cake pumps and the variability of sludge concentrations can affect the overall accuracies of these reported values.

D. Chemical Usage

Point Loma Annual Chemical Usage Report
Monthly Totals - 2014

Month	Polymer Pt.Loma Gallons	ACTIVE Polymer Pt.Loma Lbs.	Ferric Chloride PS #2 Gallons	Ferrous Chloride PS #2 Gallons	Ferric Chloride Pt.Loma Gallons	Sodium hydroxide PS #1 Gallons	Sodium hydroxide PS #2 Gallons	Sodium hydroxide Pt.Loma Gallons	NaOCl PS #1 Gallons	NaOCl PS #2 Gallons	NaOCl Pt.Loma Gallons	Salt PS #1 Lbs.	Salt PS #2 Lbs.	Salt Pt.Loma Lbs.
01	148,910	6,255			94,344	195	11	3,482	173	2,414	443,410	350	500	15,500
02	138,027	5,806			87,431	284	56	3,165	235	1,858	454,922	350	100	14,000
03	153,012	6,430			97,152	355	72	3,322	90	2,407	578,728	300	600	15,500
04	144,255	6,068			91,572	189	147	3,364	708	2,156	589,014	50	1,900	15,000
05	145,702	6,122			92,137	113	67	4,174	97	3,369	575,325	0	1,550	15,500
06	139,850	5,878			87,928	113	25	103,773	114	1,902	610,311	250	1,000	15,000
07	145,519	6,115			90,245	100	55	3,848	2,119	309	667,156	500	3,450	15,500
08	141,096	5,932			89,489	206	205	3,325	1,569	68	486,955	350	200	15,500
09	139,236	5,854			87,929	315	59	3,879	217	664	331,641	603	1,500	15,000
10	143,135	6,024			91,164	140	103	8,024	241	1,123	178,958	450	600	15,500
11	139,342	5,848			87,850	120	78	2,517	215	1,598	170,200	850	1,500	15,000
12	157,159	6,607			98,783	99	115	3,889	754	2,796	189,911	1,050	1,600	15,500
avg	144,603	6,078			91,335	186	83	12,230	544	1,722	439,711	425	1,208	15,208
sum	1,735,242	72,939			1,096,024	2,229	993	146,762	6,532	20,664	5,276,531	5,103	14,500	182,500

E. Gas Production

Point Loma Wastewater Treatment Plant
Gas Report - 2014

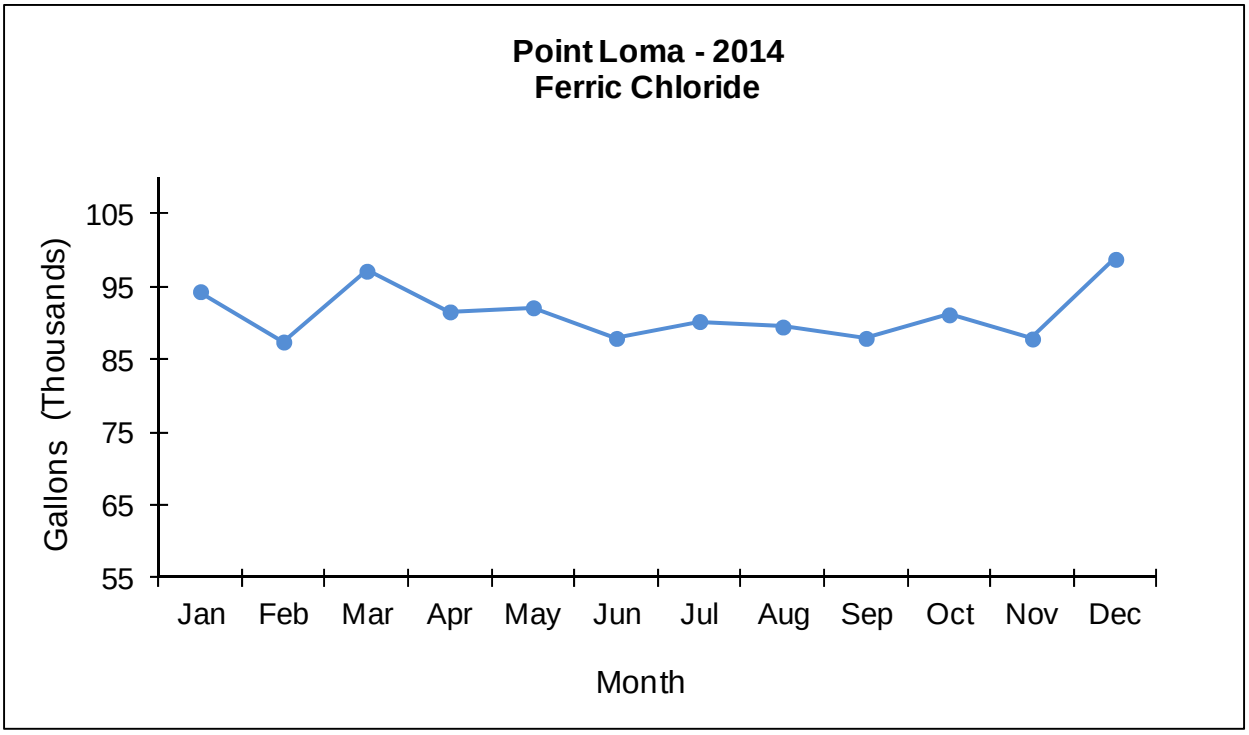
Daily Monthly Averages

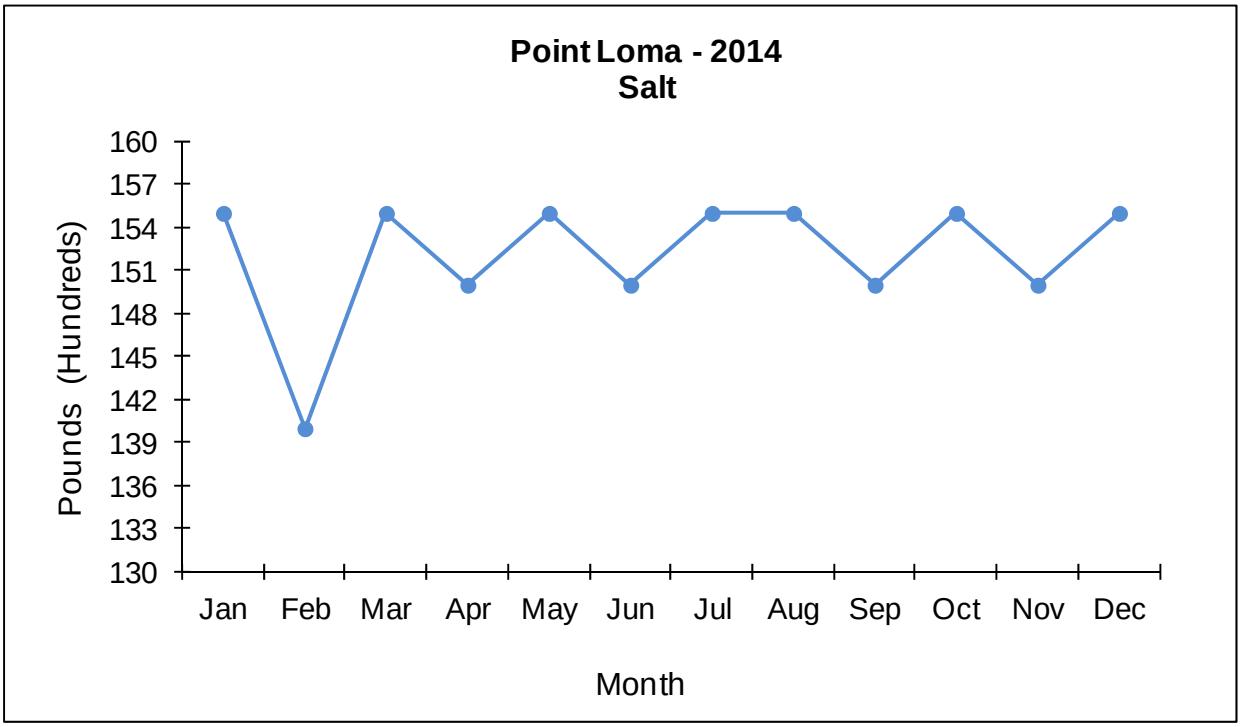
	GAS PRODUCTION (x1000 Cu. Ft.)						GAS CONSUMPTION (x1000 Cu. Ft.)						
Month	N-1-P	N-2-P	C-1-P	C-2-P	S-1-P	S-2-P	Dig 7	Dig 8	Total	Boilers	Burners	GUF	Total
01	307.4	.0	656.1	.0	672.2	343.5	104.7	1,051.5	1,979.2	112	1,465	1,849	3,426
02	167.1	.0	679.1	.0	683.1	483.6	104.7	1,003.4	2,013.0	86	1,523	1,827	3,435
03	109.8	.0	548.9	369.7	633.0	473.2	101.4	921.4	2,134.6	104	1,582	1,824	3,510
04	.0	.0	634.1	504.8	639.0	462.5	98.8	819.8	2,240.3	85	1,596	1,856	3,537
05	.0	.0	555.8	515.0	630.6	442.0	103.2	825.7	2,143.5	99	1,458	1,863	3,420
06	.0	.0	563.4	523.1	642.2	374.5	98.2	794.1	2,103.2	96	1,592	1,653	3,340
07	.0	.0	550.7	512.5	632.6	365.1	98.8	833.3	2,060.9	44	1,401	1,858	3,303
08	.0	.0	531.4	503.2	623.2	361.2	99.2	803.0	2,019.0	35	1,116	1,865	3,017
09	.0	.0	514.8	485.7	603.6	342.3	95.0	678.1	1,946.4	22	189	1,844	2,055
10	.0	.0	521.4	493.1	615.8	349.9	101.1	762.9	1,980.2	49	158	1,844	2,051
11	.0	.0	534.8	503.2	632.5	362.1	100.0	803.4	2,032.6	78	49	1,843	1,971
12	.0	.0	560.5	519.6	664.4	380.5	101.7	842.4	2,124.9	100	195	1,808	2,103
avg	48.7	.0	570.9	410.8	639.3	395.0	100.6	844.9	2,064.8	76	1,027	1,828	2,931

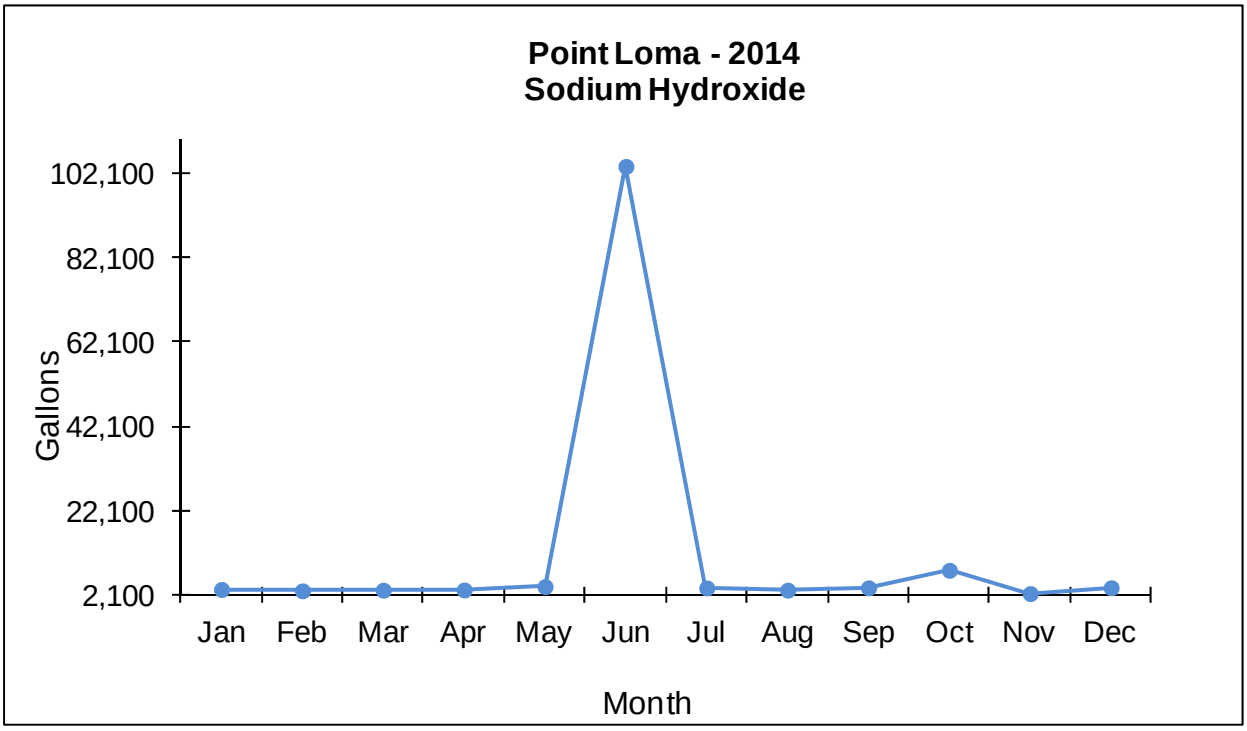
Monthly Totals

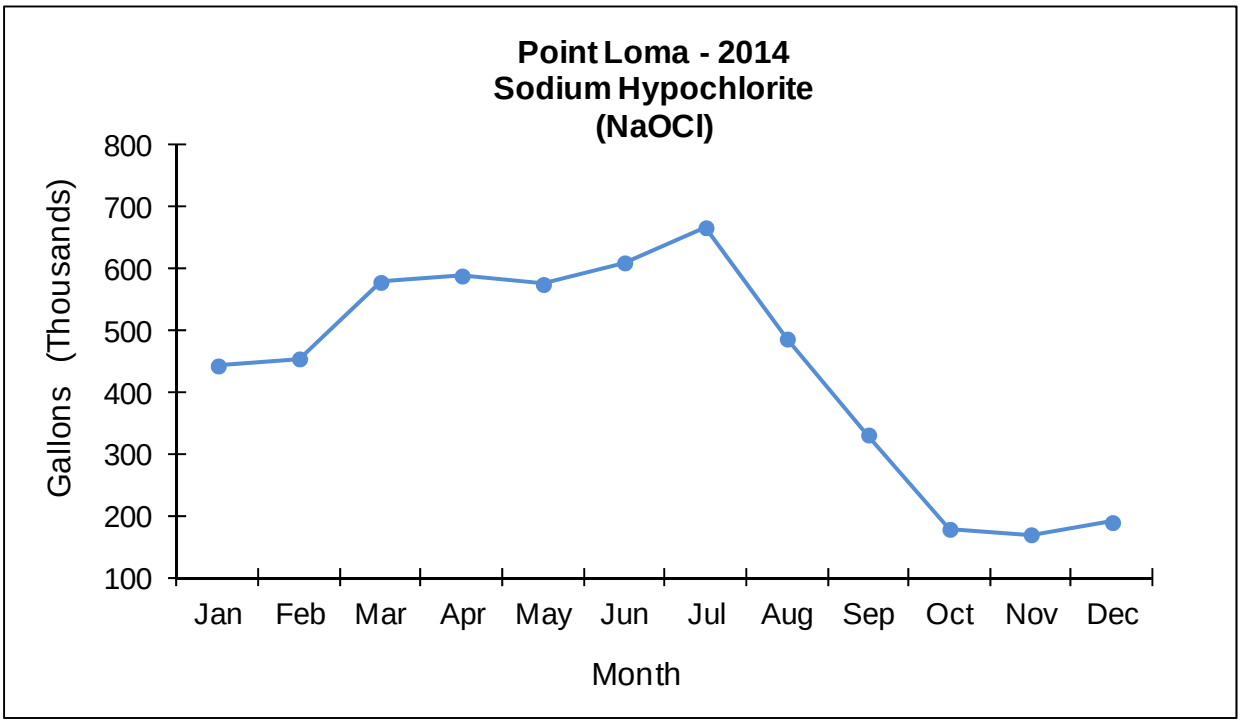
	GAS PRODUCTION (x1000 Cu. Ft.)						GAS CONSUMPTION (x1000 Cu. Ft.)						
Month	N-1-P	N-2-P	C-1-P	C-2-P	S-1-P	S-2-P	Dig 7	Dig 8	Total	Boilers	Burners	GUF	Total
01	9,529.0	.0	20,340.0	.0	20,837.0	10,648.0	3,247.0	32,595.0	61,354.0	3,471	45,428	57,314	106,213
02	4,680.0	.0	19,014.0	.0	19,128.0	13,542.0	2,932.0	28,095.0	56,364.0	2,410	42,638	51,143	96,191
03	3,403.0	.0	17,017.0	11,461.0	19,623.0	14,668.0	3,143.0	28,563.0	66,172.0	3,235	49,039	56,541	108,815
04	.0	.0	19,022.0	15,143.0	19,169.0	13,876.0	2,965.0	24,594.0	67,210.0	2,540	47,889	55,692	106,121
05	.0	.0	17,231.0	15,965.0	19,549.0	13,702.0	3,198.0	25,597.0	66,447.0	3,079	45,194	57,753	106,026
06	.0	.0	16,902.0	15,693.0	19,267.0	11,234.0	2,946.0	23,823.0	63,096.0	2,881	47,745	49,577	100,203
07	.0	.0	17,073.0	15,887.0	19,611.0	11,317.0	3,062.0	25,832.0	63,888.0	1,375	43,433	57,598	102,406
08	.0	.0	16,473.0	15,600.0	19,318.0	11,197.0	3,075.0	24,893.0	62,588.0	1,087	34,607	57,823	93,517
09	.0	.0	15,443.0	14,570.0	18,109.0	10,269.0	2,851.0	20,343.0	58,391.0	668	5,655	55,332	61,655
10	.0	.0	16,164.0	15,287.0	19,089.0	10,847.0	3,133.0	23,649.0	61,387.0	1,529	4,904	57,152	63,585
11	.0	.0	16,043.0	15,097.0	18,975.0	10,863.0	3,001.0	24,101.0	60,978.0	2,352	1,475	55,289	59,116
12	.0	.0	17,375.0	16,108.0	20,595.0	11,794.0	3,153.0	26,114.0	65,872.0	3,107	6,042	56,043	65,192
avg	1,467.7	.0	17,341.4	12,567.6	19,439.2	11,996.4	3,058.8	25,683.3	62,812.3	2,311	31,171	55,605	89,087
sum	17,612.0	.0	208,097.0	150,811.0	233,270.0	143,957.0	36,706.0	308,199.0	753,747.0	27,734	374,049	667,257	1,069,040

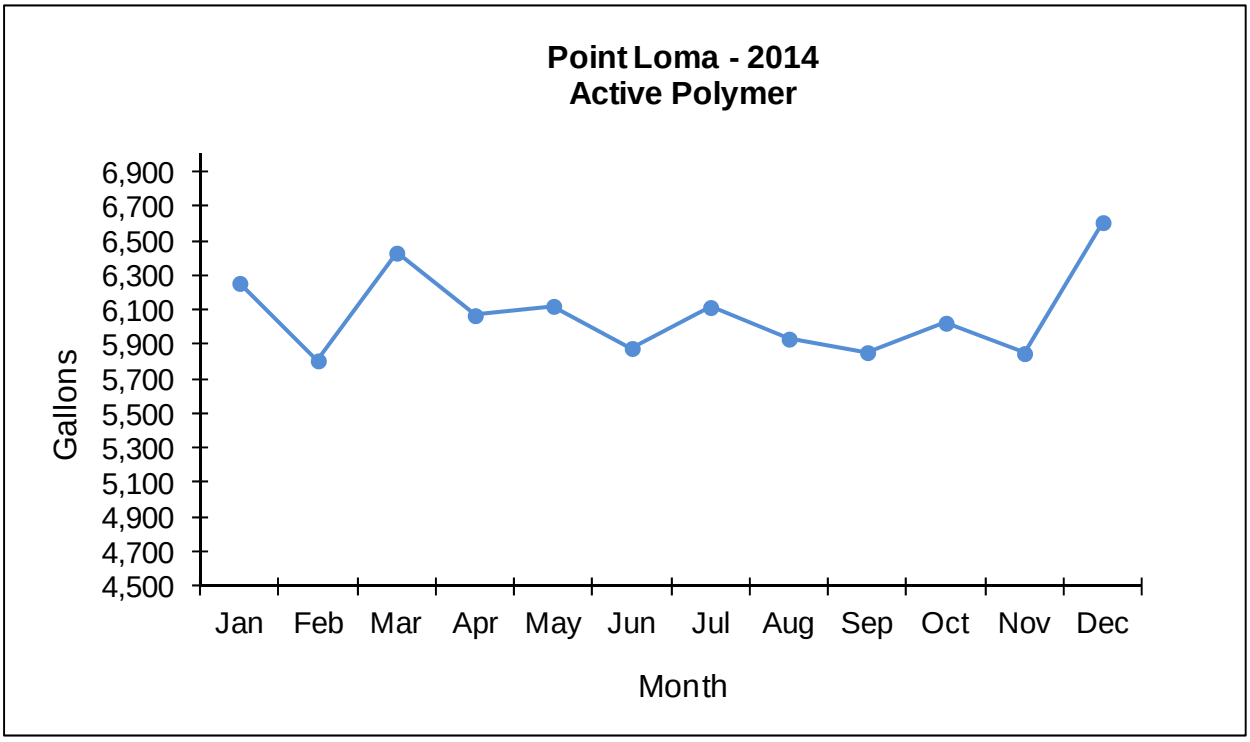
F. Graphs of Chemical Usage






Point Loma - 2014
Sodium Hydroxide
102,100
82,100
62,100
42,100
22,100
2,100
Gallons
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month


Point Loma - 2014
Sodium Hypochlorite
(NaOCl)
800
700
600
500
400
300
200
100
Gallons (Thousands)
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month


Point Loma - 2014
Active Polymer
Gallons
6,900
6,700
6,500
6,300
6,100
5,900
5,700
5,500
5,300
5,100
4,900
4,700
4,500
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month

G. Grit and Screenings

The following are reports of the analyses of grit samples taken from the Pt. Loma WWTP headworks (grit removal chambers) in 2014. Reports include Title 22 analyses and Total Solids. Title 22 sampling and analysis of PLR grit occurs on a Semi-Annual basis. Samples from the grit bins are taken daily for 7 consecutive days and composited together to form the Semi-Annual sample. Although everywhere else in this report PLR refers to Point Loma WWTP raw Influent sewage, in this section, it refers to the grit removed from the grit chambers at the headworks building at the influent end of the plant.

Point Loma Wastewater Treatment Plant
Grit and Screenings 2014- Monthly Total Solids Averages (% WT)

Grit		Headworks Screenings		Sludge Screenings	
JAN	49.4	JAN	44.2	JAN	38.3
FEB	50.6	FEB	46.8	FEB	39.0
MAR	50.8	MAR	49.8	MAR	38.1
APR	51.6	APR	47.3	APR	40.1
MAY	53.0	MAY	54.1	MAY	40.5
JUN	49.8	JUN	49.6	JUN	38.8
JUL	50.6	JUL	51.8	JUL	37.7
AUG	57.2	AUG	48.9	AUG	37.6
SEP	56.3	SEP	45.0	SEP	38.7
OCT	60.9	OCT	51.6	OCT	39.5
NOV	58.6	NOV	49.9	NOV	40.5
DEC	52.8	DEC	46.8	DEC	40.3
AVG	**53.5**	**AVG**	**48.8**	**AVG**	**39.1**

Point Loma Wastewater Treatment Plant

2014 Grit Total Solid (%WT)

	Average	Minimum	Maximum
	%WT	%WT	%WT
JAN	49.4	38.4	65.7
FEB	50.6	39.7	70.6
MAR	50.8	42.6	69.7
APR	51.6	41.2	63.9
MAY	53.0	42.1	69.7
JUN	49.8	37.7	64.6
JUL	50.6	36.9	89.0
AUG	57.2	43.0	94.4
SEP	56.3	40.6	78.5
OCT	60.9	41.1	86.5
NOV	58.6	38.4	76.5
DEC	52.8	40.1	67.0

2014 Sludge Screenings Total Solids (%WT)

	Average	Minimum	Maximum
	%WT	%WT	%WT
JAN	38.3	34.5	42.6
FEB	39.0	30.5	45.9
MAR	38.1	32.5	49.8
APR	40.1	36.3	45.3
MAY	40.5	36.4	45.6
JUN	38.8	35.6	42.7
JUL	37.7	34.3	44.4
AUG	37.6	35.0	41.8
SEP	38.7	34.4	42.9
OCT	39.5	23.6	44.1
NOV	40.5	36.8	52.9
DEC	40.3	34.4	43.1

2014 Headworks Screenings Total Solids (%WT)

	Average	Minimum	Maximum
	%WT	%WT	%WT
JAN	44.2	38.3	54.5
FEB	46.8	41.2	56.7
MAR	49.8	40.8	61.1
APR	47.3	36.3	61.7
MAY	54.1	45.6	63.2
JUN	49.6	44.6	55.6
JUL	51.8	41.7	63.8
AUG	48.9	45.6	55.0
SEP	45.0	39.8	50.5
OCT	51.6	37.7	64.1
NOV	49.9	43.5	60.2
DEC	46.8	36.0	60.1

POINT LOMA WASTEWATER TREATMENT PLANT
CALIFORNIA HAZARDOUS WASTE IDENTIFICATION TESTS (Title 22)
Metro Biosolids Center Dewatered Sludge

2014 Annual

Source: PLR
Sample ID: P716346
Sample Date: 02-JUN-14

Constituent	MDL.	Units	Total Dry Wt. mg/Kg	Total Wet Wt. mg/Kg	TTLC Wet Wt. mg/Kg	W.E.T. Wet Wt. mg/L	STLC Wet Wt. mg/L	40 CFR 503 Limits ** mg/Kg	CA Health & Safety code Limits *** mg/Kg
Antimony	.5	MG/KG	1.4	.76	500	*	15.00		
Arsenic	.07	MG/KG	1.55	.85	500	*	5.00	41	
Barium	.05	MG/KG	120	65.5	10000	*	100.00		
Beryllium	.02	MG/KG	ND	ND	75	*	.75		
Cadmium	.1	MG/KG	ND	ND	100	*	1.00	39	
Chromium (VI)			NA	NA	500	NA	5.00		
Chromium	.3	MG/KG	10.1	5.52	2500	*	560.00	1,200	
Cobalt	.2	MG/KG	2.2	1.2	8000	*	80.00		
Copper	.4	MG/KG	279	152.3	2500	*	25.00	1,500	2,500
Lead	2	MG/KG	9	4.91	1000	*	5.00	300	350
Mercury			NA	NA	20	NA	.20	17	
Molybdenum	.1	MG/KG	3.7	2.02	3500	*	350.00		
Nickel	.3	MG/KG	17	9.28	2000	*	20.00	420	2,000
Selenium	.07	MG/KG	2.49	1.36	100	*	1.00	100	
Silver	.07	MG/KG	ND	ND	500	*	5.00		
Thallium	1	MG/KG	ND	ND	700	*	7.00		
Vanadium	.2	MG/KG	6.4	3.494	2400	*	24.00		
Zinc	.5	MG/KG	437	238.6	5000	*	250.00	2,800	
Fluoride			NA	NA	18000	NA	180.00		
Total Solids		WT%	54.6						
Total Volatile Solids		WT%	39.5						
pH		PH	6.76		>2 - <12				
Aldrin	.001	MG/KG	ND	ND	1.4	*	.14		
Chlordanes	.001	MG/KG	.008	.0042	2.5	*	.25		
DDT, DDE, DDD	.001	MG/KG	.02	.01	1.0	*	.10		
2,4-D	.07	MG/KG	ND	ND	100	*	10.00		
Dieldrin	.002	MG/KG	ND	ND	8.0	*	.80		
Endrin	.002	MG/KG	ND	ND	0.2	*	.02		
Heptachlor	.002	MG/KG	.03		4.7	*	.47		
Kepone			NA	NA	21	NA	2.10		
Lindane	0	MG/KG	.01	.004	4.0	*	.40		
Methoxychlor	0	MG/KG	ND	ND	100	*	10.00		
Mirex	.001	MG/KG	ND	ND	21	*	2.10		
Pentachlorophenol	1.17	MG/KG	ND	ND	17	*	1.70		
PCBs (Arochlors)	.67	MG/KG	ND	ND	50	*	5.00		
Toxaphene	.05	MG/KG	ND	ND	5	*	.50		
Trichloroethene	.003	MG/KG	ND	ND	2040	*	204.00		
2,4,5-TP	.03	MG/KG	ND	ND	10	*	1.00		

TTLC = Total Threshold Limit Concentration.
STLC = Soluble Threshold Limit Concentration.
W.E.T. = Waste Extraction Technique.
* = The total wet concentration is less than 10 times the STLC. Therefore by definition,
. this substance is present in concentrations that are less than the limits for hazardous wastes.
** = Limits are in mg/Kg (dry weight) based on 40 CFR part 503.13 Table 3 "Limits for Land Application".
*** = The California State Health and Safety Code 25157.8 established lower a limit for Lead.
NA = Not Analyzed, ND= Not Detected, NS= Not Sampled, NR= Not Required
MDL = Method Detection Limit (are in mg/Kg per dry weight; except for pH and Total and Volatile Solids)
MBCDEWCN = Metro Biosolids Center Dewatered Centrifuged Sludge.

POINT LOMA WASTEWATER TREATMENT PLANT
CALIFORNIA HAZARDOUS WASTE IDENTIFICATION TESTS (Title 22)
Metro Biosolids Center Dewatered Sludge

2014 Annual

Source: PLR
Sample ID: P736639
Sample Date: 03-NOV-14

Constituent	MDL.	Units	Total Dry Wt. mg/Kg	Total Wet Wt. mg/Kg	TTLC Wet Wt. mg/Kg	W.E.T. Wet Wt. mg/L	STLC Wet Wt. mg/L	40 CFR 503 Limits ** mg/Kg	CA Health & Safety code Limits *** mg/Kg
Antimony	.5	MG/KG	1	.69	500	*	15.00		
Arsenic	.07	MG/KG	1.23	.84	500	*	5.00	41	
Barium	.05	MG/KG	131	89.7	10000	*	100.00		
Beryllium	.02	MG/KG	.05	.03	75	*	.75		
Cadmium	.1	MG/KG	.4	.274	100	*	1.00	39	
Chromium (VI)			NA	NA	500	NA	5.00		
Chromium	.3	MG/KG	17	11.7	2500	*	560.00	1,200	
Cobalt	.2	MG/KG	2.8	1.92	8000	*	80.00		
Copper	.4	MG/KG	393	269.2	2500	*	25.00	1,500	2,500
Lead	2	MG/KG	18	12.3	1000	*	5.00	300	350
Mercury	.2	MG/KG	.37	.256	20	*	.20	17	
Molybdenum	.1	MG/KG	5.6	3.84	3500	*	350.00		
Nickel	.3	MG/KG	18.3	12.5	2000	*	20.00	420	2,000
Selenium	.07	MG/KG	.55	.377	100	*	1.00	100	
Silver	.07	MG/KG	1.51	1.03	500	*	5.00		
Thallium	1	MG/KG	1	.69	700	*	7.00		
Vanadium	.2	MG/KG	12.3	8.43	2400	*	24.00		
Zinc	.5	MG/KG	1420	934.4	5000	*	250.00	2,800	
Fluoride			NA	NA	18000	NA	180.00		
Total Solids		WT%	68.5						
Total Volatile Solids		WT%	30.6						
pH		PH	7.3		>2 - <12				
Aldrin	.001	MG/KG	ND	ND	1.4	*	.14		
Chlordanes	.001	MG/KG	ND	ND	2.5	*	.25		
DDT, DDE, DDD	.001	MG/KG	ND	ND	1.0	*	.10		
2,4-D	.01	MG/KG	ND	ND	100	*	10.00		
Dieldrin	.002	MG/KG	ND	ND	8.0	*	.80		
Endrin	.002	MG/KG	ND	ND	0.2	*	.02		
Heptachlor	.002	MG/KG	ND	ND	4.7	*	.47		
Kepone			NA	NA	21	NA	2.10		
Lindane	0	MG/KG	ND	ND	4.0	*	.40		
Methoxychlor	0	MG/KG	ND	ND	100	*	10.00		
Mirex	.001	MG/KG	ND	ND	21	*	2.10		
Pentachlorophenol	1.17	MG/KG	ND	ND	17	*	1.70		
PCBs (Arochlors)	.67	MG/KG	ND	ND	50	*	5.00		
Toxaphene	.05	MG/KG	ND	ND	5	*	.50		
Trichloroethene	.003	MG/KG	ND	ND	2040	*	204.00		
2,4,5-TP	.03	MG/KG	ND	ND	10	*	1.00		

TTLC = Total Threshold Limit Concentration.
STLC = Soluble Threshold Limit Concentration.
W.E.T. = Waste Extraction Technique.
* = The total wet concentration is less than 10 times the STLC. Therefore by definition,
. this substance is present in concentrations that are less than the limits for hazardous wastes.
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NA = Not Analyzed, ND= Not Detected, NS= Not Sampled, NR= Not Required
MDL = Method Detection Limit (are in mg/Kg per dry weight; except for pH and Total and Volatile Solids)
MBCDEWCN = Metro Biosolids Center Dewatered Centrifuged Sludge.

POINT LOMA WASTEWATER TREATMENT PLANT
ANNUAL GRIT COMPOSITES
Inorganics and Organics

2014 Annual

Source:			GRIT COMP	GRIT COMP
Date:			02-JUN-2014	03-NOV-2014
Analyte:	MDL	Units:	P716346	P736639
Aluminum	4	MG/KG	1440	2950
Antimony	.5	MG/KG	1.4	1.0
Arsenic	.07	MG/KG	1.55	1.23
Barium	.05	MG/KG	120	131
Beryllium	.02	MG/KG	ND	0.05
Cadmium	.1	MG/KG	ND	0.4
Chromium	.3	MG/KG	10.1	17.0
Cobalt	.2	MG/KG	2.2	2.8
Copper	.4	MG/KG	279	393
Iron	20	MG/KG	40700	21200
Lead	2	MG/KG	9	18
Manganese	.2	MG/KG	191	598
Mercury	.2	MG/KG	NA	0.37
Molybdenum	.1	MG/KG	3.7	5.6
Nickel	.3	MG/KG	17	18
Selenium	.07	MG/KG	2.49	0.55
Silver	.07	MG/KG	ND	1.5
Thallium	1	MG/KG	ND	1
Vanadium	.2	MG/KG	6.4	12.3
Zinc	.5	MG/KG	437	1420
pH		PH	6.76	7.30
Total Solids	.24	WT%	54.6	68.5
Total Volatile Solids	.11	WT%	39.5	30.6
Aldrin	640	MG/KG	ND	ND
2,4-Dichlorophenoxyacetic acid	.07	MG/KG	ND	ND
Dieldrin	1700	MG/KG	ND	ND
Endrin	1890	MG/KG	ND	ND
Heptachlor	1700	MG/KG	<1700	ND
BHC, Gamma isomer	430	MG/KG	ND	ND
Methoxychlor	1460	MG/KG	ND	ND
Pentachlorophenol	1170	MG/KG	ND	ND
Toxaphene	48660	MG/KG	ND	ND
Trichloroethene	2.6	MG/KG	ND	ND
2,4,5-TP (Silvex)	.033	MG/KG	ND	ND

NA= Not Analyzed, ND= Not Detected, NS= Not Sampled, NR= Not Required

POINT LOMA WASTEWATER TREATMENT PLANT
GRIT- Chlorinated Pesticide Analysis

2014 Annual

Grit

Source			PLR	PLR
Date			02-JUN-2014	03-NOV-2014
Analyte	MDL	Units	P716346	P736639
Aldrin	640	NG/KG	ND	ND
Dieldrin	1700	NG/KG	ND	ND
BHC, Alpha isomer	390	NG/KG	ND	ND
BHC, Beta isomer	860	NG/KG	6800	ND
BHC, Gamma isomer	430	NG/KG	ND	ND
BHC, Delta isomer	940	NG/KG	ND	ND
o,p-DDD	970	NG/KG	10000	ND
o,p-DDE	640	NG/KG	ND	ND
o,p-DDT	940	NG/KG	ND	ND
p,p-DDD	690	NG/KG	ND	ND
p,p-DDE	700	NG/KG	3900	ND
p,p-DDT	840	NG/KG	3500	ND
Heptachlor	1700	NG/KG	34000	ND
Heptachlor epoxide	2560	NG/KG	ND	ND
Alpha (cis) Chlordane	840	NG/KG	1300	ND
Gamma (trans) Chlordane	540	NG/KG	6400	ND
Alpha Chlordene		NG/KG	NA	NA
Gamma Chlordene		NG/KG	NA	NA
Oxychlordane	360	NG/KG	ND	ND
Trans Nonachlor	1000	NG/KG	ND	ND
Cis Nonachlor	850	NG/KG	ND	ND
Alpha Endosulfan	760	NG/KG	ND	ND
Beta Endosulfan	570	NG/KG	ND	ND
Endosulfan Sulfate	1020	NG/KG	ND	ND
Endrin	1890	NG/KG	ND	ND
Endrin aldehyde	1000	NG/KG	ND	ND
Toxaphene	48660	NG/KG	ND	ND
Mirex	680	NG/KG	ND	ND
Methoxychlor	1460	NG/KG	ND	ND
PCB 1016	83300	NG/KG	ND	ND
PCB 1221	667000	NG/KG	ND	ND
PCB 1232	500000	NG/KG	ND	ND
PCB 1242	66860	NG/KG	ND	ND
PCB 1248	83300	NG/KG	ND	ND
PCB 1254	83300	NG/KG	ND	ND
PCB 1260	333000	NG/KG	ND	ND
PCB 1262	83300	NG/KG	ND	ND
Aldrin + Dieldrin	1700	NG/KG	0	0
Hexachlorocyclohexanes	940	NG/KG	6800	0
DDT and derivatives	970	NG/KG	17400	0
Chlordane + related cmpds.	1000	NG/KG	7700	0
Polychlorinated biphenyls	667000	NG/KG	0	0
Chlorinated Hydrocarbons	667000	NG/KG	65900	0

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

POINT LOMA WASTEWATER TREATMENT PLANT
GRIT
ANALYSIS-ACID EXTRACTABLE COMPOUNDS

2014 Annual

Source			PLR	PLR
Date			02-JUN-2014	03-NOV-2014
Analyte	MDL	Units	P716346	P736639
2-Chlorophenol	1310	UG/KG	ND	ND
4-Chloro-3-methylphenol	1900	UG/KG	ND	ND
2,4-Dichlorophenol	914	UG/KG	ND	ND
2,4-Dimethylphenol	1070	UG/KG	ND	ND
2,4-Dinitrophenol		UG/KG	ND	ND
2-Methyl-4,6-dinitrophenol		UG/KG	ND	ND
2-Nitrophenol	1600	UG/KG	ND	ND
4-Nitrophenol		UG/KG	ND	ND
Pentachlorophenol	1170	UG/KG	ND	ND
Phenol	1440	UG/KG	ND	ND
2,4,6-Trichlorophenol	1600	UG/KG	ND	ND
Total Chlorinated Phenols	1900	UG/KG	0.0	0.0
Total Non-Chlorinated Phenols	1600	UG/KG	0.0	0.0
Phenols	1900	UG/KG	0.0	0.0

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

POINT LOMA WASTEWATER TREATMENT PLANT
GRIT - Priority Pollutants Base/Neutral Compounds

2014 Annual

Source:			PLR	PLR
Date:			02-JUN-2014	03-NOV-2014
Sample:	MDL	Units	P716346	P736639
Acenaphthene	863	UG/KG	ND	ND
Acenaphthylene	584	UG/KG	ND	ND
Anthracene	986	UG/KG	ND	ND
Benzidine		UG/KG	ND	ND
Benzo[a]anthracene	1100	UG/KG	ND	ND
3,4-Benzo(b)fluoranthene	1127	UG/KG	ND	ND
Benzo[k]fluoranthene	1930	UG/KG	ND	ND
Benzo[a]pyrene	741	UG/KG	ND	ND
Benzo[g,h,i]perylene	301	UG/KG	<301	<301
4-Bromophenyl phenyl ether	1030	UG/KG	ND	ND
Bis-(2-chloroethoxy) methane	1630	UG/KG	ND	ND
Bis-(2-chloroethyl) ether	1420	UG/KG	ND	ND
Bis-(2-chloroisopropyl) ether	1090	UG/KG	ND	ND
4-Chlorophenyl phenyl ether	362	UG/KG	ND	ND
2-Chloronaphthalene		UG/KG	ND	ND
Chrysene	352	UG/KG	704	705
Dibenzo(a,h)anthracene	616	UG/KG	ND	ND
Butyl benzyl phthalate	2210	UG/KG	ND	ND
Di-n-butyl phthalate	1450	UG/KG	ND	ND
Bis-(2-ethylhexyl) phthalate	3960	UG/KG	ND	25300
Diethyl phthalate	1400	UG/KG	ND	ND
Dimethyl phthalate	356	UG/KG	ND	ND
Di-n-octyl phthalate	3460	UG/KG	ND	ND
3,3-Dichlorobenzidine	2030	UG/KG	ND	ND
2,4-Dinitrotoluene	1030	UG/KG	ND	ND
2,6-Dinitrotoluene	1890	UG/KG	ND	ND
1,2-Diphenylhydrazine	1590	UG/KG	ND	ND
Fluoranthene	216	UG/KG	1190	1220
Fluorene	2520	UG/KG	ND	ND
Hexachlorobenzene	813	UG/KG	ND	ND
Hexachlorobutadiene	940	UG/KG	ND	ND
Hexachlorocyclopentadiene	1890	UG/KG	ND	ND
Hexachloroethane	382	UG/KG	ND	ND
Indeno(1,2,3-CD)pyrene	953	UG/KG	ND	ND
Isophorone	1820	UG/KG	ND	ND
Naphthalene	2150	UG/KG	ND	ND
Nitrobenzene	2800	UG/KG	ND	ND
N-nitrosodimethylamine		UG/KG	ND	ND
N-nitrosodi-n-propylamine	1360	UG/KG	ND	ND
N-nitrosodiphenylamine	1330	UG/KG	ND	ND
Phenanthrene	1040	UG/KG	ND	ND
Pyrene	1150	UG/KG	<1150	<1150
1,2,4-Trichlorobenzene	2.5	UG/KG	ND	ND
1,3-Dichlorobenzene	733	UG/KG	ND	ND
1,2-Dichlorobenzene	342	UG/KG	ND	ND
1,4-Dichlorobenzene	1270	UG/KG	ND	ND
Polynuc. Aromatic Hydrocarbons	2520	UG/KG	704	705
Total Dichlorobenzenes	733	UG/KG	0	0
Base/Neutral Compounds	3960	UG/KG	1894	27225

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

POINT LOMA WASTEWATER TREATMENT PLANT
GRIT - Priority Pollutants Purgeable Compounds

2014 ANNUAL

Source			PLR	PLR
Date			02-JUN-2014	03-NOV-2014
Analyte	MDL	Units	P716346	P736639
Acrolein	6.4	UG/KG	ND	ND
Acrylonitrile	3.9	UG/KG	ND	ND
Benzene	2.1	UG/KG	ND	ND
Bromodichloromethane	2.2	UG/KG	ND	ND
Bromoform	2.4	UG/KG	ND	ND
Bromomethane	6.9	UG/KG	ND	ND
Carbon tetrachloride	3	UG/KG	ND	ND
Chlorobenzene	1	UG/KG	ND	ND
Chloroethane	3.6	UG/KG	ND	ND
Chloroform	2.3	UG/KG	ND	ND
Chloromethane	3.4	UG/KG	ND	ND
Dibromochloromethane	2.4	UG/KG	ND	ND
1,2-Dichlorobenzene	1.5	UG/KG	DNQ2.6	ND
1,3-Dichlorobenzene	1.8	UG/KG	ND	ND
1,4-Dichlorobenzene	1.5	UG/KG	69.4	72.4
1,1-Dichloroethane	1.9	UG/KG	ND	ND
1,1-Dichloroethene	5	UG/KG	ND	ND
1,2-Dichloroethane	3.6	UG/KG	ND	ND
trans-1,2-dichloroethene	3.5	UG/KG	ND	ND
1,2-Dichloropropane	2.6	UG/KG	ND	ND
cis-1,3-dichloropropene	2.5	UG/KG	ND	ND
trans-1,3-dichloropropene	2.1	UG/KG	ND	ND
Ethylbenzene	1.4	UG/KG	DNQ3.9	8.5
Methylene chloride	3.5	UG/KG	DNQ10.0	ND
1,1,2,2-Tetrachloroethane	5.9	UG/KG	ND	ND
Tetrachloroethene	2.8	UG/KG	ND	ND
Toluene	1.2	UG/KG	97.3	141.0
1,1,1-Trichloroethane	3.2	UG/KG	ND	ND
1,1,2-Trichloroethane	2.8	UG/KG	ND	ND
Trichloroethene	2.6	UG/KG	ND	ND
Vinyl chloride	4.8	UG/KG	ND	ND
Halomethane Purgeable Cmpnds	6.9	UG/KG	0.0	0.0
Total Dichlorobenzenes	1.8	UG/KG	2.6	0.0
Purgeable Compounds	6.9	UG/KG	94.7	149.5
Additional Analytes Determined;				
Acetone	31.4	UG/KG	9260	2700
Allyl chloride	3.6	UG/KG	ND	ND
Benzyl chloride	4.3	UG/KG	ND	ND
2-Butanone	36.3	UG/KG	2280	727
Carbon disulfide	4.7	UG/KG	56.5	57.3
Chloroprene	3.1	UG/KG	ND	ND
1,2-Dibromoethane	2.5	UG/KG	ND	ND
Isopropylbenzene	1.3	UG/KG	ND	ND
Methyl Iodide	3.8	UG/KG	ND	ND
Methyl methacrylate	2.4	UG/KG	ND	ND
2-Nitropropane	45.8	UG/KG	ND	ND
ortho-xylene	1.9	UG/KG	DNQ5.1	DNQ3.5
Styrene	1.7	UG/KG	DNQ4.9	DNQ4.9
1,2,4-Trichlorobenzene	979	UG/KG	ND	ND
meta,para xylenes	4.2	UG/KG	DNQ11.1	DNQ8.0
Trichlorofluoromethane	2.2	UG/KG	ND	ND
2-Chloroethylvinyl ether	5.5	UG/KG	ND	ND
4-Methyl-2-pentanone	9.7	UG/KG	ND	ND

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

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

POINT LOMA WASTEWATER TREATMENT PLANT
GRIT - Herbicides

2014 ANNUAL

Source			PLR	PLR
Date			02-JUN-2014	03-NOV-2014
Analyte	MDL	Units	P716346	P736639
2,4-Dichlorophenoxyacetic acid	.07	MG/KG	ND	ND
2,4,5-TP (Silvex)	.033	MG/KG	ND	ND

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

H. Raw Sludge Data Summary

Raw Sludge
Monthly average of daily average

Month	pH	%Total Solids	%Total Volatile Solids
January	5.68	4.2	79.4
February	5.72	4.1	78.3
March	5.65	4.1	78.6
April	5.53	4.2	78.3
May	5.58	4.0	77.9
June	5.55	4.1	78.4
July	5.53	4.1	78.1
August	5.51	4.1	78.3
September	5.59	4.2	77.8
October	5.57	4.1	77.7
November	5.54	4.0	78.0
December	5.58	4.3	77.4
Averages	**5.59**	**4.1**	**78.2**

I. Digester and Digested Sludge Data Summary

Point Loma Wastewater Treatment Plant Annual Report
Digesters
Year: 2014

N1P

	pH	Total Solids (%)	Volatile Solids (%)	Alkal-inity (mg/L)	Volatile Acids (mg/L)	Methane (%)	Carbon Dioxide (%)
JANUARY -2014	7.17	2.3	60.5	2280	72	61.6	38.3
FEBRUARY -2014	7.13	2.3	58.4	2500	70	61.7	38.2
MARCH -2014	7.13	2.1	57.1	2650	68	62.8	37.2
APRIL -2014	7.18	1.7	53.9	*	*	*	*
MAY -2014	*	*	*	*	*	*	*
JUNE -2014	*	*	*	*	*	*	*
JULY -2014	*	*	*	*	*	*	*
AUGUST -2014	*	*	*	*	*	*	*
SEPTEMBER-2014	*	*	*	*	*	*	*
OCTOBER -2014	*	*	*	*	*	*	*
NOVEMBER -2014	*	*	*	*	*	*	*
DECEMBER -2014	*	*	*	*	*	*	*
Average:	7.15	2.1	57.5	2477	70	62.0	37.9

N2P

	pH	Total Solids (%)	Volatile Solids (%)	Alkal-inity (mg/L)	Volatile Acids (mg/L)	Methane (%)	Carbon Dioxide (%)
JANUARY -2014	*	*	*	*	*	*	*
FEBRUARY -2014	*	*	*	*	*	*	*
MARCH -2014	*	*	*	*	*	*	*
APRIL -2014	*	*	*	*	*	*	*
MAY -2014	*	*	*	*	*	*	*
JUNE -2014	*	*	*	*	*	*	*
JULY -2014	*	*	*	*	*	*	*
AUGUST -2014	*	*	*	*	*	*	*
SEPTEMBER-2014	*	*	*	*	*	*	*
OCTOBER -2014	*	*	*	*	*	*	*
NOVEMBER -2014	*	*	*	*	*	*	*
DECEMBER -2014	*	*	*	*	*	*	*
Average:	*	*	*	*	*	*	*

C1P

	pH	Total Solids (%)	Volatile Solids (%)	Alkal-inity (mg/L)	Volatile Acids (mg/L)	Methane (%)	Carbon Dioxide (%)	H2S ppm
JANUARY -2014	7.13	2.3	61.4	2090	67	61.4	38.4	*
FEBRUARY -2014	7.04	2.4	60.1	2030	58	61.4	38.4	*
MARCH -2014	7.00	2.3	60.5	2140	58	61.4	38.3	*
APRIL -2014	7.00	2.3	60.7	2100	66	61.8	37.9	*
MAY -2014	6.98	2.3	60.3	1850	59	61.2	38.5	*
JUNE -2014	6.98	2.3	60.4	1810	55	61.5	38.2	*
JULY -2014	6.92	2.4	61.7	1710	51	61.9	37.9	*
AUGUST -2014	6.96	2.3	61.4	1690	48	61.9	37.9	*
SEPTEMBER-2014	6.97	2.4	61.1	1590	54	61.6	38.1	*
OCTOBER -2014	6.86	2.3	59.2	1450	43	61.5	38.1	*
NOVEMBER -2014	6.93	2.3	60.2	1680	44	61.9	37.9	*
DECEMBER -2014	6.98	2.4	60.1	1970	46	62.1	37.7	*
Average:	6.98	2.3	60.6	1843	54	61.6	38.1	*

Point Loma Wastewater Treatment Plant Annual Report
Digesters
Year: 2014

C2P

	pH	Total Solids (%)	Volatile Solids (%)	Alkal-inity (mg/L)	Volatile Acids (mg/L)	Methane (%)	Carbon Dioxide (%)
JANUARY -2014	*	*	*	*	*	*	*
FEBRUARY -2014	*	*	*	*	*	*	*
MARCH -2014	7.02	2.1	58.5	2190	68	61.2	37.6
APRIL -2014	7.02	2.3	58.9	2190	69	61.9	37.7
MAY -2014	7.02	2.4	58.8	1910	60	61.4	38.3
JUNE -2014	6.96	2.4	59.4	1840	58	61.5	38.1
JULY -2014	6.94	2.4	61.2	1730	51	61.8	37.9
AUGUST -2014	6.96	2.4	59.8	1690	48	61.9	37.8
SEPTEMBER-2014	6.95	2.4	59.9	1650	55	61.8	37.9
OCTOBER -2014	6.90	2.4	59.9	1520	43	61.7	38.0
NOVEMBER -2014	6.95	2.3	59.3	1760	43	62.0	37.8
DECEMBER -2014	7.01	2.5	59.1	2090	49	62.1	37.7
Average:	6.97	2.4	59.5	1857	54	61.7	37.9

S1P

	pH	Total Solids (%)	Volatile Solids (%)	Alkal-inity (mg/L)	Volatile Acids (mg/L)	Methane (%)	Carbon Dioxide (%)	H2S ppm
JANUARY -2014	7.12	2.4	62.3	1950	67	61.5	38.3	*
FEBRUARY -2014	7.01	2.3	62.4	1920	64	61.3	38.4	*
MARCH -2014	7.01	2.3	61.7	1990	60	61.4	38.4	*
APRIL -2014	7.00	2.4	60.2	2060	71	61.9	37.7	*
MAY -2014	6.96	2.5	61.0	1700	56	61.2	38.5	*
JUNE -2014	6.96	2.4	61.2	1720	55	61.4	38.3	*
JULY -2014	6.94	2.5	62.5	1720	54	61.8	37.9	*
AUGUST -2014	6.99	2.5	61.5	2030	58	61.8	37.9	*
SEPTEMBER-2014	6.95	2.5	61.5	1630	56	61.5	38.1	*
OCTOBER -2014	6.91	2.5	60.7	1700	48	61.6	38.1	*
NOVEMBER -2014	6.91	2.4	61.0	1680	43	61.6	38.1	*
DECEMBER -2014	7.02	2.5	60.5	2160	50	62.0	37.7	*
Average:	6.98	2.4	61.4	1855	57	61.6	38.1	*

S2P

	pH	Total Solids (%)	Volatile Solids (%)	Alkal-inity (mg/L)	Volatile Acids (mg/L)	Methane (%)	Carbon Dioxide (%)	H2S ppm
JANUARY -2014	7.15	2.3	61.0	2190	69	61.9	37.9	35
FEBRUARY -2014	7.03	2.4	61.4	2080	59	61.4	38.3	29
MARCH -2014	7.02	2.3	61.3	2070	58	61.5	38.2	26
APRIL -2014	7.00	2.5	60.2	2100	72	63.1	36.5	33
MAY -2014	6.98	2.4	61.6	1740	61	61.4	38.2	33
JUNE -2014	6.99	2.4	60.6	1830	56	61.7	38.0	28
JULY -2014	6.94	2.4	61.5	1760	55	61.9	37.7	28
AUGUST -2014	7.01	2.3	61.0	1750	50	62.0	37.8	25
SEPTEMBER-2014	7.04	2.4	61.0	1650	53	61.7	38.0	32
OCTOBER -2014	6.95	2.4	60.3	1560	45	61.8	37.9	31
NOVEMBER -2014	6.97	2.3	60.2	1780	44	61.9	37.9	28
DECEMBER -2014	7.02	2.5	59.9	2110	48	62.3	37.4	28
Average:	7.01	2.4	60.8	1885	56	61.9	37.8	30

Point Loma Wastewater Treatment Plant Annual Report
Digesters
Year: 2014

DIG 7

	pH	Total Solids (%)	Volatile Solids (%)	Alkal-inity (mg/L)	Volatile Acids (mg/L)	Methane (%)	Carbon Dioxide (%)	H2S ppm
JANUARY -2014	7.14	2.0	60.2	2070	71	64.3	35.2	*
FEBRUARY -2014	7.05	1.9	59.6	2040	65	65.1	34.5	*
MARCH -2014	7.07	1.9	59.2	2100	60	64.5	35.1	*
APRIL -2014	7.06	2.0	58.3	2180	71	64.1	35.5	*
MAY -2014	7.03	2.0	59.1	1860	62	63.3	36.3	*
JUNE -2014	7.04	2.0	59.2	1820	58	63.9	35.7	*
JULY -2014	6.99	2.2	60.7	1830	53	62.8	36.9	*
AUGUST -2014	7.02	2.1	60.0	1810	51	62.8	36.9	*
SEPTEMBER-2014	7.06	2.2	60.0	1730	55	62.5	37.1	*
OCTOBER -2014	6.99	2.2	59.1	1610	45	62.8	36.9	*
NOVEMBER -2014	7.03	2.1	59.1	1840	43	63.0	36.7	*
DECEMBER -2014	7.09	2.2	58.9	2160	51	63.4	36.4	*
Average:	7.05	2.1	59.5	1921	57	63.5	36.1	*

DIG 8

	pH	Total Solids (%)	Volatile Solids (%)	Alkal-inity (mg/L)	Volatile Acids (mg/L)	Methane (%)	Carbon Dioxide (%)	H2S ppm
JANUARY -2014	7.12	2.3	62.3	1950	67	61.5	38.3	*
FEBRUARY -2014	7.06	2.2	61.6	1980	61	61.3	38.5	*
MARCH -2014	7.04	2.2	61.0	2060	55	61.3	38.6	*
APRIL -2014	7.02	2.3	61.0	2110	69	61.7	38.1	*
MAY -2014	7.00	2.3	60.9	1810	55	61.3	38.5	*
JUNE -2014	6.99	2.3	60.8	1800	54	61.4	38.4	*
JULY -2014	6.93	2.4	62.0	1610	48	61.7	38.1	*
AUGUST -2014	6.96	2.3	61.3	1620	47	61.5	38.3	*
SEPTEMBER-2014	6.97	2.4	61.5	1520	50	61.4	38.1	*
OCTOBER -2014	6.90	2.4	59.6	1410	41	61.3	38.4	*
NOVEMBER -2014	6.99	2.3	60.6	1690	39	61.6	38.1	*
DECEMBER -2014	7.00	2.4	60.3	2000	48	61.8	38.0	*
Average:	7.00	2.3	61.1	1797	53	61.5	38.3	*

IV. Metro Biosolids Center (MBC) Data

A. MBC Diagrams
B. Return Stream Data Summary
C. Digester and Digested Sludge Data Summary
D. Gas Production
E. Chemical Usage
F. Graphs of Chemical Usage
G. Solids Handling Annual Report
H. Results of "Title 22" Sludge Hazardous Waste Tests

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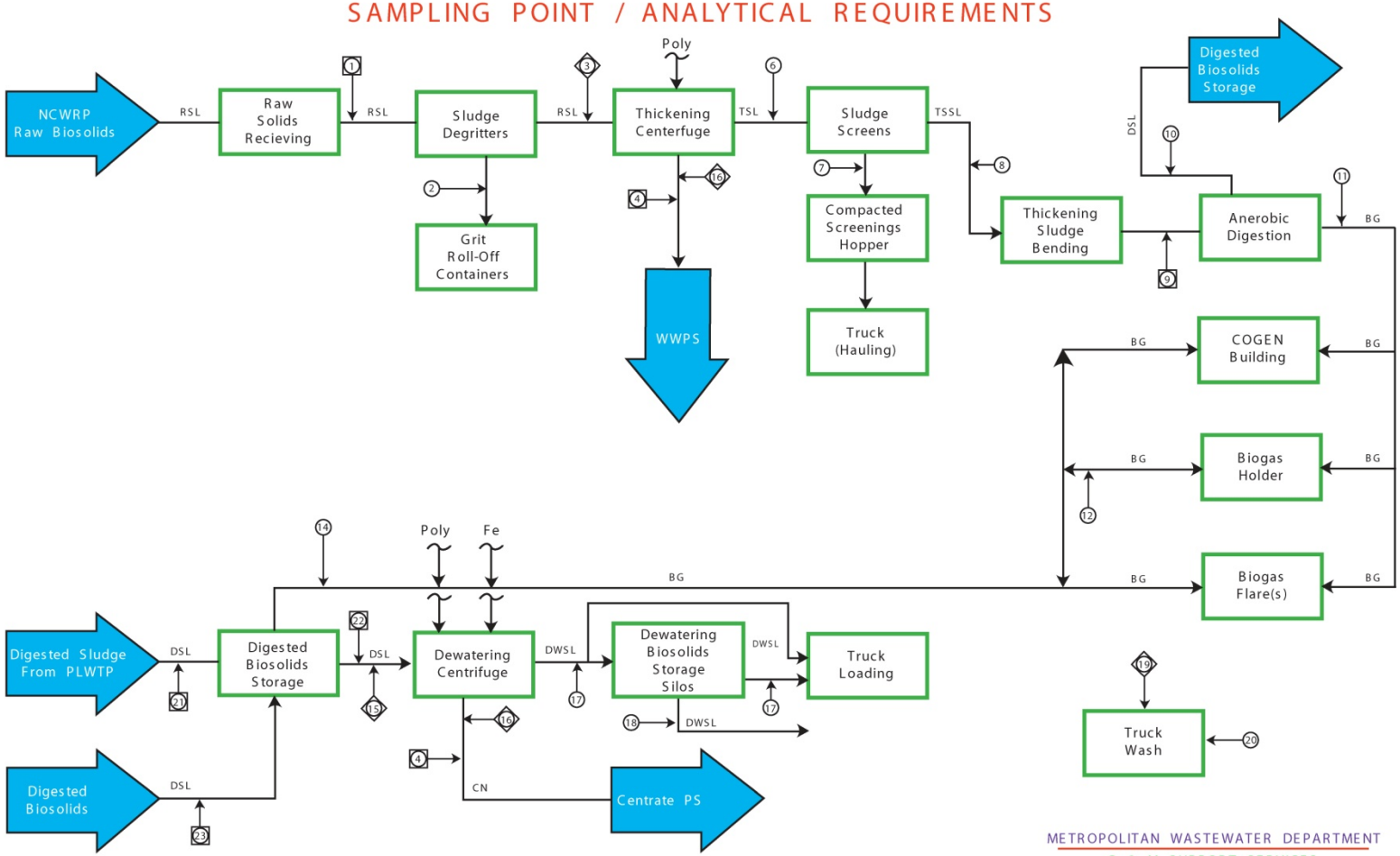
A. MBC Diagrams

METROPOLITAN BIOSOLIDS CENTER
PROCESS FLOW DIAGRAM
SAMPLING POINT / ANALYTICAL REQUIREMENTS



METROPOLITAN WASTEWATER DEPARTMENT
O & M SUPPORT SERVICES

○ GRAB SAMPLER
▢ AUTOSAMPLER
◇ ANALYZER/METER

LOCATION	DESCRIPTION
1	Raw Solids Sampler (73 AU 9040): Volatile Solids, Total Solids, pH, Alkilinity
2	Grit: Volitile Solids, % Moisture
3	Thickened Sludge Feed Loop (76 DE 2140): Total Solids, Volatile
4	Centrate (Dewatering & Thickening) Sampler (76 AU 2635): Total Suspended Solids, pH, BOD_5
5	Thickened Biosolids: Total Solids, Volatile Solids, pH
6	Sludge Screening: Volitile Solids, % Moisture
7	Thickened Screen Sludge: Total Sludge, Volatile Solids
8	

LOCATION	DESCRIPTION
9	Thickened Sludge (73 AU 9050): Total Solids, Volatile Solids, Temperature, pH, Alkalinity, Volatile Acids, Iron
10	Anaerobically Digested Sludge: % Total Solids, % Volatile Solids, Temperature, pH, Alkalinity, Volatile Acids
11	Biogas from Digestion: Methane (CH_4), Carbon Dioxide (CO_2), Hydrogen Sulfide (H_2S)
12	Biogas to Biogas Holder: Methane (CH_4), Carbon Dioxide (CO_2), H_2S
13	Biogas from Digestion: Methane (CH_4), Carbon Dioxide (CO_2)
14	Dewatering Centrifuge Feed Loop (76 DE 2502): Total Solids
15	

LOCATION	DESCRIPTION
16	Centrate (Dewatering & Thickening) Analyzers: Total Suspended Solids
17	Dewatered Biosolids: Total Solids, Volatile Solids, pH, TKN, PCB, Trace Metals
18	Dewatered Biosolids Cake: Total Solids, Volatile Solids, pH, TKN, PCB, Trace Metals
19	Truck Wash: (87 AIT 9011): CL_2 Residule
20	Truck Wash: BOD_5, Coliform
21	Digested Sludge from PLWTP (80 AU 9009): Total Solids, Volatile Solids, pH, Iron
22	Digested Sludge from DBST (80 AU 2115): Total Solids, Volatile Solids, pH
23	Digester Samplers: Digester#1 80 AU 9006, Digester#2 9007, Digester#3 9008 Total Solids, Volatile Solids, pH, Alkalinity, Iron

Revision Date: 02/11/04

B. Return Stream Data Summary

This section presents the results of analyses of the Metro Biosolids Center (MBC) return stream (MBC_COMBCN) for 2014. This return stream is continuously sampled by a flow proportioned, autosampler connected to the return stream lines at MBC. Each 24-hour13 composite is collected and analyzed for pH, BOD, TSS, TVSS, TS, and TVS daily. An aliquot is preserved and added to a monthly (calendar month) composite for analysis of trace metals.

The data is presented in tables of monthly averages and graphs of the monthly averages of select parameters. Tables of daily values for select parameters (such as TSS, Flow, etc.) along with graphs are also provided.

13 approximately midnight to midnight each day.

Metro Biosolids Center (MBC)

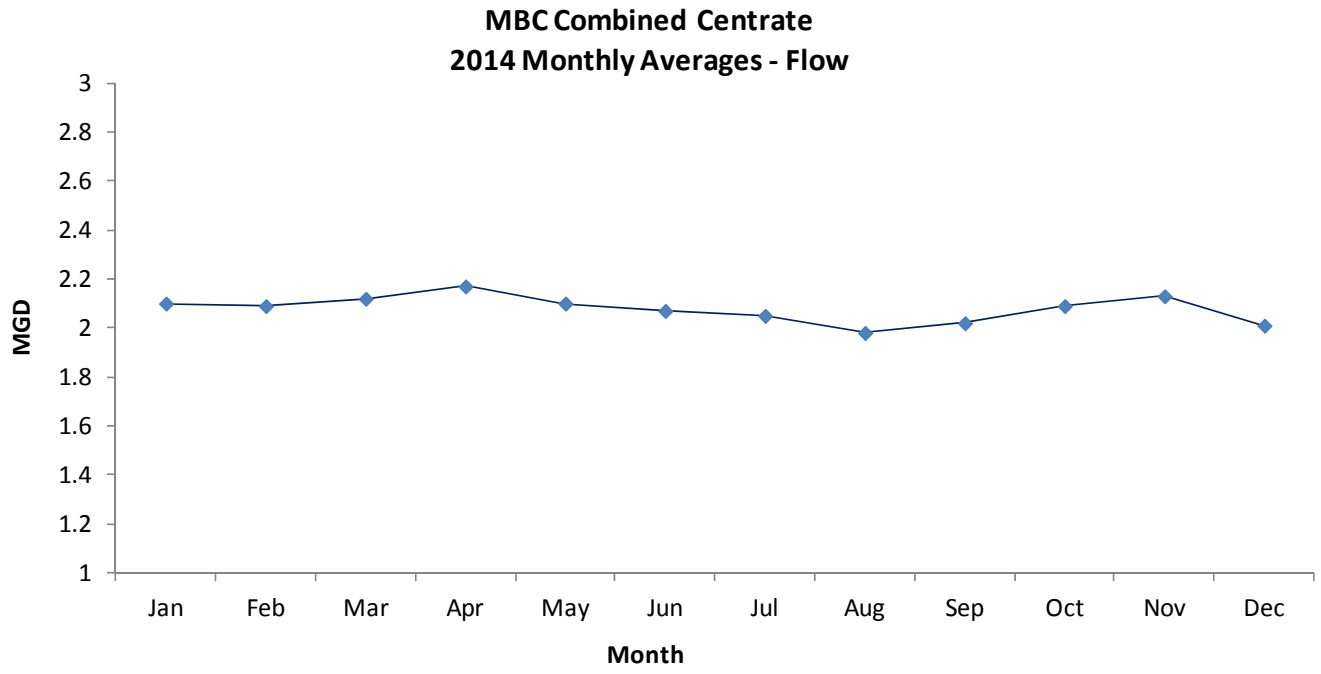
Sludge Project – Annual Summary

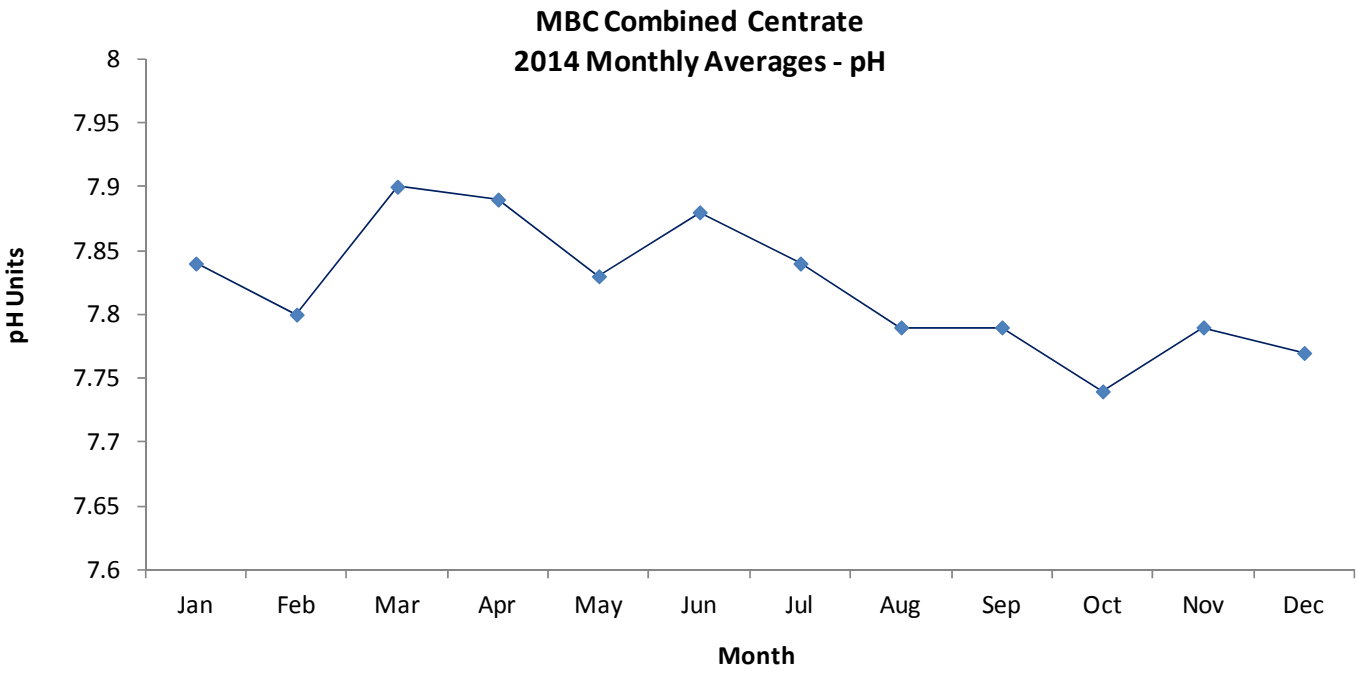
Combined Sludge Concentrate

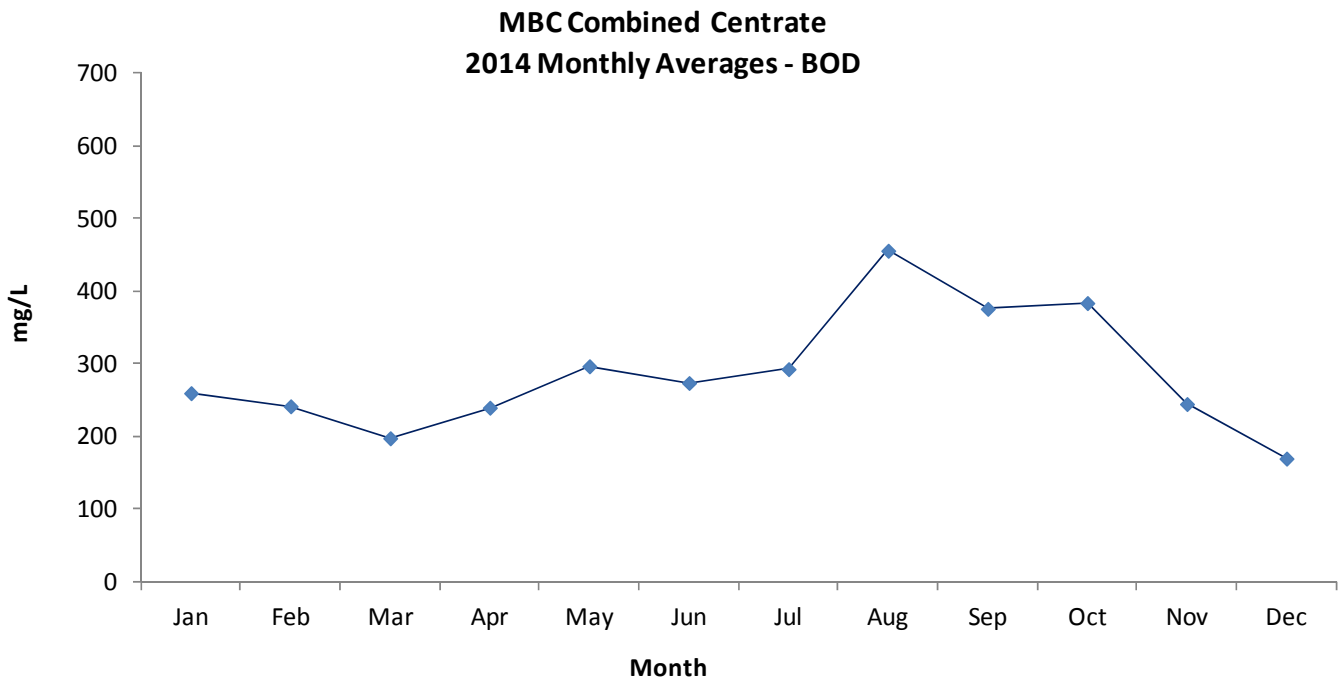
Annual 2014

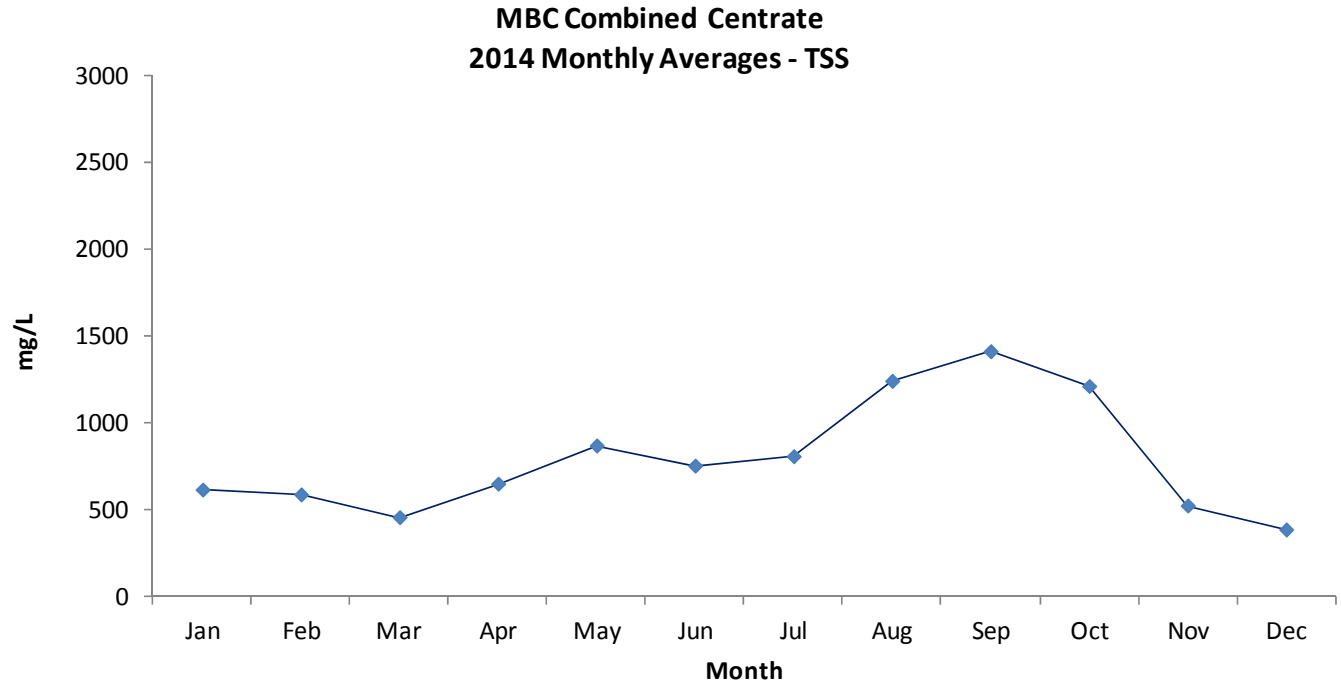
	FLOW	PH	BOD	TSS	VSS	TS	TVS	TSS Mass Emmissions
	MGD	pH Units	mg/L	mg/L	mg/L	Wt%	Wt%	(lbs/Day)
JANUARY -2014	2.10	7.84	260	614	463	0.31	38	10754
FEBRUARY -2014	2.09	7.80	242	586	447	0.32	42	10214
MARCH -2014	2.12	7.90	198	455	363	0.32	42	8045
APRIL -2014	2.17	7.89	240	648	490	0.34	43	11727
MAY -2014	2.10	7.83	297	868	592	0.39	46	15202
JUNE -2014	2.07	7.88	274	752	538	0.40	50	12982
JULY -2014	2.05	7.84	293	806	580	0.43	55	13780
AUGUST -2014	1.98	7.79	>456	1240	863	0.44	55	20476
SEPTEMBER-2014	2.02	7.79	376	1410	1010	0.44	52	23754
OCTOBER -2014	2.09	7.74	384	1210	861	0.42	49	21091
NOVEMBER -2014	2.13	7.79	245	522	386	0.33	41	9273
DECEMBER -2014	2.01	7.77	<170	384	281	0.34	41	6437
Average	2.08	7.82	286	791	573	0.37	46	13645

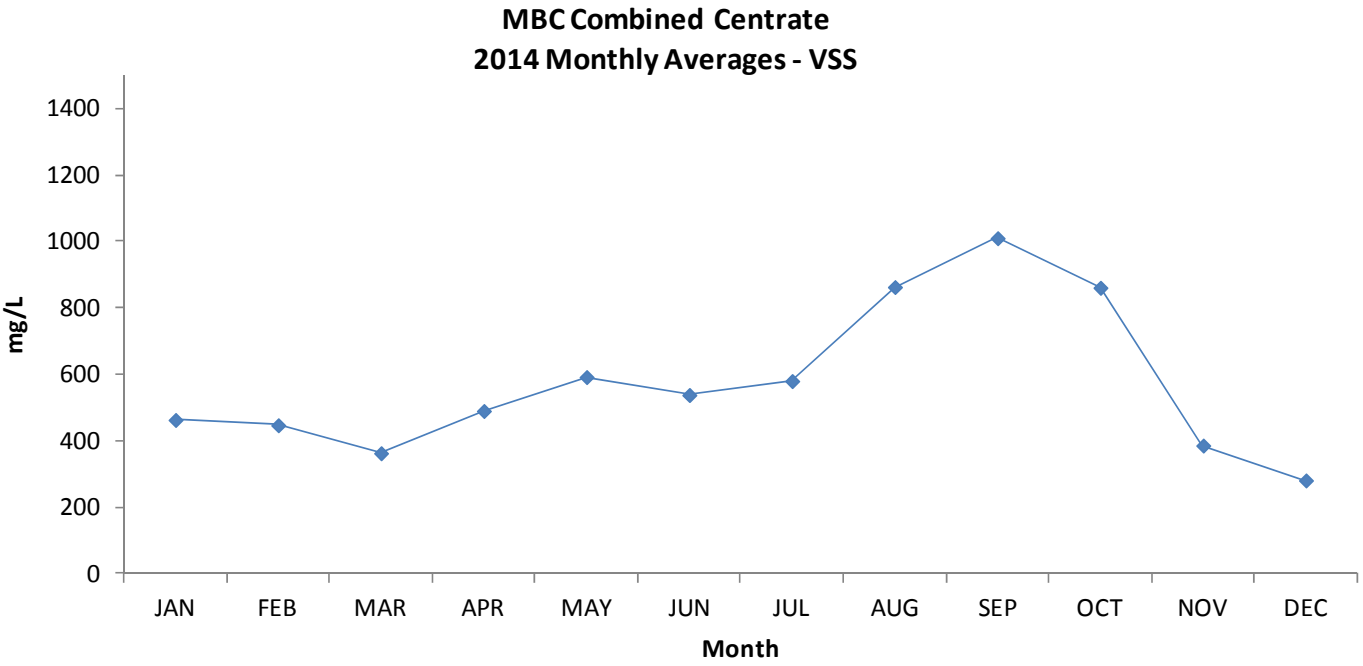
'Average' = Annual average of Monthly Averages

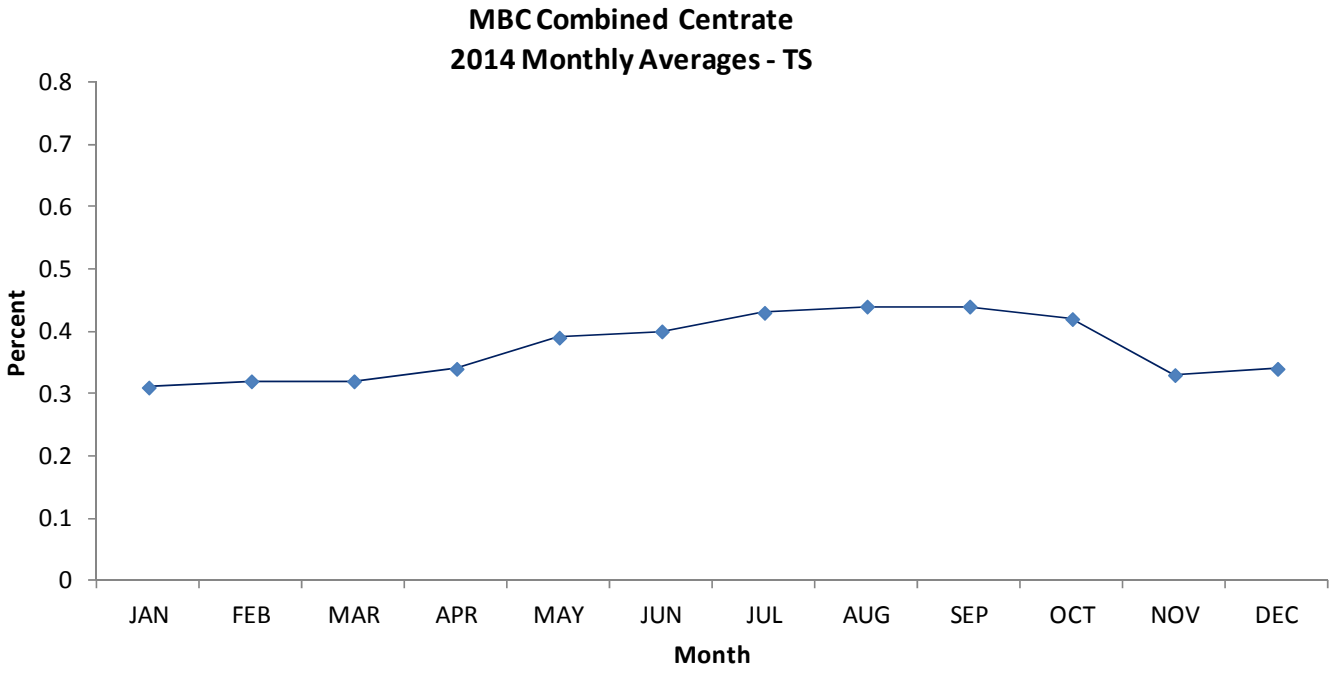

MBC Combined Centrate
2014 Monthly Averages - Flow
MGD
3
2.8
2.6
2.4
2.2
2
1.8
1.6
1.4
1.2
1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month

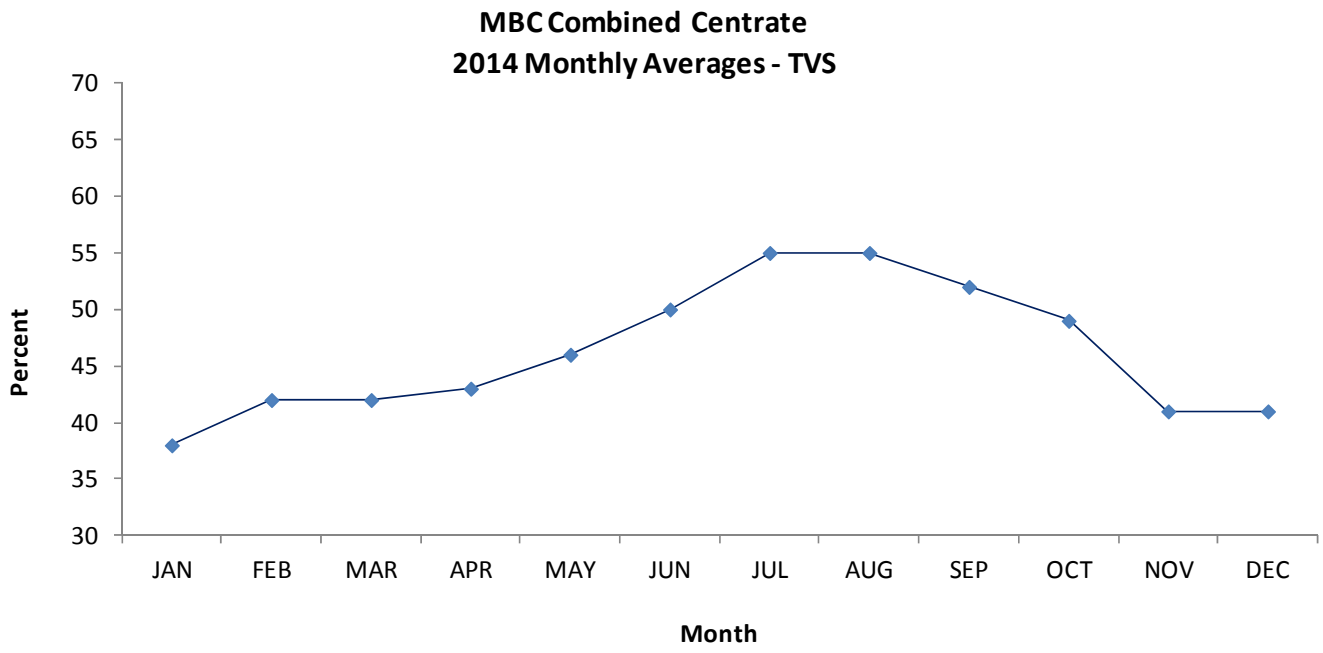

MBC Combined Centrate
2014 Monthly Averages - pH
pH Units
8
7.95
7.9
7.85
7.8
7.75
7.7
7.65
7.6
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month

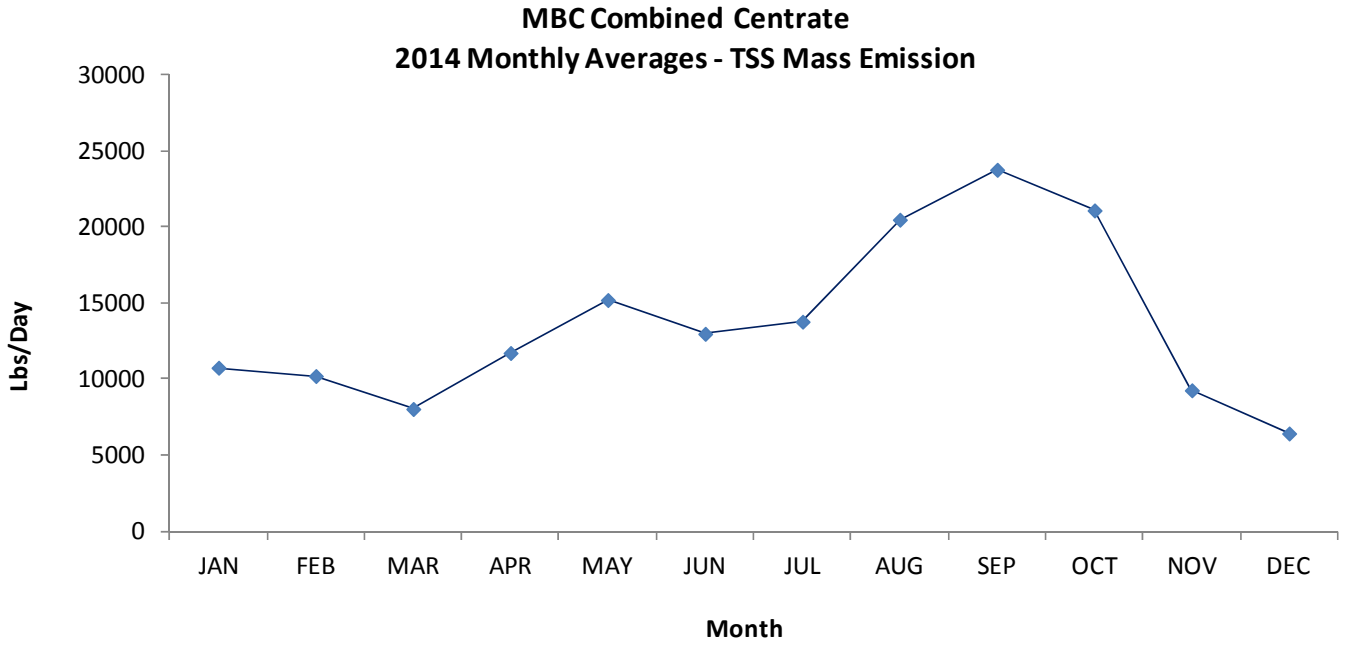

MBC Combined Centrate
2014 Monthly Averages - BOD
700
600
500
400
300
200
100
0
mg/L
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month


MBC Combined Centrate
2014 Monthly Averages - TSS
3000
2500
2000
1500
1000
500
0
mg/L
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month

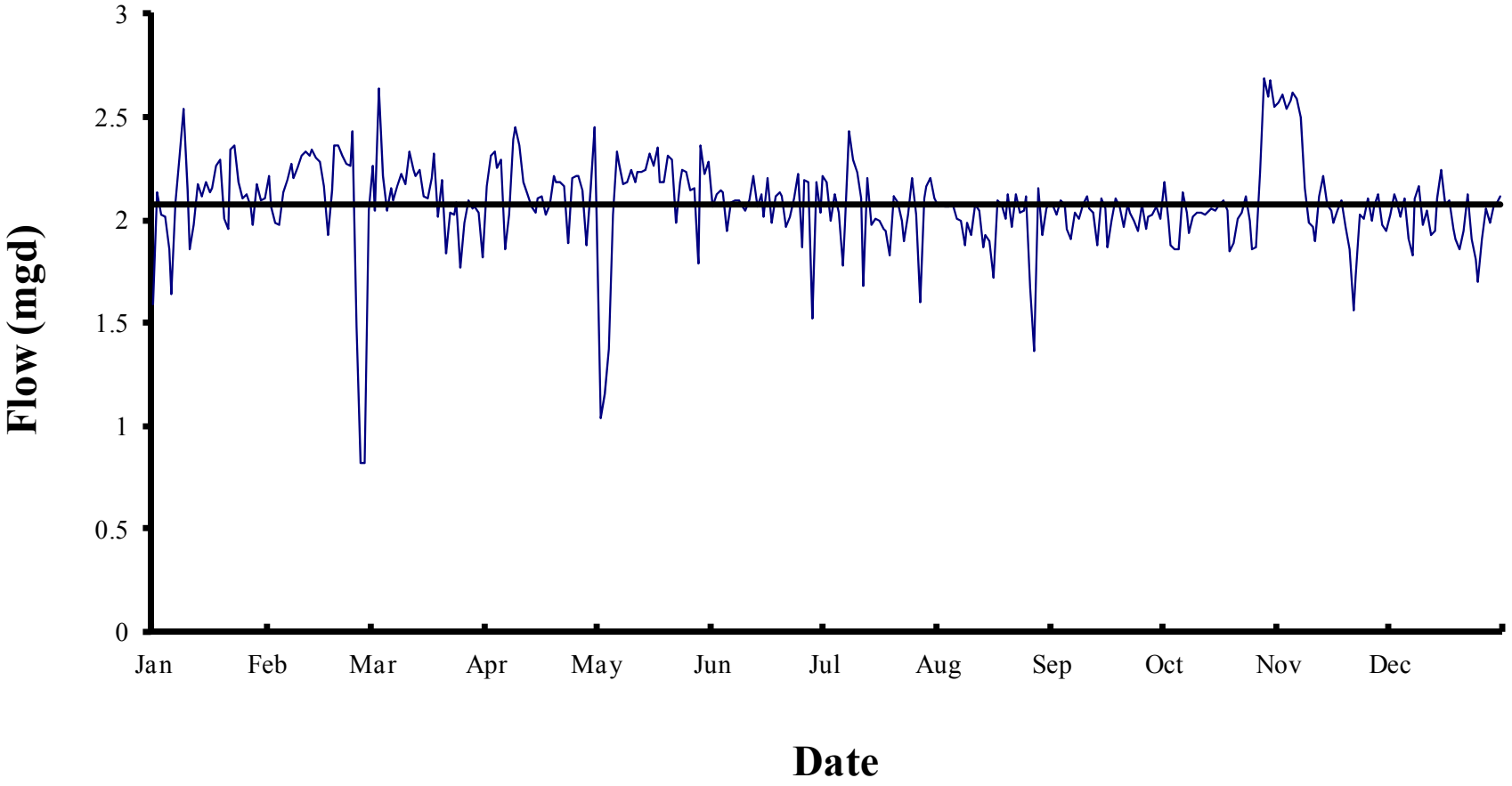

MBC Combined Centrate
2014 Monthly Averages - VSS
mg/L
1400
1200
1000
800
600
400
200
0
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Month


MBC Combined Centrate
2014 Monthly Averages - TS
Percent
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Month


MBC Combined Centrate
2014 Monthly Averages - TVS
Percent
70
65
60
55
50
45
40
35
30
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Month


MBC Combined Centrate
2014 Monthly Averages - TSS Mass Emission
Lbs/Day
30000
25000
20000
15000
10000
5000
0
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Month

2014 MBC Return Stream Flow (mgd)



Metro Biosolids Center

2014 MBC Return Stream Daily Flows (mgd)

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	1.59	2.21	2.26	2.16	2.00	2.06	2.21	2.06	2.07	2.19	2.57	2.03	
2	2.14	2.07	2.04	2.32	1.04	2.13	2.18	2.07	2.02	1.99	2.61	2.13	
3	2.02	1.99	2.64	2.33	1.15	2.14	1.99	2.07	2.09	1.88	2.54	2.10	
4	2.02	1.98	2.21	2.26	1.37	2.13	2.12	2.07	2.07	1.86	2.58	2.02	
5	1.85	2.14	2.05	2.30	2.02	1.94	2.04	2.07	1.95	1.86	2.61	2.11	
6	1.64	2.19	2.15	1.86	2.33	2.09	1.78	2.01	1.91	2.13	2.59	1.91	
7	2.09	2.27	2.09	2.03	2.27	2.09	1.98	1.99	2.04	2.03	2.50	1.83	
8	2.30	2.20	2.16	2.40	2.17	2.09	2.42	1.88	2.00	1.93	2.15	2.11	
9	2.54	2.26	2.22	2.45	2.18	2.07	2.29	1.99	2.08	2.02	1.99	2.16	
10	2.14	2.32	2.17	2.36	2.24	2.05	2.23	1.93	2.11	2.03	1.97	1.97	
11	1.85	2.33	2.33	2.18	2.18	2.10	2.10	2.07	2.05	2.04	1.89	2.05	
12	1.98	2.31	2.24	2.13	2.23	2.21	1.68	2.04	2.03	2.02	2.11	1.92	
13	2.17	2.34	2.21	2.06	2.23	2.06	2.20	1.86	1.87	2.05	2.22	1.94	
14	2.12	2.30	2.24	2.04	2.25	2.12	1.98	1.93	2.11	2.06	2.07	2.11	
15	2.19	2.28	2.11	2.10	2.33	2.01	2.00	1.90	2.05	2.04	2.05	2.24	
16	2.14	2.16	2.10	2.11	2.27	2.20	1.99	1.72	1.87	2.08	1.99	2.07	
17	2.15	1.93	2.21	2.02	2.35	1.99	1.95	2.09	2.00	2.09	2.04	2.10	
18	2.26	2.14	2.32	2.07	2.18	2.12	1.94	2.08	2.10	2.04	2.09	1.96	
19	2.29	2.36	2.02	2.21	2.18	2.13	1.83	2.00	2.06	1.85	1.97	1.91	
20	2.00	2.36	2.19	2.18	2.31	2.12	2.11	2.12	1.97	1.89	1.85	1.86	
21	1.96	2.31	1.83	2.18	2.29	1.97	2.08	1.97	2.07	2.00	1.56	1.94	
22	2.34	2.27	2.03	2.16	1.99	2.01	2.00	2.12	2.03	2.04	1.73	2.12	
23	2.36	2.27	2.02	1.89	2.18	2.11	1.90	2.03	1.99	2.11	2.02	1.90	
24	2.18	2.43	2.09	2.21	2.24	2.22	2.02	2.05	1.95	2.00	2.01	1.81	
25	2.10	1.48	1.77	2.22	2.23	1.86	2.20	2.12	2.08	1.86	2.11	1.70	
26	2.12	0.82	1.99	2.21	2.15	2.19	2.03	1.67	1.96	1.87	2.00	1.90	
27	2.06	0.82	2.09	2.15	2.15	2.18	1.60	1.37	2.01	2.23	2.07	2.06	
28	1.97	2.04	2.05	1.88	1.78	1.52	2.11	2.15	2.03	2.68	2.12	1.99	
29	2.17		2.07	2.14	2.36	2.18	2.17	1.93	2.06	2.60	1.97	2.07	
30	2.09		2.04	2.45	2.22	2.04	2.20	2.06	2.00	2.67	1.95	2.07	
31	2.10		1.81		2.28		2.11	2.08		2.55		2.11	Annual Summary
Avg	2.10	2.09	2.12	2.17	2.10	2.07	2.05	1.98	2.02	2.09	2.13	2.01	2.08
Min	1.59	0.82	1.77	1.86	1.04	1.52	1.60	1.37	1.87	1.85	1.56	1.70	0.82
Max	2.54	2.43	2.64	2.45	2.36	2.22	2.42	2.15	2.11	2.68	2.61	2.24	2.68

METRO BIOSOLIDS CENTER
ANNUAL SLUDGE CENTRATE COMPOSITES
Trace Metals

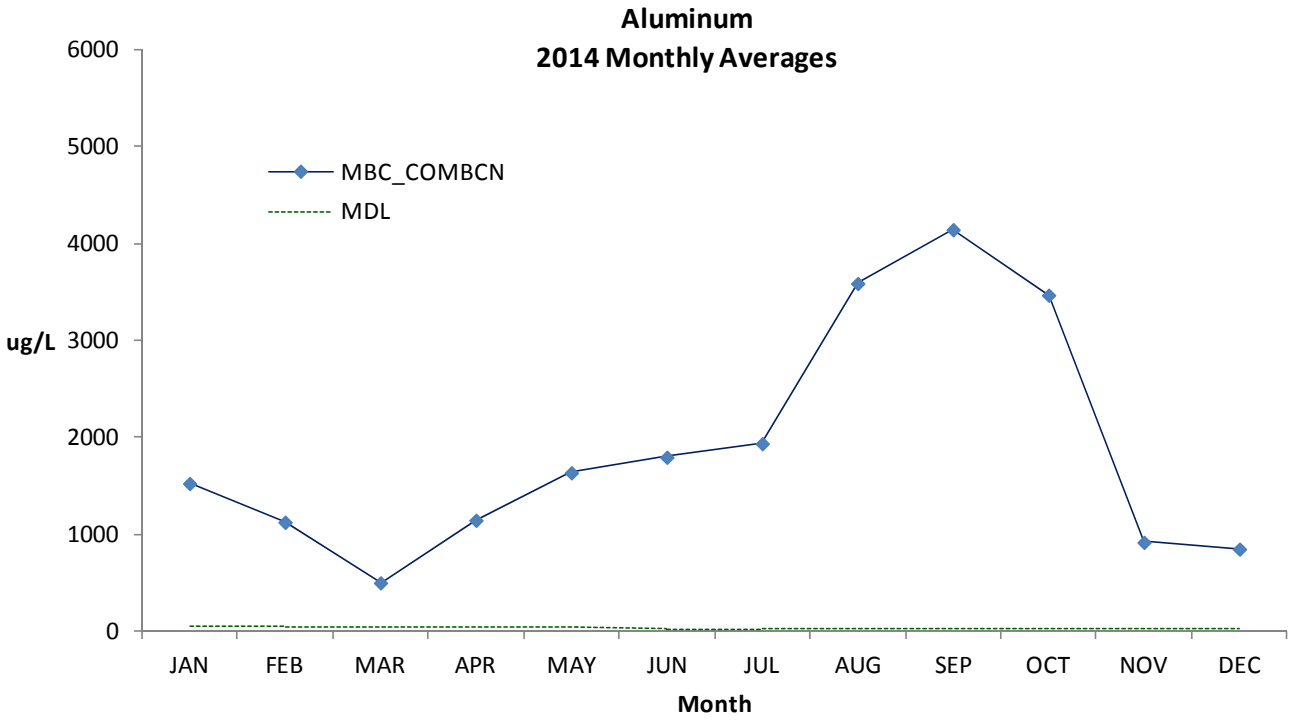
2014 Annual

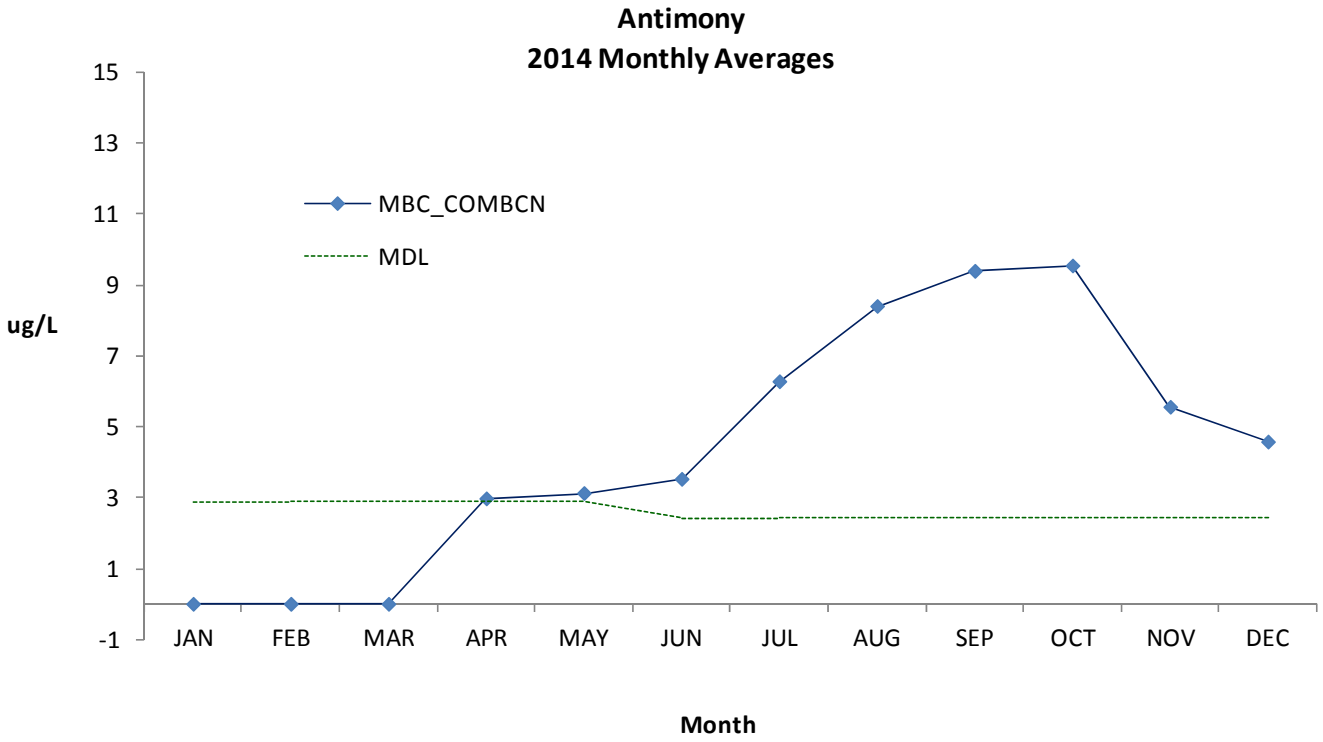
Source:			MBC_COMBCN	MBC_COMBCN	MBC_COMBCN	MBC_COMBCN	MBC_COMBCN	MBC_COMBCN
Date:			31-JAN-2014	28-FEB-2014	31-MAR-2014	30-APR-2014	31-MAY-2014	30-JUN-2014
Sample ID:			P695520	P701728	P707335	P710844	P716425	P720869
Aluminum	47	UG/L	1530	1130	506	1150	1640	1800
Antimony	2.9	UG/L	ND	ND	ND	3.0	3.1	3.5
Arsenic	.06	UG/L	3.2	2.6	3.1	2.8	3.2	3.0
Barium	.7	UG/L	305	269	194	246	308	290
Beryllium	.05	UG/L	0.06	<0.02	0.04	0.06	0.04	ND
Cadmium	.53	UG/L	ND	ND	ND	ND	ND	2.1
Chromium	1.2	UG/L	18	13	7	14	20	16
Cobalt	.85	UG/L	6.5	5.8	5.1	6.6	6.6	6.0
Copper	2.16	UG/L	299	220	131	254	356	301
Iron	37	UG/L	45900	35300	25300	35600	56500	50500
Lead	2	UG/L	10	5	5	6	10	6
Manganese	.78	UG/L	338	276	251	300	445	467
Mercury	.005	UG/L	0.22	0.16	0.07	0.16	0.21	0.16
Molybdenum	.89	UG/L	6.1	6.1	4.1	6.3	10.0	10.1
Nickel	.53	UG/L	29	28	23	29	33	26
Selenium	.08	UG/L	3.31	2.88	2.44	3.29	3.60	3.11
Silver	.73	UG/L	1	1	1	ND	4	2
Thallium	3.9	UG/L	ND	ND	ND	ND	ND	ND
Vanadium	.64	UG/L	19.1	14.0	9.0	14.5	13.9	13.9
Zinc	4.19	UG/L	403	334	208	376	504	458

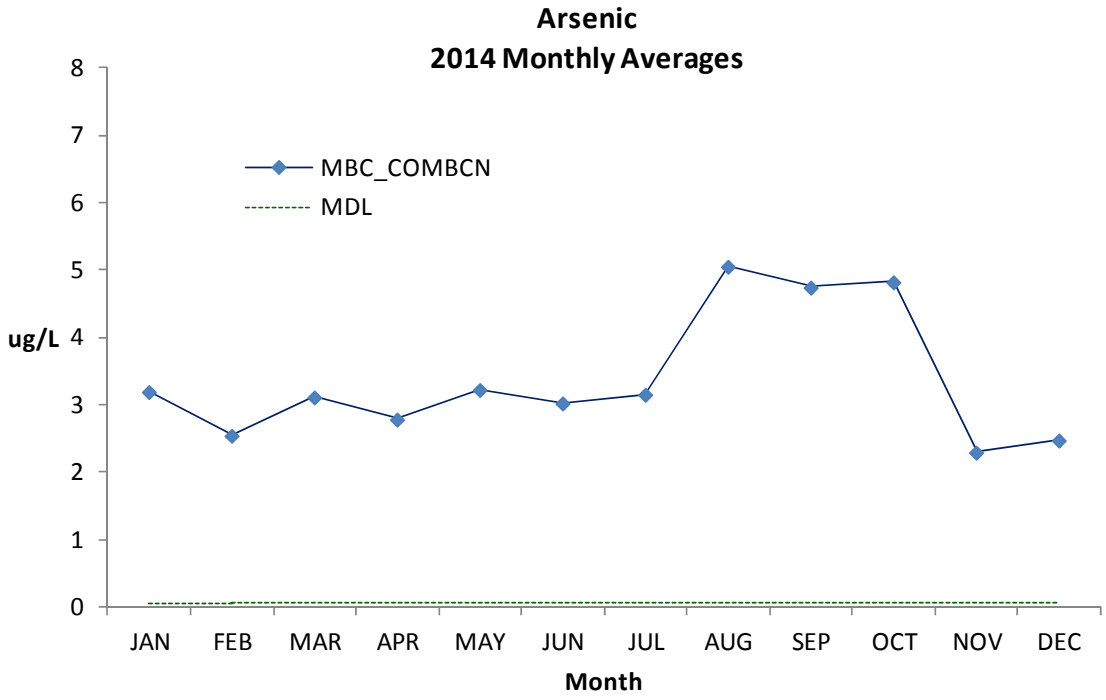
Source:			MBC_COMBCN	MBC_COMBCN	MBC_COMBCN	MBC_COMBCN	MBC_COMBCN	MBC_COMBCN
Date:			31-JUL-2014	31-AUG-2014	30-SEP-2014	31-OCT-2014	30-NOV-2014	31-DEC-2014
Sample ID:			P727206	P731762	P736391	P741661	P746877	P751629
Aluminum	47	UG/L	1940	3590	4150	3470	923	854
Antimony	2.9	UG/L	6.3	8.4	9.4	9.5	5.6	4.6
Arsenic	.06	UG/L	3.2	5.1	4.8	4.8	2.3	2.5
Barium	.7	UG/L	255	393	475	454	241	211
Beryllium	.05	UG/L	ND	ND	ND	0.11	ND	ND
Cadmium	.53	UG/L	4.1	2.4	8.8	6.0	1.0	0.4
Chromium	1.2	UG/L	18	25	37	32	10	9
Cobalt	.85	UG/L	5.8	9.2	9.9	8.7	3.8	5.0
Copper	2.16	UG/L	302	431	634	555	169	150
Iron	37	UG/L	53900	90800	107000	94700	39300	25600
Lead	2	UG/L	7	14	16	15	6	7
Manganese	.78	UG/L	481	510	665	702	498	382
Mercury	.005	UG/L	0.18	0.34	0.51	0.46	0.07	0.07
Molybdenum	.89	UG/L	11.0	23.0	24.5	18.7	6.8	5.9
Nickel	.53	UG/L	24	40	36	40	16	18
Selenium	.08	UG/L	2.42	4.35	4.82	3.64	2.31	1.83
Silver	.73	UG/L	1	2	3	3	ND	1
Thallium	3.9	UG/L	ND	ND	ND	ND	ND	ND
Vanadium	.64	UG/L	11.7	19.4	31.9	28.5	5.6	5.9
Zinc	4.19	UG/L	445	604	883	752	214	202

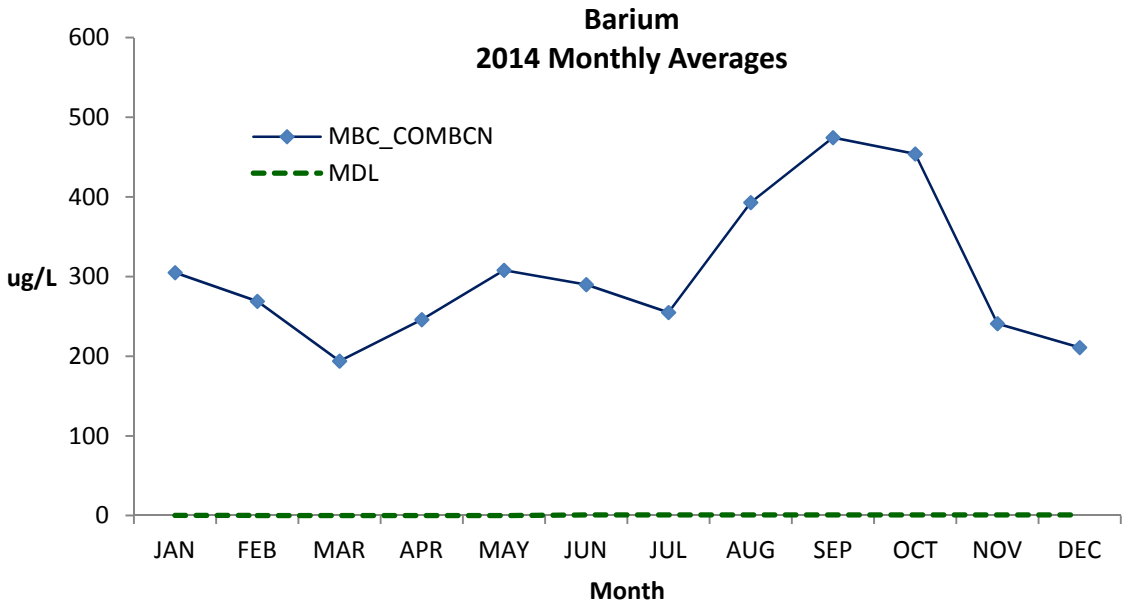
ND= Not Detected

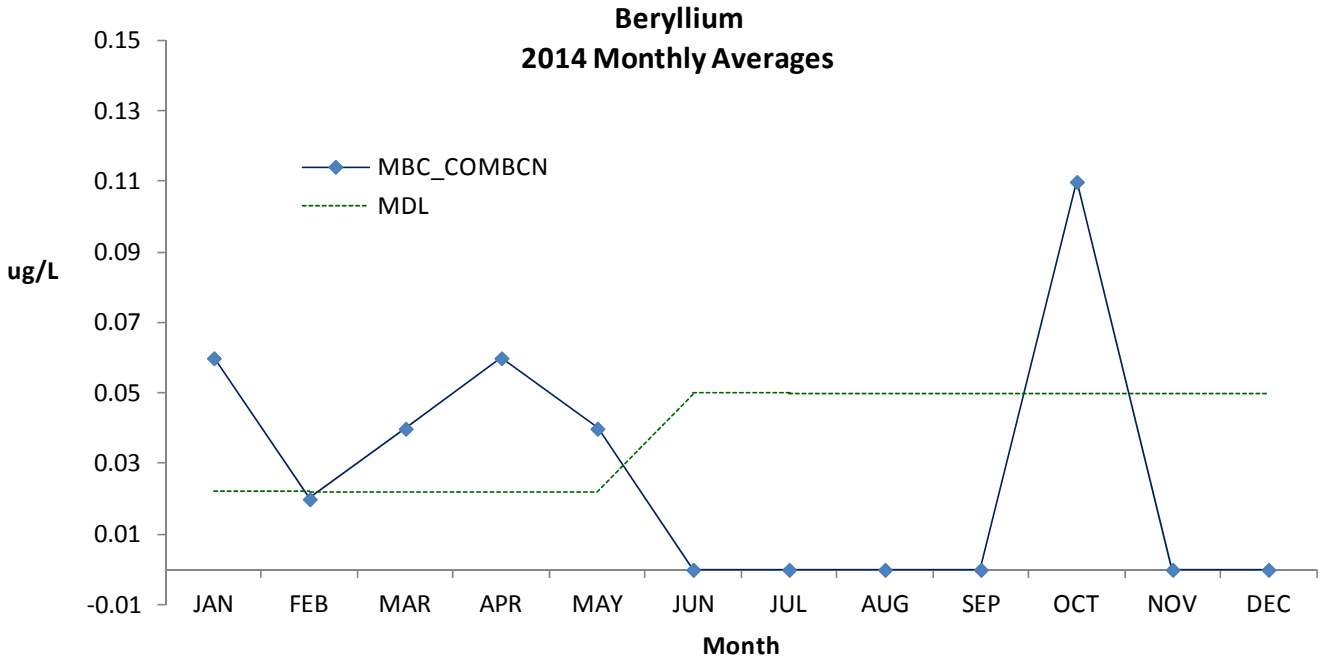
MBC_COMBCN= Metro Biosolids Center Combined Sludge Centrate

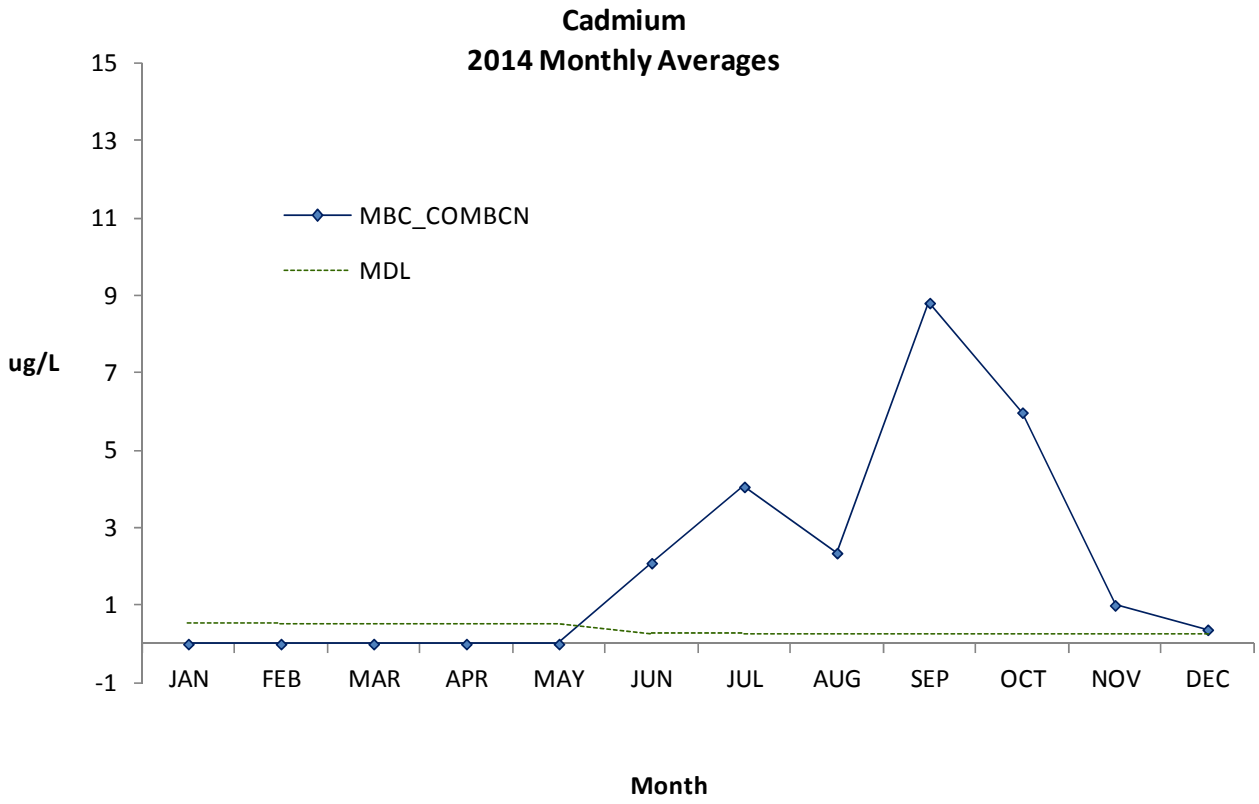

Aluminum
2014 Monthly Averages
6000
5000
4000
3000
2000
1000
0
ug/L
MBC_COMBCN
MDL
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Month

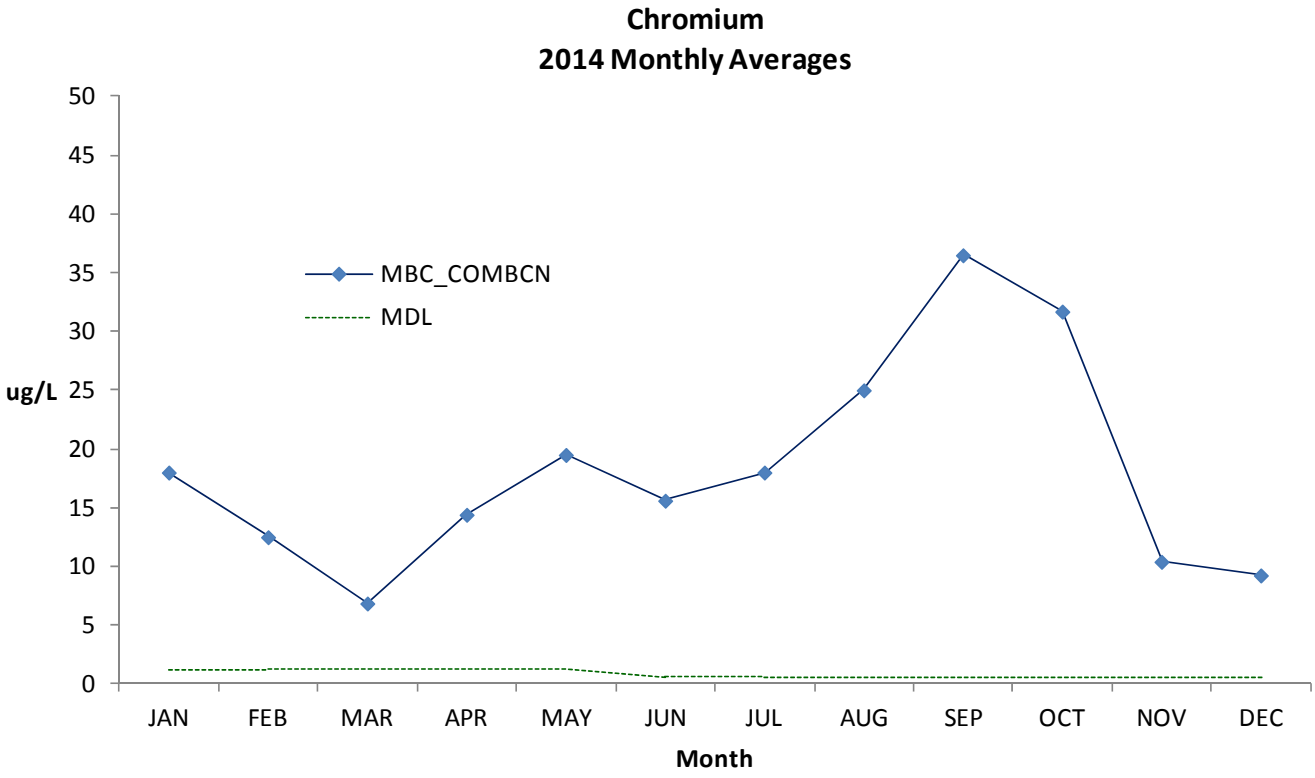

Antimony
2014 Monthly Averages
15
13
11
9
7
5
3
1
-1
ug/L
MBC_COMBCN
MDL
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Month

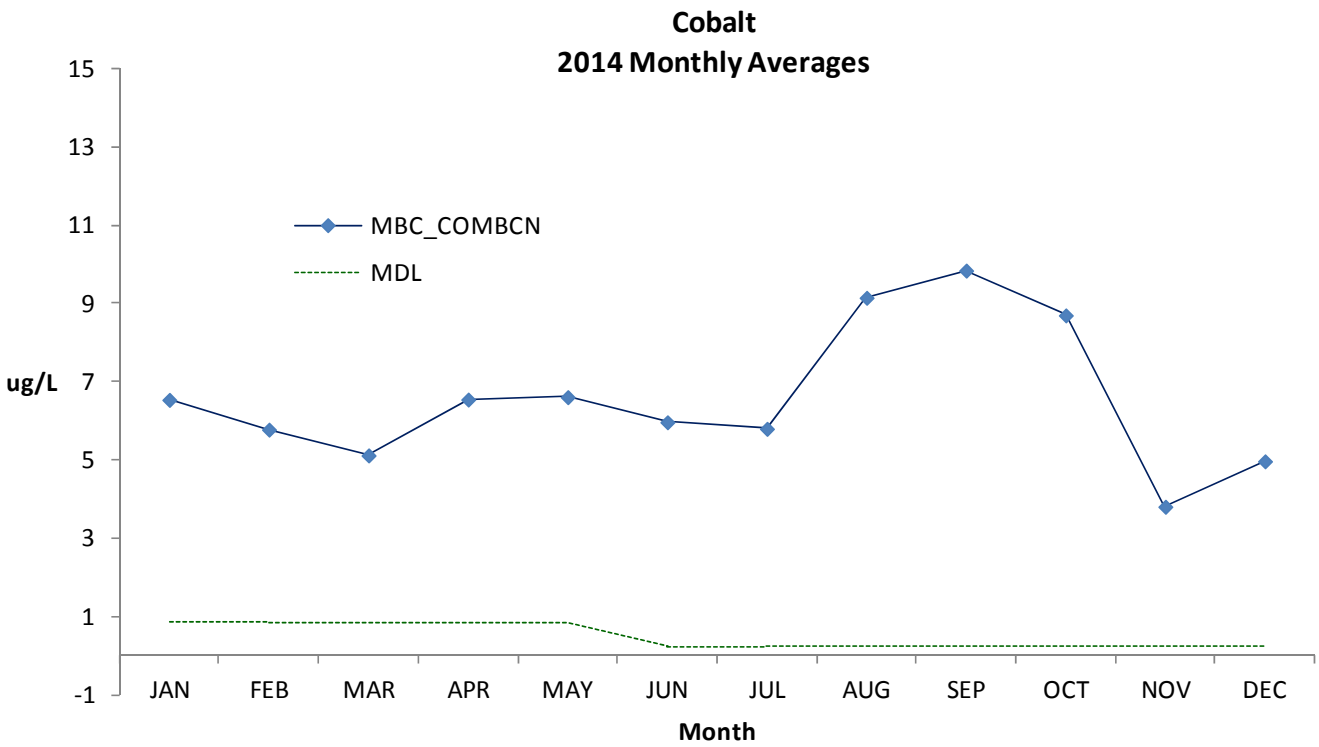

Arsenic
2014 Monthly Averages
MBC_COMBCN
MDL
ug/L
0
1
2
3
4
5
6
7
8
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Month

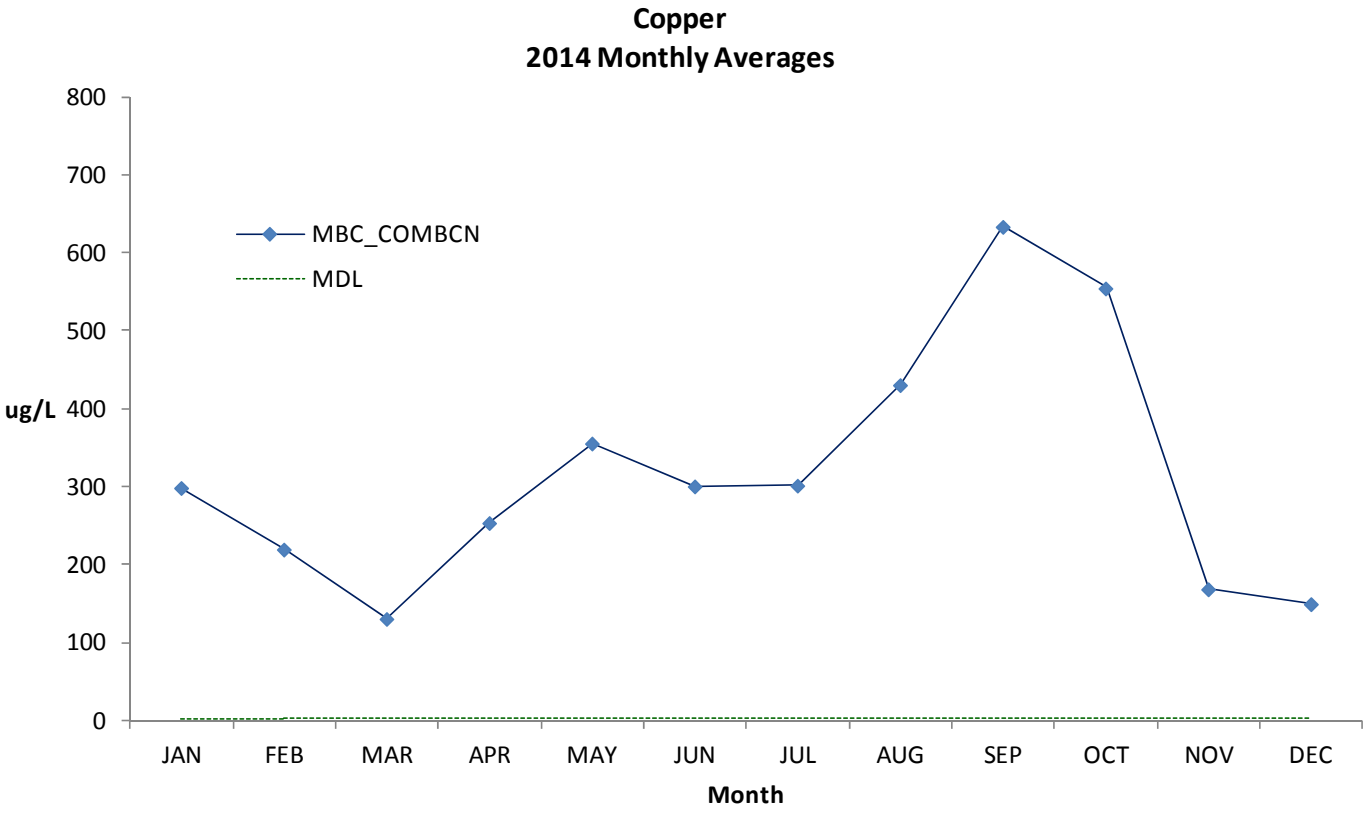

Barium
2014 Monthly Averages
MBC_COMBCN
MDL
ug/L
0
100
200
300
400
500
600
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Month

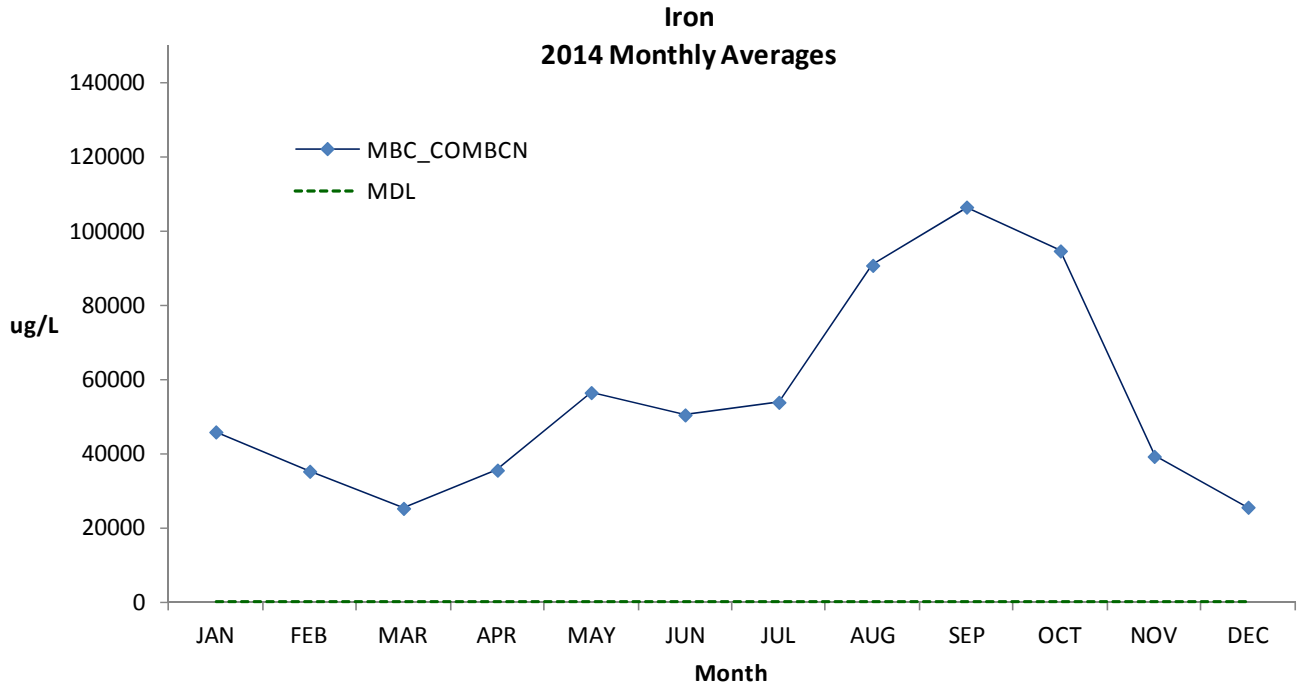

Beryllium
2014 Monthly Averages
MBC_COMBCN
MDL
ug/L
0.15
0.13
0.11
0.09
0.07
0.05
0.03
0.01
-0.01
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Month

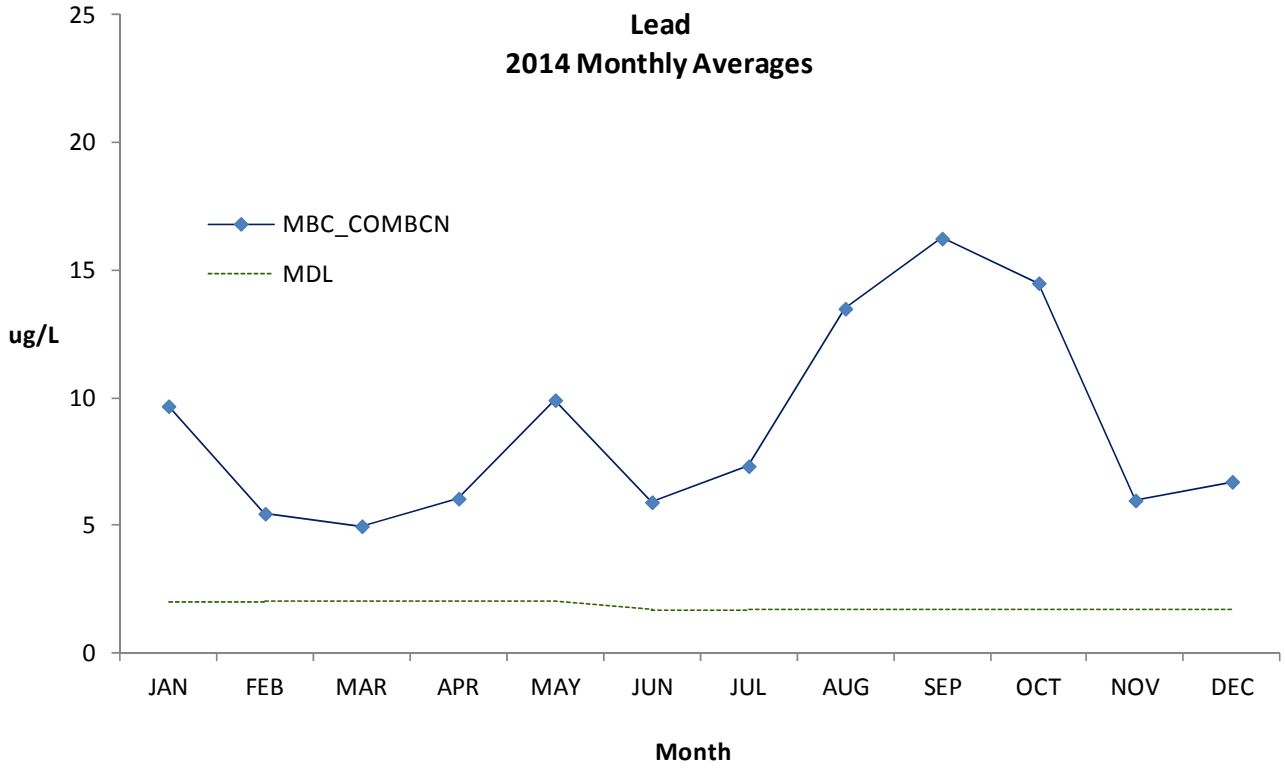

Cadmium
2014 Monthly Averages
MBC_COMBCN
MDL
ug/L
15
13
11
9
7
5
3
1
-1
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Month

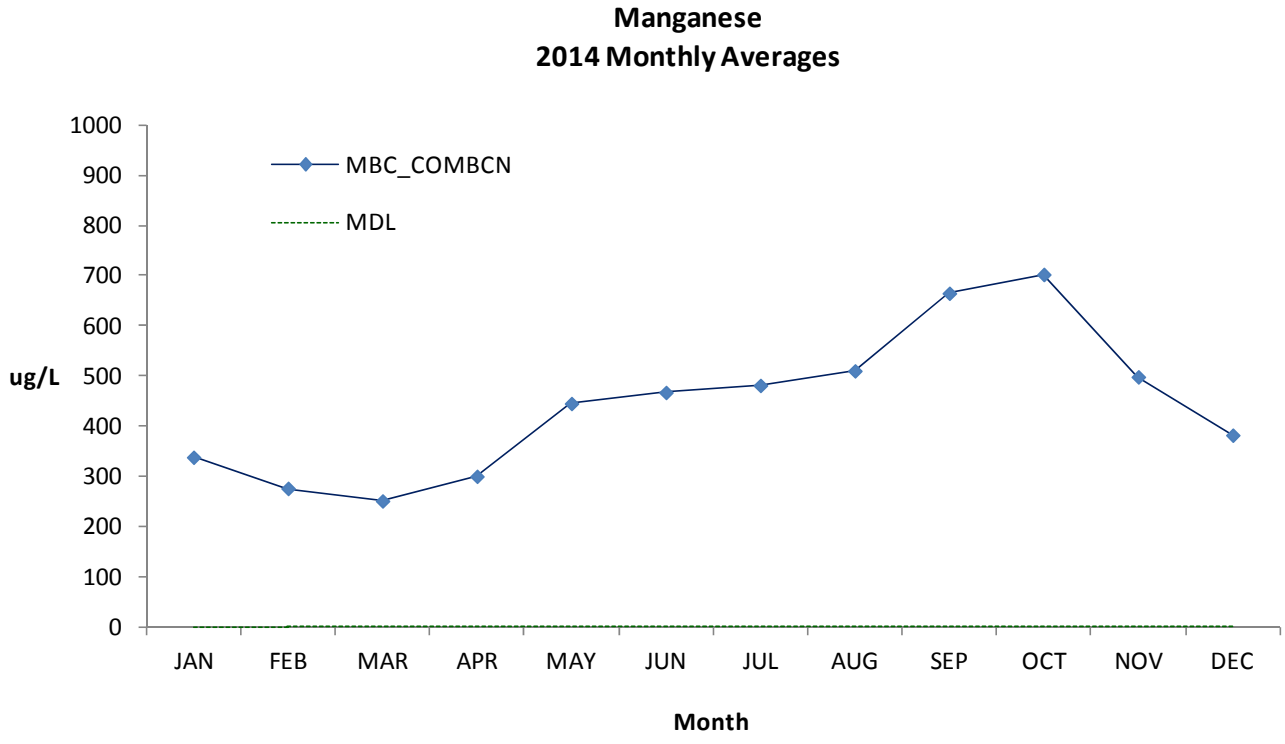

Chromium
2014 Monthly Averages
50
45
40
35
30
25
20
15
10
5
0
ug/L
MBC_COMBCN
MDL
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Month

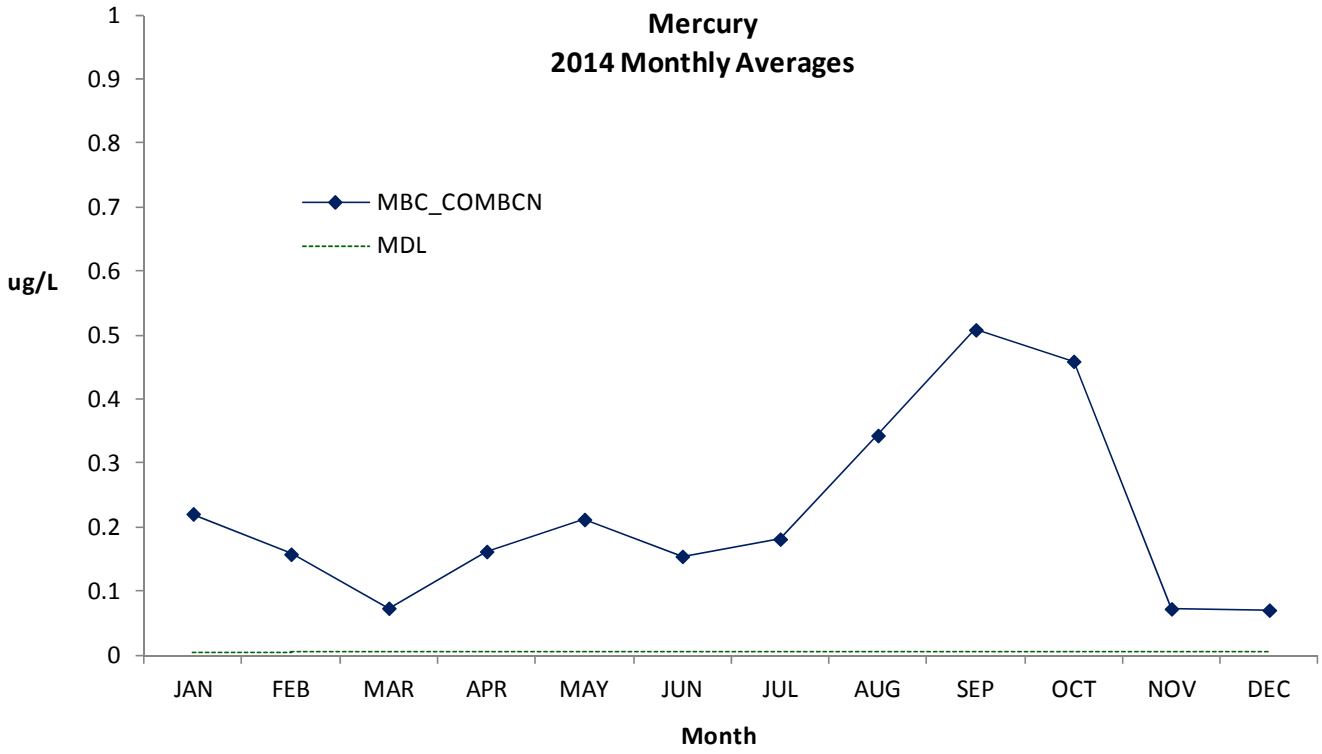

Cobalt
2014 Monthly Averages
15
13
11
9
7
5
3
1
-1
ug/L
MBC_COMBCN
MDL
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Month

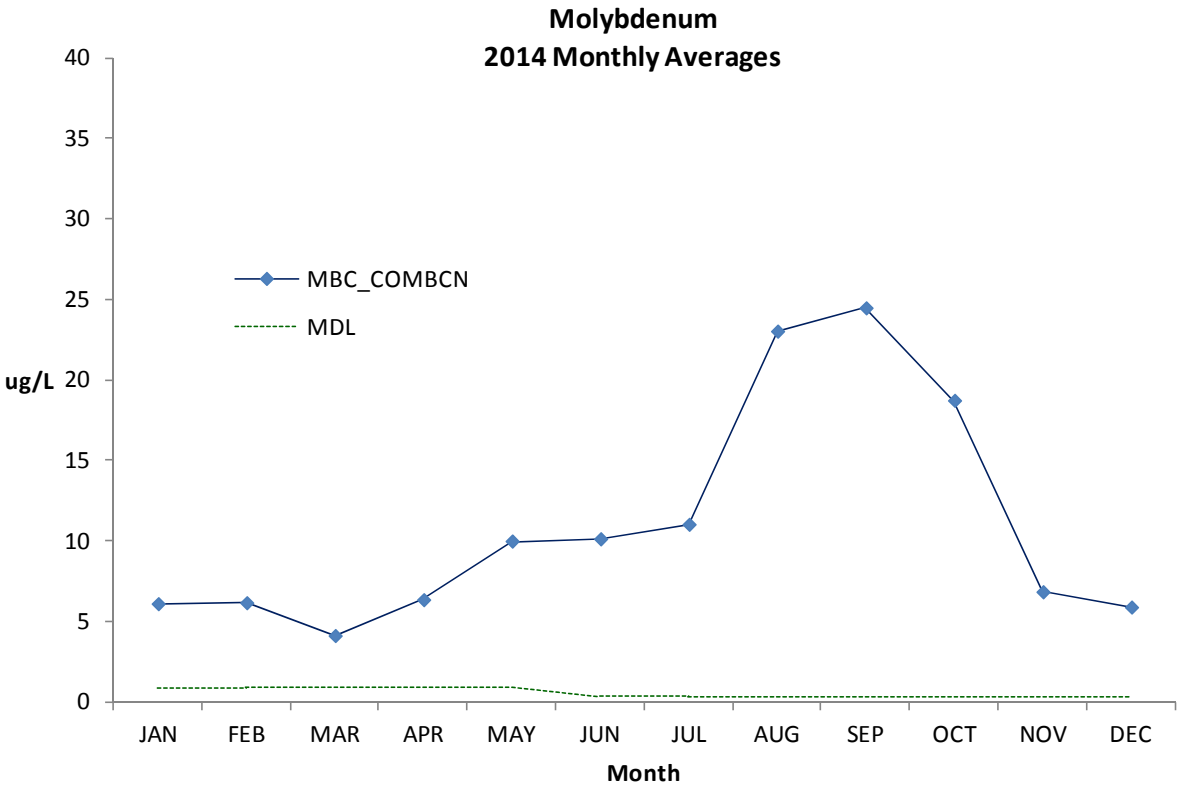

Copper
2014 Monthly Averages
800
700
600
500
400
300
200
100
0
ug/L
MBC_COMBCN
MDL
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Month

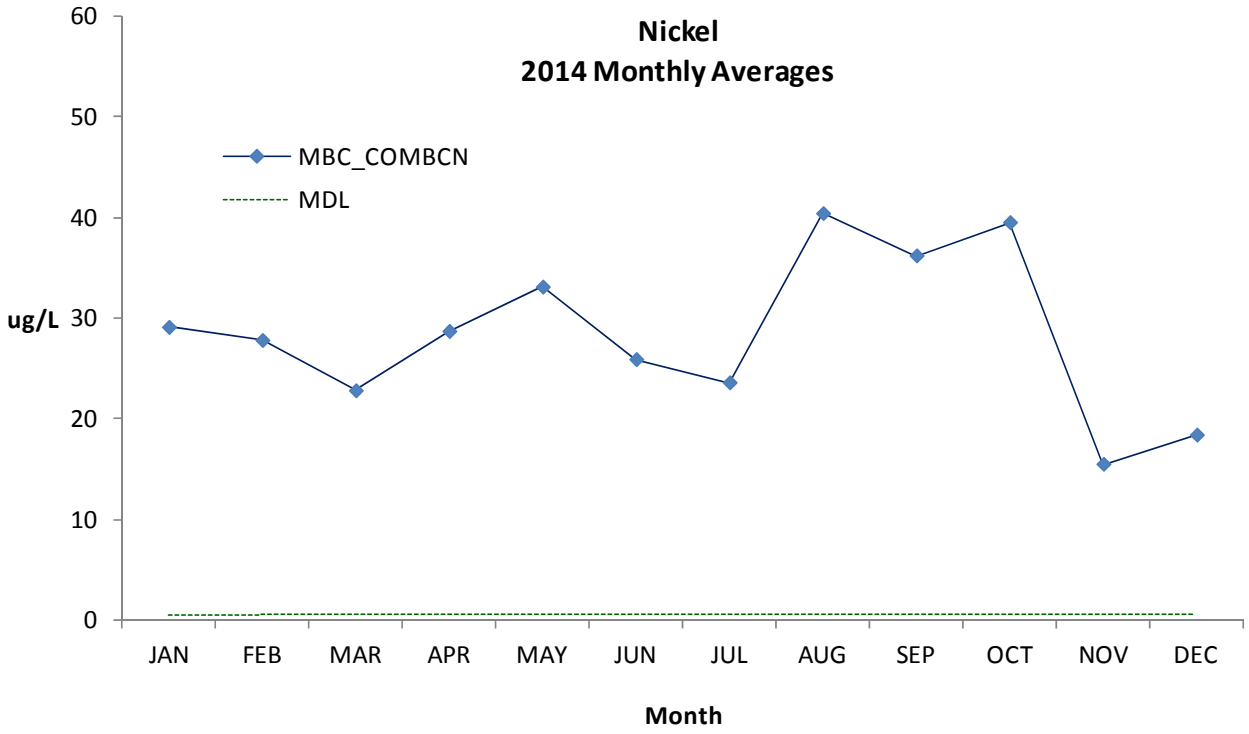

Iron
2014 Monthly Averages
140000
120000
100000
80000
60000
40000
20000
0
ug/L
MBC_COMBCN
MDL
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Month

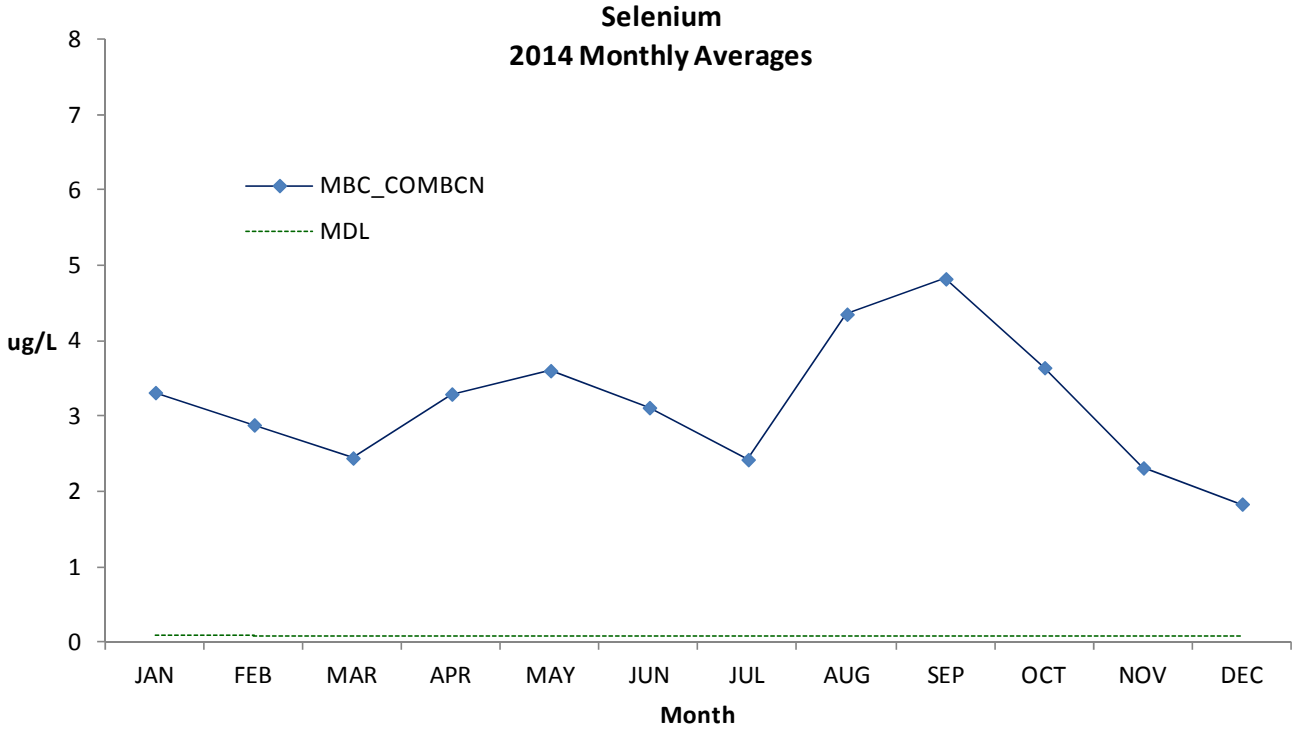

Lead
2014 Monthly Averages
25
20
15
10
5
0
ug/L
MBC_COMBCN
MDL
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Month

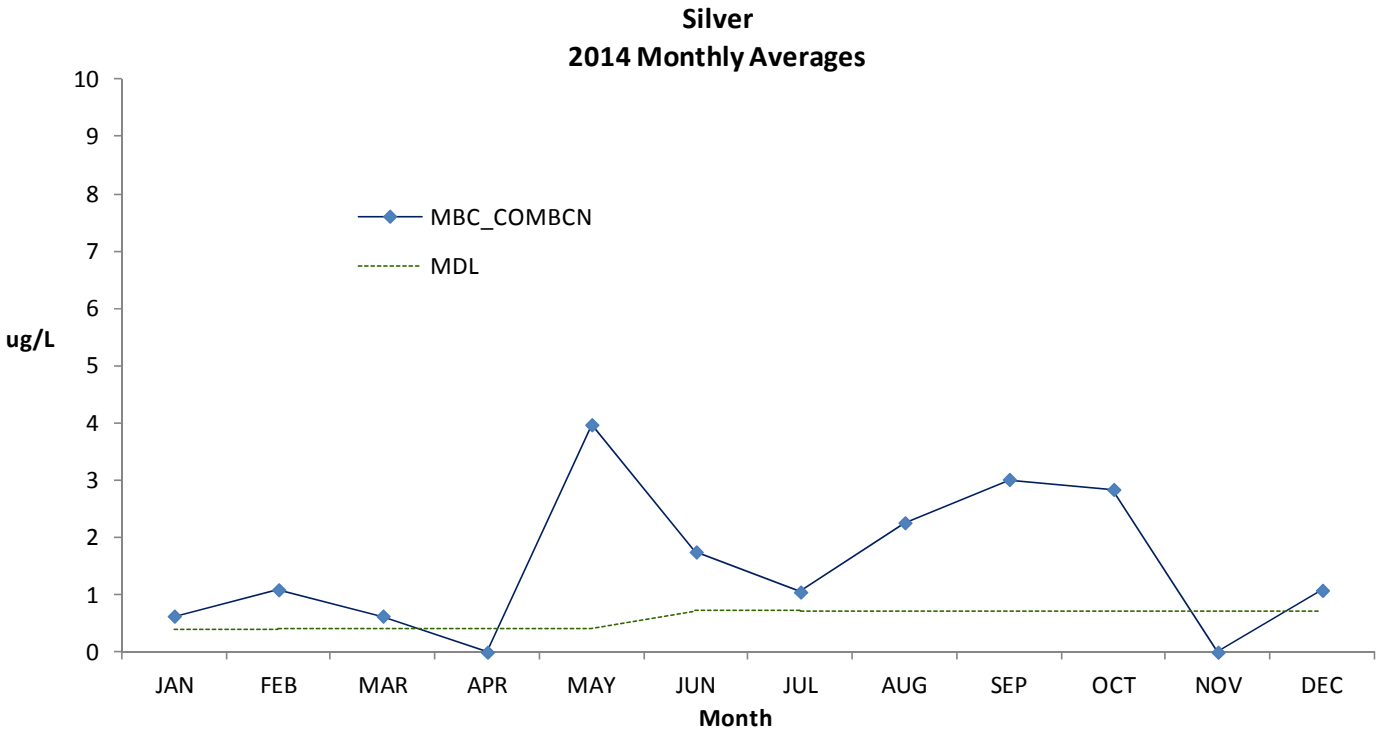

Manganese
2014 Monthly Averages
1000
900
800
700
600
500
400
300
200
100
0
ug/L
MBC_COMBCN
MDL
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Month


Mercury
2014 Monthly Averages
MBC_COMBCN
MDL
ug/L
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Month


Molybdenum
2014 Monthly Averages
MBC_COMBCN
MDL
ug/L
40
35
30
25
20
15
10
5
0
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Month


Nickel
2014 Monthly Averages
MBC_COMBCN
MDL
ug/L
60
50
40
30
20
10
0
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Month


Selenium
2014 Monthly Averages
MBC_COMBCN
MDL
ug/L
8
7
6
5
4
3
2
1
0
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Month


Silver
2014 Monthly Averages
10
9
8
7
6
5
4
3
2
1
0
ug/L
MBC_COMBCN
MDL
JAN
FEB
MAR
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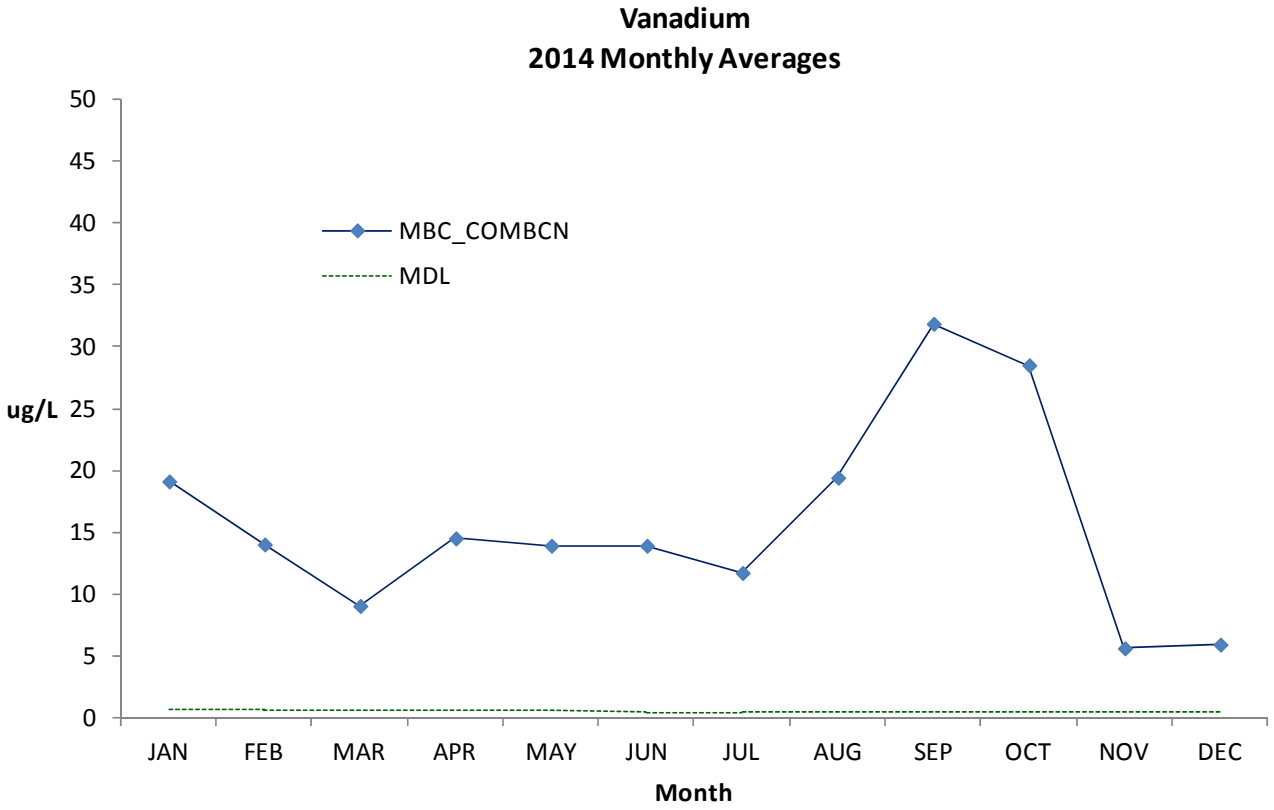
SEP
OCT
NOV
DEC
Month


Vanadium
2014 Monthly Averages
50
45
40
35
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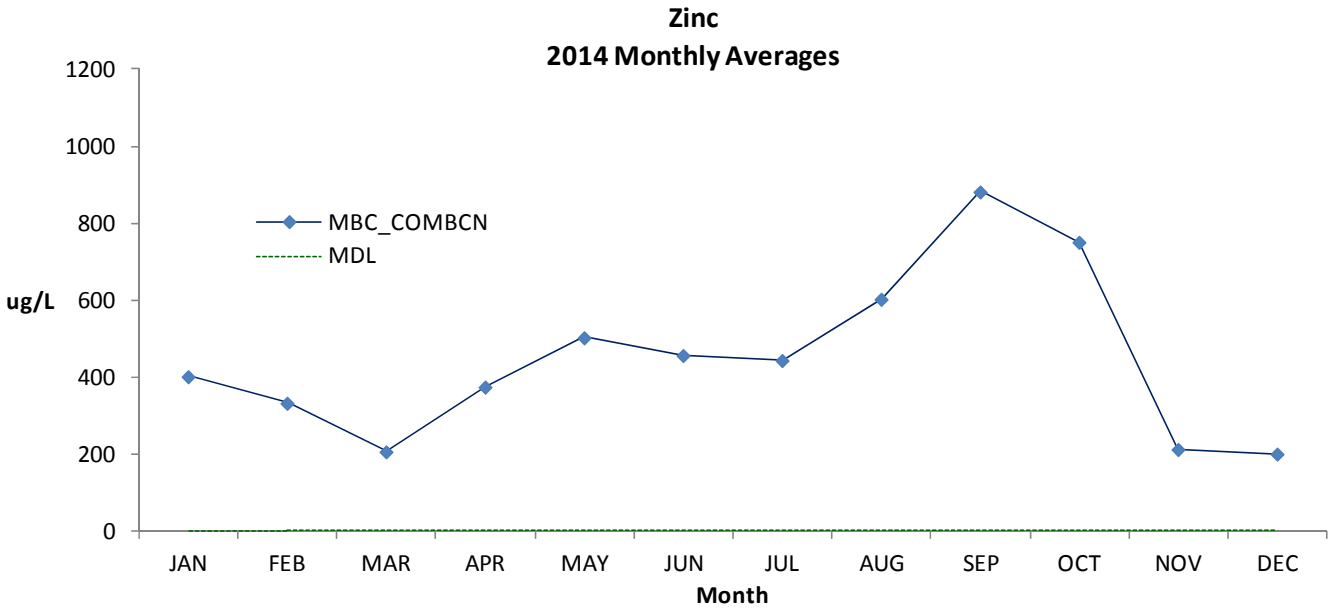
25
20
15
10
5
0
ug/L
MBC_COMBCN
MDL
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Month


Zinc
2014 Monthly Averages
1200
1000
800
600
400
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0
ug/L
MBC_COMBCN
MDL
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Month

C. MBC Digester and Digested Sludge Data Summary

Metro Biosolids Center
Digesters

Year: 2014

Digester 1

	pH	Total Solids (%)	Volatile Solids (%)	Alkal-inity (mg/L)	Volatile Acids (mg/L)	Methane (%)	Carbon Dioxide (%)	H2S ppm
JANUARY -2014				NOTE IN SERVICE				
FEBRUARY -2014								
MARCH -2014								
APRIL -2014								
MAY -2014								
JUNE -2014								
JULY -2014								
AUGUST -2014								
SEPTEMBER-2014								
OCTOBER -2014								
NOVEMBER -2014								
DECEMBER -2014								
Average:	*	*	*	*	*	*	*	*

Digester 2

	pH	Total Solids (%)	Volatile Solids (%)	Alkal-inity (mg/L)	Volatile Acids (mg/L)	Methane (%)	Carbon Dioxide (%)	H2S ppm
JANUARY -2014				NOTE IN SERVICE				
FEBRUARY -2014								
MARCH -2014								
APRIL -2014								
MAY -2014								
JUNE -2014								
JULY -2014								
AUGUST -2014								
SEPTEMBER-2014								
OCTOBER -2014								
NOVEMBER -2014								
DECEMBER -2014								
Average:	*	*	*	*	*	*	*	*

Digester 3

	pH	Total Solids (%)	Volatile Solids (%)	Alkal-inity (mg/L)	Volatile Acids (mg/L)	Methane (%)	Carbon Dioxide (%)	H2S ppm
JANUARY -2014	6.98	2.9	66.0	2500	73	60.3	39.7	22
FEBRUARY -2014	7.04	3.0	66.2	2600	72	60.2	39.8	22
MARCH -2014	7.07	2.9	66.1	2680	74	60.0	40.0	24
APRIL -2014	7.05	2.8	66.2	2460	72	59.8	40.2	28
MAY -2014	6.78	2.9	65.1	1540	70	58.6	41.4	44
JUNE -2014	6.75	3.3	66.3	1410	74	59.2	40.8	28
JULY -2014	6.86	3.3	66.9	1800	72	60.6	39.5	22
AUGUST -2014	6.96	3.1	66.5	1880	61	60.5	39.5	18
SEPTEMBER-2014	7.00	3.1	65.2	1950	43	60.6	39.4	20
OCTOBER -2014	7.01	3.0	65.3	1960	40	60.5	39.5	18
NOVEMBER -2014	7.06	2.9	65.8	2190	40	60.4	39.6	20
DECEMBER -2014	7.11	2.9	65.6	2380	43	60.2	39.8	18
Average:	6.97	3.0	65.9	2113	61	60.1	39.9	24

D. Gas Production

Metro Biosolids Center
Gas Report - 2014

Daily Monthly Averages

	GAS PRODUCTION (x1000 Cu. Ft.)				GAS CONSUMPTION (x1000 Cu. Ft.)		
Month	DIG 1	DIG 2	DIG 3	Total Gas Production	GAS FLARES	GAS COGENERATION	Total Gas Consumption
01			274,510.9	274,510.9	1,768	279,808	281,577
02			283,634.7	283,634.7	1,427	288,786	290,213
03			271,990.4	271,990.4	2,183	275,294	277,477
04			263,091.0	263,091.0	1,007	275,170	276,176
05			214,998.7	214,998.7	848	234,003	234,850
06			234,479.9	234,479.9	795	246,966	247,761
07			237,696.3	237,696.3	1,601	247,832	249,433
08			221,606.5	221,606.5	1,248	231,827	233,075
09			243,836.2	243,836.2	1,029	247,616	248,646
10			243,848.2	243,848.2	1,026	252,629	253,655
11			257,679.1	257,679.1	626	267,308	267,934
12			242,076.5	242,076.5	612	257,412	258,024
avg			249,120.7	249,120.7	1,181	258,721	259,902

Monthly Totals

	GAS PRODUCTION (x1000 Cu. Ft.)				GAS CONSUMPTION (x1000 Cu. Ft.)		
Month	DIG 1	DIG 2	DIG 3	Total Gas Production	Gas Flares	Gas Cogeneration	Total Gas Consumption
01			8,509,837.0	8,509,837.0	51,278	8,674,062	8,725,340
02			7,941,772.0	7,941,772.0	39,947	8,086,016	8,125,963
03			8,431,701.0	8,431,701.0	67,661	8,534,121	8,601,782
04			7,892,730.0	7,892,730.0	30,202	8,255,088	8,285,290
05			6,664,961.0	6,664,961.0	26,273	7,254,092	7,280,365
06			7,034,398.0	7,034,398.0	23,855	7,408,988	7,432,843
07			7,368,586.0	7,368,586.0	49,640	7,682,784	7,732,424
08			6,869,803.0	6,869,803.0	38,691	7,186,622	7,225,313
09			7,315,087.0	7,315,087.0	30,882	7,428,488	7,459,370
10			7,559,294.0	7,559,294.0	31,806	7,831,513	7,863,319
11			7,730,373.0	7,730,373.0	18,790	8,019,229	8,038,019
12			7,504,370.0	7,504,370.0	18,972	7,979,764	7,998,736
avg			7,568,576.0	7,568,576.0	35,666	7,861,731	7,897,397
sum			90,822,912.0	90,822,912.0	427,997	94,340,767	94,768,764

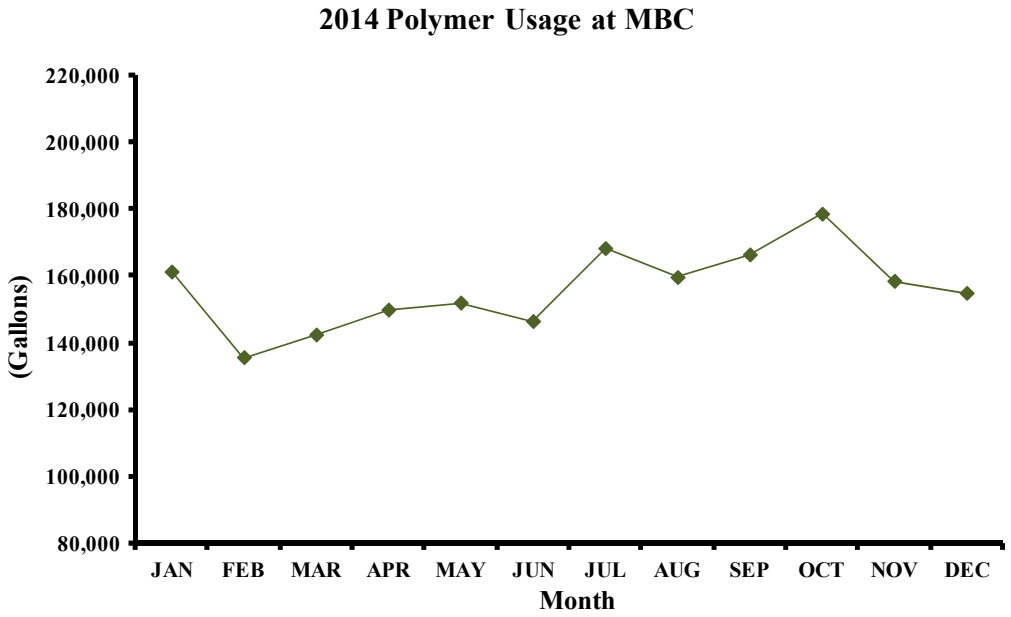
E. Chemical Usage

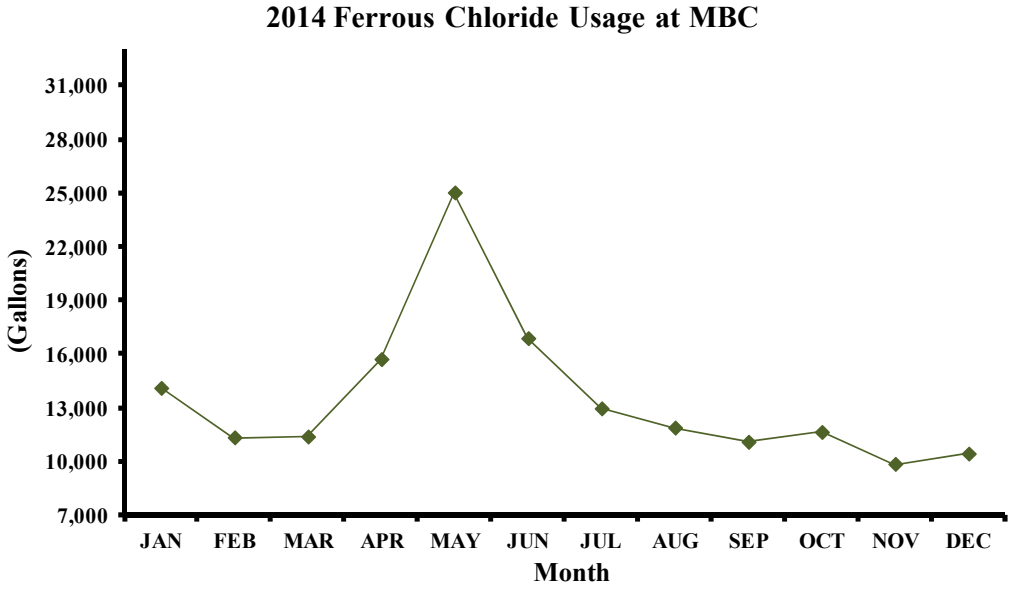
Metro Biosolids Center - Monthly Chemical Usage Report

01-JAN-2014 to 31-DEC-2014

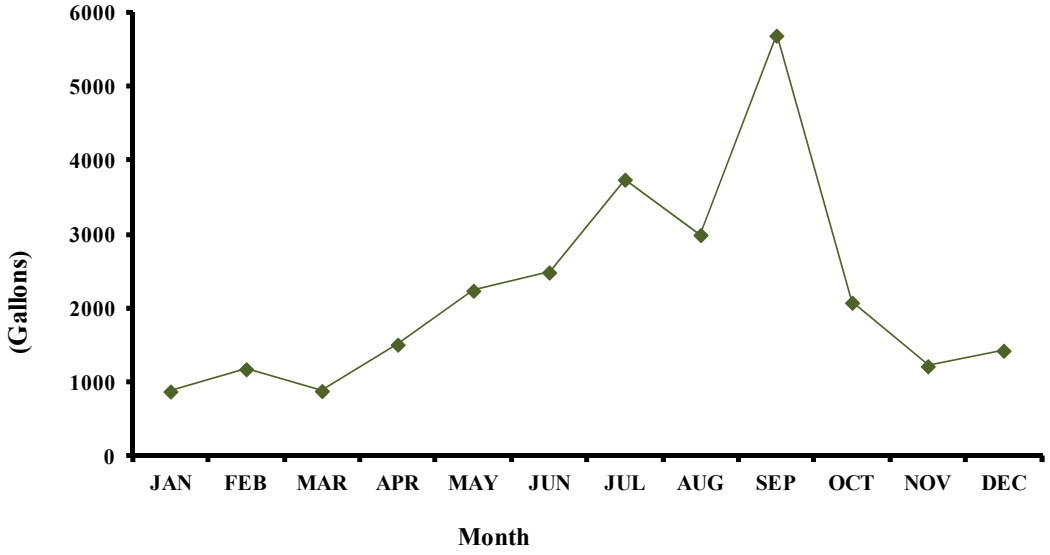
MON	Polymer Gallons	Ferric Chloride Gallons	Ferrous Chloride Gallons	Sodium Hydroxide Gallons	Hypochlorite Gallons	Sulfuric Acid Gallons
01	161,140	0	14,084	883	3,906	0
02	135,561	0	11,323	1,184	2,668	0
03	142,322	0	11,368	890	2,236	0
04	149,753	0	15,695	1,516	2,787	0
05	151,865	0	25,002	2,244	3,141	0
06	146,344	0	16,860	2,491	3,390	0
07	168,157	0	12,941	3,744	3,387	0
08	159,491	0	11,868	2,997	3,361	0
09	166,272	0	11,072	5,689	5,668	0
10	178,436	0	11,620	2,082	3,490	0
11	158,381	0	9,835	1,223	2,919	0
12	154,769	0	10,413	1,434	3,183	0
avg	156,041	0	13,507	2,198	3,345	0
sum	1,872,490	0	162,079	26,377	40,136	0

F. Graphs of Monthly Chemical Usage

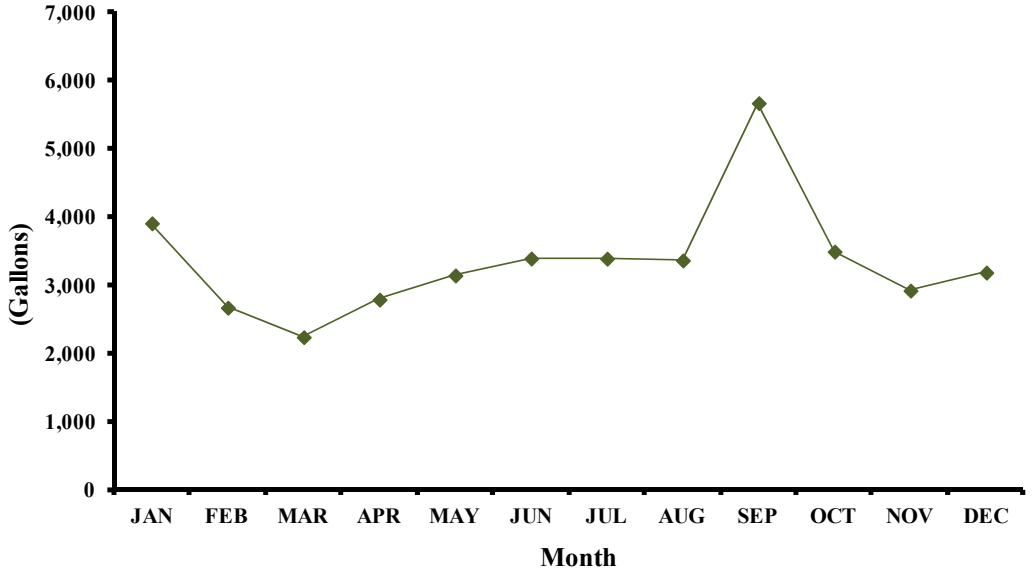




2014 Caustic Usage at MBC



2014 Sodium Hypochlorite Usage at MBC



G. Solids Handling Annual Report

2014 Annual Biosolids Beneficial Use & Disposal Report

Facilities:

Sources of biosolids:	Biosolids treatment and processing:
Point Loma Wastewater Treatment Plant (PLWWTP) 1902 Gatchell Rd., San Diego, CA	Metro Biosolids Center (MBC) 5240 Convoy Street, San Diego, CA 92111
North City Water Reclamation Plant (NCWRP) 4949 Eastgate Mall, San Diego, CA 92121	Point Loma Wastewater Treatment Plant (PLWWTP) 1902 Gatchell Rd., San Diego, CA

The Point Loma Wastewater Treatment Plant (PLWWTP) and the North City Water Reclamation Plant produced and disposed of 131,419 wet tons or 36,959 dry tons (33,529 dry metric tons) of digested sludge (biosolids) in 2014.

All digested sludge produced at the Pt. Loma WWTP was pumped to the Metro Biosolids Center (MBC) for dewatering by centrifuges. All biosolids were then hauled to a disposal site (Local Landfill) or beneficial use site. During this reporting period all of the raw sludge produced at the North City Water Reclamation Plant (NCWRP) was diverted to the Metro Biosolids Center for thickening, degritting, digestion, and blended with the digested solids from the PLWWTP prior to dewatering. The MBC Monthly Biosolids Processing Reports include the biosolids processed from the PLWWTP and the NCWRP. Copies of the MBC Monthly Biosolids Processing Reports and the MBC Biosolids Beneficial Use and Disposal Monthly Summary Reports detailing daily biosolids processing and beneficial use/disposal are included as Enclosures 1 and 5, respectively.

All of the sludge/biosolids produced by the City of San Diego, Pt. Loma Wastewater Treatment Plant and North City Water Reclamation Plant were dewatered at the Metro Biosolids Center(MBC) and disposition is summarized in the following table.

Disposition	Wet tons (short)	Dry tons[14]	Dry metric tons
Disposal in sanitary landfill	**0**	**0**	**0**
Beneficial reuse as Alternative Daily Cover (ADC) at landfill	**122,105**	**34,347**	**31,159**
Land application in Arizona	**9,315**	**2,612**	**2,370**
Totals:	**131,419**	**36,959**	**33,529**

All Biosolids produced by the City of San Diego were treated to Class B standards through Anaerobic Digestion for a minimum of 15 days at a temperature of 35 to 55 degrees Centigrade (Alternative 3, Process 3). Vector Attraction requirements were achieved by reducing the volatile solids content a minimum of 38 percent (Option 1).

[14] (based on sum of monthly total tons)

Land Applier: **Solid Solutions, LLC**
Address: 12812 Valley View St, #9, Garden Grove, CA 92845
Period: January 1, 2014 - December 31, 2014
Reuse method: Direct land application. Digested dewatered sludge from the MBC centrifuges were land applied directly to fields in Yuma County, AZ. The sludge was certified by the City of San Diego as meeting Class B pathogen and vector attraction reduction requirements of 40 CFR 503. Copies of the City of San Diego's certifications (which also serve as notification of nitrogen content) are included as Enclosure 2. Copies of Solid Solutions' certification statements are included as Enclosures 11 & 12.

The MBC provides two essential treatment processes, thickening and digestion of the raw solids from the NCWRP and dewatering of biosolids generated at the NCWRP and the PLWWTP. The digested biosolids from the PLWWTP are pumped to MBC in a 17 mile pipeline into one of the two storage tanks on site where it is blended with the digested biosolids from the NCWRP. Before these biosolids are sent to the dewatering process polymer and ferric chloride are added to condition the biosolids, which enhances the dewaterablility of the biosolids and minimizes the potential of scale formation.

Eight dewatering centrifuges are used to separate the liquid and solids fractions of the conditioned biosolids. The liquid fraction, (centrate) is returned to the PLWWTP via the Rose Canyon Interceptor and the solids recovered, (cake), is pumped to one of the eight storage silos on site before it is loaded into trucks for disposal and beneficial use as Alternative Daily Cover at Otay Landfill or beneficially used for land application in Yuma County, Arizona, Tables 1B and Table 1C.

The digested biosolids, centrate and dewatered cake are sampled on a daily basis to ensure regulatory compliance and to track plant process performance. Grab samples are collected daily on the incoming biosolids from the PLWWTP and the blended biosolids, which includes the digested biosolids from the NCWRP. The operation's staff also collects a twenty-four hour composite sample from the centrate return stream from the dewatering process and from the blended centrate return stream that includes the centrate flow from the thickening and dewatering processes.

Daily grab samples of dewatered cake are collected from each individual dewatering centrifuge that are in operation during the 24 hour period , and a portion of each of these grab samples are combined to provide a daily composite of dewatered cake produced. All sampling at MBC is performed by Wastewater lab staff who are certified by the State of California and in conformance with established sampling techniques listed in Standard Methods.

Because the dewatered cake samples are a daily composite and the Land Applier's (Solids Solutions) samples are a monthly grab sample, the dry ton calculations may differ slightly.

In addition to the monthly analyses of 503 and California Title 22 analyses by our California certified, and in accordance with the Arizona Department of Environmental Quality (ADEQ), grab samples were delivered to an Arizona certified laboratory. Alvarado Environmental Chemistry Services (#AZ0783) or Legend Technical Services of Arizona, Inc, 17631 North 25th Avenue, Phoenix, AZ 85023, ADHS#AZ0004 provided EPA Part 503 Table 3 Metals and Nitrogen analysis. See Enclosure 14.

Biosolids used for all uses in 2014 continued to meet all regulatory requirements. Concentration of pollutants were all well below the limits listed in California Title 22 Hazardous Waste thresholds including TTLC (Total Threshold Limit Concentration), STLC (Soluble Threshold Limit Concentration), and 40 CFR part 503.13 Table 3 "Limits for Land Application", the lower lead limit established by the California State Health and Safety Code 25157.8. It also met the A.C.C. (Arizona Administrative Code) R18-9-1005 Table 2. Monthly Average Pollutant Concentration limits.

Additional analyses, including the rest of the "priority pollutant list"[15], were performed during 2014 and the reports of these analyses are included in Enclosure 7.

Table 1.A. Landfill location used during 2014 is as follows:

Otay Landfill 1700 Maxwell Road Chula Vista, San Diego County, CA 91911	122,105 wet tons (34,347 dry tons or 31,159 dry metric tons), based on sum of monthly totals disposed of from January to December 2014 at this landfill.

No biosolids were shipped to or disposed of at a surface disposal site.

No biosolids were disposed of or reused by any other method than those listed above.

[15] Includes volatile organic compounds, phenols, base/neutral organic compounds, organophosphorus pesticides, chlorinated pesticides and PCBs.

Table 1B. Biosolids Production for MBC

2014 Month:	Otay Landfill Beneficial Use[1 (PTL)] (wet Tons)	Otay Landfill Beneficial Use[1 (MBC)] (wet Tons)	Otay Landfill Total (wet Tons)	Cullison Farms, Yuma, AZ Beneficial Use[2] (wet Tons)	Norris Farm Aztec, Yuma County, AZ Beneficial Use[2] (wet Tons)	Desert Ridge Farms Yuma, AZ Beneficial Use[2] (wet Tons)	Butler Diamond Farms Yuma, AZ Beneficial Use[2] (wet Tons)	Total (wet Tons)	%TS	Total Dry Tons	Total Biosolids (dry metric tons)
January		10,179.83	10,179.83	593.23				10,773.06	26.6	2,865.63	2,599.70
February		8,453.22	8,453.22	494.69				8,947.91	27.6	2,469.62	2,240.44
March		8,284.13	8,284.13	818.53				9,102.66	30.3	2,758.11	2,502.15
April		10,787.04	10,787.04	979.18				11,766.22	28.9	3,400.44	3,084.88
April*	3,171.88		3,171.88					3,171.88	38.4	1,218.32	1,105.26
May		9,977.08	9,977.08	1,280.92				11,258.00	28.8	3,242.30	2,941.42
June		9,286.34	9,286.34	1,131.70				10,418.04	28.2	2,937.89	2,665.25
July		10,110.72	10,110.72	1,033.86				11,144.58	27.9	3,109.34	2,820.79
August		9,424.17	9,424.17	1,132.88				10,557.05	27.2	2,871.52	2,605.04
September		9,886.87	9,886.87	976.82				10,863.69	26.9	2,922.33	2,651.14
October		11,476.41	11,476.41	281.88				11,758.29	27.3	3,210.01	2,912.12
November		9,214.28	9,214.28	410.33				9,624.61	27.6	2,656.39	2,409.88
December		11,852.85	11,852.85	180.61				12,033.46	27.4	3,297.17	2,991.19
Total:	3,171.88	118,932.94	122,104.82	9,314.63	0.00	0.00	0.00	131,419.45		36,959.07	33,529.27
Monthly Average:		9,911.08	9,392.68	776.22				10,109.19	28.7	3,068.50	2,579.17

[1] beneficial use as Alternative Daily Cover. Point Loma (PTL) or Metro Biosolids Center (MBC)

[2] beneficial use in Land Application.

* see Table 1E, Point LomaTruck summary

Table 1C. 2014 Biosolids Land Application

2014 Month	%TS	Desert Ridge , Yuma City, AZ wet tons	Desert Ridge , Yuma City, AZ dry tons	Norris, Yuma City, AZ wet tons	Norris, Yuma City, AZ dry tons	Cullison, Yuma County, AZ wet tons	Cullison, Yuma County, AZ dry tons	Butler Diamond, Yuma County, AZ wet tons	Butler Diamond, Yuma County, AZ dry tons	Total Monthly wet tons	Total Monthly dry tons	Total Metric dry tons
January	26.6		0.00		0.00	593.23	157.80		0.00	593.23	157.80	143.16
February	27.6		0.00		0.00	494.69	136.53		0.00	494.69	136.53	123.86
March	30.3		0.00		0.00	818.53	248.01		0.00	818.53	248.01	225.00
April	28.9		0.00		0.00	979.18	282.98		0.00	979.18	282.98	256.72
May	28.8		0.00		0.00	1,280.92	368.90		0.00	1,280.92	368.90	334.67
June	28.2		0.00		0.00	1,131.70	319.14		0.00	1,131.70	319.14	289.52
July	27.9		0.00		0.00	1,033.86	288.45		0.00	1,033.86	288.45	261.68
August	27.2		0.00		0.00	1,132.88	308.14		0.00	1,132.88	308.14	279.55
September	26.9		0.00		0.00	976.82	262.76		0.00	976.82	262.76	238.38
October	27.3		0.00		0.00	281.88	76.95		0.00	281.88	76.95	69.81
November	27.6		0.00		0.00	410.33	113.25		0.00	410.33	113.25	102.74
December	27.4		0.00		0.00	180.61	49.49		0.00	180.61	49.49	44.89
2014 Totals	Avg =27.9	0.00	0.00	0.00	0.00	9,314.63	2,612.42	0.00	0.00	9,314.63	2,612.42	2,369.99

Table 1D. Other Solids disposal (weights are gross wet weight)

2014 Month:	Copper Mountain Landfill **Scum (Tons)**	Otay Landfill **Scum (Tons)**	South Yuma Landfill **Scum (Tons)**	Otay Landfill **Digester Cleanings (Tons)**	Miramar Landfill **Grit (Tons)**	Miramar Landfill **Rags & Screenings (Tons)**
January	32.11			0.00	173.38	484.65
February	33.82			0.00	226.49	494.66
March	18.95			0.00	214.43	523.51
April	20.78	6.48		3,171.88	147.07	461.56
May	26.60			0.00	205.64	471.12
June	13.16			0.00	154.00	553.11
July	17.78			0.00	184.23	608.19
August	6.99	6.58		0.00	151.53	589.94
September	12.57			0.00	117.11	590.63
October	20.57			0.00	162.48	603.03
November	19.09			0.00	171.99	498.24
December	51.11	13.54		0.00	205.54	513.63
Total:	273.53	26.60		3,171.88	2,113.89	6,392.27
Average:	**22.79**	**8.87**		**264.32**	**176.16**	**532.69**

Point Loma Annual Monitoring Report
Solids Report – TOTALS

From 01-JAN-2014 to 31-DEC-2014

Month	Pt. Loma Raw sludge Gallons	Dry Tons	Pt.Loma Digested Sludge Gallons	Dry Tons	MBC Combined Centrate Gallons	Dry Tons	MBC Dewatered Sludge Wet Tons	Dry Tons
01	34,976,262	6,101	34,976,262	3,396	64,949,650	830	10,773	2,868
02	31,403,196	5,405	31,403,196	3,101	58,560,842	776	8,948	2,666
03	34,815,958	5,892	34,815,958	3,230	65,777,900	867	9,103	2,758
04	32,744,883	5,651	32,744,883	3,252	65,043,480	922	11,766	3,402
05	37,143,971	6,157	37,143,971	3,710	65,167,834	1,069	11,258	3,244
06	33,127,657	5,653	33,127,657	3,283	62,141,747	1,028	9,747	2,748
07	34,209,604	5,816	34,209,604	3,417	63,439,255	1,126	11,145	3,109
08	34,004,422	5,767	34,004,422	3,369	61,468,833	1,116	10,557	2,870
09	32,958,021	5,709	32,958,021	3,357	60,651,497	1,121	10,864	2,926
10	34,490,804	5,930	34,490,804	3,483	64,687,076	1,122	11,758	3,213
11	33,163,580	5,574	33,163,580	3,219	63,910,697	879	9,625	2,652
12	33,904,937	6,101	33,904,937	3,483	62,208,666	887	12,034	3,302
avg	33,911,941	5,813	33,911,941	3,358	63,167,290	979	10,631	2,980
sum	406,943,295	69,756	406,943,295	40,300	758,007,477	11,746	127,577	35,758

Point Loma Annual Monitoring Report
Solids Report - Daily Averages by Month

From 01-JAN-2014 to 31-DEC-2014

Year Month	Pt. Loma Raw sludge Gallons	%TS	Dry Tons	Pt.Loma Digested Sludge Gallons	%TS	Dry Tons	MBC Combined Centrate Gallons	%TS	Dry Tons	MBC Dewatered Sludge Wet Tons	%TS	Dry Tons
14-01	1,128,267	4.2	199	1,128,267	2.3	110	2,095,150	0.31	26.9	348	26.6	92.5
14-02	1,121,543	4.1	192	1,121,543	2.4	112	2,091,459	0.32	28.5	320	29.8	95.2
14-03	1,123,095	4.1	189	1,123,095	2.2	104	2,121,868	0.32	28.0	294	30.3	89.0
14-04	1,091,496	4.1	189	1,091,496	2.4	108	2,168,116	0.34	30.7	392	28.9	113.4
14-05	1,198,193	4.0	202	1,198,193	2.4	122	2,102,188	0.39	34.1	363	28.8	104.7
14-06	1,104,255	4.1	184	1,104,255	2.4	111	2,071,392	0.40	34.2	325	28.2	91.6
14-07	1,103,536	4.1	187	1,103,536	2.4	111	2,046,428	0.43	36.4	360	27.9	100.3
14-08	1,096,917	4.1	189	1,096,917	2.4	110	1,982,866	0.44	35.8	341	27.2	92.6
14-09	1,098,601	4.2	190	1,098,601	2.4	112	2,021,717	0.44	37.4	362	26.9	97.5
14-10	1,112,607	4.1	193	1,112,607	2.4	114	2,086,680	0.42	35.7	379	27.3	103.6
14-11	1,105,453	4.0	189	1,105,453	2.3	109	2,130,357	0.33	29.2	321	27.6	88.4
14-12	1,093,708	4.3	205	1,093,708	2.5	117	2,006,731	0.34	28.8	388	27.4	106.5
avg	1,114,806	4.1	192	1,114,806	2.4	112	2,077,079	0.37	32.2	349	28.1	97.9

Note: A ton is a “short ton” or 2000 lbs of dry solids.
The mechanical condition of the cake pumps and the variability of sludge concentrations can affect the overall accuracies of these reported values.

Enclosure 7 Results of other analyses of dewatered biosolids for 2014

Tables showing the analyses for metals (including priority pollutants), pH, total and volatile solids, pesticides & PCBs, and organic priority pollutant compounds of sewage biosolids samples taken in 2014.

METRO BIOSOLIDS CENTER
ANNUAL DEWATERED SLUDGE COMPOSITES
Trace Metals

2014 Annual

Source:			MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN
Date:			31-JAN-2014	28-FEB-2014	31-MAR-2014	30-APR-2014	31-MAY-2014	30-JUN-2014
Sample ID:	MDL	Units	P695521	P701729	P707336	P710842	P716426	P720867
Aluminum	4	MG/KG	3790	3740	3950	3740	3590	3860
Antimony	.5	MG/KG	4.1	3.0	3.0	3.6	3.0	3.8
Arsenic	.07	MG/KG	3.20	3.17	3.72	2.91	3.38	2.82
Barium	.05	MG/KG	367	559	392	384	290	342
Beryllium	.02	MG/KG	0.07	0.06	0.03	0.06	0.06	0.05
Cadmium	.1	MG/KG	1.2	1.0	1.1	1.2	1.1	1.1
Chromium	.3	MG/KG	46	40	41	46	48	42
Cobalt	.2	MG/KG	6.1	5.3	5.6	5.7	5.4	5.6
Cyanide, Total	.1	MG/KG	NR	4.20	NR	NR	1.50	NR
Copper	.4	MG/KG	666	592	554	598	650	553
Iron	20	MG/KG	97900	90000	91200	89000	89500	97900
Lead	2	MG/KG	25	25	23	23	25	23
Manganese	.2	MG/KG	299	275	309	284	276	286
Mercury	.2	MG/KG	0.89	0.87	0.72	1.20	1.30	1.10
Molybdenum	.1	MG/KG	16	14	14	15	17	19
Nickel	.3	MG/KG	37	34	36	38	39	40
Selenium	.07	MG/KG	5.08	4.90	4.07	1.66	5.07	5.36
Silver	.07	MG/KG	4	5	4	4	8	6
Thallium	1	MG/KG	ND	3	1	ND	ND	1
Vanadium	.2	MG/KG	52	47	49	46	38	41
Zinc	.5	MG/KG	846	897	888	878	822	783
Sulfides-Reactive	11	MG/KG	30	73	106	93	43	35
Sulfides-Total	500	MG/KG	19900	11500	17200	18900	21100	25100
Total Nitrogen	1.1	WT%	5.09	4.71	4.80	5.08	4.88	0.72
Total Kjeldahl Nitrogen	.04	WT%	NR	4.78	NR	11.30	5.03	5.05
Total Volatile Solids		WT%	61.4	60.1	60.3	58.1	57.6	61.7
Total Solids		WT%	27.6	28.9	28.8	27.9	27.9	26.9
pH		PH	7.92	7.77	7.69	7.67	7.64	7.63

ND= Not Detected
NA= Not Analyzed
NS= Not Sampled
NR= Not Required

MBCDEWCN= Metro Biosolids Center Dewatered Centrifuged Sludge.

METRO BIOSOLIDS CENTER
ANNUAL DEWATERED SLUDGE COMPOSITES
Trace Metals

2014 Annual

Source:			MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN
Date:			31-JUL-2014	31-AUG-2014	30-SEP-2014	31-OCT-2014	30-NOV-2014	31-DEC-2014
Sample ID:	MDL	Units	P727207	P731763	P736392	P741662	P746878	P751630
Aluminum	4	MG/KG	3960	3600	4330	4040	3450	3520
Antimony	.5	MG/KG	4.5	4.1	5.8	0.6	2.4	3.9
Arsenic	.07	MG/KG	3.13	2.71	2.93	3.54	3.14	5.34
Barium	.05	MG/KG	338	187	371	110	334	255
Beryllium	.02	MG/KG	0.04	0.11	0.12	0.07	0.11	0.12
Cadmium	.1	MG/KG	1.3	0.9	1.1	1.9	1.0	1.1
Chromium	.3	MG/KG	46	43	45	45	40	41
Cobalt	.2	MG/KG	5.5	4.7	5.9	3.8	4.3	5.0
Cyanide, Total	.1	MG/KG	NR	2.47	NR	3.2	NR	NR
Copper	.4	MG/KG	678	661	713	676	601	628
Iron	20	MG/KG	99000	93100	110000	97100	91000	97000
Lead	2	MG/KG	26	26	32	25	25	26
Manganese	.2	MG/KG	307	272	315	322	311	340
Mercury	.2	MG/KG	1.38	1.01	1.06	0.89	1.12	1.19
Molybdenum	.1	MG/KG	21	18	26	24	17	17
Nickel	.3	MG/KG	45	42	40	39	33	36
Selenium	.07	MG/KG	3.66	4.54	4.27	4.48	4.75	5.77
Silver	.07	MG/KG	4	3	4	3	3	4
Thallium	1	MG/KG	1	ND	4	2	4	2
Vanadium	.2	MG/KG	32	30	38	35	23	26
Zinc	.5	MG/KG	887	870	996	982	829	780
Sulfides-Reactive	11	MG/KG	24	98	77	51	36	31
Sulfides-Total	500	MG/KG	18100	19700	28900	14000	14000	24800
Total Nitrogen	1.1	WT%	3.38	4.13	2.38	5.05	4.94	5.22
Total Kjeldahl Nitrogen	.04	WT%	5.25	5.01	5.09	5.08	4.66	NR
Total Volatile Solids		WT%	59.8	58.0	57.8	62.3	62.1	60.4
Total Solids		WT%	26.1	27.2	26.6	27.0	27.4	27.2
pH		PH	7.74	7.74	7.84	7.76	7.81	7.87

ND= Not Detected
NA= Not Analyzed
NS= Not Sampled
NR= Not Required

MBCDEWCN= Metro Biosolids Center Dewatered Centrifuged Sludge.

METRO BIOSOLIDS CENTER

Total Nitrogen Analysis

2014 Annual

Source:			MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN
Date:			31-JAN-2014	28-FEB-2014	31-MAR-2014	30-APR-2014	31-MAY-2014	30-JUN-2014	31-JUL-2014
Sample:	MDL	Units	P695521	P701729	P707336	P710842	P716426	P720867	P727207
Total Nitrogen	1.1	WT%	5.09	4.71	4.80	5.08	4.88	0.72	3.38

Source:			MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN
Date:			31-AUG-2014	30-SEP-2014	31-OCT-2014	30-NOV-2014	31-DEC-2014
Sample:	MDL	Units	P731763	P736392	P741662	P746878	P751630
Total Nitrogen	1.1	WT%	4.13	2.38	5.05	4.94	5.22

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

POINT LOMA WASTEWATER TREATMENT PLANT/ METRO BIOSOLIDS CENTER

Radioactivity

2014 Annual

ANALYZED BY: Truesdail Labs Inc.

Source	Sample Date	Sample ID	Gross Alpha Radiation	Gross Beta Radiation
PLE	04-FEB-2014	P695680	0.9±7.1	29.1±7.9
PLE	06-MAY-2014	P712448	1.2±8.3	30.7±9.1
PLE	05-AUG-2014	P723690	0.7±7.1	29.2±6.7
PLE	07-OCT-2014	P734686	3.5±6.6	29.5±7.5
PLE	ANNUAL	AVERAGE	1.6±7.3	29.6±7.8
PLR	04-FEB-2014	P695686	6.5±7.4	25.7±7.4
PLR	06-MAY-2014	P712454	10.2±8.6	28.9±8.8
PLR	05-AUG-2014	P723696	3.7±7.4	32.5±7.6
PLR	07-OCT-2014	P734692	0.2±8.2	34.5±7.8
PLR	ANNUAL	AVERAGE	5.2±7.9	30.4±7.9
MBC_COMBCN	04-FEB-2014	P695697	6.9±9.9	51.4±12.0
MBC_COMBCN	06-MAY-2014	P712465	1.3±11.0	46.1±13.0
MBC_COMBCN	05-AUG-2014	P723707	4.2±8.9	49.0±11.0
MBC_COMBCN	07-OCT-2014	P734703	12.9±12.0	47.8±12.0
MBC_COMBCN	ANNUAL	AVERAGE	6.3±10.5	48.6±12.0

Units in picocuries per Liter (pCi/L)

ND= Not Detected
NA= Not Analyzed
NS= Not Sampled
NR= Not Required

MBC_COMBCN = Combined Sludge Centrate
MBC_NC_DSL = Combined North City Digested Sludge Line
MBC_NC_RSL = Combined North City Raw Sludge Line

METRO BIOSOLIDS CENTER

Radioactivity

2014 Annual

ANALYZED BY: Truesdail Labs Inc.

Source	Sample Date	Sample ID		Gross Alpha Radiation	Gross Beta Radiation
MBCDEWCN	28-FEB-2014	P701729		1140.0±3350.0	8270.0±1800.0
MBCDEWCN	31-MAY-2014	P716426		4090.0±3900.0	5760.0±1600.0
MBCDEWCN	31-AUG-2014	P731763		3520.0±3800.0	9400.0±2000.0
MBCDEWCN	31-OCT-2014	P741662		4050.0±4400.0	8360.0±1900.0
AVERAGE				3200.0±3862.5	7947.5±1825.0

Units in picocuries/liter (pCi/kg)

ND= Not Detected
NA= Not Analyzed
NS= Not Sampled
NR= Not Required

MBC_COMBCN= Metro Biosolids Center Combined Sludge Centrate.

METROBIOSOLIDS CENTER
Chlorinated Pesticide Analysis

2014 Annual

Source			MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN
Date			31-JAN-2014	28-FEB-2014	31-MAR-2014	30-APR-2014	31-MAY-2014
Analyte	MDL	Units	P695521	P701729	P707336	P710842	P716426
Aldrin	640	NG/KG	ND	ND	ND	ND	ND
Dieldrin	1762	NG/KG	ND	ND	ND	ND	ND
BHC, Alpha isomer	390	NG/KG	ND	ND	ND	ND	ND
BHC, Beta isomer	860	NG/KG	ND	ND	ND	ND	ND
BHC, Gamma isomer	432	NG/KG	ND	ND	ND	ND	ND
BHC, Delta isomer	944	NG/KG	ND	ND	ND	ND	ND
p,p-DDD	693	NG/KG	ND	ND	ND	4700	ND
p,p-DDE	700	NG/KG	ND	ND	ND	13500	28500
p,p-DDT	840	NG/KG	ND	ND	ND	<840	ND
o,p-DDD	970	NG/KG	ND	ND	ND	<970	54500
o,p-DDE	643	NG/KG	ND	ND	ND	5050	ND
o,p-DDT	941	NG/KG	ND	ND	ND	ND	ND
Heptachlor	1700	NG/KG	ND	ND	ND	ND	ND
Heptachlor epoxide	2560	NG/KG	ND	ND	ND	5650	ND
Alpha (cis) Chlordane	842	NG/KG	ND	ND	ND	5900	ND
Gamma (trans) Chlordane	541	NG/KG	ND	ND	ND	9900	11500
Alpha Chlordene	0	NG/KG	NA	NA	NA	NA	NA
Gamma Chlordene	0	NG/KG	NA	NA	NA	NA	NA
Oxychlordane	362	NG/KG	ND	ND	ND	ND	ND
Trans Nonachlor	1000	NG/KG	ND	ND	ND	8750	ND
Cis Nonachlor	850	NG/KG	ND	ND	ND	<850	ND
Alpha Endosulfan	762	NG/KG	ND	ND	ND	ND	ND
Beta Endosulfan	570	NG/KG	ND	ND	ND	ND	ND
Endosulfan Sulfate	1021	NG/KG	ND	ND	ND	ND	ND
Endrin aldehyde	1001	NG/KG	ND	ND	ND	ND	ND
Toxaphene	48660	NG/KG	ND	ND	ND	ND	ND
Mirex	680	NG/KG	ND	ND	ND	ND	ND
Methoxychlor	1460	NG/KG	ND	ND	ND	ND	ND
PCB 1016	83300	NG/KG	ND	ND	ND	ND	ND
PCB 1221	667000	NG/KG	ND	ND	ND	ND	ND
PCB 1232	500000	NG/KG	ND	ND	ND	ND	ND
PCB 1242	66860	NG/KG	ND	ND	ND	ND	ND
PCB 1248	83300	NG/KG	ND	ND	ND	ND	ND
PCB 1254	83300	NG/KG	ND	ND	ND	ND	ND
PCB 1260	333000	NG/KG	ND	ND	ND	ND	ND
PCB 1262	83300	NG/KG	ND	ND	ND	ND	ND
Aldrin + Dieldrin	1762	NG/KG	0	0	0	0	0
Hexachlorocyclohexanes	944	NG/KG	0	0	0	0	0
DDT and derivatives	970	NG/KG	0	0	0	23250	83000
Chlordane + related cmpds.	842	NG/KG	0	0	0	15800	11500
Polychlorinated biphenyls	667000	NG/KG	0	0	0	0	0
Chlorinated Hydrocarbons	667000	NG/KG	0	0	0	53450	94500

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

METROBIOSOLIDS CENTER
Chlorinated Pesticide Analysis

2014 Annual

Source			MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN
Date			30-JUN-2014	31-JUL-2014	31-AUG-2014	30-SEP-2014	31-OCT-2014
Analyte	MDL	Units	P720867	P727207	P731763	P736392	P741662
Aldrin	640	NG/KG	ND	ND	ND	ND	ND
Dieldrin	1762	NG/KG	ND	ND	ND	ND	ND
BHC, Alpha isomer	390	NG/KG	ND	ND	ND	ND	ND
BHC, Beta isomer	860	NG/KG	ND	ND	ND	ND	ND
BHC, Gamma isomer	432	NG/KG	ND	ND	ND	ND	ND
BHC, Delta isomer	944	NG/KG	ND	ND	ND	ND	ND
p,p-DDD	693	NG/KG	ND	ND	ND	ND	ND
p,p-DDE	700	NG/KG	11500	ND	20500	ND	ND
p,p-DDT	840	NG/KG	ND	ND	ND	ND	ND
o,p-DDD	970	NG/KG	DNQ24000	ND	63500	ND	ND
o,p-DDE	643	NG/KG	ND	ND	ND	ND	ND
o,p-DDT	941	NG/KG	ND	ND	ND	ND	ND
Heptachlor	1700	NG/KG	ND	ND	ND	ND	ND
Heptachlor epoxide	2560	NG/KG	ND	ND	ND	ND	ND
Alpha (cis) Chlordane	842	NG/KG	ND	ND	ND	ND	ND
Gamma (trans) Chlordane	541	NG/KG	ND	ND	ND	ND	ND
Alpha Chlordene	0	NG/KG	NA	NA	NA	NA	NA
Gamma Chlordene	0	NG/KG	NA	NA	NA	NA	NA
Oxychlordane	362	NG/KG	ND	ND	ND	ND	ND
Trans Nonachlor	1000	NG/KG	ND	ND	ND	ND	ND
Cis Nonachlor	850	NG/KG	ND	ND	ND	ND	ND
Alpha Endosulfan	762	NG/KG	ND	ND	ND	ND	ND
Beta Endosulfan	570	NG/KG	ND	ND	ND	ND	ND
Endosulfan Sulfate	1021	NG/KG	ND	ND	ND	ND	ND
Endrin aldehyde	1001	NG/KG	ND	ND	ND	ND	ND
Toxaphene	48660	NG/KG	ND	ND	ND	ND	ND
Mirex	680	NG/KG	ND	ND	ND	ND	ND
Methoxychlor	1460	NG/KG	ND	ND	ND	ND	ND
PCB 1016	83300	NG/KG	ND	ND	ND	ND	ND
PCB 1221	667000	NG/KG	ND	ND	ND	ND	ND
PCB 1232	500000	NG/KG	ND	ND	ND	ND	ND
PCB 1242	66860	NG/KG	ND	ND	ND	ND	ND
PCB 1248	83300	NG/KG	ND	ND	ND	ND	ND
PCB 1254	83300	NG/KG	ND	ND	ND	ND	ND
PCB 1260	333000	NG/KG	ND	ND	ND	ND	ND
PCB 1262	83300	NG/KG	ND	ND	ND	ND	ND
Aldrin + Dieldrin	1762	NG/KG	0	0	0	0	0
Hexachlorocyclohexanes	944	NG/KG	0	0	0	0	0
DDT and derivatives	970	NG/KG	11500	0	84000	0	0
Chlordane + related cmpds.	842	NG/KG	0	0	0	0	0
Polychlorinated biphenyls	667000	NG/KG	0	0	0	0	0
Chlorinated Hydrocarbons	667000	NG/KG	11500	0	84000	0	0

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

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

METROBIOSOLIDS CENTER
Chlorinated Pesticide Analysis

2014 Annual

Source			MBCDEWCN	MBCDEWCN	
Date			30-NOV-2014	31-DEC-2014	Annual
Analyte	MDL	Units	P746878	P751630	Average
Aldrin	640	NG/KG	ND	ND	ND
Dieldrin	1762	NG/KG	ND	ND	ND
BHC, Alpha isomer	390	NG/KG	ND	ND	ND
BHC, Beta isomer	860	NG/KG	ND	ND	ND
BHC, Gamma isomer	432	NG/KG	ND	ND	ND
BHC, Delta isomer	944	NG/KG	ND	ND	ND
p,p-DDD	693	NG/KG	ND	ND	392
p,p-DDE	700	NG/KG	ND	ND	6167
p,p-DDT	840	NG/KG	ND	ND	0
o,p-DDD	970	NG/KG	ND	ND	DNQ11833
o,p-DDE	643	NG/KG	ND	ND	421
o,p-DDT	941	NG/KG	ND	ND	ND
Heptachlor	1700	NG/KG	ND	ND	ND
Heptachlor epoxide	2560	NG/KG	ND	ND	471
Alpha (cis) Chlordane	842	NG/KG	ND	ND	492
Gamma (trans) Chlordane	541	NG/KG	ND	ND	1783
Alpha Chlordene	0	NG/KG	NA	NA	NA
Gamma Chlordene	0	NG/KG	NA	NA	NA
Oxychlordane	362	NG/KG	ND	ND	ND
Trans Nonachlor	1000	NG/KG	ND	ND	729
Cis Nonachlor	850	NG/KG	ND	ND	0
Alpha Endosulfan	762	NG/KG	ND	ND	ND
Beta Endosulfan	570	NG/KG	ND	ND	ND
Endosulfan Sulfate	1021	NG/KG	ND	ND	ND
Endrin aldehyde	1001	NG/KG	ND	ND	ND
Toxaphene	48660	NG/KG	ND	ND	ND
Mirex	680	NG/KG	ND	ND	ND
Methoxychlor	1460	NG/KG	ND	ND	ND
PCB 1016	83300	NG/KG	ND	ND	ND
PCB 1221	667000	NG/KG	ND	ND	ND
PCB 1232	500000	NG/KG	ND	ND	ND
PCB 1242	66860	NG/KG	ND	ND	ND
PCB 1248	83300	NG/KG	ND	ND	ND
PCB 1254	83300	NG/KG	ND	ND	ND
PCB 1260	333000	NG/KG	ND	ND	ND
PCB 1262	83300	NG/KG	ND	ND	ND
Aldrin + Dieldrin	1762	NG/KG	0	0	0
Hexachlorocyclohexanes	944	NG/KG	0	0	0
DDT and derivatives	970	NG/KG	0	0	6980
Chlordane + related cmpds.	842	NG/KG	0	0	2275
Polychlorinated biphenyls	667000	NG/KG	0	0	0
Chlorinated Hydrocarbons	667000	NG/KG	0	0	10455

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

METRO BIOSOLIDS CENTER

Tributyl Tin (Sludge)

2014 Annual

Source			MBCDEWCN	MBCDEWCN
Date			31-MAY-2014	31-OCT-2014
Analyte			P716426	P741662
Monobutyltin	4000	UG/KG	ND	ND
Tributyltin	2600	UG/KG	ND	ND

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

METRO BIOSOLIDS CENTER

Herbicide Analysis

2014 Annual

Source:			MBCDEWCN	MBCDEWCN
Date:			31-MAY-2014	31-OCT-2014
Sample:	MDL	Units	P716426	P741662
2,4-Dichlorophenoxyacetic acid	.07	MG/KG	ND	ND
2,4,5-TP (Silvex)	.033	MG/KG	ND	ND

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

POINT LOMA WASTEWATER TREATMENT PLANT / METROBIOSOLIDS CENTER

Organophosphorus Pesticides

2014 Annual

Source			MBC_COMBCN	MBC_COMBCN
Date			06-MAY-2014	07-OCT-2014
Analyte	MDL	Units	P712465	P734703
Demeton O	.15	UG/L	ND	ND
Demeton S	.403	UG/L	ND	ND
Diazinon	.03	UG/L	ND	ND
Guthion	.15	UG/L	ND	ND
Malathion	.051	UG/L	ND	ND
Parathion	.032	UG/L	ND	ND
Chlorpyrifos	.034	UG/L	ND	ND
Coumaphos	.15	UG/L	ND	ND
Dichlorvos	.05	UG/L	ND	ND
Dimethoate	.189	UG/L	ND	ND
Disulfoton	.175	UG/L	ND	ND
Stirophos	.034	UG/L	ND	ND
Thiophosphorus Pesticides	.15	UG/L	0.00	0.00
Demeton -O, -S	.403	UG/L	0.00	0.00
Total Organophosphorus Pesticides	.403	UG/L	0.00	0.00

Source			MBC_NC_DSL	MBC_NC_DSL
Date			06-MAY-2014	07-OCT-2014
Analyte	MDL	Units	P712519	P734757
Demeton O	.15	UG/L	ND	ND
Demeton S	.403	UG/L	ND	ND
Diazinon	.03	UG/L	ND	ND
Guthion	.15	UG/L	ND	ND
Malathion	.051	UG/L	ND	ND
Parathion	.032	UG/L	ND	ND
Chlorpyrifos	.034	UG/L	ND	ND
Coumaphos	.15	UG/L	ND	ND
Dichlorvos	.05	UG/L	ND	ND
Dimethoate	.189	UG/L	ND	ND
Disulfoton	.175	UG/L	ND	ND
Stirophos	.034	UG/L	ND	ND
Thiophosphorus Pesticides	.15	UG/L	0.00	0.00
Demeton -O, -S	.403	UG/L	0.00	0.00
Total Organophosphorus Pesticides	.403	UG/L	0.00	0.00

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

POINT LOMA WASTEWATER TREATMENT PLANT / METROBIOSOLIDS CENTER

Organophosphorus Pesticides

2014 Annual

Source			MBC_NC_RSL	MBC_NC_RSL
Date			06-MAY-2014	07-OCT-2014
Analyte	MDL	Units	P712517	P734755
Demeton O	.15	UG/L	ND	ND
Demeton S	.403	UG/L	ND	ND
Diazinon	.03	UG/L	ND	ND
Guthion	.15	UG/L	ND	ND
Malathion	.051	UG/L	ND	ND
Parathion	.032	UG/L	ND	ND
Chlorpyrifos	.034	UG/L	ND	ND
Coumaphos	.15	UG/L	ND	ND
Dichlorvos	.05	UG/L	ND	ND
Dimethoate	.189	UG/L	ND	ND
Disulfoton	.175	UG/L	ND	ND
Stirophos	.034	UG/L	ND	ND
Thiophosphorus Pesticides	.15	UG/L	0.00	0.00
Demeton -O, -S	.403	UG/L	0.00	0.00
Total Organophosphorus Pesticides	.403	UG/L	0.00	0.00

Source			RAW COMP	RAW COMP
Date			06-MAY-2014	07-OCT-2014
Analyte	MDL	Units	P712490	P734728
Demeton O	.15	UG/L	ND	ND
Demeton S	.403	UG/L	ND	ND
Diazinon	.03	UG/L	ND	ND
Guthion	.15	UG/L	ND	ND
Malathion	.051	UG/L	ND	ND
Parathion	.032	UG/L	ND	ND
Chlorpyrifos	.034	UG/L	DNQ1.3	ND
Coumaphos	.15	UG/L	ND	ND
Dichlorvos	.05	UG/L	ND	ND
Dimethoate	.189	UG/L	ND	ND
Disulfoton	.175	UG/L	ND	ND
Stirophos	.034	UG/L	ND	ND
Thiophosphorus Pesticides	.15	UG/L	0.00	0.00
Demeton -O, -S	.403	UG/L	0.00	0.00
Total Organophosphorus Pesticides	.403	UG/L	1.30	0.00

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

POINT LOMA WASTEWATER TREATMENT PLANT / METROBIOSOLIDS CENTER

Organophosphorus Pesticides

2014 Annual

Source			DIG COMP	DIG COMP
Date			06-MAY-2014	07-OCT-2014
Analyte	MDL	Units	P712504	P734742
Demeton O	.15	UG/L	ND	ND
Demeton S	.403	UG/L	ND	ND
Diazinon	.03	UG/L	ND	ND
Guthion	.15	UG/L	ND	ND
Malathion	.051	UG/L	ND	ND
Parathion	.032	UG/L	ND	ND
Chlorpyrifos	.034	UG/L	ND	ND
Coumaphos	.15	UG/L	ND	ND
Dichlorvos	.05	UG/L	ND	ND
Dimethoate	.189	UG/L	ND	ND
Disulfoton	.175	UG/L	ND	ND
Stirophos	.034	UG/L	ND	ND
Thiophosphorus Pesticides	.15	UG/L	0.00	0.00
Demeton -O, -S	.403	UG/L	0.00	0.00
Total Organophosphorus Pesticides	.403	UG/L	0.00	0.00

Source			MBCDEWCN	MBCDEWCN
Date			31-MAY-2014	30-NOV-2014
Analyte	MDL	Units	P716426	P746878
Demeton O	67	UG/KG	ND	ND
Demeton S	27	UG/KG	ND	ND
Diazinon	2.3	UG/KG	ND	ND
Guthion	33	UG/KG	ND	ND
Malathion	20	UG/KG	ND	ND
Parathion	20	UG/KG	ND	ND
Chlorpyrifos	1.6	UG/KG	40.9	ND
Coumaphos	33	UG/KG	ND	ND
Dichlorvos	17	UG/KG	ND	ND
Dimethoate	27	UG/KG	ND	ND
Disulfoton	20	UG/KG	ND	ND
Stirophos	20	UG/KG	ND	ND
Thiophosphorus Pesticides	33	UG/KG	0.0	0.0
Demeton -O, -S	67	UG/KG	0.0	0.0
Total Organophosphorus Pesticides	67	UG/KG	40.9	0.0

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

METRO BIOSOLIDS CENTER
Base/Neutrals

Annual 2014

Source			MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN
Date			28-FEB-2014	31-MAY-2014	31-AUG-2014	31-OCT-2014
Analyte	MDL	Units	P701729	P716426	P731763	P741662
Acenaphthene	330	UG/KG	ND	ND	ND	ND
Acenaphthylene	330	UG/KG	ND	ND	ND	ND
Anthracene	330	UG/KG	ND	ND	ND	ND
Benzidine	330	UG/KG	ND	ND	ND	ND
3,4-Benzo(b)fluoranthene	330	UG/KG	ND	ND	ND	ND
Benzo[k]fluoranthene	330	UG/KG	ND	ND	ND	ND
Benzo[a]anthracene	330	UG/KG	ND	ND	ND	ND
Benzo[a]pyrene	330	UG/KG	ND	ND	ND	ND
Benzo[g,h,i]perylene	330	UG/KG	ND	ND	ND	ND
4-Bromophenyl phenyl ether	330	UG/KG	ND	ND	ND	ND
Bis-(2-chloroethoxy) methane	330	UG/KG	ND	ND	ND	ND
Bis-(2-chloroethyl) ether	330	UG/KG	ND	ND	ND	ND
Bis-(2-chloroisopropyl) ether	330	UG/KG	ND	ND	ND	ND
4-Chlorophenyl phenyl ether	330	UG/KG	ND	ND	ND	ND
2-Chloronaphthalene		UG/KG	ND	ND	ND	ND
Chrysene	330	UG/KG	ND	ND	ND	ND
Dibenzo(a,h)anthracene	330	UG/KG	ND	ND	ND	ND
Butyl benzyl phthalate	330	UG/KG	1200	785	1750	1720
Di-n-butyl phthalate	330	UG/KG	ND	ND	ND	ND
Bis-(2-ethylhexyl) phthalate	330	UG/KG	68400	81000	75900	88900
Diethyl phthalate	330	UG/KG	ND	ND	ND	ND
Dimethyl phthalate	330	UG/KG	ND	ND	ND	ND
Di-n-octyl phthalate	330	UG/KG	ND	ND	ND	ND
3,3-Dichlorobenzidine	330	UG/KG	ND	ND	ND	ND
2,4-Dinitrotoluene	330	UG/KG	ND	ND	ND	ND
2,6-Dinitrotoluene	330	UG/KG	ND	ND	ND	ND
1,2-Diphenylhydrazine		UG/KG	ND	ND	ND	ND
Fluoranthene	330	UG/KG	ND	ND	ND	ND
Fluorene	330	UG/KG	ND	ND	ND	ND
Hexachlorobenzene	330	UG/KG	ND	ND	ND	ND
Hexachlorobutadiene	330	UG/KG	ND	ND	ND	ND
Hexachlorocyclopentadiene	330	UG/KG	ND	ND	ND	ND
Hexachloroethane	330	UG/KG	ND	ND	ND	ND
Indeno(1,2,3-CD)pyrene	330	UG/KG	ND	ND	ND	ND
Isophorone	330	UG/KG	ND	ND	ND	ND
Naphthalene	330	UG/KG	ND	382	<330	430
Nitrobenzene	330	UG/KG	ND	ND	ND	ND
N-nitrosodimethylamine	330	UG/KG	ND	ND	ND	ND
N-nitrosodi-n-propylamine	330	UG/KG	ND	ND	ND	ND
N-nitrosodiphenylamine	330	UG/KG	ND	ND	ND	ND
Phenanthrene	330	UG/KG	ND	ND	ND	ND
Pyrene	330	UG/KG	ND	ND	ND	ND
1,2,4-Trichlorobenzene	330	UG/KG	ND	ND	ND	ND
1,3-Dichlorobenzene	330	UG/KG	ND	ND	ND	ND
1,2-Dichlorobenzene	330	UG/KG	ND	ND	ND	ND
1,4-Dichlorobenzene	330	UG/KG	ND	ND	ND	ND
PolyNuc. Aromatic Hydrocarbons	330	UG/KG	0	0	0	0
Base/Neutral Compounds	330	UG/KG	69600	82167	77650	91050
Dichlorobenzenes	330	UG/KG	0	0	0	0
Additional Analytes Determined;						
Biphenyl		UG/KG	ND	489	ND	ND
2,6-Dimethylnaphthalene		UG/KG	1320	1570	1470	1630
1-Methylnaphthalene		UG/KG	ND	ND	ND	ND
1-Methylphenanthrene		UG/KG	ND	ND	ND	ND
2-Methylnaphthalene		UG/KG	ND	674	480	425
2,3,5-Trimethylnaphthalene		UG/KG	ND	ND	ND	ND
Perylene	330	UG/KG	ND	ND	ND	ND
Pyridine		UG/KG	ND	ND	ND	ND

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

METRO BIOSOLIDS CENTER

Phenolics

Annual 2014

Source			MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	
Date			28-FEB-2014	31-MAY-2014	31-AUG-2014	31-OCT-2014	
Analyte	MDL	Units	P701729	P716426	P731763	P741662	Average
2-Chlorophenol	330	UG/KG	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol	330	UG/KG	ND	ND	ND	ND	ND
2,4-Dichlorophenol	330	UG/KG	ND	ND	ND	ND	ND
2,4-Dimethylphenol	330	UG/KG	ND	ND	ND	ND	ND
2,4-Dinitrophenol	330	UG/KG	ND	ND	ND	ND	ND
2-Methyl-4,6-dinitrophenol	800	UG/KG	ND	ND	ND	ND	ND
2-Nitrophenol	330	UG/KG	ND	ND	ND	ND	ND
4-Nitrophenol	800	UG/KG	ND	ND	ND	ND	ND
Pentachlorophenol	800	UG/KG	ND	ND	ND	ND	ND
Phenol	330	UG/KG	4920	3940	3400	2800	3765
2,4,6-Trichlorophenol	330	UG/KG	ND	ND	ND	ND	ND
Total Chlorinated Phenols	800	UG/KG	0	0	0	0	0
Total Non-Chlorinated Phenols	800	UG/KG	8800	6990	4900	4400	6273
Phenols	800	UG/KG	8800	6990	4900	4400	6273
Additional Analytes Determined;							
2-Methylphenol	330	UG/KG	2010	ND	ND	ND	503
4-Methylphenol(3-MP is unresolved)	330	UG/KG	1870	3050	1500	1600	2005
2,4,5-Trichlorophenol	800	UG/KG	ND	ND	ND	ND	ND
Phenols average	800	UG/KG	447	358	309	255	342

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

METRO BIOSOLIDS CENTER

Purgeables

Annual 2014

Source			MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN
Date			31-JAN-2014	28-FEB-2014	31-MAR-2014	01-APR-2014	30-APR-2014	01-MAY-2014
Analyte	MDL	Units	P695521	P701729	P707336	P707337	P710842	P710843
Acrolein	6.4	UG/KG	ND	ND	ND	ND	ND	ND
Acrylonitrile	3.9	UG/KG	ND	ND	ND	ND	ND	ND
Benzene	2.1	UG/KG	DNQ5.2	DNQ3.3	DNQ4.5	ND	DNQ4.7	ND
Bromodichloromethane	2.2	UG/KG	ND	ND	ND	ND	ND	ND
Bromoform	2.4	UG/KG	ND	ND	ND	ND	ND	ND
Bromomethane	6.9	UG/KG	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	3	UG/KG	ND	ND	ND	ND	ND	ND
Chlorobenzene	1	UG/KG	ND	ND	ND	ND	ND	ND
Chloroethane	3.6	UG/KG	ND	ND	ND	ND	ND	ND
Chloroform	2.3	UG/KG	ND	ND	ND	ND	ND	ND
Chloromethane	3.4	UG/KG	ND	ND	ND	ND	ND	ND
Dibromochloromethane	2.4	UG/KG	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	1.5	UG/KG	DNQ10.6	19.5	DNQ13.8	ND	DNQ11.9	ND
1,3-Dichlorobenzene	1.8	UG/KG	ND	DNQ3.6	DNQ4.1	ND	ND	ND
1,4-Dichlorobenzene	1.5	UG/KG	73.1	70.6	85.6	ND	79.3	ND
Dichlorodifluoromethane	5.56	UG/KG	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	1.9	UG/KG	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	3.6	UG/KG	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	5	UG/KG	ND	ND	ND	ND	ND	ND
trans-1,2-dichloroethene	3.5	UG/KG	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	2.6	UG/KG	ND	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	2.5	UG/KG	ND	ND	ND	ND	ND	ND
trans-1,3-dichloropropene	2.1	UG/KG	ND	ND	ND	ND	ND	ND
Ethylbenzene	1.4	UG/KG	240.0	233.0	349.0	ND	337.0	ND
Methylene chloride	3.5	UG/KG	ND	ND	DNQ5.6	ND	DNQ4.3	ND
1,1,2,2-Tetrachloroethane	5.9	UG/KG	ND	ND	ND	ND	ND	ND
Tetrachloroethene	2.8	UG/KG	ND	ND	ND	ND	ND	ND
Toluene	1.2	UG/KG	84.0	60.4	66.0	ND	74.4	ND
1,1,1-Trichloroethane	3.2	UG/KG	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	2.8	UG/KG	ND	ND	ND	ND	ND	ND
Trichloroethene	2.6	UG/KG	ND	ND	<2.6	ND	ND	ND
Trichlorofluoromethane	2.2	UG/KG	ND	ND	ND	ND	ND	ND
Vinyl chloride	4.8	UG/KG	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	2.5	UG/KG	ND	DNQ15.6	DNQ14.9	ND	ND	ND
Halomethane Purgeable Compounds	6.9	UG/KG	0.0	0.0	0.0	0.0	0.0	0.0
Purgeable Compounds	6.9	UG/KG	397.1	371.2	490.2	0.0	495.4	0.0
Additional Analytes Determined;								
Acetone	31.4	UG/KG	26200	21700	20300	ND	22400	ND
Allyl chloride	3.6	UG/KG	ND	ND	ND	ND	ND	ND
Benzyl chloride	4.3	UG/KG	ND	ND	ND	ND	ND	ND
2-Butanone	36.3	UG/KG	9750	6710	6840	ND	7190	ND
Carbon disulfide	4.7	UG/KG	244	128	128	ND	194	ND
Chloroprene	3.1	UG/KG	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	2.5	UG/KG	ND	ND	ND	ND	ND	ND
Isopropylbenzene	1.3	UG/KG	22.7	22.9	27.8	ND	28.6	ND
Methyl Iodide	3.8	UG/KG	ND	ND	ND	ND	ND	ND
Methyl methacrylate	2.4	UG/KG	ND	ND	ND	ND	ND	ND
Methyl tert-butyl ether	3.4	UG/KG	ND	ND	ND	ND	ND	ND
2-Nitropropane	45.8	UG/KG	ND	ND	ND	ND	ND	ND
ortho-xylene	1.9	UG/KG	DNQ33.7	40.1	49.9	ND	38.8	ND
Styrene	1.7	UG/KG	144.0	52.7	102.0	ND	63.1	ND
meta,para xylenes	4.2	UG/KG	DNQ63.7	74.2	98.2	ND	67.9	ND
2-Chloroethylvinyl ether	5.5	UG/KG	ND	ND	ND	ND	ND	ND
4-Methyl-2-pentanone	9.7	UG/KG	ND	ND	33.7	ND	ND	ND

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

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

METRO BIOSOLIDS CENTER
Purgeables

Annual 2014

Source			MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN
Date			31-MAY-2014	30-JUN-2014	30-JUN-2014	31-JUL-2014	01-AUG-2014	31-AUG-2014
Analyte	MDL	Units	P716426	P720867	P720868	P727207	P727208	P731763
Acrolein	6.4	UG/KG	ND	ND	ND	ND	ND	ND
Acrylonitrile	3.9	UG/KG	ND	ND	ND	ND	ND	ND
Benzene	2.1	UG/KG	ND	DNQ4.1	ND	<2.1	ND	DNQ3.3
Bromodichloromethane	2.2	UG/KG	ND	ND	ND	ND	ND	ND
Bromoform	2.4	UG/KG	ND	ND	ND	ND	ND	ND
Bromomethane	6.9	UG/KG	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	3	UG/KG	ND	ND	ND	ND	ND	ND
Chlorobenzene	1	UG/KG	ND	ND	ND	ND	ND	ND
Chloroethane	3.6	UG/KG	ND	ND	ND	ND	ND	ND
Chloroform	2.3	UG/KG	ND	ND	ND	ND	ND	ND
Chloromethane	3.4	UG/KG	ND	ND	ND	ND	ND	ND
Dibromochloromethane	2.4	UG/KG	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	1.5	UG/KG	ND	21.5	ND	48.0	ND	29.9
1,3-Dichlorobenzene	1.8	UG/KG	ND	DNQ5.3	ND	ND	ND	ND
1,4-Dichlorobenzene	1.5	UG/KG	69.6	71.3	ND	64.3	ND	55.6
Dichlorodifluoromethane	5.56	UG/KG	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	1.9	UG/KG	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	3.6	UG/KG	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	5	UG/KG	ND	ND	ND	ND	ND	ND
trans-1,2-dichloroethene	3.5	UG/KG	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	2.6	UG/KG	ND	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	2.5	UG/KG	ND	ND	ND	ND	ND	ND
trans-1,3-dichloropropene	2.1	UG/KG	ND	ND	ND	ND	ND	ND
Ethylbenzene	1.4	UG/KG	277.0	301.0	ND	362.0	ND	449.0
Methylene chloride	3.5	UG/KG	ND	ND	ND	DNQ6.2	ND	DNQ5.5
1,1,2,2-Tetrachloroethane	5.9	UG/KG	ND	ND	ND	ND	ND	ND
Tetrachloroethene	2.8	UG/KG	ND	ND	ND	ND	ND	<2.8
Toluene	1.2	UG/KG	71.0	102.0	ND	117.0	ND	101.0
1,1,1-Trichloroethane	3.2	UG/KG	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	2.8	UG/KG	ND	ND	ND	ND	ND	ND
Trichloroethene	2.6	UG/KG	ND	ND	ND	ND	ND	<2.6
Trichlorofluoromethane	2.2	UG/KG	ND	ND	ND	ND	ND	ND
Vinyl chloride	4.8	UG/KG	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	2.5	UG/KG	ND	DNQ19.3	ND	ND	ND	ND
Halomethane Purgeable Compounds	6.9	UG/KG	0.0	0.0	0.0	0.0	0.0	0.0
Purgeable Compounds	6.9	UG/KG	417.6	476.5	0.0	591.3	0.0	635.5
Additional Analytes Determined;								
Acetone	31.4	UG/KG	16500	25600	ND	25600	ND	19800
Allyl chloride	3.6	UG/KG	ND	ND	ND	ND	ND	ND
Benzyl chloride	4.3	UG/KG	ND	ND	ND	ND	ND	ND
2-Butanone	36.3	UG/KG	5310	8610	ND	8250	ND	5120
Carbon disulfide	4.7	UG/KG	94.3	196	ND	174	ND	125
Chloroprene	3.1	UG/KG	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	2.5	UG/KG	ND	ND	ND	ND	ND	ND
Isopropylbenzene	1.3	UG/KG	35.6	24.2	ND	44.4	ND	44.5
Methyl Iodide	3.8	UG/KG	ND	ND	ND	ND	ND	ND
Methyl methacrylate	2.4	UG/KG	ND	ND	ND	ND	ND	ND
Methyl tert-butyl ether	3.4	UG/KG	ND	ND	ND	ND	ND	ND
2-Nitropropane	45.8	UG/KG	ND	ND	ND	ND	ND	ND
ortho-xylene	1.9	UG/KG	38.6	41.5	ND	58.8	ND	42.1
Styrene	1.7	UG/KG	110.0	59.3	ND	71.1	ND	76.7
meta,para xylenes	4.2	UG/KG	71.1	80.0	ND	126.0	ND	67.6
2-Chloroethylvinyl ether	5.5	UG/KG	ND	ND	ND	ND	ND	ND
4-Methyl-2-pentanone	9.7	UG/KG	28.1	DNQ22.7	ND	31.0	ND	DNQ15.4

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

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

METRO BIOSOLIDS CENTER
Purgeables

Annual 2014

Source			MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN
Date			30-SEP-2014	01-OCT-2014	31-OCT-2014	30-NOV-2014	01-DEC-2014	31-DEC-2014
Analyte	MDL	Units	P736392	P736393	P741662	P746878	P746879	P751630
Acrolein	6.4	UG/KG	ND	ND	ND	ND	ND	ND
Acrylonitrile	3.9	UG/KG	ND	ND	ND	ND	ND	ND
Benzene	2.1	UG/KG	ND	ND	ND	ND	ND	ND
Bromodichloromethane	2.2	UG/KG	ND	ND	ND	ND	ND	ND
Bromoform	2.4	UG/KG	ND	ND	ND	ND	ND	ND
Bromomethane	6.9	UG/KG	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	3	UG/KG	ND	ND	ND	ND	ND	ND
Chlorobenzene	1	UG/KG	ND	ND	ND	ND	ND	ND
Chloroethane	3.6	UG/KG	ND	ND	ND	ND	ND	ND
Chloroform	2.3	UG/KG	ND	ND	ND	ND	ND	ND
Chloromethane	3.4	UG/KG	ND	ND	ND	ND	ND	ND
Dibromochloromethane	2.4	UG/KG	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	1.5	UG/KG	ND	ND	ND	78.0	ND	176.0
1,3-Dichlorobenzene	1.8	UG/KG	ND	ND	ND	ND	ND	DNQ10.5
1,4-Dichlorobenzene	1.5	UG/KG	48.5	ND	ND	ND	ND	44.5
Dichlorodifluoromethane	5.56	UG/KG	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	1.9	UG/KG	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	3.6	UG/KG	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	5	UG/KG	ND	ND	ND	ND	ND	ND
trans-1,2-dichloroethene	3.5	UG/KG	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	2.6	UG/KG	ND	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	2.5	UG/KG	ND	ND	ND	ND	ND	ND
trans-1,3-dichloropropene	2.1	UG/KG	ND	ND	ND	ND	ND	ND
Ethylbenzene	1.4	UG/KG	420.0	ND	358.0	298.0	ND	245.0
Methylene chloride	3.5	UG/KG	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	5.9	UG/KG	ND	ND	ND	ND	ND	ND
Tetrachloroethene	2.8	UG/KG	ND	ND	ND	ND	ND	ND
Toluene	1.2	UG/KG	156.0	ND	103.0	111.0	ND	32.5
1,1,1-Trichloroethane	3.2	UG/KG	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	2.8	UG/KG	ND	ND	ND	ND	ND	ND
Trichloroethene	2.6	UG/KG	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	2.2	UG/KG	ND	ND	ND	ND	ND	ND
Vinyl chloride	4.8	UG/KG	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	2.5	UG/KG	ND	ND	ND	ND	ND	ND
Halomethane Purgeable Compounds	6.9	UG/KG	0.0	0.0	0.0	0.0	0.0	0.0
Purgeable Compounds	6.9	UG/KG	624.5	0.0	461.0	487.0	0.0	498.0

Additional Analytes Determined;

Acetone	31.4	UG/KG	14400	ND	14500	18500	ND	17200
Allyl chloride	3.6	UG/KG	ND	ND	ND	ND	ND	ND
Benzyl chloride	4.3	UG/KG	ND	ND	ND	ND	ND	ND
2-Butanone	36.3	UG/KG	4330	ND	5280	6860	ND	4710
Carbon disulfide	4.7	UG/KG	149	ND	186	156	ND	89.0
Chloroprene	3.1	UG/KG	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	2.5	UG/KG	ND	ND	ND	ND	ND	ND
Isopropylbenzene	1.3	UG/KG	45.0	ND	47.9	46.5	ND	27.5
Methyl Iodide	3.8	UG/KG	ND	ND	ND	ND	ND	ND
Methyl methacrylate	2.4	UG/KG	ND	ND	ND	ND	ND	ND
Methyl tert-butyl ether	3.4	UG/KG	ND	ND	ND	ND	ND	ND
2-Nitropropane	45.8	UG/KG	ND	ND	ND	ND	ND	ND
ortho-xylene	1.9	UG/KG	38.5	ND	41.0	41.0	ND	32.5
Styrene	1.7	UG/KG	70.0	ND	63.6	50.5	ND	39.0
meta,para xylenes	4.2	UG/KG	75.0	ND	80.8	81.0	ND	65.5
2-Chloroethylvinyl ether	5.5	UG/KG	ND	ND	ND	ND	ND	ND
4-Methyl-2-pentanone	9.7	UG/KG	ND	ND	ND	<9.7	ND	ND

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

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

METRO BIOSOLIDS CENTER
Purgeables

Annual 2014

Analyte	MDL	Units	Average
Acrolein	6.4	UG/KG	ND
Acrylonitrile	3.9	UG/KG	ND
Benzene	2.1	UG/KG	DNQ1.4
Bromodichloromethane	2.2	UG/KG	ND
Bromoform	2.4	UG/KG	ND
Bromomethane	6.9	UG/KG	ND
Carbon tetrachloride	3	UG/KG	ND
Chlorobenzene	1	UG/KG	ND
Chloroethane	3.6	UG/KG	ND
Chloroform	2.3	UG/KG	ND
Chloromethane	3.4	UG/KG	ND
Dibromochloromethane	2.4	UG/KG	ND
1,2-Dichlorobenzene	1.5	UG/KG	22.7
1,3-Dichlorobenzene	1.8	UG/KG	DNQ1.3
1,4-Dichlorobenzene	1.5	UG/KG	36.8
Dichlorodifluoromethane	5.56	UG/KG	ND
1,1-Dichloroethane	1.9	UG/KG	ND
1,2-Dichloroethane	3.6	UG/KG	ND
1,1-Dichloroethene	5	UG/KG	ND
trans-1,2-dichloroethene	3.5	UG/KG	ND
1,2-Dichloropropane	2.6	UG/KG	ND
cis-1,3-dichloropropene	2.5	UG/KG	ND
trans-1,3-dichloropropene	2.1	UG/KG	ND
Ethylbenzene	1.4	UG/KG	214.9
Methylene chloride	3.5	UG/KG	DNQ1.2
1,1,2,2-Tetrachloroethane	5.9	UG/KG	ND
Tetrachloroethene	2.8	UG/KG	0.0
Toluene	1.2	UG/KG	59.9
1,1,1-Trichloroethane	3.2	UG/KG	ND
1,1,2-Trichloroethane	2.8	UG/KG	ND
Trichloroethene	2.6	UG/KG	0.0
Trichlorofluoromethane	2.2	UG/KG	ND
Vinyl chloride	4.8	UG/KG	ND
1,2,4-Trichlorobenzene	2.5	UG/KG	DNQ2.8
Halomethane Purgeable Compounds	6.9	UG/KG	0.0
Purgeable Compounds	6.9	UG/KG	331.6

Additional Analytes Determined;

Acetone	31.4	UG/KG	13483
Allyl chloride	3.6	UG/KG	ND
Benzyl chloride	4.3	UG/KG	ND
2-Butanone	36.3	UG/KG	4387
Carbon disulfide	4.7	UG/KG	103.5
Chloroprene	3.1	UG/KG	ND
1,2-Dibromoethane	2.5	UG/KG	ND
Isopropylbenzene	1.3	UG/KG	23.2
Methyl Iodide	3.8	UG/KG	ND
Methyl methacrylate	2.4	UG/KG	ND
Methyl tert-butyl ether	3.4	UG/KG	ND
2-Nitropropane	45.8	UG/KG	ND
ortho-xylene	1.9	UG/KG	27.6
Styrene	1.7	UG/KG	50.1
meta,para xylenes	4.2	UG/KG	52.8
2-Chloroethylvinyl ether	5.5	UG/KG	ND
4-Methyl-2-pentanone	9.7	UG/KG	DNQ7.3

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

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

METROBIOSOLIDS CENTER
Dioxin and Furan Analysis, SW-846 Method 8290

Annual 2014

Analyzed by: Frontier Analytical Laboratories

Source			MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN
Date			31-JAN-2014	28-FEB-2014	31-MAR-2014	30-APR-2014	31-MAY-2014	30-JUN-2014	31-JUL-2014
Analyte	MDL	Units	P695521	P701729	P707336	P710842	P716426	P720867	P727207
2,3,7,8-tetra CDD	.043	NG/KG	DNQ0.72	DNQ0.56	DNQ0.86	DNQ0.76	ND	ND	ND
1,2,3,7,8-penta CDD	.0566	NG/KG	DNQ2.35	DNQ2.90	DNQ4.25	DNQ2.74	DNQ3.61	DNQ3.14	ND
1,2,3,4,7,8_hexa_CDD	.0747	NG/KG	DNQ1.41	DNQ1.30	DNQ1.92	DNQ1.49	DNQ1.25	DNQ2.23	ND
1,2,3,6,7,8-hexa CDD	.081	NG/KG	12.10	15.90	15.30	16.40	17.30	19.30	18.10
1,2,3,7,8,9-hexa CDD	.0748	NG/KG	DNQ4	DNQ5	DNQ6	DNQ6	DNQ5	6	DNQ5
1,2,3,4,6,7,8-hepta CDD	.143	NG/KG	200	223	232	216	187	227	202
octa CDD	.297	NG/KG	1080	1130	1320	1350	934	1090	939
2,3,7,8-tetra CDF	.0435	NG/KG	3.04	3.26	3.43	3.83	3.45	3.97	3.30
1,2,3,7,8-penta CDF	.0625	NG/KG	DNQ1.33	DNQ1.35	DNQ1.94	DNQ1.54	DNQ1.50	DNQ2.12	DNQ1.76
2,3,4,7,8-penta CDF	.066	NG/KG	DNQ1.77	DNQ1.49	DNQ1.67	DNQ1.35	DNQ1.11	DNQ3.09	DNQ2.85
1,2,3,4,7,8-hexa CDF	.0484	NG/KG	DNQ1.88	DNQ1.80	DNQ2.49	DNQ2.37	DNQ1.80	DNQ2.65	DNQ2.10
1,2,3,6,7,8-hexa CDF	.0487	NG/KG	DNQ1.66	DNQ2.00	DNQ2.36	DNQ2.14	DNQ1.72	DNQ3.09	DNQ2.69
1,2,3,7,8,9-hexa CDF	.0627	NG/KG	DNQ0.54	DNQ0.57	DNQ1.02	DNQ0.72	DNQ0.61	ND	ND
2,3,4,6,7,8-hexa CDF	.0531	NG/KG	DNQ2.21	DNQ2.16	DNQ2.64	DNQ2.55	DNQ2.06	DNQ3.50	DNQ2.62
1,2,3,4,6,7,8-hepta CDF	.073	NG/KG	27.30	22.50	27.20	24.70	18.60	22.40	18.50
1,2,3,4,7,8,9-hepta CDF	.0704	NG/KG	DNQ1.84	DNQ1.38	DNQ2.44	DNQ1.77	DNQ1.33	DNQ2.87	ND
octa CDF	.155	NG/KG	66.30	61.00	68.20	64.40	49.90	62.70	44.70

Source			MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN
Date			31-AUG-2014	30-SEP-2014	31-OCT-2014	30-NOV-2014
Analyte	MDL	Units	P731763	P736392	P741662	P746878
2,3,7,8-tetra CDD	.043	NG/KG	DNQ0.79	DNQ0.70	DNQ0.58	ND
1,2,3,7,8-penta CDD	.0566	NG/KG	DNQ4.54	DNQ3.61	DNQ4.16	DNQ4.60
1,2,3,4,7,8_hexa_CDD	.0747	NG/KG	DNQ1.61	DNQ1.76	DNQ1.83	DNQ1.73
1,2,3,6,7,8-hexa CDD	.081	NG/KG	18.00	16.90	19.30	17.50
1,2,3,7,8,9-hexa CDD	.0748	NG/KG	DNQ6	DNQ6	6	DNQ6
1,2,3,4,6,7,8-hepta CDD	.143	NG/KG	232	232	227	218
octa CDD	.297	NG/KG	1180	1300	1230	1130
2,3,7,8-tetra CDF	.0435	NG/KG	4.99	5.19	6.43	4.28
1,2,3,7,8-penta CDF	.0625	NG/KG	DNQ1.70	DNQ1.68	DNQ1.83	DNQ1.82
2,3,4,7,8-penta CDF	.066	NG/KG	DNQ1.66	DNQ2.84	DNQ1.93	DNQ2.95
1,2,3,4,7,8-hexa CDF	.0484	NG/KG	DNQ2.44	DNQ2.70	DNQ2.48	DNQ2.51
1,2,3,6,7,8-hexa CDF	.0487	NG/KG	DNQ2.19	DNQ2.99	DNQ2.02	DNQ2.04
1,2,3,7,8,9-hexa CDF	.0627	NG/KG	DNQ0.93	DNQ1.13	DNQ0.84	DNQ0.91
2,3,4,6,7,8-hexa CDF	.0531	NG/KG	DNQ2.80	DNQ2.98	DNQ2.74	DNQ2.46
1,2,3,4,6,7,8-hepta CDF	.073	NG/KG	24.10	28.40	27.70	23.70
1,2,3,4,7,8,9-hepta CDF	.0704	NG/KG	DNQ1.70	DNQ1.76	DNQ1.60	DNQ1.73
octa CDF	.155	NG/KG	56.50	69.60	79.40	56.10

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

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

H. Results of "Title 22" Sludge Hazardous Waste Tests

Title 22 CCR Summary Tables

Concentrations of Title 22 analytes (metals and organics) both on a wet weight and dry weight concentration basis for monthly composite of daily samples of sludge being hauled from the Metro Biosolids Center.

The tables list the TTLC (Total Threshold Limit Concentration) or STLC (Soluble Threshold Limit Concentration) limits in the left column for each analyte.

Definitions:
MBCDEWCN = Metro Biosolids Center dewatered sludge.

2014 POINT LOMA WASTEWATER TREATMENT PLANT ANNUAL REPORT

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CALIFORNIA HAZARDOUS WASTE IDENTIFICATION TEST (TITLE 22)

METRO BIOSOLIDS CENTER (MBC)

METALS **WET WEIGHT Concentration (calculated)**

ANALYTE	TTLC Wet wt mg/Kg	MBCDEWCN Jan-14 P695521	MBCDEWCN Feb-14 P701729	MBCDEWCN Mar-14 P707336	MBCDEWCN Apr-14 P710842	MBCDEWCN May-14 P716426	MBCDEWCN Jun-14 P720867	MBCDEWCN Jul-14 P727207	MBCDEWCN Aug-14 P731763	MBCDEWCN Sep-14 P736392	MBCDEWCN Oct-14 P741662	MBCDEWCN Nov-14 P746878	MBCDEWCN Dec-14 P751630
ANTIMONY	500	1.13	0.87	0.86	1.00	0.84	1.02	1.17	1.12	1.54	0.15	0.66	1.06
ARSENIC	500	0.9	0.9	1.1	0.8	0.9	0.8	0.82	0.7	0.8	0.9	0.9	1.5
BARIUM	10000	101	162	113	107	81	92	88	51	99	30	92	69
BERYLLIUM	75	0.019	0.017	0.009	0.017	0.017	0.013	0.010	0.030	0.032	0.019	0.030	0.030
CADMIUM	100	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.5	0.3	0.3
CHROMIUM(VI)	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHROMIUM(total)	2500	13	12	12	13	13	11	12	12	12	12	11	11
COBALT	8000	1.7	1.5	1.6	1.6	1.5	1.5	1.4	1.3	1.6	1.0	1.2	1.4
COPPER	2500	184	171	160	167	181	149	177	180	190	183	165	171
LEAD	1000	7	7	7	6	7	6	7	7	9	7	7	7
MERCURY	20	0.25	0.17	0.20	0.33	0.36	0.30	0.37	0.27	0.29	0.24	0.31	0.33
MOLYBDENUM	3500	4.5	4.1	4.1	4.3	4.8	5.0	5.4	4.8	6.9	6.5	4.8	4.7
NICKEL	2000	10	10	10	11	11	11	12	11	11	11	9	10
SELENIUM	100	1.4	1.4	1.2	0.5	1.4	1.4	1.0	1.2	1.1	1.2	1.3	1.6
SILVER	500	1	1	1	1	2	2	1	1	1	1	1	1
THALLIUM	700	< 0.28	0.92	0.14	< 0.28	< 0.28	0.27	0.26	< 0.27	1.06	0.41	1.10	0.54
VANADIUM	2400	14	14	14	13	11	11	8	8	10	9	6	7
ZINC	5000	233	259	256	245	229	211	232	237	265	265	227	212
FLUORIDE	18000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SULFIDES-REACTIVE	NA	8	NA	31	26	12	9	6	27	20	14	NA	8
SULFIDES-TOTAL	NA	5479	3309	4939	5259	5873	55158	4724	5358	7674	3767	3836	6732
TOTAL SOLIDS (%)		27.6	28.9	28.8	27.9	27.9	26.9	26.1	27.2	26.6	27.0	27.4	27.2

DRY WEIGHT Concentration

ANALYTE	TTLC Wet wt mg/Kg	MBCDEWCN Jan-14 P695521	MBCDEWCN Feb-14 P701729	MBCDEWCN Mar-14 P707336	MBCDEWCN Apr-14 P710842	MBCDEWCN May-14 P716426	MBCDEWCN Jun-14 P720867	MBCDEWCN Jul-14 P727207	MBCDEWCN Aug-14 P731763	MBCDEWCN Sep-14 P736392	MBCDEWCN Oct-14 P741662	MBCDEWCN Nov-14 P746878	MBCDEWCN Dec-14 P751630
ANTIMONY	500	4.1	3.0	3.0	3.6	3.0	3.8	4.5	4.1	5.8	0.55	2.4	3.9
ARSENIC	500	3.2	3.17	3.7	2.91	3.38	2.82	3.13	2.71	2.93	3.5	3.14	5.34
BARIUM	10000	367	559	392	384	290	342	338	187	371	110	334	255
BERYLLIUM	75	0.07	0.06	0.03	0.06	0.06	0.05	0.04	0.11	0.12	0.07	0.11	0.11
CADMIUM	100	1.2	1.0	1.1	1.2	1.1	1.1	1.3	0.9	1.1	1.9	1.0	1.1
CHROMIUM(VI)	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHROMIUM(total)	2500	45.5	39.9	41.4	46.4	47.5	42	46.2	42.9	44.9	44.7	40.2	41.2
COBALT	8000	6.1	5.3	5.6	5.7	5.40	5.6	5.5	4.7	5.9	3.8	4.3	5.0
COPPER	2500	666	592	554	598	650	553	678	661	713	676	601	628
LEAD	1000	25	25	23	22.5	25	23	26	26	32	25	25	26
MERCURY	20	0.9	0.6	0.7	1.20	1.3	1.1	1.4	1.0	1.1	0.89	1.12	1.2
MOLYBDENUM	3500	16.3	14.2	14.2	15.4	17.2	18.7	20.8	17.6	25.8	24.1	17.4	17.1
NICKEL	2000	36.6	34.2	36	37.7	38.9	39.5	44.7	41.6	39.7	38.9	32.8	36
SELENIUM	100	5.08	4.90	4.07	1.66	5.07	5.36	3.66	4.54	4.27	4.48	4.75	5.77
SILVER	500	4.34	5.05	4.35	4.12	7.91	5.58	4.32	3.18	4.24	3.3	3.15	3.56
THALLIUM	700	< 1	3.2	0.5	< 1	< 1	1	1	< 1	4	1.5	4	2
VANADIUM	2400	51.5	47.1	48.7	46.0	37.8	41.4	31.5	29.6	37.9	35.0	23.3	26.0
ZINC	5000	846	897	888	878	822	783	887	870	996	982	829	780
FLUORIDE	18000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SULFIDES-REACTIVE	NA	30	73	106	93	43	35	24	98	77	51	NA	31
SULFIDES-TOTAL	NA	19850	11450	17150	18850	21050	205050	18100	19700	28850	13950	14000	24750

TTLC = Total Threshold Limit Concentration STLC = Soluble Threshold Limit Concentration

NA = Not Analyzed, NS = Not Sampled * = The total concentration is less than 10 times the the STLC, therefore by definition this substance is below hazardous concentrations.

ORGANICS

WET WEIGHT Concentration (calculated)

ANALYTE	TTLC Wet wt mg/Kg	MBCDEWCN Jan-14 P695521	MBCDEWCN Feb-14 P701729	MBCDEWCN Mar-14 P707336	MBCDEWCN Apr-14 P710842	MBCDEWCN May-14 P716426	MBCDEWCN Jun-14 P720867	MBCDEWCN Jul-14 P727207	MBCDEWCN Aug-14 P731763	MBCDEWCN Sep-14 P736392	MBCDEWCN Oct-14 P741662	MBCDEWCN Nov-14 P746878	MBCDEV Dec-14 P751630
ALDRIN	1.4	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	
CHLORDANE	2.5	nd	0.003	nd	0.004	0.003	nd	nd	nd	nd	nd	nd	
DDT,DDE,DDD	1.0	nd	nd	nd	nd	0.0223	0.0108	nd	0.0218	nd	nd	nd	
2,4-DCPAA	100	NA	NA	NA	NA	nd	NA	NA	NA	NA	NA	NA	
DIELDRIN	8.0	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	
ENDRIN	0.20	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	
HEPTACHLOR	4.7	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	
KEPONE	21	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
LINDANE	4	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	
METHOXYCHLOR	100	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	
MIREX	21	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	
PENTACHLOROPHENOL	17	NA	nd	NA	NA	nd	NA	NA	nd	NA	nd	NA	
PCBs (TOTAL)	50	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	
TOXAPHENE	5	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	
TRICHLOROETHENE	2040	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	
2,4,5-TCPPA	10	NA	NA	NA	NA	nd	NA	NA	NA	nd	NA	NA	
TOTAL SOLIDS (%)		27.6	28.9	28.8	27.9	27.9	26.9	26.1	27.2	26.6	27.0	27.4	
pH	>2-<12	7.92	7.77	7.69	7.67	7.64	7.63	7.74	7.74	7.84	7.76	7.81	

DRY WEIGHT Concentration

ANALYTE	TTLC Wet wt mg/Kg	MBCDEWCN Jan-14 P695521	MBCDEWCN Feb-14 P701729	MBCDEWCN Mar-14 P707336	MBCDEWCN Apr-14 P710842	MBCDEWCN May-14 P716426	MBCDEWCN Jun-14 P720867	MBCDEWCN Jul-14 P727207	MBCDEWCN Aug-14 P731763	MBCDEWCN Sep-14 P736392	MBCDEWCN Oct-14 P741662	MBCDEWCN Nov-14 P746878	MBCDEV Dec-14 P751630
ALDRIN	1.4	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	
CHLORDANE	2.5	nd	0.01	nd	0.016	0.011	nd	nd	nd	nd	nd	nd	
DDT,DDE,DDD	1.0	nd	nd	nd	nd	0.080	0.040	nd	0.08	nd	nd	nd	
2,4-DCPAA	100	NA	NA	NA	NA	nd	NA	NA	NA	NA	NA	NA	
DIELDRIN	8.0	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	
ENDRIN	0.20	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	
HEPTACHLOR	4.7	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	
KEPONE	21	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
LINDANE	4	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	
METHOXYCHLOR	100	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	
MIREX	21	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	
PENTACHLOROPHENOL	17	NA	nd	NA	NA	nd	NA	NA	nd	NA	nd	NA	
PCBs (TOTAL)	50	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	
TOXAPHENE	5	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	
TRICHLOROETHENE	2040	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	
2,4,5-TCPPA	10	NA	NA	NA	NA	nd	NA	NA	NA	nd	NA	NA	

TTLC = Total Threshold Limit Concentration STLC = Soluble Threshold Limit Concentration

	STLC	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEV
	Wet wt	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14
ANALYTE	mg/L	P695521	P701729	P707336	P710842	P716426	P720867	P727207	P731763	P736392	P741662	P746878	P751630
ANTIMONY	15	*	*	*	*	*	*	*	*	*	*	*	
ARSENIC	5.0	*	*	*	*	*	*	*	*	*	*	*	
BARIUM	100	*	*	*	*	*	*	*	*	*	*	*	
BERYLLIUM	0.75	*	*	*	*	*	*	*	*	*	*	*	
CADMIUM	1.0	*	*	*	*	*	*	*	*	*	*	*	
CHROMIUM(VI)	5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CHROMIUM(total)	560	*	*	*	*	*	*	*	*	*	*	*	
COBALT	80	*	*	*	*	*	*	*	*	*	*	*	
COPPER	25	*	*	*	*	*	*	*	*	*	*	*	
LEAD	5.0	*	*	*	*	*	*	*	*	*	*	*	
MERCURY	0.2	*	*	*	*	*	*	*	*	*	*	*	
MOLYBDENUM	350	*	*	*	*	*	*	*	*	*	*	*	
NICKEL	20	*	*	*	*	*	*	*	*	*	*	*	
SELENIUM	1.0	*	*	*	*	*	*	*	*	*	*	*	
SILVER	5.0	*	*	*	*	*	*	*	*	*	*	*	
THALLIUM	7.0	*	*	*	*	*	*	*	*	*	*	*	
VANADIUM	24	*	*	*	*	*	*	*	*	*	*	*	
ZINC	250	*	*	*	*	*	*	*	*	*	*	*	

* = The total concentrations are less than 10 times the the STLC, this substance is below STLC limits by definition.

WASTE EXTRACTION TEST - ORGANICS

	STLC	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEV
	Wet wt	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14
ANALYTE	mg/L	P695521	P701729	P707336	P710842	P716426	P720867	P575132	P731763	P736392	P741662	P746878	P751630
ALDRIN	0.14	*	*	*	*	*	*	*	*	*	*	*	
CHLORDANE	0.25	*	*	*	*	*	*	*	*	*	*	*	
DDT,DDE,DDD	0.1	*	*	*	*	*	*	*	*	*	*	*	
2,4-DCPAA	10	NA	NA	NA	NA	*	NA	NA	NA	NA	NA	NA	
DIELDRIN	0.8	*	*	*	*	*	*	*	*	*	*	*	
ENDRIN	0.02	*	*	*	*	*	*	*	*	*	*	*	
HEPTACHLOR	0.47	*	*	*	*	*	*	*	*	*	*	*	
KEPONE	2.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
LINDANE	0.4	*	*	*	*	*	*	*	*	*	*	*	
METHOXYCHLOR	10	*	*	*	*	*	*	*	*	*	*	*	
MIREX	2.1	*	*	*	*	*	*	*	*	*	*	*	
PENTACHLOROPHENOL	1.7	NA	*	NA	NA	*	NA	NA	*	NA	*	NA	
PCBs (TOTAL)	5	*	*	*	*	*	*	*	*	*	*	*	
TOXAPHENE	0.5	*	*	*	*	*	*	*	*	*	*	*	
TRICHLOROETHENE	204	*	*	*	*	*	*	*	*	*	*	*	
2,4,5-TCPPA	1	NA	NA	NA	NA	*	NA	NA	NA	NA	NA	NA	

TTLC = Total Threshold Limit Concentration STLC = Soluble Threshold Limit Concentration

NA = Not Analyzed, NS = Not Sampled

* = The total concentrations are less than 10 times the the STLC, this substance is below STLC limits by definition.

V. Ocean Monitoring Data Summary

A. Ocean Sediment Chemistry Data Tables.
B. Fish Tissue Chemistry Data Tables.

Maps of sampling sites are included in this section.

Summary of Sampling Technique[16]:

Sediments

Benthic sediment is obtained using a $0.1m^2$, 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 flatfish and rockfish are collected by otter trawl and/or rig fishing. Dissected muscle and liver tissues from these fish are frozen and delivered to the laboratory for analysis. Tissue samples are kept frozen until prepared for analyses. Addendum 1 (June 2003) to MRP R9-2002-0025/NPDES CA0107409 changed the station definitions for trawl and rig fishing sampling, primarily eliminating or redefining stations. Trawl stations SD-7 through SD-14 were reorganized into zones as shown in Section B. In previous years' reports, samples from stations involved in the South Bay Ocean Outfall Predischarge Monitoring, such as SD-15, SD-17 thru SD-21 and RF-3 & RF-4 were included in this Pt. Loma Outfall Report. Since this data is now reported in the South Bay Outfall Monitoring reports, they are no longer contained in this report. Additionally, determinations of Poly Aromatic Hydrocarbon (PAHs) were removed by the modifications.

[16] For complete description of the sampling protocols, dissection techniques, 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 for the Point Loma Ocean Outfall 2008.

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 and are on file.

Sampling stations may also be identified by either a 3-digit number and/or a letter-number identification code. All "A" stations are 100 series and "B" stations are 200 series designations. For example, the station A-15 is also called 115 and station B-7 would be 207.

Chemistries for benthic sediments for 22 “Core Stations” are identified in the following table.

Core Stations

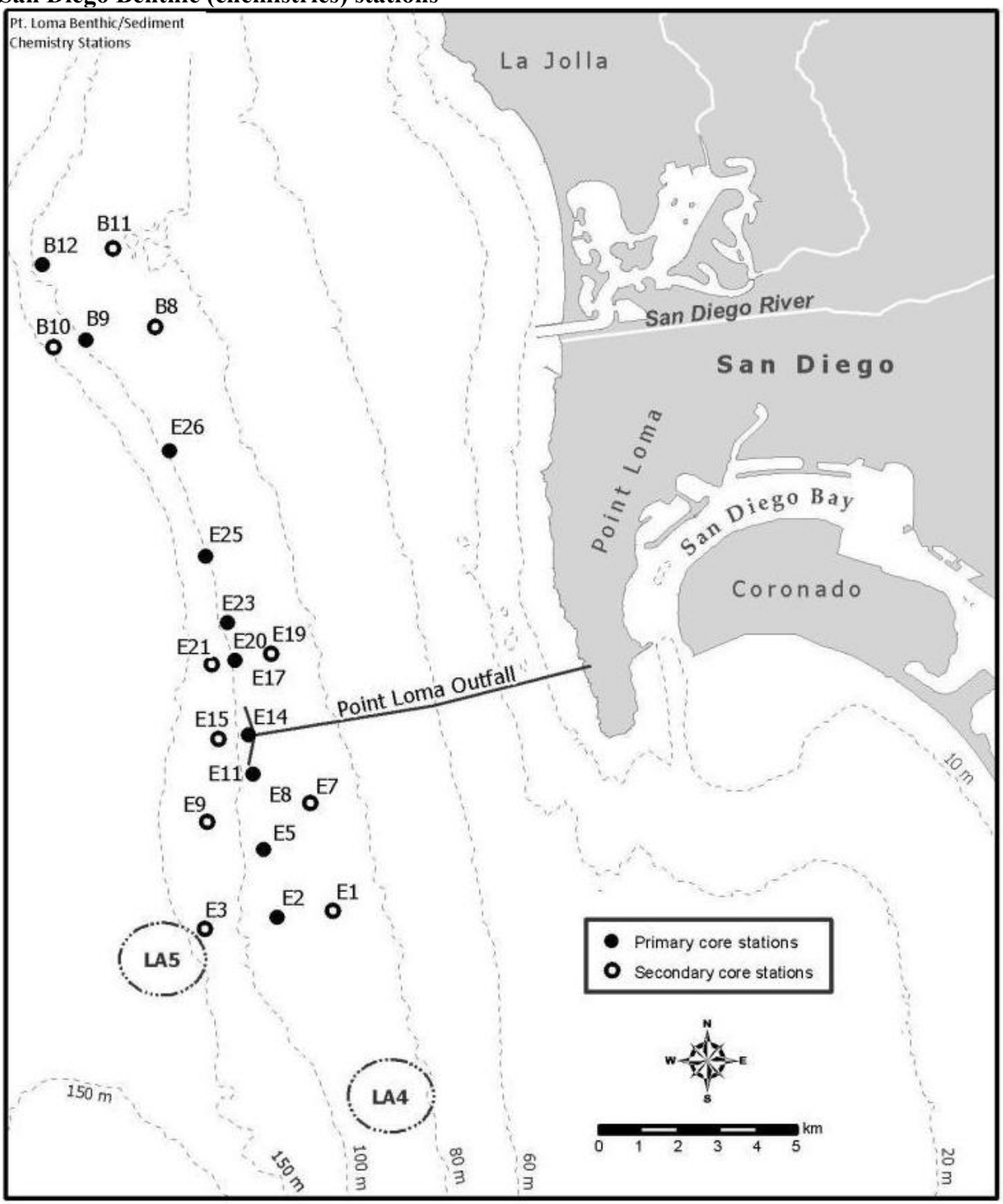
B-8	E-1	E-9	E-20
B-9	E-2	E-11	E-21
B-10	E-3	E-14	E-23
B-11	E-5	E-15	E-25
B-12	E-7	E-17	E-26
	E-8	E-19	

NPDES Permit No. CA 0107409/SDRWQCB Order No. R9-2002-0025 was modified in 2005 to incorporate 8 “Recovery Stations” (listed in following table) in the regular monitoring program as an on-going special study. The suite of analyses is not inclusive, e.g. BOD and PAHs are not a required part of the monitoring program for these stations and may not be included.

Recovery Stations

A-2	A-15
A-5	A-16
A-8	B-3
A-9	B-5

San Diego Benthic (chemistries) stations



POINT LOMA WASTEWATER TREATMENT PLANT
OCEAN SEDIMENT ANNUAL

Annual 2014

Biochemical Oxygen Demand
(mg/Kg)

STATION	DATE	First Quarter	Third Quarter	Average of All Quarters
B-8		253	378*	253
B-9		224	302*	224
B-10		258	580*	258
B-11		285	463*	285
B-12		266	426*	266
E-1		173	217	195
E-2		202	281	242
E-3		172	261	217
E-5		176	174*	176
E-7		305	206*	305
E-8		362	140*	362
E-9		223	279*	223
E-11		264	258*	264
E-14		471	610*	471
E-15		217	517*	217
E-17		326	306*	326
E-19		357	221*	357
E-20		322	194*	322
E-21		312	192*	312
E-23		314*	220*	*
E-25		222*	340*	*
E-26		192	331*	192

* = Quality control criteria was no met. Values are shown but not included in average calculation.

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

POINT LOMA WASTEWATER TREATMENT PLANT
OCEAN SEDIMENT ANNUAL

Annual 2014

Sulfides, Total
(mg/Kg)

STATION	First Quarter	Third Quarter	Average of All Quarters
A-2	NS	5.2	5.2
A-5	NS	9.1	9.1
A-8	NS	4.2	4.2
A-9	NS	4.6	4.6
A-15	NS	4.6	4.6
A-16	NS	6.1	6.1
B-3	NS	4.2	4.2
B-5	NS	4.6	4.6
B-8	2.1	9.5	5.8
B-9	2.2	12.8	7.5
B-10	4.1	7.2	5.7
B-11	3.8	4.9	4.4
B-12	1.2	4.2	2.7
E-1	3.3	3.1	3.2
E-2	6.7	4.6	5.7
E-3	5.7	4.7	5.2
E-5	2.7	3.4	3.1
E-7	3.4	4.0	3.7
E-8	12.7	3.3	8.0
E-9	6.6	3.8	5.2
E-11	11.4	3.4	7.4
E-14	58.8	68.2	63.5
E-15	31.2	17.7	24.5
E-17	15.6	3.6	9.6
E-19	3.9	3.6	3.8
E-20	3.5	3.3	3.4
E-21	4.2	3.0	3.6
E-23	4.7	3.2	4.0
E-25	3.7	4.4	4.1
E-26	1.4	16.2	8.8

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

POINT LOMA WASTEWATER TREATMENT PLANT
OCEAN SEDIMENT ANNUAL

Annual 2014

Total Volatile Solids
(% Weight)

STATION	DATE	First Quarter	Third Quarter	Average of All Quarters
A-2		NS	2.2	2.2
A-5		NS	2.5	2.5
A-8		NS	2.3	2.3
A-9		NS	2.4	2.4
A-15		NS	2.4	2.4
A-16		NS	2.4	2.4
B-3		NS	2.3	2.3
B-5		NS	2.9	2.9
B-8		2.9	3.2	3.1
B-9		2.6	2.7	2.7
B-10		2.2	2.4	2.3
B-11		3.6	3.5	3.6
B-12		2.9	3.1	3.0
E-1		2.0	1.8	1.9
E-2		2.5	2.5	2.5
E-3		2.1	1.8	2.0
E-5		2.0	1.9	2.0
E-7		2.1	2.3	2.2
E-8		2.0	1.6	1.8
E-9		2.2	2.6	2.4
E-11		2.0	2.0	2.0
E-14		1.7	1.8	1.8
E-15		2.1	2.0	2.1
E-17		1.7	1.9	1.8
E-19		2.4	2.3	2.4
E-20		2.0	1.8	1.9
E-21		2.0	1.8	1.9
E-23		2.1	2.0	2.1
E-25		1.9	2.1	2.0
E-26		2.3	2.1	2.2

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

POINT LOMA WASTEWATER TREATMENT PLANT
SEDIMENT SEMI-ANNUAL
Grain Size
(all values are in percent distribution)

Annual 2014

	A-2	A-5	A-8	A-9	A-15	A-16	B-3
	P724735	P724739	P724745	P724749	P724724	P724729	P726153
Analyte	11-JUL-2014	11-JUL-2014	11-JUL-2014	11-JUL-2014	11-JUL-2014	11-JUL-2014	21-JUL-2014
>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	0.247	0.125	0.121	0.108	0.126	0.137	0.137
>3.9 to 7.8	4.340	3.790	3.440	3.690	3.940	4.110	4.290
>7.8 to 15.6	11.800	11.700	10.100	11.700	11.900	12.300	13.200
>15.6 to 31	8.330	9.800	8.090	9.160	9.000	9.670	10.300
>31 to 62.5	18.600	24.300	20.700	22.100	20.300	22.100	21.700
>62.5 to 125	41.300	39.500	42.500	40.700	40.100	39.000	37.100
>125 to 250	14.600	10.200	14.200	11.900	13.800	11.900	12.600
>250 to 500	0.859	0.561	0.853	0.659	0.852	0.723	0.648
>500 to 1000	0.000	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	0.000
>2000*	ND	ND	ND	ND	ND	ND	ND
Totals:	100.076	99.976	100.004	100.017	100.018	99.940	99.975

	B-5	B-8	B-8	B-9	B-9	B-10	B-11
	P726159	P694617	P726710	P694620	P726717	P694599	P694605
Analyte	21-JUL-2014	09-JAN-2014	23-JUL-2014	09-JAN-2014	23-JUL-2014	09-JAN-2014	09-JAN-2014
>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	0.138	0.114	0.153	0.112	0.167	0.458	0.324
>3.9 to 7.8	4.980	4.580	4.830	4.500	4.830	5.760	5.820
>7.8 to 15.6	15.200	16.200	15.600	14.300	12.900	8.130	15.300
>15.6 to 31	9.760	13.800	13.700	9.570	8.260	4.180	9.540
>31 to 62.5	18.800	28.500	28.900	19.100	18.400	12.900	16.500
>62.5 to 125	37.100	31.100	31.100	36.400	38.200	42.600	27.400
>125 to 250	13.200	5.680	5.650	14.500	15.600	23.400	16.900
>250 to 500	0.779	0.092	0.096	1.570	1.700	2.530	8.080
>500 to 1000	0.000	0.000	0.000	0.000	0.000	0.000	0.098
>1000 to 2000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
>2000*	ND	ND	ND	ND	ND	5.02	5.63
Totals:	99.957	100.066	100.029	100.052	100.057	99.958	99.962

*=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.

POINT LOMA WASTEWATER TREATMENT PLANT
SEDIMENT SEMI-ANNUAL
Grain Size
(all values are in percent distribution)

Annual 2014

	B-12	B-12	E-1	E-1	E-2	E-2	E-3
	P694609	P726702	P694695	P725597	P694719	P725605	P694723
Analyte	09-JAN-2014	23-JUL-2014	10-JAN-2014	16-JUL-2014	10-JAN-2014	16-JUL-2014	10-JAN-2014
>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	0.384	0.142	0.113	0.143	0.115	0.189
>3.9 to 7.8	4.030	4.250	3.890	3.750	4.640	3.910	4.870
>7.8 to 15.6	7.350	6.590	9.580	11.400	13.100	11.700	9.770
>15.6 to 31	4.960	4.560	7.840	8.640	8.520	8.180	6.770
>31 to 62.5	10.300	10.300	16.900	16.700	15.700	15.700	9.800
>62.5 to 125	17.000	18.200	30.500	31.100	29.000	29.200	14.300
>125 to 250	24.800	24.200	24.500	22.500	17.100	19.000	27.800
>250 to 500	27.200	25.200	6.710	5.870	7.060	8.940	21.500
>500 to 1000	4.280	6.400	0.000	0.000	3.430	3.270	5.080
>1000 to 2000	0.000	0.000	0.000	0.000	1.260	0.052	0.000
>2000*	ND	ND	ND	ND	ND	ND	1.16
Totals:	100.089	100.084	100.062	100.073	99.953	100.067	100.079

	E-3	E-5	E-5	E-7	E-7	E-8	E-8
	P725611	P694731	P726457	P694735	P726461	P694743	P726471
Analyte	16-JUL-2014	10-JAN-2014	22-JUL-2014	10-JAN-2014	22-JUL-2014	10-JAN-2014	22-JUL-2014
>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	0.185	0.113	0.147	0.120	0.129	0.106	0.138
>3.9 to 7.8	5.160	3.270	3.510	3.610	3.780	3.460	3.050
>7.8 to 15.6	10.900	8.830	8.690	10.500	10.900	9.660	6.700
>15.6 to 31	7.510	6.250	6.130	8.610	8.880	6.520	5.070
>31 to 62.5	10.700	16.900	17.300	23.700	24.200	17.500	18.100
>62.5 to 125	14.800	42.700	43.000	40.600	40.600	43.800	46.300
>125 to 250	22.400	19.900	19.300	12.100	11.000	17.600	19.000
>250 to 500	17.700	2.020	1.970	0.684	0.501	1.370	1.760
>500 to 1000	10.100	0.000	0.000	0.000	0.000	0.000	0.000
>1000 to 2000	0.494	0.000	0.000	0.000	0.000	0.000	0.000
>2000*	ND	ND	ND	ND	ND	ND	ND
Totals:	99.949	99.983	100.047	99.924	99.990	100.016	100.118

*=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.

POINT LOMA WASTEWATER TREATMENT PLANT
SEDIMENT SEMI-ANNUAL
Grain Size
(all values are in percent distribution)

Annual 2014

	E-9	E-9	E-11	E-11	E-14	E-14	E-15
	P694751	P726478	P694704	P726453	P694705	P726896	P694716
Analyte	10-JAN-2014	22-JUL-2014	10-JAN-2014	22-JUL-2014	10-JAN-2014	25-JUL-2014	10-JAN-2014
>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	0.160	0.594	0.125	0.132	0.283	0.284	0.150
>3.9 to 7.8	4.860	5.490	3.320	3.390	3.930	3.880	4.180
>7.8 to 15.6	12.200	9.760	8.320	8.410	7.340	7.370	10.300
>15.6 to 31	6.880	5.930	5.860	5.710	4.150	4.590	6.100
>31 to 62.5	14.400	15.600	18.400	17.600	15.200	17.200	16.100
>62.5 to 125	30.200	28.400	45.000	46.100	50.500	49.400	45.500
>125 to 250	13.500	11.800	17.400	17.300	17.700	16.000	16.900
>250 to 500	5.420	5.150	1.580	1.370	0.889	1.220	0.865
>500 to 1000	5.720	9.650	0.000	0.000	0.000	0.000	0.000
>1000 to 2000	6.560	7.290	0.000	0.000	0.000	0.000	0.000
>2000*	ND	ND	ND	ND	ND	ND	ND
Totals:	99.900	99.664	100.005	100.012	99.992	99.944	100.095

	E-15	E-17	E-17	E-19	E-19	E-20	E-20
	P726902	P694859	P724754	P694862	P724761	P694869	P724769
Analyte	25-JUL-2014	13-JAN-2014	11-JUL-2014	13-JAN-2014	11-JUL-2014	13-JAN-2014	11-JUL-2014
>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	0.299	0.138	0.000	0.131	0.157	0.120	0.112
>3.9 to 7.8	4.320	3.420	3.470	4.090	4.060	3.620	3.390
>7.8 to 15.6	9.990	8.280	10.600	12.000	11.200	9.790	9.670
>15.6 to 31	6.160	5.640	7.350	9.610	9.630	6.880	7.280
>31 to 62.5	16.400	18.200	19.200	26.500	27.700	20.200	21.000
>62.5 to 125	45.000	48.000	44.800	38.900	38.800	45.300	45.200
>125 to 250	16.600	15.700	14.100	8.640	8.260	13.500	12.800
>250 to 500	1.240	0.653	0.601	0.161	0.156	0.601	0.528
>500 to 1000	0.000	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	0.000
>2000*	ND	ND	ND	ND	ND	ND	ND
Totals:	100.009	100.031	100.121	100.032	99.963	100.011	99.980

*=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.

POINT LOMA WASTEWATER TREATMENT PLANT
SEDIMENT SEMI-ANNUAL
Grain Size
(all values are in percent distribution)

Annual 2014

Analyte	E-21 P694878 13-JAN-2014	E-21 P724772 11-JUL-2014	E-23 P694882 13-JAN-2014	E-23 P724780 11-JUL-2014	E-25 P694888 13-JAN-2014	E-25 P726909 25-JUL-2014	E-26 P694628 09-JAN-2014
>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	0.141	0.122	0.106	0.139	0.123	0.152	0.168
>3.9 to 7.8	3.800	3.490	3.520	3.740	3.220	3.900	4.260
>7.8 to 15.6	9.410	9.180	10.300	10.100	8.510	10.300	11.400
>15.6 to 31	6.020	6.110	7.640	7.780	6.710	7.970	8.990
>31 to 62.5	17.500	17.500	21.300	22.700	20.500	22.200	23.700
>62.5 to 125	47.500	47.800	44.000	43.200	43.800	41.400	40.700
>125 to 250	14.900	15.200	12.600	11.700	15.900	13.300	10.500
>250 to 500	0.616	0.612	0.544	0.542	1.240	0.721	0.177
>500 to 1000	0.000	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	0.000
>2000*	ND	ND	ND	ND	ND	ND	ND
Totals:	99.887	100.014	100.010	99.901	100.003	99.943	99.895

Analyte	E-26 P726918 25-JUL-2014
>0.5 to 1.0	0.000
>1.0 to 2.0	0.000
>2.0 to 3.9	0.152
>3.9 to 7.8	4.160
>7.8 to 15.6	11.600
>15.6 to 31	9.170
>31 to 62.5	23.800
>62.5 to 125	40.400
>125 to 250	10.600
>250 to 500	0.193
>500 to 1000	0.000
>1000 to 2000	0.000
>2000*	ND
Totals:	100.075

*=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.

POINT LOMA WASTEWATER TREATMENT PLANT
OCEAN SEDIMENT ANNUAL SUMMARY
Total Organic Carbon/Total Nitrogen

Annual 2014

Analyte	MDL	Units	A-2 Avg 2014	A-5 Avg 2014	A-8 Avg 2014	A-9 Avg 2014	A-15 Avg 2014	A-16 Avg 2014	B-3 Avg 2014
Total Nitrogen	.005	WT%	0.051	0.058	0.066	0.066	0.044	0.063	0.034
Total Organic Carbon	.01	WT%	0.562	0.633	0.573	0.611	0.691	0.622	0.677

Analyte	MDL	Units	B-5 Avg 2014	B-8 Avg 2014	B-9 Avg 2014	B-10 Avg 2014	B-11 Avg 2014	B-12 Avg 2014	E-1 Avg 2014
Total Nitrogen	.005	WT%	0.032	0.073	0.036	0.043	0.057	0.036	0.043
Total Organic Carbon	.01	WT%	0.751	0.736	0.599	0.660	0.551	0.861	0.434

Analyte	MDL	Units	E-2 Avg 2014	E-3 Avg 2014	E-5 Avg 2014	E-7 Avg 2014	E-8 Avg 2014	E-9 Avg 2014	E-11 Avg 2014
Total Nitrogen	.005	WT%	0.050	0.040	0.035	0.044	0.041	0.043	0.035
Total Organic Carbon	.01	WT%	0.545	0.417	0.365	0.499	0.473	0.313	0.476

Analyte	MDL	Units	E-14 Avg 2014	E-15 Avg 2014	E-17 Avg 2014	E-19 Avg 2014	E-20 Avg 2014	E-21 Avg 2014	E-23 Avg 2014
Total Nitrogen	.005	WT%	0.033	0.036	0.048	0.059	0.047	0.041	0.043
Total Organic Carbon	.01	WT%	0.386	0.488	0.425	0.575	0.456	0.412	0.518

Analyte	MDL	Units	E-25 Avg 2014	E-26 Avg 2014
Total Nitrogen	.005	WT%	0.038	0.038
Total Organic Carbon	.01	WT%	0.452	0.555

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

POINT LOMA WASTEWATER TREATMENT PLANT
ANNUAL OCEAN SEDIMENT - STANDARD
Trace Metals

Annual 2014

Source:			A-2	A-5	A-8	A-9	A-15	A-16	B-3
Date:			2014	2014	2014	2014	2014	2014	2014
Analyte:	MDL	Units	Average	Average	Average	Average	Average	Average	Average
Aluminum	2	MG/KG	8260	9000	9260	8660	9060	8940	8500
Antimony	.3	MG/KG	0.5	0.5	0.7	0.7	0.5	0.6	0.7
Arsenic	.33	MG/KG	2.60	5.11	3.50	4.18	3.00	3.25	3.51
Barium	.02	MG/KG	44.4	47.4	49.9	48.0	49.0	49.5	40.9
Beryllium	.01	MG/KG	ND	ND	ND	0.07	ND	ND	ND
Cadmium	.06	MG/KG	0.09	0.14	0.14	0.10	0.09	0.08	ND
Chromium	.1	MG/KG	14.1	15.8	15.6	15.5	15.8	15.8	15.3
Copper	.2	MG/KG	5.8	6.8	6.8	6.1	6.9	6.8	5.7
Iron	9	MG/KG	11300	12400	12800	12200	12600	12500	12100
Lead	.8	MG/KG	5.1	6.0	5.4	5.3	5.9	5.6	5.8
Manganese	.08	MG/KG	104	110	116	110	116	113	99
Mercury	.004	MG/KG	0.033	0.057	0.030	0.034	0.035	0.040	0.011
Nickel	.1	MG/KG	6.8	7.8	7.5	7.3	7.7	7.5	7.1
Selenium	.24	MG/KG	ND	ND	ND	ND	ND	<0.24	ND
Silver	.04	MG/KG	ND	ND	ND	ND	ND	ND	ND
Thallium	.5	MG/KG	0.5	0.7	0.5	<0.5	1.0	0.8	0.9
Tin	.3	MG/KG	1.4	1.3	1.5	1.3	1.3	1.6	1.2
Zinc	.25	MG/KG	30.8	33.9	34.6	33.5	34.8	35.7	30.5

Source:			B-5	B-8	B-9	B-10	B-11	B-12	E-1
Date:			2014	2014	2014	2014	2014	2014	2014
Analyte:	MDL	Units	Average	Average	Average	Average	Average	Average	Average
Aluminum	2	MG/KG	8240	10700	7750	5710	9870	7290	6790
Antimony	.3	MG/KG	0.6	0.5	0.7	0.6	0.8	1.0	0.6
Arsenic	.33	MG/KG	4.13	3.19	3.38	2.62	3.56	5.52	3.24
Barium	.02	MG/KG	44.1	49.3	44.1	23.3	59.5	29.5	37.5
Beryllium	.01	MG/KG	ND	ND	ND	ND	ND	0.04	ND
Cadmium	.06	MG/KG	ND	ND	<0.06	<0.06	0.06	ND	ND
Chromium	.1	MG/KG	17.6	20.1	18.5	15.2	20.5	25.0	13.0
Copper	.2	MG/KG	4.6	7.0	4.0	3.0	6.0	2.4	5.5
Iron	9	MG/KG	14600	15100	15000	11300	17100	22900	10200
Lead	.8	MG/KG	6.1	6.6	4.8	3.8	6.5	6.0	5.4
Manganese	.08	MG/KG	102	116	89	62	123	64	80
Mercury	.004	MG/KG	0.009	0.031	0.019	0.012	0.022	0.011	0.026
Nickel	.1	MG/KG	6.7	10.0	7.6	5.6	9.4	7.3	6.0
Selenium	.24	MG/KG	ND	<0.24	ND	ND	ND	<0.24	<0.24
Silver	.04	MG/KG	ND	ND	ND	ND	ND	ND	ND
Thallium	.5	MG/KG	0.8	ND	<0.5	<0.5	<0.5	ND	ND
Tin	.3	MG/KG	1.2	1.2	1.1	1.1	1.4	1.1	1.2
Zinc	.25	MG/KG	33.6	38.0	33.2	26.0	40.7	39.7	25.8

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

POINT LOMA WASTEWATER TREATMENT PLANT
ANNUAL OCEAN SEDIMENT - STANDARD
Trace Metals

Annual 2014

Source:			E-2	E-3	E-5	E-7	E-8	E-9	E-11
Date:			2014	2014	2014	2014	2014	2014	2014
Analyte:	MDL	Units	Average	Average	Average	Average	Average	Average	Average
Aluminum	2	MG/KG	8140	8870	6560	7860	5960	7100	7410
Antimony	.3	MG/KG	0.9	0.9	0.6	0.4	0.5	0.8	0.5
Arsenic	.33	MG/KG	2.80	2.80	2.63	3.54	2.89	3.25	2.55
Barium	.02	MG/KG	46.8	55.5	32.4	38.9	24.0	32.5	25.9
Beryllium	.01	MG/KG	0.07	ND	ND	ND	ND	ND	0.08
Cadmium	.06	MG/KG	ND	<0.06	ND	ND	ND	<0.06	0.07
Chromium	.1	MG/KG	15.5	14.9	12.5	14.4	11.7	17.4	12.5
Copper	.2	MG/KG	8.6	10.9	4.1	5.4	3.8	8.3	3.2
Iron	9	MG/KG	12900	13900	9650	10900	8880	12400	9290
Lead	.8	MG/KG	5.8	8.2	3.7	4.6	3.4	5.2	3.0
Manganese	.08	MG/KG	95	107	72	88	65	74	90
Mercury	.004	MG/KG	0.037	0.038	0.017	0.022	0.016	0.020	0.014
Nickel	.1	MG/KG	7.1	6.5	6.0	7.4	5.5	6.8	6.1
Selenium	.24	MG/KG	ND	ND	ND	<0.24	<0.24	<0.24	ND
Silver	.04	MG/KG	ND	ND	ND	ND	ND	ND	ND
Thallium	.5	MG/KG	<0.5	ND	<0.5	0.5	0.6	0.9	<0.5
Tin	.3	MG/KG	1.2	1.4	0.9	1.3	1.0	1.3	0.8
Zinc	.25	MG/KG	32.4	36.6	32.8	30.3	21.9	36.6	23.6

Source:			E-14	E-15	E-17	E-19	E-20	E-21	E-23
Date:			2014	2014	2014	2014	2014	2014	2014
Analyte:	MDL	Units	Average	Average	Average	Average	Average	Average	Average
Aluminum	2	MG/KG	7100	8400	7900	11500	9000	8140	10300
Antimony	.3	MG/KG	0.7	0.8	0.9	1.2	0.8	0.8	0.8
Arsenic	.33	MG/KG	1.79	2.07	2.73	2.74	2.58	2.22	2.88
Barium	.02	MG/KG	26.2	28.5	27.8	47.4	31.8	28.1	38.3
Beryllium	.01	MG/KG	0.05	0.06	0.06	0.11	0.05	0.05	0.07
Cadmium	.06	MG/KG	0.10	<0.06	<0.06	0.10	<0.06	<0.06	<0.06
Chromium	.1	MG/KG	12.2	14.3	13.2	18.2	14.3	13.7	16.2
Copper	.2	MG/KG	4.1	4.0	3.6	5.4	3.4	3.5	4.3
Iron	9	MG/KG	8340	10100	9660	13200	10500	9750	12200
Lead	.8	MG/KG	2.3	3.5	3.1	5.0	3.4	3.3	4.1
Manganese	.08	MG/KG	86	94	93	131	104	92	118
Mercury	.004	MG/KG	0.016	0.016	0.021	0.024	0.018	0.017	0.022
Nickel	.1	MG/KG	6.6	7.0	6.8	9.2	7.3	7.0	8.3
Selenium	.24	MG/KG	<0.24	ND	<0.24	<0.24	<0.24	<0.24	ND
Silver	.04	MG/KG	ND	ND	ND	ND	ND	ND	ND
Thallium	.5	MG/KG	<0.5	0.5	0.6	ND	<0.5	ND	<0.5
Tin	.3	MG/KG	0.9	1.1	1.1	1.0	1.1	1.1	1.1
Zinc	.25	MG/KG	23.6	26.6	24.6	34.3	26.1	24.6	30.5

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

POINT LOMA WASTEWATER TREATMENT PLANT
ANNUAL OCEAN SEDIMENT - STANDARD
Trace Metals

Annual 2014

Source:			E-25	E-26
Date:			2014	2014
Analyte:	MDL	Units	Average	Average
Aluminum	2	MG/KG	9810	10000
Antimony	.3	MG/KG	1.0	0.8
Arsenic	.33	MG/KG	1.98	1.81
Barium	.02	MG/KG	36.3	38.1
Beryllium	.01	MG/KG	0.07	0.18
Cadmium	.06	MG/KG	ND	ND
Chromium	.1	MG/KG	15.5	16.6
Copper	.2	MG/KG	4.1	4.4
Iron	9	MG/KG	11700	12100
Lead	.8	MG/KG	4.1	4.1
Manganese	.08	MG/KG	114	115
Mercury	.004	MG/KG	0.017	0.020
Nickel	.1	MG/KG	7.9	8.5
Selenium	.24	MG/KG	ND	<0.24
Silver	.04	MG/KG	ND	ND
Thallium	.5	MG/KG	ND	ND
Tin	.3	MG/KG	1.0	1.0
Zinc	.25	MG/KG	29.4	30.6

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

POINT LOMA WASTEWATER TREATMENT PLANT
SEDIMENT ANNUAL Chlorinated Pesticide Analysis - STANDARD STATIONS

Annual 2014

Source:			A-2	A-5	A-8	A-9	A-15	A-16	B-3	B-5
Date:			2014	2014	2014	2014	2014	2014	2014	2014
Analyte	MDL	Units	Average	Average	Average	Average	Average	Average	Average	Average
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	580	710	700	490	620	810	360	520
p,p-DDMU	110	NG/KG	ND	ND	ND	ND	ND	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	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	580	710	700	490	620	810	360	520
Chlordane + related cmpds.	1200	NG/KG	0	0	0	0	0	0	0	0
Chlorinated Hydrocarbons	2400	NG/KG	580	710	700	490	620	810	360	520

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

POINT LOMA WASTEWATER TREATMENT PLANT
SEDIMENT ANNUAL Chlorinated Pesticide Analysis - STANDARD STATIONS

Annual 2014

Source:			B-8	B-9	B-10	B-11	B-12	E-1	E-2	E-3
Date:			2014	2014	2014	2014	2014	2014	2014	2014
Analyte	MDL	Units	Average	Average	Average	Average	Average	Average	Average	Average
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	130	95	ND	ND	98	ND	210
p,p-DDE	260	NG/KG	460	455	470	365	338	665	570	345
p,p-DDMU	110	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
p,p-DDT	70	NG/KG	45	8500	2700	ND	ND	93	60	E28
o,p-DDD	100	NG/KG	ND	ND	ND	ND	ND	ND	ND	85
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	505	9085	3265	365	338	856	630	668
Chlordane + related cmpds.	1200	NG/KG	0	0	0	0	0	0	0	0
Chlorinated Hydrocarbons	2400	NG/KG	505	9085	3265	365	338	856	630	668

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

POINT LOMA WASTEWATER TREATMENT PLANT
SEDIMENT ANNUAL Chlorinated Pesticide Analysis - STANDARD STATIONS

Annual 2014

Source:			E-5	E-7	E-8	E-9	E-11	E-14	E-15	E-17
Date:			2014	2014	2014	2014	2014	2014	2014	2014
Analyte	MDL	Units	Average	Average	Average	Average	Average	Average	Average	Average
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	145	245	216	280	313	240	600	135
p,p-DDMU	110	NG/KG	ND	ND	ND	65	ND	ND	ND	ND
p,p-DDT	70	NG/KG	ND	200	55	185	95	ND	ND	70
o,p-DDD	100	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
o,p-DDE	60	NG/KG	ND	ND	ND	95	ND	ND	ND	ND
o,p-DDT	110	NG/KG	ND	ND	ND	55	ND	ND	ND	ND
Heptachlor	120	NG/KG	ND	ND	ND	125	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	180	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	145	445	271	615	408	240	600	205
Chlordane + related cmpds.	1200	NG/KG	0	0	0	0	0	0	0	0
Chlorinated Hydrocarbons	2400	NG/KG	145	445	271	920	408	240	600	205

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

POINT LOMA WASTEWATER TREATMENT PLANT
SEDIMENT ANNUAL Chlorinated Pesticide Analysis - STANDARD STATIONS

Annual 2014

Source:			E-19	E-20	E-21	E-23	E-25	E-26
Date:			2014	2014	2014	2014	2014	2014
Analyte	MDL	Units	Average	Average	Average	Average	Average	Average
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	350	145	235	160	458	495
p,p-DDMU	110	NG/KG	ND	ND	ND	ND	ND	ND
p,p-DDT	70	NG/KG	60	55	40	ND	25	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	410	200	275	160	483	495
Chlordane + related cmpds.	1200	NG/KG	0	0	0	0	0	0
Chlorinated Hydrocarbons	2400	NG/KG	410	200	275	160	483	495

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

POINT LOMA WASTEWATER TREATMENT PLANT
SEDIMENT ANNUAL - PCB Congeners (STANDARD STATIONS)

Annual 2014

Source:			A-2	A-5	A-8	A-9	A-15	A-16	B-3	B-5
Date:			2014	2014	2014	2014	2014	2014	2014	2014
Analyte	MDL	Units	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg
PCB 18	90	NG/KG	ND	ND	ND	92	ND	ND	ND	ND
PCB 28	60	NG/KG	ND	120	ND	94	ND	83	ND	ND
PCB 52	90	NG/KG	ND	ND	ND	ND	190	120	ND	ND
PCB 49	70	NG/KG	ND	ND	ND	ND	ND	74	ND	ND
PCB 44	100	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 37	90	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 74	100	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 70	60	NG/KG	ND	85	ND	60	130	96	ND	ND
PCB 66	100	NG/KG	ND	110	120	ND	ND	E99	ND	ND
PCB 101	100	NG/KG	ND	ND	ND	ND	320	ND	ND	ND
PCB 99	120	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 119	80	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 87	200	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 110	110	NG/KG	ND	ND	ND	ND	350	190	ND	ND
PCB 81	130	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 151	80	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 77	110	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 149	110	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 123	130	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 118	90	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 114	130	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 105	50	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 138	80	NG/KG	220	ND	120	130	330	180	ND	ND
PCB 158	70	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 187	110	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 183	60	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 126	70	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 128	80	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 167	30	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 177	70	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 201	70	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 156	90	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 157	100	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 180	80	NG/KG	ND	630	ND	ND	ND	ND	ND	ND
PCB 170	80	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Total PCB's	200	NG/KG	220	945	240	376	1320	842	0	0

ND=not detected; NS=not sampled; NA=not analyzed
E=estimated value, value is less than the Method Detection Limit but confirmed by GC/MS-MS

POINT LOMA WASTEWATER TREATMENT PLANT
SEDIMENT ANNUAL - PCB Congeners (STANDARD STATIONS)

Annual 2014

Source:			B-8	B-9	B-10	B-11	B-12	E-1	E-2	E-3
Date:			2014	2014	2014	2014	2014	2014	2014	2014
Analyte	MDL	Units	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg
PCB 18	90	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 28	60	NG/KG	ND	ND	ND	ND	ND	<60	<60	170
PCB 52	90	NG/KG	ND	ND	ND	ND	ND	95	1000	190
PCB 49	70	NG/KG	ND	ND	ND	ND	ND	<70	240	160
PCB 44	100	NG/KG	ND	ND	ND	ND	ND	ND	320	ND
PCB 37	90	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 74	100	NG/KG	ND	ND	ND	ND	ND	ND	100	<100
PCB 70	60	NG/KG	ND	ND	ND	ND	ND	<60	450	95
PCB 66	100	NG/KG	ND	ND	ND	ND	<100	<100	220	<100
PCB 101	100	NG/KG	ND	ND	ND	ND	ND	210	1500	<100
PCB 99	120	NG/KG	ND	ND	ND	ND	ND	<120	450	ND
PCB 119	80	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 87	200	NG/KG	ND	ND	ND	ND	ND	<200	910	ND
PCB 110	110	NG/KG	ND	ND	ND	ND	ND	420	1700	300
PCB 81	130	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 151	80	NG/KG	ND	ND	ND	ND	ND	<80	110	ND
PCB 77	110	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 149	110	NG/KG	ND	ND	ND	ND	ND	300	900	200
PCB 123	130	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 118	90	NG/KG	ND	ND	ND	ND	ND	310	1400	<90
PCB 114	130	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 105	50	NG/KG	ND	ND	ND	ND	ND	60	440	<50
PCB 138	80	NG/KG	ND	ND	ND	ND	ND	380	1300	250
PCB 158	70	NG/KG	ND	ND	ND	ND	ND	<70	200	ND
PCB 187	110	NG/KG	ND	ND	ND	ND	ND	130	220	140
PCB 183	60	NG/KG	ND	ND	ND	ND	ND	66	90	ND
PCB 126	70	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 128	80	NG/KG	ND	ND	ND	ND	ND	<80	390	ND
PCB 167	30	NG/KG	ND	ND	ND	ND	ND	ND	36	ND
PCB 177	70	NG/KG	ND	ND	ND	ND	ND	<70	<70	ND
PCB 201	70	NG/KG	ND	ND	ND	ND	ND	190	<70	ND
PCB 156	90	NG/KG	ND	ND	ND	ND	ND	ND	220	ND
PCB 157	100	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 180	80	NG/KG	ND	ND	ND	ND	ND	250	460	210
PCB 170	80	NG/KG	ND	ND	ND	ND	ND	<80	240	ND
Total PCB's	200	NG/KG	0	0	0	0	0	2411	12896	1715

ND=not detected; NS=not sampled; NA=not analyzed
E=estimated value, value is less than the Method Detection Limit but confirmed by GC/MS-MS

POINT LOMA WASTEWATER TREATMENT PLANT
SEDIMENT ANNUAL - PCB Congeners (STANDARD STATIONS)

Annual 2014

Source:			E-5	E-7	E-8	E-9	E-11	E-14	E-15	E-17
Date:			2014	2014	2014	2014	2014	2014	2014	2014
Analyte	MDL	Units	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg
PCB 18	90	NG/KG	ND	ND	ND	<90	ND	ND	ND	ND
PCB 28	60	NG/KG	ND	ND	ND	65	ND	ND	ND	ND
PCB 52	90	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 49	70	NG/KG	ND	ND	ND	80	<70	ND	ND	ND
PCB 44	100	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 37	90	NG/KG	ND	ND	ND	<90	ND	ND	ND	ND
PCB 74	100	NG/KG	ND	ND	ND	<100	ND	ND	ND	ND
PCB 70	60	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 66	100	NG/KG	ND	ND	ND	<100	ND	ND	ND	ND
PCB 101	100	NG/KG	ND	<100	ND	130	<100	ND	ND	ND
PCB 99	120	NG/KG	ND	ND	ND	<120	<120	ND	ND	ND
PCB 119	80	NG/KG	ND	ND	ND	<80	ND	ND	ND	ND
PCB 87	200	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 110	110	NG/KG	ND	<110	ND	<110	<110	ND	ND	ND
PCB 81	130	NG/KG	ND	ND	ND	<130	ND	ND	ND	ND
PCB 151	80	NG/KG	ND	ND	ND	<80	<80	ND	ND	ND
PCB 77	110	NG/KG	ND	ND	ND	<110	ND	ND	ND	ND
PCB 149	110	NG/KG	ND	<110	ND	ND	<110	ND	ND	ND
PCB 123	130	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 118	90	NG/KG	ND	<90	<90	<90	100	ND	ND	ND
PCB 114	130	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 105	50	NG/KG	ND	ND	ND	<50	<50	ND	ND	ND
PCB 138	80	NG/KG	ND	<80	ND	<80	120	ND	ND	ND
PCB 158	70	NG/KG	ND	ND	ND	ND	<70	ND	ND	ND
PCB 187	110	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 183	60	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 126	70	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 128	80	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 167	30	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 177	70	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 201	70	NG/KG	ND	ND	ND	ND	70	ND	ND	ND
PCB 156	90	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 157	100	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 180	80	NG/KG	ND	ND	ND	<80	ND	ND	ND	ND
PCB 170	80	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Total PCB's	200	NG/KG	0	0	0	275	290	0	0	0

ND=not detected; NS=not sampled; NA=not analyzed
E=estimated value, value is less than the Method Detection Limit but confirmed by GC/MS-MS

POINT LOMA WASTEWATER TREATMENT PLANT
SEDIMENT ANNUAL - PCB Congeners (STANDARD STATIONS)

Annual 2014

Source:			E-19	E-20	E-21	E-23	E-25	E-26
Date:			2014	2014	2014	2014	2014	2014
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	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; NS=not sampled; NA=not analyzed
E=estimated value, value is less than the Method Detection Limit but confirmed by GC/MS-MS

POINT LOMA WASTEWATER TREATMENT PLANT
SEDIMENT ANNUAL Base/Neutrals - Standard Stations

Annual 2014

Analyte	MDL	Units	B-8 2014 Avg	B-9 2014 Avg	B-10 2014 Avg	B-11 2014 Avg	B-12 2014 Avg	E-1 2014 Avg	E-2 2014 Avg	E-3 2014 Avg	E-5 2014 Avg	E-7 2014 Avg	E-8 2014 Avg	E-9 2014 Avg	E-11 2014 Avg
Acenaphthene	20	UG/KG	ND	ND	<20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	30	UG/KG	<30	ND	ND	ND	ND	ND	ND	<30	ND	ND	ND	ND	ND
Anthracene	20	UG/KG	ND	ND	ND	ND	ND	<20	<20	E11	ND	ND	ND	<20	ND
Benzo[a]anthracene	20	UG/KG	<20	ND	ND	ND	ND	<20	<20	26	ND	ND	ND	<20	ND
Benzo[a]pyrene	20	UG/KG	<20	ND	ND	ND	ND	26	E17	124	ND	<20	ND	E28	ND
3,4-Benzo(b)fluoranthene	20	UG/KG	E25	ND	ND	ND	ND	32	<20	164	ND	ND	ND	33	ND
Benzo[e]pyrene	20	UG/KG	ND	ND	ND	ND	ND	<20	E12	E76	ND	ND	ND	E20	ND
Benzo[g,h,i]perylene	20	UG/KG	<20	ND	ND	ND	ND	E16	<20	E39	ND	ND	ND	E14	ND
Benzo[k]fluoranthene	20	UG/KG	ND	ND	ND	ND	ND	<20	<20	48	ND	ND	ND	<20	ND
Biphenyl	30	UG/KG	<30	<30	<30	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	40	UG/KG	<40	ND	ND	ND	ND	E27	E16	E58	ND	ND	ND	E18	<40
Dibenzo(a,h)anthracene	20	UG/KG	<20	ND	ND	ND	ND	ND	<20	ND	ND	ND	ND	ND	ND
2,6-Dimethylnaphthalene	20	UG/KG	E14	E10	E12	<20	<20	E9	E11	<20	<20	E13	<20	E10	E12
Fluoranthene	20	UG/KG	<20	ND	ND	ND	ND	<20	E12	E12	ND	ND	ND	E9	ND
Fluorene	20	UG/KG	<20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-CD)pyrene	20	UG/KG	<20	ND	ND	ND	ND	E14	E10	E43	ND	ND	ND	<20	ND
1-Methylphenanthrene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	20	UG/KG	ND	ND	<20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1-Methylnaphthalene	20	UG/KG	ND	ND	<20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	30	UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perylene	30	UG/KG	ND	ND	ND	ND	ND	ND	ND	<30	ND	ND	ND	<30	ND
Phenanthrene	30	UG/KG	<30	ND	ND	ND	ND	<30	ND	<30	ND	ND	ND	ND	ND
Pyrene	20	UG/KG	E20	ND	ND	ND	ND	<20	E14	<20	ND	ND	ND	E12	ND
2,3,5-Trimethylnaphthalene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Base/Neutral Compounds	40	UG/KG	0	0	0	0	0	58	0	314	0	0	0	33	0

Analyte	MDL	Units	E-14 2014 Avg	E-15 2014 Avg	E-17 2014 Avg	E-19 2014 Avg	E-20 2014 Avg	E-21 2014 Avg	E-23 2014 Avg	E-25 2014 Avg	E-26 2014 Avg
Acenaphthene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	30	UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]pyrene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND
3,4-Benzo(b)fluoranthene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[e]pyrene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[g,h,i]perylene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[k]fluoranthene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND
Biphenyl	30	UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	40	UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzo(a,h)anthracene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,6-Dimethylnaphthalene	20	UG/KG	E13	<20	E13	E16	E13	E13	E13	<20	E12
Fluoranthene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	<20
Fluorene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-CD)pyrene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND
1-Methylphenanthrene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND
1-Methylnaphthalene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	30	UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perylene	30	UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	30	UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	20	UG/KG	ND	ND	ND	<20	ND	ND	ND	ND	<20
2,3,5-Trimethylnaphthalene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND
Base/Neutral Compounds	40	UG/KG	0	0	0	0	0	0	0	0	0

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

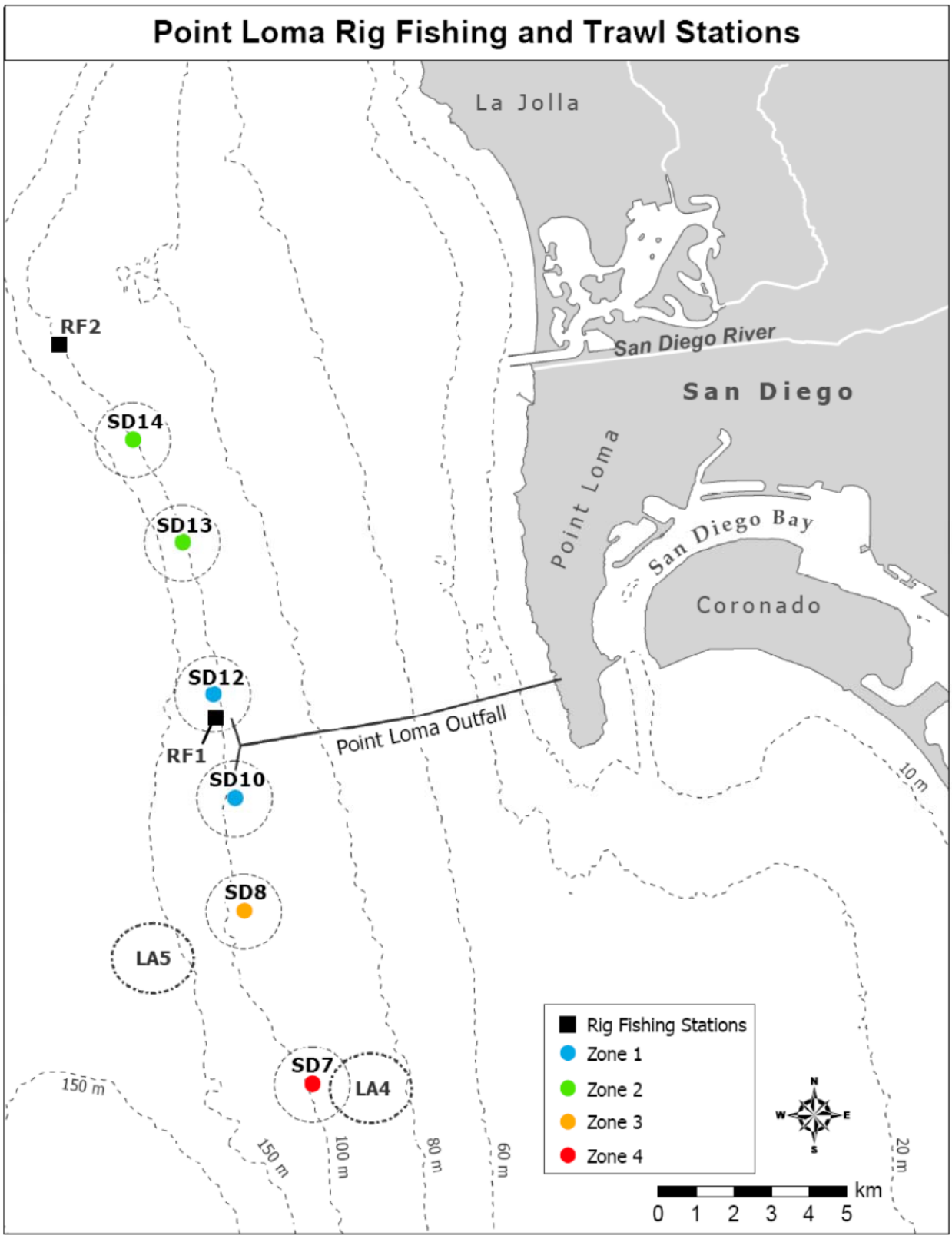
B. Fish Tissue Data.

Fish were taken from the stations shown in the below tables during 2014. The fish were dissected, preserved by freezing, and each sample analyzed for trace metals, chlorinated pesticides, PCBs, Lipids, and total solids.

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

Station	Matrix
RF-1	FISH_MUSCLE
RF-2	FISH_MUSCLE

Station	Matrix
TFZONE1 (SD-10 & 12)	FISH_LIVER
TFZONE2 (SD-13 & 14)	FISH_LIVER
TFZONE3 (SD-8)	FISH_LIVER
TFZONE4 (SD-7)	FISH_LIVER



San Diego Rig Fishing and Trawl Stations

POINT LOMA WASTEWATER TREATMENT PLANT
Annual Fish Tissue - Muscle/Liver

FISH - Lipids & Total Solids

Annual 2014

Tissue	Analyte	MDL	Units	RF-1 2014 Avg	RF-2 2014 Avg	TFZONE1 2014 Avg	TFZONE2 2014 Avg	TFZONE3 2014 Avg	TFZONE4 2014 Avg
Liver	Lipids	.09	WT%	NR	NR	46.0	47.0	43.9	56.5
Liver	Total Solids	.4	WT%	NR	NR	62.7	63.6	58.1	60.8
Muscle	Lipids	.09	WT%	0.89	E0.24*				
Muscle	Total Solids	.4	WT%	21.3	20.8				

ND= not detected
NR= not required
E=Estimated value below MDL, but qualified
*= This value was calculated by averaging the estimated values with a value over the MDL.

POINT LOMA WASTEWATER TREATMENT PLANT
Annual Fish Tissue - Muscle/Liver
Trace Metals

Annual 2014

Source:			TFZONE1	TFZONE2	TFZONE3	TFZONE4
Date:			2014	2014	2014	2014
Analyte:	MDL	Units	Average	Average	Average	Average
Aluminum	1.2	MG/KG	3.90	5.37	3.70	4.10
Antimony	.1	MG/KG	<0.10	<0.10	<0.10	ND
Arsenic	.12	MG/KG	3.05	3.01	2.24	2.35
Beryllium	.002	MG/KG	<0.00	<0.00	0.01	<0.00
Cadmium	.06	MG/KG	6.14	4.64	6.69	5.68
Chromium	.1	MG/KG	ND	<0.10	ND	<0.10
Copper	.3	MG/KG	5.23	5.02	4.65	5.32
Iron	2	MG/KG	83	68	61	97
Lead	.2	MG/KG	<0.20	<0.20	<0.20	<0.20
Manganese	.1	MG/KG	0.60	0.74	0.58	0.60
Mercury	.002	MG/KG	0.164	0.123	0.190	0.127
Nickel	.2	MG/KG	ND	ND	ND	ND
Selenium	.06	MG/KG	1.08	1.30	1.02	0.58
Silver	.05	MG/KG	0.07	0.05	<0.05	0.12
Thallium	.1	MG/KG	ND	ND	ND	ND
Tin	.2	MG/KG	ND	ND	ND	ND
Zinc	.15	MG/KG	33.1	28.9	29.2	26.9
Total Solids	.4	WT%	62.7	63.6	58.1	60.8

Source:			RF-1	RF-2
Date:			2014	2014
Analyte:	MDL	Units	Average	Average
Aluminum	1.2	MG/KG	<1.20	ND
Antimony	.1	MG/KG	ND	ND
Arsenic	.12	MG/KG	1.99	0.47
Beryllium	.002	MG/KG	ND	<0.00
Cadmium	.06	MG/KG	<0.06	<0.06
Chromium	.1	MG/KG	ND	ND
Copper	.3	MG/KG	<0.30	<0.30
Iron	2	MG/KG	<2.00	<2.00
Lead	.2	MG/KG	<0.20	ND
Manganese	.1	MG/KG	<0.10	<0.10
Mercury	.002	MG/KG	0.208	0.311
Nickel	.2	MG/KG	ND	ND
Selenium	.06	MG/KG	0.505	0.378
Silver	.05	MG/KG	ND	ND
Thallium	.1	MG/KG	ND	ND
Tin	.2	MG/KG	ND	ND
Zinc	.15	MG/KG	2.97	2.53
Total Solids	.4	WT%	21.3	20.8

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

POINT LOMA WASTEWATER TREATMENT PLANT
ANNUAL FISH LIVER - Chlorinated Pesticides

Annual 2014

Source:			TFZONE1	TFZONE2	TFZONE3	TFZONE4
Date:			2014	2014	2014	2014
Analyte	MDL	Units	Avg	Avg	Avg	Avg
Hexachlorobenzene	2.29	UG/KG	6.3	5.0	5.1	6.0
BHC, Gamma isomer	50.4	UG/KG	ND	ND	ND	ND
Heptachlor	2.1	UG/KG	ND	ND	ND	ND
Aldrin	25.3	UG/KG	ND	ND	ND	ND
Heptachlor epoxide	3.79	UG/KG	ND	ND	ND	ND
o,p-DDE	2.52	UG/KG	E3.4	5.3	ND	<2.5
Alpha Endosulfan	24.7	UG/KG	ND	ND	ND	ND
Alpha (cis) Chlordane	2.02	UG/KG	ND	ND	ND	ND
Trans Nonachlor	1.44	UG/KG	ND	ND	ND	ND
p,p-DDE	4.94	UG/KG	257	240	135	170
p,p-DDMU	1.82	UG/KG	12.4	14.0	7.9	10.8
Dieldrin	12.6	UG/KG	ND	ND	ND	ND
o,p-DDD	1.98	UG/KG	ND	ND	ND	ND
Endrin	30.3	UG/KG	ND	ND	ND	ND
o,p-DDT	2.05	UG/KG	ND	ND	ND	ND
p,p-DDD	2.86	UG/KG	ND	E3.2	<2.9	3.0
Beta Endosulfan	43.8	UG/KG	ND	ND	ND	ND
p,p-DDT	2.76	UG/KG	<2.8	<2.8	ND	3.5
Mirex	1.77	UG/KG	ND	ND	ND	ND
Endosulfan Sulfate	58.3	UG/KG	ND	ND	ND	ND

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

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

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

POINT LOMA WASTEWATER TREATMENT PLANT
ANNUAL FISH MUSCLE - Chlorinated Pesticides

Annual 2014

Source:			RF-1	RF-2
Date:			2014	2014
Analyte	MDL	Units	Avg	Avg
Hexachlorobenzene	.23	UG/KG	<0.23	<0.23
BHC, Gamma isomer	5.04	UG/KG	ND	ND
Heptachlor	.21	UG/KG	ND	ND
Aldrin	2.53	UG/KG	ND	ND
Heptachlor epoxide	.38	UG/KG	ND	ND
o,p-DDE	.25	UG/KG	ND	ND
Alpha Endosulfan	2.47	UG/KG	ND	ND
Alpha (cis) Chlordane	.2	UG/KG	ND	ND
Trans Nonachlor	.14	UG/KG	ND	ND
p,p-DDE	.49	UG/KG	0.63	<0.49
p,p-DDMU	.18	UG/KG	ND	ND
Dieldrin	1.26	UG/KG	ND	ND
o,p-DDD	.2	UG/KG	ND	ND
Endrin	3.03	UG/KG	ND	ND
o,p-DDT	.2	UG/KG	ND	ND
p,p-DDD	.29	UG/KG	ND	ND
Beta Endosulfan	4.38	UG/KG	ND	ND
p,p-DDT	.28	UG/KG	ND	ND
Mirex	.18	UG/KG	ND	ND
Endosulfan Sulfate	5.83	UG/KG	ND	ND

ND= not detected
NA= not analyzed
NS= not sampled
E=estimated value, value is less than the Method Detection Limit but confirmed by GC/MS-MS

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

POINT LOMA WASTEWATER TREATMENT PLANT
ANNUAL FISH LIVER - Poly Chlorinated Biphenyls (PCB's)

Annual 2014

Source:			TFZONE1	TFZONE2	TFZONE3	TFZONE4
Date:			2014	2014	2014	2014
Analyte	MDL	Units	Avg	Avg	Avg	Avg
PCB 18	1.49	UG/KG	2.67	ND	ND	ND
PCB 28	1.47	UG/KG	<1.47	<1.47	ND	<1.47
PCB 49	1.67	UG/KG	23.1	2.4	2.35	2.93
PCB 37	2.03	UG/KG	ND	ND	ND	ND
PCB 70	2.05	UG/KG	E6.0	<2.1	E1.5	E2.3
PCB 101	1.7	UG/KG	37.1	8.67	6.90	8.15
PCB 119	2.72	UG/KG	<2.72	ND	ND	ND
PCB 87	1.95	UG/KG	3.67	ND	ND	ND
PCB 110	2.13	UG/KG	24.8	6.37	4.5	6.12
PCB 151	1.52	UG/KG	8.17	3.13	ND	2.3
PCB 77	3.32	UG/KG	ND	ND	ND	ND
PCB 149	1.92	UG/KG	13.5	4.83	4.07	4.42
PCB 123	3.04	UG/KG	3.2	ND	ND	ND
PCB 118	2.56	UG/KG	57.0	14.3	10.5	11.6
PCB 114	2.77	UG/KG	ND	ND	ND	ND
PCB 153/168	3.76	UG/KG	101	32.3	25.0	30.3
PCB 105	2.28	UG/KG	9.47	E3.5	ND	ND
PCB 138	1.93	UG/KG	54.7	18.3	12.5	15.5
PCB 158	2.55	UG/KG	E6.23	<2.55	ND	<2.55
PCB 187	2.25	UG/KG	21.7	12.0	8.5	9.9
PCB 183	2.06	UG/KG	7.33	3.57	E2.45	2.93
PCB 126	1.93	UG/KG	ND	ND	ND	ND
PCB 128	2.28	UG/KG	11.4	3.87	<2.28	<2.28
PCB 167	2.05	UG/KG	3.27	<2.05	ND	ND
PCB 177	1.96	UG/KG	ND	ND	ND	ND
PCB 156	2.33	UG/KG	4.9	<2.33	<2.33	<2.33
PCB 157	2.77	UG/KG	<2.77	ND	ND	ND
PCB 180	2.89	UG/KG	24.8	12.1	7.9	9.4
PCB 170	2.16	UG/KG	10.8	4.33	2.30	4.22
PCB 169	1.41	UG/KG	ND	ND	ND	ND
PCB 189	1.78	UG/KG	ND	ND	ND	ND
PCB 194	3.41	UG/KG	E5.47	E3.63	ND	ND
PCB 206	1.84	UG/KG	<1.84	<1.84	ND	ND

ND= not detected
NA= not analyzed
NS= not sampled
E=estimated value, value is less than the Method Detection Limit but confirmed by GC/MS-MS

POINT LOMA WASTEWATER TREATMENT PLANT
ANNUAL FISH MUSCLE - Poly Chlorinated Biphenyls (PCB's)

Annual 2014

Source:			RF-1	RF-2
Date:			2014	2014
Analyte	MDL	Units	Avg	Avg
PCB 18	.15	UG/KG	ND	ND
PCB 28	.15	UG/KG	ND	ND
PCB 49	.17	UG/KG	ND	ND
PCB 37	.2	UG/KG	ND	ND
PCB 70	.2	UG/KG	ND	ND
PCB 101	.17	UG/KG	ND	ND
PCB 119	.27	UG/KG	ND	ND
PCB 87	.19	UG/KG	ND	ND
PCB 110	.21	UG/KG	ND	ND
PCB 151	.15	UG/KG	ND	ND
PCB 77	.33	UG/KG	ND	ND
PCB 149	.19	UG/KG	ND	ND
PCB 123	.3	UG/KG	ND	ND
PCB 118	.26	UG/KG	ND	ND
PCB 114	.28	UG/KG	ND	ND
PCB 153/168	.38	UG/KG	ND	ND
PCB 105	.23	UG/KG	ND	ND
PCB 138	.19	UG/KG	ND	ND
PCB 158	.26	UG/KG	ND	ND
PCB 187	.23	UG/KG	ND	ND
PCB 183	.21	UG/KG	ND	ND
PCB 126	.19	UG/KG	ND	ND
PCB 128	.23	UG/KG	ND	ND
PCB 167	.21	UG/KG	ND	ND
PCB 177	.2	UG/KG	ND	ND
PCB 156	.23	UG/KG	ND	ND
PCB 157	.28	UG/KG	ND	ND
PCB 180	.29	UG/KG	ND	ND
PCB 170	.22	UG/KG	ND	ND
PCB 169	.14	UG/KG	ND	ND
PCB 189	.18	UG/KG	ND	ND
PCB 194	.34	UG/KG	ND	ND
PCB 206	.18	UG/KG	ND	ND

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

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

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VI. Annual Pretreatment Program Analyses

2014 Annual Pretreatment Program Analyses
(QUARTERLY SLUDGE PROJECT)

The Quarterly Sludge Project is part of the Pt. Loma WWTP NPDES (Permit No. CA0107409/Order No. R9-2009-0001) monitoring requirements. 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 2014. Sampling occurred on February 05, May 07, August 06, and October 08. Monthly composite samples of MBC dewatered sludge 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.

Pt. Loma WWTP Influent (PLR) and effluent (PLE) sewage are flow-proportioned 24-hr composites* taken by a refrigerated automatic continuous autosampler over the 24-hr periods from midnight to midnight of the sampling days. Two days of sampling were required for all of the required samples. The sampling locations are the influent and effluent channels.

Digested and raw sludge are sampled by operations staff and composited by the laboratory. The digested sludge sample is composited from 12 manual grab samples collected at two-hour intervals from Digester 7. The raw sludge sample is composited from 12 manual grabs collected at two hour intervals.

The Metro Biosolids Center (MBC) uses a centrifuge dewatering process, the MBC centrate is the return stream source. This is a 24-hr composite collected with the refrigerated automatic composite sampler currently installed on the MBC combined centrate return stream line. MBC_NC_DSL and MBC_NC_RSL are the MBC Digested Sludge Line and NCWRP to MBC Raw Sludge Line respectively; MBC_NC_DSL composite sample was compiled from grabs collected every 2 hours for the 24 hours of the sampling program each quarter while MBC_NC_RSL is a 24-hr composite collected with the refrigerated automatic composite sampler.

Quarterly Sludge Project data for the North City Water Reclamation Plant and the South Bay Water Reclamation Plant are reported in the Pre-treatment monitoring sections of the Annuals submitted under separate cover for each of these facilities.

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

Abbreviations:

PLR	Pt Loma WWTP influent.	RAW COMP	Pt. Loma raw sludge composite
PLE	Pt Loma WWTP effluent.	DIG COMP	Pt. Loma digested sludge composite
MBCDEWCN	MBC dewatered sludge from centrifuges.	MBC_COMBCN	MBC combined centrate from dewatering centrifuges.
MBC_NC_RSL	NCWRP to MBC raw sludge line	MBC_NC_DSL	MBC digested sludge line

A. Point Loma Wastewater Treatment Plant and Metro Biosolids Center Sources

POINT LOMA WASTEWATER TREATMENT PLANT
Physical/Aggregate Properties Report

Annual 2014

Point Loma

Source			PLR	PLR	PLR	PLR
Analyte	MDL	Units	04-FEB-2014	06-MAY-2014	05-AUG-2014	07-OCT-2014
Conductivity	10	umhos/cm	2930	3010	2740	3390
HEM (Grease & Oil)	1.2	mg/L	53.1	52.9	48.9	55.5
Total Suspended Solids	2.5	mg/L	353	367	379	460
Volatile Suspended Solids	2.5	mg/L	304	322	330	356
Total Alkalinity (bicarbonate)	20	mg/L	299	322	284	314
Total Solids	10	mg/L	1970	2080	1970	2420
Total Volatile Solids	100	mg/L	552	584	595	660
Total Kjeldahl Nitrogen	1.6	mg/L	56	63	51	63
BOD (Biochemical Oxygen Demand)	2	mg/L	312	349	367	375
Chemical Oxygen Demand	18	mg/L	623	934	780	547
pH (grab)		pH Units	7.50	7.44	7.25	7.26
Ammonia-N	.3	mg/L	33.3	39.2	35.0	35.8
Turbidity	.13	NTU	130.0	148.0	141.0	157.0
Total Dissolved Solids	28	mg/L	1620	1660	1550	1880
MBAS (Surfactants)	.03	mg/L	8.33	6.60	20.60	5.98

Source			PLE	PLE	PLE	PLE
Analyte	MDL	Units	04-FEB-2014	06-MAY-2014	05-AUG-2014	07-OCT-2014
Conductivity	10	umhos/cm	3000	3040	2840	3340
HEM (Grease & Oil)	1.2	mg/L	7.5	16.8	14.1	11.9
Total Suspended Solids	2.5	mg/L	34	23	23	35
Volatile Suspended Solids	2.5	mg/L	26	19	18	29
Total Alkalinity (bicarbonate)	20	mg/L	278	308	270	294
Total Solids	10	mg/L	1700	1730	1630	1950
Total Volatile Solids	100	mg/L	292	300	273	384
Total Kjeldahl Nitrogen	1.6	mg/L	47	50	41	51
BOD (Biochemical Oxygen Demand)	2	mg/L	103	125	117	110
Chemical Oxygen Demand	18	mg/L	215	255	243	175
pH (grab)		pH Units	7.19	7.29	7.17	7.41
Ammonia-N	.3	mg/L	33.4	37.0	34.1	34.7
Turbidity	.13	NTU	36.9	41.1	44.8	42.7
Total Dissolved Solids	28	mg/L	1610	1660	1570	1930
MBAS (Surfactants)	.03	mg/L	2.23	4.50	5.10	4.30

Source			RAW COMP	RAW COMP	RAW COMP	RAW COMP
Analyte	MDL	Units	04-FEB-2014	06-MAY-2014	05-AUG-2014	07-OCT-2014
Total Alkalinity (bicarbonate)	20	mg/L	502	426	406	383
Total Solids		Wt%	4.45	4.25	4.15	4.40
Total Volatile Solids		Wt%	79	78	79	76
Total Kjeldahl Nitrogen	.04	Wt%	7.7	3.6	3.7	3.3
pH (grab)		pH Units	5.63	5.42	5.44	5.66

Source			DIG COMP	DIG COMP	DIG COMP	DIG COMP
Analyte	MDL	Units	04-FEB-2014	06-MAY-2014	05-AUG-2014	07-OCT-2014
Total Alkalinity (bicarbonate)	20	mg/L	2160	1920	1840	1600
Total Solids		Wt%	1.90	2.00	2.05	2.20
Total Volatile Solids		Wt%	60	59	59	60
Total Kjeldahl Nitrogen	.04	Wt%	2.9	6.9	7.3	6.4
pH (grab)		pH Units	7.14	6.99	7.16	7.10

POINT LOMA WASTEWATER TREATMENT PLANT
Physical/Aggregate Properties Report

Annual 2014

MBC

Source			MBC_COMBCN	MBC_COMBCN	MBC_COMBCN	MBC_COMBCN
Analyte	MDL	Units	04-FEB-2014	06-MAY-2014	05-AUG-2014	07-OCT-2014
Conductivity	10	umhos/cm	4970	5580	5050	5620
HEM (Grease & Oil)	1.2	mg/L	20.8	28.5	21.1	47.8
Total Suspended Solids	2.5	mg/L	500	590	740	1990
Volatile Suspended Solids	2.5	mg/L	410	435	580	1440
Total Alkalinity (bicarbonate)	20	mg/L	1260	1240	1050	223
Total Solids		Wt%	0.30	0.30	0.40	0.50
Total Volatile Solids		Wt%	40	40	53	55
Total Kjeldahl Nitrogen	1.6	mg/L	393	400	345	384
BOD (Biochemical Oxygen Demand)	2	mg/L	198	301	271	525
Chemical Oxygen Demand	18	mg/L	733	1150	673	1390
pH		pH Units	7.78	7.81	7.81	7.61
pH (grab sample)		pH Units	7.58	7.46	7.49	7.54
Ammonia-N	.3	mg/L	334.0	311.0	NR	277.0

Source			MBC_NC_DSL	MBC_NC_DSL	MBC_NC_DSL	MBC_NC_DSL
Analyte	MDL	Units	04-FEB-2014	06-MAY-2014	05-AUG-2014	07-OCT-2014
Total Alkalinity (bicarbonate)	20	mg/L	2570	1680	1940	2090
Total Solids		Wt%	3.10	2.60	3.20	3.10
Total Volatile Solids		Wt%	67	64	66	65
Total Kjeldahl Nitrogen	1.6	mg/L	1430	1910	2100	2220
pH		pH Units	7.18	7.06	7.05	7.07

Source			MBC_NC_RSL	MBC_NC_RSL	MBC_NC_RSL	MBC_NC_RSL
Analyte	MDL	Units	04-FEB-2014	06-MAY-2014	05-AUG-2014	07-OCT-2014
Total Suspended Solids	2.5	mg/L	4900	1060	5700	5650
Volatile Suspended Solids	2.5	mg/L	4100	880	4650	4550
Total Alkalinity (bicarbonate)	20	mg/L	488	381	282	386
Total Solids		Wt%	0.60	0.20	0.60	0.60
Total Volatile Solids		Wt%	69	50	72	67
Total Kjeldahl Nitrogen	1.6	mg/L	318	402	272	217
pH		pH Units	7.09	6.94	7.01	7.14

NR= Not required

POINT LOMA WASTEWATER TREATMENT PLANT

(Metals from Digestion and Ions from Supernatant)

Annual 2014

Source:			PLE	PLE	PLE	PLE
Date:			04-FEB-2014	06-MAY-2014	05-AUG-2014	07-OCT-2014
Sample ID:	MDL	Units	P695680	P712448	P723690	P734686
Aluminum	47	UG/L	ND	ND	50	66
Antimony	2.9	UG/L	ND	3	ND	<2
Arsenic	.06	UG/L	0.8	0.7	0.7	1.1
Barium	.7	UG/L	44	44	30	46
Beryllium	.05	UG/L	ND	ND	ND	ND
Boron	7	UG/L	373	375	396	415
Cadmium	.53	UG/L	ND	ND	ND	ND
Chromium	1.2	UG/L	ND	ND	1.7	2.0
Cobalt	.85	UG/L	ND	ND	1.2	0.9
Copper	2.16	UG/L	12	11	13	15
Iron	37	UG/L	3030	2390	2600	2570
Lead	2	UG/L	ND	ND	3	ND
Manganese	.78	UG/L	120	108	113	106
Mercury	.5	NG/L	15.0	13.4*	29.7*	5.9
Molybdenum	.89	UG/L	6.8	5.8	5.4	7.3
Nickel	.53	UG/L	6.14	5.72	5.06	4.24
Selenium	.08	UG/L	1.24	1.13	0.69	1.12
Silver	.73	UG/L	ND	ND	ND	ND
Thallium	10	UG/L	ND	ND	ND	ND
Vanadium	.64	UG/L	1.51	0.99	0.90	1.30
Zinc	4.19	UG/L	26	20	23	23
Calcium	.04	MG/L	87.9	89.4	66.2	89.1
Lithium	.002	MG/L	0.05	0.05	0.03	0.06
Magnesium	.1	MG/L	55	55	46	63
Potassium	.3	MG/L	28	27	27	32
Sodium	1	MG/L	377	392	364	451
Bromide	.1	MG/L	1.2	1.3	1.3	1.8
Chloride	7	MG/L	594	609	593	737
Fluoride	.05	MG/L	0.84	0.65	0.73	0.80
Nitrate	.04	MG/L	0.44	1.54	0.36	0.11
Ortho Phosphate	.2	MG/L	3.5	5.7	6.4	6.3
Sulfate	9	MG/L	251	249	161	257
Calcium Hardness		MG/L	220	224	165	222
Magnesium Hardness		MG/L	226	227	190	258
Total Hardness		MG/L	446	451	355	480
Cyanide, Total	.002	MG/L	0.002	0.003	<0.002	ND
Sulfides-Total	.4	MG/L	0.8	0.9	0.8	1.0
Total Kjeldahl Nitrogen	1.6	MG/L	46.5	49.8	40.8	50.9

* = Spiked matrix samples below 71%-125% acceptable range

ND= Not Detected
NA= Not Analyzed
NS= Not Sampled
NR= Not Required

POINT LOMA WASTEWATER TREATMENT PLANT

(Metals from Digestion and Ions from Supernatant)

Annual 2014

Source:			PLR	PLR	PLR	PLR
Date:			04-FEB-2014	06-MAY-2014	05-AUG-2014	07-OCT-2014
Sample ID:	MDL	Units	P695686	P712454	P723696	P734692
Aluminum	47	UG/L	613	584	796	898
Antimony	2.9	UG/L	ND	3	ND	5
Arsenic	.06	UG/L	1.2	1.4	1.2	1.7
Barium	.7	UG/L	102	108	97	155
Beryllium	.05	UG/L	0.04	ND	ND	ND
Boron	7	UG/L	366	381	406	412
Cadmium	.53	UG/L	ND	ND	0.3	0.3
Chromium	1.2	UG/L	4.7	5.8	7.4	7.8
Cobalt	.85	UG/L	ND	1.4	1.9	1.7
Copper	2.16	UG/L	145	114	135	152
Iron	37	UG/L	8010	8350	11000	16200
Lead	2	UG/L	3	3	11	7
Manganese	.78	UG/L	131	117	130	122
Mercury	.5	NG/L	191.0	50.8*	242*	58.0
Molybdenum	.89	UG/L	8.4	9.9	9.4	13.2
Nickel	.53	UG/L	13.10	9.54	13.40	11.40
Selenium	.08	UG/L	1.89	2.10	1.62	1.16
Silver	.73	UG/L	ND	0.8	1.3	1.2
Thallium	10	UG/L	ND	ND	ND	ND
Vanadium	.64	UG/L	5.25	4.20	6.00	6.20
Zinc	4.19	UG/L	173	176	224	224
Calcium	.04	MG/L	89.0	90.7	66.1	88.2
Lithium	.002	MG/L	0.05	0.05	0.03	0.05
Magnesium	.1	MG/L	55	56	47	62
Potassium	.3	MG/L	28	28	27	32
Sodium	1	MG/L	366	387	352	439
Bromide	.1	MG/L	1.2	1.2	1.3	1.8
Chloride	7	MG/L	573	591	572	716
Fluoride	.05	MG/L	0.86	0.69	0.29	0.80
Nitrate	.04	MG/L	0.05	0.06	0.06	ND
Ortho Phosphate	.2	MG/L	3.3	4.7	7.1	7.4
Sulfate	9	MG/L	264	262	171	262
Calcium Hardness		MG/L	222	226	165	220
Magnesium Hardness		MG/L	226	230	194	256
Total Hardness		MG/L	448	456	359	476
Cyanide, Total	.002	MG/L	ND	ND	ND	0.003
Sulfides-Total	.4	MG/L	3.6	2.2	3.3	5.1
Total Kjeldahl Nitrogen	1.6	MG/L	55.5	63.4	51.3	62.6

* = Spiked matrix samples were below 71%-125% acceptable range

ND= Not Detected
NA= Not Analyzed
NS= Not Sampled
NR= Not Required

POINT LOMA WASTEWATER TREATMENT PLANT

(Metals from Digestion and Ions from Supernatant)

Annual 2014

Source:			MBC_COMBCN	MBC_COMBCN	MBC_COMBCN	MBC_COMBCN
Date:			04-FEB-2014	06-MAY-2014	05-AUG-2014	07-OCT-2014
Sample ID:	MDL	Units	P695697	P712465	P723707	P734703
Aluminum	47	UG/L	661	929	2090	2670
Antimony	2.9	UG/L	ND	ND	6	8
Arsenic	.06	UG/L	2.0	2.3	3.4	3.7
Barium	.7	UG/L	199	227	202	364
Beryllium	.05	UG/L	ND	0.03	ND	0.10
Boron	7	UG/L	365	362	376	389
Cadmium	.53	UG/L	ND	ND	1.0	0.6
Chromium	1.2	UG/L	9.0	13.6	12.8	24.3
Cobalt	.85	UG/L	5.5	6.3	5.7	9.4
Copper	2.16	UG/L	172	201	216	380
Iron	37	UG/L	25700	46000	46100	73200
Lead	2	UG/L	ND	7	38	10
Manganese	.78	UG/L	242	394	476	564
Mercury	.5	NG/L	135.0	244.0	231.0	227.0
Molybdenum	.89	UG/L	4.9	8.3	8.9	14.1
Nickel	.53	UG/L	27.90	29.90	24.40	35.10
Selenium	.08	UG/L	1.63	3.09	2.87	3.06
Silver	.73	UG/L	ND	1.8	1.2	2.1
Thallium	10	UG/L	ND	ND	ND	ND
Vanadium	.64	UG/L	9.94	9.81	7.00	23.20
Zinc	4.19	UG/L	211	274	277	561
Calcium	.04	MG/L	183	260	187	204
Lithium	.002	MG/L	0.05	0.05	0.05	0.05
Magnesium	.1	MG/L	66	80	62	68
Potassium	.3	MG/L	48	62	43	44
Sodium	1	MG/L	299	272	281	315
Bromide	.1	MG/L	0.9	0.9	0.8	1.0
Chloride	7	MG/L	859	1030	1010	1080
Fluoride	.05	MG/L	0.52	ND	0.28	0.59
Nitrate	.04	MG/L	29.30	0.81	0.21	0.27
Ortho Phosphate	.2	MG/L	22.9	2.4	2.8	8.7
Sulfate	9	MG/L	38	49	24	18
Calcium Hardness		MG/L	457	649	466	510
Magnesium Hardness		MG/L	272	329	255	280
Total Hardness		MG/L	729	978	721	790
Cyanide, Total	.002	MG/L	0.005	0.004	0.002	0.004
Sulfides-Total	.4	MG/L	8.2	6.9	5.1	19.6
Total Kjeldahl Nitrogen	1.6	MG/L	393	400	345	384

ND= Not Detected
NA= Not Analyzed
NS= Not Sampled
NR= Not Required

MBC_COMBCN = Combined Sludge Centrate

POINT LOMA WASTEWATER TREATMENT PLANT

(Metals from Digestion and Ions from Supernatant)

Annual 2014

Source:			MBC_NC_DSL			
Date:			04-FEB-2014			
Sample ID:	MDL	Units	P695751			
Aluminum	4	MG/KG	4970			
Antimony	.5	MG/KG	3.2			
Arsenic	.06	UG/L	149			
Barium	.05	MG/KG	387.0			
Beryllium	.02	MG/KG	0.05			
Boron	.7	MG/KG	32.3			
Cadmium	.1	MG/KG	0.60			
Chromium	.3	MG/KG	39.9			
Cobalt	.2	MG/KG	7.1			
Copper	.4	MG/KG	567			
Iron	20	MG/KG	87900			
Lead	2	MG/KG	18.1			
Manganese	.2	MG/KG	270			
Mercury	.005	UG/L	7.54			
Molybdenum	.1	MG/KG	13.7			
Nickel	.3	MG/KG	34			
Selenium	.08	UG/L	126			
Silver	.07	MG/KG	4.8			
Thallium	1	MG/KG	2			
Vanadium	.2	MG/KG	52.8			
Zinc	.5	MG/KG	657			
Calcium	.04	MG/L	220	200	161	194
Lithium	.002	MG/L	0.05	0.05	0.04	0.05
Magnesium	.1	MG/L	77	64	73	68
Potassium	.3	MG/L	65	48	64	53
Sodium	1	MG/L	180	308	188	185
Bromide	.1	MG/L	0.5	ND	0.4	0.5
Chloride	7	MG/L	1550	2080	1700	1380
Fluoride	.05	MG/L	0.4	0.4	0.3	0.6
Nitrate	.04	MG/L	0.17	0.15	ND	ND
Ortho Phosphate	.2	MG/L	ND	ND	ND	ND
Sulfate	9	MG/L	23	20	22	22
Cyanide, Total	.002	MG/L	0.022	0.01	0.02	<0.002
Sulfides-Reactive	11	MG/KG	138	98	146	171
Total Kjeldahl Nitrogen	1.6	MG/L	1430	1910	2100	2220

ND= Not Detected
NA= Not Analyzed
NS= Not Sampled
NR= Not Required

MBC_NC_DSL = Combined North City Digested Sludge Line

Note: Metals analytes were run under method 3050B except for Mercury, Arsenic and Selenium.

POINT LOMA WASTEWATER TREATMENT PLANT

(Metals from Digestion and Ions from Supernatant)

Annual 2014

Source:			MBC_NC_DSL	MBC_NC_DSL	MBC_NC_DSL
Date:			06-MAY-2014	05-AUG-2014	07-OCT-2014
Sample ID:	MDL	Units	P712519	P723761	P734757
Aluminum	47	UG/L	114000	224000	250000
Antimony	2.9	UG/L	124	236	221
Arsenic	.06	UG/L	55.5	178	1990
Barium	.7	UG/L	9620	10900	11400
Beryllium	.05	UG/L	2.69	ND	3.25
Boron	7	UG/L	770	1140	1120
Cadmium	.53	UG/L	17.2	15.0	15.8
Chromium	1.2	UG/L	1220	1630	1230
Cobalt	.85	UG/L	158	167	140
Copper	2.16	UG/L	14700	21500	21700
Iron	37	UG/L	2710000	2860000	2800000
Lead	2	UG/L	442	494	382
Manganese	.78	UG/L	8020	11100	11800
Mercury	.005	UG/L	11.0	8.43	8.30
Molybdenum	.89	UG/L	457	551	625
Nickel	.53	UG/L	1050	1220	906
Selenium	.08	UG/L	24.1	136	6.58
Silver	.73	UG/L	163	118	135
Thallium	52.1	UG/L	ND	ND	<52.1
Vanadium	.64	UG/L	1170	914	956
Zinc	4.19	UG/L	18000	22200	21800

ND= Not Detected
NA= Not Analyzed
NS= Not Sampled
NR= Not Required

MBC_NC_DSL = Combined North City Digested Sludge Line

Note : Metals analytes were run under EPA method 200.7 except for Mercury, Arsenic and Selenium.

POINT LOMA WASTEWATER TREATMENT PLANT

(Metals from Digestion and Ions from Supernatant)

Annual 2014

Source:			MBC_NC_RSL	MBC_NC_RSL	MBC_NC_RSL	MBC_NC_RSL
Date:			04-FEB-2014	06-MAY-2014	05-AUG-2014	07-OCT-2014
Sample ID:	MDL	Units	P695749	P712517	P723759	P734755
Aluminum	47	UG/L	16800	26200	32300	31700
Antimony	2.9	UG/L	11	14	25	17
Arsenic	.06	UG/L	18.4	27.1	37.4	34.0
Barium	.7	UG/L	1560	1770	1270	1110
Beryllium	.05	UG/L	0.22	0.45	ND	0.29
Boron	7	UG/L	427	450	467	440
Cadmium	.53	UG/L	2.1	3.2	2.7	2.3
Chromium	1.2	UG/L	115.0	201.0	137.0	96.6
Cobalt	.85	UG/L	11.3	22.1	17.0	12.2
Copper	2.16	UG/L	2190	3280	2800	1980
Iron	37	UG/L	228000	316000	251000	194000
Lead	2	UG/L	50	73	58	37
Manganese	.78	UG/L	813	1400	1230	1530
Mercury	.5	NG/L	2070	3050	19900	3640
Molybdenum	.89	UG/L	47.2	82.2	70.5	55.7
Nickel	.53	UG/L	93.30	140.0	110.0	63.40
Selenium	.08	UG/L	19.50	30.30	25.40	21.30
Silver	.73	UG/L	22.5	38.8	15.7	14.2
Thallium	10	UG/L	20.8	ND	ND	ND
Vanadium	.64	UG/L	123.0	159.0	71.0	89.70
Zinc	4.19	UG/L	2640	2980	2690	2070
Calcium	.04	MG/L	80.6	100.0	64.7	79.3
Lithium	.002	MG/L	0.05	0.05	0.04	0.05
Magnesium	.1	MG/L	40	41	35	38
Potassium	.3	MG/L	28	30	31	26
Sodium	1	MG/L	186	205	178	197
Bromide	.1	MG/L	0.4	0.2	0.4	0.4
Chloride	7	MG/L	302	381	345	380
Fluoride	.05	MG/L	0.38	0.11	0.37	0.44
Nitrate	.04	MG/L	0.13	ND	0.15	ND
Ortho Phosphate	.2	MG/L	75.3	16.0	21.4	25.6
Sulfate	9	MG/L	35	65	20	20
Calcium Hardness		MG/L	201	250	162	198
Magnesium Hardness		MG/L	165	168	144	155
Total Hardness		MG/L	366	418	306	353
Cyanide, Total	.002	MG/L	0.004	0.004	0.004	0.002
Sulfides-Total	.4	MG/L	86.0	73.7	62.6	58.0
Sulfides-Reactive	11	MG/KG	32	50	52	48
Total Kjeldahl Nitrogen	1.6	MG/L	318	402	272	217

ND= Not Detected
NA= Not Analyzed
NS= Not Sampled
NR= Not Required

MBC_NC_RSL = Combined North City Raw Sludge Line

POINT LOMA WASTEWATER TREATMENT PLANT

(Metals from Digestion and Ions from Supernatant)

Annual 2014

Source:			RAW COMP	RAW COMP	RAW COMP	RAW COMP
Date:			04-FEB-2014	06-MAY-2014	05-AUG-2014	07-OCT-2014
Sample ID:	MDL	Units	P695722	P712490	P723732	P734728
Aluminum	4	MG/KG	1780	1680	3160	1680
Antimony	.5	MG/KG	1.8	1.7	3.7	2.1
Arsenic	.68	MG/KG	1.46	2.03	1.56	1.56
Barium	.05	MG/KG	195.0	192.0	281.0	161.0
Beryllium	.02	MG/KG	ND	ND	0.05	ND
Boron	.7	MG/KG	10.5	9.0	22.5	10.5
Cadmium	.1	MG/KG	0.52	0.60	1.00	0.50
Chromium	.3	MG/KG	17.8	24.2	38.0	17.6
Cobalt	.2	MG/KG	2.8	2.8	4.9	2.7
Copper	.4	MG/KG	303	346	581	313
Iron	20	MG/KG	42700	39200	85600	50500
Lead	2	MG/KG	10.8	12.0	23.0	17.0
Manganese	.2	MG/KG	126	114	267	117
Mercury	.2	MG/KG	0.47	8.58	ND	1.87
Molybdenum	.1	MG/KG	6.5	11.0	17.5	12.8
Nickel	.3	MG/KG	16	22	39	18
Selenium	.47	MG/KG	2.28	0.85	1.87	2.73
Silver	.07	MG/KG	2.4	2.3	3.2	1.6
Thallium	1	MG/KG	2	ND	2	ND
Vanadium	.2	MG/KG	20.2	16.5	4.4	18.7
Zinc	.5	MG/KG	465	443	816	825
Bromide	3	MG/KG	72.0	10.0	136.0	32.0
Chloride	180	MG/KG	33900	34800	35200	39300
Fluoride	1.3	MG/KG	ND	ND	ND	ND
Nitrate	1	MG/KG	3.00	5.00	ND	ND
Ortho Phosphate	4	MG/KG	204	1870	609	466
Sulfate	220	MG/KG	443	661	432	425
Cyanide, Total	.1	MG/KG	2.90	4.50	2.90	4.10
Cyanide, Releaseable	.018	MG/KG	ND	ND	ND	ND
Sulfides-Total	500	MG/KG	7700	13900	15200	13500
Sulfides-Reactive	11	MG/KG	109	103	148	191
Total Kjeldahl Nitrogen	.04	WT%	7.72	3.56	3.65	3.29

ND= Not Detected
NA= Not Analyzed
NS= Not Sampled
NR= Not Required

RAW COMP = Point Loma Raw Sludge Composite

POINT LOMA WASTEWATER TREATMENT PLANT

(Metals from Digestion and Ions from Supernatant)

Annual 2014

Source:			DIG COMP	DIG COMP	DIG COMP	DIG COMP
Date:			04-FEB-2014	06-MAY-2014	05-AUG-2014	07-OCT-2014
Sample ID:	MDL	Units	P695736	P712504	P723746	P734742
Aluminum	4	MG/KG	3250	2570	466	2990
Antimony	.5	MG/KG	3.4	2.6	ND	3.4
Arsenic	.68	MG/KG	2.73	2.65	2.95	2.70
Barium	.05	MG/KG	378.0	269.0	42.7	144.0
Beryllium	.02	MG/KG	0.05	0.04	ND	0.09
Boron	.7	MG/KG	25.0	26.0	18.5	19.0
Cadmium	.1	MG/KG	1.18	0.80	ND	1.00
Chromium	.3	MG/KG	37.8	33.4	6.3	33.1
Cobalt	.2	MG/KG	5.2	3.9	0.9	4.7
Copper	.4	MG/KG	577	457	99	560
Iron	20	MG/KG	82000	60600	14200	83600
Lead	2	MG/KG	24.6	17.0	4.0	24.0
Manganese	.2	MG/KG	264	192	46	239
Mercury	.2	MG/KG	1.32	7.97	0.86	0.88
Molybdenum	.1	MG/KG	13.2	12.1	2.6	17.8
Nickel	.3	MG/KG	33	28	7	29
Selenium	.47	MG/KG	3.76	3.62	3.84	3.80
Silver	.07	MG/KG	4.2	5.7	0.6	2.8
Thallium	1	MG/KG	ND	ND	4	1
Vanadium	.2	MG/KG	40.9	26.0	31.9	33.4
Zinc	.5	MG/KG	890	618	152	1110
Bromide	3	MG/KG	72.0	63.5	64.0	66.5
Chloride	180	MG/KG	69800	71900	77200	72900
Fluoride	1.3	MG/KG	12.3	18.0	31.8	26.8
Nitrate	1	MG/KG	8.50	9.50	ND	ND
Ortho Phosphate	4	MG/KG	46	175	ND	ND
Sulfate	220	MG/KG	1040	943	961	893
Cyanide, Total	.1	MG/KG	11.50	12.30	8.85	9.30
Cyanide, Releaseable	.018	MG/KG	ND	ND	ND	ND
Sulfides-Total	500	MG/KG	17100	22700	25500	27900
Sulfides-Reactive	11	MG/KG	104	110	178	173
Total Kjeldahl Nitrogen	.04	WT%	2.90	6.94	7.27	6.39

ND= Not Detected
NA= Not Analyzed
NS= Not Sampled
NR= Not Required

DIG COMP = Point Loma Digested Sludge Composite

POINT LOMA WASTEWATER TREATMENT PLANT

(Metals from Digestion and Ions from Supernatant)

Annual 2014

Source:			MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN
Date:			28-FEB-2014	31-MAY-2014	31-AUG-2014	31-OCT-2014
Sample ID:	MDL	Units	P701729	P716426	P731763	P741662
Aluminum	4	MG/KG	3740	3590	3600	4040
Antimony	.5	MG/KG	3.0	3.0	4.1	0.6
Arsenic	.68	MG/KG	3.17	3.38	2.71	3.54
Barium	.05	MG/KG	559.0	290.0	187.0	110.0
Beryllium	.02	MG/KG	0.06	0.06	0.11	0.07
Boron	.7	MG/KG	10.8	9.2	1.7	16.7
Cadmium	.1	MG/KG	1.01	1.10	0.85	1.85
Chromium	.3	MG/KG	39.9	47.5	42.9	44.7
Cobalt	.2	MG/KG	5.3	5.4	4.7	3.8
Copper	.4	MG/KG	592	650	661	676
Iron	20	MG/KG	90000	89500	93100	97100
Lead	2	MG/KG	25.2	24.5	26.0	25.0
Manganese	.2	MG/KG	275	276	272	322
Mercury	.2	MG/KG	0.87	1.30	1.01	0.89
Molybdenum	.1	MG/KG	14.2	17.2	17.6	24.1
Nickel	.3	MG/KG	34	39	42	39
Selenium	.47	MG/KG	4.90	5.07	4.54	4.48
Silver	.07	MG/KG	5.1	7.9	3.2	3.3
Thallium	1	MG/KG	3	ND	ND	2
Vanadium	.2	MG/KG	47.1	37.8	29.6	35.0
Zinc	.5	MG/KG	897	822	870	982
Cyanide, Total	.1	MG/KG	4.20	1.50	2.47	3.20
Cyanide, Releaseable	.018	MG/KG	ND	ND	ND	ND
Sulfides-Total	500	MG/KG	11500	21100	19700	14000
Sulfides-Reactive	11	MG/KG	73	43	98	51
Total Kjeldahl Nitrogen	.04	WT%	4.78	5.03	5.01	5.08

ND= Not Detected
NA= Not Analyzed
NS= Not Sampled
NR= Not Required

MBCDEWCN = MBC Dewatered Sludge Composite

POINT LOMA WASTEWATER TREATMENT PLANT
Radioactivity

Analyzed by: TestAmerica Laboratories Richland
Method: EPA 00-02 or EPA 900.0

Annual 2014

Source	Sample Date	Sample ID	Gross Alpha Radiation pCi/L	Gross Beta Radiation pCi/L
PLE	04-FEB-2014	P695680	0.9±7.1	29.1±7.9
PLE	06-MAY-2014	P712448	1.2±8.3	30.7±9.1
PLE	05-AUG-2014	P723690	0.7±7.1	29.2±6.7
PLE	07-OCT-2014	P734686	3.5±6.6	29.5±7.5
PLR	04-FEB-2014	P695686	6.5±7.4	25.7±7.4
PLR	06-MAY-2014	P712454	10.2±8.6	28.9±8.8
PLR	05-AUG-2014	P723696	3.7±7.4	32.5±7.6
PLR	07-OCT-2014	P734692	0.2±8.2	34.5±7.8
MBC_COMBCN	04-FEB-2014	P695697	6.9±9.9	51.4±12.0
MBC_COMBCN	06-MAY-2014	P712465	1.3±11.0	46.1±13.0
MBC_COMBCN	05-AUG-2014	P723707	4.2±8.9	49.0±11.0
MBC_COMBCN	07-OCT-2014	P734703	12.9±12.0	47.8±12.0

Units in picocuries per Liter (pCi/L)

Source	Sample Date	Sample ID	Gross Alpha Radiation pCi/kg	Gross Beta Radiation pCi/kg
MBCDEWCN	28-FEB-2014	P701729	1140±3350	8270±1800
MBCDEWCN	31-MAY-2014	P716426	4090±3900	5760±1600
MBCDEWCN	31-AUG-2014	P731763	3520±3800	9400±2000
MBCDEWCN	31-OCT-2014	P741662	4050±4400	8360±1900

Units in picocuries per Kilogram (pCi/Kg)

ND= Not Detected
NA= Not Analyzed
NS= Not Sampled
NR= Not Required

POINT LOMA WASTEWATER TREATMENT PLANT / METROBIOSOLIDS CENTER
SLUDGE PROJECT - ANNUAL SUMMARY
Chlorinated Pesticide Analysis, EPA Method 608 (with additions)

Annual 2014

Source			PLE	PLE	PLE	PLE	PLR	PLR
Date			04-FEB-2014	06-MAY-2014	05-AUG-2014	07-OCT-2014	04-FEB-2014	06-MAY-2014
Analyte	MDL	Units	P695680	P712448	P723690	P734686	P695686	P712454
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	4.7
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		NG/L	NA	NA	NA	NA	NA	NA
Gamma Chlordene		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	32.0
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
Heptachlors	9.4	NG/L	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
Polychlorinated biphenyls	2000	NG/L	0.0	0.0	0.0	0.0	0.0	0.0
Chlordane + related cmpds.	4	NG/L	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	32.0
Hexachlorocyclohexanes	2	NG/L	0.0	0.0	0.0	0.0	0.0	4.7
Aldrin + Dieldrin	4.3	NG/L	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	36.7

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

POINT LOMA WASTEWATER TREATMENT PLANT / METROBIOSOLIDS CENTER
SLUDGE PROJECT - ANNUAL SUMMARY
Chlorinated Pesticide Analysis, EPA Method 608 (with additions)

Annual 2014

Source			PLR	PLR	MBC_COMBCN	MBC_COMBCN	MBC_COMBCN	MBC_COMBCN
Date			05-AUG-2014	07-OCT-2014	04-FEB-2014	06-MAY-2014	05-AUG-2014	07-OCT-2014
Analyte	MDL	Units	P723696	P734692	P695697	P712465	P723707	P734703
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		NG/L	NA	NA	NA	NA	NA	NA
Gamma Chlordene		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
Heptachlors	9.4	NG/L	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
Polychlorinated biphenyls	2000	NG/L	0.0	0.0	0.0	0.0	0.0	0.0
Chlordane + related cmpds.	4	NG/L	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
Hexachlorocyclohexanes	2	NG/L	0.0	0.0	0.0	0.0	0.0	0.0
Aldrin + Dieldrin	4.3	NG/L	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

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

POINT LOMA WASTEWATER TREATMENT PLANT / METROBIOSOLIDS CENTER
SLUDGE PROJECT - ANNUAL SUMMARY
Chlorinated Pesticide Analysis, EPA Method 608 (with additions)

Annual 2014

Source			MBC_NC_DSL	MBC_NC_DSL	MBC_NC_DSL	MBC_NC_DSL
Date			04-FEB-2014	06-MAY-2014	05-AUG-2014	07-OCT-2014
Analyte	MDL	Units	P695751	P712519	P723761	P734757
Aldrin	4	NG/L	ND	ND	ND	ND
BHC, Alpha isomer	.2	NG/L	ND	ND	ND	ND
BHC, Beta isomer	2	NG/L	ND	ND	ND	ND
BHC, Delta isomer	2	NG/L	ND	ND	ND	ND
BHC, Gamma isomer	.34	NG/L	ND	ND	ND	ND
Alpha (cis) Chlordane	1.4	NG/L	ND	ND	ND	ND
Gamma (trans) Chlordane	1.3	NG/L	ND	ND	ND	ND
Alpha Chlordene		NG/L	NA	NA	NA	NA
Gamma Chlordene		NG/L	NA	NA	NA	NA
Cis Nonachlor	4	NG/L	ND	ND	ND	ND
Dieldrin	4.3	NG/L	ND	ND	ND	ND
Endosulfan Sulfate	7	NG/L	ND	ND	ND	ND
Alpha Endosulfan	1.5	NG/L	ND	ND	ND	ND
Beta Endosulfan	3.1	NG/L	ND	ND	ND	ND
Endrin	6	NG/L	ND	ND	ND	ND
Endrin aldehyde	5.4	NG/L	ND	ND	ND	ND
Heptachlor	.6	NG/L	ND	ND	ND	ND
Heptachlor epoxide	9.4	NG/L	ND	ND	ND	ND
Methoxychlor	20	NG/L	ND	ND	ND	ND
Mirex	2.3	NG/L	ND	ND	ND	ND
o,p-DDD	4	NG/L	ND	ND	ND	ND
o,p-DDE	2	NG/L	ND	ND	ND	ND
o,p-DDT	2.4	NG/L	ND	ND	ND	ND
Oxychlordane	2	NG/L	ND	ND	ND	ND
PCB 1016	250	NG/L	ND	ND	ND	ND
PCB 1221	2000	NG/L	ND	ND	ND	ND
PCB 1232	750	NG/L	ND	ND	ND	ND
PCB 1242	250	NG/L	ND	ND	ND	ND
PCB 1248	250	NG/L	ND	ND	ND	ND
PCB 1254	500	NG/L	ND	ND	ND	ND
PCB 1260	500	NG/L	ND	ND	ND	ND
PCB 1262	500	NG/L	ND	ND	ND	ND
p,p-DDD	4	NG/L	ND	ND	ND	ND
p,p-DDE	1.4	NG/L	ND	ND	ND	ND
p,p-DDT	3	NG/L	ND	ND	ND	ND
Toxaphene	250	NG/L	ND	ND	ND	ND
Trans Nonachlor	1.1	NG/L	ND	ND	ND	ND
Heptachlors	9.4	NG/L	0.0	0.0	0.0	0.0
Endosulfans	7	NG/L	0.0	0.0	0.0	0.0
Polychlorinated biphenyls	2000	NG/L	0.0	0.0	0.0	0.0
Chlordane + related cmpds.	4	NG/L	0.0	0.0	0.0	0.0
DDT and derivatives	4	NG/L	0.0	0.0	0.0	0.0
Hexachlorocyclohexanes	2	NG/L	0.0	0.0	0.0	0.0
Aldrin + Dieldrin	4.3	NG/L	0.0	0.0	0.0	0.0
Chlorinated Hydrocarbons	2000	NG/L	0.0	0.0	0.0	0.0

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

POINT LOMA WASTEWATER TREATMENT PLANT / METROBIOSOLIDS CENTER
SLUDGE PROJECT - ANNUAL SUMMARY
Chlorinated Pesticide Analysis, EPA Method 608 (with additions)

Annual 2014

Source			MBC_NC_RSL	MBC_NC_RSL	MBC_NC_RSL	MBC_NC_RSL	RAW COMP	RAW COMP
Date			04-FEB-2014	06-MAY-2014	05-AUG-2014	07-OCT-2014	04-FEB-2014	06-MAY-2014
Analyte	MDL	Units	P695749	P712517	P723759	P734755	P695722	P712490
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	DNQ130.0	ND	ND	ND	DNQ200.0
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		NG/L	NA	NA	NA	NA	NA	NA
Gamma Chlordene		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
Heptachlors	9.4	NG/L	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
Polychlorinated biphenyls	2000	NG/L	0.0	0.0	0.0	0.0	0.0	0.0
Chlordane + related cmpds.	4	NG/L	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
Hexachlorocyclohexanes	2	NG/L	0.0	0.0	0.0	0.0	0.0	0.0
Aldrin + Dieldrin	4.3	NG/L	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

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

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

POINT LOMA WASTEWATER TREATMENT PLANT / METROBIOSOLIDS CENTER
SLUDGE PROJECT - ANNUAL SUMMARY
Chlorinated Pesticide Analysis, EPA Method 608 (with additions)

Annual 2014

Source			RAW COMP	RAW COMP	DIG COMP	DIG COMP	DIG COMP	DIG COMP
Date			05-AUG-2014	07-OCT-2014	04-FEB-2014	06-MAY-2014	05-AUG-2014	07-OCT-2014
Analyte	MDL	Units	P723732	P734728	P695736	P712504	P723746	P734742
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		NG/L	NA	NA	NA	NA	NA	NA
Gamma Chlordene		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
Heptachlors	9.4	NG/L	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
Polychlorinated biphenyls	2000	NG/L	0.0	0.0	0.0	0.0	0.0	0.0
Chlordane + related cmpds.	4	NG/L	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
Hexachlorocyclohexanes	2	NG/L	0.0	0.0	0.0	0.0	0.0	0.0
Aldrin + Dieldrin	4.3	NG/L	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

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

METROBIOSOLIDS CENTER
Chlorinated Pesticide Analysis

2014 Annual

Source			MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN
Date			31-JAN-2014	28-FEB-2014	31-MAR-2014	30-APR-2014	31-MAY-2014
Analyte	MDL	Units	P695521	P701729	P707336	P710842	P716426
Aldrin	640	NG/KG	ND	ND	ND	ND	ND
Dieldrin	1762	NG/KG	ND	ND	ND	ND	ND
BHC, Alpha isomer	390	NG/KG	ND	ND	ND	ND	ND
BHC, Beta isomer	860	NG/KG	ND	ND	ND	ND	ND
BHC, Gamma isomer	432	NG/KG	ND	ND	ND	ND	ND
BHC, Delta isomer	944	NG/KG	ND	ND	ND	ND	ND
p,p-DDD	693	NG/KG	ND	ND	ND	4700	ND
p,p-DDE	700	NG/KG	ND	ND	ND	13500	28500
p,p-DDT	840	NG/KG	ND	ND	ND	<840	ND
o,p-DDD	970	NG/KG	ND	ND	ND	<970	54500
o,p-DDE	643	NG/KG	ND	ND	ND	5050	ND
o,p-DDT	941	NG/KG	ND	ND	ND	ND	ND
Heptachlor	1700	NG/KG	ND	ND	ND	ND	ND
Heptachlor epoxide	2560	NG/KG	ND	ND	ND	5650	ND
Alpha (cis) Chlordane	842	NG/KG	ND	ND	ND	5900	ND
Gamma (trans) Chlordane	541	NG/KG	ND	ND	ND	9900	11500
Alpha Chlordene	0	NG/KG	NA	NA	NA	NA	NA
Gamma Chlordene	0	NG/KG	NA	NA	NA	NA	NA
Oxychlordane	362	NG/KG	ND	ND	ND	ND	ND
Trans Nonachlor	1000	NG/KG	ND	ND	ND	8750	ND
Cis Nonachlor	850	NG/KG	ND	ND	ND	<850	ND
Alpha Endosulfan	762	NG/KG	ND	ND	ND	ND	ND
Beta Endosulfan	570	NG/KG	ND	ND	ND	ND	ND
Endosulfan Sulfate	1021	NG/KG	ND	ND	ND	ND	ND
Endrin aldehyde	1001	NG/KG	ND	ND	ND	ND	ND
Toxaphene	48660	NG/KG	ND	ND	ND	ND	ND
Mirex	680	NG/KG	ND	ND	ND	ND	ND
Methoxychlor	1460	NG/KG	ND	ND	ND	ND	ND
PCB 1016	83300	NG/KG	ND	ND	ND	ND	ND
PCB 1221	667000	NG/KG	ND	ND	ND	ND	ND
PCB 1232	500000	NG/KG	ND	ND	ND	ND	ND
PCB 1242	66860	NG/KG	ND	ND	ND	ND	ND
PCB 1248	83300	NG/KG	ND	ND	ND	ND	ND
PCB 1254	83300	NG/KG	ND	ND	ND	ND	ND
PCB 1260	333000	NG/KG	ND	ND	ND	ND	ND
PCB 1262	83300	NG/KG	ND	ND	ND	ND	ND
Aldrin + Dieldrin	1762	NG/KG	0	0	0	0	0
Hexachlorocyclohexanes	944	NG/KG	0	0	0	0	0
DDT and derivatives	970	NG/KG	0	0	0	23250	83000
Chlordane + related cmpds.	842	NG/KG	0	0	0	15800	11500
Polychlorinated biphenyls	667000	NG/KG	0	0	0	0	0
Chlorinated Hydrocarbons	667000	NG/KG	0	0	0	53450	94500

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

METROBIOSOLIDS CENTER
Chlorinated Pesticide Analysis

2014 Annual

Source			MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN
Date			30-JUN-2014	31-JUL-2014	31-AUG-2014	30-SEP-2014	31-OCT-2014
Analyte	MDL	Units	P720867	P727207	P731763	P736392	P741662
Aldrin	640	NG/KG	ND	ND	ND	ND	ND
Dieldrin	1762	NG/KG	ND	ND	ND	ND	ND
BHC, Alpha isomer	390	NG/KG	ND	ND	ND	ND	ND
BHC, Beta isomer	860	NG/KG	ND	ND	ND	ND	ND
BHC, Gamma isomer	432	NG/KG	ND	ND	ND	ND	ND
BHC, Delta isomer	944	NG/KG	ND	ND	ND	ND	ND
p,p-DDD	693	NG/KG	ND	ND	ND	ND	ND
p,p-DDE	700	NG/KG	11500	ND	20500	ND	ND
p,p-DDT	840	NG/KG	ND	ND	ND	ND	ND
o,p-DDD	970	NG/KG	DNQ24000	ND	63500	ND	ND
o,p-DDE	643	NG/KG	ND	ND	ND	ND	ND
o,p-DDT	941	NG/KG	ND	ND	ND	ND	ND
Heptachlor	1700	NG/KG	ND	ND	ND	ND	ND
Heptachlor epoxide	2560	NG/KG	ND	ND	ND	ND	ND
Alpha (cis) Chlordane	842	NG/KG	ND	ND	ND	ND	ND
Gamma (trans) Chlordane	541	NG/KG	ND	ND	ND	ND	ND
Alpha Chlordene	0	NG/KG	NA	NA	NA	NA	NA
Gamma Chlordene	0	NG/KG	NA	NA	NA	NA	NA
Oxychlordane	362	NG/KG	ND	ND	ND	ND	ND
Trans Nonachlor	1000	NG/KG	ND	ND	ND	ND	ND
Cis Nonachlor	850	NG/KG	ND	ND	ND	ND	ND
Alpha Endosulfan	762	NG/KG	ND	ND	ND	ND	ND
Beta Endosulfan	570	NG/KG	ND	ND	ND	ND	ND
Endosulfan Sulfate	1021	NG/KG	ND	ND	ND	ND	ND
Endrin aldehyde	1001	NG/KG	ND	ND	ND	ND	ND
Toxaphene	48660	NG/KG	ND	ND	ND	ND	ND
Mirex	680	NG/KG	ND	ND	ND	ND	ND
Methoxychlor	1460	NG/KG	ND	ND	ND	ND	ND
PCB 1016	83300	NG/KG	ND	ND	ND	ND	ND
PCB 1221	667000	NG/KG	ND	ND	ND	ND	ND
PCB 1232	500000	NG/KG	ND	ND	ND	ND	ND
PCB 1242	66860	NG/KG	ND	ND	ND	ND	ND
PCB 1248	83300	NG/KG	ND	ND	ND	ND	ND
PCB 1254	83300	NG/KG	ND	ND	ND	ND	ND
PCB 1260	333000	NG/KG	ND	ND	ND	ND	ND
PCB 1262	83300	NG/KG	ND	ND	ND	ND	ND
Aldrin + Dieldrin	1762	NG/KG	0	0	0	0	0
Hexachlorocyclohexanes	944	NG/KG	0	0	0	0	0
DDT and derivatives	970	NG/KG	11500	0	84000	0	0
Chlordane + related cmpds.	842	NG/KG	0	0	0	0	0
Polychlorinated biphenyls	667000	NG/KG	0	0	0	0	0
Chlorinated Hydrocarbons	667000	NG/KG	11500	0	84000	0	0

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

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

METROBIOSOLIDS CENTER
Chlorinated Pesticide Analysis

2014 Annual

Source			MBCDEWCN	MBCDEWCN	
Date			30-NOV-2014	31-DEC-2014	Annual
Analyte	MDL	Units	P746878	P751630	Average
Aldrin	640	NG/KG	ND	ND	ND
Dieldrin	1762	NG/KG	ND	ND	ND
BHC, Alpha isomer	390	NG/KG	ND	ND	ND
BHC, Beta isomer	860	NG/KG	ND	ND	ND
BHC, Gamma isomer	432	NG/KG	ND	ND	ND
BHC, Delta isomer	944	NG/KG	ND	ND	ND
p,p-DDD	693	NG/KG	ND	ND	392
p,p-DDE	700	NG/KG	ND	ND	6167
p,p-DDT	840	NG/KG	ND	ND	0
o,p-DDD	970	NG/KG	ND	ND	DNQ11833
o,p-DDE	643	NG/KG	ND	ND	421
o,p-DDT	941	NG/KG	ND	ND	ND
Heptachlor	1700	NG/KG	ND	ND	ND
Heptachlor epoxide	2560	NG/KG	ND	ND	471
Alpha (cis) Chlordane	842	NG/KG	ND	ND	492
Gamma (trans) Chlordane	541	NG/KG	ND	ND	1783
Alpha Chlordene	0	NG/KG	NA	NA	NA
Gamma Chlordene	0	NG/KG	NA	NA	NA
Oxychlordane	362	NG/KG	ND	ND	ND
Trans Nonachlor	1000	NG/KG	ND	ND	729
Cis Nonachlor	850	NG/KG	ND	ND	0
Alpha Endosulfan	762	NG/KG	ND	ND	ND
Beta Endosulfan	570	NG/KG	ND	ND	ND
Endosulfan Sulfate	1021	NG/KG	ND	ND	ND
Endrin aldehyde	1001	NG/KG	ND	ND	ND
Toxaphene	48660	NG/KG	ND	ND	ND
Mirex	680	NG/KG	ND	ND	ND
Methoxychlor	1460	NG/KG	ND	ND	ND
PCB 1016	83300	NG/KG	ND	ND	ND
PCB 1221	667000	NG/KG	ND	ND	ND
PCB 1232	500000	NG/KG	ND	ND	ND
PCB 1242	66860	NG/KG	ND	ND	ND
PCB 1248	83300	NG/KG	ND	ND	ND
PCB 1254	83300	NG/KG	ND	ND	ND
PCB 1260	333000	NG/KG	ND	ND	ND
PCB 1262	83300	NG/KG	ND	ND	ND
Aldrin + Dieldrin	1762	NG/KG	0	0	0
Hexachlorocyclohexanes	944	NG/KG	0	0	0
DDT and derivatives	970	NG/KG	0	0	6980
Chlordane + related cmpds.	842	NG/KG	0	0	2275
Polychlorinated biphenyls	667000	NG/KG	0	0	0
Chlorinated Hydrocarbons	667000	NG/KG	0	0	10455

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

POINT LOMA WASTEWATER TREATMENT PLANT / METROBIOSOLIDS CENTER
SLUDGE PROJECT- ANNUAL SUMMARY
Organophosphorus Pesticides
2014 Annual

Source			PLE	PLE	PLE	PLE	PLE	PLE
Date			05-JAN-2014	04-FEB-2014	19-MAR-2014	06-APR-2014	06-MAY-2014	11-JUN-2014
Analyte	MDL	Units	P691888	P695680	P703944	P709176	P712448	P717770
Demeton O	.15	UG/L	ND	ND	ND	ND	ND	ND
Demeton S	.403	UG/L	ND	ND	ND	ND	ND	ND
Diazinon	.03	UG/L	ND	ND	ND	ND	ND	DNQ0.1
Guthion	.15	UG/L	ND	ND	ND	ND	ND	ND
Malathion	.051	UG/L	ND	ND	ND	ND	DNQ0.06	ND
Parathion	.032	UG/L	ND	ND	ND	ND	ND	ND
Chlorpyrifos	.034	UG/L	ND	ND	ND	ND	ND	ND
Coumaphos	.15	UG/L	ND	ND	ND	ND	ND	ND
Dichlorvos	.05	UG/L	ND	ND	ND	ND	ND	ND
Dimethoate	.189	UG/L	ND	ND	ND	ND	ND	ND
Disulfoton	.175	UG/L	ND	ND	ND	ND	ND	ND
Stirophos	.034	UG/L	ND	ND	ND	ND	ND	ND
Thiophosphorus Pesticides	.15	UG/L	0.00	0.00	0.00	0.00	0.00	0.00
Demeton -O, -S	.403	UG/L	0.00	0.00	0.00	0.00	0.00	0.00
Total Organophosphorus Pesticides	.403	UG/L	0.00	0.00	0.00	0.00	0.00	0.00

			PLE	PLE*	PLE*	PLE*	PLE*	PLE*
			09-JUL-2014	05-AUG-2014	10-SEP-2014	07-OCT-2014	11-NOV-2014	10-DEC-2014
Analyte	MDL	Units	P722751	P723690	P733264	P734686	P743398	P748302
Demeton O	.15	UG/L	ND	ND	ND	ND	ND	ND
Demeton S	.403	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	.051	UG/L	ND	DNQ0.12	ND	ND	ND	ND
Parathion	.032	UG/L	ND	ND	ND	ND	ND	ND
Chlorpyrifos	.034	UG/L	ND	ND	ND	ND	ND	ND
Coumaphos	.15	UG/L	ND	ND	ND	ND	ND	ND
Dichlorvos	.05	UG/L	DNQ0.1	ND	ND	<0.05	ND	ND
Dimethoate	.189	UG/L	ND	ND	ND	ND	ND	ND
Disulfoton	.175	UG/L	ND	ND	ND	ND	ND	ND
Stirophos	.034	UG/L	ND	ND	ND	ND	ND	ND
Thiophosphorus Pesticides	.15	UG/L	0.00	0.00	0.00	0.00	0.00	0.00
Demeton -O, -S	.403	UG/L	0.00	0.00	0.00	0.00	0.00	0.00
Total Organophosphorus Pesticides	.403	UG/L	0.00	0.00	0.00	0.00	0.00	0.00

* = Samples analyzed under GC-MS TripleQuad.

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

POINT LOMA WASTEWATER TREATMENT PLANT / METROBIOSOLIDS CENTER
SLUDGE PROJECT- ANNUAL SUMMARY
Organophosphorus Pesticides
2014 Annual

Analyte	MDL	Units	PLR 05-JAN-2014 P691891	PLR 04-FEB-2014 P695686	PLR 19-MAR-2014 P703947	PLR 06-APR-2014 P709179	PLR 06-MAY-2014 P712454	PLR 11-JUN-2014 P717773
Demeton O	.15	UG/L	ND	ND	ND	ND	ND	ND
Demeton S	.403	UG/L	ND	ND	ND	ND	ND	ND
Diazinon	.03	UG/L	ND	ND	ND	ND	ND	DNQ0.2
Guthion	.15	UG/L	ND	ND	ND	ND	ND	ND
Malathion	.051	UG/L	DNQ0.03	ND	ND	ND	ND	ND
Parathion	.032	UG/L	ND	ND	ND	ND	ND	ND
Chlorpyrifos	.034	UG/L	ND	DNQ0.1	ND	ND	ND	ND
Coumaphos	.15	UG/L	ND	ND	ND	ND	ND	ND
Dichlorvos	.05	UG/L	ND	ND	ND	ND	ND	ND
Dimethoate	.189	UG/L	ND	ND	ND	ND	ND	ND
Disulfoton	.175	UG/L	ND	ND	ND	ND	ND	ND
Stirophos	.034	UG/L	ND	ND	ND	ND	ND	ND
Thiophosphorus Pesticides	.15	UG/L	0.00	0.00	0.00	0.00	0.00	0.00
Demeton -O, -S	.403	UG/L	0.00	0.00	0.00	0.00	0.00	0.00
Total Organophosphorus Pesticides	.403	UG/L	0.00	0.00	0.00	0.00	0.00	0.00

Analyte	MDL	Units	PLR 09-JUL-2014 P722754	PLR* 05-AUG-2014 P723696	PLR* 10-SEP-2014 P733267	PLR* 07-OCT-2014 P734692	PLR* 11-NOV-2014 P743401	PLR* 10-DEC-2014 P748305
Demeton O	.15	UG/L	ND	ND	ND	ND	ND	ND
Demeton S	.403	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	.051	UG/L	ND	DNQ0.07	ND	ND	ND	ND
Parathion	.032	UG/L	ND	ND	ND	ND	ND	ND
Chlorpyrifos	.034	UG/L	ND	ND	ND	ND	ND	ND
Coumaphos	.15	UG/L	ND	ND	ND	ND	ND	ND
Dichlorvos	.05	UG/L	DNQ0.1	ND	ND	ND	ND	ND
Dimethoate	.189	UG/L	ND	ND	ND	ND	ND	ND
Disulfoton	.175	UG/L	ND	ND	ND	ND	ND	ND
Stirophos	.034	UG/L	ND	ND	ND	ND	ND	ND
Thiophosphorus Pesticides	.15	UG/L	0.00	0.07	0.00	0.00	0.00	0.00
Demeton -O, -S	.403	UG/L	0.00	0.00	0.00	0.00	0.00	0.00
Total Organophosphorus Pesticides	.403	UG/L	0.10	0.07	0.00	0.00	0.00	0.00

* = Samples analyzed under GC-MS TripleQuad.

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

POINT LOMA WASTEWATER TREATMENT PLANT / METROBIOSOLIDS CENTER
SLUDGE PROJECT- ANNUAL SUMMARY
Organophosphorus Pesticides
2014 Annual

Source			MBC_COMBCN	MBC_COMBCN*
Date			06-MAY-2014	07-OCT-2014
Analyte	MDL	Units	P712465	P734703
Demeton O	.15	UG/L	ND	ND
Demeton S	.403	UG/L	ND	ND
Diazinon	.03	UG/L	ND	ND
Guthion	.15	UG/L	ND	ND
Malathion	.051	UG/L	ND	ND
Parathion	.032	UG/L	ND	ND
Chlorpyrifos	.034	UG/L	ND	ND
Coumaphos	.15	UG/L	ND	ND
Dichlorvos	.05	UG/L	ND	ND
Dimethoate	.189	UG/L	ND	ND
Disulfoton	.175	UG/L	ND	ND
Stirophos	.034	UG/L	ND	ND
Thiophosphorus Pesticides	.15	UG/L	0.00	0.00
Demeton -O, -S	.403	UG/L	0.00	0.00
Total Organophosphorus Pesticides	.403	UG/L	0.00	0.00

Source			MBC_NC_DSL	MBC_NC_DSL*
Date			06-MAY-2014	07-OCT-2014
Analyte	MDL	Units	P712519	P734757
Demeton O	.15	UG/L	ND	ND
Demeton S	.403	UG/L	ND	ND
Diazinon	.03	UG/L	ND	ND
Guthion	.15	UG/L	ND	ND
Malathion	.051	UG/L	ND	ND
Parathion	.032	UG/L	ND	ND
Chlorpyrifos	.034	UG/L	ND	ND
Coumaphos	.15	UG/L	ND	ND
Dichlorvos	.05	UG/L	ND	ND
Dimethoate	.189	UG/L	ND	ND
Disulfoton	.175	UG/L	ND	ND
Stirophos	.034	UG/L	ND	ND
Thiophosphorus Pesticides	.15	UG/L	0.00	0.00
Demeton -O, -S	.403	UG/L	0.00	0.00
Total Organophosphorus Pesticides	.403	UG/L	0.00	0.00

* = Samples analyzed under GC-MS TripleQuad.

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

POINT LOMA WASTEWATER TREATMENT PLANT / METROBIOSOLIDS CENTER
SLUDGE PROJECT- ANNUAL SUMMARY
Organophosphorus Pesticides
2014 Annual

Source			MBC_NC_RSL	MBC_NC_RSL*
Date			06-MAY-2014	07-OCT-2014
Analyte	MDL	Units	P712517	P734755
Demeton O	.15	UG/L	ND	ND
Demeton S	.403	UG/L	ND	ND
Diazinon	.03	UG/L	ND	ND
Guthion	.15	UG/L	ND	ND
Malathion	.051	UG/L	ND	ND
Parathion	.032	UG/L	ND	ND
Chlorpyrifos	.034	UG/L	ND	ND
Coumaphos	.15	UG/L	ND	ND
Dichlorvos	.05	UG/L	ND	ND
Dimethoate	.189	UG/L	ND	ND
Disulfoton	.175	UG/L	ND	ND
Stirophos	.034	UG/L	ND	ND
Thiophosphorus Pesticides	.15	UG/L	0.00	0.00
Demeton -O, -S	.403	UG/L	0.00	0.00
Total Organophosphorus Pesticides	.403	UG/L	0.00	0.00

Source			RAW COMP	RAW COMP*
Date			06-MAY-2014	07-OCT-2014
Analyte	MDL	Units	P712490	P734728
Demeton O	.15	UG/L	ND	ND
Demeton S	.403	UG/L	ND	ND
Diazinon	.03	UG/L	ND	ND
Guthion	.15	UG/L	ND	ND
Malathion	.051	UG/L	ND	ND
Parathion	.032	UG/L	ND	ND
Chlorpyrifos	.034	UG/L	DNQ1.3	ND
Coumaphos	.15	UG/L	ND	ND
Dichlorvos	.05	UG/L	ND	ND
Dimethoate	.189	UG/L	ND	ND
Disulfoton	.175	UG/L	ND	ND
Stirophos	.034	UG/L	ND	ND
Thiophosphorus Pesticides	.15	UG/L	0.00	0.00
Demeton -O, -S	.403	UG/L	0.00	0.00
Total Organophosphorus Pesticides	.403	UG/L	1.30	0.00

* = Samples analyzed under GC-MS TripleQuad.

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

POINT LOMA WASTEWATER TREATMENT PLANT / METROBIOSOLIDS CENTER
SLUDGE PROJECT- ANNUAL SUMMARY
Organophosphorus Pesticides
2014 Annual

Source			DIG COMP	DIG COMP*
Date			06-MAY-2014	07-OCT-2014
Analyte	MDL	Units	P712504	P734742
Demeton O	.15	UG/L	ND	ND
Demeton S	.403	UG/L	ND	ND
Diazinon	.03	UG/L	ND	ND
Guthion	.15	UG/L	ND	ND
Malathion	.051	UG/L	ND	ND
Parathion	.032	UG/L	ND	ND
Chlorpyrifos	.034	UG/L	ND	ND
Coumaphos	.15	UG/L	ND	ND
Dichlorvos	.05	UG/L	ND	ND
Dimethoate	.189	UG/L	ND	ND
Disulfoton	.175	UG/L	ND	ND
Stirophos	.034	UG/L	ND	ND
Thiophosphorus Pesticides	.15	UG/L	0.00	0.00
Demeton -O, -S	.403	UG/L	0.00	0.00
Total Organophosphorus Pesticides	.403	UG/L	0.00	0.00

* = Samples analyzed under GC-MS TripleQuad.

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

METROBIOSOLIDS CENTER

ORGANOPHOSPHORUS PESTICIDES

2014 Annual

Source			MBCDEWCN	MBCDEWCN*
Date			31-MAY-2014	30-NOV-2014
Analyte	MDL	Units	P716426	P746878
Demeton O	67	UG/KG	ND	ND
Demeton S	27	UG/KG	ND	ND
Diazinon	2.3	UG/KG	ND	ND
Guthion	33	UG/KG	ND	ND
Malathion	20	UG/KG	ND	ND
Parathion	20	UG/KG	ND	ND
Chlorpyrifos	1.6	UG/KG	40.9	ND
Coumaphos	33	UG/KG	ND	ND
Dichlorvos	17	UG/KG	ND	ND
Dimethoate	27	UG/KG	ND	ND
Disulfoton	20	UG/KG	ND	ND
Stirophos	20	UG/KG	ND	ND
Thiophosphorus Pesticides	33	UG/KG	0.0	0.0
Demeton -O, -S	67	UG/KG	0.0	0.0
Total Organophosphorus Pesticides	67	UG/KG	40.9	0.0

* = Samples analyzed under GC-MS TripleQuad.

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

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

POINT LOMA WASTEWATER TREATMENT PLANT / METROBIOSOLIDS CENTER
SLUDGE PROJECT - ANNUAL SUMMARY
Tributyl Tin (Sewage)

Annual 2014

Source	PLE	PLE	PLE	PLE	PLR	PLR	PLR
Date	04-FEB-2014	06-MAY-2014	05-AUG-2014	07-OCT-2014	04-FEB-2014	06-MAY-2014	05-AUG-2014
Analyte	P695680	P712448	P723690	P734686	P695686	P712454	P723696
Monobutyltin	ND	ND	ND	ND	ND	ND	ND
Tributyltin	ND	ND	ND	ND	ND	ND	ND

SOurce	PLR	MBC_COMBCN	MBC_COMBCN	MBC_COMBCN	MBC_COMBCN	MBCDEWCN	MBCDEWCN
Date	07-OCT-2014	04-FEB-2014	06-MAY-2014	05-AUG-2014	07-OCT-2014	31-MAY-2014	31-OCT-2014
Analyte	P734692	P695697	P712465	P723707	P734703	P716426	P741662
Monobutyltin	ND	ND	ND	ND	ND	ND	ND
Tributyltin	ND	ND	ND	ND	ND	ND	ND

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

POINT LOMA WASTEWATER TREATMENT PLANT
Herbicide Analysis

2014 Annual

Source:			MBCDEWCN	MBCDEWCN
Date:			31-MAY-2014	31-OCT-2014
Sample:	MDL	Units	P716426	P741662
2,4-Dichlorophenoxyacetic acid	.07	MG/KG	ND	ND
2,4,5-TP (Silvex)	.033	MG/KG	ND	ND

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

POINT LOMA WASTEWATER TREATMENT PLANT
PRIORITY POLLUTANT ANALYSIS-ACID EXTRACTABLE COMPOUNDS, EPA Method 625

Annual 2014

Source			PLE	PLE	PLE	PLE	PLR	PLR
Date			04-FEB-2014	06-MAY-2014	05-AUG-2014	07-OCT-2014	04-FEB-2014	06-MAY-2014
Analyte	MDL	Units	P695680	P712448	P723690	P734686	P695686	P712454
2-Chlorophenol	1.32	UG/L	ND	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol	1.67	UG/L	ND	ND	ND	ND	ND	ND
2,4-Dichlorophenol	1.01	UG/L	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	2.01	UG/L	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol	2.16	UG/L	ND	ND	ND	ND	ND	ND
2-Methyl-4,6-dinitrophenol	1.52	UG/L	ND	ND	ND	ND	ND	ND
2-Nitrophenol	1.55	UG/L	ND	ND	ND	ND	ND	ND
4-Nitrophenol	1.14	UG/L	ND	ND	ND	ND	ND	ND
Pentachlorophenol	1.12	UG/L	ND	ND	ND	ND	ND	ND
Phenol	1.76	UG/L	24.1	24.8	36.8	17.5	22.2	29.9
2,4,6-Trichlorophenol	1.65	UG/L	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
Total Non-Chlorinated Phenols	2.16	UG/L	24.1	24.8	36.8	17.5	22.2	29.9
Phenols	2.16	UG/L	24.1	24.8	36.8	17.5	22.2	29.9
Additional Analytes Determined;								
2-Methylphenol	2.15	UG/L	ND	ND	ND	ND	ND	ND
4-Methylphenol(3-MP is unresolved)	2.11	UG/L	71.7	54.3	74.2	35.4	57.8	12.0
2,4,5-Trichlorophenol	1.66	UG/L	ND	ND	ND	ND	ND	ND

Source			PLR	PLR	MBC_COMBCN	MBC_COMBCN	MBC_COMBCN	MBC_COMBCN
Date			05-AUG-2014	07-OCT-2014	04-FEB-2014	06-MAY-2014	05-AUG-2014	07-OCT-2014
Analyte	MDL	Units	P723696	P734692	P695697	P712465	P723707	P734703
2-Chlorophenol	1.32	UG/L	ND	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol	1.67	UG/L	ND	ND	ND	ND	ND	ND
2,4-Dichlorophenol	1.01	UG/L	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	2.01	UG/L	ND	ND	2.2	2.6	3.2	2.7
2,4-Dinitrophenol	2.16	UG/L	ND	ND	ND	ND	ND	ND
2-Methyl-4,6-dinitrophenol	1.52	UG/L	ND	ND	ND	ND	ND	ND
2-Nitrophenol	1.55	UG/L	ND	ND	ND	ND	ND	ND
4-Nitrophenol	1.14	UG/L	ND	ND	ND	ND	ND	ND
Pentachlorophenol	1.12	UG/L	ND	ND	ND	ND	ND	ND
Phenol	1.76	UG/L	29.3	26.8	ND	6.8	6.3	ND
2,4,6-Trichlorophenol	1.65	UG/L	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
Total Non-Chlorinated Phenols	2.16	UG/L	29.3	26.8	2.2	9.4	9.5	2.7
Phenols	2.16	UG/L	29.3	26.8	2.2	9.4	9.5	2.7
Additional Analytes Determined;								
2-Methylphenol	2.15	UG/L	ND	ND	ND	ND	ND	ND
4-Methylphenol(3-MP is unresolved)	2.11	UG/L	52.3	51.4	5.2	ND	4.2	2.2
2,4,5-Trichlorophenol	1.66	UG/L	ND	ND	ND	ND	ND	ND

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

POINT LOMA WASTEWATER TREATMENT PLANT
PRIORITY POLLUTANT ANALYSIS-ACID EXTRACTABLE COMPOUNDS, EPA Method 625

Annual 2014

Source			RAW COMP	RAW COMP	RAW COMP	RAW COMP	DIG COMP	DIG COMP
Date			04-FEB-2014	06-MAY-2014	05-AUG-2014	07-OCT-2014	04-FEB-2014	06-MAY-2014
Analyte	MDL	Units	P695722	P712490	P723732	P734728	P695736	P712504
2-Chlorophenol	1.32	UG/L	ND	ND	ND*	ND	ND	ND
4-Chloro-3-methylphenol	1.67	UG/L	ND	ND	ND*	ND	ND	ND
2,4-Dichlorophenol	1.01	UG/L	ND	ND	ND*	ND	ND	ND
2,4-Dimethylphenol	2.01	UG/L	ND	ND	ND*	ND	DNQ5.3	ND
2,4-Dinitrophenol	2.16	UG/L	ND	ND	ND*	ND	ND	ND
2-Methyl-4,6-dinitrophenol	1.52	UG/L	ND	ND	ND*	ND	ND	ND
2-Nitrophenol	1.55	UG/L	ND	ND	ND*	ND	ND	ND
4-Nitrophenol	1.14	UG/L	ND	ND	ND*	ND	ND	ND
Pentachlorophenol	1.12	UG/L	ND	ND	ND*	ND	ND	ND
Phenol	1.76	UG/L	38.1	60.4	33.8*	60.1	ND	ND
2,4,6-Trichlorophenol	1.65	UG/L	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
Total Non-Chlorinated Phenols	2.16	UG/L	38.1	60.4	0.0*	60.1	5.3	0.0
Phenols	2.16	UG/L	38.1	60.4	0.0*	60.1	5.3	0.0
Additional Analytes Determined;								
2-Methylphenol	2.15	UG/L	ND	ND	ND*	ND	ND	ND
4-Methylphenol(3-MP is unresolved)	2.11	UG/L	591.0	243.0	489*	529.0	DNQ6.0	25.0
2,4,5-Trichlorophenol	1.66	UG/L	ND	ND	ND*	ND	ND	ND

Source			DIG COMP	DIG COMP	MBC_NC_DSL	MBC_NC_DSL	MBC_NC_DSL	MBC_NC_DSL
Date			05-AUG-2014	07-OCT-2014	04-FEB-2014	06-MAY-2014	05-AUG-2014	07-OCT-2014
Analyte	MDL	Units	P723746	P734742	P695751	P712519	P723761	P734757
2-Chlorophenol	1.32	UG/L	ND	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol	1.67	UG/L	ND	ND	ND	ND	ND	ND
2,4-Dichlorophenol	1.01	UG/L	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	2.01	UG/L	ND	DNQ9.5	DNQ3.1	ND	DNQ5.7	DNQ5.9
2,4-Dinitrophenol	2.16	UG/L	ND	ND	ND	ND	ND	ND
2-Methyl-4,6-dinitrophenol	1.52	UG/L	ND	ND	ND	ND	ND	ND
2-Nitrophenol	1.55	UG/L	ND	ND	ND	ND	ND	ND
4-Nitrophenol	1.14	UG/L	ND	ND	ND	ND	ND	ND
Pentachlorophenol	1.12	UG/L	ND	ND	ND	ND	ND	ND
Phenol	1.76	UG/L	ND	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	1.65	UG/L	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
Total Non-Chlorinated Phenols	2.16	UG/L	0.0	9.5	3.1	0.0	5.7	5.9
Phenols	2.16	UG/L	0.0	9.5	3.1	0.0	5.7	5.9
Additional Analytes Determined;								
2-Methylphenol	2.15	UG/L	ND	ND	ND	ND	ND	ND
4-Methylphenol(3-MP is unresolved)	2.11	UG/L	11.6	DNQ7.0	DNQ7.2	DNQ4.4	16.5	117.0
2,4,5-Trichlorophenol	1.66	UG/L	ND	ND	ND	ND	ND	ND

* = Sample surrogate values were below QC acceptance criteria; therefore values are non-reportable.

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

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

POINT LOMA WASTEWATER TREATMENT PLANT
PRIORITY POLLUTANT ANALYSIS-ACID EXTRACTABLE COMPOUNDS, EPA Method 625

Annual 2014

Source			MBC_NC_RSL	MBC_NC_RSL	MBC_NC_RSL	MBC_NC_RSL
Date			04-FEB-2014	06-MAY-2014	05-AUG-2014	07-OCT-2014
Analyte	MDL	Units	P695749	P712517	P723759	P734755
2-Chlorophenol	1.32	UG/L	ND	ND	ND	ND
4-Chloro-3-methylphenol	1.67	UG/L	ND	ND	ND	ND
2,4-Dichlorophenol	1.01	UG/L	ND	ND	ND	ND
2,4-Dimethylphenol	2.01	UG/L	ND	ND	ND	ND
2,4-Dinitrophenol	2.16	UG/L	ND	ND	ND	ND
2-Methyl-4,6-dinitrophenol	1.52	UG/L	ND	ND	ND	ND
2-Nitrophenol	1.55	UG/L	ND	ND	ND	ND
4-Nitrophenol	1.14	UG/L	ND	ND	ND	ND
Pentachlorophenol	1.12	UG/L	ND	ND	ND	ND
Phenol	1.76	UG/L	ND	37.9	ND	ND
2,4,6-Trichlorophenol	1.65	UG/L	ND	ND	ND	ND
Total Chlorinated Phenols	1.67	UG/L	0.0	0.0	0.0	0.0
Total Non-Chlorinated Phenols	2.16	UG/L	0.0	37.9	0.0	0.0
Phenols	2.16	UG/L	0.0	37.9	0.0	0.0
Additional Analytes Determined;						
2-Methylphenol	2.15	UG/L	ND	ND	ND	ND
4-Methylphenol(3-MP is unresolved)	2.11	UG/L	315.0	753.0	523.0	160.0
2,4,5-Trichlorophenol	1.66	UG/L	ND	ND	ND	ND

Source			MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	
Analyte	MDL	Units	P701729	P716426	P731763	P741662	Average
2-Chlorophenol	330	UG/KG	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol	330	UG/KG	ND	ND	ND	ND	ND
2,4-Dichlorophenol	330	UG/KG	ND	ND	ND	ND	ND
2,4-Dimethylphenol	330	UG/KG	ND	ND	ND	ND	ND
2,4-Dinitrophenol	330	UG/KG	ND	ND	ND	ND	ND
2-Methyl-4,6-dinitrophenol	800	UG/KG	ND	ND	ND	ND	ND
2-Nitrophenol	330	UG/KG	ND	ND	ND	ND	ND
4-Nitrophenol	800	UG/KG	ND	ND	ND	ND	ND
Pentachlorophenol	800	UG/KG	ND	ND	ND	ND	ND
Phenol	330	UG/KG	4920	3940	3400	2800	3765
2,4,6-Trichlorophenol	330	UG/KG	ND	ND	ND	ND	ND
Total Chlorinated Phenols	800	UG/KG	0	0	0	0	0
Total Non-Chlorinated Phenols	800	UG/KG	8800	6990	4900	4400	6273
Phenols	800	UG/KG	8800	6990	4900	4400	6273
2-Methylphenol	330	UG/KG	2010	ND	ND	ND	503
4-Methylphenol(3-MP is unresolved)	330	UG/KG	1870	3050	1500	1600	2005
2,4,5-Trichlorophenol	800	UG/KG	ND	ND	ND	ND	ND
Phenols average	800	UG/KG	447	358	309	255	342

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

POINT LOMA WASTEWATER TREATMENT PLANT
Quarterly Sludge Project
SEWAGE Priority Pollutants Purgeable Compounds, EPA Method 624
Annual 2014

Source			PLR	PLR	PLR	PLR	PLE	PLE
Date			04-FEB-2014	06-MAY-2014	05-AUG-2014	07-OCT-2014	04-FEB-2014	06-MAY-2014
Analyte	MDL	Units	P695689	P712457	P723699	P734695	P695683	P712451
Acrolein	1.3	UG/L	ND	ND	ND	ND	ND	ND
Acrylonitrile	.7	UG/L	ND	ND	ND	ND	ND	ND
Benzene	.4	UG/L	ND	ND	ND	ND	ND	ND
Bromodichloromethane	.5	UG/L	ND	ND	ND	ND	<0.5	ND
Bromoform	.5	UG/L	ND	ND	ND	ND	ND	ND
Bromomethane	.7	UG/L	ND	ND	ND	ND	ND	0.8
Carbon tetrachloride	.4	UG/L	ND	ND	ND	ND	ND	ND
Chlorobenzene	.4	UG/L	ND	ND	ND	ND	ND	ND
Chloroethane	.9	UG/L	ND	ND	ND	ND	1.3	1.8
Chloroform	.2	UG/L	2.2	2.4	2.1	2.4	5.6	6.1
Chloromethane	.5	UG/L	ND	ND	ND	ND	8.1	11.1
Dibromochloromethane	.6	UG/L	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	.4	UG/L	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	.5	UG/L	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	.4	UG/L	ND	DNQ0.5	ND	ND	ND	ND
1,1-Dichloroethane	.4	UG/L	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	.5	UG/L	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	.4	UG/L	ND	ND	ND	ND	ND	ND
trans-1,2-dichloroethene	.6	UG/L	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	.3	UG/L	ND	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	.3	UG/L	ND	ND	ND	ND	ND	ND
trans-1,3-dichloropropene	.5	UG/L	ND	ND	ND	ND	ND	ND
Ethylbenzene	.3	UG/L	ND	1.1	ND	ND	<0.3	DNQ0.4
Methylene chloride	.3	UG/L	DNQ1.3	1.3	1.2	1.7	DNQ0.9	1.0
1,1,2,2-Tetrachloroethane	.5	UG/L	ND	ND	ND	ND	ND	ND
Tetrachloroethene	1.1	UG/L	ND	ND	ND	ND	ND	ND
Toluene	.4	UG/L	DNQ0.9	2.9	DNQ0.8	DNQ0.7	DNQ1.8	1.4
1,1,1-Trichloroethane	.4	UG/L	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	.5	UG/L	ND	ND	ND	ND	ND	ND
Trichloroethene	.7	UG/L	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	.3	UG/L	ND	ND	ND	ND	ND	ND
Vinyl chloride	.4	UG/L	ND	ND	ND	ND	ND	ND
Halomethane Purgeable Cmpnds	.7	UG/L	0.0	0.0	0.0	0.0	8.1	11.9
Total Dichlorobenzenes	.5	UG/L	0.0	0.0	0.0	0.0	0.0	0.0
Purgeable Compounds	1.3	UG/L	2.2	7.7	3.3	4.1	15.0	22.2
Additional Analytes Determined;								
Acetone	4.5	UG/L	580.0	285.0	936.0	336.0	703.0	740.0
Allyl chloride	.6	UG/L	ND	ND	ND	ND	ND	ND
Benzyl chloride	1.1	UG/L	ND	ND	ND	ND	ND	ND
2-Butanone	6.3	UG/L	ND	10.4	16.5	DNQ7.5	DNQ9.4	16.7
Carbon disulfide	.6	UG/L	DNQ1.0	2.9	2.7	3.1	2.6	3.8
Chloroprene	.4	UG/L	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	.3	UG/L	ND	ND	ND	ND	ND	ND
Isopropylbenzene	.3	UG/L	ND	ND	ND	ND	ND	ND
Methyl Iodide	.6	UG/L	ND	ND	ND	ND	ND	ND
Methyl methacrylate	.8	UG/L	ND	ND	ND	ND	ND	ND
2-Nitropropane	12	UG/L	ND	ND	ND	ND	ND	ND
ortho-xylene	.4	UG/L	ND	1.6	ND	ND	ND	DNQ0.5
Styrene	.3	UG/L	DNQ0.5	DNQ0.9	DNQ0.4	DNQ0.8	DNQ0.5	DNQ0.4
1,2,4-Trichlorobenzene	.7	UG/L	ND	ND	ND	ND	ND	ND
meta,para xylenes	.6	UG/L	DNQ0.6	3.0	ND	ND	ND	DNQ1.0
2-Chloroethylvinyl ether	1.1	UG/L	ND	ND	ND	ND	ND	ND
4-Methyl-2-pentanone	1.3	UG/L	ND	ND	ND	ND	ND	ND

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

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

POINT LOMA WASTEWATER TREATMENT PLANT
Quarterly Sludge Project
SEWAGE Priority Pollutants Purgeable Compounds, EPA Method 624
Annual 2014

Source			PLE	PLE	MBC_COMBCN	MBC_COMBCN	MBC_COMBCN	MBC_COMBCN
Date			05-AUG-2014	07-OCT-2014	04-FEB-2014	06-MAY-2014	05-AUG-2014	07-OCT-2014
Analyte	MDL	Units	P723693	P734689	P695700	P712468	P723710	P734706
Acrolein	1.3	UG/L	ND	ND	ND	ND	ND	ND
Acrylonitrile	.7	UG/L	ND	ND	ND	ND	ND	ND
Benzene	.4	UG/L	ND	ND	ND	ND	ND	ND
Bromodichloromethane	.5	UG/L	ND	ND	ND	ND	ND	ND
Bromoform	.5	UG/L	ND	ND	ND	ND	ND	ND
Bromomethane	.7	UG/L	1.6	ND	ND	ND	ND	ND
Carbon tetrachloride	.4	UG/L	ND	ND	ND	ND	ND	ND
Chlorobenzene	.4	UG/L	ND	ND	ND	ND	ND	ND
Chloroethane	.9	UG/L	3.1	ND	ND	ND	ND	ND
Chloroform	.2	UG/L	7.6	3.2	1.5	1.6	2.7	ND
Chloromethane	.5	UG/L	16.9	3.1	ND	ND	ND	ND
Dibromochloromethane	.6	UG/L	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	.4	UG/L	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	.5	UG/L	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	.4	UG/L	ND	ND	DNQ0.4	DNQ0.5	ND	ND
1,1-Dichloroethane	.4	UG/L	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	.5	UG/L	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	.4	UG/L	ND	ND	ND	ND	ND	ND
trans-1,2-dichloroethene	.6	UG/L	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	.3	UG/L	ND	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	.3	UG/L	ND	ND	ND	ND	ND	ND
trans-1,3-dichloropropene	.5	UG/L	ND	ND	ND	ND	ND	ND
Ethylbenzene	.3	UG/L	ND	DNQ0.4	DNQ0.7	DNQ0.8	1.0	DNQ0.9
Methylene chloride	.3	UG/L	1.4	1.4	DNQ1.0	1.0	1.6	ND
1,1,2,2-Tetrachloroethane	.5	UG/L	ND	ND	ND	ND	ND	ND
Tetrachloroethene	1.1	UG/L	ND	ND	ND	ND	ND	ND
Toluene	.4	UG/L	1.1	1.3	DNQ1.9	1.9	1.9	1.2
1,1,1-Trichloroethane	.4	UG/L	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	.5	UG/L	ND	ND	ND	ND	ND	ND
Trichloroethene	.7	UG/L	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	.3	UG/L	ND	ND	ND	ND	ND	ND
Vinyl chloride	.4	UG/L	ND	ND	ND	ND	ND	ND
Halomethane Purgeable Cmpnds	.7	UG/L	18.5	3.1	0.0	0.0	0.0	0.0
Total Dichlorobenzenes	.5	UG/L	0.0	0.0	0.0	0.0	0.0	0.0
Purgeable Compounds	1.3	UG/L	31.7	9.0	1.5	4.5	7.2	1.2
Additional Analytes Determined;								
Acetone	4.5	UG/L	1820	862.0	94.3	150.0	257.0	58.4
Allyl chloride	.6	UG/L	ND	ND	ND	ND	ND	ND
Benzyl chloride	1.1	UG/L	DNQ1.3	ND	ND	ND	ND	ND
2-Butanone	6.3	UG/L	20.0	13.5	DNQ8.4	12.9	10.9	ND
Carbon disulfide	.6	UG/L	4.5	3.7	DNQ1.0	DNQ0.9	1.4	ND
Chloroprene	.4	UG/L	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	.3	UG/L	ND	ND	ND	ND	ND	ND
Isopropylbenzene	.3	UG/L	ND	ND	ND	ND	ND	ND
Methyl Iodide	.6	UG/L	ND	ND	ND	ND	ND	ND
Methyl methacrylate	.8	UG/L	ND	ND	ND	ND	ND	ND
2-Nitropropane	12	UG/L	ND	ND	ND	ND	ND	ND
ortho-xylene	.4	UG/L	ND	ND	ND	ND	ND	ND
Styrene	.3	UG/L	ND	DNQ0.5	ND	ND	DNQ0.4	ND
1,2,4-Trichlorobenzene	.7	UG/L	ND	ND	ND	ND	ND	ND
meta,para xylenes	.6	UG/L	ND	ND	ND	ND	ND	ND
2-Chloroethylvinyl ether	1.1	UG/L	ND	ND	ND	ND	ND	ND
4-Methyl-2-pentanone	1.3	UG/L	ND	ND	ND	ND	ND	ND

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

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

POINT LOMA WASTEWATER TREATMENT PLANT
Quarterly Sludge Project
SEWAGE Priority Pollutants Purgeable Compounds, EPA Method 624
Annual 2014

Source			DIG COMP	DIG COMP	DIG COMP	RAW COMP	RAW COMP	RAW COMP
Date			04-FEB-2014	06-MAY-2014	05-AUG-2014	04-FEB-2014	06-MAY-2014	05-AUG-2014
Analyte	MDL	Units	P695736	P712504	P723746	P695722	P712490	P723732
Acrolein	6.4	UG/KG	ND	ND	ND	ND	ND	ND
Acrylonitrile	3.9	UG/KG	ND	ND	ND	ND	ND	ND
Benzene	2.1	UG/KG	ND	ND	ND	ND	ND	ND
Bromodichloromethane	2.2	UG/KG	ND	ND	ND	ND	ND	ND
Bromoform	2.4	UG/KG	ND	ND	ND	ND	ND	ND
Bromomethane	6.9	UG/KG	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	3	UG/KG	ND	ND	ND	ND	ND	ND
Chlorobenzene	1	UG/KG	ND	ND	ND	ND	ND	ND
Chloroethane	3.6	UG/KG	ND	ND	ND	ND	ND	ND
Chloroform	2.3	UG/KG	ND	ND	ND	ND	ND	ND
Chloromethane	3.4	UG/KG	ND	ND	ND	ND	ND	ND
Dibromochloromethane	2.4	UG/KG	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	1.5	UG/KG	ND	ND	DNQ52.4	DNQ19.0	ND	DNQ17.7
1,3-Dichlorobenzene	1.8	UG/KG	DNQ9.8	ND	ND	DNQ13.3	ND	ND
1,4-Dichlorobenzene	1.5	UG/KG	DNQ90.9	ND	DNQ120.0	DNQ101.0	DNQ88.7	DNQ68.2
1,1-Dichloroethane	1.9	UG/KG	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	3.6	UG/KG	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	5	UG/KG	ND	ND	ND	ND	ND	ND
trans-1,2-dichloroethene	3.5	UG/KG	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	2.6	UG/KG	ND	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	2.5	UG/KG	ND	ND	ND	ND	ND	ND
trans-1,3-dichloropropene	2.1	UG/KG	ND	ND	ND	ND	ND	ND
Ethylbenzene	1.4	UG/KG	DNQ281.0	DNQ204.0	690.0	DNQ57.5	DNQ51.6	DNQ62.5
Methylene chloride	3.5	UG/KG	ND	ND	DNQ50.4	DNQ58.6	DNQ32.0	DNQ85.4
1,1,2,2-Tetrachloroethane	5.9	UG/KG	ND	ND	ND	ND	ND	ND
Tetrachloroethene	2.8	UG/KG	ND	ND	ND	ND	ND	DNQ10.4
Toluene	1.2	UG/KG	DNQ159.0	DNQ91.3	DNQ169.0	707.0	191.0	321.0
1,1,1-Trichloroethane	3.2	UG/KG	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	2.8	UG/KG	ND	ND	ND	ND	ND	ND
Trichloroethene	2.6	UG/KG	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	2.2	UG/KG	ND	ND	ND	ND	ND	ND
Vinyl chloride	4.8	UG/KG	ND	ND	ND	ND	ND	ND
Halomethane Purgeable Cmpnds	6.9	UG/KG	0.0	0.0	0.0	0.0	0.0	0.0
Total Dichlorobenzenes	1.8	UG/KG	0.0	0.0	52.4	32.3	0.0	17.7
Purgeable Compounds	6.9	UG/KG	0.0	0.0	690.0	707.0	191.0	321.0
Additional Analytes Determined;								
Acetone	31.4	UG/KG	DNQ3300	DNQ1500	6720	20300	42900	25600
Allyl chloride	3.6	UG/KG	ND	ND	ND	ND	ND	ND
Benzyl chloride	4.3	UG/KG	ND	ND	ND	ND	ND	ND
2-Butanone	36.3	UG/KG	DNQ1400	DNQ744.0	2410	3400	1990	3900
Carbon disulfide	4.7	UG/KG	DNQ212.0	DNQ80.0	343.0	123.0	DNQ60.2	126.0
Chloroprene	3.1	UG/KG	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	2.5	UG/KG	ND	ND	ND	ND	ND	ND
Isopropylbenzene	1.3	UG/KG	DNQ21.0	ND	DNQ49.5	DNQ29.2	DNQ26.5	DNQ34.4
Methyl Iodide	3.8	UG/KG	ND	ND	ND	ND	ND	ND
Methyl methacrylate	2.4	UG/KG	ND	ND	ND	ND	ND	ND
2-Nitropropane	45.8	UG/KG	ND	ND	ND	ND	ND	ND
ortho-xylene	1.9	UG/KG	DNQ63.6	ND	DNQ50.8	DNQ56.0	DNQ61.1	DNQ73.5
Styrene	1.7	UG/KG	DNQ60.7	DNQ52.4	DNQ134.0	390.0	247.0	402.0
1,2,4-Trichlorobenzene	2.5	UG/KG	DNQ50.2	ND	ND	ND	ND	DNQ33.3
meta,para xylenes	4.2	UG/KG	DNQ106.0	DNQ56.5	DNQ88.9	DNQ126.0	DNQ137.0	DNQ129.0
2-Chloroethylvinyl ether	5.5	UG/KG	ND	ND	ND	ND	ND	ND
4-Methyl-2-pentanone	9.7	UG/KG	ND	ND	ND	ND	ND	ND

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

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

POINT LOMA WASTEWATER TREATMENT PLANT
Purgeables

Annual 2014

Source			MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN
Date			31-JAN-2014	28-FEB-2014	31-MAR-2014	01-APR-2014	30-APR-2014	01-MAY-2014
Analyte	MDL	Units	P695521	P701729	P707336	P707337	P710842	P710843
Acrolein	6.4	UG/KG	ND	ND	ND	ND	ND	ND
Acrylonitrile	3.9	UG/KG	ND	ND	ND	ND	ND	ND
Benzene	2.1	UG/KG	DNQ5.2	DNQ3.3	DNQ4.5	ND	DNQ4.7	ND
Bromodichloromethane	2.2	UG/KG	ND	ND	ND	ND	ND	ND
Bromoform	2.4	UG/KG	ND	ND	ND	ND	ND	ND
Bromomethane	6.9	UG/KG	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	3	UG/KG	ND	ND	ND	ND	ND	ND
Chlorobenzene	1	UG/KG	ND	ND	ND	ND	ND	ND
Chloroethane	3.6	UG/KG	ND	ND	ND	ND	ND	ND
Chloroform	2.3	UG/KG	ND	ND	ND	ND	ND	ND
Chloromethane	3.4	UG/KG	ND	ND	ND	ND	ND	ND
Dibromochloromethane	2.4	UG/KG	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	1.5	UG/KG	DNQ10.6	19.5	DNQ13.8	ND	DNQ11.9	ND
1,3-Dichlorobenzene	1.8	UG/KG	ND	DNQ3.6	DNQ4.1	ND	ND	ND
1,4-Dichlorobenzene	1.5	UG/KG	73.1	70.6	85.6	ND	79.3	ND
Dichlorodifluoromethane	5.56	UG/KG	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	1.9	UG/KG	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	3.6	UG/KG	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	5	UG/KG	ND	ND	ND	ND	ND	ND
trans-1,2-dichloroethene	3.5	UG/KG	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	2.6	UG/KG	ND	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	2.5	UG/KG	ND	ND	ND	ND	ND	ND
trans-1,3-dichloropropene	2.1	UG/KG	ND	ND	ND	ND	ND	ND
Ethylbenzene	1.4	UG/KG	240.0	233.0	349.0	ND	337.0	ND
Methylene chloride	3.5	UG/KG	ND	ND	DNQ5.6	ND	DNQ4.3	ND
1,1,2,2-Tetrachloroethane	5.9	UG/KG	ND	ND	ND	ND	ND	ND
Tetrachloroethene	2.8	UG/KG	ND	ND	ND	ND	ND	ND
Toluene	1.2	UG/KG	84.0	60.4	66.0	ND	74.4	ND
1,1,1-Trichloroethane	3.2	UG/KG	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	2.8	UG/KG	ND	ND	ND	ND	ND	ND
Trichloroethene	2.6	UG/KG	ND	ND	<2.6	ND	ND	ND
Trichlorofluoromethane	2.2	UG/KG	ND	ND	ND	ND	ND	ND
Vinyl chloride	4.8	UG/KG	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	2.5	UG/KG	ND	DNQ15.6	DNQ14.9	ND	ND	ND
Halomethane Purgeable Compounds	6.9	UG/KG	0.0	0.0	0.0	0.0	0.0	0.0
Purgeable Compounds	6.9	UG/KG	397.1	371.2	490.2	0.0	495.4	0.0
Additional Analytes Determined;								
Acetone	31.4	UG/KG	26200	21700	20300	ND	22400	ND
Allyl chloride	3.6	UG/KG	ND	ND	ND	ND	ND	ND
Benzyl chloride	4.3	UG/KG	ND	ND	ND	ND	ND	ND
2-Butanone	36.3	UG/KG	9750	6710	6840	ND	7190	ND
Carbon disulfide	4.7	UG/KG	244	128	128	ND	194	ND
Chloroprene	3.1	UG/KG	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	2.5	UG/KG	ND	ND	ND	ND	ND	ND
Isopropylbenzene	1.3	UG/KG	22.7	22.9	27.8	ND	28.6	ND
Methyl Iodide	3.8	UG/KG	ND	ND	ND	ND	ND	ND
Methyl methacrylate	2.4	UG/KG	ND	ND	ND	ND	ND	ND
Methyl tert-butyl ether	3.4	UG/KG	ND	ND	ND	ND	ND	ND
2-Nitropropane	45.8	UG/KG	ND	ND	ND	ND	ND	ND
ortho-xylene	1.9	UG/KG	DNQ33.7	40.1	49.9	ND	38.8	ND
Styrene	1.7	UG/KG	144.0	52.7	102.0	ND	63.1	ND
meta,para xylenes	4.2	UG/KG	DNQ63.7	74.2	98.2	ND	67.9	ND
2-Chloroethylvinyl ether	5.5	UG/KG	ND	ND	ND	ND	ND	ND
4-Methyl-2-pentanone	9.7	UG/KG	ND	ND	33.7	ND	ND	ND

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

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

POINT LOMA WASTEWATER TREATMENT PLANT
Purgeables

Annual 2014

Source			MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN
Date			31-MAY-2014	30-JUN-2014	30-JUN-2014	31-JUL-2014	01-AUG-2014	31-AUG-2014
Analyte	MDL	Units	P716426	P720867	P720868	P727207	P727208	P731763
Acrolein	6.4	UG/KG	ND	ND	ND	ND	ND	ND
Acrylonitrile	3.9	UG/KG	ND	ND	ND	ND	ND	ND
Benzene	2.1	UG/KG	ND	DNQ4.1	ND	<2.1	ND	DNQ3.3
Bromodichloromethane	2.2	UG/KG	ND	ND	ND	ND	ND	ND
Bromoform	2.4	UG/KG	ND	ND	ND	ND	ND	ND
Bromomethane	6.9	UG/KG	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	3	UG/KG	ND	ND	ND	ND	ND	ND
Chlorobenzene	1	UG/KG	ND	ND	ND	ND	ND	ND
Chloroethane	3.6	UG/KG	ND	ND	ND	ND	ND	ND
Chloroform	2.3	UG/KG	ND	ND	ND	ND	ND	ND
Chloromethane	3.4	UG/KG	ND	ND	ND	ND	ND	ND
Dibromochloromethane	2.4	UG/KG	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	1.5	UG/KG	ND	21.5	ND	48.0	ND	29.9
1,3-Dichlorobenzene	1.8	UG/KG	ND	DNQ5.3	ND	ND	ND	ND
1,4-Dichlorobenzene	1.5	UG/KG	69.6	71.3	ND	64.3	ND	55.6
Dichlorodifluoromethane	5.56	UG/KG	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	1.9	UG/KG	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	3.6	UG/KG	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	5	UG/KG	ND	ND	ND	ND	ND	ND
trans-1,2-dichloroethene	3.5	UG/KG	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	2.6	UG/KG	ND	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	2.5	UG/KG	ND	ND	ND	ND	ND	ND
trans-1,3-dichloropropene	2.1	UG/KG	ND	ND	ND	ND	ND	ND
Ethylbenzene	1.4	UG/KG	277.0	301.0	ND	362.0	ND	449.0
Methylene chloride	3.5	UG/KG	ND	ND	ND	DNQ6.2	ND	DNQ5.5
1,1,2,2-Tetrachloroethane	5.9	UG/KG	ND	ND	ND	ND	ND	ND
Tetrachloroethene	2.8	UG/KG	ND	ND	ND	ND	ND	<2.8
Toluene	1.2	UG/KG	71.0	102.0	ND	117.0	ND	101.0
1,1,1-Trichloroethane	3.2	UG/KG	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	2.8	UG/KG	ND	ND	ND	ND	ND	ND
Trichloroethene	2.6	UG/KG	ND	ND	ND	ND	ND	<2.6
Trichlorofluoromethane	2.2	UG/KG	ND	ND	ND	ND	ND	ND
Vinyl chloride	4.8	UG/KG	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	2.5	UG/KG	ND	DNQ19.3	ND	ND	ND	ND
Halomethane Purgeable Compounds	6.9	UG/KG	0.0	0.0	0.0	0.0	0.0	0.0
Purgeable Compounds	6.9	UG/KG	417.6	476.5	0.0	591.3	0.0	635.5
Additional Analytes Determined;								
Acetone	31.4	UG/KG	16500	25600	ND	25600	ND	19800
Allyl chloride	3.6	UG/KG	ND	ND	ND	ND	ND	ND
Benzyl chloride	4.3	UG/KG	ND	ND	ND	ND	ND	ND
2-Butanone	36.3	UG/KG	5310	8610	ND	8250	ND	5120
Carbon disulfide	4.7	UG/KG	94.3	196	ND	174	ND	125
Chloroprene	3.1	UG/KG	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	2.5	UG/KG	ND	ND	ND	ND	ND	ND
Isopropylbenzene	1.3	UG/KG	35.6	24.2	ND	44.4	ND	44.5
Methyl Iodide	3.8	UG/KG	ND	ND	ND	ND	ND	ND
Methyl methacrylate	2.4	UG/KG	ND	ND	ND	ND	ND	ND
Methyl tert-butyl ether	3.4	UG/KG	ND	ND	ND	ND	ND	ND
2-Nitropropane	45.8	UG/KG	ND	ND	ND	ND	ND	ND
ortho-xylene	1.9	UG/KG	38.6	41.5	ND	58.8	ND	42.1
Styrene	1.7	UG/KG	110.0	59.3	ND	71.1	ND	76.7
meta,para xylenes	4.2	UG/KG	71.1	80.0	ND	126.0	ND	67.6
2-Chloroethylvinyl ether	5.5	UG/KG	ND	ND	ND	ND	ND	ND
4-Methyl-2-pentanone	9.7	UG/KG	28.1	DNQ22.7	ND	31.0	ND	DNQ15.4

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

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

POINT LOMA WASTEWATER TREATMENT PLANT
Purgeables

Annual 2014

Source			MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN
Date			30-SEP-2014	01-OCT-2014	31-OCT-2014	30-NOV-2014	01-DEC-2014	31-DEC-2014
Analyte	MDL	Units	P736392	P736393	P741662	P746878	P746879	P751630
Acrolein	6.4	UG/KG	ND	ND	ND	ND	ND	ND
Acrylonitrile	3.9	UG/KG	ND	ND	ND	ND	ND	ND
Benzene	2.1	UG/KG	ND	ND	ND	ND	ND	ND
Bromodichloromethane	2.2	UG/KG	ND	ND	ND	ND	ND	ND
Bromoform	2.4	UG/KG	ND	ND	ND	ND	ND	ND
Bromomethane	6.9	UG/KG	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	3	UG/KG	ND	ND	ND	ND	ND	ND
Chlorobenzene	1	UG/KG	ND	ND	ND	ND	ND	ND
Chloroethane	3.6	UG/KG	ND	ND	ND	ND	ND	ND
Chloroform	2.3	UG/KG	ND	ND	ND	ND	ND	ND
Chloromethane	3.4	UG/KG	ND	ND	ND	ND	ND	ND
Dibromochloromethane	2.4	UG/KG	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	1.5	UG/KG	ND	ND	ND	78.0	ND	176.0
1,3-Dichlorobenzene	1.8	UG/KG	ND	ND	ND	ND	ND	DNQ10.5
1,4-Dichlorobenzene	1.5	UG/KG	48.5	ND	ND	ND	ND	44.5
Dichlorodifluoromethane	5.56	UG/KG	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	1.9	UG/KG	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	3.6	UG/KG	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	5	UG/KG	ND	ND	ND	ND	ND	ND
trans-1,2-dichloroethene	3.5	UG/KG	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	2.6	UG/KG	ND	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	2.5	UG/KG	ND	ND	ND	ND	ND	ND
trans-1,3-dichloropropene	2.1	UG/KG	ND	ND	ND	ND	ND	ND
Ethylbenzene	1.4	UG/KG	420.0	ND	358.0	298.0	ND	245.0
Methylene chloride	3.5	UG/KG	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	5.9	UG/KG	ND	ND	ND	ND	ND	ND
Tetrachloroethene	2.8	UG/KG	ND	ND	ND	ND	ND	ND
Toluene	1.2	UG/KG	156.0	ND	103.0	111.0	ND	32.5
1,1,1-Trichloroethane	3.2	UG/KG	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	2.8	UG/KG	ND	ND	ND	ND	ND	ND
Trichloroethene	2.6	UG/KG	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	2.2	UG/KG	ND	ND	ND	ND	ND	ND
Vinyl chloride	4.8	UG/KG	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	2.5	UG/KG	ND	ND	ND	ND	ND	ND
Halomethane Purgeable Compounds	6.9	UG/KG	0.0	0.0	0.0	0.0	0.0	0.0
Purgeable Compounds	6.9	UG/KG	624.5	0.0	461.0	487.0	0.0	498.0
Additional Analytes Determined;								
Acetone	31.4	UG/KG	14400	ND	14500	18500	ND	17200
Allyl chloride	3.6	UG/KG	ND	ND	ND	ND	ND	ND
Benzyl chloride	4.3	UG/KG	ND	ND	ND	ND	ND	ND
2-Butanone	36.3	UG/KG	4330	ND	5280	6860	ND	4710
Carbon disulfide	4.7	UG/KG	149	ND	186	156	ND	89.0
Chloroprene	3.1	UG/KG	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	2.5	UG/KG	ND	ND	ND	ND	ND	ND
Isopropylbenzene	1.3	UG/KG	45.0	ND	47.9	46.5	ND	27.5
Methyl Iodide	3.8	UG/KG	ND	ND	ND	ND	ND	ND
Methyl methacrylate	2.4	UG/KG	ND	ND	ND	ND	ND	ND
Methyl tert-butyl ether	3.4	UG/KG	ND	ND	ND	ND	ND	ND
2-Nitropropane	45.8	UG/KG	ND	ND	ND	ND	ND	ND
ortho-xylene	1.9	UG/KG	38.5	ND	41.0	41.0	ND	32.5
Styrene	1.7	UG/KG	70.0	ND	63.6	50.5	ND	39.0
meta,para xylenes	4.2	UG/KG	75.0	ND	80.8	81.0	ND	65.5
2-Chloroethylvinyl ether	5.5	UG/KG	ND	ND	ND	ND	ND	ND
4-Methyl-2-pentanone	9.7	UG/KG	ND	ND	ND	<9.7	ND	ND

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

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

POINT LOMA WASTEWATER TREATMENT PLANT
Purgeables

Annual 2014

Analyte	MDL	Units	Average
Acrolein	6.4	UG/KG	ND
Acrylonitrile	3.9	UG/KG	ND
Benzene	2.1	UG/KG	DNQ1.4
Bromodichloromethane	2.2	UG/KG	ND
Bromoform	2.4	UG/KG	ND
Bromomethane	6.9	UG/KG	ND
Carbon tetrachloride	3	UG/KG	ND
Chlorobenzene	1	UG/KG	ND
Chloroethane	3.6	UG/KG	ND
Chloroform	2.3	UG/KG	ND
Chloromethane	3.4	UG/KG	ND
Dibromochloromethane	2.4	UG/KG	ND
1,2-Dichlorobenzene	1.5	UG/KG	22.7
1,3-Dichlorobenzene	1.8	UG/KG	DNQ1.3
1,4-Dichlorobenzene	1.5	UG/KG	36.8
Dichlorodifluoromethane	5.56	UG/KG	ND
1,1-Dichloroethane	1.9	UG/KG	ND
1,2-Dichloroethane	3.6	UG/KG	ND
1,1-Dichloroethene	5	UG/KG	ND
trans-1,2-dichloroethene	3.5	UG/KG	ND
1,2-Dichloropropane	2.6	UG/KG	ND
cis-1,3-dichloropropene	2.5	UG/KG	ND
trans-1,3-dichloropropene	2.1	UG/KG	ND
Ethylbenzene	1.4	UG/KG	214.9
Methylene chloride	3.5	UG/KG	DNQ1.2
1,1,2,2-Tetrachloroethane	5.9	UG/KG	ND
Tetrachloroethene	2.8	UG/KG	0.0
Toluene	1.2	UG/KG	59.9
1,1,1-Trichloroethane	3.2	UG/KG	ND
1,1,2-Trichloroethane	2.8	UG/KG	ND
Trichloroethene	2.6	UG/KG	0.0
Trichlorofluoromethane	2.2	UG/KG	ND
Vinyl chloride	4.8	UG/KG	ND
1,2,4-Trichlorobenzene	2.5	UG/KG	DNQ2.8
Halomethane Purgeable Compounds	6.9	UG/KG	0.0
Purgeable Compounds	6.9	UG/KG	331.6
Additional Analytes Determined;			
Acetone	31.4	UG/KG	13483
Allyl chloride	3.6	UG/KG	ND
Benzyl chloride	4.3	UG/KG	ND
2-Butanone	36.3	UG/KG	4387
Carbon disulfide	4.7	UG/KG	103.5
Chloroprene	3.1	UG/KG	ND
1,2-Dibromoethane	2.5	UG/KG	ND
Isopropylbenzene	1.3	UG/KG	23.2
Methyl Iodide	3.8	UG/KG	ND
Methyl methacrylate	2.4	UG/KG	ND
Methyl tert-butyl ether	3.4	UG/KG	ND
2-Nitropropane	45.8	UG/KG	ND
ortho-xylene	1.9	UG/KG	27.6
Styrene	1.7	UG/KG	50.1
meta,para xylenes	4.2	UG/KG	52.8
2-Chloroethylvinyl ether	5.5	UG/KG	ND
4-Methyl-2-pentanone	9.7	UG/KG	DNQ7.3

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

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

POINT LOMA WASTEWATER TREATMENT PLANT
QUARTERLY SLUDGE PROJECT
Priority Pollutants Base/Neutral Compounds, EPA Method 625 & 605
Annual 2014

Source			PLE	PLE	PLE	PLE	PLR	PLR
Date			04-FEB-2014	06-MAY-2014	05-AUG-2014	07-OCT-2014	04-FEB-2014	06-MAY-2014
Analyte	MDL	Units	P695680	P712448	P723690	P734686	P695686	P712454
Acenaphthene	1.8	UG/L	ND	ND	ND	ND	ND	ND
Acenaphthylene	1.77	UG/L	ND	ND	ND	ND	ND	ND
Anthracene	1.29	UG/L	ND	ND	ND	ND	ND	ND
Benzidine	1.52	UG/L	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	1.1	UG/L	ND	ND	ND	ND	ND	ND
3,4-Benzo(b)fluoranthene	1.35	UG/L	ND	ND	ND	ND	ND	ND
Benzo[k]fluoranthene	1.49	UG/L	ND	ND	ND	ND	ND	ND
Benzo[a]pyrene	1.25	UG/L	ND	ND	ND	ND	ND	ND
Benzo[g,h,i]perylene	1.09	UG/L	ND	ND	ND	ND	ND	ND
4-Bromophenyl phenyl ether	1.4	UG/L	ND	ND	ND	ND	ND	ND
Bis-(2-chloroethoxy) methane	1.01	UG/L	ND	ND	ND	ND	ND	ND
Bis-(2-chloroisopropyl) ether	1.16	UG/L	ND	ND	ND	ND	ND	ND
Bis-(2-chloroethyl) ether	1.38	UG/L	ND	ND	ND	ND	ND	ND
4-Chlorophenyl phenyl ether	1.57	UG/L	ND	ND	ND	ND	ND	ND
Chrysene	1.16	UG/L	ND	ND	ND	ND	ND	ND
Dibenzo(a,h)anthracene	1.01	UG/L	ND	ND	ND	ND	ND	ND
Butyl benzyl phthalate	2.84	UG/L	ND	ND	ND	ND	3.6	ND
Di-n-butyl phthalate	3.96	UG/L	ND	ND	ND	ND	ND	ND
Bis-(2-ethylhexyl) phthalate	8.96	UG/L	ND	ND	ND	ND	11.2	ND
Diethyl phthalate	3.05	UG/L	3.7	4.0	5.8	ND	ND	3.2
Dimethyl phthalate	1.44	UG/L	ND	ND	ND	ND	ND	ND
Di-n-octyl phthalate	1	UG/L	ND	ND	ND	ND	ND	ND
3,3-Dichlorobenzidine	2.44	UG/L	ND	ND	ND	ND	ND	ND
2,4-Dinitrotoluene	1.36	UG/L	ND	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	1.53	UG/L	ND	ND	ND	ND	ND	ND
1,2-Diphenylhydrazine	1.37	UG/L	ND	ND	ND	ND	ND	ND
Fluoranthene	1.33	UG/L	ND	ND	ND	ND	ND	ND
Fluorene	1.61	UG/L	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	1.48	UG/L	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	1.64	UG/L	ND	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	1.25	UG/L	ND	ND	ND	ND	ND	ND
Hexachloroethane	1.32	UG/L	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-CD)pyrene	1.14	UG/L	ND	ND	ND	ND	ND	ND
Isophorone	1.53	UG/L	ND	ND	ND	ND	ND	ND
Naphthalene	1.65	UG/L	ND	ND	ND	ND	ND	ND
Nitrobenzene	1.6	UG/L	ND	ND	ND	ND	ND	ND
N-nitrosodimethylamine	1.27	UG/L	ND	ND	ND	ND	ND	ND
N-nitrosodi-n-propylamine	1.16	UG/L	ND	ND	ND	ND	ND	ND
N-nitrosodiphenylamine	3.48	UG/L	ND	ND	ND	ND	ND	ND
Phenanthrene	1.34	UG/L	ND	ND	ND	ND	ND	ND
Pyrene	1.43	UG/L	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	1.52	UG/L	ND	ND	ND	ND	ND	ND
Polynuc. Aromatic Hydrocarbons	1.77	UG/L	0.0	0.0	0.0	0.0	0.0	0.0
Base/Neutral Compounds	8.96	UG/L	3.7	4.0	5.8	0.0	14.8	3.2
Benzo[e]pyrene	1.44	UG/L	ND	ND	ND	ND	ND	ND
Biphenyl	2.29	UG/L	ND	ND	ND	ND	ND	ND
2,6-Dimethylnaphthalene	2.16	UG/L	ND	ND	ND	ND	ND	ND
1-Methylnaphthalene	2.18	UG/L	ND	ND	ND	ND	ND	ND
1-Methylphenanthrene	1.46	UG/L	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	2.14	UG/L	ND	ND	ND	ND	ND	ND
2,3,5-Trimethylnaphthalene	2.18	UG/L	ND	ND	ND	ND	ND	ND
Perylene	1.41	UG/L	ND	ND	ND	ND	ND	ND
2-Chloronaphthalene	1.87	UG/L	ND	ND	ND	ND	ND	ND

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

POINT LOMA WASTEWATER TREATMENT PLANT
QUARTERLY SLUDGE PROJECT
Priority Pollutants Base/Neutral Compounds, EPA Method 625 & 605
Annual 2014

Source			PLR	PLR	MBC_COMBCN	MBC_COMBCN	MBC_COMBCN	MBC_COMBCN
Date			05-AUG-2014	07-OCT-2014	04-FEB-2014	06-MAY-2014	05-AUG-2014	07-OCT-2014
Analyte	MDL	Units	P723696	P734692	P695697	P712465	P723707	P734703
Acenaphthene	1.8	UG/L	ND	ND	ND	ND	ND	ND
Acenaphthylene	1.77	UG/L	ND	ND	ND	ND	ND	ND
Anthracene	1.29	UG/L	ND	ND	ND	ND	ND	ND
Benzidine	1.52	UG/L	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	1.1	UG/L	ND	ND	ND	ND	ND	ND
3,4-Benzo(b)fluoranthene	1.35	UG/L	ND	ND	ND	ND	ND	ND
Benzo[k]fluoranthene	1.49	UG/L	ND	ND	ND	ND	ND	ND
Benzo[a]pyrene	1.25	UG/L	ND	ND	ND	ND	ND	ND
Benzo[g,h,i]perylene	1.09	UG/L	ND	ND	ND	ND	ND	ND
4-Bromophenyl phenyl ether	1.4	UG/L	ND	ND	ND	ND	ND	ND
Bis-(2-chloroethoxy) methane	1.01	UG/L	ND	ND	ND	ND	ND	ND
Bis-(2-chloroisopropyl) ether	1.16	UG/L	ND	ND	ND	ND	ND	ND
Bis-(2-chloroethyl) ether	1.38	UG/L	ND	ND	ND	ND	ND	ND
4-Chlorophenyl phenyl ether	1.57	UG/L	ND	ND	ND	ND	ND	ND
Chrysene	1.16	UG/L	ND	ND	ND	ND	ND	ND
Dibenzo(a,h)anthracene	1.01	UG/L	ND	ND	ND	ND	ND	ND
Butyl benzyl phthalate	2.84	UG/L	ND	ND	ND	ND	ND	ND
Di-n-butyl phthalate	3.96	UG/L	ND	ND	ND	ND	ND	ND
Bis-(2-ethylhexyl) phthalate	8.96	UG/L	20.7	9.2	13.1	<9.0	<9.0	16.6
Diethyl phthalate	3.05	UG/L	4.7	ND	ND	ND	ND	ND
Dimethyl phthalate	1.44	UG/L	ND	ND	ND	ND	ND	ND
Di-n-octyl phthalate	1	UG/L	ND	ND	ND	ND	ND	ND
3,3-Dichlorobenzidine	2.44	UG/L	ND	ND	ND	ND	ND	ND
2,4-Dinitrotoluene	1.36	UG/L	ND	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	1.53	UG/L	ND	ND	ND	ND	ND	ND
1,2-Diphenylhydrazine	1.37	UG/L	ND	ND	ND	ND	ND	ND
Fluoranthene	1.33	UG/L	ND	ND	ND	ND	ND	ND
Fluorene	1.61	UG/L	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	1.48	UG/L	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	1.64	UG/L	ND	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	1.25	UG/L	ND	ND	ND	ND	ND	ND
Hexachloroethane	1.32	UG/L	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-CD)pyrene	1.14	UG/L	ND	ND	ND	ND	ND	ND
Isophorone	1.53	UG/L	ND	ND	ND	ND	ND	ND
Naphthalene	1.65	UG/L	ND	ND	ND	ND	ND	ND
Nitrobenzene	1.6	UG/L	ND	ND	ND	ND	ND	ND
N-nitrosodimethylamine	1.27	UG/L	ND	ND	ND	ND	ND	4.9
N-nitrosodi-n-propylamine	1.16	UG/L	ND	ND	ND	ND	ND	ND
N-nitrosodiphenylamine	3.48	UG/L	ND	ND	ND	ND	ND	ND
Phenanthrene	1.34	UG/L	ND	ND	ND	ND	ND	ND
Pyrene	1.43	UG/L	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	1.52	UG/L	ND	ND	ND	ND	ND	ND
Polynuc. Aromatic Hydrocarbons	1.77	UG/L	0.0	0.0	0.0	0.0	0.0	0.0
Base/Neutral Compounds	8.96	UG/L	25.4	9.2	13.1	0.0	0.0	21.5
Benzo[e]pyrene	1.44	UG/L	ND	ND	ND	ND	ND	ND
Biphenyl	2.29	UG/L	ND	ND	ND	ND	ND	ND
2,6-Dimethylnaphthalene	2.16	UG/L	ND	ND	ND	ND	ND	ND
1-Methylnaphthalene	2.18	UG/L	ND	ND	ND	ND	ND	ND
1-Methylphenanthrene	1.46	UG/L	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	2.14	UG/L	ND	ND	ND	ND	ND	ND
2,3,5-Trimethylnaphthalene	2.18	UG/L	ND	ND	ND	ND	ND	ND
Perylene	1.41	UG/L	ND	ND	ND	ND	ND	ND
2-Chloronaphthalene	1.87	UG/L	ND	ND	ND	ND	ND	ND

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

POINT LOMA WASTEWATER TREATMENT PLANT
QUARTERLY SLUDGE PROJECT
Priority Pollutants Base/Neutral Compounds, EPA Method 625 & 605
Annual 2014

Source			PLE	PLE	PLE	PLE	PLR	PLR
Date			04-FEB-2014	06-MAY-2014	05-AUG-2014	07-OCT-2014	04-FEB-2014	06-MAY-2014
Analyte	MDL	Units	P695680	P712448	P723690	P734686	P695686	P712454
Acenaphthene	1.8	UG/L	ND	ND	ND	ND	ND	ND
Acenaphthylene	1.77	UG/L	ND	ND	ND	ND	ND	ND
Anthracene	1.29	UG/L	ND	ND	ND	ND	ND	ND
Benzidine	1.52	UG/L	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	1.1	UG/L	ND	ND	ND	ND	ND	ND
3,4-Benzo(b)fluoranthene	1.35	UG/L	ND	ND	ND	ND	ND	ND
Benzo[k]fluoranthene	1.49	UG/L	ND	ND	ND	ND	ND	ND
Benzo[a]pyrene	1.25	UG/L	ND	ND	ND	ND	ND	ND
Benzo[g,h,i]perylene	1.09	UG/L	ND	ND	ND	ND	ND	ND
4-Bromophenyl phenyl ether	1.4	UG/L	ND	ND	ND	ND	ND	ND
Bis-(2-chloroethoxy) methane	1.01	UG/L	ND	ND	ND	ND	ND	ND
Bis-(2-chloroisopropyl) ether	1.16	UG/L	ND	ND	ND	ND	ND	ND
Bis-(2-chloroethyl) ether	1.38	UG/L	ND	ND	ND	ND	ND	ND
4-Chlorophenyl phenyl ether	1.57	UG/L	ND	ND	ND	ND	ND	ND
Chrysene	1.16	UG/L	ND	ND	ND	ND	ND	ND
Dibenzo(a,h)anthracene	1.01	UG/L	ND	ND	ND	ND	ND	ND
Butyl benzyl phthalate	2.84	UG/L	ND	ND	ND	ND	3.6	ND
Di-n-butyl phthalate	3.96	UG/L	ND	ND	ND	ND	ND	ND
Bis-(2-ethylhexyl) phthalate	8.96	UG/L	ND	ND	ND	ND	11.2	ND
Diethyl phthalate	3.05	UG/L	3.7	4.0	5.8	ND	ND	3.2
Dimethyl phthalate	1.44	UG/L	ND	ND	ND	ND	ND	ND
Di-n-octyl phthalate	1	UG/L	ND	ND	ND	ND	ND	ND
3,3-Dichlorobenzidine	2.44	UG/L	ND	ND	ND	ND	ND	ND
2,4-Dinitrotoluene	1.36	UG/L	ND	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	1.53	UG/L	ND	ND	ND	ND	ND	ND
1,2-Diphenylhydrazine	1.37	UG/L	ND	ND	ND	ND	ND	ND
Fluoranthene	1.33	UG/L	ND	ND	ND	ND	ND	ND
Fluorene	1.61	UG/L	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	1.48	UG/L	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	1.64	UG/L	ND	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	1.25	UG/L	ND	ND	ND	ND	ND	ND
Hexachloroethane	1.32	UG/L	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-CD)pyrene	1.14	UG/L	ND	ND	ND	ND	ND	ND
Isophorone	1.53	UG/L	ND	ND	ND	ND	ND	ND
Naphthalene	1.65	UG/L	ND	ND	ND	ND	ND	ND
Nitrobenzene	1.6	UG/L	ND	ND	ND	ND	ND	ND
N-nitrosodimethylamine	1.27	UG/L	ND	ND	ND	ND	ND	ND
N-nitrosodi-n-propylamine	1.16	UG/L	ND	ND	ND	ND	ND	ND
N-nitrosodiphenylamine	3.48	UG/L	ND	ND	ND	ND	ND	ND
Phenanthrene	1.34	UG/L	ND	ND	ND	ND	ND	ND
Pyrene	1.43	UG/L	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	1.52	UG/L	ND	ND	ND	ND	ND	ND
Polynuc. Aromatic Hydrocarbons	1.77	UG/L	0.0	0.0	0.0	0.0	0.0	0.0
Base/Neutral Compounds	8.96	UG/L	3.7	4.0	5.8	0.0	14.8	3.2
Benzo[e]pyrene	1.44	UG/L	ND	ND	ND	ND	ND	ND
Biphenyl	2.29	UG/L	ND	ND	ND	ND	ND	ND
2,6-Dimethylnaphthalene	2.16	UG/L	ND	ND	ND	ND	ND	ND
1-Methylnaphthalene	2.18	UG/L	ND	ND	ND	ND	ND	ND
1-Methylphenanthrene	1.46	UG/L	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	2.14	UG/L	ND	ND	ND	ND	ND	ND
2,3,5-Trimethylnaphthalene	2.18	UG/L	ND	ND	ND	ND	ND	ND
Perylene	1.41	UG/L	ND	ND	ND	ND	ND	ND
2-Chloronaphthalene	1.87	UG/L	ND	ND	ND	ND	ND	ND

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

POINT LOMA WASTEWATER TREATMENT PLANT
QUARTERLY SLUDGE PROJECT
Priority Pollutants Base/Neutral Compounds, EPA Method 625 & 605
Annual 2014

Source			PLR	PLR	MBC_COMBCN	MBC_COMBCN	MBC_COMBCN	MBC_COMBCN
Date			05-AUG-2014	07-OCT-2014	04-FEB-2014	06-MAY-2014	05-AUG-2014	07-OCT-2014
Analyte	MDL	Units	P723696	P734692	P695697	P712465	P723707	P734703
Acenaphthene	1.8	UG/L	ND	ND	ND	ND	ND	ND
Acenaphthylene	1.77	UG/L	ND	ND	ND	ND	ND	ND
Anthracene	1.29	UG/L	ND	ND	ND	ND	ND	ND
Benzidine	1.52	UG/L	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	1.1	UG/L	ND	ND	ND	ND	ND	ND
3,4-Benzo(b)fluoranthene	1.35	UG/L	ND	ND	ND	ND	ND	ND
Benzo[k]fluoranthene	1.49	UG/L	ND	ND	ND	ND	ND	ND
Benzo[a]pyrene	1.25	UG/L	ND	ND	ND	ND	ND	ND
Benzo[g,h,i]perylene	1.09	UG/L	ND	ND	ND	ND	ND	ND
4-Bromophenyl phenyl ether	1.4	UG/L	ND	ND	ND	ND	ND	ND
Bis-(2-chloroethoxy) methane	1.01	UG/L	ND	ND	ND	ND	ND	ND
Bis-(2-chloroisopropyl) ether	1.16	UG/L	ND	ND	ND	ND	ND	ND
Bis-(2-chloroethyl) ether	1.38	UG/L	ND	ND	ND	ND	ND	ND
4-Chlorophenyl phenyl ether	1.57	UG/L	ND	ND	ND	ND	ND	ND
Chrysene	1.16	UG/L	ND	ND	ND	ND	ND	ND
Dibenzo(a,h)anthracene	1.01	UG/L	ND	ND	ND	ND	ND	ND
Butyl benzyl phthalate	2.84	UG/L	ND	ND	ND	ND	ND	ND
Di-n-butyl phthalate	3.96	UG/L	ND	ND	ND	ND	ND	ND
Bis-(2-ethylhexyl) phthalate	8.96	UG/L	20.7	9.2	13.1	<9.0	<9.0	16.6
Diethyl phthalate	3.05	UG/L	4.7	ND	ND	ND	ND	ND
Dimethyl phthalate	1.44	UG/L	ND	ND	ND	ND	ND	ND
Di-n-octyl phthalate	1	UG/L	ND	ND	ND	ND	ND	ND
3,3-Dichlorobenzidine	2.44	UG/L	ND	ND	ND	ND	ND	ND
2,4-Dinitrotoluene	1.36	UG/L	ND	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	1.53	UG/L	ND	ND	ND	ND	ND	ND
1,2-Diphenylhydrazine	1.37	UG/L	ND	ND	ND	ND	ND	ND
Fluoranthene	1.33	UG/L	ND	ND	ND	ND	ND	ND
Fluorene	1.61	UG/L	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	1.48	UG/L	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	1.64	UG/L	ND	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	1.25	UG/L	ND	ND	ND	ND	ND	ND
Hexachloroethane	1.32	UG/L	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-CD)pyrene	1.14	UG/L	ND	ND	ND	ND	ND	ND
Isophorone	1.53	UG/L	ND	ND	ND	ND	ND	ND
Naphthalene	1.65	UG/L	ND	ND	ND	ND	ND	ND
Nitrobenzene	1.6	UG/L	ND	ND	ND	ND	ND	ND
N-nitrosodimethylamine	1.27	UG/L	ND	ND	ND	ND	ND	4.9
N-nitrosodi-n-propylamine	1.16	UG/L	ND	ND	ND	ND	ND	ND
N-nitrosodiphenylamine	3.48	UG/L	ND	ND	ND	ND	ND	ND
Phenanthrene	1.34	UG/L	ND	ND	ND	ND	ND	ND
Pyrene	1.43	UG/L	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	1.52	UG/L	ND	ND	ND	ND	ND	ND
Polynuc. Aromatic Hydrocarbons	1.77	UG/L	0.0	0.0	0.0	0.0	0.0	0.0
Base/Neutral Compounds	8.96	UG/L	25.4	9.2	13.1	0.0	0.0	21.5
Benzo[e]pyrene	1.44	UG/L	ND	ND	ND	ND	ND	ND
Biphenyl	2.29	UG/L	ND	ND	ND	ND	ND	ND
2,6-Dimethylnaphthalene	2.16	UG/L	ND	ND	ND	ND	ND	ND
1-Methylnaphthalene	2.18	UG/L	ND	ND	ND	ND	ND	ND
1-Methylphenanthrene	1.46	UG/L	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	2.14	UG/L	ND	ND	ND	ND	ND	ND
2,3,5-Trimethylnaphthalene	2.18	UG/L	ND	ND	ND	ND	ND	ND
Perylene	1.41	UG/L	ND	ND	ND	ND	ND	ND
2-Chloronaphthalene	1.87	UG/L	ND	ND	ND	ND	ND	ND

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

POINT LOMA WASTEWATER TREATMENT PLANT
QUARTERLY SLUDGE PROJECT
Priority Pollutants Base/Neutral Compounds, EPA Method 625 & 605
Annual 2014

Source			MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN
Date			28-FEB-2014	31-MAY-2014	31-AUG-2014	31-OCT-2014
Analyte		Units	P701729	P716426	P731763	P741662
Acenaphthene	330	UG/KG	ND	ND	ND	ND
Acenaphthylene	330	UG/KG	ND	ND	ND	ND
Anthracene	330	UG/KG	ND	ND	ND	ND
Benzidine	330	UG/KG	ND	ND	ND	ND
Benzo[a]anthracene	330	UG/KG	ND	ND	ND	ND
3,4-Benzo(b)fluoranthene	330	UG/KG	ND	ND	ND	ND
Benzo[k]fluoranthene	330	UG/KG	ND	ND	ND	ND
Benzo[a]pyrene	330	UG/KG	ND	ND	ND	ND
Benzo[g,h,i]perylene	330	UG/KG	ND	ND	ND	ND
4-Bromophenyl phenyl ether	330	UG/KG	ND	ND	ND	ND
Bis-(2-chloroethoxy) methane	330	UG/KG	ND	ND	ND	ND
Bis-(2-chloroethyl) ether	330	UG/KG	ND	ND	ND	ND
Bis-(2-chloroisopropyl) ether	330	UG/KG	ND	ND	ND	ND
4-Chlorophenyl phenyl ether	330	UG/KG	ND	ND	ND	ND
Chrysene	330	UG/KG	ND	ND	ND	ND
Dibenzo(a,h)anthracene	330	UG/KG	ND	ND	ND	ND
Butyl benzyl phthalate	330	UG/KG	1200	785	1750	1720
Di-n-butyl phthalate	330	UG/KG	ND	ND	ND	ND
Bis-(2-ethylhexyl) phthalate	330	UG/KG	68400	81000	75900	88900
Diethyl phthalate	330	UG/KG	ND	ND	ND	ND
Dimethyl phthalate	330	UG/KG	ND	ND	ND	ND
Di-n-octyl phthalate	330	UG/KG	ND	ND	ND	ND
3,3-Dichlorobenzidine	330	UG/KG	ND	ND	ND	ND
2,4-Dinitrotoluene	330	UG/KG	ND	ND	ND	ND
2,6-Dinitrotoluene	330	UG/KG	ND	ND	ND	ND
1,2-Diphenylhydrazine		UG/KG	ND	ND	ND	ND
Fluoranthene	330	UG/KG	ND	ND	ND	ND
Fluorene	330	UG/KG	ND	ND	ND	ND
Hexachlorobenzene	330	UG/KG	ND	ND	ND	ND
Hexachlorobutadiene	330	UG/KG	ND	ND	ND	ND
Hexachlorocyclopentadiene	330	UG/KG	ND	ND	ND	ND
Hexachloroethane	330	UG/KG	ND	ND	ND	ND
Indeno(1,2,3-CD)pyrene	330	UG/KG	ND	ND	ND	ND
Isophorone	330	UG/KG	ND	ND	ND	ND
Naphthalene	330	UG/KG	ND	382	<330	430
Nitrobenzene	330	UG/KG	ND	ND	ND	ND
N-nitrosodimethylamine	330	UG/KG	ND	ND	ND	ND
N-nitrosodi-n-propylamine	330	UG/KG	ND	ND	ND	ND
N-nitrosodiphenylamine	330	UG/KG	ND	ND	ND	ND
Phenanthrene	330	UG/KG	ND	ND	ND	ND
Pyrene	330	UG/KG	ND	ND	ND	ND
1,2,4-Trichlorobenzene	330	UG/KG	<330	ND	ND	ND
Polynuc. Aromatic Hydrocarbons			0	0	0	0
Base/Neutral Compounds			69600	82167	77650	91050
Benzo[e]pyrene		UG/KG	ND	ND	ND	ND
Biphenyl		UG/KG	ND	489	ND	ND
2,6-Dimethylnaphthalene		UG/KG	1320	1570	1470	1630
1-Methylnaphthalene		UG/KG	ND	ND	ND	ND
1-Methylphenanthrene		UG/KG	ND	ND	ND	ND
2-Methylnaphthalene		UG/KG	ND	674	480	425
2,3,5-Trimethylnaphthalene		UG/KG	ND	ND	ND	ND
Perylene	330	UG/KG	ND	ND	ND	ND
2-Chloronaphthalene		UG/KG	ND	ND	ND	ND
Pyridine		UG/KG	ND	ND	ND	ND

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

POINT LOMA WASTEWATER TREATMENT
EFFLUENT
Dioxin and Furan Analysis

ANALYZED BY: Frontier Analytical Laboratories

2014 Annual

Source			PLE	PLE	PLE	PLE	PLE	PLE	PLE	PLE
Month			JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG
Analyte	MDL	Units	P691421	P695680	P701809	P708925	P712448	P717495	P721248	P723690
2,3,7,8-tetra CDD	.155	PG/L	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,7,8-penta CDD	.254	PG/L	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,4,7,8_hexa_CDD	.31	PG/L	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDD	.315	PG/L	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDD	.287	PG/L	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDD	.53	PG/L	DNQ2.36	DNQ2.52	DNQ3.71	DNQ2.21	ND	DNQ2.65	DNQ3.57	ND
octa CDD	1.12	PG/L	DNQ16.0	DNQ15.0	DNQ21.0	DNQ19.0	ND	DNQ16.0	DNQ21.0	DNQ16.0
2,3,7,8-tetra CDF	.164	PG/L	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,7,8-penta CDF	.187	PG/L	ND	ND	ND	ND	ND	ND	DNQ4.04	ND
2,3,4,7,8-penta CDF	.178	PG/L	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDF	.19	PG/L	ND	ND	ND	ND	ND	ND	DNQ1.36	ND
1,2,3,6,7,8-hexa CDF	.211	PG/L	ND	ND	ND	ND	ND	DNQ1.68	DNQ3.38	ND
1,2,3,7,8,9-hexa CDF	.265	PG/L	ND	ND	ND	ND	ND	ND	ND	ND
2,3,4,6,7,8-hexa CDF	.217	PG/L	ND	ND	ND	ND	ND	ND	DNQ1.45	ND
1,2,3,4,6,7,8-hepta CDF	.225	PG/L	ND	ND	ND	ND	ND	ND	DNQ3.23	ND
1,2,3,4,7,8,9-hepta CDF	.317	PG/L	ND	ND	ND	ND	ND	ND	ND	ND
octa CDF	.579	PG/L	ND	ND	ND	ND	ND	ND	ND	ND

Source			PLE	PLE	PLE	PLE
Month			SEP	OCT	NOV	DEC
Analyte	MDL	Units	P731834	P734686	P741746	P747038
2,3,7,8-tetra CDD	.155	PG/L	ND	ND	ND	ND
1,2,3,7,8-penta CDD	.254	PG/L	ND	ND	ND	ND
1,2,3,4,7,8_hexa_CDD	.31	PG/L	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDD	.315	PG/L	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDD	.287	PG/L	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDD	.53	PG/L	DNQ3.77	DNQ2.75	DNQ4.52	DNQ2.46
octa CDD	1.12	PG/L	DNQ26.0	DNQ22.0	DNQ28.0	DNQ15.0
2,3,7,8-tetra CDF	.164	PG/L	ND	ND	ND	ND
1,2,3,7,8-penta CDF	.187	PG/L	ND	ND	ND	ND
2,3,4,7,8-penta CDF	.178	PG/L	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDF	.19	PG/L	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDF	.211	PG/L	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDF	.265	PG/L	ND	ND	ND	ND
2,3,4,6,7,8-hexa CDF	.217	PG/L	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDF	.225	PG/L	ND	ND	ND	ND
1,2,3,4,7,8,9-hepta CDF	.317	PG/L	ND	ND	ND	ND
octa CDF	.579	PG/L	ND	ND	ND	ND

Above are permit required CDD/CDF isomers.

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

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

POINT LOMA WASTEWATER TREATMENT
EFFLUENT
Dioxin and Furan Analysis

ANALYZED BY: Frontier Analytical Laboratories

2014 Annual

Source				PLE TCDD	PLE TCDD	PLE TCDD	PLE TCDD	PLE TCDD	PLE TCDD	PLE TCDD	PLE TCDD
Month				JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG
Analyte	MDL	Units	Equiv	P691421	P695680	P701809	P708925	P712448	P717495	P721248	P723690
2,3,7,8-tetra CDD	.155	PG/L	1.000	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,7,8-penta CDD	.254	PG/L	0.500	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,4,7,8_hexa_CDD	.31	PG/L	0.100	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDD	.315	PG/L	0.100	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDD	.287	PG/L	0.100	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDD	.53	PG/L	0.010	DNQ0.024	DNQ0.025	DNQ0.037	DNQ0.022	ND	DNQ0.027	DNQ0.036	ND
octa CDD	1.12	PG/L	0.001	DNQ0.016	DNQ0.015	DNQ0.021	DNQ0.019	ND	DNQ0.016	DNQ0.021	DNQ0.016
2,3,7,8-tetra CDF	.164	PG/L	0.100	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,7,8-penta CDF	.187	PG/L	0.050	ND	ND	ND	ND	ND	ND	DNQ0.202	ND
2,3,4,7,8-penta CDF	.178	PG/L	0.500	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDF	.19	PG/L	0.100	ND	ND	ND	ND	ND	ND	DNQ0.136	ND
1,2,3,6,7,8-hexa CDF	.211	PG/L	0.100	ND	ND	ND	ND	ND	DNQ0.168	DNQ0.338	ND
1,2,3,7,8,9-hexa CDF	.265	PG/L	0.100	ND	ND	ND	ND	ND	ND	ND	ND
2,3,4,6,7,8-hexa CDF	.217	PG/L	0.100	ND	ND	ND	ND	ND	ND	DNQ0.145	ND
1,2,3,4,6,7,8-hepta CDF	.225	PG/L	0.010	ND	ND	ND	ND	ND	ND	DNQ0.032	ND
1,2,3,4,7,8,9-hepta CDF	.317	PG/L	0.010	ND	ND	ND	ND	ND	ND	ND	ND
octa CDF	.579	PG/L	0.001	ND	ND	ND	ND	ND	ND	ND	ND

Source				PLE TCDD	PLE TCDD	PLE TCDD	PLE TCDD
Month				SEP	OCT	NOV	DEC
Analyte	MDL	Units	Equiv	P731834	P734686	P741746	P747038
2,3,7,8-tetra CDD	.155	PG/L	1.000	ND	ND	ND	ND
1,2,3,7,8-penta CDD	.254	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8_hexa_CDD	.31	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDD	.315	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDD	.287	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDD	.53	PG/L	0.010	DNQ0.038	DNQ0.028	DNQ0.045	DNQ0.025
octa CDD	1.12	PG/L	0.001	DNQ0.026	DNQ0.022	DNQ0.028	DNQ0.015
2,3,7,8-tetra CDF	.164	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8-penta CDF	.187	PG/L	0.050	ND	ND	ND	ND
2,3,4,7,8-penta CDF	.178	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDF	.19	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDF	.211	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDF	.265	PG/L	0.100	ND	ND	ND	ND
2,3,4,6,7,8-hexa CDF	.217	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDF	.225	PG/L	0.010	ND	ND	ND	ND
1,2,3,4,7,8,9-hepta CDF	.317	PG/L	0.010	ND	ND	ND	ND
octa CDF	.579	PG/L	0.001	ND	ND	ND	ND

Above are permit required CDD/CDF isomers.

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

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

POINT LOMA WASTEWATER TREATMENT
EFFLUENT
Dioxin and Furan Analysis

ANALYZED BY: Frontier Analytical Laboratories

2014 Annual

Source			PLR	PLR	PLR	PLR	PLR	PLR	PLR	PLR	PLR
Month			JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Analyte	MDL	Units	P691424	P695686	P701812	P708928	P712454	P717498	P721251	P723696	P731837
2,3,7,8-tetra CDD	.155	PG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,7,8-penta CDD	.254	PG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,4,7,8_hexa_CDD	.31	PG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDD	.315	PG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDD	.287	PG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDD	.53	PG/L	25.1	DNQ20.5	28.4	DNQ18.0	DNQ19.2	DNQ19.4	DNQ23.3	25.0	DNQ22.9
octa CDD	1.12	PG/L	210.0	210.0	210.0	200.0	200.0	190.0	190.0	190.0	200.0
2,3,7,8-tetra CDF	.164	PG/L	ND	ND	ND	ND	ND	ND	DNQ1.13	ND	ND
1,2,3,7,8-penta CDF	.187	PG/L	ND	ND	ND	ND	ND	DNQ3.03	DNQ3.09	ND	ND
2,3,4,7,8-penta CDF	.178	PG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDF	.19	PG/L	ND	ND	ND	ND	ND	DNQ2.10	DNQ1.37	ND	ND
1,2,3,6,7,8-hexa CDF	.211	PG/L	DNQ1.20	DNQ2.0	DNQ2.75	ND	ND	DNQ6.91	DNQ6.71	DNQ5.89	DNQ4.23
1,2,3,7,8,9-hexa CDF	.265	PG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,3,4,6,7,8-hexa CDF	.217	PG/L	ND	ND	ND	ND	ND	DNQ1.65	DNQ1.29	ND	ND
1,2,3,4,6,7,8-hepta CDF	.225	PG/L	DNQ4.620	DNQ4.88	DNQ6.23	DNQ4.86	ND	DNQ7.89	DNQ6.96	DNQ7.45	DNQ5.24
1,2,3,4,7,8,9-hepta CDF	.317	PG/L	ND	ND	ND	ND	ND	ND	ND	ND	ND
octa CDF	.579	PG/L	DNQ12.4	DNQ12.0	DNQ11.1	DNQ9.65	ND	DNQ13.0	DNQ13.1	DNQ11.9	DNQ13.6

Source			PLR	PLR	PLR
Month			OCT	NOV	DEC
2,3,7,8-tetra CDD	.155	PG/L	ND	ND	ND
1,2,3,7,8-penta CDD	.254	PG/L	ND	ND	ND
1,2,3,4,7,8_hexa_CDD	.31	PG/L	ND	ND	ND
1,2,3,6,7,8-hexa CDD	.315	PG/L	ND	ND	ND
1,2,3,7,8,9-hexa CDD	.287	PG/L	ND	ND	ND
1,2,3,4,6,7,8-hepta CDD	.53	PG/L	DNQ21.3	DNQ22.3	DNQ18.1
octa CDD	1.12	PG/L	230.0	220.0	170.0
2,3,7,8-tetra CDF	.164	PG/L	ND	DNQ2.06	ND
1,2,3,7,8-penta CDF	.187	PG/L	ND	ND	ND
2,3,4,7,8-penta CDF	.178	PG/L	ND	ND	ND
1,2,3,4,7,8-hexa CDF	.19	PG/L	ND	ND	ND
1,2,3,6,7,8-hexa CDF	.211	PG/L	ND	ND	ND
1,2,3,7,8,9-hexa CDF	.265	PG/L	ND	ND	ND
2,3,4,6,7,8-hexa CDF	.217	PG/L	ND	ND	ND
1,2,3,4,6,7,8-hepta CDF	.225	PG/L	DNQ4.01	DNQ6.10	DNQ5.09
1,2,3,4,7,8,9-hepta CDF	.317	PG/L	ND	ND	ND
octa CDF	.579	PG/L	DNQ9.35	DNQ12.0	DNQ10.5

Above are permit required CDD/CDF isomers.

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

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

POINT LOMA WASTEWATER TREATMENT
EFFLUENT
Dioxin and Furan Analysis

ANALYZED BY: Frontier Analytical Laboratories

2014 Annual

Source				PLR TCDD	PLR TCDD	PLR TCDD	PLR TCDD	PLR TCDD	PLR TCDD	PLR TCDD	PLR TCDD
Month				JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG
2,3,7,8-tetra CDD	.155	PG/L	1.000	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,7,8-penta CDD	.254	PG/L	0.500	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,4,7,8_hexa_CDD	.31	PG/L	0.100	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDD	.315	PG/L	0.100	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDD	.287	PG/L	0.100	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDD	.53	PG/L	0.010	0.251	DNQ0.205	0.284	DNQ0.180	DNQ0.192	DNQ0.194	DNQ0.233	0.250
octa CDD	1.12	PG/L	0.001	0.210	0.210	0.210	0.200	0.200	0.190	0.190	0.190
2,3,7,8-tetra CDF	.164	PG/L	0.100	ND	ND	ND	ND	ND	ND	DNQ0.113	ND
1,2,3,7,8-penta CDF	.187	PG/L	0.050	ND	ND	ND	ND	ND	DNQ0.152	DNQ0.155	ND
2,3,4,7,8-penta CDF	.178	PG/L	0.500	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDF	.19	PG/L	0.100	ND	ND	ND	ND	ND	DNQ0.210	DNQ0.137	ND
1,2,3,6,7,8-hexa CDF	.211	PG/L	0.100	DNQ0.120	DNQ0.200	DNQ0.275	ND	ND	DNQ0.691	DNQ0.671	DNQ0.589
1,2,3,7,8,9-hexa CDF	.265	PG/L	0.100	ND	ND	ND	ND	ND	ND	ND	ND
2,3,4,6,7,8-hexa CDF	.217	PG/L	0.100	ND	ND	ND	ND	ND	DNQ0.165	DNQ0.129	ND
1,2,3,4,6,7,8-hepta CDF	.225	PG/L	0.010	DNQ0.046	DNQ0.049	DNQ0.062	DNQ0.049	ND	DNQ0.079	DNQ0.070	DNQ0.075
1,2,3,4,7,8,9-hepta CDF	.317	PG/L	0.010	ND	ND	ND	ND	ND	ND	ND	ND
octa CDF	.579	PG/L	0.001	DNQ0.012	DNQ0.012	DNQ0.011	DNQ0.010	ND	DNQ0.013	DNQ0.013	DNQ0.012

Source				PLR TCDD	PLR TCDD	PLR TCDD	PLR TCDD
Month				SEP	OCT	NOV	DEC
2,3,7,8-tetra CDD	.155	PG/L	1.000	ND	ND	ND	ND
1,2,3,7,8-penta CDD	.254	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8_hexa_CDD	.31	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDD	.315	PG/L	0.100	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDD	.287	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDD	.53	PG/L	0.010	DNQ0.229	DNQ0.213	DNQ0.223	DNQ0.181
octa CDD	1.12	PG/L	0.001	0.200	0.230	0.220	0.170
2,3,7,8-tetra CDF	.164	PG/L	0.100	ND	ND	DNQ0.206	ND
1,2,3,7,8-penta CDF	.187	PG/L	0.050	ND	ND	ND	ND
2,3,4,7,8-penta CDF	.178	PG/L	0.500	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDF	.19	PG/L	0.100	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDF	.211	PG/L	0.100	DNQ0.423	ND	ND	ND
1,2,3,7,8,9-hexa CDF	.265	PG/L	0.100	ND	ND	ND	ND
2,3,4,6,7,8-hexa CDF	.217	PG/L	0.100	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDF	.225	PG/L	0.010	DNQ0.052	DNQ0.040	DNQ0.061	DNQ0.051
1,2,3,4,7,8,9-hepta CDF	.317	PG/L	0.010	ND	ND	ND	ND
octa CDF	.579	PG/L	0.001	DNQ0.014	DNQ0.009	DNQ0.012	DNQ0.011

Above are permit required CDD/CDF isomers.

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

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

METROBIOSOLIDS CENTER
SLUDGE PROJECT - ANNUAL SUMMARY
Dioxin and Furan Analysis, SW-846 Method 8290
From 01-JAN-2014to 31-DEC-2014
Analyzed by: Frontier Analytical Laboratories

Source			MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN
Date			31-JAN-2014	28-FEB-2014	31-MAR-2014	30-APR-2014	31-MAY-2014	30-JUN-2014	31-JUL-2014
Analyte	MDL	Units	P695521	P701729	P707336	P710842	P716426	P720867	P727207
2,3,7,8-tetra CDD	.043	NG/KG	DNQ0.72	DNQ0.56	DNQ0.86	DNQ0.76	ND	ND	ND
1,2,3,7,8-penta CDD	.0566	NG/KG	DNQ2.35	DNQ2.90	DNQ4.25	DNQ2.74	DNQ3.61	DNQ3.14	ND
1,2,3,4,7,8_hexa_CDD	.0747	NG/KG	DNQ1.41	DNQ1.30	DNQ1.92	DNQ1.49	DNQ1.25	DNQ2.23	ND
1,2,3,6,7,8-hexa CDD	.081	NG/KG	12.10	15.90	15.30	16.40	17.30	19.30	18.10
1,2,3,7,8,9-hexa CDD	.0748	NG/KG	DNQ4	DNQ5	DNQ6	DNQ6	DNQ5	6	DNQ5
1,2,3,4,6,7,8-hepta CDD	.143	NG/KG	200	223	232	216	187	227	202
octa CDD	.297	NG/KG	1080	1130	1320	1350	934	1090	939
2,3,7,8-tetra CDF	.0435	NG/KG	3.04	3.26	3.43	3.83	3.45	3.97	3.30
1,2,3,7,8-penta CDF	.0625	NG/KG	DNQ1.33	DNQ1.35	DNQ1.94	DNQ1.54	DNQ1.50	DNQ2.12	DNQ1.76
2,3,4,7,8-penta CDF	.066	NG/KG	DNQ1.77	DNQ1.49	DNQ1.67	DNQ1.35	DNQ1.11	DNQ3.09	DNQ2.85
1,2,3,4,7,8-hexa CDF	.0484	NG/KG	DNQ1.88	DNQ1.80	DNQ2.49	DNQ2.37	DNQ1.80	DNQ2.65	DNQ2.10
1,2,3,6,7,8-hexa CDF	.0487	NG/KG	DNQ1.66	DNQ2.00	DNQ2.36	DNQ2.14	DNQ1.72	DNQ3.09	DNQ2.69
1,2,3,7,8,9-hexa CDF	.0627	NG/KG	DNQ0.54	DNQ0.57	DNQ1.02	DNQ0.72	DNQ0.61	ND	ND
2,3,4,6,7,8-hexa CDF	.0531	NG/KG	DNQ2.21	DNQ2.16	DNQ2.64	DNQ2.55	DNQ2.06	DNQ3.50	DNQ2.62
1,2,3,4,6,7,8-hepta CDF	.073	NG/KG	27.30	22.50	27.20	24.70	18.60	22.40	18.50
1,2,3,4,7,8,9-hepta CDF	.0704	NG/KG	DNQ1.84	DNQ1.38	DNQ2.44	DNQ1.77	DNQ1.33	DNQ2.87	ND
octa CDF	.155	NG/KG	66.30	61.00	68.20	64.40	49.90	62.70	44.70

Source			MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN
Date			31-AUG-2014	30-SEP-2014	31-OCT-2014	30-NOV-2014
Analyte	MDL	Units	P731763	P736392	P741662	P746878
2,3,7,8-tetra CDD	.043	NG/KG	DNQ0.79	DNQ0.70	DNQ0.58	ND
1,2,3,7,8-penta CDD	.0566	NG/KG	DNQ4.54	DNQ3.61	DNQ4.16	DNQ4.60
1,2,3,4,7,8_hexa_CDD	.0747	NG/KG	DNQ1.61	DNQ1.76	DNQ1.83	DNQ1.73
1,2,3,6,7,8-hexa CDD	.081	NG/KG	18.00	16.90	19.30	17.50
1,2,3,7,8,9-hexa CDD	.0748	NG/KG	DNQ6	DNQ6	6	DNQ6
1,2,3,4,6,7,8-hepta CDD	.143	NG/KG	232	232	227	218
octa CDD	.297	NG/KG	1180	1300	1230	1130
2,3,7,8-tetra CDF	.0435	NG/KG	4.99	5.19	6.43	4.28
1,2,3,7,8-penta CDF	.0625	NG/KG	DNQ1.70	DNQ1.68	DNQ1.83	DNQ1.82
2,3,4,7,8-penta CDF	.066	NG/KG	DNQ1.66	DNQ2.84	DNQ1.93	DNQ2.95
1,2,3,4,7,8-hexa CDF	.0484	NG/KG	DNQ2.44	DNQ2.70	DNQ2.48	DNQ2.51
1,2,3,6,7,8-hexa CDF	.0487	NG/KG	DNQ2.19	DNQ2.99	DNQ2.02	DNQ2.04
1,2,3,7,8,9-hexa CDF	.0627	NG/KG	DNQ0.93	DNQ1.13	DNQ0.84	DNQ0.91
2,3,4,6,7,8-hexa CDF	.0531	NG/KG	DNQ2.80	DNQ2.98	DNQ2.74	DNQ2.46
1,2,3,4,6,7,8-hepta CDF	.073	NG/KG	24.10	28.40	27.70	23.70
1,2,3,4,7,8,9-hepta CDF	.0704	NG/KG	DNQ1.70	DNQ1.76	DNQ1.60	DNQ1.73
octa CDF	.155	NG/KG	56.50	69.60	79.40	56.10

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

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

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VII. Other Required Information

A. Notes on Specific Analysis
B. Report of Operator Certification
C. Status of the Operations and Maintenance Manual

A. Notes on Specific Analysis

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).

2. Detection Limit

MDLs for various analyses were updated in 2014. The MDLs referenced in this report are the maximum MDL for the calendar year. The following is a table listing, by Analyses Code and Analyte Name, the changes in the MDLs that occurred in 2014. All MDL studies were performed following CFR136.3. This year most MDL studies utilized clean matrix, i.e. Deionized Water or clean sand.

ANALYSIS CODE	ANALYTE NAME	EFFECTIVE DATE	CURRENT MDL	PREVIOUS MDL	UNITS
METS_HYDR_SLDG	Arsenic	10-Feb-14	0.07	0.68	MG/KG
METS_HYDR_SLDG	Selenium	10-Feb-14	0.07	0.47	MG/KG
METS_ICP2_AWPD	Aluminum	7-Jan-14	0.846	*	UG/L
METS_ICP2_AWPD	Barium	7-Jan-14	1.07	*	UG/L
METS_ICP2_AWPD	Boron	7-Jan-14	2.25	*	UG/L
METS_ICP2_AWPD	Manganese	7-Jan-14	0.0399	*	UG/L
METS_ICP2_AWPD	Strontium	7-Jan-14	0.443	*	UG/L
METS_ICP2_DIS	Iron (Dissolved)	7-Jan-14	2.04	10	UG/L
METS_ICP2_DIS	Iron (Dissolved)	7-Jan-14	2.04	2	UG/L
METS_ICP2_DIS	Iron (Dissolved)	7-Jan-14	2.04	70	UG/L
METS_ICP2_DIS	Iron (Dissolved)	7-Jan-14	2.04	37	UG/L
METS_ICP2_DIS	Manganese (Dissolved)	7-Jan-14	0.458	0.24	UG/L
METS_ICP2_DIS	Manganese (Dissolved)	7-Jan-14	0.458	0.5	UG/L
METS_ICP2_DIS	Manganese (Dissolved)	7-Jan-14	0.458	5	UG/L
METS_ICP2_DIS	Manganese (Dissolved)	7-Jan-14	0.458	0.4	UG/L
METS_ICP2_TIS	Aluminum	1-Dec-14	1.2	3	MG/KG
METS_ICP2_TIS	Antimony	1-Dec-14	0.1	0.2	MG/KG
METS_ICP2_TIS	Arsenic	1-Dec-14	0.12	0.24	MG/KG
METS_ICP2_TIS	Barium	1-Dec-14	0.02	0.03	MG/KG
METS_ICP2_TIS	Beryllium	1-Dec-14	0.002	0.006	MG/KG
METS_ICP2_TIS	Cadmium	1-Dec-14	0.01	0.06	MG/KG
METS_ICP2_TIS	Chromium	1-Dec-14	0.07	0.1	MG/KG

ANALYSIS CODE	ANALYTE NAME	EFFECTIVE DATE	CURRENT MDL	PREVIOUS MDL	UNITS
METS_ICP2_TIS	Copper	1-Dec-14	0.043	0.3	MG/KG
METS_ICP2_TIS	Iron	1-Dec-14	0.7	2	MG/KG
METS_ICP2_TIS	Lead	1-Dec-14	0.07	0.2	MG/KG
METS_ICP2_TIS	Manganese	1-Dec-14	0.02	0.1	MG/KG
METS_ICP2_TIS	Nickel	1-Dec-14	0.06	0.2	MG/KG
METS_ICP2_TIS	Silver	1-Dec-14	0.03	0.05	MG/KG
METS_ICP2_TIS	Thallium	1-Dec-14	0.1	0.4	MG/KG
METS_ICP2_TIS	Tin	1-Dec-14	0.05	0.2	MG/KG
METS_ICP2_TIS	Zinc	1-Dec-14	0.1	0.15	MG/KG
METS_ICP2_WW	Aluminum	30-May-14	23.8	47	UG/L
METS_ICP2_WW	Antimony	30-May-14	2.44	2.9	UG/L
METS_ICP2_WW	Barium	30-May-14	0.7	0.039	UG/L
METS_ICP2_WW	Beryllium	30-May-14	0.05	0.022	UG/L
METS_ICP2_WW	Boron	30-May-14	1.4	7	UG/L
METS_ICP2_WW	Cadmium	30-May-14	0.26	0.53	UG/L
METS_ICP2_WW	Chromium	30-May-14	0.54	1.2	UG/L
METS_ICP2_WW	Cobalt	30-May-14	0.24	0.85	UG/L
METS_ICP2_WW	Copper	30-May-14	2.16	2	UG/L
METS_ICP2_WW	Iron	30-May-14	15.6	37	UG/L
METS_ICP2_WW	Lead	30-May-14	1.68	2	UG/L
METS_ICP2_WW	Manganese	30-May-14	0.78	0.24	UG/L
METS_ICP2_WW	Molybdenum	30-May-14	0.32	0.89	UG/L
METS_ICP2_WW	Nickel	30-May-14	0.53	0.53	UG/L
METS_ICP2_WW	Silver	30-May-14	0.73	0.4	UG/L
METS_ICP2_WW	Thallium	30-May-14	3.12	3.9	UG/L
METS_ICP2_WW	Tin	30-May-14	1.66	2.1	UG/L
METS_ICP2_WW	Titanium	30-May-14	0.21	*	UG/L
METS_ICP2_WW	Vanadium	30-May-14	0.45	0.64	UG/L
METS_ICP2_WW	Zinc	30-May-14	4.19	2.5	UG/L
TN_DSLDG	Total Nitrogen	12-Dec-14	0.01	1.1	WT%
TOC_N_SED	Total Nitrogen	12-Dec-14	0.01	0.005	WT%
TOC_N_SED	Total Organic Carbon	12-Dec-14	0.04	0.01	WT%
TPH_G	TPH as Gasoline	28-Apr-14	5.52	4.63	UG/L
TSS/VSS	Total Suspended Solids	24-Jan-14	2.5	2.5	MG/L
TSS/VSS	Total Suspended Solids	24-Jan-14	2.5	1.4	MG/L
TSS/VSS	Volatile Suspended Solids	24-Jan-14	2.5	*	MG/L
TSS/VSS	Volatile Suspended Solids	24-Jan-14	2.5	1.6	MG/L

* No previous MDL on Analysis Code

B. Report of Operator Certification

Report of Operator Certification

The following list includes all Wastewater Treatment Plant Operators working for the Public Utilities Wastewater Department at the Point Loma Wastewater Treatment Plant and their California State certification status **as of January 2015**, Name, Certification Grade, Certification Number, and expiration date are shown for each operator.

NAME	Grade	Cert #	Expiration
PTL Superintendent:			
Shankles, K.C.	V	6975	June, 2015
Senior Operations Supervisors:			
Huntamer, David	V	8686	Dec, 2015
Operations Supervisors:			
Cesar Sanchez	V	10083	June, 2015
Avila, Juan	III	28383	Dec, 2015
Marlow, David	V	10216	Dec. 2016
Salonga, Leonardo	III	27923	Dec. 2015
Feliciano, Romeo	III	10196	June, 2015
Griffiths, Eric	III	28975	Dec 2015
Plant Operators:			
Gutierrez, Marlene	II	9636	June 2015
Palestini, Anthony	II	8521	Dec 2015
Pizarro, Emiliano	II	9863	June 2016
Wade, Brian	II	9141	Dec 2016
Alpas, Gilbert	III	6314	Dec 2016
Childress, Linda	II	41589	Jan 2017
Mohler, Victor	III	28869	June 2016
Tomas, Matthew	III	29004	Dec 2015
Rogers, Larry	II	10121	Dec 2015
Valenzuela, Sam	II	40695	Jan 2017
Moreno, Daniel	II	40707	Dec 2016
Gumbiner, Jason	OIT		Dec 2016
Squyres, Tracy	OIT II		Nov 2016
O'Riley, Eric	OIT II		Oct 2016
Holyfield, Kevin	OIT		Sept 2016
Process Control			
Nunez, Carlos	III	7626	June 2016
Dornfeld, Michael	II	7678	Dec 2016

The following list includes all Wastewater Treatment Plant Operators working for the Public Utilities Wastewater Department at the Metro Biosolids Center and their California State certification status **as of January 2015**, Name, Certification Grade, Certification Number, and expiration date are shown for each operator.

NAME	Grade	Cert #	Expiration
MBC Superintendent:			
Barry Ayers	V	9346	June, 2016
Senior Operations Supervisors:			
Richard Pitchford	V	9851	June, 2017
Operations Supervisors:			
Ralph Dugdale	III	5936	June, 2015
Dedric Evans	III	10196	June, 2016
Brandon Howard	V	28024	Dec. 2016
Shannon McKiernan	III	7465	Dec. 2015
Frank Perea	III	7968	June, 2015
Javier Zavala	III	9635	June 2015
Plant Operators:			
Barry Calton	III	10178	Dec. 2016
Larren Colum	II	41857	Dec. 2016
Raymond Crowder	II	40563	Aug. 2015
Noemi Gonzalez- Bueno	II	41833	Oct. 2016
James Johnson	II	29021	June, 2017
Laura Kaiser	II	28842	June, 2016
Eric Neptune	II	28839	June, 2015
Sony Reth	III	29023	June, 2016
Ben Reynolds	II	6638	Dec. 2015
Hayvert Williams	III	27959	Dec. 2015
Aaron Gentry	OIT-I	OIT-I	Dec. 2016

C. Status of the Operations and Maintenance Manual

Point Loma WWTP:

There is an approved O&M Manual for the PLWWTP. Plant staff continues to review and update the Manual and Standard Operating Procedures (SOP's) as necessary to keep current with changes in equipment, processes, and standards of practice. New procedures are included as needs are identified. For example, PLWWTP Staff, in conjunction with the Safety Staff, have developed and established a standard Lock-Out/Tag-Out Program to serve all MWWD Facilities.

Plant Personnel continue the ISO certification and operate the PLWTP facility under the guidelines of the Environmental Management System established under our ISO 14001 program. This program has helped to organize and consolidate facility SOP's, and has been effective in enhancing plant personnel's awareness of industrial and environmental issues as they relate to the work place.

VIII. Appendices

A. Terms and Abbreviations used in this Report
B. Methods of Analysis
C. Frequency of Analysis and Type of Sample
D. Laboratories contributing Results used in this report
E. QA Summary Report
F. Staff Contributing to this Report
G. System wide calculation definition

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.
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
MBC - Metro Biosolids Center
MBCDEWCN - Metro Biosolids Center Dewatering Centrifuges; typically the dewatered biosolids from these.
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
pc/L or pCi/L ..... pico curies per liter
TU..... toxicity units
ntu..... nephelometric turbidity units
^{o}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
BOD.....Biochemical Oxygen Demand
BOD_5 ..... 5-Day Biochemical Oxygen Demand
CN^-.....Cyanide
COD.....Chemical Oxygen Demand
Cr^{6+} .....Hexavalent Chromium
D.O. .....Dissolved Oxygen
DDD .....Dichlorodiphenyldichloroethane .....(a.k.a. TDE-tetrachlorodiphenylethane)
DDE.....Dichlorodiphenyldichloroethylene
DDT.....Dichlorodiphenyltrichloroethane
$FeCl_3$.....Ferric Chloride
G&O .....Grease and Oil
GC .....Gas chromatography.
GC-ECD .....Electron Capture Detector
GC-FID.....Flame Ionization Detector
GC-FPD.....Flame Photometric Detector
GC-MS .....Mass Spectroscopy
H_2S.....Hydrogen Sulfide
Hg .....Mercury
IC .....Ion Chromatography
ICP-AES.....Inductively Coupled Plasma-Atomic Emission Spectroscopy
MDL .....Method Detection Limit
MSD .....Mass Spectroscopy Detector
NH_3.....Ammonia
NH_3-N.....Ammonia Nitrogen
NH_4^+ .....Ammonium ion
NO_3^-.....Nitrate
PAD .....Pulsed Amperometric Detector
PCB .....Polychlorinated Biphenyls
PO_4^{3-} .....Phosphate
SO_4^{2-} .....Sulfate
SS.....Suspended Solids
TBT .....Tributyl tin
TCH .....Total Chlorinated Hydrocarbons (i.e. chlorinated pesticides & PCB's)
TCLP .....Toxicity Characteristic Leaching Procedure
TDS .....Total Dissolved Solids
TS .....Total Solids
TVS .....Total Volatile Solids
VSS.....Volatile Suspended Solids

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	(e) 200.7
Antimony	Acid Digestion / ICP-AES	TJA IRIS	(e) 200.7
Arsenic	Hydride Generation / AA	Thermo iCE 3000	(h) 3114 C
Barium	Acid Digestion / ICP-AES	TJA IRIS	(e) 200.7
Beryllium	Acid Digestion / ICP-AES	TJA IRIS	(e) 200.7
Boron	Acid Digestion / ICP-AES	TJA IRIS	(e) 200.7
Cadmium	Acid Digestion / ICP-AES	TJA IRIS	(e) 200.7
Calcium	Acid Digestion / ICP-AES	TJA IRIS	(e) 200.7
Chromium	Acid Digestion / ICP-AES	TJA IRIS	(e) 200.7
Cobalt	Acid Digestion / ICP-AES	TJA IRIS	(e) 200.7
Copper	Acid Digestion / ICP-AES	TJA IRIS	(e) 200.7
Iron	Acid Digestion / ICP-AES	TJA IRIS	(e) 200.7
Lead	Acid Digestion / ICP-AES	TJA IRIS	(e) 200.7
Lithium	Acid Digestion / ICP-AES	TJA IRIS	(e) 200.7
Magnesium	Acid Digestion / ICP-AES	TJA IRIS	(e) 200.7
Manganese	Acid Digestion / ICP-AES	TJA IRIS	(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	(e) 200.7
Nickel	Acid Digestion / ICP-AES	TJA IRIS	(e) 200.7
Potassium	Acid Digestion / ICP-AES	TJA IRIS	(e) 200.7
Selenium	Hydride Generation / AA	Thermo iCE 3000	(h) 3114 C
Silver	Acid Digestion / ICP-AES	TJA IRIS	(e) 200.7
Sodium	Acid Digestion / ICP-AES	TJA IRIS	(e) 200.7
Thallium	Acid Digestion / ICP-AES	TJA IRIS	(e) 200.7
Vanadium	Acid Digestion / ICP-AES	TJA IRIS	(e) 200.7
Zinc	Acid Digestion / ICP-AES	TJA IRIS	(e) 200.7

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

WASTEWATER INFLUENT and EFFLUENT (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	Basic / CH2Cl2 continuous extraction, GC-MSD	HP-6890GC / 5973MSD Capillary DB-5.625	(a) 625
Benzidines	Basic / CH2Cl2 continuous extraction, GC-MSD	HP-6890GC / 5973MSD Capillary DB-5.625	(a) 625
Chlorinated Compounds	CH2Cl2 extraction, GC-ECD	Bruker 450-GC 300-MS TQ Mass Spectrometer DB-XLB	(a) 608
Dioxin	Outside Contract (Frontier)	VG/Micromass 70SE Fisons/Micromass Autospec M Waters /Micromass Autospec M	(w) 1613E
Organophosphorus Pesticides	CH2Cl2 extraction, hexane exchange, GC-PFPD	Varian 3800 GC-PFPD RTX-1 :RTX-50	(a) 622
Phenolic Compounds	Acidic / CH2Cl2 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	CH2Cl2 extraction, derivatization, hexane exchange, GC-FPD	Varian 3400 GC-FPD DB-608/30m	(l)

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

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

Analyte	Description	Instrumentation	Reference[1]
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	(c) 6010 B
Antimony	Acid Digestion / ICP-AES	TJA IRIS	(c) 6010 B
Arsenic	Hydride Generation / AA	Thermo iCE 3000	(c) 7062
Beryllium	Acid Digestion / ICP-AES	TJA IRIS	(c) 6010 B
Barium	Acid Digestion / ICP-AES	TJA IRIS	(c) 6010 B
Boron	Acid Digestion / ICP-AES	TJA IRIS	(c) 6010 B
Cadmium	Acid Digestion / ICP-AES	TJA IRIS	(c) 6010 B
Chromium	Acid Digestion / ICP-AES	TJA IRIS	(c) 6010 B
Cobalt	Acid Digestion / ICP-AES	TJA IRIS	(c) 6010 B
Copper	Acid Digestion / ICP-AES	TJA IRIS	(c) 6010 B
Iron	Acid Digestion / ICP-AES	TJA IRIS	(c) 6010 B
Lead	Acid Digestion / ICP-AES	TJA IRIS	(c) 6010 B
Manganese	Acid Digestion / ICP-AES	TJA IRIS	(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	(c) 6010 B
Nickel	Acid Digestion / ICP-AES	TJA IRIS	(c) 6010 B
Selenium	Hydride Generation / AA	Thermo iCE 3000	(c) 7742
Silver	Acid Digestion / ICP-AES	TJA IRIS	(c) 6010 B
Thallium	Acid Digestion / ICP-AES	TJA IRIS	(c) 6010 B
Vanadium	Acid Digestion / ICP-AES	TJA IRIS	(c) 6010 B
Zinc	Acid Digestion / ICP-AES	TJA IRIS	(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 / CH2Cl2 continuous extraction, GC-MSD	HP-6890GC / 5973MSD Capillary DB-5.625	(a) 625 (b)
Benzidines	Basic / CH2Cl2 continuous extraction, GC-MSD	HP-6890GC / 5973MSD Capillary DB-5.625	(a) 625
Chlorinated Compounds	CH2Cl2 extraction, GC-ECD	Bruker 450-GC 300-MS TQ Mass Spectrometer DB-XLB	(c) 8081 A
PCBs	CH2Cl2 extraction, GC-ECD	Bruker 450-GC 300-MS TQ Mass Spectrometer DB-XLB	(c) 8082
Dioxin	Outside Contract (Frontier)	VG/Micromass 70SE Fisons/Micromass Autospec M Waters /Micromass Autospec M	(a) 8290
Organophosphorus Pesticides	CH2Cl2 extraction, hexane exchange, GC-PFPD	Varian 3800 GC-PFPD RTX-1 : RTX-50	(a) 622
Phenolic Compounds	Acidic / CH2Cl2	HP-6890GC / 5973MSD	(a) 625

	continuous extraction, GC-MSD	Capillary DB-5.625	(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	CH2Cl2 extraction, derivatization, hexane exchange, GC-FPD	Varian 3400 GC-FPD DB-608/30m	(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 and 9014
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 Cº	Denver PI-314, Mettler AB204	(i) 2540 B
Solids, Total-Volatile	Gravimetric @ 500 Cº	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	(c) 6010 B
Antimony	Acid Digestion / ICP-AES	TJA IRIS	(c) 6010 B
Arsenic	Hydride Generation / AA	Thermo iCE 3000	(c) 7062
Barium	Acid Digestion / ICP-AES	TJA IRIS	(c) 6010 B
Beryllium	Acid Digestion / ICP-AES	TJA IRIS	(c) 6010 B
Boron	Acid Digestion / ICP-AES	TJA IRIS	(c) 6010 B
Cadmium	Acid Digestion / ICP-AES	TJA IRIS	(c) 6010 B
Chromium	Acid Digestion / ICP-AES	TJA IRIS	(c) 6010 B
Cobalt	Acid Digestion / ICP-AES	TJA IRIS	(c) 6010 B
Copper	Acid Digestion / ICP-AES	TJA IRIS	(c) 6010 B
Iron	Acid Digestion / ICP-AES	TJA IRIS	(c) 6010 B
Lead	Acid Digestion / ICP-AES	TJA IRIS	(c) 6010 B
Manganese	Acid Digestion / ICP-AES	TJA IRIS	(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	(c) 6010 B
Nickel	Acid Digestion / ICP-AES	TJA IRIS	(c) 6010 B
Selenium	Hydride Generation / AA	Thermo iCE 3000	(c) 7742

Silver	Acid Digestion / ICP-AES	TJA IRIS	(c) 6010 B
Thallium	Acid Digestion / ICP-AES	TJA IRIS	(c) 6010 B
Vanadium	Acid Digestion / ICP-AES	TJA IRIS	(c) 6010 B
Zinc	Acid Digestion / ICP-AES	TJA IRIS	(c) 6010 B
Waste Extraction Test (WET)	Extraction with Sodium Citrate ICP-AES	Burrel wrist action shaker TJA IRIS	(j) Section 66261.100

[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	CH2Cl2 /Acetone sonication extraction, GC-MSD	Agilent-7890GC / 5975MSD Capillary DB-5.625	(c) 8270 C (c) 3550 A
Chlorinated Compounds	CH2Cl2 extraction, GC-ECD	Bruker 450-GC 300-MS TQ Mass Spectrometer DB-XLB	(c) 8081 A
PCBs	CH2Cl2 extraction, GC-ECD	Bruker 450-GC 300-MS TQ Mass Spectrometer DB-XLB	(c) 8082
Dioxin	Outside Contract (Frontier)	VG/Micromass 70SE Fisons/Micromass Autospec M Waters /Micromass Autospec M	(a) 8290
Organophosphorus Pesticides	CH2Cl2 extraction, hexane exchange, GC-PFPD	Varian 3800 GC-PFPD RTX-1 : RTX-50	(c) 8141 A
Phenolic Compounds	CH2Cl2 / 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	CH2Cl2 extraction, derivatization, hexane exchange, GC-FPD	Varian 3400 GC-FPD 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 ICS3000-PAD(Ag)	(k)
Solids, Total	Gravimetric @ 103-105 Cº	AND HM-120	(g) 2540 B
Solids, Total-Volatile	Gravimetric @ 500 Cº	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	(c) 6010 B
Antimony	Acid Digestion / ICP-AES	TJA IRIS	(c) 6010 B
Arsenic	Hydride Generation / AA	Thermo iCE 3000	(c) 7062
Beryllium	Acid Digestion / ICP-AES	TJA IRIS	(c) 6010 B
Cadmium	Acid Digestion / ICP-AES	TJA IRIS	(c) 6010 B
Chromium	Acid Digestion / ICP-AES	TJA IRIS	(c) 6010 B
Copper	Acid Digestion / ICP-AES	TJA IRIS	(c) 6010 B
Iron	Acid Digestion / ICP-AES	TJA IRIS	(c) 6010 B
Lead	Acid Digestion / ICP-AES	TJA IRIS	(c) 6010 B
Manganese	Acid Digestion / ICP-AES	TJA IRIS	(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	(c) 6010 B
Selenium	Hydride Generation / AA	Thermo iCE 3000	(c) 7742
Silver	Acid Digestion / ICP-AES	TJA IRIS	(c) 6010 B
Thallium	Acid Digestion / ICP-AES	TJA IRIS	(c) 6010 B
Tin	Acid Digestion / ICP-AES	TJA IRIS	(c) 6010 B
Zinc	Acid Digestion / ICP-AES	TJA IRIS	(c) 6010 B

OCEAN SEDIMENT (Organics)

Analyte	Description	Instrumentation	Reference[1]
Base/Neutral Extractables	CH2Cl2 / Acetone ASE GC-MSD	Agilent-7890GC / 5975MSD Capillary DB-5.625	(c) 8270 C (b) 3545A
Chlorinated Compounds	CH2Cl2 extraction, GC-MS/MS	Varian 3800 GC Saturn 2000 MS-Ion Trap DB-XLB/60m	(c) 8081 A 3545A
PCBs as Congeners	CH2Cl2 extraction, GC-MS/MS	Varian 3800 GC Saturn 2000 MS-Ion Trap DB-XLB/60m	(c) 8082 3545A
Organophosphorus Pesticides	CH2Cl2 extraction, hexane exchange, GC-PFPD	Varian 3800 GC-PFPD RTX-1 : RTX-50	(c) 8141 A
Tri, Di, and Monobutyl Tin	CH2Cl2 extraction, derivatization, hexane exchange, GC-FPD	Varian 3400 GC-FPD DB-608/30m	(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 AB-204 Balance	(n)
Lipids	Hexane/Acetone Extraction Gravimetric	Dionex ASE-200 Mettler AB-204 Balance	(o)

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

Analyte	Description	Instrumentation	Reference[1]
Aluminum	Acid Digestion / ICP-AES	TJA IRIS	(e) 200.3 / 200.7
Antimony	Acid Digestion / ICP-AES	TJA IRIS	(e) 200.3 / 200.7
Arsenic	Acid Digestion / ICP-AES	Thermo iCE 3000	(c) 7742
Beryllium	Acid Digestion / ICP-AES	TJA IRIS	(e) 200.3 / 200.7
Cadmium	Acid Digestion / ICP-AES	TJA IRIS	(e) 200.3 / 200.7
Chromium	Acid Digestion / ICP-AES	TJA IRIS	(e) 200.3 / 200.7
Copper	Acid Digestion / ICP-AES	TJA IRIS	(e) 200.3 / 200.7
Iron	Acid Digestion / ICP-AES	TJA IRIS	(e) 200.3 / 200.7
Lead	Acid Digestion / ICP-AES	TJA IRIS	(e) 200.3 / 200.7
Manganese	Acid Digestion / ICP-AES	TJA IRIS	(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	(e) 200.3 / 200.7
Selenium	Hydride Generation / AA	Thermo iCE 3000	(c) 7742
Silver	Acid Digestion / ICP-AES	TJA IRIS	(e) 200.3 / 200.7
Thallium	Acid Digestion / ICP-AES	TJA IRIS	(e) 200.3 / 200.7
Tin	Acid Digestion / ICP-AES	TJA IRIS	(e) 200.3 / 200.7
Zinc	Acid Digestion / ICP-AES	TJA IRIS	(e) 200.3 / 200.7

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

Analyte	Description	Instrumentation	Reference[1]
Base/Neutral Extractables	Basic / CH2Cl2 ASE extraction, GC-MSD	Dionex ASE-200 Agilent-7890GC/5975 MSD Capillary DB-5625	(c) 3545 / 8270 C
Chlorinated Compounds	CH2Cl2 extraction, GC- MS/MS	Varian 3800 GC Saturn 2000 MS-Ion Trap DB-XLB/60m	(c) 3545 / 8081 A
PCBs	CH2Cl2 extraction, hexane exchange, GC- 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.

w) Method 1631, Revision E:,
Mercury in water by oxidation, purge and trap, and cold vapor atomic fluorescence spectrometry

C. Frequency of analysis and Type of Sample - 2014

CONSTITUENT	Frequency	Sample Type	Permit Required		Comments
			Influent	Effluent	
Process Control					
Biochemical Oxygen Demand -Total	Daily	Composite	X	X	
Biochemical Oxygen Demand -Soluble	Daily	Composite			Monday-Friday
Chemical Oxygen Demand	Weekly	Composite			
Conductivity	Weekly	Composite			
Floating Particulates	Daily	Composite	X	X	
Flow	Daily		X	X	Same meter used
Oil and Grease	Daily	Grab	X	X	
pH	Daily	Grab	X	X	
Settleable Solids	Daily	Grab	X	X	
Temperature	Daily	Grab	X	X	
Total Dissolved Solids	Daily	Composite	X	X	
Total Solids	Weekly	Composite			
Total Suspended Solids	Daily	Composite	X	X	
Total Volatile Solids	Weekly	Composite			
Turbidity	Daily	Composite	X	X	
Volatile Suspended Solids	Daily	Composite	X	X	
Metals					
As,Cd,Cr,Cu,Pb,Hg,Ni,Se,Ag,Zn	Weekly	Composite	X	X	
Sb, Be, Tl	Weekly	Composite	X	X	Req. Frequency=Monthly
Fe	Weekly	Composite			
Ions					
Alkalinity	Weekly	Composite			
Ammonia-Nitrogen	Weekly	Composite	X	X	
Anions (F-,Cl-,Br-,SO42-,NO3-,PO43-)	Weekly	Composite			
Cations (Ca2+, Mg2+, Li+,Na+,K+)	Weekly	Composite			
Cyanide	Weekly	Composite	X	X	
Hardness (Total, Ca, Mg)	Weekly	Composite			By calculation
Organic Priority Pollutants					
Acrolein and Acrylonitrile	Monthly	Grab	X	X	Method 8260
Base/Neutral Compounds	Monthly	Composite	X	X	Method 625
Benzidines	Monthly	Composite	X	X	Method 625
Dioxin	Monthly	Composite	X	X	Method 1613
Pesticides, chlorinated	Monthly	Composite	X	X	
Pesticides, organophosphorus	Semi-Annual	Composite			
Phenols, non-chlorinated	Weekly	Composite	X	X	Method 625
Phenols, chlorinated	Weekly	Composite	X	X	Method 625
Polychlorinated Biphenyls	Weekly	Composite	X	X	
Purgeable (Volatile) Compounds	Monthly	Grab	X	X	Method 8260
Tri, Di, & monobutyl tins	Monthly	Composite	X	X	
Miscellaneous					
Radiation	Monthly	Composite	X	X	Performed by a contract lab.
Toxicity (Acute & Chronic)	Monthly	Composite	X		Reported in the monthly Toxicity Testing Report by the Biology Section

D. Laboratories Contributing Results used in this report.

i. Metropolitan Wastewater Chemistry Laboratory (EPA Lab Code: CA00380, ELAP Certificate: 1609)
5530 Kiowa Drive
La Mesa, CA 91942
(619)668-3212
All results except those listed below.

ii. Point Loma Wastewater Chemistry Laboratory
(EPA Lab Code: CA01435, ELAP Certificate: 2474)
1902 Gatchell Road
San Diego, CA 92106
(619)221-8765
Process control analyses and wet methods for the plant.

iii. North City Wastewater Chemistry Laboratory
(EPA Lab Code: CA01436, ELAP Certificate: 2477)
4949 Eastgate Mall
San Diego, CA 92121
(858)824-6009
Process control analyses and wet methods for the plant.

iv. Metro Biosolids Center Chemistry Laboratory
(EPA Lab Code: CA01437, ELAP Certificate: 2478)
5240 Convoy Street
San Diego, CA 92111
(858)614-5834
Process control analyses and wet methods for the plant.

v. South Bay Water Reclamation Plant
(EPA Lab Code: CA01460, ELAP Certificate: 2539)
2411 Dairy Mart Road
San Diego, CA 92173
619.428.7349
Process control analyses and wet methods for the plant.

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
Total Organic Carbon in Wastewater

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
Microbiology

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
Bioassays

ix. Frontier Analitical Laboratory
(EPA Lab Code:CA014455, NELAP- Certificate: 02113CA)
5172 Hillsdale Circle
El Dorado Hills, CA95762
(916) 934-0900

x. Test America (EPA Lab code: WA00023, CA ELAP Certification: 2425
2800 George Washington Way
Richland, WA 99354-1613
Telephone# (509) 375-3131
Gross Alpha/Beta Radioactivity

xi. Test America
2960 Foster Creighton Drive
Nashville, TN 37204
NELAP Certification: 01168CA
Telephone# (615) 726-0177

E. QA Report Summary

Summary and Overview:

The Environmental Chemistry Services section, Public Utilities Department, City of San Diego performs most of the NPDES and other permit and process control chemical and physical testing for the City of San Diego E.W. Bloom, Pt. Loma Wastewater Treatment Plant (PLWWTP), North City Water Reclamation Plant (NCWRP), South Bay Water Reclamation Plant (SBWRP), and the Metro Biosolids Center (MBC). We also perform the chemical/physical testing of ocean sediment and fish tissue samples for the Ocean monitoring program for the City of San Diego (PLWWTP Ocean Outfall and SBWRP Ocean Outfall) and the International Boundary and Water Commission, International Treatment Plant outfall. We also perform environmental testing for various customers, both internal to the City of San Diego and for other agencies.

The QA/QC activities of the Laboratory are comprehensive and extensive. Of the 42,023 samples received in the Laboratory in 2014, approximately 38.7% were Quality Control (QC) samples, such as blanks, check samples, standard reference materials, etc. 125 different analyses were performed throughout the year resulting in 253,687 analytical determinations. Of the determinations, 107,061 (~42.2%) were QC determinations (e.g. blanks, lab. replicates, matrix spikes, surrogates, etc.) used to determine the accuracy, precision, and performance of each analysis and batch.

We have 5 separate laboratory facility locations, each with its own California ELAP (Environmental Laboratory Accreditation Program) certification for the fields of testing required under California regulations and one of these laboratories is certified for fields of testing under the Arizona Department of Health Services (ADHS). These are rigorous programs involving continuing independent blind performance testing, biannual comprehensive audits, and extensive documentation requirements. Each of the 5 laboratory facilities in the Public Utilities Department are independently certified and copies of those certifications are included in Attachment 1. California ELAP and Arizona certifies fields of testing (methods/analytes) only for Water, Wastewater, and Hazardous materials for which methods are published in the Federal Register or specifically approved in regulation by U.S.EPA. Additionally, the Laboratory performs analyses using methods for which certification does not exist, such as ocean sediment and sea water determinations. Those 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. Many methods of analysis developed for matrices and applications not within ELAP jurisdiction have been adapted from ELAP listed methods. In all cases, we apply generally accepted standards of performance and quality control to methods.

Additionally, the operating 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 for, and/or are approved by the appropriate regulatory agency (e.g. SDRWQCB). Copies of their certifications are included as Attachment 2.

The following report summarizes the QA/QC activities during 2014 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 Ananlyses and wet mehtod for the treatment plant.
North City Wastewater Chemistry Laboratory	CA01436		2477	4949 Eastgate Mall San Diego, CA 92121	(858)824-6009	Process Control Ananlyses and wet mehtod for the treatment plant.
Metro Biosolids Center Chemistry Laboratory	CA01437		2478	5240 Convoy Street San Diego, CA 92111	(858)614-5834	Process Control Ananlyses and wet mehtod for the treatment plant.
South Bay Wastewater Chemistry Laboratory	CA00080		2539	2411 Dairy Mart Road San Diego, CA 92173	(619)428-7349	Process Control Ananlyses and wet mehtod 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			01168CA	2960 Foster Creighton Drive Nashville, TN 37204	(615)756-0177	Herbicides (2011)
Frontier Analytical Laboratory			02113CA	5172 Hillsdale Circle El Dorado Hills, CA 95762	(916)934-0900	Dioxin/Furan Wastewater and Solids
* Licenced & certification as Arizona Out-of-State Laboratory						

Facilities & Scope:

Environmental Chemistry Services (ECS) comprises five geographically separated laboratories. The Section's main laboratory facilities and headquarters located at the Alvarado Joint Laboratory building in La Mesa and the four satellite chemistry laboratories located at MWWD treatment plants maintain individual California Department of Health Service, Environmental Laboratory Accreditation Program (ELAP) certification in their respective Fields of Testing (FoT). Each laboratory has its own U.S.EPA 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	2411Dairy 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 laboratory at Alvarado is the main office for ECS and contains the most extensive laboratory facilities of the several laboratories. Along with a variety of process control and wet chemistry analyses, this facility 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 directly related to the support of the operations of the co-located wastewater treatment plant.

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

- E.W. Blom, Pt. 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, International Treatment Plant.
- Other environmental testing for various customers, both internal to the City of San Diego and other public agencies.

A small portion of the required monitoring testing was sub-contracted out to laboratories certified by ELAP for those analyses, specifically;

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

Copies of these laboratories' ELAP certifications are included as Attachment 2. 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. organo-tin analyses, sediment grain size, etc.) or adaptations of exiting 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 the participation of several public, academic/research, and private laboratories under the umbrella of the Southern California Coastal Water Research Project (SCCWRP). These programs are repeated periodically as part of the Southern California Bight Regional Monitoring/Survey Project. This 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 was adopted as the standard reference material for QC QA for the Southern California Bight Regional Project. This sample is also used world-wide as a standard reference material. 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, 2014 - December 31, 2014.[17]

The sample distribution for 2014 is significantly changed from 2013; QC sample log numbers were changed in 2014 to account for individual QC samples in batches from a single stock solution. 253,687 analytical determinations were made on 42,023 samples received by the Laboratory in 2014 (see table A.). Of these 16,267 or 38.71% were Quality Control (QC) samples. 12.43% were blanks and 26.28% check or reference samples.

	2014	
	Number of Samples	**Percent of total samples**
Table A. Samples		
Customer/Environmental samples	**25,756**	**61.29%**
Quality Control (QC) samples	**16,267**	**38.71%**
Total Samples	**42,023**	**100.00%**
QC Samples:		
Blanks:		
FIELD_BLANK	**235**	**0.56%**
REAGENT_BLANK	**23**	**0.05%**
TRIP BLANK	**0**	**0.00%**
METHOD_BLANK	**4,965**	**11.81%**
Total Blanks:	**5,223**	**12.43%**
Check samples:		
External Check samples	**5,540**	**13.18%**
Internal Check samples	**5,403**	**12.86%**
Low Level MDL Verification	**53**	**0.13%**
SRMs (Standard Reference Material)	**48**	**0.11%**
Total Check Samples:	**11,044**	**26.28%**
Total QC Samples:	**16,267**	**38.71%**

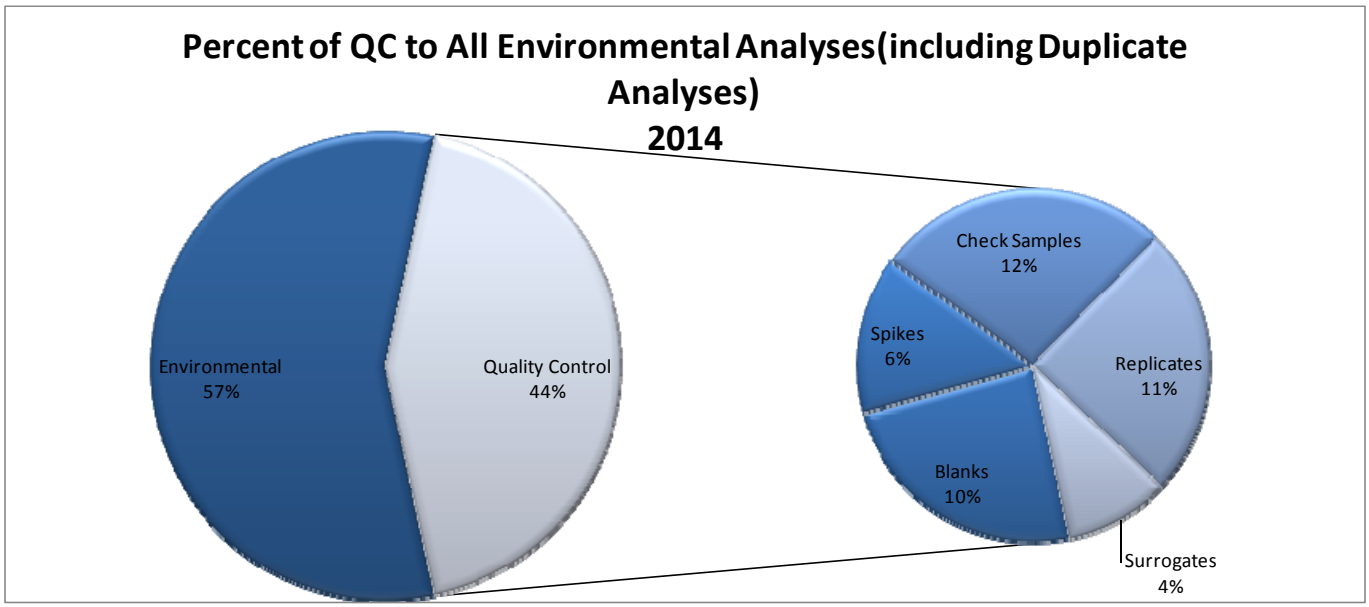
High levels of QC are used for laboratory determinations. 42.2% of the 253,687 determinations were QC (e.g. blanks, lab replicates, matrix spikes, surrogates, etc.). If calculated for the 238,664 customer determinations only, the percentage increases to 44.9%.

1.19% of total analytical determinations or of analytical batches did not meet internal QA review due to a variety of criteria, e.g. unsuccessful calibration, unacceptable QC performance, etc. Samples having analytical determinations that were rejected are reanalyzed, or, if that is not possible, the data is either not reported or reported but flagged as having not met data quality objectives and may not be suitable for compliance determination.

17 Data counts (metrics) were obtained on March 03, 2015 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, 2014 and December 31, 2014. This data summary is comprehensive; includes all laboratory analyses work for all customers, projects, and programs unless otherwise indicated.

Table A.2. Analyses (results) - 2014

	Number	Percent of total	
Total number of analytes/results determined:	**253,687**	NA	
Total results not complete [2]:	9,057	3.6%	
No. of results for Customer/Environmental Samples [1,3]:	**238,664**	**94.1%**	
Total number of rejected results:	15,023	6.28%	
No. of results for blanks [3]:	25,753	10.2%	10.8%
No. of results for matrix spikes [3]:	15,504	6.1%	6.5%
No. of results for Check samples [3]:	28,868	11.4%	12.1%
No. of results for Replicates [3]:	26,732	10.5%	11.2%
No. of results for surrogates [3]:	10,204	4.0%	4.3%
Total QC analyses run [3] :	**107,061**	**42.2%**	**44.9%**



1 – matrix spike, replicates, surrogates are also part of the total for Customer/Environmental samples.
2 – as of March 03, 2015.
3 – percent of QC samples calculated from grand total of 238,664.

NOTE: Analysis, for the purposes of the metrics used in this report generally refer to each analyte determined in each sample in a batch. For example, an analysis (determination) of several metals in a sample (e.g. iron, nickel, lead) would total as 3 analyses in the expression of totals such as those in the Analyses table on the preceding page. This method of calculation has been used for many years and, with batch and method, is 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:	15,203	98.59%
Total number of rejected analytical batches:	183	1.19%
Incomplete batches (as of March 3, 2015):	34	0.22%

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	4658	1.95%
Test America	340	0.14%
Total outside results:	4,998	2.09%

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 2015.

Performance Testing (PT) Studies for 2014:

The Environmental Chemistry Laboratories participates in required ELAP and U.S.EPA PT studies throughout the year. We participated in 13 PT studies in 2014. Each of our geographically separated laboratory facilities participated individually (as required by ELAP). 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 internal protocols, modified procedures were 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 2014 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-0114	57	57	100%
HW-0414	107	107	100%
WP-0314	131	130	99.2%
WP-0414	10	10	100%
WP-0114	27	25	92.6%
Total analytes:	332	**329**	**Overall:** 99.1%

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

PT Study	Number of Analytes	Number of Acceptable results	Success Rate (%)
WP-0314	14	14	100%
Total analytes:	14	**Overall:**	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-0415	5	5	100%
Total analytes:	5	**Overall:**	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-0314	6	5	83.3%
WP-0414	7	7	100%
WP-0514	1	1	100%
Total analytes:	14	**Overall:**	92.9%

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

PT Study	Number of Analytes	Number of Acceptable results	Success Rate (%)
WP-0114	19	19	100%
WS-0114	1	0	0.00%
WS-213	1	1	100%
Total analytes:	21	**Overall**	95.2%

F. Staff contributing to this Report

Staff Contributing to this Report in 2014

Initials	ID	First Name	Last Name	Signature
TB	TBAO	Tan	Bao	
VB	VBASILAN	Virginia	Basilan	
EB	EBLANCO	Enrique	Blanco	
BGB	BBOWMAN	Brent	Bowman	
TC	TJCANNON	Tim	Cannon	
LC	LCARR	Laura	Carr	Laura E. Carr
JC	JCASTRO	Jose	Castro	
JCM	JCAZARES	Jacqueline	Cazares-Medina	Jacqueline Cazares Medina
NC	NCOGLAN	Nancy	Coglan	
SC	SCORIA	Salvador	Coria	
MC	MCORONEL	Maricela	Coronel	
JCM	JCZAJKOWSKI	Jerry	Czajkowski	
KD	KDANG	Ken	Dang	
BD	BDONAHUE	Brad	Donahue	
HHD	HZD	Heather	Duckett	
ACD	ADURAN	Angelica	Duran	
JTF	JFINDLEY	Jeff	Findley	
EFITZ	EFITZGERALD	Erica	Fitzgerald	
KG	KGENZ	Kenneth	Genz	
EG	EGWYNN	Eric	Gwynn	
MH	MHANNA	Mona	Hanna	
RJ	RJARDINE	Ron	Jardine	
WLJ	WLJOHNSON	Wendy	Johnson	
LK	LKING	Lee	King	
VK	VKOZAREV	Vesselka	Kozarev	V. Kozarev
EL	ELANEZ	Estela	Lanez	
CL	CLANZL	Caylyn	Lanzl	
LL	LLI	Lin	Li	
AM	AMARTINEZ	Armando	Martinez	
FM	FMARTINEZ	Fernando	Martinez	
CGM	CONNIEM	Connie	Mata	
JM	JMCANALLY	Jeff	McAnally	
LN	LNANNINGA	Leslie	Nanninga	
JN	JNIETO	Jesus	Nieto	
MN	MNOLLER	Maria	Noller	
LP	LPANTOJA	Lorena	Pantoja	
PP	PPARRA	Paola	Parra	
LP	LPRZYBYLO	Leonard	Przybylo	
CAQ	CQUINATA	Corinna	Quinata	
RR	RRONSAIRO	Rowena	Ronsairo	
KR	KRUEHRWEIN	Keith	Ruehrwein	
RS	RSANDOVAL	Robert	Sandoval	
DWS	DSCHLICKMAN	David	Schlickman	
GS	GSCHLIMME	Greg	Schlimme	
MRS	MSTEWART	Michael	Stewart	
MIS	MSZETERLAK	Margot	Szeterlak	
OT	OTANJA	Olga	Tanja	
SV	SVALENZUELA	Sandra	Valenzuela	
ZV	ZACKV	Zachary	Vanslager	
JW	JWEBB	Julie	Webb	
KLW	KLW	Kristof	Witczak	

Figure 1. Chemistry Laboratory Organization Chart.

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

Deputy Director
Peter S. Vroom, Ph.D.

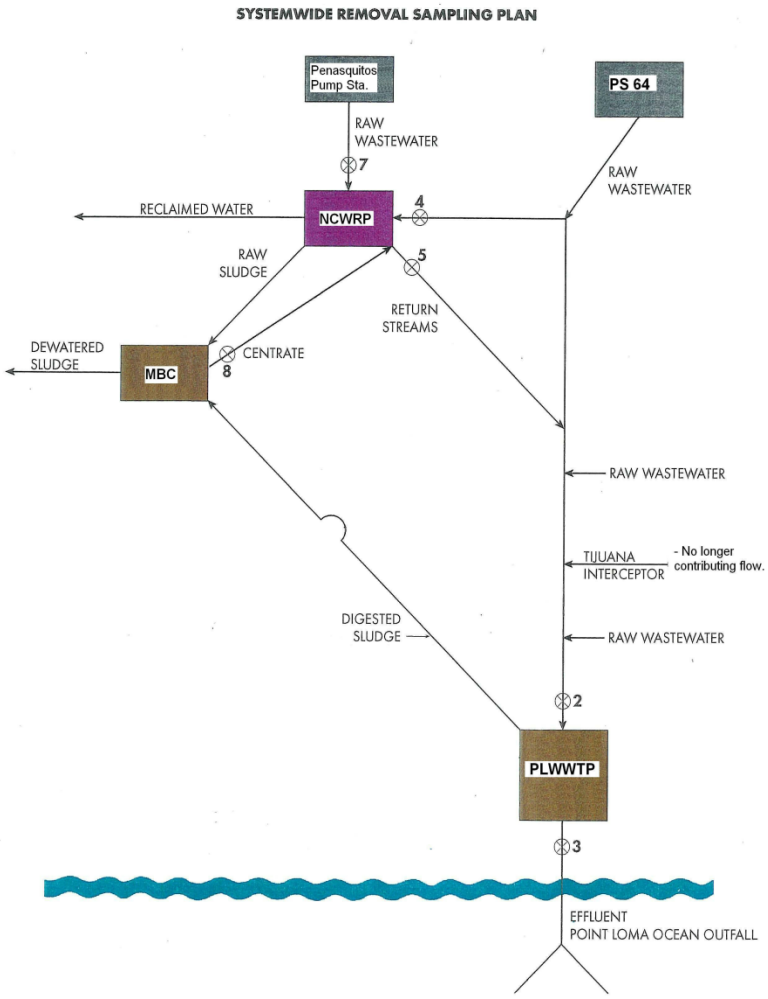
***Senior Chemist** 1.00*
Brent Bowman

Pesticides/ Wet Chemistry Group	***QA/DM Group***	***Metals Group***	***Pt. Loma WWTP / MBC Group***	***South Bay WRP Group***	***North City WRP Group***	***GC/MS Group***
Associate Chemist 1.00 Vacant	*Associate Chemist 1.00* LEE KING	*Associate Chemist 1.00* ROBERT SANDOVAL	*Associate Chemist 1.00* SALVADOR CORIA	*Associate Chemist 1.00* SANDRA VALENZUELA	*Associate Chemist 1.00* NANCY COGLAN	*Associate Chemist 1.00* JEFF MCANALLY
Assistant Chemists:5.00 TAN BAO JACQUELINE CAZARES- MEDINA LIN LI Vacant Vacant	*Assistant Chemists: 4.00* FERNANDO MARTINEZ ARMANDO MARTINEZ WENDY JOHNSON JULIE WEBB	*Assistant Chemists6.00* JERRY CZAJKOWSKI JEFF FINDLEY JESUS NIETO LEONARD PRZYBYLO VESSELKA KOZAREV KEN DANG	*Assistant Chemists: 3.00* ENRIQUE BLANCO VIRGINIA BASILAN MICHAEL STEWART	*Assistant Chemists:1.00* GREG SCHLIMME	*Assistant Chemists: 1.00* LORENA PANTOJA	*Assistant Chemists: 3.00* MARIA NOLLER ESTELA LANEZ RONALD JARDINE
Laboratory Technician: 2.00 MARICELA CORONEL Vacant	*Laboratory Technician: 1.00* ERIC GWYNN	*Laboratory Technician: 2.00* ERICA FITZGERALD CAYLYNB LANZL	*Laboratory Technician: 5.00* BRADLEY DONAHUE OLGA N. TANJA ROWENA RONSAIRO LESLIE NANNINGA TIM CANNON	*Laboratory Technician: 2.00* JOSE CASTRO ANGELICA DURAN	*Laboratory Technician: 3.00* KENNETH GENZ LAURA CARR PAOLA PARRA	*Laboratory Technician: 1.00* CONNIE MATA
Intern:	*Word Processing Operator: 1.00* CORINNA QUINATA *Intern:*	Intern:				

G. System-wide calculation definition

System-wide removals are a practical extension of the "Adjusted Removals" previously reported. Adjusted removals were used to determine removal efficiency of TSS and BOD, during the period when biosolids dewatering occurred at Fiesta Island. The wastewater removed by dewatering (e.g. belt filter press or drying bed decant) was returned to the Point Loma WWTP headworks and contained a certain amount of solids. In order to account for the removal and return of TSS and BOD, on a complete mass-balance basis, the Adjusted Removals were determined. That calculation was relatively straight forward and included removing the contribution to the Pt. Loma WWTP influent of the returned stream. The calculation was done on a mass balance basis to fully account for the solids and BOD contributions returned back to the system.

With the replacement of Fiesta Island biosolids processing by the Metro Biosolids Center (MBC) and the addition of the NCWRP (North City Water Reclamation Plant) in the Metro System, the removal and return of solids to Pt. Loma WWTP was complicated by the addition of multiple inputs and outputs to the system. To calculate the system-wide removals, the net total inputs and outputs were determined and included in the updated calculation18. The determination of System-wide removals is represented by Equation 1 on the next page. This simplified diagram graphically shows the relationships of the input and output streams. The Tijuana interceptor (emergency connection) has not contributed flows since September 2003. The South Bay Water Reclamation Plant (SBWRP) is not shown since it currently has no net contribution or solids removal.



18 Calculations are performed by a computer database application working with Metro System flow and concentration data.

Equation 1.

$$\text{System-wide \%Removal} = \frac{(\Sigma\text{System Influents}) - (\Sigma\text{Return Streams}) - (\Sigma\text{Outfall Discharge})}{\Sigma\text{System Influents} - \Sigma\text{Return Streams}} \times 100\%$$

Where,

System Influents = Point Loma Wastewater Treatment Plant Influents,
NCWRP Influent Pump Station (i.e. Pump station 64),
NCWRP Influent from Penasquitos Pump Station

Return Streams = NCWRP Filter Backwash,
NCWRP Plant Drain,
NCWRP Secondary Effluent,
NCWRP Un-disinfected Filtered Effluent Bypass,
NCWRP Final Effluent
Metro Biosolids Center Centrate

The TSS and BOD_5 concentrations, together with the flow rate, of each stream are measured daily and mass emissions (pounds a day) for each stream determined. The above formula is applied on the resultant mass balances and the system-wide removals calculated for each day. In the event that a data value (e.g. flow rate measurement, TSS concentration or BOD_5 concentration) is not available for a stream, the median value for the previous calendar year for that stream is used as a surrogate number to allow completion of the calculation. The annual averages and summaries in the system-wide data tables are derived (arithmetic mean) from the monthly averages of the daily calculated mass emissions values and removal rates.