King County Sediment Management Plan Update

CSO Sediment Quality Characterization

2011 Sediment Sampling Event

Draft Report

Prepared for the

King County Department of Natural Resources and Parks
Wastewater Treatment Division

and the

Washington State Department of Ecology

by the

King County Department of Natural Resources and Parks
Marine and Sediment Assessment Group

December 2012

King County

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Table of Contents

1 Introduction **1**
1.1 Project Background 1
1.2 Project Report and Data Submittal 4
2 Sample Collection **5**
3 Sample Analysis **18**
4 Sediment Chemistry Analytical Results **19**
4.1 Marine CSOs 21
4.1.1 North Beach CSO *21*
4.1.2 South Magnolia CSO *21*
4.1.3 53rd Avenue SW CSO *21*
4.1.4 Murray Avenue SW CSO *27*
4.1.5 SW Barton Street CSO *27*
4.2 Estuarine CSOs 28
4.2.1 South Brandon Street CSO *28*
4.2.2 Chelan Avenue SW CSO *31*
4.3 Freshwater CSOs 31
4.3.1 3rd Avenue West CSO *35*
4.3.2 University Regulator CSO *35*
4.3.3 Montlake CSO *35*
5 References **37**

List of Appendices

Appendix A Complete Sediment Chemistry Analytical Results
Appendix B Data Validation Review Memorandum and Attachments
Appendix C Analytical Results for Non-Ionic Organic Compounds at Nine Sampling Stations Compared to Appropriate SMS Chemical Criteria

1 Introduction

This report presents results from the 2011 sampling event for King County's Combined Sewer Overflow (CSO) Sediment Quality Characterization project. King County's Sediment Management Plan (King County 1999) develops remedial strategies for correcting short- and long-term hazards associated with contaminated sediments near King County CSO sites. As part of the update to the Sediment Management Plan (SMP), the County has developed a near-field sediment model primarily to evaluate recontamination potential for CSOs, following control and sediment remediation projects. Analysis of the model output will be used to inform the scheduled update to the SMP by providing one line of evidence in determining which remaining areas in front of County CSOs require remedial action. Sediment quality data collected during this project will be used to both to populate the model as well as validate the model output. The specific goals of the 2011 CSO sediment quality sampling event were to:

- populate, calibrate, and verify the County's near-field sediment recontamination model;
- determine if sediment chemical concentrations in the vicinity of 10 CSO outfalls meet or exceed Washington State Sediment Management Standards (SMS) chemical criteria;
- create a pre-construction sediment quality baseline at four locations, for which CSO control projects are currently underway.

1.1 Project Background

After considering the data needs of the near-field sediment recontamination model and SMP update, King County proposed conducting sediment quality characterizations at 10 County CSO discharge points during the summer and fall of 2011. The 10 CSO sediment sampling sites are:

- North Beach
- South Magnolia
- 53rd Avenue SW
- Murray Avenue SW
- SW Barton Street
- South Brandon Street
- Chelan Avenue SW
- 3rd Avenue West
- University Regulator
- Montlake

Sediment quality data collected during this sampling event at the Barton, Murray, South Magnolia, and North Beach CSOs will also provide a sediment quality baseline, against which future post-construction sediment monitoring data will be compared.

Sediment samples were also collected from three background stations. All three background stations were located away from anthropogenic inputs. The depths at which the background samples were collected represent an average of the associated CSO sampling station depths. Data collected from the three background stations will aid in understanding local background sediment quality for interpretation of specific CSO site data.

King County has collected sediment quality data at the majority of its CSO outfall discharge locations, both as part of past NPDES sediment monitoring requirements as well as during special environmental studies. These data were previously provided in King County's comprehensive sediment quality report (King County 2009). These data were reviewed as part of the sampling design process, along with the needs of the near-field sediment modeling, undertaken as part of the King County Sediment Management Plan.

The data quality objectives (DQOs) of the 2011 CSO sediment quality characterization project sampling event were to collect data of sufficient *quantity* and *quality* to be able to meet the following project goals:

- measure the areal extent and spatial variations of sediment chemical concentrations in front of 10 King County CSO discharge points;
- evaluate these sediment chemical concentrations relative to the current marine sediment quality standards of Chapter 173-204 WAC (Ecology 1995) and the freshwater sediment quality reference values found on Ecology's Environmental Information Management (EIM) database;
- provide data for populating, calibrating, and validating the near-field sediment recontamination model, as part of the process to update the County's Sediment Management Plan; and
- provide pre-construction, baseline, sediment quality data at four of the County's CSO facilities, at which CSO control projects are currently underway.

The *quantity* of data to be collected was based on the need to meet multiple project goals at the CSO sites, which discharge at varying volumes and depths, and into varying flow regimes. Collection of six to seven sediment samples at each of the 10 CSO sites was determined sufficient to provide data to meet the study goals listed above.

King County modeling staff performed a scaling analysis for the 10 CSOs to be sampled during this project in order to provide the optimal sampling station array that would efficiently meet the needs of the three programs for which these data will be collected. The scaling analysis was performed to determine where particulate matter discharged during CSO events would most likely settle to the surface sediment in the receiving water. The model used in the scaling analysis described the percent of suspended solids that would settle into the sediment and included the following assumptions:

- the discharged suspended solids are well mixed across the water depth;
- receiving water velocity is primarily in the along-shore direction and, thus, will not affect the offshore extent of the sediment deposition;
- the characteristic offshore velocity of the plume is 10% of the discharge velocity; and
- the characteristic settling velocity of CSO solids most likely to deposit in the vicinity of the outfall is 0.1 cm/s (based on a medial settling velocity of particles in effluent collected from three County CSOs already sampled.

Based on results of the scaling analysis, the sample station location strategies shown graphically in Figure 1-1 were chosen. Sediment samples were collected from six stations at the North

Beach, South Magnolia, 53rd Avenue SW, SW Barton Street, South Brandon Street, and Chelan Avenue SW CSO sites. Samples were collected from seven stations at the Murray Avenue SW, 3rd Avenue West, University Regulator, and Montlake CSO sites. In each of the 10 sample station arrays, the first station was always located approximately 30 feet in front of the outfall.

Figure 1-1
CSO Sediment Sampling Location Strategy Based on Scaling Analysis

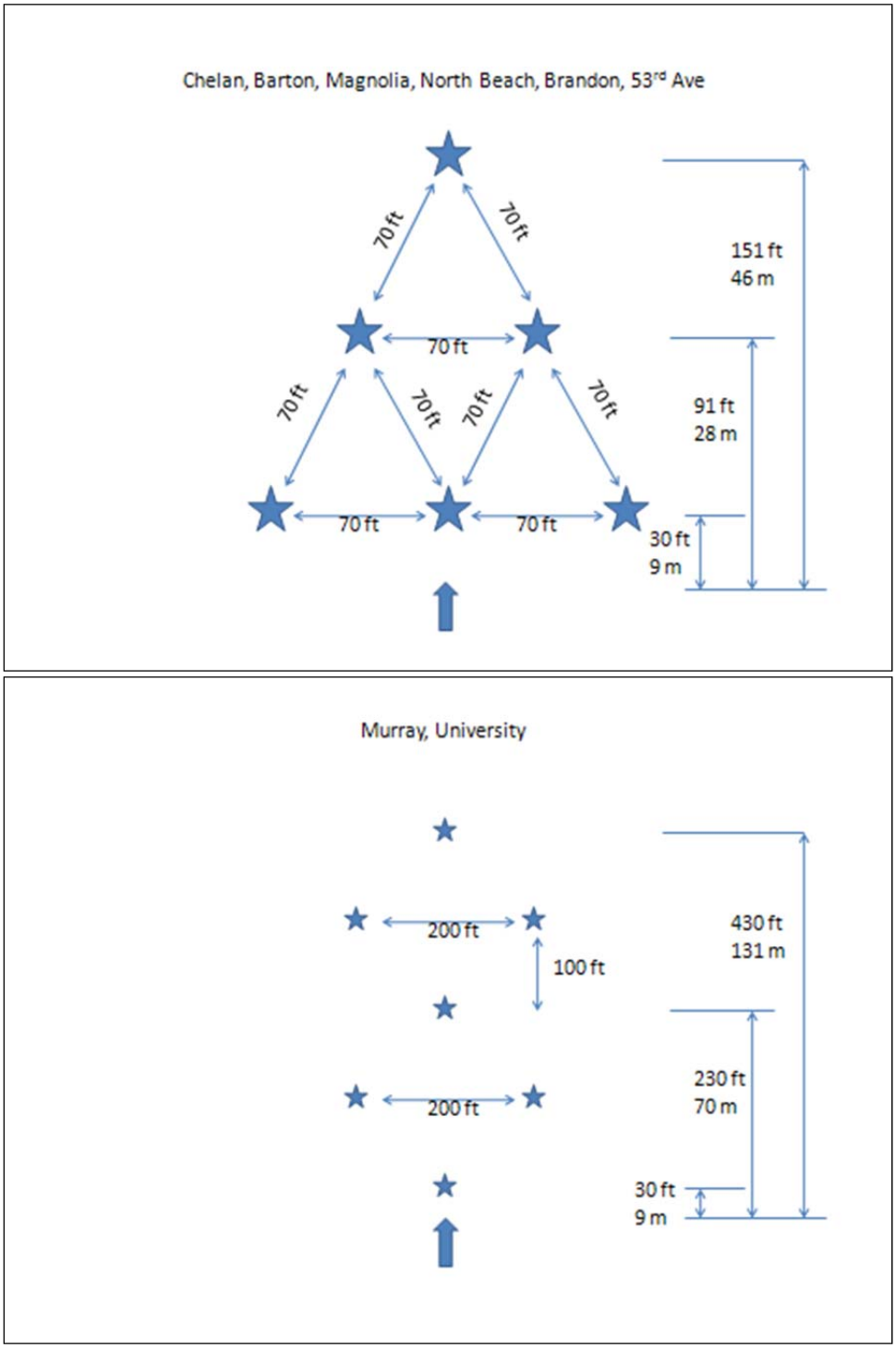
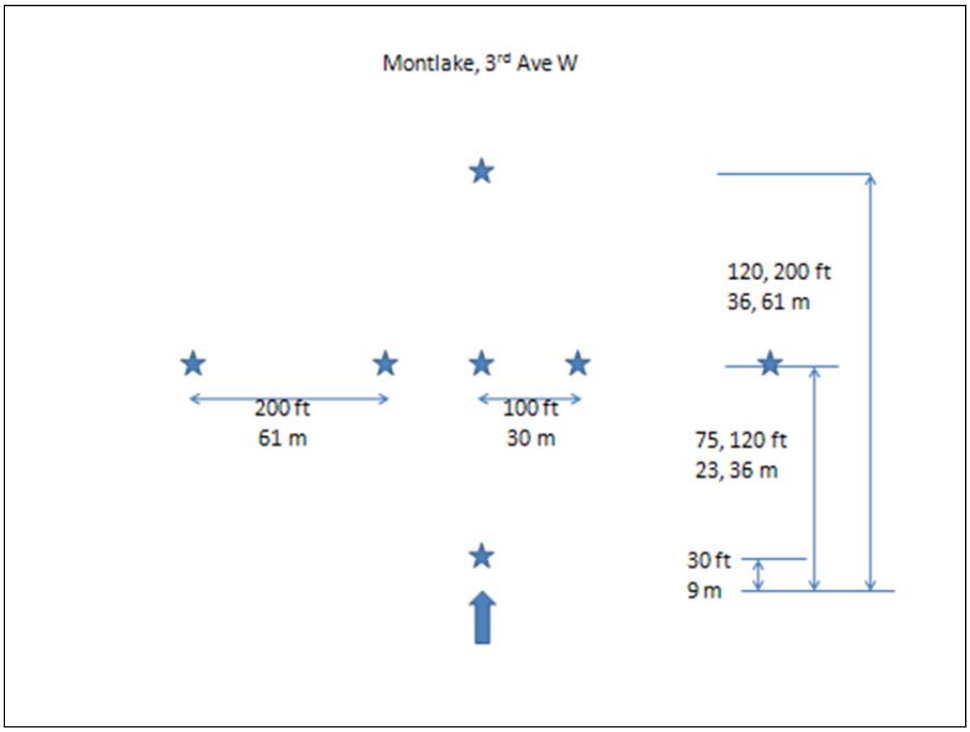


Figure 1-1 (cont.)
CSO Sediment Sampling Location Strategy Based on Scaling Analysis



1.2 Project Report and Associated Data Submittal

This project report is also being submitted to the Washington State Department of Ecology to comply with monitoring and reporting requirement S18.J.3 of the County's NPDES Permit No. WA-002918-1, which states in part:

> *The Permittee must submit to Ecology a Sediment Data Report containing the results of the sediment sampling and analysis no later than January 1, 2013.*

This report includes a description of both the sampling and analytical methodologies and a summary of the sediment chemistry analytical results. Appendices to the report include complete sediment chemistry analytical results and a memorandum describing the data validation results. All project data referenced in this report have been submitted electronically to Ecology's EIM database. Confirmation has been received from Ecology's EIM database manager that the data have been uploaded and are available for review.

2 Sample Collection

Sediment samples were collected in August 2011 from 45 marine/estuarine stations, which included samples collected at seven CSOs and two marine background stations. Sediment samples were collected in October 2011 from 22 freshwater stations, which included samples collected at three CSOs and one background station. Figure 2-1 provides the locations of the 10 CSO sampling sites and the three background sediment sampling stations. Figures 2-2 through 2-11 show the locations of the sampling stations at each CSO site. All sample collection followed protocols outlined in the Puget Sound Estuary Program's (PSEP) Puget Sound Protocols (PSEP 1997a, 1998). Sediment was obtained using two modified, stainless steel, 0.1 m^2 van Veen grab samplers deployed in tandem from King County's research vessel *Liberty*.

The *Liberty* is equipped with a differential global positioning system (DGPS). The DGPS is a satellite-based navigation system that operates using a receiver to calculate ground position by triangulating scrambled data transmitted by a constellation of satellites operated by the Department of Defense (DOD). The ship-board "differential" receiver receives both the scrambled DOD signal and "corrected" signals originating from base stations operated by various agencies including the Coast Guard and King County. Upon contact of the grab sampler with the bottom, the coordinate data representing the actual sediment grab impact point were electronically recorded in real time. Positioning information included local time and date that a position was recorded, comments, and coordinate data in both latitude/longitude and North American Datum 1983 (NAD83) State Plane formats.

All but two of the samples were collected within 20 feet from the station coordinates prescribed in the SAP, thus meeting the requirement of "*Sample collection is expected to take place within a 6-meter* (20 feet) *radius of each station's prescribed position and samples will not be collected if the observed coordinates of the grab deployment are outside of this limit*." (King County 2011). The freshwater sediment background station CSO-BKGD-UB, located in Union Bay, was relocated after consultation between the project manager and field manager, due to an inacceptable bottom substrate. Station CSO-UR-1, located at the University Regulator CSO, was relocated 9.5 meters (31 feet) to the south due to rip-rap at the planned sampling station.

At 62 of the67 stations, samples consisted of the top 10 cm of sediment collected from the contents of a single deployment of the dual grab samplers. Successful collection of the top 10 cm of sediment required a minimum grab-penetration depth of 11 cm to allow sample collection without sampling sediment that had touched the sides or bottom of the grab sampler. At the remaining five stations, grab penetration was unable to achieve the required 11 cm after multiple deployments of the grab samplers. Grab penetration depth at these five stations ranged from 5 to 10 cm and sediments were collected from the top 4 to 9 cm, accordingly.

Samples were composited from the contents of both grab samplers. When sufficient sediment for all analyses had been collected, the sediment was thoroughly homogenized and sediment aliquots transferred to appropriate laboratory containers. A separate set of stainless-steel sampling equipment was dedicated to each station, precluding the need for decontamination of

this field gear. The van Veen grab sampler was decontaminated between stations by scrubbing with a brush and ambient seawater, followed by a thorough *in situ* rinsing.

Samples were stored in ice-filled coolers from the time of collection until delivery to the King County Environmental Laboratory, at the end of each sampling day. Samples were delivered under chain-of-custody and were maintained as such throughout the analytical process. Samples were stored frozen at a temperature of -18°C by the laboratory until analysis, with the exception of samples for particle size distribution. These samples were stored refrigerated at approximately 4°C.

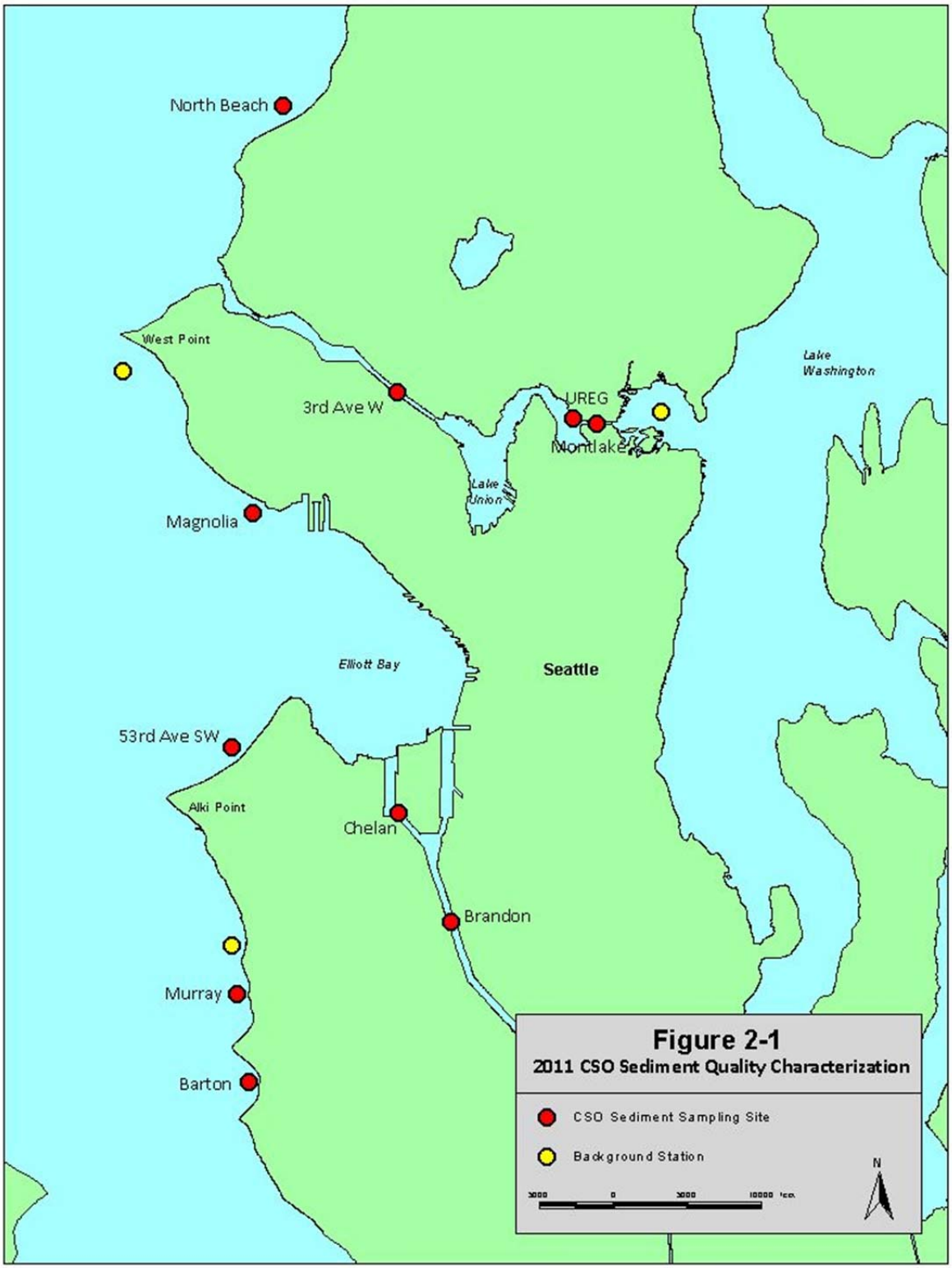

North Beach
West Point
3rd Ave W
UREG
Montlake
Lake Washington
Lake Union
Magnolia
Elliott Bay
Seattle
53rd Ave SW
Alki Point
Chelan
Brandon
Murray
Barton
Figure 2-1
2011 CSO Sediment Quality Characterization
CSO Sediment Sampling Site
Background Station
N

Figure 2-2
North Beach CSO Sediment Sampling Station Array

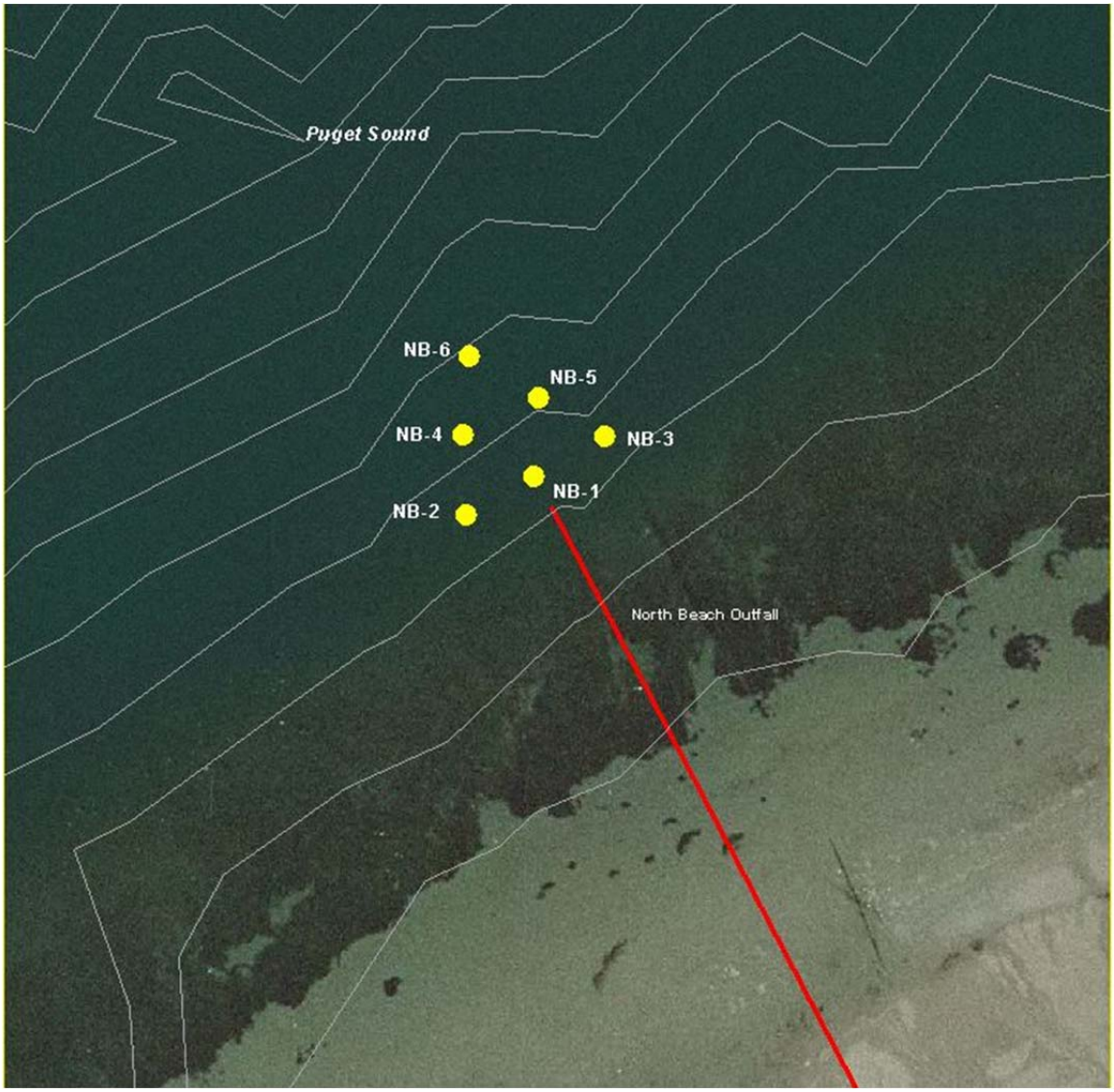


Figure 2-3
South Magnolia CSO Sediment Sampling Station Array

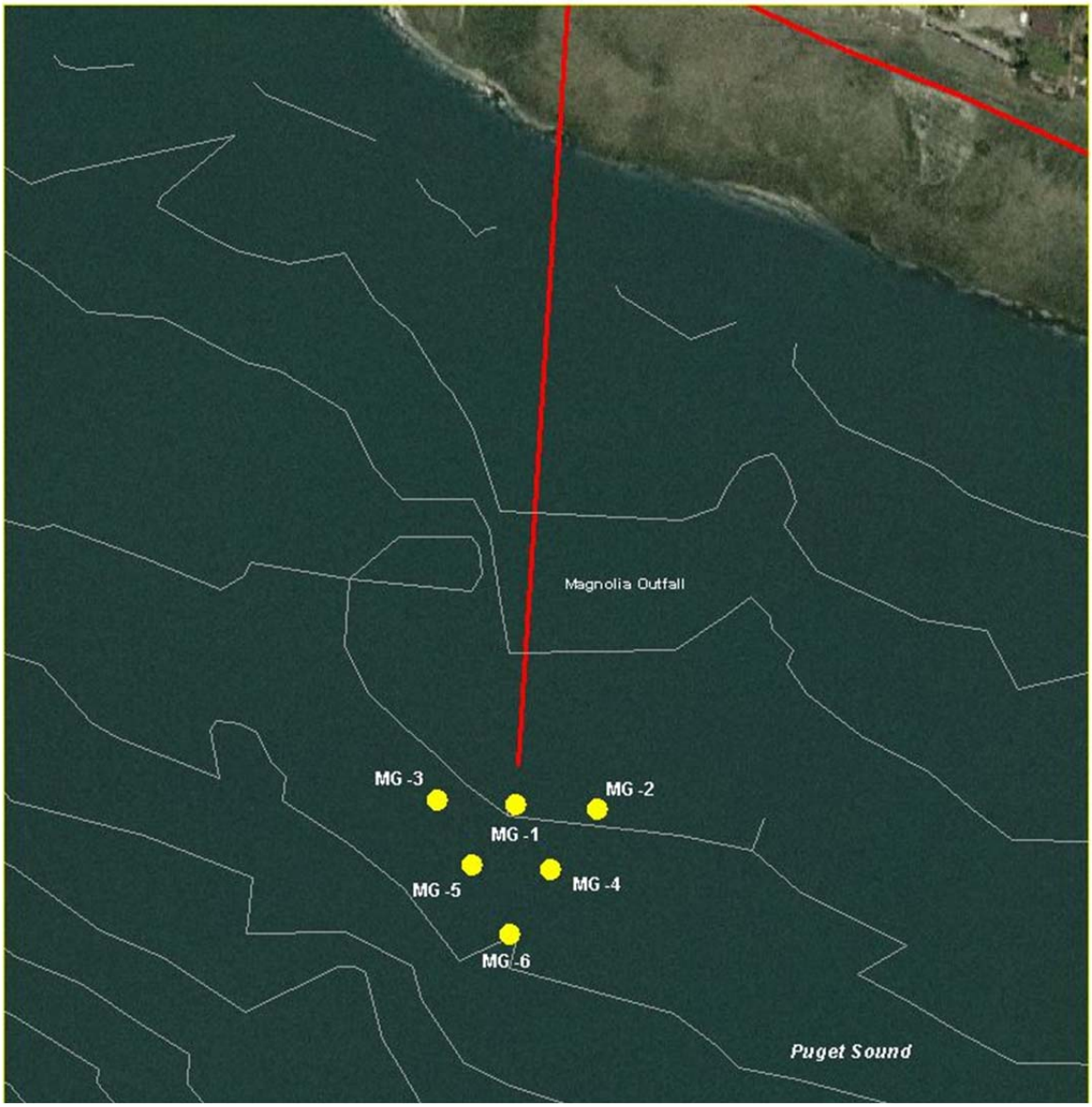


Figure 2-4
53rd Avenue SW CSO Sediment Sampling Station Array

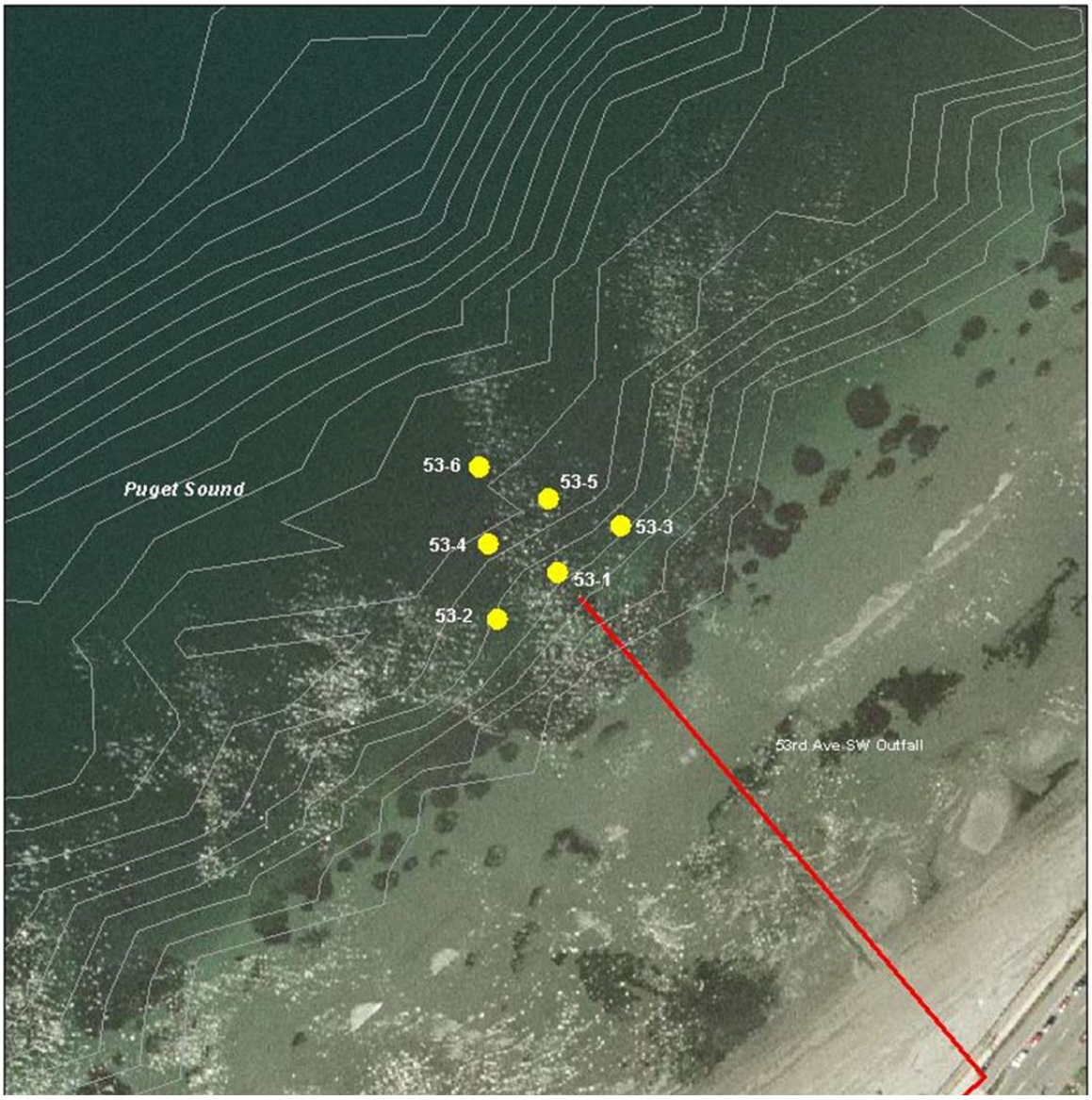


Figure 2-5
Murray Avenue SW CSO Sediment Sampling Station Array

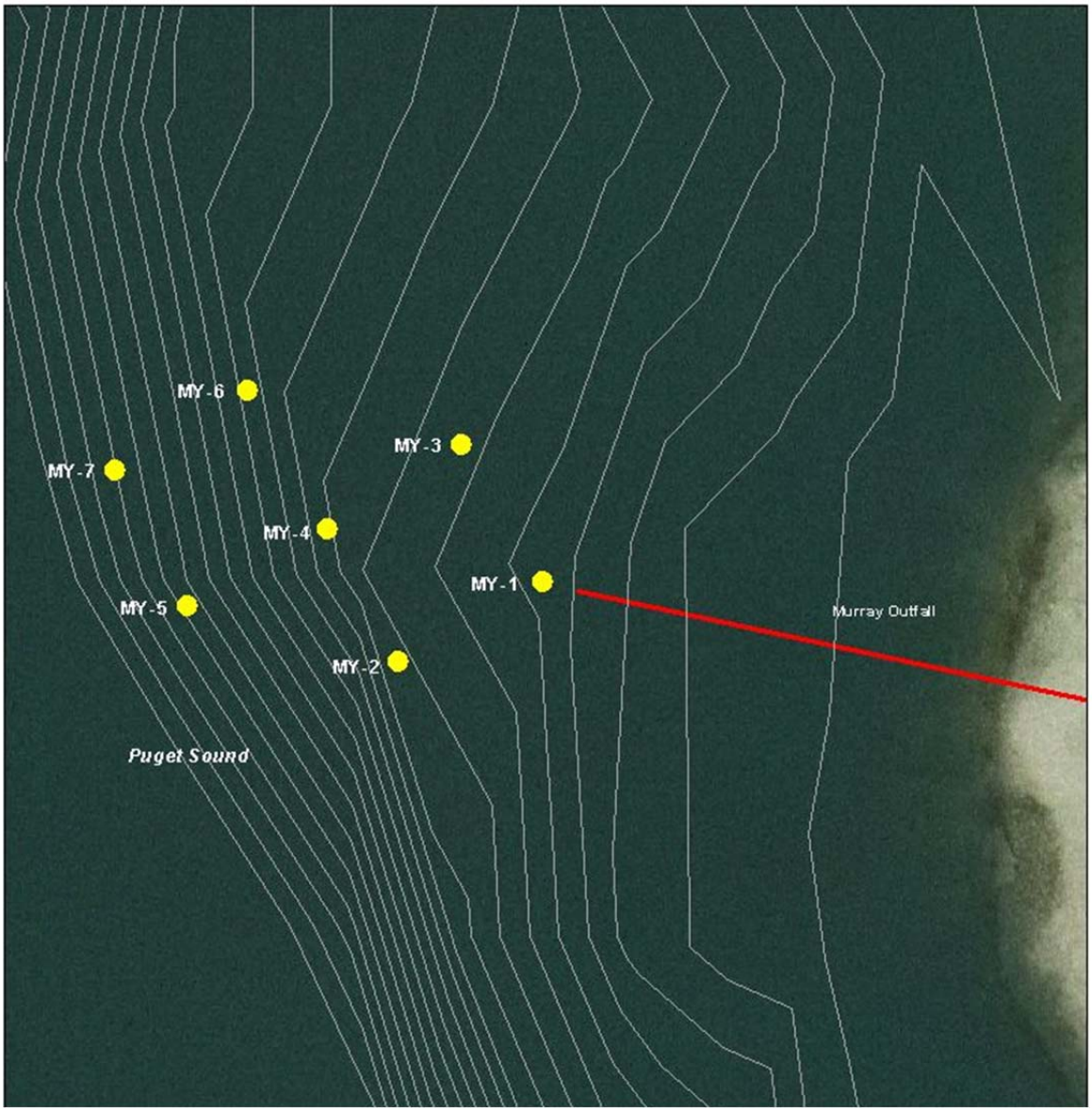


Figure 2-6
SW Barton Street CSO Sediment Sampling Station Array

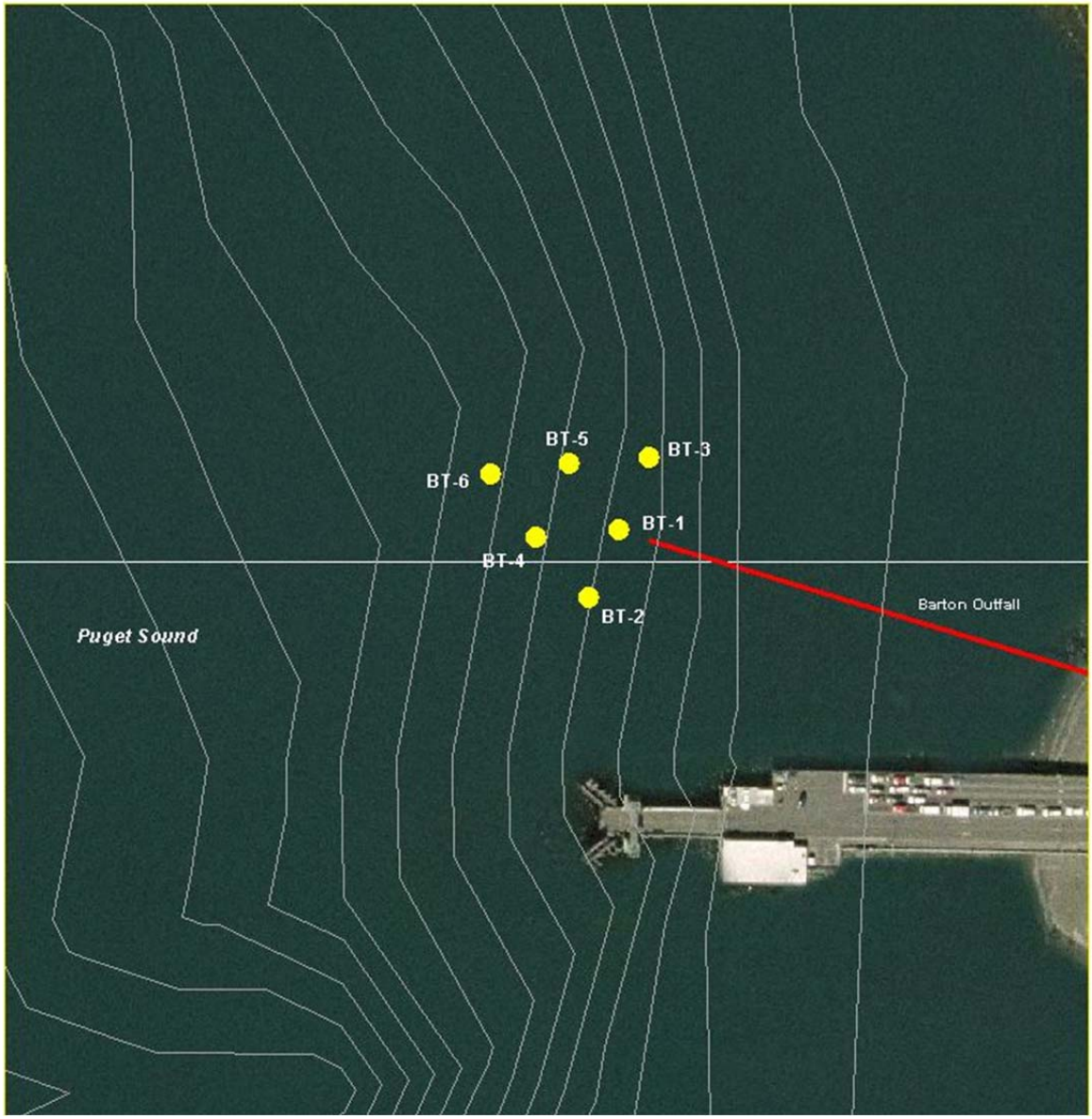


Figure 2-7
South Brandon Street CSO Sediment Sampling Station Array

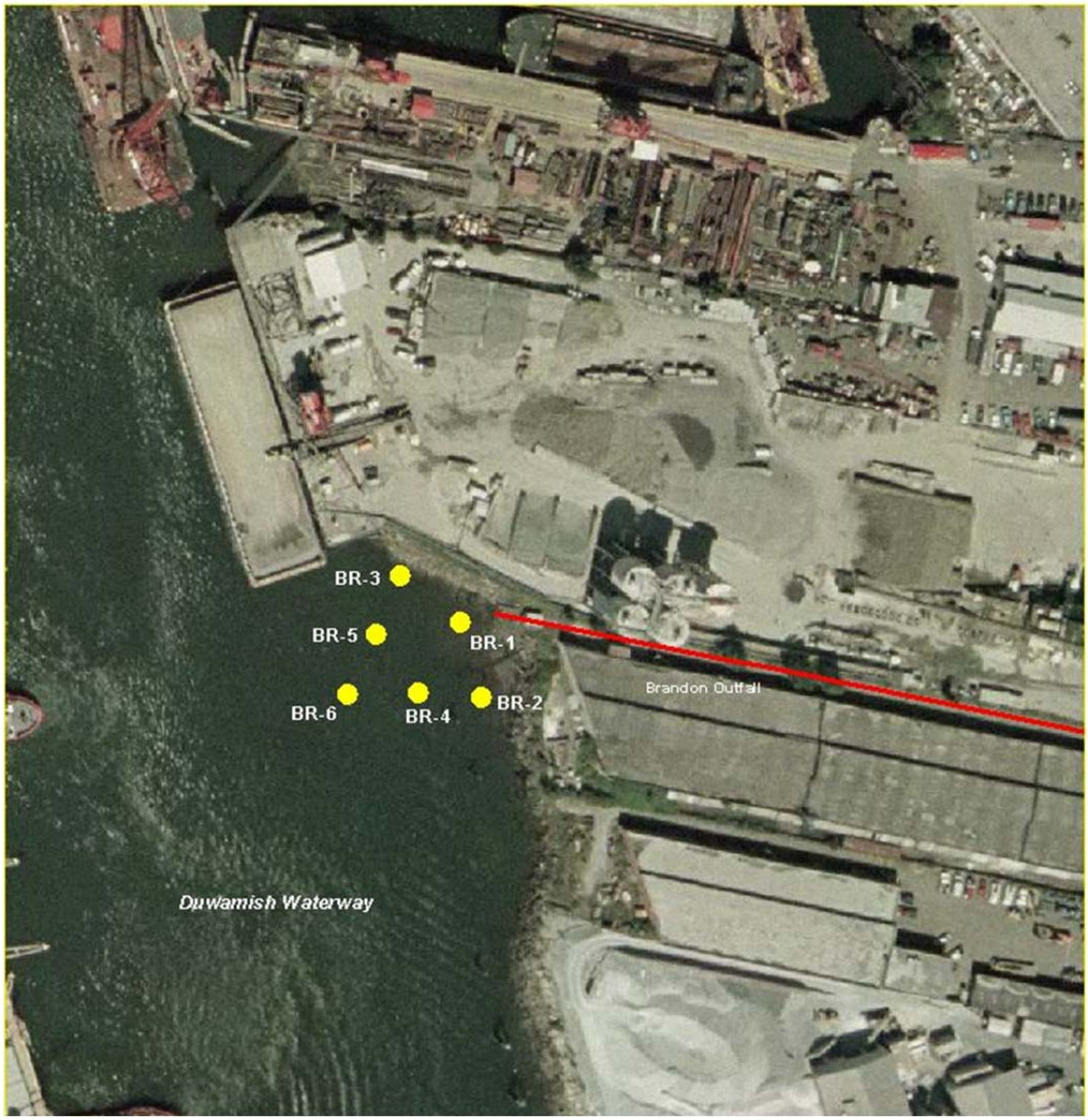


Figure 2-8
Chelan Avenue SW CSO Sediment Sampling Station Array

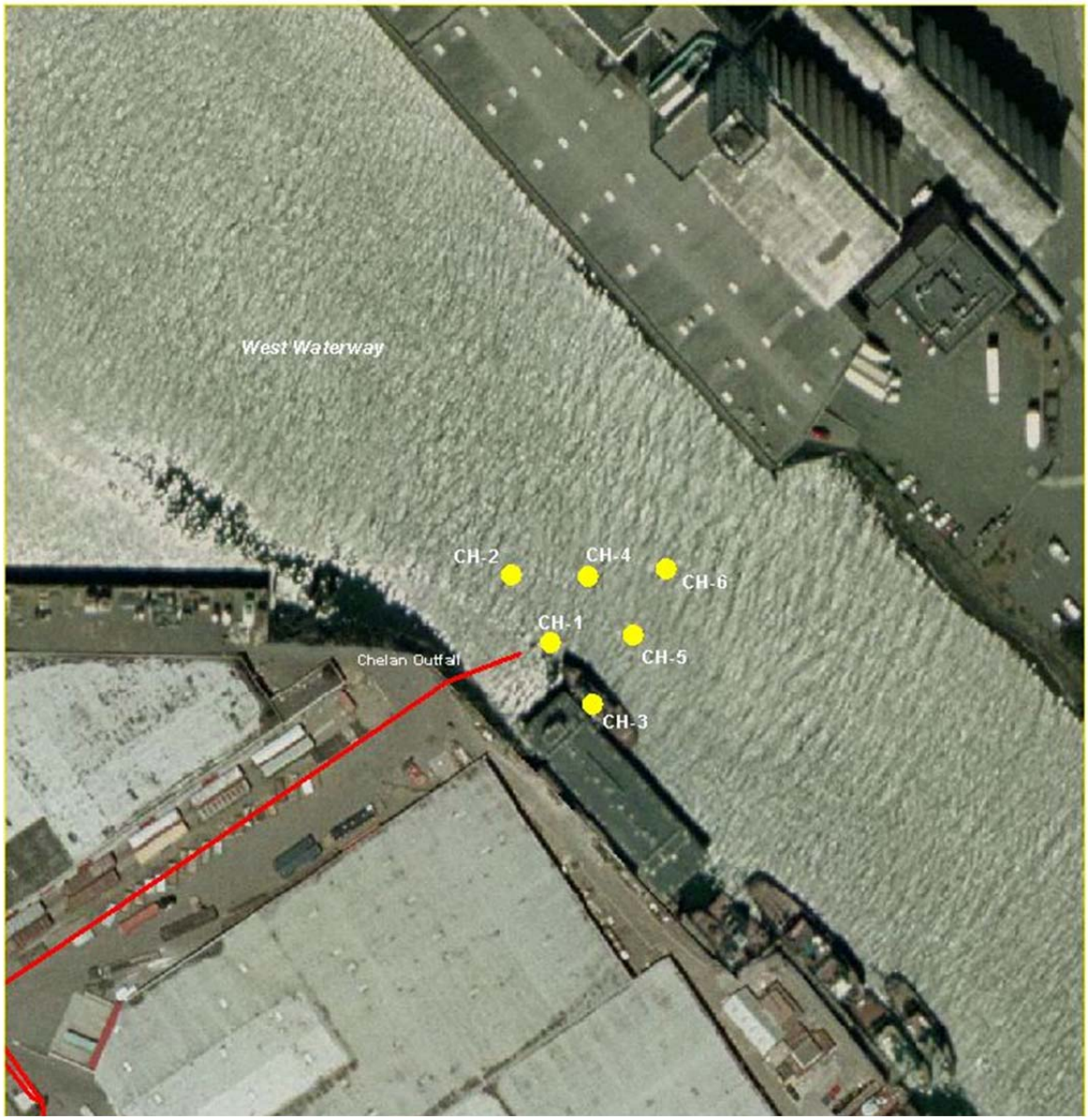


Figure 2-9
3rd Avenue West CSO Sediment Sampling Station Array

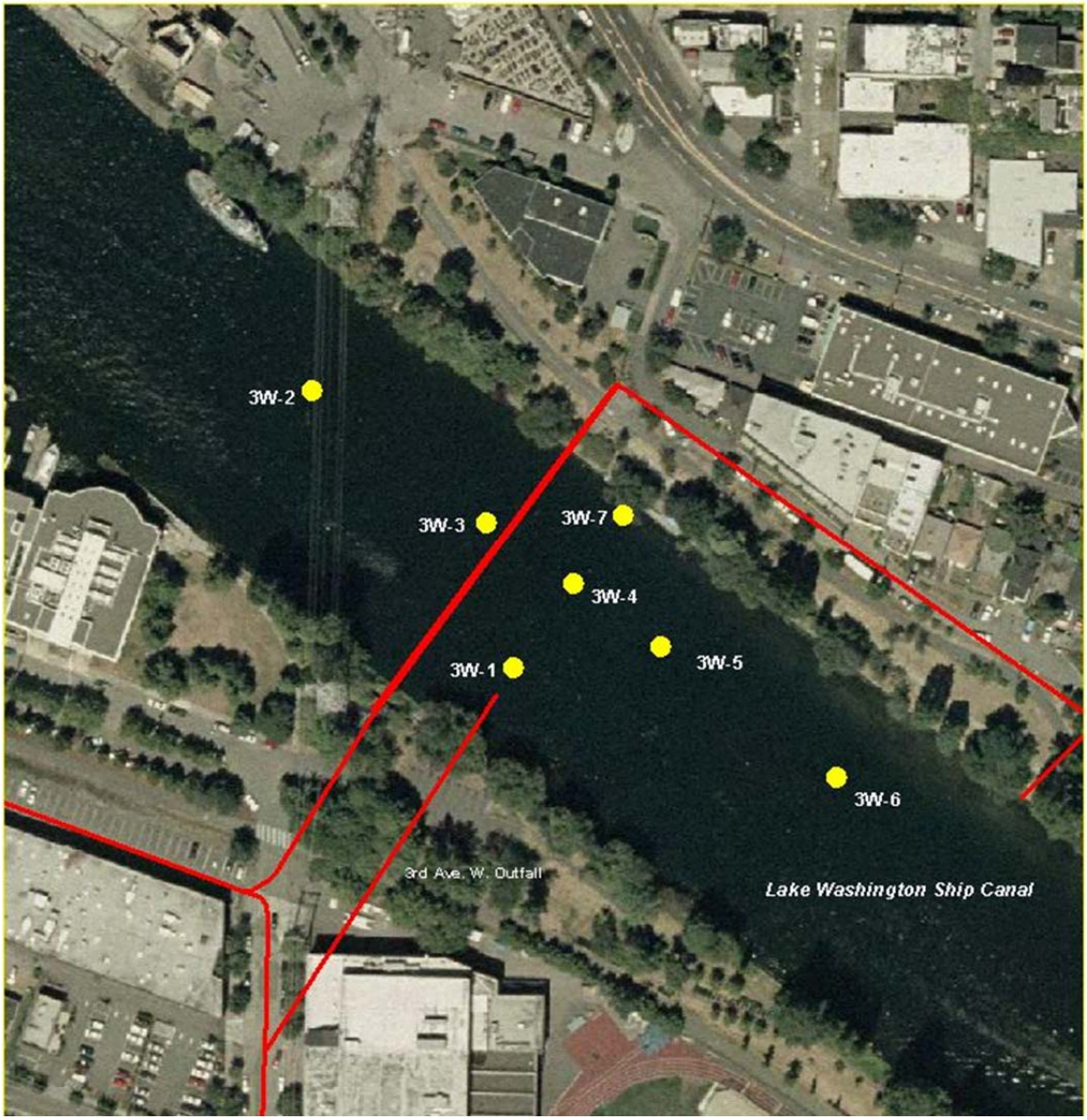


Figure 2-10
University Regulator CSO Sediment Sampling Station Array

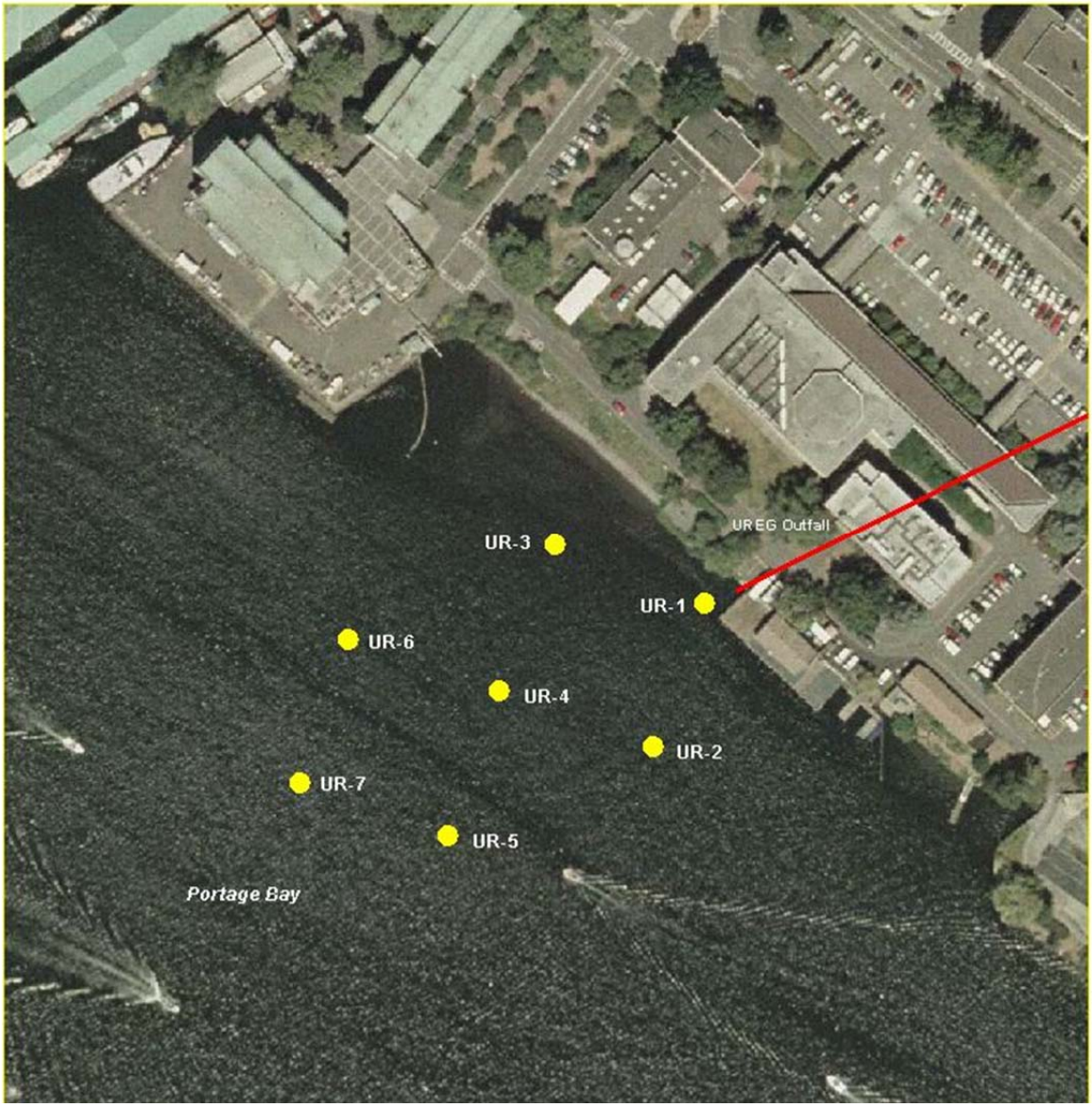
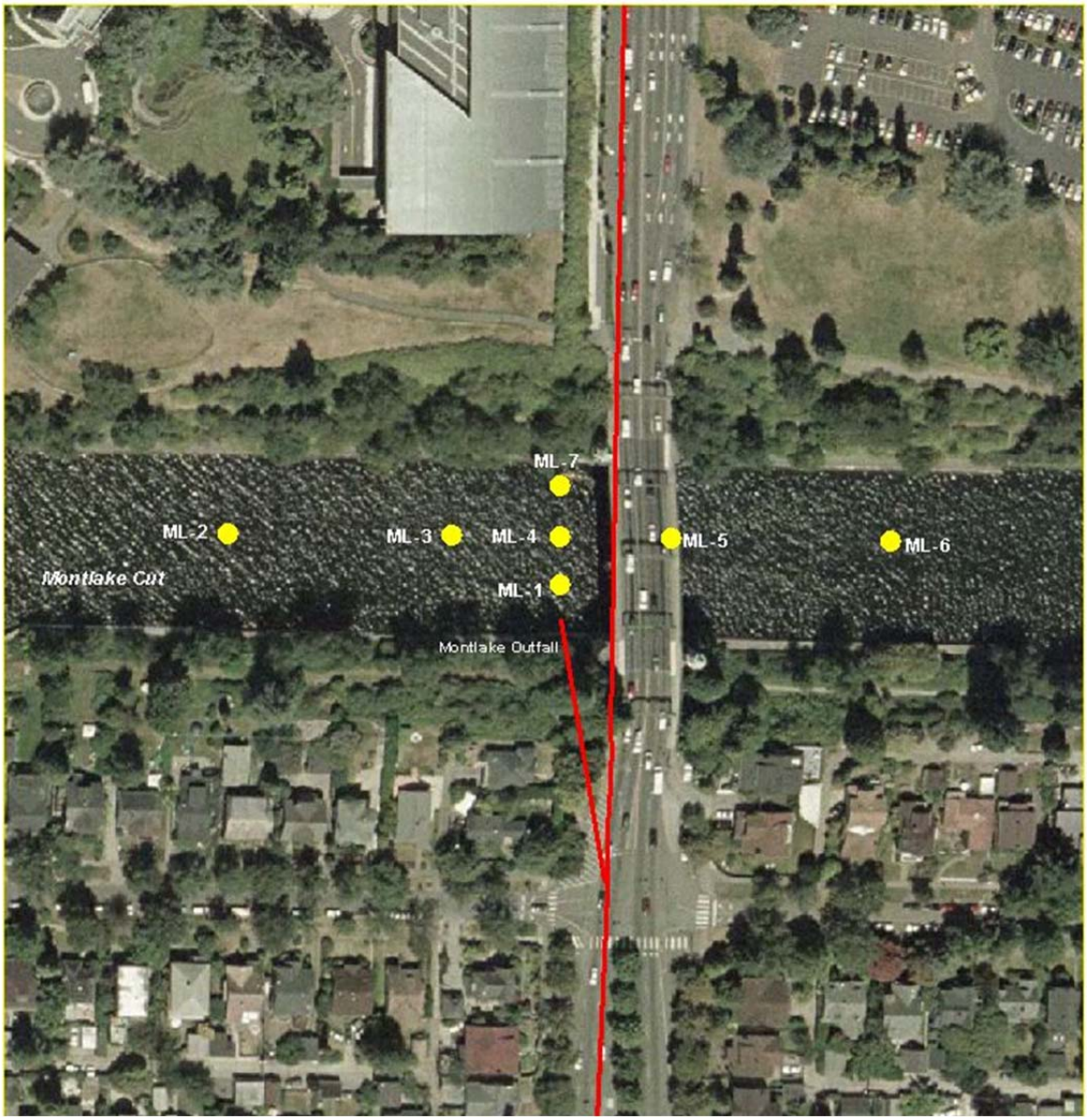


Figure 2-11
Montlake CSO Sediment Sampling Station Array



3 Sample Analysis

Forty-five marine/estuarine sediment samples and 22 freshwater sediment samples were submitted for chemical analysis of conventional, metal, and organic parameters. Sediment chemistry analytical parameters were selected based on guidance for conducting sediment characterizations (Ecology 2008) and for comparison of analytical results with published sediment quality criteria (Ecology 1995). All analyses were performed by the King County Environmental Laboratory.

Conventional analyses included percent solids, total organic carbon (TOC), and particle size distribution (PSD). Percent solids analysis was performed according to Standard Method (SM)2540-G (APHA 2005), which is a gravimetric determination. TOC analysis was performed following EPA Method 9060 (SW-846, EPA 2007), high-temperature combustion with infrared spectroscopy. PSD analysis was performed according to ASTM Method D422, which is a combination of sieve and hydrometer methodologies (ASTM 2002).

Metal analytes for marine and estuarine sediments included arsenic, cadmium, chromium, copper, lead, mercury, silver, and zinc. Antimony and nickel were added to the suite of metal analytes for freshwater sediment samples. Mercury was analyzed according to EPA Method 7471B (SW-846), cold vapor atomic absorption spectroscopy. The remaining metals in marine/estuarine sediment samples were analyzed according to EPA Methods 3050B/6010C (SW-846), strong-acid digestion with inductively coupled plasma optical emission spectroscopy (ICP-OES). The remaining metals in freshwater sediment samples were analyzed according to EPA methods 3050B/6020A, strong-acid digestion with inductively coupled plasma mass spectroscopy (ICP-MS).

Trace organic parameters included base/neutral/acid extractable semivolatile organic compounds (BNAs) and polychlorinated biphenyls (PCBs). BNA analysis was performed according to EPA methods 3550B/8270D (SW-846), which employ solvent extraction with sonication, and analysis by gas chromatography/mass spectroscopy (GC/MS). PCB analysis was performed according to EPA methods 3550B/8082A (SW-846), which employ solvent extraction with sonication, and analysis by gas chromatography with electron capture detector (GC/ECD) and dual column confirmation.

Sediment chemistry analyses were performed following guidance recommended in the Puget Sound Protocols (PSEP 1986, 1997b, 1997c) including associated QA/QC practices. Laboratory QA/QC practices produced chemistry data of sufficient quality to pass QA1 review. Chemistry data were reviewed following QA1 guidelines (Ecology 1989, 2008), as well as EPA data validation guidance (EPA 2008, 2010) and flagged with data qualifiers where appropriate.

4 Sediment Chemistry Analytical Results

Analytical results for the 2011 CSO Sediment Characterization sampling event are presented in the following sections. Complete sediment chemistry analytical results are included as Appendix A to this report. A memorandum summarizing the data validation review for this project is included as Appendix B.

Chemical concentrations in samples collected from marine and higher-salinity estuarine sediments have been compared to the Sediment Management Standards (SMS) chemical criteria found in Tables I and III of Chapter 173-204 WAC (Ecology 1995). Results for metals and ionic organic compounds (acids and alcohols) are always compared to the Sediment Quality Standard (SQS) and Cleanup Screening level (CLS) chemical criteria on a dry weight basis, either in units of milligrams per kilogram (mg/Kg DW) for metals or micrograms per kilogram (µg/Kg DW) for ionic organic compounds.

Results for non-ionic organic compounds (PAHs, phthalates, chlorobenzenes, and PCBs), however, are generally normalized to organic carbon for comparison with the SQS and CSL chemical criteria in Tables I and III of the SMS. Normalization to organic carbon can produce biased results, however, when the organic carbon content of a sample is very low (Ecology 1992). When the organic carbon content of a sample is near 0.1 or 0.2% (1,000 to 2,000 mg/Kg DW), even background concentrations of certain organic compounds can exceed sediment quality criteria.

If the organic carbon content at any particular station was below 0.5%, then dry weight-normalized results for non-ionic organic compounds have been compared to the 1998 Marine Dry SQS and CSL from Ecology's Environmental Information Management (EIM) database (http://www.ecy.wa.gov/eim/myEIM.htm), which are based on the 1988 Puget Sound AET update (EPA 1988). Table 4-1 summarizes the total organic carbon (TOC) concentrations in samples collected from the seven marine/estuarine CSO sites.

For comparative purposes between stations at a particular site, analytical results for non-ionic organic compounds have been normalized to either dry weight or organic carbon, depending on whether the majority of stations exhibited a TOC concentration greater or less than 0.5%. Results for the seven marine/estuarine CSO sites are presented in Tables 4-2 through 4-8. Four stations with TOC concentrations greater than 0.5% that were initially compared to dry weight SMS chemical criteria for comparative purposes are presented in Appendix C (Table C-1), more appropriately compared to organic carbon SMS chemical criteria for the non-ionic organic compounds. Five stations with TOC concentrations less than 0.5% that were initially compared to organic carbon SMS chemical criteria for comparative purposes are also presented in Appendix C (Table C-2), more appropriately compared to dry weight SMS chemical criteria for the non-ionic organic compounds.

Sediment chemical concentrations detected in samples collected from the three freshwater CSOs are presented in Tables 4-9 through 4-11. These sediment chemical concentrations have been compared to the draft freshwater SQS and CSL reference values found on the EIM

database (http://www.ecy.wa.gov/eim/myEIM.htm), which are based on the 2003 Floating Percentile Guidelines (Ecology 2003). These reference values are all based on dry-weight sediment concentrations. The reference values are non-regulatory but provide an indicator of sediment quality proximal to freshwater CSOs.

Table 4-1

TOC Concentrations at Marine/Estuarine CSO Sediment Sampling Stations
CSO Sediment Monitoring Program
King County Sediment Management Plan Update

North Beach Station	TOC (mg/Kg DW)	TOC (%)
CSO-NB-1	1,950	0.20
CSO-NB-2	1,690	0.17
CSO-NB-3	1,710	0.17
CSO-NB-4	2,110	0.21
CSO-NB-5	2,440	0.24
CSO-NB-6	1,790	0.18

Barton Station	TOC (mg/Kg DW)	TOC (%)
CSO-BT-1	45,100	4.51
CSO-BT-2	14,100	1.41
CSO-BT-3	4,860	0.49
CSO-BT-4	6,820	0.68
CSO-BT-5	20,300	2.03
CSO-BT-6	4,830	0.48

Magnolia Station	TOC (mg/Kg DW)	TOC (%)
CSO-MG-1	3,820	0.38
CSO-MG-2	5,330	0.53
CSO-MG-3	1,970	0.20
CSO-MG-4	2,540	0.25
CSO-MG-5	1,490	0.15
CSO-MG-6	2,100	0.21

Brandon Station	TOC (mg/Kg DW)	TOC (%)
CSO-BR-1	9,420	0.94
CSO-BR-2	9,540	0.95
CSO-BR-3	17,900	1.79
CSO-BR-4	22,200	2.22
CSO-BR-5	21,900	2.19
CSO-BR-6	22,900	2.29

53rd Avenue Station	TOC (mg/Kg DW)	TOC (%)
CSO-53-1	2,920	0.29
CSO-53-2	740	0.07
CSO-53-3	1,030	0.10
CSO-53-4	2,100	0.21
CSO-53-5	1,880	0.19
CSO-53-6	12,300	1.23

Chelan Station	TOC (mg/Kg DW)	TOC (%)
CSO-CH-1	12,800	1.28
CSO-CH-2	4,670	0.47
CSO-CH-3	8,060	0.81
CSO-CH-4	3,730	0.37
CSO-CH-5	4,950	0.50
CSO-CH-6	7,590	0.76

Murray Station	TOC (mg/Kg DW)	TOC (%)
CSO-MY-1	6,750	0.68
CSO-MY-2	2,330	0.23
CSO-MY-3	5,970	0.60
CSO-MY-4	1,680	0.17
CSO-MY-5	1,790	0.18
CSO-MY-6	1,020	0.10
CSO-MY-7	1,370	0.14

4.1 Marine CSOs

Sediment chemical concentrations detected in samples collected from four of the five marine CSOs – North Beach, South Magnolia, 53rd Avenue SW, and Murray Avenue SW – have been compared to the 1998 Marine Dry Weight SQS and CSL chemical criteria. The TOC concentration in the majority of these samples was less than 0.5%, so comparison to dry weight-normalized chemical criteria for the non-ionic organic compounds is appropriate (Ecology 1992). In those instances where one or two stations per site had TOC concentrations greater than 0.5%, the chemical concentrations of the non-ionic organic compounds were compared again in Table 4-9 to SQS and CSL chemical criteria found in Tables I and III of the Sediment Management Standards (Ecology 1995).

The TOC concentration in the majority of samples collected near the SW Barton Street CSO were greater than 0.5% so analytical results for the non-ionic organic compounds were initially compared to organic carbon-normalized SQS and CSL chemical criteria for comparative purposes between stations. For the two Barton stations at which the TOC concentration was less than 0.5%, results for the non-ionic organic compounds were compared again in Table 4-10 to the dry weight-normalized SQS and CSL chemical criteria.

4.1.1 North Beach CSO

Analytical results for the six samples collected near the North Beach CSO are summarized in Table 4-2. TOC values in these six samples ranged from 0.17 to 0.24%, so results for the non-ionic organic compounds have been compared to the 1988 Marine Dry-Weight SQS and CSL chemical criteria. There were no exceedences of SMS chemical criteria in any of the six North Beach CSO sediment samples.

4.1.2 South Magnolia CSO

Analytical results for the six samples collected near the South Magnolia CSO are summarized in Table 4-3. TOC values in these six samples ranged from 0.15 to 0.53%, with one sample having a TOC concentration greater than 0.5%. Results for the non-ionic organic compounds have been initially compared to the 1988 Marine Dry-Weight SQS and CSL chemical criteria for comparative purposes. There were no exceedences of SMS dry-weight chemical criteria in any of the six South Magnolia CSO sediment samples. Results for non-ionic organic compounds in the sediment sample collected from station CSO-MG-2, in which the TOC concentration was 0.53%, have also been compared to organic-carbon normalized chemical criteria in Table C-1 of Appendix C. There were also no exceedences of organic carbon-normalized chemical criteria in this sample.

4.1.3 53rd Avenue SW CSO

Analytical results for the six samples collected near the 53rd Avenue SW CSO are summarized in Table 4-4. TOC values in these six samples ranged from 0.07 to 1.23%, with one sample having a TOC concentration greater than 0.5%. Results for the non-ionic organic compounds have been initially compared to the 1988 Marine Dry-Weight SQS and CSL chemical criteria for comparative purposes between stations. There were no exceedences of SMS dry-weight chemical criteria in any of the six 53rd Avenue SW CSO sediment samples. Results for non-ionic

Table 4-2

Sediment Chemistry Results for North Beach CSO
CSO Sediment Monitoring Program
King County Sediment Management Plan Update

Metals (mg/Kg DW)	SQS	CSL	CSO-NB-1	CSO-NB-2	CSO-NB-3	CSO-NB-4	CSO-NB-5	CSO-NB-6
Arsenic	57	93	--	--	2.1	--	--	--
Cadmium	5.1	6.7	--	0.17	0.16	--	--	--
Chromium	260	270	15.3	15.8	16.3	14.5	15.0	12.8
Copper	390	390	6.01	5.56	5.10	4.00	4.50	3.41
Lead	450	530	3.9	3.1	3.6	3.3	3.3	2.8
Mercury	0.41	0.59	0.017	0.030	0.020	0.013	0.018	0.013
Silver	6.1	6.1	--	--	--	--	--	--
Zinc	410	960	21.6	21.7	21.3	18.3	18.8	16.1
Organics (µg/Kg DW)	**SQS**	**CSL**	**CSO-NB-1**	**CSO-NB-2**	**CSO-NB-3**	**CSO-NB-4**	**CSO-NB-5**	**CSO-NB-6**
Acenaphthene	500	500	--	--	--	--	--	--
Acenaphthylene	1,300	1,300	--	--	--	--	--	--
Anthracene	960	960	--	--	34.4	--	--	14
Fluorene	540	540	--	--	--	--	--	--
2-Methylnaphthalene	670	670	--	--	--	--	--	--
Naphthalene	2,100	2,100	--	--	--	--	--	--
Phenanthrene	1,500	1,500	18.8	--	83.9	18.0	--	65.2
Total LPAHs	5,200	5,200	18.8	--	118	18.0	--	79.2
Benzo(a)anthracene	1,300	1,600	25.5	13	102	34.3	13	33.6
Benzo(a)pyrene	1,600	1,600	38.4	22.3	104	35.6	21.0	43.2
Benzofluoranthenes (Total)	3,200	3,600	38.7	14	135	38.6	13	44.1
Benzo(g,h,i)perylene	670	720	13	--	59.8	7.6	--	18.6
Chrysene	1,400	2,800	20.4	--	89.6	24.8	--	25.3
Dibenzo(a,h)anthracene	230	230	--	--	17.0	--	--	7.7
Fluoranthene	1,700	2,500	31.7	--	222	42.5	--	73.3
Indeno(1,2,3-c,d)pyrene	600	690	18.8	9.0	56.1	15.8	8.2	22.4
Pyrene	2,600	3,300	35.2	--	210	37.4	--	74.0
Total HPAHs	12,000	17,000	221	58.1	996	237	54.6	342
Benzyl Butyl Phthalate	63	900	--	--	--	--	--	--
Bis(2-ethylhexyl) Phthalate	1,300	3,100	--	--	--	--	--	--
Di-N-butyl Phthalate	1,400	5,100	--	--	--	--	--	--
Di-N-octyl Phthalate	6,200	6,200	--	--	--	--	--	--
Diethyl Phthalate	200	1,200	--	--	--	--	--	--
Dimethyl Phthalate	71	160	--	--	--	--	--	--
1,2-Dichlorobenzene	35	50	--	--	--	--	--	--
1,4-Dichlorobenzene	110	110	--	--	--	--	--	--
1,2,4-Trichlorobenzene	31	51	--	--	--	--	--	--
Hexachlorobenzene	22	70	--	--	--	--	--	--
Dibenzofuran	540	540	--	--	--	--	--	--
Hexachlorobutadiene	11	120	--	--	--	--	--	--
N-Nitrosodiphenylamine	28	40	--	--	--	--	--	--
Total PCBs	130	1,000	--	--	--	--	79.2	--
Benzoic Acid	650	650	250	193	180	220	259	224
Benzyl Alcohol	57	73	--	--	--	--	--	--
2-Methylphenol	63	63	--	--	--	--	--	--
4-Methylphenol	670	670	--	--	--	--	--	--
2,4-Dimethylphenol	29	29	--	--	--	--	--	--
Pentachlorophenol	360	690	--	--	--	--	--	--
Phenol	420	1,200	--	--	--	--	49	--

Notes

mg/Kg DW - Milligrams per kilogram on a dry weight basis, based on percent solids.
µg/Kg DW - Micrograms per kilogram on a dry weight basis, based on percent solids.
SQS - 1988 Marine Dry Sediment Quality Standard chemical criterion from EIM database.
CSL - 1988 Marine Dry Cleanup Screening Level chemical criterion from EIM database.
-- Analyte not detected.

Table 4-3

Sediment Chemistry Results for South Magnolia CSO
CSO Sediment Monitoring Program
King County Sediment Management Plan Update

Metals (mg/Kg DW)	SQS	CSL	CSO-MG-1	CSO-MG-2	CSO-MG-3	CSO-MG-4	CSO-MG-5	CSO-MG-6
Arsenic	57	93	2.6	3.2	2.6	2.6	3.3	3.0
Cadmium	5.1	6.7	0.19	0.24	0.16	--	--	0.13
Chromium	260	270	16.0	16.7	16.6	18.3	17.1	17.5
Copper	390	390	18.3	14.5	9.15	8.33	7.30	7.48
Lead	450	530	10.3	16.6	8.53	7.84	6.2	6.79
Mercury	0.41	0.59	0.038	0.046	0.041	0.026	0.029	0.033
Silver	6.1	6.1	--	--	--	--	--	--
Zinc	410	960	56.0	43.7	29.7	28.1	26.6	23.5
Organics (µg/Kg DW)	**SQS**	**CSL**	**CSO-MG-1**	**CSO-MG-2**	**CSO-MG-3**	**CSO-MG-4**	**CSO-MG-5**	**CSO-MG-6**
Acenaphthene	500	500	--	--	--	--	--	--
Acenaphthylene	1,300	1,300	--	--	--	--	--	--
Anthracene	960	960	--	12	9.7	7.9	8.50	13
Fluorene	540	540	--	--	--	--	--	--
2-Methylnaphthalene	670	670	--	--	--	--	--	--
Naphthalene	2,100	2,100	--	--	--	--	--	--
Phenanthrene	1,500	1,500	15.3	28.3	25.4	31.0	17.0	35.9
Total LPAHs	5,200	5,200	15.3	40.8	35.1	38.9	25.5	48.9
Benzo(a)anthracene	1,300	1,600	28.7	45.9	30.6	42.4	24.4	45.4
Benzo(a)pyrene	1,600	1,600	39.9	56.7	42.5	52.7	36.7	53.3
Benzofluoranthenes (Total)	3,200	3,600	59.1	89.4	56.6	87.6	48.7	77.2
Benzo(g,h,i)perylene	670	720	17.5	29.1	19.3	27.3	13	22.6
Chrysene	1,400	2,800	28.3	47.7	27.8	52.0	23.1	40.6
Dibenzo(a,h)anthracene	230	230	9.4	13	9.1	12	7.9	11
Fluoranthene	1,700	2,500	42.1	75.7	42.8	95.1	33.1	71.5
Indeno(1,2,3-c,d)pyrene	600	690	23.5	32.8	24.8	33.1	19.0	29.8
Pyrene	2,600	3,300	36.8	67.2	37.6	76.9	29.8	62.3
Total HPAHs	12,000	17,000	285	457	291	480	235	414
Benzyl Butyl Phthalate	63	900	--	--	--	54.2	--	--
Bis(2-ethylhexyl) Phthalate	1,300	3,100	--	--	--	--	--	--
Di-N-butyl Phthalate	1,400	5,100	--	--	--	--	--	--
Di-N-octyl Phthalate	6,200	6,200	--	--	--	--	--	--
Diethyl Phthalate	200	1,200	--	--	--	--	--	--
Dimethyl Phthalate	71	160	--	--	--	--	--	--
1,2-Dichlorobenzene	35	50	--	--	--	--	--	--
1,4-Dichlorobenzene	110	110	--	--	--	--	--	--
1,2,4-Trichlorobenzene	31	51	--	--	--	--	--	--
Hexachlorobenzene	22	70	--	--	--	--	--	--
Dibenzofuran	540	540	--	--	--	--	--	--
Hexachlorobutadiene	11	120	--	--	--	--	--	--
N-Nitrosodiphenylamine	28	40	--	--	--	--	--	--
Total PCBs	130	1,000	2.4	7.30	5.03	5.27	4.70	7.12
Benzoic Acid	650	650	181	234	159	177	157	158
Benzyl Alcohol	57	73	--	--	--	--	--	--
2-Methylphenol	63	63	--	--	--	--	--	--
4-Methylphenol	670	670	--	--	--	--	--	--
2,4-Dimethylphenol	29	29	--	--	--	--	--	--
Pentachlorophenol	360	690	--	--	--	--	--	--
Phenol	420	1,200	--	--	--	--	--	--

Notes

mg/Kg DW - Milligrams per kilogram on a dry weight basis, based on percent solids.
µg/Kg DW - Micrograms per kilogram on a dry weight basis, based on percent solids.
SQS - 1988 Marine Dry Sediment Quality Standard chemical criterion from EIM database.
CSL - 1988 Marine Dry Cleanup Screening Level chemical criterion from EIM database.
-- Analyte not detected.

Table 4-4

Sediment Chemistry Results for 53rd Avenue SW CSO
CSO Sediment Monitoring Program
King County Sediment Management Plan Update

Metals (mg/Kg DW)	SQS	CSL	CSO-53-1	CSO-53-2	CSO-53-3	CSO-53-4	CSO-53-5	CSO-53-6
Arsenic	57	93	1.8	--	--	--	2.0	2.8
Cadmium	5.1	6.7	0.16	--	--	--	--	0.31
Chromium	260	270	20.7	19.0	20.1	18.8	21.3	26.8
Copper	390	390	23.5	4.83	4.87	5.47	6.10	13.2
Lead	450	530	3.7	3.8	3.4	6.4	5.4	7.6
Mercury	0.41	0.59	0.016	0.011	0.012	0.014	0.015	0.038
Silver	6.1	6.1	--	--	--	--	--	--
Zinc	410	960	30.5	24.8	25.7	26.1	30.1	39.6
Organics (µg/Kg DW)	**SQS**	**CSL**	**CSO-53-1**	**CSO-53-2**	**CSO-53-3**	**CSO-53-4**	**CSO-53-5**	**CSO-53-6**
Acenaphthene	500	500	--	--	--	--	--	--
Acenaphthylene	1,300	1,300	--	--	--	--	--	--
Anthracene	960	960	16.6	--	--	--	--	24.3
Fluorene	540	540	--	--	--	--	--	--
2-Methylnaphthalene	670	670	--	--	--	--	--	--
Naphthalene	2,100	2,100	--	--	--	--	--	--
Phenanthrene	1,500	1,500	43.1	--	--	19.5	19.4	59.6
Total LPAHs	5,200	5,200	59.7	--	--	19.5	19.4	83.9
Benzo(a)anthracene	1,300	1,600	50.3	--	--	17.1	22.5	49.5
Benzo(a)pyrene	1,600	1,600	61.3	--	--	26.7	32.6	77.0
Benzofluoranthenes (Total)	3,200	3,600	86.4	--	--	25.7	31.2	109
Benzo(g,h,i)perylene	670	720	18.9	--	--	--	--	28.6
Chrysene	1,400	2,800	54.7	--	--	14	16	64.2
Dibenzo(a,h)anthracene	230	230	12	--	--	--	8.5	16
Fluoranthene	1,700	2,500	79.5	--	--	19.6	25.6	125
Indeno(1,2,3-c,d)pyrene	600	690	25.2	--	--	11	14	36.9
Pyrene	2,600	3,300	65.4	--	--	21.4	23.8	103
Total HPAHs	12,000	17,000	454	--	--	135	174	610
Benzyl Butyl Phthalate	63	900	--	--	--	--	--	--
Bis(2-ethylhexyl) Phthalate	1,300	3,100	--	--	--	--	--	--
Di-N-butyl Phthalate	1,400	5,100	16	16	15	17	17	--
Di-N-octyl Phthalate	6,200	6,200	--	--	--	--	--	--
Diethyl Phthalate	200	1,200	--	--	--	--	--	--
Dimethyl Phthalate	71	160	--	--	--	--	--	--
1,2-Dichlorobenzene	35	50	--	--	--	--	--	--
1,4-Dichlorobenzene	110	110	--	--	--	--	--	--
1,2,4-Trichlorobenzene	31	51	--	--	--	--	--	--
Hexachlorobenzene	22	70	--	--	--	--	--	--
Dibenzofuran	540	540	--	--	--	--	--	--
Hexachlorobutadiene	11	120	--	--	--	--	--	--
N-Nitrosodiphenylamine	28	40	--	--	--	--	--	--
Total PCBs	130	1,000	--	--	11.2	--	6.69	12.6
Benzoic Acid	650	650	214	--	158	192	174	233
Benzyl Alcohol	57	73	--	--	--	--	--	--
2-Methylphenol	63	63	--	--	--	--	--	--
4-Methylphenol	670	670	--	--	--	--	--	--
2,4-Dimethylphenol	29	29	--	--	--	--	--	--
Pentachlorophenol	360	690	--	--	--	--	--	--
Phenol	420	1,200	--	--	--	--	--	--

Notes

mg/Kg DW - Milligrams per kilogram on a dry weight basis, based on percent solids.
µg/Kg DW - Micrograms per kilogram on a dry weight basis, based on percent solids.
SQS - 1988 Marine Dry Sediment Quality Standard chemical criterion from EIM database.
CSL - 1988 Marine Dry Cleanup Screening Level chemical criterion from EIM database.
-- Analyte not detected.

Table 4-5

Sediment Chemistry Results for Murray Avenue SW CSO
CSO Sediment Monitoring Program
King County Sediment Management Plan Update

Metals (mg/Kg DW)	SQS	CSL	CSO-MY-1	CSO-MY-2	CSO-MY-3	CSO-MY-4	CSO-MY-5	CSO-MY-6	CSO-MY-7
Arsenic	57	93	2.1	2.1	2.1	2.0	2.7	2.7	3.0
Cadmium	5.1	6.7	0.18	--	--	--	--	--	--
Chromium	260	270	15.5	16.8	18.3	15.1	13.8	17.0	18.5
Copper	390	390	6.45	7.45	8.18	3.84	4.13	4.40	3.79
Lead	450	530	8.35	10.8	12.8	5.5	4.7	5.0	3.8
Mercury	0.41	0.59	0.018	0.047	0.016	0.011	0.014	0.0093	0.011
Silver	6.1	6.1	--	--	--	--	--	--	--
Zinc	410	960	30.3	42.1	36.3	19.6	20.9	21.4	20.4
Organics (µg/Kg DW)	**SQS**	**CSL**	**CSO-MY-1**	**CSO-MY-2**	**CSO-MY-3**	**CSO-MY-4**	**CSO-MY-5**	**CSO-MY-6**	**CSO-MY-7**
Acenaphthene	500	500	15.2	--	8.0	--	--	--	--
Acenaphthylene	1,300	1,300	--	--	--	--	--	--	--
Anthracene	960	960	50.0	13	32.3	--	--	11	--
Fluorene	540	540	16.9	--	14.6	--	--	--	--
2-Methylnaphthalene	670	670	--	--	--	--	--	--	--
Naphthalene	2,100	2,100	--	--	--	--	--	--	--
Phenanthrene	1,500	1,500	170	42.4	106	11	--	38.3	--
Total LPAHs	5,200	5,200	252	55.1	161	11	--	49.6	--
Benzo(a)anthracene	1,300	1,600	133	46.3	72.8	34.8	12	25.9	--
Benzo(a)pyrene	1,600	1,600	132	56.4	82.3	52.0	20.6	34.4	--
Benzofluoranthenes (Total)	3,200	3,600	233	78.3	138	59.8	15.1	34.7	--
Benzo(g,h,i)perylene	670	720	82.5	30.6	48.2	24.7	--	7.9	--
Chrysene	1,400	2,800	137	42.8	81.7	34.5	--	22.5	--
Dibenzo(a,h)anthracene	230	230	26.9	15.1	18.5	9.2	--	7.4	--
Fluoranthene	1,700	2,500	278	91.5	167	49.0	--	39.9	--
Indeno(1,2,3-c,d)pyrene	600	690	77.0	29.2	47.7	27.6	8.2	14.3	--
Pyrene	2,600	3,300	263	83.5	142	57.8	--	41.2	--
Total HPAHs	12,000	17,000	1,370	474	798	349	55.7	228	--
Benzyl Butyl Phthalate	63	900	**129**	--	--	--	--	--	--
Bis(2-ethylhexyl) Phthalate	1,300	3,100	--	--	--	--	--	--	--
Di-N-butyl Phthalate	1,400	5,100	59.8	17	16	15	14	14	14
Di-N-octyl Phthalate	6,200	6,200	--	--	--	--	--	--	--
Diethyl Phthalate	200	1,200	--	--	--	--	14	--	--
Dimethyl Phthalate	71	160	--	--	32.3	--	--	--	--
1,2-Dichlorobenzene	35	50	--	--	--	--	--	--	--
1,4-Dichlorobenzene	110	110	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	31	51	--	--	--	--	--	--	--
Hexachlorobenzene	22	70	--	--	--	--	--	--	--
Dibenzofuran	540	540	--	--	--	--	--	--	--
Hexachlorobutadiene	11	120	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	28	40	--	--	--	--	--	--	--
Total PCBs	130	1,000	--	2.8	2.9	--	--	--	--
Benzoic Acid	650	650	224	182	226	228	186	214	224
Benzyl Alcohol	57	73	--	--	--	--	--	--	--
2-Methylphenol	63	63	--	--	--	--	--	--	--
4-Methylphenol	670	670	--	--	--	--	--	--	--
2,4-Dimethylphenol	29	29	--	--	--	--	--	--	--
Pentachlorophenol	360	690	--	--	--	--	--	--	--
Phenol	420	1,200	--	--	--	--	--	--	--

Notes

mg/Kg DW - Milligrams per kilogram on a dry weight basis, based on percent solids.
µg/Kg DW - Micrograms per kilogram on a dry weight basis, based on percent solids.
SQS - 1988 Marine Dry Sediment Quality Standard chemical criterion from EIM database.
CSL - 1988 Marine Dry Cleanup Screening Level chemical criterion from EIM database.
-- Analyte not detected.
Value Detected chemical concentration exceeds the SQS chemical criterion.

Table 4-6

Sediment Chemistry Results for SW Barton Street CSO
CSO Sediment Monitoring Program
King County Sediment Management Plan Update

Metals (mg/Kg DW)	SQS	CSL	CSO-BT-1	CSO-BT-2	CSO-BT-3	CSO-BT-4	CSO-BT-5	CSO-BT-6
Arsenic	57	93	7.7	5.6	4.3	3.6	5.8	2.5
Cadmium	5.1	6.7	0.69	0.31	0.18	0.21	0.32	--
Chromium	260	270	19.9	15.7	20.1	17.4	19.1	19.8
Copper	390	390	27.5	14.0	8.09	14.2	30.1	6.67
Lead	450	530	43.8	18.5	10.1	17.3	21.5	8.93
Mercury	0.41	0.59	0.043	0.022	0.018	0.020	0.028	0.011
Silver	6.1	6.1	--	--	--	--	--	--
Zinc	410	960	90.8	57.0	42.3	48.6	62.9	29.8
Organics (mg/Kg OC)	**SQS**	**CSL**	**CSO-BT-1**	**CSO-BT-2**	**CSO-BT-3**	**CSO-BT-4**	**CSO-BT-5**	**CSO-BT-6**
Acenaphthene	16	57	**68.5**	2.66	**239**	--	7.46	--
Acenaphthylene	66	66	2.05	1.29	--	--	--	--
Anthracene	220	1,200	136	12.2	**597**	30.3	163	68.2
Fluorene	23	79	**59.9**	2.85	**220**	--	16.4	--
2-Methylnaphthalene	38	64	27.1	--	29.7	--	--	--
Naphthalene	99	170	22.8	--	41.1	--	--	--
Phenanthrene	100	480	**406**	31.7	**1,540**	54.4	**246**	**127**
Total LPAHs	370	780	**694**	50.7	**2,630**	84.7	**433**	195
Benzo(a)anthracene	110	270	**171**	38.0	**928**	91.5	**358**	**192**
Benzo(a)pyrene	99	210	**145**	40.0	**885**	**154**	**361**	**251**
Benzofluoranthenes (Total)	230	450	**231**	101	**1,690**	**273**	**734**	**455**
Benzo(g,h,i)perylene	31	78	**94.7**	22.4	**545**	**102**	**384**	**193**
Chrysene	110	460	**183**	57.7	**1,020**	**129**	**532**	**284**
Dibenzo(a,h)anthracene	12	33	**32.4**	7.41	**237**	**40.6**	**137**	**79.0**
Fluoranthene	160	1,200	**375**	123	**1,800**	135	**911**	**522**
Indeno(1,2,3-c,d)pyrene	34	88	**81.4**	20.6	**506**	**89.9**	**291**	**185**
Pyrene	1,000	1,400	404	101	**1,540**	191	862	435
Total HPAHs	960	5,300	**1,710**	511	**9,360**	**1,210**	**4,570**	**2,590**
Benzyl Butyl Phthalate	4.9	64	--	**68.5**	**163**	--	--	--
Bis(2-ethylhexyl) Phthalate	47	78	12.6	--	**352**	**216**	**210**	**969**
Di-N-butyl Phthalate	220	1,700	--	8.24	32.4	23.9	--	31.2
Di-N-octyl Phthalate	58	4,500	--	--	**208**	--	--	--
Diethyl Phthalate	61	110	--	--	--	--	--	--
Dimethyl Phthalate	53	53	--	--	47.0	--	--	--
1,2-Dichlorobenzene	2.3	2.3	--	--	--	--	--	--
1,4-Dichlorobenzene	3.1	9	--	--	--	--	--	--
1,2,4-Trichlorobenzene	0.81	1.8	--	--	--	--	--	--
Hexachlorobenzene	0.38	2.3	--	--	--	--	--	--
Dibenzofuran	15	58	**16.4**	1.0	**103**	--	6.1	--
Hexachlorobutadiene	3.9	6.2	--	--	--	--	--	--
N-Nitrosodiphenylamine	11	11	--	--	--	**107**	--	--
Total PCBs	12	65	0.60	0.46	0.59	0.44	0.39	0.43
Organics (µg/Kg DW)	**SQS**	**CSL**	**CSO-BT-1**	**CSO-BT-2**	**CSO-BT-3**	**CSO-BT-4**	**CSO-BT-5**	**CSO-BT-6**
Benzoic Acid	650	650	--	251	**2,100**	**2,280**	**2,780**	**3,470**
Benzyl Alcohol	57	73	--	--	--	--	--	--
2-Methylphenol	63	63	--	--	--	--	--	--
4-Methylphenol	670	670	--	--	--	--	--	--
2,4-Dimethylphenol	29	29	--	--	--	--	--	--
Pentachlorophenol	360	690	--	--	--	--	--	--
Phenol	420	1,200	--	--	--	--	--	--

Notes

mg/Kg DW - Milligrams per kilogram on a dry weight basis, based on percent solids.
mg/Kg OC - Milligrams per kilogram on an organic carbon basis, based on TOC.
µg/Kg DW - Micrograms per kilogram on a dry weight basis, based on percent solids.
SQS - Sediment Quality Standard from Table I of Chapter 173-204-320 WAC.
CSL - Cleanup Screening Level from Table III of Chapter 173-204-320 WAC.

--	Analyte not detected.
Value	Detected chemical concentration exceeds the SQS chemical criterion.
Value	Detected chemical concentration exceeds the CSL chemical criterion.

organic compounds in the sediment sample collected from station CSO-53-6, in which the TOC concentration was 1.23%, have also been compared to organic-carbon normalized chemical criteria in Table C-1 of Appendix C. There were also no exceedences of organic carbon-normalized chemical criteria in this sample.

4.1.4 Murray Avenue SW CSO

Analytical results for the seven samples collected near the Murray Avenue SW CSO are summarized in Table 4-5. TOC values in these seven samples ranged from 0.10 to 0.67%, with two samples having a TOC concentration greater than 0.5%. Results for the non-ionic organic compounds have been initially compared to the 1988 Marine Dry-Weight SQS and CSL chemical criteria for comparative purposes. There was one exceedence of SMS chemical criteria. The benzyl butyl phthalate concentration in the sample collected from station CSO-MY-1 exceeded the dry-weight SQS criterion but was well below the CSL criterion. There were no other exceedences of SMS chemical criteria in this sample or any of the other six samples.

Results for non-ionic organic compounds in the sediment samples collected from stations CSO-MY-1 and CSO-MY-3, in which the TOC concentrations were 0.67 and 0.60%, respectively, have also been compared to organic-carbon normalized chemical criteria in Table C-1 of Appendix C. There were also no exceedences of organic carbon-normalized chemical criteria in the sample collected from station CSO-MY-3. The organic carbon-normalized benzyl butyl phthalate concentration detected in the sample collected from station CSO-MY-1 also exceeded the SQS criterion but, again, was well below the CSL criterion. There were no other exceedences of organic carbon-normalized SMS criteria in the sample collected from station CSO-MY-1.

4.1.5 SW Barton Street CSO

Analytical results for the six samples collected near the SW Barton Street CSO are summarized in Table 4-6. TOC values in these six samples ranged from 0.48 to 4.51%, with two samples having a TOC concentration less than 0.5%. Results for the non-ionic organic compounds in Table 4-6 have been initially compared to the organic carbon-normalized SQS and CSL chemical criteria from Tables I and III of the SMS for comparative purposes between stations. Results for the non-ionic organic compounds in samples collected from stations CSO-BT-3 and CSO-BT-6 have then been more-appropriately compared in C-2 of Appendix C to the 1988 Marine Dry Weight SQS and CSL chemical criteria. Sediment chemical concentrations that exceeded SQS and/or CSL chemical criteria were reported in samples collected from all six stations, shown below.

SW Barton Street CSO

Sediment Concentrations Greater than SQS or CSL Chemical Criteria

Station	SQS Chemical Criterion	CSL Chemical Criterion
CSO-BT-1	Fluorene, Phenanthrene, Total LPAHs, Benzo(a)anthracene, Benzo(a)pyrene, Benzofluoranthenes (Total), Chrysene, Dibenzo(a,h)anthracene, Fluoranthene, Indeno(1,2,3-c,d)pyrene, Total HPAHs, Dibenzofuran	Acenaphthene, Benzo(g,h,i)perylene
CSO-BT-2	*None*	Benzyl Butyl Phthalate

Station	SQS Chemical Criterion	CSL Chemical Criterion
CSO-BT-3	Bis(2-ethylhexyl) Phthalate, Benzyl Butyl Phthalate	Acenaphthene, Anthracene, Fluorene, Phenanthrene, Total LPAHs, Benzo(a)anthracene, Benzo(a)pyrene, Benzofluoranthenes (Total), Benzo(g,h,i)perylene, Chrysene, Dibenzo(a,h)anthracene, Fluoranthene, Indeno(1,2,3-c,d)pyrene, Pyrene, Total HPAHs, Dimethyl Phthalate, Benzoic Acid
CSO-BT-4	Benzo(a)pyrene, Benzofluoranthenes (Total), Chrysene, Total HPAHs	Benzo(g,h,i)perylene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene, Bis(2-ethylhexyl) Phthalate, N-Nitrosodiphenylamine, Benzoic Acid
CSO-BT-5	Phenanthrene, Total LPAHs, Fluoranthene, Total HPAHs	Benzo(a)anthracene, Benzo(a)pyrene, Benzofluoranthenes (Total), Benzo(g,h,i)perylene, Chrysene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene, Bis(2-ethylhexyl) Phthalate, Benzoic Acid
CSO-BT-6	Total HPAHs	Benzo(g,h,i)perylene, Dibenzo(a,h)anthracene, Fluoranthene, Indeno(1,2,3-c,d)pyrene, Bis(2-ethylhexyl) Phthalate, Benzoic Acid

4.2 Estuarine CSOs

Sediment chemical concentrations detected in samples collected from the two higher-salinity estuarine CSOs – South Brandon Street and Chelan Avenue SW – have been compared to SQS and CSL chemical criteria found in Tables I and III of the SMS. Results for the non-ionic organic compounds have been initially compared to organic carbon-normalized chemical criteria when the TOC concentration in the sample was greater than 0.5%. When the TOC concentration in the sample was less than 0.5%, results for the non-ionic organic compounds have been re-compared in Table 4-10 to the 1998 Marine Dry Weight SQS and CSL chemical criteria.

4.2.1 South Brandon Street CSO

Analytical results for the six samples collected near the South Brandon Street CSO are summarized in Table 4-7. TOC values in these six samples ranged from 0.94 to 2.29%, so results for the non-ionic organic compounds have all been compared to the organic carbon-normalized SQS and CSL chemical criteria from Tables I and III of the SMS. Sediment chemical concentrations that exceeded SQS and/or CSL chemical criteria were reported in samples collected from five of six stations, shown below.

Table 4-7

Sediment Chemistry Results for South Brandon Street CSO
CSO Sediment Monitoring Program
King County Sediment Management Plan Update

Metals (mg/Kg DW)	SQS	CSL	CSO-BR-1	CSO-BR-2	CSO-BR-3	CSO-BR-4	CSO-BR-5	CSO-BR-6
Arsenic	57	93	11.2	14.9	8.2	15.3	13.3	12
Cadmium	5.1	6.7	--	0.25	0.24	0.31	0.42	0.36
Chromium	260	270	19.6	21.9	26.8	27.2	30.9	27.8
Copper	390	390	35.6	38.1	59.5	60.7	67.3	55.9
Lead	450	530	29.6	45.2	68.4	27.8	32.3	25.9
Mercury	0.41	0.59	0.313	0.159	0.0775	0.146	0.227	0.225
Silver	6.1	6.1	1.2	1.3	2.03	2.04	2.17	2.42
Zinc	410	960	74.9	90.4	104	116	124	107
Organics (mg/Kg OC)	**SQS**	**CSL**	**CSO-BR-1**	**CSO-BR-2**	**CSO-BR-3**	**CSO-BR-4**	**CSO-BR-5**	**CSO-BR-6**
Acenaphthene	16	57	2.32	1.08	14.0	2.48	0.77	0.94
Acenaphthylene	66	66	--	--	--	--	--	--
Anthracene	220	1,200	4.74	6.89	76.0	5.15	4.15	2.95
Fluorene	23	79	1.3	1.74	16.0	3.07	1.33	1.55
2-Methylnaphthalene	38	64	--	--	--	0.67	--	--
Naphthalene	99	170	--	--	--	0.51	--	--
Phenanthrene	100	480	8.00	13.6	**141**	15.3	7.90	6.02
Total LPAHs	370	780	16.4	23.3	247	26.5	14.1	11.5
Benzo(a)anthracene	110	270	10.5	16.2	**137**	11.1	13.0	12.7
Benzo(a)pyrene	99	210	11.6	17.0	**163**	8.30	11.8	5.83
Benzofluoranthenes (Total)	230	450	22.9	38.7	**277**	20.2	30.3	17.1
Benzo(g,h,i)perylene	31	78	7.99	11.0	**115**	5.95	7.09	4.23
Chrysene	110	460	13.9	19.9	**198**	14.4	16.7	6.26
Dibenzo(a,h)anthracene	12	33	2.61	3.41	**42.0**	2.20	2.74	1.86
Fluoranthene	160	1,200	23.4	37.7	**358**	36.5	31.9	15.9
Indeno(1,2,3-c,d)pyrene	34	88	7.15	10.0	**101**	5.46	6.90	3.87
Pyrene	1,000	1,400	19.8	35.4	317	25.5	25.4	14.0
Total HPAHs	960	5,300	120	190	**1,710**	130	146	81.7
Benzyl Butyl Phthalate	4.9	64	**9.89**	**7.18**	--	**6.84**	4.83	--
Bis(2-ethylhexyl) Phthalate	47	78	38.4	33.0	**358**	24.4	30.1	--
Di-N-butyl Phthalate	220	1,700	--	--	21.3	--	1.5	--
Di-N-octyl Phthalate	58	4,500	--	--	--	--	--	--
Diethyl Phthalate	61	110	--	--	--	--	--	--
Dimethyl Phthalate	53	53	1.81	--	--	1.34	1.24	--
1,2-Dichlorobenzene	2.3	2.3	--	--	--	--	--	--
1,4-Dichlorobenzene	3.1	9	--	--	--	--	--	--
1,2,4-Trichlorobenzene	0.81	1.8	--	--	--	--	--	--
Hexachlorobenzene	0.38	2.3	--	--	--	--	--	--
Dibenzofuran	15	58	--	0.86	6.5	2.34	0.86	1.05
Hexachlorobutadiene	3.9	6.2	--	--	--	--	--	--
N-Nitrosodiphenylamine	11	11	--	--	--	--	--	--
Total PCBs	12	65	**39.0**	**17.4**	3.65	4.33	4.94	5.47
Organics (µg/Kg DW)	**SQS**	**CSL**	**CSO-BR-1**	**CSO-BR-2**	**CSO-BR-3**	**CSO-BR-4**	**CSO-BR-5**	**CSO-BR-6**
Benzoic Acid	650	650	298	200	**2,040**	**1,090**	**705**	--
Benzyl Alcohol	57	73	--	--	--	29.6	--	--
2-Methylphenol	63	63	--	--	--	--	--	--
4-Methylphenol	670	670	--	--	--	--	--	--
2,4-Dimethylphenol	29	29	--	--	--	--	--	--
Pentachlorophenol	360	690	--	--	--	--	--	--
Phenol	420	1,200	--	--	--	117	86	--

Notes

mg/Kg DW - Milligrams per kilogram on a dry weight basis, based on percent solids.
mg/Kg OC - Milligrams per kilogram on an organic carbon basis, based on TOC.
µg/Kg DW - Micrograms per kilogram on a dry weight basis, based on percent solids.
SQS - Sediment Quality Standard from Table I of Chapter 173-204-320 WAC.
CSL - Cleanup Screening Level from Table III of Chapter 173-204-320 WAC.

--	Analyte not detected.
Value	Detected chemical concentration exceeds the SQS chemical criterion.
Value	Detected chemical concentration exceeds the CSL chemical criterion.

Table 4-8

Sediment Chemistry Results for Chelan Avenue SW CSO
CSO Sediment Monitoring Program
King County Sediment Management Plan Update

Metals (mg/Kg DW)	SQS	CSL	CSO-CH-1	CSO-CH-2	CSO-CH-3	CSO-CH-4	CSO-CH-5	CSO-CH-6
Arsenic	57	93	10.6	6.2	16.6	5.1	8.3	5.0
Cadmium	5.1	6.7	0.19	--	0.32	--	0.16	--
Chromium	260	270	24.1	12.9	26.9	10.2	14.5	9.28
Copper	390	390	49.8	30.5	64.6	17.2	28.7	12.0
Lead	450	530	27.9	27.0	52.7	15.8	23.6	13.5
Mercury	0.41	0.59	0.133	0.0968	0.175	0.057	0.134	0.018
Silver	6.1	6.1	1.2	1.1	1.1	1.1	1.1	0.91
Zinc	410	960	92.6	56.6	105	38.1	70.1	31.1
Organics (mg/Kg OC)	**SQS**	**CSL**	**CSO-CH-1**	**CSO-CH-2**	**CSO-CH-3**	**CSO-CH-4**	**CSO-CH-5**	**CSO-CH-6**
Acenaphthene	16	57	7.32	2.26	3.87	2.71	2.24	--
Acenaphthylene	66	66	1.08	--	2.81	--	--	--
Anthracene	220	1,200	20.8	10.9	143	10.5	9.43	--
Fluorene	23	79	7.65	4.22	21.5	4.16	3.91	--
2-Methylnaphthalene	38	64	1.72	--	6.54	--	--	--
Naphthalene	99	170	1.36	--	4.52	--	--	--
Phenanthrene	100	480	63.3	28.7	61.5	22.6	26.12	--
Total LPAHs	370	780	102	46.2	237	40.0	41.7	--
Benzo(a)anthracene	110	270	45.7	32.4	92.9	24.1	23.6	--
Benzo(a)pyrene	99	210	38.9	34.2	73.5	27.0	27.2	--
Benzofluoranthenes (Total)	230	450	82.8	74.5	174	53.1	55.5	--
Benzo(g,h,i)perylene	31	78	21.2	17.3	**32.6**	12.6	14.5	--
Chrysene	110	460	54.4	43.1	**174**	30.6	30.7	--
Dibenzo(a,h)anthracene	12	33	6.73	6.09	11.8	4.94	4.66	--
Fluoranthene	160	1,200	81.3	79.9	117	57.6	59.5	77.3
Indeno(1,2,3-c,d)pyrene	34	88	19.6	17.7	33.2	13.2	14.8	--
Pyrene	1,000	1,400	105	68.3	103	55.7	54.6	107
Total HPAHs	960	5,300	455	373	811	279	285	184
Benzyl Butyl Phthalate	4.9	64	**5.19**	**14.0**	**8.16**	**15.5**	**12.8**	--
Bis(2-ethylhexyl) Phthalate	47	78	--	--	--	--	--	**407**
Di-N-butyl Phthalate	220	1,700	--	--	--	--	--	--
Di-N-octyl Phthalate	58	4,500	--	--	--	--	--	--
Diethyl Phthalate	61	110	--	--	--	--	--	--
Dimethyl Phthalate	53	53	--	--	2.71	--	--	--
1,2-Dichlorobenzene	2.3	2.3	--	--	--	--	--	--
1,4-Dichlorobenzene	3.1	9	1.10	--	--	--	--	--
1,2,4-Trichlorobenzene	0.81	1.8	--	--	--	--	--	--
Hexachlorobenzene	0.38	2.3	--	--	--	--	--	--
Dibenzofuran	15	58	1.72	2.08	8.10	2.60	2.44	--
Hexachlorobutadiene	3.9	6.2	--	--	--	--	--	--
N-Nitrosodiphenylamine	11	11	--	--	--	--	--	--
Total PCBs	12	65	**21.6**	10.8	**17.1**	9.21	4.19	2.79
Organics (µg/Kg DW)	**SQS**	**CSL**	**CSO-CH-1**	**CSO-CH-2**	**CSO-CH-3**	**CSO-CH-4**	**CSO-CH-5**	**CSO-CH-6**
Benzoic Acid	650	650	210	172	205	157	162	--
Benzyl Alcohol	57	73	--	--	--	--	--	--
2-Methylphenol	63	63	--	--	--	--	--	--
4-Methylphenol	670	670	--	--	--	--	--	--
2,4-Dimethylphenol	29	29	--	--	--	--	--	--
Pentachlorophenol	360	690	--	--	--	--	--	--
Phenol	420	1,200	--	--	--	--	--	--

Notes

mg/Kg DW - Milligrams per kilogram on a dry weight basis, based on percent solids.
mg/Kg OC - Milligrams per kilogram on an organic carbon basis, based on TOC.
µg/Kg DW - Micrograms per kilogram on a dry weight basis, based on percent solids.
SQS - Sediment Quality Standard from Table I of Chapter 173-204-320 WAC.
CSL - Cleanup Screening Level from Table III of Chapter 173-204-320 WAC.
-- Analyte not detected.
Value Detected chemical concentration exceeds the SQS chemical criterion.
Value Detected chemical concentration exceeds the CSL chemical criterion.

South Brandon Street CSO
Sediment Concentrations Greater than SQS or CSL Chemical Criteria

Station	SQS Chemical Criterion	CSL Chemical Criterion
CSO-BR-1	Benzyl Butyl Phthalate, Total PCBs	*None*
CSO-BR-2	Benzyl Butyl Phthalate, Total PCBs	*None*
CSO-BR-3	Phenanthrene, Benzo(a)anthracene, Benzo(a)pyrene, Benzofluoranthenes (Total), Benzo(g,h,i)perylene, Chrysene, Dibenzo(a,h)anthracene, Fluoranthene, Total HPAHs	Indeno(1,2,3-c,d)pyrene, Benzoic Acid, Bis(2-ethylhexyl) Phthalate
CSO-BR-4	Benzyl Butyl Phthalate	Benzoic Acid
CSO-BR-5	*None*	Benzoic Acid
CSO-BR-6	*None*	*None*

4.2.2 Chelan Avenue SW CSO

Analytical results for the six samples collected near the Chelan Avenue SW CSO are summarized in Table 4-8. TOC concentrations in these six samples ranged from 0.37 to 1.28%, with the concentration in three samples greater than 0.5% and in three samples less than 0.5%. Results for the non-ionic organic compounds in Table 4-8 have been initially compared to the organic carbon-normalized SQS and CSL chemical criteria from Tables I and III of the SMS for comparative purposes between stations. Results for the non-ionic organic compounds in samples collected from stations CSO-CH-2, CSO-CH-4, and CSO-CH-5 have then been more-appropriately compared in Table C-2 of Appendix C to the 1988 Marine Dry Weight SQS and CSL chemical criteria. Sediment chemical concentrations that exceeded SQS and/or CSL chemical criteria were reported in samples collected from five of six stations, shown below.

Chelan Avenue SW CSO
Sediment Concentrations Greater than SQS or CSL Chemical Criteria

Station	SQS Chemical Criterion	CSL Chemical Criterion
CSO-CH-1	Benzyl Butyl Phthalate, Total PCBs	*None*
CSO-CH-2	Benzyl Butyl Phthalate	*None*
CSO-CH-3	Benzo(g,h,i)perylene, Chrysene, Benzyl Butyl Phthalate, Total PCBs	*None*
CSO-CH-4	*None*	*None*
CSO-CH-5	Benzyl Butyl Phthalate	*None*
CSO-CH-6	*None*	Bis(2-ethylhexyl) Phthalate

4.3 Freshwater CSOs

Sediment chemical concentrations detected in samples collected from the three freshwater CSOs – 3rd Avenue West, University Regulator, and Montlake – have been compared to the draft freshwater SQS and CSL reference values found on the EIM database (http://www.ecy.wa.gov/eim/myEIM.htm), which are based on the 2003 Floating Percentile Guidelines (Ecology 2003). These reference values are all based on dry-weight sediment concentrations. The reference values are non-regulatory but provide an indicator of sediment quality proximal to freshwater CSOs.

Table 4-9

Sediment Chemistry Results for 3rd Avenue West CSO

CSO Sediment Monitoring Program

King County Sediment Management Plan Update

Metals (mg/Kg DW)	SQS-D	CSL-D	CSO-3W-1	CSO-3W-2	CSO-3W-3	CSO-3W-4	CSO-3W-5	CSO-3W-6	CSO-3W-7
Antimony	0.4	0.6	0.702	0.668	0.378	0.718	0.297	0.16	--
Arsenic	20	51	9.51	4.54	5.91	7.36	4.89	3.14	4.69
Cadmium	0.6	1	0.489	0.270	0.308	0.517	0.457	0.174	0.149
Chromium	95	100	25.8	16.5	21.2	21.9	19.2	15.7	20.9
Copper	80	830	82.0	40.7	40.7	46.0	47.9	25.9	21.0
Lead	340	430	114	68.5	84.4	140	99.0	40.9	51.0
Mercury	0.5	0.75	1.50	0.459	0.585	0.339	0.370	0.352	0.050
Nickel	60	70	35.7	23.9	31.4	30.6	28.5	24.8	18.7
Silver	2	2.5	0.826	0.624	0.527	0.855	0.738	0.179	0.154
Zinc	140	160	172	95.0	132	157	123	85.3	80.0
Organics (µg/Kg DW)	**SQS-D**	**CSL-D**	**CSO-3W-1**	**CSO-3W-2**	**CSO-3W-3**	**CSO-3W-4**	**CSO-3W-5**	**CSO-3W-6**	**CSO-3W-7**
Acenaphthene	1,100	1,320	879	229	1,480	1,020	1,660	1,610	114
Acenaphthylene	470	640	140	--	389	119	199	138	--
Anthracene	1,200	1,580	1,060	581	2,350	1,120	1,500	1,770	35.7
Fluorene	1,000	3,000	457	124	1,060	528	693	700	41.4
2-Methylnaphthalene	470	560	136	37.7	117	138	156	118	7.6
Naphthalene	500	1,310	220	111	243	252	194	265	--
Phenanthrene	6,100	7,600	3,260	1,560	7,820	3,900	5,840	6,990	143
Total LPAHs	6,600	9,200	6,020	2,600	13,300	6,940	10,100	11,500	334
Benzo(a)anthracene	4,300	5,800	2,330	1,220	3,890	2,580	2,820	2,930	108
Benzo(a)pyrene	3,300	4,810	3,480	1,780	5,720	3,790	4,340	5,060	144
Benzofluoranthenes (Total	11,000	14,000	4,270	2,300	7,110	4,780	5,270	6,090	201
Benzo(g,h,i)perylene	4,000	5,200	2,310	1,140	3,300	2,190	2,650	2,920	85.9
Chrysene	5,900	6,400	2,770	1,560	5,090	3,210	3,550	3,700	129
Dibenzo(a,h)anthracene	800	840	575	306	773	447	603	625	18.2
Fluoranthene	11,000	15,000	5,210	2,920	9,950	6,000	7,180	8,070	209
Indeno(1,2,3-c,d)pyrene	4,100	5,300	1,880	935	2,640	1,860	2,170	2,310	65.6
Pyrene	8,800	16,000	6,000	3,270	11,700	6,960	8,370	9,850	246
Total HPAHs	31,000	54,800	28,800	15,400	50,200	31,800	36,900	41,500	1,210
Benzyl Butyl Phthalate	260	370	361	--	253	396	--	--	--
Bis(2-ethylhexyl) Phthalat	230	320	1,820	506	1,730	1,240	1,010	--	--
Di-N-octyl Phthalate	26	45	--	--	--	--	--	--	--
Dimethyl Phthalate	46	440	36.5	20.7	--	--	--	--	16.8
Dibenzofuran	400	440	121	21.5	204	110	97.7	64.6	12
Total PCBs	60	120	187	88.4	54.2	310	247	40.6	4.46

Notes

mg/Kg DW - Milligrams per kilogram on a dry weight basis, based on percent solids.

µg/Kg DW - Micrograms per kilogram on a dry weight basis, based on percent solids.

SQS-D - Draft Freshwater Sediment Quality Standard based on 2003 Floating Percentile.

CSL-D - Draft Freshwater Cleanup Screening Level based on 2003 Floating Percentile.

Value	Detected chemical concentration exceeds the SQS-D value.
Value	Detected chemical concentration exceeds the CSL-D value.
--	Analyte not detected.

Table 4-10

Sediment Chemistry Results for University Regulator CSO

CSO Sediment Monitoring Program

King County Sediment Management Plan Update

Metals (mg/Kg DW)	SQS-D	CSL-D	CSO-UR-1	CSO-UR-2	CSO-UR-3	CSO-UR-4	CSO-UR-5	CSO-UR-6	CSO-UR-7
Antimony	0.4	0.6	**0.993**	0.22	**0.842**	0.21	--	0.15	--
Arsenic	20	51	10.6	8.01	8.78	3.55	6.53	2.60	5.15
Cadmium	0.6	1	**1.01**	0.317	**0.914**	0.265	0.140	0.161	0.245
Chromium	95	100	24.1	17.9	27.7	22.7	20.2	15.8	19.0
Copper	80	830	**113**	21.6	**89.6**	20.7	16.4	25.6	23.2
Lead	340	430	109	57.1	112	48.7	10.9	22.6	48.2
Mercury	0.5	0.75	**2.23**	0.197	0.464	0.136	0.070	0.061	0.099
Nickel	60	70	22.4	27.0	35.6	26.5	30.7	25.3	31.4
Silver	2	2.5	0.794	0.137	0.802	0.0985	0.065	0.0825	0.120
Zinc	140	160	**386**	70.5	**293**	77.8	34.7	48.0	67.7
Organics (µg/Kg DW)	**SQS-D**	**CSL-D**	**CSO-UR-1**	**CSO-UR-2**	**CSO-UR-3**	**CSO-UR-4**	**CSO-UR-5**	**CSO-UR-6**	**CSO-UR-7**
Acenaphthene	1,100	1,320	29.7	--	--	12	--	27.3	--
Acenaphthylene	470	640	15	--	--	--	--	--	--
Anthracene	1,200	1,580	119	37.9	155	39.8	34.2	85.7	78.7
Fluorene	1,000	3,000	63.2	--	--	16	--	45.5	--
2-Methylnaphthalene	470	560	--	--	--	--	--	--	--
Naphthalene	500	1,310	17	--	--	--	--	--	--
Phenanthrene	6,100	7,600	487	131	357	171	153	278	108
Total LPAHs	6,600	9,200	731	169	512	239	187	437	187
Benzo(a)anthracene	4,300	5,800	650	123	430	226	115	156	250
Benzo(a)pyrene	3,300	4,810	551	183	536	258	127	150	338
Benzofluoranthenes (Total	11,000	14,000	1,520	297	1,100	430	215	250	563
Benzo(g,h,i)perylene	4,000	5,200	404	121	353	163	72.4	77.6	181
Chrysene	5,900	6,400	1,030	192	653	258	137	173	326
Dibenzo(a,h)anthracene	800	840	71.8	38.5	144	52.1	25	36.5	71.3
Fluoranthene	11,000	15,000	1,690	297	1,030	427	394	416	329
Indeno(1,2,3-c,d)pyrene	4,100	5,300	305	95.7	273	141	57.8	68.3	167
Pyrene	8,800	16,000	1,420	299	811	365	344	341	299
Total HPAHs	31,000	54,800	7,650	1,650	5,330	2,320	1,490	1,670	2,520
Benzyl Butyl Phthalate	260	370	**2,330**	--	**676**	--	--	--	--
Bis(2-ethylhexyl) Phthalat	230	320	**12,300**	**602**	**2,840**	--	--	--	--
Di-N-octyl Phthalate	26	45	--	--	--	--	--	--	--
Dimethyl Phthalate	46	440	--	**70.2**	--	**54.9**	--	--	--
Dibenzofuran	400	440	28.9	--	--	--	--	12	--
Total PCBs	60	120	**567**	50.8	**247**	**147**	48.9	32.7	**67.4**

Notes

mg/Kg DW - Milligrams per kilogram on a dry weight basis, based on percent solids.

µg/Kg DW - Micrograms per kilogram on a dry weight basis, based on percent solids.

SQS-D - Draft Freshwater Sediment Quality Standard based on 2003 Floating Percentile.

CSL-D - Draft Freshwater Cleanup Screening Level based on 2003 Floating Percentile.

Value Detected chemical concentration exceeds the SQS-D value.

Value Detected chemical concentration exceeds the CSL-D value.

-- Analyte not detected.

Table 4-11

Sediment Chemistry Results for Montlake CSO

CSO Sediment Monitoring Program

King County Sediment Management Plan Update

Metals (mg/Kg DW)	SQS-D	CSL-D	CSO-ML-1	CSO-ML-2	CSO-ML-3	CSO-ML-4	CSO-ML-5	CSO-ML-6	CSO-ML-7
Antimony	0.4	0.6	--	0.2699	0.450	--	--	--	3.54
Arsenic	20	51	2.43	4.85	6.68	3.00	2.57	1.75	29.6
Cadmium	0.6	1	0.057	0.077	0.109	0.053	0.057	0.054	0.180
Chromium	95	100	13.8	13.4	14.6	16.9	11.5	12.3	14.4
Copper	80	830	21.4	14.9	50.5	11.4	10.6	13.0	65.1
Lead	340	430	30.2	43.7	565	22.4	85.0	15.2	112
Mercury	0.5	0.75	0.036	0.045	0.0732	0.025	0.0666	0.036	0.0890
Nickel	60	70	21.9	23.9	21.0	20.3	22.5	20.8	21.7
Silver	2	2.5	0.038	0.060	0.100	0.029	0.033	0.021	0.247
Zinc	140	160	66.0	62.6	265	59.3	39.9	28.1	202
Organics (µg/Kg DW)	**SQS-D**	**CSL-D**	**CSO-ML-1**	**CSO-ML-2**	**CSO-ML-3**	**CSO-ML-4**	**CSO-ML-5**	**CSO-ML-6**	**CSO-ML-7**
Acenaphthene	1,100	1,320	--	10	12	--	--	--	--
Acenaphthylene	470	640	--	--	--	--	--	--	--
Anthracene	1,200	1,580	8.6	30.2	48.5	12	9.0	--	9.4
Fluorene	1,000	3,000	--	15.9	17.8	--	--	--	--
2-Methylnaphthalene	470	560	--	--	--	--	--	--	--
Naphthalene	500	1,310	--	--	--	--	--	--	--
Phenanthrene	6,100	7,600	12	145	173	29.6	21.6	--	17.5
Total LPAHs	6,600	9,200	20.8	202	251	41.8	30.6	--	26.9
Benzo(a)anthracene	4,300	5,800	29.9	73.8	369	33.3	29.7	9.0	25.9
Benzo(a)pyrene	3,300	4,810	45.4	77.6	240	35.2	36.2	14.1	33.8
Benzofluoranthenes (Total	11,000	14,000	73.6	136	489	57.3	64.0	21.3	61.1
Benzo(g,h,i)perylene	4,000	5,200	31.0	36.4	150	18.8	21.0	7.7	18.9
Chrysene	5,900	6,400	29.5	78.1	604	26.8	27.4	--	25.1
Dibenzo(a,h)anthracene	800	840	11	15.7	43.5	9.1	9.6	--	--
Fluoranthene	11,000	15,000	43.0	170	419	62.1	58.7	11	49.8
Indeno(1,2,3-c,d)pyrene	4,100	5,300	22.5	34.6	156	14.4	16.6	--	14.7
Pyrene	8,800	16,000	43.6	150	482	53.0	48.2	9.0	43.6
Total HPAHs	31,000	54,800	330	772	2,950	310	311	71.8	273
Benzyl Butyl Phthalate	260	370	--	--	--	--	--	--	--
Bis(2-ethylhexyl) Phthalat	230	320	--	--	--	--	--	--	--
Di-N-octyl Phthalate	26	45	--	--	--	--	--	--	--
Dimethyl Phthalate	46	440	--	--	--	--	--	--	--
Dibenzofuran	400	440	--	7.3	--	--	--	--	--
Total PCBs	60	120	--	2.4	17.6	--	--	--	4.48

Notes

mg/Kg DW - Milligrams per kilogram on a dry weight basis, based on percent solids.

µg/Kg DW - Micrograms per kilogram on a dry weight basis, based on percent solids.

SQS-D - Draft Freshwater Sediment Quality Standard based on 2003 Floating Percentile.

CSL-D - Draft Freshwater Cleanup Screening Level based on 2003 Floating Percentile.

Value	Detected chemical concentration exceeds the SQS-D value.
Value	Detected chemical concentration exceeds the CSL-D value.
--	Analyte not detected.

4.3.1 3rd Avenue West CSO

Analytical results for the seven samples collected near the 3rd Avenue West CSO are summarized in Table 4-11, where they are compared numerically to the draft freshwater SQS and CSL reference values. Sediment chemical concentrations greater than the draft freshwater reference values were reported in samples collected from six of seven stations, shown below.

3rd Avenue West CSO

Sediment Concentrations Greater than Draft Freshwater SQS or CSL Reference Values

Station	Draft SQS Reference Value	Draft CSL Reference Value
CSO-3W-1	Copper, Benzo(a)pyrene, Benzyl Butyl Phthalate	Antimony, Mercury, Zinc, Bis(2-ethylhexyl) Phthalate, Total PCBs
CSO-3W-2	Total PCBs	Bis(2-ethylhexyl) Phthalate
CSO-3W-3	Mercury, Acenaphthene, Fluorene, Pyrene, Total HPAHs	Anthracene, Phenanthrene, Total LPAHs, Benzo(a)pyrene, Bis(2-ethylhexyl) Phthalate
CSO-3W-4	Zinc, Total LPAHs, Benzo(a)pyrene, Total HPAHs	Antimony, Benzyl Butyl Phthalate, Bis(2-ethylhexyl) Phthalate, Total PCBs
CSO-3W-5	Anthracene, Benzo(a)pyrene, Total HPAHs	Acenaphthene, Total LPAHs, Bis(2-ethylhexyl) Phthalate, Total PCBs
CSO-3W-6	Phenanthrene, Pyrene, Total HPAHs	Acenaphthene, Anthracene, Total LPAHs, Benzo(a)pyrene
CSO-3W-7	*None*	*None*

4.3.2 University Regulator CSO

Analytical results for the seven samples collected near the University Regulator CSO are summarized in Table 4-12, where they are compared numerically to the draft freshwater SQS and CSL reference values. Sediment chemical concentrations greater than the draft freshwater reference values were reported in samples collected from five of seven stations, shown below.

University Regulator CSO

Sediment Concentrations Greater than Draft Freshwater SQS or CSL Reference Values

Station	Draft SQS Reference Value	Draft CSL Reference Value
CSO-UR-1	Copper	Antimony, Cadmium, Mercury, Zinc, Bis(2-ethylhexyl) Phthalate, Benzyl Butyl Phthalate, Total PCBs
CSO-UR-2	Dimethyl Phthalate	Bis(2-ethylhexyl) Phthalate
CSO-UR-3	Cadmium, Copper	Antimony, Zinc, Benzyl Butyl Phthalate, Bis(2-ethylhexyl) Phthalate, Total PCBs
CSO-UR-4	Dimethyl Phthalate	Total PCBs
CSO-UR-5	*None*	*None*
CSO-UR-6	*None*	*None*
CSO-UR-7	Total PCBs	*None*

4.3.3 Montlake CSO

Analytical results for the seven samples collected near the Montlake CSO are summarized in Table 4-13, where they are compared numerically to the draft freshwater SQS and CSL reference values. Sediment chemical concentrations greater than the draft freshwater reference values were reported in samples collected from five of seven stations, shown below.

Montlake CSO

Sediment Concentrations Greater than Draft Freshwater SQS or CSL Reference Values

Station	Draft SQS Reference Value	Draft CSL Reference Value
CSO-ML-1	*None*	*None*
CSO-ML-2	*None*	*None*
CSO-ML-3	Antimony	Lead, Zinc
CSO-ML-4	*None*	*None*
CSO-ML-5	*None*	*None*
CSO-ML-6	*None*	*None*
CSO-ML-7	Arsenic	Antimony, Zinc

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Appendix A
Complete Sediment Chemistry Analytical Results

Appendix A - Table A-1
Complete Analytical Results for Marine/Estuarine CSOs

	Locator	CSO-NB-1				Locator	CSO-NB-2				Locator	CSO-NB-3				Locator	CSO-NB-4			
	Description	NORTH BEACH CSO				Description	NORTH BEACH CSO				Description	NORTH BEACH CSO				Description	NORTH BEACH CSO			
	Sample	L53963-1				Sample	L53963-2				Sample	L53963-3				Sample	L53963-4			
	Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED			
	Collected	08/29/11				Collected	08/29/11				Collected	08/29/11				Collected	08/29/11			
	% Solids	71.9				% Solids	70.9				% Solids	70.4				% Solids	72.2			
	Depth (m)	6				Depth (m)	5.8				Depth (m)	5.2				Depth (m)	6.7			
	DRY Weight Basis					**DRY Weight Basis**					**DRY Weight Basis**					**DRY Weight Basis**				
Parameters	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**
ASTM D422																				
Clay*	2.6		0.65	1.3	%	2.7		0.66	1.33	%	2.5		0.63	1.26	%	3.3		0.66	1.32	%
Fines*	2.6		0.65	1.3	%	2.7		0.66	1.33	%	3.1		0.63	1.26	%	3.3		0.66	1.32	%
Gravel*		<MDL	0.13	1.3	%		<MDL	0.13	1.33	%		<MDL	0.13	1.26	%	0.3	<RDL	0.13	1.32	%
p+0.00*		<MDL	0.13	1.3	%		<MDL	0.13	1.33	%	0.2	<RDL	0.13	1.26	%		<MDL	0.13	1.32	%
p+1.00*	1.3		0.13	1.3	%	0.8	<RDL	0.13	1.33	%	0.3	<RDL	0.13	1.26	%	0.8	<RDL	0.13	1.32	%
p+10.0(equal/more than)*	2.6		0.65	1.3	%	2.7		0.66	1.33	%	1.9		0.63	1.26	%	3.3		0.66	1.32	%
p+2.00*	14.6		0.13	1.3	%	14.4		0.13	1.33	%	7.4		0.13	1.26	%	14.3		0.13	1.32	%
p+3.00*	74.4		0.13	1.3	%	74.6		0.13	1.33	%	79.6		0.13	1.26	%	73		0.13	1.32	%
p+4.00*	7.6		0.13	1.3	%	7.6		0.13	1.33	%	9.8		0.13	1.26	%	8.8		0.13	1.32	%
p+5.00*		<MDL	0.65	1.3	%		<MDL	0.66	1.33	%		<MDL	0.63	1.26	%		<MDL	0.66	1.32	%
p+6.00*		<MDL	0.65	1.3	%		<MDL	0.66	1.33	%		<MDL	0.63	1.26	%		<MDL	0.66	1.32	%
p+7.00*		<MDL	0.65	1.3	%		<MDL	0.66	1.33	%		<MDL	0.63	1.26	%		<MDL	0.66	1.32	%
p+8.00*		<MDL	0.65	1.3	%		<MDL	0.66	1.33	%		<MDL	0.63	1.26	%		<MDL	0.66	1.32	%
p+9.00*		<MDL	0.65	1.3	%		<MDL	0.66	1.33	%		<MDL	0.63	1.26	%		<MDL	0.66	1.32	%
p-1.00*		<MDL	0.13	1.3	%		<MDL	0.13	1.33	%		<MDL	0.13	1.26	%		<MDL	0.13	1.32	%
p-2.00(less than)*		<MDL	0.13	1.3	%		<MDL	0.13	1.33	%		<MDL	0.13	1.26	%	0.3	<RDL	0.13	1.32	%
p-2.00*		<MDL	0.13	1.3	%		<MDL	0.13	1.33	%		<MDL	0.13	1.26	%		<MDL	0.13	1.32	%
Sand*	97.9		0.13	1.3	%	97.4		0.13	1.33	%	97.2		0.13	1.26	%	96.9		0.13	1.32	%
Silt*		<MDL	0.65	1.3	%		<MDL	0.66	1.33	%		<MDL	0.63	1.26	%		<MDL	0.66	1.32	%
SM2540-G																				
Total Solids*	71.9		0.005	0.01	%	70.9		0.005	0.01	%	70.4		0.005	0.01	%	72.2		0.005	0.01	%
EP A9060																				
Total Organic Carbon	1950		500	1010	mg/Kg	1690		490	999	mg/Kg	1700		510	1020	mg/Kg	2110		510	1010	mg/Kg
EPA 3050B/6010C																				
Arsenic, Total, ICP		<MDL	1.7	8.57	mg/Kg		<MDL	1.7	8.6	mg/Kg	2.1	<RDL	1.8	8.93	mg/Kg		<MDL	1.8	8.77	mg/Kg
Cadmium, Total, ICP		<MDL	0.14	0.686	mg/Kg	0.17	<RDL	0.14	0.688	mg/Kg	0.16	<RDL	0.14	0.716	mg/Kg		<MDL	0.14	0.701	mg/Kg
Chromium, Total, ICP	15.3		0.21	1.03	mg/Kg	15.8		0.21	1.03	mg/Kg	16.3		0.21	1.07	mg/Kg	14.5		0.21	1.05	mg/Kg
Copper, Total, ICP	6.01		0.28	1.37	mg/Kg	5.56		0.28	1.38	mg/Kg	5.1		0.28	1.43	mg/Kg	4		0.28	1.4	mg/Kg
Lead, Total, ICP	3.9	<RDL	1.4	6.86	mg/Kg	3.1	<RDL	1.4	6.88	mg/Kg	3.6	<RDL	1.4	7.16	mg/Kg	3.3	<RDL	1.4	7.01	mg/Kg
Silver, Total, ICP		<MDL	0.28	1.37	mg/Kg		<MDL	0.28	1.38	mg/Kg		<MDL	0.28	1.43	mg/Kg		<MDL	0.28	1.4	mg/Kg
Zinc, Total, ICP	21.6		0.35	1.71	mg/Kg	21.7		0.34	1.72	mg/Kg	21.3		0.36	1.79	mg/Kg	18.3		0.35	1.76	mg/Kg
EPA 7471B																				
Mercury, Total, CVAA	0.017	<RDL	0.007	0.0698	mg/Kg	0.03	<RDL	0.0071	0.0704	mg/Kg	0.02	<RDL	0.0071	0.0705	mg/Kg	0.013	<RDL	0.0068	0.068	mg/Kg
EPA 3550B/8082A																				
Aroclor 1016		<MDL	2.8	5.56	ug/Kg		<MDL	2.8	5.64	ug/Kg		<MDL	2.8	5.68	ug/Kg		<MDL	2.8	5.54	ug/Kg
Aroclor 1221		<MDL	5.6	11.1	ug/Kg		<MDL	5.6	11.3	ug/Kg		<MDL	5.7	11.4	ug/Kg		<MDL	5.5	11.1	ug/Kg
Aroclor 1232		<MDL	5.6	11.1	ug/Kg		<MDL	5.6	11.3	ug/Kg		<MDL	5.7	11.4	ug/Kg		<MDL	5.5	11.1	ug/Kg
Aroclor 1242		<MDL	2.8	5.56	ug/Kg		<MDL	2.8	5.64	ug/Kg		<MDL	2.8	5.68	ug/Kg		<MDL	2.8	5.54	ug/Kg
Aroclor 1248		<MDL	2.8	5.56	ug/Kg		<MDL	2.8	5.64	ug/Kg		<MDL	2.8	5.68	ug/Kg		<MDL	2.8	5.54	ug/Kg
Aroclor 1254		<MDL	2.8	5.56	ug/Kg		<MDL	2.8	5.64	ug/Kg		<MDL	2.8	5.68	ug/Kg		<MDL	2.8	5.54	ug/Kg
Aroclor 1260		<MDL	2.8	5.56	ug/Kg		<MDL	2.8	5.64	ug/Kg		<MDL	2.8	5.68	ug/Kg		<MDL	2.8	5.54	ug/Kg
Total Aroclors		<MDL	5.6	11.1	ug/Kg		<MDL	5.6	11.3	ug/Kg		<MDL	5.7	11.4	ug/Kg		<MDL	5.5	11.1	ug/Kg
EPA 3550B/8270D																				
1,2,4-Trichlorobenzene		<MDL	0.74	1.49	ug/Kg		<MDL	0.75	1.51	ug/Kg		<MDL	0.75	1.52	ug/Kg		<MDL	0.73	1.48	ug/Kg
1,2-Dichlorobenzene		<MDL	7.41	7.41	ug/Kg		<MDL	7.52	7.52	ug/Kg		<MDL	7.57	7.57	ug/Kg		<MDL	7.38	7.38	ug/Kg
1,4-Dichlorobenzene		<MDL	11.1	11.1	ug/Kg		<MDL	11.3	11.3	ug/Kg		<MDL	11.4	11.4	ug/Kg		<MDL	11.1	11.1	ug/Kg
2,4-Dimethylphenol		<MDL	7.4	14.9	ug/Kg		<MDL	7.5	15.1	ug/Kg		<MDL	7.5	15.2	ug/Kg		<MDL	7.3	14.8	ug/Kg

Appendix A - Table A-1
Complete Analytical Results for Marine/Estuarine CSOs

	Locator	CSO-NB-1				Locator	CSO-NB-2				Locator	CSO-NB-3				Locator	CSO-NB-4			
	Description	NORTH BEACH CSO				Description	NORTH BEACH CSO				Description	NORTH BEACH CSO				Description	NORTH BEACH CSO			
	Sample	L53963-1				Sample	L53963-2				Sample	L53963-3				Sample	L53963-4			
	Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED			
	Collected	08/29/11				Collected	08/29/11				Collected	08/29/11				Collected	08/29/11			
	% Solids	71.9				% Solids	70.9				% Solids	70.4				% Solids	72.2			
	Depth (m)	6				Depth (m)	5.8				Depth (m)	5.2				Depth (m)	6.7			
	DRY Weight Basis					**DRY Weight Basis**					**DRY Weight Basis**					**DRY Weight Basis**				
Parameters	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**
2-Methylnaphthalene		<MDL	7.4	14.9	ug/Kg		<MDL	7.5	15.1	ug/Kg		<MDL	7.5	15.2	ug/Kg		<MDL	7.3	14.8	ug/Kg
2-Methylphenol		<MDL	7.4	14.9	ug/Kg		<MDL	7.5	15.1	ug/Kg		<MDL	7.5	15.2	ug/Kg		<MDL	7.3	14.8	ug/Kg
3-,4-Methylphenol		<MDL	38	74.1	ug/Kg		<MDL	38	75.2	ug/Kg		<MDL	38	75.7	ug/Kg		<MDL	37	73.8	ug/Kg
Acenaphthene		<MDL	7.4	14.9	ug/Kg		<MDL	7.5	15.1	ug/Kg		<MDL	7.5	15.2	ug/Kg		<MDL	7.3	14.8	ug/Kg
Acenaphthylene		<MDL	7.4	14.9	ug/Kg		<MDL	7.5	15.1	ug/Kg		<MDL	7.5	15.2	ug/Kg		<MDL	7.3	14.8	ug/Kg
Anthracene		<MDL	7.4	14.9	ug/Kg		<MDL	7.5	15.1	ug/Kg	34.4		7.5	15.2	ug/Kg		<MDL	7.3	14.8	ug/Kg
Benzo(a)anthracene	25.5		7.4	14.9	ug/Kg	13	<RDL	7.5	15.1	ug/Kg	102		7.5	15.2	ug/Kg	34.3		7.3	14.8	ug/Kg
Benzo(a)pyrene	38.4		7.4	14.9	ug/Kg	22.3		7.5	15.1	ug/Kg	104		7.5	15.2	ug/Kg	35.6		7.3	14.8	ug/Kg
Benzo(b,j,k)fluoranthene	38.7		7.4	14.9	ug/Kg	14	<RDL	7.5	15.1	ug/Kg	135		7.5	15.2	ug/Kg	38.6		7.3	14.8	ug/Kg
Benzo(g,h,i)perylene	13	<RDL,JL	7.4	14.9	ug/Kg		<MDL,JL	7.5	15.1	ug/Kg	59.8	JL	7.5	15.2	ug/Kg	7.6	<RDL,JL	7.3	14.8	ug/Kg
Benzoic Acid	250		149	149	ug/Kg	193		151	151	ug/Kg	180		152	152	ug/Kg	220		148	148	ug/Kg
Benzyl Alcohol		<MDL	18.5	18.5	ug/Kg		<MDL	18.8	18.8	ug/Kg		<MDL	18.9	18.9	ug/Kg		<MDL	18.4	18.4	ug/Kg
Benzyl Butyl Phthalate		<MDL,JL	11.1	11.1	ug/Kg		<MDL,JL	11.3	11.3	ug/Kg		<MDL,JL	11.4	11.4	ug/Kg		<MDL,JL	11.1	11.1	ug/Kg
Bis(2-Ethylhexyl)Phthalate	37	B	15	29.6	ug/Kg	37.2	B	16	30	ug/Kg	39.8	B	16	30.3	ug/Kg	36	B	15	29.5	ug/Kg
Chrysene	20.4		7.4	14.9	ug/Kg		<MDL	7.5	15.1	ug/Kg	89.6		7.5	15.2	ug/Kg	24.8		7.3	14.8	ug/Kg
Dibenzo(a,h)anthracene		<MDL	7.4	14.9	ug/Kg		<MDL	7.5	15.1	ug/Kg	17		7.5	15.2	ug/Kg		<MDL	7.3	14.8	ug/Kg
Dibenzofuran		<MDL	7.4	14.9	ug/Kg		<MDL	7.5	15.1	ug/Kg		<MDL	7.5	15.2	ug/Kg		<MDL	7.3	14.8	ug/Kg
Diethyl Phthalate		<MDL	15	29.6	ug/Kg		<MDL	16	30	ug/Kg		<MDL	16	30.3	ug/Kg		<MDL	15	29.5	ug/Kg
Dimethyl Phthalate		<MDL	14.9	14.9	ug/Kg		<MDL	15.1	15.1	ug/Kg		<MDL	15.2	15.2	ug/Kg		<MDL	14.8	14.8	ug/Kg
Di-N-Butyl Phthalate		<MDL	15	29.6	ug/Kg		<MDL	16	30	ug/Kg	20	<RDL,B	16	30.3	ug/Kg		<MDL	15	29.5	ug/Kg
Di-N-Octyl Phthalate		<MDL	14.9	14.9	ug/Kg		<MDL	15.1	15.1	ug/Kg		<MDL	15.2	15.2	ug/Kg		<MDL	14.8	14.8	ug/Kg
Fluoranthene	31.7		7.4	14.9	ug/Kg		<MDL	7.5	15.1	ug/Kg	222		7.5	15.2	ug/Kg	42.5		7.3	14.8	ug/Kg
Fluorene		<MDL	7.4	14.9	ug/Kg		<MDL	7.5	15.1	ug/Kg		<MDL	7.5	15.2	ug/Kg		<MDL	7.3	14.8	ug/Kg
Hexachlorobenzene		<MDL	0.74	1.49	ug/Kg		<MDL	0.75	1.51	ug/Kg		<MDL	0.75	1.52	ug/Kg		<MDL	0.73	1.48	ug/Kg
Hexachlorobutadiene		<MDL	3.8	7.41	ug/Kg		<MDL	3.8	7.52	ug/Kg		<MDL	3.8	7.57	ug/Kg		<MDL	3.7	7.38	ug/Kg
Indeno(1,2,3-Cd)Pyrene	18.8	JL	7.4	14.9	ug/Kg	9	<RDL,JL	7.5	15.1	ug/Kg	56.1	JL	7.5	15.2	ug/Kg	15.8	JL	7.3	14.8	ug/Kg
Naphthalene		<MDL	7.4	14.9	ug/Kg		<MDL	7.5	15.1	ug/Kg		<MDL	7.5	15.2	ug/Kg		<MDL	7.3	14.8	ug/Kg
N-Nitrosodiphenylamine		<MDL	18.5	18.5	ug/Kg		<MDL	18.8	18.8	ug/Kg		<MDL	18.9	18.9	ug/Kg		<MDL	18.4	18.4	ug/Kg
Pentachlorophenol		<MDL	111	111	ug/Kg		<MDL	113	113	ug/Kg		<MDL	114	114	ug/Kg		<MDL	111	111	ug/Kg
Phenanthrene	18.8		7.4	14.9	ug/Kg		<MDL	7.5	15.1	ug/Kg	83.9		7.5	15.2	ug/Kg	18		7.3	14.8	ug/Kg
Phenol		<MDL	38	111	ug/Kg		<MDL	38	113	ug/Kg		<MDL	38	114	ug/Kg		<MDL	37	111	ug/Kg
Pyrene	35.2		7.4	14.9	ug/Kg		<MDL	7.5	15.1	ug/Kg	210		7.5	15.2	ug/Kg	37.4		7.3	14.8	ug/Kg
Total HPAHS	221		7.4	14.9	ug/Kg	58.1		7.5	15.1	ug/Kg	996		7.5	15.2	ug/Kg	237		7.3	14.8	ug/Kg
Total LPAHs	18.8		7.4	14.9	ug/Kg		<MDL	7.5	15.1	ug/Kg	118		7.5	15.2	ug/Kg	18		7.3	14.8	ug/Kg

* Not converted to dry weight basis

Appendix A - Table A-1
Complete Analytical Results for Marine/Estuarine CSOs

	Locator	CSO-NB-5				Locator	CSO-NB-6				Locator	CSO-MG-1				Locator	CSO-MG-2			
	Description	NORTH BEACH CSO				Description	NORTH BEACH CSO				Description	SOUTH MAGNOLIA CSO				Description	SOUTH MAGNOLIA CSO			
	Sample	L53963-5				Sample	L53963-6				Sample	L53963-7				Sample	L53963-8			
	Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED			
	Collected	08/29/11				Collected	08/29/11				Collected	08/29/11				Collected	08/29/11			
	% Solids	71.8				% Solids	71.5				% Solids	75.6				% Solids	75.3			
	Depth (m)	6.5				Depth (m)	8.2				Depth (m)	4.8				Depth (m)	4.1			
	DRY Weight Basis					**DRY Weight Basis**					**DRY Weight Basis**					**DRY Weight Basis**				
Parameters	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**
ASTM D422																				
Clay*	2		0.67	1.34	%	2.6		0.66	1.32	%	2.6		0.65	1.29	%	2.9		0.59	1.18	%
Fines*	2.7		0.67	1.34	%	2.6		0.66	1.32	%	3.9		0.65	1.29	%	4.7		0.59	1.18	%
Gravel*	0.2	<RDL	0.13	1.34	%		<MDL	0.13	1.32	%	3.6		0.13	1.29	%	41.7		0.12	1.18	%
p+0.00*	0.1	<RDL	0.13	1.34	%		<MDL	0.13	1.32	%	3.8		0.13	1.29	%	4.3		0.12	1.18	%
p+1.00*	1.4		0.13	1.34	%	1	<RDL	0.13	1.32	%	11.5		0.13	1.29	%	5.2		0.12	1.18	%
p+10.0(equal/more than)*	2		0.67	1.34	%	2		0.66	1.32	%	2.6		0.65	1.29	%	2.4		0.59	1.18	%
p+2.00*	17.8		0.13	1.34	%	20.2		0.13	1.32	%	51.8		0.13	1.29	%	23.9		0.12	1.18	%
p+3.00*	71.6		0.13	1.34	%	72		0.13	1.32	%	21.3		0.13	1.29	%	14.9		0.12	1.18	%
p+4.00*	6.5		0.13	1.34	%	5.7		0.13	1.32	%	3.5		0.13	1.29	%	4.4		0.12	1.18	%
p+5.00*	0.7	<RDL	0.67	1.34	%		<MDL	0.66	1.32	%	0.6	<RDL	0.65	1.29	%	1.2	RDL	0.59	1.18	%
p+6.00*		<MDL	0.67	1.34	%		<MDL	0.66	1.32	%		<MDL	0.65	1.29	%		<MDL	0.59	1.18	%
p+7.00*		<MDL	0.67	1.34	%		<MDL	0.66	1.32	%	0.6	<RDL	0.65	1.29	%		<MDL	0.59	1.18	%
p+8.00*		<MDL	0.67	1.34	%		<MDL	0.66	1.32	%		<MDL	0.65	1.29	%	0.6	<RDL	0.59	1.18	%
p+9.00*		<MDL	0.67	1.34	%	0.7	<RDL	0.66	1.32	%		<MDL	0.65	1.29	%	0.6	<RDL	0.59	1.18	%
p-1.00*	0.2	<RDL	0.13	1.34	%		<MDL	0.13	1.32	%	2.7		0.13	1.29	%	7.3		0.12	1.18	%
p-2.00(less than)*		<MDL	0.13	1.34	%		<MDL	0.13	1.32	%		<MDL	0.13	1.29	%	30.8		0.12	1.18	%
p-2.00*		<MDL	0.13	1.34	%		<MDL	0.13	1.32	%	0.9	<RDL	0.13	1.29	%	3.5		0.12	1.18	%
Sand*	97.4		0.13	1.34	%	98.9		0.13	1.32	%	92		0.13	1.29	%	52.7		0.12	1.18	%
Silt*	0.7	<RDL	0.67	1.34	%		<MDL	0.66	1.32	%	1.3	RDL	0.65	1.29	%	1.8		0.59	1.18	%
SM2540-G																				
Total Solids*	71.8		0.005	0.01	%	71.5		0.005	0.01	%	75.6		0.005	0.01	%	75.3		0.005	0.01	%
EP A9060																				
Total Organic Carbon	2440		520	1020	mg/Kg	1790		500	1010	mg/Kg	3820		500	995	mg/Kg	5330		520	1030	mg/Kg
EPA 3050B/6010C																				
Arsenic, Total, ICP		<MDL	1.8	8.72	mg/Kg		<MDL	1.7	8.67	mg/Kg	2.6	<RDL	1.6	8.17	mg/Kg	3.2	<RDL	1.6	8.06	mg/Kg
Cadmium, Total, ICP		<MDL	0.14	0.698	mg/Kg		<MDL	0.14	0.694	mg/Kg	0.19	<RDL	0.13	0.655	mg/Kg	0.24	<RDL	0.13	0.645	mg/Kg
Chromium, Total, ICP	15		0.21	1.05	mg/Kg	12.8		0.21	1.04	mg/Kg	16		0.2	0.981	mg/Kg	16.7		0.2	0.968	mg/Kg
Copper, Total, ICP	4.5		0.28	1.39	mg/Kg	3.41		0.28	1.39	mg/Kg	18.3		0.26	1.31	mg/Kg	14.5		0.25	1.29	mg/Kg
Lead, Total, ICP	3.3	<RDL	1.4	6.98	mg/Kg	2.8	<RDL	1.4	6.94	mg/Kg	10.3		1.3	6.55	mg/Kg	16.6		1.3	6.45	mg/Kg
Silver, Total, ICP		<MDL	0.28	1.39	mg/Kg		<MDL	0.28	1.39	mg/Kg		<MDL	0.26	1.31	mg/Kg		<MDL	0.25	1.29	mg/Kg
Zinc, Total, ICP	18.8		0.35	1.74	mg/Kg	16.1		0.35	1.73	mg/Kg	56		0.33	1.64	mg/Kg	43.7		0.32	1.61	mg/Kg
EPA 7471B																				
Mercury, Total, CVAA	0.018	<RDL	0.007	0.0698	mg/Kg	0.013	<RDL	0.007	0.0699	mg/Kg	0.038	<RDL	0.0065	0.0648	mg/Kg	0.046	<RDL	0.0065	0.0651	mg/Kg
EPA 3550B/8082A																				
Aroclor 1016		<MDL	2.8	5.57	ug/Kg		<MDL	2.8	5.59	ug/Kg		<MDL	2.6	5.29	ug/Kg		<MDL	2.7	5.31	ug/Kg
Aroclor 1221		<MDL	5.6	11.1	ug/Kg		<MDL	5.6	11.2	ug/Kg		<MDL	5.3	10.6	ug/Kg		<MDL	5.3	10.6	ug/Kg
Aroclor 1232		<MDL	5.6	11.1	ug/Kg		<MDL	5.6	11.2	ug/Kg		<MDL	5.3	10.6	ug/Kg		<MDL	5.3	10.6	ug/Kg
Aroclor 1242		<MDL	2.8	5.57	ug/Kg		<MDL	2.8	5.59	ug/Kg		<MDL	2.6	5.29	ug/Kg		<MDL	2.7	5.31	ug/Kg
Aroclor 1248		<MDL	2.8	5.57	ug/Kg		<MDL	2.8	5.59	ug/Kg		<MDL	2.6	5.29	ug/Kg		<MDL	2.7	5.31	ug/Kg
Aroclor 1254	70.1		2.8	5.57	ug/Kg		<MDL	2.8	5.59	ug/Kg		<MDL	2.6	5.29	ug/Kg	4.8	<RDL	2.7	5.31	ug/Kg
Aroclor 1260	9.15		2.8	5.57	ug/Kg		<MDL	2.8	5.59	ug/Kg	2.4	<RDL	1.6	3.17	ug/Kg	2.5	<RDL	1.6	3.19	ug/Kg
Total Aroclors	79.2		2.8	5.57	ug/Kg		<MDL	5.6	11.2	ug/Kg	2.4	<RDL	1.6	3.17	ug/Kg	7.3		1.6	3.19	ug/Kg
EPA 3550B/8270D																				
1,2,4-Trichlorobenzene		<MDL	0.74	1.49	ug/Kg		<MDL	0.74	1.5	ug/Kg		<MDL	0.7	1.42	ug/Kg		<MDL	0.7	1.42	ug/Kg
1,2-Dichlorobenzene		<MDL	7.42	7.42	ug/Kg		<MDL	7.45	7.45	ug/Kg		<MDL	7.05	7.05	ug/Kg		<MDL	7.08	7.08	ug/Kg
1,4-Dichlorobenzene		<MDL	11.1	11.1	ug/Kg		<MDL	11.2	11.2	ug/Kg		<MDL	10.6	10.6	ug/Kg		<MDL	10.6	10.6	ug/Kg
2,4-Dimethylphenol		<MDL	7.4	14.9	ug/Kg		<MDL	7.4	15	ug/Kg		<MDL	7	14.2	ug/Kg		<MDL	7	14.2	ug/Kg

Appendix A - Table A-1
Complete Analytical Results for Marine/Estuarine CSOs

	Locator	CSO-NB-5				Locator	CSO-NB-6				Locator	CSO-MG-1				Locator	CSO-MG-2			
	Description	NORTH BEACH CSO				Description	NORTH BEACH CSO				Description	SOUTH MAGNOLIA CSO				Description	SOUTH MAGNOLIA CSO			
	Sample	L53963-5				Sample	L53963-6				Sample	L53963-7				Sample	L53963-8			
	Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED			
	Collected	08/29/11				Collected	08/29/11				Collected	08/29/11				Collected	08/29/11			
	% Solids	71.8				% Solids	71.5				% Solids	75.6				% Solids	75.3			
	Depth (m)	6.5				Depth (m)	8.2				Depth (m)	4.8				Depth (m)	4.1			
	DRY Weight Basis					**DRY Weight Basis**					**DRY Weight Basis**					**DRY Weight Basis**				
Parameters	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**
2-Methylnaphthalene		<MDL	7.4	14.9	ug/Kg		<MDL	7.4	15	ug/Kg		<MDL	7	14.2	ug/Kg		<MDL	7	14.2	ug/Kg
2-Methylphenol		<MDL	7.4	14.9	ug/Kg		<MDL	7.4	15	ug/Kg		<MDL	7	14.2	ug/Kg		<MDL	7	14.2	ug/Kg
3-,4-Methylphenol		<MDL	38	74.2	ug/Kg		<MDL	38	74.5	ug/Kg		<MDL	36	70.5	ug/Kg		<MDL	36	70.8	ug/Kg
Acenaphthene		<MDL	7.4	14.9	ug/Kg		<MDL	7.4	15	ug/Kg		<MDL	7	14.2	ug/Kg		<MDL	7	14.2	ug/Kg
Acenaphthylene		<MDL	7.4	14.9	ug/Kg		<MDL	7.4	15	ug/Kg		<MDL	7	14.2	ug/Kg		<MDL	7	14.2	ug/Kg
Anthracene		<MDL	7.4	14.9	ug/Kg	14	<RDL	7.4	15	ug/Kg		<MDL	7	14.2	ug/Kg	12	<RDL	7	14.2	ug/Kg
Benzo(a)anthracene	13	<RDL	7.4	14.9	ug/Kg	33.6		7.4	15	ug/Kg	28.7		7	14.2	ug/Kg	45.9		7	14.2	ug/Kg
Benzo(a)pyrene	21		7.4	14.9	ug/Kg	43.2		7.4	15	ug/Kg	39.9		7	14.2	ug/Kg	56.7		7	14.2	ug/Kg
Benzo(b,j,k)fluoranthene	13	<RDL	7.4	14.9	ug/Kg	44.1		7.4	15	ug/Kg	59.1		7	14.2	ug/Kg	89.4		7	14.2	ug/Kg
Benzo(g,h,i)perylene		<MDL,JL	7.4	14.9	ug/Kg	18.6	JL	7.4	15	ug/Kg	17.5	JL	7	14.2	ug/Kg	29.1	JL	7	14.2	ug/Kg
Benzoic Acid	259		149	149	ug/Kg	224		150	150	ug/Kg	181		142	142	ug/Kg	234		142	142	ug/Kg
Benzyl Alcohol		<MDL	18.5	18.5	ug/Kg		<MDL	18.6	18.6	ug/Kg		<MDL	17.6	17.6	ug/Kg		<MDL	17.7	17.7	ug/Kg
Benzyl Butyl Phthalate		<MDL,JL	11.1	11.1	ug/Kg		<MDL,JL	11.2	11.2	ug/Kg		<MDL,JL	10.6	10.6	ug/Kg		<MDL,JL	10.6	10.6	ug/Kg
Bis(2-Ethylhexyl)Phthalate	36.5	B	15	29.7	ug/Kg	35.7	B	15	29.8	ug/Kg	114	B	15	28.2	ug/Kg	187	B2	15	28.3	ug/Kg
Chrysene		<MDL	7.4	14.9	ug/Kg	25.3		7.4	15	ug/Kg	28.3		7	14.2	ug/Kg	47.7		7	14.2	ug/Kg
Dibenzo(a,h)anthracene		<MDL	7.4	14.9	ug/Kg	7.7	<RDL	7.4	15	ug/Kg	9.4	<RDL	7	14.2	ug/Kg	13	<RDL	7	14.2	ug/Kg
Dibenzofuran		<MDL	7.4	14.9	ug/Kg		<MDL	7.4	15	ug/Kg		<MDL	7	14.2	ug/Kg		<MDL	7	14.2	ug/Kg
Diethyl Phthalate		<MDL	15	29.7	ug/Kg		<MDL	15	29.8	ug/Kg		<MDL	15	28.2	ug/Kg		<MDL	15	28.3	ug/Kg
Dimethyl Phthalate		<MDL	14.9	14.9	ug/Kg		<MDL	15	15	ug/Kg		<MDL	14.2	14.2	ug/Kg		<MDL	14.2	14.2	ug/Kg
Di-N-Butyl Phthalate		<MDL	15	29.7	ug/Kg		<MDL	15	29.8	ug/Kg	57.4	B	15	28.2	ug/Kg	23	<RDL,B	15	28.3	ug/Kg
Di-N-Octyl Phthalate		<MDL	14.9	14.9	ug/Kg		<MDL	15	15	ug/Kg		<MDL	14.2	14.2	ug/Kg		<MDL	14.2	14.2	ug/Kg
Fluoranthene		<MDL	7.4	14.9	ug/Kg	73.3		7.4	15	ug/Kg	42.1		7	14.2	ug/Kg	75.7		7	14.2	ug/Kg
Fluorene		<MDL	7.4	14.9	ug/Kg		<MDL	7.4	15	ug/Kg		<MDL	7	14.2	ug/Kg		<MDL	7	14.2	ug/Kg
Hexachlorobenzene		<MDL	0.74	1.49	ug/Kg		<MDL	0.74	1.5	ug/Kg		<MDL	0.7	1.42	ug/Kg		<MDL	0.7	1.42	ug/Kg
Hexachlorobutadiene		<MDL	3.8	7.42	ug/Kg		<MDL	3.8	7.45	ug/Kg		<MDL	3.6	7.05	ug/Kg		<MDL	3.6	7.08	ug/Kg
Indeno(1,2,3-Cd)Pyrene	8.2	<RDL,JL	7.4	14.9	ug/Kg	22.4	JL	7.4	15	ug/Kg	23.5	JL	7	14.2	ug/Kg	32.8	JL	7	14.2	ug/Kg
Naphthalene		<MDL	7.4	14.9	ug/Kg		<MDL	7.4	15	ug/Kg		<MDL	7	14.2	ug/Kg		<MDL	7	14.2	ug/Kg
N-Nitrosodiphenylamine		<MDL	18.5	18.5	ug/Kg		<MDL	18.6	18.6	ug/Kg		<MDL	17.6	17.6	ug/Kg		<MDL	17.7	17.7	ug/Kg
Pentachlorophenol		<MDL	111	111	ug/Kg		<MDL	112	112	ug/Kg		<MDL	106	106	ug/Kg		<MDL	106	106	ug/Kg
Phenanthrene		<MDL	7.4	14.9	ug/Kg	65.2		7.4	15	ug/Kg	15.3		7	14.2	ug/Kg	28.3		7	14.2	ug/Kg
Phenol	49	<RDL	38	111	ug/Kg		<MDL	38	112	ug/Kg		<MDL	36	106	ug/Kg		<MDL	36	106	ug/Kg
Pyrene		<MDL	7.4	14.9	ug/Kg	74		7.4	15	ug/Kg	36.8		7	14.2	ug/Kg	67.2		7	14.2	ug/Kg
Total HPAHS	54.6		7.4	14.9	ug/Kg	342		7.4	15	ug/Kg	285		7	14.2	ug/Kg	457		7	14.2	ug/Kg
Total LPAHs		<MDL	7.4	14.9	ug/Kg	79.2		7.4	15	ug/Kg	15.3		7	14.2	ug/Kg	40.8		7	14.2	ug/Kg

* Not converted to dry weight ba

Appendix A - Table A-1
Complete Analytical Results for Marine/Estuarine CSOs

	Locator	CSO-MG-3				Locator	CSO-MG-4				Locator	CSO-MG-5				Locator	CSO-MG-6			
	Description	SOUTH MAGNOLIA CSO				Description	SOUTH MAGNOLIA CSO				Description	SOUTH MAGNOLIA CSO				Description	SOUTH MAGNOLIA CSO			
	Sample	L53963-9				Sample	L53963-10				Sample	L53963-11				Sample	L53963-12			
	Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED			
	Collected	08/29/11				Collected	08/29/11				Collected	08/29/11				Collected	08/29/11			
	% Solids	75.5				% Solids	75.9				% Solids	78.8				% Solids	75.8			
	Depth (m)	4				Depth (m)	4.8				Depth (m)	5.1				Depth (m)	5.7			
	DRY Weight Basis					**DRY Weight Basis**					**DRY Weight Basis**					**DRY Weight Basis**				
Parameters	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**
ASTM D422																				
Clay*	2.6		0.64	1.28	%	3.2		0.64	1.29	%	3.6		0.61	1.21	%	3.2		0.63	1.26	%
Fines*	4.5		0.64	1.28	%	4.5		0.64	1.29	%	4.9		0.61	1.21	%	3.8		0.63	1.26	%
Gravel*	2.4		0.13	1.28	%	2.3	J	0.13	1.29	%	2		0.12	1.21	%		<MDL	0.13	1.26	%
p+0.00*	2.4		0.13	1.28	%	2.3		0.13	1.29	%	1	<RDL	0.12	1.21	%	0.4	<RDL	0.13	1.26	%
p+1.00*	11.1		0.13	1.28	%	8.2		0.13	1.29	%	9.1		0.12	1.21	%	6.2		0.13	1.26	%
p+10.0(equal/more than)*	1.3	RDL	0.64	1.28	%	1.9		0.64	1.29	%	2.4		0.61	1.21	%	2.5		0.63	1.26	%
p+2.00*	51.8		0.13	1.28	%	53.3		0.13	1.29	%	56.2		0.12	1.21	%	65.1		0.13	1.26	%
p+3.00*	22.6		0.13	1.28	%	25		0.13	1.29	%	22.8		0.12	1.21	%	21.2		0.13	1.26	%
p+4.00*	4.5		0.13	1.28	%	4		0.13	1.29	%	3.5		0.12	1.21	%	2.5		0.13	1.26	%
p+5.00*	0.6	<RDL	0.64	1.28	%	0.6	<RDL	0.64	1.29	%	0.6	<RDL	0.61	1.21	%		<MDL	0.63	1.26	%
p+6.00*	0.6	<RDL	0.64	1.28	%		<MDL	0.64	1.29	%	0.6	<RDL	0.61	1.21	%	0.6	<RDL	0.63	1.26	%
p+7.00*	0.6	<RDL	0.64	1.28	%		<MDL	0.64	1.29	%		<MDL	0.61	1.21	%		<MDL	0.63	1.26	%
p+8.00*		<MDL	0.64	1.28	%	0.6	<RDL	0.64	1.29	%		<MDL	0.61	1.21	%		<MDL	0.63	1.26	%
p+9.00*	1.3	RDL	0.64	1.28	%	1.3	RDL	0.64	1.29	%	1.2	RDL	0.61	1.21	%	0.6	<RDL	0.63	1.26	%
p-1.00*	1.1	<RDL	0.13	1.28	%	1.7		0.13	1.29	%	0.3	<RDL	0.12	1.21	%		<MDL	0.13	1.26	%
p-2.00(less than)*	1.3		0.13	1.28	%	0.2	<RDL	0.13	1.29	%	1.7		0.12	1.21	%		<MDL	0.13	1.26	%
p-2.00*		<MDL	0.13	1.28	%	0.4	<RDL	0.13	1.29	%		<MDL	0.12	1.21	%		<MDL	0.13	1.26	%
Sand*	92.4		0.13	1.28	%	92.8		0.13	1.29	%	92.7		0.12	1.21	%	95.3		0.13	1.26	%
Silt*	1.9		0.64	1.28	%	1.3	RDL	0.64	1.29	%	1.2	RDL	0.61	1.21	%	0.6	<RDL	0.63	1.26	%
SM2540-G																				
Total Solids*	75.5		0.005	0.01	%	75.9		0.005	0.01	%	78.8		0.005	0.01	%	75.8		0.005	0.01	%
EP A9060																				
Total Organic Carbon	1970		520	1030	mg/Kg	2540		510	1020	mg/Kg	1480		510	1020	mg/Kg	2100		500	1010	mg/Kg
EPA 3050B/6010C																				
Arsenic, Total, ICP	2.6	<RDL	1.6	8.16	mg/Kg	2.6	<RDL	1.7	8.51	mg/Kg	3.3	<RDL	1.5	7.82	mg/Kg	3	<RDL	1.6	8.1	mg/Kg
Cadmium, Total, ICP	0.16	<RDL	0.13	0.652	mg/Kg		<MDL	0.13	0.681	mg/Kg		<MDL	0.13	0.626	mg/Kg	0.13	<RDL	0.13	0.649	mg/Kg
Chromium, Total, ICP	16.6		0.2	0.979	mg/Kg	18.3		0.21	1.02	mg/Kg	17.1		0.19	0.938	mg/Kg	17.5		0.2	0.972	mg/Kg
Copper, Total, ICP	9.15		0.26	1.3	mg/Kg	8.33		0.28	1.36	mg/Kg	7.3		0.25	1.25	mg/Kg	7.48		0.26	1.3	mg/Kg
Lead, Total, ICP	8.53		1.3	6.52	mg/Kg	7.84		1.3	6.81	mg/Kg	6.2	<RDL	1.3	6.26	mg/Kg	6.79		1.3	6.49	mg/Kg
Silver, Total, ICP		<MDL	0.26	1.3	mg/Kg		<MDL	0.28	1.36	mg/Kg		<MDL	0.25	1.25	mg/Kg		<MDL	0.26	1.3	mg/Kg
Zinc, Total, ICP	29.7		0.33	1.63	mg/Kg	28.1		0.34	1.7	mg/Kg	26.6		0.32	1.56	mg/Kg	23.5		0.33	1.62	mg/Kg
EPA 7471B																				
Mercury, Total, CVAA	0.041	<RDL	0.0066	0.066	mg/Kg	0.026	<RDL	0.0065	0.064	mg/Kg	0.029	<RDL	0.0062	0.0627	mg/Kg	0.033	<RDL	0.0066	0.0661	mg/Kg
EPA 3550B/8082A																				
Aroclor 1016		<MDL	2.6	5.3	ug/Kg		<MDL	2.6	5.27	ug/Kg		<MDL	2.5	5.08	ug/Kg		<MDL	2.6	5.28	ug/Kg
Aroclor 1221		<MDL	5.3	10.6	ug/Kg		<MDL	5.3	10.5	ug/Kg		<MDL	5.1	10.2	ug/Kg		<MDL	5.3	10.6	ug/Kg
Aroclor 1232		<MDL	5.3	10.6	ug/Kg		<MDL	5.3	10.5	ug/Kg		<MDL	5.1	10.2	ug/Kg		<MDL	5.3	10.6	ug/Kg
Aroclor 1242		<MDL	2.6	5.3	ug/Kg		<MDL	2.6	5.27	ug/Kg		<MDL	2.5	5.08	ug/Kg		<MDL	2.6	5.28	ug/Kg
Aroclor 1248		<MDL	2.6	5.3	ug/Kg		<MDL	2.6	5.27	ug/Kg		<MDL	2.5	5.08	ug/Kg		<MDL	2.6	5.28	ug/Kg
Aroclor 1254	2.5	<RDL	1.6	3.18	ug/Kg	2.9	<RDL	2.6	5.27	ug/Kg	2.7	<RDL	2.5	5.08	ug/Kg	3.3	<RDL	2.6	5.28	ug/Kg
Aroclor 1260	2.5	<RDL	1.6	3.18	ug/Kg	2.4	<RDL	1.6	3.16	ug/Kg	2	<RDL	1.5	3.05	ug/Kg	3.8	<RDL	2.6	5.28	ug/Kg
Total Aroclors	5.03		1.6	3.18	ug/Kg	5.27		1.6	3.16	ug/Kg	4.7		1.5	3.05	ug/Kg	7.12		2.6	5.28	ug/Kg
EPA 3550B/8270D																				
1,2,4-Trichlorobenzene		<MDL	0.7	1.42	ug/Kg		<MDL	0.7	1.41	ug/Kg		<MDL	0.67	1.36	ug/Kg		<MDL	0.7	1.41	ug/Kg
1,2-Dichlorobenzene		<MDL	7.06	7.06	ug/Kg		<MDL	7.02	7.02	ug/Kg		<MDL	6.76	6.76	ug/Kg		<MDL	7.03	7.03	ug/Kg
1,4-Dichlorobenzene		<MDL	10.6	10.6	ug/Kg		<MDL	10.5	10.5	ug/Kg		<MDL	10.2	10.2	ug/Kg		<MDL	10.6	10.6	ug/Kg
2,4-Dimethylphenol		<MDL	7	14.2	ug/Kg		<MDL	7	14.1	ug/Kg		<MDL	6.7	13.6	ug/Kg		<MDL	7	14.1	ug/Kg

Appendix A - Table A-1
Complete Analytical Results for Marine/Estuarine CSOs

	Locator	CSO-MG-3				Locator	CSO-MG-4				Locator	CSO-MG-5				Locator	CSO-MG-6			
	Description	SOUTH MAGNOLIA CSO				Description	SOUTH MAGNOLIA CSO				Description	SOUTH MAGNOLIA CSO				Description	SOUTH MAGNOLIA CSO			
	Sample	L53963-9				Sample	L53963-10				Sample	L53963-11				Sample	L53963-12			
	Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED			
	Collected	08/29/11				Collected	08/29/11				Collected	08/29/11				Collected	08/29/11			
	% Solids	75.5				% Solids	75.9				% Solids	78.8				% Solids	75.8			
	Depth (m)	4				Depth (m)	4.8				Depth (m)	5.1				Depth (m)	5.7			
	DRY Weight Basis					**DRY Weight Basis**					**DRY Weight Basis**					**DRY Weight Basis**				
Parameters	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**
2-Methylnaphthalene		<MDL	7	14.2	ug/Kg		<MDL	7	14.1	ug/Kg		<MDL	6.7	13.6	ug/Kg		<MDL	7	14.1	ug/Kg
2-Methylphenol		<MDL	7	14.2	ug/Kg		<MDL	7	14.1	ug/Kg		<MDL	6.7	13.6	ug/Kg		<MDL	7	14.1	ug/Kg
3-,4-Methylphenol		<MDL	36	70.6	ug/Kg		<MDL	36	70.2	ug/Kg		<MDL	34	67.6	ug/Kg		<MDL	36	70.3	ug/Kg
Acenaphthene		<MDL	7	14.2	ug/Kg		<MDL	7	14.1	ug/Kg		<MDL	6.7	13.6	ug/Kg		<MDL	7	14.1	ug/Kg
Acenaphthylene		<MDL	7	14.2	ug/Kg		<MDL	7	14.1	ug/Kg		<MDL	6.7	13.6	ug/Kg		<MDL	7	14.1	ug/Kg
Anthracene	9.7	<RDL	7	14.2	ug/Kg	7.9	<RDL	7	14.1	ug/Kg	8.5	<RDL	6.7	13.6	ug/Kg	13	<RDL	7	14.1	ug/Kg
Benzo(a)anthracene	30.6		7	14.2	ug/Kg	42.4		7	14.1	ug/Kg	24.4		6.7	13.6	ug/Kg	45.4		7	14.1	ug/Kg
Benzo(a)pyrene	42.5		7	14.2	ug/Kg	52.7		7	14.1	ug/Kg	36.7		6.7	13.6	ug/Kg	53.3		7	14.1	ug/Kg
Benzo(b,j,k)fluoranthene	56.6		7	14.2	ug/Kg	87.6		7	14.1	ug/Kg	48.7		6.7	13.6	ug/Kg	77.2		7	14.1	ug/Kg
Benzo(g,h,i)perylene	19.3	JL	7	14.2	ug/Kg	27.3	JL	7	14.1	ug/Kg	13	<RDL,JL	6.7	13.6	ug/Kg	22.6	JL	7	14.1	ug/Kg
Benzoic Acid	159		142	142	ug/Kg	177		141	141	ug/Kg	157		136	136	ug/Kg	158		141	141	ug/Kg
Benzyl Alcohol		<MDL	17.6	17.6	ug/Kg		<MDL	17.5	17.5	ug/Kg		<MDL	16.9	16.9	ug/Kg		<MDL	17.5	17.5	ug/Kg
Benzyl Butyl Phthalate		<MDL,JL	10.6	10.6	ug/Kg	54.2	JL	10.5	10.5	ug/Kg		<MDL,JL	10.2	10.2	ug/Kg		<MDL,JL	10.6	10.6	ug/Kg
Bis(2-Ethylhexyl)Phthalate	41.3	B	15	28.2	ug/Kg	47.4	B	14	28.1	ug/Kg	39.1	B	14	27	ug/Kg	41.3	B	15	28.1	ug/Kg
Chrysene	27.8		7	14.2	ug/Kg	52		7	14.1	ug/Kg	23.1		6.7	13.6	ug/Kg	40.6		7	14.1	ug/Kg
Dibenzo(a,h)anthracene	9.1	<RDL	7	14.2	ug/Kg	12	<RDL	7	14.1	ug/Kg	7.9	<RDL	6.7	13.6	ug/Kg	11	<RDL	7	14.1	ug/Kg
Dibenzofuran		<MDL	7	14.2	ug/Kg		<MDL	7	14.1	ug/Kg		<MDL	6.7	13.6	ug/Kg		<MDL	7	14.1	ug/Kg
Diethyl Phthalate		<MDL	15	28.2	ug/Kg		<MDL	14	28.1	ug/Kg		<MDL	14	27	ug/Kg		<MDL	15	28.1	ug/Kg
Dimethyl Phthalate		<MDL	14.2	14.2	ug/Kg		<MDL	14.1	14.1	ug/Kg		<MDL	13.6	13.6	ug/Kg		<MDL	14.1	14.1	ug/Kg
Di-N-Butyl Phthalate	19	<RDL,B	15	28.2	ug/Kg	20	<RDL,B	14	28.1	ug/Kg	19	<RDL,B	14	27	ug/Kg	25	<RDL,B	15	28.1	ug/Kg
Di-N-Octyl Phthalate		<MDL	14.2	14.2	ug/Kg		<MDL	14.1	14.1	ug/Kg		<MDL	13.6	13.6	ug/Kg		<MDL	14.1	14.1	ug/Kg
Fluoranthene	42.8		7	14.2	ug/Kg	95.1		7	14.1	ug/Kg	33.1		6.7	13.6	ug/Kg	71.5		7	14.1	ug/Kg
Fluorene		<MDL	7	14.2	ug/Kg		<MDL	7	14.1	ug/Kg		<MDL	6.7	13.6	ug/Kg		<MDL	7	14.1	ug/Kg
Hexachlorobenzene		<MDL	0.7	1.42	ug/Kg		<MDL	0.7	1.41	ug/Kg		<MDL	0.67	1.36	ug/Kg		<MDL	0.7	1.41	ug/Kg
Hexachlorobutadiene		<MDL	3.6	7.06	ug/Kg		<MDL	3.6	7.02	ug/Kg		<MDL	3.4	6.76	ug/Kg		<MDL	3.6	7.03	ug/Kg
Indeno(1,2,3-Cd)Pyrene	24.8	JL	7	14.2	ug/Kg	33.1	JL	7	14.1	ug/Kg	19	JL	6.7	13.6	ug/Kg	29.8	JL	7	14.1	ug/Kg
Naphthalene		<MDL	7	14.2	ug/Kg		<MDL	7	14.1	ug/Kg		<MDL	6.7	13.6	ug/Kg		<MDL	7	14.1	ug/Kg
N-Nitrosodiphenylamine		<MDL	17.6	17.6	ug/Kg		<MDL	17.5	17.5	ug/Kg		<MDL	16.9	16.9	ug/Kg		<MDL	17.5	17.5	ug/Kg
Pentachlorophenol		<MDL	106	106	ug/Kg		<MDL	105	105	ug/Kg		<MDL	102	102	ug/Kg		<MDL	106	106	ug/Kg
Phenanthrene	25.4		7	14.2	ug/Kg	31		7	14.1	ug/Kg	17		6.7	13.6	ug/Kg	35.9		7	14.1	ug/Kg
Phenol		<MDL	36	106	ug/Kg		<MDL	36	105	ug/Kg		<MDL	34	102	ug/Kg		<MDL	36	106	ug/Kg
Pyrene	37.6		7	14.2	ug/Kg	76.9		7	14.1	ug/Kg	29.8		6.7	13.6	ug/Kg	62.3		7	14.1	ug/Kg
Total HPAHS	291		7	14.2	ug/Kg	480		7	14.1	ug/Kg	235		6.7	13.6	ug/Kg	414		7	14.1	ug/Kg
Total LPAHs	35.1		7	14.2	ug/Kg	38.9		7	14.1	ug/Kg	25.5		6.7	13.6	ug/Kg	48.9		7	14.1	ug/Kg

* Not converted to dry weight ba

Appendix A - Table A-1
Complete Analytical Results for Marine/Estuarine CSOs

	Locator	CSO-53-1				Locator	CSO-53-2				Locator	CSO-53-3				Locator	CSO-53-4			
	Description	53RD AVE SW CSO				Description	53RD AVE SW CSO				Description	53RD AVE SW CSO				Description	53RD AVE SW CSO			
	Sample	L53963-13				Sample	L53963-14				Sample	L53963-15				Sample	L53963-16			
	Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED			
	Collected	08/30/11				Collected	08/30/11				Collected	08/30/11				Collected	08/30/11			
	% Solids	68.2				% Solids	73.5				% Solids	72.7				% Solids	71.9			
	Depth (m)	9				Depth (m)	9				Depth (m)	8				Depth (m)	11			
	DRY Weight Basis					**DRY Weight Basis**					**DRY Weight Basis**					**DRY Weight Basis**				
Parameters	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**
ASTM D422																				
Clay*	3.3		0.66	1.32	%	3.2		0.64	1.29	%	2.6		0.65	1.3	%	4.1		0.68	1.36	%
Fines*	4.6		0.66	1.32	%	3.9		0.64	1.29	%	2.6		0.65	1.3	%	4.1		0.68	1.36	%
Gravel*	26.5		0.13	1.32	%	0.6	<RDL	0.13	1.29	%		<MDL	0.13	1.3	%		<MDL	0.14	1.36	%
p+0.00*	0.6	<RDL	0.13	1.32	%		<MDL	0.13	1.29	%		<MDL	0.13	1.3	%	0.1	<RDL	0.14	1.36	%
p+1.00*	0.5	<RDL	0.13	1.32	%	0.9	<RDL	0.13	1.29	%	0.4	<RDL	0.13	1.3	%	1.3	<RDL	0.14	1.36	%
p+10.0(equal/more than)*	2.6		0.66	1.32	%	2.6		0.64	1.29	%	2		0.65	1.3	%	3.4		0.68	1.36	%
p+2.00*	11.7		0.13	1.32	%	34		0.13	1.29	%	24.1		0.13	1.3	%	26.9		0.14	1.36	%
p+3.00*	45.3		0.13	1.32	%	56.9		0.13	1.29	%	65.6		0.13	1.3	%	60		0.14	1.36	%
p+4.00*	6.9		0.13	1.32	%	5.2		0.13	1.29	%	5.9		0.13	1.3	%	9.6		0.14	1.36	%
p+5.00*		<MDL	0.66	1.32	%	0.6	<RDL	0.64	1.29	%		<MDL	0.65	1.3	%		<MDL	0.68	1.36	%
p+6.00*	0.7	<RDL	0.66	1.32	%		<MDL	0.64	1.29	%		<MDL	0.65	1.3	%		<MDL	0.68	1.36	%
p+7.00*		<MDL	0.66	1.32	%		<MDL	0.64	1.29	%		<MDL	0.65	1.3	%		<MDL	0.68	1.36	%
p+8.00*	0.7	<RDL	0.66	1.32	%		<MDL	0.64	1.29	%		<MDL	0.65	1.3	%		<MDL	0.68	1.36	%
p+9.00*	0.7	<RDL	0.66	1.32	%	0.6	<RDL	0.64	1.29	%	0.7	<RDL	0.65	1.3	%	0.7	<RDL	0.68	1.36	%
p-1.00*	1	<RDL	0.13	1.32	%		<MDL	0.13	1.29	%		<MDL	0.13	1.3	%		<MDL	0.14	1.36	%
p-2.00(less than)*	24.7		0.13	1.32	%	0.6	<RDL	0.13	1.29	%		<MDL	0.13	1.3	%		<MDL	0.14	1.36	%
p-2.00*	0.9	<RDL	0.13	1.32	%		<MDL	0.13	1.29	%		<MDL	0.13	1.3	%		<MDL	0.14	1.36	%
Sand*	65		0.13	1.32	%	97.1		0.13	1.29	%	96		0.13	1.3	%	97.9		0.14	1.36	%
Silt*	1.3	RDL	0.66	1.32	%	0.6	<RDL	0.64	1.29	%		<MDL	0.65	1.3	%		<MDL	0.68	1.36	%
SM2540-G																				
Total Solids*	68.2		0.005	0.01	%	73.5		0.005	0.01	%	72.7		0.005	0.01	%	71.9		0.005	0.01	%
EP A9060																				
Total Organic Carbon	2920		500	997	mg/Kg	730	<RDL	520	1040	mg/Kg	1030		510	1020	mg/Kg	2100		500	996	mg/Kg
EPA 3050B/6010C																				
Arsenic, Total, ICP	1.8	<RDL	1.8	8.91	mg/Kg		<MDL	1.8	8.61	mg/Kg		<MDL	1.7	8.53	mg/Kg		<MDL	1.7	8.53	mg/Kg
Cadmium, Total, ICP	0.16	<RDL	0.14	0.713	mg/Kg		<MDL	0.14	0.69	mg/Kg		<MDL	0.14	0.682	mg/Kg		<MDL	0.14	0.683	mg/Kg
Chromium, Total, ICP	20.7		0.22	1.07	mg/Kg	19		0.2	1.03	mg/Kg	20.1		0.21	1.02	mg/Kg	18.8		0.21	1.02	mg/Kg
Copper, Total, ICP	23.5		0.28	1.43	mg/Kg	4.83		0.27	1.37	mg/Kg	4.87		0.28	1.36	mg/Kg	5.47		0.28	1.36	mg/Kg
Lead, Total, ICP	3.7	<RDL	1.4	7.13	mg/Kg	3.8	<RDL	1.4	6.9	mg/Kg	3.4	<RDL	1.4	6.82	mg/Kg	6.4	<RDL	1.4	6.83	mg/Kg
Silver, Total, ICP		<MDL	0.28	1.43	mg/Kg		<MDL	0.27	1.37	mg/Kg		<MDL	0.28	1.36	mg/Kg		<MDL	0.28	1.36	mg/Kg
Zinc, Total, ICP	30.5		0.35	1.79	mg/Kg	24.8		0.34	1.73	mg/Kg	25.7		0.34	1.71	mg/Kg	26.1		0.35	1.71	mg/Kg
EPA 7471B																				
Mercury, Total, CVAA	0.016	<RDL	0.0073	0.0732	mg/Kg	0.011	<RDL	0.0067	0.0667	mg/Kg	0.012	<RDL	0.0067	0.0677	mg/Kg	0.014	<RDL	0.0068	0.0683	mg/Kg
EPA 3550B/8082A																				
Aroclor 1016		<MDL	2.9	5.87	ug/Kg		<MDL	2.7	5.44	ug/Kg		<MDL	2.8	5.5	ug/Kg		<MDL	2.8	5.56	ug/Kg
Aroclor 1221		<MDL	5.9	11.7	ug/Kg		<MDL	5.4	10.9	ug/Kg		<MDL	5.5	11	ug/Kg		<MDL	5.6	11.1	ug/Kg
Aroclor 1232		<MDL	5.9	11.7	ug/Kg		<MDL	5.4	10.9	ug/Kg		<MDL	5.5	11	ug/Kg		<MDL	5.6	11.1	ug/Kg
Aroclor 1242		<MDL	2.9	5.87	ug/Kg		<MDL	2.7	5.44	ug/Kg		<MDL	2.8	5.5	ug/Kg		<MDL	2.8	5.56	ug/Kg
Aroclor 1248		<MDL	2.9	5.87	ug/Kg		<MDL	2.7	5.44	ug/Kg		<MDL	2.8	5.5	ug/Kg		<MDL	2.8	5.56	ug/Kg
Aroclor 1254		<MDL	2.9	5.87	ug/Kg		<MDL	2.7	5.44	ug/Kg	11.2		2.8	5.5	ug/Kg		<MDL	2.8	5.56	ug/Kg
Aroclor 1260		<MDL	2.9	5.87	ug/Kg		<MDL	2.7	5.44	ug/Kg		<MDL	2.8	5.5	ug/Kg		<MDL	2.8	5.56	ug/Kg
Total Aroclors		<MDL	5.9	11.7	ug/Kg		<MDL	5.4	10.9	ug/Kg	11.2		2.8	5.5	ug/Kg		<MDL	5.6	11.1	ug/Kg
EPA 3550B/8270D																				
1,2,4-Trichlorobenzene		<MDL	0.78	1.57	ug/Kg		<MDL	0.72	1.46	ug/Kg		<MDL	0.73	1.47	ug/Kg		<MDL	0.74	1.49	ug/Kg
1,2-Dichlorobenzene		<MDL	7.82	7.82	ug/Kg		<MDL	7.25	7.25	ug/Kg		<MDL	7.33	7.33	ug/Kg		<MDL	7.41	7.41	ug/Kg
1,4-Dichlorobenzene		<MDL	11.7	11.7	ug/Kg		<MDL	10.9	10.9	ug/Kg		<MDL	11	11	ug/Kg		<MDL	11.1	11.1	ug/Kg
2,4-Dimethylphenol		<MDL	7.8	15.7	ug/Kg		<MDL	7.2	14.6	ug/Kg		<MDL	7.3	14.7	ug/Kg		<MDL	7.4	14.9	ug/Kg

Appendix A - Table A-1
Complete Analytical Results for Marine/Estuarine CSOs

	Locator	CSO-53-1				Locator	CSO-53-2				Locator	CSO-53-3				Locator	CSO-53-4			
	Description	53RD AVE SW CSO				Description	53RD AVE SW CSO				Description	53RD AVE SW CSO				Description	53RD AVE SW CSO			
	Sample	L53963-13				Sample	L53963-14				Sample	L53963-15				Sample	L53963-16			
	Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED			
	Collected	08/30/11				Collected	08/30/11				Collected	08/30/11				Collected	08/30/11			
	% Solids	68.2				% Solids	73.5				% Solids	72.7				% Solids	71.9			
	Depth (m)	9				Depth (m)	9				Depth (m)	8				Depth (m)	11			
	DRY Weight Basis					**DRY Weight Basis**					**DRY Weight Basis**					**DRY Weight Basis**				
Parameters	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**
2-Methylnaphthalene		<MDL	7.8	15.7	ug/Kg		<MDL	7.2	14.6	ug/Kg		<MDL	7.3	14.7	ug/Kg		<MDL	7.4	14.9	ug/Kg
2-Methylphenol		<MDL	7.8	15.7	ug/Kg		<MDL	7.2	14.6	ug/Kg		<MDL	7.3	14.7	ug/Kg		<MDL	7.4	14.9	ug/Kg
3-,4-Methylphenol		<MDL	40	78.2	ug/Kg		<MDL	37	72.5	ug/Kg		<MDL	37	73.3	ug/Kg		<MDL	38	74.1	ug/Kg
Acenaphthene		<MDL	7.8	15.7	ug/Kg		<MDL	7.2	14.6	ug/Kg		<MDL	7.3	14.7	ug/Kg		<MDL	7.4	14.9	ug/Kg
Acenaphthylene		<MDL	7.8	15.7	ug/Kg		<MDL	7.2	14.6	ug/Kg		<MDL	7.3	14.7	ug/Kg		<MDL	7.4	14.9	ug/Kg
Anthracene	16.6		7.8	15.7	ug/Kg		<MDL	7.2	14.6	ug/Kg		<MDL	7.3	14.7	ug/Kg		<MDL	7.4	14.9	ug/Kg
Benzo(a)anthracene	50.3		7.8	15.7	ug/Kg		<MDL	7.2	14.6	ug/Kg		<MDL	7.3	14.7	ug/Kg	17.1		7.4	14.9	ug/Kg
Benzo(a)pyrene	61.3		7.8	15.7	ug/Kg		<MDL	7.2	14.6	ug/Kg		<MDL	7.3	14.7	ug/Kg	26.7		7.4	14.9	ug/Kg
Benzo(b,j,k)fluoranthene	86.4		7.8	15.7	ug/Kg		<MDL	7.2	14.6	ug/Kg		<MDL	7.3	14.7	ug/Kg	25.7		7.4	14.9	ug/Kg
Benzo(g,h,i)perylene	18.9		7.8	15.7	ug/Kg		<MDL	7.2	14.6	ug/Kg		<MDL	7.3	14.7	ug/Kg		<MDL	7.4	14.9	ug/Kg
Benzoic Acid	214		157	157	ug/Kg		<MDL	146	146	ug/Kg	158	J	147	147	ug/Kg	192		149	149	ug/Kg
Benzyl Alcohol		<MDL	19.5	19.5	ug/Kg		<MDL	18.1	18.1	ug/Kg		<MDL	18.3	18.3	ug/Kg		<MDL	18.5	18.5	ug/Kg
Benzyl Butyl Phthalate		<MDL	11.7	11.7	ug/Kg		<MDL	10.9	10.9	ug/Kg		<MDL	11	11	ug/Kg		<MDL	11.1	11.1	ug/Kg
Bis(2-Ethylhexyl)Phthalate	37	B	16	31.2	ug/Kg	32.4	B	15	29	ug/Kg	31.5	B	15	29.3	ug/Kg	32.8	B	15	29.6	ug/Kg
Chrysene	54.7		7.8	15.7	ug/Kg		<MDL	7.2	14.6	ug/Kg		<MDL	7.3	14.7	ug/Kg	14	<RDL	7.4	14.9	ug/Kg
Dibenzo(a,h)anthracene	12	<RDL	7.8	15.7	ug/Kg		<MDL	7.2	14.6	ug/Kg		<MDL	7.3	14.7	ug/Kg		<MDL	7.4	14.9	ug/Kg
Dibenzofuran		<MDL	7.8	15.7	ug/Kg		<MDL	7.2	14.6	ug/Kg		<MDL	7.3	14.7	ug/Kg		<MDL	7.4	14.9	ug/Kg
Diethyl Phthalate		<MDL	16	31.2	ug/Kg		<MDL	15	29	ug/Kg		<MDL	15	29.3	ug/Kg		<MDL	15	29.6	ug/Kg
Dimethyl Phthalate		<MDL	15.7	15.7	ug/Kg		<MDL	14.6	14.6	ug/Kg		<MDL	14.7	14.7	ug/Kg		<MDL	14.9	14.9	ug/Kg
Di-N-Butyl Phthalate	16	<RDL	16	31.2	ug/Kg	16	<RDL	15	29	ug/Kg	15	<RDL	15	29.3	ug/Kg	17	<RDL	15	29.6	ug/Kg
Di-N-Octyl Phthalate		<MDL	15.7	15.7	ug/Kg		<MDL	14.6	14.6	ug/Kg		<MDL	14.7	14.7	ug/Kg		<MDL	14.9	14.9	ug/Kg
Fluoranthene	79.5		7.8	15.7	ug/Kg		<MDL	7.2	14.6	ug/Kg		<MDL	7.3	14.7	ug/Kg	19.6		7.4	14.9	ug/Kg
Fluorene		<MDL	7.8	15.7	ug/Kg		<MDL	7.2	14.6	ug/Kg		<MDL	7.3	14.7	ug/Kg		<MDL	7.4	14.9	ug/Kg
Hexachlorobenzene		<MDL	0.78	1.57	ug/Kg		<MDL	0.72	1.46	ug/Kg		<MDL	0.73	1.47	ug/Kg		<MDL	0.74	1.49	ug/Kg
Hexachlorobutadiene		<MDL	4	7.82	ug/Kg		<MDL	3.7	7.25	ug/Kg		<MDL	3.7	7.33	ug/Kg		<MDL	3.8	7.41	ug/Kg
Indeno(1,2,3-Cd)Pyrene	25.2	JL	7.8	15.7	ug/Kg		<MDL	7.2	14.6	ug/Kg		<MDL	7.3	14.7	ug/Kg	11	<RDL,JL	7.4	14.9	ug/Kg
Naphthalene		<MDL	7.8	15.7	ug/Kg		<MDL	7.2	14.6	ug/Kg		<MDL	7.3	14.7	ug/Kg		<MDL	7.4	14.9	ug/Kg
N-Nitrosodiphenylamine		<MDL	19.5	19.5	ug/Kg		<MDL	18.1	18.1	ug/Kg		<MDL	18.3	18.3	ug/Kg		<MDL	18.5	18.5	ug/Kg
Pentachlorophenol		<MDL	117	117	ug/Kg		<MDL	109	109	ug/Kg		<MDL	110	110	ug/Kg		<MDL	111	111	ug/Kg
Phenanthrene	43.1		7.8	15.7	ug/Kg		<MDL	7.2	14.6	ug/Kg		<MDL	7.3	14.7	ug/Kg	19.5		7.4	14.9	ug/Kg
Phenol		<MDL	40	117	ug/Kg		<MDL	37	109	ug/Kg		<MDL	37	110	ug/Kg		<MDL	38	111	ug/Kg
Pyrene	65.4		7.8	15.7	ug/Kg		<MDL	7.2	14.6	ug/Kg		<MDL	7.3	14.7	ug/Kg	21.4		7.4	14.9	ug/Kg
Total HPAHS	454		7.8	15.7	ug/Kg		<MDL	7.2	14.6	ug/Kg		<MDL	7.3	14.7	ug/Kg	135		7.4	14.9	ug/Kg
Total LPAHs	59.7		7.8	15.7	ug/Kg		<MDL	7.2	14.6	ug/Kg		<MDL	7.3	14.7	ug/Kg	19.5		7.4	14.9	ug/Kg

* Not converted to dry weight ba

Appendix A - Table A-1
Complete Analytical Results for Marine/Estuarine CSOs

	Locator	CSO-53-5				Locator	CSO-53-6				Locator	CSO-MY-1				Locator	CSO-MY-2			
	Description	53RD AVE SW CSO				Description	53RD AVE SW CSO				Description	MURRAY AVENUE SW CSO				Description	MURRAY AVENUE SW CSO			
	Sample	L53963-17				Sample	L53963-18				Sample	L53963-19				Sample	L53963-20			
	Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED			
	Collected	08/30/11				Collected	08/30/11				Collected	08/30/11				Collected	08/30/11			
	% Solids	64.4				% Solids	60.4				% Solids	72.2				% Solids	78			
	Depth (m)	10				Depth (m)	13				Depth (m)	6				Depth (m)	10			
	DRY Weight Basis					**DRY Weight Basis**					**DRY Weight Basis**					**DRY Weight Basis**				
Parameters	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**
ASTM D422																				
Clay*	2.5		0.62	1.25	%	5.6		0.8	1.61	%	2		0.65	1.3	%	1.9	J	0.63	1.25	%
Fines*	3.7		0.62	1.25	%	10.4		0.8	1.61	%	2		0.65	1.3	%	1.9		0.63	1.25	%
Gravel*		<MDL	0.12	1.25	%	0.7	<RDL	0.16	1.61	%	11.3		0.13	1.3	%	8.7		0.13	1.25	%
p+0.00*	0.2	<RDL	0.12	1.25	%	0.3	<RDL	0.16	1.61	%	6.2		0.13	1.3	%	8.4		0.13	1.25	%
p+1.00*	0.8	<RDL	0.12	1.25	%	0.6	<RDL	0.16	1.61	%	10.1		0.13	1.3	%	16		0.13	1.25	%
p+10.0(equal/more than)*	1.2	RDL	0.62	1.25	%	4.8		0.8	1.61	%	1.3	RDL	0.65	1.3	%	1.9		0.63	1.25	%
p+2.00*	21.8		0.12	1.25	%	5.9		0.16	1.61	%	32.7		0.13	1.3	%	39.7		0.13	1.25	%
p+3.00*	65.1		0.12	1.25	%	47.1		0.16	1.61	%	34.5		0.13	1.3	%	24.6		0.13	1.25	%
p+4.00*	8.8		0.12	1.25	%	33.7		0.16	1.61	%	1.3	<RDL	0.13	1.3	%	1	<RDL	0.13	1.25	%
p+5.00*		<MDL	0.62	1.25	%	3.2		0.8	1.61	%		<MDL	0.65	1.3	%		<MDL	0.63	1.25	%
p+6.00*		<MDL	0.62	1.25	%		<MDL	0.8	1.61	%		<MDL	0.65	1.3	%		<MDL	0.63	1.25	%
p+7.00*		<MDL	0.62	1.25	%		<MDL	0.8	1.61	%		<MDL	0.65	1.3	%		<MDL	0.63	1.25	%
p+8.00*		<MDL	0.62	1.25	%		<MDL	0.8	1.61	%		<MDL	0.65	1.3	%		<MDL	0.63	1.25	%
p+9.00*	1.2	RDL	0.62	1.25	%		<MDL	0.8	1.61	%	0.7	<RDL	0.65	1.3	%		<MDL	0.63	1.25	%
p-1.00*		<MDL	0.12	1.25	%	0.2	<RDL	0.16	1.61	%	6.7		0.13	1.3	%	5.6		0.13	1.25	%
p-2.00(less than)*		<MDL	0.12	1.25	%	0.5	<RDL	0.16	1.61	%	3.8		0.13	1.3	%	1.5		0.13	1.25	%
p-2.00*		<MDL	0.12	1.25	%		<MDL	0.16	1.61	%	0.7	<RDL	0.13	1.3	%	1.6		0.13	1.25	%
Sand*	96.7		0.12	1.25	%	87.6		0.16	1.61	%	84.8		0.13	1.3	%	89.6		0.13	1.25	%
Silt*	1.2	RDL	0.62	1.25	%	4.8		0.8	1.61	%		<MDL	0.65	1.3	%		<MDL	0.63	1.25	%
SM2540-G																				
Total Solids*	64.4		0.005	0.01	%	60.4		0.005	0.01	%	72.2		0.005	0.01	%	78		0.005	0.01	%
EP A9060																				
Total Organic Carbon	1880		560	1110	mg/Kg	12300		1000	2040	mg/Kg	6750		540	1080	mg/Kg	2330		510	1020	mg/Kg
EPA 3050B/6010C																				
Arsenic, Total, ICP	2	<RDL	1.9	9.53	mg/Kg	2.8	<RDL	2	10.1	mg/Kg	2.1	<RDL	1.7	8.46	mg/Kg	2.1	<RDL	1.7	8.17	mg/Kg
Cadmium, Total, ICP		<MDL	0.15	0.762	mg/Kg	0.31	<RDL	0.16	0.81	mg/Kg	0.18	<RDL	0.14	0.677	mg/Kg		<MDL	0.13	0.654	mg/Kg
Chromium, Total, ICP	21.3		0.23	1.14	mg/Kg	26.8		0.25	1.22	mg/Kg	15.5		0.21	1.02	mg/Kg	16.8		0.19	0.981	mg/Kg
Copper, Total, ICP	6.1		0.31	1.53	mg/Kg	13.2		0.33	1.62	mg/Kg	6.45		0.28	1.35	mg/Kg	7.45		0.26	1.31	mg/Kg
Lead, Total, ICP	5.4	<RDL	1.5	7.62	mg/Kg	7.6	<RDL	1.6	8.1	mg/Kg	8.35		1.4	6.77	mg/Kg	10.8		1.3	6.54	mg/Kg
Silver, Total, ICP		<MDL	0.31	1.53	mg/Kg		<MDL	0.33	1.62	mg/Kg		<MDL	0.28	1.35	mg/Kg		<MDL	0.26	1.31	mg/Kg
Zinc, Total, ICP	30.1		0.39	1.91	mg/Kg	39.6		0.4	2.02	mg/Kg	30.3		0.33	1.69	mg/Kg	42.1		0.32	1.63	mg/Kg
EPA 7471B																				
Mercury, Total, CVAA	0.015	<RDL	0.0076	0.0766	mg/Kg	0.038	<RDL,J	0.0083	0.0821	mg/Kg	0.018	<RDL	0.0068	0.0676	mg/Kg	0.047	<RDL	0.0063	0.0626	mg/Kg
EPA 3550B/8082A																				
Aroclor 1016		<MDL	3.1	6.21	ug/Kg		<MDL	3.3	6.62	ug/Kg		<MDL	2.8	5.54	ug/Kg		<MDL	2.6	5.13	ug/Kg
Aroclor 1221		<MDL	6.2	12.4	ug/Kg		<MDL	6.6	13.2	ug/Kg		<MDL	5.5	11.1	ug/Kg		<MDL	5.1	10.3	ug/Kg
Aroclor 1232		<MDL	6.2	12.4	ug/Kg		<MDL	6.6	13.2	ug/Kg		<MDL	5.5	11.1	ug/Kg		<MDL	5.1	10.3	ug/Kg
Aroclor 1242		<MDL	3.1	6.21	ug/Kg		<MDL	3.3	6.62	ug/Kg		<MDL	2.8	5.54	ug/Kg		<MDL	2.6	5.13	ug/Kg
Aroclor 1248		<MDL	3.1	6.21	ug/Kg		<MDL	3.3	6.62	ug/Kg		<MDL	2.8	5.54	ug/Kg		<MDL	2.6	5.13	ug/Kg
Aroclor 1254	6.69		3.1	6.21	ug/Kg	10.1		3.3	6.62	ug/Kg		<MDL	2.8	5.54	ug/Kg	2.8	<RDL	2.6	5.13	ug/Kg
Aroclor 1260		<MDL	3.1	6.21	ug/Kg	2.5	<RDL	2	3.97	ug/Kg		<MDL	2.8	5.54	ug/Kg		<MDL	2.6	5.13	ug/Kg
Total Aroclors	6.69		3.1	6.21	ug/Kg	12.6		2	3.97	ug/Kg		<MDL	5.5	11.1	ug/Kg	2.8	<RDL	2.6	5.13	ug/Kg
EPA 3550B/8270D																				
1,2,4-Trichlorobenzene		<MDL	0.82	1.66	ug/Kg		<MDL	0.88	1.77	ug/Kg		<MDL	0.73	1.48	ug/Kg		<MDL	0.68	1.37	ug/Kg
1,2-Dichlorobenzene		<MDL	8.28	8.28	ug/Kg		<MDL	8.82	8.82	ug/Kg		<MDL	7.38	7.38	ug/Kg		<MDL	6.83	6.83	ug/Kg
1,4-Dichlorobenzene		<MDL	12.4	12.4	ug/Kg		<MDL	13.2	13.2	ug/Kg		<MDL	11.1	11.1	ug/Kg		<MDL	10.3	10.3	ug/Kg
2,4-Dimethylphenol		<MDL	8.2	16.6	ug/Kg		<MDL	8.8	17.7	ug/Kg		<MDL	7.3	14.8	ug/Kg		<MDL	6.8	13.7	ug/Kg

Appendix A - Table A-1
Complete Analytical Results for Marine/Estuarine CSOs

	Locator	CSO-53-5				Locator	CSO-53-6				Locator	CSO-MY-1				Locator	CSO-MY-2			
	Description	53RD AVE SW CSO				Description	53RD AVE SW CSO				Description	MURRAY AVENUE SW CSO				Description	MURRAY AVENUE SW CSO			
	Sample	L53963-17				Sample	L53963-18				Sample	L53963-19				Sample	L53963-20			
	Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED			
	Collected	08/30/11				Collected	08/30/11				Collected	08/30/11				Collected	08/30/11			
	% Solids	64.4				% Solids	60.4				% Solids	72.2				% Solids	78			
	Depth (m)	10				Depth (m)	13				Depth (m)	6				Depth (m)	10			
	DRY Weight Basis					**DRY Weight Basis**					**DRY Weight Basis**					**DRY Weight Basis**				
Parameters	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**
2-Methylnaphthalene		<MDL	8.2	16.6	ug/Kg		<MDL	8.8	17.7	ug/Kg		<MDL	7.3	14.8	ug/Kg		<MDL	6.8	13.7	ug/Kg
2-Methylphenol		<MDL	8.2	16.6	ug/Kg		<MDL	8.8	17.7	ug/Kg		<MDL	7.3	14.8	ug/Kg		<MDL	6.8	13.7	ug/Kg
3-,4-Methylphenol		<MDL	42	82.8	ug/Kg		<MDL	45	88.2	ug/Kg		<MDL	37	73.8	ug/Kg		<MDL	35	68.3	ug/Kg
Acenaphthene		<MDL	8.2	16.6	ug/Kg		<MDL	8.8	17.7	ug/Kg	15.2	JL	7.3	14.8	ug/Kg		<MDL	6.8	13.7	ug/Kg
Acenaphthylene		<MDL	8.2	16.6	ug/Kg		<MDL	8.8	17.7	ug/Kg		<MDL	7.3	14.8	ug/Kg		<MDL	6.8	13.7	ug/Kg
Anthracene		<MDL	8.2	16.6	ug/Kg	24.3		8.8	17.7	ug/Kg	50		7.3	14.8	ug/Kg	13	<RDL	6.8	13.7	ug/Kg
Benzo(a)anthracene	22.5		8.2	16.6	ug/Kg	49.5		8.8	17.7	ug/Kg	133		7.3	14.8	ug/Kg	46.3		6.8	13.7	ug/Kg
Benzo(a)pyrene	32.6		8.2	16.6	ug/Kg	77		8.8	17.7	ug/Kg	132		7.3	14.8	ug/Kg	56.4		6.8	13.7	ug/Kg
Benzo(b,j,k)fluoranthene	31.2		8.2	16.6	ug/Kg	109		8.8	17.7	ug/Kg	233		7.3	14.8	ug/Kg	78.3		6.8	13.7	ug/Kg
Benzo(g,h,i)perylene		<MDL	8.2	16.6	ug/Kg	28.6		8.8	17.7	ug/Kg	82.5		7.3	14.8	ug/Kg	30.6		6.8	13.7	ug/Kg
Benzoic Acid	174		166	166	ug/Kg	233		177	177	ug/Kg	224		148	148	ug/Kg	182		137	137	ug/Kg
Benzyl Alcohol		<MDL	20.7	20.7	ug/Kg		<MDL	22	22	ug/Kg		<MDL	18.4	18.4	ug/Kg		<MDL	17.1	17.1	ug/Kg
Benzyl Butyl Phthalate		<MDL	12.4	12.4	ug/Kg		<MDL	13.2	13.2	ug/Kg	129	JL	11.1	11.1	ug/Kg		<MDL	10.3	10.3	ug/Kg
Bis(2-Ethylhexyl)Phthalate	41.9	B	17	33.1	ug/Kg	54.8	B	18	35.3	ug/Kg	150	B2	15	29.5	ug/Kg	58.2	B	14	27.3	ug/Kg
Chrysene	16	<RDL	8.2	16.6	ug/Kg	64.2		8.8	17.7	ug/Kg	137		7.3	14.8	ug/Kg	42.8		6.8	13.7	ug/Kg
Dibenzo(a,h)anthracene	8.5	<RDL	8.2	16.6	ug/Kg	16	<RDL	8.8	17.7	ug/Kg	26.9		7.3	14.8	ug/Kg	15.1		6.8	13.7	ug/Kg
Dibenzofuran		<MDL	8.2	16.6	ug/Kg		<MDL	8.8	17.7	ug/Kg		<MDL	7.3	14.8	ug/Kg		<MDL	6.8	13.7	ug/Kg
Diethyl Phthalate		<MDL	17	33.1	ug/Kg		<MDL	18	35.3	ug/Kg		<MDL	15	29.5	ug/Kg		<MDL	14	27.3	ug/Kg
Dimethyl Phthalate		<MDL	16.6	16.6	ug/Kg		<MDL	17.7	17.7	ug/Kg		<MDL	14.8	14.8	ug/Kg		<MDL	13.7	13.7	ug/Kg
Di-N-Butyl Phthalate	17	<RDL	17	33.1	ug/Kg		<MDL	18	35.3	ug/Kg	59.8		15	29.5	ug/Kg	17	<RDL	14	27.3	ug/Kg
Di-N-Octyl Phthalate		<MDL	16.6	16.6	ug/Kg		<MDL	17.7	17.7	ug/Kg		<MDL	14.8	14.8	ug/Kg		<MDL	13.7	13.7	ug/Kg
Fluoranthene	25.6		8.2	16.6	ug/Kg	125		8.8	17.7	ug/Kg	278		7.3	14.8	ug/Kg	91.5		6.8	13.7	ug/Kg
Fluorene		<MDL	8.2	16.6	ug/Kg		<MDL	8.8	17.7	ug/Kg	16.9	JL	7.3	14.8	ug/Kg		<MDL	6.8	13.7	ug/Kg
Hexachlorobenzene		<MDL	0.82	1.66	ug/Kg		<MDL	0.88	1.77	ug/Kg		<MDL	0.73	1.48	ug/Kg		<MDL	0.68	1.37	ug/Kg
Hexachlorobutadiene		<MDL	4.2	8.28	ug/Kg		<MDL	4.5	8.82	ug/Kg		<MDL	3.7	7.38	ug/Kg		<MDL	3.5	6.83	ug/Kg
Indeno(1,2,3-Cd)Pyrene	14	<RDL,JL	8.2	16.6	ug/Kg	36.9	JL	8.8	17.7	ug/Kg	77	JL	7.3	14.8	ug/Kg	29.2	JL	6.8	13.7	ug/Kg
Naphthalene		<MDL	8.2	16.6	ug/Kg		<MDL	8.8	17.7	ug/Kg		<MDL	7.3	14.8	ug/Kg		<MDL	6.8	13.7	ug/Kg
N-Nitrosodiphenylamine		<MDL	20.7	20.7	ug/Kg		<MDL	22	22	ug/Kg		<MDL	18.4	18.4	ug/Kg		<MDL	17.1	17.1	ug/Kg
Pentachlorophenol		<MDL	124	124	ug/Kg		<MDL	132	132	ug/Kg		<MDL	111	111	ug/Kg		<MDL	103	103	ug/Kg
Phenanthrene	19.4		8.2	16.6	ug/Kg	59.6		8.8	17.7	ug/Kg	170		7.3	14.8	ug/Kg	42.4		6.8	13.7	ug/Kg
Phenol		<MDL	42	124	ug/Kg		<MDL	45	132	ug/Kg		<MDL	37	111	ug/Kg		<MDL	35	103	ug/Kg
Pyrene	23.8		8.2	16.6	ug/Kg	103		8.8	17.7	ug/Kg	263		7.3	14.8	ug/Kg	83.5		6.8	13.7	ug/Kg
Total HPAHS	174		8.2	16.6	ug/Kg	610		8.8	17.7	ug/Kg	1360		7.3	14.8	ug/Kg	474		6.8	13.7	ug/Kg
Total LPAHs	19.4		8.2	16.6	ug/Kg	83.9		8.8	17.7	ug/Kg	252		7.3	14.8	ug/Kg	55.1		6.8	13.7	ug/Kg

* Not converted to dry weight ba

Appendix A - Table A-1
Complete Analytical Results for Marine/Estuarine CSOs

	Locator	CSO-MY-3				Locator	CSO-MY-4				Locator	CSO-MY-5				Locator	CSO-MY-6			
	Description	MURRAY AVENUE SW CSO				Description	MURRAY AVENUE SW CSO				Description	MURRAY AVENUE SW CSO				Description	MURRAY AVENUE SW CSO			
	Sample	L53963-21				Sample	L53963-22				Sample	L53963-23				Sample	L53963-24			
	Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED			
	Collected	08/30/11				Collected	08/30/11				Collected	08/30/11				Collected	08/30/11			
	% Solids	74.7				% Solids	78.2				% Solids	78.3				% Solids	78.1			
	Depth (m)	9				Depth (m)	12				Depth (m)	22				Depth (m)	17			
	DRY Weight Basis					**DRY Weight Basis**					**DRY Weight Basis**					**DRY Weight Basis**				
Parameters	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**
ASTM D422																				
Clay*	2.6		0.64	1.29	%	1.2	RDL	0.62	1.24	%	2.4		0.61	1.22	%	2.4		0.61	1.22	%
Fines*	2.6		0.64	1.29	%	1.9		0.62	1.24	%	2.4		0.61	1.22	%	2.4		0.61	1.22	%
Gravel*	8.6		0.13	1.29	%	14.2		0.12	1.24	%	24.1		0.12	1.22	%	12		0.12	1.22	%
p+0.00*	9.8		0.13	1.29	%	7.7		0.12	1.24	%	8		0.12	1.22	%	8.3		0.12	1.22	%
p+1.00*	16.9		0.13	1.29	%	14.7		0.12	1.24	%	10		0.12	1.22	%	13.5		0.12	1.22	%
p+10.0(equal/more than)*	1.9		0.64	1.29	%	1.2	RDL	0.62	1.24	%	2.4		0.61	1.22	%	2.4		0.61	1.22	%
p+2.00*	36.7		0.13	1.29	%	34.3		0.12	1.24	%	27.2		0.12	1.22	%	32.1		0.12	1.22	%
p+3.00*	23.4		0.13	1.29	%	27.8		0.12	1.24	%	27.5		0.12	1.22	%	29.6		0.12	1.22	%
p+4.00*	1	<RDL	0.13	1.29	%	1.1	<RDL	0.12	1.24	%	1.7		0.12	1.22	%	1.4		0.12	1.22	%
p+5.00*		<MDL	0.64	1.29	%	0.6	<RDL	0.62	1.24	%		<MDL	0.61	1.22	%		<MDL	0.61	1.22	%
p+6.00*		<MDL	0.64	1.29	%		<MDL	0.62	1.24	%		<MDL	0.61	1.22	%		<MDL	0.61	1.22	%
p+7.00*		<MDL	0.64	1.29	%		<MDL	0.62	1.24	%		<MDL	0.61	1.22	%		<MDL	0.61	1.22	%
p+8.00*		<MDL	0.64	1.29	%		<MDL	0.62	1.24	%		<MDL	0.61	1.22	%		<MDL	0.61	1.22	%
p+9.00*	0.6	<RDL	0.64	1.29	%		<MDL	0.62	1.24	%		<MDL	0.61	1.22	%		<MDL	0.61	1.22	%
p-1.00*	5.7		0.13	1.29	%	7.9		0.12	1.24	%	10.1		0.12	1.22	%	7.4		0.12	1.22	%
p-2.00(less than)*	2		0.13	1.29	%	3.7		0.12	1.24	%	11.2		0.12	1.22	%	1.9		0.12	1.22	%
p-2.00*	0.9	<RDL	0.13	1.29	%	2.6		0.12	1.24	%	2.8		0.12	1.22	%	2.6		0.12	1.22	%
Sand*	87.8		0.13	1.29	%	85.7		0.12	1.24	%	74.4		0.12	1.22	%	84.9		0.12	1.22	%
Silt*		<MDL	0.64	1.29	%	0.6	<RDL	0.62	1.24	%		<MDL	0.61	1.22	%		<MDL	0.61	1.22	%
SM2540-G																				
Total Solids*	74.7		0.005	0.01	%	78.2		0.005	0.01	%	78.3		0.005	0.01	%	78.1		0.005	0.01	%
EP A9060																				
Total Organic Carbon	5970		520	1050	mg/Kg	1680		520	1040	mg/Kg	1790		510	1030	mg/Kg	1020		500	990	mg/Kg
EPA 3050B/6010C																				
Arsenic, Total, ICP	2.1	<RDL	1.6	8.18	mg/Kg	2	<RDL	1.7	8.08	mg/Kg	2.7	<RDL	1.7	8.16	mg/Kg	2.7	<RDL	1.7	8.02	mg/Kg
Cadmium, Total, ICP		<MDL	0.13	0.653	mg/Kg		<MDL	0.13	0.647	mg/Kg		<MDL	0.13	0.653	mg/Kg		<MDL	0.13	0.641	mg/Kg
Chromium, Total, ICP	18.3		0.2	0.981	mg/Kg	15.1		0.19	0.969	mg/Kg	13.8		0.19	0.98	mg/Kg	17		0.19	0.962	mg/Kg
Copper, Total, ICP	8.18		0.27	1.31	mg/Kg	3.84		0.26	1.29	mg/Kg	4.13		0.26	1.3	mg/Kg	4.4		0.26	1.28	mg/Kg
Lead, Total, ICP	12.8		1.3	6.53	mg/Kg	5.5	<RDL	1.3	6.47	mg/Kg	4.7	<RDL	1.3	6.53	mg/Kg	5	<RDL	1.3	6.41	mg/Kg
Silver, Total, ICP		<MDL	0.27	1.31	mg/Kg		<MDL	0.26	1.29	mg/Kg		<MDL	0.26	1.3	mg/Kg		<MDL	0.26	1.28	mg/Kg
Zinc, Total, ICP	36.3		0.32	1.63	mg/Kg	19.6		0.32	1.61	mg/Kg	20.9		0.33	1.63	mg/Kg	21.4		0.32	1.6	mg/Kg
EPA 7471B																				
Mercury, Total, CVAA	0.016	<RDL	0.0067	0.0669	mg/Kg	0.011	<RDL	0.0064	0.0636	mg/Kg	0.014	<RDL	0.0063	0.0627	mg/Kg	0.0093	<RDL	0.0063	0.0633	mg/Kg
EPA 3550B/8082A																				
Aroclor 1016		<MDL	2.7	5.35	ug/Kg		<MDL	2.6	5.12	ug/Kg		<MDL	2.6	5.11	ug/Kg		<MDL	2.6	5.12	ug/Kg
Aroclor 1221		<MDL	5.4	10.7	ug/Kg		<MDL	5.1	10.2	ug/Kg		<MDL	5.1	10.2	ug/Kg		<MDL	5.1	10.2	ug/Kg
Aroclor 1232		<MDL	5.4	10.7	ug/Kg		<MDL	5.1	10.2	ug/Kg		<MDL	5.1	10.2	ug/Kg		<MDL	5.1	10.2	ug/Kg
Aroclor 1242		<MDL	2.7	5.35	ug/Kg		<MDL	2.6	5.12	ug/Kg		<MDL	2.6	5.11	ug/Kg		<MDL	2.6	5.12	ug/Kg
Aroclor 1248		<MDL	2.7	5.35	ug/Kg		<MDL	2.6	5.12	ug/Kg		<MDL	2.6	5.11	ug/Kg		<MDL	2.6	5.12	ug/Kg
Aroclor 1254	2.9	<RDL	2.7	5.35	ug/Kg		<MDL	2.6	5.12	ug/Kg		<MDL	2.6	5.11	ug/Kg		<MDL	2.6	5.12	ug/Kg
Aroclor 1260		<MDL	2.7	5.35	ug/Kg		<MDL	2.6	5.12	ug/Kg		<MDL	2.6	5.11	ug/Kg		<MDL	2.6	5.12	ug/Kg
Total Aroclors	2.9	<RDL	2.7	5.35	ug/Kg		<MDL	5.1	10.2	ug/Kg		<MDL	5.1	10.2	ug/Kg		<MDL	5.1	10.2	ug/Kg
EPA 3550B/8270D																				
1,2,4-Trichlorobenzene		<MDL	0.71	1.43	ug/Kg		<MDL	0.68	1.37	ug/Kg		<MDL	0.68	1.37	ug/Kg		<MDL	0.68	1.37	ug/Kg
1,2-Dichlorobenzene		<MDL	7.14	7.14	ug/Kg		<MDL	6.82	6.82	ug/Kg		<MDL	6.81	6.81	ug/Kg		<MDL	6.82	6.82	ug/Kg
1,4-Dichlorobenzene		<MDL	10.7	10.7	ug/Kg		<MDL	10.2	10.2	ug/Kg		<MDL	10.2	10.2	ug/Kg		<MDL	10.2	10.2	ug/Kg
2,4-Dimethylphenol		<MDL	7.1	14.3	ug/Kg		<MDL	6.8	13.7	ug/Kg		<MDL	6.8	13.7	ug/Kg		<MDL	6.8	13.7	ug/Kg

Appendix A - Table A-1
Complete Analytical Results for Marine/Estuarine CSOs

	Locator	CSO-MY-3				Locator	CSO-MY-4				Locator	CSO-MY-5				Locator	CSO-MY-6			
	Description	MURRAY AVENUE SW CSO				Description	MURRAY AVENUE SW CSO				Description	MURRAY AVENUE SW CSO				Description	MURRAY AVENUE SW CSO			
	Sample	L53963-21				Sample	L53963-22				Sample	L53963-23				Sample	L53963-24			
	Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED			
	Collected	08/30/11				Collected	08/30/11				Collected	08/30/11				Collected	08/30/11			
	% Solids	74.7				% Solids	78.2				% Solids	78.3				% Solids	78.1			
	Depth (m)	9				Depth (m)	12				Depth (m)	22				Depth (m)	17			
	DRY Weight Basis					**DRY Weight Basis**					**DRY Weight Basis**					**DRY Weight Basis**				
Parameters	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**
2-Methylnaphthalene		<MDL	7.1	14.3	ug/Kg		<MDL	6.8	13.7	ug/Kg		<MDL	6.8	13.7	ug/Kg		<MDL	6.8	13.7	ug/Kg
2-Methylphenol		<MDL	7.1	14.3	ug/Kg		<MDL	6.8	13.7	ug/Kg		<MDL	6.8	13.7	ug/Kg		<MDL	6.8	13.7	ug/Kg
3-,4-Methylphenol		<MDL	36	71.4	ug/Kg		<MDL	35	68.2	ug/Kg		<MDL	34	68.1	ug/Kg		<MDL	35	68.2	ug/Kg
Acenaphthene	8	<RDL,JL	7.1	14.3	ug/Kg		<MDL	6.8	13.7	ug/Kg		<MDL	6.8	13.7	ug/Kg		<MDL	6.8	13.7	ug/Kg
Acenaphthylene		<MDL	7.1	14.3	ug/Kg		<MDL	6.8	13.7	ug/Kg		<MDL	6.8	13.7	ug/Kg		<MDL	6.8	13.7	ug/Kg
Anthracene	32.3		7.1	14.3	ug/Kg		<MDL	6.8	13.7	ug/Kg		<MDL	6.8	13.7	ug/Kg	11	<RDL	6.8	13.7	ug/Kg
Benzo(a)anthracene	72.8		7.1	14.3	ug/Kg	34.8		6.8	13.7	ug/Kg	12	<RDL	6.8	13.7	ug/Kg	25.9		6.8	13.7	ug/Kg
Benzo(a)pyrene	82.3		7.1	14.3	ug/Kg	52		6.8	13.7	ug/Kg	20.6		6.8	13.7	ug/Kg	34.4		6.8	13.7	ug/Kg
Benzo(b,j,k)fluoranthene	138		7.1	14.3	ug/Kg	59.8		6.8	13.7	ug/Kg	15.1		6.8	13.7	ug/Kg	34.7		6.8	13.7	ug/Kg
Benzo(g,h,i)perylene	48.2		7.1	14.3	ug/Kg	24.7		6.8	13.7	ug/Kg		<MDL	6.8	13.7	ug/Kg	7.9	<RDL	6.8	13.7	ug/Kg
Benzoic Acid	226		143	143	ug/Kg	228		137	137	ug/Kg	186		137	137	ug/Kg	214		137	137	ug/Kg
Benzyl Alcohol		<MDL	17.8	17.8	ug/Kg		<MDL	17	17	ug/Kg		<MDL	17	17	ug/Kg		<MDL	17	17	ug/Kg
Benzyl Butyl Phthalate		<MDL	10.7	10.7	ug/Kg		<MDL	10.2	10.2	ug/Kg		<MDL	10.2	10.2	ug/Kg		<MDL	10.2	10.2	ug/Kg
Bis(2-Ethylhexyl)Phthalate	137	B2	15	28.5	ug/Kg	34.1	B	14	27.2	ug/Kg	29	B	14	27.2	ug/Kg	28.6	B	14	27.3	ug/Kg
Chrysene	81.7		7.1	14.3	ug/Kg	34.5		6.8	13.7	ug/Kg		<MDL	6.8	13.7	ug/Kg	22.5		6.8	13.7	ug/Kg
Dibenzo(a,h)anthracene	18.5		7.1	14.3	ug/Kg	9.2	<RDL	6.8	13.7	ug/Kg		<MDL	6.8	13.7	ug/Kg	7.4	<RDL	6.8	13.7	ug/Kg
Dibenzofuran		<MDL	7.1	14.3	ug/Kg		<MDL	6.8	13.7	ug/Kg		<MDL	6.8	13.7	ug/Kg		<MDL	6.8	13.7	ug/Kg
Diethyl Phthalate		<MDL	15	28.5	ug/Kg		<MDL	14	27.2	ug/Kg	14	<RDL	14	27.2	ug/Kg		<MDL	14	27.3	ug/Kg
Dimethyl Phthalate	32.3		14.3	14.3	ug/Kg		<MDL	13.7	13.7	ug/Kg		<MDL	13.7	13.7	ug/Kg		<MDL	13.7	13.7	ug/Kg
Di-N-Butyl Phthalate	16	<RDL	15	28.5	ug/Kg	15	<RDL	14	27.2	ug/Kg	14	<RDL	14	27.2	ug/Kg	14	<RDL	14	27.3	ug/Kg
Di-N-Octyl Phthalate		<MDL	14.3	14.3	ug/Kg		<MDL	13.7	13.7	ug/Kg		<MDL	13.7	13.7	ug/Kg		<MDL	13.7	13.7	ug/Kg
Fluoranthene	167		7.1	14.3	ug/Kg	49		6.8	13.7	ug/Kg		<MDL	6.8	13.7	ug/Kg	39.9		6.8	13.7	ug/Kg
Fluorene	14.6	JL	7.1	14.3	ug/Kg		<MDL	6.8	13.7	ug/Kg		<MDL	6.8	13.7	ug/Kg		<MDL	6.8	13.7	ug/Kg
Hexachlorobenzene		<MDL	0.71	1.43	ug/Kg		<MDL	0.68	1.37	ug/Kg		<MDL	0.68	1.37	ug/Kg		<MDL	0.68	1.37	ug/Kg
Hexachlorobutadiene		<MDL	3.6	7.14	ug/Kg		<MDL	3.5	6.82	ug/Kg		<MDL	3.4	6.81	ug/Kg		<MDL	3.5	6.82	ug/Kg
Indeno(1,2,3-Cd)Pyrene	47.7	JL	7.1	14.3	ug/Kg	27.6	JL	6.8	13.7	ug/Kg	8.2	<RDL,JL	6.8	13.7	ug/Kg	14.3	JL	6.8	13.7	ug/Kg
Naphthalene		<MDL	7.1	14.3	ug/Kg		<MDL	6.8	13.7	ug/Kg		<MDL	6.8	13.7	ug/Kg		<MDL	6.8	13.7	ug/Kg
N-Nitrosodiphenylamine		<MDL	17.8	17.8	ug/Kg		<MDL	17	17	ug/Kg		<MDL	17	17	ug/Kg		<MDL	17	17	ug/Kg
Pentachlorophenol		<MDL	107	107	ug/Kg		<MDL	102	102	ug/Kg		<MDL	102	102	ug/Kg		<MDL	102	102	ug/Kg
Phenanthrene	106		7.1	14.3	ug/Kg	11	<RDL	6.8	13.7	ug/Kg		<MDL	6.8	13.7	ug/Kg	38.3		6.8	13.7	ug/Kg
Phenol		<MDL	36	107	ug/Kg		<MDL	35	102	ug/Kg		<MDL	34	102	ug/Kg		<MDL	35	102	ug/Kg
Pyrene	142		7.1	14.3	ug/Kg	57.8		6.8	13.7	ug/Kg		<MDL	6.8	13.7	ug/Kg	41.2		6.8	13.7	ug/Kg
Total HPAHS	798		7.1	14.3	ug/Kg	349		6.8	13.7	ug/Kg	55.7		6.8	13.7	ug/Kg	228		6.8	13.7	ug/Kg
Total LPAHs	161		7.1	14.3	ug/Kg	11	<RDL	6.8	13.7	ug/Kg		<MDL	6.8	13.7	ug/Kg	49.6		6.8	13.7	ug/Kg

* Not converted to dry weight ba

Appendix A - Table A-1
Complete Analytical Results for Marine/Estuarine CSOs

	Locator	CSO-MY-7				Locator	CSO-BT-1				Locator	CSO-BT-2				Locator	CSO-BT-3			
	Description	MURRAY AVENUE SW CSO				Description	SW BARTON STREET CSO				Description	SW BARTON STREET CSO				Description	SW BARTON STREET CSO			
	Sample	L53963-25				Sample	L53963-26				Sample	L53963-27				Sample	L53963-28			
	Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED			
	Collected	08/30/11				Collected	08/30/11				Collected	08/30/11				Collected	08/30/11			
	% Solids	79.1				% Solids	46.6				% Solids	67.4				% Solids	76.1			
	Depth (m)	28				Depth (m)	6				Depth (m)	6				Depth (m)	5			
	DRY Weight Basis					**DRY Weight Basis**					**DRY Weight Basis**					**DRY Weight Basis**				
Parameters	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**
ASTM D422																				
Clay*	1.8		0.6	1.2	%	7.6		1.1	2.18	%	4.1		0.68	1.36	%	2.6		0.64	1.28	%
Fines*	1.8		0.6	1.2	%	8.7		1.1	2.18	%	4.8		0.68	1.36	%	2.6		0.64	1.28	%
Gravel*	10.9		0.12	1.2	%	12.4		0.22	2.18	%	11.2		0.14	1.36	%	12.1		0.13	1.28	%
p+0.00*	11		0.12	1.2	%	12.4		0.22	2.18	%	7		0.14	1.36	%	8.6		0.13	1.28	%
p+1.00*	14.3		0.12	1.2	%	22		0.22	2.18	%	21.2		0.14	1.36	%	26.4		0.13	1.28	%
p+10.0(equal/more than)*	1.8		0.6	1.2	%	6.5		1.1	2.18	%	3.4		0.68	1.36	%	2.6		0.64	1.28	%
p+2.00*	32.5		0.12	1.2	%	26.7		0.22	2.18	%	34.3		0.14	1.36	%	35.7		0.13	1.28	%
p+3.00*	25.8		0.12	1.2	%	15.1		0.22	2.18	%	18.2		0.14	1.36	%	16		0.13	1.28	%
p+4.00*	1.4		0.12	1.2	%	4.3		0.22	2.18	%	3.3		0.14	1.36	%	1.1	<RDL	0.13	1.28	%
p+5.00*		<MDL	0.6	1.2	%		<MDL	1.1	2.18	%		<MDL	0.68	1.36	%		<MDL	0.64	1.28	%
p+6.00*		<MDL	0.6	1.2	%		<MDL	1.1	2.18	%		<MDL	0.68	1.36	%		<MDL	0.64	1.28	%
p+7.00*		<MDL	0.6	1.2	%	1.1	<RDL	1.1	2.18	%		<MDL	0.68	1.36	%		<MDL	0.64	1.28	%
p+8.00*		<MDL	0.6	1.2	%		<MDL	1.1	2.18	%		<MDL	0.68	1.36	%		<MDL	0.64	1.28	%
p+9.00*		<MDL	0.6	1.2	%	1.1	<RDL	1.1	2.18	%		<MDL	0.68	1.36	%		<MDL	0.64	1.28	%
p-1.00*	7.2		0.12	1.2	%	6.9		0.22	2.18	%	6		0.14	1.36	%	3.5		0.13	1.28	%
p-2.00(less than)*	1.9		0.12	1.2	%	3.6		0.22	2.18	%	3.7		0.14	1.36	%	7.7		0.13	1.28	%
p-2.00*	1.8		0.12	1.2	%	1.9	<RDL	0.22	2.18	%	1.6		0.14	1.36	%	0.9	<RDL	0.13	1.28	%
Sand*	84.9		0.12	1.2	%	80.3		0.22	2.18	%	83.9		0.14	1.36	%	87.8		0.13	1.28	%
Silt*		<MDL	0.6	1.2	%	1.1	<RDL	1.1	2.18	%		<MDL	0.68	1.36	%		<MDL	0.64	1.28	%
SM2540-G																				
Total Solids*	79.1		0.005	0.01	%	46.6		0.005	0.01	%	67.4		0.005	0.01	%	76.1		0.005	0.01	%
EP A9060																				
Total Organic Carbon	1370		510	1020	mg/Kg	45100		5200	10200	mg/Kg	14100		1200	2480	mg/Kg	4860		960	1910	mg/Kg
EPA 3050B/6010C																				
Arsenic, Total, ICP	3	<RDL	1.5	7.77	mg/Kg	7.7	<RDL	2.6	13.3	mg/Kg	5.6	<RDL	1.9	9.66	mg/Kg	4.3	<RDL	1.6	8.06	mg/Kg
Cadmium, Total, ICP		<MDL	0.12	0.622	mg/Kg	0.69	<RDL	0.21	1.06	mg/Kg	0.31	<RDL	0.15	0.773	mg/Kg	0.18	<RDL	0.13	0.644	mg/Kg
Chromium, Total, ICP	18.5		0.19	0.933	mg/Kg	19.9		0.32	1.6	mg/Kg	15.7		0.24	1.16	mg/Kg	20.1		0.2	0.967	mg/Kg
Copper, Total, ICP	3.79		0.25	1.24	mg/Kg	27.5		0.43	2.13	mg/Kg	14		0.31	1.54	mg/Kg	8.09		0.26	1.29	mg/Kg
Lead, Total, ICP	3.8	<RDL	1.2	6.22	mg/Kg	43.8		2.1	10.6	mg/Kg	18.5		1.5	7.73	mg/Kg	10.1		1.3	6.44	mg/Kg
Silver, Total, ICP		<MDL	0.25	1.24	mg/Kg		<MDL	0.43	2.13	mg/Kg		<MDL	0.31	1.54	mg/Kg		<MDL	0.26	1.29	mg/Kg
Zinc, Total, ICP	20.4		0.32	1.55	mg/Kg	90.8		0.54	2.66	mg/Kg	57		0.39	1.93	mg/Kg	42.3		0.33	1.62	mg/Kg
EPA 7471B																				
Mercury, Total, CVAA	0.011	<RDL	0.0063	0.0631	mg/Kg	0.043	<RDL	0.011	0.105	mg/Kg	0.022	<RDL	0.0073	0.0723	mg/Kg	0.018	<RDL	0.0064	0.064	mg/Kg
EPA 3550B/8082A																				
Aroclor 1016		<MDL	2.5	5.06	ug/Kg		<MDL	4.3	8.58	ug/Kg		<MDL	3	5.93	ug/Kg		<MDL	2.6	5.26	ug/Kg
Aroclor 1221		<MDL	5.1	10.1	ug/Kg		<MDL	8.6	17.2	ug/Kg		<MDL	5.9	11.9	ug/Kg		<MDL	5.3	10.5	ug/Kg
Aroclor 1232		<MDL	5.1	10.1	ug/Kg		<MDL	8.6	17.2	ug/Kg		<MDL	5.9	11.9	ug/Kg		<MDL	5.3	10.5	ug/Kg
Aroclor 1242		<MDL	2.5	5.06	ug/Kg	3.9	<RDL	2.6	5.15	ug/Kg		<MDL	3	5.93	ug/Kg		<MDL	2.6	5.26	ug/Kg
Aroclor 1248		<MDL	2.5	5.06	ug/Kg		<MDL	4.3	8.58	ug/Kg		<MDL	3	5.93	ug/Kg		<MDL	2.6	5.26	ug/Kg
Aroclor 1254		<MDL	2.5	5.06	ug/Kg	15.2		4.3	8.58	ug/Kg	6.44		3	5.93	ug/Kg	2.9	<RDL	2.6	5.26	ug/Kg
Aroclor 1260		<MDL	2.5	5.06	ug/Kg	7.9	<RDL	4.3	8.58	ug/Kg		<MDL	3	5.93	ug/Kg		<MDL	2.6	5.26	ug/Kg
Total Aroclors		<MDL	5.1	10.1	ug/Kg	27		2.6	5.15	ug/Kg	6.44		3	5.93	ug/Kg	2.9	<RDL	2.6	5.26	ug/Kg
EPA 3550B/8270D																				
1,2,4-Trichlorobenzene		<MDL	0.67	1.35	ug/Kg		<MDL	1.1	2.3	ug/Kg		<MDL	0.79	1.59	ug/Kg		<MDL	7	14.1	ug/Kg
1,2-Dichlorobenzene		<MDL	6.74	6.74	ug/Kg		<MDL	11.4	11.4	ug/Kg		<MDL	7.91	7.91	ug/Kg		<MDL	70	70	ug/Kg
1,4-Dichlorobenzene		<MDL	10.1	10.1	ug/Kg		<MDL	17.2	17.2	ug/Kg		<MDL	11.9	11.9	ug/Kg		<MDL	105	105	ug/Kg
2,4-Dimethylphenol		<MDL	6.7	13.5	ug/Kg		<MDL	11	23	ug/Kg		<MDL	7.9	15.9	ug/Kg		<MDL	70	141	ug/Kg

Appendix A - Table A-1
Complete Analytical Results for Marine/Estuarine CSOs

	Locator	CSO-MY-7				Locator	CSO-BT-1				Locator	CSO-BT-2				Locator	CSO-BT-3			
	Description	MURRAY AVENUE SW CSO				Description	SW BARTON STREET CSO				Description	SW BARTON STREET CSO				Description	SW BARTON STREET CSO			
	Sample	L53963-25				Sample	L53963-26				Sample	L53963-27				Sample	L53963-28			
	Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED			
	Collected	08/30/11				Collected	08/30/11				Collected	08/30/11				Collected	08/30/11			
	% Solids	79.1				% Solids	46.6				% Solids	67.4				% Solids	76.1			
	Depth (m)	28				Depth (m)	6				Depth (m)	6				Depth (m)	5			
	DRY Weight Basis					**DRY Weight Basis**					**DRY Weight Basis**					**DRY Weight Basis**				
Parameters	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**
2-Methylnaphthalene		<MDL	6.7	13.5	ug/Kg	1220		11	23	ug/Kg		<MDL	7.9	15.9	ug/Kg	145		70	141	ug/Kg
2-Methylphenol		<MDL	6.7	13.5	ug/Kg		<MDL	11	23	ug/Kg		<MDL	7.9	15.9	ug/Kg		<MDL	70	141	ug/Kg
3-,4-Methylphenol		<MDL	34	67.4	ug/Kg		<MDL	58	114	ug/Kg		<MDL	40	79.1	ug/Kg		<MDL	350	700	ug/Kg
Acenaphthene		<MDL	6.7	13.5	ug/Kg	3090	JL	11	23	ug/Kg	37.5	J	7.9	15.9	ug/Kg	1160	JL	70	141	ug/Kg
Acenaphthylene		<MDL	6.7	13.5	ug/Kg	92.5		11	23	ug/Kg	18.2	J	7.9	15.9	ug/Kg		<MDL	70	141	ug/Kg
Anthracene		<MDL	6.7	13.5	ug/Kg	6120		110	230	ug/Kg	172	J	7.9	15.9	ug/Kg	2900		70	141	ug/Kg
Benzo(a)anthracene		<MDL	6.7	13.5	ug/Kg	7700		110	230	ug/Kg	536	J	7.9	15.9	ug/Kg	4510		70	141	ug/Kg
Benzo(a)pyrene		<MDL	6.7	13.5	ug/Kg	6550		110	230	ug/Kg	564	J	7.9	15.9	ug/Kg	4300		70	141	ug/Kg
Benzo(b,j,k)fluoranthene		<MDL	6.7	13.5	ug/Kg	10400		110	230	ug/Kg	1420	J	7.9	15.9	ug/Kg	8230		70	141	ug/Kg
Benzo(g,h,i)perylene		<MDL	6.7	13.5	ug/Kg	4270		110	230	ug/Kg	316	J	7.9	15.9	ug/Kg	2650		70	141	ug/Kg
Benzoic Acid	224		135	135	ug/Kg		<MDL	230	230	ug/Kg	251		159	159	ug/Kg	2100		1410	1410	ug/Kg
Benzyl Alcohol		<MDL	16.8	16.8	ug/Kg		<MDL	28.5	28.5	ug/Kg		<MDL	19.7	19.7	ug/Kg		<MDL	175	175	ug/Kg
Benzyl Butyl Phthalate		<MDL	10.1	10.1	ug/Kg		<MDL	17.2	17.2	ug/Kg	966	J	11.9	11.9	ug/Kg	792	JL	105	105	ug/Kg
Bis(2-Ethylhexyl)Phthalate	27.4	B	14	26.9	ug/Kg	569		24	45.7	ug/Kg	205	B2,J	16	31.6	ug/Kg	1710		140	280	ug/Kg
Chrysene		<MDL	6.7	13.5	ug/Kg	8240		110	230	ug/Kg	813	J	7.9	15.9	ug/Kg	4940		70	141	ug/Kg
Dibenzo(a,h)anthracene		<MDL	6.7	13.5	ug/Kg	1450		11	23	ug/Kg	104	J	7.9	15.9	ug/Kg	1150		70	141	ug/Kg
Dibenzofuran		<MDL	6.7	13.5	ug/Kg	738		11	23	ug/Kg	15	<RDL	7.9	15.9	ug/Kg	499		70	141	ug/Kg
Diethyl Phthalate		<MDL	14	26.9	ug/Kg		<MDL	24	45.7	ug/Kg		<MDL	16	31.6	ug/Kg		<MDL	140	280	ug/Kg
Dimethyl Phthalate		<MDL	13.5	13.5	ug/Kg		<MDL	23	23	ug/Kg		<MDL	15.9	15.9	ug/Kg	229		141	141	ug/Kg
Di-N-Butyl Phthalate	14	<RDL	14	26.9	ug/Kg		<MDL	24	45.7	ug/Kg	116	J	16	31.6	ug/Kg	160	<RDL	140	280	ug/Kg
Di-N-Octyl Phthalate		<MDL	13.5	13.5	ug/Kg		<MDL	23	23	ug/Kg		<MDL	15.9	15.9	ug/Kg	1010		141	141	ug/Kg
Fluoranthene		<MDL	6.7	13.5	ug/Kg	16900		110	230	ug/Kg	1740	J	7.9	15.9	ug/Kg	8750		70	141	ug/Kg
Fluorene		<MDL	6.7	13.5	ug/Kg	2700	JL	11	23	ug/Kg	40.2	J	7.9	15.9	ug/Kg	1070	JL	70	141	ug/Kg
Hexachlorobenzene		<MDL	0.67	1.35	ug/Kg		<MDL	1.1	2.3	ug/Kg		<MDL	0.79	1.59	ug/Kg		<MDL	7	14.1	ug/Kg
Hexachlorobutadiene		<MDL	3.4	6.74	ug/Kg		<MDL	5.8	11.4	ug/Kg		<MDL	4	7.91	ug/Kg		<MDL	35	70	ug/Kg
Indeno(1,2,3-Cd)Pyrene		<MDL	6.7	13.5	ug/Kg	3670	JL	110	230	ug/Kg	291	J	7.9	15.9	ug/Kg	2460	JL	70	141	ug/Kg
Naphthalene		<MDL	6.7	13.5	ug/Kg	1030		11	23	ug/Kg		<MDL	7.9	15.9	ug/Kg	200		70	141	ug/Kg
N-Nitrosodiphenylamine		<MDL	16.8	16.8	ug/Kg		<MDL	28.5	28.5	ug/Kg		<MDL	19.7	19.7	ug/Kg		<MDL	175	175	ug/Kg
Pentachlorophenol		<MDL	101	101	ug/Kg		<MDL	172	172	ug/Kg		<MDL	119	119	ug/Kg		<MDL	1050	1050	ug/Kg
Phenanthrene		<MDL	6.7	13.5	ug/Kg	18300		110	230	ug/Kg	447	J	7.9	15.9	ug/Kg	7490		70	141	ug/Kg
Phenol		<MDL	34	101	ug/Kg		<MDL	58	172	ug/Kg		<MDL	40	119	ug/Kg		<MDL	350	1050	ug/Kg
Pyrene		<MDL	6.7	13.5	ug/Kg	18200		110	230	ug/Kg	1430	J	7.9	15.9	ug/Kg	8500		70	141	ug/Kg
Total HPAHS		<MDL	6.7	13.5	ug/Kg	77300		11	23	ug/Kg	7210		7.9	15.9	ug/Kg	45500		70	141	ug/Kg
Total LPAHs		<MDL	6.7	13.5	ug/Kg	31300		11	23	ug/Kg	715		7.9	15.9	ug/Kg	12800		70	141	ug/Kg

* Not converted to dry weight ba

Appendix A - Table A-1
Complete Analytical Results for Marine/Estuarine CSOs

	Locator	CSO-BT-4				Locator	CSO-BT-5				Locator	CSO-BT-6				Locator	CSO-CH-1			
	Description	SW BARTON STREET CSO				Description	SW BARTON STREET CSO				Description	SW BARTON STREET CSO				Description	CHELAN AVENUE SW CSO			
	Sample	L53963-29				Sample	L53963-30				Sample	L53963-31				Sample	L53963-32			
	Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED			
	Collected	08/30/11				Collected	08/30/11				Collected	08/30/11				Collected	08/29/11			
	% Solids	79.8				% Solids	63.4				% Solids	72.9				% Solids	67.3			
	Depth (m)	9				Depth (m)	8				Depth (m)	10				Depth (m)	6			
	DRY Weight Basis					**DRY Weight Basis**					**DRY Weight Basis**					**DRY Weight Basis**				
Parameters	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**
ASTM D422																				
Clay*	1.1	RDL	0.57	1.14	%	2.4		0.8	1.6	%	1.9		0.65	1.29	%	6.5		0.81	1.63	%
Fines*	1.1	RDL	0.57	1.14	%	3.1		0.8	1.6	%	1.9		0.65	1.29	%	16.3		0.81	1.63	%
Gravel*	38.5		0.11	1.14	%	3.3	J	0.2	1.6	%	2.7		0.13	1.29	%	19.6		0.16	1.63	%
p+0.00*	13.5		0.11	1.14	%	5		0.2	1.6	%	3.3		0.13	1.29	%	3		0.16	1.63	%
p+1.00*	19.5		0.11	1.14	%	22.3		0.2	1.6	%	23.7		0.13	1.29	%	6.2		0.16	1.63	%
p+10.0(equal/more than)*		<MDL	0.57	1.14	%	2.4		0.8	1.6	%	1.3	RDL	0.65	1.29	%	4.1		0.81	1.63	%
p+2.00*	18.5		0.11	1.14	%	38.9		0.2	1.6	%	39		0.13	1.29	%	23.3		0.16	1.63	%
p+3.00*	6.7		0.11	1.14	%	21		0.2	1.6	%	24.6		0.13	1.29	%	22.3		0.16	1.63	%
p+4.00*	1	<RDL	0.11	1.14	%	3.7		0.2	1.6	%	3.2		0.13	1.29	%	10		0.16	1.63	%
p+5.00*		<MDL	0.57	1.14	%		<MDL	0.8	1.6	%		<MDL	0.65	1.29	%	3.3		0.81	1.63	%
p+6.00*		<MDL	0.57	1.14	%		<MDL	0.8	1.6	%		<MDL	0.65	1.29	%	2.4		0.81	1.63	%
p+7.00*		<MDL	0.57	1.14	%		<MDL	0.8	1.6	%		<MDL	0.65	1.29	%	2.4		0.81	1.63	%
p+8.00*		<MDL	0.57	1.14	%		<MDL	0.8	1.6	%		<MDL	0.65	1.29	%	1.6	RDL	0.81	1.63	%
p+9.00*		<MDL	0.57	1.14	%		<MDL	0.8	1.6	%	0.6	<RDL	0.65	1.29	%	2.4		0.81	1.63	%
p-1.00*	10.6		0.11	1.14	%	2.2		0.2	1.6	%	1.2	<RDL	0.13	1.29	%	2.5		0.16	1.63	%
p-2.00(less than)*	24.5		0.11	1.14	%	0.9	<RDL	0.2	1.6	%	1.2	<RDL	0.13	1.29	%	16.8		0.16	1.63	%
p-2.00*	3.4		0.11	1.14	%		<MDL	0.2	1.6	%	0.2	<RDL	0.13	1.29	%	0.3	<RDL	0.16	1.63	%
Sand*	59.1		0.11	1.14	%	91		0.2	1.6	%	93.9		0.13	1.29	%	64.8		0.16	1.63	%
Silt*		<MDL	0.57	1.14	%		<MDL	0.8	1.6	%		<MDL	0.65	1.29	%	9.8		0.81	1.63	%
SM2540-G																				
Total Solids*	79.8		0.005	0.01	%	63.4		0.005	0.01	%	72.9		0.005	0.01	%	67.3		0.005	0.01	%
EP A9060																				
Total Organic Carbon	6820		540	1080	mg/Kg	20300		3600	7150	mg/Kg	4830		810	1630	mg/Kg	12800		940	1870	mg/Kg
EPA 3050B/6010C																				
Arsenic, Total, ICP	3.6	<RDL	1.5	7.67	mg/Kg	5.8	<RDL	1.9	9.62	mg/Kg	2.5	<RDL	1.6	8.56	mg/Kg	10.6		1.8	9.29	mg/Kg
Cadmium, Total, ICP	0.21	<RDL	0.12	0.614	mg/Kg	0.32	<RDL	0.15	0.77	mg/Kg		<MDL	0.14	0.684	mg/Kg	0.19	<RDL	0.15	0.743	mg/Kg
Chromium, Total, ICP	17.4		0.19	0.921	mg/Kg	19.1		0.24	1.15	mg/Kg	19.8		0.21	1.03	mg/Kg	24.1		0.22	1.11	mg/Kg
Copper, Total, ICP	14.2		0.25	1.23	mg/Kg	30.1		0.32	1.54	mg/Kg	6.67		0.27	1.37	mg/Kg	49.8		0.3	1.49	mg/Kg
Lead, Total, ICP	17.3		1.2	6.14	mg/Kg	21.5		1.5	7.7	mg/Kg	8.93		1.4	6.84	mg/Kg	27.9		1.5	7.43	mg/Kg
Silver, Total, ICP		<MDL	0.25	1.23	mg/Kg		<MDL	0.32	1.54	mg/Kg	1	<RDL	0.27	1.37	mg/Kg	1.2	<RDL	0.3	1.49	mg/Kg
Zinc, Total, ICP	48.6		0.3	1.53	mg/Kg	62.9		0.38	1.92	mg/Kg	29.8		0.34	1.71	mg/Kg	92.6		0.37	1.86	mg/Kg
EPA 7471B																				
Mercury, Total, CVAA	0.02	<RDL	0.0061	0.0618	mg/Kg	0.028	<RDL	0.0077	0.077	mg/Kg	0.011	<RDL	0.0067	0.0674	mg/Kg	0.133		0.0074	0.0743	mg/Kg
EPA 3550B/8082A																				
Aroclor 1016		<MDL	2.5	5.01	ug/Kg		<MDL	3.2	6.31	ug/Kg		<MDL	2.7	5.49	ug/Kg		<MDL	3	5.94	ug/Kg
Aroclor 1221		<MDL	5	10	ug/Kg		<MDL	6.3	12.6	ug/Kg		<MDL	5.5	11	ug/Kg		<MDL	5.9	11.9	ug/Kg
Aroclor 1232		<MDL	5	10	ug/Kg		<MDL	6.3	12.6	ug/Kg		<MDL	5.5	11	ug/Kg		<MDL	5.9	11.9	ug/Kg
Aroclor 1242		<MDL	2.5	5.01	ug/Kg		<MDL	3.2	6.31	ug/Kg		<MDL	2.7	5.49	ug/Kg	91.5		3	5.94	ug/Kg
Aroclor 1248		<MDL	2.5	5.01	ug/Kg		<MDL	3.2	6.31	ug/Kg		<MDL	2.7	5.49	ug/Kg		<MDL	3	5.94	ug/Kg
Aroclor 1254	3	<RDL	2.5	5.01	ug/Kg	7.87		3.2	6.31	ug/Kg	2.1	<RDL	1.6	3.29	ug/Kg	150		3	5.94	ug/Kg
Aroclor 1260		<MDL	2.5	5.01	ug/Kg		<MDL	3.2	6.31	ug/Kg		<MDL	2.7	5.49	ug/Kg	34.9		3	5.94	ug/Kg
Total Aroclors	3	<RDL	2.5	5.01	ug/Kg	7.87		3.2	6.31	ug/Kg	2.1	<RDL	1.6	3.29	ug/Kg	277		3	5.94	ug/Kg
EPA 3550B/8270D																				
1,2,4-Trichlorobenzene		<MDL	6.6	13.4	ug/Kg		<MDL	8.4	16.9	ug/Kg		<MDL	7.3	14.7	ug/Kg		<MDL	0.79	1.59	ug/Kg
1,2-Dichlorobenzene		<MDL	66.8	66.8	ug/Kg		<MDL	84.1	84.1	ug/Kg		<MDL	73.1	73.1	ug/Kg		<MDL	7.92	7.92	ug/Kg
1,4-Dichlorobenzene		<MDL	100	100	ug/Kg		<MDL	126	126	ug/Kg		<MDL	110	110	ug/Kg	14.1		11.9	11.9	ug/Kg
2,4-Dimethylphenol		<MDL	66	134	ug/Kg		<MDL	84	169	ug/Kg		<MDL	73	147	ug/Kg		<MDL	7.9	15.9	ug/Kg

Appendix A - Table A-1
Complete Analytical Results for Marine/Estuarine CSOs

	Locator	CSO-BT-4				Locator	CSO-BT-5				Locator	CSO-BT-6				Locator	CSO-CH-1			
	Description	SW BARTON STREET CSO				Description	SW BARTON STREET CSO				Description	SW BARTON STREET CSO				Description	CHELAN AVENUE SW CSO			
	Sample	L53963-29				Sample	L53963-30				Sample	L53963-31				Sample	L53963-32			
	Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED			
	Collected	08/30/11				Collected	08/30/11				Collected	08/30/11				Collected	08/29/11			
	% Solids	79.8				% Solids	63.4				% Solids	72.9				% Solids	67.3			
	Depth (m)	9				Depth (m)	8				Depth (m)	10				Depth (m)	6			
	DRY Weight Basis					**DRY Weight Basis**					**DRY Weight Basis**					**DRY Weight Basis**				
Parameters	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**
2-Methylnaphthalene		<MDL	66	134	ug/Kg		<MDL	84	169	ug/Kg		<MDL	73	147	ug/Kg	22		7.9	15.9	ug/Kg
2-Methylphenol		<MDL	66	134	ug/Kg		<MDL	84	169	ug/Kg		<MDL	73	147	ug/Kg		<MDL	7.9	15.9	ug/Kg
3-,4-Methylphenol		<MDL	340	668	ug/Kg		<MDL	430	841	ug/Kg		<MDL	370	731	ug/Kg		<MDL	40	79.2	ug/Kg
Acenaphthene		<MDL	66	134	ug/Kg	150	<RDL,JL	84	169	ug/Kg		<MDL	73	147	ug/Kg	93.8		7.9	15.9	ug/Kg
Acenaphthylene		<MDL	66	134	ug/Kg		<MDL	84	169	ug/Kg		<MDL	73	147	ug/Kg	14	<RDL	7.9	15.9	ug/Kg
Anthracene	207		66	134	ug/Kg	3300		84	169	ug/Kg	329		73	147	ug/Kg	266		7.9	15.9	ug/Kg
Benzo(a)anthracene	624		66	134	ug/Kg	7270		84	169	ug/Kg	926		73	147	ug/Kg	585		7.9	15.9	ug/Kg
Benzo(a)pyrene	1050		66	134	ug/Kg	7330		84	169	ug/Kg	1210		73	147	ug/Kg	498		7.9	15.9	ug/Kg
Benzo(b,j,k)fluoranthene	1850		66	134	ug/Kg	14900		84	169	ug/Kg	2190		73	147	ug/Kg	1060		7.9	15.9	ug/Kg
Benzo(g,h,i)perylene	694		66	134	ug/Kg	7790		84	169	ug/Kg	934		73	147	ug/Kg	272	JL	7.9	15.9	ug/Kg
Benzoic Acid	2280		1340	1340	ug/Kg	2780		1690	1690	ug/Kg	3470		1470	1470	ug/Kg	210		159	159	ug/Kg
Benzyl Alcohol		<MDL	167	167	ug/Kg		<MDL	210	210	ug/Kg		<MDL	182	182	ug/Kg		<MDL	19.8	19.8	ug/Kg
Benzyl Butyl Phthalate		<MDL	100	100	ug/Kg		<MDL	126	126	ug/Kg		<MDL	110	110	ug/Kg	66.4	JL	11.9	11.9	ug/Kg
Bis(2-Ethylhexyl)Phthalate	1470		140	267	ug/Kg	4260		170	336	ug/Kg	4680		150	292	ug/Kg	259	B2	16	31.6	ug/Kg
Chrysene	880		66	134	ug/Kg	10800		84	169	ug/Kg	1370		73	147	ug/Kg	697		7.9	15.9	ug/Kg
Dibenzo(a,h)anthracene	277		66	134	ug/Kg	2790		84	169	ug/Kg	381		73	147	ug/Kg	86.2		7.9	15.9	ug/Kg
Dibenzofuran		<MDL	66	134	ug/Kg	120	<RDL	84	169	ug/Kg		<MDL	73	147	ug/Kg	22		7.9	15.9	ug/Kg
Diethyl Phthalate		<MDL	140	267	ug/Kg		<MDL	170	336	ug/Kg		<MDL	150	292	ug/Kg		<MDL	16	31.6	ug/Kg
Dimethyl Phthalate		<MDL	134	134	ug/Kg		<MDL	169	169	ug/Kg		<MDL	147	147	ug/Kg		<MDL	15.9	15.9	ug/Kg
Di-N-Butyl Phthalate	160	<RDL	140	267	ug/Kg		<MDL	170	336	ug/Kg	150	<RDL	150	292	ug/Kg	34.8	B	16	31.6	ug/Kg
Di-N-Octyl Phthalate		<MDL	134	134	ug/Kg		<MDL	169	169	ug/Kg		<MDL	147	147	ug/Kg		<MDL	15.9	15.9	ug/Kg
Fluoranthene	917		66	134	ug/Kg	18500		84	169	ug/Kg	2520		73	147	ug/Kg	1040		7.9	15.9	ug/Kg
Fluorene		<MDL	66	134	ug/Kg	333	JL	84	169	ug/Kg		<MDL	73	147	ug/Kg	97.9		7.9	15.9	ug/Kg
Hexachlorobenzene		<MDL	6.6	13.4	ug/Kg		<MDL	8.4	16.9	ug/Kg		<MDL	7.3	14.7	ug/Kg		<MDL	0.79	1.59	ug/Kg
Hexachlorobutadiene		<MDL	34	66.8	ug/Kg		<MDL	43	84.1	ug/Kg		<MDL	37	73.1	ug/Kg		<MDL	4	7.92	ug/Kg
Indeno(1,2,3-Cd)Pyrene	613	JL	66	134	ug/Kg	5900	JL	84	169	ug/Kg	894	JL	73	147	ug/Kg	251	JL	7.9	15.9	ug/Kg
Naphthalene		<MDL	66	134	ug/Kg		<MDL	84	169	ug/Kg		<MDL	73	147	ug/Kg	17.4		7.9	15.9	ug/Kg
N-Nitrosodiphenylamine	728		167	167	ug/Kg		<MDL	210	210	ug/Kg		<MDL	182	182	ug/Kg		<MDL	19.8	19.8	ug/Kg
Pentachlorophenol		<MDL	1000	1000	ug/Kg		<MDL	1260	1260	ug/Kg		<MDL	1100	1100	ug/Kg		<MDL	119	119	ug/Kg
Phenanthrene	371		66	134	ug/Kg	5000		84	169	ug/Kg	612		73	147	ug/Kg	810		7.9	15.9	ug/Kg
Phenol		<MDL	340	1000	ug/Kg		<MDL	430	1260	ug/Kg		<MDL	370	1100	ug/Kg		<MDL	40	119	ug/Kg
Pyrene	1300		66	134	ug/Kg	17500		84	169	ug/Kg	2100		73	147	ug/Kg	1340		7.9	15.9	ug/Kg
Total HPAHS	8220		66	134	ug/Kg	92800		84	169	ug/Kg	12500		73	147	ug/Kg	5820		7.9	15.9	ug/Kg
Total LPAHs	578		66	134	ug/Kg	8780		84	169	ug/Kg	941		73	147	ug/Kg	1300		7.9	15.9	ug/Kg

* Not converted to dry weight ba

Appendix A - Table A-1
Complete Analytical Results for Marine/Estuarine CSOs

	Locator	CSO-CH-2				Locator	CSO-CH-3				Locator	CSO-CH-4				Locator	CSO-CH-5			
	Description	CHELAN AVENUE SW CSO				Description	CHELAN AVENUE SW CSO				Description	CHELAN AVENUE SW CSO				Description	CHELAN AVENUE SW CSO			
	Sample	L53963-33				Sample	L53963-34				Sample	L53963-35				Sample	L53963-36			
	Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED			
	Collected	08/29/11				Collected	08/29/11				Collected	08/29/11				Collected	08/29/11			
	% Solids	72.1				% Solids	69.2				% Solids	72.2				% Solids	70.3			
	Depth (m)	8				Depth (m)	9				Depth (m)	10				Depth (m)	11			
	DRY Weight Basis					**DRY Weight Basis**					**DRY Weight Basis**					**DRY Weight Basis**				
Parameters	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**
ASTM D422																				
Clay*	4.7		0.68	1.35	%	6.2		0.69	1.38	%	4		0.67	1.34	%	6		0.67	1.33	%
Fines*	10.2		0.68	1.35	%	15.2		0.69	1.38	%	8.7		0.67	1.34	%	12		0.67	1.33	%
Gravel*	4.1		0.14	1.35	%	21.2		0.14	1.38	%	2.8		0.13	1.34	%	1.5		0.13	1.33	%
p+0.00*	0.6	<RDL	0.14	1.35	%	3.5		0.14	1.38	%	0.9	<RDL	0.13	1.34	%	0.8	<RDL	0.13	1.33	%
p+1.00*	5.3		0.14	1.35	%	6.6		0.14	1.38	%	5.6		0.13	1.34	%	6.9		0.13	1.33	%
p+10.0(equal/more than)*	2.7		0.68	1.35	%	4.1		0.69	1.38	%	2.7		0.67	1.34	%	4		0.67	1.33	%
p+2.00*	33.5		0.14	1.35	%	22.6		0.14	1.38	%	37.9		0.13	1.34	%	37.7		0.13	1.33	%
p+3.00*	33.2		0.14	1.35	%	21.5		0.14	1.38	%	36		0.13	1.34	%	30.8		0.13	1.33	%
p+4.00*	10.6		0.14	1.35	%	9.4		0.14	1.38	%	6.5		0.13	1.34	%	11		0.13	1.33	%
p+5.00*	2		0.68	1.35	%	3.5		0.69	1.38	%	1.3	RDL	0.67	1.34	%	2		0.67	1.33	%
p+6.00*	0.7	<RDL	0.68	1.35	%	1.4	RDL	0.69	1.38	%	0.7	<RDL	0.67	1.34	%	1.3	RDL	0.67	1.33	%
p+7.00*	1.4	RDL	0.68	1.35	%	2.1		0.69	1.38	%	1.3	RDL	0.67	1.34	%	1.3	RDL	0.67	1.33	%
p+8.00*	1.4	RDL	0.68	1.35	%	2.1		0.69	1.38	%	1.3	RDL	0.67	1.34	%	1.3	RDL	0.67	1.33	%
p+9.00*	2		0.68	1.35	%	2.1		0.69	1.38	%	1.3	RDL	0.67	1.34	%	2		0.67	1.33	%
p-1.00*	0.3	<RDL	0.14	1.35	%	4.5		0.14	1.38	%	0.8	<RDL	0.13	1.34	%	0.5	<RDL	0.13	1.33	%
p-2.00(less than)*	3.7		0.14	1.35	%	15.5		0.14	1.38	%	2		0.13	1.34	%	0.5	<RDL	0.13	1.33	%
p-2.00*	0.2	<RDL	0.14	1.35	%	1.2	<RDL	0.14	1.38	%		<MDL	0.13	1.34	%	0.4	<RDL	0.13	1.33	%
Sand*	83.2		0.14	1.35	%	63.6		0.14	1.38	%	86.9		0.13	1.34	%	87.3		0.13	1.33	%
Silt*	5.4		0.68	1.35	%	9		0.69	1.38	%	4.7		0.67	1.34	%	6		0.67	1.33	%
SM2540-G																				
Total Solids*	72.1		0.005	0.01	%	69.2		0.005	0.01	%	72.2		0.005	0.01	%	70.3		0.005	0.01	%
EP A9060																				
Total Organic Carbon	4670		500	1000	mg/Kg	8060		510	1020	mg/Kg	3730		500	997	mg/Kg	4950		510	1020	mg/Kg
EPA 3050B/6010C																				
Arsenic, Total, ICP	6.2	<RDL	1.7	8.67	mg/Kg	16.6		1.9	9.03	mg/Kg	5.1	<RDL	1.7	8.66	mg/Kg	8.3	<RDL	1.7	8.88	mg/Kg
Cadmium, Total, ICP		<MDL	0.14	0.693	mg/Kg	0.32	<RDL	0.14	0.723	mg/Kg		<MDL	0.14	0.693	mg/Kg	0.16	<RDL	0.14	0.71	mg/Kg
Chromium, Total, ICP	12.9		0.21	1.04	mg/Kg	26.9		0.22	1.08	mg/Kg	10.2		0.21	1.04	mg/Kg	14.5		0.21	1.07	mg/Kg
Copper, Total, ICP	30.5		0.28	1.39	mg/Kg	64.6		0.29	1.45	mg/Kg	17.2		0.28	1.39	mg/Kg	28.7		0.28	1.42	mg/Kg
Lead, Total, ICP	27		1.4	6.93	mg/Kg	52.7		1.4	7.23	mg/Kg	15.8		1.4	6.93	mg/Kg	23.6		1.4	7.1	mg/Kg
Silver, Total, ICP	1.1	<RDL	0.28	1.39	mg/Kg	1.1	<RDL	0.29	1.45	mg/Kg	1.1	<RDL	0.28	1.39	mg/Kg	1.1	<RDL	0.28	1.42	mg/Kg
Zinc, Total, ICP	56.6		0.35	1.73	mg/Kg	105		0.36	1.81	mg/Kg	38.1		0.35	1.73	mg/Kg	70.1		0.36	1.78	mg/Kg
EPA 7471B																				
Mercury, Total, CVAA	0.0968		0.0068	0.0685	mg/Kg	0.175		0.0072	0.072	mg/Kg	0.057	<RDL	0.0068	0.0683	mg/Kg	0.134		0.0071	0.071	mg/Kg
EPA 3550B/8082A																				
Aroclor 1016		<MDL	2.8	5.55	ug/Kg		<MDL	2.9	5.78	ug/Kg		<MDL	2.8	5.54	ug/Kg		<MDL	2.8	5.69	ug/Kg
Aroclor 1221		<MDL	5.5	11.1	ug/Kg		<MDL	5.8	11.6	ug/Kg		<MDL	5.5	11.1	ug/Kg		<MDL	5.7	11.4	ug/Kg
Aroclor 1232		<MDL	5.5	11.1	ug/Kg		<MDL	5.8	11.6	ug/Kg		<MDL	5.5	11.1	ug/Kg		<MDL	5.7	11.4	ug/Kg
Aroclor 1242	13.3		2.8	5.55	ug/Kg	39.5		2.9	5.78	ug/Kg	5.1	<RDL	2.8	5.54	ug/Kg	3.6	<RDL	2.8	5.69	ug/Kg
Aroclor 1248		<MDL	2.8	5.55	ug/Kg		<MDL	2.9	5.78	ug/Kg		<MDL	2.8	5.54	ug/Kg		<MDL	2.8	5.69	ug/Kg
Aroclor 1254	23.4		2.8	5.55	ug/Kg	46.1		2.9	5.78	ug/Kg	19.9		2.8	5.54	ug/Kg	10		2.8	5.69	ug/Kg
Aroclor 1260	13.9		2.8	5.55	ug/Kg	52.3		2.9	5.78	ug/Kg	9.27		2.8	5.54	ug/Kg	7.18		2.8	5.69	ug/Kg
Total Aroclors	50.6		2.8	5.55	ug/Kg	138		2.9	5.78	ug/Kg	34.3		2.8	5.54	ug/Kg	20.7		2.8	5.69	ug/Kg
EPA 3550B/8270D																				
1,2,4-Trichlorobenzene		<MDL	0.74	1.48	ug/Kg		<MDL	0.77	1.55	ug/Kg		<MDL	0.73	1.48	ug/Kg		<MDL	0.75	1.52	ug/Kg
1,2-Dichlorobenzene		<MDL	7.39	7.39	ug/Kg		<MDL	7.7	7.7	ug/Kg		<MDL	7.38	7.38	ug/Kg		<MDL	7.58	7.58	ug/Kg
1,4-Dichlorobenzene		<MDL	11.1	11.1	ug/Kg		<MDL	11.6	11.6	ug/Kg		<MDL	11.1	11.1	ug/Kg		<MDL	11.4	11.4	ug/Kg
2,4-Dimethylphenol		<MDL	7.4	14.8	ug/Kg		<MDL	7.7	15.5	ug/Kg		<MDL	7.3	14.8	ug/Kg		<MDL	7.5	15.2	ug/Kg

Appendix A - Table A-1
Complete Analytical Results for Marine/Estuarine CSOs

	Locator	CSO-CH-2				Locator	CSO-CH-3				Locator	CSO-CH-4				Locator	CSO-CH-5			
	Description	CHELAN AVENUE SW CSO				Description	CHELAN AVENUE SW CSO				Description	CHELAN AVENUE SW CSO				Description	CHELAN AVENUE SW CSO			
	Sample	L53963-33				Sample	L53963-34				Sample	L53963-35				Sample	L53963-36			
	Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED			
	Collected	08/29/11				Collected	08/29/11				Collected	08/29/11				Collected	08/29/11			
	% Solids	72.1				% Solids	69.2				% Solids	72.2				% Solids	70.3			
	Depth (m)	8				Depth (m)	9				Depth (m)	10				Depth (m)	11			
	DRY Weight Basis					**DRY Weight Basis**					**DRY Weight Basis**					**DRY Weight Basis**				
Parameters	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**
2-Methylnaphthalene		<MDL	7.4	14.8	ug/Kg	52.7		7.7	15.5	ug/Kg		<MDL	7.3	14.8	ug/Kg		<MDL	7.5	15.2	ug/Kg
2-Methylphenol		<MDL	7.4	14.8	ug/Kg		<MDL	7.7	15.5	ug/Kg		<MDL	7.3	14.8	ug/Kg		<MDL	7.5	15.2	ug/Kg
3-,4-Methylphenol		<MDL	37	73.9	ug/Kg		<MDL	39	77	ug/Kg		<MDL	37	73.8	ug/Kg		<MDL	38	75.8	ug/Kg
Acenaphthene	11	<RDL	7.4	14.8	ug/Kg	31.2		7.7	15.5	ug/Kg	10	<RDL	7.3	14.8	ug/Kg	11	<RDL	7.5	15.2	ug/Kg
Acenaphthylene		<MDL	7.4	14.8	ug/Kg	22.7		7.7	15.5	ug/Kg		<MDL	7.3	14.8	ug/Kg		<MDL	7.5	15.2	ug/Kg
Anthracene	51		7.4	14.8	ug/Kg	1150		7.7	15.5	ug/Kg	39.1		7.3	14.8	ug/Kg	46.7		7.5	15.2	ug/Kg
Benzo(a)anthracene	151		7.4	14.8	ug/Kg	749		7.7	15.5	ug/Kg	89.8		7.3	14.8	ug/Kg	117		7.5	15.2	ug/Kg
Benzo(a)pyrene	160		7.4	14.8	ug/Kg	592		7.7	15.5	ug/Kg	101		7.3	14.8	ug/Kg	135		7.5	15.2	ug/Kg
Benzo(b,j,k)fluoranthene	348		7.4	14.8	ug/Kg	1400		7.7	15.5	ug/Kg	198		7.3	14.8	ug/Kg	275		7.5	15.2	ug/Kg
Benzo(g,h,i)perylene	80.7	JL	7.4	14.8	ug/Kg	263	JL	7.7	15.5	ug/Kg	47.1	JL	7.3	14.8	ug/Kg	71.6	JL	7.5	15.2	ug/Kg
Benzoic Acid	172		148	148	ug/Kg	205		155	155	ug/Kg	157		148	148	ug/Kg	162		152	152	ug/Kg
Benzyl Alcohol		<MDL	18.4	18.4	ug/Kg		<MDL	19.2	19.2	ug/Kg		<MDL	18.4	18.4	ug/Kg		<MDL	18.9	18.9	ug/Kg
Benzyl Butyl Phthalate	65.3	JL	11.1	11.1	ug/Kg	65.8	JL	11.6	11.6	ug/Kg	57.9	JL	11.1	11.1	ug/Kg	63.3	JL	11.4	11.4	ug/Kg
Bis(2-Ethylhexyl)Phthalate	126	B	15	29.5	ug/Kg	270	B2	16	30.8	ug/Kg	92.8	B	15	29.5	ug/Kg	182	B2	16	30.3	ug/Kg
Chrysene	201		7.4	14.8	ug/Kg	1400		7.7	15.5	ug/Kg	114		7.3	14.8	ug/Kg	152		7.5	15.2	ug/Kg
Dibenzo(a,h)anthracene	28.4		7.4	14.8	ug/Kg	95.4		7.7	15.5	ug/Kg	18.4		7.3	14.8	ug/Kg	23		7.5	15.2	ug/Kg
Dibenzofuran	9.7	<RDL	7.4	14.8	ug/Kg	65.3		7.7	15.5	ug/Kg	9.7	<RDL	7.3	14.8	ug/Kg	12	<RDL	7.5	15.2	ug/Kg
Diethyl Phthalate		<MDL	15	29.5	ug/Kg		<MDL	16	30.8	ug/Kg		<MDL	15	29.5	ug/Kg		<MDL	16	30.3	ug/Kg
Dimethyl Phthalate		<MDL	14.8	14.8	ug/Kg	21.8		15.5	15.5	ug/Kg		<MDL	14.8	14.8	ug/Kg		<MDL	15.2	15.2	ug/Kg
Di-N-Butyl Phthalate	28	<RDL,B	15	29.5	ug/Kg	30	<RDL,B	16	30.8	ug/Kg	24	<RDL,B	15	29.5	ug/Kg	21	<RDL,B	16	30.3	ug/Kg
Di-N-Octyl Phthalate		<MDL	14.8	14.8	ug/Kg		<MDL	15.5	15.5	ug/Kg		<MDL	14.8	14.8	ug/Kg		<MDL	15.2	15.2	ug/Kg
Fluoranthene	373		7.4	14.8	ug/Kg	947		7.7	15.5	ug/Kg	215		7.3	14.8	ug/Kg	294		7.5	15.2	ug/Kg
Fluorene	19.7		7.4	14.8	ug/Kg	173		7.7	15.5	ug/Kg	15.5		7.3	14.8	ug/Kg	19.3		7.5	15.2	ug/Kg
Hexachlorobenzene		<MDL	0.74	1.48	ug/Kg		<MDL	0.77	1.55	ug/Kg		<MDL	0.73	1.48	ug/Kg		<MDL	0.75	1.52	ug/Kg
Hexachlorobutadiene		<MDL	3.7	7.39	ug/Kg		<MDL	3.9	7.7	ug/Kg		<MDL	3.7	7.38	ug/Kg		<MDL	3.8	7.58	ug/Kg
Indeno(1,2,3-Cd)Pyrene	82.7	JL	7.4	14.8	ug/Kg	267	JL	7.7	15.5	ug/Kg	49.2	JL	7.3	14.8	ug/Kg	73.3	JL	7.5	15.2	ug/Kg
Naphthalene		<MDL	7.4	14.8	ug/Kg	36.4		7.7	15.5	ug/Kg		<MDL	7.3	14.8	ug/Kg		<MDL	7.5	15.2	ug/Kg
N-Nitrosodiphenylamine		<MDL	18.4	18.4	ug/Kg		<MDL	19.2	19.2	ug/Kg		<MDL	18.4	18.4	ug/Kg		<MDL	18.9	18.9	ug/Kg
Pentachlorophenol		<MDL	111	111	ug/Kg		<MDL	116	116	ug/Kg		<MDL	111	111	ug/Kg		<MDL	114	114	ug/Kg
Phenanthrene	134		7.4	14.8	ug/Kg	496		7.7	15.5	ug/Kg	84.3		7.3	14.8	ug/Kg	129		7.5	15.2	ug/Kg
Phenol		<MDL	37	111	ug/Kg		<MDL	39	116	ug/Kg		<MDL	37	111	ug/Kg		<MDL	38	114	ug/Kg
Pyrene	319		7.4	14.8	ug/Kg	827		7.7	15.5	ug/Kg	208		7.3	14.8	ug/Kg	270		7.5	15.2	ug/Kg
Total HPAHS	1740		7.4	14.8	ug/Kg	6530		7.7	15.5	ug/Kg	1040		7.3	14.8	ug/Kg	1410		7.5	15.2	ug/Kg
Total LPAHs	216		7.4	14.8	ug/Kg	1910		7.7	15.5	ug/Kg	149		7.3	14.8	ug/Kg	206		7.5	15.2	ug/Kg

* Not converted to dry weight ba

Appendix A - Table A-1
Complete Analytical Results for Marine/Estuarine CSOs

	Locator	CSO-CH-6				Locator	CSO-BR-1				Locator	CSO-BR-2				Locator	CSO-BR-3			
	Description	CHELAN AVENUE SW CSO				Description	S BRANDON STREET CSO				Description	S BRANDON STREET CSO				Description	S BRANDON STREET CSO			
	Sample	L53963-37				Sample	L53963-38				Sample	L53963-39				Sample	L53963-40			
	Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED			
	Collected	08/29/11				Collected	08/29/11				Collected	08/29/11				Collected	08/29/11			
	% Solids	71.8				% Solids	65.8				% Solids	67.9				% Solids	71.6			
	Depth (m)	11				Depth (m)	2				Depth (m)	3				Depth (m)	4			
	DRY Weight Basis					**DRY Weight Basis**					**DRY Weight Basis**					**DRY Weight Basis**				
Parameters	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**
ASTM D422																				
Clay*	2.6		0.64	1.28	%	3.6		0.7	1.5	%	7.8		0.8	1.6	%	6.1		0.7	1.4	%
Fines*	2.6		0.64	1.28	%	8.7		0.7	1.5	%	19.5		0.8	1.6	%	15.7		0.7	1.4	%
Gravel*	1.4		0.13	1.28	%	35.3		0.2	1.5	%	8.5		0.2	1.6	%	35.2		0.1	1.4	%
p+0.00*	2.4		0.13	1.28	%	3.4		0.2	1.5	%	4.5		0.2	1.6	%	7.8		0.1	1.4	%
p+1.00*	17.8		0.13	1.28	%	12.2		0.2	1.5	%	14.8		0.2	1.6	%	8.2		0.1	1.4	%
p+10.0(equal/more than)*	1.3	RDL	0.64	1.28	%	2.2		0.7	1.5	%	5.5		0.8	1.6	%	4.1		0.7	1.4	%
p+2.00*	55.9		0.13	1.28	%	27.9		0.2	1.5	%	30.6		0.2	1.6	%	15.3		0.1	1.4	%
p+3.00*	18.2		0.13	1.28	%	11.8		0.2	1.5	%	13.3		0.2	1.6	%	14.7		0.1	1.4	%
p+4.00*	1.2	<RDL	0.13	1.28	%	4.2		0.2	1.5	%	5.7		0.2	1.6	%	4.7		0.1	1.4	%
p+5.00*		<MDL	0.64	1.28	%	2.2		0.7	1.5	%	3.1		0.8	1.6	%	4.1		0.7	1.4	%
p+6.00*		<MDL	0.64	1.28	%	1.5	RDL	0.7	1.5	%	3.1		0.8	1.6	%	1.4	RDL	0.7	1.4	%
p+7.00*		<MDL	0.64	1.28	%	0.7	<RDL	0.7	1.5	%	3.9		0.8	1.6	%	2.7		0.7	1.4	%
p+8.00*		<MDL	0.64	1.28	%	0.7	<RDL	0.7	1.5	%	1.6	RDL	0.8	1.6	%	1.4	RDL	0.7	1.4	%
p+9.00*	1.3	RDL	0.64	1.28	%	1.5	RDL	0.7	1.5	%	2.3		0.8	1.6	%	2		0.7	1.4	%
p-1.00*	0.7	<RDL	0.13	1.28	%	6.4		0.2	1.5	%	3.8		0.2	1.6	%	11.4		0.1	1.4	%
p-2.00(less than)*	0.4	<RDL	0.13	1.28	%	25.7		0.2	1.5	%	3.3		0.2	1.6	%	21.2		0.1	1.4	%
p-2.00*	0.2	<RDL	0.13	1.28	%	3.1		0.2	1.5	%	1.5	<RDL	0.2	1.6	%	2.7		0.1	1.4	%
Sand*	95.5		0.13	1.28	%	59.5		0.2	1.5	%	68.8		0.2	1.6	%	50.7		0.1	1.4	%
Silt*		<MDL	0.64	1.28	%	5.1		0.7	1.5	%	11.7		0.8	1.6	%	9.5		0.7	1.4	%
SM2540-G																				
Total Solids*	71.8		0.005	0.01	%	65.8		0.005	0.01	%	67.9		0.005	0.01	%	71.6		0.005	0.01	%
EP A9060																				
Total Organic Carbon	7590		520	1020	mg/Kg	9420		590	1190	mg/Kg	9540		530	1070	mg/Kg	17900		2000	3780	mg/Kg
EPA 3050B/6010C																				
Arsenic, Total, ICP	5	<RDL	1.7	8.7	mg/Kg	11.2		2	9.5	mg/Kg	14.9		1.8	9.2	mg/Kg	8.2	<RDL	1.7	8.72	mg/Kg
Cadmium, Total, ICP		<MDL	0.14	0.696	mg/Kg		<MDL	0.15	0.76	mg/Kg	0.25	<RDL	0.15	0.736	mg/Kg	0.24	<RDL	0.14	0.697	mg/Kg
Chromium, Total, ICP	9.28		0.21	1.04	mg/Kg	19.6		0.23	1.14	mg/Kg	21.9		0.22	1.1	mg/Kg	26.8		0.21	1.05	mg/Kg
Copper, Total, ICP	12		0.28	1.39	mg/Kg	35.6		0.3	1.52	mg/Kg	38.1		0.29	1.47	mg/Kg	59.5		0.28	1.39	mg/Kg
Lead, Total, ICP	13.5		1.4	6.96	mg/Kg	29.6		1.5	7.6	mg/Kg	45.2		1.5	7.36	mg/Kg	68.4		1.4	6.97	mg/Kg
Silver, Total, ICP	0.91	<RDL	0.28	1.39	mg/Kg	1.2	<RDL	0.3	1.52	mg/Kg	1.3	<RDL	0.29	1.47	mg/Kg	2.03		0.28	1.39	mg/Kg
Zinc, Total, ICP	31.1		0.35	1.74	mg/Kg	74.9		0.38	1.9	mg/Kg	90.4		0.37	1.84	mg/Kg	104		0.35	1.75	mg/Kg
EPA 7471B																				
Mercury, Total, CVAA	0.018	<RDL	0.0068	0.0685	mg/Kg	0.313		0.0076	0.076	mg/Kg	0.159		0.0074	0.0732	mg/Kg	0.0775		0.0068	0.0689	mg/Kg
EPA 3550B/8082A																				
Aroclor 1016		<MDL	2.8	5.57	ug/Kg		<MDL	3	6.08	ug/Kg		<MDL	2.9	5.89	ug/Kg		<MDL	2.8	5.59	ug/Kg
Aroclor 1221		<MDL	5.6	11.1	ug/Kg		<MDL	6.1	12.2	ug/Kg		<MDL	5.9	11.8	ug/Kg		<MDL	5.6	11.2	ug/Kg
Aroclor 1232		<MDL	5.6	11.1	ug/Kg		<MDL	6.1	12.2	ug/Kg		<MDL	5.9	11.8	ug/Kg		<MDL	5.6	11.2	ug/Kg
Aroclor 1242	4	<RDL	2.8	5.57	ug/Kg	7.74		3	6.08	ug/Kg	12.7		2.9	5.89	ug/Kg	8.97		2.8	5.59	ug/Kg
Aroclor 1248		<MDL	2.8	5.57	ug/Kg		<MDL	3	6.08	ug/Kg		<MDL	2.9	5.89	ug/Kg		<MDL	2.8	5.59	ug/Kg
Aroclor 1254	7.58		2.8	5.57	ug/Kg	31		3	6.08	ug/Kg	54.5		2.9	5.89	ug/Kg	35.5		2.8	5.59	ug/Kg
Aroclor 1260	9.57		2.8	5.57	ug/Kg	328	JG	3	6.08	ug/Kg	99		2.9	5.89	ug/Kg	20.8		2.8	5.59	ug/Kg
Total Aroclors	21.2		2.8	5.57	ug/Kg	367		3	6.08	ug/Kg	166		2.9	5.89	ug/Kg	65.3		2.8	5.59	ug/Kg
EPA 3550B/8270D																				
1,2,4-Trichlorobenzene		<MDL	15	29.7	ug/Kg		<MDL	0.81	1.63	ug/Kg		<MDL	0.78	1.58	ug/Kg		<MDL	7.4	14.9	ug/Kg
1,2-Dichlorobenzene		<MDL	149	149	ug/Kg		<MDL	8.1	8.1	ug/Kg		<MDL	7.85	7.85	ug/Kg		<MDL	74.4	74.4	ug/Kg
1,4-Dichlorobenzene		<MDL	223	223	ug/Kg		<MDL	12.2	12.2	ug/Kg		<MDL	11.8	11.8	ug/Kg		<MDL	112	112	ug/Kg
2,4-Dimethylphenol		<MDL	150	297	ug/Kg		<MDL	8.1	16.3	ug/Kg		<MDL	7.8	15.8	ug/Kg		<MDL	74	149	ug/Kg

Appendix A - Table A-1
Complete Analytical Results for Marine/Estuarine CSOs

	Locator	CSO-CH-6				Locator	CSO-BR-1				Locator	CSO-BR-2				Locator	CSO-BR-3			
	Description	CHELAN AVENUE SW CSO				Description	S BRANDON STREET CSO				Description	S BRANDON STREET CSO				Description	S BRANDON STREET CSO			
	Sample	L53963-37				Sample	L53963-38				Sample	L53963-39				Sample	L53963-40			
	Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED			
	Collected	08/29/11				Collected	08/29/11				Collected	08/29/11				Collected	08/29/11			
	% Solids	71.8				% Solids	65.8				% Solids	67.9				% Solids	71.6			
	Depth (m)	11				Depth (m)	2				Depth (m)	3				Depth (m)	4			
	DRY Weight Basis					**DRY Weight Basis**					**DRY Weight Basis**					**DRY Weight Basis**				
Parameters	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**
2-Methylnaphthalene		<MDL	150	297	ug/Kg		<MDL	8.1	16.3	ug/Kg		<MDL	7.8	15.8	ug/Kg		<MDL	74	149	ug/Kg
2-Methylphenol		<MDL	150	297	ug/Kg		<MDL	8.1	16.3	ug/Kg		<MDL	7.8	15.8	ug/Kg		<MDL	74	149	ug/Kg
3-,4-Methylphenol		<MDL	740	1490	ug/Kg		<MDL	41	81	ug/Kg		<MDL	40	78.5	ug/Kg		<MDL	380	744	ug/Kg
Acenaphthene		<MDL	150	297	ug/Kg	21.9		8.1	16.3	ug/Kg	10	<RDL	7.8	15.8	ug/Kg	251	JL	74	149	ug/Kg
Acenaphthylene		<MDL	150	297	ug/Kg		<MDL	8.1	16.3	ug/Kg		<MDL	7.8	15.8	ug/Kg		<MDL	74	149	ug/Kg
Anthracene		<MDL	150	297	ug/Kg	44.7		8.1	16.3	ug/Kg	65.7		7.8	15.8	ug/Kg	1360		74	149	ug/Kg
Benzo(a)anthracene		<MDL	150	297	ug/Kg	98.9		8.1	16.3	ug/Kg	155		7.8	15.8	ug/Kg	2460		74	149	ug/Kg
Benzo(a)pyrene		<MDL	150	297	ug/Kg	109		8.1	16.3	ug/Kg	162		7.8	15.8	ug/Kg	2920		74	149	ug/Kg
Benzo(b,j,k)fluoranthene		<MDL	150	297	ug/Kg	216		8.1	16.3	ug/Kg	370		7.8	15.8	ug/Kg	4960		74	149	ug/Kg
Benzo(g,h,i)perylene		<MDL,JL	150	297	ug/Kg	75.2	JL	8.1	16.3	ug/Kg	105	JL	7.8	15.8	ug/Kg	2050		74	149	ug/Kg
Benzoic Acid		<MDL	2970	2970	ug/Kg	298		163	163	ug/Kg	200		158	158	ug/Kg	2040		1490	1490	ug/Kg
Benzyl Alcohol		<MDL	372	372	ug/Kg		<MDL	20.2	20.2	ug/Kg		<MDL	19.6	19.6	ug/Kg		<MDL	186	186	ug/Kg
Benzyl Butyl Phthalate		<MDL,JL	223	223	ug/Kg	93.2	JL	12.2	12.2	ug/Kg	68.5	JL	11.8	11.8	ug/Kg		<MDL	112	112	ug/Kg
Bis(2-Ethylhexyl)Phthalate	3090		290	595	ug/Kg	362		17	32.4	ug/Kg	315		16	31.4	ug/Kg	6400		150	297	ug/Kg
Chrysene		<MDL	150	297	ug/Kg	131		8.1	16.3	ug/Kg	190		7.8	15.8	ug/Kg	3550		74	149	ug/Kg
Dibenzo(a,h)anthracene		<MDL	150	297	ug/Kg	24.6		8.1	16.3	ug/Kg	32.5		7.8	15.8	ug/Kg	751		74	149	ug/Kg
Dibenzofuran		<MDL	150	297	ug/Kg		<MDL	8.1	16.3	ug/Kg	8.2	<RDL	7.8	15.8	ug/Kg	120	<RDL	74	149	ug/Kg
Diethyl Phthalate		<MDL	290	595	ug/Kg		<MDL	17	32.4	ug/Kg		<MDL	16	31.4	ug/Kg		<MDL	150	297	ug/Kg
Dimethyl Phthalate		<MDL	297	297	ug/Kg	17		16.3	16.3	ug/Kg		<MDL	15.8	15.8	ug/Kg		<MDL	149	149	ug/Kg
Di-N-Butyl Phthalate		<MDL	290	595	ug/Kg		<MDL	17	32.4	ug/Kg	27	<RDL,J,B	16	31.4	ug/Kg	381		150	297	ug/Kg
Di-N-Octyl Phthalate		<MDL	297	297	ug/Kg		<MDL	16.3	16.3	ug/Kg		<MDL	15.8	15.8	ug/Kg		<MDL	149	149	ug/Kg
Fluoranthene	586		150	297	ug/Kg	220		8.1	16.3	ug/Kg	359		7.8	15.8	ug/Kg	6410		74	149	ug/Kg
Fluorene		<MDL	150	297	ug/Kg	13	<RDL	8.1	16.3	ug/Kg	16.6		7.8	15.8	ug/Kg	286	JL	74	149	ug/Kg
Hexachlorobenzene		<MDL	15	29.7	ug/Kg		<MDL	0.81	1.63	ug/Kg		<MDL	0.78	1.58	ug/Kg		<MDL	7.4	14.9	ug/Kg
Hexachlorobutadiene		<MDL	74	149	ug/Kg		<MDL	4.1	8.1	ug/Kg		<MDL	4	7.85	ug/Kg		<MDL	38	74.4	ug/Kg
Indeno(1,2,3-Cd)Pyrene		<MDL,JL	150	297	ug/Kg	67.3	JL	8.1	16.3	ug/Kg	95.7	JL	7.8	15.8	ug/Kg	1800	JL	74	149	ug/Kg
Naphthalene		<MDL	150	297	ug/Kg		<MDL	8.1	16.3	ug/Kg		<MDL	7.8	15.8	ug/Kg		<MDL	74	149	ug/Kg
N-Nitrosodiphenylamine		<MDL	372	372	ug/Kg		<MDL	20.2	20.2	ug/Kg		<MDL	19.6	19.6	ug/Kg		<MDL	186	186	ug/Kg
Pentachlorophenol		<MDL	2230	2230	ug/Kg		<MDL	122	122	ug/Kg		<MDL	118	118	ug/Kg		<MDL	1120	1120	ug/Kg
Phenanthrene		<MDL	150	297	ug/Kg	75.4		8.1	16.3	ug/Kg	129		7.8	15.8	ug/Kg	2530		74	149	ug/Kg
Phenol		<MDL	740	2230	ug/Kg		<MDL	41	122	ug/Kg		<MDL	40	118	ug/Kg		<MDL	380	1120	ug/Kg
Pyrene	813		150	297	ug/Kg	187		8.1	16.3	ug/Kg	337		7.8	15.8	ug/Kg	5670		74	149	ug/Kg
Total HPAHS	1400		150	297	ug/Kg	1130		8.1	16.3	ug/Kg	1810		7.8	15.8	ug/Kg	30600		74	149	ug/Kg
Total LPAHs		<MDL	150	297	ug/Kg	155		8.1	16.3	ug/Kg	222		7.8	15.8	ug/Kg	4420		74	149	ug/Kg

* Not converted to dry weight ba

Appendix A - Table A-1
Complete Analytical Results for Marine/Estuarine CSOs

	Locator	CSO-BR-4				Locator	CSO-BR-5				Locator	CSO-BR-6				Locator	CSO-BKGD-NS			
	Description	S BRANDON STREET CSO				Description	S BRANDON STREET CSO				Description	S BRANDON STREET CSO				Description	BACKGROUND STATION			
	Sample	L53963-41				Sample	L53963-42				Sample	L53963-43				Sample	L53963-44			
	Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED			
	Collected	08/29/11				Collected	08/29/11				Collected	08/29/11				Collected	08/29/11			
	% Solids	51.4				% Solids	50.2				% Solids	46.7				% Solids	72.9			
	Depth (m)	4				Depth (m)	4				Depth (m)	8				Depth (m)	11.6			
	DRY Weight Basis					**DRY Weight Basis**					**DRY Weight Basis**					**DRY Weight Basis**				
Parameters	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**
ASTM D422																				
Clay*	23		1.4	2.7	%	25.1		1.3	2.6	%	23		1.5	3.1	%	2		0.7	1.3	%
Fines*	79.8		1.4	2.7	%	82		1.3	2.6	%	92.2		1.5	3.1	%	2.6		0.7	1.3	%
Gravel*	2	<RDL	0.3	2.7	%	0.4	<RDL	0.3	2.6	%		<MDL	0.3	3.1	%		<MDL	0.1	1.3	%
p+0.00*	0.8	<RDL	0.3	2.7	%		<MDL	0.3	2.6	%		<MDL	0.3	3.1	%		<MDL	0.1	1.3	%
p+1.00*	0.7	<RDL	0.3	2.7	%	0.6	<RDL	0.3	2.6	%		<MDL	0.3	3.1	%		<MDL	0.1	1.3	%
p+10.0(equal/more than)*	16.2		1.4	2.7	%	17.2		1.3	2.6	%	16.9		1.5	3.1	%	2		0.7	1.3	%
p+2.00*	4.4		0.3	2.7	%	4.5		0.3	2.6	%	0.6	<RDL	0.3	3.1	%	5.1		0.1	1.3	%
p+3.00*	5.2		0.3	2.7	%	5.8		0.3	2.6	%	1.4	<RDL	0.3	3.1	%	81.1		0.1	1.3	%
p+4.00*	6.8		0.3	2.7	%	7.1		0.3	2.6	%	6.6		0.3	3.1	%	10.9		0.1	1.3	%
p+5.00*	10.8		1.4	2.7	%	10.6		1.3	2.6	%	13.8		1.5	3.1	%		<MDL	0.7	1.3	%
p+6.00*	23		1.4	2.7	%	22.5		1.3	2.6	%	24.6		1.5	3.1	%		<MDL	0.7	1.3	%
p+7.00*	16.2		1.4	2.7	%	17.2		1.3	2.6	%	19.9		1.5	3.1	%	0.7	<RDL	0.7	1.3	%
p+8.00*	6.8		1.4	2.7	%	6.6		1.3	2.6	%	10.9		1.5	3.1	%		<MDL	0.7	1.3	%
p+9.00*	6.8		1.4	2.7	%	7.9		1.3	2.6	%	6.1		1.5	3.1	%		<MDL	0.7	1.3	%
p-1.00*	1.1	<RDL	0.3	2.7	%		<MDL	0.3	2.6	%		<MDL	0.3	3.1	%		<MDL	0.1	1.3	%
p-2.00(less than)*	0.9	<RDL	0.3	2.7	%	0.4	<RDL	0.3	2.6	%		<MDL	0.3	3.1	%		<MDL	0.1	1.3	%
p-2.00*		<MDL	0.3	2.7	%		<MDL	0.3	2.6	%		<MDL	0.3	3.1	%		<MDL	0.1	1.3	%
Sand*	18		0.3	2.7	%	18.1		0.3	2.6	%	8.5		0.3	3.1	%	97.2		0.1	1.3	%
Silt*	56.8		1.4	2.7	%	56.8		1.3	2.6	%	69.1		1.5	3.1	%	0.7	<RDL	0.7	1.3	%
SM2540-G																				
Total Solids*	51.4		0.005	0.01	%	50.2		0.005	0.01	%	46.7		0.005	0.01	%	72.9		0.005	0.01	%
EP A9060																				
Total Organic Carbon	22200		4100	8050	mg/Kg	21900		4200	8490	mg/Kg	22900		4500	8990	mg/Kg	2070		510	1020	mg/Kg
EPA 3050B/6010C																				
Arsenic, Total, ICP	15.3		2.3	12.1	mg/Kg	13.3		2.4	12.4	mg/Kg	12	<RDL	2.6	13.4	mg/Kg		<MDL	1.6	8.56	mg/Kg
Cadmium, Total, ICP	0.31	<RDL	0.19	0.971	mg/Kg	0.42	<RDL	0.2	0.994	mg/Kg	0.36	<RDL	0.21	1.07	mg/Kg		<MDL	0.14	0.684	mg/Kg
Chromium, Total, ICP	27.2		0.29	1.46	mg/Kg	30.9		0.3	1.49	mg/Kg	27.8		0.32	1.61	mg/Kg	17		0.21	1.03	mg/Kg
Copper, Total, ICP	60.7		0.39	1.94	mg/Kg	67.3		0.4	1.99	mg/Kg	55.9		0.43	2.14	mg/Kg	4.8		0.27	1.37	mg/Kg
Lead, Total, ICP	27.8		1.9	9.71	mg/Kg	32.3		2	9.94	mg/Kg	25.9		2.1	10.7	mg/Kg	1.9	<RDL	1.4	6.84	mg/Kg
Silver, Total, ICP	2.04		0.39	1.94	mg/Kg	2.17		0.4	1.99	mg/Kg	2.42		0.43	2.14	mg/Kg	0.96	<RDL	0.27	1.37	mg/Kg
Zinc, Total, ICP	116		0.49	2.43	mg/Kg	124		0.5	2.49	mg/Kg	107		0.54	2.68	mg/Kg	21.4		0.34	1.71	mg/Kg
EPA 7471B																				
Mercury, Total, CVAA	0.146		0.0095	0.0951	mg/Kg	0.227		0.0098	0.0974	mg/Kg	0.225		0.01	0.104	mg/Kg	0.012	<RDL	0.0069	0.068	mg/Kg
EPA 3550B/8082A																				
Aroclor 1016		<MDL	3.9	7.78	ug/Kg		<MDL	4	7.97	ug/Kg		<MDL	4.3	8.57	ug/Kg		<MDL	2.7	5.49	ug/Kg
Aroclor 1221		<MDL	7.8	15.6	ug/Kg		<MDL	8	15.9	ug/Kg		<MDL	8.6	17.1	ug/Kg		<MDL	5.5	11	ug/Kg
Aroclor 1232		<MDL	7.8	15.6	ug/Kg		<MDL	8	15.9	ug/Kg		<MDL	8.6	17.1	ug/Kg		<MDL	5.5	11	ug/Kg
Aroclor 1242	18.9		3.9	7.78	ug/Kg	22.7		4	7.97	ug/Kg	21.6		4.3	8.57	ug/Kg		<MDL	2.7	5.49	ug/Kg
Aroclor 1248		<MDL	3.9	7.78	ug/Kg		<MDL	4	7.97	ug/Kg		<MDL	4.3	8.57	ug/Kg		<MDL	2.7	5.49	ug/Kg
Aroclor 1254	46.9		3.9	7.78	ug/Kg	50.8		4	7.97	ug/Kg	60.8		4.3	8.57	ug/Kg		<MDL	2.7	5.49	ug/Kg
Aroclor 1260	30.4		3.9	7.78	ug/Kg	34.7		4	7.97	ug/Kg	42.8		4.3	8.57	ug/Kg		<MDL	2.7	5.49	ug/Kg
Total Aroclors	96.1		3.9	7.78	ug/Kg	108		4	7.97	ug/Kg	125		4.3	8.57	ug/Kg		<MDL	5.5	11	ug/Kg
EPA 3550B/8270D																				
1,2,4-Trichlorobenzene		<MDL	1	2.08	ug/Kg		<MDL	1.1	2.13	ug/Kg		<MDL	1.1	2.29	ug/Kg		<MDL	0.73	1.47	ug/Kg
1,2-Dichlorobenzene		<MDL	10.4	10.4	ug/Kg		<MDL	10.6	10.6	ug/Kg		<MDL	11.4	11.4	ug/Kg		<MDL	7.31	7.31	ug/Kg
1,4-Dichlorobenzene		<MDL	15.6	15.6	ug/Kg		<MDL	15.9	15.9	ug/Kg		<MDL	17.1	17.1	ug/Kg		<MDL	11	11	ug/Kg
2,4-Dimethylphenol		<MDL	10	20.8	ug/Kg		<MDL	11	21.3	ug/Kg		<MDL	11	22.9	ug/Kg		<MDL	7.3	14.7	ug/Kg

Appendix A - Table A-1
Complete Analytical Results for Marine/Estuarine CSOs

	Locator	CSO-BR-4				Locator	CSO-BR-5				Locator	CSO-BR-6				Locator	CSO-BKGD-NS			
	Description	S BRANDON STREET CSO				Description	S BRANDON STREET CSO				Description	S BRANDON STREET CSO				Description	BACKGROUND STATION			
	Sample	L53963-41				Sample	L53963-42				Sample	L53963-43				Sample	L53963-44			
	Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED				Matrix	SF SALTWTRSED			
	Collected	08/29/11				Collected	08/29/11				Collected	08/29/11				Collected	08/29/11			
	% Solids	51.4				% Solids	50.2				% Solids	46.7				% Solids	72.9			
	Depth (m)	4				Depth (m)	4				Depth (m)	8				Depth (m)	11.6			
	DRY Weight Basis					**DRY Weight Basis**					**DRY Weight Basis**					**DRY Weight Basis**				
Parameters	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**
2-Methylnaphthalene	15	<RDL	10	20.8	ug/Kg		<MDL	11	21.3	ug/Kg		<MDL	11	22.9	ug/Kg		<MDL	7.3	14.7	ug/Kg
2-Methylphenol		<MDL	10	20.8	ug/Kg		<MDL	11	21.3	ug/Kg		<MDL	11	22.9	ug/Kg		<MDL	7.3	14.7	ug/Kg
3-,4-Methylphenol		<MDL	53	104	ug/Kg		<MDL	54	106	ug/Kg		<MDL	58	114	ug/Kg		<MDL	37	73.1	ug/Kg
Acenaphthene	55.1		10	20.8	ug/Kg	17	<RDL	11	21.3	ug/Kg	21	<RDL	11	22.9	ug/Kg		<MDL	7.3	14.7	ug/Kg
Acenaphthylene		<MDL	10	20.8	ug/Kg		<MDL	11	21.3	ug/Kg		<MDL	11	22.9	ug/Kg		<MDL	7.3	14.7	ug/Kg
Anthracene	114		10	20.8	ug/Kg	90.8		11	21.3	ug/Kg	67.7		11	22.9	ug/Kg		<MDL	7.3	14.7	ug/Kg
Benzo(a)anthracene	247		10	20.8	ug/Kg	285		11	21.3	ug/Kg	291		11	22.9	ug/Kg	16.2		7.3	14.7	ug/Kg
Benzo(a)pyrene	184		10	20.8	ug/Kg	259		11	21.3	ug/Kg	134		11	22.9	ug/Kg	25.4		7.3	14.7	ug/Kg
Benzo(b,j,k)fluoranthene	447		10	20.8	ug/Kg	663		11	21.3	ug/Kg	392		11	22.9	ug/Kg	18.2		7.3	14.7	ug/Kg
Benzo(g,h,i)perylene	132		10	20.8	ug/Kg	155		11	21.3	ug/Kg	96.8		11	22.9	ug/Kg		<MDL	7.3	14.7	ug/Kg
Benzoic Acid	1090	J	208	208	ug/Kg	705		213	213	ug/Kg		<MDL	229	229	ug/Kg	278		147	147	ug/Kg
Benzyl Alcohol	29.6		25.9	25.9	ug/Kg		<MDL	26.5	26.5	ug/Kg		<MDL	28.5	28.5	ug/Kg		<MDL	18.2	18.2	ug/Kg
Benzyl Butyl Phthalate	152	J	15.6	15.6	ug/Kg	106		15.9	15.9	ug/Kg		<MDL	17.1	17.1	ug/Kg		<MDL	11	11	ug/Kg
Bis(2-Ethylhexyl)Phthalate	541		21	41.4	ug/Kg	659		22	42.4	ug/Kg	377	B2	24	45.6	ug/Kg	31.8	B	15	29.2	ug/Kg
Chrysene	319		10	20.8	ug/Kg	367		11	21.3	ug/Kg	143		11	22.9	ug/Kg	9.2	<RDL	7.3	14.7	ug/Kg
Dibenzo(a,h)anthracene	48.8		10	20.8	ug/Kg	60		11	21.3	ug/Kg	42.6		11	22.9	ug/Kg		<MDL	7.3	14.7	ug/Kg
Dibenzofuran	51.9		10	20.8	ug/Kg	19	<RDL	11	21.3	ug/Kg	24		11	22.9	ug/Kg		<MDL	7.3	14.7	ug/Kg
Diethyl Phthalate		<MDL	21	41.4	ug/Kg		<MDL	22	42.4	ug/Kg		<MDL	24	45.6	ug/Kg		<MDL	15	29.2	ug/Kg
Dimethyl Phthalate	29.8	J	20.8	20.8	ug/Kg	27.1		21.3	21.3	ug/Kg		<MDL	22.9	22.9	ug/Kg		<MDL	14.7	14.7	ug/Kg
Di-N-Butyl Phthalate		<MDL	21	41.4	ug/Kg	34	<RDL	22	42.4	ug/Kg		<MDL	24	45.6	ug/Kg	16	<RDL	15	29.2	ug/Kg
Di-N-Octyl Phthalate		<MDL	20.8	20.8	ug/Kg		<MDL	21.3	21.3	ug/Kg		<MDL	22.9	22.9	ug/Kg		<MDL	14.7	14.7	ug/Kg
Fluoranthene	811		10	20.8	ug/Kg	699		11	21.3	ug/Kg	364		11	22.9	ug/Kg	12	<RDL	7.3	14.7	ug/Kg
Fluorene	68.1		10	20.8	ug/Kg	29.1		11	21.3	ug/Kg	35.5		11	22.9	ug/Kg		<MDL	7.3	14.7	ug/Kg
Hexachlorobenzene		<MDL	1	2.08	ug/Kg		<MDL	1.1	2.13	ug/Kg		<MDL	1.1	2.29	ug/Kg		<MDL	0.73	1.47	ug/Kg
Hexachlorobutadiene		<MDL	5.3	10.4	ug/Kg		<MDL	5.4	10.6	ug/Kg		<MDL	5.8	11.4	ug/Kg		<MDL	3.7	7.31	ug/Kg
Indeno(1,2,3-Cd)Pyrene	121		10	20.8	ug/Kg	151		11	21.3	ug/Kg	88.7		11	22.9	ug/Kg	11	<RDL	7.3	14.7	ug/Kg
Naphthalene	11	<RDL	10	20.8	ug/Kg		<MDL	11	21.3	ug/Kg		<MDL	11	22.9	ug/Kg		<MDL	7.3	14.7	ug/Kg
N-Nitrosodiphenylamine		<MDL	25.9	25.9	ug/Kg		<MDL	26.5	26.5	ug/Kg		<MDL	28.5	28.5	ug/Kg		<MDL	18.2	18.2	ug/Kg
Pentachlorophenol		<MDL	156	156	ug/Kg		<MDL	159	159	ug/Kg		<MDL	171	171	ug/Kg		<MDL	110	110	ug/Kg
Phenanthrene	340		10	20.8	ug/Kg	173		11	21.3	ug/Kg	138		11	22.9	ug/Kg	8.4	<RDL	7.3	14.7	ug/Kg
Phenol	120	<RDL	53	156	ug/Kg	86	<RDL	54	159	ug/Kg		<MDL	58	171	ug/Kg		<MDL	37	110	ug/Kg
Pyrene	566		10	20.8	ug/Kg	556		11	21.3	ug/Kg	321		11	22.9	ug/Kg	16.2		7.3	14.7	ug/Kg
Total HPAHS	2880		10	20.8	ug/Kg	3200		11	21.3	ug/Kg	1870		11	22.9	ug/Kg	107		7.3	14.7	ug/Kg
Total LPAHs	589		10	20.8	ug/Kg	310		11	21.3	ug/Kg	263		11	22.9	ug/Kg	8.4	<RDL	7.3	14.7	ug/Kg

* Not converted to dry weight ba

Appendix A - Table A-1
Complete Analytical Results for Marine/Estuarine CSOs

Locator	CSO-BKGD-WS
Description	BACKGROUND STATION
Sample	L53963-45
Matrix	SF SALTWTRSED
Collected	08/30/11
% Solids	74.2
Depth (m)	13

DRY Weight Basis

Parameters	Value	Qual	MDL	RDL	Units
ASTM D422					
Clay*	2		0.7	1.3	%
Fines*	2		0.7	1.3	%
Gravel*	0.3	<RDL	0.1	1.3	%
p+0.00*	0.2	<RDL	0.1	1.3	%
p+1.00*	1.4		0.1	1.3	%
p+10.0(equal/more than)*	2		0.7	1.3	%
p+2.00*	35.3		0.1	1.3	%
p+3.00*	57.8		0.1	1.3	%
p+4.00*	2.6		0.1	1.3	%
p+5.00*		<MDL	0.7	1.3	%
p+6.00*		<MDL	0.7	1.3	%
p+7.00*		<MDL	0.7	1.3	%
p+8.00*		<MDL	0.7	1.3	%
p+9.00*		<MDL	0.7	1.3	%
p-1.00*	0.3	<RDL	0.1	1.3	%
p-2.00(less than)*		<MDL	0.1	1.3	%
p-2.00*		<MDL	0.1	1.3	%
Sand*	97.4		0.1	1.3	%
Silt*		<MDL	0.7	1.3	%
SM2540-G					
Total Solids*	74.2		0.005	0.01	%
EP A9060					
Total Organic Carbon	1000	<RDL	500	1010	mg/Kg
EPA 3050B/6010C					
Arsenic, Total, ICP		<MDL	1.6	8.42	mg/Kg
Cadmium, Total, ICP		<MDL	0.13	0.674	mg/Kg
Chromium, Total, ICP	12.1		0.2	1.01	mg/Kg
Copper, Total, ICP	2.59		0.27	1.35	mg/Kg
Lead, Total, ICP	3	<RDL	1.3	6.74	mg/Kg
Silver, Total, ICP	0.57	<RDL	0.27	1.35	mg/Kg
Zinc, Total, ICP	14.6		0.34	1.68	mg/Kg
EPA 7471B					
Mercury, Total, CVAA	0.011	<RDL	0.0067	0.067	mg/Kg
EPA 3550B/8082A					
Aroclor 1016		<MDL	2.7	5.39	ug/Kg
Aroclor 1221		<MDL	5.4	10.8	ug/Kg
Aroclor 1232		<MDL	5.4	10.8	ug/Kg
Aroclor 1242		<MDL	2.7	5.39	ug/Kg
Aroclor 1248		<MDL	2.7	5.39	ug/Kg
Aroclor 1254	6.04		2.7	5.39	ug/Kg
Aroclor 1260	27.8		2.7	5.39	ug/Kg
Total Aroclors	33.8		2.7	5.39	ug/Kg
EPA 3550B/8270D					
1,2,4-Trichlorobenzene		<MDL	0.71	1.44	ug/Kg
1,2-Dichlorobenzene		<MDL	7.18	7.18	ug/Kg
1,4-Dichlorobenzene		<MDL	10.8	10.8	ug/Kg
2,4-Dimethylphenol		<MDL	7.1	14.4	ug/Kg

Appendix A - Table A-1
Complete Analytical Results for Marine/Estuarine CSOs

Locator	CSO-BKGD-WS
Description	BACKGROUND STATION
Sample	L53963-45
Matrix	SF SALTWTRSED
Collected	08/30/11
% Solids	74.2
Depth (m)	13

DRY Weight Basis

Parameters	Value	Qual	MDL	RDL	Units
2-Methylnaphthalene		<MDL	7.1	14.4	ug/Kg
2-Methylphenol		<MDL	7.1	14.4	ug/Kg
3-,4-Methylphenol		<MDL	36	71.8	ug/Kg
Acenaphthene		<MDL	7.1	14.4	ug/Kg
Acenaphthylene		<MDL	7.1	14.4	ug/Kg
Anthracene		<MDL	7.1	14.4	ug/Kg
Benzo(a)anthracene		<MDL	7.1	14.4	ug/Kg
Benzo(a)pyrene	18.6		7.1	14.4	ug/Kg
Benzo(b,j,k)fluoranthene	9.2	<RDL	7.1	14.4	ug/Kg
Benzo(g,h,i)perylene		<MDL	7.1	14.4	ug/Kg
Benzoic Acid	239		144	144	ug/Kg
Benzyl Alcohol		<MDL	17.9	17.9	ug/Kg
Benzyl Butyl Phthalate	53.9		10.8	10.8	ug/Kg
Bis(2-Ethylhexyl)Phthalate	32.1	B	15	28.7	ug/Kg
Chrysene		<MDL	7.1	14.4	ug/Kg
Dibenzo(a,h)anthracene		<MDL	7.1	14.4	ug/Kg
Dibenzofuran		<MDL	7.1	14.4	ug/Kg
Diethyl Phthalate		<MDL	15	28.7	ug/Kg
Dimethyl Phthalate		<MDL	14.4	14.4	ug/Kg
Di-N-Butyl Phthalate	16	<RDL	15	28.7	ug/Kg
Di-N-Octyl Phthalate		<MDL	14.4	14.4	ug/Kg
Fluoranthene		<MDL	7.1	14.4	ug/Kg
Fluorene		<MDL	7.1	14.4	ug/Kg
Hexachlorobenzene		<MDL	0.71	1.44	ug/Kg
Hexachlorobutadiene		<MDL	3.6	7.18	ug/Kg
Indeno(1,2,3-Cd)Pyrene		<MDL	7.1	14.4	ug/Kg
Naphthalene		<MDL	7.1	14.4	ug/Kg
N-Nitrosodiphenylamine		<MDL	17.9	17.9	ug/Kg
Pentachlorophenol		<MDL	108	108	ug/Kg
Phenanthrene		<MDL	7.1	14.4	ug/Kg
Phenol		<MDL	36	108	ug/Kg
Pyrene		<MDL	7.1	14.4	ug/Kg
Total HPAHS	27.8		7.1	14.4	ug/Kg
Total LPAHs		<MDL	7.1	14.4	ug/Kg

* Not converted to dry weight ba

Appendix A - Table A-2
Complete Analytical Results for Freshwater CSOs

	Locator	CSO-3W-1				Locator:	CSO-3W-2				Locator:	CSO-3W-3				Locator:	CSO-3W-4			
	Description	3RD AVENUE W CSO				Descrip:	3RD AVENUE W CSO				Descrip:	3RD AVENUE W CSO				Descrip:	3RD AVENUE W CSO			
	Sample	L54227-1				Sample:	L54227-2				Sample:	L54227-3				Sample:	L54227-4			
	Matrix	SE FRSHWTRSED				Matrix:	SE FRSHWTRSED				Matrix:	SE FRSHWTRSED				Matrix:	SE FRSHWTRSED			
	Collected	10/10/11				ColDate:	10/10/11				ColDate:	10/10/11				ColDate:	10/10/11			
	% Solids	62.8				TotalSolid:	78.2				TotalSolid:	64.3				TotalSolid:	66.7			
	Depth (m)	8				SampDepth:	9				SampDepth:	10				SampDepth:	10			
	DRY Weight Basis					**DRY Weight Basis**					**DRY Weight Basis**					**DRY Weight Basis**				
Parameters	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**
ASTM D422																				
Clay*	3.4		0.8	1.7	%	1.9		0.6	1.3	%	2.8		0.7	1.4	%	2.2		0.7	1.5	%
Fines*	9.3		0.8	1.7	%	2.5		0.6	1.3	%	4.2		0.7	1.4	%	2.9		0.7	1.5	%
Gravel*	6.7		0.2	1.7	%	36.2		0.1	1.3	%	4		0.1	1.4	%	0.8	<RDL	0.2	1.5	%
p+0.00*	1.1	<RDL	0.2	1.7	%	2.8		0.1	1.3	%	1.4	<RDL	0.1	1.4	%	1.7		0.2	1.5	%
p+1.00*	4.3		0.2	1.7	%	2.6		0.1	1.3	%	4.3		0.1	1.4	%	4.3		0.2	1.5	%
p+10.0(equal/more than)*	2.5		0.8	1.7	%	1.3	RDL	0.6	1.3	%	1.4	RDL	0.7	1.4	%	2.2		0.7	1.5	%
p+2.00*	28.3		0.2	1.7	%	15.6		0.1	1.3	%	32.4		0.1	1.4	%	29.3		0.2	1.5	%
p+3.00*	40.4		0.2	1.7	%	30.6		0.1	1.3	%	46.1		0.1	1.4	%	50.2		0.2	1.5	%
p+4.00*	11.4		0.2	1.7	%	6.9		0.1	1.3	%	7.8		0.1	1.4	%	8.6		0.2	1.5	%
p+5.00*	4.2		0.8	1.7	%	0.6	<RDL	0.6	1.3	%		<MDL	0.7	1.4	%		<MDL	0.7	1.5	%
p+6.00*	0.8	<RDL	0.8	1.7	%		<MDL	0.6	1.3	%	0.7	<RDL	0.7	1.4	%		<MDL	0.7	1.5	%
p+7.00*		<MDL	0.8	1.7	%		<MDL	0.6	1.3	%	0.7	<RDL	0.7	1.4	%	0.7	<RDL	0.7	1.5	%
p+8.00*	0.8	<RDL	0.8	1.7	%		<MDL	0.6	1.3	%		<MDL	0.7	1.4	%		<MDL	0.7	1.5	%
p+9.00*	0.8	<RDL	0.8	1.7	%	0.6	<RDL	0.6	1.3	%	1.4	RDL	0.7	1.4	%		<MDL	0.7	1.5	%
p-1.00*	1.3	<RDL	0.2	1.7	%	7		0.1	1.3	%	0.7	<RDL	0.1	1.4	%	0.8	<RDL	0.2	1.5	%
p-2.00(less than)*	5.3		0.2	1.7	%	24.5		0.1	1.3	%	3.3		0.1	1.4	%		<MDL	0.2	1.5	%
p-2.00*	0.2	<RDL	0.2	1.7	%	4.7		0.1	1.3	%		<MDL	0.1	1.4	%		<MDL	0.2	1.5	%
Sand*	85.3		0.2	1.7	%	58.4		0.1	1.3	%	92		0.1	1.4	%	94.1		0.2	1.5	%
Silt*	5.9		0.8	1.7	%	0.6	<RDL	0.6	1.3	%	1.4	RDL	0.7	1.4	%	0.7	<RDL	0.7	1.5	%
SM2540-G																				
Total Solids*	62.8		0.005	0.01	%	78.2		0.005	0.01	%	64.3		0.005	0.01	%	66.7		0.005	0.01	%
CV SW846 9060-PSEP96																				
Total Organic Carbon	15500		970	1940	mg/Kg	9850		820	1620	mg/Kg	12300		1000	1990	mg/Kg	13400		1000	2040	mg/Kg
EPA 3050B/6020A																				
Antimony, Total, ICP-MS	0.702	JG	0.12	0.408	mg/Kg	0.668	JG	0.092	0.309	mg/Kg	0.378	JG	0.11	0.375	mg/Kg	0.718	JG	0.11	0.375	mg/Kg
Arsenic, Total, ICP-MS	9.51		0.041	0.204	mg/Kg	4.54		0.031	0.155	mg/Kg	5.91		0.037	0.187	mg/Kg	7.36		0.037	0.187	mg/Kg
Cadmium, Total, ICP-MS	0.489		0.021	0.102	mg/Kg	0.27		0.015	0.0772	mg/Kg	0.308		0.019	0.0936	mg/Kg	0.517		0.018	0.0936	mg/Kg
Chromium, Total, ICP-MS	25.8		0.081	0.408	mg/Kg	16.5		0.061	0.309	mg/Kg	21.2		0.075	0.375	mg/Kg	21.9		0.075	0.375	mg/Kg
Copper, Total, ICP-MS	82		0.16	0.815	mg/Kg	40.7		0.12	0.618	mg/Kg	40.7		0.15	0.748	mg/Kg	46		0.15	0.748	mg/Kg
Lead, Total, ICP-MS	114		0.041	0.204	mg/Kg	68.5	J	0.031	0.155	mg/Kg	84.4		0.037	0.187	mg/Kg	140		0.037	0.187	mg/Kg
Nickel, Total, ICP-MS	35.7		0.041	0.204	mg/Kg	23.9		0.031	0.155	mg/Kg	31.4		0.037	0.187	mg/Kg	30.6		0.037	0.187	mg/Kg
Silver, Total, ICP-MS	0.826		0.016	0.0815	mg/Kg	0.624		0.012	0.0618	mg/Kg	0.527		0.015	0.0748	mg/Kg	0.855		0.015	0.0748	mg/Kg
Zinc, Total, ICP-MS	172		0.21	1.02	mg/Kg	95		0.15	0.772	mg/Kg	132		0.19	0.936	mg/Kg	157		0.18	0.936	mg/Kg
EPA 7471B																				
Mercury, Total, CVAA	1.5	J	0.076	0.771	mg/Kg	0.459		0.0063	0.0632	mg/Kg	0.585		0.0075	0.0743	mg/Kg	0.339		0.0073	0.0729	mg/Kg
EPA 3550B/8082A																				
Aroclor 1016		<MDL	2.1	4.25	ug/Kg		<MDL	1.7	3.41	ug/Kg		<MDL	2	4.15	ug/Kg		<MDL	1.9	4	ug/Kg
Aroclor 1221		<MDL	4.3	8.49	ug/Kg		<MDL	3.5	6.82	ug/Kg		<MDL	4.2	8.29	ug/Kg		<MDL	4	7.99	ug/Kg
Aroclor 1232		<MDL	4.3	8.49	ug/Kg		<MDL	3.5	6.82	ug/Kg		<MDL	4.2	8.29	ug/Kg		<MDL	4	7.99	ug/Kg
Aroclor 1242	45.9		2.1	4.25	ug/Kg	19.4		1.7	3.41	ug/Kg	7.29		2	4.15	ug/Kg	66.1		1.9	4	ug/Kg
Aroclor 1248		<MDL	2.1	4.25	ug/Kg		<MDL	1.7	3.41	ug/Kg		<MDL	2	4.15	ug/Kg		<MDL	1.9	4	ug/Kg
Aroclor 1254	87.1		2.1	4.25	ug/Kg	52		1.7	3.41	ug/Kg	33		2	4.15	ug/Kg	186		1.9	4	ug/Kg
Aroclor 1260	53.8		2.1	4.25	ug/Kg	16.9		1.7	3.41	ug/Kg	13.9		2	4.15	ug/Kg	58.5		1.9	4	ug/Kg
Total Aroclors	187		2.1	4.25	ug/Kg	88.4		1.7	3.41	ug/Kg	54.2		2	4.15	ug/Kg	310		1.9	4	ug/Kg
EPA 3550B/8270D																				
1,2,4-Trichlorobenzene		<MDL	0.84	1.7	ug/Kg		<MDL	0.68	1.37	ug/Kg		<MDL	4.2	8.29	ug/Kg		<MDL	0.79	1.6	ug/Kg
1,2-Dichlorobenzene		<MDL	8.49	8.49	ug/Kg		<MDL	6.82	6.82	ug/Kg		<MDL	41.5	41.5	ug/Kg		<MDL	7.99	7.99	ug/Kg

Appendix A - Table A-2
Complete Analytical Results for Freshwater CSOs

	Locator	CSO-3W-1				Locator:	CSO-3W-2				Locator:	CSO-3W-3				Locator:	CSO-3W-4			
	Description	3RD AVENUE W CSO				Descrip:	3RD AVENUE W CSO				Descrip:	3RD AVENUE W CSO				Descrip:	3RD AVENUE W CSO			
	Sample	L54227-1				Sample:	L54227-2				Sample:	L54227-3				Sample:	L54227-4			
	Matrix	SE FRSHWTRSED				Matrix:	SE FRSHWTRSED				Matrix:	SE FRSHWTRSED				Matrix:	SE FRSHWTRSED			
	Collected	10/10/11				ColDate:	10/10/11				ColDate:	10/10/11				ColDate:	10/10/11			
	% Solids	62.8				TotalSolid:	78.2				TotalSolid:	64.3				TotalSolid:	66.7			
	Depth (m)	8				SampDepth:	9				SampDepth:	10				SampDepth:	10			
	DRY Weight Basis					**DRY Weight Basis**					**DRY Weight Basis**					**DRY Weight Basis**				
Parameters	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**
1,4-Dichlorobenzene	16.6		12.7	12.7	ug/Kg		<MDL	10.2	10.2	ug/Kg		<MDL	62.2	62.2	ug/Kg	18.7		12	12	ug/Kg
2,4-Dimethylphenol		<MDL	8.4	17	ug/Kg		<MDL	6.8	13.7	ug/Kg		<MDL	42	82.9	ug/Kg		<MDL	7.9	16	ug/Kg
2-Methylnaphthalene	136		8.4	17	ug/Kg	37.7		6.8	13.7	ug/Kg	117		42	82.9	ug/Kg	138		7.9	16	ug/Kg
2-Methylphenol		<MDL	8.4	17	ug/Kg		<MDL	6.8	13.7	ug/Kg		<MDL	42	82.9	ug/Kg		<MDL	7.9	16	ug/Kg
3-,4-Methylphenol		<MDL	43	84.9	ug/Kg		<MDL	35	68.2	ug/Kg		<MDL	200	415	ug/Kg		<MDL	40	79.9	ug/Kg
Acenaphthene	879		8.4	17	ug/Kg	229		6.8	13.7	ug/Kg	1480	J	42	82.9	ug/Kg	1020		7.9	16	ug/Kg
Acenaphthylene	140		8.4	17	ug/Kg		<MDL	6.8	13.7	ug/Kg	389	J	42	82.9	ug/Kg	119		7.9	16	ug/Kg
Anthracene	1060		84	170	ug/Kg	581		68	137	ug/Kg	2350	J	42	82.9	ug/Kg	1120		79	160	ug/Kg
Benzo(a)anthracene	2320		84	170	ug/Kg	1220		68	137	ug/Kg	3890	J	42	82.9	ug/Kg	2580		79	160	ug/Kg
Benzo(a)pyrene	3470		84	170	ug/Kg	1780		68	137	ug/Kg	5720	J	42	82.9	ug/Kg	3790		79	160	ug/Kg
Benzo(b,j,k)fluoranthene	4270		84	170	ug/Kg	2300		68	137	ug/Kg	7110	J	42	82.9	ug/Kg	4780		79	160	ug/Kg
Benzo(g,h,i)perylene	2310		84	170	ug/Kg	1140		68	137	ug/Kg	3300	J	42	82.9	ug/Kg	2190		79	160	ug/Kg
Benzoic Acid	252		170	170	ug/Kg		<MDL	137	137	ug/Kg		<MDL	829	829	ug/Kg	259		160	160	ug/Kg
Benzyl Alcohol		<MDL	21.2	21.2	ug/Kg		<MDL	17	17	ug/Kg		<MDL	104	104	ug/Kg		<MDL	19.9	19.9	ug/Kg
Benzyl Butyl Phthalate	361		12.7	12.7	ug/Kg	105	B	10.2	10.2	ug/Kg	253	B2,J	62.2	62.2	ug/Kg	396		120	120	ug/Kg
Bis(2-Ethylhexyl)Phthalate	1820		180	339	ug/Kg	506		14	27.2	ug/Kg	1730	J	82	166	ug/Kg	1240		160	319	ug/Kg
Chrysene	2770		84	170	ug/Kg	1560		68	137	ug/Kg	5090	J	42	82.9	ug/Kg	3210		79	160	ug/Kg
Dibenzo(a,h)anthracene	575		84	170	ug/Kg	306		68	137	ug/Kg	773	J	42	82.9	ug/Kg	447		79	160	ug/Kg
Dibenzofuran	121		8.4	17	ug/Kg	21.5		6.8	13.7	ug/Kg	204	J	42	82.9	ug/Kg	110		7.9	16	ug/Kg
Diethyl Phthalate		<MDL	18	33.9	ug/Kg		<MDL	14	27.2	ug/Kg		<MDL	82	166	ug/Kg		<MDL	16	31.9	ug/Kg
Dimethyl Phthalate	36.5		17	17	ug/Kg	20.7		13.7	13.7	ug/Kg		<MDL	82.9	82.9	ug/Kg		<MDL	16	16	ug/Kg
Di-N-Butyl Phthalate	77.4		18	33.9	ug/Kg	520		14	27.2	ug/Kg		<MDL	82	166	ug/Kg		<MDL	16	31.9	ug/Kg
Di-N-Octyl Phthalate		<MDL	17	17	ug/Kg		<MDL	13.7	13.7	ug/Kg		<MDL	82.9	82.9	ug/Kg		<MDL	16	16	ug/Kg
Fluoranthene	5210		84	170	ug/Kg	2920		68	137	ug/Kg	9950	J	420	829	ug/Kg	6000		79	160	ug/Kg
Fluorene	457		8.4	17	ug/Kg	124		6.8	13.7	ug/Kg	1060	J	42	82.9	ug/Kg	528		7.9	16	ug/Kg
Hexachlorobenzene		<MDL	0.84	1.7	ug/Kg		<MDL	0.68	1.37	ug/Kg		<MDL	4.2	8.29	ug/Kg		<MDL	0.79	1.6	ug/Kg
Hexachlorobutadiene		<MDL	4.3	8.49	ug/Kg		<MDL	3.5	6.82	ug/Kg		<MDL	20	41.5	ug/Kg		<MDL	4	7.99	ug/Kg
Indeno(1,2,3-Cd)Pyrene	1880		84	170	ug/Kg	935		68	137	ug/Kg	2640	J	42	82.9	ug/Kg	1860		79	160	ug/Kg
Naphthalene	220		8.4	17	ug/Kg	111		6.8	13.7	ug/Kg	243		42	82.9	ug/Kg	252		7.9	16	ug/Kg
N-Nitrosodiphenylamine		<MDL	21.2	21.2	ug/Kg		<MDL	17	17	ug/Kg		<MDL	104	104	ug/Kg		<MDL	19.9	19.9	ug/Kg
Pentachlorophenol		<MDL	127	127	ug/Kg		<MDL	102	102	ug/Kg		<MDL	622	622	ug/Kg		<MDL	120	120	ug/Kg
Phenanthrene	3260		84	170	ug/Kg	1560		68	137	ug/Kg	7820	J	420	829	ug/Kg	3900		79	160	ug/Kg
Phenol		<MDL	43	127	ug/Kg		<MDL	35	102	ug/Kg		<MDL	200	622	ug/Kg		<MDL	40	120	ug/Kg
Pyrene	6000		84	170	ug/Kg	3270		68	137	ug/Kg	11700	J	420	829	ug/Kg	6960		79	160	ug/Kg
Total HPAHS	28800		84	170	ug/Kg	15400		68	137	ug/Kg	50200		42	82.9	ug/Kg	31800		79	160	ug/Kg
Total LPAHs	6020		8.4	17	ug/Kg	2600		6.8	13.7	ug/Kg	13300		42	82.9	ug/Kg	6940		7.9	16	ug/Kg

* Not converted to dry weight basis

Appendix A - Table A-2
Complete Analytical Results for Freshwater CSOs

	Locator: CSO-3W-5 Descrip: 3RD AVENUE W CSO Sample: L54227-5 Matrix: SE FRSHWTRSED ColDate: 10/10/11 TotalSolid: 68.7 SampDepth: 10 **DRY Weight Basis**					Locator: CSO-3W-6 Descrip: 3RD AVENUE W CSO Sample: L54227-6 Matrix: SE FRSHWTRSED ColDate: 10/10/11 TotalSolid: 74.1 SampDepth: 10 **DRY Weight Basis**					Locator: CSO-3W-7 Descrip: 3RD AVENUE W CSO Sample: L54227-7 Matrix: SE FRSHWTRSED ColDate: 10/10/11 TotalSolid: 81.4 SampDepth: 4 **DRY Weight Basis**					Locator: CSO-UR-1 Descrip: UNIVERSITY REGULATOR CSO Sample: L54227-8 Matrix: SE FRSHWTRSED ColDate: 10/10/11 TotalSolid: 14.1 SampDepth: 5 **DRY Weight Basis**				
Parameters	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**
ASTM D422																				
Clay*	2.9		0.7	1.5	%	1.2	RDL	0.6	1.2	%	2.4		0.6	1.2	%	19.8		5	9.9	%
Fines*	8.1		0.7	1.5	%	1.9		0.6	1.2	%	3		0.6	1.2	%	69.3		5	9.9	%
Gravel*	3.8		0.2	1.5	%	2.6		0.1	1.2	%	45.8		0.1	1.2	%	1.4	<RDL	0.9	8.5	%
p+0.00*	0.8	<RDL	0.2	1.5	%	1.8		0.1	1.2	%	9.7		0.1	1.2	%	1.2	<RDL	0.9	8.5	%
p+1.00*	4.4		0.2	1.5	%	6.3		0.1	1.2	%	4.5		0.1	1.2	%	1.6	<RDL	0.9	8.5	%
p+10.0(equal/more than)*	1.5	RDL	0.7	1.5	%	1.2	RDL	0.6	1.2	%	1.2	RDL	0.6	1.2	%	14.9		5	9.9	%
p+2.00*	39.1		0.2	1.5	%	44.4		0.1	1.2	%	14.1		0.1	1.2	%	2.5	<RDL	0.9	8.5	%
p+3.00*	38.4		0.2	1.5	%	32		0.1	1.2	%	17.4		0.1	1.2	%	5.8	<RDL	0.9	8.5	%
p+4.00*	6.3		0.2	1.5	%	4.2		0.1	1.2	%	4.9		0.1	1.2	%	13.4		0.9	8.5	%
p+5.00*	2.2		0.7	1.5	%		<MDL	0.6	1.2	%		<MDL	0.6	1.2	%	34.7		5	9.9	%
p+6.00*	0.7	<RDL	0.7	1.5	%		<MDL	0.6	1.2	%		<MDL	0.6	1.2	%	5	<RDL	5	9.9	%
p+7.00*	2.2		0.7	1.5	%		<MDL	0.6	1.2	%		<MDL	0.6	1.2	%	5	<RDL	5	9.9	%
p+8.00*		<MDL	0.7	1.5	%		<MDL	0.6	1.2	%		<MDL	0.6	1.2	%	5	<RDL	5	9.9	%
p+9.00*	1.5	RDL	0.7	1.5	%		<MDL	0.6	1.2	%	1.2	RDL	0.6	1.2	%	5	<RDL	5	9.9	%
p-1.00*	0.5	<RDL	0.2	1.5	%	1.3		0.1	1.2	%	36.4		0.1	1.2	%	1.4	<RDL	0.9	8.5	%
p-2.00(less than)*	3.3		0.2	1.5	%	0.8	<RDL	0.1	1.2	%	4.7		0.1	1.2	%		<MDL	0.9	8.5	%
p-2.00*		<MDL	0.2	1.5	%	0.5	<RDL	0.1	1.2	%	4.7		0.1	1.2	%		<MDL	0.9	8.5	%
Sand*	89		0.2	1.5	%	88.6		0.1	1.2	%	50.5		0.1	1.2	%	24.4		0.9	8.5	%
Silt*	5.2		0.7	1.5	%		<MDL	0.6	1.2	%		<MDL	0.6	1.2	%	49.5		5	9.9	%
SM2540-G																				
Total Solids*	68.7		0.005	0.01	%	74.1		0.005	0.01	%	81.4		0.005	0.01	%	14.1		0.005	0.01	%
CV SW846 9060-PSEP96																				
Total Organic Carbon	11400		960	1910	mg/Kg	4890		510	1010	mg/Kg	9710		910	1820	mg/Kg	109000		7800	15000	mg/Kg
EPA 3050B/6020A																				
Antimony, Total, ICP-MS	0.297	JG	0.073	0.245	mg/Kg	0.16	<RDL,JG	0.065	0.217	mg/Kg		<MDL,JG	0.095	0.316	mg/Kg	0.993	JG	0.11	0.365	mg/Kg
Arsenic, Total, ICP-MS	4.89		0.025	0.122	mg/Kg	3.14		0.022	0.109	mg/Kg	4.69		0.032	0.158	mg/Kg	10.6		0.037	0.183	mg/Kg
Cadmium, Total, ICP-MS	0.457		0.012	0.0613	mg/Kg	0.174		0.011	0.0545	mg/Kg	0.149		0.016	0.0791	mg/Kg	1.01		0.018	0.0915	mg/Kg
Chromium, Total, ICP-MS	19.2		0.049	0.245	mg/Kg	15.7		0.043	0.217	mg/Kg	20.9		0.063	0.316	mg/Kg	24.1		0.071	0.365	mg/Kg
Copper, Total, ICP-MS	47.9		0.098	0.489	mg/Kg	25.9		0.088	0.436	mg/Kg	21		0.12	0.633	mg/Kg	113		0.15	0.73	mg/Kg
Lead, Total, ICP-MS	99		0.025	0.122	mg/Kg	40.9		0.022	0.109	mg/Kg	51		0.032	0.158	mg/Kg	109		0.037	0.183	mg/Kg
Nickel, Total, ICP-MS	28.5		0.025	0.122	mg/Kg	24.8		0.022	0.109	mg/Kg	18.7		0.032	0.158	mg/Kg	22.4		0.037	0.183	mg/Kg
Silver, Total, ICP-MS	0.738		0.0098	0.0489	mg/Kg	0.179		0.0088	0.0436	mg/Kg	0.154		0.012	0.0633	mg/Kg	0.794		0.015	0.073	mg/Kg
Zinc, Total, ICP-MS	123		0.12	0.613	mg/Kg	85.3		0.11	0.545	mg/Kg	80		0.16	0.791	mg/Kg	386		0.18	0.915	mg/Kg
EPA 7471B																				
Mercury, Total, CVAA	0.37		0.0071	0.0715	mg/Kg	0.352		0.0065	0.065	mg/Kg	0.05	<RDL	0.0059	0.059	mg/Kg	2.23		0.034	0.341	mg/Kg
EPA 3550B/8082A																				
Aroclor 1016		<MDL	19	38.9	ug/Kg		<MDL	1.8	3.6	ug/Kg		<MDL	1.6	3.28	ug/Kg		<MDL	23	47.3	ug/Kg
Aroclor 1221		<MDL	39	77.6	ug/Kg		<MDL	3.6	7.19	ug/Kg		<MDL	3.3	6.55	ug/Kg		<MDL	48	94.3	ug/Kg
Aroclor 1232		<MDL	39	77.6	ug/Kg		<MDL	3.6	7.19	ug/Kg		<MDL	3.3	6.55	ug/Kg		<MDL	48	94.3	ug/Kg
Aroclor 1242	60.7	J	19	38.9	ug/Kg	5.52		1.8	3.6	ug/Kg		<MDL	1.6	3.28	ug/Kg	45	<RDL	23	47.3	ug/Kg
Aroclor 1248		<MDL	19	38.9	ug/Kg		<MDL	1.8	3.6	ug/Kg		<MDL	1.6	3.28	ug/Kg		<MDL	23	47.3	ug/Kg
Aroclor 1254	147		19	38.9	ug/Kg	28.2		1.8	3.6	ug/Kg	4.46		1.6	3.28	ug/Kg	282		23	47.3	ug/Kg
Aroclor 1260	39.7	J	19	38.9	ug/Kg	6.84		1.8	3.6	ug/Kg		<MDL	1.6	3.28	ug/Kg	240		23	47.3	ug/Kg
Total Aroclors	247		19	38.9	ug/Kg	40.6		1.8	3.6	ug/Kg	4.46		1.6	3.28	ug/Kg	567		23	47.3	ug/Kg
EPA 3550B/8270D																				
1,2,4-Trichlorobenzene		<MDL	0.77	1.56	ug/Kg	1.3	<RDL	0.72	1.44	ug/Kg		<MDL	0.65	1.31	ug/Kg					
1,2-Dichlorobenzene		<MDL	7.76	7.76	ug/Kg		<MDL	7.19	7.19	ug/Kg		<MDL	6.55	6.55	ug/Kg					

Appendix A - Table A-2
Complete Analytical Results for Freshwater CSOs

	Locator: CSO-3W-5 Descrip: 3RD AVENUE W CSO Sample: L54227-5 Matrix: SE FRSHWTRSED ColDate: 10/10/11 TotalSolid: 68.7 SampDepth: 10 **DRY Weight Basis**					Locator: CSO-3W-6 Descrip: 3RD AVENUE W CSO Sample: L54227-6 Matrix: SE FRSHWTRSED ColDate: 10/10/11 TotalSolid: 74.1 SampDepth: 10 **DRY Weight Basis**					Locator: CSO-3W-7 Descrip: 3RD AVENUE W CSO Sample: L54227-7 Matrix: SE FRSHWTRSED ColDate: 10/10/11 TotalSolid: 81.4 SampDepth: 4 **DRY Weight Basis**					Locator: CSO-UR-1 Descrip: UNIVERSITY REGULATOR CSO Sample: L54227-8 Matrix: SE FRSHWTRSED ColDate: 10/10/11 TotalSolid: 14.1 SampDepth: 5 **DRY Weight Basis**				
Parameters	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**
1,4-Dichlorobenzene	13		11.6	11.6	ug/Kg		<MDL	10.8	10.8	ug/Kg		<MDL	9.83	9.83	ug/Kg					
2,4-Dimethylphenol		<MDL	7.7	15.6	ug/Kg		<MDL	7.2	14.4	ug/Kg		<MDL	6.5	13.1	ug/Kg					
2-Methylnaphthalene	156		7.7	15.6	ug/Kg	118		7.2	14.4	ug/Kg	7.6	<RDL	6.5	13.1	ug/Kg					
2-Methylphenol		<MDL	7.7	15.6	ug/Kg		<MDL	7.2	14.4	ug/Kg		<MDL	6.5	13.1	ug/Kg					
3-,4-Methylphenol		<MDL	39	77.6	ug/Kg		<MDL	36	71.9	ug/Kg		<MDL	33	65.5	ug/Kg					
Acenaphthene	1660		77	156	ug/Kg	1610		72	144	ug/Kg	114		6.5	13.1	ug/Kg					
Acenaphthylene	199		7.7	15.6	ug/Kg	138		7.2	14.4	ug/Kg		<MDL	6.5	13.1	ug/Kg					
Anthracene	1500		77	156	ug/Kg	1770		72	144	ug/Kg	35.7		6.5	13.1	ug/Kg					
Benzo(a)anthracene	2820		77	156	ug/Kg	2930		72	144	ug/Kg	108		6.5	13.1	ug/Kg					
Benzo(a)pyrene	4340		77	156	ug/Kg	5060		72	144	ug/Kg	144		6.5	13.1	ug/Kg					
Benzo(b,j,k)fluoranthene	5270		77	156	ug/Kg	6090		72	144	ug/Kg	201		6.5	13.1	ug/Kg					
Benzo(g,h,i)perylene	2650		77	156	ug/Kg	2910		72	144	ug/Kg	85.9		6.5	13.1	ug/Kg					
Benzoic Acid	242		156	156	ug/Kg	192		144	144	ug/Kg	592		131	131	ug/Kg					
Benzyl Alcohol		<MDL	19.4	19.4	ug/Kg		<MDL	17.9	17.9	ug/Kg		<MDL	16.3	16.3	ug/Kg					
Benzyl Butyl Phthalate		<MDL	11.6	11.6	ug/Kg	45.1	B	10.8	10.8	ug/Kg		<MDL	9.83	9.83	ug/Kg					
Bis(2-Ethylhexyl)Phthalate	1010		160	310	ug/Kg	152	B2	15	28.7	ug/Kg	189	B2	14	26.2	ug/Kg					
Chrysene	3550		77	156	ug/Kg	3700		72	144	ug/Kg	129		6.5	13.1	ug/Kg					
Dibenzo(a,h)anthracene	603		77	156	ug/Kg	625		72	144	ug/Kg	18.2		6.5	13.1	ug/Kg					
Dibenzofuran	97.7		7.7	15.6	ug/Kg	64.6		7.2	14.4	ug/Kg	12	<RDL	6.5	13.1	ug/Kg					
Diethyl Phthalate		<MDL	16	31	ug/Kg		<MDL	15	28.7	ug/Kg		<MDL	14	26.2	ug/Kg					
Dimethyl Phthalate		<MDL	15.6	15.6	ug/Kg		<MDL	14.4	14.4	ug/Kg	16.8		13.1	13.1	ug/Kg					
Di-N-Butyl Phthalate		<MDL	16	31	ug/Kg		<MDL	15	28.7	ug/Kg	23	<RDL,B	14	26.2	ug/Kg					
Di-N-Octyl Phthalate		<MDL	15.6	15.6	ug/Kg		<MDL	14.4	14.4	ug/Kg		<MDL	13.1	13.1	ug/Kg					
Fluoranthene	7180		77	156	ug/Kg	8070		72	144	ug/Kg	209		6.5	13.1	ug/Kg					
Fluorene	693		7.7	15.6	ug/Kg	700		7.2	14.4	ug/Kg	41.4		6.5	13.1	ug/Kg					
Hexachlorobenzene		<MDL	0.77	1.56	ug/Kg		<MDL	0.72	1.44	ug/Kg		<MDL	0.65	1.31	ug/Kg					
Hexachlorobutadiene		<MDL	3.9	7.76	ug/Kg		<MDL	3.6	7.19	ug/Kg		<MDL	3.3	6.55	ug/Kg					
Indeno(1,2,3-Cd)Pyrene	2170		77	156	ug/Kg	2310		72	144	ug/Kg	65.6		6.5	13.1	ug/Kg					
Naphthalene	194		7.7	15.6	ug/Kg	265		7.2	14.4	ug/Kg		<MDL	6.5	13.1	ug/Kg					
N-Nitrosodiphenylamine		<MDL	19.4	19.4	ug/Kg		<MDL	17.9	17.9	ug/Kg		<MDL	16.3	16.3	ug/Kg					
Pentachlorophenol		<MDL	116	116	ug/Kg		<MDL	108	108	ug/Kg		<MDL	98.3	98.3	ug/Kg					
Phenanthrene	5840		77	156	ug/Kg	6990		72	144	ug/Kg	143		6.5	13.1	ug/Kg					
Phenol		<MDL	39	116	ug/Kg		<MDL	36	108	ug/Kg		<MDL	33	98.3	ug/Kg					
Pyrene	8370		77	156	ug/Kg	9850		72	144	ug/Kg	246		6.5	13.1	ug/Kg					
Total HPAHS	36900		77	156	ug/Kg	41500		72	144	ug/Kg	1210		6.5	13.1	ug/Kg					
Total LPAHs	10100		7.7	15.6	ug/Kg	11500		7.2	14.4	ug/Kg	334		6.5	13.1	ug/Kg					

* Not converted to dry weight ba

Appendix A - Table A-2
Complete Analytical Results for Freshwater CSOs

	Locator: CSO-UR-2					Locator: CSO-UR-3					Locator: CSO-UR-4					Locator: CSO-UR-5				
	Descrip: UNIVERSITY REGULATOR CSO					Descrip: UNIVERSITY REGULATOR CSO					Descrip: UNIVERSITY REGULATOR CSO					Descrip: UNIVERSITY REGULATOR CSO				
	Sample: L54227-9					Sample: L54227-10					Sample: L54227-11					Sample: L54227-12				
	Matrix: SE FRSHWTRSED					Matrix: SE FRSHWTRSED					Matrix: SE FRSHWTRSED					Matrix: SE FRSHWTRSED				
	ColDate: 10/10/11					ColDate: 10/10/11					ColDate: 10/10/11					ColDate: 10/10/11				
	TotalSolid: 32.2					TotalSolid: 22.2					TotalSolid: 53.2					TotalSolid: 39.8				
	SampDepth: 6					SampDepth: 5					SampDepth: 8.4					SampDepth: 10				
	DRY Weight Basis					**DRY Weight Basis**					**DRY Weight Basis**					**DRY Weight Basis**				
Parameters	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**
ASTM D422																				
Clay*	7.1		1.8	3.5	%	11.9		3	6	%	4		1	2	%	8.3		1.4	2.8	%
Fines*	37.2		1.8	3.5	%	47.6		3	6	%	8		1	2	%	37.2		1.4	2.8	%
Gravel*	6.4		0.4	3.5	%		<MDL	0.6	6	%	6.7		0.2	2	%	9.4		0.3	2.8	%
p+0.00*	2.3	<RDL	0.4	3.5	%	1.8	<RDL	0.6	6	%	1.2	<RDL	0.2	2	%	2	<RDL	0.3	2.8	%
p+1.00*	3.6		0.4	3.5	%	5.5	<RDL	0.6	6	%	3.6		0.2	2	%	3.1		0.3	2.8	%
p+10.0(equal/more than)*	3.5	RDL	1.8	3.5	%	5.9	RDL	3	6	%	2	RDL	1	2	%	5.5		1.4	2.8	%
p+2.00*	7.9		0.4	3.5	%	19.9		0.6	6	%	14.4		0.2	2	%	10.2		0.3	2.8	%
p+3.00*	17		0.4	3.5	%	18.4		0.6	6	%	43.3		0.2	2	%	22.8		0.3	2.8	%
p+4.00*	15.4		0.4	3.5	%	11.1		0.6	6	%	16.8		0.2	2	%	12.6		0.3	2.8	%
p+5.00*	21.3		1.8	3.5	%	23.8		3	6	%	4		1	2	%	15.2		1.4	2.8	%
p+6.00*	3.5	RDL	1.8	3.5	%	5.9	RDL	3	6	%		<MDL	1	2	%	5.5		1.4	2.8	%
p+7.00*	3.5	RDL	1.8	3.5	%	3	<RDL	3	6	%		<MDL	1	2	%	6.9		1.4	2.8	%
p+8.00*		<MDL	1.8	3.5	%	3	<RDL	3	6	%		<MDL	1	2	%		<MDL	1.4	2.8	%
p+9.00*	3.5	RDL	1.8	3.5	%	5.9	RDL	3	6	%	2	RDL	1	2	%	2.8	RDL	1.4	2.8	%
p-1.00*	1.6	<RDL	0.4	3.5	%		<MDL	0.6	6	%	0.6	<RDL	0.2	2	%	2.4	<RDL	0.3	2.8	%
p-2.00(less than)*	4.8		0.4	3.5	%		<MDL	0.6	6	%	6.1		0.2	2	%	6		0.3	2.8	%
p-2.00*		<MDL	0.4	3.5	%		<MDL	0.6	6	%		<MDL	0.2	2	%	1	<RDL	0.3	2.8	%
Sand*	46.2		0.4	3.5	%	56.6		0.6	6	%	79.4		0.2	2	%	50.6		0.3	2.8	%
Silt*	30.1		1.8	3.5	%	35.7		3	6	%	4		1	2	%	29		1.4	2.8	%
SM2540-G																				
Total Solids*	32.2		0.005	0.01	%	22.2		0.005	0.01	%	53.2		0.005	0.01	%	39.8		0.005	0.01	%
CV SW846 9060-PSEP96																				
Total Organic Carbon	41600		2800	5680	mg/Kg	73400		7700	15100	mg/Kg	28600		2600	5110	mg/Kg	32700		2400	4820	mg/Kg
EPA 3050B/6020A																				
Antimony, Total, ICP-MS	0.22	<RDL,JG	0.12	0.391	mg/Kg	0.842	JG	0.14	0.459	mg/Kg	0.21	<RDL,JG	0.14	0.455	mg/Kg		<MDL,JG	0.098	0.327	mg/Kg
Arsenic, Total, ICP-MS	8.01		0.04	0.195	mg/Kg	8.78		0.045	0.229	mg/Kg	3.55		0.045	0.227	mg/Kg	6.53		0.033	0.164	mg/Kg
Cadmium, Total, ICP-MS	0.317		0.02	0.0975	mg/Kg	0.914		0.023	0.114	mg/Kg	0.265		0.023	0.114	mg/Kg	0.14		0.016	0.0817	mg/Kg
Chromium, Total, ICP-MS	17.9		0.078	0.391	mg/Kg	27.7		0.09	0.459	mg/Kg	22.7		0.09	0.455	mg/Kg	20.2		0.065	0.327	mg/Kg
Copper, Total, ICP-MS	21.6		0.16	0.783	mg/Kg	89.6		0.18	0.914	mg/Kg	20.7		0.18	0.91	mg/Kg	16.4		0.13	0.653	mg/Kg
Lead, Total, ICP-MS	57.1		0.04	0.195	mg/Kg	112		0.045	0.229	mg/Kg	48.7		0.045	0.227	mg/Kg	10.9		0.033	0.164	mg/Kg
Nickel, Total, ICP-MS	27		0.04	0.195	mg/Kg	35.6		0.045	0.229	mg/Kg	26.5		0.045	0.227	mg/Kg	30.7		0.033	0.164	mg/Kg
Silver, Total, ICP-MS	0.137		0.016	0.0783	mg/Kg	0.802		0.018	0.0914	mg/Kg	0.0985		0.018	0.091	mg/Kg	0.0653	<RDL	0.013	0.0653	mg/Kg
Zinc, Total, ICP-MS	70.5		0.2	0.975	mg/Kg	293		0.23	1.14	mg/Kg	77.8		0.23	1.14	mg/Kg	34.7		0.16	0.817	mg/Kg
EPA 7471B																				
Mercury, Total, CVAA	0.197		0.016	0.154	mg/Kg	0.464		0.022	0.219	mg/Kg	0.136		0.0092	0.0919	mg/Kg	0.07	<RDL	0.012	0.124	mg/Kg
EPA 3550B/8082A																				
Aroclor 1016		<MDL	4	8.29	ug/Kg		<MDL	3	5.99	ug/Kg		<MDL	2.4	5.02	ug/Kg		<MDL	3.3	6.71	ug/Kg
Aroclor 1221		<MDL	8.4	16.6	ug/Kg		<MDL	5.9	12	ug/Kg		<MDL	5.1	10	ug/Kg		<MDL	6.8	13.4	ug/Kg
Aroclor 1232		<MDL	8.4	16.6	ug/Kg		<MDL	5.9	12	ug/Kg		<MDL	5.1	10	ug/Kg		<MDL	6.8	13.4	ug/Kg
Aroclor 1242		<MDL	4	8.29	ug/Kg	12.6		3	5.99	ug/Kg	6.45		2.4	5.02	ug/Kg		<MDL	3.3	6.71	ug/Kg
Aroclor 1248		<MDL	4	8.29	ug/Kg		<MDL	3	5.99	ug/Kg		<MDL	2.4	5.02	ug/Kg		<MDL	3.3	6.71	ug/Kg
Aroclor 1254	25.2		4	8.29	ug/Kg	136		3	5.99	ug/Kg	43.6		2.4	5.02	ug/Kg	36.2		3.3	6.71	ug/Kg
Aroclor 1260	25.5		4	8.29	ug/Kg	99.1		3	5.99	ug/Kg	97		2.4	5.02	ug/Kg	12.7		3.3	6.71	ug/Kg
Total Aroclors	50.8		4	8.29	ug/Kg	247		3	5.99	ug/Kg	147		2.4	5.02	ug/Kg	48.9		3.3	6.71	ug/Kg
EPA 3550B/8270D																				
1,2,4-Trichlorobenzene		<MDL	1.4	2.84	ug/Kg		<MDL	5	10.3	ug/Kg		<MDL	1	2.01	ug/Kg		<MDL	1.3	2.69	ug/Kg
1,2-Dichlorobenzene		<MDL	14.2	14.2	ug/Kg		<MDL	51.4	51.4	ug/Kg		<MDL	10	10	ug/Kg		<MDL	13.4	13.4	ug/Kg

Appendix A - Table A-2
Complete Analytical Results for Freshwater CSOs

	Locator: CSO-UR-2 Descrip: UNIVERSITY REGULATOR CSO Sample: L54227-9 Matrix: SE FRSHWTRSED ColDate: 10/10/11 TotalSolid: 32.2 SampDepth: 6 **DRY Weight Basis**					Locator: CSO-UR-3 Descrip: UNIVERSITY REGULATOR CSO Sample: L54227-10 Matrix: SE FRSHWTRSED ColDate: 10/10/11 TotalSolid: 22.2 SampDepth: 5 **DRY Weight Basis**					Locator: CSO-UR-4 Descrip: UNIVERSITY REGULATOR CSO Sample: L54227-11 Matrix: SE FRSHWTRSED ColDate: 10/10/11 TotalSolid: 53.2 SampDepth: 8.4 **DRY Weight Basis**					Locator: CSO-UR-5 Descrip: UNIVERSITY REGULATOR CSO Sample: L54227-12 Matrix: SE FRSHWTRSED ColDate: 10/10/11 TotalSolid: 39.8 SampDepth: 10 **DRY Weight Basis**				
Parameters	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**
1,4-Dichlorobenzene		<MDL	21.3	21.3	ug/Kg		<MDL	77	77	ug/Kg		<MDL	15	15	ug/Kg		<MDL	20.1	20.1	ug/Kg
2,4-Dimethylphenol		<MDL	14	28.4	ug/Kg		<MDL	50	103	ug/Kg		<MDL	10	20.1	ug/Kg		<MDL	13	26.9	ug/Kg
2-Methylnaphthalene		<MDL	14	28.4	ug/Kg		<MDL	50	103	ug/Kg		<MDL	10	20.1	ug/Kg		<MDL	13	26.9	ug/Kg
2-Methylphenol		<MDL	14	28.4	ug/Kg		<MDL	50	103	ug/Kg		<MDL	10	20.1	ug/Kg		<MDL	13	26.9	ug/Kg
3-,4-Methylphenol		<MDL	71	142	ug/Kg		<MDL	260	514	ug/Kg		<MDL	51	100	ug/Kg		<MDL	68	134	ug/Kg
Acenaphthene		<MDL	14	28.4	ug/Kg		<MDL	50	103	ug/Kg	12	<RDL	10	20.1	ug/Kg		<MDL	13	26.9	ug/Kg
Acenaphthylene		<MDL	14	28.4	ug/Kg		<MDL	50	103	ug/Kg		<MDL	10	20.1	ug/Kg		<MDL	13	26.9	ug/Kg
Anthracene	37.9		14	28.4	ug/Kg	155		50	103	ug/Kg	39.8		10	20.1	ug/Kg	34.2		13	26.9	ug/Kg
Benzo(a)anthracene	123		14	28.4	ug/Kg	430		50	103	ug/Kg	226		10	20.1	ug/Kg	115		13	26.9	ug/Kg
Benzo(a)pyrene	183		14	28.4	ug/Kg	536		50	103	ug/Kg	258		10	20.1	ug/Kg	127		13	26.9	ug/Kg
Benzo(b,j,k)fluoranthene	297		14	28.4	ug/Kg	1100		50	103	ug/Kg	430		10	20.1	ug/Kg	215		13	26.9	ug/Kg
Benzo(g,h,i)perylene	121		14	28.4	ug/Kg	353		50	103	ug/Kg	163		10	20.1	ug/Kg	72.4		13	26.9	ug/Kg
Benzoic Acid	425		284	284	ug/Kg		<MDL	1030	1030	ug/Kg	214		201	201	ug/Kg		<MDL	269	269	ug/Kg
Benzyl Alcohol		<MDL	35.4	35.4	ug/Kg		<MDL	129	129	ug/Kg		<MDL	25	25	ug/Kg		<MDL	33.4	33.4	ug/Kg
Benzyl Butyl Phthalate		<MDL	21.3	21.3	ug/Kg	676	B2	77	77	ug/Kg		<MDL	15	15	ug/Kg		<MDL	20.1	20.1	ug/Kg
Bis(2-Ethylhexyl)Phthalate	602		28	56.8	ug/Kg	2840		100	206	ug/Kg	325	B2	21	40	ug/Kg	79.6	B	28	53.5	ug/Kg
Chrysene	192		14	28.4	ug/Kg	653		50	103	ug/Kg	258		10	20.1	ug/Kg	137		13	26.9	ug/Kg
Dibenzo(a,h)anthracene	38.5		14	28.4	ug/Kg	144		50	103	ug/Kg	52.1		10	20.1	ug/Kg	25	<RDL	13	26.9	ug/Kg
Dibenzofuran		<MDL	14	28.4	ug/Kg		<MDL	50	103	ug/Kg		<MDL	10	20.1	ug/Kg		<MDL	13	26.9	ug/Kg
Diethyl Phthalate	413		28	56.8	ug/Kg		<MDL	100	206	ug/Kg	23	<RDL	21	40	ug/Kg		<MDL	28	53.5	ug/Kg
Dimethyl Phthalate	70.2		28.4	28.4	ug/Kg		<MDL	103	103	ug/Kg	54.9		20.1	20.1	ug/Kg		<MDL	26.9	26.9	ug/Kg
Di-N-Butyl Phthalate	53	<RDL,B	28	56.8	ug/Kg	180	<RDL,B	100	206	ug/Kg	112	B	21	40	ug/Kg	38	<RDL,B	28	53.5	ug/Kg
Di-N-Octyl Phthalate		<MDL	28.4	28.4	ug/Kg		<MDL	103	103	ug/Kg		<MDL	20.1	20.1	ug/Kg		<MDL	26.9	26.9	ug/Kg
Fluoranthene	297		14	28.4	ug/Kg	1030		50	103	ug/Kg	427		10	20.1	ug/Kg	394		13	26.9	ug/Kg
Fluorene		<MDL	14	28.4	ug/Kg		<MDL	50	103	ug/Kg	16	<RDL	10	20.1	ug/Kg		<MDL	13	26.9	ug/Kg
Hexachlorobenzene		<MDL	1.4	2.84	ug/Kg		<MDL	5	10.3	ug/Kg		<MDL	1	2.01	ug/Kg		<MDL	1.3	2.69	ug/Kg
Hexachlorobutadiene		<MDL	7.1	14.2	ug/Kg		<MDL	26	51.4	ug/Kg		<MDL	5.1	10	ug/Kg		<MDL	6.8	13.4	ug/Kg
Indeno(1,2,3-Cd)Pyrene	95.7		14	28.4	ug/Kg	273		50	103	ug/Kg	141		10	20.1	ug/Kg	57.8		13	26.9	ug/Kg
Naphthalene		<MDL	14	28.4	ug/Kg		<MDL	50	103	ug/Kg		<MDL	10	20.1	ug/Kg		<MDL	13	26.9	ug/Kg
N-Nitrosodiphenylamine		<MDL	35.4	35.4	ug/Kg		<MDL	129	129	ug/Kg		<MDL	25	25	ug/Kg		<MDL	33.4	33.4	ug/Kg
Pentachlorophenol		<MDL	213	213	ug/Kg		<MDL	770	770	ug/Kg		<MDL	150	150	ug/Kg		<MDL	201	201	ug/Kg
Phenanthrene	131		14	28.4	ug/Kg	357		50	103	ug/Kg	171		10	20.1	ug/Kg	153		13	26.9	ug/Kg
Phenol		<MDL	71	213	ug/Kg		<MDL	260	770	ug/Kg		<MDL	51	150	ug/Kg		<MDL	68	201	ug/Kg
Pyrene	299		14	28.4	ug/Kg	811		50	103	ug/Kg	365		10	20.1	ug/Kg	344		13	26.9	ug/Kg
Total HPAHS	1650		14	28.4	ug/Kg	5330		50	103	ug/Kg	2320		10	20.1	ug/Kg	1490		13	26.9	ug/Kg
Total LPAHs	169		14	28.4	ug/Kg	512		50	103	ug/Kg	239		10	20.1	ug/Kg	187		13	26.9	ug/Kg

* Not converted to dry weight ba

Appendix A - Table A-2
Complete Analytical Results for Freshwater CSOs

	Locator: CSO-UR-6 Descrip: UNIVERSITY REGULATOR CSO Sample: L54227-13 Matrix: SE FRSHWTRSED ColDate: 10/10/11 TotalSolid: 58.9 SampDepth: 8.6 **DRY Weight Basis**					Locator: CSO-UR-7 Descrip: UNIVERSITY REGULATOR CSO Sample: L54227-14 Matrix: SE FRSHWTRSED ColDate: 10/10/11 TotalSolid: 33.4 SampDepth: 10 **DRY Weight Basis**					Locator: CSO-ML-1 Descrip: MONTLAKE CSO Sample: L54227-15 Matrix: SE FRSHWTRSED ColDate: 10/10/11 TotalSolid: 73.2 SampDepth: 9 **DRY Weight Basis**					Locator: CSO-ML-2 Descrip: MONTLAKE CSO Sample: L54227-16 Matrix: SE FRSHWTRSED ColDate: 10/10/11 TotalSolid: 77.8 SampDepth: 10 **DRY Weight Basis**				
Parameters	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**
ASTM D422																				
Clay*	2.6		0.9	1.7	%	6.4		1.6	3.2	%	1.9		0.6	1.3	%		<MDL	0.62	1.25	%
Fines*	10.3		0.9	1.7	%	25.5		1.6	3.2	%	1.9		0.6	1.3	%		<MDL	0.62	1.25	%
Gravel*	4.6		0.2	1.7	%	0.7	<RDL	0.3	3.2	%	3.2		0.1	1.3	%	12.5		0.1	1.3	%
p+0.00*	3.1		0.2	1.7	%	0.4	<RDL	0.3	3.2	%	3.6		0.1	1.3	%	9.6		0.1	1.3	%
p+1.00*	8.8		0.2	1.7	%	1.3	<RDL	0.3	3.2	%	20.3		0.1	1.3	%	17.6		0.1	1.3	%
p+10.0(equal/more than)*	2.6		0.9	1.7	%	6.4		1.6	3.2	%	1.9		0.6	1.3	%		<MDL	0.6	1.3	%
p+2.00*	28.6		0.2	1.7	%	9.3		0.3	3.2	%	56.3		0.1	1.3	%	38.8		0.1	1.3	%
p+3.00*	29.6		0.2	1.7	%	45.6		0.3	3.2	%	13.6		0.1	1.3	%	17.5		0.1	1.3	%
p+4.00*	12		0.2	1.7	%	19.2		0.3	3.2	%	1.1	<RDL	0.1	1.3	%	1.8		0.1	1.3	%
p+5.00*	6		0.9	1.7	%	12.7		1.6	3.2	%		<MDL	0.6	1.3	%		<MDL	0.6	1.3	%
p+6.00*	0.9	<RDL	0.9	1.7	%	3.2	RDL	1.6	3.2	%		<MDL	0.6	1.3	%		<MDL	0.6	1.3	%
p+7.00*		<MDL	0.9	1.7	%	1.6	<RDL	1.6	3.2	%		<MDL	0.6	1.3	%		<MDL	0.6	1.3	%
p+8.00*	0.9	<RDL	0.9	1.7	%	1.6	<RDL	1.6	3.2	%		<MDL	0.6	1.3	%		<MDL	0.6	1.3	%
p+9.00*		<MDL	0.9	1.7	%		<MDL	1.6	3.2	%		<MDL	0.6	1.3	%		<MDL	0.6	1.3	%
p-1.00*	1.9		0.2	1.7	%	0.4	<RDL	0.3	3.2	%	1.7		0.1	1.3	%	7.2		0.1	1.3	%
p-2.00(less than)*	2.3		0.2	1.7	%	0.4	<RDL	0.3	3.2	%	0.6	<RDL	0.1	1.3	%	3.9		0.1	1.3	%
p-2.00*	0.4	<RDL	0.2	1.7	%		<MDL	0.3	3.2	%	0.9	<RDL	0.1	1.3	%	1.4		0.1	1.3	%
Sand*	82		0.2	1.7	%	75.9		0.3	3.2	%	94.9		0.1	1.3	%	85.4		0.1	1.3	%
Silt*	7.7		0.9	1.7	%	19.1		1.6	3.2	%		<MDL	0.6	1.3	%		<MDL	0.6	1.3	%
SM2540-G																				
Total Solids*	58.9		0.005	0.01	%	33.4		0.005	0.01	%	73.2		0.005	0.01	%	77.8		0.005	0.01	%
CV SW846 9060-PSEP96																				
Total Organic Carbon	19700		2200	4300	mg/Kg	50900		4800	9640	mg/Kg	2540		520	1050	mg/Kg	3420		500	1000	mg/Kg
EPA 3050B/6020A																				
Antimony, Total, ICP-MS	0.15	<RDL,JG	0.12	0.411	mg/Kg		<MDL,JG	0.22	0.728	mg/Kg		<MDL,JG	0.1	0.333	mg/Kg	0.27	<RDL,JG	0.096	0.323	mg/Kg
Arsenic, Total, ICP-MS	2.6		0.041	0.205	mg/Kg	5.15		0.072	0.365	mg/Kg	2.43		0.033	0.167	mg/Kg	4.85		0.032	0.161	mg/Kg
Cadmium, Total, ICP-MS	0.161		0.02	0.103	mg/Kg	0.245		0.036	0.182	mg/Kg	0.057	<RDL	0.016	0.0833	mg/Kg	0.077	<RDL	0.017	0.0806	mg/Kg
Chromium, Total, ICP-MS	15.8		0.081	0.411	mg/Kg	19		0.15	0.728	mg/Kg	13.8		0.067	0.333	mg/Kg	13.4		0.064	0.323	mg/Kg
Copper, Total, ICP-MS	25.6		0.16	0.822	mg/Kg	23.2		0.29	1.46	mg/Kg	21.4		0.13	0.667	mg/Kg	14.9		0.13	0.645	mg/Kg
Lead, Total, ICP-MS	22.6		0.041	0.205	mg/Kg	48.2		0.072	0.365	mg/Kg	30.2		0.033	0.167	mg/Kg	43.7		0.032	0.161	mg/Kg
Nickel, Total, ICP-MS	25.3		0.041	0.205	mg/Kg	31.4		0.072	0.365	mg/Kg	21.9		0.033	0.167	mg/Kg	23.9		0.032	0.161	mg/Kg
Silver, Total, ICP-MS	0.0825		0.016	0.0822	mg/Kg	0.12	<RDL	0.029	0.146	mg/Kg	0.038	<RDL	0.013	0.0667	mg/Kg	0.06	<RDL	0.013	0.0645	mg/Kg
Zinc, Total, ICP-MS	48		0.2	1.03	mg/Kg	67.7		0.36	1.82	mg/Kg	66		0.16	0.833	mg/Kg	62.6		0.17	0.806	mg/Kg
EPA 7471B																				
Mercury, Total, CVAA	0.061	<RDL	0.0085	0.0852	mg/Kg	0.099	<RDL	0.014	0.145	mg/Kg	0.036	<RDL,J	0.0068	0.0682	mg/Kg	0.045	<RDL	0.0064	0.064	mg/Kg
EPA 3550B/8082A																				
Aroclor 1016		<MDL	2.2	4.53	ug/Kg		<MDL	3.9	7.99	ug/Kg		<MDL	1.8	3.65	ug/Kg		<MDL	1.7	3.43	ug/Kg
Aroclor 1221		<MDL	4.6	9.05	ug/Kg		<MDL	8.1	16	ug/Kg		<MDL	3.7	7.28	ug/Kg		<MDL	3.5	6.85	ug/Kg
Aroclor 1232		<MDL	4.6	9.05	ug/Kg		<MDL	8.1	16	ug/Kg		<MDL	3.7	7.28	ug/Kg		<MDL	3.5	6.85	ug/Kg
Aroclor 1242	4.4	<RDL	2.2	4.53	ug/Kg	12		3.9	7.99	ug/Kg		<MDL	1.8	3.65	ug/Kg		<MDL	1.7	3.43	ug/Kg
Aroclor 1248		<MDL	2.2	4.53	ug/Kg		<MDL	3.9	7.99	ug/Kg		<MDL	1.8	3.65	ug/Kg		<MDL	1.7	3.43	ug/Kg
Aroclor 1254	15.7		2.2	4.53	ug/Kg	32.9		3.9	7.99	ug/Kg		<MDL	1.8	3.65	ug/Kg	2.4	<RDL	1.7	3.43	ug/Kg
Aroclor 1260	12.6		2.2	4.53	ug/Kg	22.5		3.9	7.99	ug/Kg		<MDL	1.8	3.65	ug/Kg		<MDL	1.7	3.43	ug/Kg
Total Aroclors	32.7		2.2	4.53	ug/Kg	67.4		3.9	7.99	ug/Kg		<MDL	3.7	7.28	ug/Kg	2.4	<RDL	1.7	3.43	ug/Kg
EPA 3550B/8270D																				
1,2,4-Trichlorobenzene		<MDL	0.9	1.82	ug/Kg		<MDL	1.1	2.18	ug/Kg		<MDL	0.72	1.46	ug/Kg		<MDL	0.68	1.38	ug/Kg
1,2-Dichlorobenzene		<MDL	9.05	9.05	ug/Kg		<MDL	10.9	10.9	ug/Kg		<MDL	7.28	7.28	ug/Kg		<MDL	6.85	6.85	ug/Kg

Appendix A - Table A-2
Complete Analytical Results for Freshwater CSOs

	Locator: CSO-UR-6 Descrip: UNIVERSITY REGULATOR CSO Sample: L54227-13 Matrix: SE FRSHWTRSED ColDate: 10/10/11 TotalSolid: 58.9 SampDepth: 8.6 **DRY Weight Basis**					Locator: CSO-UR-7 Descrip: UNIVERSITY REGULATOR CSO Sample: L54227-14 Matrix: SE FRSHWTRSED ColDate: 10/10/11 TotalSolid: 33.4 SampDepth: 10 **DRY Weight Basis**					Locator: CSO-ML-1 Descrip: MONTLAKE CSO Sample: L54227-15 Matrix: SE FRSHWTRSED ColDate: 10/10/11 TotalSolid: 73.2 SampDepth: 9 **DRY Weight Basis**					Locator: CSO-ML-2 Descrip: MONTLAKE CSO Sample: L54227-16 Matrix: SE FRSHWTRSED ColDate: 10/10/11 TotalSolid: 77.8 SampDepth: 10 **DRY Weight Basis**				
Parameters	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**
1,4-Dichlorobenzene		<MDL	13.6	13.6	ug/Kg		<MDL	16.3	16.3	ug/Kg		<MDL	10.9	10.9	ug/Kg		<MDL	10.3	10.3	ug/Kg
2,4-Dimethylphenol		<MDL	9	18.2	ug/Kg		<MDL	11	21.8	ug/Kg		<MDL	7.2	14.6	ug/Kg		<MDL	6.8	13.8	ug/Kg
2-Methylnaphthalene		<MDL	9	18.2	ug/Kg		<MDL	11	21.8	ug/Kg		<MDL	7.2	14.6	ug/Kg		<MDL	6.8	13.8	ug/Kg
2-Methylphenol		<MDL	9	18.2	ug/Kg		<MDL	11	21.8	ug/Kg		<MDL	7.2	14.6	ug/Kg		<MDL	6.8	13.8	ug/Kg
3-,4-Methylphenol		<MDL	46	90.5	ug/Kg		<MDL	54	109	ug/Kg		<MDL	37	72.8	ug/Kg		<MDL	35	68.5	ug/Kg
Acenaphthene	27.3		9	18.2	ug/Kg		<MDL	11	21.8	ug/Kg		<MDL	7.2	14.6	ug/Kg	10	<RDL	6.8	13.8	ug/Kg
Acenaphthylene		<MDL	9	18.2	ug/Kg		<MDL	11	21.8	ug/Kg		<MDL	7.2	14.6	ug/Kg		<MDL	6.8	13.8	ug/Kg
Anthracene	85.7		9	18.2	ug/Kg	78.7		11	21.8	ug/Kg	8.6	<RDL	7.2	14.6	ug/Kg	30.2		6.8	13.8	ug/Kg
Benzo(a)anthracene	156		9	18.2	ug/Kg	250		11	21.8	ug/Kg	29.9		7.2	14.6	ug/Kg	73.8		6.8	13.8	ug/Kg
Benzo(a)pyrene	150		9	18.2	ug/Kg	338		11	21.8	ug/Kg	45.4		7.2	14.6	ug/Kg	77.6		6.8	13.8	ug/Kg
Benzo(b,j,k)fluoranthene	250		9	18.2	ug/Kg	563		11	21.8	ug/Kg	73.6		7.2	14.6	ug/Kg	136		6.8	13.8	ug/Kg
Benzo(g,h,i)perylene	77.6		9	18.2	ug/Kg	181		11	21.8	ug/Kg	31		7.2	14.6	ug/Kg	36.4		6.8	13.8	ug/Kg
Benzoic Acid	212		182	182	ug/Kg	284		218	218	ug/Kg		<MDL	146	146	ug/Kg	528		138	138	ug/Kg
Benzyl Alcohol		<MDL	22.6	22.6	ug/Kg		<MDL	27.2	27.2	ug/Kg		<MDL	18.2	18.2	ug/Kg		<MDL	17.1	17.1	ug/Kg
Benzyl Butyl Phthalate		<MDL	13.6	13.6	ug/Kg	152	B	16.3	16.3	ug/Kg		<MDL	10.9	10.9	ug/Kg		<MDL	10.3	10.3	ug/Kg
Bis(2-Ethylhexyl)Phthalate	260	B2	19	36.2	ug/Kg	311	B2	22	43.4	ug/Kg	68.4	B	15	29.1	ug/Kg	69.7	B	14	27.4	ug/Kg
Chrysene	173		9	18.2	ug/Kg	326		11	21.8	ug/Kg	29.5		7.2	14.6	ug/Kg	78.1		6.8	13.8	ug/Kg
Dibenzo(a,h)anthracene	36.5		9	18.2	ug/Kg	71.3		11	21.8	ug/Kg	11	<RDL	7.2	14.6	ug/Kg	15.7		6.8	13.8	ug/Kg
Dibenzofuran	12	<RDL	9	18.2	ug/Kg		<MDL	11	21.8	ug/Kg		<MDL	7.2	14.6	ug/Kg	7.3	<RDL	6.8	13.8	ug/Kg
Diethyl Phthalate		<MDL	19	36.2	ug/Kg		<MDL	22	43.4	ug/Kg		<MDL	15	29.1	ug/Kg		<MDL	14	27.4	ug/Kg
Dimethyl Phthalate		<MDL	18.2	18.2	ug/Kg		<MDL	21.8	21.8	ug/Kg		<MDL	14.6	14.6	ug/Kg		<MDL	13.8	13.8	ug/Kg
Di-N-Butyl Phthalate	31	<RDL,B	19	36.2	ug/Kg	184	B	22	43.4	ug/Kg	22	<RDL,B	15	29.1	ug/Kg	21	<RDL,B	14	27.4	ug/Kg
Di-N-Octyl Phthalate		<MDL	18.2	18.2	ug/Kg		<MDL	21.8	21.8	ug/Kg		<MDL	14.6	14.6	ug/Kg		<MDL	13.8	13.8	ug/Kg
Fluoranthene	416		9	18.2	ug/Kg	329		11	21.8	ug/Kg	43		7.2	14.6	ug/Kg	170		6.8	13.8	ug/Kg
Fluorene	45.5		9	18.2	ug/Kg		<MDL	11	21.8	ug/Kg		<MDL	7.2	14.6	ug/Kg	15.9		6.8	13.8	ug/Kg
Hexachlorobenzene		<MDL	0.9	1.82	ug/Kg		<MDL	1.1	2.18	ug/Kg		<MDL	0.72	1.46	ug/Kg		<MDL	0.68	1.38	ug/Kg
Hexachlorobutadiene		<MDL	4.6	9.05	ug/Kg		<MDL	5.4	10.9	ug/Kg		<MDL	3.7	7.28	ug/Kg		<MDL	3.5	6.85	ug/Kg
Indeno(1,2,3-Cd)Pyrene	68.3		9	18.2	ug/Kg	167		11	21.8	ug/Kg	22.5		7.2	14.6	ug/Kg	34.6		6.8	13.8	ug/Kg
Naphthalene		<MDL	9	18.2	ug/Kg		<MDL	11	21.8	ug/Kg		<MDL	7.2	14.6	ug/Kg		<MDL	6.8	13.8	ug/Kg
N-Nitrosodiphenylamine		<MDL	22.6	22.6	ug/Kg		<MDL	27.2	27.2	ug/Kg		<MDL	18.2	18.2	ug/Kg		<MDL	17.1	17.1	ug/Kg
Pentachlorophenol		<MDL	136	136	ug/Kg		<MDL	163	163	ug/Kg		<MDL	109	109	ug/Kg		<MDL	103	103	ug/Kg
Phenanthrene	278		9	18.2	ug/Kg	108		11	21.8	ug/Kg	12	<RDL	7.2	14.6	ug/Kg	145		6.8	13.8	ug/Kg
Phenol		<MDL	46	136	ug/Kg		<MDL	54	163	ug/Kg		<MDL	37	109	ug/Kg		<MDL	35	103	ug/Kg
Pyrene	341		9	18.2	ug/Kg	299		11	21.8	ug/Kg	43.6		7.2	14.6	ug/Kg	150		6.8	13.8	ug/Kg
Total HPAHS	1670		9	18.2	ug/Kg	2520		11	21.8	ug/Kg	330		7.2	14.6	ug/Kg	772		6.8	13.8	ug/Kg
Total LPAHs	437		9	18.2	ug/Kg	187		11	21.8	ug/Kg	20.8		7.2	14.6	ug/Kg	202		6.8	13.8	ug/Kg

* Not converted to dry weight ba

Appendix A - Table A-2
Complete Analytical Results for Freshwater CSOs

	Locator: CSO-ML-3 Descrip: MONTLAKE CSO Sample: L54227-17 Matrix: SE FRSHWTRSED ColDate: 10/10/11 TotalSolid: 71.3 SampDepth: 10 **DRY Weight Basis**					Locator: CSO-ML-4 Descrip: MONTLAKE CSO Sample: L54227-18 Matrix: SE FRSHWTRSED ColDate: 10/10/11 TotalSolid: 78.7 SampDepth: 10 **DRY Weight Basis**					Locator: CSO-ML-5 Descrip: MONTLAKE CSO Sample: L54227-19 Matrix: SE FRSHWTRSED ColDate: 10/10/11 TotalSolid: 79.1 SampDepth: 10 **DRY Weight Basis**					Locator: CSO-ML-6 Descrip: MONTLAKE CSO Sample: L54227-20 Matrix: SE FRSHWTRSED ColDate: 10/10/11 TotalSolid: 80.2 SampDepth: 10 **DRY Weight Basis**				
Parameters	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**
ASTM D422																				
Clay*	3.4		0.8	1.7	%	1.8		0.6	1.2	%	1.9		0.6	1.2	%	2.5		0.6	1.2	%
Fines*	3.4		0.8	1.7	%	1.8		0.6	1.2	%	2.5		0.6	1.2	%	3.7		0.6	1.2	%
Gravel*	15.3		0.2	1.7	%	12.1		0.1	1.2	%	4.5		0.1	1.2	%	37.4		0.1	1.2	%
p+0.00*	9.6		0.2	1.7	%	10.9		0.1	1.2	%	15.8		0.1	1.2	%	9.2		0.1	1.2	%
p+1.00*	18.3		0.2	1.7	%	21.2		0.1	1.2	%	26.1		0.1	1.2	%	13.4		0.1	1.2	%
p+10.0(equal/more than)*	3.4		0.8	1.7	%	1.8		0.6	1.2	%	1.9		0.6	1.2	%	2.5		0.6	1.2	%
p+2.00*	40.8		0.2	1.7	%	47		0.1	1.2	%	39.4		0.1	1.2	%	30.9		0.1	1.2	%
p+3.00*	11.7		0.2	1.7	%	8		0.1	1.2	%	11.2		0.1	1.2	%	9.9		0.1	1.2	%
p+4.00*	1.3	<RDL	0.2	1.7	%	0.7	<RDL	0.1	1.2	%	1.3		0.1	1.2	%	1	<RDL	0.1	1.2	%
p+5.00*		<MDL	0.8	1.7	%		<MDL	0.6	1.2	%		<MDL	0.6	1.2	%		<MDL	0.6	1.2	%
p+6.00*		<MDL	0.8	1.7	%		<MDL	0.6	1.2	%		<MDL	0.6	1.2	%		<MDL	0.6	1.2	%
p+7.00*		<MDL	0.8	1.7	%		<MDL	0.6	1.2	%		<MDL	0.6	1.2	%	0.6	<RDL	0.6	1.2	%
p+8.00*		<MDL	0.8	1.7	%		<MDL	0.6	1.2	%	0.6	<RDL	0.6	1.2	%	0.6	<RDL	0.6	1.2	%
p+9.00*		<MDL	0.8	1.7	%		<MDL	0.6	1.2	%		<MDL	0.6	1.2	%		<MDL	0.6	1.2	%
p-1.00*	4.2		0.2	1.7	%	5.1		0.1	1.2	%	4.5		0.1	1.2	%	8.9		0.1	1.2	%
p-2.00(less than)*	9.9		0.2	1.7	%	6.6		0.1	1.2	%		<MDL	0.1	1.2	%	26.2		0.1	1.2	%
p-2.00*	1.2	<RDL	0.2	1.7	%	0.4	<RDL	0.1	1.2	%		<MDL	0.1	1.2	%	2.2		0.1	1.2	%
Sand*	81.9		0.2	1.7	%	87.9		0.1	1.2	%	93.7		0.1	1.2	%	64.5		0.1	1.2	%
Silt*		<MDL	0.8	1.7	%		<MDL	0.6	1.2	%	0.6	<RDL	0.6	1.2	%	1.2	RDL,J	0.6	1.2	%
SM2540-G																				
Total Solids*	71.3		0.005	0.01	%	78.7		0.005	0.01	%	79.1		0.005	0.01	%	80.2		0.005	0.01	%
CV SW846 9060-PSEP96																				
Total Organic Carbon	7530		520	1030	mg/Kg	2130		510	1010	mg/Kg	2380		510	1020	mg/Kg	2070		510	1010	mg/Kg
EPA 3050B/6020A																				
Antimony, Total, ICP-MS	0.45	JG	0.11	0.367	mg/Kg		<MDL,JG	0.099	0.33	mg/Kg		<MDL,JG	0.096	0.319	mg/Kg		<MDL,JG	0.09	0.298	mg/Kg
Arsenic, Total, ICP-MS	6.68		0.036	0.184	mg/Kg	3		0.033	0.165	mg/Kg	2.57		0.032	0.159	mg/Kg	1.75		0.03	0.148	mg/Kg
Cadmium, Total, ICP-MS	0.109		0.018	0.0917	mg/Kg	0.053	<RDL	0.017	0.0826	mg/Kg	0.057	<RDL	0.016	0.0795	mg/Kg	0.054	<RDL	0.015	0.0744	mg/Kg
Chromium, Total, ICP-MS	14.6		0.073	0.367	mg/Kg	16.9		0.066	0.33	mg/Kg	11.5		0.063	0.319	mg/Kg	12.3		0.06	0.298	mg/Kg
Copper, Total, ICP-MS	50.5		0.14	0.735	mg/Kg	11.4		0.13	0.661	mg/Kg	10.6		0.13	0.637	mg/Kg	13		0.12	0.596	mg/Kg
Lead, Total, ICP-MS	565		0.18	0.917	mg/Kg	22.4		0.033	0.165	mg/Kg	85		0.032	0.159	mg/Kg	15.2		0.03	0.148	mg/Kg
Nickel, Total, ICP-MS	21		0.036	0.184	mg/Kg	20.3		0.033	0.165	mg/Kg	22.5		0.032	0.159	mg/Kg	20.8		0.03	0.148	mg/Kg
Silver, Total, ICP-MS	0.1		0.014	0.0735	mg/Kg	0.029	<RDL	0.013	0.0661	mg/Kg	0.033	<RDL	0.013	0.0637	mg/Kg	0.021	<RDL	0.012	0.0596	mg/Kg
Zinc, Total, ICP-MS	265		0.18	0.917	mg/Kg	59.3		0.17	0.826	mg/Kg	39.9		0.16	0.795	mg/Kg	28.1		0.15	0.744	mg/Kg
EPA 7471B																				
Mercury, Total, CVAA	0.0732		0.007	0.0694	mg/Kg	0.025	<RDL	0.0062	0.0625	mg/Kg	0.0666		0.0063	0.063	mg/Kg	0.036	<RDL	0.006	0.0605	mg/Kg
EPA 3550B/8082A																				
Aroclor 1016		<MDL	1.8	3.74	ug/Kg		<MDL	1.7	3.39	ug/Kg		<MDL	1.6	3.38	ug/Kg		<MDL	1.6	3.33	ug/Kg
Aroclor 1221		<MDL	3.8	7.48	ug/Kg		<MDL	3.4	6.77	ug/Kg		<MDL	3.4	6.74	ug/Kg		<MDL	3.4	6.65	ug/Kg
Aroclor 1232		<MDL	3.8	7.48	ug/Kg		<MDL	3.4	6.77	ug/Kg		<MDL	3.4	6.74	ug/Kg		<MDL	3.4	6.65	ug/Kg
Aroclor 1242		<MDL	1.8	3.74	ug/Kg		<MDL	1.7	3.39	ug/Kg		<MDL	1.6	3.38	ug/Kg		<MDL	1.6	3.33	ug/Kg
Aroclor 1248		<MDL	1.8	3.74	ug/Kg		<MDL	1.7	3.39	ug/Kg		<MDL	1.6	3.38	ug/Kg		<MDL	1.6	3.33	ug/Kg
Aroclor 1254	6.1		1.8	3.74	ug/Kg		<MDL	1.7	3.39	ug/Kg		<MDL	1.6	3.38	ug/Kg		<MDL	1.6	3.33	ug/Kg
Aroclor 1260	11.5		1.8	3.74	ug/Kg		<MDL	1.7	3.39	ug/Kg		<MDL	1.6	3.38	ug/Kg		<MDL	1.6	3.33	ug/Kg
Total Aroclors	17.6		1.8	3.74	ug/Kg		<MDL	3.4	6.77	ug/Kg		<MDL	3.4	6.74	ug/Kg		<MDL	3.4	6.65	ug/Kg
EPA 3550B/8270D																				
1,2,4-Trichlorobenzene		<MDL	0.74	1.5	ug/Kg		<MDL	0.67	1.36	ug/Kg		<MDL	0.67	1.35	ug/Kg		<MDL	0.66	1.33	ug/Kg
1,2-Dichlorobenzene		<MDL	7.48	7.48	ug/Kg		<MDL	6.77	6.77	ug/Kg		<MDL	6.74	6.74	ug/Kg		<MDL	6.65	6.65	ug/Kg

Appendix A - Table A-2
Complete Analytical Results for Freshwater CSOs

	Locator: CSO-ML-3 Descrip: MONTLAKE CSO Sample: L54227-17 Matrix: SE FRSHWTRSED ColDate: 10/10/11 TotalSolid: 71.3 SampDepth: 10 **DRY Weight Basis**					Locator: CSO-ML-4 Descrip: MONTLAKE CSO Sample: L54227-18 Matrix: SE FRSHWTRSED ColDate: 10/10/11 TotalSolid: 78.7 SampDepth: 10 **DRY Weight Basis**					Locator: CSO-ML-5 Descrip: MONTLAKE CSO Sample: L54227-19 Matrix: SE FRSHWTRSED ColDate: 10/10/11 TotalSolid: 79.1 SampDepth: 10 **DRY Weight Basis**					Locator: CSO-ML-6 Descrip: MONTLAKE CSO Sample: L54227-20 Matrix: SE FRSHWTRSED ColDate: 10/10/11 TotalSolid: 80.2 SampDepth: 10 **DRY Weight Basis**				
Parameters	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**
1,4-Dichlorobenzene		<MDL	11.2	11.2	ug/Kg		<MDL	10.2	10.2	ug/Kg		<MDL	10.1	10.1	ug/Kg		<MDL	9.98	9.98	ug/Kg
2,4-Dimethylphenol		<MDL	7.4	15	ug/Kg		<MDL	6.7	13.6	ug/Kg		<MDL	6.7	13.5	ug/Kg		<MDL	6.6	13.3	ug/Kg
2-Methylnaphthalene		<MDL	7.4	15	ug/Kg		<MDL	6.7	13.6	ug/Kg		<MDL	6.7	13.5	ug/Kg		<MDL	6.6	13.3	ug/Kg
2-Methylphenol		<MDL	7.4	15	ug/Kg		<MDL	6.7	13.6	ug/Kg		<MDL	6.7	13.5	ug/Kg		<MDL	6.6	13.3	ug/Kg
3-,4-Methylphenol		<MDL	38	74.8	ug/Kg		<MDL	34	67.7	ug/Kg		<MDL	34	67.4	ug/Kg		<MDL	34	66.5	ug/Kg
Acenaphthene	12	<RDL	7.4	15	ug/Kg		<MDL	6.7	13.6	ug/Kg		<MDL	6.7	13.5	ug/Kg		<MDL	6.6	13.3	ug/Kg
Acenaphthylene		<MDL	7.4	15	ug/Kg		<MDL	6.7	13.6	ug/Kg		<MDL	6.7	13.5	ug/Kg		<MDL	6.6	13.3	ug/Kg
Anthracene	48.5		7.4	15	ug/Kg	12	<RDL	6.7	13.6	ug/Kg	9	<RDL	6.7	13.5	ug/Kg		<MDL,J	6.6	13.3	ug/Kg
Benzo(a)anthracene	369		7.4	15	ug/Kg	33.3		6.7	13.6	ug/Kg	29.7		6.7	13.5	ug/Kg	9	<RDL,J	6.6	13.3	ug/Kg
Benzo(a)pyrene	240		7.4	15	ug/Kg	35.2		6.7	13.6	ug/Kg	36.2		6.7	13.5	ug/Kg	14.1		6.6	13.3	ug/Kg
Benzo(b,j,k)fluoranthene	489		7.4	15	ug/Kg	57.3		6.7	13.6	ug/Kg	64		6.7	13.5	ug/Kg	21.3	J	6.6	13.3	ug/Kg
Benzo(g,h,i)perylene	150		7.4	15	ug/Kg	18.8		6.7	13.6	ug/Kg	21		6.7	13.5	ug/Kg	7.7	<RDL,J	6.6	13.3	ug/Kg
Benzoic Acid	353		150	150	ug/Kg	325		136	136	ug/Kg	140		135	135	ug/Kg	236		133	133	ug/Kg
Benzyl Alcohol		<MDL	18.7	18.7	ug/Kg		<MDL	16.9	16.9	ug/Kg		<MDL	16.8	16.8	ug/Kg		<MDL	16.6	16.6	ug/Kg
Benzyl Butyl Phthalate		<MDL	11.2	11.2	ug/Kg		<MDL	10.2	10.2	ug/Kg		<MDL	10.1	10.1	ug/Kg		<MDL	9.98	9.98	ug/Kg
Bis(2-Ethylhexyl)Phthalate	146	B2	15	29.9	ug/Kg	59.2	B	14	27.1	ug/Kg	58	B	14	26.9	ug/Kg	30.2	B	14	26.6	ug/Kg
Chrysene	604		7.4	15	ug/Kg	26.8		6.7	13.6	ug/Kg	27.4		6.7	13.5	ug/Kg		<MDL,J	6.6	13.3	ug/Kg
Dibenzo(a,h)anthracene	43.5		7.4	15	ug/Kg	9.1	<RDL	6.7	13.6	ug/Kg	9.6	<RDL	6.7	13.5	ug/Kg		<MDL	6.6	13.3	ug/Kg
Dibenzofuran		<MDL	7.4	15	ug/Kg		<MDL	6.7	13.6	ug/Kg		<MDL	6.7	13.5	ug/Kg		<MDL	6.6	13.3	ug/Kg
Diethyl Phthalate		<MDL	15	29.9	ug/Kg		<MDL	14	27.1	ug/Kg		<MDL	14	26.9	ug/Kg		<MDL,J	14	26.6	ug/Kg
Dimethyl Phthalate		<MDL	15	15	ug/Kg		<MDL	13.6	13.6	ug/Kg		<MDL	13.5	13.5	ug/Kg		<MDL,J	13.3	13.3	ug/Kg
Di-N-Butyl Phthalate		<MDL	15	29.9	ug/Kg	20	<RDL,B	14	27.1	ug/Kg	20	<RDL,B	14	26.9	ug/Kg	19	<RDL,B,J	14	26.6	ug/Kg
Di-N-Octyl Phthalate		<MDL	15	15	ug/Kg		<MDL	13.6	13.6	ug/Kg		<MDL	13.5	13.5	ug/Kg		<MDL	13.3	13.3	ug/Kg
Fluoranthene	419		7.4	15	ug/Kg	62.1		6.7	13.6	ug/Kg	58.7		6.7	13.5	ug/Kg	11	<RDL,J	6.6	13.3	ug/Kg
Fluorene	17.8		7.4	15	ug/Kg		<MDL	6.7	13.6	ug/Kg		<MDL	6.7	13.5	ug/Kg		<MDL,J	6.6	13.3	ug/Kg
Hexachlorobenzene		<MDL	0.74	1.5	ug/Kg		<MDL	0.67	1.36	ug/Kg		<MDL	0.67	1.35	ug/Kg		<MDL,J	0.66	1.33	ug/Kg
Hexachlorobutadiene		<MDL	3.8	7.48	ug/Kg		<MDL	3.4	6.77	ug/Kg		<MDL	3.4	6.74	ug/Kg		<MDL	3.4	6.65	ug/Kg
Indeno(1,2,3-Cd)Pyrene	156		7.4	15	ug/Kg	14.4		6.7	13.6	ug/Kg	16.6		6.7	13.5	ug/Kg		<MDL	6.6	13.3	ug/Kg
Naphthalene		<MDL	7.4	15	ug/Kg		<MDL	6.7	13.6	ug/Kg		<MDL	6.7	13.5	ug/Kg		<MDL	6.6	13.3	ug/Kg
N-Nitrosodiphenylamine		<MDL	18.7	18.7	ug/Kg		<MDL	16.9	16.9	ug/Kg		<MDL	16.8	16.8	ug/Kg		<MDL,J	16.6	16.6	ug/Kg
Pentachlorophenol		<MDL	112	112	ug/Kg		<MDL	102	102	ug/Kg		<MDL	101	101	ug/Kg		<MDL,J	99.8	99.8	ug/Kg
Phenanthrene	173		7.4	15	ug/Kg	29.6		6.7	13.6	ug/Kg	21.6		6.7	13.5	ug/Kg		<MDL,J	6.6	13.3	ug/Kg
Phenol		<MDL	38	112	ug/Kg		<MDL	34	102	ug/Kg		<MDL	34	101	ug/Kg		<MDL	34	99.8	ug/Kg
Pyrene	482		7.4	15	ug/Kg	53		6.7	13.6	ug/Kg	48.2		6.7	13.5	ug/Kg	9	<RDL,J	6.6	13.3	ug/Kg
Total HPAHS	2950		7.4	15	ug/Kg	310		6.7	13.6	ug/Kg	311		6.7	13.5	ug/Kg	71.8		6.6	13.3	ug/Kg
Total LPAHs	251		7.4	15	ug/Kg	41.8		6.7	13.6	ug/Kg	30.6		6.7	13.5	ug/Kg		<MDL	6.6	13.3	ug/Kg

* Not converted to dry weight ba

Appendix A - Table A-2
Complete Analytical Results for Freshwater CSOs

	Locator: CSO-ML-7 Descrip: MONTLAKE CSO Sample: L54227-21 Matrix: SE FRSHWTRSED ColDate: 10/10/11 TotalSolid: 73.7 SampDepth: 8.3 **DRY Weight Basis**					Locator: CSO-BKGD-UB Descrip: BACKGROUND STATION Sample: L54227-22 Matrix: SE FRSHWTRSED ColDate: 10/10/11 TotalSolid: 10.7 SampDepth: 9.6 **DRY Weight Basis**					Locator: CSO-UR-1 Descrip: UNIVERSITY REGULATOR CSO Sample: L55155-1 Matrix: SE FRSHWTRSED ColDate: 10/10/11 TotalSolid: 23.4 SampDepth: **DRY Weight Basis**				
Parameters	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**
ASTM D422															
Clay*	2.7		0.7	1.3	%	16		5.3	10.7	%					
Fines*	2.7		0.7	1.3	%	26.7		5.3	10.7	%					
Gravel*	15.2		0.1	1.3	%	15.2		1.1	10.7	%					
p+0.00*	6.7		0.1	1.3	%	3	<RDL	1.1	10.7	%					
p+1.00*	14.8		0.1	1.3	%	7.8	<RDL	1.1	10.7	%					
p+10.0(equal/more than)*	2.7		0.7	1.3	%	16		5.3	10.7	%					
p+2.00*	48.6		0.1	1.3	%	18.6		1.1	10.7	%					
p+3.00*	13.5		0.1	1.3	%	16.9		1.1	10.7	%					
p+4.00*	1.1	<RDL	0.1	1.3	%	9.5	<RDL	1.1	10.7	%					
p+5.00*		<MDL	0.7	1.3	%		<MDL	5.3	10.7	%					
p+6.00*		<MDL	0.7	1.3	%	5.3	<RDL	5.3	10.7	%					
p+7.00*		<MDL	0.7	1.3	%	5.3	<RDL	5.3	10.7	%					
p+8.00*		<MDL	0.7	1.3	%		<MDL	5.3	10.7	%					
p+9.00*		<MDL	0.7	1.3	%		<MDL	5.3	10.7	%					
p-1.00*	5.3		0.1	1.3	%		<MDL	1.1	10.7	%					
p-2.00(less than)*	9.5		0.1	1.3	%	15.2		1.1	10.7	%					
p-2.00*	0.5	<RDL	0.1	1.3	%		<MDL	1.1	10.7	%					
Sand*	84.7		0.1	1.3	%	55.8		1.1	10.7	%					
Silt*		<MDL	0.7	1.3	%	10.7	RDL	5.3	10.7	%					
SM2540-G															
Total Solids*	73.7		0.005	0.01	%	10.7		0.005	0.01	%	23.4		0.005	0.01	%
CV SW846 9060-PSEP96															
Total Organic Carbon	4150		500	1010	mg/Kg	188000		12000	24600	mg/Kg	137000		7700	15200	mg/Kg
EPA 3050B/6020A															
Antimony, Total, ICP-MS	3.54	JG,J	0.098	0.324	mg/Kg		<MDL,JG	0.26	0.885	mg/Kg					
Arsenic, Total, ICP-MS	29.6	J	0.033	0.163	mg/Kg	9.44		0.089	0.442	mg/Kg					
Cadmium, Total, ICP-MS	0.18		0.016	0.0811	mg/Kg	0.236		0.044	0.221	mg/Kg					
Chromium, Total, ICP-MS	14.4		0.065	0.324	mg/Kg	18.9		0.18	0.885	mg/Kg					
Copper, Total, ICP-MS	65.1	J	0.13	0.649	mg/Kg	19.3		0.36	1.77	mg/Kg					
Lead, Total, ICP-MS	112		0.16	0.811	mg/Kg	9.81		0.089	0.442	mg/Kg					
Nickel, Total, ICP-MS	21.7		0.033	0.163	mg/Kg	19.6		0.089	0.442	mg/Kg					
Silver, Total, ICP-MS	0.247	J	0.013	0.0649	mg/Kg	0.055	<RDL	0.036	0.177	mg/Kg					
Zinc, Total, ICP-MS	202	J	0.16	0.811	mg/Kg	30.8		0.44	2.21	mg/Kg					
EPA 7471B															
Mercury, Total, CVAA	0.089		0.0068	0.0674	mg/Kg	0.093	<RDL	0.047	0.465	mg/Kg					
EPA 3550B/8082A															
Aroclor 1016		<MDL	1.8	3.62	ug/Kg		<MDL	6.3	12.4	ug/Kg					
Aroclor 1221		<MDL	3.7	7.23	ug/Kg		<MDL	12	25	ug/Kg					
Aroclor 1232		<MDL	3.7	7.23	ug/Kg		<MDL	12	25	ug/Kg					
Aroclor 1242		<MDL	1.8	3.62	ug/Kg		<MDL	6.3	12.4	ug/Kg					
Aroclor 1248		<MDL	1.8	3.62	ug/Kg		<MDL	6.3	12.4	ug/Kg					
Aroclor 1254	2.3	<RDL	1.8	3.62	ug/Kg		<MDL	6.3	12.4	ug/Kg					
Aroclor 1260	2.2	<RDL	1.8	3.62	ug/Kg		<MDL	6.3	12.4	ug/Kg					
Total Aroclors	4.48		1.8	3.62	ug/Kg		<MDL	12	25	ug/Kg					
EPA 3550B/8270D															
1,2,4-Trichlorobenzene		<MDL	0.72	1.45	ug/Kg		<MDL	1	2.14	ug/Kg		<MDL	1.4	2.74	ug/Kg
1,2-Dichlorobenzene		<MDL	7.23	7.23	ug/Kg		<MDL	10.7	10.7	ug/Kg		<MDL	13.7	13.7	ug/Kg

Appendix A - Table A-2
Complete Analytical Results for Freshwater CSOs

	Locator: CSO-ML-7					Locator: CSO-BKGD-UB					Locator: CSO-UR-1				
	Descrip: MONTLAKE CSO					Descrip: BACKGROUND STATION					Descrip: UNIVERSITY REGULATOR CSO				
	Sample: L54227-21					Sample: L54227-22					Sample: L55155-1				
	Matrix: SE FRSHWTRSED					Matrix: SE FRSHWTRSED					Matrix: SE FRSHWTRSED				
	ColDate: 10/10/11					ColDate: 10/10/11					ColDate: 10/10/11				
	TotalSolid: 73.7					TotalSolid: 10.7					TotalSolid: 23.4				
	SampDepth: 8.3					SampDepth: 9.6					SampDepth:				
	DRY Weight Basis					**DRY Weight Basis**					**DRY Weight Basis**				
Parameters	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**
1,4-Dichlorobenzene		<MDL	10.9	10.9	ug/Kg		<MDL	16	16	ug/Kg		<MDL	20.5	20.5	ug/Kg
2,4-Dimethylphenol		<MDL	7.2	14.5	ug/Kg		<MDL	10	21.4	ug/Kg		<MDL	14	27.4	ug/Kg
2-Methylnaphthalene		<MDL	7.2	14.5	ug/Kg		<MDL	10	21.4	ug/Kg		<MDL	14	27.4	ug/Kg
2-Methylphenol		<MDL	7.2	14.5	ug/Kg		<MDL	10	21.4	ug/Kg		<MDL	14	27.4	ug/Kg
3-,4-Methylphenol		<MDL	37	72.3	ug/Kg		<MDL	53	107	ug/Kg		<MDL	68	137	ug/Kg
Acenaphthene		<MDL	7.2	14.5	ug/Kg		<MDL	10	21.4	ug/Kg	29.7		14	27.4	ug/Kg
Acenaphthylene		<MDL	7.2	14.5	ug/Kg		<MDL	10	21.4	ug/Kg	15	<RDL	14	27.4	ug/Kg
Anthracene	9.4	<RDL	7.2	14.5	ug/Kg	27.5		10	21.4	ug/Kg	119		14	27.4	ug/Kg
Benzo(a)anthracene	25.9		7.2	14.5	ug/Kg	165		10	21.4	ug/Kg	650		14	27.4	ug/Kg
Benzo(a)pyrene	33.8		7.2	14.5	ug/Kg	410		10	21.4	ug/Kg	551		14	27.4	ug/Kg
Benzo(b,j,k)fluoranthene	61.1		7.2	14.5	ug/Kg	288		10	21.4	ug/Kg	1520		14	27.4	ug/Kg
Benzo(g,h,i)perylene	18.9		7.2	14.5	ug/Kg	153		10	21.4	ug/Kg	404		14	27.4	ug/Kg
Benzoic Acid	328		145	145	ug/Kg	311		214	214	ug/Kg	538		274	274	ug/Kg
Benzyl Alcohol		<MDL	18	18	ug/Kg		<MDL	26.7	26.7	ug/Kg		<MDL	34.2	34.2	ug/Kg
Benzyl Butyl Phthalate		<MDL	10.9	10.9	ug/Kg		<MDL	16	16	ug/Kg	2330		20.5	20.5	ug/Kg
Bis(2-Ethylhexyl)Phthalate	204	B2	15	28.9	ug/Kg	580	B	21	42.7	ug/Kg	12300		270	547	ug/Kg
Chrysene	25.1		7.2	14.5	ug/Kg	120		10	21.4	ug/Kg	1030		14	27.4	ug/Kg
Dibenzo(a,h)anthracene		<MDL	7.2	14.5	ug/Kg	29.4		10	21.4	ug/Kg	71.8		14	27.4	ug/Kg
Dibenzofuran		<MDL	7.2	14.5	ug/Kg		<MDL	10	21.4	ug/Kg	28.9		14	27.4	ug/Kg
Diethyl Phthalate		<MDL	15	28.9	ug/Kg		<MDL	21	42.7	ug/Kg	41	<RDL	27	54.7	ug/Kg
Dimethyl Phthalate		<MDL	14.5	14.5	ug/Kg		<MDL	21.4	21.4	ug/Kg		<MDL	27.4	27.4	ug/Kg
Di-N-Butyl Phthalate	22	<RDL,B	15	28.9	ug/Kg	39	<RDL,B	21	42.7	ug/Kg	130	B	27	54.7	ug/Kg
Di-N-Octyl Phthalate		<MDL	14.5	14.5	ug/Kg		<MDL	21.4	21.4	ug/Kg		<MDL	27.4	27.4	ug/Kg
Fluoranthene	49.8		7.2	14.5	ug/Kg	364		10	21.4	ug/Kg	1690		14	27.4	ug/Kg
Fluorene		<MDL	7.2	14.5	ug/Kg		<MDL	10	21.4	ug/Kg	63.2		14	27.4	ug/Kg
Hexachlorobenzene		<MDL	0.72	1.45	ug/Kg		<MDL	1	2.14	ug/Kg		<MDL	1.4	2.74	ug/Kg
Hexachlorobutadiene		<MDL	3.7	7.23	ug/Kg		<MDL	5.3	10.7	ug/Kg		<MDL	6.8	13.7	ug/Kg
Indeno(1,2,3-Cd)Pyrene	14.7		7.2	14.5	ug/Kg	97.2		10	21.4	ug/Kg	305		14	27.4	ug/Kg
Naphthalene		<MDL	7.2	14.5	ug/Kg		<MDL	10	21.4	ug/Kg	17	<RDL	14	27.4	ug/Kg
N-Nitrosodiphenylamine		<MDL	18	18	ug/Kg		<MDL	26.7	26.7	ug/Kg		<MDL	34.2	34.2	ug/Kg
Pentachlorophenol		<MDL	109	109	ug/Kg		<MDL	160	160	ug/Kg		<MDL	205	205	ug/Kg
Phenanthrene	17.5		7.2	14.5	ug/Kg	81.6		10	21.4	ug/Kg	487		14	27.4	ug/Kg
Phenol		<MDL	37	109	ug/Kg		<MDL	53	160	ug/Kg		<MDL	68	205	ug/Kg
Pyrene	43.6		7.2	14.5	ug/Kg	369		10	21.4	ug/Kg	1420		14	27.4	ug/Kg
Total HPAHS	273		7.2	14.5	ug/Kg	2000		10	21.4	ug/Kg	7650		14	27.4	ug/Kg
Total LPAHs	26.9		7.2	14.5	ug/Kg	109		10	21.4	ug/Kg	731		14	27.4	ug/Kg

* Not converted to dry weight ba

Appendix B
Data Validation Review Memorandum and Attachments

King County

Technical Memorandum

Date: November 28, 2012

To: Recipients, Project File

From: Scott Mickelson, King County Marine and Sediment Assessment Group

Subject: Data Validation Review
Marine, Estuarine, and Freshwater CSO Sediment Chemistry Samples
Sediment Management Plan Update – 2011 CSO Sediment Monitoring Project

This technical memorandum summarizes the data validation review performed on 45 marine and estuarine sediment samples collected on August 29 and 30, 2011 and 22 freshwater sediment samples collected on October 10, 2011. These 67 samples, assigned sample numbers L53963-1 through -45 and L54227-1 through -22, were submitted for analysis of particle size distribution (PSD), total organic carbon (TOC), total solids, mercury, other metals, base/neutral/acid semivolatile organic compounds (BNAs), and polychlorinated biphenyls (PCBs). Sample L54227-8 required re-analysis for BNAs, following centrifugation and decanting of liquid, and was assigned a new sample number (L55155-1). Sample L55155-1 was also re-analyzed for total organic carbon and total solids so that adjustments for dry weight or TOC content would directly represent the portion of sample tested. All samples were collected and all analyses performed by the King County Environmental Laboratory.

This work was performed to provide information necessary to update the County's Sediment Management Plan as well as provide pre-construction, baseline sediment quality data at four of the County's combined sewer overflows (CSOs), at which CSO-control projects are currently underway. All sampling and analysis associated with this monitoring program was performed in accordance with protocols and methodologies outlined in the project sampling and analysis plan (King County 2011).

1.0 Introduction

This data validation review has been based, in part, on guidance found in *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (EPA 2008) and *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review* (EPA 2010), as well as the project SAP (King County 2011). Materials reviewed included Batch Reports and Analytical Quality Control (QC) Reports downloaded from the King County Laboratory Information System (LIMS) database, along with

data anomaly forms, all of which are attached to this memorandum. The QC parameters reviewed during this data validation include; holding time, method blanks, spike blanks, matrix spikes, matrix spike duplicates, laboratory control samples, standard reference materials, laboratory replicates, and surrogates, which are described below.

1.1 Holding Time

The analytical holding time is a method-specific timeframe, during which sample preparation and analysis should occur to provide valid data. All samples should be analyzed within this prescribed holding time.

1.2 Method Blank

A method blank is an aliquot of clean reference matrix that is generally processed through the entire analytical procedure. Please see the individual analytical sections for a description of the method blank for each analysis. Analysis of the method blank is used to evaluate the levels of contamination that might be associated with the processing and analysis of samples. All method blank results should be less than the method detection limit (MDL). Method blanks were included with all analyses except PSD.

1.3 Spike Blank

A spike blank is an aliquot of the clean reference matrix used for the method blank, to which a known concentration of target analyte(s) has been added. The spiked aliquot is processed through the entire analytical procedure. Analysis of the spike blank is used as an indicator of method accuracy. Spike blanks were used as part of the QC regimen for TOC, mercury, metals, BNA, and PCB analyses. Spike blanks are not addressed in the *National Functional Guidelines*, however, King County has method-defined or empirically-derived control limits for spike blank analytes, which are shown on the attached QC reports. Spike blank results should be within these control limits.

1.4 Matrix Spike

A matrix spike is a sample aliquot fortified with a known concentration of a target analyte(s). The spiked sample is processed through the entire analytical procedure. Analysis of the matrix spike is used as an indicator of sample matrix effect on the recovery of target analyte(s). Control limits for individual organic analytes and total organic carbon are not addressed in the *National Functional Guidelines*, however, King County has program-defined (Ecology 2008) or empirically-derived control limits for percent recoveries of these matrix spike analytes, which are shown on the attached QC reports. Matrix spike recoveries should be within these control limits. Matrix spike recoveries for metals should be within 75 to 125% (EPA 2010).

1.5 Matrix Spike Duplicate

A matrix spike duplicate is a second sample aliquot fortified with a known concentration of a target analyte(s). The spiked sample is processed through the entire analytical procedure. Matrix spike duplicates were analyzed as part of the QC regimen for all trace organic analyses as well as mercury analysis. Analysis of the matrix spike duplicate is used as an additional indicator of sample matrix effect on the recovery of target analyte(s) as well as an indicator of method precision. The relative percent difference (RPD) between matrix spike and matrix spike

duplicate results for trace organic analytes are not addressed in the *National Functional Guidelines*, however, King County uses program-defined (Ecology 2008) control limits for this QC analysis, which are shown on the attached QC reports. The RPD for matrix spike/matrix spike duplicate results should be less than 20% for mercury analysis (EPA 2010).

1.6 Laboratory Control Sample and Standard Reference Material

A laboratory control sample (LCS) is a sample of known analyte concentration(s) that is prepared in the laboratory from a separate source of analyte(s) relative to the calibration standards. Since the laboratory control sample analysis should follow the entire analytical process, it should be stored and prepared following the same procedures as a field sample. A standard reference material (SRM) is a commercially-prepared laboratory control sample. Analysis of an LCS or SRM is used as an indicator of method accuracy and long-term analytical precision. LCS/SRM analyses were used as part of the QC regimen for TOC, mercury, trace metals, and trace organics. King County uses LCS/SRM percent recovery control limits of 80 to 120% for TOC analysis. Percent recoveries for LCS/SRM samples for trace metals analysis are addressed in *National Functional Guidelines* and results should be within control limits of 80 to 120% (EPA 2010). King County also has empirically-derived control limits for trace metals, as well as trace organic LCS/SRM samples, which are shown on the attached QC reports. For some methods, a duplicate LCS or SRM was tested to evaluate method precision.

1.7 Laboratory Replicate (Duplicate or Triplicate)

A laboratory replicate is a second (duplicate) or third (triplicate) aliquot of a sample, processed concurrently and in an identical manner with the original sample. Analysis of the laboratory replicate is used as an indicator of method precision and laboratory subsampling procedures. The laboratory replicate can also be used to provide information regarding the homogeneity of the sample matrix. QC results are reported as either a RPD between the sample and laboratory duplicate results or percent relative standard deviation (%RSD) between the sample and laboratory triplicate results. Laboratory duplicates were used during all metals analyses and the RPD should be below 20% (EPA 2010). Laboratory duplicates were also used during analysis of both BNA and PCB analyses, however, QC control limits for organics RPDs are not addressed in the *National Functional Guidelines*. King County uses RDP control limits of 35% for BNA and PCB laboratory duplicate analyses (Ecology 2008). Laboratory triplicates were used during PSD, TOC, and total solids analyses, however, control limits for conventional analyses are also not addressed under the *National Functional Guidelines*. King County uses %RSD control limits of 20% for all conventional analyses (Ecology 2008). The %RSD for laboratory triplicate results should be below these control limits.

1.8 Surrogates

A surrogate is a known concentration of non-target analyte which is added to each sample (both analytical and QC samples) prior to extraction and analysis for BNAs and PCBs. Surrogate recovery is used as a sample-specific indication of method or matrix bias for target analytes. The surrogate is selected to behave in a similar manner to the target analytes.

The King County Environmental Laboratory uses two surrogate compounds, decachlorobiphenyl and 2,4,5,6-tetrachloro-m-xylene during PCB analysis. *National Functional Guidelines* provides

control limits for percent recoveries of these surrogate compounds and King County has empirically-derived control limits as well, which are shown in Table 1-1. Surrogate recoveries should be within these control limits.

Table 1-1
Surrogate Recovery QC Limits for PCB Analysis

Compound	King County Environmental Lab Recovery Limits	National Functional Guidelines Quality Control Recovery Limits
2,4,5,6-Tetrachloro-m-xylene	20 – 110	30 – 150
Decachlorobiphenyl	25 – 150	30 – 150

The King County Environmental Laboratory uses seven surrogate compounds during analysis of the full suite of BNAs. Four of these compounds are deuterated monitoring compounds (DMCs). Three of the DMCs are recommended in *National Functional Guidelines*. King County has empirically-derived laboratory QC control limits, which are shown in Table 1-2 and compared to the *National Functional Guidelines* recoveries for the three DMCs.

Table 1-2
Surrogate Recovery QC Limits for BNA Analysis

Compound	King County Environmental Lab Recovery Limits	National Functional Guidelines Quality Control Recovery Limits
2,4,6-Tribromophenol	45 – 150	--
2-Fluorobiphenyl	22 – 135	--
2-Flurophenol	20 – 136	--
d14-Terphenyl	25 – 150	--
d4-2-Chlorophenol	20 – 127	13 – 101
d5-Nitrobenzene	22 – 126	16 – 103
d5-Phenol	20 – 142	17 – 103

2.0 Conventional Analyses

Conventional analyses included particle size distribution (PSD), total organic carbon (TOC), and total solids.

2.1 Particle Size Distribution – Work Groups WG118548, WG118953, WG119419, WG119909

PSD analysis was performed by a combination of sieve and hydrometer methods following ASTM Method D422 (ASTM 2002). Associated QC samples included laboratory triplicates.

2.1.1 Holding Time

All 67 samples were analyzed within the prescribed 6-month holding time.

2.1.2 Laboratory Triplicate

The RSDs of 46% and 24% between results for the gravel fraction in the laboratory triplicates associated, respectively, with work groups WG118548 and WG119419 exceeded the 20% QC limit. Results for the parameter “gravel” in samples L53963-10 and -30 should be qualified with a “J” flag and considered estimated with an unknown bias. If the data user feels it necessary,

the individual phi sizes associated with the gravel fraction may also be qualified with a "J" flag. These phi sizes include p-1.00, p-2.00, and p-2.00(less than).

The RSD of 21% between results for the clay fraction in the laboratory triplicate associated with work group WG118953 exceeded the 20% QC limit. Results for the parameter "clay" in sample L53963-20 should be qualified with a "J" flag and considered estimated with an unknown bias. If the data user feels it necessary, the individual phi sizes associated with the clay fraction may also be qualified with a "J" flag. These phi sizes include p+9.00 and p+10.0(equal/more than).

The RSD of 87% between results for the silt fraction in the laboratory triplicate associated with work group WG119909 exceeded the 20% QC limit. Results for the parameter "silt" in sample L54227-20 should be qualified with a "J" flag and considered estimated with an unknown bias. If the data user feels it necessary, the individual phi sizes associated with the silt fraction may also be qualified with a "J" flag. These phi sizes include p+5.00, p+6.00, p+7.00, and p+8.00.

All other RSD values in these four work groups were below the 20% QC limit, ranging from 0 to 18%

2.2 Total Organic Carbon – Work Groups WG117357, WG118607, WG118620, WG119851

TOC analysis was performed using high-temperature combustion and infrared spectroscopy following EPA Method 9060 – SW846 (EPA 1995). Associated QC samples included method blanks, spike blanks, matrix spikes, laboratory triplicates, and standard reference materials.

2.2.1 Holding Time

All 67 samples were analyzed within the prescribed 6-month holding time.

2.2.2 Method Blank

A TOC method blank consists of a conditioned sample cup containing quartz wool that is submitted to the entire analytical procedure. TOC results in the method blanks were all less than the MDL, indicating that laboratory contamination was not an issue during analysis of the samples included in these three work groups.

2.2.3 Spike Blank

All TOC spike blank recoveries were within the 80 to 120% QC limits, ranging from 99 to 110%.

2.2.4 Matrix Spike

All TOC matrix spike recoveries were within the 75 to 125% QC limits ranging from 81 to 103%.

2.2.5 Laboratory Triplicate

All RSDs between TOC laboratory triplicate results were at or below the 20% QC limit, ranging from 11 to 20%.

2.2.6 Standard Reference Material

All TOC standard reference material recoveries were within the 80 to 120% QC limits, ranging from 88 to 107%.

2.3 Total Solids – Work Groups WG117182, WG117904, WG119810

Total (percent) solids analysis was performed using a gravimetric determination following Standard Method SM2540-G (APHA 1998). Associated QC samples included method blanks and laboratory triplicates.

2.3.1 Holding Time

All 67 samples were analyzed within the prescribed 6-month holding time.

2.3.2 Method Blank

A total solids method blank consists of a conditioned sample cup that is submitted to the entire analytical procedure. All total solids method blank results were less than the MDL, indicating acceptable balance and method performance.

2.3.3 Laboratory Triplicate

All RSDs between total solids laboratory triplicate results were below the 20% QC limit, ranging from 0 to 1%.

3.0 Trace Metals Analyses

Trace metals analyses included total mercury and the seven other metals regulated under the Sediment Management Standards – arsenic, cadmium, chromium, copper, lead, silver, and zinc. Antimony and nickel were also analyzed on freshwater sediment samples.

3.1 Mercury – Work Groups WG117325, WG117360, WG117412, WG118047, WG118314

Total mercury analysis was performed by cold-vapor atomic absorption spectroscopy (CVAA) following EPA Method 7471B – SW846 (EPA 2007). Associated QC samples included method blanks, spike blanks, matrix spikes, matrix spike duplicates, laboratory duplicates, and standard reference materials (marine/estuarine samples) or laboratory control samples (freshwater samples).

3.1.1 Holding Time

All 67 samples were digested and analyzed within the prescribed 28-day holding time.

3.1.2 Method Blank

A mercury method blank consists of an aliquot of reagent water that is digested and then analyzed. All mercury method blank results were less than the MDL, indicating that laboratory contamination was not an issue during analysis of the samples included in these work groups.

3.1.3 Spike Blank

All mercury spike blank recoveries were within 85 to 115% QC limits, ranging from 93 to 100%.

3.1.4 Matrix Spike and Matrix Spike Duplicate

Mercury recoveries in the matrix spikes and matrix spike duplicates associated with work groups WG117325, WG117360, WG117412, and WG118314 were all within the 75 to 125% QC limits, ranging from 75 to 105%.

The 21% RPD between mercury concentrations in the matrix spike and matrix spike duplicate associated with work group WG117360 exceeded the 20% QC limit. The mercury result in sample L53963-18 should be qualified with a "J" flag and considered estimated with an unknown bias. RPDs between mercury recoveries in the matrix spikes and matrix spike duplicates associated with work groups WG117325, WG117412, and WG118314 were all below the 20% QC limit, ranging from 1 to 2%.

Meaningful mercury recoveries could not be calculated for the matrix spike and matrix spike duplicate associated with work group WG118047 due to the large sample concentration to spike concentration ratio.

3.1.5 Laboratory Duplicate

The RPDs of 36 and 33% between mercury results in the laboratory duplicates associated, respectively, with work groups WG117325 and WG117412 exceeded the 20% QC limit. Both of these associated mercury sample results, however, were less than the reporting detection limit (RDL) and, as such, will already be qualified with a "JT" flag and considered estimated (see Section 5.0).

The RPDs of 116 and 84% between mercury results in the laboratory duplicates associated, respectively, with work groups WG118047 and WG118314 exceeded the 20% QC limit. The mercury result in samples L54227-1 and -15 should be qualified with a "J" flag and considered estimated with an unknown bias.

The RPD of 4% between mercury results in the laboratory duplicate associated with work group WG117360 was below the 20% QC limit.

3.1.6 Standard Reference Materials and Laboratory Control Samples

All mercury standard reference material recoveries were within the 80 to 120% QC limits, ranging from 89 to 99%. Laboratory control samples were analyzed in duplicate in those work groups associated with freshwater sediment samples. All mercury laboratory control sample recoveries were within the 80 to 120% QC limits, ranging from 96 to 102%. RPDs between mercury laboratory control sample results were both below the 20% QC limit, at 2 and 5%.

3.2 ICP Metals – Work Groups WG117466, WG118630, WG118707; ICPMS Metals – Work Groups WG119186, WG119225

Total metals analysis for marine and estuarine sediments was performed by inductively-coupled plasma optical emission spectroscopy (ICP) following EPA Method 6010C – SW846 (EPA 2007). Total metals analysis for freshwater sediments was performed by inductively-coupled plasma mass spectroscopy (ICPMS) following EPA Method 6020A – SW846 (EPA 2007). Target analytes included arsenic, cadmium, chromium, copper, lead, silver, and zinc, as well as antimony and nickel on freshwater samples only. Associated QC samples included method blanks, spike blanks, matrix spikes, laboratory duplicates, laboratory control samples, and standard reference materials.

3.3.1 Holding Time

All 67 samples were digested and analyzed within the prescribed 6-month holding time.

3.2.2 Method Blank

An ICP metals method blank consists of an aliquot of reagent water that is digested and then analyzed. Results for all target metals in the method blanks associated with all five work groups were less than the MDL, indicating that laboratory contamination was not an issue during analysis of the samples included in these work groups.

3.2.3 Spike Blank

Spike blank recoveries for all target metals in each work group were within the 85 to 115% laboratory QC limits, ranging from 89 to 106%.

3.2.4 Matrix Spike

Recoveries for all target metals in the matrix spikes associated with work groups WG117466, WG118630, and WG118707 were within the 75 to 125% laboratory QC limits, ranging from 87 to 111%.

The 31% antimony recovery in the matrix spike associated with work group WG119186 was below the 75% lower QC limit. Recoveries for antimony in both the spike blank and laboratory control sample, however, were within QC limits. The antimony matrix spike results, therefore, indicate a matrix interference, which is inherent in sediments digested using EPA Method 3050B. Antimony results in samples L54227-1 through -20 should be qualified with a "JG" flag and considered estimated with a low bias. Meaningful recoveries for copper, lead, and zinc could not be calculated for the matrix spike associated with work group WG119186 due to the large sample concentration to spike concentration ratio. Matrix spike recoveries for the remaining metals were within the 75 to 125% QC limits, ranging from 81 to 112%.

The 74% antimony recovery in the matrix spike associated with work group WG119225 was below the 75% lower QC limit. Recoveries for antimony in both the spike blank and laboratory control sample, however, were within QC limits. The antimony matrix spike results, therefore, indicate a matrix interference, which is inherent in sediments digested using EPA Method 3050B. Antimony results in samples L54227-20 and -21 should be qualified with a "JG" flag and considered estimated with a low bias. The 150% silver recovery in the matrix spike associated with work group WG119225 exceeded the 125% upper QC limit. The silver result in sample L54227-21 should be qualified with a "JL" flag and considered estimated with a high bias. Meaningful recoveries for arsenic, copper, lead, and zinc could not be calculated for the matrix spike associated with work group WG119225 due to the large sample concentration to spike concentration ratio. Matrix spike recoveries for the remaining metals were within the 75 to 125% QC limits, ranging from 93 to 110%.

3.2.5 Laboratory Duplicate

The 33% RPD between lead results in the laboratory duplicate associated with work group WG119186 exceeded the 20% QC limit. The lead result in sample L54227-2 should be qualified with a "J" flag and considered estimated with an unknown bias.

The RPDs between results for antimony (46%), arsenic (46%), copper (34%), silver (91%), and zinc (37%) in the laboratory duplicate associated with work group WG119225 all exceeded the 20% QC limit. Results for arsenic, copper, silver, and zinc in sample L54227-21 should all be

qualified with a "J" flag and considered estimated with an unknown bias. The antimony result in this sample has already been qualified based on the matrix spike result.

RPDs between all other laboratory duplicate results were below the 20% QC limit, ranging from 0 to 16%.

3.2.6 Laboratory Control Sample and Standard Reference Material

Recoveries for all target metals in all laboratory control samples and standard reference materials were within the empirically-derived laboratory QC limits shown on the attached QC report. Several of the laboratory control samples and standard reference materials were analyzed in duplicate. RPDs between all duplicate laboratory control sample and standard reference material results were less than the 20% QC limit, ranging from 0 to 15%.

4.0 Trace Organics Analyses

Trace organics analyses included base/neutral/acid semivolatile organic compounds (BNAs) and polychlorinated biphenyls (PCBs), which include all organic compounds regulated under SMS.

4.1 BNAs – Work Groups WG117647, WG118181, WG118182, WG119275, WG119542

BNA analysis was performed by gas chromatography/mass spectroscopy (GC/MS) following EPA Methods 3550B/8270D – SW846 (EPA 2007). Target analytes included 36 BNA compounds, shown on the attached LIMS analytical QC report. Associated QC samples in each work group included a method blank, two spike blanks, a matrix spike and matrix spike duplicate, standard reference material run in duplicate, a laboratory duplicate, and surrogates.

4.1.1 Holding Time

All 67 samples were extracted and analyzed within the prescribed frozen holding time of 1 year until extraction and, then, 40 days to analysis.

4.1.2 Method Blank

A BNA method blank consists of an aliquot of anhydrous sodium sulfate/hydro matrix to which surrogates are added. The method blank is then extracted and analyzed following the same protocols as sample analysis. Bis(2-ethylhexyl) phthalate was detected in all five method blanks at concentrations ranging from 19 to 21 µg/Kg on a wet-weight basis. Bis(2-ethylhexyl) phthalate sample data should be qualified as follows:

- Samples L53963-1 through -25, -27, -32 through -36, and -43 through -45, and L54227-6 through -7 and -11 through -22 should be qualified with a "UJ" flag. All values for bis(2-ethylhexyl) phthalate in these samples were less than 10 times the method blank concentration. Each sample-specific MDL should be raised to the reported sample value.

Benzyl butyl phthalate was detected in the method blanks associated with work groups WG119275 and WG119542 at concentrations of 18.7 and 18.4 µg/Kg on a wet-weight basis, respectively. Benzyl butyl phthalate sample data associated with these two work groups should be qualified as follows:

- Samples L54227-2, -3, -6, -10 and -14 should be qualified with a "UJ" flag. All values for benzyl butyl phthalate in these samples were less than 10 times the method blank concentration. Each sample-specific MDL should be raised to the reported sample value.

Di-N-butyl phthalate was detected in the method blanks associated with work groups WG117647, WG119275, and WG119542 at concentrations ranging from 13 to 15 µg/Kg on a wet-weight basis. Di-N-butyl phthalate sample data should be qualified as follows:

- Samples L53963-3, -7 through -12, -32 through -36, and -39, and L54227-1, -7, -9, -10 through -16, and -18 through -22 and L55155-1 should be qualified with a "UJ" flag. All values for di-N-butyl phthalate in these samples were less than 10 times the method blank concentration. Each sample-specific method MDL should be raised to the reported sample value.

4.1.3 Spike Blank

Both lower- and higher-concentration spike blanks were analyzed with each work group. Spike blank results shown on the attached QC report showed recoveries of many target analytes to be outside of the empirically-derived QC limits. Since these analyses were performed, King County has updated its spike blank QC limits, based on additional and more-recent empirical data. The new control limits for BNA spike blanks are included as an attachment to this memorandum. Spike blank results were compared to these new QC limits. Spike blank recoveries in all five work groups were within updated QC limits with the following exceptions:

- The benzyl butyl phthalate recovery of 157% in the lower-concentration spike blank associated with work group WG117647 exceeded the new upper QC limit of 150%. The recovery of 123% in the higher-concentration spike blank, however, was within the new QC limits. Based on professional judgment, associated benzyl butyl phthalate sample data will not be qualified based on spike blank recoveries.
- The benzoic acid recovery of 14% in the lower-concentration spike blank associated with work group WG117647 was below the new lower QC limit of 20%. Benzoic acid returned a 0% recovery in the higher-concentration spike blank. This compound historically performs poorly from a QC standpoint in spike blanks, while returning acceptable QC performance in analytical samples. Benzoic acid recoveries in both the matrix spike and matrix duplicate associated with this work group (74 and 59%, respectively, with a 20% RPD) were within QC control limits and performed acceptably from both accuracy and precision standpoints. Based on professional judgment, associated benzoic acid sample data will not be qualified based on spike blank recoveries.
- The benzyl butyl phthalate recoveries of 151% in the lower-concentration spike blank and 164% in the higher-concentration spike blank associated with work group WG118181 both exceeded the new upper QC limit of 150%. Benzyl butyl phthalate recoveries in the matrix spike and matrix spike duplicate associated with this work group also exceeded the new upper matrix spike QC limit. As a result, associated detected sample results should be qualified with a "JL" flag and considered estimated with a high bias. Associated non-detected sample results may be used as reported

without qualification. Benzyl butyl phthalate results in samples L53963-19, -27, and -28 should be qualified with a "JL" flag and considered estimated with a high bias.

- The bis(2-ethylhexyl) phthalate recovery of 161% in the higher-concentration spike blank associated with work group WG118181 exceeded the new upper QC limit of 150%. The recovery of 143% in the lower-concentration spike blank, however, was within the new QC limits. Based on professional judgment, associated bis(2-ethylhexyl) phthalate sample data will not be qualified on spike blank recoveries.
- Benzoic acid returned a 0% recovery in the higher-concentration spike blank associated with work group WG118182. The recovery of 27% in the lower-concentration spike blank, however, was within the new 20 to 92% QC limits. Benzoic acid also returned acceptable matrix spike and matrix spike duplicate recoveries of 71 and 65% (8% RPD). Based on professional judgment, associated benzoic acid sample data will not be qualified based on spike blank recoveries.

4.1.4 Matrix Spike and Matrix Spike Duplicate

Matrix spike and matrix spike duplicate results shown on the attached QC report showed recoveries of many target analytes to be outside of the empirically-derived QC limits. Since these analyses were performed, King County has updated its matrix spike QC limits, based on additional and more-recent empirical data. The new control limits for BNA matrix spikes are included as an attachment to this memorandum. Matrix spike results were compared to these new QC limits. Matrix spike recoveries in all five work groups were within updated QC limits with the following exceptions:

- The recoveries of benzyl butyl phthalate in the matrix spike (155%) and matrix spike duplicate (150%) associated with work group WG117647 were at or exceeded the new upper QC limit of 150%. Benzyl butyl phthalate, however, was not detected in sample L53963-1, on which the matrix spikes were performed so no sample data will be qualified based on these matrix spike and matrix spike duplicate recoveries.
- The recoveries of benzyl butyl phthalate in the matrix spike (156%) and matrix spike duplicate (153%) associated with work group WG118181 both exceeded the new upper QC limit of 150%. Benzyl butyl phthalate, however, was not detected in sample L53963-15, on which the matrix spikes were performed so sample data will not be qualified based on these matrix spike and matrix spike duplicate recoveries.

RPDs between matrix spike and matrix spike duplicate results in all five work groups were at or below the 35% QC limit, ranging from 1 to 35%, with the following exceptions:

- The 45% RPD between benzoic acid results in the matrix spike and matrix spike duplicate associated with work group WG118181 exceeded the 35% QC limit. The benzoic acid result in sample L53963-15 should be qualified with a "J" flag and considered estimated with an unknown bias.
- The RPDs between results for the following compounds in the matrix spike and matrix spike duplicate associated with work group WG119542 all exceeded the 35% QC limit: dimethyl phthalate (36%), diethyl phthalate (37%), N-nitrosodiphenylamine (37%), fluorene (36%), hexachlorobenzene (38%), pentachlorophenol (41%), phenanthrene (37%), anthracene (37%), di-N-butyl phthalate (38%), and chrysene (36%). These

compounds, however, were not detected in sample L54227-20, on which the matrix spike and matrix spike duplicate were performed so associated sample data will not be qualified based on these RPD results.

- The RPDs between results for the following detected compounds in the matrix spike and matrix spike duplicate associated with work group WG119542 all exceeded the 35% QC limit: fluoranthene (38%), benzo(a)anthracene (36%), benzo(b,j,k)fluoranthene (37%), pyrene (36%), and benzo(g,h,i)perylene (37%). Results for benzo(a)anthracene, benzo(b,j,k)fluoranthene, benzo(g,h,i)perylene, fluoranthene, and pyrene in sample L54227-20 should be qualified with a "J" flag and considered estimated with an unknown bias.

4.1.5 Standard Reference Material and Standard Reference Material Duplicate

Standard reference materials analyzed in association with BNA analysis include a partial list of target analytes – a total of 12 compounds – all of which are polycyclic aromatic hydrocarbons (PAHs). Standard reference material were analyzed in duplicate with all five work groups. Standard reference material recoveries were reviewed against updated, empirically-derived QC limits, which are attached to this memorandum. All standard reference material recoveries were within their respective empirically-derived QC limits. RPDs between duplicate results were all below the 35% QC limit, ranging from 0 to 18%.

4.1.6 Laboratory Duplicate

The 39% RPD between di-N-butyl phthalate results in the laboratory duplicate associated with work group WG117647 exceeded the 35% QC limit. The di-N-butyl phthalate result in sample L53963-39, on which the laboratory duplicate was performed, has already been qualified with a "UJ" flag due to method blank contamination so no further qualification will be necessary, based on laboratory duplicate results. The RPDs between laboratory duplicate results for all other compounds were at or below the 35% QC limit, ranging from 1 to 35%.

The RPDs between results for 17 of 36 target analytes in the laboratory duplicate associated with workgroup WG118181 exceeded the 35% QC limit, ranging from 135 to 200%. Results for these analytes (shown in the following table) in sample L53963-27, including the parameters "Total LPAHs" and "Total HPAHs", should be qualified with a "J" flag and considered estimated with an unknown bias.

Analyte	RPD	Analyte	RPD
Acenaphthene	200	Chrysene	179
Acenaphthylene	200	Dibenzo(a,h)anthracene	160
Anthracene	177	Di-N-butyl Phthalate	200
Benzo(a)anthracene	172	Fluoranthene	181
Benzo(a)pyrene	166	Fluorene	200
Benzo(b,j,k)fluoranthene	181	Indeno(1,2,3-c,d)pyrene	168
Benzo(g,h,i)perylene	182	Phenanthrene	156
Benzyl Butyl Phthalate	200	Pyrene	183
Bis(2-ethylhexyl) phthalate	135		

The RPDs of 78% for benzoic acid, 200% for dimethyl phthalate, and 36% for benzyl butyl phthalate in the laboratory duplicate associated with work group WG118182 all exceeded the 35% QC limit. Results for benzoic acid, benzyl butyl phthalate, and dimethyl phthalate in sample L53963-41 should be qualified with a "J" flag and considered estimated with an unknown bias. The RPDs between laboratory duplicate results for all other compounds were below the 35% QC limit, ranging from 4 to 28%.

A laboratory duplicate was not performed in association with work group WG119275.

The RPDs between results for 19 of 36 target analytes in the laboratory duplicate associated with workgroup WG119542 exceeded the 35% QC limit, ranging from 42 to 200%. Results for these analytes (shown in the following table) in sample L54227-3, including the parameters "Total LPAHs" and "Total HPAHs", should be qualified with a "J" flag and considered estimated with an unknown bias.

Analyte	RPD	Analyte	RPD
Acenaphthene	82	Dibenzo(a,h)anthracene	51
Acenaphthylene	50	Dibenzofuran	200
Anthracene	87	Fluoranthene	70
Benzo(a)anthracene	59	Fluorene	100
Benzo(a)pyrene	53	Indeno(1,2,3-c,d)pyrene	50
Benzo(b,j,k)fluoranthene	51	2-Methylnaphthalene	200
Benzo(g,h,i)perylene	52	Naphthalene	117
Benzyl Butyl Phthalate	42	Phenanthrene	99
Bis(2-ethylhexyl)phthalate	87	Pyrene	82
Chrysene	56		

The RPDs between results in a second laboratory duplicate performed in association with work group WG119542 were all below the 35% QC limit, ranging from 0 to 25%.

4.1.7 Surrogates

Surrogate results shown on the attached QC report showed recoveries of many surrogates to be outside of the empirically-derived QC limits. Since these analyses were performed, King County has updated its surrogate recovery QC limits, based on additional and more-recent empirical data. The new control limits for BNA surrogates are included as an attachment to this memorandum. Surrogate results were compared to these new QC limits. Surrogate recoveries in all five work groups were within updated QC limits with the following exceptions:

- Recoveries of the surrogate d14-terphenyl in samples L53963-4 (151%), L53963-7 (153%), L53963-27 (158%), L53963-34 (153%), L53963-37 (188%), L54227-4 (156%), L54227-5 (156%), and L54227-6 (161%) exceeded the upper QC limit of 150%. This surrogate is associated with the base/neutral-fraction compounds of the BNA analysis. Since the other two surrogates associated with the base/neutral fraction were within QC limits in each sample, data will not be qualified based on these d14-terphenyl recoveries.
- Recoveries of the surrogate 2,4,6-tribromophenol in samples L53963-37 (162%) and L54227-6 (161%) exceeded the upper QC limit of 150%. This surrogate is associated

with the acid-fraction compounds of the BNA analysis. Since the other three surrogates associated with the acid fraction were within QC limits in each sample, data will not be qualified based on these 2,4,6-tribromophenol recoveries.

4.2 PCBs – Work Groups WG117693, WG118262, WG118263, WG118809, WG119034

PCB Aroclors were analyzed by gas chromatography with electron capture detector (GC/ECD), following EPA Method 3550B/8082A – SW846 (EPA 2007). Associated QC samples included method blanks, spike blanks, matrix spikes and matrix spike duplicates, standard reference material and standard reference material duplicates, laboratory duplicates, and surrogates.

4.2.1 Holding Time

All 67 samples were extracted analyzed within the prescribed frozen holding time of 1 year until extraction and, then, 40 days to analysis.

4.2.2 Method Blanks

Results for all seven Aroclors in all method blanks were less than the MDL, indicating that laboratory contamination was not an issue during analysis of the samples included in these work groups.

4.2.3 Spike Blank

Two Aroclors, 1242 and 1260, were used in both spike blanks as well as matrix spikes (see Section 4.2.4). Recoveries for both Aroclors were within the empirically-derived QC limits shown on the attached LIMS analytical QC report for the spike blanks associated with all five work groups.

4.2.4 Matrix Spikes and Matrix Spike Duplicates

Matrix spike recoveries for both Aroclors in both the matrix spike and matrix spike duplicate were within the empirically-derived laboratory QC limits in all five work groups. The RPDs for both Aroclor results between the matrix spikes and matrix spike duplicates were less than the laboratory QC limit of 35%, ranging from 1 to 4%.

4.2.5 Standard Reference Material and Standard Reference Material Duplicate

Aroclor 1254 is used as the target PCB analyte during standard reference material analysis. Recoveries of Aroclor 1254 in both the standard reference material and standard reference material duplicate were within the empirically-derived laboratory QC limits in all five work groups. The RPDs between standard reference material and standard reference material duplicate results were at or below the 35% laboratory QC limit in all five work groups, ranging from 5 to 35%.

4.2.6 Laboratory Duplicate

The 166% RPD between Aroclor 1260 results in the laboratory duplicate associated with work group WG117693 exceeded the 35% QC limit. Results for Aroclor 1260 and the parameter "Total Aroclors" in sample L53963-38 should be qualified with a "J" flag and considered estimated with an unknown bias.

The 86% RPD between Aroclor 1242 results and 169% RPD between Aroclor 1260 results in the laboratory duplicate associated with work group WG119034 both exceeded the 35% QC limit. Results for Aroclors 1242 and 1260, as well as the parameter "Total Aroclors" in sample L54227-5 should be qualified with a "J" flag and considered estimated with an unknown bias.

RPDs between all other laboratory duplicate results were below the 35% QC limit.

4.2.7 Surrogates

Recoveries for both surrogates in all 66 of 67 analytical samples and all 36 QC samples were within the empirically-derived laboratory QC limits. Surrogate recoveries were also within the control limits recommended in *National Functional Guidelines*. The 170% recovery of the surrogate decachlorobiphenyl in sample L54227-8 exceeded both the empirically-derived and *National Functional Guidelines* upper QC limit of 150%. Recovery of the other surrogate compound, 2,4,5,6-tetrachloro-m-xylene, was within both the empirically-derived and *National Functional Guidelines* QC limits for this sample. As a result, data will not be qualified based on this surrogate recovery QC exceedence.

5.0 Data Usability

Sediment chemistry data collected during this project will be entered into Ecology's Environmental Information Management (EIM) database. Prior to data entry, EIM-compatible qualifiers will be assigned. As a general data reporting format, sample results that are reported as "<MDL" by King County should be assigned a "U" flag in all cases. Sample results that are reported as "less than the reporting detection limit" (<RDL) should be assigned a "JT" flag and considered estimated in all cases. Analytical data for samples L53963-1 through -45 and L54227-1 through -22 may be used as reported, with the following exceptions:

- Results for the parameter "gravel" in samples L53963-10 and L53963-30 should be qualified with a "J" flag and considered estimated with an unknown bias. If the data user feels it necessary, the individual phi sizes associated with the gravel fraction may also be qualified with a "J" flag. These phi sizes include p-1.00, p-2.00, and p-2.00(less than).
- Results for the parameter "clay" in sample L53963-20 should be qualified with a "J" flag and considered estimated with an unknown bias. If the data user feels it necessary, the individual phi sizes associated with the clay fraction may also be qualified with a "J" flag. These phi sizes include p+9.00 and p+10.0(equal/more than).
- Results for the parameter "silt" in sample L54227-20 should be qualified with a "J" flag and considered estimated with an unknown bias. If the data user feels it necessary, the individual phi sizes associated with the silt fraction may also be qualified with a "J" flag. These phi sizes include p+5.00, p+6.00, p+7.00, and p+8.00.
- Mercury results in samples L53963-18, L54227-1, and L54227-15 should be qualified with a "J" flag and considered estimated with an unknown bias.
- Antimony results in samples L54227-1 through -22 should be qualified with a "JG" flag and considered estimated with a low bias.
- The silver result in sample L54227-21 should be qualified with a "JL" flag and considered estimated with a high bias.

- The lead result in sample L54227-2 should be qualified with a “J” flag and considered estimated with an unknown bias.
- Results for arsenic, copper, silver, and zinc in sample L54227-21 should all be qualified with a “J” flag and considered estimated with an unknown bias.
- Bis(2-ethylhexyl) phthalate results in samples L53963-1 through -25, -27, -32 through -36, and -43 through -45, and L54227-6 through -7 and -11 through -22 should be qualified with a “UJ” flag. Each sample-specific MDL should be raised to the reported sample value.
- Benzyl butyl phthalate results in samples L54227-2, -3, -6, -10 and -14 should be qualified with a “UJ” flag. Each sample-specific MDL should be raised to the reported sample value.
- Di-N-butyl phthalate results in samples L53963-3, -7 through -12, -32 through -36, and -39, and L54227-1, -7, -9, -10 through -16, and -18 through -22 and L55155-1 should be qualified with a “UJ” flag. Each sample-specific method MDL should be raised to the reported sample value.
- Benzyl butyl phthalate results in samples L53963-19, -27, and -28 should be qualified with a “JL” flag and considered estimated with a high bias.
- The benzoic acid result in sample L53963-15 should be qualified with a “J” flag and considered estimated with an unknown bias.
- Results for benzo(a)anthracene, benzo(b,j,k)fluoranthene, benzo(g,h,i)perylene, fluoranthene, and pyrene in sample L54227-20 should be qualified with a “J” flag and considered estimated with an unknown bias.
- Results for acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b,j,k)fluoranthene, benzo(g,h,i)perylene, benzyl butyl phthalate, bis(2-ethylhexyl) phthalate, chrysene, dibenzo(a,h)anthracene, di-N-butyl phthalate, fluoranthene, fluorene, indeno(1,2,3-c,d)pyrene, phenanthrene, pyrene, total LPAHs, and total HPAHs in sample L53963-27 should all be qualified with a “J” flag and considered estimated with an unknown bias.
- Results for benzoic acid, benzyl butyl phthalate, and dimethyl phthalate in sample L53963-41 should be qualified with a “J” flag and considered estimated with an unknown bias.
- Results for acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b,j,k)fluoranthene, benzo(g,h,i)perylene, benzyl butyl phthalate, bis(2-ethylhexyl) phthalate, chrysene, dibenzo(a,h)anthracene, dibenzofuran, fluoranthene, fluorene, indeno(1,2,3-c,d) pyrene, 2-methylnaphthalene, naphthalene, phenanthrene, pyrene, total LPAHs, and total HPAHs in sample L54227-3 should all be qualified with a “J” flag and considered estimated with an unknown bias.
- Results for Aroclor 1260 and the parameter “Total Aroclors” in sample L53963-38 should be qualified with a “J” flag and considered estimated with an unknown bias.
- Results for Aroclors 1242 and 1260, as well as the parameter “Total Aroclors” in sample L54227-5 should be qualified with a “J” flag and considered estimated with an unknown bias.

6.0 References

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King County 2011. *CSO Sediment Quality Characterization, Final Sampling and Analysis Plan*. King County Department of Natural Resources and Parks. Seattle, Washington.

LIMSView Batch Report for 2011 CSO Sediment Monitoring Project

WG118548 - PSD

Sample	Project	Project Description	List Type	Matrix	Collect Date	Prep Date	Analysis Date	QC Association
L53963-1	423368-210-1	CSO Sed Qual Charac	CVPSD	SALTWTRSED	08/29/11	11/08/11	11/09/11	WG118548-1,-2
L53963-2	423368-210-1	CSO Sed Qual Charac	CVPSD	SALTWTRSED	08/29/11	11/08/11	11/09/11	WG118548-1,-2
L53963-3	423368-210-1	CSO Sed Qual Charac	CVPSD	SALTWTRSED	08/29/11	11/08/11	11/09/11	WG118548-1,-2
L53963-4	423368-210-1	CSO Sed Qual Charac	CVPSD	SALTWTRSED	08/29/11	11/08/11	11/09/11	WG118548-1,-2
L53963-5	423368-210-1	CSO Sed Qual Charac	CVPSD	SALTWTRSED	08/29/11	11/08/11	11/09/11	WG118548-1,-2
L53963-6	423368-210-1	CSO Sed Qual Charac	CVPSD	SALTWTRSED	08/29/11	11/08/11	11/09/11	WG118548-1,-2
L53963-7	423368-210-1	CSO Sed Qual Charac	CVPSD	SALTWTRSED	08/29/11	11/08/11	11/09/11	WG118548-1,-2
L53963-8	423368-210-1	CSO Sed Qual Charac	CVPSD	SALTWTRSED	08/29/11	11/08/11	11/09/11	WG118548-1,-2
L53963-9	423368-210-1	CSO Sed Qual Charac	CVPSD	SALTWTRSED	08/29/11	11/16/11	11/17/11	WG118548-1,-2
L53963-10	423368-210-1	CSO Sed Qual Charac	CVPSD	SALTWTRSED	08/29/11	11/16/11	11/17/11	WG118548-1,-2
L53963-11	423368-210-1	CSO Sed Qual Charac	CVPSD	SALTWTRSED	08/29/11	11/16/11	11/17/11	WG118548-1,-2
L53963-12	423368-210-1	CSO Sed Qual Charac	CVPSD	SALTWTRSED	08/29/11	11/16/11	11/17/11	WG118548-1,-2
L53963-13	423368-210-1	CSO Sed Qual Charac	CVPSD	SALTWTRSED	08/30/11	11/16/11	11/17/11	WG118548-1,-2
L53963-14	423368-210-1	CSO Sed Qual Charac	CVPSD	SALTWTRSED	08/30/11	11/16/11	11/17/11	WG118548-1,-2
L53963-15	423368-210-1	CSO Sed Qual Charac	CVPSD	SALTWTRSED	08/30/11	11/16/11	11/17/11	WG118548-1,-2
L53963-16	423368-210-1	CSO Sed Qual Charac	CVPSD	SALTWTRSED	08/30/11	11/16/11	11/17/11	WG118548-1,-2
L53963-17	423368-210-1	CSO Sed Qual Charac	CVPSD	SALTWTRSED	08/30/11	11/16/11	11/17/11	WG118548-1,-2
L53963-18	423368-210-1	CSO Sed Qual Charac	CVPSD	SALTWTRSED	08/30/11	11/16/11	11/17/11	WG118548-1,-2
WG118548-1	LD		CVPSD	SALTWTRSED		11/16/11	11/17/11	WG118548-1,-2
WG118548-2	LT		CVPSD	SALTWTRSED		11/16/11	11/17/11	WG118548-1,-2

WG118953 - PSD

Sample	Project	Project Description	List Type	Matrix	Collect Date	Prep Date	Analysis Date	QC Association
L53963-19	423368-210-1	CSO Sed Qual Charac	CVPSD	SALTWTRSED	08/30/11	12/12/11	12/13/11	WG118953-1,-2
L53963-20	423368-210-1	CSO Sed Qual Charac	CVPSD	SALTWTRSED	08/30/11	12/12/11	12/13/11	WG118953-1,-2
L53963-21	423368-210-1	CSO Sed Qual Charac	CVPSD	SALTWTRSED	08/30/11	12/12/11	12/13/11	WG118953-1,-2
L53963-22	423368-210-1	CSO Sed Qual Charac	CVPSD	SALTWTRSED	08/30/11	12/12/11	12/13/11	WG118953-1,-2
L53963-23	423368-210-1	CSO Sed Qual Charac	CVPSD	SALTWTRSED	08/30/11	12/12/11	12/13/11	WG118953-1,-2
L53963-24	423368-210-1	CSO Sed Qual Charac	CVPSD	SALTWTRSED	08/30/11	12/12/11	12/13/11	WG118953-1,-2
L53963-25	423368-210-1	CSO Sed Qual Charac	CVPSD	SALTWTRSED	08/30/11	12/12/11	12/13/11	WG118953-1,-2
L53963-26	423368-210-1	CSO Sed Qual Charac	CVPSD	SALTWTRSED	08/30/11	12/12/11	12/13/11	WG118953-1,-2
L53963-27	423368-210-1	CSO Sed Qual Charac	CVPSD	SALTWTRSED	08/30/11	12/12/11	12/13/11	WG118953-1,-2
L53963-28	423368-210-1	CSO Sed Qual Charac	CVPSD	SALTWTRSED	08/30/11	12/12/11	12/13/11	WG118953-1,-2
L53963-29	423368-210-1	CSO Sed Qual Charac	CVPSD	SALTWTRSED	08/30/11	12/27/11	12/28/11	WG118953-1,-2
L53963-31	423368-210-1	CSO Sed Qual Charac	CVPSD	SALTWTRSED	08/30/11	12/27/11	12/28/11	WG118953-1,-2
L53963-32	423368-210-1	CSO Sed Qual Charac	CVPSD	SALTWTRSED	08/29/11	12/27/11	12/28/11	WG118953-1,-2
L53963-33	423368-210-1	CSO Sed Qual Charac	CVPSD	SALTWTRSED	08/29/11	12/27/11	12/28/11	WG118953-1,-2

L53963-34	423368-210-1	CSO Sed Qual Charac	CVPSD	SALTWTRSED	08/29/11	12/27/11	12/28/11	WG118953-1,-2
L53963-35	423368-210-1	CSO Sed Qual Charac	CVPSD	SALTWTRSED	08/29/11	12/27/11	12/28/11	WG118953-1,-2
L53963-36	423368-210-1	CSO Sed Qual Charac	CVPSD	SALTWTRSED	08/29/11	12/27/11	12/28/11	WG118953-1,-2
L53963-37	423368-210-1	CSO Sed Qual Charac	CVPSD	SALTWTRSED	08/29/11	12/27/11	12/28/11	WG118953-1,-2
WG118953-1	LD		CVPSD	SALTWTRSED		12/12/11	12/13/11	WG118953-1,-2
WG118953-2	LT		CVPSD	SALTWTRSED		12/12/11	12/13/11	WG118953-1,-2

WG119419 - PSD

Sample	Project	Project Description	List Type	Matrix	Collect Date	Prep Date	Analysis Date	QC Association
L53963-30	423368-210-1	CSO Sed Qual Charac	CVPSD	SALTWTRSED	08/30/11	01/17/12	01/18/12	WG119419-1,-2
L53963-38	423368-210-1	CSO Sed Qual Charac	CVPSD	SALTWTRSED	08/29/11	01/17/12	01/18/12	WG119419-1,-2
L53963-39	423368-210-1	CSO Sed Qual Charac	CVPSD	SALTWTRSED	08/29/11	01/17/12	01/18/12	WG119419-1,-2
L53963-40	423368-210-1	CSO Sed Qual Charac	CVPSD	SALTWTRSED	08/29/11	01/17/12	01/18/12	WG119419-1,-2
L53963-41	423368-210-1	CSO Sed Qual Charac	CVPSD	SALTWTRSED	08/29/11	01/17/12	01/18/12	WG119419-1,-2
L53963-42	423368-210-1	CSO Sed Qual Charac	CVPSD	SALTWTRSED	08/29/11	01/17/12	01/18/12	WG119419-1,-2
L53963-43	423368-210-1	CSO Sed Qual Charac	CVPSD	SALTWTRSED	08/29/11	01/17/12	01/18/12	WG119419-1,-2
L53963-44	423368-210-1	CSO Sed Qual Charac	CVPSD	SALTWTRSED	08/29/11	01/17/12	01/18/12	WG119419-1,-2
L53963-45	423368-210-1	CSO Sed Qual Charac	CVPSD	SALTWTRSED	08/30/11	01/17/12	01/18/12	WG119419-1,-2
L54227-1	423368-210-1	CSO Sed Qual Charac	CVPSD	FRSHWTRSED	10/10/11	01/17/12	01/18/12	WG119419-1,-2
L54227-2	423368-210-1	CSO Sed Qual Charac	CVPSD	FRSHWTRSED	10/10/11	01/30/12	01/31/12	WG119419-1,-2
L54227-3	423368-210-1	CSO Sed Qual Charac	CVPSD	FRSHWTRSED	10/10/11	01/30/12	01/31/12	WG119419-1,-2
L54227-5	423368-210-1	CSO Sed Qual Charac	CVPSD	FRSHWTRSED	10/10/11	01/30/12	01/31/12	WG119419-1,-2
L54227-6	423368-210-1	CSO Sed Qual Charac	CVPSD	FRSHWTRSED	10/10/11	01/30/12	01/31/12	WG119419-1,-2
L54227-7	423368-210-1	CSO Sed Qual Charac	CVPSD	FRSHWTRSED	10/10/11	01/30/12	01/31/12	WG119419-1,-2
L54227-8	423368-210-1	CSO Sed Qual Charac	CVPSD	FRSHWTRSED	10/10/11	01/30/12	01/31/12	WG119419-1,-2
L54227-9	423368-210-1	CSO Sed Qual Charac	CVPSD	FRSHWTRSED	10/10/11	01/30/12	01/31/12	WG119419-1,-2
L54227-10	423368-210-1	CSO Sed Qual Charac	CVPSD	FRSHWTRSED	10/10/11	01/30/12	01/31/12	WG119419-1,-2
L54227-11	423368-210-1	CSO Sed Qual Charac	CVPSD	FRSHWTRSED	10/10/11	01/30/12	01/31/12	WG119419-1,-2
L54227-12	423368-210-1	CSO Sed Qual Charac	CVPSD	FRSHWTRSED	10/10/11	01/30/12	01/31/12	WG119419-1,-2
WG119419-1	LD		CVPSD	SALTWTRSED		01/17/12	01/18/12	WG119419-1,-2
WG119419-2	LT		CVPSD	SALTWTRSED		01/17/12	01/18/12	WG119419-1,-2

WG119909 - PSD

Sample	Project	Project Description	List Type	Matrix	Collect Date	Prep Date	Analysis Date	QC Association
L54227-4	423368-210-1	CSO Sed Qual Charac	CVPSD	FRSHWTRSED	10/10/11	02/27/12	02/28/12	WG119909-1,-2
L54227-13	423368-210-1	CSO Sed Qual Charac	CVPSD	FRSHWTRSED	10/10/11	02/27/12	02/28/12	WG119909-1,-2
L54227-14	423368-210-1	CSO Sed Qual Charac	CVPSD	FRSHWTRSED	10/10/11	02/27/12	02/28/12	WG119909-1,-2
L54227-15	423368-210-1	CSO Sed Qual Charac	CVPSD	FRSHWTRSED	10/10/11	02/27/12	02/28/12	WG119909-1,-2
L54227-16	423368-210-1	CSO Sed Qual Charac	CVPSD	FRSHWTRSED	10/10/11	03/12/12	03/15/12	WG119909-1,-2

L54227-17	423368-210-1	CSO Sed Qual Charac	CVPSD	FRSHWTRSED	10/10/11	02/27/12	02/28/12	WG119909-1,-2
L54227-18	423368-210-1	CSO Sed Qual Charac	CVPSD	FRSHWTRSED	10/10/11	02/27/12	02/28/12	WG119909-1,-2
L54227-19	423368-210-1	CSO Sed Qual Charac	CVPSD	FRSHWTRSED	10/10/11	02/27/12	02/28/12	WG119909-1,-2
L54227-20	423368-210-1	CSO Sed Qual Charac	CVPSD	FRSHWTRSED	10/10/11	02/27/12	02/28/12	WG119909-1,-2
L54227-21	423368-210-1	CSO Sed Qual Charac	CVPSD	FRSHWTRSED	10/10/11	02/27/12	02/28/12	WG119909-1,-2
L54227-22	423368-210-1	CSO Sed Qual Charac	CVPSD	FRSHWTRSED	10/10/11	02/27/12	02/28/12	WG119909-1,-2
WG119909-1	LD		CVPSD	FRSHWTRSED		02/27/12	02/28/12	WG119909-1,-2
WG119909-2	LT		CVPSD	FRSHWTRSED		02/27/12	02/28/12	WG119909-1,-2

WG117357 - TOC

Sample	Project	Project Description	List Type	Matrix	Collect Date	Prep Date	Analysis Date	QC Association
L53963-1	423368-210-1	CSO Sed Qual Charac	CVTOC	SALTWTRSED	08/29/11	09/01/11	09/15/11	WG117357-1 thru - 27
L53963-2	423368-210-1	CSO Sed Qual Charac	CVTOC	SALTWTRSED	08/29/11	09/01/11	09/15/11	WG117357-1 thru - 27
L53963-3	423368-210-1	CSO Sed Qual Charac	CVTOC	SALTWTRSED	08/29/11	09/01/11	09/15/11	WG117357-1 thru - 27
L53963-4	423368-210-1	CSO Sed Qual Charac	CVTOC	SALTWTRSED	08/29/11	09/01/11	09/15/11	WG117357-1 thru - 27
L53963-5	423368-210-1	CSO Sed Qual Charac	CVTOC	SALTWTRSED	08/29/11	09/01/11	09/15/11	WG117357-1 thru - 27
L53963-6	423368-210-1	CSO Sed Qual Charac	CVTOC	SALTWTRSED	08/29/11	09/01/11	09/15/11	WG117357-1 thru - 27
L53963-7	423368-210-1	CSO Sed Qual Charac	CVTOC	SALTWTRSED	08/29/11	09/01/11	09/15/11	WG117357-1 thru - 27
L53963-8	423368-210-1	CSO Sed Qual Charac	CVTOC	SALTWTRSED	08/29/11	09/01/11	09/15/11	WG117357-1 thru - 27
L53963-9	423368-210-1	CSO Sed Qual Charac	CVTOC	SALTWTRSED	08/29/11	09/01/11	09/15/11	WG117357-1 thru - 27
L53963-10	423368-210-1	CSO Sed Qual Charac	CVTOC	SALTWTRSED	08/29/11	09/01/11	09/15/11	WG117357-1 thru - 27
L53963-11	423368-210-1	CSO Sed Qual Charac	CVTOC	SALTWTRSED	08/29/11	09/01/11	09/20/11	WG117357-1 thru - 27
L53963-12	423368-210-1	CSO Sed Qual Charac	CVTOC	SALTWTRSED	08/29/11	09/01/11	09/20/11	WG117357-1 thru - 27
L53963-13	423368-210-1	CSO Sed Qual Charac	CVTOC	SALTWTRSED	08/30/11	09/06/11	09/27/11	WG117357-1 thru - 27
L53963-14	423368-210-1	CSO Sed Qual Charac	CVTOC	SALTWTRSED	08/30/11	09/06/11	09/27/11	WG117357-1 thru - 27
L53963-15	423368-210-1	CSO Sed Qual Charac	CVTOC	SALTWTRSED	08/30/11	09/06/11	09/27/11	WG117357-1 thru - 27
L53963-16	423368-210-1	CSO Sed Qual Charac	CVTOC	SALTWTRSED	08/30/11	09/06/11	09/27/11	WG117357-1 thru - 27
L53963-17	423368-210-1	CSO Sed Qual Charac	CVTOC	SALTWTRSED	08/30/11	09/06/11	09/27/11	WG117357-1 thru - 27
L53963-18	423368-210-1	CSO Sed Qual Charac	CVTOC	SALTWTRSED	08/30/11	09/06/11	09/27/11	WG117357-1 thru - 27
L53963-19	423368-210-1	CSO Sed Qual Charac	CVTOC	SALTWTRSED	08/30/11	09/06/11	09/27/11	WG117357-1 thru - 27
L53963-20	423368-210-1	CSO Sed Qual Charac	CVTOC	SALTWTRSED	08/30/11	09/06/11	09/28/11	WG117357-1 thru - 27
L53963-21	423368-210-1	CSO Sed Qual Charac	CVTOC	SALTWTRSED	08/30/11	09/06/11	09/28/11	WG117357-1 thru - 27
L53963-22	423368-210-1	CSO Sed Qual Charac	CVTOC	SALTWTRSED	08/30/11	09/06/11	09/28/11	WG117357-1 thru - 27
L53963-23	423368-210-1	CSO Sed Qual Charac	CVTOC	SALTWTRSED	08/30/11	09/06/11	09/28/11	WG117357-1 thru - 27
L53963-24	423368-210-1	CSO Sed Qual Charac	CVTOC	SALTWTRSED	08/30/11	09/06/11	11/01/11	WG117357-1 thru - 27
L53963-25	423368-210-1	CSO Sed Qual Charac	CVTOC	SALTWTRSED	08/30/11	09/06/11	09/28/11	WG117357-1 thru - 27
L53963-26	423368-210-1	CSO Sed Qual Charac	CVTOC	SALTWTRSED	08/30/11	09/06/11	09/28/11	WG117357-1 thru - 27
L53963-27	423368-210-1	CSO Sed Qual Charac	CVTOC	SALTWTRSED	08/30/11	09/06/11	09/29/11	WG117357-1 thru - 27
L53963-28	423368-210-1	CSO Sed Qual Charac	CVTOC	SALTWTRSED	08/30/11	09/06/11	09/29/11	WG117357-1 thru - 27
L53963-29	423368-210-1	CSO Sed Qual Charac	CVTOC	SALTWTRSED	08/30/11	09/06/11	09/29/11	WG117357-1 thru - 27

L53963-30	423368-210-1	CSO Sed Qual Charac	CVTOC	SALTWTRSED	08/30/11	09/06/11	09/29/11	WG117357-1 thru - 27
L53963-31	423368-210-1	CSO Sed Qual Charac	CVTOC	SALTWTRSED	08/30/11	09/06/11	09/29/11	WG117357-1 thru - 27
L53963-32	423368-210-1	CSO Sed Qual Charac	CVTOC	SALTWTRSED	08/29/11	09/01/11	09/20/11	WG117357-1 thru - 27
L53963-33	423368-210-1	CSO Sed Qual Charac	CVTOC	SALTWTRSED	08/29/11	09/01/11	09/22/11	WG117357-1 thru - 27
L53963-34	423368-210-1	CSO Sed Qual Charac	CVTOC	SALTWTRSED	08/29/11	09/01/11	09/22/11	WG117357-1 thru - 27
L53963-35	423368-210-1	CSO Sed Qual Charac	CVTOC	SALTWTRSED	08/29/11	09/01/11	09/22/11	WG117357-1 thru - 27
L53963-36	423368-210-1	CSO Sed Qual Charac	CVTOC	SALTWTRSED	08/29/11	09/01/11	09/22/11	WG117357-1 thru - 27
L53963-37	423368-210-1	CSO Sed Qual Charac	CVTOC	SALTWTRSED	08/29/11	09/01/11	09/22/11	WG117357-1 thru - 27
L53963-38	423368-210-1	CSO Sed Qual Charac	CVTOC	SALTWTRSED	08/29/11	09/01/11	09/22/11	WG117357-1 thru - 27
L53963-39	423368-210-1	CSO Sed Qual Charac	CVTOC	SALTWTRSED	08/29/11	09/01/11	09/22/11	WG117357-1 thru - 27
L53963-40	423368-210-1	CSO Sed Qual Charac	CVTOC	SALTWTRSED	08/29/11	09/06/11	09/29/11	WG117357-1 thru - 27
L53963-41	423368-210-1	CSO Sed Qual Charac	CVTOC	SALTWTRSED	08/29/11	09/06/11	09/29/11	WG117357-1 thru - 27
L53963-42	423368-210-1	CSO Sed Qual Charac	CVTOC	SALTWTRSED	08/29/11	09/06/11	09/29/11	WG117357-1 thru - 27
L53963-43	423368-210-1	CSO Sed Qual Charac	CVTOC	SALTWTRSED	08/29/11	09/06/11	09/29/11	WG117357-1 thru - 27
L53963-44	423368-210-1	CSO Sed Qual Charac	CVTOC	SALTWTRSED	08/29/11	09/06/11	09/29/11	WG117357-1 thru - 27
L53963-45	423368-210-1	CSO Sed Qual Charac	CVTOC	SALTWTRSED	08/30/11	09/06/11	09/29/11	WG117357-1 thru - 27
WG117357-1	MB		CVTOC	OTHR SOLID		09/01/11	09/15/11	WG117357-1 thru - 27
WG117357-2	SRM		CVTOC	OTHR SOLID		09/01/11	09/15/11	WG117357-1 thru - 27
WG117357-3	MB		CVTOC	OTHR SOLID		09/01/11	09/20/11	WG117357-1 thru - 27
WG117357-4	SRM		CVTOC	OTHR SOLID		09/01/11	09/20/11	WG117357-1 thru - 27
WG117357-5	SB		CVTOC	OTHR SOLID		09/01/11	09/20/11	WG117357-1 thru - 27
WG117357-6	LD		CVTOC	SALTWTRSED		09/01/11	09/20/11	WG117357-1 thru - 27
WG117357-7	LT		CVTOC	SALTWTRSED		09/01/11	09/20/11	WG117357-1 thru - 27
WG117357-8	MS		CVTOC	SALTWTRSED		09/01/11	09/20/11	WG117357-1 thru - 27
WG117357-9	MB		CVTOC	OTHR SOLID		09/01/11	09/22/11	WG117357-1 thru - 27
WG117357-10	SRM		CVTOC	OTHR SOLID		09/01/11	09/22/11	WG117357-1 thru - 27
WG117357-11	MB		CVTOC	OTHR SOLID		09/06/11	09/27/11	WG117357-1 thru - 27
WG117357-12	SRM		CVTOC	OTHR SOLID		09/06/11	09/27/11	WG117357-1 thru - 27
WG117357-13	MB		CVTOC	OTHR SOLID		09/06/11	09/28/11	WG117357-1 thru - 27
WG117357-14	SB		CVTOC	OTHR SOLID		09/06/11	09/28/11	WG117357-1 thru - 27
WG117357-15	LD		CVTOC	SALTWTRSED		09/06/11	11/01/11	WG117357-1 thru - 27
WG117357-16	LT		CVTOC	SALTWTRSED		09/06/11	11/01/11	WG117357-1 thru - 27
WG117357-17	MS		CVTOC	SALTWTRSED		09/06/11	11/01/11	WG117357-1 thru - 27
WG117357-18	MB		CVTOC	OTHR SOLID		09/06/11	09/29/11	WG117357-1 thru - 27
WG117357-19	SRM		CVTOC	OTHR SOLID		09/06/11	09/29/11	WG117357-1 thru - 27
WG117357-20	LD		CVTOC	SALTWTRSED		09/06/11	09/29/11	WG117357-1 thru - 27
WG117357-21	LT		CVTOC	SALTWTRSED		09/06/11	09/29/11	WG117357-1 thru - 27
WG117357-22	MB		CVTOC	OTHR SOLID		09/06/11	09/30/11	WG117357-1 thru - 27
WG117357-23	SB		CVTOC	OTHR SOLID		09/06/11	09/30/11	WG117357-1 thru - 27
WG117357-24	MS		CVTOC	SALTWTRSED		09/06/11	09/30/11	WG117357-1 thru - 27
WG117357-25	MB		CVTOC	OTHR SOLID		09/06/11	11/01/11	WG117357-1 thru - 27

WG117357-26	SRM		CVTOC	OTHR SOLID		09/06/11	11/01/11	WG117357-1 thru - 27
WG117357-27	SB		CVTOC	OTHR SOLID		09/06/11	11/01/11	WG117357-1 thru - 27

WG118067 - TOC

Sample	Project	Project Description	List Type	Matrix	Collect Date	Prep Date	Analysis Date	QC Association
L54227-1	423368-210-1	CSO Sed Qual Charac	CVTOC	FRSHWTRSED	10/10/11	10/17/11	11/15/11	WG118067-1, thru -7
L54227-2	423368-210-1	CSO Sed Qual Charac	CVTOC	FRSHWTRSED	10/10/11	10/17/11	11/15/11	WG118067-1, thru -7
L54227-3	423368-210-1	CSO Sed Qual Charac	CVTOC	FRSHWTRSED	10/10/11	10/17/11	11/15/11	WG118067-1, thru -7
L54227-4	423368-210-1	CSO Sed Qual Charac	CVTOC	FRSHWTRSED	10/10/11	10/17/11	11/15/11	WG118067-1, thru -7
L54227-5	423368-210-1	CSO Sed Qual Charac	CVTOC	FRSHWTRSED	10/10/11	10/17/11	11/15/11	WG118067-1, thru -7
L54227-6	423368-210-1	CSO Sed Qual Charac	CVTOC	FRSHWTRSED	10/10/11	10/17/11	11/15/11	WG118067-1, thru -7
L54227-7	423368-210-1	CSO Sed Qual Charac	CVTOC	FRSHWTRSED	10/10/11	10/17/11	11/15/11	WG118067-1, thru -7
L54227-8	423368-210-1	CSO Sed Qual Charac	CVTOC	FRSHWTRSED	10/10/11	10/17/11	11/16/11	WG118067-1, thru -7
L54227-9	423368-210-1	CSO Sed Qual Charac	CVTOC	FRSHWTRSED	10/10/11	10/17/11	11/16/11	WG118067-1, thru -7
L54227-10	423368-210-1	CSO Sed Qual Charac	CVTOC	FRSHWTRSED	10/10/11	10/17/11	11/16/11	WG118067-1, thru -7
L54227-11	423368-210-1	CSO Sed Qual Charac	CVTOC	FRSHWTRSED	10/10/11	10/17/11	11/16/11	WG118067-1, thru -7
L54227-12	423368-210-1	CSO Sed Qual Charac	CVTOC	FRSHWTRSED	10/10/11	10/17/11	11/16/11	WG118067-1, thru -7
L54227-13	423368-210-1	CSO Sed Qual Charac	CVTOC	FRSHWTRSED	10/10/11	10/17/11	11/16/11	WG118067-1, thru -7
L54227-14	423368-210-1	CSO Sed Qual Charac	CVTOC	FRSHWTRSED	10/10/11	10/17/11	11/16/11	WG118067-1, thru -7
L54227-15	423368-210-1	CSO Sed Qual Charac	CVTOC	FRSHWTRSED	10/10/11	10/17/11	11/16/11	WG118067-1, thru -7
L54227-16	423368-210-1	CSO Sed Qual Charac	CVTOC	FRSHWTRSED	10/10/11	10/17/11	11/16/11	WG118067-1, thru -7
L54227-17	423368-210-1	CSO Sed Qual Charac	CVTOC	FRSHWTRSED	10/10/11	10/17/11	11/16/11	WG118067-1, thru -7
L54227-18	423368-210-1	CSO Sed Qual Charac	CVTOC	FRSHWTRSED	10/10/11	10/17/11	11/16/11	WG118067-1, thru -7
L54227-20	423368-210-1	CSO Sed Qual Charac	CVTOC	FRSHWTRSED	10/10/11	10/17/11	11/16/11	WG118067-1, thru -7
L54227-21	423368-210-1	CSO Sed Qual Charac	CVTOC	FRSHWTRSED	10/10/11	10/17/11	11/16/11	WG118067-1, thru -7
WG118067-1	MB		CVTOC	OTHR SOLID		10/17/11	11/15/11	WG118067-1, thru -7
WG118067-2	SRM		CVTOC	OTHR SOLID		10/17/11	11/15/11	WG118067-1, thru -7
WG118067-3	LD		CVTOC	FRSHWTRSED		10/17/11	11/15/11	WG118067-1, thru -7
WG118067-4	SB		CVTOC	OTHR SOLID		10/17/11	11/15/11	WG118067-1, thru -7
WG118067-5	LT		CVTOC	FRSHWTRSED		10/17/11	11/15/11	WG118067-1, thru -7
WG118067-6	MS		CVTOC	FRSHWTRSED		10/17/11	11/15/11	WG118067-1, thru -7
WG118067-7	MB		CVTOC	OTHR SOLID		10/17/11	11/16/11	WG118067-1, thru -7

WG118620 - TOC

Sample	Project	Project Description	List Type	Matrix	Collect Date	Prep Date	Analysis Date	QC Association
L54227-19	423368-210-1	CSO Sed Qual Charac	CVTOC	FRSHWTRSED	10/10/11	10/17/11	11/17/11	WG118620-1 thru - 10
L54227-22	423368-210-1	CSO Sed Qual Charac	CVTOC	FRSHWTRSED	10/10/11	10/17/11	11/17/11	WG118620-1 thru - 10
L54529-1	423589-340-4	CSO Source Charac	CVTOC	IN-LINESED	10/27/11	11/15/11	11/17/11	WG118620-1 thru - 10
L54529-3	423589-340-4	CSO Source Charac	CVTOC	IN-LINESED	10/27/11	11/15/11	11/17/11	WG118620-1 thru - 10

WG118620-1	MB	CVTOC	OTHR SOLID	10/17/11	11/17/11	WG118620-1 thru - 10
WG118620-2	SRM	CVTOC	OTHR SOLID	10/17/11	11/17/11	WG118620-1 thru - 10
WG118620-3	SRM	CVTOC	OTHR SOLID	10/17/11	11/17/11	WG118620-1 thru - 10
WG118620-4	SB	CVTOC	OTHR SOLID	10/17/11	11/17/11	WG118620-1 thru - 10
WG118620-5	LD	CVTOC	FRSHWTRSED	10/17/11	11/17/11	WG118620-1 thru - 10
WG118620-6	LT	CVTOC	FRSHWTRSED	10/17/11	11/17/11	WG118620-1 thru - 10
WG118620-7	MS	CVTOC	FRSHWTRSED	10/17/11	11/17/11	WG118620-1 thru - 10
WG118620-8	LD	CVTOC	IN-LINESED	11/15/11	11/17/11	WG118620-1 thru - 10
WG118620-9	LT	CVTOC	IN-LINESED	11/15/11	11/17/11	WG118620-1 thru - 10
WG118620-10	MS	CVTOC	IN-LINESED	11/15/11	11/17/11	WG118620-1 thru - 10

WG119851 - TOC

Sample	Project	Project Description	List Type	Matrix	Collect Date	Prep Date	Analysis Date	QC Association
L54985-1	421196-180	Roads SWAP	CVTOC	SOIL	02/08/12	02/09/12	02/10/12	WG119851-1 thru -9
L54985-2	421196-180	Roads SWAP	CVTOC	SOIL	02/08/12	02/09/12	02/10/12	WG119851-1 thru -9
L54985-3	421196-180	Roads SWAP	CVTOC	SOIL	02/08/12	02/09/12	02/10/12	WG119851-1 thru -9
L54985-4	421196-180	Roads SWAP	CVTOC	SOIL	02/08/12	02/09/12	02/10/12	WG119851-1 thru -9
L54985-5	421196-180	Roads SWAP	CVTOC	SOIL	02/08/12	02/09/12	02/13/12	WG119851-1 thru -9
L54985-7	421196-180	Roads SWAP	CVTOC	SOIL	02/08/12	02/09/12	02/14/12	WG119851-1 thru -9
L54985-8	421196-180	Roads SWAP	CVTOC	SOIL	02/08/12	02/09/12	02/13/12	WG119851-1 thru -9
L54985-9	421196-180	Roads SWAP	CVTOC	SOIL	02/08/12	02/09/12	02/13/12	WG119851-1 thru -9
L54985-10	421196-180	Roads SWAP	CVTOC	SOIL	02/09/12	02/09/12		WG119851-1 thru -9
L54985-11	421196-180	Roads SWAP	CVTOC	SOIL	02/09/12	02/09/12		WG119851-1 thru -9
L54985-12	421196-180	Roads SWAP	CVTOC	SOIL	02/08/12	02/09/12	02/13/12	WG119851-1 thru -9
L54985-13	421196-180	Roads SWAP	CVTOC	SOIL	02/08/12	02/09/12	02/13/12	WG119851-1 thru -9
L54985-14	421196-180	Roads SWAP	CVTOC	SOIL	02/08/12	02/09/12	02/14/12	WG119851-1 thru -9
L55155-1	423368-210-1	CSO Sed Qual Charac	CVTOC	FRSHWTRSED	10/10/11	02/09/12	02/10/12	WG119851-1 thru -9
WG119851-1	MB		CVTOC	OTHR SOLID		02/10/12	02/10/12	WG119851-1 thru -9
WG119851-2	SRM		CVTOC	OTHR SOLID		02/10/12	02/10/12	WG119851-1 thru -9
WG119851-3	MB		CVTOC	OTHR SOLID		02/13/12	02/13/12	WG119851-1 thru -9
WG119851-4	SRM		CVTOC	OTHR SOLID		02/13/12	02/13/12	WG119851-1 thru -9
WG119851-5	MB		CVTOC	OTHR SOLID		02/14/12	02/14/12	WG119851-1 thru -9
WG119851-6	SB		CVTOC	OTHR SOLID		02/14/12	02/14/12	WG119851-1 thru -9
WG119851-7	LD		CVTOC	SOIL		02/09/12	02/14/12	WG119851-1 thru -9
WG119851-8	LT		CVTOC	SOIL		02/09/12	02/14/12	WG119851-1 thru -9
WG119851-9	MS		CVTOC	SOIL		02/09/12	02/14/12	WG119851-1 thru -9

LIMSView Batch Report for 2011 CSO Sediment Monitoring Project

WG117182 - Total Solids

Sample	Project	Project Description	List Type	Matrix	Collect Date	Prep Date	Analysis Date	QC Association
L53963-1	423368-210-1	CSO Sed Qual Charac	CVTOTS	SALTWTRSED	08/29/11	09/07/11	09/08/11	WG117182-1 thru - 9
L53963-2	423368-210-1	CSO Sed Qual Charac	CVTOTS	SALTWTRSED	08/29/11	09/07/11	09/08/11	WG117182-1 thru - 9
L53963-3	423368-210-1	CSO Sed Qual Charac	CVTOTS	SALTWTRSED	08/29/11	09/07/11	09/08/11	WG117182-1 thru - 9
L53963-4	423368-210-1	CSO Sed Qual Charac	CVTOTS	SALTWTRSED	08/29/11	09/07/11	09/08/11	WG117182-1 thru - 9
L53963-5	423368-210-1	CSO Sed Qual Charac	CVTOTS	SALTWTRSED	08/29/11	09/07/11	09/08/11	WG117182-1 thru - 9
L53963-6	423368-210-1	CSO Sed Qual Charac	CVTOTS	SALTWTRSED	08/29/11	09/07/11	09/08/11	WG117182-1 thru - 9
L53963-7	423368-210-1	CSO Sed Qual Charac	CVTOTS	SALTWTRSED	08/29/11	09/07/11	09/08/11	WG117182-1 thru - 9
L53963-8	423368-210-1	CSO Sed Qual Charac	CVTOTS	SALTWTRSED	08/29/11	09/07/11	09/08/11	WG117182-1 thru - 9
L53963-9	423368-210-1	CSO Sed Qual Charac	CVTOTS	SALTWTRSED	08/29/11	09/07/11	09/08/11	WG117182-1 thru - 9
L53963-10	423368-210-1	CSO Sed Qual Charac	CVTOTS	SALTWTRSED	08/29/11	09/07/11	09/08/11	WG117182-1 thru - 9
L53963-11	423368-210-1	CSO Sed Qual Charac	CVTOTS	SALTWTRSED	08/29/11	09/07/11	09/08/11	WG117182-1 thru - 9
L53963-12	423368-210-1	CSO Sed Qual Charac	CVTOTS	SALTWTRSED	08/29/11	09/07/11	09/08/11	WG117182-1 thru - 9
L53963-13	423368-210-1	CSO Sed Qual Charac	CVTOTS	SALTWTRSED	08/30/11	09/07/11	09/08/11	WG117182-1 thru - 9
L53963-14	423368-210-1	CSO Sed Qual Charac	CVTOTS	SALTWTRSED	08/30/11	09/07/11	09/08/11	WG117182-1 thru - 9
L53963-15	423368-210-1	CSO Sed Qual Charac	CVTOTS	SALTWTRSED	08/30/11	09/07/11	09/08/11	WG117182-1 thru - 9
L53963-16	423368-210-1	CSO Sed Qual Charac	CVTOTS	SALTWTRSED	08/30/11	09/07/11	09/08/11	WG117182-1 thru - 9
L53963-17	423368-210-1	CSO Sed Qual Charac	CVTOTS	SALTWTRSED	08/30/11	09/07/11	09/08/11	WG117182-1 thru - 9
L53963-18	423368-210-1	CSO Sed Qual Charac	CVTOTS	SALTWTRSED	08/30/11	09/07/11	09/08/11	WG117182-1 thru - 9
L53963-19	423368-210-1	CSO Sed Qual Charac	CVTOTS	SALTWTRSED	08/30/11	09/07/11	09/08/11	WG117182-1 thru - 9
L53963-20	423368-210-1	CSO Sed Qual Charac	CVTOTS	SALTWTRSED	08/30/11	09/07/11	09/08/11	WG117182-1 thru - 9
L53963-21	423368-210-1	CSO Sed Qual Charac	CVTOTS	SALTWTRSED	08/30/11	09/07/11	09/08/11	WG117182-1 thru - 9
L53963-22	423368-210-1	CSO Sed Qual Charac	CVTOTS	SALTWTRSED	08/30/11	09/07/11	09/08/11	WG117182-1 thru - 9
L53963-23	423368-210-1	CSO Sed Qual Charac	CVTOTS	SALTWTRSED	08/30/11	09/07/11	09/08/11	WG117182-1 thru - 9
L53963-24	423368-210-1	CSO Sed Qual Charac	CVTOTS	SALTWTRSED	08/30/11	09/07/11	09/08/11	WG117182-1 thru - 9
L53963-25	423368-210-1	CSO Sed Qual Charac	CVTOTS	SALTWTRSED	08/30/11	09/07/11	09/08/11	WG117182-1 thru - 9
L53963-26	423368-210-1	CSO Sed Qual Charac	CVTOTS	SALTWTRSED	08/30/11	09/07/11	09/08/11	WG117182-1 thru - 9
L53963-27	423368-210-1	CSO Sed Qual Charac	CVTOTS	SALTWTRSED	08/30/11	09/07/11	09/08/11	WG117182-1 thru - 9
L53963-28	423368-210-1	CSO Sed Qual Charac	CVTOTS	SALTWTRSED	08/30/11	09/07/11	09/08/11	WG117182-1 thru - 9
L53963-29	423368-210-1	CSO Sed Qual Charac	CVTOTS	SALTWTRSED	08/30/11	09/07/11	09/08/11	WG117182-1 thru - 9
L53963-30	423368-210-1	CSO Sed Qual Charac	CVTOTS	SALTWTRSED	08/30/11	09/07/11	09/08/11	WG117182-1 thru - 9
L53963-31	423368-210-1	CSO Sed Qual Charac	CVTOTS	SALTWTRSED	08/30/11	09/07/11	09/08/11	WG117182-1 thru - 9
L53963-32	423368-210-1	CSO Sed Qual Charac	CVTOTS	SALTWTRSED	08/29/11	09/07/11	09/08/11	WG117182-1 thru - 9
L53963-33	423368-210-1	CSO Sed Qual Charac	CVTOTS	SALTWTRSED	08/29/11	09/07/11	09/08/11	WG117182-1 thru - 9
L53963-34	423368-210-1	CSO Sed Qual Charac	CVTOTS	SALTWTRSED	08/29/11	09/07/11	09/08/11	WG117182-1 thru - 9
L53963-35	423368-210-1	CSO Sed Qual Charac	CVTOTS	SALTWTRSED	08/29/11	09/07/11	09/08/11	WG117182-1 thru - 9
L53963-36	423368-210-1	CSO Sed Qual Charac	CVTOTS	SALTWTRSED	08/29/11	09/07/11	09/08/11	WG117182-1 thru - 9
L53963-37	423368-210-1	CSO Sed Qual Charac	CVTOTS	SALTWTRSED	08/29/11	09/07/11	09/08/11	WG117182-1 thru - 9
L53963-38	423368-210-1	CSO Sed Qual Charac	CVTOTS	SALTWTRSED	08/29/11	09/07/11	09/08/11	WG117182-1 thru - 9

L53963-39	423368-210-1	CSO Sed Qual Charac	CVTOTS	SALTWTRSED	08/29/11	09/07/11	09/08/11	WG117182-1 thru - 9
L53963-40	423368-210-1	CSO Sed Qual Charac	CVTOTS	SALTWTRSED	08/29/11	09/07/11	09/08/11	WG117182-1 thru - 9
L53963-41	423368-210-1	CSO Sed Qual Charac	CVTOTS	SALTWTRSED	08/29/11	09/07/11	09/08/11	WG117182-1 thru - 9
L53963-42	423368-210-1	CSO Sed Qual Charac	CVTOTS	SALTWTRSED	08/29/11	09/07/11	09/08/11	WG117182-1 thru - 9
L53963-43	423368-210-1	CSO Sed Qual Charac	CVTOTS	SALTWTRSED	08/29/11	09/07/11	09/08/11	WG117182-1 thru - 9
L53963-44	423368-210-1	CSO Sed Qual Charac	CVTOTS	SALTWTRSED	08/29/11	09/07/11	09/08/11	WG117182-1 thru - 9
L53963-45	423368-210-1	CSO Sed Qual Charac	CVTOTS	SALTWTRSED	08/30/11	09/07/11	09/08/11	WG117182-1 thru - 9
WG117182-1	MB		CVTOTS	OTHR SOLID		09/07/11	09/08/11	WG117182-1 thru - 9
WG117182-2	LD		CVTOTS	SALTWTRSED		09/07/11	09/08/11	WG117182-1 thru - 9
WG117182-3	LT		CVTOTS	SALTWTRSED		09/07/11	09/08/11	WG117182-1 thru - 9
WG117182-4	MB		CVTOTS	OTHR SOLID		09/07/11	09/08/11	WG117182-1 thru - 9
WG117182-5	LD		CVTOTS	SALTWTRSED		09/07/11	09/08/11	WG117182-1 thru - 9
WG117182-6	LT		CVTOTS	SALTWTRSED		09/07/11	09/08/11	WG117182-1 thru - 9
WG117182-7	MB		CVTOTS	OTHR SOLID		09/07/11	09/08/11	WG117182-1 thru - 9
WG117182-8	LD		CVTOTS	SALTWTRSED		09/07/11	09/08/11	WG117182-1 thru - 9
WG117182-9	LT		CVTOTS	SALTWTRSED		09/07/11	09/08/11	WG117182-1 thru - 9

WG117904 - Total Solids

Sample	Project	Project Description	List Type	Matrix	Collect Date	Prep Date	Analysis Date	QC Association
L54227-1	423368-210-1	CSO Sed Qual Charac	CVTOTS	FRSHWTRSED	10/10/11	10/19/11	10/20/11	WG117904-1 thru - 6
L54227-2	423368-210-1	CSO Sed Qual Charac	CVTOTS	FRSHWTRSED	10/10/11	10/19/11	10/20/11	WG117904-1 thru - 6
L54227-3	423368-210-1	CSO Sed Qual Charac	CVTOTS	FRSHWTRSED	10/10/11	10/19/11	10/20/11	WG117904-1 thru - 6
L54227-4	423368-210-1	CSO Sed Qual Charac	CVTOTS	FRSHWTRSED	10/10/11	10/19/11	10/20/11	WG117904-1 thru - 6
L54227-5	423368-210-1	CSO Sed Qual Charac	CVTOTS	FRSHWTRSED	10/10/11	10/19/11	10/20/11	WG117904-1 thru - 6
L54227-6	423368-210-1	CSO Sed Qual Charac	CVTOTS	FRSHWTRSED	10/10/11	10/19/11	10/20/11	WG117904-1 thru - 6
L54227-7	423368-210-1	CSO Sed Qual Charac	CVTOTS	FRSHWTRSED	10/10/11	10/19/11	10/20/11	WG117904-1 thru - 6
L54227-8	423368-210-1	CSO Sed Qual Charac	CVTOTS	FRSHWTRSED	10/10/11	10/19/11	10/20/11	WG117904-1 thru - 6
L54227-9	423368-210-1	CSO Sed Qual Charac	CVTOTS	FRSHWTRSED	10/10/11	10/19/11	10/20/11	WG117904-1 thru - 6
L54227-10	423368-210-1	CSO Sed Qual Charac	CVTOTS	FRSHWTRSED	10/10/11	10/19/11	10/20/11	WG117904-1 thru - 6
L54227-11	423368-210-1	CSO Sed Qual Charac	CVTOTS	FRSHWTRSED	10/10/11	10/19/11	10/20/11	WG117904-1 thru - 6
L54227-12	423368-210-1	CSO Sed Qual Charac	CVTOTS	FRSHWTRSED	10/10/11	10/19/11	10/20/11	WG117904-1 thru - 6
L54227-13	423368-210-1	CSO Sed Qual Charac	CVTOTS	FRSHWTRSED	10/10/11	10/19/11	10/20/11	WG117904-1 thru - 6
L54227-14	423368-210-1	CSO Sed Qual Charac	CVTOTS	FRSHWTRSED	10/10/11	10/19/11	10/20/11	WG117904-1 thru - 6
L54227-15	423368-210-1	CSO Sed Qual Charac	CVTOTS	FRSHWTRSED	10/10/11	10/19/11	10/20/11	WG117904-1 thru - 6
L54227-16	423368-210-1	CSO Sed Qual Charac	CVTOTS	FRSHWTRSED	10/10/11	10/19/11	10/20/11	WG117904-1 thru - 6
L54227-17	423368-210-1	CSO Sed Qual Charac	CVTOTS	FRSHWTRSED	10/10/11	10/19/11	10/20/11	WG117904-1 thru - 6
L54227-18	423368-210-1	CSO Sed Qual Charac	CVTOTS	FRSHWTRSED	10/10/11	10/19/11	10/20/11	WG117904-1 thru - 6
L54227-19	423368-210-1	CSO Sed Qual Charac	CVTOTS	FRSHWTRSED	10/10/11	10/19/11	10/20/11	WG117904-1 thru - 6
L54227-20	423368-210-1	CSO Sed Qual Charac	CVTOTS	FRSHWTRSED	10/10/11	10/19/11	10/20/11	WG117904-1 thru - 6
L54227-21	423368-210-1	CSO Sed Qual Charac	CVTOTS	FRSHWTRSED	10/10/11	10/19/11	10/20/11	WG117904-1 thru - 6

L54227-22	423368-210-1	CSO Sed Qual Charac	CVTOTS	FRSHWTRSED	10/10/11	10/19/11	10/20/11	WG117904-1 thru - 6
WG117904-1	MB		CVTOTS	OTHR SOLID		10/19/11	10/20/11	WG117904-1 thru - 6
WG117904-2	LD		CVTOTS	FRSHWTRSED		10/19/11	10/20/11	WG117904-1 thru - 6
WG117904-3	LT		CVTOTS	FRSHWTRSED		10/19/11	10/20/11	WG117904-1 thru - 6
WG117904-4	MB		CVTOTS	OTHR SOLID		10/19/11	10/20/11	WG117904-1 thru - 6
WG117904-5	LD		CVTOTS	FRSHWTRSED		10/19/11	10/20/11	WG117904-1 thru - 6
WG117904-6	LT		CVTOTS	FRSHWTRSED		10/19/11	10/20/11	WG117904-1 thru - 6

WG119810 - Total Solids

Sample	Project	Project Description	List Type	Matrix	Collect Date	Prep Date	Analysis Date	QC Association
L54985-1	421196-180	Roads SWAP	CVTOTS	SOIL	02/08/12	02/14/12	02/17/12	WG119810-1,-2
L54985-2	421196-180	Roads SWAP	CVTOTS	SOIL	02/08/12	02/14/12	02/17/12	WG119810-1,-2
L54985-3	421196-180	Roads SWAP	CVTOTS	SOIL	02/08/12	02/14/12	02/17/12	WG119810-1,-2
L54985-4	421196-180	Roads SWAP	CVTOTS	SOIL	02/08/12	02/14/12	02/17/12	WG119810-1,-2
L54985-5	421196-180	Roads SWAP	CVTOTS	SOIL	02/08/12	02/14/12	02/17/12	WG119810-1,-2
L54985-6	421196-180	Roads SWAP	CVTOTS	SOIL	02/08/12	02/14/12	02/17/12	WG119810-1,-2
L54985-7	421196-180	Roads SWAP	CVTOTS	SOIL	02/08/12	02/14/12	02/17/12	WG119810-1,-2
L54985-8	421196-180	Roads SWAP	CVTOTS	SOIL	02/08/12	02/14/12	02/17/12	WG119810-1,-2
L54985-9	421196-180	Roads SWAP	CVTOTS	SOIL	02/08/12	02/14/12	02/17/12	WG119810-1,-2
L54985-10	421196-180	Roads SWAP	CVTOTS	SOIL	02/09/12	02/14/12	02/17/12	WG119810-1,-2
L54985-11	421196-180	Roads SWAP	CVTOTS	SOIL	02/09/12	02/14/12	02/17/12	WG119810-1,-2
L54985-12	421196-180	Roads SWAP	CVTOTS	SOIL	02/08/12	02/14/12	02/17/12	WG119810-1,-2
L54985-13	421196-180	Roads SWAP	CVTOTS	SOIL	02/08/12	02/14/12	02/17/12	WG119810-1,-2
L54985-14	421196-180	Roads SWAP	CVTOTS	SOIL	02/08/12	02/14/12	02/17/12	WG119810-1,-2
L55155-1	423368-210-1	CSO Sed Qual Charac	CVTOTS	FRSHWTRSED	10/10/11	02/14/12	02/17/12	WG119810-1,-2
WG119810-1	MB		CVTOTS	OTHR SOLID		02/14/12	02/17/12	WG119810-1,-2
WG119810-2	LD		CVTOTS	SOIL		02/14/12	02/17/12	WG119810-1,-2

WG117325 - Mercury

Sample	Project	Project Description	List Type	Matrix	Collect Date	Prep Date	Analysis Date	QC Association
L53963-1	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	SALTWTRSED	08/29/11	09/12/11	09/12/11	WG117325-1 thru -6
L53963-2	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	SALTWTRSED	08/29/11	09/12/11	09/12/11	WG117325-1 thru -6
L53963-3	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	SALTWTRSED	08/29/11	09/12/11	09/12/11	WG117325-1 thru -6
L53963-4	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	SALTWTRSED	08/29/11	09/12/11	09/12/11	WG117325-1 thru -6
L53963-5	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	SALTWTRSED	08/29/11	09/12/11	09/12/11	WG117325-1 thru -6
L53963-6	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	SALTWTRSED	08/29/11	09/12/11	09/12/11	WG117325-1 thru -6
L53963-7	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	SALTWTRSED	08/29/11	09/12/11	09/12/11	WG117325-1 thru -6
L53963-8	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	SALTWTRSED	08/29/11	09/12/11	09/12/11	WG117325-1 thru -6
L53963-9	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	SALTWTRSED	08/29/11	09/12/11	09/12/11	WG117325-1 thru -6

L53963-10	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	SALTWTRSED	08/29/11	09/12/11	09/12/11	WG117325-1 thru -6
L53963-11	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	SALTWTRSED	08/29/11	09/12/11	09/12/11	WG117325-1 thru -6
L53963-12	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	SALTWTRSED	08/29/11	09/12/11	09/12/11	WG117325-1 thru -6
L53963-13	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	SALTWTRSED	08/30/11	09/12/11	09/12/11	WG117325-1 thru -6
L53963-14	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	SALTWTRSED	08/30/11	09/12/11	09/12/11	WG117325-1 thru -6
L53963-15	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	SALTWTRSED	08/30/11	09/12/11	09/12/11	WG117325-1 thru -6
WG117325-1	SRM		MTHG-MIDS	SALTWTRSED		09/12/11	09/12/11	WG117325-1 thru -6
WG117325-2	MB		MTHG-MIDS	SOLIDBLANK		09/12/11	09/12/11	WG117325-1 thru -6
WG117325-3	SB		MTHG-MIDS	SOLIDBLANK		09/12/11	09/12/11	WG117325-1 thru -6
WG117325-4	MS		MTHG-MIDS	SALTWTRSED		09/12/11	09/12/11	WG117325-1 thru -6
WG117325-5	MSD		MTHG-MIDS	SALTWTRSED		09/12/11	09/12/11	WG117325-1 thru -6
WG117325-6	LD		MTHG-MIDS	SALTWTRSED		09/12/11	09/12/11	WG117325-1 thru -6

WG117360 - Mercury

Sample	Project	Project Description	List Type	Matrix	Collect Date	Prep Date	Analysis Date	QC Association
L53963-16	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	SALTWTRSED	08/30/11	09/13/11	09/15/11	WG117360-1 thru -6
L53963-17	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	SALTWTRSED	08/30/11	09/13/11	09/15/11	WG117360-1 thru -6
L53963-18	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	SALTWTRSED	08/30/11	09/13/11	09/15/11	WG117360-1 thru -6
L53963-19	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	SALTWTRSED	08/30/11	09/13/11	09/15/11	WG117360-1 thru -6
L53963-20	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	SALTWTRSED	08/30/11	09/13/11	09/15/11	WG117360-1 thru -6
L53963-21	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	SALTWTRSED	08/30/11	09/13/11	09/15/11	WG117360-1 thru -6
L53963-22	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	SALTWTRSED	08/30/11	09/13/11	09/15/11	WG117360-1 thru -6
L53963-23	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	SALTWTRSED	08/30/11	09/13/11	09/15/11	WG117360-1 thru -6
L53963-24	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	SALTWTRSED	08/30/11	09/13/11	09/15/11	WG117360-1 thru -6
L53963-25	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	SALTWTRSED	08/30/11	09/13/11	09/15/11	WG117360-1 thru -6
L53963-26	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	SALTWTRSED	08/30/11	09/13/11	09/15/11	WG117360-1 thru -6
L53963-27	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	SALTWTRSED	08/30/11	09/13/11	09/15/11	WG117360-1 thru -6
L53963-28	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	SALTWTRSED	08/30/11	09/13/11	09/15/11	WG117360-1 thru -6
L53963-29	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	SALTWTRSED	08/30/11	09/13/11	09/15/11	WG117360-1 thru -6
L53963-30	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	SALTWTRSED	08/30/11	09/13/11	09/15/11	WG117360-1 thru -6
WG117360-1	SRM		MTHG-MIDS	SALTWTRSED		09/13/11	09/15/11	WG117360-1 thru -6
WG117360-2	MB		MTHG-MIDS	SOLIDBLANK		09/13/11	09/15/11	WG117360-1 thru -6
WG117360-3	SB		MTHG-MIDS	SOLIDBLANK		09/13/11	09/15/11	WG117360-1 thru -6
WG117360-4	MS		MTHG-MIDS	SALTWTRSED		09/13/11	09/15/11	WG117360-1 thru -6
WG117360-5	MSD		MTHG-MIDS	SALTWTRSED		09/13/11	09/15/11	WG117360-1 thru -6
WG117360-6	LD		MTHG-MIDS	SALTWTRSED		09/13/11	09/15/11	WG117360-1 thru -6

LIMSView Batch Report for 2011 CSO Sediment Monitoring Project

WG117412 - Mercury

Sample	Project	Project Description	List Type	Matrix	Collect Date	Prep Date	Analysis Date	QC Association
L53963-31	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	SALTWTRSED	08/30/11	09/15/11	09/16/11	WG117412-1 thru -6
L53963-32	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	SALTWTRSED	08/29/11	09/15/11	09/16/11	WG117412-1 thru -6
L53963-33	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	SALTWTRSED	08/29/11	09/15/11	09/16/11	WG117412-1 thru -6
L53963-34	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	SALTWTRSED	08/29/11	09/15/11	09/16/11	WG117412-1 thru -6
L53963-35	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	SALTWTRSED	08/29/11	09/15/11	09/16/11	WG117412-1 thru -6
L53963-36	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	SALTWTRSED	08/29/11	09/15/11	09/16/11	WG117412-1 thru -6
L53963-37	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	SALTWTRSED	08/29/11	09/15/11	09/16/11	WG117412-1 thru -6
L53963-38	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	SALTWTRSED	08/29/11	09/15/11	09/16/11	WG117412-1 thru -6
L53963-39	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	SALTWTRSED	08/29/11	09/15/11	09/16/11	WG117412-1 thru -6
L53963-40	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	SALTWTRSED	08/29/11	09/15/11	09/16/11	WG117412-1 thru -6
L53963-41	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	SALTWTRSED	08/29/11	09/15/11	09/16/11	WG117412-1 thru -6
L53963-42	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	SALTWTRSED	08/29/11	09/15/11	09/16/11	WG117412-1 thru -6
L53963-43	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	SALTWTRSED	08/29/11	09/15/11	09/16/11	WG117412-1 thru -6
L53963-44	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	SALTWTRSED	08/29/11	09/15/11	09/16/11	WG117412-1 thru -6
L53963-45	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	SALTWTRSED	08/30/11	09/15/11	09/16/11	WG117412-1 thru -6
WG117412-1	SRM		MTHG-MIDS	SALTWTRSED		09/15/11	09/16/11	WG117412-1 thru -6
WG117412-2	MB		MTHG-MIDS	SOLIDBLANK		09/15/11	09/16/11	WG117412-1 thru -6
WG117412-3	SB		MTHG-MIDS	SOLIDBLANK		09/15/11	09/16/11	WG117412-1 thru -6
WG117412-4	MS		MTHG-MIDS	SALTWTRSED		09/15/11	09/16/11	WG117412-1 thru -6
WG117412-5	MSD		MTHG-MIDS	SALTWTRSED		09/15/11	09/16/11	WG117412-1 thru -6
WG117412-6	LD		MTHG-MIDS	SALTWTRSED		09/15/11	09/16/11	WG117412-1 thru -6

WG118047 - Mercury

Sample	Project	Project Description	List Type	Matrix	Collect Date	Prep Date	Analysis Date	QC Association
L54227-1	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	FRSHWTRSED	10/10/11	10/24/11	10/25/11	WG118047-1 thru -7
L54227-2	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	FRSHWTRSED	10/10/11	10/24/11	10/25/11	WG118047-1 thru -7
L54227-3	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	FRSHWTRSED	10/10/11	10/24/11	10/25/11	WG118047-1 thru -7
L54227-4	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	FRSHWTRSED	10/10/11	10/24/11	10/25/11	WG118047-1 thru -7
L54227-5	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	FRSHWTRSED	10/10/11	10/24/11	10/25/11	WG118047-1 thru -7
L54227-6	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	FRSHWTRSED	10/10/11	10/24/11	10/25/11	WG118047-1 thru -7
L54227-7	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	FRSHWTRSED	10/10/11	10/24/11	10/25/11	WG118047-1 thru -7
L54227-8	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	FRSHWTRSED	10/10/11	10/24/11	10/25/11	WG118047-1 thru -7
L54227-9	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	FRSHWTRSED	10/10/11	10/24/11	10/25/11	WG118047-1 thru -7
L54227-10	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	FRSHWTRSED	10/10/11	10/24/11	10/25/11	WG118047-1 thru -7
L54227-11	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	FRSHWTRSED	10/10/11	10/24/11	10/25/11	WG118047-1 thru -7
WG118047-1	LCS		MTHG-MIDS	FRSHWTRSED		10/24/11	10/25/11	WG118047-1 thru -7
WG118047-2	LCSD		MTHG-MIDS	FRSHWTRSED		10/24/11	10/25/11	WG118047-1 thru -7

WG118047-3	MB		MTHG-MIDS	SOLIDBLANK		10/24/11	10/25/11	WG118047-1 thru -7
WG118047-4	SB		MTHG-MIDS	SOLIDBLANK		10/24/11	10/25/11	WG118047-1 thru -7
WG118047-5	MS		MTHG-MIDS	FRSHWTRSED		10/24/11	10/25/11	WG118047-1 thru -7
WG118047-6	MSD		MTHG-MIDS	FRSHWTRSED		10/24/11	10/25/11	WG118047-1 thru -7
WG118047-7	LD		MTHG-MIDS	FRSHWTRSED		10/24/11	10/25/11	WG118047-1 thru -7

WG118314 - Mercury

Sample	Project	Project Description	List Type	Matrix	Collect Date	Prep Date	Analysis Date	QC Association
L54227-12	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	FRSHWTRSED	10/10/11	11/01/11	11/01/11	WG118314-1 thru -7
L54227-13	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	FRSHWTRSED	10/10/11	11/01/11	11/01/11	WG118314-1 thru -7
L54227-14	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	FRSHWTRSED	10/10/11	11/01/11	11/01/11	WG118314-1 thru -7
L54227-15	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	FRSHWTRSED	10/10/11	11/01/11	11/01/11	WG118314-1 thru -7
L54227-16	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	FRSHWTRSED	10/10/11	11/01/11	11/01/11	WG118314-1 thru -7
L54227-17	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	FRSHWTRSED	10/10/11	11/01/11	11/01/11	WG118314-1 thru -7
L54227-18	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	FRSHWTRSED	10/10/11	11/01/11	11/01/11	WG118314-1 thru -7
L54227-19	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	FRSHWTRSED	10/10/11	11/01/11	11/01/11	WG118314-1 thru -7
L54227-20	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	FRSHWTRSED	10/10/11	11/01/11	11/01/11	WG118314-1 thru -7
L54227-21	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	FRSHWTRSED	10/10/11	11/01/11	11/01/11	WG118314-1 thru -7
L54227-22	423368-210-1	CSO Sed Qual Charac	MTHG-MIDS	FRSHWTRSED	10/10/11	11/01/11	11/01/11	WG118314-1 thru -7
WG118314-1	LCS		MTHG-MIDS	FRSHWTRSED		11/01/11	11/01/11	WG118314-1 thru -7
WG118314-2	LCSD		MTHG-MIDS	FRSHWTRSED		11/01/11	11/01/11	WG118314-1 thru -7
WG118314-3	MB		MTHG-MIDS	SOLIDBLANK		11/01/11	11/01/11	WG118314-1 thru -7
WG118314-4	SB		MTHG-MIDS	SOLIDBLANK		11/01/11	11/01/11	WG118314-1 thru -7
WG118314-5	MS		MTHG-MIDS	FRSHWTRSED		11/01/11	11/01/11	WG118314-1 thru -7
WG118314-6	MSD		MTHG-MIDS	FRSHWTRSED		11/01/11	11/01/11	WG118314-1 thru -7
WG118314-7	LD		MTHG-MIDS	FRSHWTRSED		11/01/11	11/01/11	WG118314-1 thru -7

WG117466 - ICP Metals

Sample	Project	Project Description	List Type	Matrix	Collect Date	Prep Date	Analysis Date	QC Association
L53963-16	423368-210-1	CSO Sed Qual Charac	MTICP-SED	SALTWTRSED	08/30/11	09/19/11	09/20/11	WG117466-1 thru -6
L53963-17	423368-210-1	CSO Sed Qual Charac	MTICP-SED	SALTWTRSED	08/30/11	09/19/11	09/20/11	WG117466-1 thru -6
L53963-18	423368-210-1	CSO Sed Qual Charac	MTICP-SED	SALTWTRSED	08/30/11	09/19/11	09/20/11	WG117466-1 thru -6
L53963-19	423368-210-1	CSO Sed Qual Charac	MTICP-SED	SALTWTRSED	08/30/11	09/19/11	09/20/11	WG117466-1 thru -6
L53963-20	423368-210-1	CSO Sed Qual Charac	MTICP-SED	SALTWTRSED	08/30/11	09/19/11	09/20/11	WG117466-1 thru -6
L53963-21	423368-210-1	CSO Sed Qual Charac	MTICP-SED	SALTWTRSED	08/30/11	09/19/11	09/20/11	WG117466-1 thru -6
L53963-22	423368-210-1	CSO Sed Qual Charac	MTICP-SED	SALTWTRSED	08/30/11	09/19/11	09/20/11	WG117466-1 thru -6
L53963-23	423368-210-1	CSO Sed Qual Charac	MTICP-SED	SALTWTRSED	08/30/11	09/19/11	09/20/11	WG117466-1 thru -6
L53963-24	423368-210-1	CSO Sed Qual Charac	MTICP-SED	SALTWTRSED	08/30/11	09/19/11	09/20/11	WG117466-1 thru -6
L53963-25	423368-210-1	CSO Sed Qual Charac	MTICP-SED	SALTWTRSED	08/30/11	09/19/11	09/20/11	WG117466-1 thru -6

L53963-26	423368-210-1	CSO Sed Qual Charac	MTICP-SED	SALTWTRSED	08/30/11	09/19/11	09/20/11	WG117466-1 thru -6
L53963-27	423368-210-1	CSO Sed Qual Charac	MTICP-SED	SALTWTRSED	08/30/11	09/19/11	09/20/11	WG117466-1 thru -6
L53963-28	423368-210-1	CSO Sed Qual Charac	MTICP-SED	SALTWTRSED	08/30/11	09/19/11	09/20/11	WG117466-1 thru -6
L53963-29	423368-210-1	CSO Sed Qual Charac	MTICP-SED	SALTWTRSED	08/30/11	09/19/11	09/20/11	WG117466-1 thru -6
L53963-30	423368-210-1	CSO Sed Qual Charac	MTICP-SED	SALTWTRSED	08/30/11	09/19/11	09/20/11	WG117466-1 thru -6
WG117466-1	SB		MTICP-SED	SOLIDBLANK		09/19/11	09/20/11	WG117466-1 thru -6
WG117466-2	MB		MTICP-SED	SOLIDBLANK		09/19/11	09/20/11	WG117466-1 thru -6
WG117466-3	LD		MTICP-SED	SALTWTRSED		09/19/11	09/20/11	WG117466-1 thru -6
WG117466-4	MS		MTICP-SED	SALTWTRSED		09/19/11	09/20/11	WG117466-1 thru -6
WG117466-5	SRM		MTICP-SED	SALTWTRSED		09/19/11	09/20/11	WG117466-1 thru -6
WG117466-6	LCS		MTICP-SED	SOIL		09/19/11	09/20/11	WG117466-1 thru -6

WG118630 - ICP Metals

Sample	Project	Project Description	List Type	Matrix	Collect Date	Prep Date	Analysis Date	QC Association
L53963-1	423368-210-1	CSO Sed Qual Charac	MTICP-SED	SALTWTRSED	08/29/11	11/21/11	11/22/11	WG118630-1 thru -8
L53963-2	423368-210-1	CSO Sed Qual Charac	MTICP-SED	SALTWTRSED	08/29/11	11/21/11	11/22/11	WG118630-1 thru -8
L53963-3	423368-210-1	CSO Sed Qual Charac	MTICP-SED	SALTWTRSED	08/29/11	11/21/11	11/22/11	WG118630-1 thru -8
L53963-4	423368-210-1	CSO Sed Qual Charac	MTICP-SED	SALTWTRSED	08/29/11	11/21/11	11/22/11	WG118630-1 thru -8
L53963-5	423368-210-1	CSO Sed Qual Charac	MTICP-SED	SALTWTRSED	08/29/11	11/21/11	11/22/11	WG118630-1 thru -8
L53963-6	423368-210-1	CSO Sed Qual Charac	MTICP-SED	SALTWTRSED	08/29/11	11/21/11	11/22/11	WG118630-1 thru -8
L53963-7	423368-210-1	CSO Sed Qual Charac	MTICP-SED	SALTWTRSED	08/29/11	11/21/11	11/22/11	WG118630-1 thru -8
L53963-8	423368-210-1	CSO Sed Qual Charac	MTICP-SED	SALTWTRSED	08/29/11	11/21/11	11/22/11	WG118630-1 thru -8
L53963-9	423368-210-1	CSO Sed Qual Charac	MTICP-SED	SALTWTRSED	08/29/11	11/21/11	11/22/11	WG118630-1 thru -8
L53963-10	423368-210-1	CSO Sed Qual Charac	MTICP-SED	SALTWTRSED	08/29/11	11/21/11	11/22/11	WG118630-1 thru -8
L53963-11	423368-210-1	CSO Sed Qual Charac	MTICP-SED	SALTWTRSED	08/29/11	11/21/11	11/22/11	WG118630-1 thru -8
L53963-12	423368-210-1	CSO Sed Qual Charac	MTICP-SED	SALTWTRSED	08/29/11	11/21/11	11/22/11	WG118630-1 thru -8
L53963-13	423368-210-1	CSO Sed Qual Charac	MTICP-SED	SALTWTRSED	08/30/11	11/21/11	11/22/11	WG118630-1 thru -8
L53963-14	423368-210-1	CSO Sed Qual Charac	MTICP-SED	SALTWTRSED	08/30/11	11/21/11	11/22/11	WG118630-1 thru -8
L53963-15	423368-210-1	CSO Sed Qual Charac	MTICP-SED	SALTWTRSED	08/30/11	11/21/11	11/22/11	WG118630-1 thru -8
WG118630-1	SB		MTICP-SED	SOLIDBLANK		11/21/11	11/22/11	WG118630-1 thru -8
WG118630-2	MB		MTICP-SED	SOLIDBLANK		11/21/11	11/22/11	WG118630-1 thru -8
WG118630-3	LD		MTICP-SED	SALTWTRSED		11/21/11	11/22/11	WG118630-1 thru -8
WG118630-4	MS		MTICP-SED	SALTWTRSED		11/21/11	11/22/11	WG118630-1 thru -8
WG118630-5	LCS		MTICP-SED	SOIL		11/21/11	11/22/11	WG118630-1 thru -8
WG118630-6	LCSD		MTICP-SED	SOIL		11/21/11	11/22/11	WG118630-1 thru -8
WG118630-7	SRM		MTICP-SED	SALTWTRSED		11/21/11	11/22/11	WG118630-1 thru -8
WG118630-8	SRMD		MTICP-SED	SALTWTRSED		11/21/11	11/22/11	WG118630-1 thru -8

LIMSView Batch Report for 2011 CSO Sediment Monitoring Project

WG118707 - ICP Metals

Sample	Project	Project Description	List Type	Matrix	Collect Date	Prep Date	Analysis Date	QC Association
L53963-31	423368-210-1	CSO Sed Qual Charac	MTICP-SED	SALTWTRSED	08/30/11	11/29/11	11/30/11	WG118707-1 thru -8
L53963-32	423368-210-1	CSO Sed Qual Charac	MTICP-SED	SALTWTRSED	08/29/11	11/29/11	11/30/11	WG118707-1 thru -8
L53963-33	423368-210-1	CSO Sed Qual Charac	MTICP-SED	SALTWTRSED	08/29/11	11/29/11	11/30/11	WG118707-1 thru -8
L53963-34	423368-210-1	CSO Sed Qual Charac	MTICP-SED	SALTWTRSED	08/29/11	11/29/11	11/30/11	WG118707-1 thru -8
L53963-35	423368-210-1	CSO Sed Qual Charac	MTICP-SED	SALTWTRSED	08/29/11	11/29/11	11/30/11	WG118707-1 thru -8
L53963-36	423368-210-1	CSO Sed Qual Charac	MTICP-SED	SALTWTRSED	08/29/11	11/29/11	11/30/11	WG118707-1 thru -8
L53963-37	423368-210-1	CSO Sed Qual Charac	MTICP-SED	SALTWTRSED	08/29/11	11/29/11	11/30/11	WG118707-1 thru -8
L53963-38	423368-210-1	CSO Sed Qual Charac	MTICP-SED	SALTWTRSED	08/29/11	11/29/11	11/30/11	WG118707-1 thru -8
L53963-39	423368-210-1	CSO Sed Qual Charac	MTICP-SED	SALTWTRSED	08/29/11	11/29/11	11/30/11	WG118707-1 thru -8
L53963-40	423368-210-1	CSO Sed Qual Charac	MTICP-SED	SALTWTRSED	08/29/11	11/29/11	11/30/11	WG118707-1 thru -8
L53963-41	423368-210-1	CSO Sed Qual Charac	MTICP-SED	SALTWTRSED	08/29/11	11/29/11	11/30/11	WG118707-1 thru -8
L53963-42	423368-210-1	CSO Sed Qual Charac	MTICP-SED	SALTWTRSED	08/29/11	11/29/11	11/30/11	WG118707-1 thru -8
L53963-43	423368-210-1	CSO Sed Qual Charac	MTICP-SED	SALTWTRSED	08/29/11	11/29/11	11/30/11	WG118707-1 thru -8
L53963-44	423368-210-1	CSO Sed Qual Charac	MTICP-SED	SALTWTRSED	08/29/11	11/29/11	11/30/11	WG118707-1 thru -8
L53963-45	423368-210-1	CSO Sed Qual Charac	MTICP-SED	SALTWTRSED	08/30/11	11/29/11	11/30/11	WG118707-1 thru -8
WG118707-1	SB		MTICP-SED	SOLIDBLANK		11/29/11	11/30/11	WG118707-1 thru -8
WG118707-2	MB		MTICP-SED	SOLIDBLANK		11/29/11	11/30/11	WG118707-1 thru -8
WG118707-3	LD		MTICP-SED	SALTWTRSED		11/29/11	11/30/11	WG118707-1 thru -8
WG118707-4	MS		MTICP-SED	SALTWTRSED		11/29/11	11/30/11	WG118707-1 thru -8
WG118707-5	LCS		MTICP-SED	SOIL		11/29/11	11/30/11	WG118707-1 thru -8
WG118707-6	LCSD		MTICP-SED	SOIL		11/29/11	11/30/11	WG118707-1 thru -8
WG118707-7	SRM		MTICP-SED	SALTWTRSED		11/29/11	11/30/11	WG118707-1 thru -8
WG118707-8	SRMD		MTICP-SED	SALTWTRSED		11/29/11	11/30/11	WG118707-1 thru -8

WG119186 - ICPMS Metals

Sample	Project	Project Description	List Type	Matrix	Collect Date	Prep Date	Analysis Date	QC Association
L54227-1	423368-210-1	CSO Sed Qual Charac	MTICPMS-SED	FRSHWTRSED	10/10/11	12/29/11	01/03/12	WG119186-1 thru -7
L54227-2	423368-210-1	CSO Sed Qual Charac	MTICPMS-SED	FRSHWTRSED	10/10/11	12/29/11	01/03/12	WG119186-1 thru -7
L54227-3	423368-210-1	CSO Sed Qual Charac	MTICPMS-SED	FRSHWTRSED	10/10/11	12/29/11	01/03/12	WG119186-1 thru -7
L54227-4	423368-210-1	CSO Sed Qual Charac	MTICPMS-SED	FRSHWTRSED	10/10/11	12/29/11	01/03/12	WG119186-1 thru -7
L54227-5	423368-210-1	CSO Sed Qual Charac	MTICPMS-SED	FRSHWTRSED	10/10/11	12/29/11	01/03/12	WG119186-1 thru -7
L54227-6	423368-210-1	CSO Sed Qual Charac	MTICPMS-SED	FRSHWTRSED	10/10/11	12/29/11	01/03/12	WG119186-1 thru -7
L54227-7	423368-210-1	CSO Sed Qual Charac	MTICPMS-SED	FRSHWTRSED	10/10/11	12/29/11	01/03/12	WG119186-1 thru -7
L54227-8	423368-210-1	CSO Sed Qual Charac	MTICPMS-SED	FRSHWTRSED	10/10/11	12/29/11	01/03/12	WG119186-1 thru -7
L54227-9	423368-210-1	CSO Sed Qual Charac	MTICPMS-SED	FRSHWTRSED	10/10/11	12/29/11	01/03/12	WG119186-1 thru -7
L54227-10	423368-210-1	CSO Sed Qual Charac	MTICPMS-SED	FRSHWTRSED	10/10/11	12/29/11	01/03/12	WG119186-1 thru -7
L54227-11	423368-210-1	CSO Sed Qual Charac	MTICPMS-SED	FRSHWTRSED	10/10/11	12/29/11	01/03/12	WG119186-1 thru -7

L54227-12	423368-210-1	CSO Sed Qual Charac	MTICPMS-SED	FRSHWTRSED	10/10/11	12/29/11	01/03/12	WG119186-1 thru -7
L54227-13	423368-210-1	CSO Sed Qual Charac	MTICPMS-SED	FRSHWTRSED	10/10/11	12/29/11	01/03/12	WG119186-1 thru -7
L54227-14	423368-210-1	CSO Sed Qual Charac	MTICPMS-SED	FRSHWTRSED	10/10/11	12/29/11	01/03/12	WG119186-1 thru -7
L54227-15	423368-210-1	CSO Sed Qual Charac	MTICPMS-SED	FRSHWTRSED	10/10/11	12/29/11	01/03/12	WG119186-1 thru -7
L54227-16	423368-210-1	CSO Sed Qual Charac	MTICPMS-SED	FRSHWTRSED	10/10/11	12/29/11	01/03/12	WG119186-1 thru -7
L54227-17	423368-210-1	CSO Sed Qual Charac	MTICPMS-SED	FRSHWTRSED	10/10/11	12/29/11	01/03/12	WG119186-1 thru -7
L54227-18	423368-210-1	CSO Sed Qual Charac	MTICPMS-SED	FRSHWTRSED	10/10/11	12/29/11	01/03/12	WG119186-1 thru -7
L54227-19	423368-210-1	CSO Sed Qual Charac	MTICPMS-SED	FRSHWTRSED	10/10/11	12/29/11	01/03/12	WG119186-1 thru -7
L54227-20	423368-210-1	CSO Sed Qual Charac	MTICPMS-SED	FRSHWTRSED	10/10/11	12/29/11	01/03/12	WG119186-1 thru -7
WG119186-1	MB		MTICPMS-SED	SOLIDBLANK		12/29/11	01/03/12	WG119186-1 thru -7
WG119186-2	SB		MTICPMS-SED	SOLIDBLANK		12/29/11	01/03/12	WG119186-1 thru -7
WG119186-3	LCS		MTICPMS-SED	SOIL		12/29/11	01/03/12	WG119186-1 thru -7
WG119186-4	LCSD		MTICPMS-SED	SOIL		12/29/11	01/03/12	WG119186-1 thru -7
WG119186-5	LCS		MTICPMS-SED	FRSHWTRSED		12/29/11	01/03/12	WG119186-1 thru -7
WG119186-6	LD		MTICPMS-SED	FRSHWTRSED		12/29/11	01/03/12	WG119186-1 thru -7
WG119186-7	MS		MTICPMS-SED	FRSHWTRSED		12/29/11	01/03/12	WG119186-1 thru -7

WG119225 - ICPMS Metals

Sample	Project	Project Description	List Type	Matrix	Collect Date	Prep Date	Analysis Date	QC Association
L54227-21	423368-210-1	CSO Sed Qual Charac	MTICPMS-SED	FRSHWTRSED	10/10/11	12/29/11	01/03/12	WG119225-1 thru -7
L54227-22	423368-210-1	CSO Sed Qual Charac	MTICPMS-SED	FRSHWTRSED	10/10/11	12/29/11	01/03/12	WG119225-1 thru -7
WG119225-1	MB		MTICPMS-SED	SOLIDBLANK		12/29/11	01/03/12	WG119225-1 thru -7
WG119225-2	SB		MTICPMS-SED	SOLIDBLANK		12/29/11	01/03/12	WG119225-1 thru -7
WG119225-3	LCS		MTICPMS-SED	SOIL		12/29/11	01/03/12	WG119225-1 thru -7
WG119225-4	LCSD		MTICPMS-SED	SOIL		12/29/11	01/03/12	WG119225-1 thru -7
WG119225-5	LCS		MTICPMS-SED	FRSHWTRSED		12/29/11	01/03/12	WG119225-1 thru -7
WG119225-6	LD		MTICPMS-SED	FRSHWTRSED		12/29/11	01/03/12	WG119225-1 thru -7
WG119225-7	MS		MTICPMS-SED	FRSHWTRSED		12/29/11	01/03/12	WG119225-1 thru -7

WG117647 - BNAs

Sample	Project	Project Description	List Type	Matrix	Collect Date	Prep Date	Analysis Date	QC Association
L53963-1	423368-210-1	CSO Sed Qual Charac	ORBNASMS	SALTWTRSED	08/29/11	09/28/11	10/11/11	WG117647-1 thru -8
L53963-2	423368-210-1	CSO Sed Qual Charac	ORBNASMS	SALTWTRSED	08/29/11	09/28/11	10/13/11	WG117647-1 thru -8
L53963-3	423368-210-1	CSO Sed Qual Charac	ORBNASMS	SALTWTRSED	08/29/11	09/28/11	10/13/11	WG117647-1 thru -8
L53963-4	423368-210-1	CSO Sed Qual Charac	ORBNASMS	SALTWTRSED	08/29/11	09/28/11	10/13/11	WG117647-1 thru -8
L53963-5	423368-210-1	CSO Sed Qual Charac	ORBNASMS	SALTWTRSED	08/29/11	09/28/11	10/13/11	WG117647-1 thru -8
L53963-6	423368-210-1	CSO Sed Qual Charac	ORBNASMS	SALTWTRSED	08/29/11	09/28/11	10/13/11	WG117647-1 thru -8
L53963-7	423368-210-1	CSO Sed Qual Charac	ORBNASMS	SALTWTRSED	08/29/11	09/28/11	10/13/11	WG117647-1 thru -8
L53963-8	423368-210-1	CSO Sed Qual Charac	ORBNASMS	SALTWTRSED	08/29/11	09/28/11	10/13/11	WG117647-1 thru -8

L53963-9	423368-210-1	CSO Sed Qual Charac	ORBNASMS	SALTWTRSED	08/29/11	09/28/11	10/13/11	WG117647-1 thru -8
L53963-10	423368-210-1	CSO Sed Qual Charac	ORBNASMS	SALTWTRSED	08/29/11	09/28/11	10/13/11	WG117647-1 thru -8
L53963-11	423368-210-1	CSO Sed Qual Charac	ORBNASMS	SALTWTRSED	08/29/11	09/28/11	10/13/11	WG117647-1 thru -8
L53963-12	423368-210-1	CSO Sed Qual Charac	ORBNASMS	SALTWTRSED	08/29/11	09/28/11	10/13/11	WG117647-1 thru -8
L53963-32	423368-210-1	CSO Sed Qual Charac	ORBNASMS	SALTWTRSED	08/29/11	09/28/11	10/13/11	WG117647-1 thru -8
L53963-33	423368-210-1	CSO Sed Qual Charac	ORBNASMS	SALTWTRSED	08/29/11	09/28/11	10/13/11	WG117647-1 thru -8
L53963-34	423368-210-1	CSO Sed Qual Charac	ORBNASMS	SALTWTRSED	08/29/11	09/28/11	10/13/11	WG117647-1 thru -8
L53963-35	423368-210-1	CSO Sed Qual Charac	ORBNASMS	SALTWTRSED	08/29/11	09/28/11	10/13/11	WG117647-1 thru -8
L53963-36	423368-210-1	CSO Sed Qual Charac	ORBNASMS	SALTWTRSED	08/29/11	09/28/11	10/13/11	WG117647-1 thru -8
L53963-37	423368-210-1	CSO Sed Qual Charac	ORBNASMS	SALTWTRSED	08/29/11	09/28/11	10/18/11	WG117647-1 thru -8
L53963-38	423368-210-1	CSO Sed Qual Charac	ORBNASMS	SALTWTRSED	08/29/11	09/28/11	10/17/11	WG117647-1 thru -8
L53963-39	423368-210-1	CSO Sed Qual Charac	ORBNASMS	SALTWTRSED	08/29/11	09/28/11	10/11/11	WG117647-1 thru -8
WG117647-1	MB		ORBNASMS	OTHR SOLID		09/28/11	10/11/11	WG117647-1 thru -8
WG117647-2	SB		ORBNASMS	OTHR SOLID		09/28/11	10/11/11	WG117647-1 thru -8
WG117647-3	SB		ORBNASMS	OTHR SOLID		09/28/11	10/11/11	WG117647-1 thru -8
WG117647-4	MS		ORBNASMS	SALTWTRSED		09/28/11	10/11/11	WG117647-1 thru -8
WG117647-5	MSD		ORBNASMS	SALTWTRSED		09/28/11	10/11/11	WG117647-1 thru -8
WG117647-6	SRM		ORBNASMS	SALTWTRSED		09/28/11	10/11/11	WG117647-1 thru -8
WG117647-7	SRMD		ORBNASMS	SALTWTRSED		09/28/11	10/11/11	WG117647-1 thru -8
WG117647-8	LD		ORBNASMS	SALTWTRSED		09/28/11	10/11/11	WG117647-1 thru -8

WG118181 - BNAs

Sample	Project	Project Description	List Type	Matrix	Collect Date	Prep Date	Analysis Date	QC Association
L53963-13	423368-210-1	CSO Sed Qual Charac	ORBNASMS	SALTWTRSED	08/30/11	10/25/11	11/01/11	WG118181-1 thru -8
L53963-14	423368-210-1	CSO Sed Qual Charac	ORBNASMS	SALTWTRSED	08/30/11	10/25/11	11/01/11	WG118181-1 thru -8
L53963-15	423368-210-1	CSO Sed Qual Charac	ORBNASMS	SALTWTRSED	08/30/11	10/25/11	10/31/11	WG118181-1 thru -8
L53963-16	423368-210-1	CSO Sed Qual Charac	ORBNASMS	SALTWTRSED	08/30/11	10/25/11	11/01/11	WG118181-1 thru -8
L53963-17	423368-210-1	CSO Sed Qual Charac	ORBNASMS	SALTWTRSED	08/30/11	10/25/11	11/02/11	WG118181-1 thru -8
L53963-18	423368-210-1	CSO Sed Qual Charac	ORBNASMS	SALTWTRSED	08/30/11	10/25/11	11/01/11	WG118181-1 thru -8
L53963-19	423368-210-1	CSO Sed Qual Charac	ORBNASMS	SALTWTRSED	08/30/11	10/25/11	11/02/11	WG118181-1 thru -8
L53963-20	423368-210-1	CSO Sed Qual Charac	ORBNASMS	SALTWTRSED	08/30/11	10/25/11	11/02/11	WG118181-1 thru -8
L53963-21	423368-210-1	CSO Sed Qual Charac	ORBNASMS	SALTWTRSED	08/30/11	10/25/11	11/02/11	WG118181-1 thru -8
L53963-22	423368-210-1	CSO Sed Qual Charac	ORBNASMS	SALTWTRSED	08/30/11	10/25/11	11/02/11	WG118181-1 thru -8
L53963-23	423368-210-1	CSO Sed Qual Charac	ORBNASMS	SALTWTRSED	08/30/11	10/25/11	11/02/11	WG118181-1 thru -8
L53963-24	423368-210-1	CSO Sed Qual Charac	ORBNASMS	SALTWTRSED	08/30/11	10/25/11	11/02/11	WG118181-1 thru -8
L53963-25	423368-210-1	CSO Sed Qual Charac	ORBNASMS	SALTWTRSED	08/30/11	10/25/11	11/02/11	WG118181-1 thru -8
L53963-26	423368-210-1	CSO Sed Qual Charac	ORBNASMS	SALTWTRSED	08/30/11	10/25/11	11/22/11	WG118181-1 thru -8
L53963-27	423368-210-1	CSO Sed Qual Charac	ORBNASMS	SALTWTRSED	08/30/11	10/25/11	11/02/11	WG118181-1 thru -8
L53963-28	423368-210-1	CSO Sed Qual Charac	ORBNASMS	SALTWTRSED	08/30/11	10/25/11	11/02/11	WG118181-1 thru -8
L53963-29	423368-210-1	CSO Sed Qual Charac	ORBNASMS	SALTWTRSED	08/30/11	10/25/11	11/02/11	WG118181-1 thru -8

L53963-30	423368-210-1	CSO Sed Qual Charac	ORBNASMS	SALTWTRSED	08/30/11	10/25/11	11/02/11	WG118181-1 thru -8
L53963-31	423368-210-1	CSO Sed Qual Charac	ORBNASMS	SALTWTRSED	08/30/11	10/25/11	11/02/11	WG118181-1 thru -8
L53963-40	423368-210-1	CSO Sed Qual Charac	ORBNASMS	SALTWTRSED	08/29/11	10/25/11	11/02/11	WG118181-1 thru -8
WG118181-1	MB		ORBNASMS	OTHR SOLID		10/25/11	10/31/11	WG118181-1 thru -8
WG118181-2	SB		ORBNASMS	OTHR SOLID		10/25/11	10/31/11	WG118181-1 thru -8
WG118181-3	SB		ORBNASMS	OTHR SOLID		10/25/11	10/31/11	WG118181-1 thru -8
WG118181-4	MS		ORBNASMS	SALTWTRSED		10/25/11	10/31/11	WG118181-1 thru -8
WG118181-5	MSD		ORBNASMS	SALTWTRSED		10/25/11	10/31/11	WG118181-1 thru -8
WG118181-6	SRM		ORBNASMS	SALTWTRSED		10/25/11	10/31/11	WG118181-1 thru -8
WG118181-7	SRMD		ORBNASMS	SALTWTRSED		10/25/11	10/31/11	WG118181-1 thru -8
WG118181-8	LD		ORBNASMS	SALTWTRSED		10/25/11	11/01/11	WG118181-1 thru -8

WG118182 - BNAs

Sample	Project	Project Description	List Type	Matrix	Collect Date	Prep Date	Analysis Date	QC Association
L53963-41	423368-210-1	CSO Sed Qual Charac	ORBNASMS	SALTWTRSED	08/29/11	10/25/11	11/01/11	WG118182-1 - thru -8
L53963-42	423368-210-1	CSO Sed Qual Charac	ORBNASMS	SALTWTRSED	08/29/11	10/25/11	11/01/11	WG118182-1 - thru -8
L53963-44	423368-210-1	CSO Sed Qual Charac	ORBNASMS	SALTWTRSED	08/29/11	10/25/11	11/01/11	WG118182-1 - thru -8
L53963-45	423368-210-1	CSO Sed Qual Charac	ORBNASMS	SALTWTRSED	08/30/11	10/25/11	10/31/11	WG118182-1 - thru -8
WG118182-1	MB		ORBNASMS	OTHR SOLID		10/25/11	10/31/11	WG118182-1 - thru -8
WG118182-2	SB		ORBNASMS	OTHR SOLID		10/25/11	10/31/11	WG118182-1 - thru -8
WG118182-3	SB		ORBNASMS	OTHR SOLID		10/25/11	10/31/11	WG118182-1 - thru -8
WG118182-4	MS		ORBNASMS	SALTWTRSED		10/25/11	10/31/11	WG118182-1 - thru -8
WG118182-5	MSD		ORBNASMS	SALTWTRSED		10/25/11	10/31/11	WG118182-1 - thru -8
WG118182-6	SRM		ORBNASMS	SALTWTRSED		10/25/11	10/31/11	WG118182-1 - thru -8
WG118182-7	SRMD		ORBNASMS	SALTWTRSED		10/25/11	10/31/11	WG118182-1 - thru -8
WG118182-8	LD		ORBNASMS	SALTWTRSED		10/25/11	11/01/11	WG118182-1 - thru -8

WG119275 - BNAs

Sample	Project	Project Description	List Type	Matrix	Collect Date	Prep Date	Anal Date	QC Association
L53963-43	423368-210-1	CSO Sed Qual Charac	ORBNASMS	SALTWTRSED	08/29/11	01/05/12	01/11/12	WG119275-1 thru -7
L54219-1	423575-550-4	Brightwater Outfall	ORBNASMS	SALTWTRSED	10/04/11	01/05/12	01/11/12	WG119275-1 thru -7
L54219-2	423575-550-4	Brightwater Outfall	ORBNASMS	SALTWTRSED	10/05/11	01/05/12	01/11/12	WG119275-1 thru -7
L54219-3	423575-550-4	Brightwater Outfall	ORBNASMS	SALTWTRSED	10/04/11	01/05/12	01/11/12	WG119275-1 thru -7
L54219-4	423575-550-4	Brightwater Outfall	ORBNASMS	SALTWTRSED	10/05/11	01/05/12	01/11/12	WG119275-1 thru -7
L54219-5	423575-550-4	Brightwater Outfall	ORBNASMS	SALTWTRSED	10/04/11	01/05/12	01/11/12	WG119275-1 thru -7
L54219-6	423575-550-4	Brightwater Outfall	ORBNASMS	SALTWTRSED	10/04/11	01/05/12	01/12/12	WG119275-1 thru -7
L54219-7	423575-550-4	Brightwater Outfall	ORBNASMS	SALTWTRSED	10/05/11	01/05/12	01/12/12	WG119275-1 thru -7
L54219-8	423575-550-4	Brightwater Outfall	ORBNASMS	SALTWTRSED	10/05/11	01/05/12	01/12/12	WG119275-1 thru -7
L54219-9	423575-550-4	Brightwater Outfall	ORBNASMS	SALTWTRSED	10/05/11	01/05/12	01/12/12	WG119275-1 thru -7

L54219-10	423575-550-4	Brightwater Outfall	ORBNASMS	SALTWTRSED	10/05/11	01/05/12	01/12/12	WG119275-1 thru -7
L54219-11	423575-550-4	Brightwater Outfall	ORBNASMS	SALTWTRSED	10/04/11	01/05/12	01/12/12	WG119275-1 thru -7
L54227-1	423368-210-1	CSO Sed Qual Charac	ORBNASMS	FRSHWTRSED	10/10/11	01/05/12	01/12/12	WG119275-1 thru -7
L54227-2	423368-210-1	CSO Sed Qual Charac	ORBNASMS	FRSHWTRSED	10/10/11	01/05/12	01/12/12	WG119275-1 thru -7
WG119275-1	MB		ORBNASMS	OTHR SOLID		01/05/12	01/11/12	WG119275-1 thru -7
WG119275-2	SB		ORBNASMS	OTHR SOLID		01/05/12	01/11/12	WG119275-1 thru -7
WG119275-3	SB		ORBNASMS	OTHR SOLID		01/05/12	01/11/12	WG119275-1 thru -7
WG119275-4	MS		ORBNASMS	SALTWTRSED		01/05/12	01/11/12	WG119275-1 thru -7
WG119275-5	MSD		ORBNASMS	SALTWTRSED		01/05/12	01/11/12	WG119275-1 thru -7
WG119275-6	SRM		ORBNASMS	SALTWTRSED		01/05/12	01/11/12	WG119275-1 thru -7
WG119275-7	SRMD		ORBNASMS	SALTWTRSED		01/05/12	01/11/12	WG119275-1 thru -7

WG119542 - BNAs

Sample	Project	Project Description	List Type	Matrix	Collect Date	Prep Date	Analysis Date	QC Association
L54227-3	423368-210-1	CSO Sed Qual Charac	ORBNASMS	FRSHWTRSED	10/10/11	01/31/12	03/07/12	WG119542-1 thru -9
L54227-4	423368-210-1	CSO Sed Qual Charac	ORBNASMS	FRSHWTRSED	10/10/11	01/31/12	02/08/12	WG119542-1 thru -9
L54227-5	423368-210-1	CSO Sed Qual Charac	ORBNASMS	FRSHWTRSED	10/10/11	01/31/12	02/08/12	WG119542-1 thru -9
L54227-6	423368-210-1	CSO Sed Qual Charac	ORBNASMS	FRSHWTRSED	10/10/11	01/31/12	02/08/12	WG119542-1 thru -9
L54227-7	423368-210-1	CSO Sed Qual Charac	ORBNASMS	FRSHWTRSED	10/10/11	01/31/12	02/07/12	WG119542-1 thru -9
L54227-9	423368-210-1	CSO Sed Qual Charac	ORBNASMS	FRSHWTRSED	10/10/11	01/31/12	02/08/12	WG119542-1 thru -9
L54227-10	423368-210-1	CSO Sed Qual Charac	ORBNASMS	FRSHWTRSED	10/10/11	01/31/12	03/07/12	WG119542-1 thru -9
L54227-11	423368-210-1	CSO Sed Qual Charac	ORBNASMS	FRSHWTRSED	10/10/11	01/31/12	03/07/12	WG119542-1 thru -9
L54227-12	423368-210-1	CSO Sed Qual Charac	ORBNASMS	FRSHWTRSED	10/10/11	01/31/12	02/07/12	WG119542-1 thru -9
L54227-13	423368-210-1	CSO Sed Qual Charac	ORBNASMS	FRSHWTRSED	10/10/11	01/31/12	03/07/12	WG119542-1 thru -9
L54227-14	423368-210-1	CSO Sed Qual Charac	ORBNASMS	FRSHWTRSED	10/10/11	01/31/12	03/07/12	WG119542-1 thru -9
L54227-15	423368-210-1	CSO Sed Qual Charac	ORBNASMS	FRSHWTRSED	10/10/11	01/31/12	02/07/12	WG119542-1 thru -9
L54227-16	423368-210-1	CSO Sed Qual Charac	ORBNASMS	FRSHWTRSED	10/10/11	01/31/12	02/07/12	WG119542-1 thru -9
L54227-17	423368-210-1	CSO Sed Qual Charac	ORBNASMS	FRSHWTRSED	10/10/11	01/31/12	03/07/12	WG119542-1 thru -9
L54227-18	423368-210-1	CSO Sed Qual Charac	ORBNASMS	FRSHWTRSED	10/10/11	01/31/12	02/07/12	WG119542-1 thru -9
L54227-19	423368-210-1	CSO Sed Qual Charac	ORBNASMS	FRSHWTRSED	10/10/11	01/31/12	02/07/12	WG119542-1 thru -9
L54227-20	423368-210-1	CSO Sed Qual Charac	ORBNASMS	FRSHWTRSED	10/10/11	01/31/12	02/06/12	WG119542-1 thru -9
L54227-21	423368-210-1	CSO Sed Qual Charac	ORBNASMS	FRSHWTRSED	10/10/11	01/31/12	02/07/12	WG119542-1 thru -9
L54227-22	423368-210-1	CSO Sed Qual Charac	ORBNASMS	FRSHWTRSED	10/10/11	01/31/12	03/09/12	WG119542-1 thru -9
L55155-1	423368-210-1	CSO Sed Qual Charac	ORBNASMS	FRSHWTRSED	10/10/11	01/31/12	03/07/12	WG119542-1 thru -9
WG119542-1	MB		ORBNASMS	OTHR SOLID		01/31/12	02/06/12	WG119542-1 thru -9
WG119542-2	SB		ORBNASMS	OTHR SOLID		01/31/12	02/06/12	WG119542-1 thru -9
WG119542-3	SB		ORBNASMS	OTHR SOLID		01/31/12	02/06/12	WG119542-1 thru -9
WG119542-4	MS		ORBNASMS	FRSHWTRSED		01/31/12	02/06/12	WG119542-1 thru -9
WG119542-5	MSD		ORBNASMS	FRSHWTRSED		01/31/12	02/06/12	WG119542-1 thru -9
WG119542-6	SRM		ORBNASMS	FRSHWTRSED		01/31/12	02/06/12	WG119542-1 thru -9

WG119542-7	SRMD	ORBNASMS	FRSHWTRSED	01/31/12	02/06/12	WG119542-1 thru -9
WG119542-8	LD	ORBNASMS	FRSHWTRSED	01/31/12	03/07/12	WG119542-1 thru -9
WG119542-9	LD	ORBNASMS	FRSHWTRSED	01/31/12	03/07/12	WG119542-1 thru -9

WG117693 - PCBs

Sample	Project	Project Description	List Type	Matrix	Collect Date	Prep Date	Analysis Date	QC Association
L53963-1	423368-210-1	CSO Sed Qual Charac	ORPCBLL	SALTWTRSED	08/29/11	09/30/11	10/12/11	WG117693-1 thru -7
L53963-2	423368-210-1	CSO Sed Qual Charac	ORPCBLL	SALTWTRSED	08/29/11	09/30/11	10/12/11	WG117693-1 thru -7
L53963-3	423368-210-1	CSO Sed Qual Charac	ORPCBLL	SALTWTRSED	08/29/11	09/30/11	10/12/11	WG117693-1 thru -7
L53963-4	423368-210-1	CSO Sed Qual Charac	ORPCBLL	SALTWTRSED	08/29/11	09/30/11	10/12/11	WG117693-1 thru -7
L53963-5	423368-210-1	CSO Sed Qual Charac	ORPCBLL	SALTWTRSED	08/29/11	09/30/11	10/12/11	WG117693-1 thru -7
L53963-6	423368-210-1	CSO Sed Qual Charac	ORPCBLL	SALTWTRSED	08/29/11	09/30/11	10/12/11	WG117693-1 thru -7
L53963-7	423368-210-1	CSO Sed Qual Charac	ORPCBLL	SALTWTRSED	08/29/11	09/30/11	10/12/11	WG117693-1 thru -7
L53963-8	423368-210-1	CSO Sed Qual Charac	ORPCBLL	SALTWTRSED	08/29/11	09/30/11	10/12/11	WG117693-1 thru -7
L53963-9	423368-210-1	CSO Sed Qual Charac	ORPCBLL	SALTWTRSED	08/29/11	09/30/11	10/12/11	WG117693-1 thru -7
L53963-10	423368-210-1	CSO Sed Qual Charac	ORPCBLL	SALTWTRSED	08/29/11	09/30/11	10/12/11	WG117693-1 thru -7
L53963-11	423368-210-1	CSO Sed Qual Charac	ORPCBLL	SALTWTRSED	08/29/11	09/30/11	10/12/11	WG117693-1 thru -7
L53963-12	423368-210-1	CSO Sed Qual Charac	ORPCBLL	SALTWTRSED	08/29/11	09/30/11	10/12/11	WG117693-1 thru -7
L53963-32	423368-210-1	CSO Sed Qual Charac	ORPCBLL	SALTWTRSED	08/29/11	09/30/11	10/12/11	WG117693-1 thru -7
L53963-33	423368-210-1	CSO Sed Qual Charac	ORPCBLL	SALTWTRSED	08/29/11	09/30/11	10/12/11	WG117693-1 thru -7
L53963-34	423368-210-1	CSO Sed Qual Charac	ORPCBLL	SALTWTRSED	08/29/11	09/30/11	10/12/11	WG117693-1 thru -7
L53963-35	423368-210-1	CSO Sed Qual Charac	ORPCBLL	SALTWTRSED	08/29/11	09/30/11	10/12/11	WG117693-1 thru -7
L53963-36	423368-210-1	CSO Sed Qual Charac	ORPCBLL	SALTWTRSED	08/29/11	09/30/11	10/12/11	WG117693-1 thru -7
L53963-37	423368-210-1	CSO Sed Qual Charac	ORPCBLL	SALTWTRSED	08/29/11	09/30/11	10/12/11	WG117693-1 thru -7
L53963-38	423368-210-1	CSO Sed Qual Charac	ORPCBLL	SALTWTRSED	08/29/11	09/30/11	10/12/11	WG117693-1 thru -7
L53963-39	423368-210-1	CSO Sed Qual Charac	ORPCBLL	SALTWTRSED	08/29/11	09/30/11	10/12/11	WG117693-1 thru -7
WG117693-1	MB		ORPCBLL	OTHR SOLID		09/30/11	10/12/11	WG117693-1 thru -7
WG117693-2	SB		ORPCBLL	OTHR SOLID		09/30/11	10/12/11	WG117693-1 thru -7
WG117693-3	MS		ORPCBLL	SALTWTRSED		09/30/11	10/12/11	WG117693-1 thru -7
WG117693-4	MSD		ORPCBLL	SALTWTRSED		09/30/11	10/12/11	WG117693-1 thru -7
WG117693-5	SRM		ORPCBLL	SALTWTRSED		09/30/11	10/12/11	WG117693-1 thru -7
WG117693-6	SRMD		ORPCBLL	SALTWTRSED		09/30/11	10/12/11	WG117693-1 thru -7
WG117693-7	LD		ORPCBLL	SALTWTRSED		09/30/11	10/12/11	WG117693-1 thru -7

WG118262 - PCBs

Sample	Project	Project Description	List Type	Matrix	Collect Date	Prep Date	Analysis Date	QC Association
L53963-13	423368-210-1	CSO Sed Qual Charac	ORPCBLL	SALTWTRSED	08/30/11	10/28/11	11/08/11	WG118262-1 thru -7
L53963-14	423368-210-1	CSO Sed Qual Charac	ORPCBLL	SALTWTRSED	08/30/11	10/28/11	11/08/11	WG118262-1 thru -7
L53963-15	423368-210-1	CSO Sed Qual Charac	ORPCBLL	SALTWTRSED	08/30/11	10/28/11	11/08/11	WG118262-1 thru -7

L53963-16	423368-210-1	CSO Sed Qual Charac	ORPCBLL	SALTWTRSED	08/30/11	10/28/11	11/08/11	WG118262-1 thru -7
L53963-17	423368-210-1	CSO Sed Qual Charac	ORPCBLL	SALTWTRSED	08/30/11	10/28/11	11/08/11	WG118262-1 thru -7
L53963-18	423368-210-1	CSO Sed Qual Charac	ORPCBLL	SALTWTRSED	08/30/11	10/28/11	11/08/11	WG118262-1 thru -7
L53963-19	423368-210-1	CSO Sed Qual Charac	ORPCBLL	SALTWTRSED	08/30/11	10/28/11	11/08/11	WG118262-1 thru -7
L53963-20	423368-210-1	CSO Sed Qual Charac	ORPCBLL	SALTWTRSED	08/30/11	10/28/11	11/08/11	WG118262-1 thru -7
L53963-21	423368-210-1	CSO Sed Qual Charac	ORPCBLL	SALTWTRSED	08/30/11	10/28/11	11/08/11	WG118262-1 thru -7
L53963-22	423368-210-1	CSO Sed Qual Charac	ORPCBLL	SALTWTRSED	08/30/11	10/28/11	11/08/11	WG118262-1 thru -7
L53963-23	423368-210-1	CSO Sed Qual Charac	ORPCBLL	SALTWTRSED	08/30/11	10/28/11	11/08/11	WG118262-1 thru -7
L53963-24	423368-210-1	CSO Sed Qual Charac	ORPCBLL	SALTWTRSED	08/30/11	10/28/11	11/08/11	WG118262-1 thru -7
L53963-25	423368-210-1	CSO Sed Qual Charac	ORPCBLL	SALTWTRSED	08/30/11	10/28/11	11/08/11	WG118262-1 thru -7
L53963-26	423368-210-1	CSO Sed Qual Charac	ORPCBLL	SALTWTRSED	08/30/11	10/28/11	11/08/11	WG118262-1 thru -7
L53963-27	423368-210-1	CSO Sed Qual Charac	ORPCBLL	SALTWTRSED	08/30/11	10/28/11	11/08/11	WG118262-1 thru -7
L53963-28	423368-210-1	CSO Sed Qual Charac	ORPCBLL	SALTWTRSED	08/30/11	10/28/11	11/08/11	WG118262-1 thru -7
L53963-29	423368-210-1	CSO Sed Qual Charac	ORPCBLL	SALTWTRSED	08/30/11	10/28/11	11/08/11	WG118262-1 thru -7
L53963-30	423368-210-1	CSO Sed Qual Charac	ORPCBLL	SALTWTRSED	08/30/11	10/28/11	11/08/11	WG118262-1 thru -7
L53963-31	423368-210-1	CSO Sed Qual Charac	ORPCBLL	SALTWTRSED	08/30/11	10/28/11	11/08/11	WG118262-1 thru -7
L53963-40	423368-210-1	CSO Sed Qual Charac	ORPCBLL	SALTWTRSED	08/29/11	10/28/11	11/08/11	WG118262-1 thru -7
WG118262-1	MB		ORPCBLL	OTHR SOLID		10/28/11	11/08/11	WG118262-1 thru -7
WG118262-2	SB		ORPCBLL	OTHR SOLID		10/28/11	11/08/11	WG118262-1 thru -7
WG118262-3	MS		ORPCBLL	SALTWTRSED		10/28/11	11/08/11	WG118262-1 thru -7
WG118262-4	MSD		ORPCBLL	SALTWTRSED		10/28/11	11/08/11	WG118262-1 thru -7
WG118262-5	SRM		ORPCBLL	SALTWTRSED		10/28/11	11/08/11	WG118262-1 thru -7
WG118262-6	SRMD		ORPCBLL	SALTWTRSED		10/28/11	11/08/11	WG118262-1 thru -7
WG118262-7	LD		ORPCBLL	SALTWTRSED		10/28/11	11/08/11	WG118262-1 thru -7

WG118263 - PCBs

Sample	Project	Project Description	List Type	Matrix	Collect Date	Prep Date	Analysis Date	QC Association
L53963-41	423368-210-1	CSO Sed Qual Charac	ORPCBLL	SALTWTRSED	08/29/11	10/28/11	11/08/11	WG118263-1 thru -7
L53963-42	423368-210-1	CSO Sed Qual Charac	ORPCBLL	SALTWTRSED	08/29/11	10/28/11	11/08/11	WG118263-1 thru -7
L53963-43	423368-210-1	CSO Sed Qual Charac	ORPCBLL	SALTWTRSED	08/29/11	10/28/11	11/08/11	WG118263-1 thru -7
L53963-44	423368-210-1	CSO Sed Qual Charac	ORPCBLL	SALTWTRSED	08/29/11	10/28/11	11/08/11	WG118263-1 thru -7
L53963-45	423368-210-1	CSO Sed Qual Charac	ORPCBLL	SALTWTRSED	08/30/11	10/28/11	11/08/11	WG118263-1 thru -7
WG118263-1	MB		ORPCBLL	OTHR SOLID		10/28/11	11/08/11	WG118263-1 thru -7
WG118263-2	SB		ORPCBLL	OTHR SOLID		10/28/11	11/08/11	WG118263-1 thru -7
WG118263-3	MS		ORPCBLL	SALTWTRSED		10/28/11	11/08/11	WG118263-1 thru -7
WG118263-4	MSD		ORPCBLL	SALTWTRSED		10/28/11	11/08/11	WG118263-1 thru -7
WG118263-5	SRM		ORPCBLL	SALTWTRSED		10/28/11	11/08/11	WG118263-1 thru -7
WG118263-6	SRMD		ORPCBLL	SALTWTRSED		10/28/11	11/08/11	WG118263-1 thru -7
WG118263-7	LD		ORPCBLL	SALTWTRSED		10/28/11	11/08/11	WG118263-1 thru -7

LIMSView Batch Report for 2011 CSO Sediment Monitoring Project

WG118809 - PCBs

Sample	Project	Project Description	List Type	Matrix	Collect Date	Prep Date	Analysis Date	QC Association
L54219-1	423575-550-4	Brightwater Outfall	ORPCBLL	SALTWTRSED	10/04/11	12/06/11	12/08/11	WG118809-1 thru -7
L54219-2	423575-550-4	Brightwater Outfall	ORPCBLL	SALTWTRSED	10/05/11	12/06/11	12/08/11	WG118809-1 thru -7
L54219-3	423575-550-4	Brightwater Outfall	ORPCBLL	SALTWTRSED	10/04/11	12/06/11	12/08/11	WG118809-1 thru -7
L54219-4	423575-550-4	Brightwater Outfall	ORPCBLL	SALTWTRSED	10/05/11	12/06/11	12/08/11	WG118809-1 thru -7
L54219-5	423575-550-4	Brightwater Outfall	ORPCBLL	SALTWTRSED	10/04/11	12/06/11	12/08/11	WG118809-1 thru -7
L54219-6	423575-550-4	Brightwater Outfall	ORPCBLL	SALTWTRSED	10/04/11	12/06/11	12/08/11	WG118809-1 thru -7
L54219-7	423575-550-4	Brightwater Outfall	ORPCBLL	SALTWTRSED	10/05/11	12/06/11	12/08/11	WG118809-1 thru -7
L54219-8	423575-550-4	Brightwater Outfall	ORPCBLL	SALTWTRSED	10/05/11	12/06/11	12/08/11	WG118809-1 thru -7
L54219-9	423575-550-4	Brightwater Outfall	ORPCBLL	SALTWTRSED	10/05/11	12/06/11	12/08/11	WG118809-1 thru -7
L54219-10	423575-550-4	Brightwater Outfall	ORPCBLL	SALTWTRSED	10/05/11	12/06/11	12/08/11	WG118809-1 thru -7
L54219-11	423575-550-4	Brightwater Outfall	ORPCBLL	SALTWTRSED	10/04/11	12/06/11	12/08/11	WG118809-1 thru -7
L54227-1	423368-210-1	CSO Sed Qual Charac	ORPCBLL	FRSHWTRSED	10/10/11	12/06/11	12/08/11	WG118809-1 thru -7
L54227-2	423368-210-1	CSO Sed Qual Charac	ORPCBLL	FRSHWTRSED	10/10/11	12/06/11	12/09/11	WG118809-1 thru -7
WG118809-1	MB		ORPCBLL	OTHR SOLID		12/06/11	12/08/11	WG118809-1 thru -7
WG118809-2	SB		ORPCBLL	OTHR SOLID		12/06/11	12/08/11	WG118809-1 thru -7
WG118809-3	MS		ORPCBLL	SALTWTRSED		12/06/11	12/08/11	WG118809-1 thru -7
WG118809-4	MSD		ORPCBLL	SALTWTRSED		12/06/11	12/08/11	WG118809-1 thru -7
WG118809-5	SRM		ORPCBLL	SALTWTRSED		12/06/11	12/08/11	WG118809-1 thru -7
WG118809-6	SRMD		ORPCBLL	SALTWTRSED		12/06/11	12/08/11	WG118809-1 thru -7
WG118809-7	LD		ORPCBLL	SALTWTRSED		12/06/11	12/08/11	WG118809-1 thru -7

WG119034 - PCBs

Sample	Project	Project Description	List Type	Matrix	Collect Date	Prep Date	Analysis Date	QC Association
L54227-3	423368-210-1	CSO Sed Qual Charac	ORPCBLL	FRSHWTRSED	10/10/11	12/20/11	01/03/12	WG119034-1 thru -8
L54227-4	423368-210-1	CSO Sed Qual Charac	ORPCBLL	FRSHWTRSED	10/10/11	12/20/11	01/04/12	WG119034-1 thru -8
L54227-5	423368-210-1	CSO Sed Qual Charac	ORPCBLL	FRSHWTRSED	10/10/11	12/20/11	01/03/12	WG119034-1 thru -8
L54227-6	423368-210-1	CSO Sed Qual Charac	ORPCBLL	FRSHWTRSED	10/10/11	12/20/11	01/03/12	WG119034-1 thru -8
L54227-7	423368-210-1	CSO Sed Qual Charac	ORPCBLL	FRSHWTRSED	10/10/11	12/20/11	01/03/12	WG119034-1 thru -8
L54227-8	423368-210-1	CSO Sed Qual Charac	ORPCBLL	FRSHWTRSED	10/10/11	12/20/11	01/04/12	WG119034-1 thru -8
L54227-9	423368-210-1	CSO Sed Qual Charac	ORPCBLL	FRSHWTRSED	10/10/11	12/20/11	01/03/12	WG119034-1 thru -8
L54227-10	423368-210-1	CSO Sed Qual Charac	ORPCBLL	FRSHWTRSED	10/10/11	12/20/11	01/05/12	WG119034-1 thru -8
L54227-11	423368-210-1	CSO Sed Qual Charac	ORPCBLL	FRSHWTRSED	10/10/11	12/20/11	01/03/12	WG119034-1 thru -8
L54227-12	423368-210-1	CSO Sed Qual Charac	ORPCBLL	FRSHWTRSED	10/10/11	12/20/11	01/03/12	WG119034-1 thru -8
L54227-13	423368-210-1	CSO Sed Qual Charac	ORPCBLL	FRSHWTRSED	10/10/11	12/20/11	01/05/12	WG119034-1 thru -8
L54227-14	423368-210-1	CSO Sed Qual Charac	ORPCBLL	FRSHWTRSED	10/10/11	12/20/11	01/03/12	WG119034-1 thru -8
L54227-15	423368-210-1	CSO Sed Qual Charac	ORPCBLL	FRSHWTRSED	10/10/11	12/20/11	01/03/12	WG119034-1 thru -8
L54227-16	423368-210-1	CSO Sed Qual Charac	ORPCBLL	FRSHWTRSED	10/10/11	12/20/11	01/03/12	WG119034-1 thru -8

LIMSView Batch Report for 2011 CSO Sediment Monitoring Project

L54227-17	423368-210-1	CSO Sed Qual Charac	ORPCBLL	FRSHWTRSED	10/10/11	12/20/11	01/03/12	WG119034-1 thru -8
L54227-18	423368-210-1	CSO Sed Qual Charac	ORPCBLL	FRSHWTRSED	10/10/11	12/20/11	01/03/12	WG119034-1 thru -8
L54227-19	423368-210-1	CSO Sed Qual Charac	ORPCBLL	FRSHWTRSED	10/10/11	12/20/11	01/03/12	WG119034-1 thru -8
L54227-20	423368-210-1	CSO Sed Qual Charac	ORPCBLL	FRSHWTRSED	10/10/11	12/20/11	01/03/12	WG119034-1 thru -8
L54227-21	423368-210-1	CSO Sed Qual Charac	ORPCBLL	FRSHWTRSED	10/10/11	12/20/11	01/03/12	WG119034-1 thru -8
L54227-22	423368-210-1	CSO Sed Qual Charac	ORPCBLL	FRSHWTRSED	10/10/11	12/20/11	01/03/12	WG119034-1 thru -8
WG119034-1	MB		ORPCBLL	OTHR SOLID		12/20/11	01/03/12	WG119034-1 thru -8
WG119034-2	SB		ORPCBLL	OTHR SOLID		12/20/11	01/03/12	WG119034-1 thru -8
WG119034-3	MS		ORPCBLL	FRSHWTRSED		12/20/11	01/03/12	WG119034-1 thru -8
WG119034-4	MSD		ORPCBLL	FRSHWTRSED		12/20/11	01/03/12	WG119034-1 thru -8
WG119034-5	SRM		ORPCBLL	FRSHWTRSED		12/20/11	01/03/12	WG119034-1 thru -8
WG119034-6	SRMD		ORPCBLL	FRSHWTRSED		12/20/11	01/03/12	WG119034-1 thru -8
WG119034-7	LD		ORPCBLL	FRSHWTRSED		12/20/11	01/03/12	WG119034-1 thru -8
WG119034-8	LD		ORPCBLL	FRSHWTRSED		12/20/11	01/03/12	WG119034-1 thru -8

LIMSView QC Report for 2011 CSO Sediment Monitoring Project

WG118548 - PSD

LT:WG118548-2 LD:WG118548-1 L53963-10 Matrix: SALTWTRSED Listtype:CVPSD Method:ASTM D422 Project:423368-210-1 Pkey:SED
(Lab Triplicate, Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	LT Value	RSD	Qual	LabLimit
Gravel	0.13	1.28	%	2.3	6.4	6.1	46	*	0--20
Sand	0.13	1.28	%	92.8	90	90.3	2		0--20
Silt	0.64	1.28	%	1.3	1.3	1.3	1		0--20
Clay	0.64	1.28	%	3.2	3.2	3.2	1		0--20

WG118953 - PSD

LT:WG118953-2 LD:WG118953-1 L53963-20 Matrix: SALTWTRSED Listtype:CVPSD Method:ASTM D422 Project:423368-210-1 Pkey:SED
(Lab Triplicate, Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	LT Value	RSD	Qual	LabLimit
Gravel	0.13	1.26	%	8.7	9.2	11.9	18		0--20
Sand	0.13	1.26	%	89.6	90.2	86.7	2		0--20
Silt	0.63	1.26	%	<MDL	<MDL	<MDL			0--20
Clay	0.63	1.26	%	1.9	1.3	1.8	21	*	0--20

WG119419 - PSD

LT:WG119419-2 LD:WG119419-1 L53963-30 Matrix: SALTWTRSED Listtype:CVPSD Method:ASTM D422 Project:423368-210-1 Pkey:SED
(Lab Triplicate, Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	LT Value	RSD	Qual	LabLimit
Gravel	0.2	1.6	%	3.3	3.3	2.1	24	*	0--20
Sand	0.2	1.6	%	91	92.4	93.2	1		0--20
Silt	0.8	1.6	%	<MDL	0.8	0.8			0--20
Clay	0.8	1.6	%	2.4	2.3	2.3	0		0--20

WG119909 - PSD

LT:WG119909-2 LD:WG119909-1 L54227-20 Matrix: FRSHWTRSED Listtype:CVPSD Method:ASTM D422 Project:423368-210-1 Pkey:SED
(Lab Triplicate, Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	LT Value	RSD	Qual	LabLimit
Gravel	0.1	1.2	%	37.4	36.2	34.9	3		0--20
Sand	0.1	1.2	%	64.5	63.2	64.3	1		0--20
Silt	0.6	1.2	%	1.2	1.2	<MDL	87	*	0--20
Clay	0.6	1.2	%	2.5	2.4	1.8	15		0--20

LIMSView QC Report for 2011 CSO Sediment Monitoring Project

WG117357 - TOC

MB:WG117357-1 Matrix: OTHR SOLID Listtype:CVTOC Method:SW846 9060-PSEP96 Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Total Organic Carbon	500	1000	mg/Kg	<MDL	

SRM:WG117357-2 Matrix: OTHR SOLID Listtype:CVTOC Method:SW846 9060-PSEP96 Project: Pkey:STD
(Std Reference Material)

Parameter	MDL	RDL	Units	TrueValue	SRM Value	% Rec.	Qual	LabLimit
Total Organic Carbon	4800	9500	mg/Kg	36900	33300	90		80--120

MB:WG117357-3 Matrix: OTHR SOLID Listtype:CVTOC Method:SW846 9060-PSEP96 Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Total Organic Carbon	500	1000	mg/Kg	<MDL	

SRM:WG117357-4 Matrix: OTHR SOLID Listtype:CVTOC Method:SW846 9060-PSEP96 Project: Pkey:STD
(Std Reference Material)

Parameter	MDL	RDL	Units	TrueValue	SRM Value	% Rec.	Qual	LabLimit
Total Organic Carbon	4600	9150	mg/Kg	36900	37800	102		80--120

SB:WG117357-5 MB:WG117357-3 Matrix: OTHR SOLID Listtype:CVTOC Method:SW846 9060-PSEP96 Project: Pkey:STD
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	TrueValue	SB Value	% Rec.	Qual	LabLimit
Total Organic Carbon	500	1000	mg/Kg	<MDL	2500	2510	101		80--120

LT:WG117357-7 LD:WG117357-6 L53963-12 Matrix: SALTWTRSED Listtype:CVTOC Method:SW846 9060-PSEP96 Project:423368-210-1 Pkey:SED
(Lab Triplicate, Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	LT Value	RSD	Qual	LabLimit
Total Organic Carbon	380	756	mg/Kg	1590	1130	1160	20		0--20

MS:WG117357-8 L53963-12 Matrix: SALTWTRSED Listtype:CVTOC Method:SW846 9060-PSEP96 Project:423368-210-1 Pkey:SED
(Matrix Spike)

Parameter	MDL	RDL	Units	SAMP Value	TrueValue	MS Value	% Rec.	Qual	LabLimit
Total Organic Carbon	380	764	mg/Kg	1590	2500	3520	101		75--125

MB:WG117357-9 Matrix: OTHR SOLID Listtype:CVTOC Method:SW846 9060-PSEP96 Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Total Organic Carbon	500	1000	mg/Kg	<MDL	

LIMSView QC Report for 2011 CSO Sediment Monitoring Project

SRM:WG117357-10 Matrix: OTHR SOLID Listtype:CVTOC Method:SW846 9060-PSEP96 Project: Pkey:STD
(Std Reference Material)

Parameter	MDL	RDL	Units	TrueValue	SRM Value	% Rec.	Qual	LabLimit
Total Organic Carbon	4300	8510	mg/Kg	36900	35100	95		80--120

MB:WG117357-11 Matrix: OTHR SOLID Listtype:CVTOC Method:SW846 9060-PSEP96 Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Total Organic Carbon	500	1000	mg/Kg	<MDL	

SRM:WG117357-12 Matrix: OTHR SOLID Listtype:CVTOC Method:SW846 9060-PSEP96 Project: Pkey:STD
(Std Reference Material)

Parameter	MDL	RDL	Units	TrueValue	SRM Value	% Rec.	Qual	LabLimit
Total Organic Carbon	4700	9450	mg/Kg	36900	35100	95		80--120

MB:WG117357-13 Matrix: OTHR SOLID Listtype:CVTOC Method:SW846 9060-PSEP96 Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Total Organic Carbon	500	1000	mg/Kg	<MDL	

SB:WG117357-14 MB:WG117357-13 Matrix: OTHR SOLID Listtype:CVTOC Method:SW846 9060-PSEP96 Project: Pkey:STD
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	TrueValue	SB Value	% Rec.	Qual	LabLimit
Total Organic Carbon	500	1000	mg/Kg	<MDL	2500	2520	101		80--120

LT:WG117357-16 LD:WG117357-15 L53963-24 Matrix: SALTWTRSED Listtype:CVTOC Method:SW846 9060-PSEP96 Project:423368-210-1 Pkey:SED
(Lab Triplicate, Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	LT Value	RSD	Qual	LabLimit
Total Organic Carbon	390	790	mg/Kg	799	838	680	11		0--20

MS:WG117357-17 L53963-24 Matrix: SALTWTRSED Listtype:CVTOC Method:SW846 9060-PSEP96 Project:423368-210-1 Pkey:SED
(Matrix Spike)

Parameter	MDL	RDL	Units	SAMP Value	TrueValue	MS Value	% Rec.	Qual	LabLimit
Total Organic Carbon	390	773	mg/Kg	799	2500	2770	101		75--125

MB:WG117357-18 Matrix: OTHR SOLID Listtype:CVTOC Method:SW846 9060-PSEP96 Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Total Organic Carbon	500	1000	mg/Kg	<MDL	

LIMSView QC Report for 2011 CSO Sediment Monitoring Project

SRM:WG117357-19 Matrix: OTHR SOLID Listtype:CVTOC Method:SW846 9060-PSEP96 Project: Pkey:STD
(Std Reference Material)

Parameter	MDL	RDL	Units	TrueValue	SRM Value	% Rec.	Qual	LabLimit
Total Organic Carbon	4700	9470	mg/Kg	36900	32800	89		80--120

LT:WG117357-21 LD:WG117357-20 L53963-45 Matrix: SALTWTRSED Listtype:CVTOC Method:SW846 9060-PSEP96 Project:423368-210-1 Pkey:SED
(Lab Triplicate, Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	LT Value	RSD	Qual	LabLimit
Total Organic Carbon	390	777	mg/Kg	740	740	660			0--20

MB:WG117357-22 Matrix: OTHR SOLID Listtype:CVTOC Method:SW846 9060-PSEP96 Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Total Organic Carbon	500	1000	mg/Kg	<MDL	

SB:WG117357-23 MB:WG117357-22 Matrix: OTHR SOLID Listtype:CVTOC Method:SW846 9060-PSEP96 Project: Pkey:STD
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	TrueValue	SB Value	% Rec.	Qual	LabLimit
Total Organic Carbon	500	1000	mg/Kg	<MDL	2500	2470	99		80--120

MS:WG117357-24 L53963-45 Matrix: SALTWTRSED Listtype:CVTOC Method:SW846 9060-PSEP96 Project:423368-210-1 Pkey:SED
(Matrix Spike)

Parameter	MDL	RDL	Units	SAMP Value	TrueValue	MS Value	% Rec.	Qual	LabLimit
Total Organic Carbon	370	747	mg/Kg	740	2500	2670	103		75--125

MB:WG117357-25 Matrix: OTHR SOLID Listtype:CVTOC Method:SW846 9060-PSEP96 Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Total Organic Carbon	500	1000	mg/Kg	<MDL	

SRM:WG117357-26 Matrix: OTHR SOLID Listtype:CVTOC Method:SW846 9060-PSEP96 Project: Pkey:STD
(Std Reference Material)

Parameter	MDL	RDL	Units	TrueValue	SRM Value	% Rec.	Qual	LabLimit
Total Organic Carbon	2400	4800	mg/Kg	36900	32300	88		80--120

SB:WG117357-27 MB:WG117357-25 Matrix: OTHR SOLID Listtype:CVTOC Method:SW846 9060-PSEP96 Project: Pkey:STD
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	TrueValue	SB Value	% Rec.	Qual	LabLimit
Total Organic Carbon	500	1000	mg/Kg	<MDL	2500	2540	101		80--120

LIMSView QC Report for 2011 CSO Sediment Monitoring Project

WG118067 - TOC

MB:WG118067-1 Matrix: OTHR SOLID Listtype:CVTOC Method:SW846 9060-PSEP96 Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Total Organic Carbon	500	1000	mg/Kg	<MDL	

SRM:WG118067-2 Matrix: OTHR SOLID Listtype:CVTOC Method:SW846 9060-PSEP96 Project: Pkey:STD
(Std Reference Material)

Parameter	MDL	RDL	Units	TrueValue	SRM Value	% Rec.	Qual	LabLimit
Total Organic Carbon	2400	4760	mg/Kg	36900	32400	88		80--120

SB:WG118067-4 MB:WG118067-1 Matrix: OTHR SOLID Listtype:CVTOC Method:SW846 9060-PSEP96 Project: Pkey:STD
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	TrueValue	SB Value	% Rec.	Qual	LabLimit
Total Organic Carbon	500	1000	mg/Kg	<MDL	2500	2760	110		80--120

LT:WG118067-5 LD:WG118067-3 L54227-6 Matrix: FRSHWTRSED Listtype:CVTOC Method:SW846 9060-PSEP96 Project:423368-210-1 Pkey:SED
(Lab Triplicate, Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	LT Value	RSD	Qual	LabLimit
Total Organic Carbon	380	752	mg/Kg	3620	3250	2890	11		0--20

MS:WG118067-6 L54227-6 Matrix: FRSHWTRSED Listtype:CVTOC Method:SW846 9060-PSEP96 Project:423368-210-1 Pkey:SED
(Matrix Spike)

Parameter	MDL	RDL	Units	SAMP Value	TrueValue	MS Value	% Rec.	Qual	LabLimit
Total Organic Carbon	380	750	mg/Kg	3620	2500	5160	81		75--125

MB:WG118067-7 Matrix: OTHR SOLID Listtype:CVTOC Method:SW846 9060-PSEP96 Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Total Organic Carbon	500	1000	mg/Kg	<MDL	

WG118620 - TOC

MB:WG118620-1 Matrix: OTHR SOLID Listtype:CVTOC Method:SW846 9060-PSEP96 Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Total Organic Carbon	500	1000	mg/Kg	<MDL	

SRM:WG118620-2 Matrix: OTHR SOLID Listtype:CVTOC Method:SW846 9060-PSEP96 Project: Pkey:STD
(Std Reference Material)

Parameter	MDL	RDL	Units	TrueValue	SRM Value	% Rec.	Qual	LabLimit
Total Organic Carbon	2600	5110	mg/Kg	36900	31800	86		80--120

SRM:WG118620-3 Matrix: OTHR SOLID Listtype:CVTOC Method:SW846 9060-PSEP96 Project: Pkey:STD
(Std Reference Material)

Parameter	MDL	RDL	Units	TrueValue	SRM Value	% Rec.	Qual	LabLimit
Total Organic Carbon	1700	3320	mg/Kg	21900	19200	88		80--120

SB:WG118620-4 MB:WG118620-1 Matrix: OTHR SOLID Listtype:CVTOC Method:SW846 9060-PSEP96 Project: Pkey:STD
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	TrueValue	SB Value	% Rec.	Qual	LabLimit
Total Organic Carbon	500	1000	mg/Kg	<MDL	2500	2490	100		80--120

LT:WG118620-6 LD:WG118620-5 L54227-19 Matrix: FRSHWTRSED Listtype:CVTOC Method:SW846 9060-PSEP96 Project:423368-210-1 Pkey:SED
(Lab Triplicate, Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	LT Value	RSD	Qual	LabLimit
Total Organic Carbon	400	807	mg/Kg	1880	1620	2060	12		0--20

MS:WG118620-7 L54227-19 Matrix: FRSHWTRSED Listtype:CVTOC Method:SW846 9060-PSEP96 Project:423368-210-1 Pkey:SED
(Matrix Spike)

Parameter	MDL	RDL	Units	SAMP Value	TrueValue	MS Value	% Rec.	Qual	LabLimit
Total Organic Carbon	400	803	mg/Kg	1880	2500	3510	82		75--125

LT:WG118620-9 LD:WG118620-8 L54529-3 Matrix: IN-LINESED Listtype:CVTOC Method:SW846 9060-PSEP96 Project:423589-340-4 Pkey:STD
(Lab Triplicate, Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	LT Value	RSD	Qual	LabLimit
Total Organic Carbon	550	1110	mg/Kg	6050	6240	7430	11		0--20

MS:WG118620-10 L54529-3 Matrix: IN-LINESED Listtype:CVTOC Method:SW846 9060-PSEP96 Project:423589-340-4 Pkey:STD
(Matrix Spike)

Parameter	MDL	RDL	Units	SAMP Value	TrueValue	MS Value	% Rec.	Qual	LabLimit
Total Organic Carbon	570	1130	mg/Kg	6050	2500	8480	90		75--125

WG119851 - TOC

MB:WG119851-1 Matrix: OTHR SOLID Listtype:CVTOC Method:SW846 9060-PSEP96 Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Total Organic Carbon	500	1000	mg/Kg	<MDL	

SRM:WG119851-2 Matrix: OTHR SOLID Listtype:CVTOC Method:SW846 9060-PSEP96 Project: Pkey:STD
(Std Reference Material)

Parameter	MDL	RDL	Units	TrueValue	SRM Value	% Rec.	Qual	LabLimit
Total Organic Carbon	2800	5700	mg/Kg	33510	35900	107		80--120

MB:WG119851-3 Matrix: OTHR SOLID Listtype:CVTOC Method:SW846 9060-PSEP96 Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Total Organic Carbon	500	1000	mg/Kg	<MDL	

SRM:WG119851-4 Matrix: OTHR SOLID Listtype:CVTOC Method:SW846 9060-PSEP96 Project: Pkey:STD
(Std Reference Material)

Parameter	MDL	RDL	Units	TrueValue	SRM Value	% Rec.	Qual	LabLimit
Total Organic Carbon	3000	6070	mg/Kg	33510	33600	100		80--120

MB:WG119851-5 Matrix: OTHR SOLID Listtype:CVTOC Method:SW846 9060-PSEP96 Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Total Organic Carbon	500	1000	mg/Kg	<MDL	

SB:WG119851-6 MB:WG119851-5 Matrix: OTHR SOLID Listtype:CVTOC Method:SW846 9060-PSEP96 Project: Pkey:STD
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	TrueValue	SB Value	% Rec.	Qual	LabLimit
Total Organic Carbon	500	1000	mg/Kg	<MDL	2500	2650	106		80--120

LT:WG119851-8 LD:WG119851-7 L54985-7 Matrix: SOIL Listtype:CVTOC Method:SW846 9060-PSEP96 Project:421196-180 Pkey:STD
(Lab Triplicate, Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	LT Value	RSD	Qual	LabLimit
Total Organic Carbon	7100	14300	mg/Kg	40900	52900	43300	14		0--20

MS:WG119851-9 L54985-7 Matrix: SOIL Listtype:CVTOC Method:SW846 9060-PSEP96 Project:421196-180 Pkey:STD
(Matrix Spike)

Parameter	MDL	RDL	Units	SAMP Value	TrueValue	MS Value	% Rec.	Qual	LabLimit
Total Organic Carbon	6700	13400	mg/Kg	40900	2500	74600	100		75--125

WG117182 - Total Solids

MB:WG117182-1 Matrix: OTHR SOLID Listtype:CVTOTS Method:SM2540-G Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Total Solids	0.005	0.01	%	<MDL	

LT:WG117182-3 LD:WG117182-2 L53963-1 Matrix: SALTWTRSED Listtype:CVTOTS Method:SM2540-G Project:423368-210-1 Pkey:SED
(Lab Triplicate, Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	LT Value	RSD	Qual	LabLimit
Total Solids	0.005	0.01	%	71.9	72.5	72.9	1		0--20

MB:WG117182-4 Matrix: OTHR SOLID Listtype:CVTOTS Method:SM2540-G Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Total Solids	0.005	0.01	%	<MDL	

LT:WG117182-6 LD:WG117182-5 L53963-22 Matrix: SALTWTRSED Listtype:CVTOTS Method:SM2540-G Project:423368-210-1 Pkey:SED
(Lab Triplicate, Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	LT Value	RSD	Qual	LabLimit
Total Solids	0.005	0.01	%	78.2	78.7	80	1		0--20

MB:WG117182-7 Matrix: OTHR SOLID Listtype:CVTOTS Method:SM2540-G Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Total Solids	0.005	0.01	%	<MDL	

LT:WG117182-9 LD:WG117182-8 L53963-41 Matrix: SALTWTRSED Listtype:CVTOTS Method:SM2540-G Project:423368-210-1 Pkey:SED
(Lab Triplicate, Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	LT Value	RSD	Qual	LabLimit
Total Solids	0.005	0.01	%	51.4	51.3	51.6	0		0--20

WG117904 - Total Solids

MB:WG117904-1 Matrix: OTHR SOLID Listtype:CVTOTS Method:SM2540-G Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Total Solids	0.005	0.01	%	<MDL	

LT:WG117904-3 LD:WG117904-2 L54227-1 Matrix: FRSHWTRSED Listtype:CVTOTS Method:SM2540-G Project:423368-210-1 Pkey:SED
(Lab Triplicate, Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	LT Value	RSD	Qual	LabLimit
Total Solids	0.005	0.01	%	62.8	63	63.3	0		0--20

MB:WG117904-4 Matrix: OTHR SOLID Listtype:CVTOTS Method:SM2540-G Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Total Solids	0.005	0.01	%	<MDL	

LT:WG117904-6 LD:WG117904-5 L54227-21 Matrix: FRSHWTRSED Listtype:CVTOTS Method:SM2540-G Project:423368-210-1 Pkey:SED
(Lab Triplicate, Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	LT Value	RSD	Qual	LabLimit
Total Solids	0.005	0.01	%	73.7	74.5	75.5	1		0--20

WG119810 - Total Solids

MB:WG119810-1 Matrix: OTHR SOLID Listtype:CVTOTS Method:SM2540-G Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Total Solids	0.005	0.01	%	<MDL	

LD:WG119810-2 L54985-14 Matrix: SOIL Listtype:CVTOTS Method:SM2540-G Project:421196-180 Pkey:STD
(Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	RPD	Qual	LabLimit
Total Solids	0.005	0.01	%	64.1	66.2	3		0--20

WG117325 - Mercury

SRM:WG117325-1 Matrix: SALTWTRSED Listtype:MTHG-MIDS Method:SW846 7471B Project: Pkey:SED
(Std Reference Material)

Parameter	MDL	RDL	Units	TrueValue	SRM Value	% Rec.	Qual	LabLimit
Mercury, Total, CVAA	0.051	0.508	mg/Kg	3.04	2.7	89		80--120

MB:WG117325-2 Matrix: SOLIDBLANK Listtype:MTHG-MIDS Method:SW846 7471B Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Mercury, Total, CVAA	0.005	0.048	mg/Kg	<MDL	

SB:WG117325-3 MB:WG117325-2 Matrix: SOLIDBLANK Listtype:MTHG-MIDS Method:SW846 7471B Project: Pkey:STD
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	TrueValue	SB Value	% Rec.	Qual	LabLimit
Mercury, Total, CVAA	0.005	0.048	mg/Kg	<MDL	0.0952	0.0915	96		85--115

MSD:WG117325-5 MS:WG117325-4 L53963-4 Matrix: SALTWTRSED Listtype:MTHG-MIDS Method:SW846 7471B Project:423368-210-1 Pkey:SED
(Matrix Spike Duplicate, Matrix Spike)

Parameter	MDL	RDL	Units	SAMP Value	TrueValue	MS Value	% Rec.	Qual	LabLimit	TrueValue	MSD Value	% Rec.	Qual	RPD	Qual	LabLimit
Mercury, Total, CVAA	0.005	0.048	mg/Kg	0.0097	0.0969	0.103	96		75--125	0.0983	0.103	95		1		0--20

LD:WG117325-6 L53963-4 Matrix: SALTWTRSED Listtype:MTHG-MIDS Method:SW846 7471B Project:423368-210-1 Pkey:SED
(Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	RPD	Qual	LabLimit
Mercury, Total, CVAA	0.005	0.049	mg/Kg	0.0097	0.014			0--20

WG117360 - Mercury

SRM:WG117360-1 Matrix: SALTWTRSED Listtype:MTHG-MIDS Method:SW846 7471B Project: Pkey:SED
(Std Reference Material)

Parameter	MDL	RDL	Units	TrueValue	SRM Value	% Rec.	Qual	LabLimit
Mercury, Total, CVAA	0.05	0.5	mg/Kg	3.04	3.02	99		80--120

MB:WG117360-2 Matrix: SOLIDBLANK Listtype:MTHG-MIDS Method:SW846 7471B Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Mercury, Total, CVAA	0.005	0.048	mg/Kg	<MDL	

SB:WG117360-3 MB:WG117360-2 Matrix: SOLIDBLANK Listtype:MTHG-MIDS Method:SW846 7471B Project: Pkey:STD
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	TrueValue	SB Value	% Rec.	Qual	LabLimit
Mercury, Total, CVAA	0.005	0.048	mg/Kg	<MDL	0.0952	0.0919	97		85--115

MSD:WG117360-5 MS:WG117360-4 L53963-18 Matrix: SALTWTRSED Listtype:MTHG-MIDS Method:SW846 7471B Project:423368-210-1 Pkey:SED
(Matrix Spike Duplicate, Matrix Spike)

Parameter	MDL	RDL	Units	SAMP Value	TrueValue	MS Value	% Rec.	Qual	LabLimit	TrueValue	MSD Value	% Rec.	Qual	RPD	Qual	LabLimit
Mercury, Total, CVAA	0.005	0.05	mg/Kg	0.023	0.0991	0.0978	75		75--125	0.0989	0.12	98		21	*	0--20

LD:WG117360-6 L53963-18 Matrix: SALTWTRSED Listtype:MTHG-MIDS Method:SW846 7471B Project:423368-210-1 Pkey:SED
(Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	RPD	Qual	LabLimit
Mercury, Total, CVAA	0.005	0.05	mg/Kg	0.023	0.024			0--20

WG117412 - Mercury

SRM:WG117412-1 Matrix: SALTWTRSED Listtype:MTHG-MIDS Method:SW846 7471B Project: Pkey:SED
(Std Reference Material)

Parameter	MDL	RDL	Units	TrueValue	SRM Value	% Rec.	Qual	LabLimit
Mercury, Total, CVAA	0.05	0.503	mg/Kg	3.04	2.86	94		80--120

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MB:WG117412-2 Matrix: SOLIDBLANK Listtype:MTHG-MIDS Method:SW846 7471B Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Mercury, Total, CVAA	0.005	0.048	mg/Kg	<MDL	

SB:WG117412-3 MB:WG117412-2 Matrix: SOLIDBLANK Listtype:MTHG-MIDS Method:SW846 7471B Project: Pkey:STD
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	TrueValue	SB Value	% Rec.	Qual	LabLimit
Mercury, Total, CVAA	0.005	0.048	mg/Kg	<MDL	0.0952	0.0886	93		85--115

MSD:WG117412-5 MS:WG117412-4 L53963-31 Matrix: SALTWTRSED Listtype:MTHG-MIDS Method:SW846 7471B Project:423368-210-1 Pkey:SED
(Matrix Spike Duplicate, Matrix Spike)

Parameter	MDL	RDL	Units	SAMP Value	TrueValue	MS Value	% Rec.	Qual	LabLimit	TrueValue	MSD Value	% Rec.	Qual	RPD	Qual	LabLimit
Mercury, Total, CVAA	0.005	0.049	mg/Kg	0.0079	0.0984	0.103	97		75--125	0.0978	0.101	95		2		0--20

LD:WG117412-6 L53963-31 Matrix: SALTWTRSED Listtype:MTHG-MIDS Method:SW846 7471B Project:423368-210-1 Pkey:SED
(Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	RPD	Qual	LabLimit
Mercury, Total, CVAA	0.005	0.049	mg/Kg	0.0079	0.011			0--20

WG118047 - Mercury

LCSD:WG118047-2 LCS:WG118047-1 Matrix: FRSHWTRSED Listtype:MTHG-MIDS Method:SW846 7471B Project: Pkey:SED
(Lab Control Sample Duplicate, Lab Control Sample)

Parameter	MDL	RDL	Units	TrueValue	LCS Value	% Rec.	Qual	LabLimit	TrueValue	LCSD Value	% Rec.	Qual	RPD	Qual	LabLimit
Mercury, Total, CVAA	0.025	0.249	mg/Kg	1.09	1.1	101		80--120	1.09	1.04	96		5		0--20

MB:WG118047-3 Matrix: SOLIDBLANK Listtype:MTHG-MIDS Method:SW846 7471B Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Mercury, Total, CVAA	0.005	0.048	mg/Kg	<MDL	

SB:WG118047-4 MB:WG118047-3 Matrix: SOLIDBLANK Listtype:MTHG-MIDS Method:SW846 7471B Project: Pkey:STD
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	TrueValue	SB Value	% Rec.	Qual	LabLimit
Mercury, Total, CVAA	0.005	0.048	mg/Kg	<MDL	0.0952	0.0933	98		85--115

MSD:WG118047-6 MS:WG118047-5 L54227-1 Matrix: FRSHWTRSED Listtype:MTHG-MIDS Method:SW846 7471B Project:423368-210-1 Pkey:SED
(Matrix Spike Duplicate, Matrix Spike)

Parameter	MDL	RDL	Units	SAMP Value	TrueValue	MS Value	% Rec.	Qual	LabLimit	TrueValue	MSD Value	% Rec.	Qual	RPD	Qual	LabLimit
Mercury, Total, CVAA	0.01	0.097	mg/Kg	0.944	0.193	0.41		4xRule	75--125	0.0974	0.318		4xRule	25		0--20

LD:WG118047-7 L54227-1 Matrix: FRSHWTRSED Listtype:MTHG-MIDS Method:SW846 7471B Project:423368-210-1 Pkey:SED
(Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	RPD	Qual	LabLimit
Mercury, Total, CVAA	0.048	0.484	mg/Kg	0.944	0.251	116	*	0--20

WG118314 - Mercury

LCSD:WG118314-2 LCS:WG118314-1 Matrix: FRSHWTRSED Listtype:MTHG-MIDS Method:SW846 7471B Project: Pkey:SED
(Lab Control Sample Duplicate, Lab Control Sample)

Parameter	MDL	RDL	Units	TrueValue	LCS Value	% Rec.	Qual	LabLimit	TrueValue	LCSD Value	% Rec.	Qual	RPD	Qual	LabLimit
Mercury, Total, CVAA	0.026	0.255	mg/Kg	1.09	1.09	100		80--120	1.09	1.11	102		2		

MB:WG118314-3 Matrix: SOLIDBLANK Listtype:MTHG-MIDS Method:SW846 7471B Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Mercury, Total, CVAA	0.005	0.048	mg/Kg	<MDL	

SB:WG118314-4 MB:WG118314-3 Matrix: SOLIDBLANK Listtype:MTHG-MIDS Method:SW846 7471B Project: Pkey:STD
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	TrueValue	SB Value	% Rec.	Qual	LabLimit
Mercury, Total, CVAA	0.005	0.048	mg/Kg	<MDL	0.0952	0.0956	100		85--115

MSD:WG118314-6 MS:WG118314-5 L54227-15 Matrix: FRSHWTRSED Listtype:MTHG-MIDS Method:SW846 7471B Project:423368-210-1 Pkey:SED
(Matrix Spike Duplicate, Matrix Spike)

Parameter	MDL	RDL	Units	SAMP Value	TrueValue	MS Value	% Rec.	Qual	LabLimit	TrueValue	MSD Value	% Rec.	Qual	RPD	Qual	LabLimit
Mercury, Total, CVAA	0.005	0.05	mg/Kg	0.026	0.0998	0.131	105		75--125	0.0995	0.128	103		2		0--20

LD:WG118314-7 L54227-15 Matrix: FRSHWTRSED Listtype:MTHG-MIDS Method:SW846 7471B Project:423368-210-1 Pkey:SED
(Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	RPD	Qual	LabLimit
Mercury, Total, CVAA	0.005	0.05	mg/Kg	0.026	0.0631	84	*	0--20

WG117466 - ICP Metals

SB:WG117466-1 MB:WG117466-2 Matrix: SOLIDBLANK Listtype:MTICP-SED Method:SW846 3050B*SW846 6010C Project: Pkey:STD
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	TrueValue	SB Value	% Rec.	Qual	LabLimit
Silver, Total, ICP	0.19	0.952	mg/Kg	<MDL	47.6	47.9	101		85--115
Arsenic, Total, ICP	1.2	5.95	mg/Kg	<MDL	47.6	47.6	100		85--115
Cadmium, Total, ICP	0.095	0.476	mg/Kg	<MDL	47.6	46.4	98		85--115
Chromium, Total, ICP	0.14	0.714	mg/Kg	<MDL	47.6	47.5	100		85--115

Copper, Total, ICP	0.19	0.952	mg/Kg	<MDL	47.6	48.8	102	85--115
Lead, Total, ICP	0.95	4.76	mg/Kg	<MDL	47.6	46.3	97	85--115
Zinc, Total, ICP	0.24	1.19	mg/Kg	<MDL	238	220	92	85--115

MB:WG117466-2 Matrix: SOLIDBLANK Listtype:MTICP-SED Method:SW846 3050B*SW846 6010C Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Silver, Total, ICP	0.19	0.952	mg/Kg	<MDL	
Arsenic, Total, ICP	1.2	5.95	mg/Kg	<MDL	
Cadmium, Total, ICP	0.095	0.476	mg/Kg	<MDL	
Chromium, Total, ICP	0.14	0.714	mg/Kg	<MDL	
Copper, Total, ICP	0.19	0.952	mg/Kg	<MDL	
Lead, Total, ICP	0.95	4.76	mg/Kg	<MDL	
Zinc, Total, ICP	0.24	1.19	mg/Kg	<MDL	

LD:WG117466-3 L53963-23 Matrix: SALTWTRSED Listtype:MTICP-SED Method:SW846 3050B*SW846 6010C Project:423368-210-1 Pkey:SED
(Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	RPD	Qual	LabLimit
Silver, Total, ICP	0.2	1.02	mg/Kg	<MDL	<MDL			0--20
Arsenic, Total, ICP	1.3	6.39	mg/Kg	2.1	2.1			0--20
Cadmium, Total, ICP	0.1	0.511	mg/Kg	<MDL	<MDL			0--20
Chromium, Total, ICP	0.15	0.767	mg/Kg	10.8	11.4	6		0--20
Copper, Total, ICP	0.2	1.02	mg/Kg	3.23	3.2	1		0--20
Lead, Total, ICP	1	5.11	mg/Kg	3.7	3.9			0--20
Zinc, Total, ICP	0.26	1.28	mg/Kg	16.4	16.1	2		0--20

MS:WG117466-4 L53963-23 Matrix: SALTWTRSED Listtype:MTICP-SED Method:SW846 3050B*SW846 6010C Project:423368-210-1 Pkey:SED
(Matrix Spike)

Parameter	MDL	RDL	Units	SAMP Value	TrueValue	MS Value	% Rec.	Qual	LabLimit
Silver, Total, ICP	0.2	1.02	mg/Kg	<MDL	48.9	49.6	101		75--125
Arsenic, Total, ICP	1.3	6.39	mg/Kg	2.1	48.9	52.1	102		75--125
Cadmium, Total, ICP	0.1	0.511	mg/Kg	<MDL	48.9	48.9	100		75--125
Chromium, Total, ICP	0.15	0.767	mg/Kg	10.8	48.9	62.1	105		75--125
Copper, Total, ICP	0.2	1.02	mg/Kg	3.23	48.9	52.2	100		75--125
Lead, Total, ICP	1	5.11	mg/Kg	3.7	48.9	51.2	97		75--125
Zinc, Total, ICP	0.26	1.28	mg/Kg	16.4	245	244	93		75--125

SRM:WG117466-5 Matrix: SALTWTRSED Listtype:MTICP-SED Method:SW846 3050B*SW846 6010C Project: Pkey:SED
(Std Reference Material)

Parameter	MDL	RDL	Units	TrueValue	SRM Value	% Rec.	Qual	LabLimit
Chromium, Total, ICP	0.6	3.02	mg/Kg	90.7	45.2	50		30--70

Copper, Total, ICP	0.81	4.03	mg/Kg	310	300	97	78--118
Lead, Total, ICP	4	20.2	mg/Kg	183	162	89	74--114
Zinc, Total, ICP	1	5.04	mg/Kg	364	323	89	73--113

LCS:WG117466-6 Matrix: SOIL Listtype:MTICP-SED Method:SW846 3050B*SW846 6010C Project: Pkey:STD
(Lab Control Sample)

Parameter	MDL	RDL	Units	TrueValue	LCS Value	% Rec.	Qual	LabLimit
Silver, Total, ICP	0.81	4.04	mg/Kg	45.1	43.1	96		66--134
Arsenic, Total, ICP	5.1	25.3	mg/Kg	138	134	97		80--120
Cadmium, Total, ICP	0.4	2.02	mg/Kg	71	67.6	95		80--120
Chromium, Total, ICP	0.61	3.03	mg/Kg	105	102	97		80--120
Copper, Total, ICP	0.81	4.04	mg/Kg	110	106	97		80--120
Lead, Total, ICP	4	20.2	mg/Kg	144	139	96		80--120
Zinc, Total, ICP	1	5.05	mg/Kg	223	196	88		80--121

WG118630 - ICP Metals

SB:WG118630-1 MB:WG118630-2 Matrix: SOLIDBLANK Listtype:MTICP-SED Method:SW846 3050B*SW846 6010C Project: Pkey:STD
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	TrueValue	SB Value	% Rec.	Qual	LabLimit
Silver, Total, ICP	0.19	0.952	mg/Kg	<MDL	47.6	49.6	104		85--115
Arsenic, Total, ICP	1.2	5.95	mg/Kg	<MDL	47.6	50.2	105		85--115
Cadmium, Total, ICP	0.095	0.476	mg/Kg	<MDL	47.6	49.2	103		85--115
Chromium, Total, ICP	0.14	0.714	mg/Kg	<MDL	47.6	49.6	104		85--115
Copper, Total, ICP	0.19	0.952	mg/Kg	<MDL	47.6	49.6	104		85--115
Lead, Total, ICP	0.95	4.76	mg/Kg	<MDL	47.6	48	101		85--115
Zinc, Total, ICP	0.24	1.19	mg/Kg	<MDL	238	228	96		85--115

MB:WG118630-2 Matrix: SOLIDBLANK Listtype:MTICP-SED Method:SW846 3050B*SW846 6010C Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Silver, Total, ICP	0.19	0.952	mg/Kg	<MDL	
Arsenic, Total, ICP	1.2	5.95	mg/Kg	<MDL	
Cadmium, Total, ICP	0.095	0.476	mg/Kg	<MDL	
Chromium, Total, ICP	0.14	0.714	mg/Kg	<MDL	
Copper, Total, ICP	0.19	0.952	mg/Kg	<MDL	
Lead, Total, ICP	0.95	4.76	mg/Kg	<MDL	
Zinc, Total, ICP	0.24	1.19	mg/Kg	<MDL	

LIMSView QC Report for 2011 CSO Sediment Monitoring Project

LD:WG118630-3 L53963-15 Matrix: SALTWTRSED Listtype:MTICP-SED Method:SW846 3050B*SW846 6010C Project:423368-210-1 Pkey:SED
(Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	RPD	Qual	LabLimit
Silver, Total, ICP	0.2	0.992	mg/Kg	<MDL	<MDL			0--20
Arsenic, Total, ICP	1.2	6.2	mg/Kg	<MDL	<MDL			0--20
Cadmium, Total, ICP	0.099	0.496	mg/Kg	<MDL	<MDL			0--20
Chromium, Total, ICP	0.15	0.744	mg/Kg	14.6	14.7	1		0--20
Copper, Total, ICP	0.2	0.992	mg/Kg	3.54	3.51	1		0--20
Lead, Total, ICP	0.99	4.96	mg/Kg	2.5	2.4			0--20
Zinc, Total, ICP	0.25	1.24	mg/Kg	18.7	18.2	2		0--20

MS:WG118630-4 L53963-15 Matrix: SALTWTRSED Listtype:MTICP-SED Method:SW846 3050B*SW846 6010C Project:423368-210-1 Pkey:SED
(Matrix Spike)

Parameter	MDL	RDL	Units	SAMP Value	TrueValue	MS Value	% Rec.	Qual	LabLimit
Silver, Total, ICP	0.2	0.992	mg/Kg	<MDL	50.9	53.9	106		75--125
Arsenic, Total, ICP	1.2	6.2	mg/Kg	<MDL	50.9	56.3	111		75--125
Cadmium, Total, ICP	0.099	0.496	mg/Kg	<MDL	50.9	54.5	107		75--125
Chromium, Total, ICP	0.15	0.744	mg/Kg	14.6	50.9	68.8	106		75--125
Copper, Total, ICP	0.2	0.992	mg/Kg	3.54	50.9	57.1	105		75--125
Lead, Total, ICP	0.99	4.96	mg/Kg	2.5	50.9	54.3	102		75--125
Zinc, Total, ICP	0.25	1.24	mg/Kg	18.7	255	264	96		75--125

LCSD:WG118630-6 LCS:WG118630-5 Matrix: SOIL Listtype:MTICP-SED Method:SW846 3050B*SW846 6010C Project: Pkey:STD
(Lab Control Sample Duplicate, Lab Control Sample)

Parameter	MDL	RDL	Units	TrueValue	LCS Value	% Rec.	Qual	LabLimit	TrueValue	LCSD Value	% Rec.	Qual	RPD	Qual	LabLimit
Silver, Total, ICP	0.83	4.17	mg/Kg	45.1	43.5	97		66--134	45.1	43.3	96		0		0--20
Arsenic, Total, ICP	5.2	26.1	mg/Kg	138	133	97		80--120	138	143	103		7		0--20
Cadmium, Total, ICP	0.42	2.09	mg/Kg	71	70.4	99		80--120	71	70	99		1		0--20
Chromium, Total, ICP	0.63	3.13	mg/Kg	105	99.8	95		80--120	105	102	98		3		0--20
Copper, Total, ICP	0.83	4.17	mg/Kg	110	101	91		80--120	110	105	96		4		0--20
Lead, Total, ICP	4.2	20.9	mg/Kg	144	137	95		80--120	144	142	99		4		0--20
Zinc, Total, ICP	1	5.22	mg/Kg	223	221	99		80--121	223	214	96		3		0--20

SRMD:WG118630-8 SRM:WG118630-7 Matrix: SALTWTRSED Listtype:MTICP-SED Method:SW846 3050B*SW846 6010C Project: Pkey:SED
(Std Reference Material Duplicate, Std Reference Material)

Parameter	MDL	RDL	Units	TrueValue	SRM Value	% Rec.	Qual	LabLimit	TrueValue	SRMD Value	% Rec.	Qual	RPD	Qual	LabLimit
Chromium, Total, ICP	0.62	3.1	mg/Kg	90.7	46.2	51		30--70	90.7	45.4	50		2		0--20
Copper, Total, ICP	0.83	4.13	mg/Kg	310	302	97		78--118	310	304	98		1		0--20
Lead, Total, ICP	4.1	20.6	mg/Kg	183	172	94		74--114	183	169	92		2		0--20
Zinc, Total, ICP	1	5.16	mg/Kg	364	335	92		73--113	364	325	89		3		0--20

LIMSView QC Report for 2011 CSO Sediment Monitoring Project

WG118707 - ICP Metals

SB:WG118707-1 MB:WG118707-2 Matrix: SOLIDBLANK Listtype:MTICP-SED Method:SW846 3050B*SW846 6010C Project: Pkey:STD
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	TrueValue	SB Value	% Rec.	Qual	LabLimit
Silver, Total, ICP	0.19	0.952	mg/Kg	<MDL	47.6	46.8	98		85--115
Arsenic, Total, ICP	1.2	5.95	mg/Kg	<MDL	47.6	47.8	100		85--115
Cadmium, Total, ICP	0.095	0.476	mg/Kg	<MDL	47.6	47.1	99		85--115
Chromium, Total, ICP	0.14	0.714	mg/Kg	<MDL	47.6	46.1	97		85--115
Copper, Total, ICP	0.19	0.952	mg/Kg	<MDL	47.6	45.6	96		85--115
Lead, Total, ICP	0.95	4.76	mg/Kg	<MDL	47.6	45.6	96		85--115
Zinc, Total, ICP	0.24	1.19	mg/Kg	<MDL	238	213	89		85--115

MB:WG118707-2 Matrix: SOLIDBLANK Listtype:MTICP-SED Method:SW846 3050B*SW846 6010C Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Silver, Total, ICP	0.19	0.952	mg/Kg	<MDL	
Arsenic, Total, ICP	1.2	5.95	mg/Kg	<MDL	
Cadmium, Total, ICP	0.095	0.476	mg/Kg	<MDL	
Chromium, Total, ICP	0.14	0.714	mg/Kg	<MDL	
Copper, Total, ICP	0.19	0.952	mg/Kg	<MDL	
Lead, Total, ICP	0.95	4.76	mg/Kg	<MDL	
Zinc, Total, ICP	0.24	1.19	mg/Kg	<MDL	

LD:WG118707-3 L53963-33 Matrix: SALTWTRSED Listtype:MTICP-SED Method:SW846 3050B*SW846 6010C Project:423368-210-1 Pkey:SED
(Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	RPD	Qual	LabLimit
Silver, Total, ICP	0.2	1	mg/Kg	0.76	0.82			0--20
Arsenic, Total, ICP	1.2	6.25	mg/Kg	4.5	5			0--20
Cadmium, Total, ICP	0.1	0.5	mg/Kg	<MDL	<MDL			0--20
Chromium, Total, ICP	0.15	0.75	mg/Kg	9.33	9.96	7		0--20
Copper, Total, ICP	0.2	1	mg/Kg	22	19.9	10		0--20
Lead, Total, ICP	1	5	mg/Kg	19.5	16.7	16		0--20
Zinc, Total, ICP	0.25	1.25	mg/Kg	40.8	43.4	6		0--20

MS:WG118707-4 L53963-33 Matrix: SALTWTRSED Listtype:MTICP-SED Method:SW846 3050B*SW846 6010C Project:423368-210-1 Pkey:SED
(Matrix Spike)

Parameter	MDL	RDL	Units	SAMP Value	TrueValue	MS Value	% Rec.	Qual	LabLimit
Silver, Total, ICP	0.2	1	mg/Kg	0.76	50	49.2	97		75--125
Arsenic, Total, ICP	1.2	6.25	mg/Kg	4.5	50	55.1	101		75--125
Cadmium, Total, ICP	0.1	0.5	mg/Kg	<MDL	50	48.9	98		75--125

Chromium, Total, ICP	0.15	0.75	mg/Kg	9.33	50	56.7	95	75--125
Copper, Total, ICP	0.2	1	mg/Kg	22	50	70.1	96	75--125
Lead, Total, ICP	1	5	mg/Kg	19.5	50	63.2	87	75--125
Zinc, Total, ICP	0.25	1.25	mg/Kg	40.8	250	259	88	75--125

LCSD:WG118707-6 LCS:WG118707-5 Matrix: SOIL Listtype:MTICP-SED Method:SW846 3050B*SW846 6010C Project: Pkey:STD
(Lab Control Sample Duplicate, Lab Control Sample)

Parameter	MDL	RDL	Units	TrueValue	LCS Value	% Rec.	Qual	LabLimit	TrueValue	LCSD Value	% Rec.	Qual	RPD	Qual	LabLimit
Silver, Total, ICP	0.82	4.1	mg/Kg	45.1	41	91		66--134	45.1	44.1	98		7		0--20
Arsenic, Total, ICP	5.1	25.6	mg/Kg	138	130	94		80--120	138	134	97		3		0--20
Cadmium, Total, ICP	0.41	2.05	mg/Kg	71	64.2	90		80--120	71	67.7	95		5		0--20
Chromium, Total, ICP	0.62	3.08	mg/Kg	105	93.9	89		80--120	105	96.9	92		3		0--20
Copper, Total, ICP	0.82	4.1	mg/Kg	110	97.3	88		80--120	110	98	89		1		0--20
Lead, Total, ICP	4.1	20.5	mg/Kg	144	138	96		80--120	144	135	94		2		0--20
Zinc, Total, ICP	1	5.13	mg/Kg	223	195	87		80--121	223	198	89		2		0--20

SRMD:WG118707-8 SRM:WG118707-7 Matrix: SALTWTRSED Listtype:MTICP-SED Method:SW846 3050B*SW846 6010C Project: Pkey:SED
(Std Reference Material Duplicate, Std Reference Material)

Parameter	MDL	RDL	Units	TrueValue	SRM Value	% Rec.	Qual	LabLimit	TrueValue	SRMD Value	% Rec.	Qual	RPD	Qual	LabLimit
Chromium, Total, ICP	0.61	3.04	mg/Kg	90.7	43.3	48		30--70	90.7	43.5	48		0		0--20
Copper, Total, ICP	0.81	4.05	mg/Kg	310	285	92		78--118	310	275	89		4		0--20
Lead, Total, ICP	4	20.2	mg/Kg	183	159	87		74--114	183	166	91		4		0--20
Zinc, Total, ICP	1	5.06	mg/Kg	364	307	84		73--113	364	311	86		2		0--20

WG119186 - ICPMS Metals

MB:WG119186-1 Matrix: SOLIDBLANK Listtype:MTICPMS-SED Method:SW846 3050B*SW846 6020A Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Chromium, Total, ICP-MS	0.01	0.05	mg/Kg	<MDL	
Nickel, Total, ICP-MS	0.005	0.025	mg/Kg	<MDL	
Copper, Total, ICP-MS	0.02	0.099	mg/Kg	<MDL	
Zinc, Total, ICP-MS	0.025	0.124	mg/Kg	<MDL	
Arsenic, Total, ICP-MS	0.005	0.025	mg/Kg	<MDL	
Silver, Total, ICP-MS	0.002	0.01	mg/Kg	<MDL	
Cadmium, Total, ICP-MS	0.003	0.012	mg/Kg	<MDL	
Antimony, Total, ICP-MS	0.015	0.05	mg/Kg	<MDL	
Lead, Total, ICP-MS	0.005	0.025	mg/Kg	<MDL	

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SB:WG119186-2 MB:WG119186-1 Matrix: SOLIDBLANK Listtype:MTICPMS-SED Method:SW846 3050B*SW846 6020A Project: Pkey:STD
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	TrueValue	SB Value	% Rec.	Qual	LabLimit
Chromium, Total, ICP-MS	0.01	0.05	mg/Kg	<MDL	0.99	0.981	99		85--115
Nickel, Total, ICP-MS	0.005	0.025	mg/Kg	<MDL	0.99	1.03	105		85--115
Copper, Total, ICP-MS	0.02	0.099	mg/Kg	<MDL	0.99	1.04	106		85--115
Zinc, Total, ICP-MS	0.025	0.124	mg/Kg	<MDL	0.99	1.02	103		85--115
Arsenic, Total, ICP-MS	0.005	0.025	mg/Kg	<MDL	0.99	1.05	106		85--115
Silver, Total, ICP-MS	0.002	0.01	mg/Kg	<MDL	0.99	1.03	104		85--115
Cadmium, Total, ICP-MS	0.003	0.012	mg/Kg	<MDL	0.99	1	101		85--115
Antimony, Total, ICP-MS	0.015	0.05	mg/Kg	<MDL	0.99	0.984	99		85--115
Lead, Total, ICP-MS	0.005	0.025	mg/Kg	<MDL	0.99	0.984	99		85--115

LCSD:WG119186-4 LCS:WG119186-3 Matrix: SOIL Listtype:MTICPMS-SED Method:SW846 3050B*SW846 6020A Project: Pkey:STD
(Lab Control Sample Duplicate, Lab Control Sample)

Parameter	MDL	RDL	Units	TrueValue	LCS Value	% Rec.	Qual	LabLimit	TrueValue	LCSD Value	% Rec.	Qual	RPD	Qual	LabLimit
Chromium, Total, ICP-MS	0.25	1.24	mg/Kg	105	95.4	91		80--120	105	94.6	90		1		0--20
Nickel, Total, ICP-MS	0.12	0.622	mg/Kg	130	127	97		80--120	130	129	99		1		0--20
Copper, Total, ICP-MS	0.5	2.49	mg/Kg	110	108	98		80--120	110	104	95		3		0--20
Zinc, Total, ICP-MS	0.62	3.11	mg/Kg	223	212	95		80--121	223	197	88		8		0--20
Arsenic, Total, ICP-MS	0.12	0.622	mg/Kg	138	151	109		80--120	138	147	106		3		0--20
Silver, Total, ICP-MS	0.05	0.249	mg/Kg	45.1	45	100		66--134	45.1	45.1	100		0		0--20
Cadmium, Total, ICP-MS	0.062	0.311	mg/Kg	71	70.8	100		80--120	71	70.1	99		1		0--20
Antimony, Total, ICP-MS	0.37	1.24	mg/Kg	117	47.1	40		10--241	117	46.6	40		1		0--20
Lead, Total, ICP-MS	0.12	0.622	mg/Kg	144	168	117		80--120	144	145	100		15		0--20

LCS:WG119186-5 Matrix: FRSHWTRSED Listtype:MTICPMS-SED Method:SW846 3050B*SW846 6020A Project: Pkey:SED
(Lab Control Sample)

Parameter	MDL	RDL	Units	TrueValue	LCS Value	% Rec.	Qual	LabLimit
Chromium, Total, ICP-MS	0.25	1.25	mg/Kg	121.9	64.8	53		40--80
Nickel, Total, ICP-MS	0.13	0.625	mg/Kg	42.9	35.1	82		80--120
Zinc, Total, ICP-MS	0.63	3.13	mg/Kg	408	343	84		69--109
Arsenic, Total, ICP-MS	0.13	0.625	mg/Kg	17	15.7	93		80--120
Cadmium, Total, ICP-MS	0.063	0.313	mg/Kg	2.94	3.06	104		76--116
Lead, Total, ICP-MS	0.13	0.625	mg/Kg	150	145	97		71--111

LD:WG119186-6 L54227-2 Matrix: FRSHWTRSED Listtype:MTICPMS-SED Method:SW846 3050B*SW846 6020A Project:423368-210-1 Pkey:SED
(Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	RPD	Qual	LabLimit
Chromium, Total, ICP-MS	0.048	0.242	mg/Kg	12.9	13.8	7		0--20
Nickel, Total, ICP-MS	0.024	0.121	mg/Kg	18.7	18.7	0		0--20

Copper, Total, ICP-MS	0.097	0.483	mg/Kg	31.8	28.3	12		0--20
Zinc, Total, ICP-MS	0.12	0.604	mg/Kg	74.3	77.2	4		0--20
Arsenic, Total, ICP-MS	0.024	0.121	mg/Kg	3.55	3.7	4		0--20
Silver, Total, ICP-MS	0.01	0.048	mg/Kg	0.488	0.478	2		0--20
Cadmium, Total, ICP-MS	0.012	0.06	mg/Kg	0.211	0.211	0		0--20
Antimony, Total, ICP-MS	0.072	0.242	mg/Kg	0.522	0.531	2		0--20
Lead, Total, ICP-MS	0.024	0.121	mg/Kg	53.6	74.8	33	*	0--20

MS:WG119186-7 L54227-2 Matrix: FRSHWTRSED Listtype:MTICPMS-SED Method:SW846 3050B*SW846 6020A Project:423368-210-1 Pkey:SED
(Matrix Spike)

Parameter	MDL	RDL	Units	SAMP Value	TrueValue	MS Value	% Rec.	Qual	LabLimit
Chromium, Total, ICP-MS	0.048	0.242	mg/Kg	12.9	4.92	18.4	112		75--125
Nickel, Total, ICP-MS	0.024	0.121	mg/Kg	18.7	4.92	22.7	81		75--125
Copper, Total, ICP-MS	0.097	0.483	mg/Kg	31.8	4.92	34.1		4xRule	75--125
Zinc, Total, ICP-MS	0.12	0.604	mg/Kg	74.3	4.92	84.9		4xRule	75--125
Arsenic, Total, ICP-MS	0.024	0.121	mg/Kg	3.55	4.92	8.67	104		75--125
Silver, Total, ICP-MS	0.01	0.048	mg/Kg	0.488	4.92	5.48	101		75--125
Cadmium, Total, ICP-MS	0.012	0.06	mg/Kg	0.211	4.92	5.02	98		75--125
Antimony, Total, ICP-MS	0.072	0.242	mg/Kg	0.522	4.92	2.06	31	*	75--125
Lead, Total, ICP-MS	0.024	0.121	mg/Kg	53.6	4.92	54.4		4xRule	75--125

WG119225 - ICPMS Metals

MB:WG119225-1 Matrix: SOLIDBLANK Listtype:MTICPMS-SED Method:SW846 3050B*SW846 6020A Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Chromium, Total, ICP-MS	0.01	0.05	mg/Kg	<MDL	
Nickel, Total, ICP-MS	0.005	0.025	mg/Kg	<MDL	
Copper, Total, ICP-MS	0.02	0.099	mg/Kg	<MDL	
Zinc, Total, ICP-MS	0.025	0.124	mg/Kg	<MDL	
Arsenic, Total, ICP-MS	0.005	0.025	mg/Kg	<MDL	
Silver, Total, ICP-MS	0.002	0.01	mg/Kg	<MDL	
Cadmium, Total, ICP-MS	0.003	0.012	mg/Kg	<MDL	
Antimony, Total, ICP-MS	0.015	0.05	mg/Kg	<MDL	
Lead, Total, ICP-MS	0.005	0.025	mg/Kg	<MDL	

SB:WG119225-2 MB:WG119225-1 Matrix: SOLIDBLANK Listtype:MTICPMS-SED Method:SW846 3050B*SW846 6020A Project: Pkey:STD
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	TrueValue	SB Value	% Rec.	Qual	LabLimit
Chromium, Total, ICP-MS	0.01	0.05	mg/Kg	<MDL	0.99	0.962	97		85--115
Nickel, Total, ICP-MS	0.005	0.025	mg/Kg	<MDL	0.99	1.01	102		85--115

Copper, Total, ICP-MS	0.02	0.099	mg/Kg	<MDL	0.99	1.02	103	85--115
Zinc, Total, ICP-MS	0.025	0.124	mg/Kg	<MDL	0.99	0.977	99	85--115
Arsenic, Total, ICP-MS	0.005	0.025	mg/Kg	<MDL	0.99	0.983	99	85--115
Silver, Total, ICP-MS	0.002	0.01	mg/Kg	<MDL	0.99	1.01	102	85--115
Cadmium, Total, ICP-MS	0.003	0.012	mg/Kg	<MDL	0.99	0.983	99	85--115
Antimony, Total, ICP-MS	0.015	0.05	mg/Kg	<MDL	0.99	0.97	98	85--115
Lead, Total, ICP-MS	0.005	0.025	mg/Kg	<MDL	0.99	0.986	100	85--115

LCSD:WG119225-4 LCS:WG119225-3 Matrix: SOIL Listtype:MTICPMS-SED Method:SW846 3050B*SW846 6020A Project: Pkey:STD
(Lab Control Sample Duplicate, Lab Control Sample)

Parameter	MDL	RDL	Units	TrueValue	LCS Value	% Rec.	Qual	LabLimit	TrueValue	LCSD Value	% Rec.	Qual	RPD	Qual	LabLimit
Chromium, Total, ICP-MS	0.21	1.05	mg/Kg	105	92.2	88		80--120	105	101	96		9		0--20
Nickel, Total, ICP-MS	0.11	0.525	mg/Kg	130	123	95		80--120	130	132	102		7		0--20
Copper, Total, ICP-MS	0.42	2.1	mg/Kg	110	101	92		80--120	110	108	98		7		0--20
Zinc, Total, ICP-MS	0.53	2.63	mg/Kg	223	208	93		80--121	223	215	96		3		0--20
Arsenic, Total, ICP-MS	0.11	0.525	mg/Kg	138	137	99		80--120	138	151	110		10		0--20
Silver, Total, ICP-MS	0.042	0.21	mg/Kg	45.1	43.6	97		66--134	45.1	47.6	106		9		0--20
Cadmium, Total, ICP-MS	0.053	0.263	mg/Kg	71	69.3	98		80--120	71	74.6	105		7		0--20
Antimony, Total, ICP-MS	0.32	1.05	mg/Kg	117	43.8	37		10--241	117	50	43		13		0--20
Lead, Total, ICP-MS	0.11	0.525	mg/Kg	144	145	101		80--120	144	158	110		9		0--20

LCS:WG119225-5 Matrix: FRSHWTRSED Listtype:MTICPMS-SED Method:SW846 3050B*SW846 6020A Project: Pkey:SED
(Lab Control Sample)

Parameter	MDL	RDL	Units	TrueValue	LCS Value	% Rec.	Qual	LabLimit
Chromium, Total, ICP-MS	0.25	1.23	mg/Kg	121.9	63.9	52		40--80
Nickel, Total, ICP-MS	0.12	0.616	mg/Kg	42.9	35.3	82		80--120
Zinc, Total, ICP-MS	0.62	3.08	mg/Kg	408	353	87		69--109
Arsenic, Total, ICP-MS	0.12	0.616	mg/Kg	17	15.5	91		80--120
Cadmium, Total, ICP-MS	0.062	0.308	mg/Kg	2.94	2.99	102		76--116
Lead, Total, ICP-MS	0.12	0.616	mg/Kg	150	156	104		71--111

LD:WG119225-6 L54227-21 Matrix: FRSHWTRSED Listtype:MTICPMS-SED Method:SW846 3050B*SW846 6020A Project:423368-210-1 Pkey:SED
(Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	RPD	Qual	LabLimit
Chromium, Total, ICP-MS	0.048	0.239	mg/Kg	10.6	11.5	8		0--20
Nickel, Total, ICP-MS	0.024	0.12	mg/Kg	16	17.5	8		0--20
Copper, Total, ICP-MS	0.096	0.478	mg/Kg	48	33.9	34	*	0--20
Zinc, Total, ICP-MS	0.12	0.598	mg/Kg	149	103	37	*	0--20
Arsenic, Total, ICP-MS	0.024	0.12	mg/Kg	21.8	35	46	*	0--20
Silver, Total, ICP-MS	0.01	0.048	mg/Kg	0.182	0.0683	91	*	0--20
Cadmium, Total, ICP-MS	0.012	0.06	mg/Kg	0.133	0.123	8		0--20

Antimony, Total, ICP-MS	0.072	0.239	mg/Kg	2.61	4.17	46	*	0--20
Lead, Total, ICP-MS	0.12	0.598	mg/Kg	82.7	90.7	9		0--20

MS:WG119225-7 L54227-21 Matrix: FRSHWTRSED Listtype:MTICPMS-SED Method:SW846 3050B*SW846 6020A Project:423368-210-1 Pkey:SED
(Matrix Spike)

Parameter	MDL	RDL	Units	SAMP Value	TrueValue	MS Value	% Rec.	Qual	LabLimit
Chromium, Total, ICP-MS	0.048	0.239	mg/Kg	10.6	4.92	16	110		75--125
Nickel, Total, ICP-MS	0.024	0.12	mg/Kg	16	4.92	21.3	107		75--125
Copper, Total, ICP-MS	0.096	0.478	mg/Kg	48	4.92	36.4		4xRule	75--125
Zinc, Total, ICP-MS	0.12	0.598	mg/Kg	149	4.92	132		4xRule	75--125
Arsenic, Total, ICP-MS	0.024	0.12	mg/Kg	21.8	4.92	32.6		4xRule	75--125
Silver, Total, ICP-MS	0.01	0.048	mg/Kg	0.182	4.92	7.56	150	*	75--125
Cadmium, Total, ICP-MS	0.012	0.06	mg/Kg	0.133	4.92	4.7	93		75--125
Antimony, Total, ICP-MS	0.072	0.239	mg/Kg	2.61	4.92	6.26	74	*	75--125
Lead, Total, ICP-MS	0.12	0.598	mg/Kg	82.7	4.92	164		4xRule	75--125

WG117647 - BNAs

MB:WG117647-1 Matrix: OTHR SOLID Listtype:ORBNASMS Method:SW846 3550B*SW846 8270D Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Phenol	27	80	ug/Kg	<MDL	
1,4-Dichlorobenzene	8	8	ug/Kg	<MDL	
Benzyl Alcohol	13.3	13.3	ug/Kg	<MDL	
1,2-Dichlorobenzene	5.33	5.33	ug/Kg	<MDL	
2-Methylphenol	5.3	10.7	ug/Kg	<MDL	
3-,4-Methylphenol	27	53.3	ug/Kg	<MDL	
Benzoic Acid	107	107	ug/Kg	<MDL	
2,4-Dimethylphenol	5.3	10.7	ug/Kg	<MDL	
1,2,4-Trichlorobenzene	0.53	1.07	ug/Kg	<MDL	
Naphthalene	5.3	10.7	ug/Kg	<MDL	
Hexachlorobutadiene	2.7	5.33	ug/Kg	<MDL	
2-Methylnaphthalene	5.3	10.7	ug/Kg	<MDL	
Dimethyl Phthalate	10.7	10.7	ug/Kg	<MDL	
Acenaphthylene	5.3	10.7	ug/Kg	<MDL	
Acenaphthene	5.3	10.7	ug/Kg	<MDL	
Dibenzofuran	5.3	10.7	ug/Kg	<MDL	
Diethyl Phthalate	11	21.3	ug/Kg	<MDL	
Fluorene	5.3	10.7	ug/Kg	<MDL	
N-Nitrosodiphenylamine	13.3	13.3	ug/Kg	<MDL	
Hexachlorobenzene	0.53	1.07	ug/Kg	<MDL	

Pentachlorophenol	80	80	ug/Kg	<MDL	
Phenanthrene	5.3	10.7	ug/Kg	<MDL	
Anthracene	5.3	10.7	ug/Kg	<MDL	
Di-N-Butyl Phthalate	11	21.3	ug/Kg	13	B
Fluoranthene	5.3	10.7	ug/Kg	<MDL	
Pyrene	5.3	10.7	ug/Kg	<MDL	
Benzyl Butyl Phthalate	8	8	ug/Kg	<MDL	
Benzo(a)anthracene	5.3	10.7	ug/Kg	<MDL	
Chrysene	5.3	10.7	ug/Kg	<MDL	
Bis(2-Ethylhexyl)Phthalate	11	21.3	ug/Kg	21	B
Di-N-Octyl Phthalate	10.7	10.7	ug/Kg	<MDL	
Benzo(b,j,k)fluoranthene	5.3	10.7	ug/Kg	<MDL	
Benzo(a)pyrene	5.3	10.7	ug/Kg	<MDL	
Indeno(1,2,3-Cd)Pyrene	5.3	10.7	ug/Kg	<MDL	
Dibenzo(a,h)anthracene	5.3	10.7	ug/Kg	<MDL	
Benzo(g,h,i)perylene	5.3	10.7	ug/Kg	<MDL	
Total LPAHs	5.3	10.7	ug/Kg	<MDL	
Total HPAHS	5.3	10.7	ug/Kg	<MDL	

SB:WG117647-2 MB:WG117647-1 Matrix: OTHR SOLID Listtype:ORBNASMS Method:SW846 3550B*SW846 8270D Project: Pkey:STD
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	TrueValue	SB Value	% Rec.	Qual	LabLimit
Phenol	27	80	ug/Kg	<MDL	800	843	105	*	17--92
1,4-Dichlorobenzene	8	8	ug/Kg	<MDL	800	700	88	*	32--78
Benzyl Alcohol	13.3	13.3	ug/Kg	<MDL	800	582	73		10--90
1,2-Dichlorobenzene	5.33	5.33	ug/Kg	<MDL	800	730	91		21--118
2-Methylphenol	5.3	10.7	ug/Kg	<MDL	800	634	79		10--100
3-,4-Methylphenol	27	53.3	ug/Kg	<MDL	800	605	76		10--125
Benzoic Acid	107	107	ug/Kg	<MDL	800	111	14		10--150
2,4-Dimethylphenol	5.3	10.7	ug/Kg	<MDL	800	372	46		5--80
1,2,4-Trichlorobenzene	0.53	1.07	ug/Kg	<MDL	800	600	75		21--115
Naphthalene	5.3	10.7	ug/Kg	<MDL	800	649	81		29--100
Hexachlorobutadiene	2.7	5.33	ug/Kg	<MDL	800	773	97	*	17--92
2-Methylnaphthalene	5.3	10.7	ug/Kg	<MDL	800	556	69		25--129
Dimethyl Phthalate	10.7	10.7	ug/Kg	<MDL	800	849	106		41--128
Acenaphthylene	5.3	10.7	ug/Kg	<MDL	800	776	97		48--111
Acenaphthene	5.3	10.7	ug/Kg	<MDL	800	780	98		40--100
Dibenzofuran	5.3	10.7	ug/Kg	<MDL	800	844	105		44--106
Diethyl Phthalate	11	21.3	ug/Kg	<MDL	800	913	114		40--138
Fluorene	5.3	10.7	ug/Kg	<MDL	800	1010	126	*	45--109
N-Nitrosodiphenylamine	13.3	13.3	ug/Kg	<MDL	800	820	103		5--128

Hexachlorobenzene	0.53	1.07	ug/Kg	<MDL	800	965	121	*	36--112
Pentachlorophenol	80	80	ug/Kg	<MDL	800	669	84		20--121
Phenanthrene	5.3	10.7	ug/Kg	<MDL	800	846	106		58--106
Anthracene	5.3	10.7	ug/Kg	<MDL	800	920	115	*	55--112
Di-N-Butyl Phthalate	11	21.3	ug/Kg	13	800	916	113		50--150
Fluoranthene	5.3	10.7	ug/Kg	<MDL	800	908	113		50--120
Pyrene	5.3	10.7	ug/Kg	<MDL	800	893	112		50--125
Benzyl Butyl Phthalate	8	8	ug/Kg	<MDL	800	1260	157	*	46--147
Benzo(a)anthracene	5.3	10.7	ug/Kg	<MDL	800	950	119		68--130
Chrysene	5.3	10.7	ug/Kg	<MDL	800	911	114	*	59--110
Bis(2-Ethylhexyl)Phthalate	11	21.3	ug/Kg	21	800	1210	149	*	49--129
Di-N-Octyl Phthalate	10.7	10.7	ug/Kg	<MDL	800	1020	127		54--146
Benzo(b,j,k)fluoranthene	5.3	10.7	ug/Kg	<MDL	2400	1990	83		61--126
Benzo(a)pyrene	5.3	10.7	ug/Kg	<MDL	800	891	111		62--113
Indeno(1,2,3-Cd)Pyrene	5.3	10.7	ug/Kg	<MDL	800	1140	142	*	54--127
Dibenzo(a,h)anthracene	5.3	10.7	ug/Kg	<MDL	800	1100	137		53--137
Benzo(g,h,i)perylene	5.3	10.7	ug/Kg	<MDL	800	1120	140	*	36--126

SB:WG117647-3 MB:WG117647-1 Matrix: OTHR SOLID Listtype:ORBNASMS Method:SW846 3550B*SW846 8270D Project: Pkey:STD
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	TrueValue	SB Value	% Rec.	Qual	LabLimit
Phenol	27	80	ug/Kg	<MDL	3200	3010	94	*	17--92
1,4-Dichlorobenzene	8	8	ug/Kg	<MDL	3200	2260	71		32--78
Benzyl Alcohol	13.3	13.3	ug/Kg	<MDL	3200	2320	72		10--90
1,2-Dichlorobenzene	5.33	5.33	ug/Kg	<MDL	3200	2330	73		21--118
2-Methylphenol	5.3	10.7	ug/Kg	<MDL	3200	2700	84		10--100
3-,4-Methylphenol	27	53.3	ug/Kg	<MDL	3200	2820	88		10--125
Benzoic Acid	107	107	ug/Kg	<MDL	3200	<MDL	0	*	10--150
2,4-Dimethylphenol	5.3	10.7	ug/Kg	<MDL	3200	2060	65		5--80
1,2,4-Trichlorobenzene	0.53	1.07	ug/Kg	<MDL	3200	1940	61		21--115
Naphthalene	5.3	10.7	ug/Kg	<MDL	3200	2230	70		29--100
Hexachlorobutadiene	2.7	5.33	ug/Kg	<MDL	3200	2590	81		17--92
2-Methylnaphthalene	5.3	10.7	ug/Kg	<MDL	3200	1850	58		25--129
Dimethyl Phthalate	10.7	10.7	ug/Kg	<MDL	3200	2900	91		41--128
Acenaphthylene	5.3	10.7	ug/Kg	<MDL	3200	2630	82		48--111
Acenaphthene	5.3	10.7	ug/Kg	<MDL	3200	2610	82		40--100
Dibenzofuran	5.3	10.7	ug/Kg	<MDL	3200	2860	90		44--106
Diethyl Phthalate	11	21.3	ug/Kg	<MDL	3200	2970	93		40--138
Fluorene	5.3	10.7	ug/Kg	<MDL	3200	3450	108		45--109
N-Nitrosodiphenylamine	13.3	13.3	ug/Kg	<MDL	3200	2870	90		5--128
Hexachlorobenzene	0.53	1.07	ug/Kg	<MDL	3200	3170	99		36--112

Pentachlorophenol	80	80	ug/Kg	<MDL	3200	2110	66	20--121
Phenanthrene	5.3	10.7	ug/Kg	<MDL	3200	2840	89	58--106
Anthracene	5.3	10.7	ug/Kg	<MDL	3200	3190	100	55--112
Di-N-Butyl Phthalate	11	21.3	ug/Kg	13	3200	3070	95	50--150
Fluoranthene	5.3	10.7	ug/Kg	<MDL	3200	3020	94	50--120
Pyrene	5.3	10.7	ug/Kg	<MDL	3200	2890	90	50--125
Benzyl Butyl Phthalate	8	8	ug/Kg	<MDL	3200	3930	123	46--147
Benzo(a)anthracene	5.3	10.7	ug/Kg	<MDL	3200	3020	94	68--130
Chrysene	5.3	10.7	ug/Kg	<MDL	3200	2910	91	59--110
Bis(2-Ethylhexyl)Phthalate	11	21.3	ug/Kg	21	3200	3850	120	49--129
Di-N-Octyl Phthalate	10.7	10.7	ug/Kg	<MDL	3200	3300	103	54--146
Benzo(b,j,k)fluoranthene	5.3	10.7	ug/Kg	<MDL	9600	6270	65	61--126
Benzo(a)pyrene	5.3	10.7	ug/Kg	<MDL	3200	2900	91	62--113
Indeno(1,2,3-Cd)Pyrene	5.3	10.7	ug/Kg	<MDL	3200	3500	109	54--127
Dibenzo(a,h)anthracene	5.3	10.7	ug/Kg	<MDL	3200	3420	107	53--137
Benzo(g,h,i)perylene	5.3	10.7	ug/Kg	<MDL	3200	3460	108	36--126

MSD:WG117647-5 MS:WG117647-4 L53963-1 Matrix: SALTWTRSED Listtype:ORBNASMS Method:SW846 3550B*SW846 8270D Project:423368-210-1 Pkey:SED
(Matrix Spike Duplicate, Matrix Spike)

Parameter	MDL	RDL	Units	SAMP Value	TrueValue	MS Value	% Rec.	Qual	LabLimit	TrueValue	MSD Value	% Rec.	Qual	RPD	Qual	LabLimit
Phenol	130	400	ug/Kg	<MDL	3200	3580	112	*	30--105	3200	3060	96		16		0--35
1,4-Dichlorobenzene	40	40	ug/Kg	<MDL	3200	2490	78	*	19--76	3200	2100	66		17		0--35
Benzyl Alcohol	66.7	66.7	ug/Kg	<MDL	3200	2610	82		10--95	3200	2260	71		14		0--35
1,2-Dichlorobenzene	26.7	26.7	ug/Kg	<MDL	3200	2600	81	*	25--74	3200	2180	68		18		0--35
2-Methylphenol	27	53.3	ug/Kg	<MDL	3200	3230	101	*	20--90	3200	2710	85		18		0--35
3-,4-Methylphenol	130	267	ug/Kg	<MDL	3200	3320	104		10--163	3200	2850	89		15		0--35
Benzoic Acid	533	533	ug/Kg	180	3200	2530	74		5--130	3200	2070	59		20		0--35
2,4-Dimethylphenol	27	53.3	ug/Kg	<MDL	3200	2780	87		5--115	3200	2520	79		10		0--35
1,2,4-Trichlorobenzene	2.7	5.33	ug/Kg	<MDL	3200	2190	68		35--117	3200	1870	58		15		0--35
Naphthalene	27	53.3	ug/Kg	<MDL	3200	2560	80		15--107	3200	2250	70		13		0--35
Hexachlorobutadiene	13	26.7	ug/Kg	<MDL	3200	2880	90	*	21--78	3200	2500	78		14		0--35
2-Methylnaphthalene	27	53.3	ug/Kg	<MDL	3200	2200	69		10--111	3200	1970	62		11		0--35
Dimethyl Phthalate	53.3	53.3	ug/Kg	<MDL	3200	3260	102		31--127	3200	3140	98		4		0--35
Acenaphthylene	27	53.3	ug/Kg	<MDL	3200	3300	103		41--112	3200	3070	96		8		0--35
Acenaphthene	27	53.3	ug/Kg	<MDL	3200	3270	102	*	40--95	3200	3020	94		8		0--35
Dibenzofuran	27	53.3	ug/Kg	<MDL	3200	3540	111		14--129	3200	3330	104		6		0--35
Diethyl Phthalate	53	107	ug/Kg	<MDL	3200	3410	106		26--142	3200	3310	103		3		0--35
Fluorene	27	53.3	ug/Kg	<MDL	3200	4130	129		18--131	3200	3960	124		4		0--35
N-Nitrosodiphenylamine	66.7	66.7	ug/Kg	<MDL	3200	3420	107		20--135	3200	3310	103		3		0--35
Hexachlorobenzene	2.7	5.33	ug/Kg	<MDL	3200	3750	117		20--130	3200	3620	113		4		0--35
Pentachlorophenol	400	400	ug/Kg	<MDL	3200	3010	94		30--151	3200	2940	92		2		0--35

Phenanthrene	27	53.3	ug/Kg	13.5	3200	3450	107		10--146	3200	3320	103		4	0--35
Anthracene	27	53.3	ug/Kg	<MDL	3200	3880	121		10--150	3200	3710	116		4	0--35
Di-N-Butyl Phthalate	53	107	ug/Kg	<MDL	3200	3830	120		34--146	3200	3690	115		4	0--35
Fluoranthene	27	53.3	ug/Kg	22.8	3200	3700	115		10--168	3200	3520	109		5	0--35
Pyrene	27	53.3	ug/Kg	25.3	3200	3530	109		20--150	3200	3450	107		2	0--35
Benzyl Butyl Phthalate	40	40	ug/Kg	<MDL	3200	4950	155	*	30--150	3200	4810	150		3	0--35
Benzo(a)anthracene	27	53.3	ug/Kg	18.3	3200	3690	115		40--158	3200	3570	111		3	0--35
Chrysene	27	53.3	ug/Kg	14.7	3200	3510	109		41--127	3200	3400	106		3	0--35
Bis(2-Ethylhexyl)Phthalate	53	107	ug/Kg	26.6	3200	4830	150		30--160	3200	4690	146		3	0--35
Di-N-Octyl Phthalate	53.3	53.3	ug/Kg	<MDL	3200	4180	131		50--155	3200	4040	126		3	0--35
Benzo(b,j,k)fluoranthene	27	53.3	ug/Kg	27.8	9600	7530	78		31--153	9600	7200	75		5	0--35
Benzo(a)pyrene	27	53.3	ug/Kg	27.6	3200	3530	110		32--143	3200	3410	106		4	0--35
Indeno(1,2,3-Cd)Pyrene	27	53.3	ug/Kg	13.5	3200	4290	134	*	35--123	3200	4090	127	*	5	0--35
Dibenzo(a,h)anthracene	27	53.3	ug/Kg	<MDL	3200	4120	129		37--129	3200	3980	124		4	0--35
Benzo(g,h,i)perylene	27	53.3	ug/Kg	9.2	3200	4230	132	*	20--121	3200	4090	128	*	3	0--35

SRMD:WG117647-7 SRM:WG117647-6 Matrix: SALTWTRSED Listtype:ORBNASMS Method:SW846 3550B*SW846 8270D Project: Pkey:SED
(Std Reference Material Duplicate, Std Reference Material)

Parameter	MDL	RDL	Units	TrueValue	SRM Value	% Rec.	Qual	LabLimit	TrueValue	SRMD Valu	% Rec.	Qual	RPD	Qual	LabLimit
Naphthalene	27	53.3	ug/Kg	163	40	25		10--29	163	40	24		2		0--35
Phenanthrene	27	53.3	ug/Kg	520	568	109		51--106	520	575	111	*	1		0--35
Anthracene	27	53.3	ug/Kg	175	88.6	51		28--98	175	92.1	53		4		0--35
Fluoranthene	27	53.3	ug/Kg	880	1080	123		45--126	880	1100	125		2		0--35
Pyrene	27	53.3	ug/Kg	957	1040	108		36--135	957	1040	109		1		0--35
Benzo(a)anthracene	27	53.3	ug/Kg	466	523	112		66--124	466	508	109		3		0--35
Chrysene	27	53.3	ug/Kg	480	667	139		77--136	480	656	137	*	2		0--35
Benzo(b,j,k)fluoranthene	27	53.3	ug/Kg	815	879	108		52--190	815	870	107		1		0--35
Benzo(a)pyrene	27	53.3	ug/Kg	424	437	103		60--116	424	444	105		1		0--35
Indeno(1,2,3-Cd)Pyrene	27	53.3	ug/Kg	274	317	116		33--121	274	319	116		1		0--35
Dibenzo(a,h)anthracene	27	53.3	ug/Kg	41.9	81.4	194		10--200	41.9	82.7	197		2		0--35
Benzo(g,h,i)perylene	27	53.3	ug/Kg	280	343	122		15--121	280	353	126	*	3		0--35

LD:WG117647-8 L53963-39 Matrix: SALTWTRSED Listtype:ORBNASMS Method:SW846 3550B*SW846 8270D Project:423368-210-1 Pkey:SED
(Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	RPD	Qual	LabLimit
Phenol	27	80	ug/Kg	<MDL	<MDL			0--35
1,4-Dichlorobenzene	8	8	ug/Kg	<MDL	<MDL			0--35
Benzyl Alcohol	13.3	13.3	ug/Kg	<MDL	<MDL			0--35
1,2-Dichlorobenzene	5.33	5.33	ug/Kg	<MDL	<MDL			0--35
2-Methylphenol	5.3	10.7	ug/Kg	<MDL	<MDL			0--35
3-,4-Methylphenol	27	53.3	ug/Kg	<MDL	<MDL			0--35

Benzoic Acid	107	107	ug/Kg	136	174	25		0--35
2,4-Dimethylphenol	5.3	10.7	ug/Kg	<MDL	<MDL			0--35
1,2,4-Trichlorobenzene	0.53	1.07	ug/Kg	<MDL	<MDL			0--35
Naphthalene	5.3	10.7	ug/Kg	<MDL	<MDL			0--35
Hexachlorobutadiene	2.7	5.33	ug/Kg	<MDL	<MDL			0--35
2-Methylnaphthalene	5.3	10.7	ug/Kg	<MDL	<MDL			0--35
Dimethyl Phthalate	10.7	10.7	ug/Kg	<MDL	<MDL			0--35
Acenaphthylene	5.3	10.7	ug/Kg	<MDL	<MDL			0--35
Acenaphthene	5.3	10.7	ug/Kg	7	8.2			0--35
Dibenzofuran	5.3	10.7	ug/Kg	5.6	7.2			0--35
Diethyl Phthalate	11	21.3	ug/Kg	<MDL	<MDL			0--35
Fluorene	5.3	10.7	ug/Kg	11.3	11.9	5		0--35
N-Nitrosodiphenylamine	13.3	13.3	ug/Kg	<MDL	<MDL			0--35
Hexachlorobenzene	0.53	1.07	ug/Kg	<MDL	<MDL			0--35
Pentachlorophenol	80	80	ug/Kg	<MDL	<MDL			0--35
Phenanthrene	5.3	10.7	ug/Kg	87.9	88.9	1		0--35
Anthracene	5.3	10.7	ug/Kg	44.6	31.4	35		0--35
Di-N-Butyl Phthalate	11	21.3	ug/Kg	18	27.3	39	*	0--35
Fluoranthene	5.3	10.7	ug/Kg	244	216	12		0--35
Pyrene	5.3	10.7	ug/Kg	229	206	10		0--35
Benzyl Butyl Phthalate	8	8	ug/Kg	46.5	52.8	13		0--35
Benzo(a)anthracene	5.3	10.7	ug/Kg	105	86.2	19		0--35
Chrysene	5.3	10.7	ug/Kg	129	124	5		0--35
Bis(2-Ethylhexyl)Phthalate	11	21.3	ug/Kg	214	203	5		0--35
Di-N-Octyl Phthalate	10.7	10.7	ug/Kg	<MDL	<MDL			0--35
Benzo(b,j,k)fluoranthene	5.3	10.7	ug/Kg	251	225	11		0--35
Benzo(a)pyrene	5.3	10.7	ug/Kg	110	101	8		0--35
Indeno(1,2,3-Cd)Pyrene	5.3	10.7	ug/Kg	65	57	13		0--35
Dibenzo(a,h)anthracene	5.3	10.7	ug/Kg	22.1	23	4		0--35
Benzo(g,h,i)perylene	5.3	10.7	ug/Kg	71	63.9	11		0--35
Total LPAHs	5.3	10.7	ug/Kg	150.8	140.4	7		0--35
Total HPAHS	5.3	10.7	ug/Kg	1226.1	1102.1	11		0--35

Surrogate:	2,4,6-Tribromophenol	2-Fluorobiphenyl	2-Fluorophenol	d14-Terphenyl	d4-2-Chlorophenol	d5-Nitrobenzene	d5-Phenol
(Lab Limits)	20--150	22--135	20--120	45--150	13--101	16--103	17--103
L53963-1	129	103	106	150	93	107 *	90
L53963-2	123	95	96	148	88	88	93
L53963-3	122	91	87	142	81	78	90
L53963-4	133	97	84	151 *	81	77	91
L53963-5	126	93	96	146	88	91	87
L53963-6	129	87	89	149	83	83	86

L53963-7	139	86	77	153 *	71	73	75
L53963-8	128	80	77	142	70	71	74
L53963-9	129	85	82	141	74	77	77
L53963-10	134	109	93	149	87	88	95
L53963-11	130	97	93	146	85	90	85
L53963-12	113	95	93	138	84	90	85
L53963-32	124	99	95	150	87	96	84
L53963-33	132	81	73	150	67	68	71
L53963-34	133	102	97	153 *	88	101	87
L53963-35	122	91	79	142	73	74	78
L53963-36	137	83	72	147	66	73	68
L53963-37	162 *	98	77	188 *	85	75	91
L53963-38	121	102	104	143	80	91	84
L53963-39	118	95	81	140	69	83	68
WG117647-1	71	102	97	150	93	98	107 *
WG117647-2	118	92	110	142	101	97	104 *
WG117647-3	106	81	84	105	83	74	94
WG117647-4	119	101	96	130	95	84	111 *
WG117647-5	121	92	81	126	80	72	93
WG117647-6	137	94	96	141	95	97	110 *
WG117647-7	133	108	94	139	93	94	109 *
WG117647-8	128	100	87	141	76	93	75

WG118181 - BNAs

MB:WG118181-1 Matrix: OTHR SOLID Listtype:ORBNASMS Method:SW846 3550B*SW846 8270D Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Phenol	27	80	ug/Kg	<MDL	
1,4-Dichlorobenzene	8	8	ug/Kg	<MDL	
Benzyl Alcohol	13.3	13.3	ug/Kg	<MDL	
1,2-Dichlorobenzene	5.33	5.33	ug/Kg	<MDL	
2-Methylphenol	5.3	10.7	ug/Kg	<MDL	
3-,4-Methylphenol	27	53.3	ug/Kg	<MDL	
Benzoic Acid	107	107	ug/Kg	<MDL	
2,4-Dimethylphenol	5.3	10.7	ug/Kg	<MDL	
1,2,4-Trichlorobenzene	0.53	1.07	ug/Kg	<MDL	
Naphthalene	5.3	10.7	ug/Kg	<MDL	
Hexachlorobutadiene	2.7	5.33	ug/Kg	<MDL	
2-Methylnaphthalene	5.3	10.7	ug/Kg	<MDL	
Dimethyl Phthalate	10.7	10.7	ug/Kg	<MDL	

Acenaphthylene	5.3	10.7	ug/Kg	<MDL	
Acenaphthene	5.3	10.7	ug/Kg	<MDL	
Dibenzofuran	5.3	10.7	ug/Kg	<MDL	
Diethyl Phthalate	11	21.3	ug/Kg	<MDL	
Fluorene	5.3	10.7	ug/Kg	<MDL	
N-Nitrosodiphenylamine	13.3	13.3	ug/Kg	<MDL	
Hexachlorobenzene	0.53	1.07	ug/Kg	<MDL	
Pentachlorophenol	80	80	ug/Kg	<MDL	
Phenanthrene	5.3	10.7	ug/Kg	<MDL	
Anthracene	5.3	10.7	ug/Kg	<MDL	
Di-N-Butyl Phthalate	11	21.3	ug/Kg	<MDL	
Fluoranthene	5.3	10.7	ug/Kg	<MDL	
Pyrene	5.3	10.7	ug/Kg	<MDL	
Benzyl Butyl Phthalate	8	8	ug/Kg	<MDL	
Benzo(a)anthracene	5.3	10.7	ug/Kg	<MDL	
Chrysene	5.3	10.7	ug/Kg	<MDL	
Bis(2-Ethylhexyl)Phthalate	11	21.3	ug/Kg	20	B
Di-N-Octyl Phthalate	10.7	10.7	ug/Kg	<MDL	
Benzo(b,j,k)fluoranthene	5.3	10.7	ug/Kg	<MDL	
Benzo(a)pyrene	5.3	10.7	ug/Kg	<MDL	
Indeno(1,2,3-Cd)Pyrene	5.3	10.7	ug/Kg	<MDL	
Dibenzo(a,h)anthracene	5.3	10.7	ug/Kg	<MDL	
Benzo(g,h,i)perylene	5.3	10.7	ug/Kg	<MDL	
Total LPAHs	5.3	10.7	ug/Kg	<MDL	
Total HPAHS	5.3	10.7	ug/Kg	<MDL	

SB:WG118181-2 MB:WG118181-1 Matrix: OTHR SOLID Listtype:ORBNASMS Method:SW846 3550B*SW846 8270D Project: Pkey:STD
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	TrueValue	SB Value	% Rec.	Qual	LabLimit
Phenol	27	80	ug/Kg	<MDL	800	461	58		17--92
1,4-Dichlorobenzene	8	8	ug/Kg	<MDL	800	667	83	*	32--78
Benzyl Alcohol	13.3	13.3	ug/Kg	<MDL	800	391	49		10--90
1,2-Dichlorobenzene	5.33	5.33	ug/Kg	<MDL	800	633	79		21--118
2-Methylphenol	5.3	10.7	ug/Kg	<MDL	800	326	41		10--100
3-,4-Methylphenol	27	53.3	ug/Kg	<MDL	800	403	50		10--125
Benzoic Acid	107	107	ug/Kg	<MDL	800	402	50		10--150
2,4-Dimethylphenol	5.3	10.7	ug/Kg	<MDL	800	305	38		5--80
1,2,4-Trichlorobenzene	0.53	1.07	ug/Kg	<MDL	800	709	89		21--115
Naphthalene	5.3	10.7	ug/Kg	<MDL	800	785	98		29--100
Hexachlorobutadiene	2.7	5.33	ug/Kg	<MDL	800	920	115	*	17--92
2-Methylnaphthalene	5.3	10.7	ug/Kg	<MDL	800	947	118		25--129

Dimethyl Phthalate	10.7	10.7	ug/Kg	<MDL	800	753	94		41--128
Acenaphthylene	5.3	10.7	ug/Kg	<MDL	800	742	93		48--111
Acenaphthene	5.3	10.7	ug/Kg	<MDL	800	755	94		40--100
Dibenzofuran	5.3	10.7	ug/Kg	<MDL	800	789	99		44--106
Diethyl Phthalate	11	21.3	ug/Kg	<MDL	800	798	100		40--138
Fluorene	5.3	10.7	ug/Kg	<MDL	800	916	115	*	45--109
N-Nitrosodiphenylamine	13.3	13.3	ug/Kg	<MDL	800	743	93		5--128
Hexachlorobenzene	0.53	1.07	ug/Kg	<MDL	800	925	116	*	36--112
Pentachlorophenol	80	80	ug/Kg	<MDL	800	748	93		20--121
Phenanthrene	5.3	10.7	ug/Kg	<MDL	800	809	101		58--106
Anthracene	5.3	10.7	ug/Kg	<MDL	800	845	106		55--112
Di-N-Butyl Phthalate	11	21.3	ug/Kg	<MDL	800	884	110		50--150
Fluoranthene	5.3	10.7	ug/Kg	<MDL	800	876	109		50--120
Pyrene	5.3	10.7	ug/Kg	<MDL	800	859	107		50--125
Benzyl Butyl Phthalate	8	8	ug/Kg	<MDL	800	1210	151	*	46--147
Benzo(a)anthracene	5.3	10.7	ug/Kg	<MDL	800	894	112		68--130
Chrysene	5.3	10.7	ug/Kg	<MDL	800	876	110		59--110
Bis(2-Ethylhexyl)Phthalate	11	21.3	ug/Kg	20	800	1170	143	*	49--129
Di-N-Octyl Phthalate	10.7	10.7	ug/Kg	<MDL	800	975	122		54--146
Benzo(b,j,k)fluoranthene	5.3	10.7	ug/Kg	<MDL	2400	1880	79		61--126
Benzo(a)pyrene	5.3	10.7	ug/Kg	<MDL	800	798	100		62--113
Indeno(1,2,3-Cd)Pyrene	5.3	10.7	ug/Kg	<MDL	800	1070	134	*	54--127
Dibenzo(a,h)anthracene	5.3	10.7	ug/Kg	<MDL	800	1040	130		53--137
Benzo(g,h,i)perylene	5.3	10.7	ug/Kg	<MDL	800	1080	135	*	36--126

SB:WG118181-3 MB:WG118181-1 Matrix: OTHR SOLID Listtype:ORBNASMS Method:SW846 3550B*SW846 8270D Project: Pkey:STD
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	TrueValue	SB Value	% Rec.	Qual	LabLimit
Phenol	27	80	ug/Kg	<MDL	3200	3200	100	*	17--92
1,4-Dichlorobenzene	8	8	ug/Kg	<MDL	3200	2910	91	*	32--78
Benzyl Alcohol	13.3	13.3	ug/Kg	<MDL	3200	2510	79		10--90
1,2-Dichlorobenzene	5.33	5.33	ug/Kg	<MDL	3200	2980	93		21--118
2-Methylphenol	5.3	10.7	ug/Kg	<MDL	3200	2700	84		10--100
3-,4-Methylphenol	27	53.3	ug/Kg	<MDL	3200	2730	85		10--125
Benzoic Acid	107	107	ug/Kg	<MDL	3200	1850	58		10--150
2,4-Dimethylphenol	5.3	10.7	ug/Kg	<MDL	3200	2860	89	*	5--80
1,2,4-Trichlorobenzene	0.53	1.07	ug/Kg	<MDL	3200	2860	89		21--115
Naphthalene	5.3	10.7	ug/Kg	<MDL	3200	3260	102	*	29--100
Hexachlorobutadiene	2.7	5.33	ug/Kg	<MDL	3200	4060	127	*	17--92
2-Methylnaphthalene	5.3	10.7	ug/Kg	<MDL	3200	3420	107		25--129
Dimethyl Phthalate	10.7	10.7	ug/Kg	<MDL	3200	3450	108		41--128

Acenaphthylene	5.3	10.7	ug/Kg	<MDL	3200	3580	112	*	48--111
Acenaphthene	5.3	10.7	ug/Kg	<MDL	3200	3460	108	*	40--100
Dibenzofuran	5.3	10.7	ug/Kg	<MDL	3200	3650	114	*	44--106
Diethyl Phthalate	11	21.3	ug/Kg	<MDL	3200	3510	110		40--138
Fluorene	5.3	10.7	ug/Kg	<MDL	3200	4220	132	*	45--109
N-Nitrosodiphenylamine	13.3	13.3	ug/Kg	<MDL	3200	3740	117		5--128
Hexachlorobenzene	0.53	1.07	ug/Kg	<MDL	3200	4290	134	*	36--112
Pentachlorophenol	80	80	ug/Kg	<MDL	3200	3800	119		20--121
Phenanthrene	5.3	10.7	ug/Kg	<MDL	3200	3800	119	*	58--106
Anthracene	5.3	10.7	ug/Kg	<MDL	3200	4210	132	*	55--112
Di-N-Butyl Phthalate	11	21.3	ug/Kg	<MDL	3200	4080	127		50--150
Fluoranthene	5.3	10.7	ug/Kg	<MDL	3200	3940	123	*	50--120
Pyrene	5.3	10.7	ug/Kg	<MDL	3200	3890	122		50--125
Benzyl Butyl Phthalate	8	8	ug/Kg	<MDL	3200	5240	164	*	46--147
Benzo(a)anthracene	5.3	10.7	ug/Kg	<MDL	3200	4020	126		68--130
Chrysene	5.3	10.7	ug/Kg	<MDL	3200	3910	122	*	59--110
Bis(2-Ethylhexyl)Phthalate	11	21.3	ug/Kg	20	3200	5180	161	*	49--129
Di-N-Octyl Phthalate	10.7	10.7	ug/Kg	<MDL	3200	4500	141		54--146
Benzo(b,j,k)fluoranthene	5.3	10.7	ug/Kg	<MDL	9600	8460	88		61--126
Benzo(a)pyrene	5.3	10.7	ug/Kg	<MDL	3200	3800	119	*	62--113
Indeno(1,2,3-Cd)Pyrene	5.3	10.7	ug/Kg	<MDL	3200	4730	148	*	54--127
Dibenzo(a,h)anthracene	5.3	10.7	ug/Kg	<MDL	3200	4650	145	*	53--137
Benzo(g,h,i)perylene	5.3	10.7	ug/Kg	<MDL	3200	4810	150	*	36--126

MSD:WG118181-5 MS:WG118181-4 L53963-15 Matrix: SALTWTRSED Listtype:ORBNASMS Method:SW846 3550B*SW846 8270D Project:423368-210-1 Pkey:SED
(Matrix Spike Duplicate, Matrix Spike)

Parameter	MDL	RDL	Units	SAMP Value	TrueValue	MS Value	% Rec.	Qual	LabLimit	TrueValue	MSD Value	% Rec.	Qual	RPD	Qual	LabLimit
Phenol	130	400	ug/Kg	<MDL	3200	3230	101		30--105	3200	3040	95		6		0--35
1,4-Dichlorobenzene	40	40	ug/Kg	<MDL	3200	2540	79	*	19--76	3200	2650	83	*	4		0--35
Benzyl Alcohol	66.7	66.7	ug/Kg	<MDL	3200	2440	76		10--95	3200	2370	74		3		0--35
1,2-Dichlorobenzene	26.7	26.7	ug/Kg	<MDL	3200	2580	81	*	25--74	3200	2720	85	*	5		0--35
2-Methylphenol	27	53.3	ug/Kg	<MDL	3200	2820	88		20--90	3200	2690	84		5		0--35
3-,4-Methylphenol	130	267	ug/Kg	<MDL	3200	2860	89		10--163	3200	2730	85		5		0--35
Benzoic Acid	533	533	ug/Kg	115	3200	2530	76		5--130	3200	4010	122		45	*	0--35
2,4-Dimethylphenol	27	53.3	ug/Kg	<MDL	3200	3000	94		5--115	3200	3390	106		12		0--35
1,2,4-Trichlorobenzene	2.7	5.33	ug/Kg	<MDL	3200	2510	78		35--117	3200	2670	83		6		0--35
Naphthalene	27	53.3	ug/Kg	<MDL	3200	3010	94		15--107	3200	3100	97		3		0--35
Hexachlorobutadiene	13	26.7	ug/Kg	<MDL	3200	3470	108	*	21--78	3200	3740	117	*	8		0--35
2-Methylnaphthalene	27	53.3	ug/Kg	<MDL	3200	2640	82		10--111	3200	3210	100		20		0--35
Dimethyl Phthalate	53.3	53.3	ug/Kg	<MDL	3200	3370	105		31--127	3200	3260	102		3		0--35
Acenaphthylene	27	53.3	ug/Kg	<MDL	3200	3370	105		41--112	3200	3470	108		3		0--35

Acenaphthene	27	53.3	ug/Kg	<MDL	3200	3160	99	*	40--95	3200	3320	104	*	5	0--35
Dibenzofuran	27	53.3	ug/Kg	<MDL	3200	3550	111		14--129	3200	3580	112		1	0--35
Diethyl Phthalate	53	107	ug/Kg	<MDL	3200	3700	116		26--142	3200	3340	104		10	0--35
Fluorene	27	53.3	ug/Kg	<MDL	3200	4220	132	*	18--131	3200	4110	128		3	0--35
N-Nitrosodiphenylamine	66.7	66.7	ug/Kg	<MDL	3200	3490	109		20--135	3200	3560	111		2	0--35
Hexachlorobenzene	2.7	5.33	ug/Kg	<MDL	3200	3880	121		20--130	3200	3960	124		2	0--35
Pentachlorophenol	400	400	ug/Kg	<MDL	3200	3610	113		30--151	3200	3780	118		5	0--35
Phenanthrene	27	53.3	ug/Kg	<MDL	3200	3600	112		10--146	3200	3550	111		1	0--35
Anthracene	27	53.3	ug/Kg	<MDL	3200	4170	130		10--150	3200	4020	126		3	0--35
Di-N-Butyl Phthalate	53	107	ug/Kg	11	3200	4150	129		34--146	3200	3950	123		5	0--35
Fluoranthene	27	53.3	ug/Kg	<MDL	3200	3920	122		10--168	3200	3790	119		3	0--35
Pyrene	27	53.3	ug/Kg	<MDL	3200	3860	121		20--150	3200	3650	114		6	0--35
Benzyl Butyl Phthalate	40	40	ug/Kg	<MDL	3200	5000	156	*	30--150	3200	4890	153	*	2	0--35
Benzo(a)anthracene	27	53.3	ug/Kg	<MDL	3200	3760	118		40--158	3200	3680	115		2	0--35
Chrysene	27	53.3	ug/Kg	<MDL	3200	3790	118		41--127	3200	3630	113		4	0--35
Bis(2-Ethylhexyl)Phthalate	53	107	ug/Kg	22.9	3200	4850	151		30--160	3200	4730	147		2	0--35
Di-N-Octyl Phthalate	53.3	53.3	ug/Kg	<MDL	3200	4490	140		50--155	3200	4220	132		6	0--35
Benzo(b,j,k)fluoranthene	27	53.3	ug/Kg	<MDL	9600	7830	82		31--153	9600	7590	79		3	0--35
Benzo(a)pyrene	27	53.3	ug/Kg	<MDL	3200	3640	114		32--143	3200	3570	111		2	0--35
Indeno(1,2,3-Cd)Pyrene	27	53.3	ug/Kg	<MDL	3200	4010	125	*	35--123	3200	4180	130	*	4	0--35
Dibenzo(a,h)anthracene	27	53.3	ug/Kg	<MDL	3200	3880	121		37--129	3200	3950	124		2	0--35
Benzo(g,h,i)perylene	27	53.3	ug/Kg	<MDL	3200	3810	119		20--121	3200	3850	120		1	0--35

SRMD:WG118181-7 SRM:WG118181-6 Matrix: SALTWTRSED Listtype:ORBNASMS Method:SW846 3550B*SW846 8270D Project: Pkey:SED
(Std Reference Material Duplicate, Std Reference Material)

Parameter	MDL	RDL	Units	TrueValue	SRM Value	% Rec.	Qual	LabLimit	TrueValue	SRMD Valu	% Rec.	Qual	RPD	Qual	LabLimit
Naphthalene	270	533	ug/Kg	1630	290	18		10--29	1630	340	21		18		0--35
Phenanthrene	270	533	ug/Kg	5200	4500	86		51--106	5200	4840	93		7		0--35
Anthracene	270	533	ug/Kg	1750	723	41		28--98	1750	792	45		9		0--35
Fluoranthene	270	533	ug/Kg	8800	8640	98		45--126	8800	9510	108		10		0--35
Pyrene	270	533	ug/Kg	9570	8400	88		36--135	9570	9110	95		8		0--35
Benzo(a)anthracene	270	533	ug/Kg	4660	4220	91		66--124	4660	4630	99		9		0--35
Chrysene	270	533	ug/Kg	4800	5200	108		77--136	4800	5750	120		10		0--35
Benzo(b,j,k)fluoranthene	270	533	ug/Kg	8150	7170	88		52--190	8150	7920	97		10		0--35
Benzo(a)pyrene	270	533	ug/Kg	4240	3570	84		60--116	4240	3960	93		10		0--35
Indeno(1,2,3-Cd)Pyrene	270	533	ug/Kg	2740	2510	91		33--121	2740	2860	104		13		0--35
Dibenzo(a,h)anthracene	270	533	ug/Kg	419	633	151		10--200	419	655	156		3		0--35
Benzo(g,h,i)perylene	270	533	ug/Kg	2800	2660	95		15--121	2800	3150	112		17		0--35

LIMSView QC Report for 2011 CSO Sediment Monitoring Project

LD:WG118181-8 L53963-27 Matrix: SALTWTRSED Listtype:ORBNASMS Method:SW846 3550B*SW846 8270D Project:423368-210-1 Pkey:SED
(Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	RPD	Qual	LabLimit
Phenol	27	80	ug/Kg	<MDL	<MDL			0--35
1,4-Dichlorobenzene	8	8	ug/Kg	<MDL	<MDL			0--35
Benzyl Alcohol	13.3	13.3	ug/Kg	<MDL	<MDL			0--35
1,2-Dichlorobenzene	5.33	5.33	ug/Kg	<MDL	<MDL			0--35
2-Methylphenol	5.3	10.7	ug/Kg	<MDL	<MDL			0--35
3-,4-Methylphenol	27	53.3	ug/Kg	<MDL	<MDL			0--35
Benzoic Acid	107	107	ug/Kg	169	185	9		0--35
2,4-Dimethylphenol	5.3	10.7	ug/Kg	<MDL	<MDL			0--35
1,2,4-Trichlorobenzene	0.53	1.07	ug/Kg	<MDL	<MDL			0--35
Naphthalene	5.3	10.7	ug/Kg	<MDL	<MDL			0--35
Hexachlorobutadiene	2.7	5.33	ug/Kg	<MDL	<MDL			0--35
2-Methylnaphthalene	5.3	10.7	ug/Kg	<MDL	<MDL			0--35
Dimethyl Phthalate	10.7	10.7	ug/Kg	<MDL	<MDL			0--35
Acenaphthylene	5.3	10.7	ug/Kg	12.3	<MDL	200	*	0--35
Acenaphthene	5.3	10.7	ug/Kg	25.3	<MDL	200	*	0--35
Dibenzofuran	5.3	10.7	ug/Kg	9.9	<MDL			0--35
Diethyl Phthalate	11	21.3	ug/Kg	<MDL	<MDL			0--35
Fluorene	5.3	10.7	ug/Kg	27.1	<MDL	200	*	0--35
N-Nitrosodiphenylamine	13.3	13.3	ug/Kg	<MDL	<MDL			0--35
Hexachlorobenzene	0.53	1.07	ug/Kg	<MDL	<MDL			0--35
Pentachlorophenol	80	80	ug/Kg	<MDL	<MDL			0--35
Phenanthrene	5.3	10.7	ug/Kg	301	37.6	156	*	0--35
Anthracene	5.3	10.7	ug/Kg	116	6.9	177	*	0--35
Di-N-Butyl Phthalate	11	21.3	ug/Kg	78.3	<MDL	200	*	0--35
Fluoranthene	5.3	10.7	ug/Kg	1170	57.7	181	*	0--35
Pyrene	5.3	10.7	ug/Kg	962	43.2	183	*	0--35
Benzyl Butyl Phthalate	8	8	ug/Kg	651	<MDL	200	*	0--35
Benzo(a)anthracene	5.3	10.7	ug/Kg	361	27.5	172	*	0--35
Chrysene	5.3	10.7	ug/Kg	548	30.7	179	*	0--35
Bis(2-Ethylhexyl)Phthalate	11	21.3	ug/Kg	138	26.7	135	*	0--35
Di-N-Octyl Phthalate	10.7	10.7	ug/Kg	<MDL	<MDL			0--35
Benzo(b,j,k)fluoranthene	5.3	10.7	ug/Kg	957	48.2	181	*	0--35
Benzo(a)pyrene	5.3	10.7	ug/Kg	380	34.9	166	*	0--35
Indeno(1,2,3-Cd)Pyrene	5.3	10.7	ug/Kg	196	17.3	168	*	0--35
Dibenzo(a,h)anthracene	5.3	10.7	ug/Kg	70.4	7.8	160	*	0--35
Benzo(g,h,i)perylene	5.3	10.7	ug/Kg	213	10	182	*	0--35
Total LPAHs	5.3	10.7	ug/Kg	481.7	44.5	166	*	0--35
Total HPAHS	5.3	10.7	ug/Kg	4857.4	277.3	178	*	0--35

Surrogate:	2,4,6-Tribromophenol	2-Fluorobiphenyl	2-Fluorophenol	d14-Terphenyl	d4-2-Chlorophenol	d5-Nitrobenzene	d5-Phenol
(Lab Limits)	20--150	22--135	20--120	45--150	13--101	16--103	17--103
L53963-13	107	89	79	124	67	70	59
L53963-14	102	90	81	125	69	76	62
L53963-15	99	77	88	120	76	80	69
L53963-16	104	88	81	132	64	62	50
L53963-17	115	79	90	130	82	97	79
L53963-18	92	78	75	108	58	58	47
L53963-19	125	81	62	133	59	59	63
L53963-20	106	82	87	129	76	82	70
L53963-21	123	93	80	126	73	75	70
L53963-22	125	84	87	137	75	86	64
L53963-23	106	85	82	128	73	79	69
L53963-24	116	86	84	131	74	81	64
L53963-25	100	86	84	126	73	77	64
L53963-26	95	73	82	104	70	91	71
L53963-27	141	110	117	158 *	100	104 *	100
L53963-28	117	101	87	127	75	83	69
L53963-29	113	99	86	129	72	87	63
L53963-30	111	91	82	127	69	75	62
L53963-31	106	96	75	130	63	70	54
L53963-40	105	96	87	135	72	70	58
WG118181-1	43	87	82	129	74	109 *	70
WG118181-2	94	89	99	122	74	99	60
WG118181-3	119	105	112	130	105 *	94	103
WG118181-4	125	90	95	124	90	90	100
WG118181-5	121	104	106	123	99	94	101
WG118181-6	105	94	91	117	80	76	87
WG118181-7	106	89	93	116	84	83	93
WG118181-8	116	86	76	123	63	71	53

WG118182 - BNAs

MB:WG118182-1 Matrix: OTHR SOLID Listtype:ORBNASMS Method:SW846 3550B*SW846 8270D Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Phenol	27	80	ug/Kg	<MDL	
1,4-Dichlorobenzene	8	8	ug/Kg	<MDL	
Benzyl Alcohol	13.3	13.3	ug/Kg	<MDL	
1,2-Dichlorobenzene	5.33	5.33	ug/Kg	<MDL	
2-Methylphenol	5.3	10.7	ug/Kg	<MDL	

3-,4-Methylphenol	27	53.3	ug/Kg	<MDL	
Benzoic Acid	107	107	ug/Kg	<MDL	
2,4-Dimethylphenol	5.3	10.7	ug/Kg	<MDL	
1,2,4-Trichlorobenzene	0.53	1.07	ug/Kg	<MDL	
Naphthalene	5.3	10.7	ug/Kg	<MDL	
Hexachlorobutadiene	2.7	5.33	ug/Kg	<MDL	
2-Methylnaphthalene	5.3	10.7	ug/Kg	<MDL	
Dimethyl Phthalate	10.7	10.7	ug/Kg	<MDL	
Acenaphthylene	5.3	10.7	ug/Kg	<MDL	
Acenaphthene	5.3	10.7	ug/Kg	<MDL	
Dibenzofuran	5.3	10.7	ug/Kg	<MDL	
Diethyl Phthalate	11	21.3	ug/Kg	<MDL	
Fluorene	5.3	10.7	ug/Kg	<MDL	
N-Nitrosodiphenylamine	13.3	13.3	ug/Kg	<MDL	
Hexachlorobenzene	0.53	1.07	ug/Kg	<MDL	
Pentachlorophenol	80	80	ug/Kg	<MDL	
Phenanthrene	5.3	10.7	ug/Kg	<MDL	
Anthracene	5.3	10.7	ug/Kg	<MDL	
Di-N-Butyl Phthalate	11	21.3	ug/Kg	<MDL	
Fluoranthene	5.3	10.7	ug/Kg	<MDL	
Pyrene	5.3	10.7	ug/Kg	<MDL	
Benzyl Butyl Phthalate	8	8	ug/Kg	<MDL	
Benzo(a)anthracene	5.3	10.7	ug/Kg	<MDL	
Chrysene	5.3	10.7	ug/Kg	<MDL	
Bis(2-Ethylhexyl)Phthalate	11	21.3	ug/Kg	19	B
Di-N-Octyl Phthalate	10.7	10.7	ug/Kg	<MDL	
Benzo(b,j,k)fluoranthene	5.3	10.7	ug/Kg	<MDL	
Benzo(a)pyrene	5.3	10.7	ug/Kg	<MDL	
Indeno(1,2,3-Cd)Pyrene	5.3	10.7	ug/Kg	<MDL	
Dibenzo(a,h)anthracene	5.3	10.7	ug/Kg	<MDL	
Benzo(g,h,i)perylene	5.3	10.7	ug/Kg	<MDL	
Total LPAHs	5.3	10.7	ug/Kg	<MDL	
Total HPAHS	5.3	10.7	ug/Kg	<MDL	

SB:WG118182-2 MB:WG118182-1 Matrix: OTHR SOLID Listtype:ORBNASMS Method:SW846 3550B*SW846 8270D Project: Pkey:STD
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	TrueValue	SB Value	% Rec.	Qual	LabLimit
Phenol	27	80	ug/Kg	<MDL	800	445	56		17--92
1,4-Dichlorobenzene	8	8	ug/Kg	<MDL	800	347	43		32--78
Benzyl Alcohol	13.3	13.3	ug/Kg	<MDL	800	399	50		10--90
1,2-Dichlorobenzene	5.33	5.33	ug/Kg	<MDL	800	371	46		21--118

2-Methylphenol	5.3	10.7	ug/Kg	<MDL	800	388	48		10--100
3-,4-Methylphenol	27	53.3	ug/Kg	<MDL	800	429	54		10--125
Benzoic Acid	107	107	ug/Kg	<MDL	800	219	27		10--150
2,4-Dimethylphenol	5.3	10.7	ug/Kg	<MDL	800	289	36		5--80
1,2,4-Trichlorobenzene	0.53	1.07	ug/Kg	<MDL	800	400	50		21--115
Naphthalene	5.3	10.7	ug/Kg	<MDL	800	483	60		29--100
Hexachlorobutadiene	2.7	5.33	ug/Kg	<MDL	800	525	66		17--92
2-Methylnaphthalene	5.3	10.7	ug/Kg	<MDL	800	533	67		25--129
Dimethyl Phthalate	10.7	10.7	ug/Kg	<MDL	800	660	82		41--128
Acenaphthylene	5.3	10.7	ug/Kg	<MDL	800	626	78		48--111
Acenaphthene	5.3	10.7	ug/Kg	<MDL	800	615	77		40--100
Dibenzofuran	5.3	10.7	ug/Kg	<MDL	800	670	84		44--106
Diethyl Phthalate	11	21.3	ug/Kg	<MDL	800	742	93		40--138
Fluorene	5.3	10.7	ug/Kg	<MDL	800	788	99		45--109
N-Nitrosodiphenylamine	13.3	13.3	ug/Kg	<MDL	800	695	87		5--128
Hexachlorobenzene	0.53	1.07	ug/Kg	<MDL	800	844	106		36--112
Pentachlorophenol	80	80	ug/Kg	<MDL	800	756	94		20--121
Phenanthrene	5.3	10.7	ug/Kg	<MDL	800	769	96		58--106
Anthracene	5.3	10.7	ug/Kg	<MDL	800	827	103		55--112
Di-N-Butyl Phthalate	11	21.3	ug/Kg	<MDL	800	884	110		50--150
Fluoranthene	5.3	10.7	ug/Kg	<MDL	800	855	107		50--120
Pyrene	5.3	10.7	ug/Kg	<MDL	800	870	109		50--125
Benzyl Butyl Phthalate	8	8	ug/Kg	<MDL	800	1190	149	*	46--147
Benzo(a)anthracene	5.3	10.7	ug/Kg	<MDL	800	889	111		68--130
Chrysene	5.3	10.7	ug/Kg	<MDL	800	866	108		59--110
Bis(2-Ethylhexyl)Phthalate	11	21.3	ug/Kg	19	800	1160	143	*	49--129
Di-N-Octyl Phthalate	10.7	10.7	ug/Kg	<MDL	800	979	122		54--146
Benzo(b,j,k)fluoranthene	5.3	10.7	ug/Kg	<MDL	2400	1860	77		61--126
Benzo(a)pyrene	5.3	10.7	ug/Kg	<MDL	800	811	101		62--113
Indeno(1,2,3-Cd)Pyrene	5.3	10.7	ug/Kg	<MDL	800	1050	131	*	54--127
Dibenzo(a,h)anthracene	5.3	10.7	ug/Kg	<MDL	800	1020	128		53--137
Benzo(g,h,i)perylene	5.3	10.7	ug/Kg	<MDL	800	1010	127	*	36--126

SB:WG118182-3 MB:WG118182-1 Matrix: OTHR SOLID Listtype:ORBNASMS Method:SW846 3550B*SW846 8270D Project: Pkey:STD
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	TrueValue	SB Value	% Rec.	Qual	LabLimit
Phenol	27	80	ug/Kg	<MDL	3200	2550	80		17--92
1,4-Dichlorobenzene	8	8	ug/Kg	<MDL	3200	2370	74		32--78
Benzyl Alcohol	13.3	13.3	ug/Kg	<MDL	3200	2080	65		10--90
1,2-Dichlorobenzene	5.33	5.33	ug/Kg	<MDL	3200	2400	75		21--118
2-Methylphenol	5.3	10.7	ug/Kg	<MDL	3200	2230	70		10--100

3-,4-Methylphenol	27	53.3	ug/Kg	<MDL	3200	2220	69		10--125
Benzoic Acid	107	107	ug/Kg	<MDL	3200	<MDL	0	*	10--150
2,4-Dimethylphenol	5.3	10.7	ug/Kg	<MDL	3200	2550	80		5--80
1,2,4-Trichlorobenzene	0.53	1.07	ug/Kg	<MDL	3200	2250	70		21--115
Naphthalene	5.3	10.7	ug/Kg	<MDL	3200	2630	82		29--100
Hexachlorobutadiene	2.7	5.33	ug/Kg	<MDL	3200	3150	98	*	17--92
2-Methylnaphthalene	5.3	10.7	ug/Kg	<MDL	3200	2700	84		25--129
Dimethyl Phthalate	10.7	10.7	ug/Kg	<MDL	3200	2770	86		41--128
Acenaphthylene	5.3	10.7	ug/Kg	<MDL	3200	2880	90		48--111
Acenaphthene	5.3	10.7	ug/Kg	<MDL	3200	2760	86		40--100
Dibenzofuran	5.3	10.7	ug/Kg	<MDL	3200	2920	91		44--106
Diethyl Phthalate	11	21.3	ug/Kg	<MDL	3200	2910	91		40--138
Fluorene	5.3	10.7	ug/Kg	<MDL	3200	3320	104		45--109
N-Nitrosodiphenylamine	13.3	13.3	ug/Kg	<MDL	3200	3150	99		5--128
Hexachlorobenzene	0.53	1.07	ug/Kg	<MDL	3200	3560	111		36--112
Pentachlorophenol	80	80	ug/Kg	<MDL	3200	3050	95		20--121
Phenanthrene	5.3	10.7	ug/Kg	<MDL	3200	3200	100		58--106
Anthracene	5.3	10.7	ug/Kg	<MDL	3200	3600	113	*	55--112
Di-N-Butyl Phthalate	11	21.3	ug/Kg	<MDL	3200	3650	114		50--150
Fluoranthene	5.3	10.7	ug/Kg	<MDL	3200	3500	109		50--120
Pyrene	5.3	10.7	ug/Kg	<MDL	3200	3350	105		50--125
Benzyl Butyl Phthalate	8	8	ug/Kg	<MDL	3200	4540	142		46--147
Benzo(a)anthracene	5.3	10.7	ug/Kg	<MDL	3200	3490	109		68--130
Chrysene	5.3	10.7	ug/Kg	<MDL	3200	3410	106		59--110
Bis(2-Ethylhexyl)Phthalate	11	21.3	ug/Kg	19	3200	4470	139	*	49--129
Di-N-Octyl Phthalate	10.7	10.7	ug/Kg	<MDL	3200	3910	122		54--146
Benzo(b,j,k)fluoranthene	5.3	10.7	ug/Kg	<MDL	9600	7240	75		61--126
Benzo(a)pyrene	5.3	10.7	ug/Kg	<MDL	3200	3300	103		62--113
Indeno(1,2,3-Cd)Pyrene	5.3	10.7	ug/Kg	<MDL	3200	4020	126		54--127
Dibenzo(a,h)anthracene	5.3	10.7	ug/Kg	<MDL	3200	3970	124		53--137
Benzo(g,h,i)perylene	5.3	10.7	ug/Kg	<MDL	3200	3850	120		36--126

MSD:WG118182-5 MS:WG118182-4 L53963-45 Matrix: SALTWTRSED Listtype:ORBNASMS Method:SW846 3550B*SW846 8270D Project:423368-210-1 Pkey:SED
(Matrix Spike Duplicate, Matrix Spike)

Parameter	MDL	RDL	Units	SAMP Value	TrueValue	MS Value	% Rec.	Qual	LabLimit	TrueValue	MSD Value	% Rec.	Qual	RPD	Qual	LabLimit
Phenol	130	400	ug/Kg	<MDL	3200	2440	76		30--105	3200	2530	79		4		0--35
1,4-Dichlorobenzene	40	40	ug/Kg	<MDL	3200	1950	61		19--76	3200	1840	58		6		0--35
Benzyl Alcohol	66.7	66.7	ug/Kg	<MDL	3200	2130	67		10--95	3200	1980	62		7		0--35
1,2-Dichlorobenzene	26.7	26.7	ug/Kg	<MDL	3200	1860	58		25--74	3200	1870	59		1		0--35
2-Methylphenol	27	53.3	ug/Kg	<MDL	3200	2370	74		20--90	3200	2260	71		5		0--35
3-,4-Methylphenol	130	267	ug/Kg	<MDL	3200	2510	78		10--163	3200	2300	72		9		0--35

Benzoic Acid	533	533	ug/Kg	177	3200	2460	71		5--130	3200	2270	65	8	0--35
2,4-Dimethylphenol	27	53.3	ug/Kg	<MDL	3200	2640	82		5--115	3200	2340	73	12	0--35
1,2,4-Trichlorobenzene	2.7	5.33	ug/Kg	<MDL	3200	1930	60		35--117	3200	1840	57	5	0--35
Naphthalene	27	53.3	ug/Kg	<MDL	3200	2430	76		15--107	3200	2270	71	7	0--35
Hexachlorobutadiene	13	26.7	ug/Kg	<MDL	3200	2630	82	*	21--78	3200	2510	78	5	0--35
2-Methylnaphthalene	27	53.3	ug/Kg	<MDL	3200	2210	69		10--111	3200	2080	65	6	0--35
Dimethyl Phthalate	53.3	53.3	ug/Kg	<MDL	3200	3000	94		31--127	3200	2780	87	7	0--35
Acenaphthylene	27	53.3	ug/Kg	<MDL	3200	2960	93		41--112	3200	2660	83	11	0--35
Acenaphthene	27	53.3	ug/Kg	<MDL	3200	2730	85		40--95	3200	2510	78	9	0--35
Dibenzofuran	27	53.3	ug/Kg	<MDL	3200	3090	97		14--129	3200	2840	89	8	0--35
Diethyl Phthalate	53	107	ug/Kg	<MDL	3200	3300	103		26--142	3200	3180	99	4	0--35
Fluorene	27	53.3	ug/Kg	<MDL	3200	3640	114		18--131	3200	3430	107	6	0--35
N-Nitrosodiphenylamine	66.7	66.7	ug/Kg	<MDL	3200	3130	98		20--135	3200	2980	93	5	0--35
Hexachlorobenzene	2.7	5.33	ug/Kg	<MDL	3200	3350	105		20--130	3200	3320	104	1	0--35
Pentachlorophenol	400	400	ug/Kg	<MDL	3200	3350	105		30--151	3200	3240	101	3	0--35
Phenanthrene	27	53.3	ug/Kg	<MDL	3200	3260	102		10--146	3200	3180	99	2	0--35
Anthracene	27	53.3	ug/Kg	<MDL	3200	3740	117		10--150	3200	3630	113	3	0--35
Di-N-Butyl Phthalate	53	107	ug/Kg	12	3200	3650	114		34--146	3200	3650	114	0	0--35
Fluoranthene	27	53.3	ug/Kg	<MDL	3200	3570	112		10--168	3200	3460	108	3	0--35
Pyrene	27	53.3	ug/Kg	<MDL	3200	3340	104		20--150	3200	3350	105	0	0--35
Benzyl Butyl Phthalate	40	40	ug/Kg	40	3200	4510	140		30--150	3200	4370	135	3	0--35
Benzo(a)anthracene	27	53.3	ug/Kg	<MDL	3200	3480	109		40--158	3200	3340	105	4	0--35
Chrysene	27	53.3	ug/Kg	<MDL	3200	3390	106		41--127	3200	3330	104	2	0--35
Bis(2-Ethylhexyl)Phthalate	53	107	ug/Kg	23.8	3200	4760	148		30--160	3200	4240	132	12	0--35
Di-N-Octyl Phthalate	53.3	53.3	ug/Kg	<MDL	3200	4020	126		50--155	3200	3940	123	2	0--35
Benzo(b,j,k)fluoranthene	27	53.3	ug/Kg	6.8	9600	7100	74		31--153	9600	7020	73	1	0--35
Benzo(a)pyrene	27	53.3	ug/Kg	13.8	3200	3300	103		32--143	3200	3270	102	1	0--35
Indeno(1,2,3-Cd)Pyrene	27	53.3	ug/Kg	<MDL	3200	3830	120		35--123	3200	3670	115	4	0--35
Dibenzo(a,h)anthracene	27	53.3	ug/Kg	<MDL	3200	3830	120		37--129	3200	3550	111	7	0--35
Benzo(g,h,i)perylene	27	53.3	ug/Kg	<MDL	3200	3650	114		20--121	3200	3220	101	12	0--35

SRMD:WG118182-7 SRM:WG118182-6 Matrix: SALTWTRSED Listtype:ORBNASMS Method:SW846 3550B*SW846 8270D Project: Pkey:SED
(Std Reference Material Duplicate, Std Reference Material)

Parameter	MDL	RDL	Units	TrueValue	SRM Value	% Rec.	Qual	LabLimit	TrueValue	SRMD Valu	% Rec.	Qual	RPD	Qual	LabLimit
Naphthalene	130	533	ug/Kg	1630	250	16		10--29	1630	240	15		5		0--35
Phenanthrene	270	533	ug/Kg	5200	4460	86		51--106	5200	4270	82		4		0--35
Anthracene	270	533	ug/Kg	1750	719	41		28--98	1750	746	43		4		0--35
Fluoranthene	270	533	ug/Kg	8800	8620	98		45--126	8800	8470	96		2		0--35
Pyrene	270	533	ug/Kg	9570	8380	88		36--135	9570	8010	84		4		0--35
Benzo(a)anthracene	270	533	ug/Kg	4660	4180	90		66--124	4660	4090	88		2		0--35
Chrysene	270	533	ug/Kg	4800	5100	106		77--136	4800	5030	105		1		0--35

Benzo(b,j,k)fluoranthene	270	533	ug/Kg	8150	7200	88		52--190	8150	7230	89	0	0--35
Benzo(a)pyrene	270	533	ug/Kg	4240	3670	86		60--116	4240	3620	85	1	0--35
Indeno(1,2,3-Cd)Pyrene	270	533	ug/Kg	2740	2620	95		33--121	2740	2580	94	2	0--35
Dibenzo(a,h)anthracene	270	533	ug/Kg	419	624	149		10--200	419	624	149	0	0--35
Benzo(g,h,i)perylene	270	533	ug/Kg	2800	2640	94		15--121	2800	2640	94	0	0--35

LD:WG118182-8 L53963-41 Matrix: SALTWTRSED Listtype:ORBNASMS Method:SW846 3550B*SW846 8270D Project:423368-210-1 Pkey:SED
(Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	RPD	Qual	LabLimit
Phenol	27	80	ug/Kg	60	<MDL			0--35
1,4-Dichlorobenzene	8	8	ug/Kg	<MDL	<MDL			0--35
Benzyl Alcohol	13.3	13.3	ug/Kg	15.2	14.6	4		0--35
1,2-Dichlorobenzene	5.33	5.33	ug/Kg	<MDL	<MDL			0--35
2-Methylphenol	5.3	10.7	ug/Kg	<MDL	<MDL			0--35
3-,4-Methylphenol	27	53.3	ug/Kg	<MDL	<MDL			0--35
Benzoic Acid	107	107	ug/Kg	561	246	78	*	0--35
2,4-Dimethylphenol	5.3	10.7	ug/Kg	<MDL	<MDL			0--35
1,2,4-Trichlorobenzene	0.53	1.07	ug/Kg	<MDL	<MDL			0--35
Naphthalene	5.3	10.7	ug/Kg	5.8	<MDL			0--35
Hexachlorobutadiene	2.7	5.33	ug/Kg	<MDL	<MDL			0--35
2-Methylnaphthalene	5.3	10.7	ug/Kg	7.7	8.3			0--35
Dimethyl Phthalate	10.7	10.7	ug/Kg	15.3	<MDL	200	*	0--35
Acenaphthylene	5.3	10.7	ug/Kg	<MDL	<MDL			0--35
Acenaphthene	5.3	10.7	ug/Kg	28.3	28	1		0--35
Dibenzofuran	5.3	10.7	ug/Kg	26.7	25.9	3		0--35
Diethyl Phthalate	11	21.3	ug/Kg	<MDL	<MDL			0--35
Fluorene	5.3	10.7	ug/Kg	35	35.7	2		0--35
N-Nitrosodiphenylamine	13.3	13.3	ug/Kg	<MDL	<MDL			0--35
Hexachlorobenzene	0.53	1.07	ug/Kg	<MDL	<MDL			0--35
Pentachlorophenol	80	80	ug/Kg	<MDL	<MDL			0--35
Phenanthrene	5.3	10.7	ug/Kg	175	233	28		0--35
Anthracene	5.3	10.7	ug/Kg	58.8	71.3	19		0--35
Di-N-Butyl Phthalate	11	21.3	ug/Kg	<MDL	16			0--35
Fluoranthene	5.3	10.7	ug/Kg	417	474	13		0--35
Pyrene	5.3	10.7	ug/Kg	291	343	16		0--35
Benzyl Butyl Phthalate	8	8	ug/Kg	78	54.1	36	*	0--35
Benzo(a)anthracene	5.3	10.7	ug/Kg	127	135	6		0--35
Chrysene	5.3	10.7	ug/Kg	164	192	16		0--35
Bis(2-Ethylhexyl)Phthalate	11	21.3	ug/Kg	278	214	26		0--35
Di-N-Octyl Phthalate	10.7	10.7	ug/Kg	<MDL	<MDL			0--35
Benzo(b,j,k)fluoranthene	5.3	10.7	ug/Kg	230	270	16		0--35

Benzo(a)pyrene	5.3	10.7	ug/Kg	94.7	111	16	0--35
Indeno(1,2,3-Cd)Pyrene	5.3	10.7	ug/Kg	62.3	65.1	4	0--35
Dibenzo(a,h)anthracene	5.3	10.7	ug/Kg	25.1	27.7	10	0--35
Benzo(g,h,i)perylene	5.3	10.7	ug/Kg	67.9	71.7	5	0--35
Total LPAHs	5.3	10.7	ug/Kg	302.9	368	19	0--35
Total HPAHS	5.3	10.7	ug/Kg	1479	1689.5	13	0--35

Surrogate:	2,4,6-Tribromophenol	2-Fluorobiphenyl	2-Fluorophenol	d14-Terphenyl	d4-2-Chlorophenol	d5-Nitrobenzene	d5-Phenol
(Lab Limits)	20--150	22--135	20--120	45--150	13--101	16--103	17--103
L53963-41	103	86	68	116	57	88	58
L53963-42	102	74	57	110	55	64	53
L53963-44	108	74	74	122	65	70	59
L53963-45	107	72	71	119	54	66	52
WG118182-1	59	73	69	129	50	96	41
WG118182-2	93	74	64	133	59	68	61
WG118182-3	95	89	97	122	82	81	87
WG118182-4	110	87	77	123	74	73	84
WG118182-5	105	77	78	119	74	70	82
WG118182-6	101	86	65	110	64	60	76
WG118182-7	103	86	67	111	72	66	85
WG118182-8	95	70	68	108	54	72	57

WG119275 - BNAs

MB:WG119275-1 Matrix: OTHR SOLID Listtype:ORBNASMS Method:SW846 3550B*SW846 8270D Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Phenol	27	80	ug/Kg	<MDL	
1,4-Dichlorobenzene	8	8	ug/Kg	<MDL	
Benzyl Alcohol	13.3	13.3	ug/Kg	<MDL	
1,2-Dichlorobenzene	5.33	5.33	ug/Kg	<MDL	
2-Methylphenol	5.3	10.7	ug/Kg	<MDL	
3-,4-Methylphenol	27	53.3	ug/Kg	<MDL	
Benzoic Acid	107	107	ug/Kg	<MDL	
2,4-Dimethylphenol	5.3	10.7	ug/Kg	<MDL	
1,2,4-Trichlorobenzene	0.53	1.07	ug/Kg	<MDL	
Naphthalene	5.3	10.7	ug/Kg	<MDL	
Hexachlorobutadiene	2.7	5.33	ug/Kg	<MDL	
2-Methylnaphthalene	5.3	10.7	ug/Kg	<MDL	
Dimethyl Phthalate	10.7	10.7	ug/Kg	<MDL	
Acenaphthylene	5.3	10.7	ug/Kg	<MDL	

Acenaphthene	5.3	10.7	ug/Kg	<MDL	
Dibenzofuran	5.3	10.7	ug/Kg	<MDL	
Diethyl Phthalate	11	21.3	ug/Kg	<MDL	
Fluorene	5.3	10.7	ug/Kg	<MDL	
N-Nitrosodiphenylamine	13.3	13.3	ug/Kg	<MDL	
Hexachlorobenzene	0.53	1.07	ug/Kg	<MDL	
Pentachlorophenol	80	80	ug/Kg	<MDL	
Phenanthrene	5.3	10.7	ug/Kg	<MDL	
Anthracene	5.3	10.7	ug/Kg	<MDL	
Di-N-Butyl Phthalate	11	21.3	ug/Kg	15	B
Fluoranthene	5.3	10.7	ug/Kg	<MDL	
Pyrene	5.3	10.7	ug/Kg	<MDL	
Benzyl Butyl Phthalate	8	8	ug/Kg	18.7	B
Benzo(a)anthracene	5.3	10.7	ug/Kg	<MDL	
Chrysene	5.3	10.7	ug/Kg	<MDL	
Bis(2-Ethylhexyl)Phthalate	11	21.3	ug/Kg	20	B
Di-N-Octyl Phthalate	10.7	10.7	ug/Kg	<MDL	
Benzo(b,j,k)fluoranthene	5.3	10.7	ug/Kg	<MDL	
Benzo(a)pyrene	5.3	10.7	ug/Kg	<MDL	
Indeno(1,2,3-Cd)Pyrene	5.3	10.7	ug/Kg	<MDL	
Dibenzo(a,h)anthracene	5.3	10.7	ug/Kg	<MDL	
Benzo(g,h,i)perylene	5.3	10.7	ug/Kg	<MDL	
Total LPAHs	5.3	10.7	ug/Kg	<MDL	
Total HPAHS	5.3	10.7	ug/Kg	<MDL	

SB:WG119275-2 MB:WG119275-1 Matrix: OTHR SOLID Listtype:ORBNASMS Method:SW846 3550B*SW846 8270D Project: Pkey:STD
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	TrueValue	SB Value	% Rec.	Qual	LabLimit
Phenol	27	80	ug/Kg	<MDL	800	731	91		17--92
1,4-Dichlorobenzene	8	8	ug/Kg	<MDL	800	551	69		32--78
Benzyl Alcohol	13.3	13.3	ug/Kg	<MDL	800	602	75		10--90
1,2-Dichlorobenzene	5.33	5.33	ug/Kg	<MDL	800	590	74		21--118
2-Methylphenol	5.3	10.7	ug/Kg	<MDL	800	668	83		10--100
3-,4-Methylphenol	27	53.3	ug/Kg	<MDL	800	644	80		10--125
Benzoic Acid	107	107	ug/Kg	<MDL	800	615	77		10--150
2,4-Dimethylphenol	5.3	10.7	ug/Kg	<MDL	800	352	44		5--80
1,2,4-Trichlorobenzene	0.53	1.07	ug/Kg	<MDL	800	539	67		21--115
Naphthalene	5.3	10.7	ug/Kg	<MDL	800	576	72		29--100
Hexachlorobutadiene	2.7	5.33	ug/Kg	<MDL	800	622	78		17--92
2-Methylnaphthalene	5.3	10.7	ug/Kg	<MDL	800	625	78		25--129
Dimethyl Phthalate	10.7	10.7	ug/Kg	<MDL	800	674	84		41--128

Acenaphthylene	5.3	10.7	ug/Kg	<MDL	800	672	84	48--111
Acenaphthene	5.3	10.7	ug/Kg	<MDL	800	663	83	40--100
Dibenzofuran	5.3	10.7	ug/Kg	<MDL	800	701	88	44--106
Diethyl Phthalate	11	21.3	ug/Kg	<MDL	800	730	91	40--138
Fluorene	5.3	10.7	ug/Kg	<MDL	800	763	95	45--109
N-Nitrosodiphenylamine	13.3	13.3	ug/Kg	<MDL	800	639	80	5--128
Hexachlorobenzene	0.53	1.07	ug/Kg	<MDL	800	761	95	36--112
Pentachlorophenol	80	80	ug/Kg	<MDL	800	635	79	20--121
Phenanthrene	5.3	10.7	ug/Kg	<MDL	800	740	93	58--106
Anthracene	5.3	10.7	ug/Kg	<MDL	800	645	81	55--112
Di-N-Butyl Phthalate	11	21.3	ug/Kg	15	800	744	91	50--150
Fluoranthene	5.3	10.7	ug/Kg	<MDL	800	744	93	50--120
Pyrene	5.3	10.7	ug/Kg	<MDL	800	726	91	50--125
Benzyl Butyl Phthalate	8	8	ug/Kg	18.7	800	833	102	46--147
Benzo(a)anthracene	5.3	10.7	ug/Kg	<MDL	800	791	99	68--130
Chrysene	5.3	10.7	ug/Kg	<MDL	800	767	96	59--110
Bis(2-Ethylhexyl)Phthalate	11	21.3	ug/Kg	20	800	817	100	49--129
Di-N-Octyl Phthalate	10.7	10.7	ug/Kg	<MDL	800	706	88	54--146
Benzo(b,j,k)fluoranthene	5.3	10.7	ug/Kg	<MDL	1600	1610	100	61--126
Benzo(a)pyrene	5.3	10.7	ug/Kg	<MDL	800	691	86	62--113
Indeno(1,2,3-Cd)Pyrene	5.3	10.7	ug/Kg	<MDL	800	790	99	54--127
Dibenzo(a,h)anthracene	5.3	10.7	ug/Kg	<MDL	800	769	96	53--137
Benzo(g,h,i)perylene	5.3	10.7	ug/Kg	<MDL	800	670	84	36--126

SB:WG119275-3 MB:WG119275-1 Matrix: OTHR SOLID Listtype:ORBNASMS Method:SW846 3550B*SW846 8270D Project: Pkey:STD
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	TrueValue	SB Value	% Rec.	Qual	LabLimit
Phenol	27	80	ug/Kg	<MDL	3200	3170	99	*	17--92
1,4-Dichlorobenzene	8	8	ug/Kg	<MDL	3200	2430	76		32--78
Benzyl Alcohol	13.3	13.3	ug/Kg	<MDL	3200	2620	82		10--90
1,2-Dichlorobenzene	5.33	5.33	ug/Kg	<MDL	3200	2590	81		21--118
2-Methylphenol	5.3	10.7	ug/Kg	<MDL	3200	3130	98		10--100
3-,4-Methylphenol	27	53.3	ug/Kg	<MDL	3200	3000	94		10--125
Benzoic Acid	107	107	ug/Kg	<MDL	3200	2180	68		10--150
2,4-Dimethylphenol	5.3	10.7	ug/Kg	<MDL	3200	2660	83	*	5--80
1,2,4-Trichlorobenzene	0.53	1.07	ug/Kg	<MDL	3200	2340	73		21--115
Naphthalene	5.3	10.7	ug/Kg	<MDL	3200	2540	79		29--100
Hexachlorobutadiene	2.7	5.33	ug/Kg	<MDL	3200	2710	85		17--92
2-Methylnaphthalene	5.3	10.7	ug/Kg	<MDL	3200	2770	87		25--129
Dimethyl Phthalate	10.7	10.7	ug/Kg	<MDL	3200	3100	97		41--128
Acenaphthylene	5.3	10.7	ug/Kg	<MDL	3200	3170	99		48--111

Acenaphthene	5.3	10.7	ug/Kg	<MDL	3200	3000	94		40--100
Dibenzofuran	5.3	10.7	ug/Kg	<MDL	3200	3210	100		44--106
Diethyl Phthalate	11	21.3	ug/Kg	<MDL	3200	3270	102		40--138
Fluorene	5.3	10.7	ug/Kg	<MDL	3200	3510	110	*	45--109
N-Nitrosodiphenylamine	13.3	13.3	ug/Kg	<MDL	3200	3340	104		5--128
Hexachlorobenzene	0.53	1.07	ug/Kg	<MDL	3200	3580	112		36--112
Pentachlorophenol	80	80	ug/Kg	<MDL	3200	3670	115		20--121
Phenanthrene	5.3	10.7	ug/Kg	<MDL	3200	3410	107	*	58--106
Anthracene	5.3	10.7	ug/Kg	<MDL	3200	3160	99		55--112
Di-N-Butyl Phthalate	11	21.3	ug/Kg	15	3200	3310	103		50--150
Fluoranthene	5.3	10.7	ug/Kg	<MDL	3200	3330	104		50--120
Pyrene	5.3	10.7	ug/Kg	<MDL	3200	3260	102		50--125
Benzyl Butyl Phthalate	8	8	ug/Kg	18.7	3200	3630	113		46--147
Benzo(a)anthracene	5.3	10.7	ug/Kg	<MDL	3200	3560	111		68--130
Chrysene	5.3	10.7	ug/Kg	<MDL	3200	3460	108		59--110
Bis(2-Ethylhexyl)Phthalate	11	21.3	ug/Kg	20	3200	3600	112		49--129
Di-N-Octyl Phthalate	10.7	10.7	ug/Kg	<MDL	3200	3350	105		54--146
Benzo(b,j,k)fluoranthene	5.3	10.7	ug/Kg	<MDL	6400	7190	112		61--126
Benzo(a)pyrene	5.3	10.7	ug/Kg	<MDL	3200	3340	104		62--113
Indeno(1,2,3-Cd)Pyrene	5.3	10.7	ug/Kg	<MDL	3200	3470	108		54--127
Dibenzo(a,h)anthracene	5.3	10.7	ug/Kg	<MDL	3200	3490	109		53--137
Benzo(g,h,i)perylene	5.3	10.7	ug/Kg	<MDL	3200	2960	92		36--126

MSD:WG119275-5 MS:WG119275-4 L54219-4 Matrix: SALTWTRSED Listtype:ORBNASMS Method:SW846 3550B*SW846 8270D Project:423575-550-4 Pkey:SED
(Matrix Spike Duplicate, Matrix Spike)

Parameter	MDL	RDL	Units	SAMP Value	TrueValue	MS Value	% Rec.	Qual	LabLimit	TrueValue	MSD Value	% Rec.	Qual	RPD	Qual	LabLimit
Phenol	130	400	ug/Kg	<MDL	3200	2500	78		30--105	3200	2470	77		1		0--35
1,4-Dichlorobenzene	40	40	ug/Kg	<MDL	3200	1700	53		19--76	3200	1750	55		3		0--35
Benzyl Alcohol	66.7	66.7	ug/Kg	<MDL	3200	2070	65		10--95	3200	2080	65		1		0--35
1,2-Dichlorobenzene	26.7	26.7	ug/Kg	<MDL	3200	1850	58		25--74	3200	1900	59		3		0--35
2-Methylphenol	27	53.3	ug/Kg	<MDL	3200	2550	80		20--90	3200	2540	79		1		0--35
3-,4-Methylphenol	130	267	ug/Kg	<MDL	3200	2460	77		10--163	3200	2500	78		2		0--35
Benzoic Acid	533	533	ug/Kg	195	3200	837	20		5--130	3200	940	23		12		0--35
2,4-Dimethylphenol	27	53.3	ug/Kg	<MDL	3200	2950	92		5--115	3200	3020	94		2		0--35
1,2,4-Trichlorobenzene	2.7	5.33	ug/Kg	<MDL	3200	1830	57		35--117	3200	1820	57		1		0--35
Naphthalene	27	53.3	ug/Kg	<MDL	3200	2090	65		15--107	3200	2100	66		1		0--35
Hexachlorobutadiene	13	26.7	ug/Kg	<MDL	3200	2090	65		21--78	3200	2110	66		1		0--35
2-Methylnaphthalene	27	53.3	ug/Kg	<MDL	3200	2300	72		10--111	3200	2350	74		2		0--35
Dimethyl Phthalate	53.3	53.3	ug/Kg	<MDL	3200	2630	82		31--127	3200	2740	86		4		0--35
Acenaphthylene	27	53.3	ug/Kg	<MDL	3200	2730	85		41--112	3200	2830	88		4		0--35
Acenaphthene	27	53.3	ug/Kg	<MDL	3200	2570	80		40--95	3200	2660	83		3		0--35

Dibenzofuran	27	53.3	ug/Kg	<MDL	3200	2760	86		14--129	3200	2880	90	4	0--35
Diethyl Phthalate	53	107	ug/Kg	<MDL	3200	2780	87		26--142	3200	2910	91	5	0--35
Fluorene	27	53.3	ug/Kg	<MDL	3200	3020	94		18--131	3200	3160	99	5	0--35
N-Nitrosodiphenylamine	66.7	66.7	ug/Kg	<MDL	3200	2820	88		20--135	3200	2990	93	6	0--35
Hexachlorobenzene	2.7	5.33	ug/Kg	<MDL	3200	2940	92		20--130	3200	3130	98	6	0--35
Pentachlorophenol	400	400	ug/Kg	<MDL	3200	2730	85		30--151	3200	2920	91	6	0--35
Phenanthrene	27	53.3	ug/Kg	11	3200	2830	88		10--146	3200	2980	93	5	0--35
Anthracene	27	53.3	ug/Kg	7.5	3200	2690	84		10--150	3200	2820	88	5	0--35
Di-N-Butyl Phthalate	53	107	ug/Kg	15	3200	2770	86		34--146	3200	2950	92	6	0--35
Fluoranthene	27	53.3	ug/Kg	20.5	3200	2810	87		10--168	3200	2970	92	6	0--35
Pyrene	27	53.3	ug/Kg	19.1	3200	2740	85		20--150	3200	2880	89	5	0--35
Benzyl Butyl Phthalate	40	40	ug/Kg	<MDL	3200	3110	97		30--150	3200	3280	102	5	0--35
Benzo(a)anthracene	27	53.3	ug/Kg	10	3200	3020	94		40--158	3200	3160	99	5	0--35
Chrysene	27	53.3	ug/Kg	11	3200	2870	89		41--127	3200	3040	95	6	0--35
Bis(2-Ethylhexyl)Phthalate	53	107	ug/Kg	25.9	3200	3090	96		30--160	3200	3270	101	5	0--35
Di-N-Octyl Phthalate	53.3	53.3	ug/Kg	<MDL	3200	3060	96		50--155	3200	3160	99	3	0--35
Benzo(b,j,k)fluoranthene	27	53.3	ug/Kg	26.6	6400	5940	92		31--153	6400	6170	96	4	0--35
Benzo(a)pyrene	27	53.3	ug/Kg	17.9	3200	2850	89		32--143	3200	2960	92	4	0--35
Indeno(1,2,3-Cd)Pyrene	27	53.3	ug/Kg	5.4	3200	2910	91		35--123	3200	3050	95	5	0--35
Dibenzo(a,h)anthracene	27	53.3	ug/Kg	<MDL	3200	2850	89		37--129	3200	3010	94	6	0--35
Benzo(g,h,i)perylene	27	53.3	ug/Kg	9.7	3200	2550	79		20--121	3200	2640	82	3	0--35

SRMD:WG119275-7 SRM:WG119275-6 Matrix: SALTWTRSED Listtype:ORBNASMS Method:SW846 3550B*SW846 8270D Project: Pkey:SED
(Std Reference Material Duplicate, Std Reference Material)

Parameter	MDL	RDL	Units	TrueValue	SRM Value	% Rec.	Qual	LabLimit	TrueValue	SRMD Valu	% Rec.	Qual	RPD	Qual	LabLimit
Naphthalene	13	53.3	ug/Kg	163	24	15		10--29	163	28	17		15		0--35
Phenanthrene	27	53.3	ug/Kg	520	498	96		51--106	520	517	99		4		0--35
Anthracene	27	53.3	ug/Kg	175	82.1	47		28--98	175	90.3	52		10		0--35
Fluoranthene	27	53.3	ug/Kg	880	897	102		45--126	880	936	106		4		0--35
Pyrene	27	53.3	ug/Kg	957	886	93		36--135	957	912	95		3		0--35
Benzo(a)anthracene	27	53.3	ug/Kg	466	450	97		66--124	466	471	101		5		0--35
Chrysene	27	53.3	ug/Kg	480	586	122		77--136	480	621	129		6		0--35
Benzo(b,j,k)fluoranthene	27	53.3	ug/Kg	815	807	99		52--190	815	869	107		7		0--35
Benzo(a)pyrene	27	53.3	ug/Kg	424	383	90		60--116	424	408	96		6		0--35
Indeno(1,2,3-Cd)Pyrene	27	53.3	ug/Kg	274	248	90		33--121	274	263	96		6		0--35
Dibenzo(a,h)anthracene	27	53.3	ug/Kg	41.9	75	179		10--200	41.9	76.6	183		2		0--35
Benzo(g,h,i)perylene	27	53.3	ug/Kg	280	276	98		15--121	280	284	101		3		0--35

LIMSView QC Report for 2011 CSO Sediment Monitoring Project

Surrogate:	2,4,6-Tribromophenol	2-Fluorobiphenyl	2-Fluorophenol	d14-Terphenyl	d4-2-Chlorophenol	d5-Nitrobenzene	d5-Phenol
(Lab Limits)	20--150	22--135	20--120	45--150	13--101	16--103	17--103
L53963-43	66	51	44	79	41	46	53
L54219-1	76	53	43	87	36	44	45
L54219-2	79	55	35	89	31	46	39
L54219-3	74	46	33	83	24	34	28
L54219-4	69	44	30	73	24	28	30
L54219-5	77	43	27	84	20	29	26
L54219-6	71	47	43	84	41	45	57
L54219-7	69	45	40	80	38	45	47
L54219-8	80	51	43	91	39	42	55
L54219-9	73	40	36	87	31	35	44
L54219-10	80	43	42	86	37	37	49
L54219-11	75	38	42	91	36	33	49
L54227-1	81	65	61	113	58	52	67
L54227-2	84	60	55	107	55	57	67
WG119275-1	81	90	91	147	84	104 *	103
WG119275-2	103	100	103	141	94	106 *	113 *
WG119275-3	116	105	102	140	95	101	113 *
WG119275-4	102	87	78	120	73	79	91
WG119275-5	105	90	79	127	73	79	90
WG119275-6	110	90	63	130	63	73	84
WG119275-7	113	98	82	135	78	92	94

WG119542 - BNAs

MB:WG119542-1 Matrix: OTHR SOLID Listtype:ORBNASMS Method:SW846 3550B*SW846 8270D Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Phenol	27	80	ug/Kg	<MDL	
1,4-Dichlorobenzene	8	8	ug/Kg	<MDL	
Benzyl Alcohol	13.3	13.3	ug/Kg	<MDL	
1,2-Dichlorobenzene	5.33	5.33	ug/Kg	<MDL	
2-Methylphenol	5.3	10.7	ug/Kg	<MDL	
3-,4-Methylphenol	27	53.3	ug/Kg	<MDL	
Benzoic Acid	107	107	ug/Kg	<MDL	
2,4-Dimethylphenol	5.3	10.7	ug/Kg	<MDL	
1,2,4-Trichlorobenzene	0.53	1.07	ug/Kg	<MDL	
Naphthalene	5.3	10.7	ug/Kg	<MDL	
Hexachlorobutadiene	2.7	5.33	ug/Kg	<MDL	
2-Methylnaphthalene	5.3	10.7	ug/Kg	<MDL	

Dimethyl Phthalate	10.7	10.7	ug/Kg	<MDL	
Acenaphthylene	5.3	10.7	ug/Kg	<MDL	
Acenaphthene	5.3	10.7	ug/Kg	<MDL	
Dibenzofuran	5.3	10.7	ug/Kg	<MDL	
Diethyl Phthalate	11	21.3	ug/Kg	<MDL	
Fluorene	5.3	10.7	ug/Kg	<MDL	
N-Nitrosodiphenylamine	13.3	13.3	ug/Kg	<MDL	
Hexachlorobenzene	0.53	1.07	ug/Kg	<MDL	
Pentachlorophenol	80	80	ug/Kg	<MDL	
Phenanthrene	5.3	10.7	ug/Kg	<MDL	
Anthracene	5.3	10.7	ug/Kg	<MDL	
Di-N-Butyl Phthalate	11	21.3	ug/Kg	14	B
Fluoranthene	5.3	10.7	ug/Kg	<MDL	
Pyrene	5.3	10.7	ug/Kg	<MDL	
Benzyl Butyl Phthalate	8	8	ug/Kg	18.4	B
Benzo(a)anthracene	5.3	10.7	ug/Kg	<MDL	
Chrysene	5.3	10.7	ug/Kg	<MDL	
Bis(2-Ethylhexyl)Phthalate	11	21.3	ug/Kg	19	B
Di-N-Octyl Phthalate	10.7	10.7	ug/Kg	<MDL	
Benzo(b,j,k)fluoranthene	5.3	10.7	ug/Kg	<MDL	
Benzo(a)pyrene	5.3	10.7	ug/Kg	<MDL	
Indeno(1,2,3-Cd)Pyrene	5.3	10.7	ug/Kg	<MDL	
Dibenzo(a,h)anthracene	5.3	10.7	ug/Kg	<MDL	
Benzo(g,h,i)perylene	5.3	10.7	ug/Kg	<MDL	
Total LPAHs	5.3	10.7	ug/Kg	<MDL	
Total HPAHS	5.3	10.7	ug/Kg	<MDL	

SB:WG119542-2 MB:WG119542-1 Matrix: OTHR SOLID Listtype:ORBNASMS Method:SW846 3550B*SW846 8270D Project: Pkey:STD
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	TrueValue	SB Value	% Rec.	Qual	LabLimit
Phenol	27	80	ug/Kg	<MDL	800	836	104	*	17--92
1,4-Dichlorobenzene	8	8	ug/Kg	<MDL	800	668	84	*	32--78
Benzyl Alcohol	13.3	13.3	ug/Kg	<MDL	800	631	79		10--90
1,2-Dichlorobenzene	5.33	5.33	ug/Kg	<MDL	800	711	89		21--118
2-Methylphenol	5.3	10.7	ug/Kg	<MDL	800	740	93		10--100
3-,4-Methylphenol	27	53.3	ug/Kg	<MDL	800	744	93		10--125
Benzoic Acid	107	107	ug/Kg	<MDL	800	449	56		10--150
2,4-Dimethylphenol	5.3	10.7	ug/Kg	<MDL	800	253	32		5--80
1,2,4-Trichlorobenzene	0.53	1.07	ug/Kg	<MDL	800	501	63		21--115
Naphthalene	5.3	10.7	ug/Kg	<MDL	800	586	73		29--100
Hexachlorobutadiene	2.7	5.33	ug/Kg	<MDL	800	595	74		17--92

2-Methylnaphthalene	5.3	10.7	ug/Kg	<MDL	800	618	77		25--129
Dimethyl Phthalate	10.7	10.7	ug/Kg	<MDL	800	839	105		41--128
Acenaphthylene	5.3	10.7	ug/Kg	<MDL	800	832	104		48--111
Acenaphthene	5.3	10.7	ug/Kg	<MDL	800	822	103	*	40--100
Dibenzofuran	5.3	10.7	ug/Kg	<MDL	800	869	109	*	44--106
Diethyl Phthalate	11	21.3	ug/Kg	<MDL	800	925	116		40--138
Fluorene	5.3	10.7	ug/Kg	<MDL	800	972	121	*	45--109
N-Nitrosodiphenylamine	13.3	13.3	ug/Kg	<MDL	800	865	108		5--128
Hexachlorobenzene	0.53	1.07	ug/Kg	<MDL	800	992	124	*	36--112
Pentachlorophenol	80	80	ug/Kg	<MDL	800	859	107		20--121
Phenanthrene	5.3	10.7	ug/Kg	<MDL	800	956	119	*	58--106
Anthracene	5.3	10.7	ug/Kg	<MDL	800	829	104		55--112
Di-N-Butyl Phthalate	11	21.3	ug/Kg	14	800	965	119		50--150
Fluoranthene	5.3	10.7	ug/Kg	<MDL	800	943	118		50--120
Pyrene	5.3	10.7	ug/Kg	<MDL	800	950	119		50--125
Benzyl Butyl Phthalate	8	8	ug/Kg	18.4	800	1110	137		46--147
Benzo(a)anthracene	5.3	10.7	ug/Kg	<MDL	800	1010	126		68--130
Chrysene	5.3	10.7	ug/Kg	<MDL	800	998	125	*	59--110
Bis(2-Ethylhexyl)Phthalate	11	21.3	ug/Kg	19	800	1090	134	*	49--129
Di-N-Octyl Phthalate	10.7	10.7	ug/Kg	<MDL	800	720	90		54--146
Benzo(b,j,k)fluoranthene	5.3	10.7	ug/Kg	<MDL	1600	2130	133	*	61--126
Benzo(a)pyrene	5.3	10.7	ug/Kg	<MDL	800	907	113		62--113
Indeno(1,2,3-Cd)Pyrene	5.3	10.7	ug/Kg	<MDL	800	1040	130	*	54--127
Dibenzo(a,h)anthracene	5.3	10.7	ug/Kg	<MDL	800	1010	126		53--137
Benzo(g,h,i)perylene	5.3	10.7	ug/Kg	<MDL	800	893	112		36--126

SB:WG119542-3 MB:WG119542-1 Matrix: OTHR SOLID Listtype:ORBNASMS Method:SW846 3550B*SW846 8270D Project: Pkey:STD
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	TrueValue	SB Value	% Rec.	Qual	LabLimit
Phenol	27	80	ug/Kg	<MDL	3200	3290	103	*	17--92
1,4-Dichlorobenzene	8	8	ug/Kg	<MDL	3200	2590	81	*	32--78
Benzyl Alcohol	13.3	13.3	ug/Kg	<MDL	3200	2510	79		10--90
1,2-Dichlorobenzene	5.33	5.33	ug/Kg	<MDL	3200	2750	86		21--118
2-Methylphenol	5.3	10.7	ug/Kg	<MDL	3200	3140	98		10--100
3-,4-Methylphenol	27	53.3	ug/Kg	<MDL	3200	3100	97		10--125
Benzoic Acid	107	107	ug/Kg	<MDL	3200	1720	54		10--150
2,4-Dimethylphenol	5.3	10.7	ug/Kg	<MDL	3200	2430	76		5--80
1,2,4-Trichlorobenzene	0.53	1.07	ug/Kg	<MDL	3200	2080	65		21--115
Naphthalene	5.3	10.7	ug/Kg	<MDL	3200	2450	77		29--100
Hexachlorobutadiene	2.7	5.33	ug/Kg	<MDL	3200	2450	77		17--92
2-Methylnaphthalene	5.3	10.7	ug/Kg	<MDL	3200	2560	80		25--129

Dimethyl Phthalate	10.7	10.7	ug/Kg	<MDL	3200	3380	105		41--128
Acenaphthylene	5.3	10.7	ug/Kg	<MDL	3200	3550	111		48--111
Acenaphthene	5.3	10.7	ug/Kg	<MDL	3200	3360	105	*	40--100
Dibenzofuran	5.3	10.7	ug/Kg	<MDL	3200	3520	110	*	44--106
Diethyl Phthalate	11	21.3	ug/Kg	<MDL	3200	3650	114		40--138
Fluorene	5.3	10.7	ug/Kg	<MDL	3200	4000	125	*	45--109
N-Nitrosodiphenylamine	13.3	13.3	ug/Kg	<MDL	3200	3870	121		5--128
Hexachlorobenzene	0.53	1.07	ug/Kg	<MDL	3200	3970	124	*	36--112
Pentachlorophenol	80	80	ug/Kg	<MDL	3200	3540	111		20--121
Phenanthrene	5.3	10.7	ug/Kg	<MDL	3200	3890	122	*	58--106
Anthracene	5.3	10.7	ug/Kg	<MDL	3200	3580	112		55--112
Di-N-Butyl Phthalate	11	21.3	ug/Kg	14	3200	3800	118		50--150
Fluoranthene	5.3	10.7	ug/Kg	<MDL	3200	3690	115		50--120
Pyrene	5.3	10.7	ug/Kg	<MDL	3200	3740	117		50--125
Benzyl Butyl Phthalate	8	8	ug/Kg	18.4	3200	4250	132		46--147
Benzo(a)anthracene	5.3	10.7	ug/Kg	<MDL	3200	3990	125		68--130
Chrysene	5.3	10.7	ug/Kg	<MDL	3200	3960	124	*	59--110
Bis(2-Ethylhexyl)Phthalate	11	21.3	ug/Kg	19	3200	4220	131	*	49--129
Di-N-Octyl Phthalate	10.7	10.7	ug/Kg	<MDL	3200	3540	111		54--146
Benzo(b,j,k)fluoranthene	5.3	10.7	ug/Kg	<MDL	9600	8330	87		61--126
Benzo(a)pyrene	5.3	10.7	ug/Kg	<MDL	3200	3770	118	*	62--113
Indeno(1,2,3-Cd)Pyrene	5.3	10.7	ug/Kg	<MDL	3200	4010	125		54--127
Dibenzo(a,h)anthracene	5.3	10.7	ug/Kg	<MDL	3200	4120	129		53--137
Benzo(g,h,i)perylene	5.3	10.7	ug/Kg	<MDL	3200	3430	107		36--126

MSD:WG119542-5 MS:WG119542-4 L54227-20 Matrix: FRSHWTRSED Listtype:ORBNASMS Method:SW846 3550B*SW846 8270D Project:423368-210-1 Pkey:SED
(Matrix Spike Duplicate, Matrix Spike)

Parameter	MDL	RDL	Units	SAMP Value	TrueValue	MS Value	% Rec.	Qual	LabLimit	TrueValue	MSD Value	% Rec.	Qual	RPD	Qual	LabLimit
Phenol	130	400	ug/Kg	<MDL	3200	2110	66		30--105	3200	1760	55		18		0--35
1,4-Dichlorobenzene	40	40	ug/Kg	<MDL	3200	1380	43		19--76	3200	1370	43		1		0--35
Benzyl Alcohol	66.7	66.7	ug/Kg	<MDL	3200	1530	48		10--95	3200	1190	37		24		0--35
1,2-Dichlorobenzene	26.7	26.7	ug/Kg	<MDL	3200	1490	46		25--74	3200	1460	46		2		0--35
2-Methylphenol	27	53.3	ug/Kg	<MDL	3200	2060	64		20--90	3200	1710	53		18		0--35
3-,4-Methylphenol	130	267	ug/Kg	<MDL	3200	2120	66		10--163	3200	1720	54		21		0--35
Benzoic Acid	533	533	ug/Kg	189	3200	2190	62		5--130	3200	1710	48		24		0--35
2,4-Dimethylphenol	27	53.3	ug/Kg	<MDL	3200	2600	81		5--115	3200	2040	64		24		0--35
1,2,4-Trichlorobenzene	2.7	5.33	ug/Kg	<MDL	3200	1330	42		35--117	3200	1300	41		2		0--35
Naphthalene	27	53.3	ug/Kg	<MDL	3200	1650	52		15--107	3200	1570	49		5		0--35
Hexachlorobutadiene	13	26.7	ug/Kg	<MDL	3200	1560	49		21--78	3200	1570	49		1		0--35
2-Methylnaphthalene	27	53.3	ug/Kg	<MDL	3200	2100	66		10--111	3200	1730	54		20		0--35
Dimethyl Phthalate	53.3	53.3	ug/Kg	<MDL	3200	3130	98		31--127	3200	2180	68		36	*	0--35

Acenaphthylene	27	53.3	ug/Kg	<MDL	3200	3180	99	41--112	3200	2250	70	34		0--35
Acenaphthene	27	53.3	ug/Kg	<MDL	3200	3030	95	40--95	3200	2130	67	35		0--35
Dibenzofuran	27	53.3	ug/Kg	<MDL	3200	3250	102	14--129	3200	2290	71	35		0--35
Diethyl Phthalate	53	107	ug/Kg	<MDL	3200	3450	108	26--142	3200	2380	74	37	*	0--35
Fluorene	27	53.3	ug/Kg	<MDL	3200	3760	118	18--131	3200	2610	81	36	*	0--35
N-Nitrosodiphenylamine	66.7	66.7	ug/Kg	<MDL	3200	3640	114	20--135	3200	2500	78	37	*	0--35
Hexachlorobenzene	2.7	5.33	ug/Kg	<MDL	3200	3700	116	20--130	3200	2530	79	38	*	0--35
Pentachlorophenol	400	400	ug/Kg	<MDL	3200	3260	102	30--151	3200	2160	68	41	*	0--35
Phenanthrene	27	53.3	ug/Kg	<MDL	3200	3650	114	10--146	3200	2500	78	37	*	0--35
Anthracene	27	53.3	ug/Kg	<MDL	3200	3350	105	10--150	3200	2290	72	37	*	0--35
Di-N-Butyl Phthalate	53	107	ug/Kg	15	3200	3590	112	34--146	3200	2460	76	38	*	0--35
Fluoranthene	27	53.3	ug/Kg	8.6	3200	3480	109	10--168	3200	2370	74	38	*	0--35
Pyrene	27	53.3	ug/Kg	7.2	3200	3500	109	20--150	3200	2440	76	36	*	0--35
Benzyl Butyl Phthalate	40	40	ug/Kg	<MDL	3200	4040	126	30--150	3200	2860	89	34		0--35
Benzo(a)anthracene	27	53.3	ug/Kg	7.2	3200	3760	117	40--158	3200	2600	81	36	*	0--35
Chrysene	27	53.3	ug/Kg	<MDL	3200	3650	114	41--127	3200	2540	79	36	*	0--35
Bis(2-Ethylhexyl)Phthalate	53	107	ug/Kg	24.2	3200	4030	125	30--160	3200	2820	87	35		0--35
Di-N-Octyl Phthalate	53.3	53.3	ug/Kg	<MDL	3200	3470	108	50--155	3200	2900	91	18		0--35
Benzo(b,j,k)fluoranthene	27	53.3	ug/Kg	17.1	6400	7480	117	31--153	6400	5160	80	37	*	0--35
Benzo(a)pyrene	27	53.3	ug/Kg	11.3	3200	3470	108	32--143	3200	2460	77	34		0--35
Indeno(1,2,3-Cd)Pyrene	27	53.3	ug/Kg	<MDL	3200	3640	114	35--123	3200	2550	80	35		0--35
Dibenzo(a,h)anthracene	27	53.3	ug/Kg	<MDL	3200	3500	109	37--129	3200	2500	78	33		0--35
Benzo(g,h,i)perylene	27	53.3	ug/Kg	6.2	3200	3290	103	20--121	3200	2280	71	37	*	0--35

SRMD:WG119542-7 SRM:WG119542-6 Matrix: FRSHWTRSED Listtype:ORBNASMS Method:SW846 3550B*SW846 8270D Project: Pkey:SED
(Std Reference Material Duplicate, Std Reference Material)

Parameter	MDL	RDL	Units	TrueValue	SRM Value	% Rec.	Qual	LabLimit	TrueValue	SRMD Valu	% Rec.	Qual	RPD	Qual	LabLimit
Naphthalene	270	533	ug/Kg	1630	300	18		10--29	1630	310	19		3		0--35
Phenanthrene	270	533	ug/Kg	5200	5150	99		51--106	5200	5390	104		5		0--35
Anthracene	270	533	ug/Kg	1750	957	55		28--98	1750	992	57		4		0--35
Fluoranthene	270	533	ug/Kg	8800	9370	106		45--126	8800	9620	109		3		0--35
Pyrene	270	533	ug/Kg	9570	9390	98		36--135	9570	9660	101		3		0--35
Benzo(a)anthracene	270	533	ug/Kg	4660	4680	100		66--124	4660	4840	104		3		0--35
Chrysene	270	533	ug/Kg	4800	6180	129		77--136	4800	6290	131		2		0--35
Benzo(b,j,k)fluoranthene	270	533	ug/Kg	8150	8310	102		52--190	8150	8450	104		2		0--35
Benzo(a)pyrene	270	533	ug/Kg	4240	3970	94		60--116	4240	4020	95		1		0--35
Indeno(1,2,3-Cd)Pyrene	270	533	ug/Kg	2740	2500	91		33--121	2740	2670	97		7		0--35
Dibenzo(a,h)anthracene	270	533	ug/Kg	419	787	188		10--200	419	819	196		4		0--35
Benzo(g,h,i)perylene	270	533	ug/Kg	2800	2910	104		15--121	2800	2970	106		2		0--35

LIMSView QC Report for 2011 CSO Sediment Monitoring Project

LD:WG119542-8 L54227-3 Matrix: FRSHWTRSED Listtype:ORBNASMS Method:SW846 3550B*SW846 8270D Project:423368-210-1 Pkey:SED
(Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	RPD	Qual	LabLimit
Phenol	130	400	ug/Kg	<MDL	<MDL			0--35
1,4-Dichlorobenzene	40	40	ug/Kg	<MDL	<MDL			0--35
Benzyl Alcohol	66.7	66.7	ug/Kg	<MDL	<MDL			0--35
1,2-Dichlorobenzene	26.7	26.7	ug/Kg	<MDL	<MDL			0--35
2-Methylphenol	27	53.3	ug/Kg	<MDL	<MDL			0--35
3-,4-Methylphenol	130	267	ug/Kg	<MDL	<MDL			0--35
Benzoic Acid	533	533	ug/Kg	<MDL	<MDL			0--35
2,4-Dimethylphenol	27	53.3	ug/Kg	<MDL	<MDL			0--35
1,2,4-Trichlorobenzene	2.7	5.33	ug/Kg	<MDL	<MDL			0--35
Naphthalene	27	53.3	ug/Kg	156	41	117	*	0--35
Hexachlorobutadiene	13	26.7	ug/Kg	<MDL	<MDL			0--35
2-Methylnaphthalene	27	53.3	ug/Kg	75.1	<MDL	200	*	0--35
Dimethyl Phthalate	53.3	53.3	ug/Kg	<MDL	<MDL			0--35
Acenaphthylene	27	53.3	ug/Kg	250	150	50	*	0--35
Acenaphthene	27	53.3	ug/Kg	951	400	82	*	0--35
Dibenzofuran	27	53.3	ug/Kg	131	<MDL	200	*	0--35
Diethyl Phthalate	53	107	ug/Kg	<MDL	<MDL			0--35
Fluorene	27	53.3	ug/Kg	679	226	100	*	0--35
N-Nitrosodiphenylamine	66.7	66.7	ug/Kg	<MDL	<MDL			0--35
Hexachlorobenzene	2.7	5.33	ug/Kg	<MDL	<MDL			0--35
Pentachlorophenol	400	400	ug/Kg	<MDL	<MDL			0--35
Phenanthrene	270	533	ug/Kg	5030	1710	99	*	0--35
Anthracene	27	53.3	ug/Kg	1510	596	87	*	0--35
Di-N-Butyl Phthalate	53	107	ug/Kg	<MDL	<MDL			0--35
Fluoranthene	270	533	ug/Kg	6400	3070	70	*	0--35
Pyrene	270	533	ug/Kg	7530	3160	82	*	0--35
Benzyl Butyl Phthalate	40	40	ug/Kg	163	106	42	*	0--35
Benzo(a)anthracene	27	53.3	ug/Kg	2500	1360	59	*	0--35
Chrysene	27	53.3	ug/Kg	3270	1830	56	*	0--35
Bis(2-Ethylhexyl)Phthalate	53	107	ug/Kg	1110	441	87	*	0--35
Di-N-Octyl Phthalate	53.3	53.3	ug/Kg	<MDL	<MDL			0--35
Benzo(b,j,k)fluoranthene	27	53.3	ug/Kg	4570	2700	51	*	0--35
Benzo(a)pyrene	27	53.3	ug/Kg	3680	2130	53	*	0--35
Indeno(1,2,3-Cd)Pyrene	27	53.3	ug/Kg	1700	1010	50	*	0--35
Dibenzo(a,h)anthracene	27	53.3	ug/Kg	497	295	51	*	0--35
Benzo(g,h,i)perylene	27	53.3	ug/Kg	2120	1250	52	*	0--35
Total LPAHs	27	53.3	ug/Kg	8576	3123	93	*	0--35
Total HPAHS	27	53.3	ug/Kg	32267	16805	63	*	0--35

LIMSView QC Report for 2011 CSO Sediment Monitoring Project

LD:WG119542-9 L54227-10 Matrix: FRSHWTRSED Listtype:ORBNASMS Method:SW846 3550B*SW846 8270D Project:423368-210-1 Pkey:SED
(Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	RPD	Qual	LabLimit
Phenol	57	171	ug/Kg	<MDL	<MDL			0--35
1,4-Dichlorobenzene	17.1	17.1	ug/Kg	<MDL	<MDL			0--35
Benzyl Alcohol	28.6	28.6	ug/Kg	<MDL	<MDL			0--35
1,2-Dichlorobenzene	11.4	11.4	ug/Kg	<MDL	<MDL			0--35
2-Methylphenol	11	22.9	ug/Kg	<MDL	<MDL			0--35
3-,4-Methylphenol	57	114	ug/Kg	<MDL	<MDL			0--35
Benzoic Acid	229	229	ug/Kg	<MDL	<MDL			0--35
2,4-Dimethylphenol	11	22.9	ug/Kg	<MDL	<MDL			0--35
1,2,4-Trichlorobenzene	1.1	2.29	ug/Kg	<MDL	<MDL			0--35
Naphthalene	11	22.9	ug/Kg	<MDL	<MDL			0--35
Hexachlorobutadiene	5.7	11.4	ug/Kg	<MDL	<MDL			0--35
2-Methylnaphthalene	11	22.9	ug/Kg	<MDL	<MDL			0--35
Dimethyl Phthalate	22.9	22.9	ug/Kg	<MDL	<MDL			0--35
Acenaphthylene	11	22.9	ug/Kg	<MDL	<MDL			0--35
Acenaphthene	11	22.9	ug/Kg	<MDL	<MDL			0--35
Dibenzofuran	11	22.9	ug/Kg	<MDL	<MDL			0--35
Diethyl Phthalate	23	45.7	ug/Kg	<MDL	<MDL			0--35
Fluorene	11	22.9	ug/Kg	<MDL	<MDL			0--35
N-Nitrosodiphenylamine	28.6	28.6	ug/Kg	<MDL	<MDL			0--35
Hexachlorobenzene	1.1	2.29	ug/Kg	<MDL	<MDL			0--35
Pentachlorophenol	171	171	ug/Kg	<MDL	<MDL			0--35
Phenanthrene	11	22.9	ug/Kg	79.3	84.6	6		0--35
Anthracene	11	22.9	ug/Kg	34.4	33.3	3		0--35
Di-N-Butyl Phthalate	23	45.7	ug/Kg	40	42			0--35
Fluoranthene	11	22.9	ug/Kg	228	229	1		0--35
Pyrene	11	22.9	ug/Kg	180	181	0		0--35
Benzyl Butyl Phthalate	17.1	17.1	ug/Kg	150	193	25		0--35
Benzo(a)anthracene	11	22.9	ug/Kg	95.4	97.5	2		0--35
Chrysene	11	22.9	ug/Kg	145	148	2		0--35
Bis(2-Ethylhexyl)Phthalate	23	45.7	ug/Kg	631	651	3		0--35
Di-N-Octyl Phthalate	22.9	22.9	ug/Kg	<MDL	<MDL			0--35
Benzo(b,j,k)fluoranthene	11	22.9	ug/Kg	244	244	0		0--35
Benzo(a)pyrene	11	22.9	ug/Kg	119	116	3		0--35
Indeno(1,2,3-Cd)Pyrene	11	22.9	ug/Kg	60.6	62.6	3		0--35
Dibenzo(a,h)anthracene	11	22.9	ug/Kg	31.9	30.4	5		0--35
Benzo(g,h,i)perylene	11	22.9	ug/Kg	78.3	74.3	5		0--35
Total LPAHs	11	22.9	ug/Kg	113.7	117.9	4		0--35
Total HPAHS	11	22.9	ug/Kg	1182.2	1182.8	0		0--35

Surrogate:	2,4,6-Tribromophenol	2-Fluorobiphenyl	2-Fluorophenol	d14-Terphenyl	d4-2-Chlorophenol	d5-Nitrobenzene	d5-Phenol
(Lab Limits)	20--150	22--135	20--120	45--150	13--101	16--103	17--103
L54227-3	156 *	113	67	143	43	44	52
L54227-4	110	102	89	156 *	89	99	118 *
L54227-5	114	102	87	156 *	77	77	115 *
L54227-6	112	93	78	161 *	72	76	113 *
L54227-7	110	91	85	143	74	86	95
L54227-9	101	76	62	125	64	56	96
L54227-10	133	98	76	122	48	28	36
L54227-11	130	85	49	128	54	53	70
L54227-12	96	85	86	128	72	80	82
L54227-13	132	84	56	127	57	59	63
L54227-14	133	80	60	126	56	54	53
L54227-15	89	80	84	131	76	92	93
L54227-16	105	83	84	140	77	94	100
L54227-17	138	106	62	136	65	88	57
L54227-18	102	86	95	134	84	104 *	103
L54227-19	98	82	90	130	79	98	97
L54227-20	94	85	93	131	80	102	98
L54227-21	110	76	79	146	70	80	84
L54227-22	149	115	46	140	96	64	116 *
L55155-1	131	102	68	131	66	64	70
WG119542-1	46	83	80	148	70	98	89
WG119542-2	93	100	104	141	90	88	110 *
WG119542-3	101	103	104	132	93	92	106 *
WG119542-4	95	83	55	124	52	55	68
WG119542-5	67	62	53	87	48	51	56
WG119542-6	103	95	85	139	78	96	92
WG119542-7	106	101	92	140	80	99	89
WG119542-8	136	91	48	125	32	42	46
WG119542-9	127	97	78	126	56	53	46

WG117693 - PCBs

MB:WG117693-1 Matrix: OTHR SOLID Listtype:ORPCBLL Method:SW846 3550B*SW846 8082A Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Aroclor 1016	2	4	ug/Kg	<MDL	
Aroclor 1221	4	8	ug/Kg	<MDL	
Aroclor 1232	4	8	ug/Kg	<MDL	
Aroclor 1242	2	4	ug/Kg	<MDL	

Aroclor 1248	2	4	ug/Kg	<MDL
Aroclor 1254	1.2	2.4	ug/Kg	<MDL
Aroclor 1260	1.2	2.4	ug/Kg	<MDL
Total Aroclors	4	8	ug/Kg	<MDL

SB:WG117693-2 MB:WG117693-1 Matrix: OTHR SOLID Listtype:ORPCBLL Method:SW846 3550B*SW846 8082A Project: Pkey:STD
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	TrueValue	SB Value	% Rec.	Qual	LabLimit
Aroclor 1242	2	4	ug/Kg	<MDL	80	34.2	43		36--117
Aroclor 1260	1.2	2.4	ug/Kg	<MDL	80	53.2	67		40--131

MSD:WG117693-4 MS:WG117693-3 L53963-2 Matrix: SALTWTRSED Listtype:ORPCBLL Method:SW846 3550B*SW846 8082A Project:423368-210-1 Pkey:SED
(Matrix Spike Duplicate, Matrix Spike)

Parameter	MDL	RDL	Units	SAMP Value	TrueValue	MS Value	% Rec.	Qual	LabLimit	TrueValue	MSD Value	% Rec.	Qual	RPD	Qual	LabLimit
Aroclor 1242	2	4	ug/Kg	<MDL	80	71.5	89		45--139	80	72.3	90		1		0--35
Aroclor 1260	2	4	ug/Kg	<MDL	80	66.2	83		20--132	80	64.9	81		2		0--35

SRMD:WG117693-6 SRM:WG117693-5 Matrix: SALTWTRSED Listtype:ORPCBLL Method:SW846 3550B*SW846 8082A Project: Pkey:SED
(Std Reference Material Duplicate, Std Reference Material)

Parameter	MDL	RDL	Units	TrueValue	SRM Value	% Rec.	Qual	LabLimit	TrueValue	SRMD Valu	% Rec.	Qual	RPD	Qual	LabLimit
Aroclor 1254	11	21.3	ug/Kg	112	109	98		57--139	112	131	117		18		0--35

LD:WG117693-7 L53963-38 Matrix: SALTWTRSED Listtype:ORPCBLL Method:SW846 3550B*SW846 8082A Project:423368-210-1 Pkey:SED
(Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	RPD	Qual	LabLimit
Aroclor 1016	2	4	ug/Kg	<MDL	<MDL			0--35
Aroclor 1221	4	8	ug/Kg	<MDL	<MDL			0--35
Aroclor 1232	4	8	ug/Kg	<MDL	<MDL			0--35
Aroclor 1242	2	4	ug/Kg	5.09	4.59	10		0--35
Aroclor 1248	2	4	ug/Kg	<MDL	<MDL			0--35
Aroclor 1254	2	4	ug/Kg	20.4	18.7	9		0--35
Aroclor 1260	2	4	ug/Kg	216	19.8	166	*	0--35
Total Aroclors	2	4	ug/Kg	241.49	43.09	139	*	0--35

Surrogate:	2,4,5,6-Tetrachloro-m-xylene	Decachlorobiphenyl
(Lab Limits)	20--110	25--150
L53963-1	74	93
L53963-2	69	101
L53963-3	61	96
L53963-4	77	95
L53963-5	69	94

L53963-6	67	94
L53963-7	73	94
L53963-8	61	85
L53963-9	63	98
L53963-10	65	94
L53963-11	75	103
L53963-12	62	88
L53963-32	91	104
L53963-33	61	92
L53963-34	84	88
L53963-35	73	83
L53963-36	33	38
L53963-37	74	90
L53963-38	82	94
L53963-39	92	86
WG117693-1	46	90
WG117693-2	31	81
WG117693-3	63	96
WG117693-4	63	94
WG117693-5	86	92
WG117693-6	86	86
WG117693-7	86	93

WG118262 - PCBs

MB:WG118262-1 Matrix: OTHR SOLID Listtype:ORPCBLL Method:SW846 3550B*SW846 8082A Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Aroclor 1016	2	4	ug/Kg	<MDL	
Aroclor 1221	4	8	ug/Kg	<MDL	
Aroclor 1232	4	8	ug/Kg	<MDL	
Aroclor 1242	1.2	2.4	ug/Kg	<MDL	
Aroclor 1248	2	4	ug/Kg	<MDL	
Aroclor 1254	1.2	2.4	ug/Kg	<MDL	
Aroclor 1260	1.2	2.4	ug/Kg	<MDL	
Total Aroclors	4	8	ug/Kg	<MDL	

LIMSView QC Report for 2011 CSO Sediment Monitoring Project

SB:WG118262-2 MB:WG118262-1 Matrix: OTHR SOLID Listtype:ORPCBLL Method:SW846 3550B*SW846 8082A Project: Pkey:STD
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	TrueValue	SB Value	% Rec.	Qual	LabLimit
Aroclor 1242	1.2	2.4	ug/Kg	<MDL	80	29.3	37		36--117
Aroclor 1260	1.2	2.4	ug/Kg	<MDL	80	58.7	73		40--131

MSD:WG118262-4 MS:WG118262-3 L53963-14 Matrix: SALTWTRSED Listtype:ORPCBLL Method:SW846 3550B*SW846 8082A Project:423368-210-1 Pkey:SED
(Matrix Spike Duplicate, Matrix Spike)

Parameter	MDL	RDL	Units	SAMP Value	TrueValue	MS Value	% Rec.	Qual	LabLimit	TrueValue	MSD Value	% Rec.	Qual	RPD	Qual	LabLimit
Aroclor 1242	2	4	ug/Kg	<MDL	80	54.3	68		45--139	80	53.6	67		1		0--35
Aroclor 1260	2	4	ug/Kg	<MDL	80	61.9	77		20--132	80	62.9	79		2		0--35

SRMD:WG118262-6 SRM:WG118262-5 Matrix: SALTWTRSED Listtype:ORPCBLL Method:SW846 3550B*SW846 8082A Project: Pkey:SED
(Std Reference Material Duplicate, Std Reference Material)

Parameter	MDL	RDL	Units	TrueValue	SRM Value	% Rec.	Qual	LabLimit	TrueValue	SRMD Valu	% Rec.	Qual	RPD	Qual	LabLimit
Aroclor 1254	11	21.3	ug/Kg	112	102	91		57--139	112	95.5	85		7		0--35

LD:WG118262-7 L53963-30 Matrix: SALTWTRSED Listtype:ORPCBLL Method:SW846 3550B*SW846 8082A Project:423368-210-1 Pkey:SED
(Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	RPD	Qual	LabLimit
Aroclor 1016	2	4	ug/Kg	<MDL	<MDL			0--35
Aroclor 1221	4	8	ug/Kg	<MDL	<MDL			0--35
Aroclor 1232	4	8	ug/Kg	<MDL	<MDL			0--35
Aroclor 1242	2	4	ug/Kg	<MDL	<MDL			0--35
Aroclor 1248	2	4	ug/Kg	<MDL	<MDL			0--35
Aroclor 1254	2	4	ug/Kg	4.99	4.97	0		0--35
Aroclor 1260	2	4	ug/Kg	<MDL	<MDL			0--35
Total Aroclors	2	4	ug/Kg	4.99	4.97	0		0--35

Surrogate:	2,4,5,6-Tetrachloro-m-xylene	Decachlorobiphenyl
(Lab Limits)	20--110	25--150
L53963-13	50	97
L53963-14	38	102
L53963-15	38	94
L53963-16	63	108
L53963-17	69	108
L53963-18	65	101
L53963-19	56	93
L53963-20	76	93
L53963-21	68	91

L53963-22	51	89
L53963-23	68	102
L53963-24	55	85
L53963-25	54	98
L53963-26	78	82
L53963-27	73	86
L53963-28	81	91
L53963-29	79	86
L53963-30	80	89
L53963-31	73	84
L53963-40	85	62
WG118262-1	34	104
WG118262-2	35	101
WG118262-3	44	96
WG118262-4	40	98
WG118262-5	71	96
WG118262-6	71	99
WG118262-7	85	96

WG118263 - PCBs

MB:WG118263-1 Matrix: OTHR SOLID Listtype:ORPCBLL Method:SW846 3550B*SW846 8082A Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Aroclor 1016	2	4	ug/Kg	<MDL	
Aroclor 1221	4	8	ug/Kg	<MDL	
Aroclor 1232	4	8	ug/Kg	<MDL	
Aroclor 1242	2	4	ug/Kg	<MDL	
Aroclor 1248	2	4	ug/Kg	<MDL	
Aroclor 1254	2	4	ug/Kg	<MDL	
Aroclor 1260	2	4	ug/Kg	<MDL	
Total Aroclors	4	8	ug/Kg	<MDL	

SB:WG118263-2 MB:WG118263-1 Matrix: OTHR SOLID Listtype:ORPCBLL Method:SW846 3550B*SW846 8082A Project: Pkey:STD
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	TrueValue	SB Value	% Rec.	Qual	LabLimit
Aroclor 1242	2	4	ug/Kg	<MDL	80	45.9	57		36--117
Aroclor 1260	2	4	ug/Kg	<MDL	80	59.7	75		40--131

LIMSView QC Report for 2011 CSO Sediment Monitoring Project

MSD:WG118263-4 MS:WG118263-3 L53963-45 Matrix: SALTWTRSED Listtype:ORPCBLL Method:SW846 3550B*SW846 8082A Project:423368-210-1 Pkey:SED
(Matrix Spike Duplicate, Matrix Spike)

Parameter	MDL	RDL	Units	SAMP Value	TrueValue	MS Value	% Rec.	Qual	LabLimit	TrueValue	MSD Value	% Rec.	Qual	RPD	Qual	LabLimit
Aroclor 1242	2	4	ug/Kg	<MDL	80	59.1	74		45--139	80	60.7	76		3		0--35
Aroclor 1260	2	4	ug/Kg	20.6	80	60.9	50		20--132	80	60.2	49		1		0--35

SRMD:WG118263-6 SRM:WG118263-5 Matrix: SALTWTRSED Listtype:ORPCBLL Method:SW846 3550B*SW846 8082A Project: Pkey:SED
(Std Reference Material Duplicate, Std Reference Material)

Parameter	MDL	RDL	Units	TrueValue	SRM Value	% Rec.	Qual	LabLimit	TrueValue	SRMD Valu	% Rec.	Qual	RPD	Qual	LabLimit
Aroclor 1254	11	21.3	ug/Kg	112	92.8	83		57--139	112	88.4	79		5		0--35

LD:WG118263-7 L53963-43 Matrix: SALTWTRSED Listtype:ORPCBLL Method:SW846 3550B*SW846 8082A Project:423368-210-1 Pkey:SED
(Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	RPD	Qual	LabLimit
Aroclor 1016	2	4	ug/Kg	<MDL	<MDL			0--35
Aroclor 1221	4	8	ug/Kg	<MDL	<MDL			0--35
Aroclor 1232	4	8	ug/Kg	<MDL	<MDL			0--35
Aroclor 1242	2	4	ug/Kg	10.1	9.97	1		0--35
Aroclor 1248	2	4	ug/Kg	<MDL	<MDL			0--35
Aroclor 1254	2	4	ug/Kg	28.4	21.2	29		0--35
Aroclor 1260	2	4	ug/Kg	20	15.3	27		0--35
Total Aroclors	2	4	ug/Kg	58.5	46.47	23		0--35

Surrogate:	2,4,5,6-Tetrachloro-m-xylene	Decachlorobiphenyl
(Lab Limits)	20--110	25--150
L53963-41	66	68
L53963-42	72	79
L53963-43	77	87
L53963-44	56	85
L53963-45	46	88
WG118263-1	30	81
WG118263-2	34	91
WG118263-3	56	93
WG118263-4	47	91
WG118263-5	75	83
WG118263-6	63	81
WG118263-7	66	83

LIMSView QC Report for 2011 CSO Sediment Monitoring Project

WG118809 - PCBs

MB:WG118809-1 Matrix: OTHR SOLID Listtype:ORPCBLL Method:SW846 3550B*SW846 8082A Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Aroclor 1016	1.3	2.67	ug/Kg	<MDL	
Aroclor 1221	2.7	5.33	ug/Kg	<MDL	
Aroclor 1232	2.7	5.33	ug/Kg	<MDL	
Aroclor 1242	1.3	2.67	ug/Kg	<MDL	
Aroclor 1248	1.3	2.67	ug/Kg	<MDL	
Aroclor 1254	1.3	2.67	ug/Kg	<MDL	
Aroclor 1260	1.3	2.67	ug/Kg	<MDL	
Total Aroclors	2.7	5.33	ug/Kg	<MDL	

SB:WG118809-2 MB:WG118809-1 Matrix: OTHR SOLID Listtype:ORPCBLL Method:SW846 3550B*SW846 8082A Project: Pkey:STD
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	TrueValue	SB Value	% Rec.	Qual	LabLimit
Aroclor 1242	1.3	2.67	ug/Kg	<MDL	53.3	28.4	53		36--117
Aroclor 1260	1.3	2.67	ug/Kg	<MDL	53.3	39.7	75		40--131

MSD:WG118809-4 MS:WG118809-3 L54219-1 Matrix: SALTWTRSED Listtype:ORPCBLL Method:SW846 3550B*SW846 8082A Project:423575-550-4 Pkey:SED
(Matrix Spike Duplicate, Matrix Spike)

Parameter	MDL	RDL	Units	SAMP Value	TrueValue	MS Value	% Rec.	Qual	LabLimit	TrueValue	MSD Value	% Rec.	Qual	RPD	Qual	LabLimit
Aroclor 1242	1.3	2.67	ug/Kg	<MDL	53.3	44.9	84		45--139	53.3	43.2	81		4		0--35
Aroclor 1260	1.3	2.67	ug/Kg	<MDL	53.3	42.1	79		20--132	53.3	41.3	77		2		0--35

SRMD:WG118809-6 SRM:WG118809-5 Matrix: SALTWTRSED Listtype:ORPCBLL Method:SW846 3550B*SW846 8082A Project: Pkey:SED
(Std Reference Material Duplicate, Std Reference Material)

Parameter	MDL	RDL	Units	TrueValue	SRM Value	% Rec.	Qual	LabLimit	TrueValue	SRMD Valu	% Rec.	Qual	RPD	Qual	LabLimit
Aroclor 1254	11	21.3	ug/Kg	112	90.6	81		57--139	112	129	115		35		0--35

LD:WG118809-7 L54219-2 Matrix: SALTWTRSED Listtype:ORPCBLL Method:SW846 3550B*SW846 8082A Project:423575-550-4 Pkey:SED
(Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	RPD	Qual	LabLimit
Aroclor 1016	1.3	2.67	ug/Kg	<MDL	<MDL			0--35
Aroclor 1221	2.7	5.33	ug/Kg	<MDL	<MDL			0--35
Aroclor 1232	2.7	5.33	ug/Kg	<MDL	<MDL			0--35
Aroclor 1242	1.3	2.67	ug/Kg	<MDL	<MDL			0--35
Aroclor 1248	1.3	2.67	ug/Kg	<MDL	<MDL			0--35
Aroclor 1254	1.3	2.67	ug/Kg	<MDL	<MDL			0--35
Aroclor 1260	1.3	2.67	ug/Kg	<MDL	<MDL			0--35

Total Aroclors	2.7	5.33	ug/Kg	<MDL	<MDL	0--35

Surrogate:	2,4,5,6-Tetrachloro-m-xylene	Decachlorobiphenyl
(Lab Limits)	20--110	25--150
L54219-1	71	92
L54219-2	68	86
L54219-3	70	89
L54219-4	71	89
L54219-5	64	87
L54219-6	63	85
L54219-7	71	86
L54219-8	59	81
L54219-9	70	90
L54219-10	64	86
L54219-11	68	88
L54227-1	80	82
L54227-2	86	91
WG118809-1	31	87
WG118809-2	44	88
WG118809-3	68	90
WG118809-4	67	91
WG118809-5	75	86
WG118809-6	70	99
WG118809-7	68	106

WG119034 - PCBs

MB:WG119034-1 Matrix: OTHR SOLID Listtype:ORPCBLL Method:SW846 3550B*SW846 8082A Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Aroclor 1016	1.3	2.67	ug/Kg	<MDL	
Aroclor 1221	2.7	5.33	ug/Kg	<MDL	
Aroclor 1232	2.7	5.33	ug/Kg	<MDL	
Aroclor 1242	1.3	2.67	ug/Kg	<MDL	
Aroclor 1248	1.3	2.67	ug/Kg	<MDL	
Aroclor 1254	1.3	2.67	ug/Kg	<MDL	
Aroclor 1260	1.3	2.67	ug/Kg	<MDL	
Total Aroclors	2.7	5.33	ug/Kg	<MDL	

LIMSView QC Report for 2011 CSO Sediment Monitoring Project

SB:WG119034-2 MB:WG119034-1 Matrix: OTHR SOLID Listtype:ORPCBLL Method:SW846 3550B*SW846 8082A Project: Pkey:STD
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	TrueValue	SB Value	% Rec.	Qual	LabLimit
Aroclor 1242	1.3	2.67	ug/Kg	<MDL	53.3	31.9	60		36--117
Aroclor 1260	1.3	2.67	ug/Kg	<MDL	53.3	42.7	80		40--131

MSD:WG119034-4 MS:WG119034-3 L54227-20 Matrix: FRSHWTRSED Listtype:ORPCBLL Method:SW846 3550B*SW846 8082A Project:423368-210-1 Pkey:SED
(Matrix Spike Duplicate, Matrix Spike)

Parameter	MDL	RDL	Units	SAMP Value	TrueValue	MS Value	% Rec.	Qual	LabLimit	TrueValue	MSD Value	% Rec.	Qual	RPD	Qual	LabLimit
Aroclor 1242	1.3	2.67	ug/Kg	<MDL	53.3	43.1	81		45--139	53.3	44.3	83		3		0--35
Aroclor 1260	1.3	2.67	ug/Kg	<MDL	53.3	40	75		20--132	53.3	41.3	77		3		0--35

SRMD:WG119034-6 SRM:WG119034-5 Matrix: FRSHWTRSED Listtype:ORPCBLL Method:SW846 3550B*SW846 8082A Project: Pkey:SED
(Std Reference Material Duplicate, Std Reference Material)

Parameter	MDL	RDL	Units	TrueValue	SRM Value	% Rec.	Qual	LabLimit	TrueValue	SRMD Valu	% Rec.	Qual	RPD	Qual	LabLimit
Aroclor 1254	11	21.3	ug/Kg	112	91.8	82		57--139	112	83.4	75		10		0--35

LD:WG119034-7 L54227-5 Matrix: FRSHWTRSED Listtype:ORPCBLL Method:SW846 3550B*SW846 8082A Project:423368-210-1 Pkey:SED
(Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	RPD	Qual	LabLimit
Aroclor 1016	13	26.7	ug/Kg	<MDL	<MDL			0--35
Aroclor 1221	27	53.3	ug/Kg	<MDL	<MDL			0--35
Aroclor 1232	27	53.3	ug/Kg	<MDL	<MDL			0--35
Aroclor 1242	13	26.7	ug/Kg	41.7	104	86	*	0--35
Aroclor 1248	13	26.7	ug/Kg	<MDL	<MDL			0--35
Aroclor 1254	13	26.7	ug/Kg	101	135	29		0--35
Aroclor 1260	13	26.7	ug/Kg	27.3	330	169	*	0--35
Total Aroclors	13	26.7	ug/Kg	170	569	108	*	0--35

LD:WG119034-8 L54227-22 Matrix: FRSHWTRSED Listtype:ORPCBLL Method:SW846 3550B*SW846 8082A Project:423368-210-1 Pkey:SED
(Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	RPD	Qual	LabLimit
Aroclor 1016	0.67	1.33	ug/Kg	<MDL	<MDL			0--35
Aroclor 1221	1.3	2.67	ug/Kg	<MDL	<MDL			0--35
Aroclor 1232	1.3	2.67	ug/Kg	<MDL	<MDL			0--35
Aroclor 1242	0.67	1.33	ug/Kg	<MDL	<MDL			0--35
Aroclor 1248	0.67	1.33	ug/Kg	<MDL	<MDL			0--35
Aroclor 1254	0.67	1.33	ug/Kg	<MDL	<MDL			0--35
Aroclor 1260	0.67	1.33	ug/Kg	<MDL	<MDL			0--35
Total Aroclors	1.3	2.67	ug/Kg	<MDL	<MDL			0--35

LIMSView QC Report for 2011 CSO Sediment Monitoring Project

Surrogate:	2,4,5,6-Tetrachloro-m-xylene	Decachlorobiphenyl
(Lab Limits)	20--110	25--150
L54227-3	77	88
L54227-4	102	109
L54227-5	69	82
L54227-6	83	92
L54227-7	76	89
L54227-8	79	170 *
L54227-9	82	90
L54227-10	93	108
L54227-11	81	94
L54227-12	59	128
L54227-13	78	88
L54227-14	78	90
L54227-15	80	86
L54227-16	72	81
L54227-17	69	80
L54227-18	77	91
L54227-19	75	80
L54227-20	63	87
L54227-21	81	86
L54227-22	72	70
WG119034-1	52	89
WG119034-2	43	99
WG119034-3	63	82
WG119034-4	67	84
WG119034-5	77	88
WG119034-6	68	77
WG119034-7	71	100
WG119034-8	70	82

Appendix C

Analytical Results for Non-Ionic Organic Compounds at Nine Sampling Stations Compared to Appropriate SMS Chemical Criteria

Appendix C - Table C-1

Non-Ionic Organic Results for Certain Stations Compared to OC-Normalized Criteria

CSO Sediment Monitoring Program

King County Sediment Management Plan Update

Organics (mg/Kg OC)	SQS	CSL	CSO-MG-2	CSO-53-6	CSO-MY-1	CSO-MY-3
Acenaphthene	16	57	--	--	2.26	1.3
Acenaphthylene	66	66	--	--	--	--
Anthracene	220	1,200	2.34	1.98	7.42	5.40
Fluorene	23	79	--	--	2.51	2.44
2-Methylnaphthalene	38	64	--	--	--	--
Naphthalene	99	170	--	--	--	--
Phenanthrene	100	480	5.31	4.85	25.3	17.8
Total LPAHs	370	780	7.65	6.82	37.5	27.0
Benzo(a)anthracene	110	270	8.62	4.02	19.7	12.2
Benzo(a)pyrene	99	210	10.6	6.26	19.5	13.8
Benzofluoranthenes (Total)	230	450	16.8	8.84	34.5	23.1
Benzo(g,h,i)perylene	31	78	5.46	2.33	12.2	8.07
Chrysene	110	460	8.94	5.22	20.3	13.7
Dibenzo(a,h)anthracene	12	33	2.37	1.33	3.99	3.09
Fluoranthene	160	1,200	14.2	10.2	41.3	28.0
Indeno(1,2,3-c,d)pyrene	34	88	6.15	3.00	11.4	7.98
Pyrene	1,000	1,400	12.6	8.40	39.0	23.8
Total HPAHs	960	5,300	85.8	49.6	203	134
Benzyl Butyl Phthalate	4.9	64	--	--	**19.1**	--
Bis(2-ethylhexyl) Phthalate	47	78	--	--	--	--
Di-N-butyl Phthalate	220	1,700	--	--	8.88	2.7
Di-N-octyl Phthalate	58	4,500	--	--	--	--
Diethyl Phthalate	61	110	--	--	--	--
Dimethyl Phthalate	53	53	--	--	--	5.40
1,2-Dichlorobenzene	2.3	2.3	--	--	--	--
1,4-Dichlorobenzene	3.1	9	--	--	--	--
1,2,4-Trichlorobenzene	0.81	1.8	--	--	--	--
Hexachlorobenzene	0.38	2.3	--	--	--	--
Dibenzofuran	15	58	--	--	--	--
Hexachlorobutadiene	3.9	6.2	--	--	--	--
N-Nitrosodiphenylamine	11	11	--	--	--	--
Total PCBs	12	65	1.37	1.02	--	0.49

Notes

mg/Kg OC - Milligrams per kilogram normalized to organic carbon, based on TOC.

SQS - Sediment Quality Standard chemical criterion from Table I of Chapter 173-204-320 WAC.

CSL - Cheanup Screening Level chemical criterion from Table III of Chapter 173-204-320 WAC.

Value Detected chemical concentration exceeds the SQS chemical criterion.

-- Analyte not detected.

Appendix C - Table C-2

Non-Ionic Organic Results for Certain Stations Compared to DW-Normalized Criteria

CSO Sediment Monitoring Program

King County Sediment Management Plan Update

Organics (µg/Kg DW)	SQS	CSL	CSO-BT-3	CSO-BT-6	CSO-CH-2	CSO-CH-4	CSO-CH-5
Acenaphthene	500	500	**1,160**	--	11	10	11
Acenaphthylene	1,300	1,300	--	--	--	--	--
Anthracene	960	960	**2,900**	329	51.0	39.1	46.7
Fluorene	540	540	**1,070**	--	19.7	15.5	19.3
2-Methylnaphthalene	670	670	145	--	--	--	--
Naphthalene	2,100	2,100	200	--	--	--	--
Phenanthrene	1,500	1,500	**7,490**	612	134	84.3	129
Total LPAHs	5,200	5,200	**12,800**	941	216	149	206
Benzo(a)anthracene	1,300	1,600	**4,510**	926	151	89.8	117
Benzo(a)pyrene	1,600	1,600	**4,300**	1,210	160	101	135
Benzofluoranthenes (Total)	3,200	3,600	**8,230**	2,200	348	198	275
Benzo(g,h,i)perylene	670	720	**2,650**	**934**	80.7	47.1	71.6
Chrysene	1,400	2,800	**4,940**	1,370	201	114	152
Dibenzo(a,h)anthracene	230	230	**1,150**	**381**	28.4	18.4	23.0
Fluoranthene	1,700	2,500	**8,750**	**2,520**	373	215	294
Indeno(1,2,3-c,d)pyrene	600	690	**2,460**	**894**	82.7	49.2	73.3
Pyrene	2,600	3,300	**7,500**	2,100	319	208	270
Total HPAHs	12,000	17,000	**45,500**	**12,500**	1,740	1,040	1,410
Benzyl Butyl Phthalate	63	900	**792**	--	**65.3**	57.9	**63.3**
Bis(2-ethylhexyl) Phthalate	1,300	3,100	**1,710**	**4,680**	--	--	--
Di-N-butyl Phthalate	1,400	5,100	158	151	--	--	--
Di-N-octyl Phthalate	6,200	6,200	1,010	--	--	--	--
Diethyl Phthalate	200	1,200	--	--	--	--	--
Dimethyl Phthalate	71	160	**229**	--	--	--	--
1,2-Dichlorobenzene	35	50	--	--	--	--	--
1,4-Dichlorobenzene	110	110	--	--	--	--	--
1,2,4-Trichlorobenzene	31	51	--	--	--	--	--
Hexachlorobenzene	22	70	--	--	--	--	--
Dibenzofuran	540	540	499	--	9.7	9.7	12
Hexachlorobutadiene	11	120	--	--	--	--	--
N-Nitrosodiphenylamine	28	40	--	--	--	--	--
Total PCBs	130	1,000	2.9	2.1	50.6	34.3	20.7

Notes

µg/Kg DW - Micrograms per kilogram on a dry weight basis, based on percent solids.

SQS - 1988 Marine Dry Sediment Quality Standard chemical criterion from EIM database.

CSL - 1988 Marine Dry Cleanup Screening Level chemical criterion from EIM database.

Value	Detected chemical concentration exceeds the SQS chemical criterion.
Value	Detected chemical concentration exceeds the CSL chemical criterion.
--	Analyte not detected.