

**Y-12
NATIONAL
SECURITY
COMPLEX**

**Annual Storm Water Report
for the
Y-12 National Security Complex
Oak Ridge, Tennessee**

December 2013

Prepared by the
Clean Water Compliance Section
of the
Environment Compliance Department
Environment, Safety and Health

Prepared for the
Y-12 National Security Complex
Oak Ridge, Tennessee 37831
managed by
B&W Technical Services Y-12, L.L.C.
for the
U.S. DEPARTMENT OF ENERGY
under contract
DE-AC05-00OR22800

MANAGED BY
B&W Y-12, LLC
FOR THE UNITED STATES
DEPARTMENT OF ENERGY

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Y/TS-2035/R7

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Executive Summary

This is the second annual storm water report prepared in accordance with the National Pollutant Discharge Elimination System (NPDES) permit issued to the Y-12 National Security Complex (Y-12 Complex) on December 1, 2011, and the corresponding Y-12 Storm Water Pollution Prevention Plan (SWP3) which became effective on September 7, 2012. However, Appendix A does contain some analytical data gathered under the previous NPDES permit and SWP3 for comparison purposes.

The quality of storm water exiting the Y-12 Complex via East Fork Poplar Creek remained relatively stable from 2012 to 2013. However, there was one largely unexpected high concentration of mercury noted in an area that is not known to have previously been a mercury use area. This was noted in Sector AA, Outfall 014. This outfall is normally sampled on a rotating basis but, due this elevated concentration, will be sampled again in 2014.

The Y-12 Complex will continue to implement appropriate BMPs and reduce outside material storage areas where possible. Emphasis will continue to be placed on site inspections and timely implementation of proper storm water control measures.

1.0 Introduction

The storm water pollution prevention program at the Y-12 National Security Complex (Y-12 Complex) protects the quality of storm water runoff through: (1) reducing the exposure of metal accumulation areas to precipitation, (2) implementation of Best Management Practices (BMPs), (3) sampling during rain events and subsequent analysis, and (4) routine surveillances. The Y-12 Complex was issued a new National Pollutant Discharge Elimination System (NPDES) permit which became effective on December 1, 2011. Although this report is prepared in accordance with the most recent NPDES permit, it also contains some data collected in previous years for comparison purposes.

The storm water pollution prevention program is a subset of the Y-12 Environmental Management System (EMS) which was fully implemented at the Y-12 Complex in December 2005. The storm water program focuses primarily on two elements of the EMS policy: pollution prevention and continual improvement. Additionally, the quality of storm water that exits the Y-12 Complex is identified as a significant environmental aspect which requires adequate attention be given to this ongoing program.

2.0 Storm Water Monitoring Data

Per the NPDES permit, storm water monitoring at the Y-12 Complex is performed on three levels: sector outfalls, in-stream monitoring locations and major outfalls. Sector outfall monitoring is designed to detect specific pollutants commonly associated with various industrial activities. In-stream and major outfall monitoring are intended to provide an indication of the storm water quality that leaves the Y-12 Complex via East Fork Poplar Creek (EFPC).

2.1 Sector Outfalls

Although the NPDES permit defines the Y-12 Complex to be a fabricated metal products industry, it also requires storm water monitoring be conducted for three additional "sectors." These sectors are defined in the Tennessee Storm Water Multi-Sector General Permit for Industrial Activities, Permit No. TNR050000. Each sector has prescribed benchmark values and some have defined sector median values. The *Rationale* portion of the NPDES permit for the Y-12 Complex states ". . . benchmark values were developed by the EPA and the State of Tennessee and are based on data submitted by similar industries for the development of the multi-sector general storm water permit. The benchmark concentrations are target values and should not be construed to represent permit limits." Similarly, sector median values are defined in the Tennessee Storm Water Multi-Sector General Permit as ". . . a pollutant concentration calculated from all sampling results provided from facilities classified in this sector during the previous permit term." The following subsections summarize the sector monitoring activities and results during 2013. All sector outfall samples are collected via grab samples during the first 30 minutes of outfall discharge attributable to a storm event.

The complete set of data for all sector outfalls is contained in Appendix B. Although the NPDES permit requires these samples to be collected by the grab method, a composite sample for most of these outfalls was also collected, analyzed and reported. The analytical results from the composite samples can also be found in Appendix B.

2.1.1 Sector AA - Storm Water Discharges Associated with Industrial Activity from Fabricated Metal Products Industry

The Storm Water Pollution Prevention Plan for the Y-12 Complex identifies six outfalls in this sector and each outfall is required to be sampled only once during the life of the NPDES permit.

The samples for Outfalls 014, 067 and 102 were collected on the dates identified in Table 2.1. This table also contains the total rainfall and duration of the rain event. The grab samples were collected during the first 30 minutes of increased flow due to the rain event and there were more than 72 hours of dry weather prior to each rain event.

**Table 2.1 - Sector AA, Fabricated Metal Products Industry
Analytical Results – Grab Samples (All values are mg/L)**

Parameter	Benchmark Value	Outfall 014 Sampled April 24, 2013	Outfall 067 Sampled April 4, 2013	Outfall 102 Sampled April 4, 2013
Total Rainfall and Duration	N/A	0.15 inches 65 minutes	0.22 inches 115 minutes	0.24 inches 185 minutes
Total Recoverable Aluminum	0.75	0.533	<0.2	<0.2
Total Recoverable Iron	5.0	1.75	0.209	0.17
Total Recoverable Zinc	0.161	0.0552	0.0592	0.0986
Nitrate plus Nitrite Nitrogen	0.68	0.583	0.67	0.351

All parameters at Outfalls 014, 067 and 102 were below the benchmark values. However, additional parameters beyond the benchmark parameters are routinely analyzed and the concentration of mercury at Outfall 014 was unusually high at 0.00712 mg/L. This was unexpected as this outfall drains an area which has no history of mercury use. For this reason, this outfall will be resampled next year even though it is scheduled to be off the rotation with other Sector AA outfalls.

2.1.2 Sector N - Storm Water Discharges Associated with Industrial Activity from Scrap Recycling and Waste Recycling Facilities

The NPDES permit for the Y-12 Complex defines only one outfall (Outfall S30) in this sector. This outfall was created specifically to monitor storm water runoff from the New Salvage Yard located west of the main industrial complex. This outfall does not discharge directly into the waters of the state (Bear Creek). The discharge from this outfall sheet flows across approximately 50 feet of grassy terrain prior to reaching Bear Creek. Therefore, concentrations of pollutants that may enter the creek can be expected to be lower than measured at the monitoring point. This outfall is sampled annually. Table 2.2 presents the benchmark values, the sector median values and the analytical results for each of the prescribed parameters for this sector.

The samples for Outfall S30 were collected on September 21, 2013. This rain event lasted 182 minutes and had a total rainfall of 1.05 inches. The grab samples were collected during the first 30 minutes of flow from the discharge pipe. There were more than 72 hours of prior dry weather.

**Table 2.2 - Sector N, Scrap Recycling and Waste Recycling Facilities
Analytical Results – Grab Samples (All values are mg/L)**

Parameter	Benchmark Value	Sector Median Value	Outfall S30 Sampled September 21, 2013
Chemical Oxygen Demand (COD)	120	79	41.0
Total Suspended Solids	150	72	13.5
Total Recoverable Aluminum	0.75	2.08	0.878
Total Recoverable Copper	0.0014	0.091	0.00724
Total Recoverable Iron	5.0	3.7	0.545
Total Recoverable Lead	0.091	0.058	0.00364
Total Recoverable Zinc	0.161	0.243	0.0146

The aluminum and copper levels exceeded the benchmark values for this sector. However, both were below the sector median values, so this location is ranked in the bottom half of all locations which fall into this sector in the State of Tennessee. Aluminum levels continue to decline and are well below previous years' results (1.51 mg/L for 2012, 12.4 mg/L for 2011 and 10.8 mg/L for 2010) as a result of recent cleanup activities in this area. The levels of copper are consistent with the results from prior years; however, the benchmark value was reduced from 0.0636 mg/L in the previous permit to 0.0014 mg/L in the new permit. Had this significant reduction in the benchmark value not been made, this parameter would have been below the benchmark value.

2.1.3 Sector L - Storm Water Discharges Associated with Industrial Activity from Landfills and Land Application Sites

The NPDES permit for the Y-12 Complex defines two outfalls in this sector: Outfalls S17 and S18. Only one outfall is required to be sampled each year and the outfalls are alternated from year to year. Outfall S17 was sampled this year. Table 2.3 presents the benchmark values, the sector median values and the analytical results for the two defined parameters for this sector.

The samples for Outfall S17 were collected on April 4, 2013. At this location, the rain event lasted 120 minutes and had a total rainfall of 0.18 inches. The grab samples were collected during the first 30 minutes of discharge and there were more than 72 hours of dry weather prior to the onset of the rain event.

**Table 2.3 - Sector L, Landfills and Land Application Sites
Analytical Results - Grab Samples (All values are mg/L)**

Parameter	Benchmark Value	Sector Median Value	Outfall S17 Sampled April 4, 2013
Total Suspended Solids (TSS)	150	47	3.5
Total Recoverable Iron	5.0	2.2	0.103

Both parameters at Outfall S17 were below the benchmark and sector median values.

2.1.4 Sector K - Storm Water Discharges Associated with Treatment, Storage and Disposal Facilities

The NPDES permit for the Y-12 Complex defines only one outfall in this sector: Outfall S06. This is an in-stream monitoring point located near the headwaters of Bear Creek, just downstream from several waste treatment facilities. This outfall is sampled annually. Table 2.4 presents the benchmark values, the sector median values and the analytical results for each of the prescribed parameters for this sector. The complete list of analytical results can be found in Appendix B.

The samples for Outfall S06 were collected on April 24, 2013. This rain event lasted 105 minutes and had a total rainfall of 0.16 inches. The grab samples were collected during the first 30 minutes of increased flow due to the rain event. There were more than 72 hours of dry weather prior to the onset of the rain event.

**Table 2.4 - Sector K, Treatment, Storage and Disposal Facilities
Analytical Results – Grab Samples (All values are mg/L)**

Parameter	Benchmark Value	Sector Median Value	Outfall S06 Sampled April 24, 2013
Ammonia	4.0	0.21	<0.2
Total Recoverable Magnesium	0.064	1.41	14.8
Chemical Oxygen Demand (COD)	120	20	5.0
Total Recoverable Cadmium	0.0021	0.010	0.00188
Total Cyanide*	0.022	0.010	< 0.05
Total Recoverable Lead	0.156	0.016	<0.001
Total Recoverable Mercury	0.0014	0.0002	0.000053
Total Recoverable Selenium	0.005	0.100	<0.004
Total Suspended Solids	150	46	7.5
Total Recoverable Silver	0.0038	0.005	<0.0002

* The detection level for this parameter is higher than normal as a consequence of the dilution factor (10) that had to be applied due to the nitrate level of 27.2 mg/L. The elevated nitrates are a result of the proximity of this location to the S-3 Ponds.

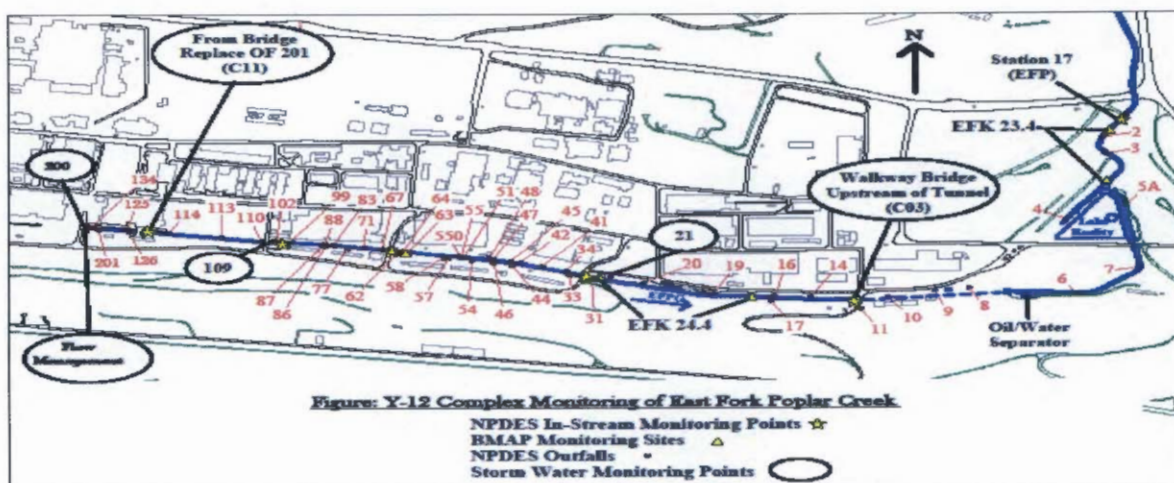
The level of magnesium at this monitoring point significantly exceeds both the benchmark value and the sector mean value. However, the geology of this portion of the Tennessee valley typically results in abnormally high levels of magnesium. For example, the level of magnesium in the raw water from the Clinch River used to supplement the flow in EFPC was 10.3 mg/L on March 18, 2013.

It is indeterminable if the level of cyanide was within the prescribed cut-off concentrations due to the high detection limit. However, it is not expected that cyanide is a problem in this area due to the lack of this material in the upstream waste treatment facility and no historical evidence of cyanide in this portion of Bear Creek.

2.2 In-Stream Monitoring Locations and Major Outfalls

Two in-stream monitoring locations are listed in the NPDES permit and the SWP3. Both locations are in EFPC and designated as C03 and C11. Each is required to be sampled annually for an extensive list of parameters. Samples are taken via both the composite and grab methods.

The NPDES permit and SWP3 also call out three major outfalls (021, 109 and 200) and the raw water flow augmentation for specific sampling. These three outfalls discharge approximately 85 percent of all storm water into EFPC from the industrialized portion of the Y-12 Complex. The rate of raw water flow is a consistent 3.6 million gallons per day and not influenced by storm events. This discharge is sampled to establish a baseline of water quality coming from the Clinch River.



The figure above shows the locations of the in-stream and major outfalls. In conjunction with the diagrams in Appendix A, this figure depicts the major storm water monitoring locations on EFPC.

On March 18, 2013, samples from the two in-stream monitoring points, three major outfalls and raw water were collected during the same rain event. This rain event began at 11:30 and ended at approximately 13:45. Total rainfall was 0.20 inches as measured at the meteorological tower located near the center of the Y-12 Complex; it had been more than 72 hours since the previous rain event of 0.10 inches or more. Tables 2.5 and 2.6 give synopses of flows and flow rates for the in-stream monitoring locations and major outfalls on EFPC during this rain event.

**Table 2.5 – Flows and Flow Rates at In-Stream Monitoring Points on EFPC
March 18, 2013, Rain Event**

Sampling Location	Base (non-Storm) Flow Rate (gpm)	Maximum Flow Rate (gpm)	Total Flow (gallons)	Duration of flow Measurement (minutes)
C03	3,300	11,177	989,500	140
C11	3,300	10,000	1,317,320	175

**Table 2.6 – Flows and Flow Rates at Major Outfalls and Raw Water on EFPC
March 18, 2013, Rain Event**

Sampling Location	Base (non-Storm) Flow Rate (gpm)	Maximum Flow Rate (gpm)	Total Flow (gallons)	Duration of flow Measurement (minutes)
021	81	828	41,540	147
109	41	2,788	84,357	138
200*	488	7,327	903,141	132
Raw Water	2,289	2,304	390,276	134

* Flow at this location is a calculated value.

The first schematic in Appendix A is a pictorial depiction of discharge and monitoring points on EFPC. Also included are the analytical results for some of the more common storm water contaminants for each location. Nine locations are shown on this schematic, including the two in-stream monitoring locations, three major outfalls, raw water discharge and three Sector AA outfalls. Schematics for locations sampled during 2006 through 2011 are also included in Appendix A for comparison purposes.

The NPDES permit and the Y-12 SWP3 include an extensive list of parameters that are required to be analyzed for both the in-stream and major outfall locations. This data is included in Appendix C. Not all of this data could be included in the schematics in Appendix A due to the volume.

There are no benchmark or median values attributed to the in-stream monitoring locations. The data indicates a relatively consistent level of water quality for 2012 to 2013. However, it is noteworthy that the concentration of mercury at in-stream Location C03 was reduced by approximately 44 percent from 2012 to 2013.

3.0 Surveillance Results and Significant Projects

The surveillances conducted during 2013 resulted in fewer and smaller areas identified as needing improvement. Most issues involved improper storage of drums, excess raw materials being stored outside and general housekeeping. Building and area owners were contacted and instructed to improve or reduce the outdoor storage of these items.

During 2013, the Y-12 Complex did not conduct any building demolitions. Over the past several years, numerous demolition projects were completed which provided a challenge in preventing contaminants and debris from entering EFPC.

There was one main project completed in 2013 which is expected to have a direct impact on the amount of mercury transported off the Y-12 Complex during storm events. A total of nine mercury traps have been installed in the storm drain system throughout the protected area of the Y-12 Complex. Dedicated mercury removal equipment has been procured and the removal process has been refined and implemented.

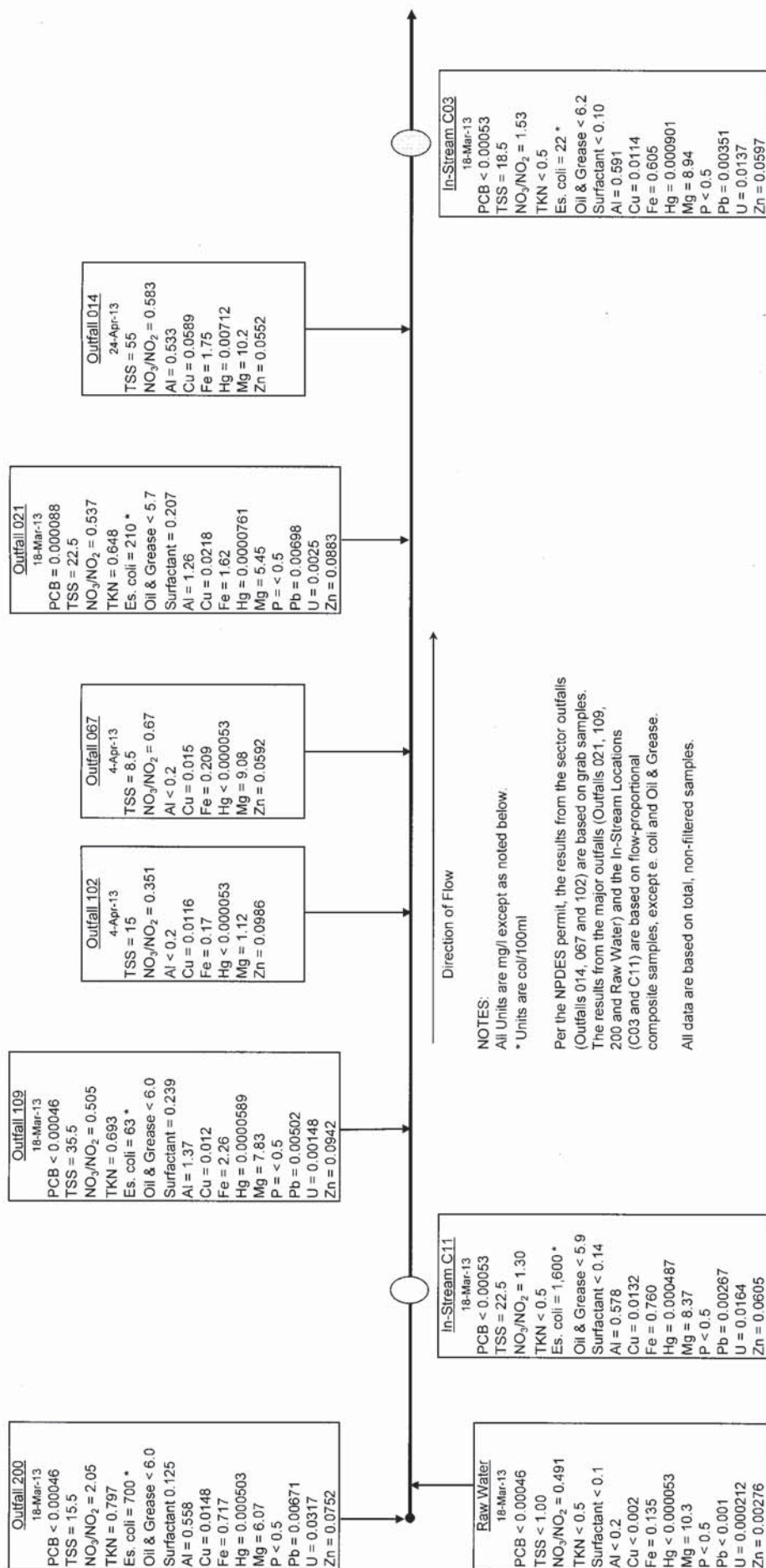
Other smaller projects focused on the reduction of outside storage areas and the removal of excess materials. At Building 9201-1, a project of note was the removal of metallic raw materials stored on the east side and large graphite billets stored on the west side. These materials were previously unprotected from contact with storm water and the areas drained to Outfalls 067 and 102, respectively. Outfalls 067 and 102 are Sector AA outfalls which are sampled on a rotating basis.

4.0 Conclusion

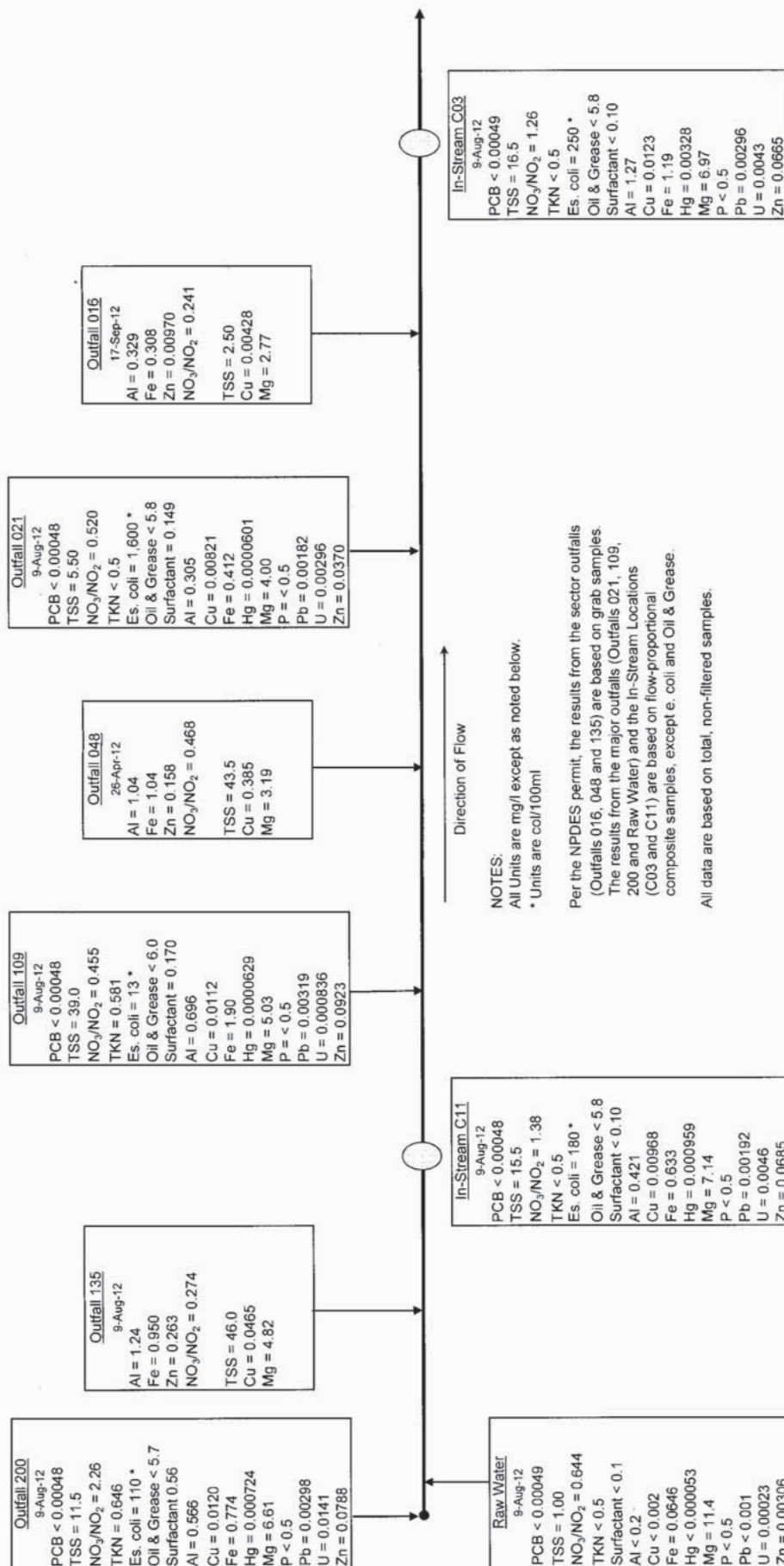
The data contained in Appendix A, which indicates the quality of storm water exiting the Y-12 Complex via EFPC, has remained relatively consistent from 2012 to 2013. Y-12 Complex personnel will continue to implement appropriate BMPs and reduce outside material storage areas whenever possible. Emphasis will continue to be placed on site inspections and timely implementation of proper storm water control measures.

Appendix A
East Fork Poplar Creek Schematics
2006 - 2013

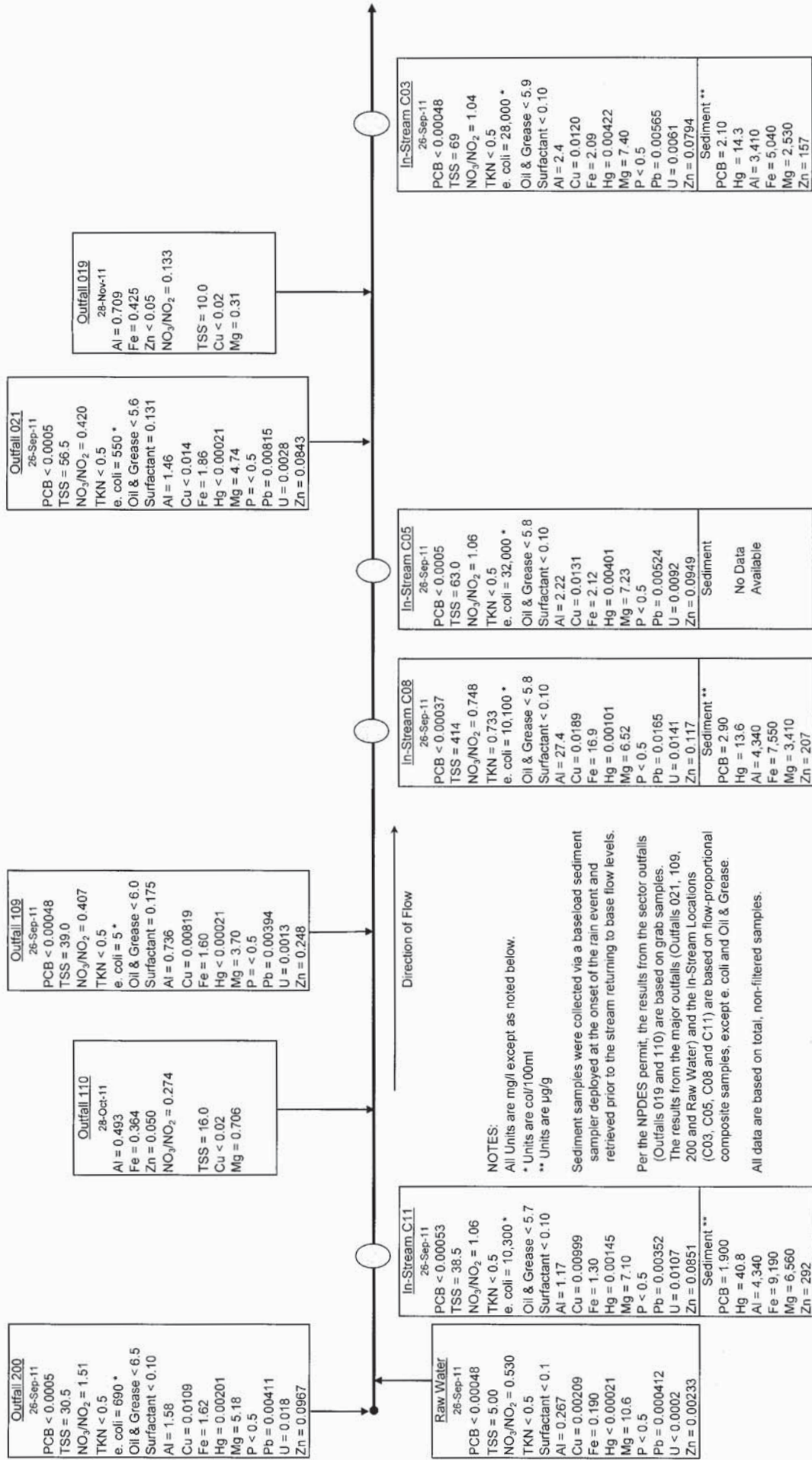
Schematic of Storm Water Outfall Analytical Data on EFPC
2013



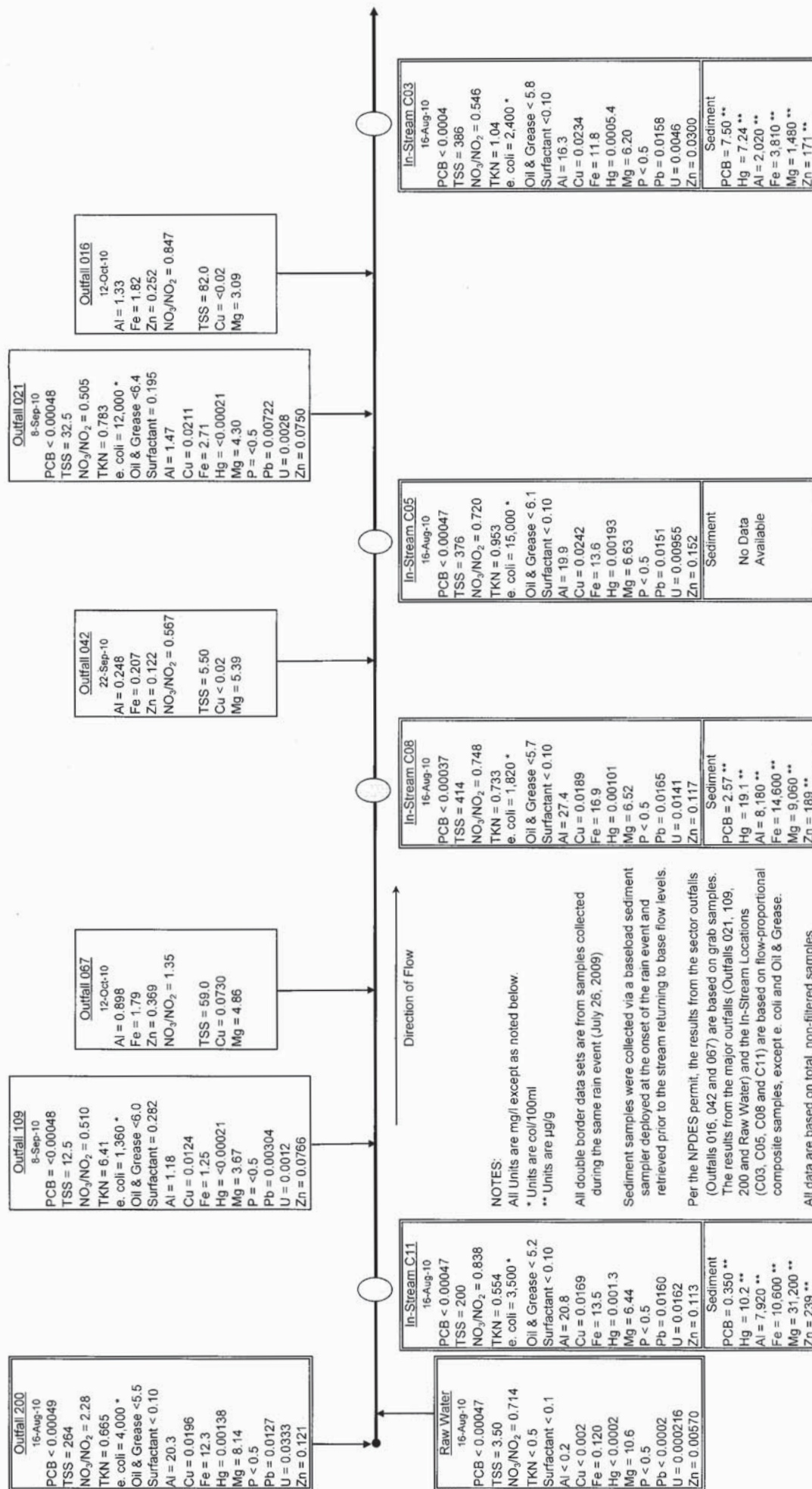
Schematic of Storm Water Outfall Analytical Data on EFPC
2012



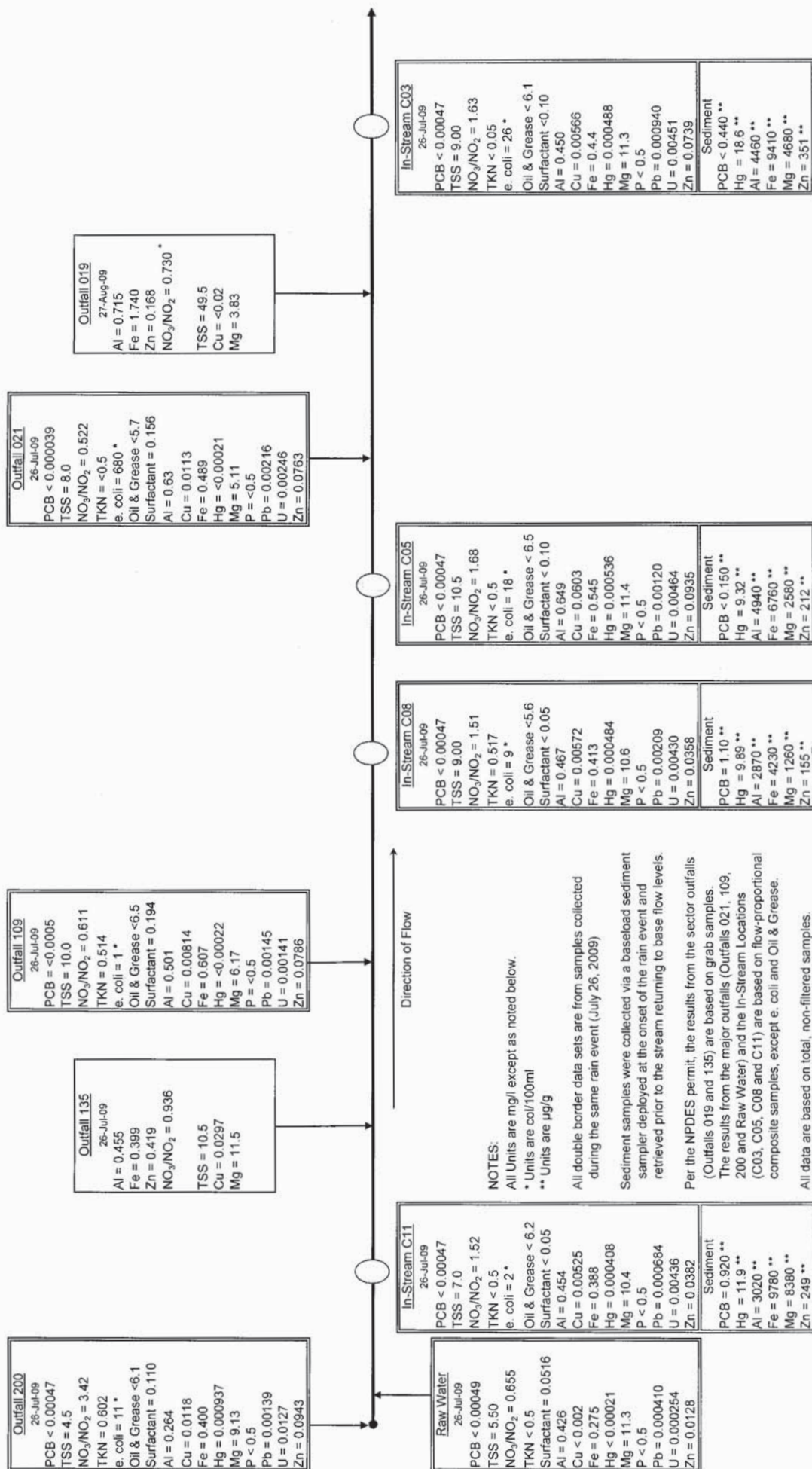
Schematic of Storm Water Outfall Analytical Data on EFPC
2011



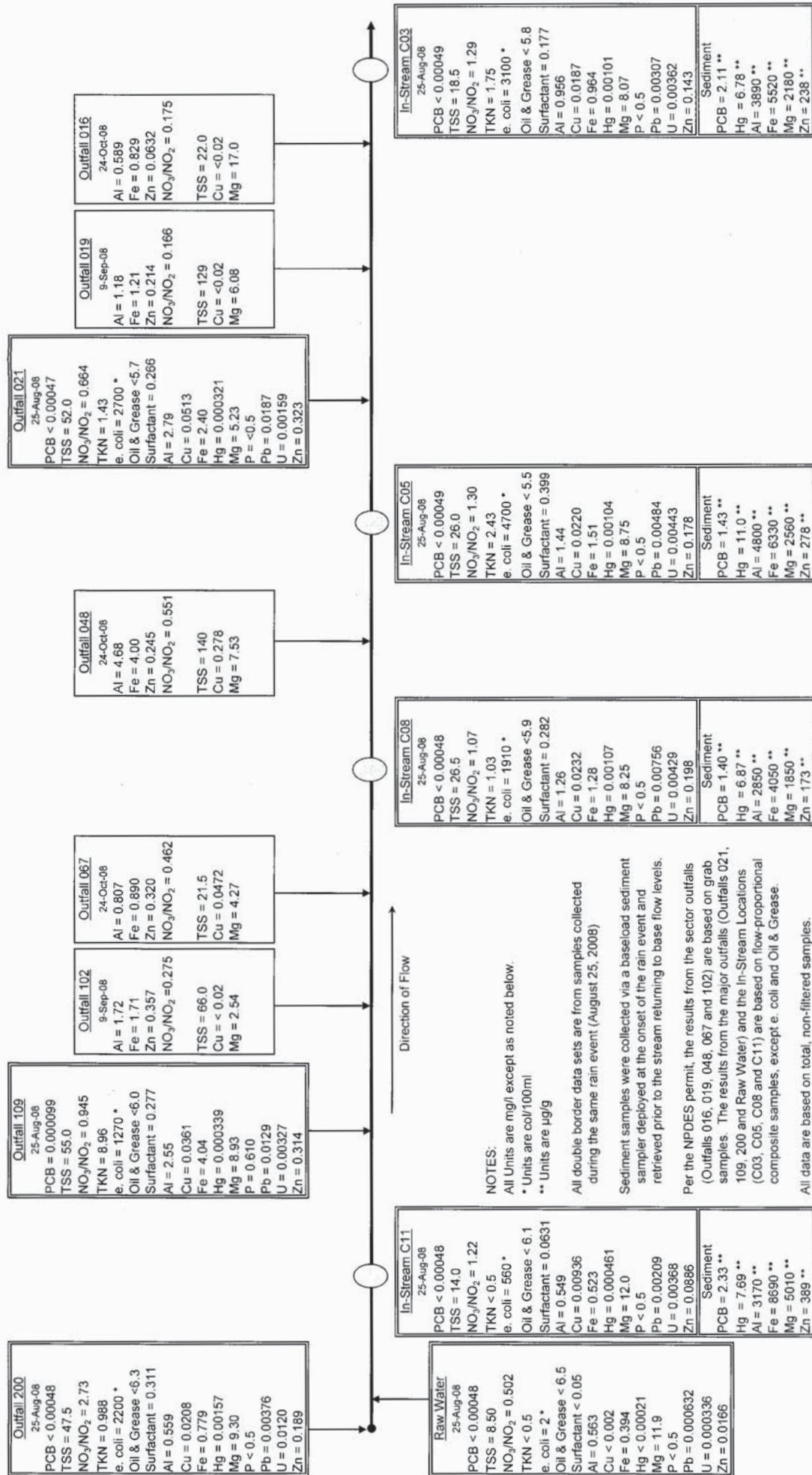
Schematic of Storm Water Outfall Analytical Data on EFPC
2010



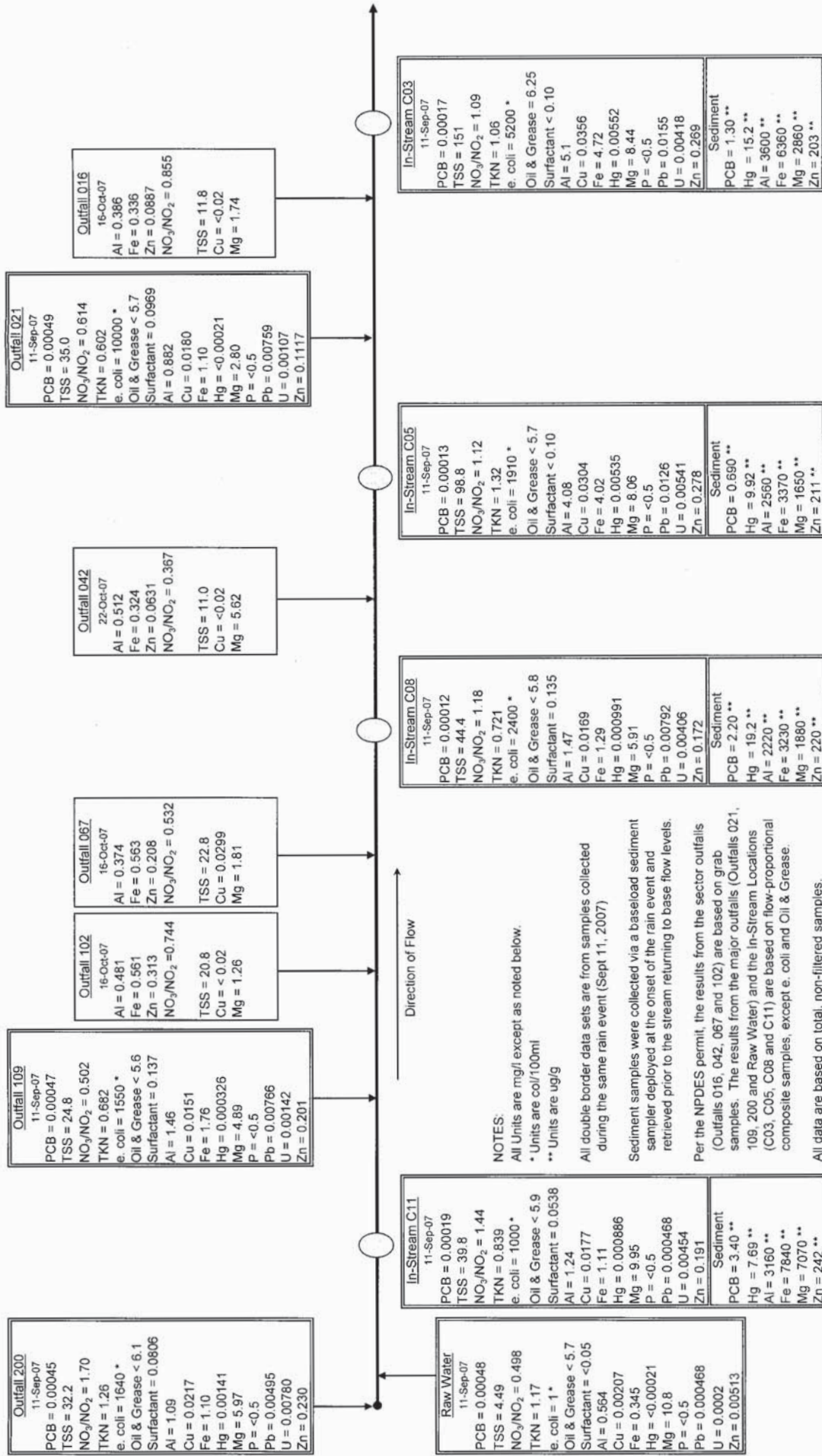
Schematic of Storm Water Outfall Analytical Data on EFPC
2009



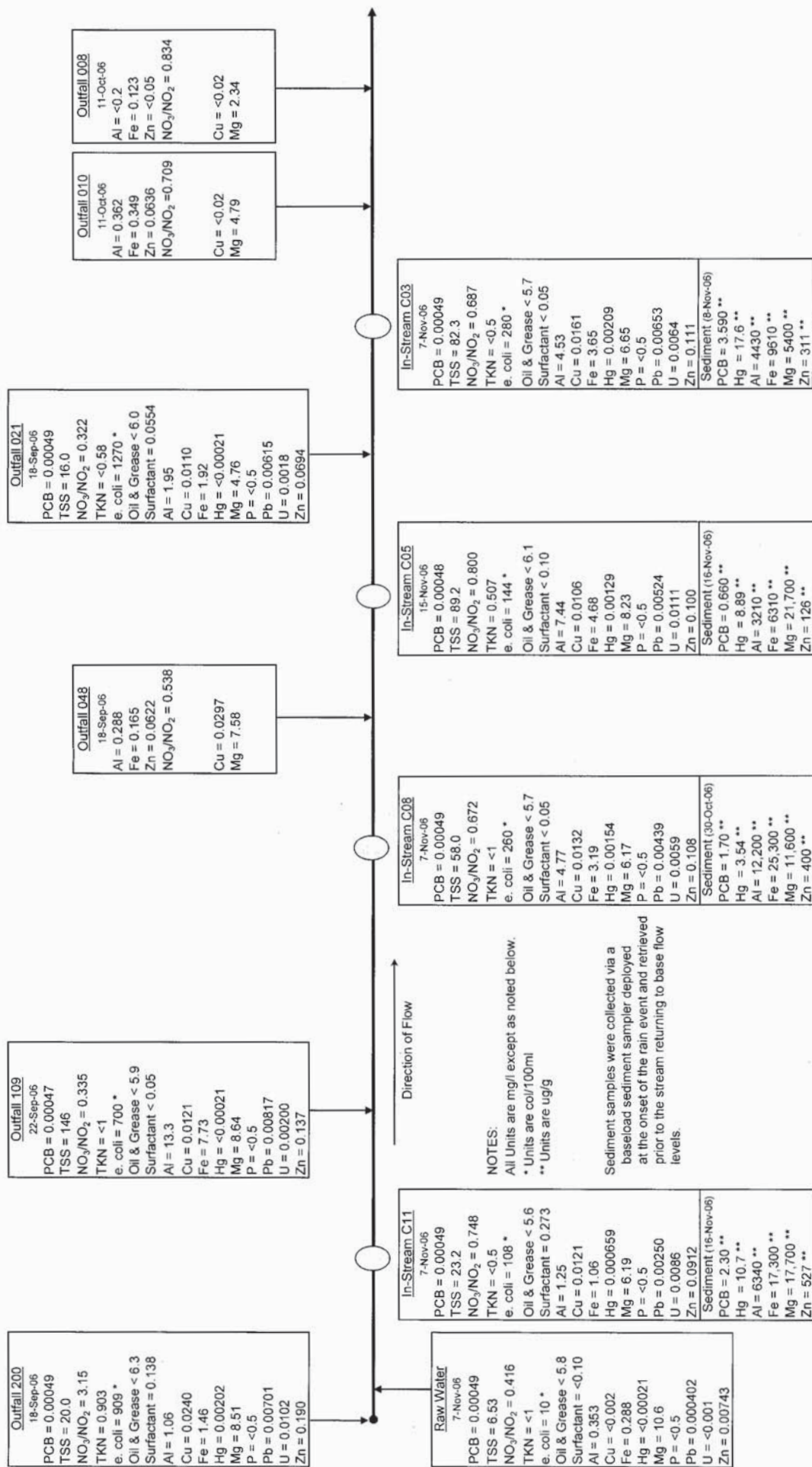
Schematic of Storm Water Outfall Analytical Data on EFPC
2008



Schematic of Storm Water Outfall Analytical Data on EFPC
2007



Schematic of Storm Water Analytical Data on EFPC
2006



Appendix B
2013 Storm Water Analytical Results,
Sector Outfalls

Sector AA Outfall 014

Location	Date Collected	Sample Type	Parameter		Result	Units
014	24-Apr-13	Field	pH		8.0	Std Units
014	24-Apr-13	Grab	Es. coli		120	col/100ml
014	24-Apr-13	Grab	HexExMatl	<	5.9	mg/L
014	24-Apr-13	Grab	KjeldahlN		1.51	mg/L
014	24-Apr-13	Grab	N(CalcTot)		2.09	mg/L
014	24-Apr-13	Grab	NO3/NO2asN		0.583	mg/L
014	24-Apr-13	Grab	SuspSolids		55	mg/L
014	24-Apr-13	Grab	Ag	<	0.0002	mg/L
014	24-Apr-13	Grab	Al		0.533	mg/L
014	24-Apr-13	Grab	As	<	0.002	mg/L
014	24-Apr-13	Grab	B	<	0.1	mg/L
014	24-Apr-13	Grab	Ba		0.0832	mg/L
014	24-Apr-13	Grab	Be	<	0.0002	mg/L
014	24-Apr-13	Grab	Ca		65.7	mg/L
014	24-Apr-13	Grab	Cd	<	0.0002	mg/L
014	24-Apr-13	Grab	Co		0.000662	mg/L
014	24-Apr-13	Grab	Cr		0.00213	mg/L
014	24-Apr-13	Grab	Cu		0.0589	mg/L
014	24-Apr-13	Grab	Fe		1.75	mg/L
014	24-Apr-13	Grab	Hg		0.00712	mg/L
014	24-Apr-13	Grab	K		2.48	mg/L
014	24-Apr-13	Grab	Li	<	0.01	mg/L
014	24-Apr-13	Grab	Mg		10.2	mg/L
014	24-Apr-13	Grab	Mn		0.265	mg/L
014	24-Apr-13	Grab	Mo	<	0.0004	mg/L
014	24-Apr-13	Grab	Na		35.1	mg/L
014	24-Apr-13	Grab	Nb	<	0.2	mg/L
014	24-Apr-13	Grab	Ni		0.00308	mg/L
014	24-Apr-13	Grab	P	<	0.5	mg/L
014	24-Apr-13	Grab	Pb		0.00247	mg/L
014	24-Apr-13	Grab	S		9.57	mg/L
014	24-Apr-13	Grab	Sb	<	0.001	mg/L
014	24-Apr-13	Grab	Se	<	0.004	mg/L
014	24-Apr-13	Grab	Sr		0.171	mg/L
014	24-Apr-13	Grab	Th	<	0.0002	mg/L
014	24-Apr-13	Grab	Ti	<	0.05	mg/L
014	24-Apr-13	Grab	Tl	<	0.0002	mg/L
014	24-Apr-13	Grab	U		0.00412	mg/L
014	24-Apr-13	Grab	V	<	0.02	mg/L
014	24-Apr-13	Grab	Zn		0.0552	mg/L
014	24-Apr-13	Grab	Zr	<	0.2	mg/L
014	24-Apr-13	Grab	Alpha		22	pCi/L
014	24-Apr-13	Grab	Beta		9.5	pCi/L
014	24-Apr-13	Grab	U		0.0039	mg/L
014	24-Apr-13	Grab	U-234	<	0.005	wt %
014	24-Apr-13	Grab	U235%		0.701	wt %
014	24-Apr-13	Grab	U-236	<	0.005	wt %
014	24-Apr-13	Grab	U-238		99.3	wt %
014	24-Apr-13	Grab	U-235		0	pCi/L
014	24-Apr-13	Grab	U-236		0	pCi/L
014	24-Apr-13	Grab	U-238		0.88	pCi/L
014	24-Apr-13	Grab	U-234		1.1	pCi/L

Sector AA
Outfall 014
(continued)

Location	Date Collected	Sample Type	Parameter	Result	Units
014	24-Apr-13	Composite	Surfactants	0.278	mg/L
014	24-Apr-13	Composite	SuspSolids	49	mg/L
014	24-Apr-13	Composite	KjeldahlN	1.2	mg/L
014	24-Apr-13	Composite	NO3/NO2asN	0.826	mg/L
014	24-Apr-13	Composite	N(Calc Tot)	2.03	mg/L
014	24-Apr-13	Composite	Ag	< 0.0002	mg/L
014	24-Apr-13	Composite	Al	0.604	mg/L
014	24-Apr-13	Composite	As	< 0.002	mg/L
014	24-Apr-13	Composite	B	< 0.1	mg/L
014	24-Apr-13	Composite	Ba	0.0437	mg/L
014	24-Apr-13	Composite	Be	< 0.0002	mg/L
014	24-Apr-13	Composite	Ca	32	mg/L
014	24-Apr-13	Composite	Cd	< 0.0002	mg/L
014	24-Apr-13	Composite	Co	0.000598	mg/L
014	24-Apr-13	Composite	Cr	0.00258	mg/L
014	24-Apr-13	Composite	Cu	0.0389	mg/L
014	24-Apr-13	Composite	Fe	1.06	mg/L
014	24-Apr-13	Composite	Hg	0.00313	mg/L
014	24-Apr-13	Composite	K	< 2	mg/L
014	24-Apr-13	Composite	Li	< 0.01	mg/L
014	24-Apr-13	Composite	Mg	5.63	mg/L
014	24-Apr-13	Composite	Mn	0.166	mg/L
014	24-Apr-13	Composite	Mo	0.000812	mg/L
014	24-Apr-13	Composite	Na	12.6	mg/L
014	24-Apr-13	Composite	Nb	< 0.2	mg/L
014	24-Apr-13	Composite	Ni	0.00303	mg/L
014	24-Apr-13	Composite	P	< 0.5	mg/L
014	24-Apr-13	Composite	Pb	0.00343	mg/L
014	24-Apr-13	Composite	S	5.47	mg/L
014	24-Apr-13	Composite	Sb	< 0.001	mg/L
014	24-Apr-13	Composite	Se	< 0.004	mg/L
014	24-Apr-13	Composite	Sr	0.0794	mg/L
014	24-Apr-13	Composite	Th	< 0.0002	mg/L
014	24-Apr-13	Composite	Ti	< 0.05	mg/L
014	24-Apr-13	Composite	Tl	< 0.0002	mg/L
014	24-Apr-13	Composite	U	0.00674	mg/L
014	24-Apr-13	Composite	V	< 0.02	mg/L
014	24-Apr-13	Composite	Zn	0.0671	mg/L
014	24-Apr-13	Composite	Zr	< 0.2	mg/L

**Sector AA
Outfall 014
(continued)**

Location	Date Collected	Sample Type	Parameter		Result	Units
014	24-Apr-13	Composite	Alpha		5.7	pCi/L
014	24-Apr-13	Composite	Beta		1.7	pCi/L
014	24-Apr-13	Composite	U		0.007	mg/L
014	24-Apr-13	Composite	U-234		0.81	pCi/L
014	24-Apr-13	Composite	U-235		0.011	pCi/L
014	24-Apr-13	Composite	U-236		0.018	pCi/L
014	24-Apr-13	Composite	U-238		2.1	pCi/L
014	24-Apr-13	Composite	U-234		0.0283	wt %
014	24-Apr-13	Composite	U235%		0.514	wt %
014	24-Apr-13	Composite	U-236		0.0157	wt %
014	24-Apr-13	Composite	U-238		99.4	wt %
014	24-Apr-13	Composite	PCB	J	0.04	ug/l.
014	24-Apr-13	Composite	PCB-1016	U	0.5	ug/l.
014	24-Apr-13	Composite	PCB-1221	U	0.5	ug/l.
014	24-Apr-13	Composite	PCB-1232	U	0.5	ug/L
014	24-Apr-13	Composite	PCB-1242	U	0.5	ug/L
014	24-Apr-13	Composite	PCB-1248	U	0.5	ug/L
014	24-Apr-13	Composite	PCB-1254	U	0.5	ug/l.
014	24-Apr-13	Composite	PCB-1260	J	0.04	ug/L
014	24-Apr-13	Composite	PCB-1262	U	0.5	ug/L
014	24-Apr-13	Composite	PCB-1268	U	0.5	ug/L

Sector AA Outfall 067

Location	Date Collected	Sample Type	Parameter		Result	Units
067	4-Apr-13	Field	pH		8.0	Std Units
067	4-Apr-13	Grab	Es. coli		9	col/100ml
067	4-Apr-13	Grab	HexExMatl	<	5.7	mg/L
067	4-Apr-13	Grab	SuspSolids		8.5	mg/L
067	4-Apr-13	Grab	KjeldahlN	<	0.5	mg/L
067	4-Apr-13	Grab	NO3/NO2asN		0.67	mg/L
067	4-Apr-13	Grab	N(Calc Tot)		0.67	mg/L
067	4-Apr-13	Grab	Ag	<	0.0002	mg/L
067	4-Apr-13	Grab	Al	<	0.2	mg/L
067	4-Apr-13	Grab	As	<	0.002	mg/L
067	4-Apr-13	Grab	B	<	0.1	mg/L
067	4-Apr-13	Grab	Ba		0.0877	mg/L
067	4-Apr-13	Grab	Be	<	0.0002	mg/L
067	4-Apr-13	Grab	Ca		59.9	mg/L
067	4-Apr-13	Grab	Cd	<	0.0002	mg/L
067	4-Apr-13	Grab	Co		0.000354	mg/L
067	4-Apr-13	Grab	Cr		0.0031	mg/L
067	4-Apr-13	Grab	Cu		0.015	mg/L
067	4-Apr-13	Grab	Fe		0.209	mg/L
067	4-Apr-13	Grab	Hg	<	0.053	ug/L
067	4-Apr-13	Grab	K		2.89	mg/L
067	4-Apr-13	Grab	Li	<	0.01	mg/L
067	4-Apr-13	Grab	Mg		9.08	mg/L
067	4-Apr-13	Grab	Mn		0.0146	mg/L
067	4-Apr-13	Grab	Mo		0.000684	mg/L
067	4-Apr-13	Grab	Na		50.3	mg/L
067	4-Apr-13	Grab	Nb	<	0.2	mg/L
067	4-Apr-13	Grab	Ni	<	0.002	mg/L
067	4-Apr-13	Grab	P	<	0.5	mg/L
067	4-Apr-13	Grab	Pb		0.00237	mg/L
067	4-Apr-13	Grab	S		9.54	mg/L
067	4-Apr-13	Grab	Sb		0.00133	mg/L
067	4-Apr-13	Grab	Se	<	0.004	mg/L
067	4-Apr-13	Grab	Sr		0.161	mg/L
067	4-Apr-13	Grab	Th	<	0.0002	mg/L
067	4-Apr-13	Grab	Ti	<	0.05	mg/L
067	4-Apr-13	Grab	Tl	<	0.0002	mg/L
067	4-Apr-13	Grab	V	<	0.02	mg/L
067	4-Apr-13	Grab	Zn		0.0592	mg/L
067	4-Apr-13	Grab	Zr	<	0.2	mg/L
067	4-Apr-13	Grab	U		0.0019	mg/L
067	4-Apr-13	Grab	Alpha		1.7	pCi/L
067	4-Apr-13	Grab	Beta		6	pCi/L
067	4-Apr-13	Grab	U-234	<	0.005	wt %
067	4-Apr-13	Grab	U235%		11.4	wt %
067	4-Apr-13	Grab	U-236	<	0.005	wt %
067	4-Apr-13	Grab	U-238		88.6	wt %
067	4-Apr-13	Grab	U-235		0.074	pCi/L
067	4-Apr-13	Grab	U-236		0.029	pCi/L
067	4-Apr-13	Grab	U-238		0.38	pCi/L
067	4-Apr-13	Grab	U-234		0.85	pCi/L

**Sector AA
Outfall 067
(continued)**

Location	Date Collected	Sample Type	Parameter		Result	Units
067	4-Apr-13	Composite	SuspSolids		46.5	mg/L
067	4-Apr-13	Composite	Surfactants		0.129	mg/L
067	4-Apr-13	Composite	KjeldahlN	<	0.5	mg/l.
067	4-Apr-13	Composite	NO3/NO2asN		0.185	mg/L
067	4-Apr-13	Composite	N(CalcTot)		0.185	mg/L
067	4-Apr-13	Composite	Ag	<	0.0002	mg/L
067	4-Apr-13	Composite	Al		1.04	mg/L
067	4-Apr-13	Composite	As	<	0.002	mg/l.
067	4-Apr-13	Composite	B	<	0.1	mg/L
067	4-Apr-13	Composite	Ba		0.0268	mg/L
067	4-Apr-13	Composite	Be	<	0.0002	mg/l.
067	4-Apr-13	Composite	Ca		18.5	mg/l.
067	4-Apr-13	Composite	Cd	<	0.0002	mg/L
067	4-Apr-13	Composite	Co		0.000516	mg/L
067	4-Apr-13	Composite	Cr		0.00507	mg/l.
067	4-Apr-13	Composite	Cu		0.0157	mg/L
067	4-Apr-13	Composite	Fe		1.06	mg/L
067	4-Apr-13	Composite	Hg	<	0.053	ug/L
067	4-Apr-13	Composite	K	<	2	mg/l.
067	4-Apr-13	Composite	Li	<	0.01	mg/l.
067	4-Apr-13	Composite	Mg		3.26	mg/L
067	4-Apr-13	Composite	Mn		0.0703	mg/l.
067	4-Apr-13	Composite	Mo		0.000464	mg/L
067	4-Apr-13	Composite	Na		6.81	mg/L
067	4-Apr-13	Composite	Nb	<	0.2	mg/L
067	4-Apr-13	Composite	Ni	<	0.002	mg/l.
067	4-Apr-13	Composite	P	<	0.5	mg/L
067	4-Apr-13	Composite	Pb		0.00569	mg/L
067	4-Apr-13	Composite	S		1.82	mg/L
067	4-Apr-13	Composite	Sb	<	0.001	mg/L
067	4-Apr-13	Composite	Se	<	0.004	mg/L
067	4-Apr-13	Composite	Sr		0.0351	mg/L
067	4-Apr-13	Composite	Th	<	0.0002	mg/L
067	4-Apr-13	Composite	Ti	<	0.05	mg/L
067	4-Apr-13	Composite	Tl	<	0.0002	mg/l.
067	4-Apr-13	Composite	V	<	0.02	mg/L
067	4-Apr-13	Composite	Zn		0.128	mg/l.
067	4-Apr-13	Composite	Zr	<	0.2	mg/L

**Sector AA
Outfall 067
(continued)**

Location	Date Collected	Sample Type	Parameter		Result	Units
067	4-Apr-13	Composite	U		0.000492	mg/L
067	4-Apr-13	Composite	Alpha		7.6	pCi/L
067	4-Apr-13	Composite	Beta		10	pCi/L
067	4-Apr-13	Composite	U-234		N/A	wt %
067	4-Apr-13	Composite	U235%		N/A	wt %
067	4-Apr-13	Composite	U-236		N/A	wt %
067	4-Apr-13	Composite	U-238		N/A	wt %
067	4-Apr-13	Composite	U-234		0.34	pCi/L
067	4-Apr-13	Composite	U-235		-0.0068	pCi/L
067	4-Apr-13	Composite	U-236		-0.025	pCi/L
067	4-Apr-13	Composite	U-238		0.2	pCi/L
067	4-Apr-13	Composite	PCB	J	0.045	ug/L
067	4-Apr-13	Composite	PCB-1016	U	0.46	ug/L
067	4-Apr-13	Composite	PCB-1221	U	0.46	ug/L
067	4-Apr-13	Composite	PCB-1232	U	0.46	ug/L
067	4-Apr-13	Composite	PCB-1242	U	0.46	ug/L
067	4-Apr-13	Composite	PCB-1248	U	0.46	ug/L
067	4-Apr-13	Composite	PCB-1254	U	0.46	ug/L
067	4-Apr-13	Composite	PCB-1260	J	0.045	ug/L
067	4-Apr-13	Composite	PCB-1262	U	0.46	ug/L
067	4-Apr-13	Composite	PCB-1268	U	0.46	ug/L

Sector AA Outfall 102

Location	Date Collected	Sample Type	Parameter		Result	Units
102	4-Apr-13	Field	pH		7.9	Std Units
102	4-Apr-13	Grab	Es. coli		35	col/100ml
102	4-Apr-13	Grab	HexExMatl	<	5.7	mg/l.
102	4-Apr-13	Grab	SuspSolids		15	mg/L
102	4-Apr-13	Grab	KjeldahN	<	0.5	mg/L
102	4-Apr-13	Grab	NO3/NO2asN		0.351	mg/l.
102	4-Apr-13	Grab	N(CalcTot)		0.351	mg/L
102	4-Apr-13	Grab	Ag	<	0.0002	mg/l.
102	4-Apr-13	Grab	Al	<	0.2	mg/L
102	4-Apr-13	Grab	As	<	0.002	mg/l.
102	4-Apr-13	Grab	B	<	0.1	mg/L
102	4-Apr-13	Grab	Ba		0.0141	mg/L
102	4-Apr-13	Grab	Be	<	0.0002	mg/l.
102	4-Apr-13	Grab	Ca		9.67	mg/L
102	4-Apr-13	Grab	Cd	<	0.0002	mg/L
102	4-Apr-13	Grab	Co		0.000248	mg/L
102	4-Apr-13	Grab	Cr	<	0.002	mg/L
102	4-Apr-13	Grab	Cu		0.0116	mg/l.
102	4-Apr-13	Grab	Fe		0.17	mg/L
102	4-Apr-13	Grab	Hg	<	0.053	ug/L
102	4-Apr-13	Grab	K	<	2	mg/L
102	4-Apr-13	Grab	Li	<	0.01	mg/L
102	4-Apr-13	Grab	Mg		1.12	mg/L
102	4-Apr-13	Grab	Mn		0.0102	mg/L
102	4-Apr-13	Grab	Mo	<	0.0004	mg/L
102	4-Apr-13	Grab	Na		1.23	mg/L
102	4-Apr-13	Grab	Nb	<	0.2	mg/l.
102	4-Apr-13	Grab	Ni	<	0.002	mg/L
102	4-Apr-13	Grab	P	<	0.5	mg/L
102	4-Apr-13	Grab	Pb		0.00317	mg/l.
102	4-Apr-13	Grab	S		1.36	mg/L
102	4-Apr-13	Grab	Sb	<	0.001	mg/L
102	4-Apr-13	Grab	Se	<	0.004	mg/l.
102	4-Apr-13	Grab	Sr		0.0163	mg/L
102	4-Apr-13	Grab	Th	<	0.0002	mg/L
102	4-Apr-13	Grab	Ti	<	0.05	mg/L
102	4-Apr-13	Grab	Tl	<	0.0002	mg/L
102	4-Apr-13	Grab	U		0.00327	mg/L
102	4-Apr-13	Grab	V	<	0.02	mg/L
102	4-Apr-13	Grab	Zn		0.0986	mg/L
102	4-Apr-13	Grab	Zr	<	0.2	mg/L
102	4-Apr-13	Grab	Alpha		2.4	pCi/L
102	4-Apr-13	Grab	Beta		11	pCi/L
102	4-Apr-13	Grab	U		0.0031	mg/L
102	4-Apr-13	Grab	U-234	<	0.005	wt %
102	4-Apr-13	Grab	U235%		0.622	wt %
102	4-Apr-13	Grab	U-236	<	0.005	wt %
102	4-Apr-13	Grab	U-238		99.4	wt %
102	4-Apr-13	Grab	U-235		0.018	pCi/L
102	4-Apr-13	Grab	U-236		0.014	pCi/L
102	4-Apr-13	Grab	U-238		1.1	pCi/L
102	4-Apr-13	Grab	U-234		0.57	pCi/l.

**Sector AA
Outfall 102
(continued)**

Location	Date Collected	Sample Type	Parameter		Result	Units
102	4-Apr-13	Composite	SuspSolids		7	mg/L
102	4-Apr-13	Composite	Surfactants	<	0.1	mg/L
102	4-Apr-13	Composite	KjeldahlN	<	0.5	mg/L
102	4-Apr-13	Composite	NO3/NO2asN		0.163	mg/L
102	4-Apr-13	Composite	N(CalcTot)		0.163	mg/L
102	4-Apr-13	Composite	Ag	<	0.0002	mg/L
102	4-Apr-13	Composite	Al		0.206	mg/L
102	4-Apr-13	Composite	As	<	0.002	mg/L
102	4-Apr-13	Composite	B	<	0.1	mg/L
102	4-Apr-13	Composite	Ba		0.011	mg/L
102	4-Apr-13	Composite	Be	<	0.0002	mg/L
102	4-Apr-13	Composite	Ca		8.04	mg/L
102	4-Apr-13	Composite	Cd	<	0.0002	mg/L
102	4-Apr-13	Composite	Co	<	0.0002	mg/L
102	4-Apr-13	Composite	Cr	<	0.002	mg/L
102	4-Apr-13	Composite	Cu		0.00802	mg/L
102	4-Apr-13	Composite	Fe		0.209	mg/L
102	4-Apr-13	Composite	Hg	<	0.053	ug/L
102	4-Apr-13	Composite	K	<	2	mg/L
102	4-Apr-13	Composite	Li	<	0.01	mg/L
102	4-Apr-13	Composite	Mg		0.743	mg/L
102	4-Apr-13	Composite	Mn		0.00777	mg/L
102	4-Apr-13	Composite	Mo	<	0.0004	mg/L
102	4-Apr-13	Composite	Na		1.35	mg/L
102	4-Apr-13	Composite	Nb	<	0.2	mg/L
102	4-Apr-13	Composite	Ni	<	0.002	mg/L
102	4-Apr-13	Composite	P	<	0.5	mg/L
102	4-Apr-13	Composite	Pb		0.00261	mg/L
102	4-Apr-13	Composite	S		0.809	mg/L
102	4-Apr-13	Composite	Sb	<	0.001	mg/L
102	4-Apr-13	Composite	Se	<	0.004	mg/L
102	4-Apr-13	Composite	Sr		0.0131	mg/L
102	4-Apr-13	Composite	Th	<	0.0002	mg/L
102	4-Apr-13	Composite	Ti	<	0.05	mg/L
102	4-Apr-13	Composite	Tl	<	0.0002	mg/L
102	4-Apr-13	Composite	U		0.00118	mg/L
102	4-Apr-13	Composite	V	<	0.02	mg/L
102	4-Apr-13	Composite	Zn		0.0862	mg/L
102	4-Apr-13	Composite	Zr	<	0.2	mg/L

**Sector AA
Outfall 102
(continued)**

Location	Date Collected	Sample Type	Parameter		Result	Units
102	4-Apr-13	Composite	U		0.0011	mg/L
102	4-Apr-13	Composite	Alpha		2.8	pCi/L
102	4-Apr-13	Composite	Beta		0.97	pCi/L
102	4-Apr-13	Composite	U-234		0.112	wt %
102	4-Apr-13	Composite	U235%		1.27	wt %
102	4-Apr-13	Composite	U-236		0.353	wt %
102	4-Apr-13	Composite	U-238		98.3	wt %
102	4-Apr-13	Composite	U-235		-0.018	pCi/L
102	4-Apr-13	Composite	U-236		0.014	pCi/L
102	4-Apr-13	Composite	U-238		0.28	pCi/L
102	4-Apr-13	Composite	U-234		0.26	pCi/L
102	4-Apr-13	Composite	PCB	U	0.46	ug/L
102	4-Apr-13	Composite	PCB-1016	U	0.46	ug/L
102	4-Apr-13	Composite	PCB-1221	U	0.46	ug/L
102	4-Apr-13	Composite	PCB-1232	U	0.46	ug/L
102	4-Apr-13	Composite	PCB-1242	U	0.46	ug/L
102	4-Apr-13	Composite	PCB-1248	U	0.46	ug/L
102	4-Apr-13	Composite	PCB-1254	U	0.46	ug/L
102	4-Apr-13	Composite	PCB-1260	U	0.46	ug/L
102	4-Apr-13	Composite	PCB-1262	U	0.46	ug/L
102	4-Apr-13	Composite	PCB-1268	U	0.46	ug/L

Sector K Outfall S06

Location	Date Collected	Sample Type	Parameter		Result	Units
S06	24-Apr-13	Field	pH		7.4	Std Units
S06	24-Apr-13	Grab	COD		5.00	mg/L
S06	24-Apr-13	Grab	BOD	<	5.0	mg/L
S06	24-Apr-13	Grab	HexExMatl	<	5.9	mg/L
S06	24-Apr-13	Grab	Cyanide	<	0.05	mg/L
S06	24-Apr-13	Grab	SuspSolids		7.50	mg/L
S06	24-Apr-13	Grab	KjeldahN	<	0.5	mg/L
S06	24-Apr-13	Grab	NH3asN	<	0.2	mg/L
S06	24-Apr-13	Grab	N(CalcTot)		27.2	mg/L
S06	24-Apr-13	Grab	NO3/NO2asN		27.2	mg/L
S06	24-Apr-13	Grab	Ag	<	0.0002	mg/L
S06	24-Apr-13	Grab	Al		0.579	mg/L
S06	24-Apr-13	Grab	As	<	0.002	mg/L
S06	24-Apr-13	Grab	B		0.292	mg/L
S06	24-Apr-13	Grab	Ba		0.154	mg/L
S06	24-Apr-13	Grab	Be	<	0.0002	mg/L
S06	24-Apr-13	Grab	Ca		105	mg/L
S06	24-Apr-13	Grab	Cd		0.00188	mg/L
S06	24-Apr-13	Grab	Co		0.00107	mg/L
S06	24-Apr-13	Grab	Cr	<	0.002	mg/L
S06	24-Apr-13	Grab	Cu	<	0.002	mg/L
S06	24-Apr-13	Grab	Fe		0.537	mg/L
S06	24-Apr-13	Grab	Hg	<	0.053	ug/L
S06	24-Apr-13	Grab	K		2.67	mg/L
S06	24-Apr-13	Grab	Li		0.0733	mg/L
S06	24-Apr-13	Grab	Mg		14.8	mg/L
S06	24-Apr-13	Grab	Mn		0.538	mg/L
S06	24-Apr-13	Grab	Mo	<	0.0004	mg/L
S06	24-Apr-13	Grab	Na		22.2	mg/L
S06	24-Apr-13	Grab	Nb	<	0.2	mg/L
S06	24-Apr-13	Grab	Ni		0.00966	mg/L
S06	24-Apr-13	Grab	P	<	0.5	mg/L
S06	24-Apr-13	Grab	Pb	<	0.001	mg/L
S06	24-Apr-13	Grab	S		8.46	mg/L
S06	24-Apr-13	Grab	Sb	<	0.001	mg/L
S06	24-Apr-13	Grab	Se	<	0.004	mg/L
S06	24-Apr-13	Grab	Sr		0.303	mg/L
S06	24-Apr-13	Grab	Th	<	0.0002	mg/L
S06	24-Apr-13	Grab	Ti	<	0.05	mg/L
S06	24-Apr-13	Grab	Tl	<	0.0002	mg/L
S06	24-Apr-13	Grab	U		0.0961	mg/L
S06	24-Apr-13	Grab	V	<	0.02	mg/L
S06	24-Apr-13	Grab	Zn		0.00558	mg/L
S06	24-Apr-13	Grab	Zr	<	0.2	mg/L

Sector K
Outfall S06
(continued)

Location	Date Collected	Sample Type	Parameter		Result	Units
S06	24-Apr-13	Composite	COD		11.0	mg/L
S06	24-Apr-13	Composite	BOD	<	5.0	mg/L
S06	24-Apr-13	Composite	SuspSolids		13.5	mg/L
S06	24-Apr-13	Composite	KjeldahlN	<	0.5	mg/L
S06	24-Apr-13	Composite	NH3asN	<	0.2	mg/L
S06	24-Apr-13	Composite	N(CalcTot)		26.8	mg/L
S06	24-Apr-13	Composite	NO3/NO2asN		26.8	mg/L
S06	24-Apr-13	Composite	Cyanide	<	0.05	mg/L
S06	24-Apr-13	Composite	Ag	<	0.0002	mg/L
S06	24-Apr-13	Composite	Al		0.927	mg/L
S06	24-Apr-13	Composite	As	<	0.002	mg/L
S06	24-Apr-13	Composite	B		0.277	mg/L
S06	24-Apr-13	Composite	Ba		0.156	mg/L
S06	24-Apr-13	Composite	Be	<	0.0002	mg/L
S06	24-Apr-13	Composite	Ca		99.4	mg/L
S06	24-Apr-13	Composite	Cd		0.00321	mg/L
S06	24-Apr-13	Composite	Co		0.00137	mg/L
S06	24-Apr-13	Composite	Cr	<	0.002	mg/L
S06	24-Apr-13	Composite	Cu	<	0.002	mg/L
S06	24-Apr-13	Composite	Fe		0.691	mg/L
S06	24-Apr-13	Composite	Hg	<	0.053	ug/L
S06	24-Apr-13	Composite	K		2.96	mg/L
S06	24-Apr-13	Composite	Li		0.0689	mg/L
S06	24-Apr-13	Composite	Mg		14.5	mg/L
S06	24-Apr-13	Composite	Mn		0.661	mg/L
S06	24-Apr-13	Composite	Mo	<	0.0004	mg/L
S06	24-Apr-13	Composite	Na		21.5	mg/L
S06	24-Apr-13	Composite	Nb	<	0.2	mg/L
S06	24-Apr-13	Composite	Ni		0.0119	mg/L
S06	24-Apr-13	Composite	P	<	0.5	mg/L
S06	24-Apr-13	Composite	Pb	<	0.001	mg/L
S06	24-Apr-13	Composite	S		8.70	mg/L
S06	24-Apr-13	Composite	Sb	<	0.001	mg/L
S06	24-Apr-13	Composite	Se	<	0.004	mg/L
S06	24-Apr-13	Composite	Sr		0.304	mg/L
S06	24-Apr-13	Composite	Th	<	0.0002	mg/L
S06	24-Apr-13	Composite	Ti	<	0.05	mg/L
S06	24-Apr-13	Composite	Tl	<	0.0002	mg/L
S06	24-Apr-13	Composite	U		0.121	mg/L
S06	24-Apr-13	Composite	V	<	0.02	mg/L
S06	24-Apr-13	Composite	Zn		0.00871	mg/L
S06	24-Apr-13	Composite	Zr	<	0.2	mg/L

Sector L Outfall S17

Location	Date Collected	Sample Type	Parameter		Result	Units
S17	4-Apr-13	Field	pH		7.7	Std Units
S17	4-Apr-13	Grab	N(CalcTot)		1.61	mg/L
S17	4-Apr-13	Grab	NO3/NO2asN		1.61	mg/L
S17	4-Apr-13	Grab	SuspSolids		3.50	mg/L
S17	4-Apr-13	Grab	KjeldahN	<	0.5	mg/L
S17	4-Apr-13	Grab	NH3asN	<	0.2	mg/L
S17	4-Apr-13	Grab	Ag	<	0.0002	mg/L
S17	4-Apr-13	Grab	Al	<	0.2	mg/L
S17	4-Apr-13	Grab	As	<	0.002	mg/L
S17	4-Apr-13	Grab	B	<	0.1	mg/L
S17	4-Apr-13	Grab	Ba		0.0509	mg/L
S17	4-Apr-13	Grab	Be	<	0.0002	mg/L
S17	4-Apr-13	Grab	Ca		35.6	mg/L
S17	4-Apr-13	Grab	Cd	<	0.0002	mg/L
S17	4-Apr-13	Grab	Co	<	0.0002	mg/L
S17	4-Apr-13	Grab	Cr	<	0.002	mg/L
S17	4-Apr-13	Grab	Cu	<	0.002	mg/L
S17	4-Apr-13	Grab	Fe		0.103	mg/L
S17	4-Apr-13	Grab	K	<	2	mg/L
S17	4-Apr-13	Grab	Li	<	0.01	mg/L
S17	4-Apr-13	Grab	Mg		14.5	mg/L
S17	4-Apr-13	Grab	Mn		0.0159	mg/L
S17	4-Apr-13	Grab	Mo	<	0.0004	mg/L
S17	4-Apr-13	Grab	Na		0.785	mg/L
S17	4-Apr-13	Grab	Nb	<	0.2	mg/L
S17	4-Apr-13	Grab	Ni	<	0.002	mg/L
S17	4-Apr-13	Grab	P	<	0.5	mg/L
S17	4-Apr-13	Grab	Pb	<	0.001	mg/L
S17	4-Apr-13	Grab	S		1.80	mg/L
S17	4-Apr-13	Grab	Sb	<	0.001	mg/L
S17	4-Apr-13	Grab	Se	<	0.004	mg/L
S17	4-Apr-13	Grab	Sr		0.0464	mg/L
S17	4-Apr-13	Grab	Th	<	0.0002	mg/L
S17	4-Apr-13	Grab	Ti	<	0.05	mg/L
S17	4-Apr-13	Grab	Tl	<	0.0002	mg/L
S17	4-Apr-13	Grab	U		0.000476	mg/L
S17	4-Apr-13	Grab	V	<	0.02	mg/L
S17	4-Apr-13	Grab	Zn		0.00253	mg/L
S17	4-Apr-13	Grab	Zr	<	0.2	mg/L

Sector L
Outfall S17
(continued)

Location	Date Collected	Sample Type	Parameter		Result	Units
S17	4-Apr-13	Composite	N(CalcTot)		1.63	mg/L
S17	4-Apr-13	Composite	NO3/NO2asN		1.63	mg/L
S17	4-Apr-13	Composite	SuspSolids		1.00	mg/L
S17	4-Apr-13	Composite	KjeldahN	<	0.5	mg/L
S17	4-Apr-13	Composite	NH3asN	<	0.2	mg/L
S17	4-Apr-13	Composite	Ag	<	0.0002	mg/L
S17	4-Apr-13	Composite	Al	<	0.2	mg/L
S17	4-Apr-13	Composite	As	<	0.002	mg/L
S17	4-Apr-13	Composite	B	<	0.1	mg/L
S17	4-Apr-13	Composite	Ba		0.0490	mg/L
S17	4-Apr-13	Composite	Be	<	0.0002	mg/L
S17	4-Apr-13	Composite	Ca		35.4	mg/L
S17	4-Apr-13	Composite	Cd	<	0.0002	mg/L
S17	4-Apr-13	Composite	Co	<	0.0002	mg/L
S17	4-Apr-13	Composite	Cr	<	0.002	mg/L
S17	4-Apr-13	Composite	Cu	<	0.002	mg/L
S17	4-Apr-13	Composite	Fe		0.0684	mg/L
S17	4-Apr-13	Composite	K	<	2	mg/L
S17	4-Apr-13	Composite	Li	<	0.01	mg/L
S17	4-Apr-13	Composite	Mg		14.4	mg/L
S17	4-Apr-13	Composite	Mn		0.0118	mg/L
S17	4-Apr-13	Composite	Mo	<	0.0004	mg/L
S17	4-Apr-13	Composite	Na		0.841	mg/L
S17	4-Apr-13	Composite	Nb	<	0.2	mg/L
S17	4-Apr-13	Composite	Ni	<	0.002	mg/L
S17	4-Apr-13	Composite	P	<	0.5	mg/L
S17	4-Apr-13	Composite	Pb	<	0.001	mg/L
S17	4-Apr-13	Composite	S		1.76	mg/L
S17	4-Apr-13	Composite	Sb	<	0.001	mg/L
S17	4-Apr-13	Composite	Se	<	0.004	mg/L
S17	4-Apr-13	Composite	Sr		0.0455	mg/L
S17	4-Apr-13	Composite	Th	<	0.0002	mg/L
S17	4-Apr-13	Composite	Ti	<	0.05	mg/L
S17	4-Apr-13	Composite	Tl	<	0.0002	mg/L
S17	4-Apr-13	Composite	U		0.000518	mg/L
S17	4-Apr-13	Composite	V	<	0.02	mg/L
S17	4-Apr-13	Composite	Zn		0.00311	mg/L
S17	4-Apr-13	Composite	Zr	<	0.2	mg/L

Sector N Outfall S30

Location	Date Collected	Sample Type	Parameter		Result	Units
S30	21-Sep-13	Field	pH		8.1	Std Units
S30	21-Sep-13	Grab	HexExMatl	<	5.9	mg/L
S30	21-Sep-13	Grab	SuspSolids		13.5	mg/L
S30	21-Sep-13	Grab	BOD		5.15	mg/L
S30	21-Sep-13	Grab	COD		41.0	mg/L
S30	21-Sep-13	Grab	Ag		0.000546	mg/L
S30	21-Sep-13	Grab	Al		0.878	mg/L
S30	21-Sep-13	Grab	As	<	0.002	mg/L
S30	21-Sep-13	Grab	B	<	0.1	mg/L
S30	21-Sep-13	Grab	Ba		0.0625	mg/L
S30	21-Sep-13	Grab	Be	<	0.0005	mg/L
S30	21-Sep-13	Grab	Ca		40.7	mg/L
S30	21-Sep-13	Grab	Cd	<	0.0002	mg/L
S30	21-Sep-13	Grab	Co		0.000950	mg/L
S30	21-Sep-13	Grab	Cr	<	0.002	mg/L
S30	21-Sep-13	Grab	Cu		0.00724	mg/L
S30	21-Sep-13	Grab	Fe		0.545	mg/L
S30	21-Sep-13	Grab	Hg	<	0.053	ug/L
S30	21-Sep-13	Grab	K		2.77	mg/L
S30	21-Sep-13	Grab	Li	<	0.01	mg/L
S30	21-Sep-13	Grab	Mg		5.64	mg/L
S30	21-Sep-13	Grab	Mn		0.0206	mg/L
S30	21-Sep-13	Grab	Mo		0.00156	mg/L
S30	21-Sep-13	Grab	Na		0.993	mg/L
S30	21-Sep-13	Grab	Nb	<	0.2	mg/L
S30	21-Sep-13	Grab	Ni		0.00580	mg/L
S30	21-Sep-13	Grab	P	<	0.5	mg/L
S30	21-Sep-13	Grab	Pb		0.00364	mg/L
S30	21-Sep-13	Grab	S		19.4	mg/L
S30	21-Sep-13	Grab	Sb	<	0.001	mg/L
S30	21-Sep-13	Grab	Se	<	0.004	mg/L
S30	21-Sep-13	Grab	Sr		0.129	mg/L
S30	21-Sep-13	Grab	Th	<	0.0002	mg/L
S30	21-Sep-13	Grab	Ti	<	0.05	mg/L
S30	21-Sep-13	Grab	Tl	<	0.0002	mg/L
S30	21-Sep-13	Grab	V	<	0.02	mg/L
S30	21-Sep-13	Grab	Zn		0.0146	mg/L
S30	21-Sep-13	Grab	Zr	<	0.2	mg/L

Sector N
Outfall S30
(continued)

Location	Date Collected	Sample Type	Parameter	Result	Units
S30	21-Sep-13	Grab	U	0.000490	mg/L
S30	21-Sep-13	Grab	U-234	0.098	pCi/L
S30	21-Sep-13	Grab	U-235	-0.097	pCi/L
S30	21-Sep-13	Grab	U-236	0.019	pCi/L
S30	21-Sep-13	Grab	U-238	0.16	pCi/L
S30	21-Sep-13	Grab	PCB	J 0.5	ug/L
S30	21-Sep-13	Grab	PCB-1016	U 0.5	ug/L
S30	21-Sep-13	Grab	PCB-1221	U 0.5	ug/L
S30	21-Sep-13	Grab	PCB-1232	U 0.5	ug/L
S30	21-Sep-13	Grab	PCB-1242	U 0.5	ug/L
S30	21-Sep-13	Grab	PCB-1248	U 0.5	ug/L
S30	21-Sep-13	Grab	PCB-1254	U 0.5	ug/L
S30	21-Sep-13	Grab	PCB-1260	U 0.5	ug/L
S30	21-Sep-13	Grab	PCB-1262	U 0.5	ug/L
S30	21-Sep-13	Grab	PCB-1268	U 0.5	ug/L
S30	21-Sep-13	Grab	2,4,5,6-tetrachloro- m-xylene	0.56	ug/L
S30	21-Sep-13	Grab	Decachloro- biphenyl	0.84	ug/L

Sector N
Outfall S30
(continued)

Location	Date Collected	Sample Type	Parameter	Result	Units
S30	21-Sep-13	Composite	SuspSolids	11.5	mg/L
S30	21-Sep-13	Composite	DissSolids	144	mg/L
S30	21-Sep-13	Composite	BOD	5.7	mg/L
S30	21-Sep-13	Composite	COD	43.0	mg/L
S30	21-Sep-13	Composite	Ag	0.000386	mg/L
S30	21-Sep-13	Composite	Al	0.914	mg/L
S30	21-Sep-13	Composite	As	< 0.002	mg/L
S30	21-Sep-13	Composite	B	< 0.1	mg/L
S30	21-Sep-13	Composite	Ba	0.0493	mg/L
S30	21-Sep-13	Composite	Be	< 0.0005	mg/L
S30	21-Sep-13	Composite	Ca	30.3	mg/L
S30	21-Sep-13	Composite	Cd	0.000210	mg/L
S30	21-Sep-13	Composite	Co	0.000870	mg/L
S30	21-Sep-13	Composite	Cr	< 0.002	mg/L
S30	21-Sep-13	Composite	Cu	0.00679	mg/L
S30	21-Sep-13	Composite	Fe	0.540	mg/L
S30	21-Sep-13	Composite	Hg	< 0.054	ug/L
S30	21-Sep-13	Composite	K	2.67	mg/L
S30	21-Sep-13	Composite	Li	< 0.01	mg/L
S30	21-Sep-13	Composite	Mg	4.33	mg/L
S30	21-Sep-13	Composite	Mn	0.0171	mg/L
S30	21-Sep-13	Composite	Mo	0.00109	mg/L
S30	21-Sep-13	Composite	Na	0.700	mg/L
S30	21-Sep-13	Composite	Nb	< 0.2	mg/L
S30	21-Sep-13	Composite	Ni	0.00478	mg/L
S30	21-Sep-13	Composite	P	< 0.5	mg/L
S30	21-Sep-13	Composite	Pb	0.00249	mg/L
S30	21-Sep-13	Composite	S	13.0	mg/L
S30	21-Sep-13	Composite	Sb	< 0.001	mg/L
S30	21-Sep-13	Composite	Se	< 0.004	mg/L
S30	21-Sep-13	Composite	Sr	0.0980	mg/L
S30	21-Sep-13	Composite	Th	< 0.0002	mg/L
S30	21-Sep-13	Composite	Ti	< 0.05	mg/L
S30	21-Sep-13	Composite	Tl	< 0.0002	mg/L
S30	21-Sep-13	Composite	V	< 0.02	mg/L
S30	21-Sep-13	Composite	Zn	0.0156	mg/L
S30	21-Sep-13	Composite	Zr	< 0.2	mg/L

Sector N
Outfall S30
(continued)

Location	Date Collected	Sample Type	Parameter		Result	Units
S30	21-Sep-13	Composite	U		0.000418	mg/L
S30	21-Sep-13	Composite	U-234		N/A	wt %
S30	21-Sep-13	Composite	U235%		N/A	wt %
S30	21-Sep-13	Composite	U-236		N/A	wt %
S30	21-Sep-13	Composite	U-238		N/A	wt %
S30	21-Sep-13	Composite	U-235		0.078	pCi/L
S30	21-Sep-13	Composite	U-236		0.0	pCi/L
S30	21-Sep-13	Composite	U-238		0.95	pCi/L
S30	21-Sep-13	Composite	U-234		0.62	pCi/L
S30	21-Sep-13	Composite	PCB	U	0.5	ug/L
S30	21-Sep-13	Composite	PCB-1016	U	0.5	ug/L
S30	21-Sep-13	Composite	PCB-1221	U	0.5	ug/L
S30	21-Sep-13	Composite	PCB-1232	U	0.5	ug/L
S30	21-Sep-13	Composite	PCB-1242	U	0.5	ug/L
S30	21-Sep-13	Composite	PCB-1248	U	0.5	ug/L
S30	21-Sep-13	Composite	PCB-1254	U	0.5	ug/L
S30	21-Sep-13	Composite	PCB-1260	U	0.5	ug/L
S30	21-Sep-13	Composite	PCB-1262	U	0.5	ug/L
S30	21-Sep-13	Composite	PCB-1268	U	0.5	ug/L

Appendix C

**2013 Storm Water Analytical Results,
In-Stream Monitoring Locations and
Major Outfalls**

In-Stream Monitoring Location C03

Location	Date Collected	Sample Type	Parameter		Result	Units
C03	18-Mar-13	Field	pH		8.1	Std Units
C03	18-Mar-13	Grab	Es. coli		22	col/100ml
C03	18-Mar-13	Grab	HexExMatl	<	6.2	mg/l.
C03	18-Mar-13	Composite	SuspSolids		18.5	mg/L
C03	18-Mar-13	Composite	KjeldahlN	<	0.5	mg/L
C03	18-Mar-13	Composite	Surfactants	<	0.10	mg/l.
C03	18-Mar-13	Composite	NO3/NO2asN		1.53	mg/L
C03	18-Mar-13	Composite	Ag	<	0.0002	mg/L
C03	18-Mar-13	Composite	Al		0.591	mg/l.
C03	18-Mar-13	Composite	As	<	0.002	mg/L
C03	18-Mar-13	Composite	B	<	0.1	mg/L
C03	18-Mar-13	Composite	Ba		0.0432	mg/L
C03	18-Mar-13	Composite	Be	<	0.0002	mg/L
C03	18-Mar-13	Composite	Ca		34.8	mg/L
C03	18-Mar-13	Composite	Cd		0.000290	mg/L
C03	18-Mar-13	Composite	Co		0.000512	mg/l.
C03	18-Mar-13	Composite	Cr		0.00247	mg/L
C03	18-Mar-13	Composite	Cu		0.0114	mg/l.
C03	18-Mar-13	Composite	Fe		0.605	mg/L
C03	18-Mar-13	Composite	Hg		0.000901	mg/L
C03	18-Mar-13	Composite	K	<	2	mg/L
C03	18-Mar-13	Composite	Li		0.0308	mg/L
C03	18-Mar-13	Composite	Mg		8.94	mg/L
C03	18-Mar-13	Composite	Mn		0.0776	mg/L
C03	18-Mar-13	Composite	Mo		0.00456	mg/L
C03	18-Mar-13	Composite	Na		24.9	mg/L
C03	18-Mar-13	Composite	Nb	<	0.2	mg/l.
C03	18-Mar-13	Composite	Ni		0.00205	mg/L
C03	18-Mar-13	Composite	P	<	0.5	mg/L
C03	18-Mar-13	Composite	Pb		0.00351	mg/L
C03	18-Mar-13	Composite	S		7.21	mg/L
C03	18-Mar-13	Composite	Sb	<	0.001	mg/L
C03	18-Mar-13	Composite	Se	<	0.004	mg/L
C03	18-Mar-13	Composite	Sr		0.0946	mg/L
C03	18-Mar-13	Composite	Th	<	0.0002	mg/L
C03	18-Mar-13	Composite	Ti	<	0.05	mg/L
C03	18-Mar-13	Composite	Tl	<	0.0002	mg/L
C03	18-Mar-13	Composite	V	<	0.02	mg/L
C03	18-Mar-13	Composite	Zn		0.0597	mg/L
C03	18-Mar-13	Composite	Zr	<	0.2	mg/L

**In-Stream Monitoring
Location C03
(continued)**

Location	Date Collected	Sample Type	Parameter		Result	Units
C03	18-Mar-13	Composite	PCB	U	0.53	ug/L
C03	18-Mar-13	Composite	PCB-1016	U	0.53	ug/L
C03	18-Mar-13	Composite	PCB-1221	U	0.53	ug/L
C03	18-Mar-13	Composite	PCB-1232	U	0.53	ug/L
C03	18-Mar-13	Composite	PCB-1242	U	0.53	ug/L
C03	18-Mar-13	Composite	PCB-1248	U	0.53	ug/L
C03	18-Mar-13	Composite	PCB-1254	U	0.53	ug/L
C03	18-Mar-13	Composite	PCB-1260	U	0.53	ug/L
C03	18-Mar-13	Composite	PCB-1262	U	0.53	ug/L
C03	18-Mar-13	Composite	PCB-1268	U	0.53	ug/L
C03	18-Mar-13	Composite	U		0.0137	mg/L
C03	18-Mar-13	Composite	U-234	<	0.005	wt %
C03	18-Mar-13	Composite	U235%		0.373	wt %
C03	18-Mar-13	Composite	U-236		0.0206	wt %
C03	18-Mar-13	Composite	U-238		99.6	wt %

In-Stream Monitoring
Location C11
(continued)

Location	Date Collected	Sample Type	Parameter		Result	Units
C11	18-Mar-13	Composite	U		0.0164	mg/L
C11	18-Mar-13	Composite	U-234	<	0.005	wt %
C11	18-Mar-13	Composite	U235%		0.356	wt %
C11	18-Mar-13	Composite	U-236	<	0.005	wt %
C11	18-Mar-13	Composite	U-238		99.6	wt %
C11	18-Mar-13	Composite	PCB	U	0.53	ug/L
C11	18-Mar-13	Composite	PCB-1016	U	0.53	ug/L
C11	18-Mar-13	Composite	PCB-1221	U	0.53	ug/L
C11	18-Mar-13	Composite	PCB-1232	U	0.53	ug/L
C11	18-Mar-13	Composite	PCB-1242	U	0.53	ug/L
C11	18-Mar-13	Composite	PCB-1248	U	0.53	ug/L
C11	18-Mar-13	Composite	PCB-1254	U	0.53	ug/L
C11	18-Mar-13	Composite	PCB-1260	U	0.53	ug/L
C11	18-Mar-13	Composite	PCB-1262	U	0.53	ug/L
C11	18-Mar-13	Composite	PCB-1268	U	0.53	ug/L

Raw Water Flow Augmentation

Location	Date Collected	Sample Type	Parameter		Result	Units
RAWH2O	18-Mar-13	Composite	KjeldahlN	<	0.5	mg/L
RAWH2O	18-Mar-13	Composite	Surfactants	<	0.10	mg/L
RAWH2O	18-Mar-13	Composite	NO3/NO2asN		0.491	mg/L
RAWH2O	18-Mar-13	Composite	SuspSolids	<	1.0	mg/L
RAWH2O	18-Mar-13	Composite	Ag	<	0.0002	mg/L
RAWH2O	18-Mar-13	Composite	Al	<	0.2	mg/L
RAWH2O	18-Mar-13	Composite	As	<	0.002	mg/L
RAWH2O	18-Mar-13	Composite	B	<	0.1	mg/L
RAWH2O	18-Mar-13	Composite	Ba		0.0317	mg/L
RAWH2O	18-Mar-13	Composite	Be	<	0.0002	mg/L
RAWH2O	18-Mar-13	Composite	Ca		36.1	mg/L
RAWH2O	18-Mar-13	Composite	Cd	<	0.0002	mg/L
RAWH2O	18-Mar-13	Composite	Co	<	0.0002	mg/L
RAWH2O	18-Mar-13	Composite	Cr	<	0.002	mg/L
RAWH2O	18-Mar-13	Composite	Cu	<	0.002	mg/L
RAWH2O	18-Mar-13	Composite	Fe		0.135	mg/L
RAWH2O	18-Mar-13	Composite	Hg	<	0.053	ug/L
RAWH2O	18-Mar-13	Composite	K	<	2	mg/L
RAWH2O	18-Mar-13	Composite	Li	<	0.01	mg/L
RAWH2O	18-Mar-13	Composite	Mg		10.3	mg/L
RAWH2O	18-Mar-13	Composite	Mn		0.0217	mg/L
RAWH2O	18-Mar-13	Composite	Mo	<	0.0004	mg/L
RAWH2O	18-Mar-13	Composite	Na		5.63	mg/L
RAWH2O	18-Mar-13	Composite	Nb	<	0.2	mg/L
RAWH2O	18-Mar-13	Composite	Ni	<	0.002	mg/L
RAWH2O	18-Mar-13	Composite	P	<	0.5	mg/L
RAWH2O	18-Mar-13	Composite	Pb	<	0.001	mg/L
RAWH2O	18-Mar-13	Composite	S		7.61	mg/L
RAWH2O	18-Mar-13	Composite	Sb	<	0.001	mg/L
RAWH2O	18-Mar-13	Composite	Se	<	0.004	mg/L
RAWH2O	18-Mar-13	Composite	Sr		0.110	mg/L
RAWH2O	18-Mar-13	Composite	Th	<	0.0002	mg/L
RAWH2O	18-Mar-13	Composite	Ti	<	0.05	mg/L
RAWH2O	18-Mar-13	Composite	Tl	<	0.0002	mg/L
RAWH2O	18-Mar-13	Composite	V	<	0.02	mg/L
RAWH2O	18-Mar-13	Composite	Zn		0.00276	mg/L
RAWH2O	18-Mar-13	Composite	Zr	<	0.2	mg/L

Raw Water Flow Augmentation (continued)

Location	Date Collected	Sample Type	Parameter		Result	Units
RAWH2O	18-Mar-13	Composite	U		0.000212	mg/L
RAWH2O	18-Mar-13	Composite	U-234		N/A	wt %
RAWH2O	18-Mar-13	Composite	U235%		N/A	wt %
RAWH2O	18-Mar-13	Composite	U-236		N/A	wt %
RAWH2O	18-Mar-13	Composite	U-238		N/A	wt %
RAWH2O	18-Mar-13	Composite	PCB	U	0.46	ug/L
RAWH2O	18-Mar-13	Composite	PCB-1016	U	0.46	ug/L
RAWH2O	18-Mar-13	Composite	PCB-1221	U	0.46	ug/l.
RAWH2O	18-Mar-13	Composite	PCB-1232	U	0.46	ug/L
RAWH2O	18-Mar-13	Composite	PCB-1242	U	0.46	ug/L
RAWH2O	18-Mar-13	Composite	PCB-1248	U	0.46	ug/L
RAWH2O	18-Mar-13	Composite	PCB-1254	U	0.46	ug/l.
RAWH2O	18-Mar-13	Composite	PCB-1260	U	0.46	ug/l.
RAWH2O	18-Mar-13	Composite	PCB-1262	U	0.46	ug/L
RAWH2O	18-Mar-13	Composite	PCB-1268	U	0.46	ug/L

Major Outfall 021

Location	Date Collected	Sample type	Parameter		Result	Units
021	18-Mar-13	Field	pH		7.9	Std Units
021	18-Mar-13	Grab	Es. coli		210	col/100ml
021	18-Mar-13	Grab	HexExMatl	<	5.7	mg/L
021	18-Mar-13	Grab	SuspSolids		66.5	mg/L
021	18-Mar-13	Grab	Surfactants		0.255	mg/l.
021	18-Mar-13	Grab	KjeldahlN		0.582	mg/L
021	18-Mar-13	Grab	NO3/NO2asN		0.975	mg/L
021	18-Mar-13	Grab	N(CalcTot)		1.56	mg/L
021	18-Mar-13	Grab	Ag		0.000206	mg/l.
021	18-Mar-13	Grab	Al		2.27	mg/L
021	18-Mar-13	Grab	As	<	0.002	mg/L
021	18-Mar-13	Grab	B	<	0.1	mg/L
021	18-Mar-13	Grab	Ba		0.129	mg/L
021	18-Mar-13	Grab	Be	<	0.0002	mg/L
021	18-Mar-13	Grab	Ca		57	mg/L
021	18-Mar-13	Grab	Cd	<	0.0002	mg/l.
021	18-Mar-13	Grab	Co		0.00191	mg/L
021	18-Mar-13	Grab	Cr		0.0065	mg/L
021	18-Mar-13	Grab	Cu		0.033	mg/L
021	18-Mar-13	Grab	Fe		4.11	mg/L
021	18-Mar-13	Grab	Hg		0.000253	mg/L
021	18-Mar-13	Grab	K		4.3	mg/L
021	18-Mar-13	Grab	Li	<	0.01	mg/L
021	18-Mar-13	Grab	Mg		11.6	mg/L
021	18-Mar-13	Grab	Mn		0.239	mg/l.
021	18-Mar-13	Grab	Mo		0.00258	mg/L
021	18-Mar-13	Grab	Na		102	mg/L
021	18-Mar-13	Grab	Nb	<	0.2	mg/L
021	18-Mar-13	Grab	Ni		0.00458	mg/L
021	18-Mar-13	Grab	P	<	0.5	mg/L
021	18-Mar-13	Grab	Pb		0.00572	mg/L
021	18-Mar-13	Grab	S		12.5	mg/L
021	18-Mar-13	Grab	Sb	<	0.001	mg/l.
021	18-Mar-13	Grab	Se	<	0.004	mg/L
021	18-Mar-13	Grab	Sr		0.157	mg/L
021	18-Mar-13	Grab	Th		0.00033	mg/l.
021	18-Mar-13	Grab	Ti		0.0965	mg/L
021	18-Mar-13	Grab	Tl	<	0.0002	mg/L
021	18-Mar-13	Grab	U		0.00694	mg/L
021	18-Mar-13	Grab	V	<	0.02	mg/L
021	18-Mar-13	Grab	Zn		0.109	mg/L
021	18-Mar-13	Grab	Zr	<	0.2	mg/L

Major Outfall 021 (continued)

Location	Date Collected	Sample type	Parameter		Result	Units
021	18-Mar-13	Grab	Alpha		8.6	pCi/L
021	18-Mar-13	Grab	Beta		14	pCi/L
021	18-Mar-13	Grab	U		0.0056	mg/L
021	18-Mar-13	Grab	U-234	<	0.005	wt %
021	18-Mar-13	Grab	U235%		1.01	wt %
021	18-Mar-13	Grab	U-236		0.00763	wt %
021	18-Mar-13	Grab	U-238		99	wt %
021	18-Mar-13	Grab	U-235		0.064	pCi/L
021	18-Mar-13	Grab	U-236		0.00001	pCi/L
021	18-Mar-13	Grab	U-238		1.4	pCi/L
021	18-Mar-13	Grab	U-234		1.8	pCi/L
021	18-Mar-13	Grab	PCB	J	0.088	ug/L
021	18-Mar-13	Grab	PCB-1016	U	0.5	ug/L
021	18-Mar-13	Grab	PCB-1221	U	0.5	ug/L
021	18-Mar-13	Grab	PCB-1232	U	0.5	ug/L
021	18-Mar-13	Grab	PCB-1242	U	0.5	ug/L
021	18-Mar-13	Grab	PCB-1248	U	0.5	ug/L
021	18-Mar-13	Grab	PCB-1254	U	0.5	ug/L
021	18-Mar-13	Grab	PCB-1260	J	0.088	ug/L
021	18-Mar-13	Grab	PCB-1262	U	0.5	ug/L
021	18-Mar-13	Grab	PCB-1268	U	0.5	ug/L

Major Outfall 021 (continued)

Location	Date Collected	Sample type	Parameter		Result	Units
021	18-Mar-13	Composite	SuspSolids		22.5	mg/l.
021	18-Mar-13	Composite	Surfactants		0.207	mg/L
021	18-Mar-13	Composite	KjeldahN		0.648	mg/L
021	18-Mar-13	Composite	NO3/NO2asN		0.537	mg/L
021	18-Mar-13	Composite	N(CalcTot)		1.18	mg/L
021	18-Mar-13	Composite	Ag	<	0.0002	mg/l.
021	18-Mar-13	Composite	Al		1.26	mg/L
021	18-Mar-13	Composite	As	<	0.002	mg/L
021	18-Mar-13	Composite	B	<	0.1	mg/l.
021	18-Mar-13	Composite	Ba		0.0599	mg/L
021	18-Mar-13	Composite	Be	<	0.0002	mg/L
021	18-Mar-13	Composite	Ca		30.3	mg/l.
021	18-Mar-13	Composite	Cd	<	0.0002	mg/L
021	18-Mar-13	Composite	Co		0.000996	mg/L
021	18-Mar-13	Composite	Cr		0.00477	mg/L
021	18-Mar-13	Composite	Cu		0.0218	mg/L
021	18-Mar-13	Composite	Fe		1.62	mg/L
021	18-Mar-13	Composite	Hg		0.0761	ug/L
021	18-Mar-13	Composite	K		2.23	mg/L
021	18-Mar-13	Composite	Li	<	0.01	mg/L
021	18-Mar-13	Composite	Mg		5.45	mg/l.
021	18-Mar-13	Composite	Mn		0.153	mg/L
021	18-Mar-13	Composite	Mo		0.00955	mg/L
021	18-Mar-13	Composite	Na		48.9	mg/L
021	18-Mar-13	Composite	Nb	<	0.2	mg/l.
021	18-Mar-13	Composite	Ni		0.0028	mg/L
021	18-Mar-13	Composite	P	<	0.5	mg/l.
021	18-Mar-13	Composite	Pb		0.00698	mg/L
021	18-Mar-13	Composite	S		5.46	mg/L
021	18-Mar-13	Composite	Sb	<	0.001	mg/L
021	18-Mar-13	Composite	Se	<	0.004	mg/L
021	18-Mar-13	Composite	Sr		0.0704	mg/L
021	18-Mar-13	Composite	Th	<	0.0002	mg/L
021	18-Mar-13	Composite	Ti	<	0.05	mg/L
021	18-Mar-13	Composite	Tl	<	0.0002	mg/L
021	18-Mar-13	Composite	V	<	0.02	mg/l.
021	18-Mar-13	Composite	Zn		0.0883	mg/L
021	18-Mar-13	Composite	Zr	<	0.2	mg/L

Major Outfall 021 (continued)

Location	Date Collected	Sample type	Parameter		Result	Units
021	18-Mar-13	Composite	Alpha		1.8	pCi/L
021	18-Mar-13	Composite	Beta		9.6	pCi/L
021	18-Mar-13	Composite	U		0.0025	mg/L
021	18-Mar-13	Composite	U-234	<	0.005	wt %
021	18-Mar-13	Composite	U235%		1.74	wt %
021	18-Mar-13	Composite	U-236	<	0.005	wt %
021	18-Mar-13	Composite	U-238		98.3	wt %
021	18-Mar-13	Composite	U-234		0.96	pCi/L
021	18-Mar-13	Composite	U-235		0.014	pCi/L
021	18-Mar-13	Composite	U-236		0.00001	pCi/L
021	18-Mar-13	Composite	U-238		0.72	pCi/L
021	18-Mar-13	Composite	PCB	U	0.47	ug/L
021	18-Mar-13	Composite	PCB-1016	U	0.47	ug/L
021	18-Mar-13	Composite	PCB-1221	U	0.47	ug/L
021	18-Mar-13	Composite	PCB-1232	U	0.47	ug/L
021	18-Mar-13	Composite	PCB-1242	U	0.47	ug/L
021	18-Mar-13	Composite	PCB-1248	U	0.47	ug/L
021	18-Mar-13	Composite	PCB-1254	U	0.47	ug/L
021	18-Mar-13	Composite	PCB-1260	U	0.47	ug/L
021	18-Mar-13	Composite	PCB-1262	U	0.47	ug/L
021	18-Mar-13	Composite	PCB-1268	U	0.47	ug/L

Major Outfall 109

Location	Date Collected	Sample Type	Parameter		Result	Units
109	18-Mar-13	Field	pH		7.7	Std Units
109	18-Mar-13	Grab	Es. coli		63	col/100ml
109	18-Mar-13	Grab	HexExMatl	<	6	mg/L
109	18-Mar-13	Grab	SuspSolids		126	mg/L
109	18-Mar-13	Grab	Surfactants		0.29	mg/L
109	18-Mar-13	Grab	KjeldahlN		0.872	mg/L
109	18-Mar-13	Grab	NO3/NO2asN		0.429	mg/L
109	18-Mar-13	Grab	N(CalcTot)		1.3	mg/L
109	18-Mar-13	Grab	Ag	<	0.0002	mg/L
109	18-Mar-13	Grab	Al		1.62	mg/L
109	18-Mar-13	Grab	As	<	0.002	mg/L
109	18-Mar-13	Grab	B	<	0.1	mg/L
109	18-Mar-13	Grab	Ba		0.0451	mg/L
109	18-Mar-13	Grab	Be	<	0.0002	mg/L
109	18-Mar-13	Grab	Ca		21	mg/L
109	18-Mar-13	Grab	Cd	<	0.0002	mg/L
109	18-Mar-13	Grab	Co		0.000784	mg/L
109	18-Mar-13	Grab	Cr		0.00507	mg/L
109	18-Mar-13	Grab	Cu		0.0129	mg/L
109	18-Mar-13	Grab	Fe		2.01	mg/L
109	18-Mar-13	Grab	Hg		0.0865	ug/L
109	18-Mar-13	Grab	K	<	2	mg/L
109	18-Mar-13	Grab	Li	<	0.01	mg/L
109	18-Mar-13	Grab	Mg		5.26	mg/L
109	18-Mar-13	Grab	Mn		0.109	mg/L
109	18-Mar-13	Grab	Mo		0.000596	mg/L
109	18-Mar-13	Grab	Na		54.5	mg/L
109	18-Mar-13	Grab	Nb	<	0.2	mg/L
109	18-Mar-13	Grab	Ni		0.00269	mg/L
109	18-Mar-13	Grab	P	<	0.5	mg/L
109	18-Mar-13	Grab	Pb		0.00493	mg/L
109	18-Mar-13	Grab	S		3.9	mg/L
109	18-Mar-13	Grab	Sb		0.00102	mg/L
109	18-Mar-13	Grab	Se	<	0.004	mg/L
109	18-Mar-13	Grab	Sr		0.0427	mg/L
109	18-Mar-13	Grab	Th	<	0.0002	mg/L
109	18-Mar-13	Grab	Ti		0.0719	mg/L
109	18-Mar-13	Grab	Tl	<	0.0002	mg/L
109	18-Mar-13	Grab	V	<	0.02	mg/L
109	18-Mar-13	Grab	Zn		0.126	mg/L
109	18-Mar-13	Grab	Zr	<	0.2	mg/L

Major Outfall 109 (continued)

Location	Date Collected	Sample Type	Parameter	Result	Units
109	18-Mar-13	Grab	U	0.000756	mg/L
109	18-Mar-13	Grab	Alpha	18	pCi/L
109	18-Mar-13	Grab	Beta	17	pCi/L
109	18-Mar-13	Grab	U-234	N/A	wt %
109	18-Mar-13	Grab	U-235%	N/A	wt %
109	18-Mar-13	Grab	U-236	N/A	wt %
109	18-Mar-13	Grab	U-238	N/A	wt %
109	18-Mar-13	Grab	U-234	8.7	pCi/L
109	18-Mar-13	Grab	U-235	0.28	pCi/L
109	18-Mar-13	Grab	U-236	0.12	pCi/L
109	18-Mar-13	Grab	U-238	0.32	pCi/L
109	18-Mar-13	Grab	PCB	U	ug/L
109	18-Mar-13	Grab	PCB-1016	U	ug/L
109	18-Mar-13	Grab	PCB-1221	U	ug/L
109	18-Mar-13	Grab	PCB-1232	U	ug/L
109	18-Mar-13	Grab	PCB-1242	U	ug/L
109	18-Mar-13	Grab	PCB-1248	U	ug/L
109	18-Mar-13	Grab	PCB-1254	U	ug/L
109	18-Mar-13	Grab	PCB-1260	U	ug/L
109	18-Mar-13	Grab	PCB-1262	U	ug/L
109	18-Mar-13	Grab	PCB-1268	U	ug/L

Major Outfall 109 (continued)

Location	Date Collected	Sample Type	Parameter		Result	Units
109	18-Mar-13	Composite	SuspSolids		35.5	mg/l.
109	18-Mar-13	Composite	Surfactants		0.239	mg/l.
109	18-Mar-13	Composite	KjeldahlN		0.693	mg/L
109	18-Mar-13	Composite	NO3/NO2asN		0.505	mg/L
109	18-Mar-13	Composite	N(CalcTot)		1.2	mg/L
109	18-Mar-13	Composite	Ag	<	0.0002	mg/L
109	18-Mar-13	Composite	Al		1.37	mg/l.
109	18-Mar-13	Composite	As	<	0.002	mg/L
109	18-Mar-13	Composite	B	<	0.1	mg/L
109	18-Mar-13	Composite	Ba		0.0617	mg/L
109	18-Mar-13	Composite	Be	<	0.0002	mg/L
109	18-Mar-13	Composite	Ca		35.3	mg/L
109	18-Mar-13	Composite	Cd		0.00073	mg/L
109	18-Mar-13	Composite	Co		0.00108	mg/L
109	18-Mar-13	Composite	Cr		0.00439	mg/l.
109	18-Mar-13	Composite	Cu		0.012	mg/L
109	18-Mar-13	Composite	Fe		2.26	mg/l.
109	18-Mar-13	Composite	Hg		0.0589	ug/L
109	18-Mar-13	Composite	K		2.24	mg/L
109	18-Mar-13	Composite	Li	<	0.01	mg/L
109	18-Mar-13	Composite	Mg		7.83	mg/L
109	18-Mar-13	Composite	Mn		0.198	mg/L
109	18-Mar-13	Composite	Mo		0.000956	mg/L
109	18-Mar-13	Composite	Na		61.9	mg/L
109	18-Mar-13	Composite	Nb	<	0.2	mg/l.
109	18-Mar-13	Composite	Ni		0.0034	mg/l.
109	18-Mar-13	Composite	P	<	0.5	mg/L
109	18-Mar-13	Composite	Pb		0.00502	mg/L
109	18-Mar-13	Composite	S		6.53	mg/L
109	18-Mar-13	Composite	Sb		0.00606	mg/L
109	18-Mar-13	Composite	Se	<	0.004	mg/l.
109	18-Mar-13	Composite	Sr		0.0838	mg/L
109	18-Mar-13	Composite	Th	<	0.0002	mg/l.
109	18-Mar-13	Composite	Ti		0.0668	mg/L
109	18-Mar-13	Composite	Tl	<	0.0002	mg/L
109	18-Mar-13	Composite	V	<	0.02	mg/L
109	18-Mar-13	Composite	Zn		0.0942	mg/L
109	18-Mar-13	Composite	Zr	<	0.2	mg/l.

Major Outfall 109 (continued)

Location	Date Collected	Sample Type	Parameter		Result	Units
109	18-Mar-13	Composite	U		0.00148	mg/L
109	18-Mar-13	Composite	Alpha		8.3	pCi/L
109	18-Mar-13	Composite	Beta		4.9	pCi/L
109	18-Mar-13	Composite	U-234	<	0.005	wt %
109	18-Mar-13	Composite	U235%		6.07	wt %
109	18-Mar-13	Composite	U-236		0.21	wt %
109	18-Mar-13	Composite	U-238		93.7	wt %
109	18-Mar-13	Composite	U-235		0.21	pCi/L
109	18-Mar-13	Composite	U-236		0.012	pCi/L
109	18-Mar-13	Composite	U-238		0.47	pCi/L
109	18-Mar-13	Composite	U-234		4.2	pCi/L
109	18-Mar-13	Composite	PCB	U	0.46	ug/L
109	18-Mar-13	Composite	PCB-1016	U	0.46	ug/L
109	18-Mar-13	Composite	PCB-1221	U	0.46	ug/L
109	18-Mar-13	Composite	PCB-1232	U	0.46	ug/L
109	18-Mar-13	Composite	PCB-1242	U	0.46	ug/L
109	18-Mar-13	Composite	PCB-1248	U	0.46	ug/L
109	18-Mar-13	Composite	PCB-1254	U	0.46	ug/L
109	18-Mar-13	Composite	PCB-1260	U	0.46	ug/L
109	18-Mar-13	Composite	PCB-1262	U	0.46	ug/L
109	18-Mar-13	Composite	PCB-1268	U	0.46	ug/L

Major Outfall 200

Location	Date Collected	Sample Type	Parameter		Result	Units
200	2013/03/18	Field	pH		7.7	Std. Units
200	2013/03/18	Grab	Es. coli		700	col/100ml
200	2013/03/18	Grab	HexExMatl	<	6	mg/L
200	2013/03/18	Grab	KjeldahlN		0.837	mg/l.
200	2013/03/18	Grab	NO3/NO2asN		3.29	mg/L
200	2013/03/18	Grab	N(CalcTot)		4.13	mg/l.
200	2013/03/18	Grab	SuspSolids		55	mg/L
200	2013/03/18	Grab	Ag	<	0.0002	mg/l.
200	2013/03/18	Grab	Al		1.06	mg/l.
200	2013/03/18	Grab	As	<	0.002	mg/l.
200	2013/03/18	Grab	B	<	0.1	mg/L
200	2013/03/18	Grab	Ba		0.0692	mg/L
200	2013/03/18	Grab	Be	<	0.0002	mg/L
200	2013/03/18	Grab	Ca		51.7	mg/L
200	2013/03/18	Grab	Cd		0.00142	mg/L
200	2013/03/18	Grab	Co		0.00154	mg/L
200	2013/03/18	Grab	Cr		0.0039	mg/L
200	2013/03/18	Grab	Cu		0.044	mg/L
200	2013/03/18	Grab	Fe		1.59	mg/L
200	2013/03/18	Grab	Hg		0.00257	mg/l.
200	2013/03/18	Grab	K		2.7	mg/L
200	2013/03/18	Grab	Li		0.0244	mg/L
200	2013/03/18	Grab	Mg		11.5	mg/l.
200	2013/03/18	Grab	Mn		0.245	mg/l.
200	2013/03/18	Grab	Mo		0.0038	mg/l.
200	2013/03/18	Grab	Na		27	mg/L
200	2013/03/18	Grab	Nb	<	0.2	mg/L
200	2013/03/18	Grab	Ni		0.00468	mg/l.
200	2013/03/18	Grab	P	<	0.5	mg/L
200	2013/03/18	Grab	Pb		0.0102	mg/l.
200	2013/03/18	Grab	S		8.98	mg/l.
200	2013/03/18	Grab	Sb	<	0.001	mg/L
200	2013/03/18	Grab	Se	<	0.004	mg/L
200	2013/03/18	Grab	Sr		0.126	mg/l.
200	2013/03/18	Grab	Th	<	0.0002	mg/L
200	2013/03/18	Grab	Ti	<	0.05	mg/L
200	2013/03/18	Grab	Tl	<	0.0002	mg/L
200	2013/03/18	Grab	V	<	0.02	mg/L
200	2013/03/18	Grab	Zn		0.179	mg/L
200	2013/03/18	Grab	Zr	<	0.2	mg/L
200	2013/03/18	Grab	Alpha		18	pCi/L
200	2013/03/18	Grab	Beta		12	pCi/L
200	2013/03/18	Grab	U		0.0585	mg/l.
200	2013/03/18	Grab	U-234	<	0.005	wt %
200	2013/03/18	Grab	U235%		0.249	wt %
200	2013/03/18	Grab	U-236		0.00876	wt %
200	2013/03/18	Grab	U-238		99.7	wt %
200	2013/03/18	Grab	U-234		4	pCi/L
200	2013/03/18	Grab	U-235		0.4	pCi/L
200	2013/03/18	Grab	U-236		0.14	pCi/L
200	2013/03/18	Grab	U-238		18	pCi/L

Major Outfall 200 (continued)

Location	Date Collected	Sample Type	Parameter		Result	Units
200	2013/03/18	Composite	Surfactants		0.125	mg/L
200	2013/03/18	Composite	SuspSolids		15.5	mg/L
200	2013/03/18	Composite	KjeldahlN		0.797	mg/L
200	2013/03/18	Composite	NO3/NO2asN		2.05	mg/L
200	2013/03/18	Composite	N(CalcTot)		2.85	mg/L
200	2013/03/18	Composite	Ag	<	0.0002	mg/L
200	2013/03/18	Composite	Al		0.558	mg/L
200	2013/03/18	Composite	As	<	0.002	mg/L
200	2013/03/18	Composite	B	<	0.1	mg/L
200	2013/03/18	Composite	Ba		0.0391	mg/L
200	2013/03/18	Composite	Be	<	0.0002	mg/L
200	2013/03/18	Composite	Ca		30	mg/L
200	2013/03/18	Composite	Cd		0.000532	mg/L
200	2013/03/18	Composite	Co		0.00053	mg/L
200	2013/03/18	Composite	Cr		0.0029	mg/L
200	2013/03/18	Composite	Cu		0.0148	mg/L
200	2013/03/18	Composite	Fe		0.717	mg/L
200	2013/03/18	Composite	Hg		0.000503	mg/L
200	2013/03/18	Composite	K	<	2	mg/L
200	2013/03/18	Composite	Li		0.0336	mg/L
200	2013/03/18	Composite	Mg		6.07	mg/L
200	2013/03/18	Composite	Mn		0.068	mg/L
200	2013/03/18	Composite	Mo		0.00216	mg/L
200	2013/03/18	Composite	Na		26.4	mg/L
200	2013/03/18	Composite	Nb	<	0.2	mg/L
200	2013/03/18	Composite	Ni		0.00205	mg/L
200	2013/03/18	Composite	P	<	0.5	mg/L
200	2013/03/18	Composite	Pb		0.00671	mg/L
200	2013/03/18	Composite	S		6.3	mg/L
200	2013/03/18	Composite	Sb	<	0.001	mg/L
200	2013/03/18	Composite	Se	<	0.004	mg/L
200	2013/03/18	Composite	Sr		0.0756	mg/L
200	2013/03/18	Composite	Th	<	0.0002	mg/L
200	2013/03/18	Composite	Ti	<	0.05	mg/L
200	2013/03/18	Composite	Tl	<	0.0002	mg/L
200	2013/03/18	Composite	V	<	0.02	mg/L
200	2013/03/18	Composite	Zn		0.0752	mg/L
200	2013/03/18	Composite	Zr	<	0.2	mg/L

Major Outfall 200 (continued)

Location	Date Collected	Sample Type	Parameter		Result	Units
200	2013/03/18	Composite	Alpha		18	pCi/L
200	2013/03/18	Composite	Beta		16	pCi/L
200	2013/03/18	Composite	U		0.0317	mg/L
200	2013/03/18	Composite	U-234	<	0.005	wt %
200	2013/03/18	Composite	U235%		0.287	wt %
200	2013/03/18	Composite	U-236		0.0136	wt %
200	2013/03/18	Composite	U-238		99.7	wt %
200	2013/03/18	Composite	U-234		2.9	pCi/L
200	2013/03/18	Composite	U-235		0.25	pCi/L
200	2013/03/18	Composite	U-238		11	pCi/L
200	2013/03/18	Composite	PCB	U	0.46	ug/L
200	2013/03/18	Composite	PCB-1016	U	0.46	ug/L
200	2013/03/18	Composite	PCB-1221	U	0.46	ug/L
200	2013/03/18	Composite	PCB-1232	U	0.46	ug/L
200	2013/03/18	Composite	PCB-1242	U	0.46	ug/L
200	2013/03/18	Composite	PCB-1248	U	0.46	ug/L
200	2013/03/18	Composite	PCB-1254	U	0.46	ug/L
200	2013/03/18	Composite	PCB-1260	U	0.46	ug/L
200	2013/03/18	Composite	PCB-1262	U	0.46	ug/L
200	2013/03/18	Composite	PCB-1268	U	0.46	ug/L