NPDES compliance summary report
July 2012 - December 2013

Massachusetts Water Resources Authority

Environmental Quality, Water and Wastewater
Report 2014-08

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NPDES COMPLIANCE SUMMARY REPORT
July 2012 – December 2013

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Executive Summary

Overview

This report presents and summarizes monitoring and compliance data collected and analyzed by the Massachusetts Water Resources Authority's (MWRA) Environmental Quality, Water and Wastewater department (EnQual) from July 1, 2012 to December 31, 2013. This report, while not a regulatory requirement, provides a useful documentation of influent and effluent quality trends for the MWRA's Deer Island Treatment Plant (DITP) and Combined Sewer Overflow (CSO) facilities. Past reports covered the July to June fiscal year, but as a transition to a calendar year based report this report covers an 18 month period.

Deer Island Treatment Plant

The MWRA's NPDES permit requires the Authority to monitor its wastewater treatment plant at Deer Island for specific parameters. The MWRA currently operates under a permit issued July 10, 2000 and effective August 9, 2000. The permit calls for secondary treatment of wastewater and monitoring of the effects of the new outfall in the Massachusetts Bay. Secondary treatment began at DITP in August 1997 with the start-up of the first battery of secondary treatment (Battery A). In March 1998, Battery B was brought on-line. The final battery, Battery C, became operational in March 2001. DITP was designed for an average design flow of 361 million gallons a day, a maximum secondary treatment capacity of 700 million gallons a day, and a hydraulic capacity of 1.2 billion gallons a day.

In addition to the completion of secondary treatment facilities, the MWRA opened on September 6, 2000 a new 9.5-mile outfall tunnel that carries treated wastewater from DITP to Massachusetts Bay. The permit requires extensive monitoring of Massachusetts Bay to determine the effects of the outfall, if any exist.

Figure 1, on the following page, shows the Deer Island flow during each month of the report period, comparing the flow with the monthly averages of the previous thirteen years – January 2000 to June 2012.

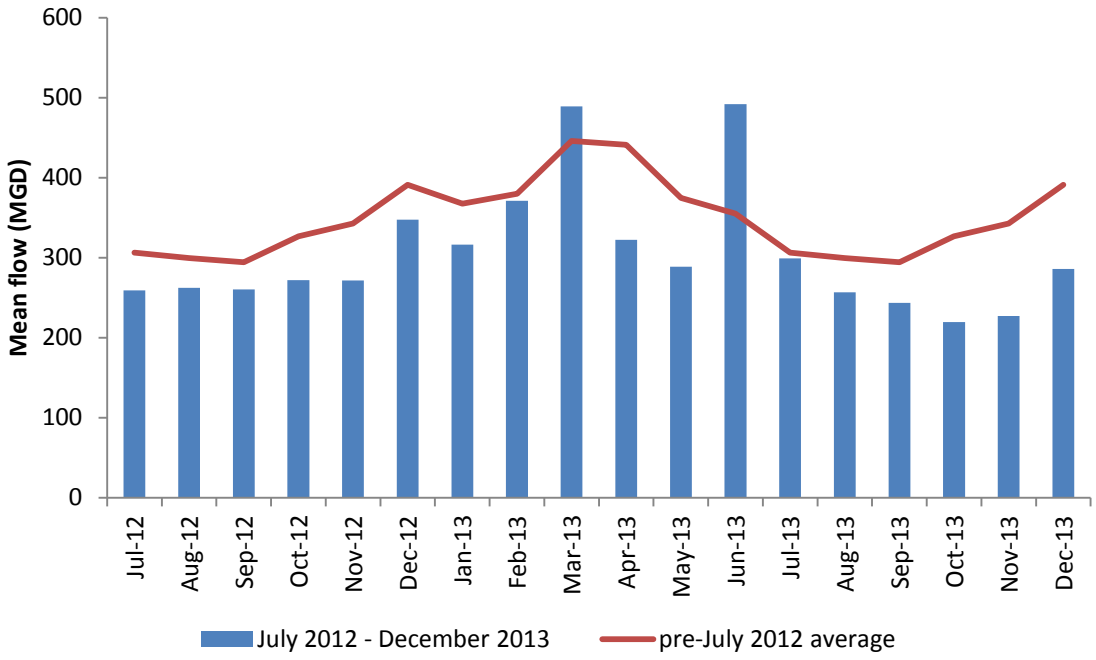


Figure 1. MWRA Flows, July 2012 – December 2013

Restrictions on dry day flow are also part of the permit. These restrictions serve to control new connections, ensuring that the collection system and the treatment plant retain adequate capacity. Monthly dry day flows are calculated by averaging the flows on dry days over the previous year. A dry day is defined as a day with 0.09 inches of precipitation or less and no snow melt with the following restrictions: the precipitation on the previous day is less than 0.3 inches, the precipitation two days prior is less than 1.0 inch, and the precipitation three days prior is less than 2.0 inches. A day with snowmelt is defined as a day when there is snow on the ground and the air temperature is above 32°F. Figure 2 shows the dry day flow for Deer Island during each month of the report period. The solid line represents the dry day flow limit of 436 mgd for the permit. During the report period, no violations of the dry day flow limit occurred.

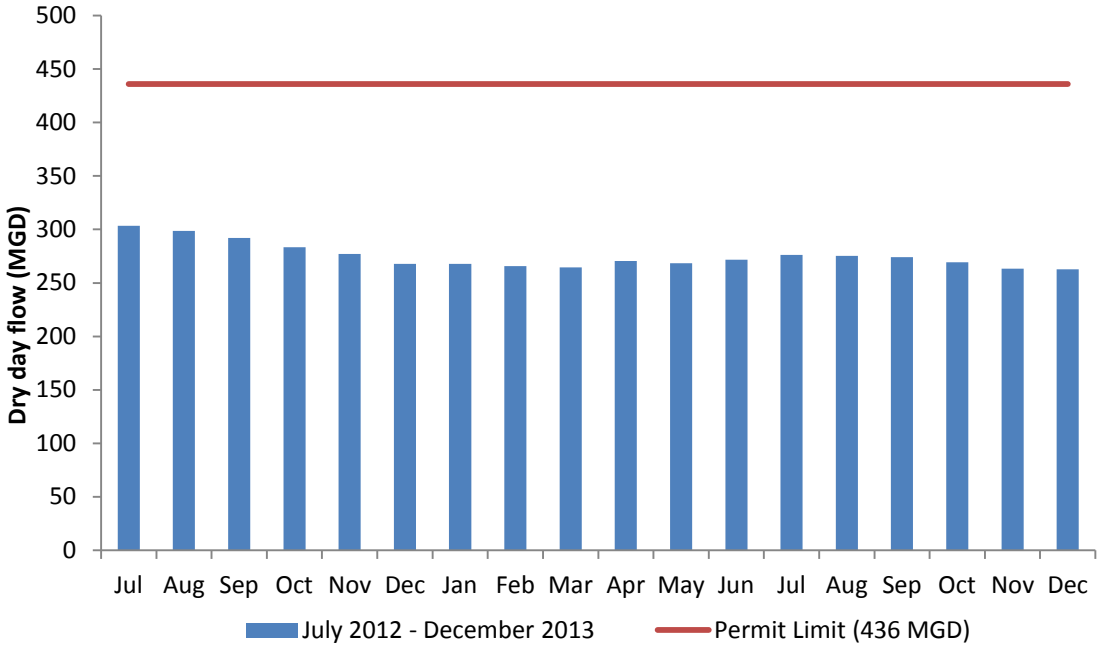


Figure 2. DITP Dry Day Flows, July 2012 – December 2013

Annual numbers of NPDES violations have decreased dramatically due to improved treatment at DITP. Figure 3 compares the number of NPDES permit violations at Deer Island since 2000. No non-toxicity NPDES violations occurred in the years 2007-2013, 2002-2004, and 2000. One non-toxicity violation occurred in each of 2004 and 2001, two in 2000, and three in 2002. One toxicity violation occurred in both 2005 and 2006, and two in 2001. During the report period, there were no toxicity or non-toxicity violations at DITP.

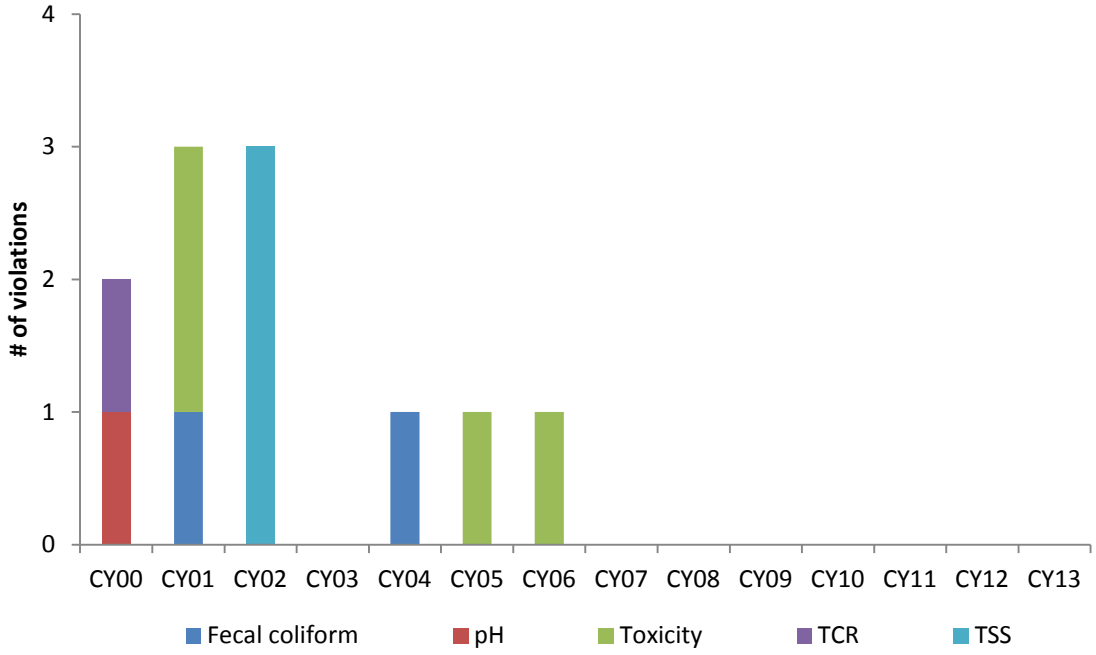


Figure 3. NPDES Violations at DITP, 2000-2013

Since the opening of the new plant, Deer Island has seen significant reductions in loadings of metals and organic compounds in the effluent – see Chapter 2 for more details. These improvements are probably due to two factors: first, corrosion control activities and source reduction programs have helped to lower these pollutants in the incoming influent. Second, the new plant is able to better capture both metals and organics in the treatment process.

Combined Sewer Overflow Facilities

MWRA monitored three CSO facilities – Cottage Farm, Prison Point, and Somerville Marginal – under the permit as of July 2012. The Fox Point, Commercial Point, and Constitution Beach facilities are also included under the permit. However, MWRA decommissioned the Constitution Beach facility in September 2000 following the completion of a sewer separation project in East Boston. In November 2007, the Fox Point and Commercial Point facilities were decommissioned after a sewer separation project was finished in Dorchester. A separate permit issued jointly to the MWRA and the Boston Water and Sewer Commission covers a fourth monitored facility, Union Park, which started operations in July 2007. For completeness, this report also covers the Union Park facility.

Figures 4 and 5 on the next page show the number of activations and the total volume treated, respectively, at the CSO facilities since 2000. The correlation between rainfall and CSO activation can be seen in both figures. Note that although total rainfall is correlated to CSO activations, the intensity of the rainfall and frequency of storms is an important contributor. These characteristics influence the degree of ground saturation, affecting the volume treated at the CSO facilities during a storm.

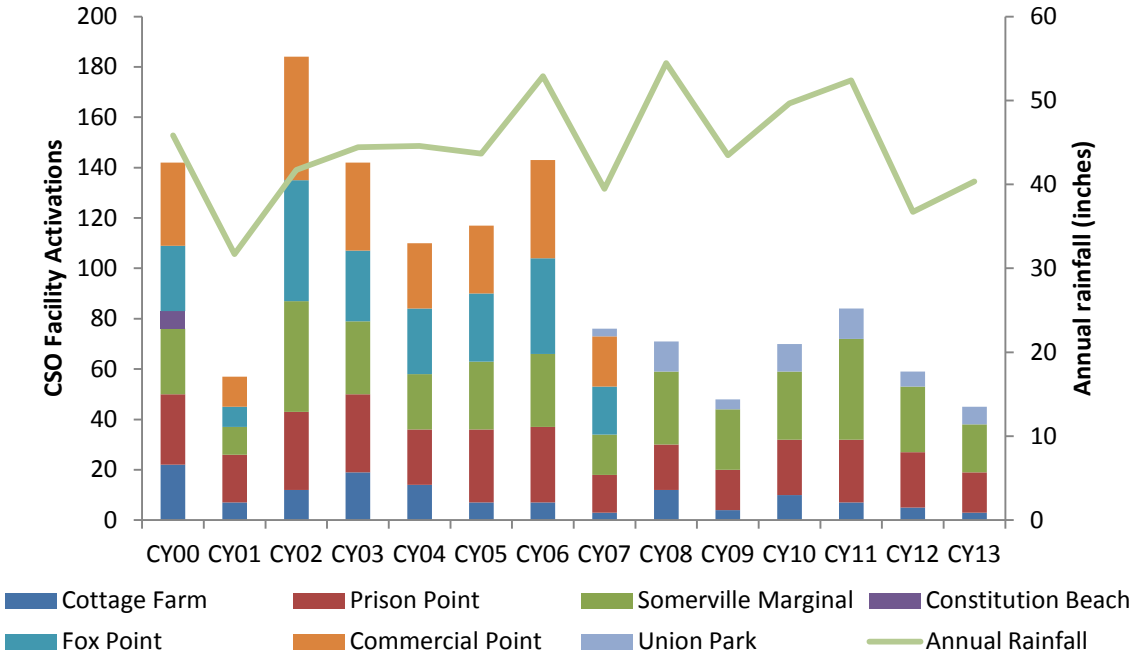


Figure 4. CSO Activations, 2000-2013

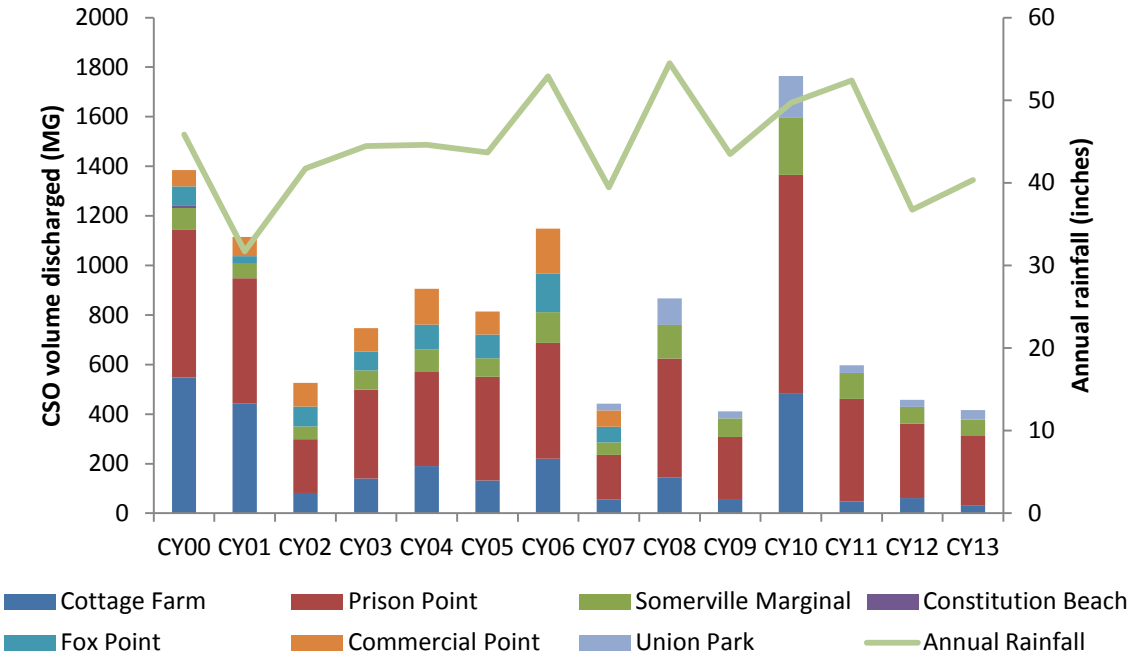


Figure 5. CSO Volume Treated, 2000-2013

Collection and Transport System

The MWRA monitors the capacity of the wastewater collection and transport system. One of the system parameters in the North System is the flow capacity of the remote headworks upstream of Deer Island. If the flow is over the capacity of the headworks, the headworks will restrict flow to Deer Island. This can occur if there is heavy rainfall, or can be initiated by MWRA staff for testing or maintenance purposes.

As Figure 6 on the following page shows, the number of hours of headworks flow restriction has fallen to very low levels since 2000, mainly due to the completion of the Deer Island plant. To minimize flow restriction related to testing and maintenance, MWRA performs maintenance and testing at off-peak times so not to cause any backups in the system upstream of the headworks.

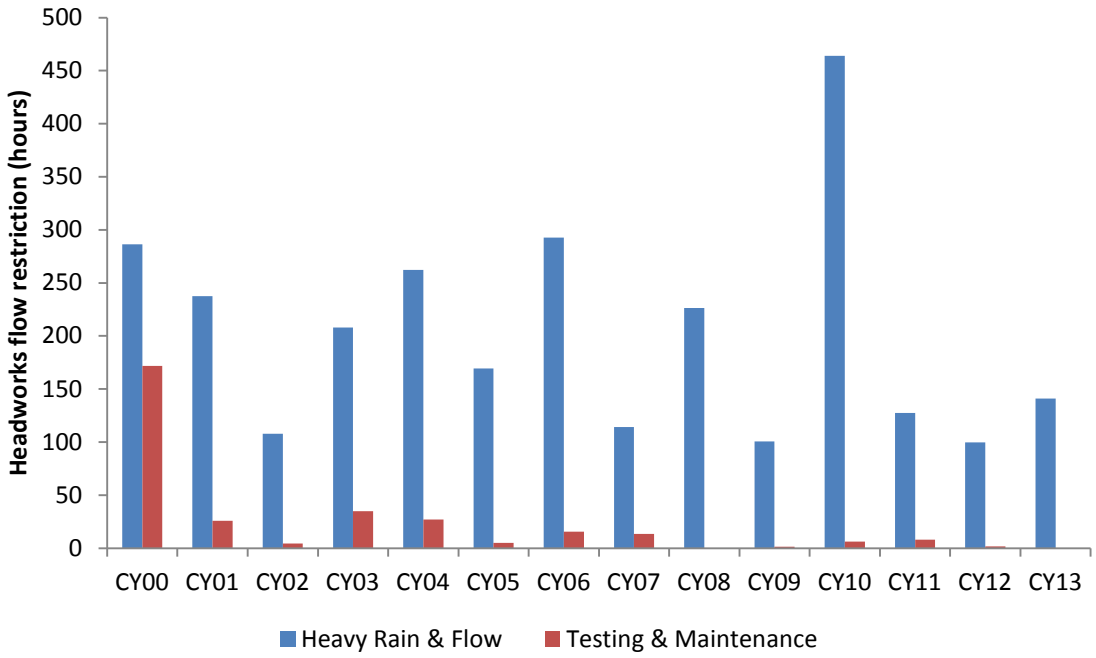


Figure 6. Headworks Flow Restriction Hours, 2000-2013

The MWRA also monitors the occurrence of Sanitary Sewer Overflows, or SSOs, associated with MWRA-owned sewer lines. These overflows occur in areas where the collection system becomes overloaded by heavy flows. Table 1 on the page lists the SSOs observed by MWRA personnel in the report period. There were seven SSOs in the period covered in this report (five in the North System and two in the South System).

Table 1. Sanitary Sewer Overflows, July 2012 – December 2013

Location	Number of Overflows
North System	
59 Brook St., Wakefield (manhole)	1
Section 176A, Somerville	1
Section 176C, Somerville	1
Section 155, Somerville	1
Section 107, Medford	1
South System	
Braintree/Weymouth Pump Station, Quincy (pump failure)	1
Smelt Brook, Braintree	1

Future Outlook

The startup of the new primary treatment plant at Deer Island in 1995 was just the first of several changes and improvements in the MWRA's facilities, including full secondary treatment, the Inter-Island Tunnel linking the South System to DITP, and the new outfall tunnel to Massachusetts Bay. The MWRA no longer discharges effluent into Boston Harbor and the Authority is monitoring the effects of these changes on water quality in the Harbor and

Massachusetts Bay, as required by the NPDES permit issued in July 2000. The monitoring ensures that the discharge does not adversely impact Massachusetts Bay.

Starting in April 2005, digested sludge was sent to the MWRA's Fore River facility via the Inter-Island Tunnel, eliminating the need to barge the sludge across Boston Harbor to the Fore River facility.

In March 2006, as a result of the sludge transfer noted above, the secondary process limit was raised from 630 to 660 million gallons per day. Further experiments conducted between March 2006 and June 2007 have set the secondary process limit to 700 million gallons a day.

Major upgrades are finished at all the operational CSO facilities, and construction of an additional facility, Union Park, was completed in April 2007. Several upgrades were also finished at the Quincy, Braintree-Weymouth, and Squantum pump stations in 2002, 2002, and 2003, respectively. The Intermediate Pump Station was brought on-line in 2004, increasing pumping capacity to DITP. Taken as a whole, these upgrades have modernized MWRA facilities and increased system capacity. The initial discharge from Union Park was in July 2005. Finally, the Fox Point and Commercial Point CSO facilities were decommissioned in November 2007 after the completion of a sewer separation project in the Dorchester area.

In January of 2012, the Primary and Secondary Clarifier Rehabilitation Project was completed after 33 months of work. The primary aim was to replace all the longitudinal and cross-collector chains and sprockets in both the primary and secondary clarifiers. Additionally, a number of other smaller maintenance projects were undertaken on the primary clarifiers as well as the replacement of headshafts on Battery C of the secondary clarifiers.

Starting in 2014, two major maintenance projects are scheduled to begin at DITP – the Scum Tip Tube Replacement Project and the Valve and Piping Replacement Project. The former will replace the scum tip tubes in both the primary and secondary clarifiers. The latter will replace a number of valves, pipes, and flow meters in the pump stations, headworks, primary and secondary clarifiers, and gravity thickeners at the treatment plant.

Introduction

This report presents and summarizes the NPDES monitoring and compliance data compiled and analyzed by the MWRA Environmental Quality Department during the period of July 2012 to December 2013. MWRA's DITP and CSO facilities serve large communities' needs for sewer systems while maintaining healthy water environments for recreation and wildlife.

The balance of this report contains the following sections. First, the next section presents and discusses the monitoring results for DITP, along with Contingency Plan and Ambient Monitoring Plan requirements. The following section describes the results for the five CSO facilities. Subsequent sections discuss sludge processing operations at DITP and the MWRA's Fore River pelletizing facility, transport and sewer system capacity issues, and finally, miscellaneous topics introduced by the permit. Appendices A – E provide detailed monthly data for the Deer Island plants and for the four CSO facilities. Appendix F provides background information about MWRA's regulatory requirements, and Appendix G describes the MWRA sewer system and facilities. Appendix H defines the types of detection limits encountered in chemical analyses. Appendix I lists pollutants of concern. Finally, Appendix J is a glossary of the terms and phrases used throughout this report.

Deer Island Treatment Plant

Overview

This chapter presents and discusses monitoring information for DITP. The characteristics examined include flow, conventional parameters, nutrients, priority pollutants (metals, cyanide, pesticides/PCBs, and other organic compounds), fecal coliform bacteria, and whole effluent toxicity. Since a number of limits in the Contingency Plan set forth by the NPDES permit deal with effluent quality, this section finishes up with a description of the Contingency Plan and the closely related Ambient Monitoring Plan.

Influent Flow

The average flow to DITP during the report period was 305 million gallons per day (mgd). Figure 7 shows that flow generally rises and falls with the amount of precipitation. This occurs because several of the larger communities in the North System (Boston, Cambridge, Somerville, and Chelsea) have combined sewers.

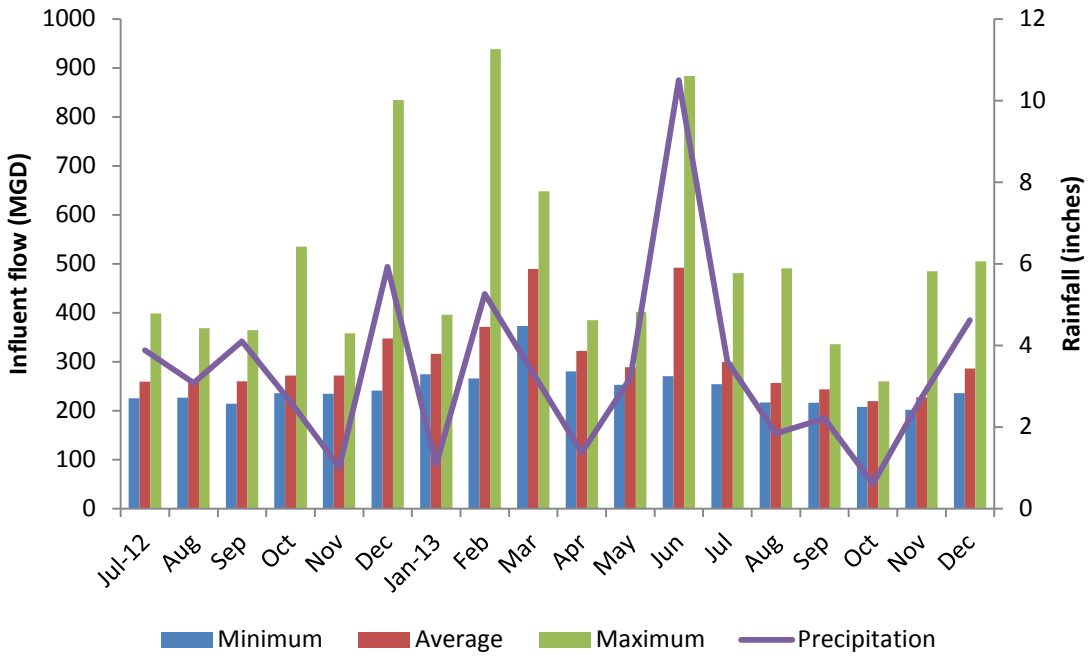


Figure 7. DITP Influent Flow Compared to Precipitation, July 2012 – December 2013

The impact of rainfall on flows can also be seen in Figure 8 on the following page, which tracks average flow and precipitation since 2000. An increase in rain may lead to slightly higher average flows to DITP. Conversely, decreases in rainfall may lead to lower average flows to DITP.

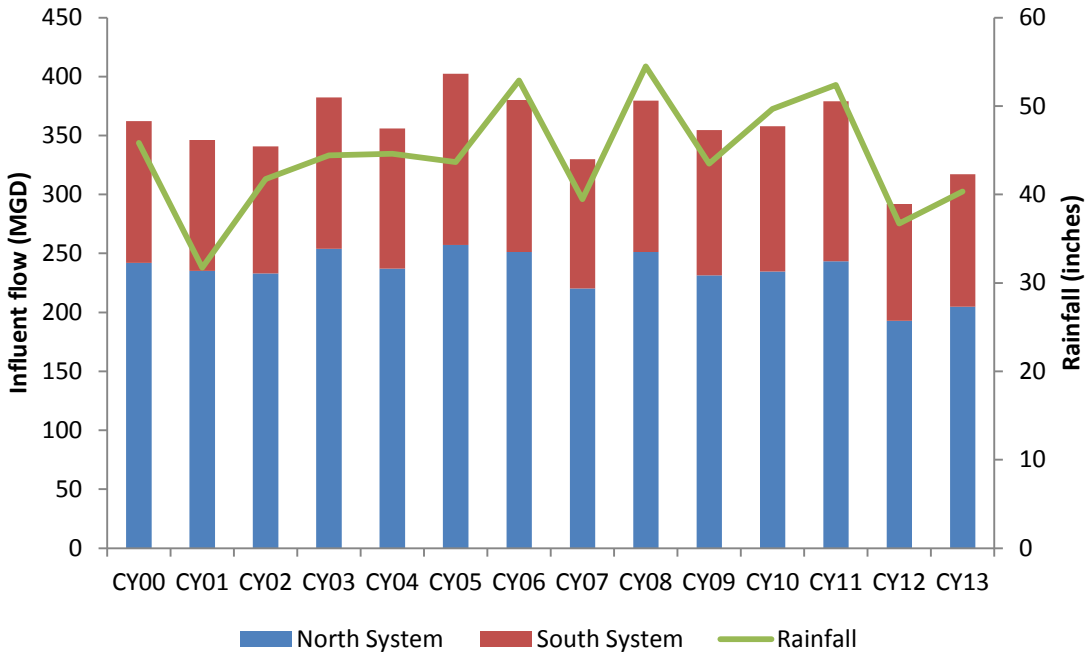


Figure 8. DITP Influent Flow Compared to Precipitation, 2000-2013

Influent Conventional Parameters and Nutrients

As Table 2 indicates, Deer Island influent strength in the report period can be classified as medium.[1]

Table 2. Classification of DITP Influent, July 2012 –December 2013

Parameter	Value	Weak	Medium	Strong
TSS (mg/L)	203	100	200	350
TKN (mg/L)	42	20	40	85
Ammonia (mg/L)	31	12	25	50

A summary of Deer Island influent characteristics from 2000-2013 is provided in Table 3 on page 11. Note that cBOD only became a measured parameter in August 2000, so the year 2000 data is only from August to December.

[1] Metcalf & Eddy, Inc. 1972. *Wastewater Engineering: Collection, Treatment, Disposal*. New York: McGraw-Hill Book Company, p. 109.

Table 3. Deer Island Influent Characterization, 2000-2013

Parameter		CY00	CY01	CY02	CY03	CY04	CY05	CY06	CY07	CY08	CY09	CY10	CY11	CY12	**CY13**
Flow (mgd)															
	Minimum	286	244	271	285	291	264	278	242	292	288	250	263	259	220
	Average	362	346	341	382	356	402	380	330	380	355	358	379	292	318
	Maximum	480	601	457	527	583	487	575	563	543	413	726	494	350	492
Total Suspended Solids (TSS)															
	Min Conc (mg/L)	132	140	140	166	129	145	124	109	108	131	102	114	162	131
	Avg Conc (mg/L)	164	195	188	215	233	209	178	179	165	159	168	167	210	191
	Max Conc (mg/L)	198	255	214	281	307	329	224	227	231	193	200	206	285	284
	Average Loading (tons/d)	248	282	267	342	346	351	282	247	262	235	251	264	256	253
Carbonaceous Biochemical Oxygen Demand (cBOD)															
	Min Conc (mg/L)	87	78	82	80	75	86	65	58	69	84	52	67	94	75
	Avg Conc (mg/L)	108	119	114	112	126	107	102	114	98	99	105	92	120	120
	Max Conc (mg/L)	147	162	131	145	146	139	133	156	125	115	126	121	145	158
	Average Loading (tons/d)	163	172	161	179	187	179	161	157	155	146	157	145	146	159
Settleable Solids															
	Min Conc (mL/L)	4.2	4.6	4.5	6.0	3.6	5.3	3.9	4.0	3.9	4.7	3.5	4.5	6.8	3.8
	Avg Conc (mL/L)	5.4	6.5	6.1	8.8	9.3	8.9	6.4	7.1	6.4	6.4	7.3	6.5	8.9	7.1
	Max Conc (mL/L)	7.0	9.5	7.9	11.1	16	16.7	8.7	10.8	9.2	8.9	9.8	9.3	13.6	9.6
	Average Loading (tons/d)	8.2	9.4	8.7	14.0	13.8	14.9	10.1	9.8	10.1	9.5	10.9	10.3	10.8	9.4
Total Kjeldahl Nitrogen															
	Min Conc (mg/L)	19.4	20.5	23.6	23.3	18.7	21.7	20.4	21.9	18.5	26.6	17.6	23.4	39.6	27.7
	Avg Conc (mg/L)	27.7	32.8	32.6	29.5	31.3	32.5	33.5	39.1	34.7	36.4	37.1	33.3	43.1	41.4
	Max Conc (mg/L)	34.3	44.5	38.1	36.6	37	44.8	41.4	51.1	45.6	46.9	44.7	44.7	49	51.8
	Average Loading (tons/d)	41.8	47.4	46.3	47.0	46.4	54.5	53.1	53.8	54.9	53.8	55.4	52.6	52.5	54.9
Ammonia-Nitrogen															
	Min Conc (mg/L)	12.0	9.6	13.2	12.4	10.8	13.8	13.7	16.0	13.3	20.7	11.4	18.4	26.4	18.7
	Avg Conc (mg/L)	16.0	19.8	18.5	17.3	20.0	21.1	23.9	29.3	26.4	27.8	29.1	23.4	31.6	30.6
	Max Conc (mg/L)	21.3	28.6	23.7	22.7	22.9	31.3	31.9	38.1	34.7	35.6	37.5	33.4	37.6	41.3
	Average Loading (tons/d)	24.2	28.6	26.3	27.6	29.7	35.4	37.9	40.3	41.8	41.1	43.4	37.0	38.5	40.6
Nitrates															
	Min Conc (mg/L)	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.04	0.07	0.01	0.10
	Avg Conc (mg/L)	0.15	0.14	0.09	0.09	0.10	0.16	0.18	0.11	0.13	0.07	0.27	0.37	0.12	0.46
	Max Conc (mg/L)	0.46	0.90	0.37	0.35	0.81	0.7	0.54	0.59	0.72	0.17	1.13	0.90	0.33	0.82
	Average Loading (tons/d)	0.23	0.20	0.13	0.14	0.15	0.27	0.29	0.15	0.21	0.10	0.40	0.58	0.15	0.61
Nitrites															
	Min Conc (mg/L)	0.06	0.00	0.07	0.01	0.01	0.09	0.01	0.01	0.01	0.02	0.16	0.01	0.01	0.12
	Avg Conc (mg/L)	0.17	0.12	0.19	0.19	0.12	0.26	0.12	0.12	0.11	0.14	0.24	0.34	0.17	0.36
	Max Conc (mg/L)	0.33	0.35	0.55	0.41	0.41	0.72	0.28	0.40	0.32	0.54	0.42	0.55	0.54	0.62
	Average Loading (tons/d)	0.26	0.17	0.27	0.30	0.18	0.44	0.19	0.17	0.17	0.21	0.36	0.54	0.21	0.48

Influent Priority Pollutants

The results of a complete priority pollutant scan of Deer Island influent can be found in Tables A-2 and A-3 of Appendix A. For levels below detection limits, one half of the method detection limit for inorganic compounds or one tenth of the quantitation limit for organic compounds was substituted to calculate concentrations and loadings. Appendix J provides a detailed discussion of detection and quantitation limits.

A pollutant is included if it was detected over the course of a year. Figures 9 and 10 below show annual averages of the daily loads; however, they do not truly reflect how often the pollutant was detected during the year. Therefore, if a below detection limit concentration is converted to a loading, it is recorded as a non-zero value, even though the constituent may not have been present in the sample. Note that these caveats apply to both metals and organics loadings. However,

since metals are commonly detected in almost every sample, the notes raised above are less of an issue.

Figure 9 compares average influent loadings during the report period for several key metals to historical values. The MWRA samples for these pollutants a few times a month. Using the measured concentration and the flow on the day on which the sample was taken, daily loads can be calculated. Since loadings are calculated using flow, which in turn is affected by rainfall, loadings can also rise and fall with rainfall amounts.

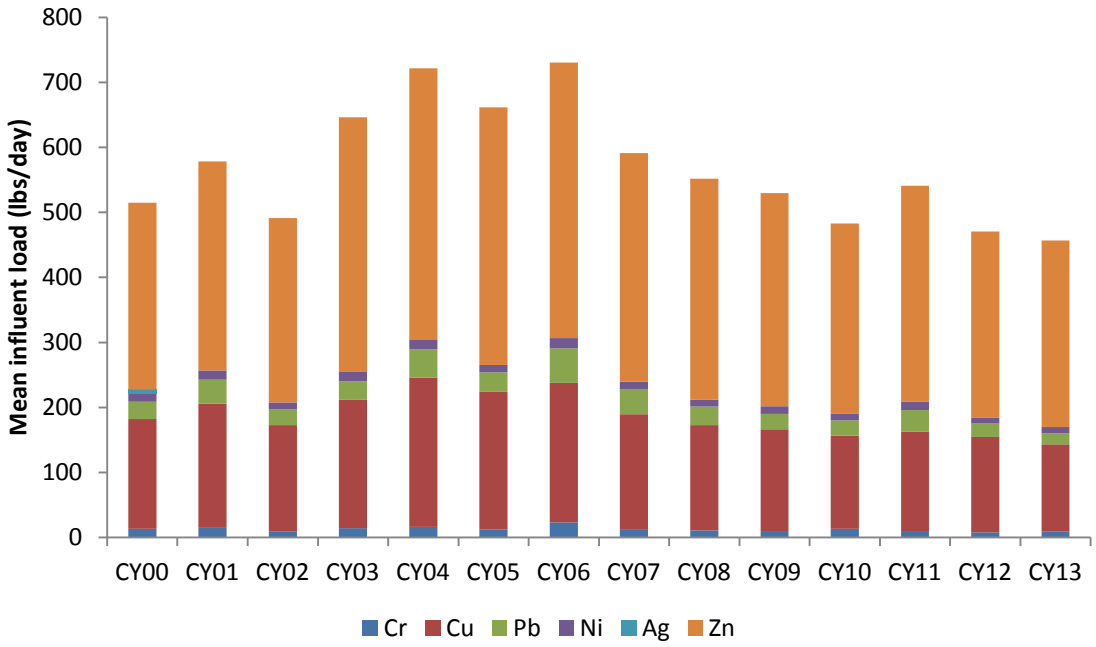


Figure 9. DITP Mean Influent Metals Loadings, 2000-2013

Figure 10 on the following page compares influent loadings of certain representative organic priority pollutants to the loadings in previous years (see Appendix A, Table A-3).

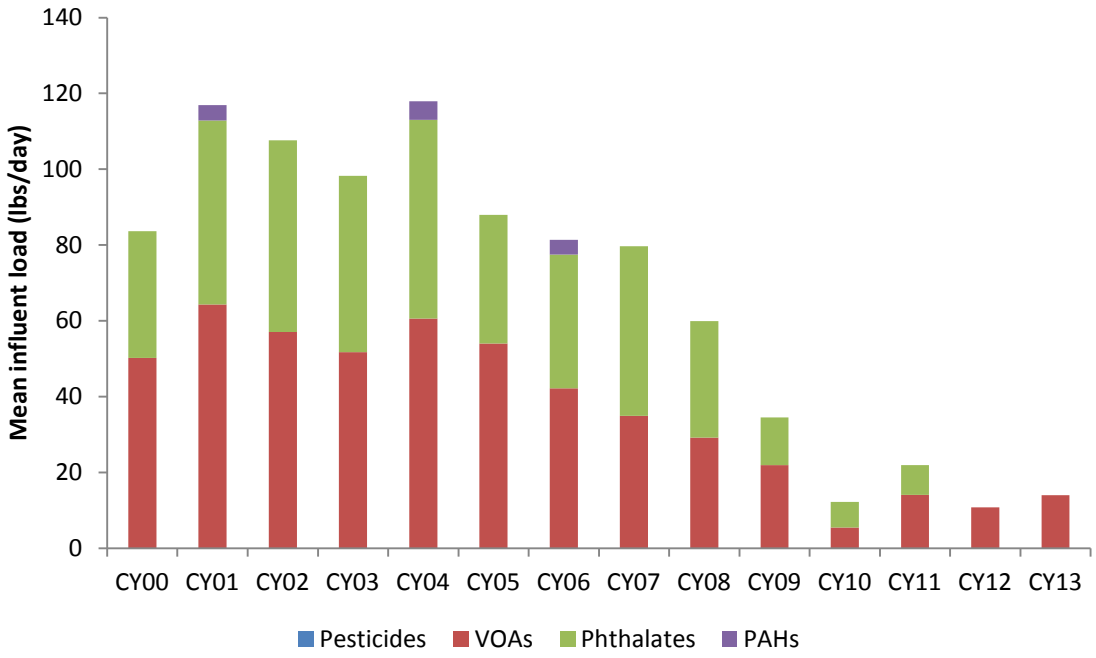


Figure 10. DITP Mean Influent Organics Loadings, 2000-2013

Effluent Conventional Parameters and Nutrients

Table 4 compares DITP's removal efficiencies for TSS and cBOD with theoretical removal efficiencies.[2] The removal efficiencies are determined from the average effluent and influent concentrations for TSS and cBOD as reported in Table A-1 of Appendix A.

Table 4. Deer Island Removal Efficiency, July 2012 – December 2013

Parameter	DITP % Removal*	Theoretical % Removal for Secondary Treatment
TSS	96%	85%
cBOD	95%	85%

* Removal efficiencies were determined using the average influent and effluent concentration values as reported in Table A-1, Appendix A. Note that high rainfall may cause a smaller percentage of the total flow to go through secondary treatment.

For the report period, 99.3% of DITP flow went through secondary treatment and removal efficiency for TSS was 96%. For cBOD, the plant achieved 95% removal efficiency.

Table 5 (next page) summarizes the conventional parameters and nutrients in Deer Island effluent since 2000.

[2] Metcalf & Eddy, Inc. 1972. *Wastewater Engineering Collection, Treatment, Disposal.* New York. McGraw-Hill Book Company, p. 446.

Table 5. Deer Island Effluent Characterization, 2000-2013

Parameter		CY00	CY01	CY02	CY03	CY04	CY05	CY06	CY07	CY08	CY09	CY10	CY11	CY12	**CY13**
Flow (mgd)															
	Minimum	260	222	238	246	243	229	237	214	236	243	201	230	214	202
	Average	362	346	340	382	356	402	380	330	380	355	358	379	287	318
	Maximum	898	1136	898	814	1132	1046	1203	1023	1031	726	1262	833	835	939
Total Suspended Solids (TSS)															
	Min Conc (mg/L)	4	3	4	5	5	5	5	2	2	2	2	2	2	2
	Avg Conc (mg/L)	17	16	18	17	17	12	8	8	9	8	8	8	8	9
	Max Conc (mg/L)	49	47	132	78	62	61	38	49	61	38	49	32	36	42
	Average Loading (tons/d)	26	23	25	27	25	20	13	11	14	12	12	13	10	12
Carbonaceous Biochemical Oxygen Demand (cBOD)															
	Min Conc (mg/L)	5	3	4	3	2	2	2	2	2	1	2	2	1	2
	Avg Conc (mg/L)	15	13	12	10	12	8	6	5	5	5	5	5	5	6
	Max Conc (mg/L)	43	40	40	50	38	27	66	19	23	20	22	29	21	18
	Average Loading (tons/d)	23	18	17	16	18	13	10	7	8	7	7	8	6	8
Settleable Solids															
	Min Conc (mL/L)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	Avg Conc (mL/L)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	Max Conc (mL/L)	1.5	3.0	3.0	6.0	1.2	1.0	0.6	0.4	1	0.2	0.7	0.1	2.5	0.1
	Average Loading (tons/d)	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.2	0.1	0.1
Total Kjeldahl Nitrogen															
	Min Conc (mg/L)	8.2	12.2	9.8	9.7	11.0	6.6	5.8	7.8	7.5	8.6	6.2	8.3	13.6	10.7
	Avg Conc (mg/L)	23.6	25.8	23.9	20.6	20.1	18.4	20.3	24.2	20.8	22.2	23.9	21.4	27.7	27.7
	Max Conc (mg/L)	32.4	34.8	35.0	25.7	32.2	35.3	31.9	72	33.7	34.8	36.2	31.7	40	41.6
	Average Loading (tons/d)	35.7	37.3	33.9	32.8	29.8	30.8	32.2	33.3	33.0	32.9	35.7	33.8	33.2	36.7
Ammonia-Nitrogen															
	Min Conc (mg/L)	5.0	5.1	8.3	7.0	7.5	4.5	4.6	7.0	6.7	6.9	4.9	7.4	6.7	7.2
	Avg Conc (mg/L)	19.4	21.0	19.2	17.2	18.2	17.7	19.0	22.8	20	21.4	24.1	20.3	27.3	27.5
	Max Conc (mg/L)	24.9	32.0	29.7	27.7	28.7	45.2	31.4	36.8	35.2	36.4	39.9	34.2	38.5	45.1
	Average Loading (tons/d)	29.3	30.3	27.2	27.4	27.0	29.7	30.1	31.4	31.7	31.7	36.0	32.1	32.7	36.5
Nitrates															
	Min Conc (mg/L)	0.03	0.01	0.01	0.02	0.01	0.02	0.05	0.15	0.22	0.03	0.04	0.04	0.01	0.01
	Avg Conc (mg/L)	0.84	0.89	1.36	1.46	2.51	1.74	0.86	1.08	1.67	1.17	1.11	0.97	0.78	1.15
	Max Conc (mg/L)	4.21	2.86	5.07	3.74	5.77	4.8	3.2	2.76	3.48	2.78	3.18	3.08	3.72	4.26
	Average Loading (tons/d)	1.3	1.3	1.9	2.3	3.7	2.9	1.4	1.5	2.6	1.7	1.7	1.5	0.9	1.5
Nitrites															
	Min Conc (mg/L)	0.01	0.01	0.01	0.01	0.01	0.15	0.46	0.08	0.22	0.09	0.07	0.06	0.02	0.03
	Avg Conc (mg/L)	0.57	0.34	0.32	0.29	0.28	0.95	1.52	0.93	1.05	1.01	0.66	0.64	0.28	0.32
	Max Conc (mg/L)	2.73	0.70	1.26	0.91	0.86	2.29	2.74	2.96	1.65	2.46	1.46	2.19	1.3	1.65
	Average Loading (tons/d)	0.9	0.5	0.5	0.5	0.4	1.6	2.4	1.3	1.7	1.5	1.0	1.0	0.3	0.4

A summary of nitrogen concentrations in Deer Island effluent from 2000 to December 2013 is provided in Figure 11 on the following page.

The activated sludge process used in DITP's secondary treatment changes nutrient concentrations. The activated sludge process uses bacteria to promote efficient and rapid breakdown of wastes. This bacterial breakdown results in changes in the proportions of nitrogen species. For example, total Kjeldahl nitrogen (TKN) consists of NH_3-N plus organic nitrogen. Effluent NH_3-N concentrations have risen while total Kjeldahl nitrogen (TKN) concentrations have remained relatively stable. Therefore, the proportion of NH_3-N as a TKN component increases. Elevated levels of NH_3-N are characteristic of the activated sludge process.

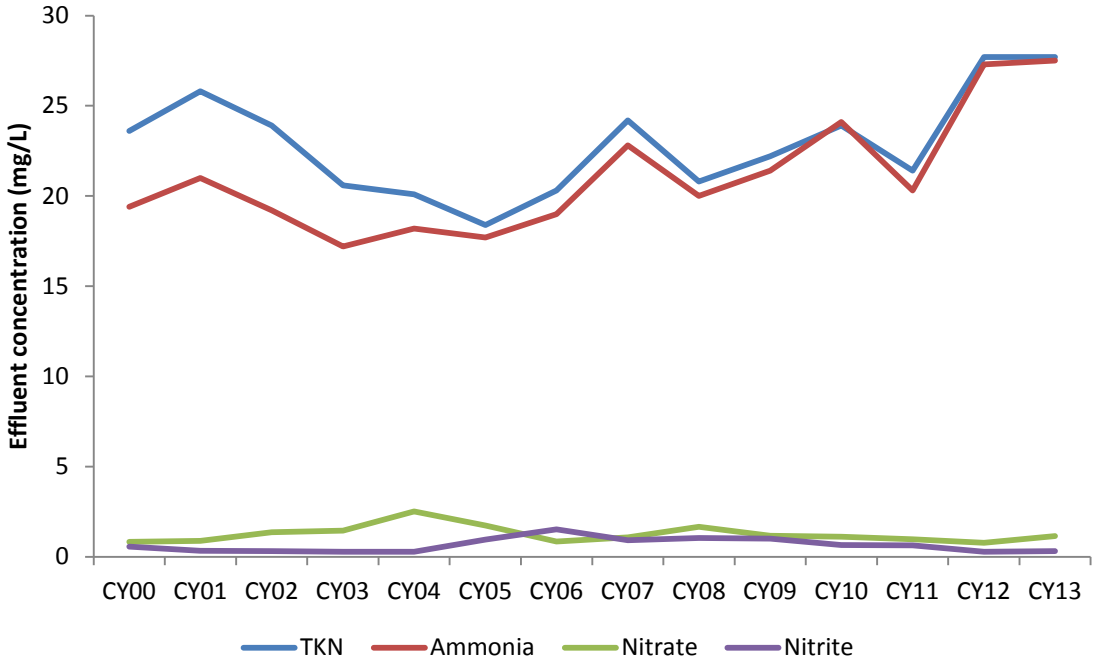


Figure 11. DITP Mean Effluent Nitrogen Concentrations, 2000-2013

Effluent Priority Pollutants

Appendix A, Tables A-8 and A-9 provide a summary of priority pollutant concentrations and loadings in DITP effluent for the report period. For a discussion of the importance of detection limits in loading calculations, see the section on influent priority pollutants above, and Appendix H. Metals loadings since 2000 are summarized in Figure 12, while Figure 13 graphs organic pollutants over the same period. Two factors may explain the long-term decrease in loadings. First, the MWRA has instituted an aggressive industrial pre-treatment program coupled with stricter enforcement of local limits. Second, the decrease may also be attributed to better capture of metals and organics at the plant.

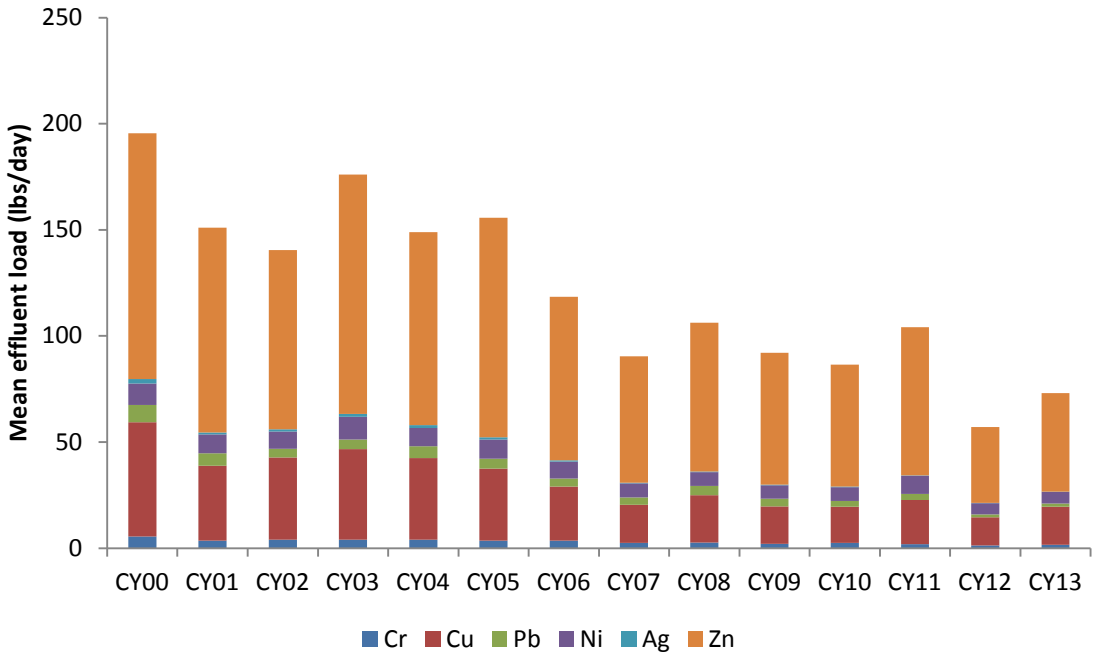


Figure 12. DITP Mean Effluent Metals Loadings, 2000-2013

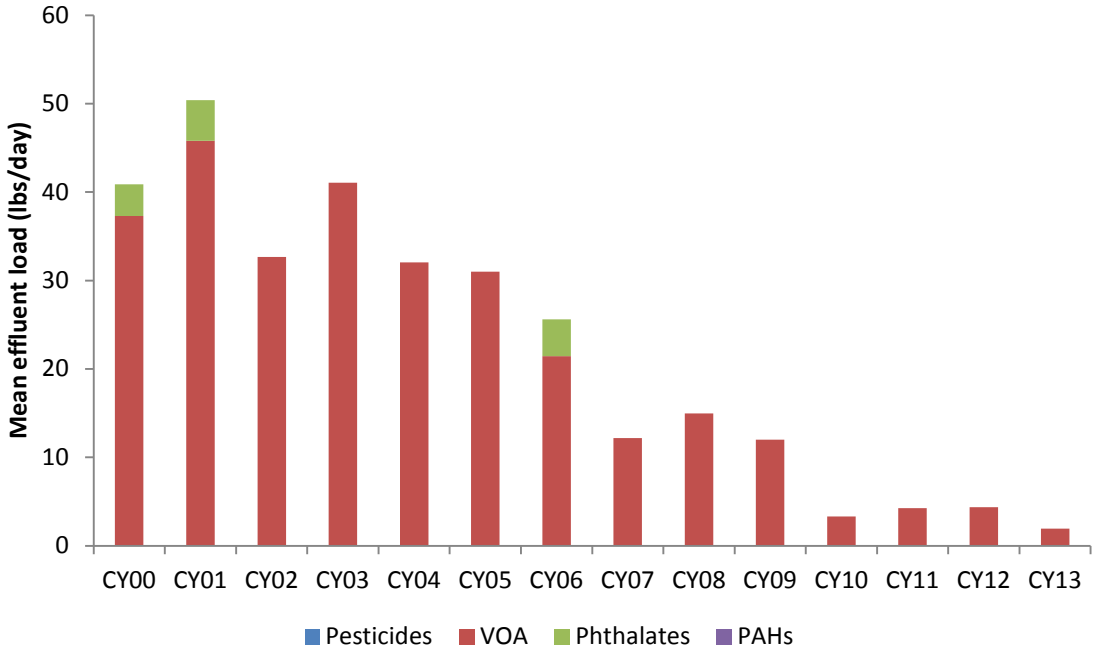


Figure 13. DITP Mean Effluent Organics Loadings, 2000-2013

Whole Effluent Toxicity

The MWRA tests effluent toxicity every month at DITP. Effluent toxicity provides an overall view of effluent quality, ensuring that the effluent does not adversely affect the environment. No acute toxicity could be attributed to metals or pesticides.

The MWRA permit requires four tests for effluent toxicity testing. 48 hour acute static toxicity tests using the mysid shrimp (*Americamysis bahia*) and the silversides fish (*Menidia beryllina*) measure the short-term lethal effects caused by the effluent. A chronic survival and growth test using *Menidia* and a chronic fertilization test using the sea urchin (*Arbacia punctulata*) both measure subtle toxic impacts over a longer period of time.

The LC50 (Lethal Concentration 50%) is the concentration of effluent in a sample that causes mortality to 50% of the test population during the duration of the test. The two acute tests use LC50.

The NOEC (No Observed Effect Concentration) used in the chronic tests is the concentration of effluent in a sample to which organisms are exposed in a life cycle or partial life cycle test. Below which there are no adverse effects. An NOEC limit of 1.5% means that 1.5% of the sample is effluent, and the remainder dilution water. Any acute LC50 below 50% or chronic NOEC below 1.5% would violate the NPDES limit.

No violations occurred during the report period. Table 6 summarizes the results.

Table 6. Deer Island Effluent Results of Toxicity Testing, July 2012 – December 2013

	Mysid acute LC50	*Menidia* acute LC50	*Arbacia* chronic NOEC	*Menidia* chronic NOEC
Limits (%)	50	50	1.5	1.5
July 2012	> 100	> 100	50	25
August	> 100	> 100	25	100
September	> 100	> 100	12.5	50
October	> 100	> 100	25	50
November	> 100	> 100	100	100
December	> 100	> 100	25	50
January 2013	> 100	> 100	50	100
February	> 100	> 100	50	100
March	> 100	> 100	100	100
April	> 100	> 100	100	50
May	> 100	> 100	100	50
June	> 100	> 100	100	100
July	> 100	> 100	100	6
August	> 100	> 100	50	50
September	> 100	> 100	100	100
October	> 100	> 100	100	50
November	> 100	> 100	100	25
December	> 100	> 100	100	50
# of Violations	0	0	0	0

Results in **bold** indicate a violation of the regulatory limits. * indicates an invalid test.

Compliance with Regulatory Limits

Plant performance at Deer Island is compared to permit limits in Table 7 and Figures 14 to 22 on the following pages. There were no permit violations in the July 2012 – December 2013 period covered in this report.

Table 7. Deer Island Effluent Quality Compared to Permit Limits, July 2012 – December 2013

Parameter		Permit Limits	Range of Values Exceeding Limits	Number of Violations
Carbonaceous Biochemical Oxygen Demand (mg/L)				
	Monthly Average	25	--	0
	Weekly Average	40	--	0
Total Suspended Solids (mg/L)				
	Monthly Average	30	--	0
	Weekly Average	45	--	0
Total Chlorine Residual (µg/L)				
	Monthly Average	456	--	0
	Daily Maximum	631	--	0
Fecal Coliform				
	Daily Geometric Mean (col/100mL)	14,000	--	0
	% of samples > 14,000 col/100mL	10	--	0
	Consecutive samples > 14,000col/100mL	3	--	0
pH (S.U.)		6.0-9.0	--	0
PCB, Aroclors (µg/L)		0.000045	--	0
Acute Toxicity				
	Mysid shrimp (%)	≥50	--	0
	Inland silverside (%)	≥50	--	0
Chronic Toxicity				
	Inland silverside (%)	≥1.5	--	0
	Sea urchin (%)	≥1.5	--	0
Dry Day Flow (MGD)		436	--	0
Total Number of Violations				**0**

Table 8 compares the number of NPDES violations since 2000.

Table 8. NPDES Violations at Deer Island, July 2012 – December 2013

	TSS	Fecal coliform	pH	cBOD	Dry day flow	TCR	Toxicity	Non-toxicity violations	Total violations
CY00	0	0	1	0	0	1	0	2	2
CY01	0	1	0	0	0	0	2	1	3
CY02	3	0	0	0	0	0	0	3	3
CY03	0	0	0	0	0	0	0	0	0
CY04	0	1	0	0	0	0	0	1	1
CY05	0	0	0	0	0	0	1	0	1
CY06	0	0	0	0	0	0	1	0	1
CY07	0	0	0	0	0	0	0	0	0
CY08	0	0	0	0	0	0	0	0	0
CY09	0	0	0	0	0	0	0	0	0
CY10	0	0	0	0	0	0	0	0	0
CY11	0	0	0	0	0	0	0	0	0
CY12	0	0	0	0	0	0	0	0	0
CY13	0	0	0	0	0	0	0	0	0

The following figures track trends in effluent over the 18 month report period. All of the effluent parameters were well under permit limits.

For carbonaceous biochemical oxygen demand (cBOD) and total suspended solids (TSS), the permit limits monthly and weekly average concentrations. Figure 14 shows that the monthly averages for cBOD never exceeded the regulatory discharge limit of 25 mg/L, and approximates the averages of the previous five years.

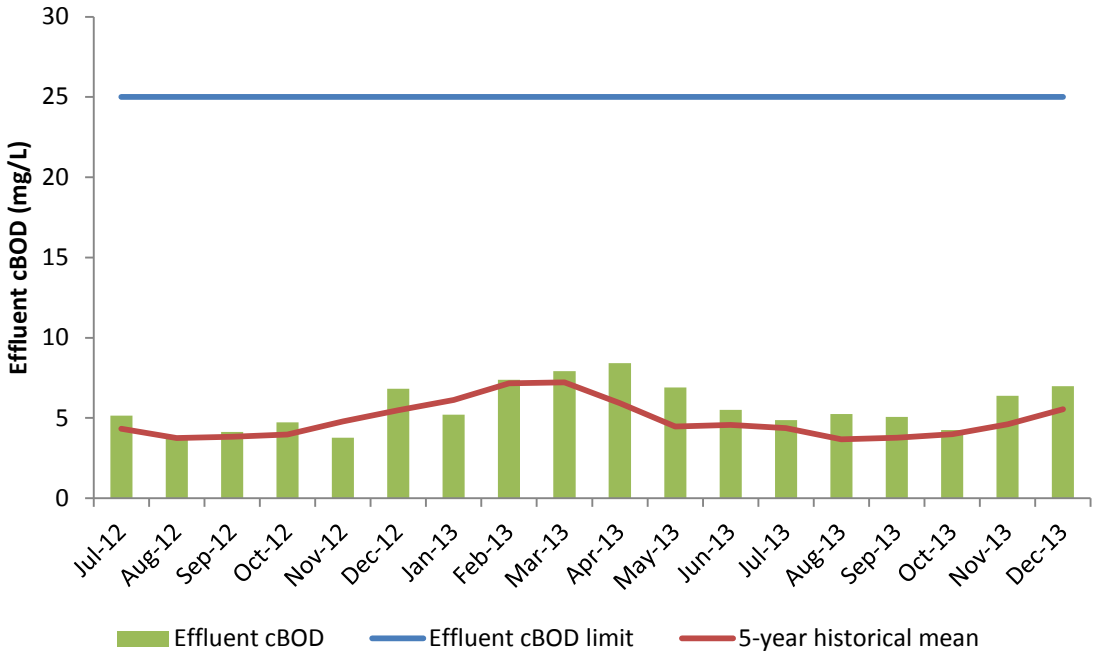


Figure 14. DITP Effluent cBOD (Monthly Average), July 2012 – December 2013

Figure 15 shows there were no violations of the cBOD weekly limit (40 mg/L).

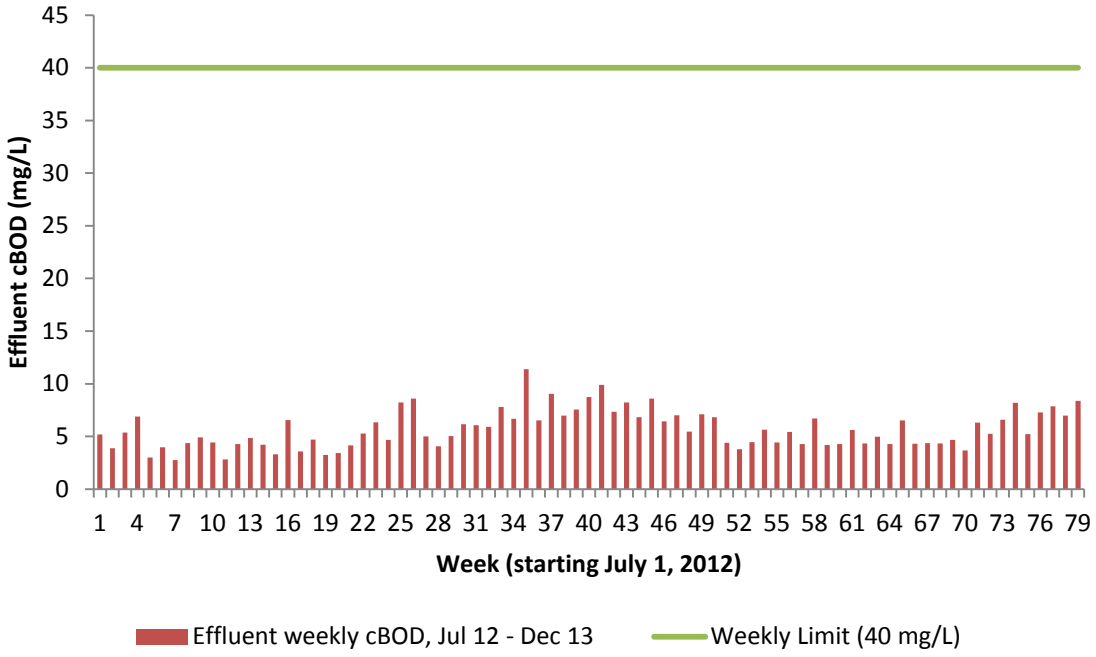


Figure 15. DITP Effluent cBOD (Weekly Average), July 2012 – December 2013

Figure 16 shows monthly averages for TSS never exceeded the regulatory discharge limit of 30 mg/L. For the report period, effluent TSS was comparable to the average of the previous five years.

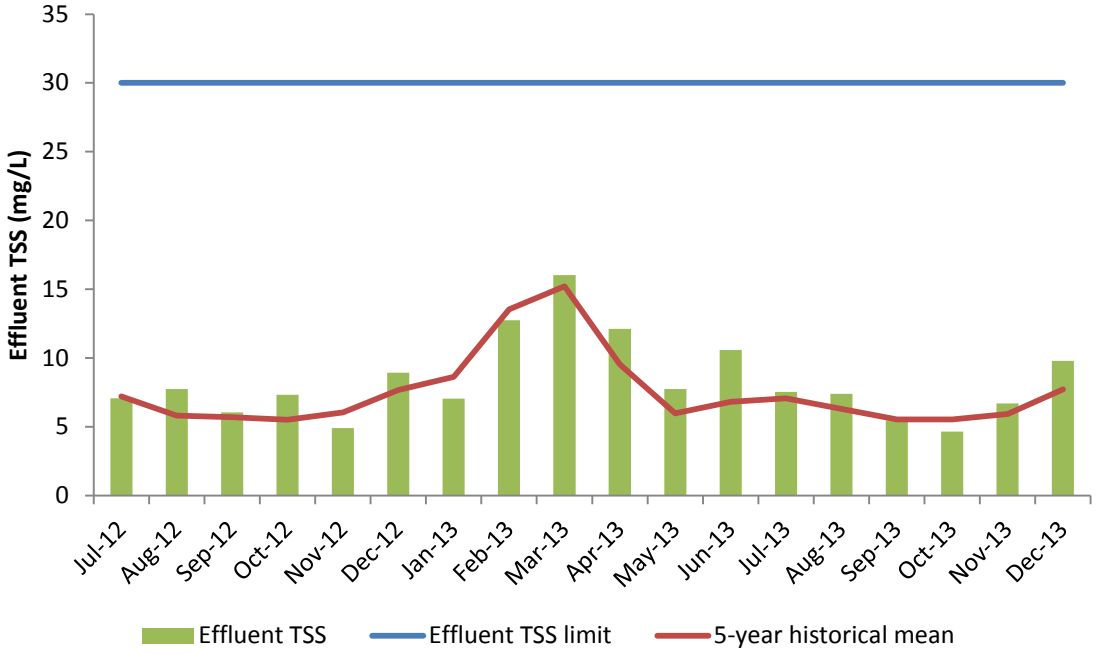


Figure 16. DITP Effluent TSS (Monthly Average), July 2012 – December 2013

Figure 17 graphs the weekly averages for effluent TSS in during the period of the report. The regulatory limit for weekly TSS averages is 45 mg/L. During the period this limit was not approached.

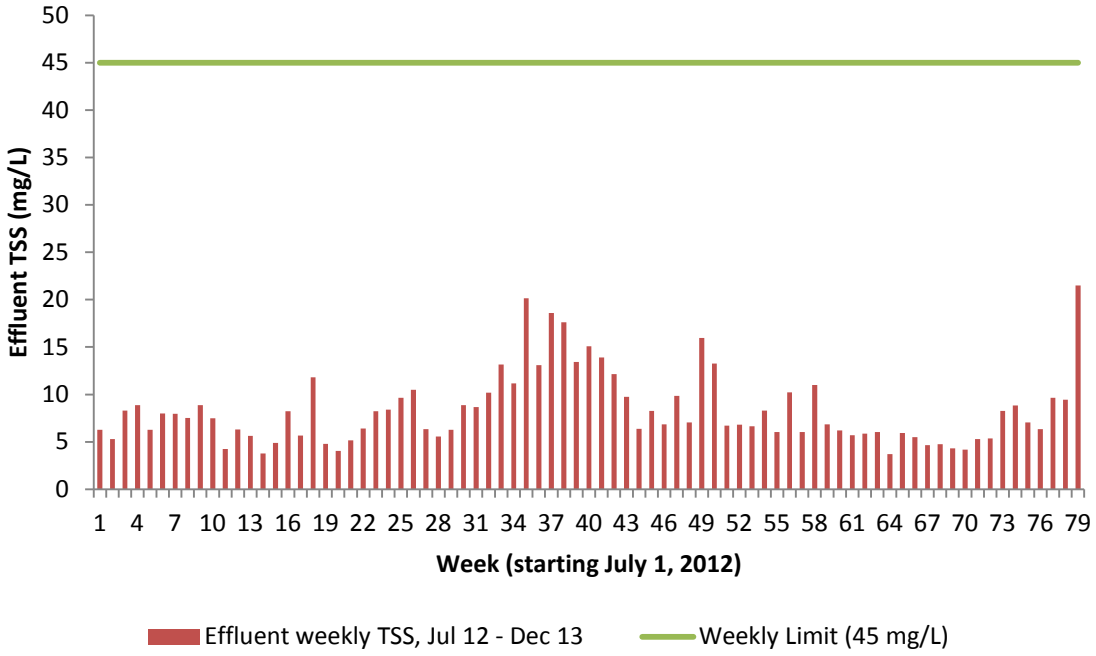


Figure 17. DITP Effluent TSS (Weekly Average), July 2012 – December 2013

Fecal coliform has a daily discharge limit of 14,000 colonies/100mL, as calculated by the daily geometric mean of three samples per day. Figure 18 shows the daily effluent trends of fecal coliform during the report period. Note that 5 colonies/100mL is the detection limit for the fecal coliform test so there will not be results below that number.

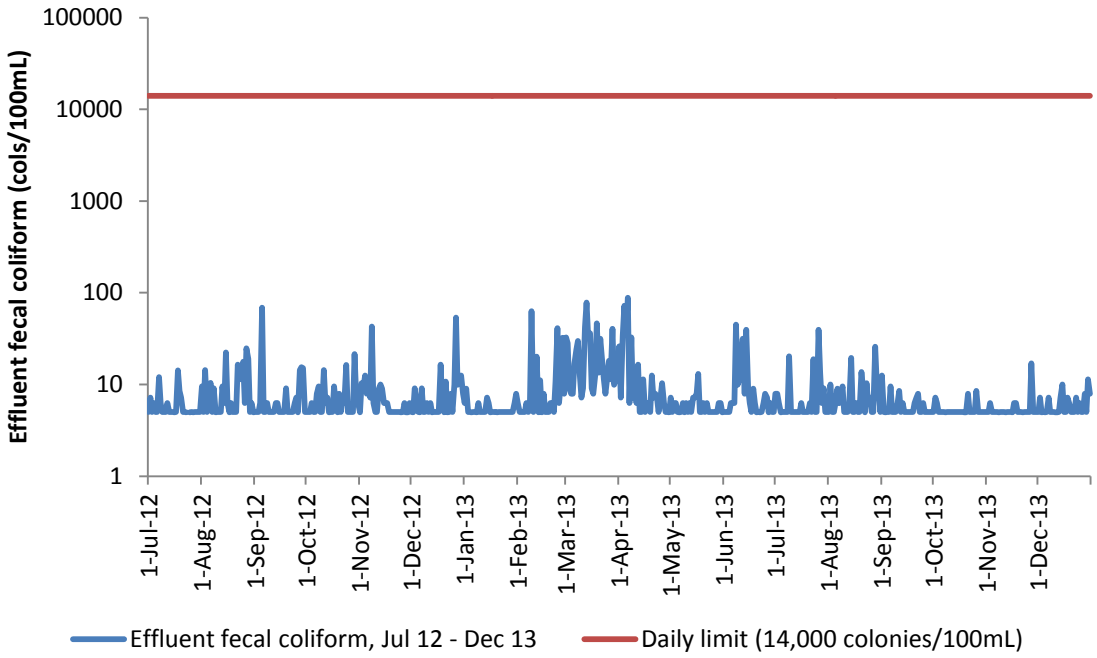


Figure 18. DITP Effluent Fecal Coliform (Daily Geometric Mean), July 2012 – December 2013

Additional limits for fecal coliform include: not more than three consecutive samples measuring over 14,000 colonies/100mL (there were no samples over 14,000 colonies/100mL throughout the report period), and no more than 10% of the samples in a month measuring over 14,000 colonies/100 mL. These latter two limits were not exceeded. Figure 19 shows the percentage of high sample counts (>14,000 colonies/100mL) by month – there were no violations of this limit either.

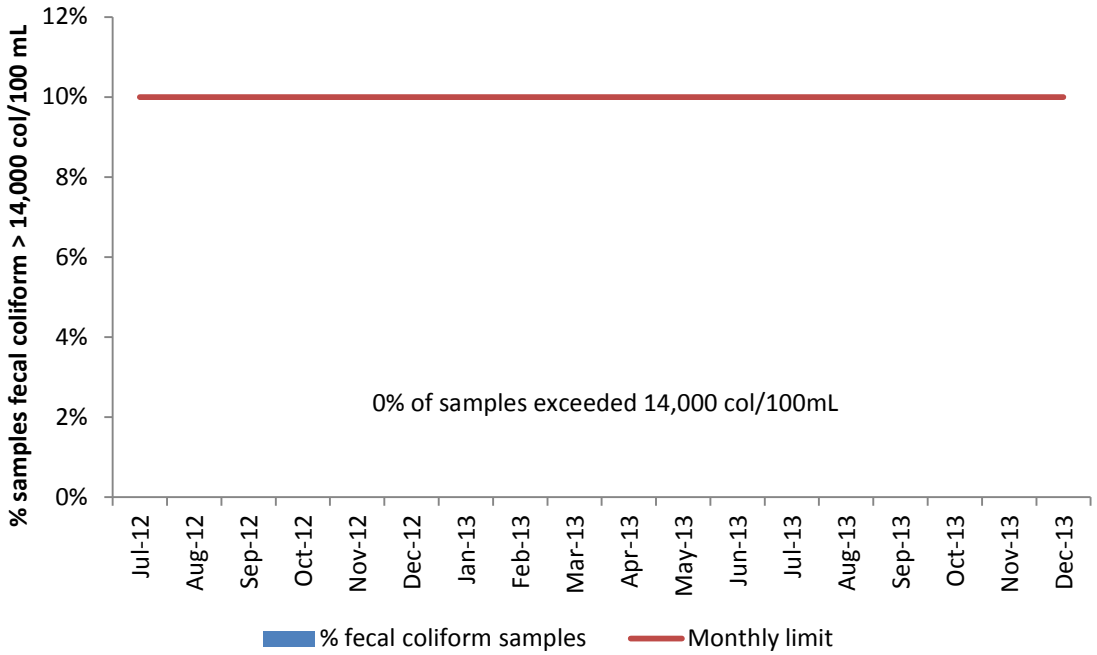


Figure 19. DITP Effluent Fecal Coliform (High Sample Counts), July 2012 – December 2013

The limits for pH are based on the maximum and minimum values for each month, with pH required to fall between 6.0 and 9.0. Between July 2012 and December 2013, the pH of the effluent was always within this range. Figure 20 shows the monthly minimums and maximums throughout the period.

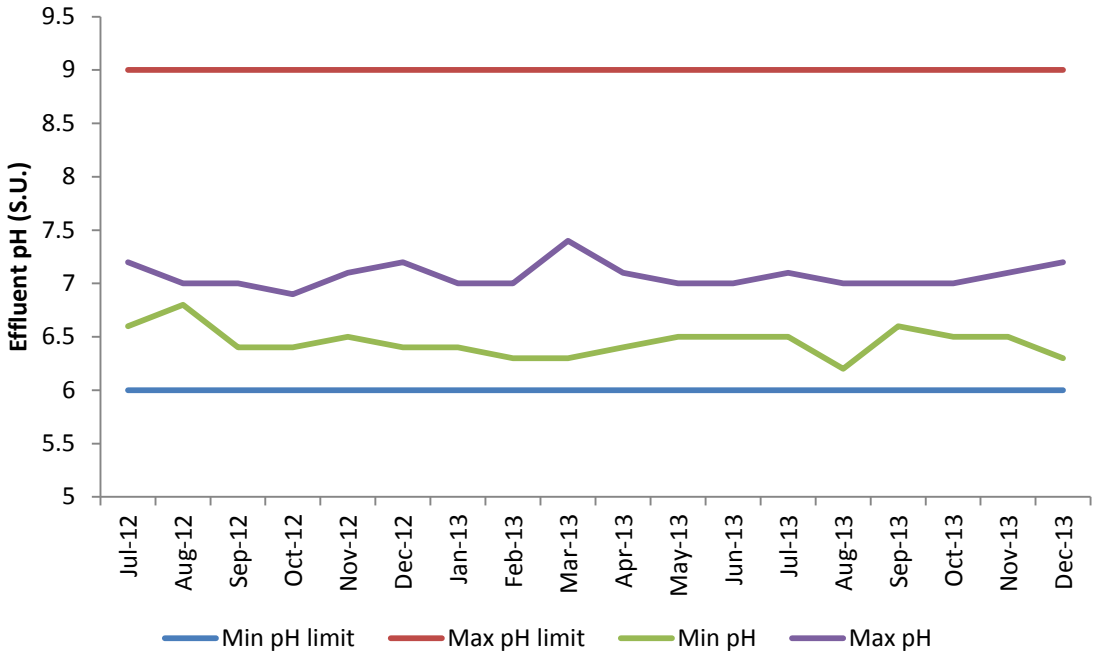


Figure 20. DITP Effluent pH (Monthly Min and Max), July 2012 – December 2013

The permit regulates total chlorine residual through two limits: a monthly average of 456 µg/L and a daily maximum of 631 µg/L. Figure 21 shows monthly average chlorine residual results versus the regulatory limit. The following figure, Figure 22, shows the daily results against the permit limit. Neither limit was violated, or even approached, during the period covered by this report.

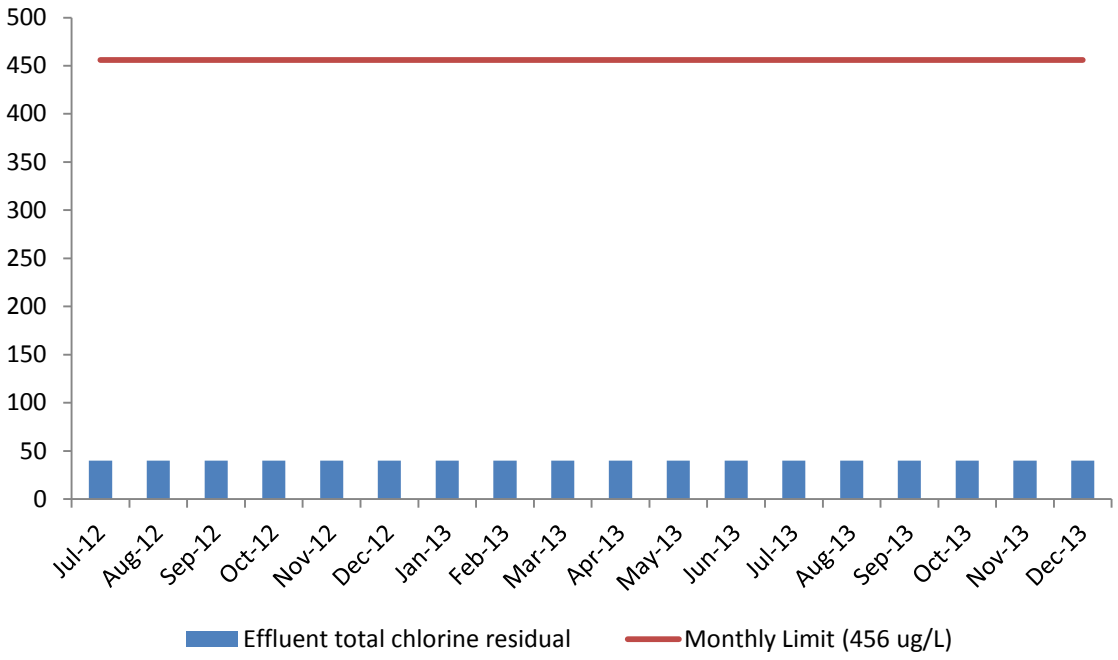


Figure 21. DITP Effluent Total Chlorine Residual (Monthly Average), July 2012 – December 2013

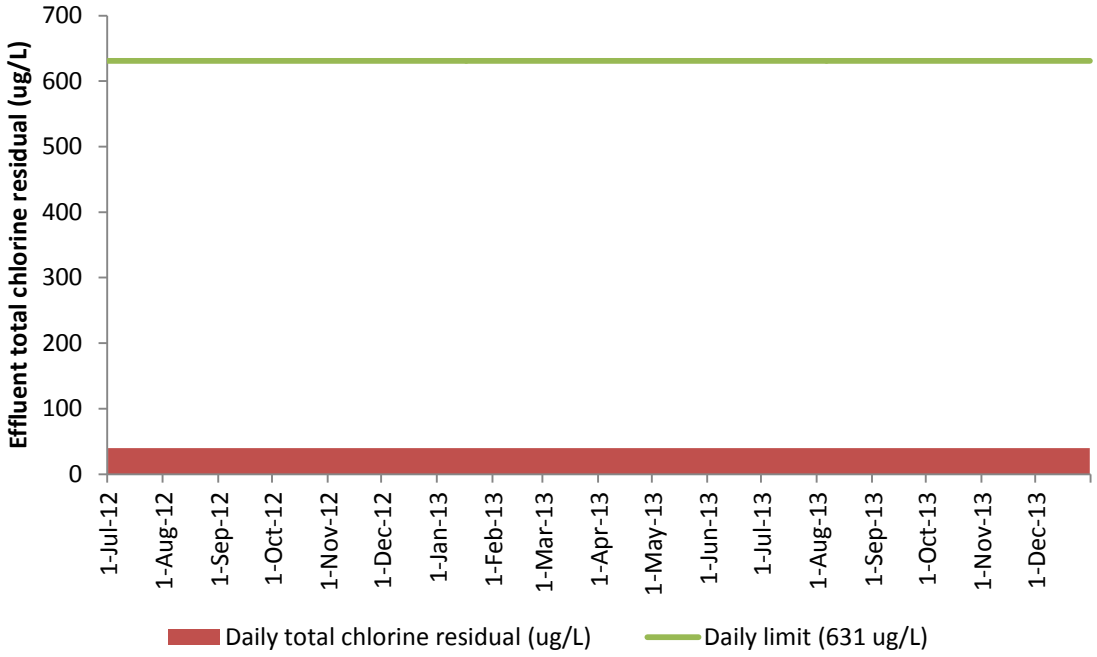


Figure 22. DITP Effluent Total Chlorine Residual (Daily Average), July 2012 – December 2013

In addition to the limits mentioned above, the permit sets forth two more effluent limits. Arochlors 1016, 1221, 1232, 1242, 1248, 1254, and 1260 have a 0.000045 µg/L limit. However, none of these compounds were detected in the 18 month report period. The limit on dry day flow was covered in the Executive Summary (Figure 2).

MWRA must also report a number of other effluent components, such as metals and nutrients, although they have no discharge limit. These are listed in Appendix H, Table H-1.

Effluent Quality Compared to Water Quality Standards

Table 9 compares concentrations of priority pollutants in DITP effluent to water quality criteria, both acute and chronic. Even before the dilution provided by the outfall, all the pollutants except for copper were below both the acute and chronic criteria. After dilution, all the pollutants were below the acute and chronic criteria. To simplify calculations for this table, only the metals data from 2013 was used.

Table 9. Comparison of DITP Effluent with Water Quality Criteria, 2013

Acute	CY13 Effluent Maximum (ug/L)	Dilution†	Concentration at ZID (ug/L)‡	Acute Dissolved Criteria (ug/L)*	Acute Recoverable Criteria (ug/L)**	Times Detected
Arsenic	0.4	50	0.008	69.0	69.0	0 of 24
Copper	11.1	50	0.222	4.8	5.8	50 of 50
Lead	1.66	50	0.033	210.0	220.8	13 of 49
Mercury	0.02	50	0.0003	1.8	2.1	25 of 47
Nickel	3.37	50	0.067	74.0	74.7	50 of 50
Silver	0.14	50	0.003	1.9	2.2	0 of 50
Zinc	31.9	50	0.638	90.0	95.1	50 of 50
Chronic	**CY13 Effluent Average (ug/L)**	**Dilution†**	**Concentration at ZID (ug/L)‡**	**Chronic Dissolved Criteria (ug/L)***	**Chronic Recoverable Criteria (ug/L)****	**Times Detected**
Arsenic	0.4	70	0.006	36.0	36.0	0 of 24
Copper	7.0	70	0.1	3.1	3.7	50 of 50
Lead	0.64	70	0.009	8.1	8.5	13 of 49
Mercury	0.01	70	0.0001	0.9	1.1	25 of 47
Nickel	2.11	70	0.03	8.2	8.3	50 of 50
Silver	No chronic criteria exist for silver.					
Zinc	18.5	70	0.264	81.0	85.6	50 of 50

† Permit estimate from Attachment S.

‡ ZID is Zone of Initial Dilution, the area directly around the outfall.

* National Recommended Water Quality Criteria for Priority Toxic Pollutants, Federal Register, 12/10/98.

** Calculated using the conversion factors in Appendix A of the Federal Register, 12/10/98.

Ambient Monitoring Plan

The permit requires ambient monitoring of the Harbor and Massachusetts Bay. The ambient monitoring plan has three main components: the Harbor and Bay monitoring plan; the maintenance of the Bays Eutrophication Model; and the implementation of plume tracking. Note that the plume tracking component of the plan is completed and results are available from EnQual (technical reports 2002-06 and 2002-07).

In March 2004, the MWRA issued Revision 1 of the Ambient Monitoring Plan, which made minor changes to the original plan. A second revision of the Ambient Monitoring Plan was issued in 2010. The plan is available online at the web address below for details of parameters sampled and sampling schedules.

The Bays Eutrophication Model is a three-dimensional hydrographic and water quality model that is run annually to provide information on whether new limits are needed on the effluent discharge. The model is designed primarily to examine nutrient impacts.

The Outfall Monitoring Science Advisory Panel (OMSAP), a panel of scientific experts convened by the EPA and the Massachusetts Department of Environmental Protection (MA DEP), oversees the monitoring plan and examines scientific data produced by the MWRA and MWRA consultants. OMSAP also serves as a peer review board for technical reports, and advises EPA and MA DEP on the implications of monitoring observations. Finally, OMSAP evaluates any exceedances under the Contingency Plan, described in the next section.

Much more information on the Ambient Monitoring Plan is available on the Internet. The Ambient Monitoring Plan can be found at:
http://www.mwra.state.ma.us/harbor/html/ambient.htm

Associated information and synthesis reports generated by ambient monitoring can be found at http://www.mwra.state.ma.us/harbor/html/wklyintr.htm for Boston Harbor and at http://www.mwra.state.ma.us/harbor/html/mbmon.htm for Massachusetts Bay.

The OMSAP web page, including announcements for public meetings, is at:
http://www.epa.gov/region1/omsap/index.html

The Contingency Plan

The permit requires a contingency plan that defines a response plan when a parameter threshold is exceeded. Responses may include additional sampling and testing, changes in treatment plant process, or, in a worst case scenario, examining the feasibility of re-opening the Deer Island harbor outfalls. The effluent and toxicity thresholds are set to be equal to the NPDES permit limits. However, the Contingency Plan includes a number of new thresholds related to parameters monitored under the Ambient Monitoring Plan in Massachusetts Bay.

Under the Contingency Plan, two types of thresholds exist: a caution level and a warning level. Figure 23 on the following page details the processes required by the Contingency Plan in case of a threshold exceedance. Table 10 lists the three Contingency Plan exceedances in the 18 month period covered by this report. For more information on historical exceedances, please refer to the web site listed below.

Table 10. Contingency Plan Exceedances, July 2012 – December 2013

Date*	Threshold Level Exceeded	Threshold Exceeded
October 26, 2012	Caution	Nearfield water column nuisance algae (*Phaeocystis*)
December 14, 2012	Caution	Infaunal diversity: Shannon-Wiener H' and Pielou's J'
December 13, 2013	Caution	Infaunal diversity: Shannon-Wiener H' and Pielou's J'
* Notification date; typically within 5 days of knowing of the violation.		

In addition to the thresholds, the Contingency Plan also requires several other studies. First, the MWRA must update annually a technical survey regarding tertiary treatment systems designed to remove nutrients. Second, the Authority must maintain a nitrogen monitoring program at DITP to examine the need for tertiary treatment. Both of these efforts are ongoing. Third, there must

be a “dry run” of a Contingency Plan violation to assess the validity of the Contingency Plan structure. Fourth, $81 million must be held in reserve for emergency use. Finally, the old Boston Harbor outfalls must be maintained in case diversion of the effluent back to the Harbor is deemed necessary. These last three options have been successfully completed, while the first two are ongoing.

More information on Contingency Plan topics is on the Internet at:
http://www.mwra.state.ma.us/harbor/html/contingency.htm

Exceedance reports are posted at:
http://www.mwra.state.ma.us/harbor/html/exceed.htm

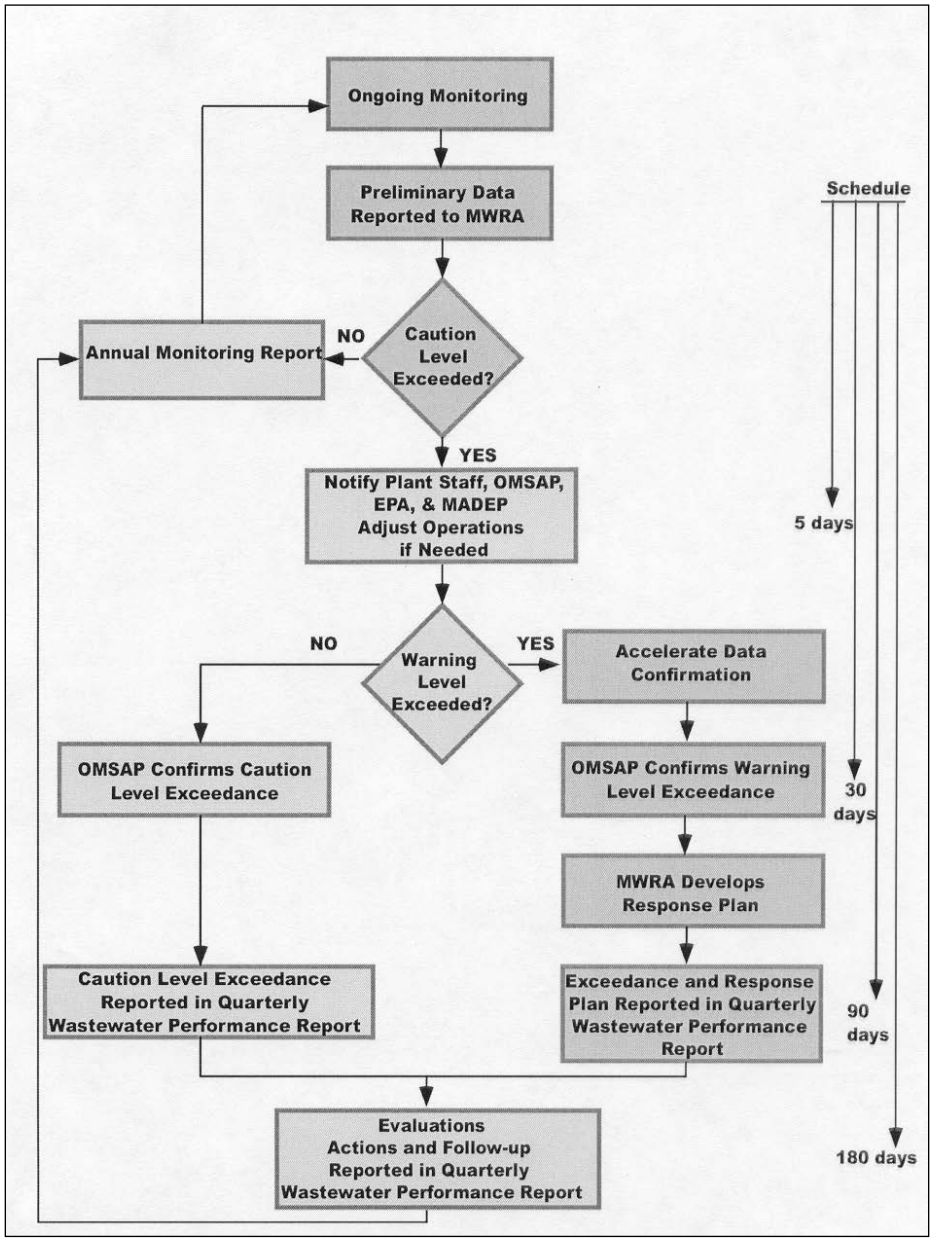


Figure 23. Contingency Plan Flow Chart

Combined Sewer Overflows

Overview

MWRA monitored four CSO facilities in the North System during the period covered in this report (July 2012 – December 2013). Three of the facilities – Cottage Farm, Prison Point, and Somerville Marginal – are covered by the same NPDES permit as DITP. The fourth facility is the Union Park CSO facility, located in Boston and discharging to the Fort Point Channel. Union Park operates under a different NPDES permit than the other CSO facilities. Details of the Union Park facility can be found in Appendix G. There are no CSO facilities in the South System. Three CSO facilities in the North System have been closed following sewer separation projects. In November 2007, the Fox Point and Commercial Point facilities were decommissioned and no longer discharge due to the completion of a separation project in the Dorchester area. The Constitution Beach facility was deactivated in September 2000.

The monitoring results vary significantly between facilities because of differences in type and location. Location is especially important since storms can be highly localized, affecting the level and intensity of rainfall at the CSO facility and the area that the facility serves. Improvements to the transport system (such as sewer separation projects) and the CSO facilities themselves have improved the capture of combined sewage. This has resulted in fewer activations over time.

Each CSO facility screens, chlorinates, and dechlorinates combined wastewater (sewage and storm water) prior to discharge. The Cottage Farm, Prison Point, and Union Park facilities also have pumping and tank storage capacity. Pumping and tank storage allows screened and chlorinated wastewater to be held at these facilities up to their storage capacities prior to discharge. Stored wastewater can eventually be pumped back into the system and processed at Deer Island. Any wastewater exceeding the storage capacity will overflow and discharge through the CSO outfalls. All of this discharge is disinfected.

The remaining CSO facility – Somerville Marginal – is a gravity CSO facility, meaning that combined wastewater both arrives and leaves the CSO facility by gravity instead of pumping. The disinfected wastewater overflows to the receiving water as quickly as it arrives at the facility. A detailed description of the CSO facilities, including the decommissioned facilities, can be found in Appendix G.

All rainfall data in the following sections is from Logan Airport.

Cottage Farm CSO Facility

Table 11 and Figures 24 and 25 summarize activation data for the Cottage Farm CSO facility.

Table 11. Cottage Farm CSO Activations Summary, 2000-2013

	Activations	Total volume treated (MG)	Min activation (MG)	Mean activation (MG)	Max activation (MG)	Total rainfall (inches)
CY00	22	574.5	0.2	24.9	88.1	45.8
CY01	7	442.6	2.4	63.2	223.4	31.7
CY02	12	81.5	0.6	6.8	20.6	41.7
CY03	19	139.5	0.9	7.3	18.3	44.4
CY04	14	190.6	0.6	13.6	62.5	44.6
CY05	7	132.8	0.7	19.0	84.9	43.7
CY06	7	219.8	1.6	31.4	61.5	52.9
CY07	3	54.9	3.6	18.3	27.9	39.5
CY08	12	145.8	0.9	12.2	48.2	54.5
CY09	4	57.5	2.3	14.4	25.9	43.5
CY10	10	484.4	0.9	48.4	187.8	49.7
CY11	7	47.3	1.9	6.8	14.5	52.4
CY12	5	61.5	6.4	12.3	26.4	36.7
CY13	3	30.2	3.2	10.1	22.5	40.4

Average activation = Total volume treated divided by the number of activations.

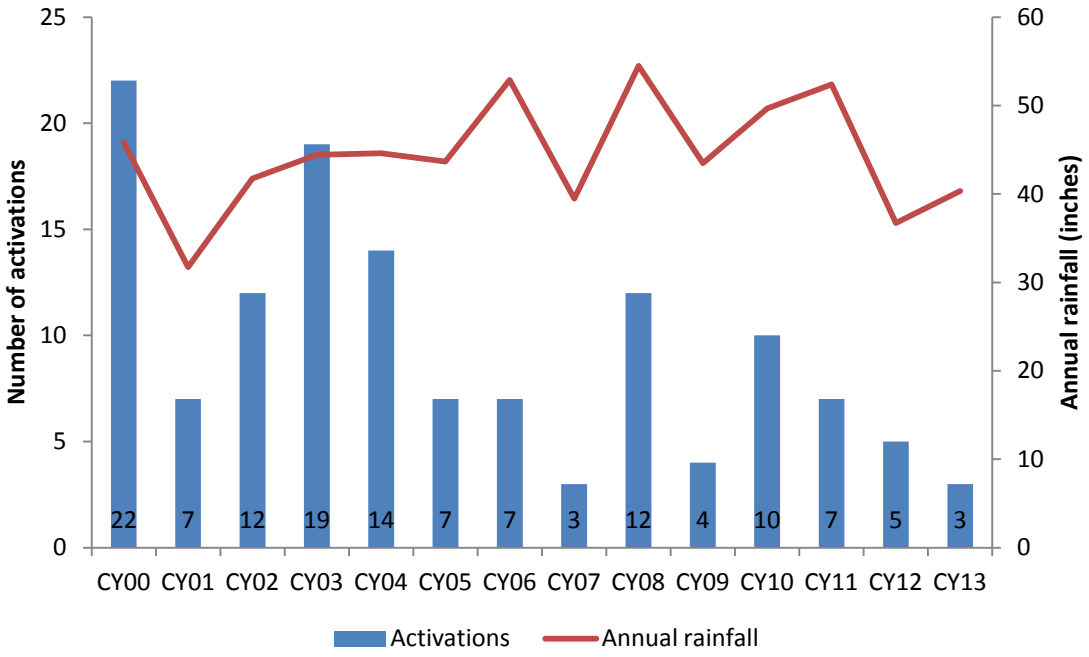


Figure 24. Cottage Farm CSO Activations Compared to Precipitation, 2000-2013

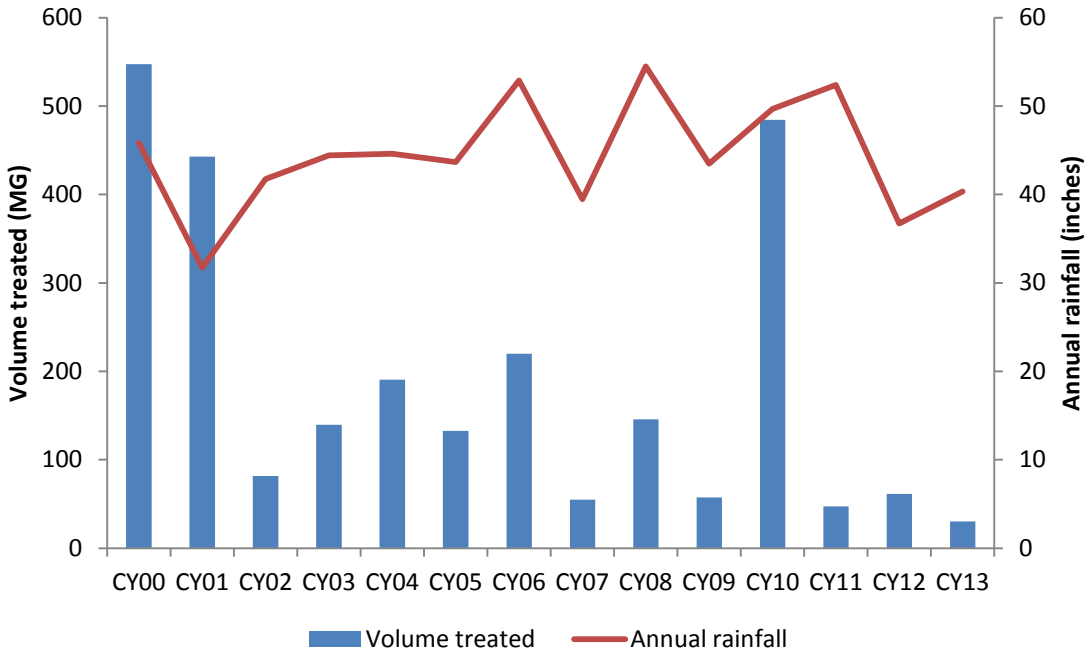


Figure 25. Cottage Farm CSO Volume Treated Compared to Precipitation, 2000-2013

Table B-1 of Appendix B contains detailed data on conventional parameters in Cottage Farm effluent. Table 12 below summarizes this data. As is the case with all four facilities covered in this chapter, Cottage Farm is a CSO facility that provides floatables control, chlorination, and dechlorination. Such a facility cannot provide the same level of effluent treatment as a full-fledged treatment plant such as Deer Island. CSO effluent pH is often rather low in comparison to effluent from Deer Island or other treatment plants as CSO facilities cannot correct for sewage and/or stormwater that enters the facility with an already low pH.

Table 12. Cottage Farm CSO Effluent Characterization, July 2012 – December 2013

Parameter	Minimum	Average	Maximum
TSS (mg/L)	60.0	89.8	129.7
BOD (mg/L)	53.9	64.8	79.0
Fecal Coliform (col/100 mL)	30	145	599
pH (SU)	6.5		8.5

MWRA also tests CSO effluent for metals and surfactants whenever the CSO facility is sampled. The results of these tests are presented in Appendix B, Tables B-2 and B-3. The target metals were detected in most samples, as seen in Table 13.

Table 13. Cottage Farm CSO Effluent Metals, July 2012 – December 2013

Parameter	Average Concentration	Times Detected
Aluminum (ug/L)	1142	4 of 4
Cadmium (ug/L)	0.51	4 of 7
Calcium (ug/L)	10625	4 of 4
Chromium (ug/L)	17.0	4 of 4
Copper (ug/L)	46.6	4 of 4
Lead (ug/L)	33.6	4 of 5
Magnesium (ug/L)	2173	4 of 4
Mercury (ug/L)	0.31	4 of 4
Nickel (ug/L)	4.51	2 of 5
Silver (ug/L)	0.35	1 of 1
Zinc (ug/L)	109.6	4 of 4

Prison Point CSO Facility

Activation data for the Prison Point CSO facility are summarized in Table 14 and Figures 26 and 27. Unlike the Cottage Farm facility, Prison Point is not hydraulically connected to the Deer Island Treatment Plant, so activations are primarily dependent on rainfall.

Table 14. Prison Point CSO Activations Summary

	Activations	Total volume treated (MG)	Min activation (MG)	Mean activation (MG)	Max activation (MG)	Total rainfall (inches)
CY00	28	596.0	1.0	21.3	596.0	45.8
CY01	19	505.4	0.4	26.6	188.0	31.7
CY02	31	217.9	0.5	7.0	27.8	41.7
CY03	31	359.2	1.0	11.6	33.8	44.4
CY04	22	379.7	0.8	17.3	97.6	44.6
CY05	29	417.4	1.0	14.4	126.1	43.7
CY06	30	467.4	1.1	15.6	115.5	52.9
CY07	15	180.2	3.3	12.0	45.9	39.5
CY08	18	478.9	1.0	26.6	91.9	54.5
CY09	16	250.6	1.1	15.7	59.0	43.5
CY10	22	880.7	1.7	40.0	336.7	49.7
CY11	25	414.4	4.1	16.6	34.0	52.4
CY12	22	300.1	0.6	13.6	54.5	36.7
CY13	16	281.4	2.7	17.6	69.8	40.4
Average activation = Total volume treated divided by the number of activations.						

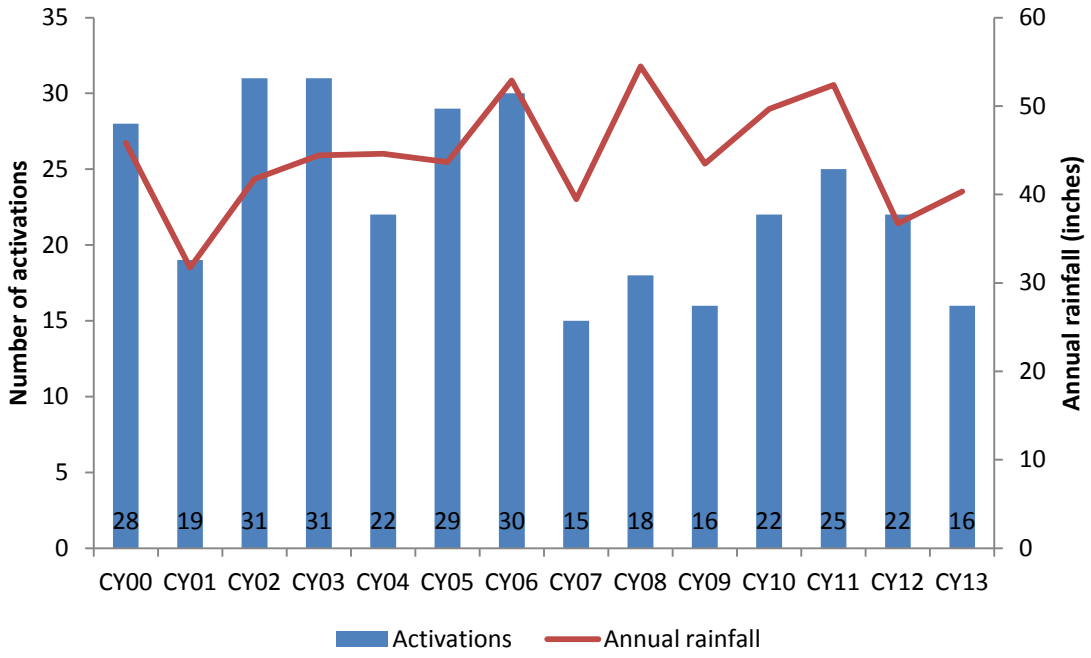


Figure 26. Prison Point CSO Activation Compared to Precipitation, 2000-2013

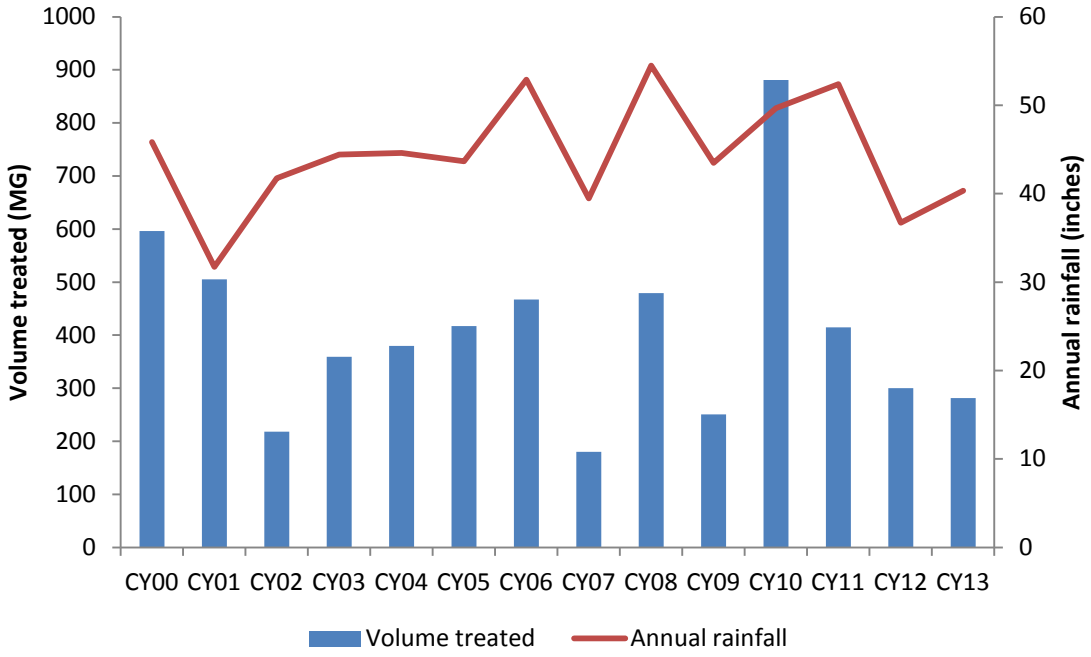


Figure 27. Prison Point CSO Volume Treated Compared to Precipitation, 2000-2013

Conventional parameter data for Prison Point effluent are provided in Appendix C, Tables C-1 and C-2. Table 15 summarizes that data.

Table 15. Prison Point CSO Effluent Characteristics, July 2012 – December 2013

Parameter	Minimum	Average	Maximum
TSS (mg/L)	43.8	115.9	371.2
BOD (mg/L)	19	33.5	69.8
Fecal Coliform (col/100 mL)	124	234	1530
pH (SU)	6.2		6.7

The results of priority pollutant testing for Prison Point can be found in Tables C-2 and C-3 of Appendix C. As with Cottage Farm, the target metals were detected in most of the samples. Table 16 summarizes average metals concentrations in Prison Point effluent in the July 2012 – December 2013 time period.

Table 16. Prison Point CSO Effluent Metals, July 2012 – December 2013

Parameter	Average Concentration	Times Detected
Aluminum (ug/L)	964	4 of 4
Cadmium (ug/L)	0.47	4 of 4
Chromium (ug/L)	14.9	4 of 4
Copper (ug/L)	50.8	4 of 4
Lead (ug/L)	44.6	4 of 4
Magnesium (ug/L)	2093	4 of 4
Mercury (ug/L)	0.13	4 of 4
Nickel (ug/L)	6.78	4 of 6
Zinc (ug/L)	148	4 of 4

Somerville Marginal CSO Facility

Table 17 and Figures 28 and 29 summarize activation information for the Somerville Marginal facility.

Table 17. Somerville Marginal CSO Activations Summary

	Activations	Total volume treated (MG)	Min activation (MG)	Mean activation (MG)	Max activation (MG)	Total rainfall (inches)
CY00	26	89.0	0.01	3.4	20.2	45.8
CY01	11	58.8	0.3	5.3	32.6	31.7
CY02	44	50.6	0.02	1.2	6.8	41.7
CY03	29	77.1	0.05	2.7	7.5	44.4
CY04	22	91.7	0.2	4.2	26.7	44.6
CY05	27	74.9	0.2	2.8	28.1	43.7
CY06	29	124.1	0.1	4.3	29.4	52.9
CY07	16	51.3	0.7	3.2	11.1	39.5
CY08	29	135.0	0.1	4.7	25.3	54.5
CY09	24	74.2	0.3	3.1	13.6	43.5
CY10	27	230.7	0.3	8.5	91.4	49.7
CY11	40	104.4	0.2	2.6	12.9	52.4
CY12	26	67.8	0.1	2.6	14.2	36.7
CY13	19	66.6	0.1	3.5	14.9	40.4
Average activation = Total volume treated divided by the number of activations.						

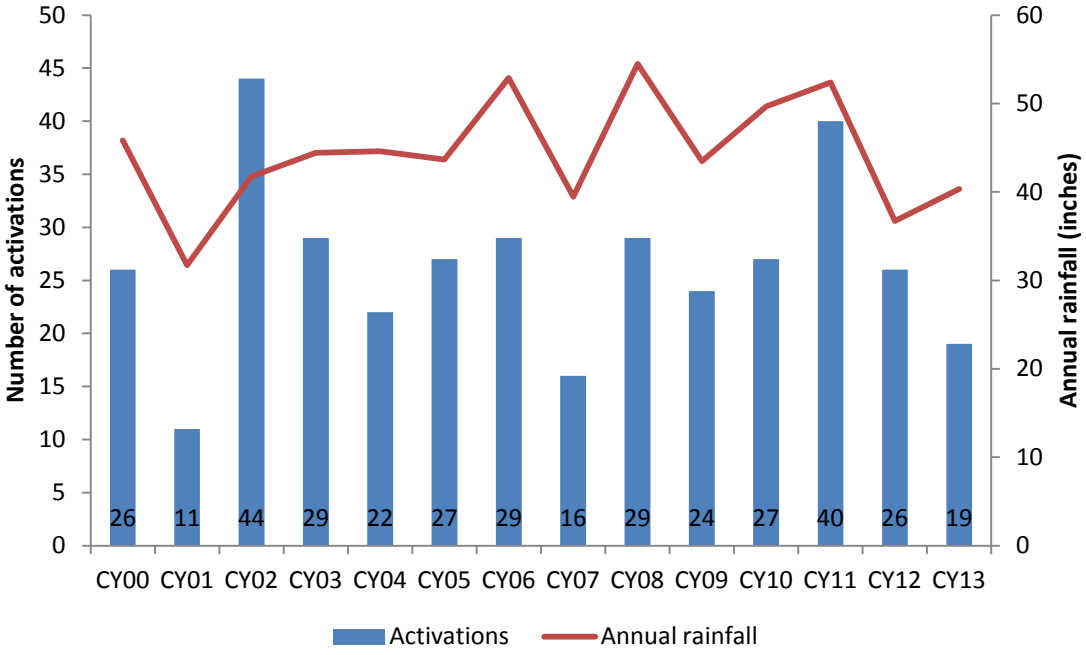


Figure 28. Somerville Marginal CSO Activations Compared to Precipitation, 2000-2013

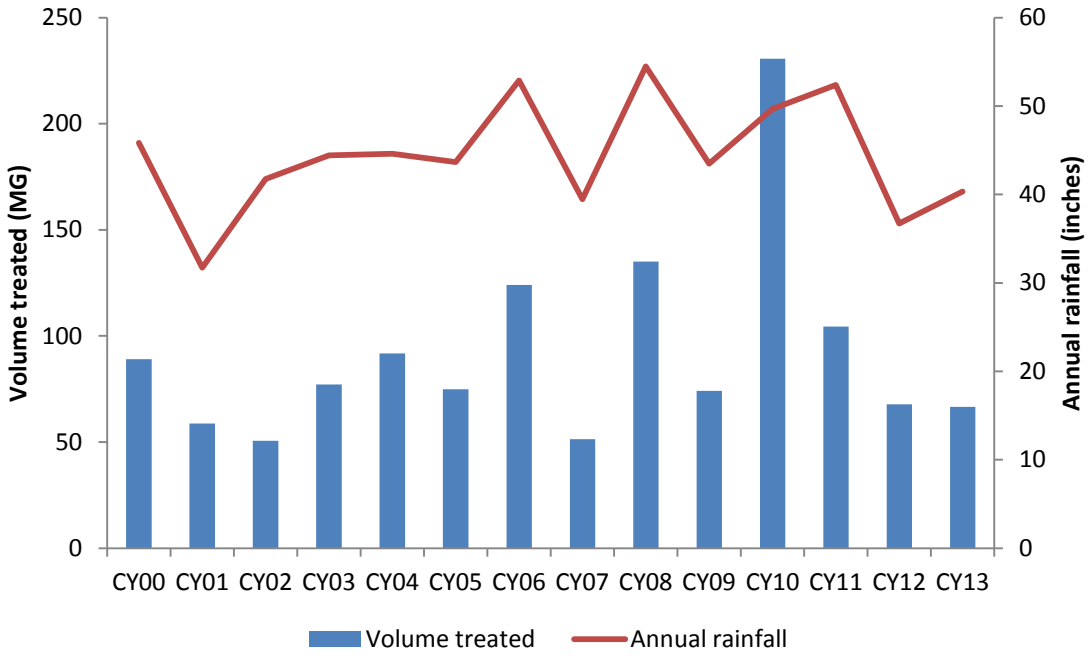


Figure 29. Somerville Marginal CSO Volume Treated Compared to Precipitation, 2000-2013

Somerville Marginal conventional parameter data is provided in Appendix D, and summarized below in Table 18.

Table 18. Somerville Marginal CSO Effluent Characteristics, July 2012 – December 2013

Parameter	Minimum	Average	Maximum
TSS (mg/L)	62.1	129.2	244
BOD (mg/L)	6.8	16.1	28.7
Fecal Coliform (col/100 mL)	1	40	560
pH (SU)	5.3		8.6

The results of Somerville Marginal priority pollutant testing can be found in Appendix D, Tables D-2 and D-3. As with the other CSO facilities, the target metals were detected in most of the samples. Table 19 summarizes the average metals concentration in the report period.

Table 19. Somerville Marginal CSO Effluent Metals, July 2012 – December 2013

Parameter	Average Concentration	Times Detected
Aluminum (ug/L)	1867	6 of 6
Cadmium (ug/L)	0.43	6 of 8
Calcium (ug/L)	7146	6 of 6
Chromium (ug/L)	10.6	6 of 6
Copper (ug/L)	26.0	6 of 7
Lead (ug/L)	44.2	6 of 9
Magnesium (ug/L)	1884	6 of 6
Mercury (ug/L)	0.07	6 of 6
Nickel (ug/L)	3.76	4 of 8
Zinc (ug/L)	113.5	6 of 6

Union Park CSO Facility

The Union Park CSO facility is a CSO pumping and storage facility in Boston. Physical details of the station can be found in Appendix E. It operates under a different permit than the previous CSO facilities, but is included in this report for completeness purposes. The Union Park CSO facility had its first discharge in July 2007. Table 20 summarizes the activations since 2007, and Figures 30 and 31 cover activations and volume discharged versus precipitation, respectively.

Table 20. Union Park CSO Activations Summary

	Activations	Total volume treated (MG)	Min activation (MG)	Mean activation (MG)	Max activation (MG)	Total rainfall (inches)
CY07	3	27.1	3.1	15.0	14.9	39.5
CY08	12	106.9	2.2	59.5	26.3	54.5
CY09	4	29.1	1.1	16.5	11.6	43.5
CY10	11	168.8	0.9	89.9	84.1	49.7
CY11	12	30.5	0.3	21.3	7.8	52.4
CY12	6	28.5	0.9	17.3	9.9	36.7
CY13	7	37.6	0.8	22.3	17.8	40.4
Average activation = Total volume treated divided by the number of activations.						

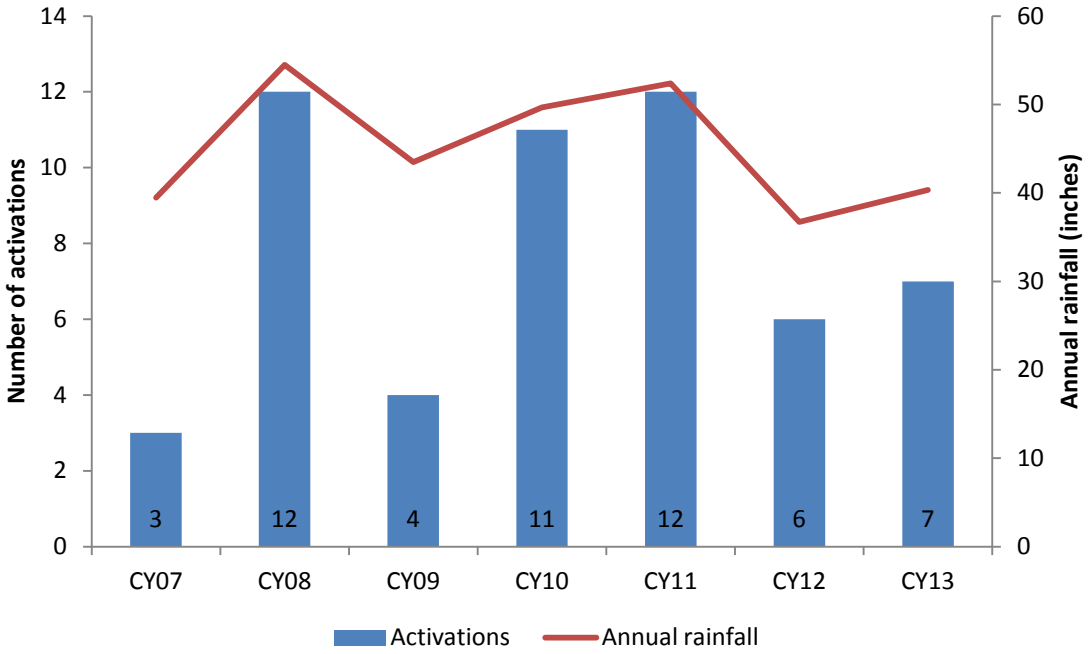


Figure 30. Union Park CSO Activations Compared to Precipitation, 2007-2013

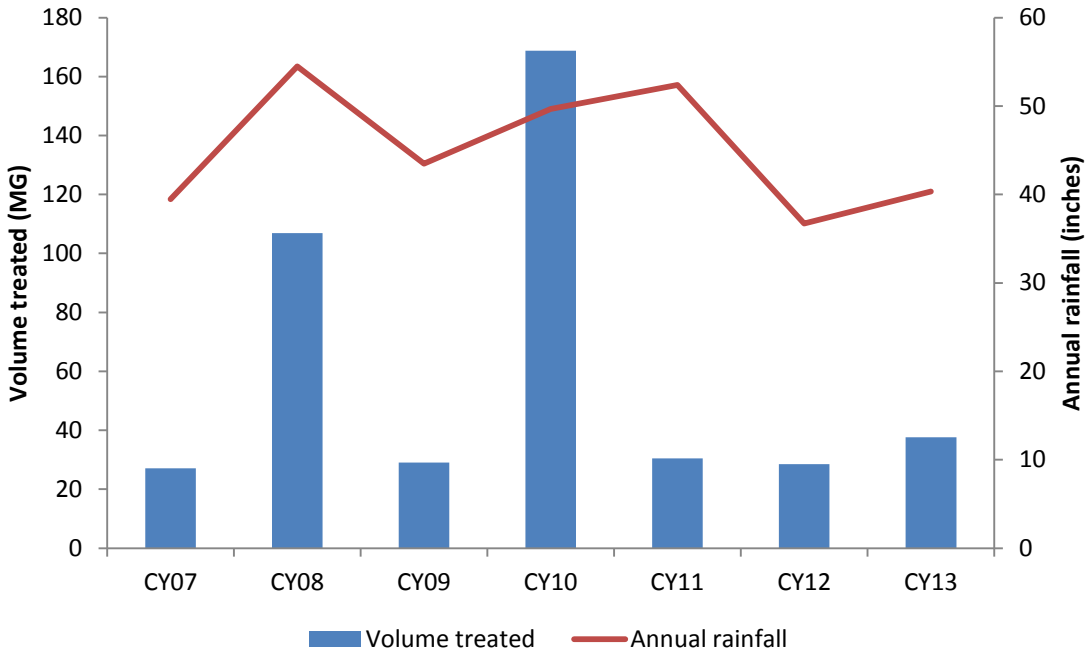


Figure 31. Union Park CSO Volume Treated Compared to Precipitation, 2007-2013

Table 21 lists conventional parameters measured in samples of Union Park effluent. More detailed results can be found in Appendix E-1.

Table 21. Union Park CSO Effluent Characteristics, July 2012 – December 2013

Parameter	Minimum	Average	Maximum
TSS (mg/L)	10.5	37.8	81
BOD (mg/L)	10	27.8	43
Fecal Coliform (col/100 mL)	3	15	140
Enterococcus (col/100mL)	2	17	676
pH (SU)	3.8		6.5

Table 22 shows the results of tests for various metals in Union Park effluent. Detailed results on concentrations and loadings can be found in Appendices E-2 and E-3 respectively.

Table 22. Union Park CSO Effluent Metals, July 2012 – December 2013

Parameter	Average Concentration	Times Detected
Aluminum (ug/L)	260.2	3 of 3
Antimony (ug/L)	0.5	0 of 3
Arsenic (ug/L)	2	3 of 3
Beryllium (ug/L)	0.5	0 of 3
Cadmium (ug/L)	0.13	0 of 6
Calcium (ug/L)	3850	3 of 3
Chromium (ug/L)	1.5	6 of 6
Copper (ug/L)	19.8	6 of 6
Lead (ug/L)	12	6 of 6
Magnesium (ug/L)	3700	3 of 3
Mercury (ug/L)	0.02	2 of 3
Nickel (ug/L)	0.75	1 of 6
Selenium (ug/L)	0.5	0 of 3
Silver (ug/L)	0.25	0 of 3
Thallium (ug/L)	0.25	0 of 3
Zinc (ug/L)	46.3	6 of 6

Sludge Processing

Overview

In December 1991, the MWRA ceased discharge of sludge into Boston Harbor. The digested sludge is now sent to the Fore River Pelletizing facility in Quincy for processing into fertilizer pellets.

Pelletizing Process

The pelletizing process begins at the Deer Island Treatment Plant, where gravity thickeners handle sludge and scum from the plant's primary batteries. Centrifuges thicken secondary sludge and scum, with the help of added polymers. Centrate, or the liquid produced by these processes, is sent back to the head of the plant for treatment.

The thickened product is then transferred to Deer Island's most distinctive feature, the egg-shaped anaerobic digesters. In the digesters, bacteria break down the sludge into methane, carbon dioxide, organic material, and water. The methane is tapped, stored, and used later to generate electrical power or heat for Deer Island. The digested sludge is pumped via a small pipe in the Inter-Island Tunnel across the Harbor to the Fore River Pelletizing facility. This tunnel connection became fully operational in April 2005.

At the biosolids processing plant, centrifuges dewater the sludge into "cake," and dryers further process the sludge into the fertilizer pellets. The centrate from the centrifuges is transferred back to Deer Island for treatment via a second small pipe in the Inter-Island Tunnel by way of the Braintree-Weymouth Intermediate Pump Station. The tunnel replaced the earlier barge service on December 16, 2004. The pellets, marketed as "Bay State Fertilizer," are stored at the facility after production. They can either be packaged on-site, or loaded and shipped out in bulk by rail.

Bay State Fertilizer is available in limited quantities to the general public, and is more widely available to local municipalities and for wholesale purchase.

Sludge Pellet Regulations

Both the federal government and the Commonwealth of Massachusetts have regulations for the composition of fertilizer pellets. The federal government regulates copper, molybdenum, nickel, zinc, arsenic, cadmium, lead, mercury, and selenium. Massachusetts sets limits for all of the above except arsenic and selenium, while adding limits for boron and chromium. In most cases the Massachusetts standards are tougher than the federal standards. Meeting these regulations has generally not been a problem for the MWRA, except for state standards for molybdenum. Table 23 (next page) summarizes the applicable standards.

Table 23. Federal and State Limits for Sludge Pellet Metals

Parameter	Federal Limit (ppm)	Massachusetts Type 1* Limit (ppm)
Arsenic	41	NR
Boron	NR	300
Cadmium	39	14
Chromium	NR	1000
Copper	1500	1000
Lead	300	300
Mercury	17	10
Molybdenum	75	25
Nickel	420	200
Selenium	100	NR
Zinc	2800	2500

NR: Not regulated

*: Type 1 pellets are certified for marketing and distribution in Massachusetts by MADEP

Due to the February 19 annual submittal date for sludge data, sludge data is compiled by calendar year. In calendar year 2012, there were no violations of the federal or state standards for sludge pellets. In 2013, there were no violations of federal standards, but there were three violations of the molybdenum state standard. Tables 24 and 25 summarize the analytical results. The plant processed 37,607 tons in 2012 and 37,160 tons in 2013.

Table 24. Summary of Sludge Pellet Analysis , 2012

Parameter	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12
Arsenic (mg/kg, dry weight)	ND	ND	ND	ND	ND	ND	3.7	4.1	4.4	4.0	3.9	4.4
Boron (mg/kg, dry weight)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium (mg/kg, dry weight)	2.0	2.2	2.2	2.1	2.6	2.2	2.3	2.2	2.3	2.4	2.8	2.4
Chromium (mg/kg, dry weight)	52.5	54.7	56.8	50.8	52.1	48.5	51.8	55.9	61.1	66.7	74.7	77.4
Copper (mg/kg, dry weight)	555.0	558.6	550.8	553.0	542.8	572.8	608.5	674.8	700.0	673.5	653.0	647.0
Lead (mg/kg, dry weight)	114.3	107.7	99.8	66.8	85.3	121.0	136.5	144.4	138.3	139.3	144.0	122.0
Mercury (mg/kg, dry weight)	1.7	1.4	1.4	1.4	1.6	1.9	1.8	1.8	2.1	2.4	2.1	2.0
Molybdenum (mg/kg, dry weight)	13.3	13.0	12.9	17.1	17.2	16.8	20.9	26.3	30.3	29.2	28.7	28.0
Nickel (mg/kg, dry weight)	21.0	21.7	19.8	18.5	22.3	21.8	22.3	23.3	24.8	26.9	28.9	25.7
Selenium (mg/kg, dry weight)	3.6	4.0	4.3	4.1	3.9	3.6	4.1	4.4	4.0	4.2	3.8	3.8
Zinc (mg/kg, dry weight)	117.5	1152.0	1102.5	1127.5	1060.5	1112.5	1215.0	1324.0	1315.0	1250.0	1226.7	1215.0

ND: No data

Bold indicates violations of the MADEP (state) limits for Type 1 sludge, or of federal limits.

Table 25. Summary of Sludge Pellet Analysis, 2013

Parameter	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13
Arsenic (mg/kg, dry weight)	3.9	3.4	4.6	4.0	3.1	4.0	4.7	4.1	3.8	4.3	4.4	3.3
Boron (mg/kg, dry weight)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium (mg/kg, dry weight)	2.5	2.7	2.7	2.3	2.4	1.9	2.2	2.0	2.0	2.1	2.0	2.0
Chromium (mg/kg, dry weight)	78.6	74.8	84.7	86.8	76.9	65.2	77.1	70.3	74.1	83.0	67.3	58.8
Copper (mg/kg, dry weight)	597.8	568.5	579.5	561.0	540.0	552.5	600.0	621.3	610.8	651.7	637.8	639.0
Lead (mg/kg, dry weight)	121.8	107.0	118.5	111.5	110.6	139.3	133.2	152.3	129.3	114.3	95.0	106.5
Mercury (mg/kg, dry weight)	1.9	2.0	2.2	2.5	1.8	1.8	1.8	1.7	1.5	1.4	1.3	1.4
Molybdenum (mg/kg, dry weight)	20.1	15.5	11.4	9.9	12.9	15.5	16.0	23.2	**26.2**	**28.3**	**32.4**	**30.2**
Nickel (mg/kg, dry weight)	25.4	24.0	22.6	23.4	23.8	23.8	23.0	23.5	22.9	22.7	21.2	23.6
Selenium (mg/kg, dry weight)	3.8	3.5	3.5	4.0	4.3	3.9	4.3	3.6	3.7	4.1	3.9	4.2
Zinc (mg/kg, dry weight)	1142.0	1045.0	1192.5	1120.0	1162.0	1200.0	1190.0	1287.5	1332.5	1406.7	1325.0	1227.5

ND: No data

Bold indicates violations of the MADEP (state) limits for Type 1 sludge, or of federal limits.

Transport Systems

North System Headworks Flow Restrictions

Figure 32 below shows the number of hours of maintenance- and rain-related flow restrictions at the remote headworks since 2000. Testing and maintenance hours declined after the outfall tunnel opened in September 2000.

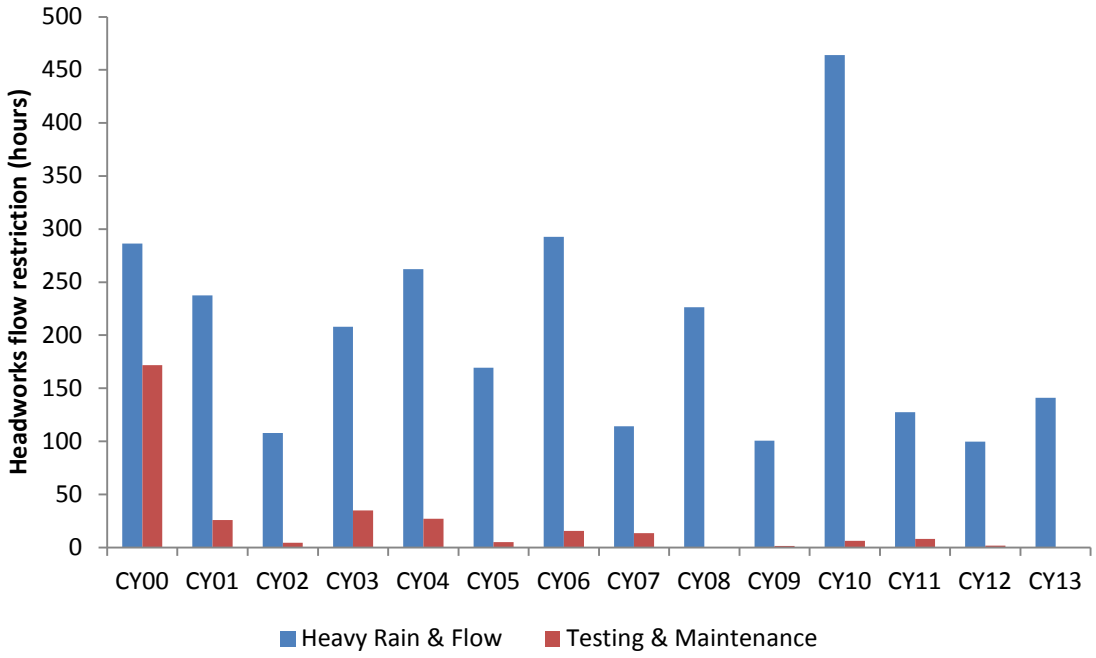


Figure 32. Headworks Flow Restriction, 2000-2013

Figure 33 shows the influence of the number of rainy days in a year on the hours of rain-related flow restrictions. A rainy day is defined as a day with greater than 0.09 inches of rainfall. Differences in storm intensity between the years can explain years that have similar amounts of rainy days yet vastly different flow restriction hours (e.g., 2007 versus 2010).

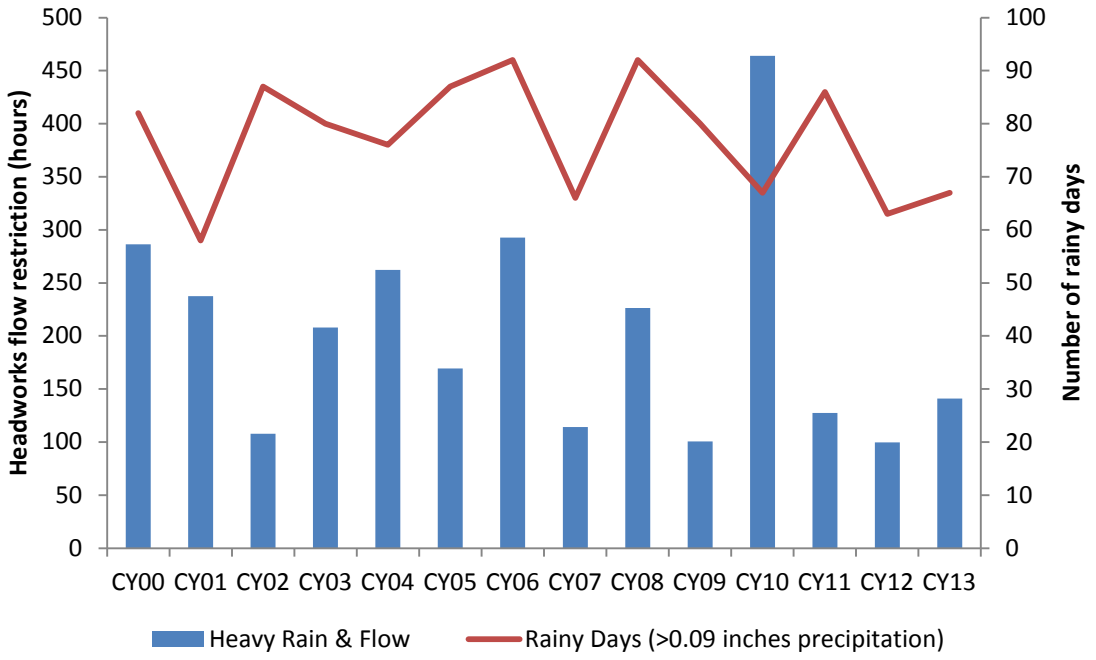


Figure 33. Rain-Related Headworks Flow Restriction, 2000-2013

Flow restriction for maintenance purposes is plotted in Figure 34. During the 2000 to 2013 report period, testing and maintenance peaked in 2000 due to the finishing of both secondary Battery C and the outfall tunnel. With no major new systems added after the completion of those two projects, flow restrictions due to testing and maintenance fell to minimal levels.

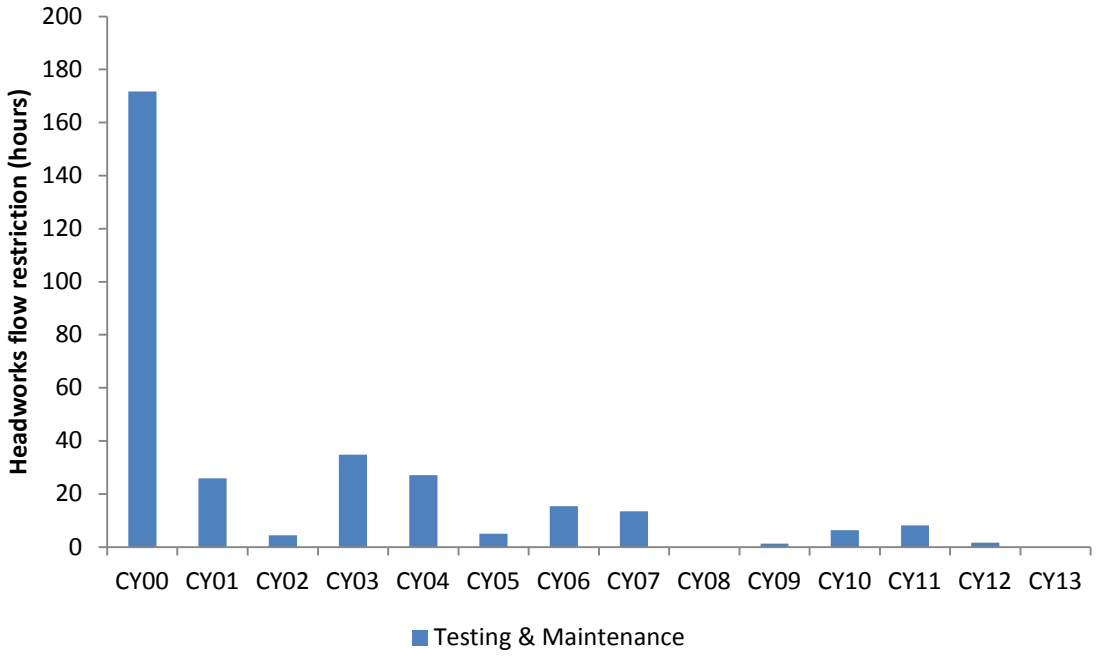


Figure 34. Testing and Maintenance-Related Headworks Flow Restriction, 2000-2013

North System Sanitary Sewer Overflows

MWRA monitors sanitary sewer overflows (SSOs) visually and with meters in both the North and South Systems. SSOs occur when extreme rainfall overwhelms the transport system. Note that SSOs differ from CSOs (combined sewer overflows) in that CSO relief points are pipes that were specifically designed to relieve the combined sewer system. When the system becomes overloaded, these CSOs discharge combined sewage and storm water into a receiving body of water, such as the Charles River. SSOs, on the other hand, are weak points in the separate system, such as manholes, which will overflow during or shortly after heavy rain events.

Reported overflows for the North System decreased from five in 2012 – note that all five occurred in the second half of 2012 – to none in 2013 (see Table 26). However, this count includes only overflows at MWRA-owned overflow areas. There may be overflows for which the local municipalities are responsible. A list of all the known overflow locations in MWRA lines is provided in Appendix G, Table G-6.

Table 26. Sanitary Sewer Overflows, North System, July 2012 – December 2013

Location	Number of Overflows 7/12-12/12	2013
59 Brook St., Wakefield (manhole)	1	--
Section 176A, Somerville	1	--
Section 176C, Somerville	1	--
Section 155, Somerville	1	--
Section 107, Medford	1	--

South System Sanitary Sewer Overflows

There were two reported overflows in the South System in 2013 (see Table 27).

Table 27. Sanitary Sewer Overflows, South System, July 2012 – December 2013

Location	Number of Overflows 7/12-12/12	2013
Braintree/Weymouth Pump Station, Quincy (pump failure)	--	1
Smelt Brook, Braintree	--	1

Inflow and Infiltration

Inflow and infiltration (I/I) is a potentially serious problem that affects all sewerage systems. The NPDES permit requires the MWRA to address issues associated with I/I. Inflow is defined as the introduction of non-sanitary sewer water such as stormwater, residential basement pump-out, and industrial cooling water, into sanitary sewers. Infiltration is the leakage of groundwater into sewage lines through cracks, inadequately sealed joints, etc. In both cases, this additional load decreases system capacity, potentially leading to SSOs. I/I poses both a wet and dry weather problem; however, wet weather exacerbates I/I problems.

A summary of all actions minimizing I/I is prepared annually by MWRA. In addition, the MWRA participates in a Regional I/I Task Force responsible for creating a Regional I/I Reduction Plan for both MWRA and local community collection systems. The I/I Task Force includes MWRA staff, state regulators, and representatives from local communities. To reduce I/I, the MWRA "may consider incentive programs, rate structures, grant and loan programs, technical assistance and public education efforts as well as regulatory and enforcement mechanisms…" (permit section 18.bb.iv)

Find permit-related I/I materials at: http://www.mwra.state.ma.us/harbor/html/operations.htm

Miscellaneous NPDES Permit Requirements

Overview

The MWRA's NPDES permit includes a number of other sections other than effluent quality for Deer Island and the CSO facilities, making it one of the most comprehensive permits ever issued by EPA.

Facility Best Management Practices Plans

Best Management Practices Plans (BMPs) are designed to minimize the environmental impact of MWRA facilities. The MWRA has developed plans for the following facilities:

- Deer Island Treatment Plant
- Nut Island Headworks
- Ward Street Headworks
- Columbus Park Headworks
- Chelsea Creek Headworks
- Cottage Farm CSO facility
- Prison Point CSO facility
- Somerville Marginal CSO facility
- Biosolids Processing Plant

The objectives of BMPs are "(1) minimize the potential for violations of the permit, (2) protect the designated water uses of the surrounding water bodies, and (3) mitigate pollution from materials storage areas, site runoff, improper use of waste disposal system, accidental spillage, etc." (permit section 9.a)

BMPs are available at the above facilities or at the MWRA offices in Charlestown.

Water Conservation and Dry Day Flow Limits

As described in the Executive Summary, one of the requirements of the permit is the adherence to a 436 MGD dry day flow limit. In the period covered by this report, the MWRA was well within compliance for this limit. See Figure 2 in the Executive Summary for details. If dry day flow reaches 415 MGD, MWRA cannot accept new connections larger than 1.4 MGD. An annual report documents the MWRA's demand management program. The demand management program, run with the cooperation of member communities, reviews historical water and wastewater use, and looks at the effectiveness of past and future conservation programs.

Find permit-related water conservation and dry day flow limit materials at:
http://www.mwra.state.ma.us/harbor/html/flow.htm

Pollution Prevention Program

The pollution prevention requirement of the permit requires MWRA to develop strategies to reduce pollutant loadings from households and permitted industries in the service area. The main

target of the program is polychlorinated biphenyls, or PCBs, a known human carcinogen. Manufacture of PCBs has been banned for several decades; however, quantities remain in the environment. The other main aspect of the program is the development of educational materials regarding domestic household hazardous waste, with the aim of preventing those materials from entering the MWRA sewerage system through proper disposal techniques.

For more information on the MWRA's pollution prevention program, visit:
http://www.mwra.state.ma.us/harbor/html/pollution.htm

Groundwater Remediation

Currently, groundwater remediation site waters cannot be discharged into the MWRA sewer system. If this prohibition is ever relaxed, a comprehensive assessment of its effects on the sewage system and treatment process is required. As of the end of December 2013, no action has been taken on this section.

Local Limits and Industrial Pretreatment Program

These two related programs deal exclusively with non-domestic users, which are primarily industry. Under the local limits program, the MWRA develops and enforces specific limits on effluent from industrial users.

The industrial pretreatment program requires the MWRA to inspect and sample industrial users as specified by 40 CFR (Code of Federal Regulations) Part 403. 40 CFR Part 403 is designed as a source reduction program to limit the amount of pollutants in treatment plant influent.

Both programs result in cleaner influent to Deer Island, reducing stress on the plant, improving the efficiency of the treatment process, and reducing "pass-through" of contaminants to the effluent. Additionally, the sludge produced is cleaner and more amenable to safe fertilizer production.

More information on local limits and the pretreatment program is on-line at:
http://www.mwra.state.ma.us/harbor/html/local.htm

Reporting

Finally, the permit also requires the MWRA to provide the public with easy access to permit compliance reports and other information.

MWRA maintains a NPDES permit website at:
http://www.mwra.state.ma.us/harbor/html/ditp_performance.htm

EPA maintains an electronic mailing list for permit-related announcements:
http://www.epa.gov/region1/eco/mwra/listserv.html

Finally, there are two library repositories for permit documents:

MWRA Library
Charlestown Navy Yard
100 First Avenue
Boston, MA 02129

Hyannis Public Library
401 Main Street
Hyannis, MA 02601

Appendix A. Deer Island Treatment Plant

Table A-1a. Deer Island Treatment Plant Operations Summary, July - December 2012

North System Influent	Jul	Aug	Sep	Oct	Nov	Dec	Min	Annual Average	Max
Flow (mgd)									
Average	174.4	178.4	178.8	184.4	174.8	230.8		186.9	
Minimum	148.5	152.2	144.7	156.5	149.2	159.9	144.7		
Maximum	296.6	273.7	276.0	405.7	241.4	594.6			594.6
Temperature (deg F)									
Average	70.9	72.7	70.0	65.9	63.6	62.4		67.6	
Minimum	68.5	71.1	64.6	57.2	56.3	52.9	52.9		
Maximum	77.4	75.9	74.5	71.2	70.2	69.1			77.4
pH (SU)									
Average	6.9	6.9	6.8	6.9	6.9	6.9		6.9	
Minimum	6.6	6.8	6.6	6.5	6.7	6.6	6.5		
Maximum	7.2	7.1	7.0	7.0	7.1	7.1			7.2

North System Influent: Conventional Parameters (mg/L)	Jul	Aug	Sep	Oct	Nov	Dec	Min	Annual Average	Max
Total Suspended Solids									
Average	187	189	200	196	178	169		187	
Minimum	123	107	151	133	108	90	90		
Maximum	252	247	303	250	285	246			303
cBOD									
Average	119	116	137	123	133	121		125	
Minimum	68	79	82	64	76	68	64		
Maximum	173	187	213	203	207	207			213
Settleable Solids (mL/L)									
Average	9.1	7.0	8.0	9.1	7.8	5.8		7.8	
Minimum	4.5	2.0	3.0	2.6	2.5	1.5	1.5		
Maximum	17.0	16.4	14.4	16.0	13.6	15.5			17.0
Total Solids									
Average	1704	1623	1495	1400	1582	1487		1548	
Minimum	1380	1200	1120	1060	1040	876	876		
Maximum	2320	2080	1990	1770	2220	2260			2320
Volatile Solids									
Average	488	444	414	384	381	366		413	
Minimum	88	272	296	252	252	188	88		
Maximum	1040	572	628	492	564	640			1040
Volatile Suspended Solids									
Average	166	168	178	175	160	151		166	
Minimum	110	87	132	120	96	78	78		
Maximum	212	227	280	224	242	218			280

Table A-1a. Deer Island Treatment Plant Operations Summary, July - December 2012 (cont.)

North System Influent: Conventional Parameters (mg/L; cont.)	Jul	Aug	Sep	Oct	Nov	Dec	Min	Annual Average	Max
BOD									
Average	173	193	205	205	191	183		192	
Minimum	110	156	156	139	132	81	81		
Maximum	236	304	269	257	262	328			328
COD									
Average	390	420	431	444	421	412		420	
Minimum	285	322	320	273	311	176	176		
Maximum	472	569	525	663	538	1280			1280
Chloride									
Average	582	576	513	460	563	535		538	
Minimum	70	76	63	71	72	84	63		
Maximum	855	777	769	676	883	1040			1040

North System Influent: Nutrients (mg/L)	Jul	Aug	Sep	Oct	Nov	Dec	Min	Annual Average	Max
Ammonia									
Average	19.9	22.3	27.1	24.3	24.9	17.3		22.6	
Minimum	15.4	15.3	21.9	16.6	24.0	12.6	12.6		
Maximum	23.6	27.4	30.0	28.5	25.8	24.8			30.0
Nitrite									
Average	0.02	0.01	0.03	0.22	0.14	0.19		0.10	
Minimum	0.01	0.01	0.01	0.06	0.05	0.06	0.01		
Maximum	0.03	0.02	0.07	0.55	0.25	0.31			0.55
Nitrate									
Average	0.01	0.02	0.02	0.07	0.08	0.03		0.04	
Minimum	0.01	0.01	0.01	0.02	0.01	0.01	0.01		
Maximum	0.02	0.06	0.02	0.12	0.16	0.07			0.16
Total Kjeldahl Nitrogen									
Average	29.5	31.7	37.5	35.2	33.8	34.1		33.6	
Minimum	24.2	24.1	32.8	23.9	30.8	25.6	23.9		
Maximum	34.5	36.5	39.9	41.0	35.8	46.3			46.3
Orthophosphates									
Average	1.8	2.2	2.5	2.1	2.2	1.8		2.1	
Minimum	1.3	1.3	1.7	1.5	1.8	1.1	1.1		
Maximum	2.4	2.8	2.9	2.7	2.4	2.6			2.9
Total Phosphorus									
Average	4.3	4.2	4.9	4.6	4.3	4.1		4.4	
Minimum	3.9	3.4	4.5	3.2	4.2	3.2	3.2		
Maximum	5.0	5.1	5.4	5.2	4.5	5.5			5.5

Table A-1a. Deer Island Treatment Plant Operations Summary, July - December 2012 (cont.)

South System Influent	Jul	Aug	Sep	Oct	Nov	Dec	Min	Annual Average	Max
Flow (mgd)									
Average	84.8	83.8	81.5	87.6	96.7	116.9		91.9	
Minimum	76.5	74.6	69.5	78.2	81.9	80.5	69.5		
Maximum	102.3	105.9	96.4	141.1	118.7	240.1			240.1
Temperature (deg F)									
Average	69.2	71.0	70.1	66.8	62.6	60.3		66.7	
Minimum	66.7	69.4	65.5	62.2	60.4	55.2	55.2		
Maximum	74.1	73.9	73.2	69.1	64.6	71.1			74.1
pH (SU)									
Average	6.9	6.9	6.8	6.9	6.9	6.9		6.9	
Minimum	6.6	6.8	6.6	6.5	6.7	6.6	6.5		
Maximum	7.2	7.1	7.0	7.0	7.1	7.1			7.2

South System Influent: Conventional Parameters (mg/L)	Jul	Aug	Sep	Oct	Nov	Dec	Min	Annual Average	Max
Total Suspended Solids									
Average	242	231	353	471	256	305		310	
Minimum	73	146	104	202	74	84	73		
Maximum	467	416	1180	956	356	1020			1180
cBOD									
Average	132	116	164	181	145	139		146	
Minimum	85	83	107	89	70	74	70		
Maximum	196	204	349	424	249	228			424
Settleable Solids (mL/L)									
Average	7.7	7.6	12.1	22.9	8.8	11.7		11.8	
Minimum	3.6	4.0	2.6	3.4	2.5	0.1	0.1		
Maximum	13.0	16.0	66.0	64.0	14.0	56.0			66.0
Total Solids									
Average	1873	1691	1713	1832	1434	1411		1659	
Minimum	1540	1280	1190	1370	1120	880	880		
Maximum	2620	2070	2320	2610	1810	2240			2620
Volatile Solids									
Average	618	533	583	685	433	474		554	
Minimum	84	328	344	364	204	192	84		
Maximum	1200	780	1160	1260	580	1060			1260
Volatile Suspended Solids									
Average	213	201	318	417	228	265		274	
Minimum	63	130	130	178	69	76	63		
Maximum	400	356	1030	860	312	896			1030

Table A-1a. Deer Island Treatment Plant Operations Summary, July - December 2012 (cont.)

South System Influent: Conventional Parameters (mg/L; cont.)	Jul	Aug	Sep	Oct	Nov	Dec	Min	Annual Average	Max
BOD									
Average	201	190	269	365	218	244		248	
Minimum	121	132	171	133	99	97	97		
Maximum	272	272	757	751	312	602			757
COD									
Average	487	472	656	821	515	557		585	
Minimum	275	343	375	252	340	212	212		
Maximum	695	754	1460	1570	751	1320			1570
Chloride									
Average	627	581	543	530	461	434		529	
Minimum	83	78	60	65	63	60	60		
Maximum	928	767	790	830	688	654			928

South System Influent: Nutrients (mg/L)	Jul	Aug	Sep	Oct	Nov	Dec	Min	Annual Average	Max
Ammonia									
Average	53.2	55.9	60.5	56.3	39.2	44.3		51.6	
Minimum	44.7	47.7	49.9	24.5	19.8	28.1	19.8		
Maximum	58.3	62.5	69.8	65.7	59.9	62.1			69.8
Nitrite									
Average	0.01	0.02	0.01	0.01	0.01	0.01		0.01	
Minimum	0.01	0.01	0.01	0.01	0.01	0.01	0.01		
Maximum	0.02	0.07	0.02	0.01	0.01	0.02			0.07
Nitrate									
Average	0.02	0.02	0.02	0.01	0.01	0.01		0.01	
Minimum	0.01	0.01	0.01	0.01	0.01	0.01	0.01		
Maximum	0.02	0.04	0.02	0.02	0.01	0.02			0.04
Total Kjeldahl Nitrogen									
Average	66.4	66.9	70.7	78.1	50.4	56.7		64.8	
Minimum	53.2	60.7	61.1	34.0	28.2	36.7	28.2		
Maximum	74.8	71.1	79.4	101.0	76.0	74.1			101.0
Orthophosphates									
Average	3.8	3.9	4.3	4.5	2.8	3.1		3.8	
Minimum	3.4	3.2	3.6	2.1	1.7	1.9	1.7		
Maximum	4.4	4.7	5.0	5.6	4.2	4.2			5.6
Total Phosphorus									
Average	7.5	7.6	7.8	10.0	6.4	6.9		7.7	
Minimum	7.1	7.2	6.7	5.2	4.5	4.8	4.5		
Maximum	7.9	7.9	8.6	14.2	8.2	9.0			14.2

Table A-1a. Deer Island Treatment Plant Operations Summary, July - December 2012 (cont.)

Flow-Weighted Influent (North+South Systems): Conventional Parameters (mg/L)

	Jul	Aug	Sep	Oct	Nov	Dec	Annual Min	Annual Average	Annual Max
Total Suspended Solids									
Average	205	202	248	285	206	215	202	227	285
cBOD									
Average	123	116	145	142	137	127	116	132	145
Settleable Solids (mL/L)									
Average	8.7	7.2	9.3	13.6	8.1	7.8	7.2	9.1	13.6
Total Solids									
Average	1760	1644	1563	1539	1529	1461	1461	1583	1760
Volatile Solids									
Average	530	473	467	481	399	402	399	459	530
Volatile Suspended Solids									
Average	182	178	222	253	184	189	178	201	253
BOD									
Average	182	192	225	257	201	204	182	210	257
COD									
Average	422	437	502	565	455	461	422	473	565
Chloride									
Average	597	577	523	482	526	501	482	534	597

Flow-Weighted Influent (North+South Systems): Nutrients (mg/L)

	Jul	Aug	Sep	Oct	Nov	Dec	Annual Min	Annual Average	Annual Max
Ammonia									
Average	30.8	33.0	37.6	34.6	30.0	26.4	26.4	32.1	37.6
Nitrite									
Average	0.02	0.01	0.03	0.15	0.09	0.13	0.01	0.07	0.15
Nitrate									
Average	0.01	0.02	0.02	0.05	0.05	0.02	0.01	0.03	0.05
Total Kjeldahl Nitrogen									
Average	41.5	43.0	47.9	49.0	39.7	41.7	39.7	43.8	49.0
Orthophosphates									
Average	2.5	2.7	3.1	2.9	2.4	2.2	2.2	2.6	3.1
Total Phosphorus									
Average	5.4	5.3	5.8	6.3	5.1	5.0	5.0	5.5	6.3

Table A-1a. Deer Island Treatment Plant Operations Summary, July - December 2012 (cont.)

Final Effluent	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Min**	**Annual Average**	**Max**
Flow (mgd)									
Average	259.2	262.3	260.4	272.0	271.5	347.7		278.8	
Minimum	225.7	226.8	214.2	236.1	234.7	240.9	214.2		
Maximum	398.9	368.8	364.5	535.3	358.0	834.8			834.8
Temperature (deg F)									
Average	71.0	72.3	71.3	68.0	63.7	62.1		68.0	
Minimum	69.3	70.5	68.7	65.5	61.5	56.8	56.8		
Maximum	72.7	73.4	73.6	70.3	65.7	65.1			73.6
pH (SU)*									
Average	6.8	6.8	6.8	6.7	6.7	6.7		6.8	
Minimum	6.5	6.7	6.3	6.3	6.5	6.3	6.3		
Maximum	7.2	7.0	7.0	6.9	7.1	7.2			7.2

Final Effluent: Conventional Parameters (mg/L)	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Min**	**Annual Average**	**Max**
Total Suspended Solids									
Average	7.1	7.7	6.0	7.3	4.9	8.9		7.0	
Minimum	3.5	4.6	2.6	2.6	2.6	4.6	2.6		
Maximum	19.4	20.0	14.9	36.0	13.6	31.0			36.0
cBOD									
Average	5.1	3.8	4.1	4.7	3.8	6.8		4.7	
Minimum	1.9	1.6	1.1	1.8	1.7	3.8	1.1		
Maximum	10.4	9.4	10.4	16.1	7.5	20.6			20.6
Settleable Solids (mL/L)									
Average	0.1	0.1	0.1	0.2	0.1	0.2		0.1	
Minimum	0.1	0.1	0.1	0.1	0.1	0.1	0.1		
Maximum	0.1	0.1	0.1	2.5	0.2	3.8			3.8
Total Chlorine Residual*									
Average	0.04	0.04	0.04	0.04	0.04	0.04		0.04	
Minimum	0.04	0.04	0.04	0.04	0.04	0.04	0.04		
Maximum	0.04	0.04	0.04	0.04	0.04	0.04			0.04
Fecal Coliform (colonies/100mL)*									
Geometric Mean	6	8	7	6	7	7		7	
Minimum	5	5	5	5	5	5	5		
Maximum	14	25	69	21	43	54			69
Total Solids									
Average	1561	1395	1292	1312	1346	1227		1355	
Minimum	1100	1010	956	1070	1100	852	852		
Maximum	2140	1710	1770	1810	1900	1720			2140

Table A-1a. Deer Island Treatment Plant Operations Summary, July - December 2012 (cont.)

Final Effluent: Conventional Parameters (mg/L; cont.)	Jul	Aug	Sep	Oct	Nov	Dec	Min	Annual Average	Max
Volatile Solids									
Average	339	272	236	220	200	186		242	
Minimum	60	88	124	104	68	84	60		
Maximum	824	392	456	368	328	316			824
Volatile Suspended Solids									
Average	6.3	6.9	5.4	6.5	4.5	7.9		6.2	
Minimum	2.6	4.2	2.6	2.4	2.2	4.2	2.2		
Maximum	17.8	18.2	13.4	31.0	13.0	25.5			31.0
BOD									
Average	15.1	11.6	14.2	15.9	12.4	18.9		14.7	
Minimum	6.5	4.9	2.2	9.4	5.6	8.6	2.2		
Maximum	35.1	21.8	26.7	41.3	18.9	47.6			47.6
COD									
Average	75	71	71	76	69	74		73	
Minimum	52	53	48	50	50	30	30		
Maximum	96	102	110	124	115	106			124
Total Organic Carbon									
Average								#DIV/0!	
Minimum							0.0		
Maximum									0.0
Chloride									
Average	642	599	549	552	572	533		574	
Minimum	437	404	380	411	309	333	309		
Maximum	886	750	741	826	847	813			886
Fats, Oils, and Grease									
Average	6.8	7.1	7.0	7.1	6.9	7.0		7.0	
Minimum	6.7	6.9	6.7	6.8	6.6	6.8	6.6		
Maximum	6.9	7.3	7.6	8.1	7.3	7.2			8.1

Table A-1a. Deer Island Treatment Plant Operations Summary, July - December 2012 (cont.)

Final Effluent: Nutrients (mg/L)	Jul	Aug	Sep	Oct	Nov	Dec	Min	Annual Average	Max
Ammonia									
Average	27.7	29.8	28.8	29.3	25.8	29.8		28.5	
Minimum	19.7	18.3	17.8	15.5	17.3	16.4	15.5		
Maximum	32.7	38.5	38.1	34.7	34.9	38.0			38.5
Nitrite									
Average	0.33	0.24	0.30	0.43	0.63	0.38		0.38	
Minimum	0.17	0.03	0.14	0.14	0.05	0.07	0.03		
Maximum	0.54	0.75	0.60	1.30	1.22	0.80			1.30
Nitrate									
Average	1.32	0.54	0.90	1.32	0.50	0.66		0.87	
Minimum	1.01	0.05	0.01	0.43	0.07	0.09	0.01		
Maximum	1.81	0.95	2.88	2.43	0.95	1.48			2.88
Total Kjeldahl Nitrogen									
Average	27.3	29.1	27.5	29.6	25.2	29.2		28.0	
Minimum	22.4	18.2	18.0	16.6	17.3	17.5	16.6		
Maximum	33.0	34.2	35.9	36.8	36.7	40.0			40.0
Orthophosphates									
Average	2.3	2.3	2.3	2.4	1.7	2.0		2.2	
Minimum	2.1	1.7	1.6	1.2	1.4	1.0	1.0		
Maximum	2.6	2.7	3.0	3.0	2.4	2.6			3.0
Total Phosphorus									
Average	2.9	2.9	2.9	2.9	2.3	2.4		2.7	
Minimum	2.7	2.2	2.2	1.5	1.7	1.6	1.5		
Maximum	3.1	3.3	3.5	3.4	3.0	3.4			3.5

~: No data collected

*: Effluent pH, TCR, and fecal coliform are sampled multiple times daily. The minimum and maximum are the minimum and maximum daily averages, not single sample minimums and maximums.

Table A-1b. Deer Island Treatment Plant Operations Summary, 2013

North System Influent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Min	Annual Average	Max
Flow (mgd)															
Average	201.8	240.8	291.7	206.1	191.4	305.2	197.9	170.3	164.2	149.3	156.0	187.7		205.2	
Minimum	177.0	173.0	229.0	181.0	165.0	180.0	168.0	142.0	145.0	140.0	138.0	155.0	138.0		
Maximum	242.0	649.0	383.0	259.0	288.0	618.0	357.0	360.0	232.0	184.0	363.0	368.0			649.0
Temperature (deg F)															
Average	60.1	57.0	57.2	61.5	61.8	65.9	70.8	71.4	69.5	65.8	66.3	61.6		64.1	
Minimum	50.9	52.3	52.3	56.5	50.7	60.1	66.7	69.1	63.0	51.6	59.7	56.1	50.7		
Maximum	77.0	62.8	63.5	67.3	67.5	73.8	78.1	73.4	73.8	70.7	77.2	74.1			78.1
pH (SU)															
Average	6.9	6.9	6.9	7.0	6.9	6.9	6.9	6.9	6.9	6.9	6.9	7.0		6.9	
Minimum	6.3	6.6	6.7	6.6	6.4	6.4	6.7	6.7	6.7	6.7	6.4	6.6	6.3		
Maximum	7.2	7.1	7.1	7.2	7.1	7.2	7.3	7.6	7.0	7.2	7.1	7.2			7.6

North System Influent: Conventional Parameters (mg/L)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Min	Annual Average	Max
Total Suspended Solids															
Average	168	156	128	179	216	140	163	178	189	203	210	191		177	
Minimum	116	75	72	132	150	60	106	84	102	134	131	108	60		
Maximum	352	266	200	228	378	236	224	312	290	258	320	332			378
cBOD															
Average	123	112	85	122	136	71	99	123	135	147	167	135		121	
Minimum	78	41	63	90	85	37	72	84	103	114	117	77	37		
Maximum	173	159	130	165	200	130	148	179	176	193	225	213			225
Settleable Solids (mL/L)															
Average	9.0	5.6	3.7	7.6	7.5	5.4	8.5	8.1	7.1	7.1	6.2	6.4		6.9	
Minimum	3.4	1.3	1.4	2.3	3.0	1.0	3.6	2.8	2.6	2.0	2.2	2.8	1.0		
Maximum	83.0	9.0	6.5	17.5	14.5	14.5	31.0	17.0	19.0	24.0	13.0	18.0			83.0
Total Solids															
Average	1476	1762	1633	1402	1535	1290	1513	1649	1638	1698	1623	1721		1578	
Minimum	944	1160	1130	984	1120	776	1120	1050	1200	1420	856	1180	776		
Maximum	2710	4310	4020	2030	1980	1870	2640	2350	2460	2180	2230	4210			4310
Volatile Solids															
Average	339	352	288	356	429	332	445	434	423	435	415	383		386	
Minimum	148	228	160	216	308	120	216	304	276	284	244	288	120		
Maximum	504	804	420	456	792	576	1640	664	592	516	540	564			1640
Volatile Suspended Solids															
Average	152	140	114	162	190	122	144	159	168	182	189	172		158	
Minimum	104	69	56	116	130	48	88	72	94	123	117	96	48		
Maximum	324	234	188	200	328	221	204	278	242	234	300	288			328

Table A-1b. Deer Island Treatment Plant Operations Summary, 2013 (cont.)

North System Influent: Conventional Parameters (mg/L; cont.)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Min	Annual Average	Max
BOD															
Average	183	182	131	205	214	142	179	195	211	244	251	206		195	
Minimum	129	82	82	156	146	69	96	124	157	156	167	122	69		
Maximum	239	275	171	269	277	361	306	267	350	373	334	298			373
COD															
Average	387	370	281	382	453	267	346	410	439	482	499	409		394	
Minimum	257	159	184	296	289	157	249	233	338	402	342	257	157		
Maximum	543	640	351	472	686	454	474	711	576	650	607	641			711
Chloride															
Average	574	765	726	543	575	483	536	637	625	637	618	699		618	
Minimum	312	405	422	318	382	267	376	351	364	496	240	440	240		
Maximum	1290	2020	2050	884	743	737	848	990	952	822	942	2100			2100

North System Influent: Nutrients (mg/L)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Min	Annual Average	Max
Ammonia															
Average	21.9	16.1	15.0	20.3	22.5	14.4	18.8	23.6	26.6	30.4	29.9	22.7		21.8	
Minimum	19.6	6.9	12.1	18.6	14.0	9.5	14.6	22.0	25.3	28.7	26.7	15.4	6.9		
Maximum	24.0	25.0	17.8	22.0	25.8	22.3	21.2	25.1	28.2	34.0	33.3	25.7			34.0
Nitrite															
Average	0.17	0.14	0.16	0.30	0.36	0.30	0.37	0.57	0.40	0.50	0.64	0.42		0.36	
Minimum	0.09	0.08	0.04	0.13	0.29	0.27	0.20	0.46	0.30	0.34	0.49	0.35	0.04		
Maximum	0.33	0.25	0.21	0.63	0.44	0.37	0.51	0.63	0.54	0.73	0.85	0.49			0.85
Nitrate															
Average	0.15	0.69	0.40	0.30	0.18	0.91	0.45	0.52	0.84	0.97	0.96	0.75		0.59	
Minimum	0.04	0.24	0.14	0.23	0.01	0.01	0.21	0.24	0.30	0.50	0.72	0.61	0.01		
Maximum	0.24	1.36	0.76	0.43	0.34	1.78	0.62	0.84	1.37	1.31	1.27	0.90			1.78
Total Kjeldahl Nitrogen															
Average	33.0	26.6	25.7	30.3	37.1	21.3	27.3	33.4	37.7	39.5	41.2	32.5		32.1	
Minimum	27.6	18.6	20.9	29.4	26.5	14.6	23.6	31.6	36.5	35.5	37.5	23.4	14.6		
Maximum	40.9	37.0	30.6	31.7	47.3	29.6	29.5	36.1	39.5	44.2	46.2	38.3			47.3
Orthophosphates															
Average	2.0	1.4	1.2	1.7	2.4	1.3	1.7	2.4	2.8	2.8	3.1	2.1		2.1	
Minimum	1.6	0.5	0.8	1.4	1.3	0.8	1.3	2.2	2.5	2.6	2.3	1.3	0.5		
Maximum	2.3	2.4	1.5	2.0	3.0	1.8	2.0	2.5	3.1	3.2	3.6	2.5			3.6
Total Phosphorus															
Average	4.7	3.5	2.9	8.7	4.9	3.0	3.7	4.7	5.0	5.5	5.7	4.5		4.7	
Minimum	4.0	2.3	2.4	3.4	3.5	2.0	3.2	4.4	4.6	4.7	4.5	3.3	2.0		
Maximum	6.0	5.0	3.6	22.4	5.7	3.8	4.4	5.0	5.4	6.4	6.4	5.1			22.4

Table A-1b. Deer Island Treatment Plant Operations Summary, 2013 (cont.)

South System Influent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Min	Annual Average	Max
Flow (mgd)															
Average	114.4	130.4	197.2	116.2	97.4	186.5	101.4	86.8	79.3	70.3	71.1	98.5		112.5	
Minimum	95.0	92.0	143.0	99.0	86.0	91.0	86.0	74.0	69.0	67.0	64.0	79.0	64.0		
Maximum	154.0	316.0	297.0	144.0	114.0	362.0	124.0	131.0	110.0	77.0	122.0	146.0			362.0
Temperature (deg F)															
Average	57.7	53.6	52.9	56.8	60.5	63.7	67.7	69.8	68.6	65.5	64.7	60.2		61.8	
Minimum	53.4	49.3	50.5	52.9	57.4	61.0	64.9	68.0	66.4	56.1	59.7	55.9	49.3		
Maximum	70.3	59.7	60.1	63.5	67.5	73.8	71.8	73.6	71.6	68.7	72.3	66.9			73.8
pH (SU)															
Average	6.9	6.9	6.8	6.9	6.9	6.9	6.9	6.9	6.9	6.9	7.0	6.9		6.9	
Minimum	6.7	6.7	6.6	6.5	6.8	6.6	6.7	6.7	6.7	6.5	6.6	6.7	6.5		
Maximum	7.1	7.2	7.1	7.2	7.1	7.1	7.0	7.1	7.1	7.2	7.2	7.2			7.2

South System Influent: Conventional Parameters (mg/L)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Min	Annual Average	Max
Total Suspended Solids															
Average	235	188	135	251	417	223	210	189	173	174	181	231		217	
Minimum	75	46	78	128	154	83	110	46	76	108	62	140	46		
Maximum	685	296	224	512	1070	814	364	420	234	245	479	352			1070
cBOD															
Average	130	112	67	111	167	82	101	118	115	127	137	136		117	
Minimum	47	47	39	68	89	32	69	72	77	95	88	72	32		
Maximum	335	159	118	222	296	191	149	156	140	168	192	200			335
Settleable Solids (mL/L)															
Average	7.9	7.4	4.1	10.8	13.9	5.9	7.9	7.4	6.8	5.9	5.6	8.9		7.7	
Minimum	5.0	3.4	1.8	3.4	4.9	2.5	5.0	2.5	3.0	2.5	3.0	4.0	1.8		
Maximum	13.0	11.0	7.0	34.0	37.0	10.0	12.0	17.0	19.0	10.0	15.0	24.0			37.0
Total Solids															
Average	1200	1410	1137	1309	1647	1222	1539	1612	1588	1628	1499	1513		1442	
Minimum	665	1040	908	968	1280	856	1190	1280	1210	1210	928	1140	665		
Maximum	1880	2740	1640	1580	2240	1780	2300	2140	2180	2080	1940	2240			2740
Volatile Solids															
Average	373	371	259	408	611	398	495	476	434	425	388	427		422	
Minimum	112	244	140	280	392	180	324	320	288	272	236	296	112		
Maximum	804	552	412	612	1080	620	836	720	600	592	516	608			1080
Volatile Suspended Solids															
Average	205	166	117	220	364	193	185	165	151	154	159	204		190	
Minimum	68	42	71	116	136	72	98	40	70	94	56	125	40		
Maximum	570	254	190	460	944	741	320	374	200	208	411	304			944

Table A-1b. Deer Island Treatment Plant Operations Summary, 2013 (cont.)

South System Influent: Conventional Parameters (mg/L; cont.)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Min	Annual Average	Max
BOD															
Average	199	182	119	209	313	160	172	177	179	201	201	208		193	
Minimum	63	75	56	126	141	65	128	100	131	151	153	126	56		
Maximum	373	261	216	340	675	343	249	260	208	269	289	285			675
COD															
Average	473	388	250	456	695	345	418	419	419	435	452	479		436	
Minimum	258	193	177	238	326	140	312	251	302	335	305	297	140		
Maximum	999	550	413	801	1350	697	674	614	579	609	734	691			1350
Chloride															
Average	399	545	468	478	530	413	548	607	604	625	566	552		528	
Minimum	281	376	340	357	388	266	405	447	413	435	317	411	266		
Maximum	609	1230	761	633	728	573	855	877	863	802	785	945			1230

South System Influent: Nutrients (mg/L)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Min	Annual Average	Max
Ammonia															
Average	44.5	34.1	24.3	48.8	56.2	30.2	38.3	57.2	61.6	64.6	57.9	52.9		47.5	
Minimum	22.8	12.9	17.2	39.7	49.7	19.3	17.4	47.2	57.4	31.3	28.8	14.7	12.9		
Maximum	57.7	59.9	31.7	55.7	59.3	50.2	51.2	66.6	67.8	77.6	76.4	73.0			77.6
Nitrite															
Average	0.03	0.10	0.71	0.11	0.01	0.28	0.12	0.73	0.84	0.62	0.54	0.01		0.34	
Minimum	0.01	0.01	0.49	0.01	0.01	0.01	0.01	0.48	0.74	0.31	0.01	0.01	0.01		
Maximum	0.15	0.37	0.85	0.44	0.01	0.78	0.53	0.89	1.01	0.83	1.04	0.01			1.04
Nitrate															
Average	0.01	0.25	0.91	0.01	0.01	0.25	0.01	0.08	0.29	0.50	0.10	0.01		0.20	
Minimum	0.01	0.01	0.18	0.01	0.01	0.01	0.01	0.02	0.04	0.17	0.01	0.01	0.01		
Maximum	0.01	0.97	1.80	0.01	0.01	0.74	0.01	0.15	0.50	0.71	0.31	0.01			1.80
Total Kjeldahl Nitrogen															
Average	56.1	46.2	45.0	55.9	80.7	38.2	53.8	66.6	70.0	69.1	66.4	60.6		59.0	
Minimum	33.7	22.2	23.9	32.5	69.6	25.4	39.5	57.9	67.0	39.0	38.3	20.2	20.2		
Maximum	72.8	79.6	80.1	69.6	94.5	57.2	61.2	74.1	75.8	79.8	84.3	81.4			94.5
Orthophosphates															
Average	3.0	2.3	1.4	3.0	4.3	1.9	2.6	3.8	4.1	4.6	4.8	3.7		3.3	
Minimum	1.6	0.7	1.0	2.4	3.8	1.1	1.9	3.4	3.4	2.8	2.8	1.2	0.7		
Maximum	3.9	4.0	1.7	3.5	4.7	3.6	3.1	4.4	4.7	5.3	6.1	4.7			6.1
Total Phosphorus															
Average	7.1	5.5	3.7	7.7	11.3	4.8	5.6	6.7	7.1	7.4	7.7	7.2		6.8	
Minimum	3.9	2.7	2.6	6.3	8.6	3.3	5.0	6.1	5.9	5.0	5.2	3.3	2.6		
Maximum	9.9	8.4	5.3	10.1	14.9	7.1	5.9	7.3	8.1	8.4	9.3	9.2			14.9

Table A-1b. Deer Island Treatment Plant Operations Summary, 2013 (cont.)

Flow-Weighted Influent (North+South Systems): Conventional Parameters (mg/L)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Min	Annual Average	Max
Total Suspended Solids															
Average	192	168	131	205	284	172	179	182	184	194	201	205	131	191	284
cBOD															
Average	125	112	78	118	146	75	100	121	129	141	158	135	75	120	158
Settleable Solids (mL/L)															
Average	8.6	6.2	3.8	8.8	9.6	5.6	8.3	7.9	7.0	6.7	6.0	7.3	3.8	7.1	9.6
Total Solids															
Average	1376	1638	1433	1369	1573	1264	1522	1636	1621	1676	1584	1650	1264	1528	1676
Volatile Solids															
Average	351	359	276	375	490	357	462	448	426	432	406	398	276	398	490
Volatile Suspended Solids															
Average	171	149	115	183	248	149	158	161	162	173	180	183	115	169	248
BOD															
Average	189	182	126	206	248	149	177	189	200	230	235	207	126	195	248
COD															
Average	418	376	268	409	534	296	370	413	432	467	485	433	268	409	534
Chloride															
Average	511	688	622	519	560	456	540	627	618	633	602	648	456	585	688

Flow-Weighted Influent (North+South Systems): Nutrients (mg/L)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Min	Annual Average	Max
Ammonia															
Average	30.1	22.4	18.7	30.5	33.8	20.4	25.4	34.9	37.9	41.3	38.7	33.1	18.7	30.6	41.3
Nitrite															
Average	0.12	0.13	0.38	0.24	0.24	0.29	0.29	0.62	0.54	0.54	0.61	0.28	0.12	0.36	0.62
Nitrate															
Average	0.10	0.54	0.61	0.19	0.13	0.66	0.30	0.37	0.66	0.82	0.69	0.49	0.10	0.46	0.82
Total Kjeldahl Nitrogen															
Average	41.3	33.5	33.5	39.5	51.8	27.7	36.3	44.6	48.2	49.0	49.1	42.1	27.7	41.4	51.8
Orthophosphates															
Average	2.3	1.7	1.2	2.2	3.0	1.5	2.0	2.9	3.2	3.4	3.6	2.6	1.2	2.5	3.6
Total Phosphorus															
Average	5.5	4.2	3.3	8.4	7.0	3.7	4.3	5.4	5.7	6.1	6.3	5.4	3.3	5.4	8.4

Table A-1b. Deer Island Treatment Plant Operations Summary, 2013 (cont.)

Final Effluent	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Min**	**Annual Average**	**Max**
Flow (mgd)															
Average	316.3	371.2	489.2	322.3	288.7	491.7	299.3	256.9	243.4	219.8	227.2	286.1		317.7	
Minimum	275.0	266.0	373.0	280.0	253.0	271.0	253.0	217.0	216.0	208.0	202.0	236.0	202.0		
Maximum	396.0	939.0	648.0	385.0	402.0	883.0	481.0	491.0	336.0	261.0	485.0	504.0			939.0
Temperature (deg F)															
Average	60.0	57.1	56.4	60.3	64.7	66.1	71.2	71.7	71.2	69.5	65.9	60.4		64.6	
Minimum	56.1	51.1	54.1	57.4	62.2	63.1	68.5	70.7	69.1	66.9	61.2	56.3	51.1		
Maximum	77.0	58.8	58.6	62.4	67.1	69.3	74.7	72.9	73.8	71.4	70.2	65.8			77.0
pH (SU)*															
Average	6.6	6.6	6.6	6.7	6.8	6.8	6.7	6.8	6.8	6.8	6.7	6.7		6.7	
Minimum	6.3	6.2	6.2	6.4	6.4	6.4	6.4	6.1	6.5	6.5	6.4	6.2	6.1		
Maximum	7.0	7.0	7.4	7.1	7.0	7.0	7.1	7.0	7.0	7.0	6.9	7.1			7.4

Final Effluent: Conventional Parameters (mg/L)	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Min**	**Annual Average**	**Max**
Total Suspended Solids															
Average	7.1	12.8	16.0	12.1	7.7	10.6	7.5	7.4	5.5	4.7	6.7	9.8		9.0	
Minimum	4.2	6.0	8.2	5.2	4.4	3.8	4.4	3.5	2.2	2.6	2.2	3.4	2.2		
Maximum	12.3	32.0	24.5	18.3	14.6	42.0	25.2	20.0	13.0	7.0	30.0	31.3			42.0
cBOD															
Average	5.2	7.4	7.9	8.4	6.9	5.5	4.9	5.2	5.1	4.2	6.4	7.0		6.2	
Minimum	2.8	3.4	4.0	5.6	2.7	2.8	3.3	2.9	2.0	3.2	2.6	3.8	2.0		
Maximum	11.7	16.7	14.3	14.6	11.4	17.2	11.5	13.1	12.0	6.7	18.1	14.0			18.1
Settleable Solids (mL/L)															
Average	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1		0.1	
Minimum	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1		
Maximum	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1			0.1
Total Chlorine Residual*															
Average	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04		0.04	
Minimum	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04		
Maximum	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04			0.04
Fecal Coliform (colonies/100mL)*															
Geometric Mean	5	8	17	10	6	8	7	7	6	5	5	6		7	
Minimum	5	5	7	5	5	5	5	5	5	5	5	5	5		
Maximum	9	63	78	88	13	45	40	26	13	9	17	11			88
Total Solids															
Average	1106	1406	1311	1166	1269	1088	1330	1413	1383	1471	1355	1491		1316	
Minimum	832	956	908	888	1050	648	940	972	1060	1220	776	1060	648		
Maximum	1800	2560	2620	1530	1820	1570	1880	1890	1910	1910	1930	2760			2760

Table A-1b. Deer Island Treatment Plant Operations Summary, 2013 (cont.)

Final Effluent: Conventional Parameters (mg/L; cont.)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Min	Annual Average	Max
Volatile Solids															
Average	156	186	160	177	220	203	282	249	236	219	196	199		207	
Minimum	60	116	64	88	148	64	100	160	116	68	92	120	60		
Maximum	256	312	272	280	412	388	432	368	500	356	312	300			500
Volatile Suspended Solids															
Average	6.3	11.1	13.5	10.7	7.0	9.2	6.7	6.4	4.9	4.1	6.1	8.7		7.9	
Minimum	3.8	5.4	6.8	4.8	3.8	3.4	3.8	3.2	2.0	2.2	2.2	3.2	2.0		
Maximum	10.8	26.8	21.0	16.4	12.8	36.0	22.4	17.6	11.8	6.2	27.0	27.4			36.0
BOD															
Average	17.2	16.2	19.1	17.5	15.4	18.2	14.4	12.8	13.2	15.8	21.1	17.0		16.5	
Minimum	9.5	8.9	9.5	10.7	8.0	8.1	8.5	7.6	6.9	9.1	11.7	9.0	6.9		
Maximum	31.4	31.2	28.8	21.5	23.4	57.8	28.3	26.9	20.7	26.1	39.6	35.1			57.8
COD															
Average	63	87	75	73	76	55	66	71	72	77	81	79		73	
Minimum	44	57	54	60	53	34	49	50	51	64	49	57	34		
Maximum	95	160	107	97	114	105	114	95	121	98	103	115			160
Total Organic Carbon															
Average	13.3	16.4	12.7	12.8	16.8	13.9	14.2	16.0	14.7	17.6	16.7	16.6		15.1	
Minimum	12.8	16.1	11.6	12.6	15.3	13.4	12.9	13.1	14.4	17.2	16.0	16.2	11.6		
Maximum	13.7	16.7	13.8	13.0	18.2	14.4	15.4	18.8	15.0	18.0	17.4	16.9			18.8
Chloride															
Average	475	668	627	529	554	457	562	621	606	651	594	691		586	
Minimum	329	420	394	359	418	256	438	392	422	509	275	452	256		
Maximum	859	1230	1380	880	807	661	844	858	907	819	868	1430			1430
Fats, Oils, and Grease															
Average	7.1	6.8	6.9	6.9	6.9	6.9	7.1	7.2	6.9	7.1	6.9	7.1		7.0	
Minimum	6.9	6.7	6.7	6.7	6.9	6.7	6.7	6.8	6.9	6.9	6.8	6.8	6.7		
Maximum	7.4	6.9	7.0	7.3	7.2	7.4	7.8	7.7	7.1	7.6	7.0	7.6			7.8

Table A-1b. Deer Island Treatment Plant Operations Summary, 2013 (cont.)

Final Effluent: Nutrients (mg/L)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Min	Annual Average	Max
Ammonia															
Average	24.6	22.4	16.2	25.1	30.6	19.6	22.7	29.2	32.6	36.9	38.2	32.5		27.5	
Minimum	13.8	8.1	12.3	14.8	18.8	7.2	10.2	16.1	24.6	26.7	25.2	12.3	7.2		
Maximum	30.3	31.8	21.9	33.3	36.9	30.9	30.6	36.7	37.4	44.0	45.1	37.6			45.1
Nitrite															
Average	0.39	0.49	0.84	0.22	0.26	0.73	0.13	0.16	0.11	0.10	0.11	0.26		0.32	
Minimum	0.14	0.03	0.27	0.07	0.06	0.14	0.08	0.06	0.07	0.06	0.05	0.05	0.03		
Maximum	1.16	1.65	1.12	0.37	0.66	1.34	0.20	0.30	0.17	0.13	0.22	0.75			1.65
Nitrate															
Average	1.37	1.00	0.97	0.60	0.57	0.78	1.14	1.40	1.69	1.55	2.13	0.57		1.15	
Minimum	0.02	0.07	0.20	0.01	0.02	0.23	0.48	0.25	0.32	0.01	0.85	0.11	0.01		
Maximum	2.52	3.31	1.53	1.13	1.25	1.15	2.72	3.56	4.26	3.66	3.70	1.27			4.26
Total Kjeldahl Nitrogen															
Average	23.1	21.6	17.9	27.0	32.4	20.3	24.1	30.4	32.9	35.5	36.6	30.8		27.7	
Minimum	15.5	10.7	13.7	16.7	21.0	13.2	14.8	16.7	24.9	26.1	24.6	14.3	10.7		
Maximum	30.2	32.7	23.8	31.5	38.6	30.1	30.9	38.4	38.7	41.6	41.0	36.4			41.6
Orthophosphates															
Average	1.5	1.2	0.7	1.1	1.9	1.1	1.5	2.4	2.7	3.0	2.9	2.1		1.8	
Minimum	1.1	0.6	0.4	1.0	1.8	0.5	0.9	2.2	2.1	2.5	2.3	0.8	0.4		
Maximum	2.0	1.8	1.0	1.3	2.3	1.8	1.9	2.6	3.1	3.3	3.3	2.7			3.3
Total Phosphorus															
Average	2.0	1.8	1.3	2.1	2.6	1.5	2.0	3.0	3.2	3.6	3.6	2.7		2.4	
Minimum	1.4	1.1	0.8	1.8	2.3	0.8	1.3	2.8	2.3	2.9	2.9	1.2	0.8		
Maximum	2.3	2.5	1.7	2.6	3.0	2.3	2.6	3.3	3.6	3.9	4.2	3.5			4.2

~: No data collected

*: Effluent pH, TCR, and fecal coliform are sampled multiple times daily. The minimum and maximum are the minimum and maximum daily averages, not single sample minimums and maximums.

Table A-2. Deer Island Influent Characterization (North & South Systems), July 2012 - June 2013

Metals (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
ALUMINUM	**730**	**708**	**533**	**960**	**570**	**649**	**404**	**436**	**271**	**418**	**607**	**708**	548	1240	46 of 46
ANTIMONY	25	25	25	25	25	25	25	25	**30.5**	25	25	25	25.8	36.5	1 of 46
ARSENIC	**0.92**	**1.04**	**0.988**	**1.24**	0.4	**0.771**	**0.539**	**0.493**	**0.86**	**0.624**	**0.92**	**0.709**	0.771	1.46	25 of 46
BERYLLIUM	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0 of 46
BORON	**218**	**168**	125	125	125	**167**	125	125	125	125	125	125	136	266	5 of 46
CADMIUM	**0.362**	**0.693**	**0.253**	**0.504**	**0.616**	**0.374**	**0.308**	**0.253**	**0.364**	**0.375**	**0.315**	**0.291**	0.375	0.867	46 of 46
CHROMIUM	**5.97**	**3.69**	**2.81**	**6.62**	**3.17**	**4.69**	**3.26**	**3.69**	**2.52**	**3.07**	**4.14**	**4.75**	3.89	9.43	46 of 46
COPPER	**76.3**	**80**	**64**	**90.3**	**60.6**	**65.1**	**61.6**	**44.6**	**34.2**	**55**	**72.1**	**65.8**	61	111	46 of 46
IRON	**1980**	**2430**	**1680**	**2790**	**2070**	**1990**	**2110**	**1870**	**1700**	**1940**	**2280**	**2180**	2040	3460	46 of 46
LEAD	**9.42**	**9.68**	**8.3**	**30.1**	**7.8**	**6.85**	**6.85**	**6.47**	**4.73**	**8.14**	**6.79**	**10.1**	9.12	43	46 of 46
MERCURY	**0.17**	**0.173**	**0.355**	**0.33**	**0.151**	**0.141**	**0.156**	**0.0973**	**0.105**	**0.159**	**0.146**	**0.195**	0.174	0.465	46 of 46
MOLYBDENUM	**4.73**	**6.05**	**4.05**	**4.36**	**6.1**	**5.12**	**3.37**	**3.27**	**2.96**	**4.14**	**3.9**	**4.55**	4.19	6.81	45 of 46
NICKEL	**3.5**	**5.58**	**3.33**	**7.79**	**3.64**	**3.49**	**3.96**	**3.57**	**4.01**	**3.86**	**3.86**	**5.06**	4.22	10	46 of 46
SELENIUM	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0 of 46
SILVER	**0.522**	**0.443**	**0.519**	**1.03**	**0.461**	**0.539**	**0.443**	**0.324**	**0.252**	**0.437**	**0.836**	**0.507**	0.505	1.06	46 of 46
THALLIUM	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 46
ZINC	**149**	**152**	**110**	**174**	**123**	**140**	**109**	**104**	**91**	**115**	**139**	**131**	124	218	46 of 46

Cyanide (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
CYANIDE	5	5	5	5	5	5	5	5	5	5	5	5	5	5	0 of 46

Oil and Grease, Surfactants, and Petroleum Hydrocarbons (mg/L)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
FATS OIL AND GREASE	**47**	**28.2**	**35.4**	**44.8**	**28.7**	**37.2**	**38**	**37.1**	**22.7**	**27.5**	**43.6**	**27.2**	34.1	63.8	44 of 46
MBAS	**3.66**	**3.81**	**3.64**	**3.97**	~	~	~	~	~	~	~	~	3.76	4.11	14 of 14
PETROLEUM HYDROCARBONS	**0.652**	**2.1**	**1.15**	**1.95**	**1.45**	**1.75**	**0.976**	**1.37**	**0.462**	**0.968**	**1.13**	0.0716	1.07	2.1	42 of 46

Organochlorine Pesticides and PCBs (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
4,4'-DDD	0.00216	0.00304	0.00216	0.00213	0.00207	0.00221	0.00205	0.00216	0.00207	0.00231	0.00207	0.00213	0.00217	0.00304	0 of 46
4,4'-DDE	0.00216	0.00304	0.00216	0.00213	0.00207	0.00221	0.00205	0.00216	0.00207	0.00231	0.00207	0.00213	0.00217	0.00304	0 of 46
4,4'-DDT	0.00216	0.00304	0.00216	0.00213	0.00207	0.00221	0.00205	0.00216	0.00207	0.00231	0.00207	0.00213	0.00217	0.00304	0 of 46
ALDRIN	0.00108	0.00151	0.00108	0.00107	0.00103	0.0011	0.00103	0.00108	0.00103	0.00115	0.00103	0.00106	0.00108	0.00151	0 of 46
ALPHA-BHC	0.00108	0.00151	0.00108	0.00107	0.00103	0.0011	0.00103	0.00108	0.00103	0.00115	0.00103	0.00106	0.00108	0.00151	0 of 46
ALPHA-CHLORDANE	0.00108	0.00151	0.00108	0.00107	0.00103	0.0011	0.00103	0.00108	0.00103	0.00115	0.00103	0.00106	0.00108	0.00151	0 of 46
AROCLOR-1016	0.054	0.0758	0.0539	0.0532	0.0517	0.0552	0.0513	0.054	0.0517	0.0577	0.0517	0.0532	0.0542	0.0758	0 of 46
AROCLOR-1221	0.108	0.151	0.108	0.107	0.103	0.11	0.103	0.108	0.103	0.115	0.103	0.106	0.108	0.151	0 of 46
AROCLOR-1232	0.054	0.0758	0.0539	0.0532	0.0517	0.0552	0.0513	0.054	0.0517	0.0577	0.0517	0.0532	0.0542	0.0758	0 of 46
AROCLOR-1242	0.054	0.0758	0.0539	0.0532	0.0517	0.0552	0.0513	0.054	0.0517	0.0577	0.0517	0.0532	0.0542	0.0758	0 of 46
AROCLOR-1248	0.054	0.0758	0.0539	0.0532	0.0517	0.0552	0.0513	0.054	0.0517	0.0577	0.0517	0.0532	0.0542	0.0758	0 of 46
AROCLOR-1254	0.054	0.0758	0.0539	0.0532	0.0517	0.0552	0.0513	0.054	0.0517	0.0577	0.0517	0.0532	0.0542	0.0758	0 of 46
AROCLOR-1260	0.054	0.0758	0.0539	0.0532	0.0517	0.0552	0.0513	0.054	0.0517	0.0577	0.0517	0.0532	0.0542	0.0758	0 of 46
BETA-BHC	0.00108	0.00151	0.00108	0.00107	0.00103	0.0011	0.00103	0.00108	0.00103	0.00115	0.00103	0.00106	0.00108	0.00151	0 of 46
CHLORDANE (TECHNICAL)	0.108	0.151	0.108	0.107	0.103	0.11	0.103	0.108	0.103	0.115	0.103	0.106	0.108	0.151	0 of 46
DELTA-BHC	0.00108	0.00151	0.00108	0.00107	0.00103	0.0011	0.00103	0.00108	0.00103	0.00115	0.00103	0.00106	0.00108	0.00151	0 of 46
DIELDRIN	0.00216	0.00304	0.00216	0.00213	0.00207	0.00221	0.00205	0.00216	0.00207	0.00231	0.00207	0.00213	0.00217	0.00304	0 of 46
ENDOSULFAN I	0.00108	0.00151	0.00108	0.00107	0.00103	0.0011	0.00103	0.00108	0.00103	0.00115	0.00103	0.00106	0.00108	0.00151	0 of 46
ENDOSULFAN II	0.00216	0.00304	0.00216	0.00213	0.00207	0.00221	0.00205	0.00216	0.00207	0.00231	0.00207	0.00213	0.00217	0.00304	0 of 46
ENDOSULFAN SULFATE	0.00216	0.00304	0.00216	0.00213	0.00207	0.00221	0.00205	0.00216	0.00207	0.00231	0.00207	0.00213	0.00217	0.00304	0 of 46
ENDRIN	0.00216	0.00304	0.00216	0.00213	0.00207	0.00221	0.00205	0.00216	0.00207	0.00231	0.00207	0.00213	0.00217	0.00304	0 of 46
ENDRIN ALDEHYDE	0.00216	0.00304	0.00216	0.00213	0.00207	0.00221	0.00205	0.00216	0.00207	0.00231	0.00207	0.00213	0.00217	0.00304	0 of 46
ENDRIN KETONE	0.00216	0.00304	0.00216	0.00213	0.00207	0.00221	0.00205	0.00216	0.00207	0.00231	0.00207	0.00213	0.00217	0.00304	0 of 46
GAMMA-BHC	0.00108	0.00151	0.00108	0.00107	0.00103	0.0011	0.00103	0.00108	0.00103	0.00115	0.00103	0.00106	0.00108	0.00151	0 of 46
GAMMA-CHLORDANE	0.00108	0.00151	0.00108	0.00107	0.00103	0.0011	0.00103	0.00108	0.00103	0.00115	0.00103	0.00106	0.00108	0.00151	0 of 46
HEPTACHLOR	0.00108	0.00151	0.00108	0.00107	0.00103	0.0011	0.00103	0.00108	0.00103	0.00115	0.00103	0.00106	0.00108	0.00151	0 of 46
HEPTACHLOR EPOXIDE	0.00108	0.00151	0.00108	0.00107	0.00103	0.0011	0.00103	0.00108	0.00103	0.00115	0.00103	0.00106	0.00108	0.00151	0 of 46
HEXACHLOROBENZENE	~	~	~	0.00107	0.00103	0.00109	0.00103	0.00108	0.00103	0.00115			0.00107	0.00122	0 of 26
METHOXYCHLOR	0.0108	0.0151	0.0108	0.0107	0.0103	0.011	0.0103	0.0108	0.0103	0.0115	0.0103	0.0106	0.0108	0.0151	0 of 46
TOXAPHENE	0.108	0.151	0.108	0.107	0.103	0.11	0.103	0.108	0.103	0.115	0.103	0.106	0.108	0.151	0 of 46

Table A-2. Deer Island Influent Characterization (North & South Systems), July - December 2013

Metals (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
ALUMINUM	**0.307**	**0.515**	**0.437**	**0.422**	**0.431**	**0.575**	0.431	0.651	22 of 22
ANTIMONY	582	586	791	483	428	287	552	930	22 of 22
ARSENIC	**0.759**	**0.854**	**0.55**	0.4	**0.924**	**0.809**	0.712	1.32	9 of 22
BERYLLIUM	125	125	171	125	268	222	165	273	7 of 22
BORON	0.25	0.25	**0.25**	0.25	**0.25**	**0.25**	0.25	0.25	0 of 22
CADMIUM	**0.242**	**0.323**	**0.384**	**0.327**	**0.317**	**0.236**	0.308	0.48	22 of 22
CHROMIUM	**3.35**	**4.66**	**3.59**	**4.06**	**4.94**	**2.44**	3.93	5.86	22 of 22
COPPER	**30.6**	**77.7**	**61.2**	**66.6**	**59.9**	**55**	57.6	98.6	22 of 22
IRON	**1840**	**2640**	**1820**	**2000**	**1630**	**1500**	1950	3280	22 of 22
LEAD	**0.0999**	**0.107**	**0.112**	**0.0701**	**0.0959**	**0.0558**	0.0937	0.12	21 of 22
MAGNESIUM					**48400**		48400	48400	2 of 2
MERCURY	**3.9**	**7.67**	**4.11**	**4.44**	**8.72**	**6.72**	5.76	10.3	22 of 22
MOLYBDENUM	**3.67**	**4.6**	**2.49**	**2.95**	**5.72**	**6.19**	4.08	6.6	22 of 22
NICKEL	**5.53**	**8.18**	**6.2**	**5.85**	**9.38**	**5.14**	6.78	11.6	22 of 22
SELENIUM	25	**25**	25	25	25	25	25	25	0 of 22
SILVER	**0.45**	**0.546**	**0.45**	**0.45**	**0.45**	**0.45**	0.468	0.644	1 of 22
THALLIUM	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 22
ZINC	**116**	**161**	**130**	**129**	**109**	**104**	127	202	22 of 22

Cyanide (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
CYANIDE	5	5	5	5	5	5	5	5	0 of 24

Oil and Grease, Surfactants, and Petroleum Hydrocarbons (mg/L)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
FATS OIL AND GREASE	**29.9**	**30.4**	**41.9**	**52.2**	**33.3**	**33.3**	36.4	64.5	24 of 24
MBAS	~	~	~	~	~	~			
PETROLEUM HYDROCARBONS	**0.77**	**1.4**	**0.854**	**1.88**	**0.781**	**1.03**	1.12	2.16	21 of 22

Organochlorine Pesticides and PCBs (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
4,4'-DDD	0.00207	0.00225	0.00208	0.00207	0.00204	0.0021	0.00211	0.00235	0 of 22
4,4'-DDE	0.00207	0.00225	0.00208	0.00207	0.00204	0.0021	0.00211	0.00235	0 of 22
4,4'-DDT	0.00207	0.00225	0.00208	0.00207	0.00204	0.0021	0.00211	0.00235	0 of 22
ALDRIN	0.00104	0.00113	0.00104	0.00104	0.00102	0.00105	0.00105	0.00118	0 of 22
ALPHA-BHC	0.00104	0.00113	0.00104	0.00104	0.00102	0.00105	0.00105	0.00118	0 of 22
ALPHA-CHLORDANE	0.00104	0.00113	**0.0157**	0.00104	0.00102	0.00105	0.0036	0.0298	1 of 22
AROCLOR-1016	0.0518	0.0564	0.0521	0.0518	0.0511	0.0525	0.0526	0.0588	0 of 22
AROCLOR-1221	0.104	0.113	0.104	0.104	0.102	0.105	0.105	0.118	0 of 22
AROCLOR-1232	0.0518	0.0564	0.0521	0.0518	0.0511	0.0525	0.0526	0.0588	0 of 22
AROCLOR-1242	0.0518	0.0564	0.0521	0.0518	0.0511	0.0525	0.0526	0.0588	0 of 22
AROCLOR-1248	0.0518	0.0564	0.0521	0.0518	0.0511	0.0525	0.0526	0.0588	0 of 22
AROCLOR-1254	0.0518	0.0564	0.0521	0.0518	0.0511	0.0525	0.0526	0.0588	0 of 22
AROCLOR-1260	0.0518	0.0564	0.0521	0.0518	0.0511	0.0525	0.0526	0.0588	0 of 22
BETA-BHC	0.00104	0.00113	0.00104	0.00104	0.00102	0.00105	0.00105	0.00118	0 of 22
CHLORDANE (TECHNICAL)	0.104	0.113	0.104	0.104	0.102	0.105	0.105	0.118	0 of 22
DELTA-BHC	0.00104	0.00113	0.00104	0.00104	0.00102	0.00105	0.00105	0.00118	0 of 22
DIELDRIN	0.00207	0.00225	0.00208	0.00207	0.00204	0.0021	0.00211	0.00235	0 of 22
ENDOSULFAN I	0.00104	0.00113	0.00104	0.00104	0.00102	0.00105	0.00105	0.00118	0 of 22
ENDOSULFAN II	0.00207	0.00225	0.00208	0.00207	0.00204	0.0021	0.00211	0.00235	0 of 22
ENDOSULFAN SULFATE	0.00207	0.00225	0.00208	0.00207	0.00204	0.0021	0.00211	0.00235	0 of 22
ENDRIN	0.00207	0.00225	0.00208	0.00207	0.00204	0.0021	0.00211	0.00235	0 of 22
ENDRIN ALDEHYDE	0.00207	0.00225	0.00208	0.00207	0.00204	0.0021	0.00211	0.00235	0 of 22
ENDRIN KETONE	0.00207	0.00225	0.00208	0.00207	0.00204	0.0021	0.00211	0.00235	0 of 22
GAMMA-BHC	0.00104	0.00113	0.00104	0.00104	0.00102	0.00105	0.00105	0.00118	0 of 22
GAMMA-CHLORDANE	0.00104	0.00113	**0.0155**	0.00104	0.00102	0.00105	0.00356	0.0293	1 of 22
HEPTACHLOR	0.00104	0.00113	0.00104	0.00104	0.00102	0.00105	0.00105	0.00118	0 of 22
HEPTACHLOR EPOXIDE	0.00104	0.00113	0.00104	0.00104	0.00102	0.00105	0.00105	0.00118	0 of 22
HEXACHLOROBENZENE	0.00105	~	~	~	~	~	0.00105	0.00105	0 of 2
METHOXYCHLOR	0.0104	0.0113	0.0104	0.0104	0.0102	0.0105	0.0105	0.0118	0 of 22
TOXAPHENE	0.104	0.113	0.104	0.104	0.102	0.105	0.105	0.118	0 of 22

Notes
~: No data or no samples taken; results in **bold** indicate one or more detects that month.
Yearly averages are calculated from individual results collected during the reporting period and are flow-weighted.
Non-detected compounds are assumed to equal one half of the detection limit for metals and inorganics and one tenth of the reporting limit for organic compounds.

Table A-3. Deer Island Influent Loadings (North & South Systems), July 2012 - June 2013

Metals (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
ALUMINUM	**1480**	**1450**	**1070**	**2010**	**1250**	**1340**	**1090**	**1000**	**1100**	**1300**	**1360**	**1870**	1360	2630	46 of 46
ANTIMONY	50.6	51.1	50.1	52.3	54.9	51.6	67.5	57.5	**124**	77.5	56.1	65.9	63.8	143	1 of 46
ARSENIC	**1.86**	**2.14**	**1.98**	**2.6**	0.878	**1.59**	**1.45**	**1.13**	**3.5**	**1.93**	**2.07**	**1.87**	1.91	5.44	25 of 46
BERYLLIUM	0.506	0.511	0.501	0.523	0.549	0.516	0.675	0.575	1.02	0.775	0.561	0.659	0.619	1.06	0 of 46
BORON	**442**	**344**	250	261	274	**344**	337	287	509	387	281	330	337	541	5 of 46
CADMIUM	**0.732**	**1.42**	**0.506**	**1.05**	**1.35**	**0.772**	**0.83**	**0.581**	**1.48**	**1.16**	**0.708**	**0.766**	0.927	1.87	46 of 46
CHROMIUM	**12.1**	**7.55**	**5.63**	**13.9**	**6.94**	**9.67**	**8.8**	**8.49**	**10.3**	**9.5**	**9.29**	**12.5**	9.64	20	46 of 46
COPPER	**154**	**164**	**128**	**189**	**133**	**134**	**166**	**103**	**139**	**171**	**162**	**173**	151	235	46 of 46
IRON	**4000**	**4970**	**3370**	**5850**	**4540**	**4100**	**5700**	**4290**	**6910**	**6000**	**5120**	**5740**	5050	8060	46 of 46
LEAD	**19.1**	**19.8**	**16.6**	**63**	**17.1**	**14.1**	**18.5**	**14.9**	**19.3**	**25.2**	**15.2**	**26.7**	22.6	91.1	46 of 46
MERCURY	**0.344**	**0.354**	**0.711**	**0.69**	**0.332**	**0.29**	**0.42**	**0.224**	**0.429**	**0.493**	**0.328**	**0.515**	0.431	0.919	46 of 46
MOLYBDENUM	**9.58**	**12.4**	**8.12**	**9.13**	**13.4**	**10.6**	**9.1**	**7.53**	**12.1**	**12.8**	**8.76**	**12**	10.4	15	45 of 46
NICKEL	**7.09**	**11.4**	**6.67**	**16.3**	**8**	**7.2**	**10.7**	**8.2**	**16.3**	**12**	**8.68**	**13.3**	10.5	21.3	46 of 46
SELENIUM	0.912	0.92	0.901	0.941	0.987	0.928	1.21	1.03	1.83	1.39	1.01	1.19	1.11	1.9	0 of 46
SILVER	**1.06**	**0.906**	**1.04**	**2.15**	**1.01**	**1.11**	**1.2**	**0.745**	**1.03**	**1.35**	**1.88**	**1.34**	1.25	2.19	46 of 46
THALLIUM	1.01	1.02	1	1.05	1.1	1.03	1.35	1.15	2.04	1.55	1.12	1.32	1.24	2.11	0 of 46
ZINC	**302**	**311**	**220**	**364**	**271**	**288**	**295**	**239**	**371**	**356**	**311**	**345**	306	461	46 of 46

Cyanide (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
CYANIDE	10	10.2	9.91	10.4	11.7	10.3	13.3	11.5	19.7	14.7	12.3	11.7	12.2	19.8	0 of 46

Oil and Grease, Surfactants, and Petroleum Hydrocarbons (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
FATS OIL AND GREASE	**94400**	**57800**	**70100**	**93200**	**67200**	**76500**	**101000**	**85000**	**89400**	**81100**	**107000**	**63500**	83300	129000	44 of 46
MBAS	**7400**	**7800**	**7280**	**8300**	~	~	~	~	~	~	~	~	7680	8490	14 of 14
PETROLEUM HYDROCARBONS	**1310**	**4300**	**2280**	**4050**	**3400**	**3600**	**2600**	**3150**	**1820**	**2850**	**2770**	167	2620	4350	42 of 46

Organochlorine Pesticides and PCBs (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
4,4'-DDD	0.00438	0.00621	0.00432	0.00445	0.00454	0.00455	0.00554	0.00496	0.00843	0.00716	0.00465	0.00561	0.00536	0.00885	0 of 46
4,4'-DDE	0.00438	0.00621	0.00432	0.00445	0.00454	0.00455	0.00554	0.00496	0.00843	0.00716	0.00465	0.00561	0.00536	0.00885	0 of 46
4,4'-DDT	0.00438	0.00621	0.00432	0.00445	0.00454	0.00455	0.00554	0.00496	0.00843	0.00716	0.00465	0.00561	0.00536	0.00885	0 of 46
ALDRIN	0.00219	0.00309	0.00216	0.00223	0.00227	0.00228	0.00277	0.00248	0.00422	0.00358	0.00232	0.00281	0.00268	0.00443	0 of 46
ALPHA-BHC	0.00219	0.00309	0.00216	0.00223	0.00227	0.00228	0.00277	0.00248	0.00422	0.00358	0.00232	0.00281	0.00268	0.00443	0 of 46
ALPHA-CHLORDANE	0.00219	0.00309	0.00216	0.00223	0.00227	0.00228	0.00277	0.00248	0.00422	0.00358	0.00232	0.00281	0.00268	0.00443	0 of 46
AROCLOR-1016	0.109	0.155	0.108	0.111	0.114	0.114	0.138	0.124	0.211	0.179	0.116	0.14	0.134	0.221	0 of 46
AROCLOR-1221	0.219	0.309	0.216	0.223	0.227	0.228	0.277	0.248	0.422	0.358	0.232	0.281	0.268	0.443	0 of 46
AROCLOR-1232	0.109	0.155	0.108	0.111	0.114	0.114	0.138	0.124	0.211	0.179	0.116	0.14	0.134	0.221	0 of 46
AROCLOR-1242	0.109	0.155	0.108	0.111	0.114	0.114	0.138	0.124	0.211	0.179	0.116	0.14	0.134	0.221	0 of 46
AROCLOR-1248	0.109	0.155	0.108	0.111	0.114	0.114	0.138	0.124	0.211	0.179	0.116	0.14	0.134	0.221	0 of 46
AROCLOR-1254	0.109	0.155	0.108	0.111	0.114	0.114	0.138	0.124	0.211	0.179	0.116	0.14	0.134	0.221	0 of 46
AROCLOR-1260	0.109	0.155	0.108	0.111	0.114	0.114	0.138	0.124	0.211	0.179	0.116	0.14	0.134	0.221	0 of 46
BETA-BHC	0.00219	0.00309	0.00216	0.00223	0.00227	0.00228	0.00277	0.00248	0.00422	0.00358	0.00232	0.00281	0.00268	0.00443	0 of 46
CHLORDANE (TECHNICAL)	0.219	0.309	0.216	0.223	0.227	0.228	0.277	0.248	0.422	0.358	0.232	0.281	0.268	0.443	0 of 46
DELTA-BHC	0.00219	0.00309	0.00216	0.00223	0.00227	0.00228	0.00277	0.00248	0.00422	0.00358	0.00232	0.00281	0.00268	0.00443	0 of 46
DIELDRIN	0.00438	0.00621	0.00432	0.00445	0.00454	0.00455	0.00554	0.00496	0.00843	0.00716	0.00465	0.00561	0.00536	0.00885	0 of 46
ENDOSULFAN I	0.00219	0.00309	0.00216	0.00223	0.00227	0.00228	0.00277	0.00248	0.00422	0.00358	0.00232	0.00281	0.00268	0.00443	0 of 46
ENDOSULFAN II	0.00438	0.00621	0.00432	0.00445	0.00454	0.00455	0.00554	0.00496	0.00843	0.00716	0.00465	0.00561	0.00536	0.00885	0 of 46
ENDOSULFAN SULFATE	0.00438	0.00621	0.00432	0.00445	0.00454	0.00455	0.00554	0.00496	0.00843	0.00716	0.00465	0.00561	0.00536	0.00885	0 of 46
ENDRIN	0.00438	0.00621	0.00432	0.00445	0.00454	0.00455	0.00554	0.00496	0.00843	0.00716	0.00465	0.00561	0.00536	0.00885	0 of 46
ENDRIN ALDEHYDE	0.00438	0.00621	0.00432	0.00445	0.00454	0.00455	0.00554	0.00496	0.00843	0.00716	0.00465	0.00561	0.00536	0.00885	0 of 46
ENDRIN KETONE	0.00438	0.00621	0.00432	0.00445	0.00454	0.00455	0.00554	0.00496	0.00843	0.00716	0.00465	0.00561	0.00536	0.00885	0 of 46
GAMMA-BHC	0.00219	0.00309	0.00216	0.00223	0.00227	0.00228	0.00277	0.00248	0.00422	0.00358	0.00232	0.00281	0.00268	0.00443	0 of 46
GAMMA-CHLORDANE	0.00219	0.00309	0.00216	0.00223	0.00227	0.00228	0.00277	0.00248	0.00422	0.00358	0.00232	0.00281	0.00268	0.00443	0 of 46
HEPTACHLOR	0.00219	0.00309	0.00216	0.00223	0.00227	0.00228	0.00277	0.00248	0.00422	0.00358	0.00232	0.00281	0.00268	0.00443	0 of 46
HEPTACHLOR EPOXIDE	0.00219	0.00309	0.00216	0.00223	0.00227	0.00228	0.00277	0.00248	0.00422	0.00358	0.00232	0.00281	0.00268	0.00443	0 of 46
HEXACHLOROBENZENE	~	~	~	0.00223	0.00227	0.00224	0.00277	0.00248	0.00422	0.00358			0.00287	0.00443	0 of 26
METHOXYCHLOR	0.0219	0.0309	0.0216	0.0223	0.0227	0.0228	0.0277	0.0248	0.0422	0.0358	0.0232	0.0281	0.0268	0.0443	0 of 46
TOXAPHENE	0.219	0.309	0.216	0.223	0.227	0.228	0.277	0.248	0.422	0.358	0.232	0.281	0.268	0.443	0 of 46

Table A-3. Deer Island Influent Loadings (North & South Systems), June - December 2013

Metals (lbs/day)

	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
ALUMINUM	**1450**	**1220**	**1540**	**900**	**775**	**574**	1120	1770	22 of 22
ANTIMONY	62.1	52.2	48.6	46.6	45.3	49.9	50.8	63.5	0 of 22
ARSENIC	**1.88**	**1.78**	**1.07**	0.745	**1.67**	**1.61**	1.45	2.8	9 of 22
BERYLLIUM	0.621	0.522	0.486	0.466	0.453	0.499	0.508	0.635	0 of 22
BORON	310	261	**333**	233	**486**	**443**	335	492	7 of 22
CADMIUM	**0.602**	**0.674**	**0.746**	**0.609**	**0.575**	**0.471**	0.626	0.954	22 of 22
CHROMIUM	**8.33**	**9.74**	**6.98**	**7.56**	**8.94**	**4.87**	8	12.1	22 of 22
COPPER	**76.1**	**162**	**119**	**124**	**108**	**110**	117	204	22 of 22
IRON	**4560**	**5520**	**3530**	**3720**	**2950**	**2990**	3960	6790	22 of 22
LEAD	**13.7**	**17.1**	**12**	**10.9**	**17**	**10.3**	13.8	21.1	22 of 22
MAGNESIUM					**89400**		89400	89400	2 of 2
MERCURY	**0.248**	**0.223**	**0.217**	**0.131**	**0.174**	**0.111**	0.191	0.292	21 of 22
MOLYBDENUM	**9.68**	**16**	**7.99**	**8.27**	**15.8**	**13.4**	11.7	20.4	22 of 22
NICKEL	**9.12**	**9.61**	**4.84**	**5.49**	**10.4**	**12.4**	8.29	12.4	22 of 22
SELENIUM	1.12	**1.14**	0.874	0.839	0.815	0.898	0.952	1.34	1 of 22
SILVER	**0.762**	**1.07**	**0.848**	**0.787**	**0.78**	**1.15**	0.877	1.35	22 of 22
THALLIUM	1.24	1.04	0.971	0.932	0.905	0.998	1.02	1.27	0 of 22
ZINC	**289**	**336**	**252**	**241**	**197**	**207**	258	419	22 of 22

Cyanide (lbs/day)

	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
CYANIDE	12.1	10.3	9.92	9.17	9.09	9.94	10.1	12.1	0 of 24

Oil and Grease, Surfactants, and Petroleum Hydrocarbons (lbs/day)

	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
FATS OIL AND GREASE	**72600**	**62800**	**83100**	**95900**	**60600**	**66200**	73500	119000	24 of 24
MBAS									
PETROLEUM HYDROCARBONS	**1870**	**2880**	**1690**	**3440**	**1420**	**2040**	2270	3990	21 of 22

Organochlorine Pesticides and PCBs (lbs/day)

	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
4,4'-DDD	0.00514	0.00471	0.00405	0.00386	0.0037	0.00419	0.00428	0.00535	0 of 22
4,4'-DDE	0.00514	0.00471	0.00405	0.00386	0.0037	0.00419	0.00428	0.00535	0 of 22
4,4'-DDT	0.00514	0.00471	0.00405	0.00386	0.0037	0.00419	0.00428	0.00535	0 of 22
ALDRIN	0.00257	0.00235	0.00202	0.00193	0.00185	0.0021	0.00214	0.00267	0 of 22
ALPHA-BHC	0.00257	0.00235	0.00202	0.00193	0.00185	0.0021	0.00214	0.00267	0 of 22
ALPHA-CHLORDANE	0.00257	0.00235	**0.0306**	0.00193	0.00185	0.0021	0.00733	0.0591	1 of 22
AROCLOR-1016	0.129	0.118	0.101	0.0965	0.0925	0.105	0.107	0.134	0 of 22
AROCLOR-1221	0.257	0.235	0.202	0.193	0.185	0.21	0.214	0.267	0 of 22
AROCLOR-1232	0.129	0.118	0.101	0.0965	0.0925	0.105	0.107	0.134	0 of 22
AROCLOR-1242	0.129	0.118	0.101	0.0965	0.0925	0.105	0.107	0.134	0 of 22
AROCLOR-1248	0.129	0.118	0.101	0.0965	0.0925	0.105	0.107	0.134	0 of 22
AROCLOR-1254	0.129	0.118	0.101	0.0965	0.0925	0.105	0.107	0.134	0 of 22
AROCLOR-1260	0.129	0.118	0.101	0.0965	0.0925	0.105	0.107	0.134	0 of 22
BETA-BHC	0.00257	0.00235	0.00202	0.00193	0.00185	0.0021	0.00214	0.00267	0 of 22
CHLORDANE (TECHNICAL)	0.257	0.235	0.202	0.193	0.185	0.21	0.214	0.267	0 of 22
DELTA-BHC	0.00257	0.00235	0.00202	0.00193	0.00185	0.0021	0.00214	0.00267	0 of 22
DIELDRIN	0.00514	0.00471	0.00405	0.00386	0.0037	0.00419	0.00428	0.00535	0 of 22
ENDOSULFAN I	0.00257	0.00235	0.00202	0.00193	0.00185	0.0021	0.00214	0.00267	0 of 22
ENDOSULFAN II	0.00514	0.00471	0.00405	0.00386	0.0037	0.00419	0.00428	0.00535	0 of 22
ENDOSULFAN SULFATE	0.00514	0.00471	0.00405	0.00386	0.0037	0.00419	0.00428	0.00535	0 of 22
ENDRIN	0.00514	0.00471	0.00405	0.00386	0.0037	0.00419	0.00428	0.00535	0 of 22
ENDRIN ALDEHYDE	0.00514	0.00471	0.00405	0.00386	0.0037	0.00419	0.00428	0.00535	0 of 22
ENDRIN KETONE	0.00514	0.00471	0.00405	0.00386	0.0037	0.00419	0.00428	0.00535	0 of 22
GAMMA-BHC	0.00257	0.00235	0.00202	0.00193	0.00185	0.0021	0.00214	0.00267	0 of 22
GAMMA-CHLORDANE	0.00257	0.00235	**0.0301**	0.00193	0.00185	0.0021	0.00724	0.0582	1 of 22
HEPTACHLOR	0.00257	0.00235	0.00202	0.00193	0.00185	0.0021	0.00214	0.00267	0 of 22
HEPTACHLOR EPOXIDE	0.00257	0.00235	0.00202	0.00193	0.00185	0.0021	0.00214	0.00267	0 of 22
HEXACHLOROBENZENE	0.00267	~	~	~	~	~	0.00267	0.00267	0 of 2
METHOXYCHLOR	0.0257	0.0235	0.0202	0.0193	0.0185	0.021	0.0214	0.0267	0 of 22
TOXAPHENE	0.257	0.235	0.202	0.193	0.185	0.21	0.214	0.267	0 of 22

Notes

~: No data or no samples taken; results in **bold** indicate one or more detects that month.

Yearly averages are calculated from individual results collected during the reporting period and are flow-weighted.

Non-detected compounds are assumed to equal one half of the detection limit for metals and inorganics and one tenth of the reporting limit for organic compounds.

Table A-4. Deer Island Influent Characterization (North System), July 2012 - June 2013

Metals (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
ALUMINUM	**769**	**565**	**470**	**650**	**404**	**442**	**348**	**389**	**210**	**363**	**527**	**739**	472	919	24 of 24
ANTIMONY	25	25	25	25	25	25	25	25	25	25	25	25	25	25	0 of 24
ARSENIC	**1.04**	**1.03**	**1.13**	**1.17**	0.4	**0.673**	**0.621**	0.4	**0.897**	**0.761**	**0.927**	**0.853**	0.821	1.36	15 of 24
BERYLLIUM	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0 of 24
BORON	**190**	125	125	125	125	**187**	125	125	125	125	125	125	134	255	2 of 24
CADMIUM	**0.381**	**0.643**	**0.267**	**0.491**	**0.721**	**0.355**	**0.294**	**0.214**	**0.317**	**0.289**	**0.265**	**0.252**	0.363	1.05	24 of 24
CHROMIUM	**6.55**	**2.98**	**2.86**	**5.45**	**2.08**	**3.98**	**2.83**	**3.01**	**2.09**	**2.61**	**3.28**	**4.32**	3.39	7.79	24 of 24
COPPER	**62.9**	**58**	**56.4**	**63.6**	**45.9**	**47.9**	**53.8**	**37.1**	**26.7**	**51.2**	**58.3**	**53.7**	49.9	73.4	24 of 24
IRON	**1430**	**1330**	**1270**	**1670**	**1180**	**1170**	**1600**	**1290**	**1210**	**1520**	**1560**	**1630**	1410	2020	24 of 24
LEAD	**8.33**	**7.24**	**9.28**	**29.4**	**5.67**	**5.83**	**7.69**	**6.35**	**4.48**	**9.06**	**6.09**	**10.8**	8.91	40.6	24 of 24
MERCURY	**0.141**	**0.0867**	**0.441**	**0.233**	**0.0943**	**0.11**	**0.145**	**0.0865**	**0.0862**	**0.172**	**0.116**	**0.195**	0.155	0.596	24 of 24
MOLYBDENUM	**5.66**	**6.06**	**5.24**	**4.13**	**7.24**	**6**	**4.46**	**3.62**	**3.41**	**4.65**	**4.85**	**5.32**	4.94	7.3	24 of 24
NICKEL	**3.13**	**5.55**	**3.11**	**7.11**	**3.02**	**2.91**	**3.83**	**3.41**	**3.6**	**3.67**	**3.66**	**4.66**	3.95	9.32	24 of 24
SELENIUM	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0 of 24
SILVER	**0.474**	**0.358**	**0.646**	**0.858**	**0.302**	**0.394**	**0.4**	**0.282**	**0.219**	**0.344**	**0.889**	**0.411**	0.446	1.26	24 of 24
THALLIUM	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
ZINC	**129**	**113**	**95.9**	**119**	**88**	**103**	**95.3**	**89.4**	**86.1**	**103**	**114**	**109**	103	136	24 of 24

Cyanide (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
CYANIDE	5	5	5	5	5	5	5	5	5	5	5	5	5	5	0 of 24

Oil and Grease, Surfactants, and Petroleum Hydrocarbons (mg/L)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
FATS OIL AND GREASE	**60.2**	**35.4**	**43.6**	**49.8**	**34.6**	**44.2**	**46.3**	**39.5**	**32.2**	**33.7**	**48.9**	**29.4**	40.8	86.7	24 of 24
MBAS	**3.48**	**3.62**	**3.19**	**3.62**	~	~	~	~	~	~	~	~	3.48	3.65	8 of 8
PETROLEUM HYDROCARBONS	**0.639**	**1.96**	**1.1**	**1.5**	**1.29**	**1.68**	**0.875**	**1.09**	**0.468**	**0.903**	**1.14**	0.0693	1.02	2.3	22 of 24

Organochlorine Pesticides and PCBs (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
4,4'-DDD	0.00219	0.00277	0.00217	0.0021	0.00203	0.00221	0.00206	0.00213	0.00204	0.00239	0.00208	0.00216	0.00219	0.00351	0 of 24
4,4'-DDE	0.00219	0.00277	0.00217	0.0021	0.00203	0.00221	0.00206	0.00213	0.00204	0.00239	0.00208	0.00216	0.00219	0.00351	0 of 24
4,4'-DDT	0.00219	0.00277	0.00217	0.0021	0.00203	0.00221	0.00206	0.00213	0.00204	0.00239	0.00208	0.00216	0.00219	0.00351	0 of 24
ALDRIN	0.00109	0.00138	0.00109	0.00105	0.00102	0.00111	0.00103	0.00106	0.00102	0.00119	0.00104	0.00108	0.00109	0.00175	0 of 24
ALPHA-BHC	0.00109	0.00138	0.00109	0.00105	0.00102	0.00111	0.00103	0.00106	0.00102	0.00119	0.00104	0.00108	0.00109	0.00175	0 of 24
ALPHA-CHLORDANE	0.00109	0.00138	0.00109	0.00105	0.00102	0.00111	0.00103	0.00106	0.00102	0.00119	0.00104	0.00108	0.00109	0.00175	0 of 24
AROCLOR-1016	0.0547	0.0693	0.0543	0.0525	0.0508	0.0553	0.0515	0.0532	0.051	0.0597	0.052	0.0539	0.0546	0.0877	0 of 24
AROCLOR-1221	0.109	0.138	0.109	0.105	0.102	0.111	0.103	0.106	0.102	0.119	0.104	0.108	0.109	0.175	0 of 24
AROCLOR-1232	0.0547	0.0693	0.0543	0.0525	0.0508	0.0553	0.0515	0.0532	0.051	0.0597	0.052	0.0539	0.0546	0.0877	0 of 24
AROCLOR-1242	0.0547	0.0693	0.0543	0.0525	0.0508	0.0553	0.0515	0.0532	0.051	0.0597	0.052	0.0539	0.0546	0.0877	0 of 24
AROCLOR-1248	0.0547	0.0693	0.0543	0.0525	0.0508	0.0553	0.0515	0.0532	0.051	0.0597	0.052	0.0539	0.0546	0.0877	0 of 24
AROCLOR-1254	0.0547	0.0693	0.0543	0.0525	0.0508	0.0553	0.0515	0.0532	0.051	0.0597	0.052	0.0539	0.0546	0.0877	0 of 24
AROCLOR-1260	0.0547	0.0693	0.0543	0.0525	0.0508	0.0553	0.0515	0.0532	0.051	0.0597	0.052	0.0539	0.0546	0.0877	0 of 24
BETA-BHC	0.00109	0.00138	0.00109	0.00105	0.00102	0.00111	0.00103	0.00106	0.00102	0.00119	0.00104	0.00108	0.00109	0.00175	0 of 24
CHLORDANE (TECHNICAL)	0.109	0.138	0.109	0.105	0.102	0.111	0.103	0.106	0.102	0.119	0.104	0.108	0.109	0.175	0 of 24
DELTA-BHC	0.00109	0.00138	0.00109	0.00105	0.00102	0.00111	0.00103	0.00106	0.00102	0.00119	0.00104	0.00108	0.00109	0.00175	0 of 24
DIELDRIN	0.00219	0.00277	0.00217	0.0021	0.00203	0.00221	0.00206	0.00213	0.00204	0.00239	0.00208	0.00216	0.00219	0.00351	0 of 24
ENDOSULFAN I	0.00109	0.00138	0.00109	0.00105	0.00102	0.00111	0.00103	0.00106	0.00102	0.00119	0.00104	0.00108	0.00109	0.00175	0 of 24
ENDOSULFAN II	0.00219	0.00277	0.00217	0.0021	0.00203	0.00221	0.00206	0.00213	0.00204	0.00239	0.00208	0.00216	0.00219	0.00351	0 of 24
ENDOSULFAN SULFATE	0.00219	0.00277	0.00217	0.0021	0.00203	0.00221	0.00206	0.00213	0.00204	0.00239	0.00208	0.00216	0.00219	0.00351	0 of 24
ENDRIN	0.00219	0.00277	0.00217	0.0021	0.00203	0.00221	0.00206	0.00213	0.00204	0.00239	0.00208	0.00216	0.00219	0.00351	0 of 24
ENDRIN ALDEHYDE	0.00219	0.00277	0.00217	0.0021	0.00203	0.00221	0.00206	0.00213	0.00204	0.00239	0.00208	0.00216	0.00219	0.00351	0 of 24
ENDRIN KETONE	0.00219	0.00277	0.00217	0.0021	0.00203	0.00221	0.00206	0.00213	0.00204	0.00239	0.00208	0.00216	0.00219	0.00351	0 of 24
GAMMA-BHC	0.00109	0.00138	0.00109	0.00105	0.00102	0.00111	0.00103	0.00106	0.00102	0.00119	0.00104	0.00108	0.00109	0.00175	0 of 24
GAMMA-CHLORDANE	0.00109	0.00138	0.00109	0.00105	0.00102	0.00111	0.00103	0.00106	0.00102	0.00119	0.00104	0.00108	0.00109	0.00175	0 of 24
HEPTACHLOR	0.00109	0.00138	0.00109	0.00105	0.00102	0.00111	0.00103	0.00106	0.00102	0.00119	0.00104	0.00108	0.00109	0.00175	0 of 24
HEPTACHLOR EPOXIDE	0.00109	0.00138	0.00109	0.00105	0.00102	0.00111	0.00103	0.00106	0.00102	0.00119	0.00104	0.00108	0.00109	0.00175	0 of 24
HEXACHLOROBENZENE				0.00105	0.00102	0.00106	0.00103	0.00106	0.00102	0.00119			0.00106	0.00126	0 of 13
METHOXYCHLOR	0.0109	0.0138	0.0109	0.0105	0.0102	0.0111	0.0103	0.0106	0.0102	0.0119	0.0104	0.0108	0.0109	0.0175	0 of 24
TOXAPHENE	0.109	0.138	0.109	0.105	0.102	0.111	0.103	0.106	0.102	0.119	0.104	0.108	0.109	0.175	0 of 24

Table A-4. Deer Island Influent Characterization (North System), July - December 2013

Metals (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
ALUMINUM	**613**	**260**	**955**	**370**	**360**	**321**	484	1210	12 of 12
ANTIMONY	**25**	**25**	**25**	**25**	**25**	**25**	25	25	0 of 12
ARSENIC	**0.778**	**0.633**	**0.625**	0.4	**1.06**	**0.713**	0.703	1.2	6 of 12
BERYLLIUM	0.25	0.25	0.25	0.25	**0.25**	**0.25**	0.25	0.25	0 of 12
BORON	125	125	125	125	267	199	159	274	3 of 12
CADMIUM	**0.222**	**0.157**	**0.455**	**0.268**	**0.363**	**0.29**	0.288	0.575	12 of 12
CHROMIUM	**2.63**	**2.03**	**3.32**	**3.19**	**4.68**	**2.62**	3.04	5.97	12 of 12
COPPER	**23.6**	**41.8**	**58.4**	**57.1**	**57.5**	**47.6**	46.5	61.9	12 of 12
IRON	**1390**	**1050**	**1550**	**1370**	**1380**	**1110**	1310	1570	12 of 12
LEAD	**5.04**	**3.67**	**6.19**	**5.42**	**11.1**	**5.56**	6.05	14.2	12 of 12
MERCURY					**53400**		53400	53400	1 of 1
MAGNESIUM	**0.0794**	**0.0625**	**0.111**	**0.0514**	**0.0978**	**0.0509**	0.0753	0.126	11 of 12
MOLYBDENUM	**4.53**	**8.49**	**4.85**	**4.55**	**11**	**7.81**	6.77	13.1	12 of 12
NICKEL	**3.15**	**3.25**	**2.4**	**2.48**	**5.35**	**5.33**	3.63	7.43	12 of 12
SELENIUM	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0 of 12
SILVER	0.287	0.228	0.445	0.405	0.368	0.63	0.388	0.74	12 of 12
THALLIUM	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
ZINC	**104**	**74.4**	**126**	**111**	**103**	**93.1**	102	127	12 of 12

Cyanide (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
CYANIDE	5	5	5	5	5	5	5	5	0 of 12

Oil and Grease, Surfactants, and Petroleum Hydrocarbons (mg/L)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
FATS OIL AND GREASE	**33.9**	**34.1**	**45.8**	**62.6**	**36.9**	**33.7**	40.8	78.4	12 of 12
MBAS									
PETROLEUM HYDROCARBONS	**0.845**	**1.54**	**0.866**	**2.14**	**0.788**	**1.03**	1.22	2.45	11 of 11

Organochlorine Pesticides and PCBs (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
4,4'-DDD	0.00207	0.00227	0.00208	0.00209	0.00205	0.00238	0.00216	0.00266	0 of 12
4,4'-DDE	0.00207	0.00227	0.00208	0.00209	0.00205	0.00238	0.00216	0.00266	0 of 12
4,4'-DDT	0.00207	0.00227	0.00208	0.00209	0.00205	0.00238	0.00216	0.00266	0 of 12
ALDRIN	0.00104	0.00114	0.00104	0.00105	0.00102	0.00119	0.00108	0.00133	0 of 12
ALPHA-BHC	0.00104	0.00114	0.00104	0.00105	0.00102	0.00119	0.00108	0.00133	0 of 12
ALPHA-CHLORDANE	0.00104	0.00114	0.00104	0.00105	0.00102	0.00119	0.00108	0.00133	0 of 12
AROCLOR-1016	0.0518	0.0568	0.052	0.0523	0.0512	0.0595	0.0539	0.0665	0 of 12
AROCLOR-1221	0.104	0.114	0.104	0.105	0.102	0.119	0.108	0.133	0 of 12
AROCLOR-1232	0.0518	0.0568	0.052	0.0523	0.0512	0.0595	0.0539	0.0665	0 of 12
AROCLOR-1242	0.0518	0.0568	0.052	0.0523	0.0512	0.0595	0.0539	0.0665	0 of 12
AROCLOR-1248	0.0518	0.0568	0.052	0.0523	0.0512	0.0595	0.0539	0.0665	0 of 12
AROCLOR-1254	0.0518	0.0568	0.052	0.0523	0.0512	0.0595	0.0539	0.0665	0 of 12
AROCLOR-1260	0.0518	0.0568	0.052	0.0523	0.0512	0.0595	0.0539	0.0665	0 of 12
BETA-BHC	0.00104	0.00114	0.00104	0.00105	0.00102	0.00119	0.00108	0.00133	0 of 12
CHLORDANE (TECHNICAL)	0.104	0.114	0.104	0.105	0.102	0.119	0.108	0.133	0 of 12
DELTA-BHC	0.00104	0.00114	0.00104	0.00105	0.00102	0.00119	0.00108	0.00133	0 of 12
DIELDRIN	0.00207	0.00227	0.00208	0.00209	0.00205	0.00238	0.00216	0.00266	0 of 12
ENDOSULFAN I	0.00104	0.00114	0.00104	0.00105	0.00102	0.00119	0.00108	0.00133	0 of 12
ENDOSULFAN II	0.00207	0.00227	0.00208	0.00209	0.00205	0.00238	0.00216	0.00266	0 of 12
ENDOSULFAN SULFATE	0.00207	0.00227	0.00208	0.00209	0.00205	0.00238	0.00216	0.00266	0 of 12
ENDRIN	0.00207	0.00227	0.00208	0.00209	0.00205	0.00238	0.00216	0.00266	0 of 12
ENDRIN ALDEHYDE	0.00207	0.00227	0.00208	0.00209	0.00205	0.00238	0.00216	0.00266	0 of 12
ENDRIN KETONE	0.00207	0.00227	0.00208	0.00209	0.00205	0.00238	0.00216	0.00266	0 of 12
GAMMA-BHC	0.00104	0.00114	0.00104	0.00105	0.00102	0.00119	0.00108	0.00133	0 of 12
GAMMA-CHLORDANE	0.00104	0.00114	0.00104	0.00105	0.00102	0.00119	0.00108	0.00133	0 of 12
HEPTACHLOR	0.00104	0.00114	0.00104	0.00105	0.00102	0.00119	0.00108	0.00133	0 of 12
HEPTACHLOR EPOXIDE	0.00104	0.00114	0.00104	0.00105	0.00102	0.00119	0.00108	0.00133	0 of 12
HEXACHLOROBENZENE	0.00106	~	~	~	~	~	0.00106	0.00106	0 of 1
METHOXYCHLOR	0.0104	0.0114	0.0104	0.0105	0.0102	0.0119	0.0108	0.0133	0 of 12
TOXAPHENE	0.104	0.114	0.104	0.105	0.102	0.119	0.108	0.133	0 of 12

Notes

~: No data or no samples taken; results in **bold** indicate one or more detects that month.

Yearly averages are calculated from individual results collected during the reporting period and are flow-weighted.

Non-detected compounds are assumed to equal one half of the detection limit for metals and inorganics and one tenth of the reporting limit for organic compounds.

Table A-5. Deer Island Influent Loadings (North System), July 2012 - June 2013

Metals (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
ALUMINUM	**1010**	**756**	**630**	**903**	**567**	**610**	**591**	**575**	**512**	**698**	**763**	**1330**	746	1870	24 of 24
ANTIMONY	32.9	33.5	33.5	34.8	35.1	34.5	42.5	37	60.8	48	36.2	44.9	39.5	63	0 of 24
ARSENIC	**1.37**	**1.39**	**1.51**	**1.63**	0.562	**0.928**	**1.06**	0.592	**2.18**	**1.46**	**1.34**	**1.53**	1.3	3.43	15 of 24
BERYLLIUM	0.329	0.335	0.335	0.348	0.351	0.345	0.425	0.37	0.608	0.48	0.362	0.449	0.395	0.63	0 of 24
BORON	**251**	167	168	174	176	**258**	213	185	304	240	181	225	212	343	2 of 24
CADMIUM	**0.502**	**0.861**	**0.358**	**0.683**	**1.01**	**0.489**	**0.499**	**0.317**	**0.772**	**0.554**	**0.384**	**0.453**	0.574	1.45	24 of 24
CHROMIUM	**8.63**	**3.99**	**3.84**	**7.59**	**2.92**	**5.5**	**4.81**	**4.45**	**5.08**	**5.02**	**4.75**	**7.76**	5.36	11	24 of 24
COPPER	**82.9**	**77.6**	**75.6**	**88.5**	**64.5**	**66.1**	**91.5**	**54.9**	**64.9**	**98.4**	**84.4**	**96.5**	78.8	115	24 of 24
IRON	**1880**	**1790**	**1710**	**2330**	**1660**	**1610**	**2720**	**1900**	**2950**	**2910**	**2260**	**2920**	2220	3670	24 of 24
LEAD	**11**	**9.7**	**12.4**	**40.8**	**7.96**	**8.04**	**13.1**	**9.39**	**10.9**	**17.4**	**8.82**	**19.4**	14.1	57.3	24 of 24
MERCURY	**0.186**	**0.116**	**0.592**	**0.325**	**0.132**	**0.152**	**0.246**	**0.128**	**0.21**	**0.329**	**0.167**	**0.351**	0.245	0.782	24 of 24
MOLYBDENUM	**7.46**	**8.11**	**7.03**	**5.75**	**10.2**	**8.27**	**7.58**	**5.35**	**8.31**	**8.94**	**7.02**	**9.56**	7.8	10.5	24 of 24
NICKEL	**4.12**	**7.43**	**4.17**	**9.89**	**4.23**	**4.01**	**6.51**	**5.05**	**8.75**	**7.04**	**5.3**	**8.38**	6.24	13.1	24 of 24
SELENIUM	0.593	0.603	0.603	0.626	0.632	0.621	0.765	0.666	1.09	0.865	0.652	0.809	0.711	1.13	0 of 24
SILVER	**0.624**	**0.479**	**0.866**	**1.19**	**0.423**	**0.544**	**0.68**	**0.417**	**0.533**	**0.66**	**1.29**	**0.74**	0.704	1.73	24 of 24
THALLIUM	0.659	0.67	0.671	0.695	0.702	0.69	0.85	0.74	1.22	0.961	0.725	0.899	0.79	1.26	0 of 24
ZINC	**170**	**151**	**129**	**165**	**124**	**142**	**162**	**132**	**210**	**197**	**165**	**196**	162	251	24 of 24

Cyanide (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
CYANIDE	6.53	6.78	6.58	6.93	7.67	6.86	8.41	7.43	11.9	9.01	8.23	7.67	7.83	12.1	0 of 24

Oil and Grease, Surfactants, and Petroleum Hydrocarbons (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
FATS OIL AND GREASE	**78700**	**48000**	**57300**	**69000**	**53000**	**60700**	**77900**	**58700**	**76700**	**60800**	**80600**	**45100**	63900	114000	24 of 24
MBAS	**4580**	**4850**	**4280**	**5040**	~	~	~	~	~	~	~	~	4680	5150	8 of 8
PETROLEUM HYDROCARBONS	**835**	**2660**	**1450**	**2080**	**1980**	**2310**	**1470**	**1620**	**1110**	**1630**	**1870**	106	1590	3130	22 of 24

Organochlorine Pesticides and PCBs (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
4,4'-DDD	0.00288	0.00371	0.00291	0.00292	0.00285	0.00305	0.0035	0.00315	0.00496	0.00459	0.00301	0.00387	0.00345	0.00514	0 of 24
4,4'-DDE	0.00288	0.00371	0.00291	0.00292	0.00285	0.00305	0.0035	0.00315	0.00496	0.00459	0.00301	0.00387	0.00345	0.00514	0 of 24
4,4'-DDT	0.00288	0.00371	0.00291	0.00292	0.00285	0.00305	0.0035	0.00315	0.00496	0.00459	0.00301	0.00387	0.00345	0.00514	0 of 24
ALDRIN	0.00144	0.00185	0.00146	0.00146	0.00143	0.00152	0.00175	0.00158	0.00248	0.00229	0.00151	0.00194	0.00173	0.00257	0 of 24
ALPHA-BHC	0.00144	0.00185	0.00146	0.00146	0.00143	0.00152	0.00175	0.00158	0.00248	0.00229	0.00151	0.00194	0.00173	0.00257	0 of 24
ALPHA-CHLORDANE	0.00144	0.00185	0.00146	0.00146	0.00143	0.00152	0.00175	0.00158	0.00248	0.00229	0.00151	0.00194	0.00173	0.00257	0 of 24
AROCLOR-1016	0.0721	0.0928	0.0728	0.073	0.0713	0.0762	0.0876	0.0788	0.124	0.115	0.0754	0.0969	0.0863	0.129	0 of 24
AROCLOR-1221	0.144	0.185	0.146	0.146	0.143	0.152	0.175	0.158	0.248	0.229	0.151	0.194	0.173	0.257	0 of 24
AROCLOR-1232	0.0721	0.0928	0.0728	0.073	0.0713	0.0762	0.0876	0.0788	0.124	0.115	0.0754	0.0969	0.0863	0.129	0 of 24
AROCLOR-1242	0.0721	0.0928	0.0728	0.073	0.0713	0.0762	0.0876	0.0788	0.124	0.115	0.0754	0.0969	0.0863	0.129	0 of 24
AROCLOR-1248	0.0721	0.0928	0.0728	0.073	0.0713	0.0762	0.0876	0.0788	0.124	0.115	0.0754	0.0969	0.0863	0.129	0 of 24
AROCLOR-1254	0.0721	0.0928	0.0728	0.073	0.0713	0.0762	0.0876	0.0788	0.124	0.115	0.0754	0.0969	0.0863	0.129	0 of 24
AROCLOR-1260	0.0721	0.0928	0.0728	0.073	0.0713	0.0762	0.0876	0.0788	0.124	0.115	0.0754	0.0969	0.0863	0.129	0 of 24
BETA-BHC	0.00144	0.00185	0.00146	0.00146	0.00143	0.00152	0.00175	0.00158	0.00248	0.00229	0.00151	0.00194	0.00173	0.00257	0 of 24
CHLORDANE (TECHNICAL)	0.144	0.185	0.146	0.146	0.143	0.152	0.175	0.158	0.248	0.229	0.151	0.194	0.173	0.257	0 of 24
DELTA-BHC	0.00144	0.00185	0.00146	0.00146	0.00143	0.00152	0.00175	0.00158	0.00248	0.00229	0.00151	0.00194	0.00173	0.00257	0 of 24
DIELDRIN	0.00288	0.00371	0.00291	0.00292	0.00285	0.00305	0.0035	0.00315	0.00496	0.00459	0.00301	0.00387	0.00345	0.00514	0 of 24
ENDOSULFAN I	0.00144	0.00185	0.00146	0.00146	0.00143	0.00152	0.00175	0.00158	0.00248	0.00229	0.00151	0.00194	0.00173	0.00257	0 of 24
ENDOSULFAN II	0.00288	0.00371	0.00291	0.00292	0.00285	0.00305	0.0035	0.00315	0.00496	0.00459	0.00301	0.00387	0.00345	0.00514	0 of 24
ENDOSULFAN SULFATE	0.00288	0.00371	0.00291	0.00292	0.00285	0.00305	0.0035	0.00315	0.00496	0.00459	0.00301	0.00387	0.00345	0.00514	0 of 24
ENDRIN	0.00288	0.00371	0.00291	0.00292	0.00285	0.00305	0.0035	0.00315	0.00496	0.00459	0.00301	0.00387	0.00345	0.00514	0 of 24
ENDRIN ALDEHYDE	0.00288	0.00371	0.00291	0.00292	0.00285	0.00305	0.0035	0.00315	0.00496	0.00459	0.00301	0.00387	0.00345	0.00514	0 of 24
ENDRIN KETONE	0.00288	0.00371	0.00291	0.00292	0.00285	0.00305	0.0035	0.00315	0.00496	0.00459	0.00301	0.00387	0.00345	0.00514	0 of 24
GAMMA-BHC	0.00144	0.00185	0.00146	0.00146	0.00143	0.00152	0.00175	0.00158	0.00248	0.00229	0.00151	0.00194	0.00173	0.00257	0 of 24
GAMMA-CHLORDANE	0.00144	0.00185	0.00146	0.00146	0.00143	0.00152	0.00175	0.00158	0.00248	0.00229	0.00151	0.00194	0.00173	0.00257	0 of 24
HEPTACHLOR	0.00144	0.00185	0.00146	0.00146	0.00143	0.00152	0.00175	0.00158	0.00248	0.00229	0.00151	0.00194	0.00173	0.00257	0 of 24
HEPTACHLOR EPOXIDE	0.00144	0.00185	0.00146	0.00146	0.00143	0.00152	0.00175	0.00158	0.00248	0.00229	0.00151	0.00194	0.00173	0.00257	0 of 24
HEXACHLOROBENZENE	~	~	~	0.00146	0.00143	0.00145	0.00175	0.00158	0.00248	0.00229	~	~	0.0018	0.00257	0 of 13
METHOXYCHLOR	0.0144	0.0185	0.0146	0.0146	0.0143	0.0152	0.0175	0.0158	0.0248	0.0229	0.0151	0.0194	0.0173	0.0257	0 of 24
TOXAPHENE	0.144	0.185	0.146	0.146	0.143	0.152	0.175	0.158	0.248	0.229	0.151	0.194	0.173	0.257	0 of 24

Table A-5. Deer Island Influent Loadings (North System), July - December 2013

Metals (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
ALUMINUM	**991**	**360**	**1240**	**471**	**446**	**419**	654	1510	12 of 12
ANTIMONY	**40.4**	**34.6**	**32.4**	**31.8**	**30.9**	**32.6**	33.8	41.3	0 of 12
ARSENIC	**1.26**	**0.877**	**0.81**	0.509	**1.32**	**0.93**	0.95	1.88	6 of 12
BERYLLIUM	0.404	0.346	0.324	0.318	**0.309**	**0.326**	0.338	0.413	0 of 12
BORON	202	173	162	159	331	260	215	355	3 of 12
CADMIUM	**0.359**	**0.217**	**0.59**	**0.341**	**0.45**	**0.378**	0.389	0.772	12 of 12
CHROMIUM	**4.25**	**2.81**	**4.31**	**4.06**	**5.79**	**3.41**	4.11	7.41	12 of 12
COPPER	**38.2**	**57.8**	**75.7**	**72.7**	**71.1**	**62.1**	62.9	80.2	12 of 12
IRON	**2250**	**1450**	**2000**	**1740**	**1700**	**1450**	1770	2260	12 of 12
LEAD	**8.14**	**5.08**	**8.03**	**6.89**	**13.7**	**7.26**	8.19	17.6	12 of 12
MAGNESIUM	~	~	~	~	**66800**	~	66800	66800	1 of 1
MERCURY	**0.128**	**0.0866**	**0.143**	**0.0654**	**0.121**	**0.0664**	0.102	0.16	11 of 12
MOLYBDENUM	**7.33**	**11.8**	**6.29**	**5.79**	**13.6**	**10.2**	9.16	16.2	12 of 12
NICKEL	**5.09**	**4.5**	**3.11**	**3.16**	**6.62**	**6.96**	4.91	9.63	12 of 12
SELENIUM	0.728	0.623	0.584	0.573	0.557	0.587	0.609	0.744	0 of 12
SILVER	0.463	0.316	0.577	0.516	0.455	0.823	0.525	0.959	12 of 12
THALLIUM	0.808	0.693	0.648	0.636	0.619	0.652	0.676	0.827	0 of 12
ZINC	**169**	**103**	**164**	**141**	**127**	**121**	138	170	12 of 12

Cyanide (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
CYANIDE	7.91	6.88	6.66	6.25	6.2	6.49	6.73	7.92	0 of 12

Oil and Grease, Surfactants, and Petroleum Hydrocarbons (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
FATS OIL AND GREASE	**53600**	**46900**	**61000**	**78300**	**45800**	**43800**	54900	98400	12 of 12
MBAS	~	~	~	~	~	~			
PETROLEUM HYDROCARBONS	**1340**	**2120**	**1140**	**2680**	**977**	**1330**	1640	3070	11 of 11

Organochlorine Pesticides and PCBs (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
4,4'-DDD	0.00335	0.00314	0.0027	0.00266	0.00254	0.00311	0.00292	0.0035	0 of 12
4,4'-DDE	0.00335	0.00314	0.0027	0.00266	0.00254	0.00311	0.00292	0.0035	0 of 12
4,4'-DDT	0.00335	0.00314	0.0027	0.00266	0.00254	0.00311	0.00292	0.0035	0 of 12
ALDRIN	0.00167	0.00157	0.00135	0.00133	0.00127	0.00155	0.00146	0.00175	0 of 12
ALPHA-BHC	0.00167	0.00157	0.00135	0.00133	0.00127	0.00155	0.00146	0.00175	0 of 12
ALPHA-CHLORDANE	0.00167	0.00157	0.00135	0.00133	0.00127	0.00155	0.00146	0.00175	0 of 12
AROCLOR-1016	0.0837	0.0786	0.0674	0.0665	0.0634	0.0777	0.0729	0.0876	0 of 12
AROCLOR-1221	0.167	0.157	0.135	0.133	0.127	0.155	0.146	0.175	0 of 12
AROCLOR-1232	0.0837	0.0786	0.0674	0.0665	0.0634	0.0777	0.0729	0.0876	0 of 12
AROCLOR-1242	0.0837	0.0786	0.0674	0.0665	0.0634	0.0777	0.0729	0.0876	0 of 12
AROCLOR-1248	0.0837	0.0786	0.0674	0.0665	0.0634	0.0777	0.0729	0.0876	0 of 12
AROCLOR-1254	0.0837	0.0786	0.0674	0.0665	0.0634	0.0777	0.0729	0.0876	0 of 12
AROCLOR-1260	0.0837	0.0786	0.0674	0.0665	0.0634	0.0777	0.0729	0.0876	0 of 12
BETA-BHC	0.00167	0.00157	0.00135	0.00133	0.00127	0.00155	0.00146	0.00175	0 of 12
CHLORDANE (TECHNICAL)	0.167	0.157	0.135	0.133	0.127	0.155	0.146	0.175	0 of 12
DELTA-BHC	0.00167	0.00157	0.00135	0.00133	0.00127	0.00155	0.00146	0.00175	0 of 12
DIELDRIN	0.00335	0.00314	0.0027	0.00266	0.00254	0.00311	0.00292	0.0035	0 of 12
ENDOSULFAN I	0.00167	0.00157	0.00135	0.00133	0.00127	0.00155	0.00146	0.00175	0 of 12
ENDOSULFAN II	0.00335	0.00314	0.0027	0.00266	0.00254	0.00311	0.00292	0.0035	0 of 12
ENDOSULFAN SULFATE	0.00335	0.00314	0.0027	0.00266	0.00254	0.00311	0.00292	0.0035	0 of 12
ENDRIN	0.00335	0.00314	0.0027	0.00266	0.00254	0.00311	0.00292	0.0035	0 of 12
ENDRIN ALDEHYDE	0.00335	0.00314	0.0027	0.00266	0.00254	0.00311	0.00292	0.0035	0 of 12
ENDRIN KETONE	0.00335	0.00314	0.0027	0.00266	0.00254	0.00311	0.00292	0.0035	0 of 12
GAMMA-BHC	0.00167	0.00157	0.00135	0.00133	0.00127	0.00155	0.00146	0.00175	0 of 12
GAMMA-CHLORDANE	0.00167	0.00157	0.00135	0.00133	0.00127	0.00155	0.00146	0.00175	0 of 12
HEPTACHLOR	0.00167	0.00157	0.00135	0.00133	0.00127	0.00155	0.00146	0.00175	0 of 12
HEPTACHLOR EPOXIDE	0.00167	0.00157	0.00135	0.00133	0.00127	0.00155	0.00146	0.00175	0 of 12
HEXACHLOROBENZENE	0.00175	~	~	~	~	~	0.00175	0.00175	0 of 1
METHOXYCHLOR	0.0167	0.0157	0.0135	0.0133	0.0127	0.0155	0.0146	0.0175	0 of 12
TOXAPHENE	0.167	0.157	0.135	0.133	0.127	0.155	0.146	0.175	0 of 12

Notes

~: No data or no samples taken; results in **bold** indicate one or more detects that month.

Yearly averages are calculated from individual results collected during the reporting period and are flow-weighted.

Non-detected compounds are assumed to equal one half of the detection limit for metals and inorganics and one tenth of the reporting limit for organic compounds.

Table A-6. Deer Island Influent Characterization (South System), July 2012 - June 2013

Metals (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
ALUMINUM	**658**	**985**	**661**	**1570**	**866**	**1070**	**501**	**520**	**360**	**508**	**752**	**640**	699	2130	24 of 24
ANTIMONY	25	25	25	25	25	25	25	25	**38.7**	25	25	25	27.1	53.5	1 of 24
ARSENIC	**0.692**	**0.767**	**0.7**	**1.39**	0.4	**0.969**	0.4	**0.66**	**0.804**	0.4	**0.908**	0.4	0.688	1.77	11 of 24
BERYLLIUM	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0 of 24
BORON	**270**	**189**	125	125	125	125	125	125	125	125	125	125	139	286	3 of 24
CADMIUM	**0.326**	**0.323**	**0.225**	**0.53**	**0.43**	**0.413**	**0.332**	**0.322**	**0.432**	**0.516**	**0.408**	**0.374**	0.395	0.681	24 of 24
CHROMIUM	**4.89**	**4.3**	**2.71**	**8.94**	**5.1**	**6.1**	**4**	**4.93**	**3.16**	**3.8**	**5.69**	**5.67**	4.73	12.7	24 of 24
COPPER	**101**	**102**	**79.4**	**143**	**86.6**	**99.7**	**74.9**	**58.1**	**45.4**	**61.3**	**97.3**	**91.7**	81.4	186	24 of 24
IRON	**2990**	**4030**	**2520**	**5020**	**3650**	**3640**	**2980**	**2920**	**2410**	**2620**	**3600**	**3360**	3190	6470	24 of 24
LEAD	**11.4**	**12.2**	**6.31**	**31.6**	**11.6**	**8.9**	**5.41**	**6.68**	**5.08**	**6.64**	**8.05**	**8.73**	9.41	47.8	24 of 24
MERCURY	**0.223**	**0.311**	**0.18**	**0.521**	**0.252**	**0.203**	**0.174**	**0.117**	**0.134**	**0.139**	**0.202**	**0.195**	0.207	0.552	24 of 24
MOLYBDENUM	**2.99**	**4.59**	**1.65**	**4.82**	**4.08**	**3.36**	**1.52**	**2.66**	**2.29**	**3.3**	**2.19**	**2.92**	2.93	6.18	23 of 24
NICKEL	**4.19**	**5.17**	**3.79**	**9.14**	**4.76**	**4.66**	**4.19**	**3.85**	**4.61**	**4.19**	**4.25**	**5.92**	4.81	11.5	24 of 24
SELENIUM	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0 of 24
SILVER	**0.611**	**0.573**	**0.263**	**1.37**	**0.743**	**0.831**	**0.517**	**0.401**	**0.301**	**0.588**	**0.74**	**0.712**	0.603	2.05	24 of 24
THALLIUM	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
ZINC	**187**	**202**	**138**	**283**	**186**	**214**	**133**	**130**	**98.3**	**135**	**184**	**177**	163	381	24 of 24

Cyanide (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
CYANIDE	5	5	5	5	5	5	5	5	5	5	5	5	5	5	0 of 24

Oil and Grease, Surfactants, and Petroleum Hydrocarbons (mg/L)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
FATS OIL AND GREASE	**22.4**	**24.8**	**19.2**	**34.9**	**17.6**	**23.2**	**23.7**	**32.7**	**8.15**	**17.8**	**32.8**	**23**	22	37.7	22 of 24
MBAS	**3.99**	**3.81**	**4.54**	**4.66**	~	~	~	~	~	~	~	~	4.25	5.22	8 of 8
PETROLEUM HYDROCARBONS	**0.677**	**1.16**	**1.25**	**2.85**	**1.76**	**1.89**	**1.15**	**1.9**	**0.452**	**1.07**	**1.11**	0.0761	1.19	3.1	21 of 24

Organochlorine Pesticides and PCBs (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
4,4'-DDD	0.00211	0.00221	0.00212	0.00219	0.00214	0.0022	0.00204	0.00221	0.00211	0.00218	0.00205	0.00207	0.00213	0.00236	0 of 24
4,4'-DDE	0.00211	0.00221	0.00212	0.00219	0.00214	0.0022	0.00204	0.00221	0.00211	0.00218	0.00205	0.00207	0.00213	0.00236	0 of 24
4,4'-DDT	0.00211	0.00221	0.00212	0.00219	0.00214	0.0022	0.00204	0.00221	0.00211	0.00218	0.00205	0.00207	0.00213	0.00236	0 of 24
ALDRIN	0.00105	0.0011	0.00106	0.0011	0.00107	0.0011	0.00102	0.00111	0.00106	0.00109	0.00102	0.00103	0.00107	0.00118	0 of 24
ALPHA-BHC	0.00105	0.0011	0.00106	0.0011	0.00107	0.0011	0.00102	0.00111	0.00106	0.00109	0.00102	0.00103	0.00107	0.00118	0 of 24
ALPHA-CHLORDANE	0.00105	0.0011	0.00106	0.0011	0.00107	0.0011	0.00102	0.00111	0.00106	0.00109	0.00102	0.00103	0.00107	0.00118	0 of 24
AROCLOR-1016	0.0527	0.0553	0.053	0.0547	0.0535	0.055	0.051	0.0553	0.0528	0.0546	0.0512	0.0517	0.0533	0.059	0 of 24
AROCLOR-1221	0.105	0.11	0.106	0.11	0.107	0.11	0.102	0.111	0.106	0.109	0.102	0.103	0.107	0.118	0 of 24
AROCLOR-1232	0.0527	0.0553	0.053	0.0547	0.0535	0.055	0.051	0.0553	0.0528	0.0546	0.0512	0.0517	0.0533	0.059	0 of 24
AROCLOR-1242	0.0527	0.0553	0.053	0.0547	0.0535	0.055	0.051	0.0553	0.0528	0.0546	0.0512	0.0517	0.0533	0.059	0 of 24
AROCLOR-1248	0.0527	0.0553	0.053	0.0547	0.0535	0.055	0.051	0.0553	0.0528	0.0546	0.0512	0.0517	0.0533	0.059	0 of 24
AROCLOR-1254	0.0527	0.0553	0.053	0.0547	0.0535	0.055	0.051	0.0553	0.0528	0.0546	0.0512	0.0517	0.0533	0.059	0 of 24
AROCLOR-1260	0.0527	0.0553	0.053	0.0547	0.0535	0.055	0.051	0.0553	0.0528	0.0546	0.0512	0.0517	0.0533	0.059	0 of 24
BETA-BHC	0.00105	0.0011	0.00106	0.0011	0.00107	0.0011	0.00102	0.00111	0.00106	0.00109	0.00102	0.00103	0.00107	0.00118	0 of 24
CHLORDANE (TECHNICAL)	0.105	0.11	0.106	0.11	0.107	0.11	0.102	0.111	0.106	0.109	0.102	0.103	0.107	0.118	0 of 24
DELTA-BHC	0.00105	0.0011	0.00106	0.0011	0.00107	0.0011	0.00102	0.00111	0.00106	0.00109	0.00102	0.00103	0.00107	0.00118	0 of 24
DIELDRIN	0.00211	0.00221	0.00212	0.00219	0.00214	0.0022	0.00204	0.00221	0.00211	0.00218	0.00205	0.00207	0.00213	0.00236	0 of 24
ENDOSULFAN I	0.00105	0.0011	0.00106	0.0011	0.00107	0.0011	0.00102	0.00111	0.00106	0.00109	0.00102	0.00103	0.00107	0.00118	0 of 24
ENDOSULFAN II	0.00211	0.00221	0.00212	0.00219	0.00214	0.0022	0.00204	0.00221	0.00211	0.00218	0.00205	0.00207	0.00213	0.00236	0 of 24
ENDOSULFAN SULFATE	0.00211	0.00221	0.00212	0.00219	0.00214	0.0022	0.00204	0.00221	0.00211	0.00218	0.00205	0.00207	0.00213	0.00236	0 of 24
ENDRIN	0.00211	0.00221	0.00212	0.00219	0.00214	0.0022	0.00204	0.00221	0.00211	0.00218	0.00205	0.00207	0.00213	0.00236	0 of 24
ENDRIN ALDEHYDE	0.00211	0.00221	0.00212	0.00219	0.00214	0.0022	0.00204	0.00221	0.00211	0.00218	0.00205	0.00207	0.00213	0.00236	0 of 24
ENDRIN KETONE	0.00211	0.00221	0.00212	0.00219	0.00214	0.0022	0.00204	0.00221	0.00211	0.00218	0.00205	0.00207	0.00213	0.00236	0 of 24
GAMMA-BHC	0.00105	0.0011	0.00106	0.0011	0.00107	0.0011	0.00102	0.00111	0.00106	0.00109	0.00102	0.00103	0.00107	0.00118	0 of 24
GAMMA-CHLORDANE	0.00105	0.0011	0.00106	0.0011	0.00107	0.0011	0.00102	0.00111	0.00106	0.00109	0.00102	0.00103	0.00107	0.00118	0 of 24
HEPTACHLOR	0.00105	0.0011	0.00106	0.0011	0.00107	0.0011	0.00102	0.00111	0.00106	0.00109	0.00102	0.00103	0.00107	0.00118	0 of 24
HEPTACHLOR EPOXIDE	0.00105	0.0011	0.00106	0.0011	0.00107	0.0011	0.00102	0.00111	0.00106	0.00109	0.00102	0.00103	0.00107	0.00118	0 of 24
HEXACHLOROBENZENE	~	0.00116	~	0.0011	0.00107	0.00115	0.00102	0.00111	0.00106	0.00109	~	~	0.00108	0.00118	0 of 14
METHOXYCHLOR	0.0105	0.011	0.0106	0.011	0.0107	0.011	0.0102	0.0111	0.0106	0.0109	0.0102	0.0103	0.0107	0.0118	0 of 24
TOXAPHENE	0.105	0.11	0.106	0.11	0.107	0.11	0.102	0.111	0.106	0.109	0.102	0.103	0.107	0.118	0 of 24

Table A-6. Deer Island Influent Characterization (South System), July - December 2013

Metals (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
ALUMINUM	**526**	**1230**	**463**	**726**	**576**	**506**	670	1790	12 of 12
ANTIMONY	25	25	25	25	25	25	25	25	0 of 12
ARSENIC	**0.722**	**1.29**	0.4	0.4	**0.623**	**0.809**	0.723	2.2	4 of 12
BERYLLIUM	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0 of 12
BORON	125	125	**264**	125	**270**	125	168	281	4 of 12
CADMIUM	**0.281**	**0.65**	**0.242**	**0.453**	**0.218**	**0.328**	0.363	0.945	12 of 12
CHROMIUM	**4.7**	**9.85**	**4.15**	**5.92**	**5.49**	**4.7**	5.79	15	12 of 12
COPPER	**43.7**	**148**	**67**	**87.1**	**65**	**86.7**	82.1	233	12 of 12
IRON	**2660**	**5790**	**2370**	**3360**	**2170**	**3290**	3300	8390	12 of 12
LEAD	**6.46**	**17.1**	**6.21**	**6.78**	**5.72**	**6.49**	8.2	25.7	12 of 12
MAGNESIUM	~	~	~	~	**38000**	~	38000	38000	1 of 1
MERCURY	**0.138**	**0.194**	**0.115**	**0.11**	**0.0918**	**0.111**	0.129	0.26	12 of 12
MOLYBDENUM	**2.71**	**6.07**	**2.63**	**4.21**	**3.84**	**4.74**	4	8.75	12 of 12
NICKEL	**4.64**	**7.27**	**2.68**	**3.94**	**6.52**	**5.62**	5.11	9.77	12 of 12
SELENIUM	0.45	**0.737**	0.45	0.45	0.45	0.45	0.5	1.03	1 of 12
SILVER	**0.345**	**1.08**	**0.419**	**0.458**	**0.567**	**0.663**	0.585	1.64	12 of 12
THALLIUM	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
ZINC	**139**	**331**	**136**	**169**	**122**	**154**	176	493	12 of 12

Cyanide (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
CYANIDE	5	5	5	5	5	5	5	5	0 of 12

Oil and Grease, Surfactants, and Petroleum Hydrocarbons (mg/L)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
FATS OIL AND GREASE	**22.4**	**23.1**	**34**	**30.1**	**25.6**	**32.5**	27.7	36.2	12 of 12
MBAS	~	~	~	~	~	~			
PETROLEUM HYDROCARBONS	**0.631**	**1.12**	**1.07**	**1.31**	**0.768**	**1.03**	0.971	1.55	11 of 12

Organochlorine Pesticides and PCBs (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
4,4'-DDD	0.00207	0.00222	0.00209	0.00203	0.00203	0.00207	0.00209	0.00242	0 of 12
4,4'-DDE	0.00207	0.00222	0.00209	0.00203	0.00203	0.00207	0.00209	0.00242	0 of 12
4,4'-DDT	0.00207	0.00222	0.00209	0.00203	0.00203	0.00207	0.00209	0.00242	0 of 12
ALDRIN	0.00104	0.00111	0.00105	0.00102	0.00101	0.00104	0.00104	0.00121	0 of 12
ALPHA-BHC	0.00104	0.00111	0.00105	0.00102	0.00101	0.00104	0.00104	0.00121	0 of 12
ALPHA-CHLORDANE	0.00104	0.00111	**0.0452**	0.00102	0.00101	0.00104	0.00806	0.0898	1 of 12
AROCLOR-1016	0.0518	0.0556	0.0523	0.0508	0.0507	0.0518	0.0522	0.0605	0 of 12
AROCLOR-1221	0.104	0.111	0.105	0.102	0.101	0.104	0.104	0.121	0 of 12
AROCLOR-1232	0.0518	0.0556	0.0523	0.0508	0.0507	0.0518	0.0522	0.0605	0 of 12
AROCLOR-1242	0.0518	0.0556	0.0523	0.0508	0.0507	0.0518	0.0522	0.0605	0 of 12
AROCLOR-1248	0.0518	0.0556	0.0523	0.0508	0.0507	0.0518	0.0522	0.0605	0 of 12
AROCLOR-1254	0.0518	0.0556	0.0523	0.0508	0.0507	0.0518	0.0522	0.0605	0 of 12
AROCLOR-1260	0.0518	0.0556	0.0523	0.0508	0.0507	0.0518	0.0522	0.0605	0 of 12
BETA-BHC	0.00104	0.00111	0.00105	0.00102	0.00101	0.00104	0.00104	0.00121	0 of 12
CHLORDANE (TECHNICAL)	0.104	0.111	0.105	0.102	0.101	0.104	0.104	0.121	0 of 12
DELTA-BHC	0.00104	0.00111	0.00105	0.00102	0.00101	0.00104	0.00104	0.00121	0 of 12
DIELDRIN	0.00207	0.00222	0.00209	0.00203	0.00203	0.00207	0.00209	0.00242	0 of 12
ENDOSULFAN I	0.00104	0.00111	0.00105	0.00102	0.00101	0.00104	0.00104	0.00121	0 of 12
ENDOSULFAN II	0.00207	0.00222	0.00209	0.00203	0.00203	0.00207	0.00209	0.00242	0 of 12
ENDOSULFAN SULFATE	0.00207	0.00222	0.00209	0.00203	0.00203	0.00207	0.00209	0.00242	0 of 12
ENDRIN	0.00207	0.00222	0.00209	0.00203	0.00203	0.00207	0.00209	0.00242	0 of 12
ENDRIN ALDEHYDE	0.00207	0.00222	0.00209	0.00203	0.00203	0.00207	0.00209	0.00242	0 of 12
ENDRIN KETONE	0.00207	0.00222	0.00209	0.00203	0.00203	0.00207	0.00209	0.00242	0 of 12
GAMMA-BHC	0.00104	0.00111	0.00105	0.00102	0.00101	0.00104	0.00104	0.00121	0 of 12
GAMMA-CHLORDANE	0.00104	0.00111	**0.0445**	0.00102	0.00101	0.00104	0.00794	0.0883	1 of 12
HEPTACHLOR	0.00104	0.00111	0.00105	0.00102	0.00101	0.00104	0.00104	0.00121	0 of 12
HEPTACHLOR EPOXIDE	0.00104	0.00111	0.00105	0.00102	0.00101	0.00104	0.00104	0.00121	0 of 12
HEXACHLOROBENZENE	0.00104	~	~	~	~	~	0.00104	0.00104	0 of 1
METHOXYCHLOR	0.0104	0.0111	0.0105	0.0102	0.0101	0.0104	0.0104	0.0121	0 of 12
TOXAPHENE	0.104	0.111	0.105	0.102	0.101	0.104	0.104	0.121	0 of 12

Notes
~: No data or no samples taken; results in **bold** indicate one or more detects that month.
Yearly averages are calculated from individual results collected during the reporting period and are flow-weighted.
Non-detected compounds are assumed to equal one half of the detection limit for metals and inorganics and one tenth of the reporting limit for organic compounds.

Table A-7. Deer Island Influent Loadings (South System), July 2012 - June 2013

Metals (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
ALUMINUM	**466**	**679**	**437**	**1100**	**684**	**728**	**500**	**426**	**590**	**598**	**599**	**537**	612	1510	24 of 24
ANTIMONY	17.7	17.2	16.5	17.5	19.7	17.1	24.9	20.5	**63.6**	29.5	19.9	21	23.8	84.6	1 of 24
ARSENIC	**0.49**	**0.529**	**0.463**	**0.974**	0.316	**0.663**	0.399	**0.541**	**1.32**	0.471	**0.723**	0.336	0.602	2.01	11 of 24
BERYLLIUM	0.177	0.172	0.165	0.175	0.197	0.171	0.249	0.205	0.41	0.295	0.199	0.21	0.219	0.426	0 of 24
BORON	**191**	**130**	82.6	87.7	98.7	85.4	125	102	205	147	99.6	105	122	213	3 of 24
CADMIUM	**0.231**	**0.223**	**0.149**	**0.372**	**0.34**	**0.283**	**0.331**	**0.264**	**0.709**	**0.608**	**0.325**	**0.313**	0.346	0.78	24 of 24
CHROMIUM	**3.46**	**2.97**	**1.79**	**6.27**	**4.03**	**4.17**	**3.99**	**4.04**	**5.18**	**4.48**	**4.54**	**4.76**	4.14	8.98	24 of 24
COPPER	**71.6**	**70.4**	**52.5**	**100**	**68.4**	**68.1**	**74.8**	**47.6**	**74.6**	**72.2**	**77.6**	**76.9**	71.3	132	24 of 24
IRON	**2120**	**2780**	**1660**	**3520**	**2880**	**2490**	**2970**	**2390**	**3960**	**3090**	**2870**	**2820**	2800	4650	24 of 24
LEAD	**8.1**	**8.43**	**4.17**	**22.2**	**9.15**	**6.08**	**5.4**	**5.47**	**8.35**	**7.83**	**6.42**	**7.32**	8.24	33.8	24 of 24
MERCURY	**0.158**	**0.214**	**0.119**	**0.366**	**0.199**	**0.139**	**0.174**	**0.0958**	**0.219**	**0.164**	**0.161**	**0.164**	0.181	0.39	24 of 24
MOLYBDENUM	**2.11**	**3.17**	**1.09**	**3.38**	**3.22**	**2.3**	**1.51**	**2.18**	**3.77**	**3.89**	**1.74**	**2.45**	2.57	6.38	23 of 24
NICKEL	**2.96**	**3.57**	**2.5**	**6.41**	**3.76**	**3.18**	**4.18**	**3.16**	**7.57**	**4.93**	**3.38**	**4.97**	4.22	8.13	24 of 24
SELENIUM	0.319	0.31	0.298	0.316	0.355	0.308	0.449	0.369	0.739	0.53	0.359	0.378	0.394	0.766	0 of 24
SILVER	**0.433**	**0.395**	**0.174**	**0.958**	**0.587**	**0.568**	**0.516**	**0.328**	**0.495**	**0.693**	**0.59**	**0.597**	0.528	1.45	24 of 24
THALLIUM	0.354	0.345	0.331	0.351	0.395	0.342	0.499	0.41	0.821	0.589	0.398	0.419	0.438	0.851	0 of 24
ZINC	**132**	**139**	**91.3**	**199**	**147**	**146**	**133**	**107**	**161**	**159**	**146**	**148**	142	269	24 of 24

Cyanide (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
CYANIDE	3.51	3.35	3.33	3.46	4.04	3.42	4.92	4.03	7.8	5.7	4.02	4.01	4.3	7.91	0 of 24

Oil and Grease, Surfactants, and Petroleum Hydrocarbons (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
FATS OIL AND GREASE	**15700**	**16600**	**12800**	**24100**	**14300**	**15800**	**23300**	**26400**	**12700**	**20300**	**26400**	**18400**	18900	28400	22 of 24
MBAS	**2830**	**2630**	**3000**	**3270**	~	~	~	~	~	~	~	~	2930	3570	8 of 8
PETROLEUM HYDROCARBONS	**475**	**780**	**833**	**1970**	**1420**	**1290**	**1130**	**1530**	**705**	**1220**	**896**	61	1030	2150	21 of 24

Organochlorine Pesticides and PCBs (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
4,4'-DDD	0.00149	0.00153	0.0014	0.00153	0.00169	0.0015	0.00204	0.00181	0.00347	0.00257	0.00163	0.00174	0.00187	0.00371	0 of 24
4,4'-DDE	0.00149	0.00153	0.0014	0.00153	0.00169	0.0015	0.00204	0.00181	0.00347	0.00257	0.00163	0.00174	0.00187	0.00371	0 of 24
4,4'-DDT	0.00149	0.00153	0.0014	0.00153	0.00169	0.0015	0.00204	0.00181	0.00347	0.00257	0.00163	0.00174	0.00187	0.00371	0 of 24
ALDRIN	0.000747	0.000762	0.000701	0.000768	0.000845	0.000752	0.00102	0.000907	0.00173	0.00129	0.000817	0.000868	0.000934	0.00186	0 of 24
ALPHA-BHC	0.000747	0.000762	0.000701	0.000768	0.000845	0.000752	0.00102	0.000907	0.00173	0.00129	0.000817	0.000868	0.000934	0.00186	0 of 24
ALPHA-CHLORDANE	0.000747	0.000762	0.000701	0.000768	0.000845	0.000752	0.00102	0.000907	0.00173	0.00129	0.000817	0.000868	0.000934	0.00186	0 of 24
AROCLOR-1016	0.0373	0.0381	0.035	0.0383	0.0423	0.0376	0.0509	0.0453	0.0867	0.0643	0.0408	0.0434	0.0467	0.0928	0 of 24
AROCLOR-1221	0.0747	0.0762	0.0701	0.0768	0.0845	0.0752	0.102	0.0907	0.173	0.129	0.0817	0.0868	0.0934	0.186	0 of 24
AROCLOR-1232	0.0373	0.0381	0.035	0.0383	0.0423	0.0376	0.0509	0.0453	0.0867	0.0643	0.0408	0.0434	0.0467	0.0928	0 of 24
AROCLOR-1242	0.0373	0.0381	0.035	0.0383	0.0423	0.0376	0.0509	0.0453	0.0867	0.0643	0.0408	0.0434	0.0467	0.0928	0 of 24
AROCLOR-1248	0.0373	0.0381	0.035	0.0383	0.0423	0.0376	0.0509	0.0453	0.0867	0.0643	0.0408	0.0434	0.0467	0.0928	0 of 24
AROCLOR-1254	0.0373	0.0381	0.035	0.0383	0.0423	0.0376	0.0509	0.0453	0.0867	0.0643	0.0408	0.0434	0.0467	0.0928	0 of 24
AROCLOR-1260	0.0373	0.0381	0.035	0.0383	0.0423	0.0376	0.0509	0.0453	0.0867	0.0643	0.0408	0.0434	0.0467	0.0928	0 of 24
BETA-BHC	0.000747	0.000762	0.000701	0.000768	0.000845	0.000752	0.00102	0.000907	0.00173	0.00129	0.000817	0.000868	0.000934	0.00186	0 of 24
CHLORDANE (TECHNICAL)	0.0747	0.0762	0.0701	0.0768	0.0845	0.0752	0.102	0.0907	0.173	0.129	0.0817	0.0868	0.0934	0.186	0 of 24
DELTA-BHC	0.000747	0.000762	0.000701	0.000768	0.000845	0.000752	0.00102	0.000907	0.00173	0.00129	0.000817	0.000868	0.000934	0.00186	0 of 24
DIELDRIN	0.00149	0.00153	0.0014	0.00153	0.00169	0.0015	0.00204	0.00181	0.00347	0.00257	0.00163	0.00174	0.00187	0.00371	0 of 24
ENDOSULFAN I	0.000747	0.000762	0.000701	0.000768	0.000845	0.000752	0.00102	0.000907	0.00173	0.00129	0.000817	0.000868	0.000934	0.00186	0 of 24
ENDOSULFAN II	0.00149	0.00153	0.0014	0.00153	0.00169	0.0015	0.00204	0.00181	0.00347	0.00257	0.00163	0.00174	0.00187	0.00371	0 of 24
ENDOSULFAN SULFATE	0.00149	0.00153	0.0014	0.00153	0.00169	0.0015	0.00204	0.00181	0.00347	0.00257	0.00163	0.00174	0.00187	0.00371	0 of 24
ENDRIN	0.00149	0.00153	0.0014	0.00153	0.00169	0.0015	0.00204	0.00181	0.00347	0.00257	0.00163	0.00174	0.00187	0.00371	0 of 24
ENDRIN ALDEHYDE	0.00149	0.00153	0.0014	0.00153	0.00169	0.0015	0.00204	0.00181	0.00347	0.00257	0.00163	0.00174	0.00187	0.00371	0 of 24
ENDRIN KETONE	0.00149	0.00153	0.0014	0.00153	0.00169	0.0015	0.00204	0.00181	0.00347	0.00257	0.00163	0.00174	0.00187	0.00371	0 of 24
GAMMA-BHC	0.000747	0.000762	0.000701	0.000768	0.000845	0.000752	0.00102	0.000907	0.00173	0.00129	0.000817	0.000868	0.000934	0.00186	0 of 24
GAMMA-CHLORDANE	0.000747	0.000762	0.000701	0.000768	0.000845	0.000752	0.00102	0.000907	0.00173	0.00129	0.000817	0.000868	0.000934	0.00186	0 of 24
HEPTACHLOR	0.000747	0.000762	0.000701	0.000768	0.000845	0.000752	0.00102	0.000907	0.00173	0.00129	0.000817	0.000868	0.000934	0.00186	0 of 24
HEPTACHLOR EPOXIDE	0.000747	0.000762	0.000701	0.000768	0.000845	0.000752	0.00102	0.000907	0.00173	0.00129	0.000817	0.000868	0.000934	0.00186	0 of 24
HEXACHLOROBENZENE	~	0.000796	~	0.000768	0.000845	0.000789	0.00102	0.000907	0.00173	0.00129	~	~	0.00105	0.00186	0 of 14
METHOXYCHLOR	0.00747	0.00762	0.00701	0.00768	0.00845	0.00752	0.0102	0.00907	0.0173	0.0129	0.00817	0.00868	0.00934	0.0186	0 of 24
TOXAPHENE	0.0747	0.0762	0.0701	0.0768	0.0845	0.0752	0.102	0.0907	0.173	0.129	0.0817	0.0868	0.0934	0.186	0 of 24

Table A-7. Deer Island Influent Loadings (South System), July - December 2013

Metals (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
ALUMINUM	**456**	**863**	**299**	**429**	**330**	**349**	454	1240	12 of 12
ANTIMONY	21.7	17.6	16.1	14.8	14.3	17.2	17	22.1	0 of 12
ARSENIC	**0.626**	**0.907**	0.258	0.236	**0.357**	**0.557**	0.49	1.53	4 of 12
BERYLLIUM	0.217	0.176	0.161	0.148	0.143	0.172	0.17	0.221	0 of 12
BORON	108	87.9	**171**	73.8	**155**	86.1	114	173	4 of 12
CADMIUM	**0.244**	**0.457**	**0.157**	**0.268**	**0.125**	**0.226**	0.246	0.657	12 of 12
CHROMIUM	**4.08**	**6.93**	**2.68**	**3.5**	**3.15**	**3.24**	3.93	10.4	12 of 12
COPPER	**37.9**	**104**	**43.3**	**51.4**	**37.3**	**59.7**	55.7	162	12 of 12
IRON	**2310**	**4070**	**1530**	**1980**	**1250**	**2270**	2230	5830	12 of 12
LEAD	**5.6**	**12**	**4.01**	**4.01**	**3.28**	**4.47**	5.56	17.9	12 of 12
MAGNESIUM	~	~	~	~	**22600**	~	22600	22600	1 of 1
MERCURY	**0.12**	**0.137**	**0.074**	**0.0652**	**0.0526**	**0.0762**	0.0874	0.181	12 of 12
MOLYBDENUM	**2.35**	**4.27**	**1.7**	**2.48**	**2.2**	**3.26**	2.71	6.08	12 of 12
NICKEL	**4.02**	**5.11**	**1.73**	**2.33**	**3.74**	**3.87**	3.47	6.79	12 of 12
SELENIUM	0.39	**0.518**	0.291	0.266	0.258	0.31	0.339	0.716	1 of 12
SILVER	**0.299**	**0.758**	**0.271**	**0.271**	**0.325**	**0.457**	0.397	1.14	12 of 12
THALLIUM	0.434	0.352	0.323	0.295	0.287	0.344	0.339	0.443	0 of 12
ZINC	**120**	**232**	**87.8**	**99.8**	**69.9**	**106**	119	343	12 of 12

Cyanide (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
CYANIDE	4.22	3.44	3.26	2.92	2.89	3.44	3.36	4.24	0 of 12

Oil and Grease, Surfactants, and Petroleum Hydrocarbons (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
FATS OIL AND GREASE	**18900**	**15900**	**22100**	**17600**	**14800**	**22400**	18600	23400	12 of 12
MBAS	~	~	~	~	~	~			
PETROLEUM HYDROCARBONS	**532**	**767**	**696**	**768**	**443**	**710**	653	1010	11 of 12

Organochlorine Pesticides and PCBs (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
4,4'-DDD	0.00179	0.00156	0.00135	0.0012	0.00116	0.00143	0.00142	0.00184	0 of 12
4,4'-DDE	0.00179	0.00156	0.00135	0.0012	0.00116	0.00143	0.00142	0.00184	0 of 12
4,4'-DDT	0.00179	0.00156	0.00135	0.0012	0.00116	0.00143	0.00142	0.00184	0 of 12
ALDRIN	0.000897	0.000781	0.000675	0.0006	0.000582	0.000713	0.000708	0.000921	0 of 12
ALPHA-BHC	0.000897	0.000781	0.000675	0.0006	0.000582	0.000713	0.000708	0.000921	0 of 12
ALPHA-CHLORDANE	0.000897	0.000781	**0.0292**	0.0006	0.000582	0.000713	0.00547	0.0578	1 of 12
AROCLOR-1016	0.0449	0.0391	0.0337	0.03	0.0291	0.0357	0.0354	0.046	0 of 12
AROCLOR-1221	0.0897	0.0781	0.0675	0.06	0.0582	0.0713	0.0708	0.0921	0 of 12
AROCLOR-1232	0.0449	0.0391	0.0337	0.03	0.0291	0.0357	0.0354	0.046	0 of 12
AROCLOR-1242	0.0449	0.0391	0.0337	0.03	0.0291	0.0357	0.0354	0.046	0 of 12
AROCLOR-1248	0.0449	0.0391	0.0337	0.03	0.0291	0.0357	0.0354	0.046	0 of 12
AROCLOR-1254	0.0449	0.0391	0.0337	0.03	0.0291	0.0357	0.0354	0.046	0 of 12
AROCLOR-1260	0.0449	0.0391	0.0337	0.03	0.0291	0.0357	0.0354	0.046	0 of 12
BETA-BHC	0.000897	0.000781	0.000675	0.0006	0.000582	0.000713	0.000708	0.000921	0 of 12
CHLORDANE (TECHNICAL)	0.0897	0.0781	0.0675	0.06	0.0582	0.0713	0.0708	0.0921	0 of 12
DELTA-BHC	0.000897	0.000781	0.000675	0.0006	0.000582	0.000713	0.000708	0.000921	0 of 12
DIELDRIN	0.00179	0.00156	0.00135	0.0012	0.00116	0.00143	0.00142	0.00184	0 of 12
ENDOSULFAN I	0.000897	0.000781	0.000675	0.0006	0.000582	0.000713	0.000708	0.000921	0 of 12
ENDOSULFAN II	0.00179	0.00156	0.00135	0.0012	0.00116	0.00143	0.00142	0.00184	0 of 12
ENDOSULFAN SULFATE	0.00179	0.00156	0.00135	0.0012	0.00116	0.00143	0.00142	0.00184	0 of 12
ENDRIN	0.00179	0.00156	0.00135	0.0012	0.00116	0.00143	0.00142	0.00184	0 of 12
ENDRIN ALDEHYDE	0.00179	0.00156	0.00135	0.0012	0.00116	0.00143	0.00142	0.00184	0 of 12
ENDRIN KETONE	0.00179	0.00156	0.00135	0.0012	0.00116	0.00143	0.00142	0.00184	0 of 12
GAMMA-BHC	0.000897	0.000781	0.000675	0.0006	0.000582	0.000713	0.000708	0.000921	0 of 12
GAMMA-CHLORDANE	0.000897	0.000781	**0.0287**	0.0006	0.000582	0.000713	0.00539	0.0568	1 of 12
HEPTACHLOR	0.000897	0.000781	0.000675	0.0006	0.000582	0.000713	0.000708	0.000921	0 of 12
HEPTACHLOR EPOXIDE	0.000897	0.000781	0.000675	0.0006	0.000582	0.000713	0.000708	0.000921	0 of 12
HEXACHLOROBENZENE	0.000921	~	~	~	~	~	0.000921	0.000921	0 of 1
METHOXYCHLOR	0.00897	0.00781	0.00675	0.006	0.00582	0.00713	0.00708	0.00921	0 of 12
TOXAPHENE	0.0897	0.0781	0.0675	0.06	0.0582	0.0713	0.0708	0.0921	0 of 12

Notes
~: No data or no samples taken; results in **bold** indicate one or more detects that month.
Yearly averages are calculated from individual results collected during the reporting period and are flow-weighted.
Non-detected compounds are assumed to equal one half of the detection limit for metals and inorganics and one tenth of the reporting limit for organic compounds.

Table A-8. Deer Island Effluent Characterization, July 2013 - June 2013

Metals (ug/L)

	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
ALUMINUM	**129**	**37.5**	**31.8**	**53.3**	**32.5**	**40.3**	**37.4**	**47.9**	**61.9**	**50.7**	**48.1**	**41.6**	50.5	358	48 of 88
ANTIMONY	25	25	25	25	25	25	25	25	25	25	25	25	25	25	0 of 25
ARSENIC	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0 of 24
BERYLLIUM	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0 of 25
BORON	**258**	125	125	125	125	125	125	125	125	125	125	125	134	264	2 of 25
CADMIUM	**0.0229**	**0.0188**	0.015	**0.0195**	0.015	**0.0192**	**0.0508**	0.015	**0.129**	**0.0672**	**0.0203**	**0.0455**	0.043	0.268	21 of 50
CHROMIUM	**0.591**	0.35	0.35	**1.04**	0.35	**0.924**	**1.11**	**1.77**	0.35	**0.614**	0.35	**0.71**	0.716	5.54	14 of 50
COPPER	**5.44**	**4.82**	**4.51**	**5.13**	**5.29**	**7**	**6.74**	**7.99**	**9.6**	**9.3**	**7.04**	**7.24**	7	11.1	50 of 50
IRON	**269**	**252**	**153**	**162**	**196**	**261**	**196**	**286**	**355**	**326**	**262**	**208**	254	361	25 of 25
LEAD	**0.61**	**0.557**	**0.595**	**0.559**	**0.57**	**0.539**	**0.594**	**0.599**	**0.986**	**0.641**	**0.594**	**0.602**	0.644	1.66	13 of 49
MERCURY	**0.00675**	**0.00734**	**0.00452**	**0.0045**	**0.0047**	**0.00627**	**0.00481**	**0.00531**	**0.00792**	**0.0113**	**0.00568**	**0.00492**	0.00628	0.0157	25 of 47
MOLYBDENUM	**3.39**	**3.38**	**3.11**	**3.48**	**4.97**	**2.91**	**1.88**	**2.6**	**2.28**	**3.96**	**3.7**	**3.66**	3.22	6.62	50 of 50
NICKEL	**2.1**	**2.89**	**2.21**	**3.04**	**1.62**	**1.52**	**2.71**	**1.94**	**1.91**	**2.02**	**2.24**	**1.67**	2.11	3.37	50 of 50
SELENIUM	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0 of 25
SILVER	0.045	0.045	0.045	0.0563	0.045	0.0564	0.045	0.0804	0.0565	0.045	0.045	0.0608	0.0532	0.135	0 of 50
THALLIUM	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 25
ZINC	**18.8**	**10.4**	**12**	**12.8**	**14**	**15**	**17.8**	**21.7**	**28.6**	**24.5**	**16.3**	**18.1**	18.5	31.9	50 of 50

Cyanide (ug/L)

	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
CYANIDE	5	5	5	5	5	5	5	5	5	5	5	5	5	5	0 of 24

Oil and Grease, Surfactants, and Petroleum Hydrocarbons (mg/L)

	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
FATS OIL AND GREASE	0.683	0.707	0.702	0.727	0.69	0.697	0.705	0.683	0.689	0.688	0.694	0.69	0.696	0.814	0 of 64
MBAS	**0.191**	**0.223**	**0.147**	**0.114**	~	~	~	~	~	~	~	~	0.169	0.262	11 of 12
PETROLEUM HYDROCARBONS	0.0198	**0.355**	0.0278	**0.119**	**0.223**	**0.0749**	**0.328**	**0.111**	0.0203	**0.173**	0.0561	0.0641	0.123	1.1	14 of 63

Organochlorine Pesticides and PCBs (ug/L)

	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
4,4'-DDD	0.00256	0.0023	0.00216	0.00212	0.00206	0.00202	0.0021	0.0021	0.0021	0.002	0.00224	0.0024	0.00217	0.00256	0 of 12
4,4'-DDE	0.00256	0.0023	0.00216	0.00212	0.00206	0.00202	0.0021	0.0021	0.0021	0.002	0.00224	0.0024	0.00217	0.00256	0 of 12
4,4'-DDT	0.00256	0.0023	0.00216	0.00212	0.00206	0.00202	0.0021	0.0021	0.0021	0.002	0.00224	0.0024	0.00217	0.00256	0 of 12
ALDRIN	0.00128	0.00115	0.00108	0.00106	0.00103	0.00101	0.00105	0.00105	0.00105	0.001	0.00112	0.0012	0.00108	0.00128	0 of 12
ALPHA-BHC	0.00128	0.00115	0.00108	0.00106	0.00103	0.00101	0.00105	0.00105	0.00105	0.001	0.00112	0.0012	0.00108	0.00128	0 of 12
ALPHA-CHLORDANE	0.00128	0.00115	0.00108	0.00106	0.00103	0.00101	0.00105	0.00105	0.00105	0.001	0.00112	0.0012	0.00108	0.00128	0 of 12
AROCLOR-1016	0.064	0.0574	0.054	0.053	0.0515	0.0505	0.0525	0.0525	0.0525	0.05	0.056	0.06	0.0542	0.064	0 of 12
AROCLOR-1221	0.128	0.115	0.108	0.106	0.103	0.101	0.105	0.105	0.105	0.1	0.112	0.12	0.108	0.128	0 of 12
AROCLOR-1232	0.064	0.0574	0.054	0.053	0.0515	0.0505	0.0525	0.0525	0.0525	0.05	0.056	0.06	0.0542	0.064	0 of 12
AROCLOR-1242	0.064	0.0574	0.054	0.053	0.0515	0.0505	0.0525	0.0525	0.0525	0.05	0.056	0.06	0.0542	0.064	0 of 12
AROCLOR-1248	0.064	0.0574	0.054	0.053	0.0515	0.0505	0.0525	0.0525	0.0525	0.05	0.056	0.06	0.0542	0.064	0 of 12
AROCLOR-1254	0.064	0.0574	0.054	0.053	0.0515	0.0505	0.0525	0.0525	0.0525	0.05	0.056	0.06	0.0542	0.064	0 of 12
AROCLOR-1260	0.064	0.0574	0.054	0.053	0.0515	0.0505	0.0525	0.0525	0.0525	0.05	0.056	0.06	0.0542	0.064	0 of 12
BETA-BHC	0.00128	0.00115	0.00108	0.00106	0.00103	0.00101	0.00105	0.00105	0.00105	0.001	0.00112	0.0012	0.00108	0.00128	0 of 12
CHLORDANE (TECHNICAL)	0.128	0.115	0.108	0.106	0.103	0.101	0.105	0.105	0.105	0.1	0.112	0.12	0.108	0.128	0 of 12
DELTA-BHC	0.00128	0.00115	0.00108	0.00106	0.00103	0.00101	0.00105	0.00105	0.00105	0.001	0.00112	0.0012	0.00108	0.00128	0 of 12
DIELDRIN	0.00256	0.0023	0.00216	0.00212	0.00206	0.00202	0.0021	0.0021	0.0021	0.002	0.00224	0.0024	0.00217	0.00256	0 of 12
ENDOSULFAN I	0.00128	0.00115	0.00108	0.00106	0.00103	0.00101	0.00105	0.00105	0.00105	0.001	0.00112	0.0012	0.00108	0.00128	0 of 12
ENDOSULFAN II	0.00256	0.0023	0.00216	0.00212	0.00206	0.00202	0.0021	0.0021	0.0021	0.002	0.00224	0.0024	0.00217	0.00256	0 of 12
ENDOSULFAN SULFATE	0.00256	0.0023	0.00216	0.00212	0.00206	0.00202	0.0021	0.0021	0.0021	0.002	0.00224	0.0024	0.00217	0.00256	0 of 12
ENDRIN	0.00256	0.0023	0.00216	0.00212	0.00206	0.00202	0.0021	0.0021	0.0021	0.002	0.00224	0.0024	0.00217	0.00256	0 of 12
ENDRIN ALDEHYDE	0.00256	0.0023	0.00216	0.00212	0.00206	0.00202	0.0021	0.0021	0.0021	0.002	0.00224	0.0024	0.00217	0.00256	0 of 12
ENDRIN KETONE	0.00256	0.0023	0.00216	0.00212	0.00206	0.00202	0.0021	0.0021	0.0021	0.002	0.00224	0.0024	0.00217	0.00256	0 of 12
GAMMA-BHC	0.00128	0.00115	0.00108	0.00106	0.00103	0.00101	0.00105	0.00105	0.00105	0.001	0.00112	0.0012	0.00108	0.00128	0 of 12
GAMMA-CHLORDANE	0.00128	0.00115	0.00108	0.00106	0.00103	0.00101	0.00105	0.00105	0.00105	0.001	0.00112	0.0012	0.00108	0.00128	0 of 12
HEPTACHLOR	0.00128	0.00115	0.00108	0.00106	0.00103	0.00101	0.00105	0.00105	0.00105	0.001	0.00112	0.0012	0.00108	0.00128	0 of 12
HEPTACHLOR EPOXIDE	0.00128	0.00115	0.00108	0.00106	0.00103	0.00101	0.00105	0.00105	0.00105	0.001	0.00112	0.0012	0.00108	0.00128	0 of 12
HEXACHLOROBENZENE	0.00128	0.00115	0.00108	~	0.00103	0.00101	0.00105	0.00105	0.00105	0.001	0.00112	0.0012	0.00109	0.00128	0 of 11
METHOXYCHLOR	0.0128	0.0115	0.0108	0.0106	0.0103	0.0101	0.0105	0.0105	0.0105	0.01	0.0112	0.012	0.0108	0.0128	0 of 12
TOXAPHENE	0.128	0.115	0.108	0.106	0.103	0.101	0.105	0.105	0.105	0.1	0.112	0.12	0.108	0.128	0 of 12

Table A-8. Deer Island Effluent Characterization, July - December 2013

Metals (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
ALUMINUM	**41**	**53.7**	**58.7**	**38.5**	**37.1**	**18.3**	41.5	152	23 of 40
ANTIMONY	25	25	25	25	25	25	25	25	0 of 12
ARSENIC	**0.75**	0.4	0.4	0.4	0.4	0.4	0.47	1.1	1 of 12
BERYLLIUM	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0 of 12
BORON	125	125	125	125	**276**	**187**	158	285	3 of 12
CADMIUM	0.015	0.015	**0.0184**	0.015	0.015	0.015	0.0156	0.0304	1 of 24
CHROMIUM	0.35	**0.469**	**0.571**	**0.595**	**0.467**	0.35	0.463	0.868	6 of 24
COPPER	**6.23**	**5.97**	**6.45**	**5.16**	**5.52**	**5.72**	5.87	9.18	24 of 24
IRON	**314**	**344**	**228**	**252**	**215**	**227**	266	382	12 of 12
LEAD	**0.603**	**0.576**	**0.532**	**0.536**	**0.554**	**0.572**	0.563	0.61	8 of 26
MAGNESIUM	~	~	~	~	**46100**	~	46100	46100	1 of 1
MERCURY	**0.00465**	**0.00435**	**0.00386**	**0.00339**	**0.00342**	**0.00308**	0.00383	0.00559	24 of 24
MOLYBDENUM	**4.1**	**3.9**	**4.8**	**2.4**	**5.6**	**3.56**	4.06	6.71	24 of 24
NICKEL	**2.06**	**2.14**	**2.22**	**2.46**	**2.28**	**2.4**	2.25	2.94	24 of 24
SELENIUM	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0 of 12
SILVER	0.045	0.045	0.045	0.101	0.112	0.078	0.069	0.135	0 of 24
THALLIUM	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
ZINC	**12.8**	**13.1**	**12.9**	**14.8**	**14.5**	**17.3**	14.2	30.4	24 of 24

Cyanide (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
CYANIDE	5	5	5	5	5	5	5	5	0 of 12

Oil and Grease, Surfactants, and Petroleum Hydrocarbons (mg/L)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
FATS OIL AND GREASE	0.707	0.717	0.692	0.711	0.689	0.718	0.707	0.778	0 of 33
MBAS	~	~	~	~	~	~			
PETROLEUM HYDROCARBONS	0.0665	0.0653	0.0645	0.0652	0.0647	0.0646	0.0652	0.075	0 of 33

Organochlorine Pesticides and PCBs (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
4,4'-DDD	0.00256	0.00206	0.00232	0.0022	0.00228	0.00208	0.00226	0.00256	0 of 6
4,4'-DDE	0.00256	0.00206	0.00232	0.0022	0.00228	0.00208	0.00226	0.00256	0 of 6
4,4'-DDT	0.00256	0.00206	0.00232	0.0022	0.00228	0.00208	0.00226	0.00256	0 of 6
ALDRIN	0.00128	0.00103	0.00116	0.0011	0.00114	0.00104	0.00113	0.00128	0 of 6
ALPHA-BHC	0.00128	0.00103	0.00116	0.0011	0.00114	0.00104	0.00113	0.00128	0 of 6
ALPHA-CHLORDANE	0.00128	0.00103	0.00116	0.0011	0.00114	0.00104	0.00113	0.00128	0 of 6
AROCLOR-1016	0.064	0.0515	0.058	0.055	0.057	0.052	0.0565	0.064	0 of 6
AROCLOR-1221	0.128	0.103	0.116	0.11	0.114	0.104	0.113	0.128	0 of 6
AROCLOR-1232	0.064	0.0515	0.058	0.055	0.057	0.052	0.0565	0.064	0 of 6
AROCLOR-1242	0.064	0.0515	0.058	0.055	0.057	0.052	0.0565	0.064	0 of 6
AROCLOR-1248	0.064	0.0515	0.058	0.055	0.057	0.052	0.0565	0.064	0 of 6
AROCLOR-1254	0.064	0.0515	0.058	0.055	0.057	0.052	0.0565	0.064	0 of 6
AROCLOR-1260	0.064	0.0515	0.058	0.055	0.057	0.052	0.0565	0.064	0 of 6
BETA-BHC	0.00128	0.00103	0.00116	0.0011	0.00114	0.00104	0.00113	0.00128	0 of 6
CHLORDANE (TECHNICAL)	0.128	0.103	0.116	0.11	0.114	0.104	0.113	0.128	0 of 6
DELTA-BHC	0.00128	0.00103	0.00116	0.0011	0.00114	0.00104	0.00113	0.00128	0 of 6
DIELDRIN	0.00256	0.00206	0.00232	0.0022	0.00228	0.00208	0.00226	0.00256	0 of 6
ENDOSULFAN I	0.00128	0.00103	0.00116	0.0011	0.00114	0.00104	0.00113	0.00128	0 of 6
ENDOSULFAN II	0.00256	0.00206	0.00232	0.0022	0.00228	0.00208	0.00226	0.00256	0 of 6
ENDOSULFAN SULFATE	0.00256	0.00206	0.00232	0.0022	0.00228	0.00208	0.00226	0.00256	0 of 6
ENDRIN	0.00256	0.00206	0.00232	0.0022	0.00228	0.00208	0.00226	0.00256	0 of 6
ENDRIN ALDEHYDE	0.00256	0.00206	0.00232	0.0022	0.00228	0.00208	0.00226	0.00256	0 of 6
ENDRIN KETONE	0.00256	0.00206	0.00232	0.0022	0.00228	0.00208	0.00226	0.00256	0 of 6
GAMMA-BHC	0.00128	0.00103	0.00116	0.0011	0.00114	0.00104	0.00113	0.00128	0 of 6
GAMMA-CHLORDANE	0.00128	0.00103	0.00116	0.0011	0.00114	0.00104	0.00113	0.00128	0 of 6
HEPTACHLOR	0.00128	0.00103	0.00116	0.0011	0.00114	0.00104	0.00113	0.00128	0 of 6
HEPTACHLOR EPOXIDE	0.00128	0.00103	0.00116	0.0011	0.00114	0.00104	0.00113	0.00128	0 of 6
HEXACHLOROBENZENE	0.00128	0.00103	0.00116	0.0011	0.00114	0.00104	0.00113	0.00128	0 of 6
METHOXYCHLOR	0.0128	0.0103	0.0116	0.011	0.0114	0.0104	0.0113	0.0128	0 of 6
TOXAPHENE	0.128	0.103	0.116	0.11	0.114	0.104	0.113	0.128	0 of 6

Table A-8a. Deer Island Effluent Characterization, July 2012 - June 2013

Volatile Organics (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
1,1,1-TRICHLOROETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
1,1,2,2-TETRACHLOROETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
1,1,2-TRICHLOROETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
1,1-DICHLOROETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
1,1-DICHLOROETHENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
1,2-DICHLOROBENZENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
1,2-DICHLOROETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
1,2-DICHLOROPROPANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
1,3-DICHLOROBENZENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
1,4-DICHLOROBENZENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
2-BUTANONE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
2-CHLOROETHYL VINYL ETHER	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
2-HEXANONE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
4-METHYL-2-PENTANONE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
ACETONE	1	**6.08**	1	**6.23**	1	1	1	1	1	1	**10.5**	1	2.63	18.5	3 of 24
ACROLEIN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0 of 24
ACRYLONITRILE	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0 of 24
BENZENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
BROMODICHLOROMETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
BROMOFORM	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
BROMOMETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
CARBON DISULFIDE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
CARBON TETRACHLORIDE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
CHLOROBENZENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
CHLOROETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
CHLOROFORM	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
CHLOROMETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
CIS-1,2-DICHLOROETHENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
CIS-1,3-DICHLOROPROPENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
DIBROMOCHLOROMETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
ETHYLBENZENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
M,P-XYLENE	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0 of 24
METHYLENE CHLORIDE	**3.12**	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.674	5.77	1 of 24
O-XYLENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
STYRENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
TETRACHLOROETHENE	0.5	0.5	**3.04**	0.5	0.5	0.5	**3.62**	0.5	0.5	0.5	0.5	0.5	0.94	6.65	2 of 24
TOLUENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
TRANS-1,2-DICHLOROETHENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
TRANS-1,3-DICHLOROPROPENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
TRICHLOROETHENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
TRICHLOROFLUOROMETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
VINYL ACETATE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
VINYL CHLORIDE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24

Table A-8b. Deer Island Effluent Characterization, July - December 2013

Volatile Organics (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
1,1,1-TRICHLOROETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
1,1,2,2-TETRACHLOROETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
1,1,2-TRICHLOROETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
1,1-DICHLOROETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
1,1-DICHLOROETHENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
1,2-DICHLOROBENZENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
1,2-DICHLOROETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
1,2-DICHLOROPROPANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
1,3-DICHLOROBENZENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
1,4-DICHLOROBENZENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
2-BUTANONE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
2-CHLOROETHYL VINYL ETHER	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
2-HEXANONE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
4-METHYL-2-PENTANONE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
ACETONE	1	1	1	1	1	1	1	1	0 of 12
ACROLEIN	1	1	1	1	1	1	1	1	0 of 12
ACRYLONITRILE	1	1	1	1	1	1	1	1	0 of 12
BENZENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
BROMODICHLOROMETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
BROMOFORM	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
BROMOMETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
CARBON DISULFIDE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
CARBON TETRACHLORIDE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
CHLOROBENZENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
CHLOROETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
CHLOROFORM	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
CHLOROMETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
CIS-1,2-DICHLOROETHENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
CIS-1,3-DICHLOROPROPENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
DIBROMOCHLOROMETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
ETHYLBENZENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
M,P-XYLENE	1	1	1	1	1	1	1	1	0 of 12
METHYLENE CHLORIDE	0.5	0.5	0.5	0.5	0.5	**18.9**	3.38	37.3	1 of 12
O-XYLENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
STYRENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
TETRACHLOROETHENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
TOLUENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
TRANS-1,2-DICHLOROETHENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
TRANS-1,3-DICHLOROPROPENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
TRICHLOROETHENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
TRICHLOROFLUOROMETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
VINYL ACETATE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
VINYL CHLORIDE	0.5	0.5	0.5	0.5	0.5	0.35	0.476	0.5	0 of 12

Notes

~: No data or no samples taken; results in **bold** indicate one or more detects that month.

Yearly averages are calculated from individual results collected during the reporting period and are flow-weighted.

Non-detected compounds are assumed to equal one half of the detection limit for metals and inorganics and one tenth of the reporting limit for organic compounds.

Table A-9. Deer Island Effluent Loadings, July 2012 - June 2013

Metals (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
ALUMINUM	**255**	**77.5**	**63.7**	**110**	**80.5**	**82.5**	**98.4**	**119**	**258**	**146**	**124**	**111**	127	722	48 of 88
ANTIMONY	50.2	51.1	49.5	52	58.6	51.4	66.7	62.2	98.5	73.6	61.3	58.4	61.2	98.8	0 of 25
ARSENIC	0.803	0.818	0.793	0.831	0.937	0.822	1.07	0.916	1.58	1.18	0.98	0.934	0.971	1.58	0 of 24
BERYLLIUM	0.502	0.511	0.495	0.52	0.586	0.514	0.667	0.622	0.985	0.736	0.613	0.584	0.612	0.988	0 of 25
BORON	**518**	256	248	260	293	257	333	311	492	368	306	292	327	533	2 of 25
CADMIUM	**0.0453**	**0.0388**	0.0301	**0.0401**	0.0371	**0.0393**	**0.133**	0.0373	**0.538**	**0.193**	**0.0525**	**0.122**	0.108	1.21	21 of 50
CHROMIUM	**1.17**	0.724	0.701	**2.14**	0.865	**1.89**	**2.91**	**4.42**	1.46	**1.77**	0.906	**1.9**	1.79	14.8	14 of 50
COPPER	**10.8**	**9.98**	**9.04**	**10.5**	**13.1**	**14.3**	**17.7**	**19.9**	**40**	**26.8**	**18.2**	**19.4**	17.6	50	50 of 50
IRON	**540**	**515**	**304**	**337**	**459**	**537**	**522**	**713**	**1400**	**961**	**643**	**487**	622	1420	25 of 25
LEAD	**1.21**	**1.15**	**1.19**	**1.15**	**1.41**	**1.1**	**1.56**	**1.43**	**4.1**	**1.85**	**1.54**	**1.61**	1.61	7.48	13 of 49
MERCURY	**0.0133**	**0.0152**	**0.00906**	**0.00925**	**0.0116**	**0.0128**	**0.0126**	**0.0132**	**0.0321**	**0.0325**	**0.0147**	**0.0144**	0.0155	0.0386	25 of 47
MOLYBDENUM	**6.7**	**6.99**	**6.22**	**7.16**	**12.3**	**5.96**	**4.94**	**6.46**	**9.49**	**11.4**	**9.58**	**9.8**	8.08	16.7	50 of 50
NICKEL	**4.15**	**5.99**	**4.43**	**6.26**	**4.01**	**3.1**	**7.11**	**4.84**	**7.94**	**5.81**	**5.81**	**4.48**	5.3	8.97	50 of 50
SELENIUM	0.904	0.921	0.892	0.935	1.05	0.925	1.2	1.12	1.77	1.32	1.1	1.05	1.1	1.78	0 of 25
SILVER	0.089	0.0931	0.0902	0.116	0.111	0.115	0.118	0.2	0.235	0.13	0.116	0.163	0.133	0.383	0 of 50
THALLIUM	1	1.02	0.991	1.04	1.17	1.03	1.33	1.24	1.97	1.47	1.23	1.17	1.22	1.98	0 of 25
ZINC	**37.2**	**21.6**	**24.1**	**26.4**	**34.7**	**30.6**	**46.8**	**54**	**119**	**70.5**	**42.3**	**48.6**	46.5	144	50 of 50

Cyanide (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
CYANIDE	9.95	10.4	9.84	10.3	13.8	10.1	13.1	11.3	20.5	14.5	14.5	11.4	12.5	21.3	0 of 24

Oil and Grease, Surfactants, and Petroleum Hydrocarbons (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
FATS OIL AND GREASE	1400	1480	1380	1810	1660	1930	1780	1900	2730	1840	1770	2520	1840	3640	0 of 64
MBAS	**376**	**464**	**296**	**232**	~	~	~	~	~	~	~	~	342	553	11 of 12
PETROLEUM HYDROCARBONS	40.7	**743**	54.7	**296**	**537**	**208**	**827**	**309**	80.5	**462**	134	234	326	2490	14 of 63

Organochlorine Pesticides and PCBs (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
4,4'-DDD	0.00516	0.0047	0.00427	0.00438	0.00445	0.00419	0.00562	0.00481	0.00825	0.00597	0.00506	0.0057	0.00521	0.00825	0 of 12
4,4'-DDE	0.00516	0.0047	0.00427	0.00438	0.00445	0.00419	0.00562	0.00481	0.00825	0.00597	0.00506	0.0057	0.00521	0.00825	0 of 12
4,4'-DDT	0.00516	0.0047	0.00427	0.00438	0.00445	0.00419	0.00562	0.00481	0.00825	0.00597	0.00506	0.0057	0.00521	0.00825	0 of 12
ALDRIN	0.00258	0.00235	0.00213	0.00219	0.00223	0.00209	0.00281	0.00241	0.00412	0.00299	0.00253	0.00285	0.00261	0.00412	0 of 12
ALPHA-BHC	0.00258	0.00235	0.00213	0.00219	0.00223	0.00209	0.00281	0.00241	0.00412	0.00299	0.00253	0.00285	0.00261	0.00412	0 of 12
ALPHA-CHLORDANE	0.00258	0.00235	0.00213	0.00219	0.00223	0.00209	0.00281	0.00241	0.00412	0.00299	0.00253	0.00285	0.00261	0.00412	0 of 12
AROCLOR-1016	0.129	0.117	0.107	0.109	0.111	0.105	0.14	0.12	0.206	0.149	0.127	0.142	0.13	0.206	0 of 12
AROCLOR-1221	0.258	0.235	0.213	0.219	0.223	0.209	0.281	0.241	0.412	0.299	0.253	0.285	0.261	0.412	0 of 12
AROCLOR-1232	0.129	0.117	0.107	0.109	0.111	0.105	0.14	0.12	0.206	0.149	0.127	0.142	0.13	0.206	0 of 12
AROCLOR-1242	0.129	0.117	0.107	0.109	0.111	0.105	0.14	0.12	0.206	0.149	0.127	0.142	0.13	0.206	0 of 12
AROCLOR-1248	0.129	0.117	0.107	0.109	0.111	0.105	0.14	0.12	0.206	0.149	0.127	0.142	0.13	0.206	0 of 12
AROCLOR-1254	0.129	0.117	0.107	0.109	0.111	0.105	0.14	0.12	0.206	0.149	0.127	0.142	0.13	0.206	0 of 12
AROCLOR-1260	0.129	0.117	0.107	0.109	0.111	0.105	0.14	0.12	0.206	0.149	0.127	0.142	0.13	0.206	0 of 12
BETA-BHC	0.00258	0.00235	0.00213	0.00219	0.00223	0.00209	0.00281	0.00241	0.00412	0.00299	0.00253	0.00285	0.00261	0.00412	0 of 12
CHLORDANE (TECHNICAL)	0.258	0.235	0.213	0.219	0.223	0.209	0.281	0.241	0.412	0.299	0.253	0.285	0.261	0.412	0 of 12
DELTA-BHC	0.00258	0.00235	0.00213	0.00219	0.00223	0.00209	0.00281	0.00241	0.00412	0.00299	0.00253	0.00285	0.00261	0.00412	0 of 12
DIELDRIN	0.00516	0.0047	0.00427	0.00438	0.00445	0.00419	0.00562	0.00481	0.00825	0.00597	0.00506	0.0057	0.00521	0.00825	0 of 12
ENDOSULFAN I	0.00258	0.00235	0.00213	0.00219	0.00223	0.00209	0.00281	0.00241	0.00412	0.00299	0.00253	0.00285	0.00261	0.00412	0 of 12
ENDOSULFAN II	0.00516	0.0047	0.00427	0.00438	0.00445	0.00419	0.00562	0.00481	0.00825	0.00597	0.00506	0.0057	0.00521	0.00825	0 of 12
ENDOSULFAN SULFATE	0.00516	0.0047	0.00427	0.00438	0.00445	0.00419	0.00562	0.00481	0.00825	0.00597	0.00506	0.0057	0.00521	0.00825	0 of 12
ENDRIN	0.00516	0.0047	0.00427	0.00438	0.00445	0.00419	0.00562	0.00481	0.00825	0.00597	0.00506	0.0057	0.00521	0.00825	0 of 12
ENDRIN ALDEHYDE	0.00516	0.0047	0.00427	0.00438	0.00445	0.00419	0.00562	0.00481	0.00825	0.00597	0.00506	0.0057	0.00521	0.00825	0 of 12
ENDRIN KETONE	0.00516	0.0047	0.00427	0.00438	0.00445	0.00419	0.00562	0.00481	0.00825	0.00597	0.00506	0.0057	0.00521	0.00825	0 of 12
GAMMA-BHC	0.00258	0.00235	0.00213	0.00219	0.00223	0.00209	0.00281	0.00241	0.00412	0.00299	0.00253	0.00285	0.00261	0.00412	0 of 12
GAMMA-CHLORDANE	0.00258	0.00235	0.00213	0.00219	0.00223	0.00209	0.00281	0.00241	0.00412	0.00299	0.00253	0.00285	0.00261	0.00412	0 of 12
HEPTACHLOR	0.00258	0.00235	0.00213	0.00219	0.00223	0.00209	0.00281	0.00241	0.00412	0.00299	0.00253	0.00285	0.00261	0.00412	0 of 12
HEPTACHLOR EPOXIDE	0.00258	0.00235	0.00213	0.00219	0.00223	0.00209	0.00281	0.00241	0.00412	0.00299	0.00253	0.00285	0.00261	0.00412	0 of 12
HEXACHLOROBENZENE	0.00258	0.00235	0.00213		0.00223	0.00209	0.00281	0.00241	0.00412	0.00299	0.00253	0.00285	0.00264	0.00412	0 of 11
METHOXYCHLOR	0.0258	0.0235	0.0213	0.0219	0.0223	0.0209	0.0281	0.0241	0.0412	0.0299	0.0253	0.0285	0.0261	0.0412	0 of 12
TOXAPHENE	0.258	0.235	0.213	0.219	0.223	0.209	0.281	0.241	0.412	0.299	0.253	0.285	0.261	0.412	0 of 12

Table A-9. Deer Island Effluent Loadings, July - December 2013

Metals (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
ALUMINUM	**98.4**	**113**	**124**	**74.3**	**68.4**	**37**	86	284	23 of 40
ANTIMONY	60.7	51.6	49.6	46.6	45.4	49.7	50.6	60.7	0 of 12
ARSENIC	**1.82**	0.825	0.794	0.745	0.727	0.795	0.951	2.67	1 of 12
BERYLLIUM	0.607	0.516	0.496	0.466	0.454	0.497	0.506	0.607	0 of 12
BORON	303	258	248	233	**501**	**372**	319	518	3 of 12
CADMIUM	0.036	0.0316	**0.0389**	0.029	0.0277	0.0304	0.0323	0.0567	1 of 24
CHROMIUM	0.84	**0.988**	**1.21**	**1.15**	**0.863**	0.709	0.96	1.9	6 of 24
COPPER	**15**	**12.6**	**13.7**	**9.97**	**10.2**	**11.6**	12.2	24.2	24 of 24
IRON	**762**	**710**	**453**	**469**	**390**	**451**	539	928	12 of 12
LEAD	**1.45**	**1.22**	**1.13**	**1.03**	**1.02**	**1.16**	1.17	1.58	8 of 26
MAGNESIUM	~	~	~	~	**85000**	~	85000	85000	1 of 1
MERCURY	**0.0112**	**0.00917**	**0.00818**	**0.00654**	**0.00631**	**0.00624**	0.00794	0.0146	24 of 24
MOLYBDENUM	**9.85**	**8.22**	**10.2**	**4.64**	**10.3**	**7.2**	8.4	17.7	24 of 24
NICKEL	**4.95**	**4.51**	**4.7**	**4.75**	**4.21**	**4.87**	4.66	7.12	24 of 24
SELENIUM	1.09	0.928	0.893	0.839	0.818	0.894	0.911	1.09	0 of 12
SILVER	0.108	0.0949	0.0953	0.195	0.207	0.158	0.143	0.249	0 of 24
THALLIUM	1.21	1.03	0.992	0.932	0.909	0.994	1.01	1.21	0 of 12
ZINC	**30.7**	**27.7**	**27.2**	**28.5**	**26.9**	**35.1**	29.4	60.2	24 of 24

Cyanide (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
CYANIDE	12.3	10.4	11.5	9.17	9.65	9.88	10.5	13.2	0 of 12

Oil and Grease, Surfactants, and Petroleum Hydrocarbons (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
FATS OIL AND GREASE	1750	1490	1490	1310	1280	1850	1540	2640	0 of 33
MBAS	~	~	~	~	~	~			
PETROLEUM HYDROCARBONS	164	136	139	120	120	166	142	224	0 of 33

Organochlorine Pesticides and PCBs (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
4,4'-DDD	0.00622	0.00427	0.00461	0.00414	0.00415	0.00415	0.00459	0.00622	0 of 6
4,4'-DDE	0.00622	0.00427	0.00461	0.00414	0.00415	0.00415	0.00459	0.00622	0 of 6
4,4'-DDT	0.00622	0.00427	0.00461	0.00414	0.00415	0.00415	0.00459	0.00622	0 of 6
ALDRIN	0.00311	0.00214	0.0023	0.00207	0.00207	0.00208	0.00229	0.00311	0 of 6
ALPHA-BHC	0.00311	0.00214	0.0023	0.00207	0.00207	0.00208	0.00229	0.00311	0 of 6
ALPHA-CHLORDANE	0.00311	0.00214	0.0023	0.00207	0.00207	0.00208	0.00229	0.00311	0 of 6
AROCLOR-1016	0.155	0.107	0.115	0.103	0.104	0.104	0.115	0.155	0 of 6
AROCLOR-1221	0.311	0.214	0.23	0.207	0.207	0.208	0.229	0.311	0 of 6
AROCLOR-1232	0.155	0.107	0.115	0.103	0.104	0.104	0.115	0.155	0 of 6
AROCLOR-1242	0.155	0.107	0.115	0.103	0.104	0.104	0.115	0.155	0 of 6
AROCLOR-1248	0.155	0.107	0.115	0.103	0.104	0.104	0.115	0.155	0 of 6
AROCLOR-1254	0.155	0.107	0.115	0.103	0.104	0.104	0.115	0.155	0 of 6
AROCLOR-1260	0.155	0.107	0.115	0.103	0.104	0.104	0.115	0.155	0 of 6
BETA-BHC	0.00311	0.00214	0.0023	0.00207	0.00207	0.00208	0.00229	0.00311	0 of 6
CHLORDANE (TECHNICAL)	0.311	0.214	0.23	0.207	0.207	0.208	0.229	0.311	0 of 6
DELTA-BHC	0.00311	0.00214	0.0023	0.00207	0.00207	0.00208	0.00229	0.00311	0 of 6
DIELDRIN	0.00622	0.00427	0.00461	0.00414	0.00415	0.00415	0.00459	0.00622	0 of 6
ENDOSULFAN I	0.00311	0.00214	0.0023	0.00207	0.00207	0.00208	0.00229	0.00311	0 of 6
ENDOSULFAN II	0.00622	0.00427	0.00461	0.00414	0.00415	0.00415	0.00459	0.00622	0 of 6
ENDOSULFAN SULFATE	0.00622	0.00427	0.00461	0.00414	0.00415	0.00415	0.00459	0.00622	0 of 6
ENDRIN	0.00622	0.00427	0.00461	0.00414	0.00415	0.00415	0.00459	0.00622	0 of 6
ENDRIN ALDEHYDE	0.00622	0.00427	0.00461	0.00414	0.00415	0.00415	0.00459	0.00622	0 of 6
ENDRIN KETONE	0.00622	0.00427	0.00461	0.00414	0.00415	0.00415	0.00459	0.00622	0 of 6
GAMMA-BHC	0.00311	0.00214	0.0023	0.00207	0.00207	0.00208	0.00229	0.00311	0 of 6
GAMMA-CHLORDANE	0.00311	0.00214	0.0023	0.00207	0.00207	0.00208	0.00229	0.00311	0 of 6
HEPTACHLOR	0.00311	0.00214	0.0023	0.00207	0.00207	0.00208	0.00229	0.00311	0 of 6
HEPTACHLOR EPOXIDE	0.00311	0.00214	0.0023	0.00207	0.00207	0.00208	0.00229	0.00311	0 of 6
HEXACHLOROBENZENE	0.00311	0.00214	0.0023	0.00207	0.00207	0.00208	0.00229	0.00311	0 of 6
METHOXYCHLOR	0.0311	0.0214	0.023	0.0207	0.0207	0.0208	0.0229	0.0311	0 of 6
TOXAPHENE	0.311	0.214	0.23	0.207	0.207	0.208	0.229	0.311	0 of 6

Table A-9. Deer Island Effluent Loadings, July 2012 - June 2013

Volatile Organics (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
1,1,1-TRICHLOROETHANE	0.995	1.04	0.984	1.03	1.38	1.01	1.31	1.13	2.05	1.45	1.45	1.14	1.25	2.13	0 of 24
1,1,2,2-TETRACHLOROETHANE	0.995	1.04	0.984	1.03	1.38	1.01	1.31	1.13	2.05	1.45	1.45	1.14	1.25	2.13	0 of 24
1,1,2-TRICHLOROETHANE	0.995	1.04	0.984	1.03	1.38	1.01	1.31	1.13	2.05	1.45	1.45	1.14	1.25	2.13	0 of 24
1,1-DICHLOROETHANE	0.995	1.04	0.984	1.03	1.38	1.01	1.31	1.13	2.05	1.45	1.45	1.14	1.25	2.13	0 of 24
1,1-DICHLOROETHENE	0.995	1.04	0.984	1.03	1.38	1.01	1.31	1.13	2.05	1.45	1.45	1.14	1.25	2.13	0 of 24
1,2-DICHLOROBENZENE	0.995	1.04	0.984	1.03	1.38	1.01	1.31	1.13	2.05	1.45	1.45	1.14	1.25	2.13	0 of 24
1,2-DICHLOROETHANE	0.995	1.04	0.984	1.03	1.38	1.01	1.31	1.13	2.05	1.45	1.45	1.14	1.25	2.13	0 of 24
1,2-DICHLOROPROPANE	0.995	1.04	0.984	1.03	1.38	1.01	1.31	1.13	2.05	1.45	1.45	1.14	1.25	2.13	0 of 24
1,3-DICHLOROBENZENE	0.995	1.04	0.984	1.03	1.38	1.01	1.31	1.13	2.05	1.45	1.45	1.14	1.25	2.13	0 of 24
1,4-DICHLOROBENZENE	0.995	1.04	0.984	1.03	1.38	1.01	1.31	1.13	2.05	1.45	1.45	1.14	1.25	2.13	0 of 24
2-BUTANONE	0.995	1.04	0.984	1.03	1.38	1.01	1.31	1.13	2.05	1.45	1.45	1.14	1.25	2.13	0 of 24
2-CHLOROETHYL VINYL ETHER	0.995	1.04	0.984	1.03	1.38	1.01	1.31	1.13	2.05	1.45	1.45	1.14	1.25	2.13	0 of 24
2-HEXANONE	0.995	1.04	0.984	1.03	1.38	1.01	1.31	1.13	2.05	1.45	1.45	1.14	1.25	2.13	0 of 24
4-METHYL-2-PENTANONE	0.995	1.04	0.984	1.03	1.38	1.01	1.31	1.13	2.05	1.45	1.45	1.14	1.25	2.13	0 of 24
ACETONE	1.99	**12.6**	1.97	**12.9**	2.75	2.02	2.62	2.25	4.11	2.9	**30.4**	2.28	6.57	58.3	3 of 24
ACROLEIN	1.99	2.08	1.97	2.06	2.75	2.02	2.62	2.25	4.11	2.9	2.9	2.28	2.49	4.26	0 of 24
ACRYLONITRILE	1.99	2.08	1.97	2.06	2.75	2.02	2.62	2.25	4.11	2.9	2.9	2.28	2.49	4.26	0 of 24
BENZENE	0.995	1.04	0.984	1.03	1.38	1.01	1.31	1.13	2.05	1.45	1.45	1.14	1.25	2.13	0 of 24
BROMODICHLOROMETHANE	0.995	1.04	0.984	1.03	1.38	1.01	1.31	1.13	2.05	1.45	1.45	1.14	1.25	2.13	0 of 24
BROMOFORM	0.995	1.04	0.984	1.03	1.38	1.01	1.31	1.13	2.05	1.45	1.45	1.14	1.25	2.13	0 of 24
BROMOMETHANE	0.995	1.04	0.984	1.03	1.38	1.01	1.31	1.13	2.05	1.45	1.45	1.14	1.25	2.13	0 of 24
CARBON DISULFIDE	0.995	1.04	0.984	1.03	1.38	1.01	1.31	1.13	2.05	1.45	1.45	1.14	1.25	2.13	0 of 24
CARBON TETRACHLORIDE	0.995	1.04	0.984	1.03	1.38	1.01	1.31	1.13	2.05	1.45	1.45	1.14	1.25	2.13	0 of 24
CHLOROBENZENE	0.995	1.04	0.984	1.03	1.38	1.01	1.31	1.13	2.05	1.45	1.45	1.14	1.25	2.13	0 of 24
CHLOROETHANE	0.995	1.04	0.984	1.03	1.38	1.01	1.31	1.13	2.05	1.45	1.45	1.14	1.25	2.13	0 of 24
CHLOROFORM	0.995	1.04	0.984	1.03	1.38	1.01	1.31	1.13	2.05	1.45	1.45	1.14	1.25	2.13	0 of 24
CHLOROMETHANE	0.995	1.04	0.984	1.03	1.38	1.01	1.31	1.13	2.05	1.45	1.45	1.14	1.25	2.13	0 of 24
CIS-1,2-DICHLOROETHENE	0.995	1.04	0.984	1.03	1.38	1.01	1.31	1.13	2.05	1.45	1.45	1.14	1.25	2.13	0 of 24
CIS-1,3-DICHLOROPROPENE	0.995	1.04	0.984	1.03	1.38	1.01	1.31	1.13	2.05	1.45	1.45	1.14	1.25	2.13	0 of 24
DIBROMOCHLOROMETHANE	0.995	1.04	0.984	1.03	1.38	1.01	1.31	1.13	2.05	1.45	1.45	1.14	1.25	2.13	0 of 24
ETHYLBENZENE	0.995	1.04	0.984	1.03	1.38	1.01	1.31	1.13	2.05	1.45	1.45	1.14	1.25	2.13	0 of 24
M,P-XYLENE	1.99	2.08	1.97	2.06	2.75	2.02	2.62	2.25	4.11	2.9	2.9	2.28	2.49	4.26	0 of 24
METHYLENE CHLORIDE	**6.21**	1.04	0.984	1.03	1.38	1.01	1.31	1.13	2.05	1.45	1.45	1.14	1.68	11.4	1 of 24
O-XYLENE	0.995	1.04	0.984	1.03	1.38	1.01	1.31	1.13	2.05	1.45	1.45	1.14	1.25	2.13	0 of 24
STYRENE	0.995	1.04	0.984	1.03	1.38	1.01	1.31	1.13	2.05	1.45	1.45	1.14	1.25	2.13	0 of 24
TETRACHLOROETHENE	0.995	1.04	**5.99**	1.03	1.38	1.01	**9.48**	1.13	2.05	1.45	1.45	1.14	2.35	17.7	2 of 24
TOLUENE	0.995	1.04	0.984	1.03	1.38	1.01	1.31	1.13	2.05	1.45	1.45	1.14	1.25	2.13	0 of 24
TRANS-1,2-DICHLOROETHENE	0.995	1.04	0.984	1.03	1.38	1.01	1.31	1.13	2.05	1.45	1.45	1.14	1.25	2.13	0 of 24
TRANS-1,3-DICHLOROPROPENE	0.995	1.04	0.984	1.03	1.38	1.01	1.31	1.13	2.05	1.45	1.45	1.14	1.25	2.13	0 of 24
TRICHLOROETHENE	0.995	1.04	0.984	1.03	1.38	1.01	1.31	1.13	2.05	1.45	1.45	1.14	1.25	2.13	0 of 24
TRICHLOROFLUOROMETHANE	0.995	1.04	0.984	1.03	1.38	1.01	1.31	1.13	2.05	1.45	1.45	1.14	1.25	2.13	0 of 24
VINYL ACETATE	0.995	1.04	0.984	1.03	1.38	1.01	1.31	1.13	2.05	1.45	1.45	1.14	1.25	2.13	0 of 24
VINYL CHLORIDE	0.995	1.04	0.984	1.03	1.38	1.01	1.31	1.13	2.05	1.45	1.45	1.14	1.25	2.13	0 of 24

Table A-9. Deer Island Effluent Loadings, July - December 2013

Volatile Organics (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
1,1,1-TRICHLOROETHANE	1.23	1.04	1.15	0.917	0.965	0.988	1.05	1.32	0 of 12
1,1,2,2-TETRACHLOROETHANE	1.23	1.04	1.15	0.917	0.965	0.988	1.05	1.32	0 of 12
1,1,2-TRICHLOROETHANE	1.23	1.04	1.15	0.917	0.965	0.988	1.05	1.32	0 of 12
1,1-DICHLOROETHANE	1.23	1.04	1.15	0.917	0.965	0.988	1.05	1.32	0 of 12
1,1-DICHLOROETHENE	1.23	1.04	1.15	0.917	0.965	0.988	1.05	1.32	0 of 12
1,2-DICHLOROBENZENE	1.23	1.04	1.15	0.917	0.965	0.988	1.05	1.32	0 of 12
1,2-DICHLOROETHANE	1.23	1.04	1.15	0.917	0.965	0.988	1.05	1.32	0 of 12
1,2-DICHLOROPROPANE	1.23	1.04	1.15	0.917	0.965	0.988	1.05	1.32	0 of 12
1,3-DICHLOROBENZENE	1.23	1.04	1.15	0.917	0.965	0.988	1.05	1.32	0 of 12
1,4-DICHLOROBENZENE	1.23	1.04	1.15	0.917	0.965	0.988	1.05	1.32	0 of 12
2-BUTANONE	1.23	1.04	1.15	0.917	0.965	0.988	1.05	1.32	0 of 12
2-CHLOROETHYL VINYL ETHER	1.23	1.04	1.15	0.917	0.965	0.988	1.05	1.32	0 of 12
2-HEXANONE	1.23	1.04	1.15	0.917	0.965	0.988	1.05	1.32	0 of 12
4-METHYL-2-PENTANONE	1.23	1.04	1.15	0.917	0.965	0.988	1.05	1.32	0 of 12
ACETONE	2.47	2.08	2.31	1.83	1.93	1.98	2.1	2.64	0 of 12
ACROLEIN	2.47	2.08	2.31	1.83	1.93	1.98	2.1	2.64	0 of 12
ACRYLONITRILE	2.47	2.08	2.31	1.83	1.93	1.98	2.1	2.64	0 of 12
BENZENE	1.23	1.04	1.15	0.917	0.965	0.988	1.05	1.32	0 of 12
BROMODICHLOROMETHANE	1.23	1.04	1.15	0.917	0.965	0.988	1.05	1.32	0 of 12
BROMOFORM	1.23	1.04	1.15	0.917	0.965	0.988	1.05	1.32	0 of 12
BROMOMETHANE	1.23	1.04	1.15	0.917	0.965	0.988	1.05	1.32	0 of 12
CARBON DISULFIDE	1.23	1.04	1.15	0.917	0.965	0.988	1.05	1.32	0 of 12
CARBON TETRACHLORIDE	1.23	1.04	1.15	0.917	0.965	0.988	1.05	1.32	0 of 12
CHLOROBENZENE	1.23	1.04	1.15	0.917	0.965	0.988	1.05	1.32	0 of 12
CHLOROETHANE	1.23	1.04	1.15	0.917	0.965	0.988	1.05	1.32	0 of 12
CHLOROFORM	1.23	1.04	1.15	0.917	0.965	0.988	1.05	1.32	0 of 12
CHLOROMETHANE	1.23	1.04	1.15	0.917	0.965	0.988	1.05	1.32	0 of 12
CIS-1,2-DICHLOROETHENE	1.23	1.04	1.15	0.917	0.965	0.988	1.05	1.32	0 of 12
CIS-1,3-DICHLOROPROPENE	1.23	1.04	1.15	0.917	0.965	0.988	1.05	1.32	0 of 12
DIBROMOCHLOROMETHANE	1.23	1.04	1.15	0.917	0.965	0.988	1.05	1.32	0 of 12
ETHYLBENZENE	1.23	1.04	1.15	0.917	0.965	0.988	1.05	1.32	0 of 12
M,P-XYLENE	2.47	2.08	2.31	1.83	1.93	1.98	2.1	2.64	0 of 12
METHYLENE CHLORIDE	1.23	1.04	1.15	0.917	0.965	**37.3**	7.1	73.6	1 of 12
O-XYLENE	1.23	1.04	1.15	0.917	0.965	0.988	1.05	1.32	0 of 12
STYRENE	1.23	1.04	1.15	0.917	0.965	0.988	1.05	1.32	0 of 12
TETRACHLOROETHENE	1.23	1.04	1.15	0.917	0.965	0.988	1.05	1.32	0 of 12
TOLUENE	1.23	1.04	1.15	0.917	0.965	0.988	1.05	1.32	0 of 12
TRANS-1,2-DICHLOROETHENE	1.23	1.04	1.15	0.917	0.965	0.988	1.05	1.32	0 of 12
TRANS-1,3-DICHLOROPROPENE	1.23	1.04	1.15	0.917	0.965	0.988	1.05	1.32	0 of 12
TRICHLOROETHENE	1.23	1.04	1.15	0.917	0.965	0.988	1.05	1.32	0 of 12
TRICHLOROFLUOROMETHANE	1.23	1.04	1.15	0.917	0.965	0.988	1.05	1.32	0 of 12
VINYL ACETATE	1.23	1.04	1.15	0.917	0.965	0.988	1.05	1.32	0 of 12
VINYL CHLORIDE	1.23	1.04	1.15	0.917	0.965	0.691	1	1.32	0 of 12

Notes

~: No data or no samples taken; results in **bold** indicate one or more detects that month.

Yearly averages are calculated from individual results collected during the reporting period and are flow-weighted.

Non-detected compounds are assumed to equal one half of the detection limit for metals and inorganics and one tenth of the reporting limit for organic compounds.

Table A-10. Deer Island Influent Characterization (Low detection limit analyses; North & South Systems), July 2012 - June 2013

Semivolatile Organics (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
1,2,4-TRICHLOROBENZENE	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
1,2-DICHLOROBENZENE	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
1,2-DIPHENYLHYDRAZINE (AS AZOBENZENE)	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
1,3-DICHLOROBENZENE	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
1,4-DICHLOROBENZENE	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
2,2'-OXYBIS(1-CHLOROPROPANE)	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
2,4,5-TRICHLOROPHENOL	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
2,4,6-TRICHLOROPHENOL	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
2,4-DICHLOROPHENOL	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
2,4-DIMETHYLPHENOL	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
2,4-DINITROPHENOL	5.45	5.37	5.64	5.32	5.15	5.42	5.24	5.37	5.32	5.66	5.17	5.49	5.39	6.05	0 of 46
2,4-DINITROTOLUENE	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
2,6-DINITROTOLUENE	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
2-CHLORONAPHTHALENE	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
2-CHLOROPHENOL	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
2-METHYL-4,6-DINITROPHENOL	5.45	5.37	5.64	5.32	5.15	5.42	5.24	5.37	5.32	5.66	5.17	5.49	5.39	6.05	0 of 46
2-METHYLNAPHTHALENE	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
2-METHYLPHENOL	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
2-NITROANILINE	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
2-NITROPHENOL	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
3,3'-DICHLOROBENZIDINE	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
3-NITROANILINE	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
4-BROMOPHENYL PHENYL ETHER	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
4-CHLORO-3-METHYLPHENOL	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
4-CHLOROANILINE	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
4-CHLOROPHENYL PHENYL ETHER	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
4-METHYLPHENOL (INCLUDES 3-METHYLPHENOL)	**25.2**	2.15	**5.63**	**12.8**	**10.3**	**19.3**	**6.58**	2.15	2.13	2.26	**36.1**	**5.65**	10.1	47.5	16 of 46
4-NITROANILINE	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
4-NITROPHENOL	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
ACENAPHTHENE	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
ACENAPHTHYLENE	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
ANILINE	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
ANTHRACENE	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
BENZIDINE	5.45	5.37	5.64	5.32	5.15	5.42	5.24	5.37	5.32	5.66	5.17	5.49	5.39	6.05	0 of 46
BENZO(A)ANTHRACENE	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
BENZO(A)PYRENE	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
BENZO(B)FLUORANTHENE	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
BENZO(G,H,I)PERYLENE	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
BENZO(K)FLUORANTHENE	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
BENZOIC ACID	5.45	5.37	5.64	5.32	5.15	5.42	5.24	5.37	5.32	5.66	5.17	5.49	5.39	6.05	0 of 46
BENZYL ALCOHOL	**10.2**	**15.3**	2.26	2.13	**11.6**	2.17	2.1	2.15	2.13	2.26	**17.7**	2.2	5.16	23.6	6 of 46
BIS(2-CHLOROETHOXY)METHANE	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
BIS(2-CHLOROETHYL)ETHER	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
BIS(2-ETHYLHEXYL)PHTHALATE	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
BUTYLBENZYLPHTHALATE	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
CARBAZOLE	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
CHRYSENE	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
DIBENZO(A,H)ANTHRACENE	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
DIBENZOFURAN	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
DIETHYLPHTHALATE	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
DIMETHYLPHTHALATE	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
DI-N-BUTYLPHTHALATE	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
DI-N-OCTYLPHTHALATE	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
FLUORANTHENE	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
FLUORENE	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
HEXACHLOROBENZENE	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
HEXACHLOROBUTADIENE	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
HEXACHLOROCYCLOPENTADIENE	5.45	5.37	5.64	5.32	5.15	5.42	5.24	5.37	5.32	5.66	5.17	5.49	5.39	6.05	0 of 46
HEXACHLOROETHANE	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
INDENO(1,2,3-CD)PYRENE	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
ISOPHORONE	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
NAPHTHALENE	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
N-DECANE	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46

Table A-10. Deer Island Influent Characterization (Low detection limit analyses; North & South Systems), July - December 2013

Semivolatile Organics (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
1,2,4-TRICHLOROBENZENE	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
1,2-DICHLOROBENZENE	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
1,2-DIPHENYLHYDRAZINE (AS AZOBENZENE)	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
1,3-DICHLOROBENZENE	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
1,4-DICHLOROBENZENE	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
2,2'-OXYBIS(1-CHLOROPROPANE)	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
2,4,5-TRICHLOROPHENOL	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
2,4,6-TRICHLOROPHENOL	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
2,4-DICHLOROPHENOL	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
2,4-DIMETHYLPHENOL	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
2,4-DINITROPHENOL	5.18	5.46	5.22	5.81	5.21	5.41	5.37	5.94	0 of 22
2,4-DINITROTOLUENE	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
2,6-DINITROTOLUENE	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
2-CHLORONAPHTHALENE	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
2-CHLOROPHENOL	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
2-METHYL-4,6-DINITROPHENOL	5.18	5.46	5.22	5.81	5.21	5.41	5.37	5.94	0 of 22
2-METHYLNAPHTHALENE	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
2-METHYLPHENOL	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
2-NITROANILINE	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
2-NITROPHENOL	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
3,3'-DICHLOROBENZIDINE	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
3-NITROANILINE	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
4-BROMOPHENYL PHENYL ETHER	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
4-CHLORO-3-METHYLPHENOL	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
4-CHLOROANILINE	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
4-CHLOROPHENYL PHENYL ETHER	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
4-METHYLPHENOL (INCLUDES 3-METHYLPHENOL)	2.07	**8.6**	**20.2**	**22.7**	**39**	**46.6**	19.8	51.7	12 of 22
4-NITROANILINE	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
4-NITROPHENOL	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
ACENAPHTHENE	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
ACENAPHTHYLENE	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
ANILINE	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
ANTHRACENE	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
BENZIDINE	5.18	5.46	5.22	5.81	5.21	5.41	5.37	5.94	0 of 22
BENZO(A)ANTHRACENE	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
BENZO(A)PYRENE	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
BENZO(B)FLUORANTHENE	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
BENZO(G,H,I)PERYLENE	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
BENZO(K)FLUORANTHENE	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
BENZOIC ACID	5.18	5.46	5.22	5.81	**21.8**	5.41	8.05	38.2	1 of 22
BENZYL ALCOHOL	2.07	2.18	**19.1**	**6.37**	**9.76**	**13.1**	8	22.8	5 of 22
BIS(2-CHLOROETHOXY)METHANE	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
BIS(2-CHLOROETHYL)ETHER	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
BIS(2-ETHYLHEXYL)PHTHALATE	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
BUTYLBENZYLPHTHALATE	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
CARBAZOLE	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
CHRYSENE	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
DIBENZO(A,H)ANTHRACENE	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
DIBENZOFURAN	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
DIETHYLPHTHALATE	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
DIMETHYLPHTHALATE	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
DI-N-BUTYLPHTHALATE	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
DI-N-OCTYLPHTHALATE	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
FLUORANTHENE	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
FLUORENE	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
HEXACHLOROBENZENE	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
HEXACHLOROBUTADIENE	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
HEXACHLOROCYCLOPENTADIENE	5.18	5.46	5.22	5.81	5.21	5.41	5.37	5.94	0 of 22
HEXACHLOROETHANE	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
INDENO(1,2,3-CD)PYRENE	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
ISOPHORONE	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
NAPHTHALENE	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
N-DECANE	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22

Table A-10. Deer Island Influent Characterization (Low detection limit analyses; North & South Systems), July 2012 - June 2013

Semivolatile Organics (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
NITROBENZENE	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
N-NITROSODIMETHYLAMINE (NDMA)	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
N-NITROSODI-N-PROPYLAMINE (NDPA)	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
N-NITROSODIPHENYLAMINE	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
N-OCTADECANE	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
PENTACHLOROPHENOL	5.45	5.37	5.64	5.32	5.15	5.42	5.24	5.37	5.32	5.66	5.17	5.49	5.39	6.05	0 of 46
PHENANTHRENE	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
PHENOL	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46
PYRENE	2.18	2.15	2.26	2.13	2.06	2.17	2.1	2.15	2.13	2.26	2.07	2.2	2.16	2.42	0 of 46

Polycyclic Aromatic Hydrocarbons (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
1-METHYLNAPHTHALENE	~	**0.0684**	~	**0.236**	~	**0.182**	~	**0.137**	~	**0.0369**	~	**0.0746**	0.118	0.259	21 of 22
1-METHYLPHENANTHRENE	~	**0.0079**	~	**0.122**	~	**0.0328**	~	**0.0502**	~	**0.011**	~	**0.0277**	0.0419	0.182	20 of 22
2,3,5-TRIMETHYLNAPHTHYLENE	~	**0.0471**	~	**0.101**	~	**0.138**	~	**0.0901**	~	**0.0238**	~	**0.037**	0.0698	0.14	22 of 22
2,6-DIMETHYLNAPHTHALENE	~	**0.0511**	~	**0.167**	~	**0.14**	~	**0.103**	~	**0.0274**	~	**0.0788**	0.0923	0.172	22 of 22
2-METHYLNAPHTHALENE	~	**0.0627**	~	**0.21**	~	**0.136**	~	**0.113**	~	**0.0341**	~	**0.0573**	0.0984	0.245	22 of 22
ACENAPHTHENE	~	**0.051**	~	**0.143**	~	**0.0445**	~	**0.0865**	~	**0.0228**	~	**0.0489**	0.0636	0.19	22 of 22
ACENAPHTHYLENE	~	**0.00653**	~	**0.0384**	~	**0.0117**	~	**0.0119**	~	**0.00758**	~	**0.00483**	0.0132	0.0506	20 of 22
ANTHRACENE	~	**0.0275**	~	**0.148**	~	**0.0169**	~	**0.0541**	~	**0.0151**	~	**0.0345**	0.048	0.204	22 of 22
BENZO(A)ANTHRACENE	~	**0.0734**	~	**0.243**	~	**0.0346**	~	**0.101**	~	**0.0353**	~	**0.074**	0.0903	0.309	22 of 22
BENZO(A)PYRENE	~	**0.0794**	~	**0.229**	~	**0.0345**	~	**0.0945**	~	**0.0395**	~	**0.0686**	0.0872	0.292	22 of 22
BENZO(B)FLUORANTHENE	~	**0.107**	~	**0.236**	~	**0.0525**	~	**0.13**	~	**0.0582**	~	**0.0971**	0.109	0.279	22 of 22
BENZO(E)PYRENE	~	**0.0629**	~	**0.145**	~	**0.0324**	~	**0.0719**	~	**0.0296**	~	**0.0554**	0.0634	0.176	22 of 22
BENZO(G,H,I)PERYLENE	~	**0.0473**	~	**0.108**	~	**0.0247**	~	**0.0522**	~	**0.0275**	~	**0.0573**	0.0516	0.12	22 of 22
BENZO(K)FLUORANTHENE	~	**0.0367**	~	**0.0798**	~	**0.0148**	~	**0.0321**	~	**0.0296**	~	**0.042**	0.0387	0.0954	22 of 22
BENZOTHIAZOLE	~	**0.169**	~	**0.0418**	~	**0.0316**	~	**0.0244**	~	**0.00832**	~	**0.0571**	0.0422	0.169	22 of 22
BIPHENYL	~	**0.0308**	~	**0.0789**	~	**0.0572**	~	**0.0525**	~	**0.0108**	~	**0.0371**	0.0429	0.0794	21 of 22
C1-CHRYSENES	~	**0.0365**	~	**0.177**	~	**0.0245**	~	**0.0531**	~	**0.0116**	~	**0.0624**	0.0591	0.247	21 of 22
C1-DIBENZOTHIOPHENES	~	**0.056**	~	0.000542	~	**0.07**	~	**0.0702**	~	**0.0174**	~	0.000526	0.0317	0.0768	14 of 22
C1-FLUORANTHENES/PYRENES	~	**0.0903**	~	**0.413**	~	**0.0735**	~	**0.135**	~	**0.0401**	~	**0.0611**	0.129	0.557	22 of 22
C1-FLUORENES	~	**0.0739**	~	**0.158**	~	**0.13**	~	**0.0945**	~	0.00056	~	**0.0493**	0.0776	0.201	17 of 22
C1-NAPHTHALENES	~	**0.095**	~	**0.319**	~	**0.234**	~	**0.186**	~	**0.0517**	~	**0.137**	0.166	0.359	22 of 22
C1-PHENANTHRENES/ANTHRACENES	~	**0.0871**	~	**0.474**	~	**0.258**	~	**0.245**	~	**0.0614**	~	**0.186**	0.216	0.69	20 of 22
C2-CHRYSENES	~	0.00103	~	**0.0921**	~	0.00111	~	**0.0709**	~	0.00056	~	0.000526	0.0274	0.146	5 of 22
C2-DIBENZOTHIOPHENES	~	0.00103	~	**0.0797**	~	**0.0305**	~	**0.0647**	~	**0.0176**	~	0.000526	0.0329	0.161	9 of 22
C2-FLUORANTHENES/PYRENES	~	**0.0258**	~	**0.202**	~	**0.0522**	~	**0.0864**	~	**0.024**	~	**0.00887**	0.0646	0.275	17 of 22
C2-FLUORENES	~	0.00103	~	**0.102**	~	0.00111	~	**0.126**	~	**0.0302**	~	0.000526	0.0455	0.206	6 of 22
C2-NAPHTHALENES	~	**0.165**	~	**0.539**	~	**0.447**	~	**0.309**	~	**0.0845**	~	**0.266**	0.295	0.57	22 of 22
C2-PHENANTHRENES/ANTHRACENES	~	0.00103	~	**0.278**	~	**0.21**	~	**0.228**	~	**0.0656**	~	**0.146**	0.161	0.362	18 of 22
C3-CHRYSENES	~	0.00103	~	**0.0564**	~	0.00111	~	0.00056	~	0.00056	~	0.000526	0.00952	0.114	1 of 22
C3-DIBENZOTHIOPHENES	~	0.00103	~	**0.0426**	~	0.00111	~	0.00056	~	0.00056	~	0.000526	0.00734	0.0858	1 of 22
C3-FLUORANTHENES/PYRENES	~	0.00103	~	**0.0762**	~	0.00111	~	0.00056	~	0.00056	~	0.000526	0.0127	0.106	3 of 22
C3-FLUORENES	~	0.00103	~	**0.0767**	~	0.00111	~	0.00056	~	**0.0186**	~	0.000526	0.017	0.155	2 of 22
C3-NAPHTHALENES	~	**0.276**	~	**1.1**	~	**1.59**	~	**0.966**	~	**0.105**	~	**0.214**	0.68	1.77	22 of 22
C3-PHENANTHRENES/ANTHRACENES	~	0.00103	~	**0.266**	~	**0.316**	~	**0.179**	~	**0.0637**	~	**0.0268**	0.143	0.326	15 of 22
C4-CHRYSENES	~	0.00103	~	0.000542	~	0.00111	~	0.00056	~	0.00056	~	0.000526	0.000672	0.00115	0 of 22
C4-NAPHTHALENES	~	**0.172**	~	**0.344**	~	**0.395**	~	**0.246**	~	**0.0871**	~	0.000526	0.193	0.418	18 of 22
C4-PHENANTHRENES/ANTHRACENES	~	0.00103	~	**0.0803**	~	0.00111	~	**0.0444**	~	0.00056	~	**0.00933**	0.0227	0.162	3 of 22
CHRYSENE	~	**0.0915**	~	**0.259**	~	**0.0453**	~	**0.117**	~	**0.0472**	~	**0.101**	0.107	0.324	22 of 22
DIBENZO(A,H)ANTHRACENE	~	**0.00702**	~	**0.0166**	~	**0.00515**	~	**0.0116**	~	**0.00906**	~	**0.00889**	0.00989	0.0239	15 of 22
DIBENZOFURAN	~	**0.0241**	~	**0.0329**	~	**0.0227**	~	**0.0322**	~	**0.00294**	~	**0.023**	0.0215	0.0392	21 of 22
DIBENZOTHIOPHENE	~	**0.0163**	~	**0.0829**	~	**0.0205**	~	**0.0332**	~	**0.00773**	~	**0.0218**	0.0295	0.118	20 of 22
FLUORANTHENE	~	**0.151**	~	**0.463**	~	**0.101**	~	**0.237**	~	**0.0931**	~	**0.223**	0.208	0.574	22 of 22
FLUORENE	~	**0.0423**	~	**0.123**	~	**0.052**	~	**0.0663**	~	**0.0206**	~	**0.0405**	0.0553	0.164	22 of 22
INDENO(1,2,3-CD)PYRENE	~	**0.0244**	~	**0.0898**	~	**0.0222**	~	**0.0573**	~	**0.0282**	~	**0.0161**	0.0394	0.113	20 of 22
NAPHTHALENE	~	**0.144**	~	**0.334**	~	**0.137**	~	**0.195**	~	**0.0799**	~	**0.126**	0.163	0.387	22 of 22
PERYLENE	~	**0.0146**	~	**0.0562**	~	**0.00664**	~	**0.0131**	~	**0.0048**	~	**0.0144**	0.0174	0.0674	21 of 22
PHENANTHRENE	~	**0.177**	~	**0.698**	~	**0.156**	~	**0.279**	~	**0.0761**	~	**0.194**	0.254	0.971	22 of 22
PYRENE	~	**0.155**	~	**0.563**	~	**0.104**	~	**0.238**	~	**0.086**	~	**0.181**	0.215	0.734	22 of 22

Table A-10. Deer Island Influent Characterization (Low detection limit analyses; North & South Systems), July - December 2013

Semivolatile Organics (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
NITROBENZENE	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
N-NITROSODIMETHYLAMINE (NDMA)	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
N-NITROSODI-N-PROPYLAMINE (NDPA)	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
N-NITROSODIPHENYLAMINE	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
N-OCTADECANE	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
PENTACHLOROPHENOL	5.18	5.46	5.22	5.81	5.21	5.41	5.37	5.94	0 of 22
PHENANTHRENE	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
PHENOL	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22
PYRENE	2.07	2.18	2.09	2.32	2.08	2.17	2.15	2.37	0 of 22

Polycyclic Aromatic Hydrocarbons (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
1-METHYLNAPHTHALENE	~	**0.0506**	~	**0.0921**	~	**0.0194**	0.0599	0.116	10 of 10
1-METHYLPHENANTHRENE	~	**0.0169**	~	**0.0276**	~	**0.012**	0.0199	0.0385	10 of 10
2,3,5-TRIMETHYLNAPHTHYLENE	~	**0.0283**	~	**0.0733**	~	**0.0183**	0.0432	0.0919	10 of 10
2,6-DIMETHYLNAPHTHALENE	~	**0.0277**	~	**0.0752**	~	**0.0247**	0.045	0.0923	10 of 10
2-METHYLNAPHTHALENE	~	**0.0438**	~	**0.0813**	~	**0.018**	0.0527	0.0985	10 of 10
ACENAPHTHENE	~	**0.0365**	~	**0.0684**	~	**0.0263**	0.0464	0.0835	10 of 10
ACENAPHTHYLENE	~	**0.00263**	~	**0.00345**	~	**0.0114**	0.00472	0.0114	10 of 10
ANTHRACENE	~	**0.0179**	~	**0.0444**	~	**0.0137**	0.0271	0.0578	10 of 10
BENZO(A)ANTHRACENE	~	**0.0314**	~	**0.0824**	~	**0.025**	0.0493	0.0985	10 of 10
BENZO(A)PYRENE	~	**0.0295**	~	**0.0775**	~	**0.0209**	0.0458	0.0912	10 of 10
BENZO(B)FLUORANTHENE	~	**0.0408**	~	**0.102**	~	**0.0427**	0.0642	0.12	10 of 10
BENZO(E)PYRENE	~	**0.0229**	~	**0.058**	~	**0.0183**	0.0352	0.0678	10 of 10
BENZO(G,H,I)PERYLENE	~	**0.0197**	~	**0.0444**	~	**0.0115**	0.0273	0.0468	9 of 10
BENZO(K)FLUORANTHENE	~	**0.0192**	~	**0.0415**	~	**0.00925**	0.0256	0.0502	10 of 10
BENZOTHIAZOLE	~	**0.0138**	~	**0.0306**	~	**0.0235**	0.0221	0.0374	10 of 10
BIPHENYL	~	**0.0177**	~	**0.0385**	~	**0.00747**	0.0235	0.0436	10 of 10
C1-CHRYSENES	~	**0.0188**	~	**0.0519**	~	**0.0239**	0.0323	0.0577	10 of 10
C1-DIBENZOTHIOPHENES	~	**0.102**	~	**0.0754**	~	0.000551	0.0717	0.139	8 of 10
C1-FLUORANTHENES/PYRENES	~	**0.0444**	~	**0.106**	~	**0.0337**	0.0654	0.125	10 of 10
C1-FLUORENES	~	**0.0428**	~	**0.101**	~	**0.0494**	0.0662	0.118	10 of 10
C1-NAPHTHALENES	~	**0.0661**	~	**0.124**	~	**0.0387**	0.0824	0.154	10 of 10
C1-PHENANTHRENES/ANTHRACENES	~	**0.0751**	~	**0.196**	~	**0.0941**	0.124	0.228	10 of 10
C2-CHRYSENES	~	**0.0222**	~	**0.298**	~	0.000551	0.122	0.47	7 of 10
C2-DIBENZOTHIOPHENES	~	**0.0287**	~	**0.0629**	~	0.000551	0.0359	0.0714	8 of 10
C2-FLUORANTHENES/PYRENES	~	**0.0302**	~	**0.0701**	~	0.000551	0.0393	0.0804	8 of 10
C2-FLUORENES	~	0.000538	~	0.000531	~	0.000551	0.000538	0.000555	0 of 10
C2-NAPHTHALENES	~	**0.0744**	~	**0.211**	~	**0.0879**	0.128	0.269	10 of 10
C2-PHENANTHRENES/ANTHRACENES	~	**0.0668**	~	**0.149**	~	**0.0587**	0.0961	0.176	10 of 10
C3-CHRYSENES	~	0.000538	~	0.000531	~	0.000551	0.000538	0.000555	0 of 10
C3-DIBENZOTHIOPHENES	~	0.000538	~	0.000531	~	0.000551	0.000538	0.000555	0 of 10
C3-FLUORANTHENES/PYRENES	~	0.000538	~	**0.00811**	~	0.000551	0.00339	0.0156	1 of 10
C3-FLUORENES	~	0.000538	~	0.000531	~	0.000551	0.000538	0.000555	0 of 10
C3-NAPHTHALENES	~	**0.372**	~	**1.06**	~	**0.0259**	0.559	1.08	9 of 10
C3-PHENANTHRENES/ANTHRACENES	~	**0.0289**	~	**0.106**	~	0.000551	0.0521	0.138	3 of 10
C4-CHRYSENES	~	0.000538	~	**0.622**	~	0.000551	0.234	0.981	3 of 10
C4-NAPHTHALENES	~	**0.0747**	~	**0.219**	~	0.000551	0.114	0.272	8 of 10
C4-PHENANTHRENES/ANTHRACENES	~	0.000538	~	0.000531	~	0.000551	0.000538	0.000555	0 of 10
CHRYSENE	~	**0.0416**	~	**0.0943**	~	**0.0299**	0.0591	0.111	10 of 10
DIBENZO(A,H)ANTHRACENE	~	**0.00989**	~	**0.014**	~	0.000551	0.00957	0.0153	8 of 10
DIBENZOFURAN	~	**0.0204**	~	**0.0392**	~	**0.0117**	0.0257	0.0487	10 of 10
DIBENZOTHIOPHENE	~	**0.0118**	~	**0.0259**	~	**0.00954**	0.0167	0.0321	10 of 10
FLUORANTHENE	~	**0.0878**	~	**0.211**	~	**0.0518**	0.127	0.259	10 of 10
FLUORENE	~	**0.0309**	~	**0.0672**	~	**0.0174**	0.0418	0.0841	10 of 10
INDENO(1,2,3-CD)PYRENE	~	**0.0186**	~	**0.0461**	~	**0.0315**	0.0316	0.0509	9 of 10
NAPHTHALENE	~	**0.0931**	~	**0.142**	~	**0.041**	0.101	0.144	10 of 10
PERYLENE	~	**0.00588**	~	**0.0158**	~	**0.00431**	0.0093	0.018	10 of 10
PHENANTHRENE	~	**0.107**	~	**0.26**	~	**0.0776**	0.159	0.333	10 of 10
PYRENE	~	**0.0789**	~	**0.194**	~	**0.0492**	0.116	0.233	10 of 10

Table A-10. Deer Island Influent Characterization (Low detection limit analyses; North & South Systems), July 2012 - June 2013

Organochlorine Pesticides and PCBs (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
2,4'-DDD	~	0.000415	~	0.000207	~	0.000213	~	0.000214	~	0.000228	~	0.000218	0.000232	0.000415	0 of 22
2,4'-DDE	~	0.000415	~	0.000207	~	0.000213	~	0.000214	~	0.000228	~	0.000218	0.000232	0.000415	0 of 22
2,4'-DDT	~	0.000415	~	0.000207	~	0.000213	~	0.000214	~	0.000228	~	0.000218	0.000232	0.000415	0 of 22
4,4'-DDD	~	0.000415	~	0.000207	~	**0.000784**	~	0.000214	~	**0.00205**	~	**0.000703**	0.000845	0.00375	3 of 22
4,4'-DDE	~	**0.00182**	~	0.000207	~	0.000213	~	**0.000617**	~	0.000228	~	**0.00184**	0.000736	0.00192	6 of 22
4,4'-DDT	~	0.000415	~	0.000207	~	0.000213	~	0.000214	~	0.000228	~	0.000218	0.000232	0.000415	0 of 22
ALDRIN	~	0.000415	~	0.000207	~	0.000213	~	0.000214	~	0.000228	~	0.000218	0.000232	0.000415	0 of 22
ALPHA-CHLORDANE	~	**0.0043**	~	**0.00162**	~	**0.00063**	~	**0.00373**	~	**0.00398**	~	**0.00282**	0.00283	0.00569	18 of 22
BZ 101 PENTACHLOROBIPHENYL	~	**0.00146**	~	**0.00359**	~	0.000213	~	0.000214	~	0.000228	~	**0.00089**	0.000983	0.00626	8 of 22
BZ 105 PENTACHLOROBIPHENYL	~	0.000415	~	**0.000565**	~	0.000213	~	0.000214	~	0.000228	~	0.000218	0.000289	0.000914	1 of 22
BZ 118 PENTACHLOROBIPHENYL	~	**0.00157**	~	**0.00394**	~	0.000213	~	0.000214	~	0.000228	~	**0.000625**	0.000994	0.0073	6 of 22
BZ 126 PENTACHLOROBIPHENYL	~	0.000415	~	0.000207	~	0.000213	~	0.000214	~	0.000228	~	0.000218	0.000232	0.000415	0 of 22
BZ 128 HEXACHLOROBIPHENYL	~	0.000415	~	**0.000739**	~	0.000213	~	0.000214	~	0.000228	~	0.000218	0.000317	0.00126	1 of 22
BZ 138 HEXACHLOROBIPHENYL	~	**0.00346**	~	**0.00425**	~	0.000213	~	**0.0019**	~	0.000228	~	**0.00168**	0.00169	0.00794	12 of 22
BZ 153 HEXACHLOROBIPHENYL	~	**0.00225**	~	**0.00481**	~	0.000213	~	**0.000506**	~	0.000228	~	**0.00084**	0.00128	0.00875	12 of 22
BZ 170 HEPTACHLOROBIPHENYL	~	0.000415	~	**0.00223**	~	0.000213	~	0.000214	~	0.000228	~	0.000218	0.000553	0.00421	1 of 22
BZ 18 TRICHLOROBIPHENYL	~	0.000415	~	0.000207	~	0.000213	~	0.000214	~	0.000228	~	0.000218	0.000232	0.000415	0 of 22
BZ 180 HEPTACHLOROBIPHENYL	~	**0.00142**	~	**0.00409**	~	0.000213	~	0.000214	~	0.000228	~	**0.000671**	0.00102	0.00765	7 of 22
BZ 187 HEPTACHLOROBIPHENYL	~	**0.000733**	~	**0.00255**	~	0.000213	~	0.000214	~	0.000228	~	**0.000304**	0.000645	0.00471	6 of 22
BZ 195 OCTACHLOROBIPHENYL	~	0.000415	~	**0.000646**	~	0.000213	~	0.000214	~	0.000228	~	0.000218	0.000302	0.00107	1 of 22
BZ 206 NONACHLOROBIPHENYL	~	0.000415	~	**0.000699**	~	0.000213	~	0.000214	~	0.000228	~	0.000218	0.00031	0.00118	1 of 22
BZ 209 DECACHLOROBIPHENYL	~	0.000415	~	0.000207	~	0.000213	~	0.000214	~	0.000228	~	0.000218	0.000232	0.000415	0 of 22
BZ 28 TRICHLOROBIPHENYL	~	0.000415	~	**0.00395**	~	0.000213	~	0.000214	~	0.000228	~	0.000218	0.000825	0.0076	2 of 22
BZ 44 TETRACHLOROBIPHENYL	~	0.000415	~	0.000207	~	0.000213	~	0.000214	~	0.000228	~	**0.00042**	0.000273	0.000589	1 of 22
BZ 52 TETRACHLOROBIPHENYL	~	**0.0014**	~	**0.00207**	~	0.000213	~	**0.000314**	~	0.000228	~	**0.000784**	0.000733	0.00336	8 of 22
BZ 66 TETRACHLOROBIPHENYL	~	0.000415	~	**0.0021**	~	0.000213	~	0.000214	~	0.000228	~	0.000218	0.000532	0.00394	1 of 22
BZ 77 TETRACHLOROBIPHENYL	~	0.000415	~	0.000207	~	0.000213	~	0.000214	~	0.000228	~	0.000218	0.000232	0.000415	0 of 22
BZ 8 DICHLOROBIPHENYL	~	0.000415	~	0.000207	~	0.000213	~	0.000214	~	0.000228	~	0.000218	0.000232	0.000415	0 of 22
CIS-NONACHLOR	~	0.000415	~	0.000207	~	0.000213	~	0.000214	~	0.000228	~	**0.000316**	0.000252	0.000432	1 of 22
DDMU	~	0.000415	~	0.000207	~	0.000213	~	0.000214	~	0.000228	~	0.000218	0.000232	0.000415	0 of 22
DIELDRIN	~	0.000415	~	0.000207	~	0.000213	~	0.000214	~	0.000228	~	0.000218	0.000232	0.000415	0 of 22
ENDRIN	~	0.000415	~	0.000207	~	0.000213	~	0.000214	~	0.000228	~	0.000218	0.000232	0.000415	0 of 22
GAMMA-BHC	~	0.000415	~	0.000207	~	0.000213	~	0.000214	~	0.000228	~	0.000218	0.000232	0.000415	0 of 22
GAMMA-CHLORDANE	~	**0.00458**	~	**0.00193**	~	**0.00101**	~	**0.00336**	~	**0.00399**	~	**0.00264**	0.00286	0.00458	20 of 22
HEPTACHLOR	~	0.000415	~	0.000207	~	0.000213	~	0.000214	~	0.000228	~	0.000218	0.000232	0.000415	0 of 22
HEPTACHLOR EPOXIDE	~	0.000415	~	0.000207	~	0.000213	~	0.000214	~	0.000228	~	0.000218	0.000232	0.000415	0 of 22
HEXACHLOROBENZENE	~	**0.000648**	~	**0.000369**	~	0.000213	~	**0.000324**	~	0.000228	~	**0.00025**	0.000302	0.000648	5 of 22
MIREX	~	0.000415	~	0.000207	~	0.000213	~	0.000214	~	0.000228	~	0.000218	0.000232	0.000415	0 of 22
OXYCHLORDANE	~	0.000415	~	0.000207	~	0.000213	~	0.000214	~	0.000228	~	0.000218	0.000232	0.000415	0 of 22
TOTAL AMP PCBS	~	**0.0112**	~	**0.0348**	~	0.000213	~	**0.00244**	~	0.000228	~	**0.00563**	0.00801	0.0653	13 of 22
TOTAL CHLORDANE	~	**0.0059**	~	**0.00237**	~	**0.00122**	~	**0.00494**	~	**0.00527**	~	**0.00416**	0.00395	0.00729	19 of 22
TOTAL DDT	~	**0.00182**	~	0.000207	~	**0.000784**	~	**0.000617**	~	**0.00205**	~	**0.00236**	0.00136	0.00375	8 of 22
TRANS-NONACHLOR	~	**0.00185**	~	**0.000743**	~	**0.000732**	~	**0.00122**	~	**0.00135**	~	**0.00134**	0.00117	0.00185	19 of 22

Table A-10. Deer Island Influent Characterization (Low detection limit analyses; North & South Systems), July - December 2013

Organochlorine Pesticides and PCBs (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
2,4'-DDD	~	0.00021	~	0.000216	~	**0.000621**	0.000295	0.000621	1 of 10
2,4'-DDE	~	0.00021	~	0.000216	~	0.00022	0.000214	0.000224	0 of 10
2,4'-DDT	~	0.00021	~	0.000216	~	0.00022	0.000214	0.000224	0 of 10
4,4'-DDD	~	0.00021	~	0.000216	~	0.00022	0.000214	0.000224	0 of 10
4,4'-DDE	~	**0.00106**	~	**0.000344**	~	**0.000899**	0.000757	0.00108	7 of 10
4,4'-DDT	~	0.00021	~	0.000216	~	0.00022	0.000214	0.000224	0 of 10
ALDRIN	~	0.00021	~	0.000216	~	0.00022	0.000214	0.000224	0 of 10
ALPHA-CHLORDANE	~	**0.00209**	~	**0.00202**	~	**0.0014**	0.00192	0.00271	10 of 10
BZ 101 PENTACHLOROBIPHENYL	~	**0.000883**	~	0.000216	~	**0.000652**	0.000585	0.000972	6 of 10
BZ 105 PENTACHLOROBIPHENYL	~	0.00021	~	0.000216	~	0.00022	0.000214	0.000224	0 of 10
BZ 118 PENTACHLOROBIPHENYL	~	**0.000703**	~	0.000216	~	**0.000543**	0.000487	0.000769	4 of 10
BZ 126 PENTACHLOROBIPHENYL	~	0.00021	~	0.000216	~	0.00022	0.000214	0.000224	0 of 10
BZ 128 HEXACHLOROBIPHENYL	~	0.00021	~	0.000216	~	0.00022	0.000214	0.000224	0 of 10
BZ 138 HEXACHLOROBIPHENYL	~	**0.000816**	~	**0.00107**	~	**0.000692**	0.000887	0.00111	10 of 10
BZ 153 HEXACHLOROBIPHENYL	~	**0.00047**	~	**0.000717**	~	**0.000539**	0.000577	0.000874	10 of 10
BZ 170 HEPTACHLOROBIPHENYL	~	0.00021	~	0.000216	~	0.00022	0.000214	0.000224	0 of 10
BZ 18 TRICHLOROBIPHENYL	~	0.00021	~	0.000216	~	0.00022	0.000214	0.000224	0 of 10
BZ 180 HEPTACHLOROBIPHENYL	~	**0.000342**	~	0.000216	~	**0.000267**	0.000279	0.000476	2 of 10
BZ 187 HEPTACHLOROBIPHENYL	~	**0.000258**	~	0.000216	~	**0.000242**	0.000239	0.000308	2 of 10
BZ 195 OCTACHLOROBIPHENYL	~	0.00021	~	0.000216	~	0.00022	0.000214	0.000224	0 of 10
BZ 206 NONACHLOROBIPHENYL	~	0.00021	~	0.000216	~	0.00022	0.000214	0.000224	0 of 10
BZ 209 DECACHLOROBIPHENYL	~	0.00021	~	0.000216	~	0.00022	0.000214	0.000224	0 of 10
BZ 28 TRICHLOROBIPHENYL	~	0.00021	~	0.000216	~	0.00022	0.000214	0.000224	0 of 10
BZ 44 TETRACHLOROBIPHENYL	~	0.00021	~	0.000216	~	0.00022	0.000214	0.000224	0 of 10
BZ 52 TETRACHLOROBIPHENYL	~	**0.000677**	~	0.000216	~	**0.000354**	0.000438	0.000736	5 of 10
BZ 66 TETRACHLOROBIPHENYL	~	0.00021	~	0.000216	~	0.00022	0.000214	0.000224	0 of 10
BZ 77 TETRACHLOROBIPHENYL	~	0.00021	~	0.000216	~	0.00022	0.000214	0.000224	0 of 10
BZ 8 DICHLOROBIPHENYL	~	0.00021	~	0.000216	~	0.00022	0.000214	0.000224	0 of 10
CIS-NONACHLOR	~	0.00021	~	0.000216	~	**0.000282**	0.000227	0.000282	1 of 10
DDMU	~	0.00021	~	0.000216	~	0.00022	0.000214	0.000224	0 of 10
DIELDRIN	~	0.00021	~	0.000216	~	0.00022	0.000214	0.000224	0 of 10
ENDRIN	~	0.00021	~	0.000216	~	0.00022	0.000214	0.000224	0 of 10
GAMMA-BHC	~	0.00021	~	0.000216	~	0.00022	0.000214	0.000224	0 of 10
GAMMA-CHLORDANE	~	**0.00196**	~	**0.00215**	~	**0.00167**	0.00198	0.00254	10 of 10
HEPTACHLOR	~	0.00021	~	0.000216	~	0.00022	0.000214	0.000224	0 of 10
HEPTACHLOR EPOXIDE	~	0.00021	~	0.000216	~	0.00022	0.000214	0.000224	0 of 10
HEXACHLOROBENZENE	~	0.00021	~	**0.00105**	~	**0.000338**	0.000551	0.00111	6 of 10
MIREX	~	0.00021	~	0.000216	~	0.00022	0.000214	0.000224	0 of 10
OXYCHLORDANE	~	0.00021	~	0.000216	~	0.00022	0.000214	0.000224	0 of 10
TOTAL AMP PCBS	~	**0.0038**	~	**0.00179**	~	**0.00284**	0.00285	0.00405	10 of 10
TOTAL CHLORDANE	~	**0.00301**	~	**0.00265**	~	**0.00214**	0.0027	0.00385	10 of 10
TOTAL DDT	~	**0.00106**	~	**0.000344**	~	**0.00145**	0.000868	0.00145	7 of 10
TRANS-NONACHLOR	~	**0.000927**	~	**0.000702**	~	**0.000741**	0.000805	0.00114	9 of 10

Table A-10. Deer Island Influent Characterization (Low detection limit analyses; North & South Systems), July 2012 - June 2013

Volatile Organics (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
1,1,1-TRICHLOROETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 46
1,1,2,2-TETRACHLOROETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 46
1,1,2-TRICHLOROETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 46
1,1-DICHLOROETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 46
1,1-DICHLOROETHENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 46
1,2-DICHLOROBENZENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 46
1,2-DICHLOROETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 46
1,2-DICHLOROPROPANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 46
1,3-DICHLOROBENZENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 46
1,4-DICHLOROBENZENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 46
2-BUTANONE	**1.44**	**4.56**	**2.2**	**8.18**	0.5	**9.47**	**3.48**	**1.57**	**1.48**	**10.1**	**5.26**	**2.6**	4.16	11.9	22 of 46
2-CHLOROETHYL VINYL ETHER	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 46
2-HEXANONE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 46
4-METHYL-2-PENTANONE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 46
ACETONE	**178**	**181**	**112**	**129**	**70.3**	**105**	**129**	**102**	**97.5**	**215**	**95**	**99**	123	354	46 of 46
ACROLEIN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0 of 46
ACRYLONITRILE	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0 of 46
BENZENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 46
BROMODICHLOROMETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 46
BROMOFORM	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 46
BROMOMETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 46
CARBON DISULFIDE	0.5	0.5	0.5	**2.24**	0.5	**2.62**	0.5	0.5	0.5	0.5	**1.89**	0.5	0.905	4.77	4 of 46
CARBON TETRACHLORIDE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 46
CHLOROBENZENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 46
CHLOROETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 46
CHLOROFORM	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 46
CHLOROMETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 46
CIS-1,2-DICHLOROETHENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 46
CIS-1,3-DICHLOROPROPENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 46
DIBROMOCHLOROMETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 46
ETHYLBENZENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 46
M,P-XYLENE	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0 of 46
METHYLENE CHLORIDE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 46
O-XYLENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 46
STYRENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	**3.26**	0.729	5.93	1 of 46
TETRACHLOROETHENE	0.5	0.5	**9.19**	0.5	**1.84**	0.5	**14.1**	0.5	0.5	0.5	0.5	0.5	2.51	27.6	3 of 46
TOLUENE	**4.93**	0.5	0.5	**2.04**	0.5	**4.74**	0.5	0.5	0.5	0.5	0.5	0.5	1.24	9.32	5 of 46
TRANS-1,2-DICHLOROETHENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 46
TRANS-1,3-DICHLOROPROPENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 46
TRICHLOROETHENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 46
TRICHLOROFLUOROMETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 46
VINYL ACETATE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 46
VINYL CHLORIDE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 46

Table A-10. Deer Island Influent Characterization (Low detection limit analyses; North & South Systems), July - December 2013

Volatile Organics (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
1,1,1-TRICHLOROETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
1,1,2,2-TETRACHLOROETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
1,1,2-TRICHLOROETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
1,1-DICHLOROETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
1,1-DICHLOROETHENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
1,2-DICHLOROBENZENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
1,2-DICHLOROETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
1,2-DICHLOROPROPANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
1,3-DICHLOROBENZENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
1,4-DICHLOROBENZENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
2-BUTANONE	**9.12**	**9.26**	**5.84**	**9.18**	**2.2**	**3.06**	6.58	11	19 of 24
2-CHLOROETHYL VINYL ETHER	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
2-HEXANONE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
4-METHYL-2-PENTANONE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
ACETONE	**409**	**135**	**133**	**184**	**86.4**	**93.5**	183	621	24 of 24
ACROLEIN	1	1	1	1	1	1	1	1	0 of 24
ACRYLONITRILE	1	1	1	1	1	1	1	1	0 of 24
BENZENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
BROMODICHLOROMETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
BROMOFORM	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
BROMOMETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
CARBON DISULFIDE	0.5	**3.78**	**4.28**	**1.74**	**28.6**	0.5	6.08	56.7	5 of 24
CARBON TETRACHLORIDE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
CHLOROBENZENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
CHLOROETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
CHLOROFORM	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
CHLOROMETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
CIS-1,2-DICHLOROETHENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
CIS-1,3-DICHLOROPROPENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
DIBROMOCHLOROMETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
ETHYLBENZENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
M,P-XYLENE	1	1	1	1	1	1	1	1	0 of 24
METHYLENE CHLORIDE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
O-XYLENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
STYRENE	**3.19**	**3.41**	0.5	0.5	0.5	0.5	1.53	6.35	2 of 24
TETRACHLOROETHENE	0.5	0.5	0.5	0.5	**2.38**	0.5	0.781	2.59	2 of 24
TOLUENE	**1.56**	0.5	0.5	**5.07**	**2.1**	0.5	1.64	5.99	5 of 24
TRANS-1,2-DICHLOROETHENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
TRANS-1,3-DICHLOROPROPENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
TRICHLOROETHENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
TRICHLOROFLUOROMETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
VINYL ACETATE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
VINYL CHLORIDE	0.5	0.5	0.5	0.5	0.5	0.2	0.451	0.5	0 of 24

Notes

DEC is the now-defunct Detailed Effluent Characterization project, which includes low-detection limit methods not approved by the EPA. DEC sampling is now carried out under the NP-EM project.

~: No data or no samples taken

Results in **bold** indicate one or more detects that month

Yearly averages are calculated from individual results collected during the reporting period and are flow-weighted.

Non-detected compounds are assumed to equal one half of the detection limit for metals and inorganics and one tenth of the reporting limit for organic compounds.

Table A-11. Deer Island Influent loadings (Low detection limit analyses; North & South Systems), July 2012 - June 2013

Semivolatile Organics (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
1,2,4-TRICHLOROBENZENE	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
1,2-DICHLOROBENZENE	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
1,2-DIPHENYLHYDRAZINE (AS AZOBENZENE)	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
1,3-DICHLOROBENZENE	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
1,4-DICHLOROBENZENE	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
2,2'-OXYBIS(1-CHLOROPROPANE)	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
2,4,5-TRICHLOROPHENOL	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
2,4,6-TRICHLOROPHENOL	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
2,4-DICHLOROPHENOL	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
2,4-DIMETHYLPHENOL	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
2,4-DINITROPHENOL	11	11	11.3	11.1	11.3	11.2	14.2	12.4	21.7	17.5	11.6	14.5	13.3	22.8	0 of 46
2,4-DINITROTOLUENE	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
2,6-DINITROTOLUENE	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
2-CHLORONAPHTHALENE	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
2-CHLOROPHENOL	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
2-METHYL-4,6-DINITROPHENOL	11	11	11.3	11.1	11.3	11.2	14.2	12.4	21.7	17.5	11.6	14.5	13.3	22.8	0 of 46
2-METHYLNAPHTHALENE	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
2-METHYLPHENOL	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
2-NITROANILINE	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
2-NITROPHENOL	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
3,3'-DICHLOROBENZIDINE	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
3-NITROANILINE	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
4-BROMOPHENYL PHENYL ETHER	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
4-CHLORO-3-METHYLPHENOL	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
4-CHLOROANILINE	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
4-CHLOROPHENYL PHENYL ETHER	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
4-METHYLPHENOL (INCLUDES 3-METHYLPHENOL)	**51**	4.39	**11.3**	**26.8**	**22.6**	**39.7**	**17.8**	4.94	8.67	7.02	**81.2**	**14.9**	25	106	16 of 46
4-NITROANILINE	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
4-NITROPHENOL	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
ACENAPHTHENE	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
ACENAPHTHYLENE	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
ANILINE	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
ANTHRACENE	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
BENZIDINE	11	11	11.3	11.1	11.3	11.2	14.2	12.4	21.7	17.5	11.6	14.5	13.3	22.8	0 of 46
BENZO(A)ANTHRACENE	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
BENZO(A)PYRENE	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
BENZO(B)FLUORANTHENE	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
BENZO(G,H,I)PERYLENE	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
BENZO(K)FLUORANTHENE	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
BENZOIC ACID	11	11	11.3	11.1	11.3	11.2	14.2	12.4	21.7	17.5	11.6	14.5	13.3	22.8	0 of 46
BENZYL ALCOHOL	**20.7**	**31.4**	4.52	4.46	**25.3**	4.48	5.66	4.94	8.67	7.02	**39.7**	5.8	12.8	53.3	6 of 46
BIS(2-CHLOROETHOXY)METHANE	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
BIS(2-CHLOROETHYL)ETHER	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
BIS(2-ETHYLHEXYL)PHTHALATE	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
BUTYLBENZYLPHTHALATE	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
CARBAZOLE	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
CHRYSENE	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
DIBENZO(A,H)ANTHRACENE	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
DIBENZOFURAN	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
DIETHYLPHTHALATE	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
DIMETHYLPHTHALATE	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
DI-N-BUTYLPHTHALATE	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
DI-N-OCTYLPHTHALATE	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
FLUORANTHENE	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
FLUORENE	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
HEXACHLOROBENZENE	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
HEXACHLOROBUTADIENE	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
HEXACHLOROCYCLOPENTADIENE	11	11	11.3	11.1	11.3	11.2	14.2	12.4	21.7	17.5	11.6	14.5	13.3	22.8	0 of 46
HEXACHLOROETHANE	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
INDENO(1,2,3-CD)PYRENE	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
ISOPHORONE	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
NAPHTHALENE	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
N-DECANE	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46

Table A-11. Deer Island Influent loadings (Low detection limit analyses; North & South Systems), July - December 2013

Semivolatile Organics (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
1,2,4-TRICHLOROBENZENE	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
1,2-DICHLOROBENZENE	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
1,2-DIPHENYLHYDRAZINE (AS AZOBENZENE)	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
1,3-DICHLOROBENZENE	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
1,4-DICHLOROBENZENE	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
2,2'-OXYBIS(1-CHLOROPROPANE)	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
2,4,5-TRICHLOROPHENOL	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
2,4,6-TRICHLOROPHENOL	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
2,4-DICHLOROPHENOL	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
2,4-DIMETHYLPHENOL	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
2,4-DINITROPHENOL	12.9	11.4	10.1	10.8	9.44	10.8	10.9	13.4	0 of 22
2,4-DINITROTOLUENE	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
2,6-DINITROTOLUENE	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
2-CHLORONAPHTHALENE	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
2-CHLOROPHENOL	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
2-METHYL-4,6-DINITROPHENOL	12.9	11.4	10.1	10.8	9.44	10.8	10.9	13.4	0 of 22
2-METHYLNAPHTHALENE	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
2-METHYLPHENOL	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
2-NITROANILINE	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
2-NITROPHENOL	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
3,3'-DICHLOROBENZIDINE	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
3-NITROANILINE	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
4-BROMOPHENYL PHENYL ETHER	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
4-CHLORO-3-METHYLPHENOL	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
4-CHLOROANILINE	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
4-CHLOROPHENYL PHENYL ETHER	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
4-METHYLPHENOL (INCLUDES 3-METHYLPHENOL)	5.15	**18**	**39.3**	**42.2**	**70.5**	**93.1**	40.3	93.9	12 of 22
4-NITROANILINE	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
4-NITROPHENOL	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
ACENAPHTHENE	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
ACENAPHTHYLENE	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
ANILINE	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
ANTHRACENE	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
BENZIDINE	12.9	11.4	10.1	10.8	9.44	10.8	10.9	13.4	0 of 22
BENZO(A)ANTHRACENE	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
BENZO(A)PYRENE	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
BENZO(B)FLUORANTHENE	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
BENZO(G,H,I)PERYLENE	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
BENZO(K)FLUORANTHENE	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
BENZOIC ACID	12.9	11.4	10.1	10.8	**39.4**	10.8	16.4	69.4	1 of 22
BENZYL ALCOHOL	5.15	4.56	**37.2**	**11.9**	**17.7**	**26.2**	16.3	43.4	5 of 22
BIS(2-CHLOROETHOXY)METHANE	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
BIS(2-CHLOROETHYL)ETHER	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
BIS(2-ETHYLHEXYL)PHTHALATE	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
BUTYLBENZYLPHTHALATE	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
CARBAZOLE	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
CHRYSENE	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
DIBENZO(A,H)ANTHRACENE	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
DIBENZOFURAN	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
DIETHYLPHTHALATE	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
DIMETHYLPHTHALATE	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
DI-N-BUTYLPHTHALATE	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
DI-N-OCTYLPHTHALATE	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
FLUORANTHENE	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
FLUORENE	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
HEXACHLOROBENZENE	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
HEXACHLOROBUTADIENE	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
HEXACHLOROCYCLOPENTADIENE	12.9	11.4	10.1	10.8	9.44	10.8	10.9	13.4	0 of 22
HEXACHLOROETHANE	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
INDENO(1,2,3-CD)PYRENE	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
ISOPHORONE	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
NAPHTHALENE	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
N-DECANE	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22

Table A-11. Deer Island Influent loadings (Low detection limit analyses; North & South Systems), July 2012 - June 2013

Semivolatile Organics (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
NITROBENZENE	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
N-NITROSODIMETHYLAMINE (NDMA)	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
N-NITROSODI-N-PROPYLAMINE (NDPA)	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
N-NITROSODIPHENYLAMINE	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
N-OCTADECANE	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
PENTACHLOROPHENOL	11	11	11.3	11.1	11.3	11.2	14.2	12.4	21.7	17.5	11.6	14.5	13.3	22.8	0 of 46
PHENANTHRENE	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
PHENOL	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46
PYRENE	4.42	4.39	4.52	4.46	4.52	4.48	5.66	4.94	8.67	7.02	4.65	5.8	5.33	9.11	0 of 46

Polycyclic Aromatic Hydrocarbons (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
1-METHYLNAPHTHALENE	~	**0.14**	~	**0.493**	~	**0.376**	~	**0.315**	~	**0.114**	~	**0.197**	0.285	0.535	21 of 22
1-METHYLPHENANTHRENE	~	**0.0162**	~	**0.255**	~	**0.0677**	~	**0.115**	~	**0.034**	~	**0.0731**	0.101	0.377	20 of 22
2,3,5-TRIMETHYLNAPHTHYLENE	~	**0.0963**	~	**0.211**	~	**0.284**	~	**0.207**	~	**0.0738**	~	**0.0976**	0.168	0.291	22 of 22
2,6-DIMETHYLNAPHTHALENE	~	**0.104**	~	**0.35**	~	**0.288**	~	**0.237**	~	**0.085**	~	**0.208**	0.222	0.364	22 of 22
2-METHYLNAPHTHALENE	~	**0.128**	~	**0.44**	~	**0.28**	~	**0.259**	~	**0.106**	~	**0.151**	0.236	0.505	22 of 22
ACENAPHTHENE	~	**0.104**	~	**0.298**	~	**0.0918**	~	**0.199**	~	**0.0706**	~	**0.129**	0.153	0.393	22 of 22
ACENAPHTHYLENE	~	**0.0134**	~	**0.0804**	~	**0.0241**	~	**0.0273**	~	**0.0235**	~	**0.0127**	0.0318	0.105	20 of 22
ANTHRACENE	~	**0.0563**	~	**0.309**	~	**0.0348**	~	**0.124**	~	**0.0469**	~	**0.0909**	0.115	0.422	22 of 22
BENZO(A)ANTHRACENE	~	**0.15**	~	**0.509**	~	**0.0713**	~	**0.233**	~	**0.109**	~	**0.195**	0.217	0.638	22 of 22
BENZO(A)PYRENE	~	**0.162**	~	**0.48**	~	**0.0711**	~	**0.217**	~	**0.122**	~	**0.181**	0.21	0.604	22 of 22
BENZO(B)FLUORANTHENE	~	**0.218**	~	**0.494**	~	**0.108**	~	**0.299**	~	**0.18**	~	**0.256**	0.263	0.576	22 of 22
BENZO(E)PYRENE	~	**0.129**	~	**0.303**	~	**0.0668**	~	**0.165**	~	**0.0919**	~	**0.146**	0.152	0.363	22 of 22
BENZO(G,H,I)PERYLENE	~	**0.0966**	~	**0.226**	~	**0.0509**	~	**0.12**	~	**0.0853**	~	**0.151**	0.124	0.247	22 of 22
BENZO(K)FLUORANTHENE	~	**0.075**	~	**0.167**	~	**0.0305**	~	**0.0738**	~	**0.0919**	~	**0.111**	0.093	0.197	22 of 22
BENZOTHIAZOLE	~	**0.346**	~	**0.0874**	~	**0.0651**	~	**0.0561**	~	**0.0258**	~	**0.151**	0.101	0.346	22 of 22
BIPHENYL	~	**0.063**	~	**0.165**	~	**0.118**	~	**0.121**	~	**0.0336**	~	**0.0979**	0.103	0.168	21 of 22
C1-CHRYSENES	~	**0.0747**	~	**0.37**	~	**0.0506**	~	**0.122**	~	**0.036**	~	**0.164**	0.142	0.511	21 of 22
C1-DIBENZOTHIOPHENES	~	**0.114**	~	0.00113	~	**0.144**	~	**0.161**	~	**0.0539**	~	0.00139	0.0762	0.176	14 of 22
C1-FLUORANTHENES/PYRENES	~	**0.185**	~	**0.864**	~	**0.152**	~	**0.311**	~	**0.124**	~	**0.161**	0.31	1.15	22 of 22
C1-FLUORENES	~	**0.151**	~	**0.331**	~	**0.269**	~	**0.217**	~	0.00173	~	**0.13**	0.186	0.414	17 of 22
C1-NAPHTHALENES	~	**0.194**	~	**0.668**	~	**0.483**	~	**0.427**	~	**0.16**	~	**0.362**	0.399	0.742	22 of 22
C1-PHENANTHRENES/ANTHRACENES	~	**0.178**	~	**0.991**	~	**0.533**	~	**0.564**	~	**0.19**	~	**0.489**	0.519	1.43	20 of 22
C2-CHRYSENES	~	0.0021	~	**0.193**	~	0.00229	~	**0.163**	~	0.00173	~	0.00139	0.0658	0.302	5 of 22
C2-DIBENZOTHIOPHENES	~	0.0021	~	**0.167**	~	**0.0629**	~	**0.149**	~	**0.0545**	~	0.00139	0.0791	0.332	9 of 22
C2-FLUORANTHENES/PYRENES	~	**0.0528**	~	**0.423**	~	**0.108**	~	**0.199**	~	**0.0744**	~	**0.0234**	0.155	0.568	17 of 22
C2-FLUORENES	~	0.0021	~	**0.213**	~	0.00229	~	**0.29**	~	**0.0936**	~	0.00139	0.109	0.425	6 of 22
C2-NAPHTHALENES	~	**0.337**	~	**1.13**	~	**0.922**	~	**0.711**	~	**0.262**	~	**0.701**	0.708	1.18	22 of 22
C2-PHENANTHRENES/ANTHRACENES	~	0.0021	~	**0.581**	~	**0.433**	~	**0.524**	~	**0.203**	~	**0.386**	0.387	0.748	18 of 22
C3-CHRYSENES	~	0.0021	~	**0.118**	~	0.00229	~	0.00129	~	0.00173	~	0.00139	0.0229	0.235	1 of 22
C3-DIBENZOTHIOPHENES	~	0.0021	~	**0.0892**	~	0.00229	~	0.00129	~	0.00173	~	0.00139	0.0176	0.177	1 of 22
C3-FLUORANTHENES/PYRENES	~	0.0021	~	**0.159**	~	0.00229	~	0.00129	~	0.00173	~	0.00139	0.0304	0.219	3 of 22
C3-FLUORENES	~	0.0021	~	**0.16**	~	0.00229	~	0.00129	~	**0.0577**	~	0.00139	0.0408	0.32	2 of 22
C3-NAPHTHALENES	~	**0.565**	~	**2.31**	~	**3.28**	~	**2.22**	~	**0.326**	~	**0.563**	1.63	3.67	22 of 22
C3-PHENANTHRENES/ANTHRACENES	~	0.0021	~	**0.557**	~	**0.652**	~	**0.412**	~	**0.198**	~	**0.0706**	0.344	0.674	15 of 22
C4-CHRYSENES	~	0.0021	~	0.00113	~	0.00229	~	0.00129	~	0.00173	~	0.00139	0.00162	0.00239	0 of 22
C4-NAPHTHALENES	~	**0.351**	~	**0.72**	~	**0.815**	~	**0.565**	~	**0.27**	~	0.00139	0.463	0.866	18 of 22
C4-PHENANTHRENES/ANTHRACENES	~	0.0021	~	**0.168**	~	0.00229	~	**0.102**	~	0.00173	~	**0.0246**	0.0545	0.335	3 of 22
CHRYSENE	~	**0.187**	~	**0.543**	~	**0.0934**	~	**0.269**	~	**0.146**	~	**0.267**	0.257	0.669	22 of 22
DIBENZO(A,H)ANTHRACENE	~	**0.0143**	~	**0.0347**	~	**0.0106**	~	**0.0267**	~	**0.0281**	~	**0.0234**	0.0238	0.0493	15 of 22
DIBENZOFURAN	~	**0.0493**	~	**0.0688**	~	**0.0469**	~	**0.0741**	~	**0.00911**	~	**0.0606**	0.0516	0.0809	21 of 22
DIBENZOTHIOPHENE	~	**0.0334**	~	**0.174**	~	**0.0424**	~	**0.0762**	~	**0.024**	~	**0.0574**	0.0709	0.245	20 of 22
FLUORANTHENE	~	**0.309**	~	**0.968**	~	**0.207**	~	**0.545**	~	**0.289**	~	**0.587**	0.5	1.19	22 of 22
FLUORENE	~	**0.0865**	~	**0.257**	~	**0.107**	~	**0.152**	~	**0.0637**	~	**0.107**	0.133	0.339	22 of 22
INDENO(1,2,3-CD)PYRENE	~	**0.0499**	~	**0.188**	~	**0.0459**	~	**0.132**	~	**0.0875**	~	**0.0425**	0.0946	0.233	20 of 22
NAPHTHALENE	~	**0.294**	~	**0.699**	~	**0.283**	~	**0.449**	~	**0.248**	~	**0.332**	0.392	0.8	22 of 22
PERYLENE	~	**0.0299**	~	**0.118**	~	**0.0137**	~	**0.0302**	~	**0.0149**	~	**0.038**	0.0417	0.143	21 of 22
PHENANTHRENE	~	**0.362**	~	**1.46**	~	**0.322**	~	**0.641**	~	**0.236**	~	**0.512**	0.61	2.01	22 of 22
PYRENE	~	**0.317**	~	**1.18**	~	**0.214**	~	**0.546**	~	**0.267**	~	**0.478**	0.517	1.52	22 of 22

Table A-11. Deer Island Influent loadings (Low detection limit analyses; North & South Systems), July - December 2013

Semivolatile Organics (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
NITROBENZENE	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
N-NITROSODIMETHYLAMINE (NDMA)	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
N-NITROSODI-N-PROPYLAMINE (NDPA)	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
N-NITROSODIPHENYLAMINE	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
N-OCTADECANE	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
PENTACHLOROPHENOL	12.9	11.4	10.1	10.8	9.44	10.8	10.9	13.4	0 of 22
PHENANTHRENE	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
PHENOL	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22
PYRENE	5.15	4.56	4.05	4.33	3.77	4.33	4.37	5.36	0 of 22

Polycyclic Aromatic Hydrocarbons (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
1-METHYLNAPHTHALENE	~	**0.106**	~	**0.172**	~	**0.0387**	0.119	0.219	10 of 10
1-METHYLPHENANTHRENE	~	**0.0352**	~	**0.0515**	~	**0.024**	0.0395	0.0724	10 of 10
2,3,5-TRIMETHYLNAPHTHYLENE	~	**0.0592**	~	**0.137**	~	**0.0364**	0.0856	0.173	10 of 10
2,6-DIMETHYLNAPHTHALENE	~	**0.0579**	~	**0.14**	~	**0.0493**	0.0891	0.174	10 of 10
2-METHYLNAPHTHALENE	~	**0.0916**	~	**0.152**	~	**0.0359**	0.104	0.185	10 of 10
ACENAPHTHENE	~	**0.0762**	~	**0.127**	~	**0.0524**	0.0919	0.157	10 of 10
ACENAPHTHYLENE	~	**0.0055**	~	**0.00643**	~	**0.0228**	0.00934	0.0228	10 of 10
ANTHRACENE	~	**0.0375**	~	**0.0828**	~	**0.0274**	0.0536	0.109	10 of 10
BENZO(A)ANTHRACENE	~	**0.0656**	~	**0.154**	~	**0.05**	0.0977	0.185	10 of 10
BENZO(A)PYRENE	~	**0.0616**	~	**0.144**	~	**0.0417**	0.0907	0.172	10 of 10
BENZO(B)FLUORANTHENE	~	**0.0852**	~	**0.19**	~	**0.0853**	0.127	0.226	10 of 10
BENZO(E)PYRENE	~	**0.0479**	~	**0.108**	~	**0.0366**	0.0697	0.128	10 of 10
BENZO(G,H,I)PERYLENE	~	**0.0411**	~	**0.0828**	~	**0.0229**	0.0541	0.088	9 of 10
BENZO(K)FLUORANTHENE	~	**0.0401**	~	**0.0773**	~	**0.0185**	0.0507	0.0943	10 of 10
BENZOTHIAZOLE	~	**0.0288**	~	**0.0571**	~	**0.0468**	0.0437	0.0703	10 of 10
BIPHENYL	~	**0.037**	~	**0.0717**	~	**0.0149**	0.0464	0.0821	10 of 10
C1-CHRYSENES	~	**0.0392**	~	**0.0966**	~	**0.0478**	0.0639	0.108	10 of 10
C1-DIBENZOTHIOPHENES	~	**0.214**	~	**0.14**	~	0.0011	0.142	0.292	8 of 10
C1-FLUORANTHENES/PYRENES	~	**0.0927**	~	**0.197**	~	**0.0672**	0.129	0.236	10 of 10
C1-FLUORENES	~	**0.0895**	~	**0.189**	~	**0.0986**	0.131	0.222	10 of 10
C1-NAPHTHALENES	~	**0.138**	~	**0.231**	~	**0.0772**	0.163	0.289	10 of 10
C1-PHENANTHRENES/ANTHRACENES	~	**0.157**	~	**0.365**	~	**0.188**	0.246	0.429	10 of 10
C2-CHRYSENES	~	**0.0463**	~	**0.555**	~	0.0011	0.241	0.867	7 of 10
C2-DIBENZOTHIOPHENES	~	**0.06**	~	**0.117**	~	0.0011	0.0711	0.134	8 of 10
C2-FLUORANTHENES/PYRENES	~	**0.0631**	~	**0.131**	~	0.0011	0.0777	0.151	8 of 10
C2-FLUORENES	~	0.00112	~	0.000989	~	0.0011	0.00107	0.00113	0 of 10
C2-NAPHTHALENES	~	**0.155**	~	**0.393**	~	**0.175**	0.254	0.507	10 of 10
C2-PHENANTHRENES/ANTHRACENES	~	**0.14**	~	**0.277**	~	**0.117**	0.19	0.332	10 of 10
C3-CHRYSENES	~	0.00112	~	0.000989	~	0.0011	0.00107	0.00113	0 of 10
C3-DIBENZOTHIOPHENES	~	0.00112	~	0.000989	~	0.0011	0.00107	0.00113	0 of 10
C3-FLUORANTHENES/PYRENES	~	0.00112	~	**0.0151**	~	0.0011	0.00672	0.0293	1 of 10
C3-FLUORENES	~	0.00112	~	0.000989	~	0.0011	0.00107	0.00113	0 of 10
C3-NAPHTHALENES	~	**0.776**	~	**1.97**	~	**0.0517**	1.11	2.04	9 of 10
C3-PHENANTHRENES/ANTHRACENES	~	**0.0604**	~	**0.197**	~	0.0011	0.103	0.255	3 of 10
C4-CHRYSENES	~	0.00112	~	**1.16**	~	0.0011	0.464	1.85	3 of 10
C4-NAPHTHALENES	~	**0.156**	~	**0.408**	~	0.0011	0.226	0.512	8 of 10
C4-PHENANTHRENES/ANTHRACENES	~	0.00112	~	0.000989	~	0.0011	0.00107	0.00113	0 of 10
CHRYSENE	~	**0.0869**	~	**0.176**	~	**0.0597**	0.117	0.209	10 of 10
DIBENZO(A,H)ANTHRACENE	~	**0.0206**	~	**0.0262**	~	0.0011	0.0189	0.0288	8 of 10
DIBENZOFURAN	~	**0.0426**	~	**0.0731**	~	**0.0234**	0.0509	0.0916	10 of 10
DIBENZOTHIOPHENE	~	**0.0246**	~	**0.0483**	~	**0.019**	0.033	0.0605	10 of 10
FLUORANTHENE	~	**0.183**	~	**0.393**	~	**0.103**	0.251	0.487	10 of 10
FLUORENE	~	**0.0644**	~	**0.125**	~	**0.0347**	0.0828	0.158	10 of 10
INDENO(1,2,3-CD)PYRENE	~	**0.0389**	~	**0.0859**	~	**0.0629**	0.0625	0.0958	9 of 10
NAPHTHALENE	~	**0.194**	~	**0.265**	~	**0.0818**	0.2	0.265	10 of 10
PERYLENE	~	**0.0123**	~	**0.0294**	~	**0.00859**	0.0184	0.0339	10 of 10
PHENANTHRENE	~	**0.224**	~	**0.485**	~	**0.155**	0.315	0.626	10 of 10
PYRENE	~	**0.165**	~	**0.361**	~	**0.0983**	0.23	0.438	10 of 10

Table A-11. Deer Island Influent loadings (Low detection limit analyses; North & South Systems), July 2012 - June 2013

Organochlorine Pesticides and PCBs (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
2,4'-DDD	~	0.000848	~	0.000432	~	0.00044	~	0.000493	~	0.000706	~	0.000574	0.000558	0.000848	0 of 22
2,4'-DDE	~	0.000848	~	0.000432	~	0.00044	~	0.000493	~	0.000706	~	0.000574	0.000558	0.000848	0 of 22
2,4'-DDT	~	0.000848	~	0.000432	~	0.00044	~	0.000493	~	0.000706	~	0.000574	0.000558	0.000848	0 of 22
4,4'-DDD	~	0.000848	~	0.000432	~	**0.00162**	~	0.000493	~	**0.00635**	~	**0.00185**	0.00203	0.012	3 of 22
4,4'-DDE	~	**0.00373**	~	0.000432	~	0.00044	~	**0.00142**	~	0.000706	~	**0.00486**	0.00177	0.00516	6 of 22
4,4'-DDT	~	0.000848	~	0.000432	~	0.00044	~	0.000493	~	0.000706	~	0.000574	0.000558	0.000848	0 of 22
ALDRIN	~	0.000848	~	0.000432	~	0.00044	~	0.000493	~	0.000706	~	0.000574	0.000558	0.000848	0 of 22
ALPHA-CHLORDANE	~	**0.0088**	~	**0.0034**	~	**0.0013**	~	**0.00857**	~	**0.0123**	~	**0.00743**	0.00681	0.0183	18 of 22
BZ 101 PENTACHLOROBIPHENYL	~	**0.00299**	~	**0.00751**	~	0.00044	~	0.000493	~	0.000706	~	**0.00235**	0.00236	0.0133	8 of 22
BZ 105 PENTACHLOROBIPHENYL	~	0.000848	~	**0.00118**	~	0.00044	~	0.000493	~	0.000706	~	0.000574	0.000695	0.00194	1 of 22
BZ 118 PENTACHLOROBIPHENYL	~	**0.00322**	~	**0.00823**	~	0.00044	~	0.000493	~	0.000706	~	**0.00165**	0.00239	0.0155	6 of 22
BZ 126 PENTACHLOROBIPHENYL	~	0.000848	~	0.000432	~	0.00044	~	0.000493	~	0.000706	~	0.000574	0.000558	0.000848	0 of 22
BZ 128 HEXACHLOROBIPHENYL	~	0.000848	~	**0.00155**	~	0.00044	~	0.000493	~	0.000706	~	0.000574	0.000761	0.00266	1 of 22
BZ 138 HEXACHLOROBIPHENYL	~	**0.00707**	~	**0.0089**	~	0.00044	~	**0.00436**	~	0.000706	~	**0.00442**	0.00406	0.0168	12 of 22
BZ 153 HEXACHLOROBIPHENYL	~	**0.0046**	~	**0.0101**	~	0.00044	~	**0.00116**	~	0.000706	~	**0.00221**	0.00307	0.0185	12 of 22
BZ 170 HEPTACHLOROBIPHENYL	~	0.000848	~	**0.00467**	~	0.00044	~	0.000493	~	0.000706	~	0.000574	0.00133	0.00892	1 of 22
BZ 18 TRICHLOROBIPHENYL	~	0.000848	~	0.000432	~	0.00044	~	0.000493	~	0.000706	~	0.000574	0.000558	0.000848	0 of 22
BZ 180 HEPTACHLOROBIPHENYL	~	**0.0029**	~	**0.00856**	~	0.00044	~	0.000493	~	0.000706	~	**0.00177**	0.00244	0.0162	7 of 22
BZ 187 HEPTACHLOROBIPHENYL	~	**0.0015**	~	**0.00534**	~	0.00044	~	0.000493	~	0.000706	~	**0.000801**	0.00155	0.00998	6 of 22
BZ 195 OCTACHLOROBIPHENYL	~	0.000848	~	**0.00135**	~	0.00044	~	0.000493	~	0.000706	~	0.000574	0.000725	0.00228	1 of 22
BZ 206 NONACHLOROBIPHENYL	~	0.000848	~	**0.00146**	~	0.00044	~	0.000493	~	0.000706	~	0.000574	0.000745	0.00249	1 of 22
BZ 209 DECACHLOROBIPHENYL	~	0.000848	~	0.000432	~	0.00044	~	0.000493	~	0.000706	~	0.000574	0.000558	0.000848	0 of 22
BZ 28 TRICHLOROBIPHENYL	~	0.000848	~	**0.00826**	~	0.00044	~	0.000493	~	0.000706	~	0.000574	0.00198	0.0161	2 of 22
BZ 44 TETRACHLOROBIPHENYL	~	0.000848	~	0.000432	~	0.00044	~	0.000493	~	0.000706	~	**0.00111**	0.000655	0.00171	1 of 22
BZ 52 TETRACHLOROBIPHENYL	~	**0.00286**	~	**0.00432**	~	0.00044	~	**0.000722**	~	0.000706	~	**0.00207**	0.00176	0.00712	8 of 22
BZ 66 TETRACHLOROBIPHENYL	~	0.000848	~	**0.00439**	~	0.00044	~	0.000493	~	0.000706	~	0.000574	0.00128	0.00835	1 of 22
BZ 77 TETRACHLOROBIPHENYL	~	0.000848	~	0.000432	~	0.00044	~	0.000493	~	0.000706	~	0.000574	0.000558	0.000848	0 of 22
BZ 8 DICHLOROBIPHENYL	~	0.000848	~	0.000432	~	0.00044	~	0.000493	~	0.000706	~	0.000574	0.000558	0.000848	0 of 22
CIS-NONACHLOR	~	0.000848	~	0.000432	~	0.00044	~	0.000493	~	0.000706	~	**0.000833**	0.000605	0.00103	1 of 22
DDMU	~	0.000848	~	0.000432	~	0.00044	~	0.000493	~	0.000706	~	0.000574	0.000558	0.000848	0 of 22
DIELDRIN	~	0.000848	~	0.000432	~	0.00044	~	0.000493	~	0.000706	~	0.000574	0.000558	0.000848	0 of 22
ENDRIN	~	0.000848	~	0.000432	~	0.00044	~	0.000493	~	0.000706	~	0.000574	0.000558	0.000848	0 of 22
GAMMA-BHC	~	0.000848	~	0.000432	~	0.00044	~	0.000493	~	0.000706	~	0.000574	0.000558	0.000848	0 of 22
GAMMA-CHLORDANE	~	**0.00936**	~	**0.00403**	~	**0.00209**	~	**0.00771**	~	**0.0124**	~	**0.00695**	0.00688	0.0146	20 of 22
HEPTACHLOR	~	0.000848	~	0.000432	~	0.00044	~	0.000493	~	0.000706	~	0.000574	0.000558	0.000848	0 of 22
HEPTACHLOR EPOXIDE	~	0.000848	~	0.000432	~	0.00044	~	0.000493	~	0.000706	~	0.000574	0.000558	0.000848	0 of 22
HEXACHLOROBENZENE	~	**0.00133**	~	**0.000773**	~	0.00044	~	**0.000745**	~	0.000706	~	**0.00066**	0.000725	0.00133	5 of 22
MIREX	~	0.000848	~	0.000432	~	0.00044	~	0.000493	~	0.000706	~	0.000574	0.000558	0.000848	0 of 22
OXYCHLORDANE	~	0.000848	~	0.000432	~	0.00044	~	0.000493	~	0.000706	~	0.000574	0.000558	0.000848	0 of 22
TOTAL AMP PCBS	~	**0.0229**	~	**0.0727**	~	0.00044	~	**0.0056**	~	0.000706	~	**0.0149**	0.0192	0.138	13 of 22
TOTAL CHLORDANE	~	**0.0121**	~	**0.00496**	~	**0.00252**	~	**0.0114**	~	**0.0163**	~	**0.011**	0.00948	0.0234	19 of 22
TOTAL DDT	~	**0.00373**	~	0.000432	~	**0.00162**	~	**0.00142**	~	**0.00635**	~	**0.00622**	0.00326	0.012	8 of 22
TRANS-NONACHLOR	~	**0.00379**	~	**0.00155**	~	**0.00151**	~	**0.00279**	~	**0.0042**	~	**0.00353**	0.00281	0.00515	19 of 22

Table A-11. Deer Island Influent loadings (Low detection limit analyses; North & South Systems), July - December 2013

Organochlorine Pesticides and PCBs (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
2,4'-DDD	~	0.000439	~	0.000403	~	**0.00124**	0.000584	0.00124	1 of 10
2,4'-DDE	~	0.000439	~	0.000403	~	0.00044	0.000425	0.00044	0 of 10
2,4'-DDT	~	0.000439	~	0.000403	~	0.00044	0.000425	0.00044	0 of 10
4,4'-DDD	~	0.000439	~	0.000403	~	0.00044	0.000425	0.00044	0 of 10
4,4'-DDE	~	**0.00221**	~	**0.00064**	~	**0.00179**	0.0015	0.00227	7 of 10
4,4'-DDT	~	0.000439	~	0.000403	~	0.00044	0.000425	0.00044	0 of 10
ALDRIN	~	0.000439	~	0.000403	~	0.00044	0.000425	0.00044	0 of 10
ALPHA-CHLORDANE	~	**0.00436**	~	**0.00375**	~	**0.0028**	0.0038	0.0057	10 of 10
BZ 101 PENTACHLOROBIPHENYL	~	**0.00184**	~	0.000403	~	**0.0013**	0.00116	0.00205	6 of 10
BZ 105 PENTACHLOROBIPHENYL	~	0.000439	~	0.000403	~	0.00044	0.000425	0.00044	0 of 10
BZ 118 PENTACHLOROBIPHENYL	~	**0.00147**	~	0.000403	~	**0.00108**	0.000965	0.00159	4 of 10
BZ 126 PENTACHLOROBIPHENYL	~	0.000439	~	0.000403	~	0.00044	0.000425	0.00044	0 of 10
BZ 128 HEXACHLOROBIPHENYL	~	0.000439	~	0.000403	~	0.00044	0.000425	0.00044	0 of 10
BZ 138 HEXACHLOROBIPHENYL	~	**0.0017**	~	**0.002**	~	**0.00138**	0.00176	0.00208	10 of 10
BZ 153 HEXACHLOROBIPHENYL	~	**0.000981**	~	**0.00134**	~	**0.00108**	0.00114	0.00164	10 of 10
BZ 170 HEPTACHLOROBIPHENYL	~	0.000439	~	0.000403	~	0.00044	0.000425	0.00044	0 of 10
BZ 18 TRICHLOROBIPHENYL	~	0.000439	~	0.000403	~	0.00044	0.000425	0.00044	0 of 10
BZ 180 HEPTACHLOROBIPHENYL	~	**0.000713**	~	0.000403	~	**0.000533**	0.000553	0.000987	2 of 10
BZ 187 HEPTACHLOROBIPHENYL	~	**0.00054**	~	0.000403	~	**0.000483**	0.000474	0.000639	2 of 10
BZ 195 OCTACHLOROBIPHENYL	~	0.000439	~	0.000403	~	0.00044	0.000425	0.00044	0 of 10
BZ 206 NONACHLOROBIPHENYL	~	0.000439	~	0.000403	~	0.00044	0.000425	0.00044	0 of 10
BZ 209 DECACHLOROBIPHENYL	~	0.000439	~	0.000403	~	0.00044	0.000425	0.00044	0 of 10
BZ 28 TRICHLOROBIPHENYL	~	0.000439	~	0.000403	~	0.00044	0.000425	0.00044	0 of 10
BZ 44 TETRACHLOROBIPHENYL	~	0.000439	~	0.000403	~	0.00044	0.000425	0.00044	0 of 10
BZ 52 TETRACHLOROBIPHENYL	~	**0.00141**	~	0.000403	~	**0.000706**	0.000868	0.00155	5 of 10
BZ 66 TETRACHLOROBIPHENYL	~	0.000439	~	0.000403	~	0.00044	0.000425	0.00044	0 of 10
BZ 77 TETRACHLOROBIPHENYL	~	0.000439	~	0.000403	~	0.00044	0.000425	0.00044	0 of 10
BZ 8 DICHLOROBIPHENYL	~	0.000439	~	0.000403	~	0.00044	0.000425	0.00044	0 of 10
CIS-NONACHLOR	~	0.000439	~	0.000403	~	**0.000562**	0.000449	0.000562	1 of 10
DDMU	~	0.000439	~	0.000403	~	0.00044	0.000425	0.00044	0 of 10
DIELDRIN	~	0.000439	~	0.000403	~	0.00044	0.000425	0.00044	0 of 10
ENDRIN	~	0.000439	~	0.000403	~	0.00044	0.000425	0.00044	0 of 10
GAMMA-BHC	~	0.000439	~	0.000403	~	0.00044	0.000425	0.00044	0 of 10
GAMMA-CHLORDANE	~	**0.0041**	~	**0.00401**	~	**0.00333**	0.00391	0.00533	10 of 10
HEPTACHLOR	~	0.000439	~	0.000403	~	0.00044	0.000425	0.00044	0 of 10
HEPTACHLOR EPOXIDE	~	0.000439	~	0.000403	~	0.00044	0.000425	0.00044	0 of 10
HEXACHLOROBENZENE	~	0.000439	~	**0.00195**	~	**0.000675**	0.00109	0.00205	6 of 10
MIREX	~	0.000439	~	0.000403	~	0.00044	0.000425	0.00044	0 of 10
OXYCHLORDANE	~	0.000439	~	0.000403	~	0.00044	0.000425	0.00044	0 of 10
TOTAL AMP PCBS	~	**0.00793**	~	**0.00333**	~	**0.00567**	0.00564	0.00839	10 of 10
TOTAL CHLORDANE	~	**0.0063**	~	**0.00493**	~	**0.00427**	0.00534	0.0081	10 of 10
TOTAL DDT	~	**0.00221**	~	**0.00064**	~	**0.00289**	0.00172	0.00289	7 of 10
TRANS-NONACHLOR	~	**0.00194**	~	**0.00131**	~	**0.00148**	0.00159	0.0024	9 of 10

Table A-11. Deer Island Influent loadings (Low detection limit analyses; North & South Systems), July 2012 - June 2013

Volatile Organics (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
1,1,1-TRICHLOROETHANE	1	1.02	0.991	1.04	1.17	1.03	1.33	1.15	1.97	1.47	1.23	1.17	1.22	1.98	0 of 46
1,1,2,2-TETRACHLOROETHANE	1	1.02	0.991	1.04	1.17	1.03	1.33	1.15	1.97	1.47	1.23	1.17	1.22	1.98	0 of 46
1,1,2-TRICHLOROETHANE	1	1.02	0.991	1.04	1.17	1.03	1.33	1.15	1.97	1.47	1.23	1.17	1.22	1.98	0 of 46
1,1-DICHLOROETHANE	1	1.02	0.991	1.04	1.17	1.03	1.33	1.15	1.97	1.47	1.23	1.17	1.22	1.98	0 of 46
1,1-DICHLOROETHENE	1	1.02	0.991	1.04	1.17	1.03	1.33	1.15	1.97	1.47	1.23	1.17	1.22	1.98	0 of 46
1,2-DICHLOROBENZENE	1	1.02	0.991	1.04	1.17	1.03	1.33	1.15	1.97	1.47	1.23	1.17	1.22	1.98	0 of 46
1,2-DICHLOROETHANE	1	1.02	0.991	1.04	1.17	1.03	1.33	1.15	1.97	1.47	1.23	1.17	1.22	1.98	0 of 46
1,2-DICHLOROPROPANE	1	1.02	0.991	1.04	1.17	1.03	1.33	1.15	1.97	1.47	1.23	1.17	1.22	1.98	0 of 46
1,3-DICHLOROBENZENE	1	1.02	0.991	1.04	1.17	1.03	1.33	1.15	1.97	1.47	1.23	1.17	1.22	1.98	0 of 46
1,4-DICHLOROBENZENE	1	1.02	0.991	1.04	1.17	1.03	1.33	1.15	1.97	1.47	1.23	1.17	1.22	1.98	0 of 46
2-BUTANONE	**2.89**	**9.33**	**4.36**	**17**	1.17	**19.5**	**9.29**	**3.59**	**5.84**	**29.7**	**12.9**	**6.08**	10.2	30.6	22 of 46
2-CHLOROETHYL VINYL ETHER	1	1.02	0.991	1.04	1.17	1.03	1.33	1.15	1.97	1.47	1.23	1.17	1.22	1.98	0 of 46
2-HEXANONE	1	1.02	0.991	1.04	1.17	1.03	1.33	1.15	1.97	1.47	1.23	1.17	1.22	1.98	0 of 46
4-METHYL-2-PENTANONE	1	1.02	0.991	1.04	1.17	1.03	1.33	1.15	1.97	1.47	1.23	1.17	1.22	1.98	0 of 46
ACETONE	**358**	**370**	**221**	**269**	**165**	**216**	**343**	**233**	**384**	**633**	**233**	**231**	302	1030	46 of 46
ACROLEIN	2.01	2.05	1.98	2.08	2.34	2.06	2.67	2.29	3.94	2.94	2.45	2.34	2.44	3.95	0 of 46
ACRYLONITRILE	2.01	2.05	1.98	2.08	2.34	2.06	2.67	2.29	3.94	2.94	2.45	2.34	2.44	3.95	0 of 46
BENZENE	1	1.02	0.991	1.04	1.17	1.03	1.33	1.15	1.97	1.47	1.23	1.17	1.22	1.98	0 of 46
BROMODICHLOROMETHANE	1	1.02	0.991	1.04	1.17	1.03	1.33	1.15	1.97	1.47	1.23	1.17	1.22	1.98	0 of 46
BROMOFORM	1	1.02	0.991	1.04	1.17	1.03	1.33	1.15	1.97	1.47	1.23	1.17	1.22	1.98	0 of 46
BROMOMETHANE	1	1.02	0.991	1.04	1.17	1.03	1.33	1.15	1.97	1.47	1.23	1.17	1.22	1.98	0 of 46
CARBON DISULFIDE	1	1.02	0.991	**4.65**	1.17	**5.38**	1.33	1.15	1.97	1.47	**4.64**	1.17	2.21	9.73	4 of 46
CARBON TETRACHLORIDE	1	1.02	0.991	1.04	1.17	1.03	1.33	1.15	1.97	1.47	1.23	1.17	1.22	1.98	0 of 46
CHLOROBENZENE	1	1.02	0.991	1.04	1.17	1.03	1.33	1.15	1.97	1.47	1.23	1.17	1.22	1.98	0 of 46
CHLOROETHANE	1	1.02	0.991	1.04	1.17	1.03	1.33	1.15	1.97	1.47	1.23	1.17	1.22	1.98	0 of 46
CHLOROFORM	1	1.02	0.991	1.04	1.17	1.03	1.33	1.15	1.97	1.47	1.23	1.17	1.22	1.98	0 of 46
CHLOROMETHANE	1	1.02	0.991	1.04	1.17	1.03	1.33	1.15	1.97	1.47	1.23	1.17	1.22	1.98	0 of 46
CIS-1,2-DICHLOROETHENE	1	1.02	0.991	1.04	1.17	1.03	1.33	1.15	1.97	1.47	1.23	1.17	1.22	1.98	0 of 46
CIS-1,3-DICHLOROPROPENE	1	1.02	0.991	1.04	1.17	1.03	1.33	1.15	1.97	1.47	1.23	1.17	1.22	1.98	0 of 46
DIBROMOCHLOROMETHANE	1	1.02	0.991	1.04	1.17	1.03	1.33	1.15	1.97	1.47	1.23	1.17	1.22	1.98	0 of 46
ETHYLBENZENE	1	1.02	0.991	1.04	1.17	1.03	1.33	1.15	1.97	1.47	1.23	1.17	1.22	1.98	0 of 46
M,P-XYLENE	2.01	2.05	1.98	2.08	2.34	2.06	2.67	2.29	3.94	2.94	2.45	2.34	2.44	3.95	0 of 46
METHYLENE CHLORIDE	1	1.02	0.991	1.04	1.17	1.03	1.33	1.15	1.97	1.47	1.23	1.17	1.22	1.98	0 of 46
O-XYLENE	1	1.02	0.991	1.04	1.17	1.03	1.33	1.15	1.97	1.47	1.23	1.17	1.22	1.98	0 of 46
STYRENE	1	1.02	0.991	1.04	1.17	1.03	1.33	1.15	1.97	1.47	1.23	**7.61**	1.78	14.1	1 of 46
TETRACHLOROETHENE	1	1.02	**18.2**	1.04	**4.3**	1.03	**37.6**	1.15	1.97	1.47	1.23	1.17	6.14	73.8	3 of 46
TOLUENE	**9.9**	1.02	0.991	**4.24**	1.17	**9.75**	1.33	1.15	1.97	1.47	1.23	1.17	3.03	18.8	5 of 46
TRANS-1,2-DICHLOROETHENE	1	1.02	0.991	1.04	1.17	1.03	1.33	1.15	1.97	1.47	1.23	1.17	1.22	1.98	0 of 46
TRANS-1,3-DICHLOROPROPENE	1	1.02	0.991	1.04	1.17	1.03	1.33	1.15	1.97	1.47	1.23	1.17	1.22	1.98	0 of 46
TRICHLOROETHENE	1	1.02	0.991	1.04	1.17	1.03	1.33	1.15	1.97	1.47	1.23	1.17	1.22	1.98	0 of 46
TRICHLOROFLUOROMETHANE	1	1.02	0.991	1.04	1.17	1.03	1.33	1.15	1.97	1.47	1.23	1.17	1.22	1.98	0 of 46
VINYL ACETATE	1	1.02	0.991	1.04	1.17	1.03	1.33	1.15	1.97	1.47	1.23	1.17	1.22	1.98	0 of 46
VINYL CHLORIDE	1	1.02	0.991	1.04	1.17	1.03	1.33	1.15	1.97	1.47	1.23	1.17	1.22	1.98	0 of 46

Table A-11. Deer Island Influent loadings (Low detection limit analyses; North & South Systems), July - December 2013

Volatile Organics (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
1,1,1-TRICHLOROETHANE	1.21	1.03	0.992	0.917	0.909	0.994	1.01	1.21	0 of 24
1,1,2,2-TETRACHLOROETHANE	1.21	1.03	0.992	0.917	0.909	0.994	1.01	1.21	0 of 24
1,1,2-TRICHLOROETHANE	1.21	1.03	0.992	0.917	0.909	0.994	1.01	1.21	0 of 24
1,1-DICHLOROETHANE	1.21	1.03	0.992	0.917	0.909	0.994	1.01	1.21	0 of 24
1,1-DICHLOROETHENE	1.21	1.03	0.992	0.917	0.909	0.994	1.01	1.21	0 of 24
1,2-DICHLOROBENZENE	1.21	1.03	0.992	0.917	0.909	0.994	1.01	1.21	0 of 24
1,2-DICHLOROETHANE	1.21	1.03	0.992	0.917	0.909	0.994	1.01	1.21	0 of 24
1,2-DICHLOROPROPANE	1.21	1.03	0.992	0.917	0.909	0.994	1.01	1.21	0 of 24
1,3-DICHLOROBENZENE	1.21	1.03	0.992	0.917	0.909	0.994	1.01	1.21	0 of 24
1,4-DICHLOROBENZENE	1.21	1.03	0.992	0.917	0.909	0.994	1.01	1.21	0 of 24
2-BUTANONE	**22.1**	**19.1**	**11.6**	**16.8**	**4**	**6.08**	13.3	26.6	19 of 24
2-CHLOROETHYL VINYL ETHER	1.21	1.03	0.992	0.917	0.909	0.994	1.01	1.21	0 of 24
2-HEXANONE	1.21	1.03	0.992	0.917	0.909	0.994	1.01	1.21	0 of 24
4-METHYL-2-PENTANONE	1.21	1.03	0.992	0.917	0.909	0.994	1.01	1.21	0 of 24
ACETONE	**991**	**278**	**264**	**338**	**157**	**186**	369	1510	24 of 24
ACROLEIN	2.43	2.06	1.98	1.83	1.82	1.99	2.02	2.43	0 of 24
ACRYLONITRILE	2.43	2.06	1.98	1.83	1.82	1.99	2.02	2.43	0 of 24
BENZENE	1.21	1.03	0.992	0.917	0.909	0.994	1.01	1.21	0 of 24
BROMODICHLOROMETHANE	1.21	1.03	0.992	0.917	0.909	0.994	1.01	1.21	0 of 24
BROMOFORM	1.21	1.03	0.992	0.917	0.909	0.994	1.01	1.21	0 of 24
BROMOMETHANE	1.21	1.03	0.992	0.917	0.909	0.994	1.01	1.21	0 of 24
CARBON DISULFIDE	1.21	**7.8**	**8.5**	**3.2**	**51.9**	0.994	12.3	103	5 of 24
CARBON TETRACHLORIDE	1.21	1.03	0.992	0.917	0.909	0.994	1.01	1.21	0 of 24
CHLOROBENZENE	1.21	1.03	0.992	0.917	0.909	0.994	1.01	1.21	0 of 24
CHLOROETHANE	1.21	1.03	0.992	0.917	0.909	0.994	1.01	1.21	0 of 24
CHLOROFORM	1.21	1.03	0.992	0.917	0.909	0.994	1.01	1.21	0 of 24
CHLOROMETHANE	1.21	1.03	0.992	0.917	0.909	0.994	1.01	1.21	0 of 24
CIS-1,2-DICHLOROETHENE	1.21	1.03	0.992	0.917	0.909	0.994	1.01	1.21	0 of 24
CIS-1,3-DICHLOROPROPENE	1.21	1.03	0.992	0.917	0.909	0.994	1.01	1.21	0 of 24
DIBROMOCHLOROMETHANE	1.21	1.03	0.992	0.917	0.909	0.994	1.01	1.21	0 of 24
ETHYLBENZENE	1.21	1.03	0.992	0.917	0.909	0.994	1.01	1.21	0 of 24
M,P-XYLENE	2.43	2.06	1.98	1.83	1.82	1.99	2.02	2.43	0 of 24
METHYLENE CHLORIDE	1.21	1.03	0.992	0.917	0.909	0.994	1.01	1.21	0 of 24
O-XYLENE	1.21	1.03	0.992	0.917	0.909	0.994	1.01	1.21	0 of 24
STYRENE	**7.74**	**7.03**	0.992	0.917	0.909	0.994	3.1	14.3	2 of 24
TETRACHLOROETHENE	1.21	1.03	0.992	0.917	**4.32**	0.994	1.58	4.7	2 of 24
TOLUENE	**3.78**	1.03	0.992	**9.3**	**3.81**	0.994	3.32	10.9	5 of 24
TRANS-1,2-DICHLOROETHENE	1.21	1.03	0.992	0.917	0.909	0.994	1.01	1.21	0 of 24
TRANS-1,3-DICHLOROPROPENE	1.21	1.03	0.992	0.917	0.909	0.994	1.01	1.21	0 of 24
TRICHLOROETHENE	1.21	1.03	0.992	0.917	0.909	0.994	1.01	1.21	0 of 24
TRICHLOROFLUOROMETHANE	1.21	1.03	0.992	0.917	0.909	0.994	1.01	1.21	0 of 24
VINYL ACETATE	1.21	1.03	0.992	0.917	0.909	0.994	1.01	1.21	0 of 24
VINYL CHLORIDE	1.21	1.03	0.992	0.917	0.909	0.397	0.91	1.21	0 of 24

Notes

DEC is the now-defunct Detailed Effluent Characterization project, which includes low-detection limit methods not approved by the EPA. DEC sampling is now carried out under the NP-EM project.

~: No data or no samples taken

Results in **bold** indicate one or more detects that month

Yearly averages are calculated from individual results collected during the reporting period and are flow-weighted.

Non-detected compounds are assumed to equal one half of the detection limit for metals and inorganics and one tenth of the reporting limit for organic compounds.

Table A-12. Deer Island Influent Characterization (Low detection limit analyses; North System), July 2012 - June 2013

Semivolatile Organics (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
1,2,4-TRICHLOROBENZENE	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
1,2-DICHLOROBENZENE	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
1,2-DIPHENYLHYDRAZINE (AS AZOBENZENE)	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
1,3-DICHLOROBENZENE	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
1,4-DICHLOROBENZENE	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
2,2'-OXYBIS(1-CHLOROPROPANE)	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
2,4,5-TRICHLOROPHENOL	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
2,4,6-TRICHLOROPHENOL	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
2,4-DICHLOROPHENOL	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
2,4-DIMETHYLPHENOL	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
2,4-DINITROPHENOL	5.44	5.28	5.41	5.25	5.13	5.54	5.23	5.41	5.1	5.79	5.22	5.63	5.37	6.1	0 of 24
2,4-DINITROTOLUENE	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
2,6-DINITROTOLUENE	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
2-CHLORONAPHTHALENE	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
2-CHLOROPHENOL	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
2-METHYL-4,6-DINITROPHENOL	5.44	5.28	5.41	5.25	5.13	5.54	5.23	5.41	5.1	5.79	5.22	5.63	5.37	6.1	0 of 24
2-METHYLNAPHTHALENE	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
2-METHYLPHENOL	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
2-NITROANILINE	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
2-NITROPHENOL	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
3,3'-DICHLOROBENZIDINE	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
3-NITROANILINE	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
4-BROMOPHENYL PHENYL ETHER	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
4-CHLORO-3-METHYLPHENOL	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
4-CHLOROANILINE	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
4-CHLOROPHENYL PHENYL ETHER	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
4-METHYLPHENOL (INCLUDES 3-METHYLPHENOL)	**20.2**	2.11	2.17	**11.8**	**14.9**	**14.2**	2.09	2.16	2.04	2.32	**26.7**	2.25	7.81	38	6 of 24
4-NITROANILINE	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
4-NITROPHENOL	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
ACENAPHTHENE	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
ACENAPHTHYLENE	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
ANILINE	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
ANTHRACENE	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
BENZIDINE	5.44	5.28	5.41	5.25	5.13	5.54	5.23	5.41	5.1	5.79	5.22	5.63	5.37	6.1	0 of 24
BENZO(A)ANTHRACENE	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
BENZO(A)PYRENE	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
BENZO(B)FLUORANTHENE	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
BENZO(G,H,I)PERYLENE	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
BENZO(K)FLUORANTHENE	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
BENZOIC ACID	5.44	5.28	5.41	5.25	5.13	5.54	5.23	5.41	5.1	5.79	5.22	5.63	5.37	6.1	0 of 24
BENZYL ALCOHOL	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	**18.9**	2.25	3.43	35.3	1 of 24
BIS(2-CHLOROETHOXY)METHANE	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
BIS(2-CHLOROETHYL)ETHER	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
BIS(2-ETHYLHEXYL)PHTHALATE	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
BUTYLBENZYLPHTHALATE	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
CARBAZOLE	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
CHRYSENE	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
DIBENZO(A,H)ANTHRACENE	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
DIBENZOFURAN	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
DIETHYLPHTHALATE	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
DIMETHYLPHTHALATE	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
DI-N-BUTYLPHTHALATE	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
DI-N-OCTYLPHTHALATE	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
FLUORANTHENE	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
FLUORENE	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
HEXACHLOROBENZENE	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
HEXACHLOROBUTADIENE	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
HEXACHLOROCYCLOPENTADIENE	5.44	5.28	5.41	5.25	5.13	5.54	5.23	5.41	5.1	5.79	5.22	5.63	5.37	6.1	0 of 24
HEXACHLOROETHANE	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
INDENO(1,2,3-CD)PYRENE	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
ISOPHORONE	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
NAPHTHALENE	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
N-DECANE	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24

Table A-12. Deer Island Influent Characterization (Low detection limit analyses; North System), July - December 2013

Semivolatile Organics (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
1,2,4-TRICHLOROBENZENE	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
1,2-DICHLOROBENZENE	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
1,2-DIPHENYLHYDRAZINE (AS AZOBENZENE)	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
1,3-DICHLOROBENZENE	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
1,4-DICHLOROBENZENE	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
2,2'-OXYBIS(1-CHLOROPROPANE)	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
2,4,5-TRICHLOROPHENOL	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
2,4,6-TRICHLOROPHENOL	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
2,4-DICHLOROPHENOL	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
2,4-DIMETHYLPHENOL	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
2,4-DINITROPHENOL	5.2	5.59	5.22	6.14	5.13	5.91	5.52	6.33	0 of 12
2,4-DINITROTOLUENE	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
2,6-DINITROTOLUENE	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
2-CHLORONAPHTHALENE	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
2-CHLOROPHENOL	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
2-METHYL-4,6-DINITROPHENOL	5.2	5.59	5.22	6.14	5.13	5.91	5.52	6.33	0 of 12
2-METHYLNAPHTHALENE	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
2-METHYLPHENOL	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
2-NITROANILINE	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
2-NITROPHENOL	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
3,3'-DICHLOROBENZIDINE	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
3-NITROANILINE	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
4-BROMOPHENYL PHENYL ETHER	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
4-CHLORO-3-METHYLPHENOL	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
4-CHLOROANILINE	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
4-CHLOROPHENYL PHENYL ETHER	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
4-METHYLPHENOL (INCLUDES 3-METHYLPHENOL)	2.08	**11.9**	**29.3**	**15.4**	**39.5**	**23.6**	19.4	55.4	7 of 12
4-NITROANILINE	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
4-NITROPHENOL	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
ACENAPHTHENE	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
ACENAPHTHYLENE	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
ANILINE	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
ANTHRACENE	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
BENZIDINE	5.2	5.59	5.22	6.14	5.13	5.91	5.52	6.33	0 of 12
BENZO(A)ANTHRACENE	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
BENZO(A)PYRENE	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
BENZO(B)FLUORANTHENE	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
BENZO(G,H,I)PERYLENE	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
BENZO(K)FLUORANTHENE	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
BENZOIC ACID	5.2	5.59	5.22	6.14	**29.3**	5.91	9.21	53.3	1 of 12
BENZYL ALCOHOL	2.08	2.24	**27.6**	2.45	**13.3**	2.37	8.01	33.6	3 of 12
BIS(2-CHLOROETHOXY)METHANE	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
BIS(2-CHLOROETHYL)ETHER	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
BIS(2-ETHYLHEXYL)PHTHALATE	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
BUTYLBENZYLPHTHALATE	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
CARBAZOLE	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
CHRYSENE	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
DIBENZO(A,H)ANTHRACENE	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
DIBENZOFURAN	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
DIETHYLPHTHALATE	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
DIMETHYLPHTHALATE	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
DI-N-BUTYLPHTHALATE	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
DI-N-OCTYLPHTHALATE	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
FLUORANTHENE	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
FLUORENE	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
HEXACHLOROBENZENE	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
HEXACHLOROBUTADIENE	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
HEXACHLOROCYCLOPENTADIENE	5.2	5.59	5.22	6.14	5.13	5.91	5.52	6.33	0 of 12
HEXACHLOROETHANE	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
INDENO(1,2,3-CD)PYRENE	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
ISOPHORONE	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
NAPHTHALENE	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
N-DECANE	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12

Table A-12. Deer Island Influent Characterization (Low detection limit analyses; North System), July 2012 - June 2013

Semivolatile Organics (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
NITROBENZENE	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
N-NITROSODIMETHYLAMINE (NDMA)	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
N-NITROSODI-N-PROPYLAMINE (NDPA)	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
N-NITROSODIPHENYLAMINE	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
N-OCTADECANE	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
PENTACHLOROPHENOL	5.44	5.28	5.41	5.25	5.13	5.54	5.23	5.41	5.1	5.79	5.22	5.63	5.37	6.1	0 of 24
PHENANTHRENE	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
PHENOL	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24
PYRENE	2.18	2.11	2.17	2.1	2.05	2.22	2.09	2.16	2.04	2.32	2.09	2.25	2.15	2.44	0 of 24

Polycyclic Aromatic Hydrocarbons (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
1-METHYLNAPHTHALENE	~	**0.0957**	~	**0.29**	~	**0.186**	~	**0.127**	~	**0.039**	~	**0.0934**	0.131	0.339	11 of 12
1-METHYLPHENANTHRENE	~	**0.0072**	~	**0.167**	~	**0.0313**	~	**0.0289**	~	**0.00858**	~	**0.029**	0.0426	0.242	11 of 12
2,3,5-TRIMETHYLNAPHTHYLENE	~	**0.0464**	~	**0.112**	~	**0.146**	~	**0.0606**	~	**0.0241**	~	**0.042**	0.0677	0.169	12 of 12
2,6-DIMETHYLNAPHTHALENE	~	**0.0529**	~	**0.16**	~	**0.144**	~	**0.0735**	~	**0.0261**	~	**0.0722**	0.0839	0.17	12 of 12
2-METHYLNAPHTHALENE	~	**0.0845**	~	**0.264**	~	**0.136**	~	**0.106**	~	**0.036**	~	**0.0716**	0.11	0.326	12 of 12
ACENAPHTHENE	~	**0.0582**	~	**0.187**	~	**0.0446**	~	**0.085**	~	**0.0191**	~	**0.0586**	0.0717	0.261	12 of 12
ACENAPHTHYLENE	~	**0.00516**	~	**0.0496**	~	**0.0103**	~	**0.00814**	~	**0.00285**	~	**0.00473**	0.0125	0.0689	11 of 12
ANTHRACENE	~	**0.0233**	~	**0.187**	~	**0.0137**	~	**0.039**	~	**0.00897**	~	**0.0382**	0.0488	0.275	12 of 12
BENZO(A)ANTHRACENE	~	**0.0453**	~	**0.288**	~	**0.0244**	~	**0.0625**	~	**0.0204**	~	**0.0773**	0.0822	0.389	12 of 12
BENZO(A)PYRENE	~	**0.0468**	~	**0.267**	~	**0.0248**	~	**0.0569**	~	**0.0225**	~	**0.0724**	0.0779	0.364	12 of 12
BENZO(B)FLUORANTHENE	~	**0.0631**	~	**0.255**	~	**0.0379**	~	**0.0873**	~	**0.0357**	~	**0.102**	0.0939	0.322	12 of 12
BENZO(E)PYRENE	~	**0.0359**	~	**0.165**	~	**0.0233**	~	**0.0454**	~	**0.0206**	~	**0.0577**	0.0558	0.212	12 of 12
BENZO(G,H,I)PERYLENE	~	**0.0264**	~	**0.11**	~	**0.0183**	~	**0.0352**	~	**0.0152**	~	**0.0592**	0.0431	0.132	12 of 12
BENZO(K)FLUORANTHENE	~	**0.0222**	~	**0.0872**	~	**0.0104**	~	**0.0264**	~	**0.0164**	~	**0.0385**	0.0328	0.111	12 of 12
BENZOTHIAZOLE	~	**0.178**	~	**0.0393**	~	**0.0327**	~	**0.0326**	~	**0.00962**	~	**0.059**	0.0548	0.18	12 of 12
BIPHENYL	~	**0.0303**	~	**0.0744**	~	**0.0511**	~	**0.0454**	~	**0.0112**	~	**0.0359**	0.0395	0.0757	11 of 12
C1-CHRYSENES	~	**0.0218**	~	**0.221**	~	**0.0157**	~	**0.0269**	~	**0.00752**	~	**0.0684**	0.0575	0.325	11 of 12
C1-DIBENZOTHIOPHENES	~	**0.0419**	~	0.00054	~	**0.0665**	~	**0.0383**	~	**0.0131**	~	0.000529	0.0249	0.0666	8 of 12
C1-FLUORANTHENES/PYRENES	~	**0.0601**	~	**0.516**	~	**0.0537**	~	**0.0733**	~	**0.0303**	~	**0.0499**	0.121	0.729	12 of 12
C1-FLUORENES	~	**0.0655**	~	**0.184**	~	**0.13**	~	**0.114**	~	0.000575	~	**0.0528**	0.0848	0.241	10 of 12
C1-NAPHTHALENES	~	**0.127**	~	**0.394**	~	**0.237**	~	**0.176**	~	**0.0541**	~	**0.172**	0.184	0.473	12 of 12
C1-PHENANTHRENES/ANTHRACENES	~	**0.057**	~	**0.622**	~	**0.244**	~	**0.15**	~	**0.0497**	~	**0.197**	0.21	0.856	11 of 12
C2-CHRYSENES	~	0.00103	~	**0.109**	~	0.00113	~	**0.0689**	~	0.000575	~	0.000529	0.0277	0.22	3 of 12
C2-DIBENZOTHIOPHENES	~	0.00103	~	**0.12**	~	0.00113	~	**0.023**	~	**0.0103**	~	0.000529	0.0241	0.242	3 of 12
C2-FLUORANTHENES/PYRENES	~	**0.0165**	~	**0.235**	~	**0.0352**	~	**0.0478**	~	**0.0181**	~	**0.0128**	0.0565	0.331	9 of 12
C2-FLUORENES	~	0.00103	~	**0.153**	~	0.00113	~	**0.0686**	~	**0.0281**	~	0.000529	0.04	0.31	3 of 12
C2-NAPHTHALENES	~	**0.174**	~	**0.597**	~	**0.457**	~	**0.232**	~	**0.0815**	~	**0.276**	0.289	0.654	12 of 12
C2-PHENANTHRENES/ANTHRACENES	~	0.00103	~	**0.417**	~	**0.205**	~	**0.126**	~	**0.0563**	~	**0.168**	0.157	0.545	10 of 12
C3-CHRYSENES	~	0.00103	~	**0.0845**	~	0.00113	~	0.000532	~	0.000575	~	0.000529	0.0133	0.171	1 of 12
C3-DIBENZOTHIOPHENES	~	0.00103	~	**0.0638**	~	0.00113	~	0.000532	~	0.000575	~	0.000529	0.0102	0.129	1 of 12
C3-FLUORANTHENES/PYRENES	~	0.00103	~	**0.0997**	~	0.00113	~	0.000532	~	0.000575	~	0.000529	0.0155	0.13	2 of 12
C3-FLUORENES	~	0.00103	~	**0.115**	~	0.00113	~	0.000532	~	**0.0297**	~	0.000529	0.0238	0.233	2 of 12
C3-NAPHTHALENES	~	**0.434**	~	**1.07**	~	**1.42**	~	**0.906**	~	**0.1**	~	**0.237**	0.643	1.47	12 of 12
C3-PHENANTHRENES/ANTHRACENES	~	0.00103	~	**0.28**	~	**0.268**	~	**0.0805**	~	**0.0321**	~	**0.0391**	0.109	0.312	8 of 12
C4-CHRYSENES	~	0.00103	~	0.00054	~	0.00113	~	0.000532	~	0.000575	~	0.000529	0.000702	0.0012	0 of 12
C4-NAPHTHALENES	~	**0.143**	~	**0.348**	~	**0.4**	~	**0.166**	~	**0.0825**	~	0.000529	0.175	0.437	10 of 12
C4-PHENANTHRENES/ANTHRACENES	~	0.00103	~	**0.121**	~	0.00113	~	0.000532	~	0.000575	~	**0.0134**	0.0211	0.244	2 of 12
CHRYSENE	~	**0.0554**	~	**0.297**	~	**0.0308**	~	**0.074**	~	**0.0289**	~	**0.106**	0.0952	0.392	12 of 12
DIBENZO(A,H)ANTHRACENE	~	**0.0028**	~	**0.0179**	~	**0.00472**	~	**0.00834**	~	**0.00229**	~	**0.0128**	0.00804	0.0357	9 of 12
DIBENZOFURAN	~	**0.0232**	~	**0.0376**	~	**0.0229**	~	**0.0326**	~	**0.00229**	~	**0.0261**	0.023	0.048	11 of 12
DIBENZOTHIOPHENE	~	**0.0171**	~	**0.106**	~	**0.0199**	~	**0.0259**	~	**0.00642**	~	**0.0282**	0.0321	0.159	11 of 12
FLUORANTHENE	~	**0.101**	~	**0.528**	~	**0.0749**	~	**0.156**	~	**0.0636**	~	**0.235**	0.188	0.694	12 of 12
FLUORENE	~	**0.0434**	~	**0.154**	~	**0.051**	~	**0.0573**	~	**0.0161**	~	**0.0464**	0.0582	0.217	12 of 12
INDENO(1,2,3-CD)PYRENE	~	**0.0278**	~	**0.117**	~	**0.0171**	~	**0.0434**	~	**0.0157**	~	**0.0162**	0.0372	0.138	11 of 12
NAPHTHALENE	~	**0.217**	~	**0.426**	~	**0.147**	~	**0.23**	~	**0.089**	~	**0.164**	0.203	0.529	12 of 12
PERYLENE	~	**0.00999**	~	**0.0411**	~	**0.00499**	~	**0.0107**	~	**0.00361**	~	**0.0154**	0.0137	0.053	11 of 12
PHENANTHRENE	~	**0.155**	~	**0.878**	~	**0.146**	~	**0.21**	~	**0.0586**	~	**0.215**	0.262	1.29	12 of 12
PYRENE	~	**0.105**	~	**0.679**	~	**0.0777**	~	**0.15**	~	**0.0607**	~	**0.191**	0.201	0.935	12 of 12

Table A-12. Deer Island Influent Characterization (Low detection limit analyses; North System), July - December 2013

Semivolatile Organics (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
NITROBENZENE	2.08	2.24	2.09	2.45	2.05	2.37	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
N-NITROSODIMETHYLAMINE (NDMA)	2.08	2.24	2.09	2.45	2.05	2.37	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
N-NITROSODI-N-PROPYLAMINE (NDPA)	2.08	2.24	2.09	2.45	2.05	2.37	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
N-NITROSODIPHENYLAMINE	2.08	2.24	2.09	2.45	2.05	2.37	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
N-OCTADECANE	2.08	2.24	2.09	2.45	2.05	2.37	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
PENTACHLOROPHENOL	5.2	5.59	5.22	6.14	5.13	5.91	5.2	5.59	5.22	6.14	5.13	5.91	5.52	6.33	0 of 12
PHENANTHRENE	2.08	2.24	2.09	2.45	2.05	2.37	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
PHENOL	2.08	2.24	2.09	2.45	2.05	2.37	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12
PYRENE	2.08	2.24	2.09	2.45	2.05	2.37	2.08	2.24	2.09	2.45	2.05	2.37	2.21	2.53	0 of 12

Polycyclic Aromatic Hydrocarbons (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
1-METHYLNAPHTHALENE	~	**0.0529**	~	**0.103**	~	**0.021**	0.0585	0.135	6 of 6
1-METHYLPHENANTHRENE	~	**0.0162**	~	**0.024**	~	**0.0146**	0.0182	0.0381	6 of 6
2,3,5-TRIMETHYLNAPHTHYLENE	~	**0.0244**	~	**0.0732**	~	**0.0177**	0.0379	0.0997	6 of 6
2,6-DIMETHYLNAPHTHALENE	~	**0.0246**	~	**0.0779**	~	**0.0312**	0.0439	0.1	6 of 6
2-METHYLNAPHTHALENE	~	**0.0458**	~	**0.0888**	~	**0.0204**	0.0513	0.109	6 of 6
ACENAPHTHENE	~	**0.0391**	~	**0.0702**	~	**0.0321**	0.0468	0.0871	6 of 6
ACENAPHTHYLENE	~	**0.00213**	~	**0.00278**	~	**0.0102**	0.005	0.0143	6 of 6
ANTHRACENE	~	**0.0172**	~	**0.0408**	~	**0.0179**	0.025	0.0553	6 of 6
BENZO(A)ANTHRACENE	~	**0.0248**	~	**0.0694**	~	**0.0373**	0.0432	0.0892	6 of 6
BENZO(A)PYRENE	~	**0.0217**	~	**0.0659**	~	**0.0309**	0.0389	0.0826	6 of 6
BENZO(B)FLUORANTHENE	~	**0.0305**	~	**0.0857**	~	**0.063**	0.0589	0.109	6 of 6
BENZO(E)PYRENE	~	**0.0171**	~	**0.0485**	~	**0.0263**	0.0302	0.0612	6 of 6
BENZO(G,H,I)PERYLENE	~	**0.0141**	~	**0.0343**	~	**0.00893**	0.0189	0.0398	5 of 6
BENZO(K)FLUORANTHENE	~	**0.0141**	~	**0.0353**	~	**0.0165**	0.0217	0.0453	6 of 6
BENZOTHIAZOLE	~	**0.0134**	~	**0.0332**	~	**0.0285**	0.0247	0.0459	6 of 6
BIPHENYL	~	**0.0171**	~	**0.0389**	~	**0.00392**	0.0198	0.0456	6 of 6
C1-CHRYSENES	~	**0.0132**	~	**0.0439**	~	**0.0342**	0.03	0.0519	6 of 6
C1-DIBENZOTHIOPHENES	~	**0.0809**	~	**0.073**	~	0.000573	0.0519	0.115	4 of 6
C1-FLUORANTHENES/PYRENES	~	**0.0347**	~	**0.0903**	~	**0.0527**	0.0585	0.116	6 of 6
C1-FLUORENES	~	**0.039**	~	**0.101**	~	**0.0502**	0.0626	0.125	6 of 6
C1-NAPHTHALENES	~	**0.068**	~	**0.137**	~	**0.0419**	0.0815	0.176	6 of 6
C1-PHENANTHRENES/ANTHRACENES	~	**0.0698**	~	**0.179**	~	**0.106**	0.117	0.231	6 of 6
C2-CHRYSENES	~	**0.0164**	~	**0.297**	~	0.000573	0.101	0.465	3 of 6
C2-DIBENZOTHIOPHENES	~	**0.0214**	~	**0.0558**	~	0.000573	0.0256	0.071	4 of 6
C2-FLUORANTHENES/PYRENES	~	**0.0237**	~	**0.0607**	~	0.000573	0.028	0.0726	4 of 6
C2-FLUORENES	~	0.000545	~	0.00054	~	0.000573	0.000553	0.000575	0 of 6
C2-NAPHTHALENES	~	**0.0682**	~	**0.228**	~	**0.107**	0.132	0.308	6 of 6
C2-PHENANTHRENES/ANTHRACENES	~	**0.0522**	~	**0.127**	~	**0.0611**	0.0792	0.167	6 of 6
C3-CHRYSENES	~	0.000545	~	0.00054	~	0.000573	0.000553	0.000575	0 of 6
C3-DIBENZOTHIOPHENES	~	0.000545	~	0.00054	~	0.000573	0.000553	0.000575	0 of 6
C3-FLUORANTHENES/PYRENES	~	0.000545	~	0.00054	~	0.000573	0.000553	0.000575	0 of 6
C3-FLUORENES	~	0.000545	~	0.00054	~	0.000573	0.000553	0.000575	0 of 6
C3-NAPHTHALENES	~	**0.276**	~	**0.816**	~	**0.0526**	0.376	0.88	5 of 6
C3-PHENANTHRENES/ANTHRACENES	~	0.000545	~	0.00054	~	0.000573	0.000553	0.000575	0 of 6
C4-CHRYSENES	~	0.000545	~	**0.504**	~	0.000573	0.162	0.994	1 of 6
C4-NAPHTHALENES	~	**0.0594**	~	**0.216**	~	0.000573	0.0903	0.288	4 of 6
C4-PHENANTHRENES/ANTHRACENES	~	0.000545	~	0.00054	~	0.000573	0.000553	0.000575	0 of 6
CHRYSENE	~	**0.0315**	~	**0.0791**	~	**0.043**	0.0506	0.101	6 of 6
DIBENZO(A,H)ANTHRACENE	~	**0.00706**	~	**0.0123**	~	0.000573	0.00662	0.015	4 of 6
DIBENZOFURAN	~	**0.021**	~	**0.0375**	~	**0.0136**	0.0239	0.0475	6 of 6
DIBENZOTHIOPHENE	~	**0.0115**	~	**0.0255**	~	**0.0117**	0.016	0.0328	6 of 6
FLUORANTHENE	~	**0.0714**	~	**0.182**	~	**0.0747**	0.108	0.243	6 of 6
FLUORENE	~	**0.0313**	~	**0.0661**	~	**0.0186**	0.0383	0.0854	6 of 6
INDENO(1,2,3-CD)PYRENE	~	**0.0141**	~	**0.0395**	~	0.000573	0.0178	0.0473	4 of 6
NAPHTHALENE	~	**0.11**	~	**0.163**	~	**0.0517**	0.108	0.17	6 of 6
PERYLENE	~	**0.00465**	~	**0.0143**	~	**0.00583**	0.00815	0.0171	6 of 6
PHENANTHRENE	~	**0.101**	~	**0.244**	~	**0.101**	0.147	0.328	6 of 6
PYRENE	~	**0.0632**	~	**0.167**	~	**0.069**	0.0985	0.217	6 of 6

Table A-12. Deer Island Influent Characterization (Low detection limit analyses; North System), July 2012 - June 2013

Organochlorine Pesticides and PCBs (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
2,4'-DDD	~	0.000436	~	0.000206	~	0.000213	~	0.000217	~	0.00024	~	0.000225	0.000252	0.00046	0 of 12
2,4'-DDE	~	0.000436	~	0.000206	~	0.000213	~	0.000217	~	0.00024	~	0.000225	0.000252	0.00046	0 of 12
2,4'-DDT	~	0.000436	~	0.000206	~	0.000213	~	0.000217	~	0.00024	~	0.000225	0.000252	0.00046	0 of 12
4,4'-DDD	~	0.000436	~	0.000206	~	**0.00107**	~	0.000217	~	**0.00318**	~	0.000225	0.000985	0.00586	2 of 12
4,4'-DDE	~	**0.00221**	~	0.000206	~	0.000213	~	0.000217	~	0.00024	~	**0.0014**	0.000735	0.00405	3 of 12
4,4'-DDT	~	0.000436	~	0.000206	~	0.000213	~	0.000217	~	0.00024	~	0.000225	0.000252	0.00046	0 of 12
ALDRIN	~	0.000436	~	0.000206	~	0.000213	~	0.000217	~	0.00024	~	0.000225	0.000252	0.00046	0 of 12
ALPHA-CHLORDANE	~	**0.00261**	~	**0.00145**	~	0.000213	~	**0.00188**	~	**0.00282**	~	**0.00176**	0.00185	0.00518	8 of 12
BZ 101 PENTACHLOROBIPHENYL	~	**0.00147**	~	**0.000948**	~	0.000213	~	0.000217	~	0.00024	~	**0.000747**	0.000613	0.00255	4 of 12
BZ 105 PENTACHLOROBIPHENYL	~	0.000436	~	0.000206	~	0.000213	~	0.000217	~	0.00024	~	0.000225	0.000252	0.00046	0 of 12
BZ 118 PENTACHLOROBIPHENYL	~	0.000436	~	**0.000521**	~	0.000213	~	0.000217	~	0.00024	~	**0.000736**	0.000398	0.00113	2 of 12
BZ 126 PENTACHLOROBIPHENYL	~	0.000436	~	0.000206	~	0.000213	~	0.000217	~	0.00024	~	0.000225	0.000252	0.00046	0 of 12
BZ 128 HEXACHLOROBIPHENYL	~	0.000436	~	0.000206	~	0.000213	~	0.000217	~	0.00024	~	0.000225	0.000252	0.00046	0 of 12
BZ 138 HEXACHLOROBIPHENYL	~	**0.00284**	~	**0.000884**	~	0.000213	~	**0.00102**	~	0.00024	~	**0.00144**	0.00106	0.00325	6 of 12
BZ 153 HEXACHLOROBIPHENYL	~	**0.00196**	~	**0.000701**	~	0.000213	~	0.000217	~	0.00024	~	**0.000736**	0.000644	0.00221	6 of 12
BZ 170 HEPTACHLOROBIPHENYL	~	0.000436	~	0.000206	~	0.000213	~	0.000217	~	0.00024	~	0.000225	0.000252	0.00046	0 of 12
BZ 18 TRICHLOROBIPHENYL	~	0.000436	~	0.000206	~	0.000213	~	0.000217	~	0.00024	~	0.000225	0.000252	0.00046	0 of 12
BZ 180 HEPTACHLOROBIPHENYL	~	**0.000945**	~	0.000206	~	0.000213	~	0.000217	~	0.00024	~	**0.000586**	0.000395	0.00142	2 of 12
BZ 187 HEPTACHLOROBIPHENYL	~	0.000436	~	**0.000284**	~	0.000213	~	0.000217	~	0.00024	~	0.000225	0.000264	0.00046	1 of 12
BZ 195 OCTACHLOROBIPHENYL	~	0.000436	~	0.000206	~	0.000213	~	0.000217	~	0.00024	~	0.000225	0.000252	0.00046	0 of 12
BZ 206 NONACHLOROBIPHENYL	~	0.000436	~	0.000206	~	0.000213	~	0.000217	~	0.00024	~	0.000225	0.000252	0.00046	0 of 12
BZ 209 DECACHLOROBIPHENYL	~	0.000436	~	0.000206	~	0.000213	~	0.000217	~	0.00024	~	0.000225	0.000252	0.00046	0 of 12
BZ 28 TRICHLOROBIPHENYL	~	0.000436	~	**0.000599**	~	0.000213	~	0.000217	~	0.00024	~	0.000225	0.000311	0.000979	1 of 12
BZ 44 TETRACHLOROBIPHENYL	~	0.000436	~	0.000206	~	0.000213	~	0.000217	~	0.00024	~	**0.000521**	0.00031	0.000752	1 of 12
BZ 52 TETRACHLOROBIPHENYL	~	**0.0012**	~	**0.000762**	~	0.000213	~	**0.000372**	~	0.00024	~	**0.000702**	0.000562	0.002	4 of 12
BZ 66 TETRACHLOROBIPHENYL	~	0.000436	~	0.000206	~	0.000213	~	0.000217	~	0.00024	~	0.000225	0.000252	0.00046	0 of 12
BZ 77 TETRACHLOROBIPHENYL	~	0.000436	~	0.000206	~	0.000213	~	0.000217	~	0.00024	~	0.000225	0.000252	0.00046	0 of 12
BZ 8 DICHLOROBIPHENYL	~	0.000436	~	0.000206	~	0.000213	~	0.000217	~	0.00024	~	0.000225	0.000252	0.00046	0 of 12
CIS-NONACHLOR	~	0.000436	~	0.000206	~	0.000213	~	0.000217	~	0.00024	~	0.000225	0.000252	0.00046	0 of 12
DDMU	~	0.000436	~	0.000206	~	0.000213	~	0.000217	~	0.00024	~	0.000225	0.000252	0.00046	0 of 12
DIELDRIN	~	0.000436	~	0.000206	~	0.000213	~	0.000217	~	0.00024	~	0.000225	0.000252	0.00046	0 of 12
ENDRIN	~	0.000436	~	0.000206	~	0.000213	~	0.000217	~	0.00024	~	0.000225	0.000252	0.00046	0 of 12
GAMMA-BHC	~	0.000436	~	0.000206	~	0.000213	~	0.000217	~	0.00024	~	0.000225	0.000252	0.00046	0 of 12
GAMMA-CHLORDANE	~	**0.00332**	~	**0.00178**	~	**0.000661**	~	**0.00212**	~	**0.00237**	~	**0.00159**	0.00198	0.00628	10 of 12
HEPTACHLOR	~	0.000436	~	0.000206	~	0.000213	~	0.000217	~	0.00024	~	0.000225	0.000252	0.00046	0 of 12
HEPTACHLOR EPOXIDE	~	0.000436	~	0.000206	~	0.000213	~	0.000217	~	0.00024	~	0.000225	0.000252	0.00046	0 of 12
HEXACHLOROBENZENE	~	0.000436	~	0.000206	~	0.000213	~	0.000217	~	0.00024	~	**0.000272**	0.000262	0.00046	1 of 12
MIREX	~	0.000436	~	0.000206	~	0.000213	~	0.000217	~	0.00024	~	0.000225	0.000252	0.00046	0 of 12
OXYCHLORDANE	~	0.000436	~	0.000206	~	0.000213	~	0.000217	~	0.00024	~	0.000225	0.000252	0.00046	0 of 12
TOTAL AMP PCBS	~	**0.00777**	~	**0.00419**	~	0.000213	~	**0.00129**	~	0.00024	~	**0.00499**	0.00299	0.00918	7 of 12
TOTAL CHLORDANE	~	**0.00461**	~	**0.00221**	~	**0.00056**	~	**0.00258**	~	**0.00355**	~	**0.00273**	0.00275	0.0089	9 of 12
TOTAL DDT	~	**0.00221**	~	0.000206	~	**0.00107**	~	0.000217	~	**0.00318**	~	**0.0014**	0.00147	0.00586	5 of 12
TRANS-NONACHLOR	~	**0.00221**	~	**0.000752**	~	**0.00056**	~	**0.000698**	~	**0.000842**	~	**0.000964**	0.000985	0.00405	9 of 12

Table A-12. Deer Island Influent Characterization (Low detection limit analyses; North System), July - December 2013

Organochlorine Pesticides and PCBs (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
2,4'-DDD	~	0.000211	~	0.000221	~	**0.000535**	0.000321	0.000844	1 of 6
2,4'-DDE	~	0.000211	~	0.000221	~	0.000229	0.00022	0.000232	0 of 6
2,4'-DDT	~	0.000211	~	0.000221	~	0.000229	0.00022	0.000232	0 of 6
4,4'-DDD	~	0.000211	~	0.000221	~	0.000229	0.00022	0.000232	0 of 6
4,4'-DDE	~	**0.000949**	~	0.000221	~	**0.000785**	0.000661	0.00118	4 of 6
4,4'-DDT	~	0.000211	~	0.000221	~	0.000229	0.00022	0.000232	0 of 6
ALDRIN	~	0.000211	~	0.000221	~	0.000229	0.00022	0.000232	0 of 6
ALPHA-CHLORDANE	~	**0.00175**	~	**0.0015**	~	**0.000761**	0.00134	0.00219	6 of 6
BZ 101 PENTACHLOROBIPHENYL	~	**0.00086**	~	0.000221	~	**0.000497**	0.000535	0.000912	4 of 6
BZ 105 PENTACHLOROBIPHENYL	~	0.000211	~	0.000221	~	0.000229	0.00022	0.000232	0 of 6
BZ 118 PENTACHLOROBIPHENYL	~	**0.000954**	~	0.000221	~	**0.000446**	0.000551	0.00105	4 of 6
BZ 126 PENTACHLOROBIPHENYL	~	0.000211	~	0.000221	~	0.000229	0.00022	0.000232	0 of 6
BZ 128 HEXACHLOROBIPHENYL	~	0.000211	~	0.000221	~	0.000229	0.00022	0.000232	0 of 6
BZ 138 HEXACHLOROBIPHENYL	~	**0.000886**	~	**0.001**	~	**0.000629**	0.000839	0.00108	6 of 6
BZ 153 HEXACHLOROBIPHENYL	~	**0.000522**	~	**0.000717**	~	**0.000492**	0.000575	0.000986	6 of 6
BZ 170 HEPTACHLOROBIPHENYL	~	0.000211	~	0.000221	~	0.000229	0.00022	0.000232	0 of 6
BZ 18 TRICHLOROBIPHENYL	~	0.000211	~	0.000221	~	0.000229	0.00022	0.000232	0 of 6
BZ 180 HEPTACHLOROBIPHENYL	~	**0.000409**	~	0.000221	~	0.000229	0.00029	0.000609	1 of 6
BZ 187 HEPTACHLOROBIPHENYL	~	**0.000284**	~	0.000221	~	0.000229	0.000246	0.000357	1 of 6
BZ 195 OCTACHLOROBIPHENYL	~	0.000211	~	0.000221	~	0.000229	0.00022	0.000232	0 of 6
BZ 206 NONACHLOROBIPHENYL	~	0.000211	~	0.000221	~	0.000229	0.00022	0.000232	0 of 6
BZ 209 DECACHLOROBIPHENYL	~	0.000211	~	0.000221	~	0.000229	0.00022	0.000232	0 of 6
BZ 28 TRICHLOROBIPHENYL	~	0.000211	~	0.000221	~	0.000229	0.00022	0.000232	0 of 6
BZ 44 TETRACHLOROBIPHENYL	~	0.000211	~	0.000221	~	0.000229	0.00022	0.000232	0 of 6
BZ 52 TETRACHLOROBIPHENYL	~	**0.00076**	~	0.000221	~	**0.000408**	0.000471	0.000763	3 of 6
BZ 66 TETRACHLOROBIPHENYL	~	0.000211	~	0.000221	~	0.000229	0.00022	0.000232	0 of 6
BZ 77 TETRACHLOROBIPHENYL	~	0.000211	~	0.000221	~	0.000229	0.00022	0.000232	0 of 6
BZ 8 DICHLOROBIPHENYL	~	0.000211	~	0.000221	~	0.000229	0.00022	0.000232	0 of 6
CIS-NONACHLOR	~	0.000211	~	0.000221	~	0.000229	0.00022	0.000232	0 of 6
DDMU	~	0.000211	~	0.000221	~	0.000229	0.00022	0.000232	0 of 6
DIELDRIN	~	0.000211	~	0.000221	~	0.000229	0.00022	0.000232	0 of 6
ENDRIN	~	0.000211	~	0.000221	~	0.000229	0.00022	0.000232	0 of 6
GAMMA-BHC	~	0.000211	~	0.000221	~	0.000229	0.00022	0.000232	0 of 6
GAMMA-CHLORDANE	~	**0.00171**	~	**0.00158**	~	**0.00102**	0.00144	0.00215	6 of 6
HEPTACHLOR	~	0.000211	~	0.000221	~	0.000229	0.00022	0.000232	0 of 6
HEPTACHLOR EPOXIDE	~	0.000211	~	0.000221	~	0.000229	0.00022	0.000232	0 of 6
HEXACHLOROBENZENE	~	0.000211	~	**0.000751**	~	**0.000166**	0.00037	0.000766	4 of 6
MIREX	~	0.000211	~	0.000221	~	0.000229	0.00022	0.000232	0 of 6
OXYCHLORDANE	~	0.000211	~	0.000221	~	0.000229	0.00022	0.000232	0 of 6
TOTAL AMP PCBS	~	**0.00446**	~	**0.00172**	~	**0.00236**	0.00289	0.00519	6 of 6
TOTAL CHLORDANE	~	**0.00259**	~	**0.00198**	~	**0.00116**	0.00192	0.00316	6 of 6
TOTAL DDT	~	**0.000949**	~	0.000221	~	**0.0012**	0.000799	0.00162	4 of 6
TRANS-NONACHLOR	~	**0.000845**	~	**0.000586**	~	**0.0004**	0.000615	0.000965	5 of 6

Table A-12. Deer Island Influent Characterization (Low detection limit analyses; North System), July 2012 - June 2013

Volatile Organics (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
1,1,1-TRICHLOROETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
1,1,2,2-TETRACHLOROETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
1,1,2-TRICHLOROETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
1,1-DICHLOROETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
1,1-DICHLOROETHENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
1,2-DICHLOROBENZENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
1,2-DICHLOROETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
1,2-DICHLOROPROPANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
1,3-DICHLOROBENZENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
1,4-DICHLOROBENZENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
2-BUTANONE	0.5	**3.15**	0.5	**6.47**	0.5	**7.52**	**2.77**	0.5	0.5	0.5	**2.53**	0.5	2.02	9.32	7 of 24
2-CHLOROETHYL VINYL ETHER	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
2-HEXANONE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
4-METHYL-2-PENTANONE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
ACETONE	**237**	**193**	**115**	**117**	**66.2**	**116**	**155**	**108**	**114**	**301**	**101**	**116**	145	533	24 of 24
ACROLEIN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0 of 24
ACRYLONITRILE	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0 of 24
BENZENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
BROMODICHLOROMETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
BROMOFORM	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
BROMOMETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
CARBON DISULFIDE	0.5	0.5	0.5	0.5	0.5	**3.67**	0.5	0.5	0.5	0.5	0.5	0.5	0.732	6.94	1 of 24
CARBON TETRACHLORIDE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
CHLOROBENZENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
CHLOROETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
CHLOROFORM	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
CHLOROMETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
CIS-1,2-DICHLOROETHENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
CIS-1,3-DICHLOROPROPENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
DIBROMOCHLOROMETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
ETHYLBENZENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
M,P-XYLENE	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0 of 24
METHYLENE CHLORIDE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
O-XYLENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
STYRENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
TETRACHLOROETHENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
TOLUENE	**6.03**	0.5	0.5	**2.81**	0.5	**5.06**	0.5	0.5	0.5	0.5	0.5	0.5	1.39	11.5	3 of 24
TRANS-1,2-DICHLOROETHENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
TRANS-1,3-DICHLOROPROPENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
TRICHLOROETHENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
TRICHLOROFLUOROMETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
VINYL ACETATE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
VINYL CHLORIDE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24

Table A-12. Deer Island Influent Characterization (Low detection limit analyses; North System), July - December 2013

Volatile Organics (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
1,1,1-TRICHLOROETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
1,1,2,2-TETRACHLOROETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
1,1,2-TRICHLOROETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
1,1-DICHLOROETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
1,1-DICHLOROETHENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
1,2-DICHLOROBENZENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
1,2-DICHLOROETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
1,2-DICHLOROPROPANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
1,3-DICHLOROBENZENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
1,4-DICHLOROBENZENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
2-BUTANONE	**7.21**	**6.08**	**2.9**	**8.81**	0.5	0.5	4.44	8.88	7 of 12
2-CHLOROETHYL VINYL ETHER	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
2-HEXANONE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
4-METHYL-2-PENTANONE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
ACETONE	**550**	**125**	**129**	**174**	**85.7**	**96**	206	913	12 of 12
ACROLEIN	1	1	1	1	1	1	1	1	0 of 12
ACRYLONITRILE	1	1	1	1	1	1	1	1	0 of 12
BENZENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
BROMODICHLOROMETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
BROMOFORM	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
BROMOMETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
CARBON DISULFIDE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
CARBON TETRACHLORIDE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
CHLOROBENZENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
CHLOROETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
CHLOROFORM	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
CHLOROMETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
CIS-1,2-DICHLOROETHENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
CIS-1,3-DICHLOROPROPENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
DIBROMOCHLOROMETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
ETHYLBENZENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
M,P-XYLENE	1	1	1	1	1	1	1	1	0 of 12
METHYLENE CHLORIDE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
O-XYLENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
STYRENE	**4.62**	**4.86**	0.5	0.5	0.5	0.5	2.05	9.24	2 of 12
TETRACHLOROETHENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
TOLUENE	0.5	0.5	0.5	**6.09**	**2.84**	0.5	1.72	6.29	3 of 12
TRANS-1,2-DICHLOROETHENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
TRANS-1,3-DICHLOROPROPENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
TRICHLOROETHENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
TRICHLOROFLUOROMETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
VINYL ACETATE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
VINYL CHLORIDE	0.5	0.5	0.5	0.5	0.5	0.2	0.452	0.5	0 of 12

Notes

DEC is the now-defunct Detailed Effluent Characterization project, which includes low-detection limit methods not approved by the EPA. DEC sampling is now carried out under the NP-EM project.

~: No data or no samples taken

Results in **bold** indicate one or more detects that month

Yearly averages are calculated from individual results collected during the reporting period and are flow-weighted.

Non-detected compounds are assumed to equal one half of the detection limit for metals and inorganics and one tenth of the reporting limit for organic compounds.

Table A-13. Deer Island Influent Loadings (Low detection limit analyses; North System), July 2012 - June 2013

Semivolatile Organics (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
1,2,4-TRICHLOROBENZENE	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
1,2-DICHLOROBENZENE	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
1,2-DIPHENYLHYDRAZINE (AS AZOBENZENE)	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
1,3-DICHLOROBENZENE	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
1,4-DICHLOROBENZENE	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
2,2'-OXYBIS(1-CHLOROPROPANE)	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
2,4,5-TRICHLOROPHENOL	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
2,4,6-TRICHLOROPHENOL	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
2,4-DICHLOROPHENOL	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
2,4-DIMETHYLPHENOL	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
2,4-DINITROPHENOL	7.17	7.06	7.26	7.3	7.2	7.64	8.89	8.01	12.4	11.1	7.57	10.1	8.48	12.9	0 of 24
2,4-DINITROTOLUENE	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
2,6-DINITROTOLUENE	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
2-CHLORONAPHTHALENE	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
2-CHLOROPHENOL	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
2-METHYL-4,6-DINITROPHENOL	7.17	7.06	7.26	7.3	7.2	7.64	8.89	8.01	12.4	11.1	7.57	10.1	8.48	12.9	0 of 24
2-METHYLNAPHTHALENE	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
2-METHYLPHENOL	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
2-NITROANILINE	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
2-NITROPHENOL	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
3,3'-DICHLOROBENZIDINE	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
3-NITROANILINE	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
4-BROMOPHENYL PHENYL ETHER	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
4-CHLORO-3-METHYLPHENOL	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
4-CHLOROANILINE	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
4-CHLOROPHENYL PHENYL ETHER	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
4-METHYLPHENOL (INCLUDES 3-METHYLPHENOL)	**26.6**	2.83	2.91	**16.4**	**20.9**	**19.5**	3.55	3.2	4.96	4.45	**38.7**	4.05	12.3	50.2	6 of 24
4-NITROANILINE	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
4-NITROPHENOL	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
ACENAPHTHENE	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
ACENAPHTHYLENE	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
ANILINE	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
ANTHRACENE	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
BENZIDINE	7.17	7.06	7.26	7.3	7.2	7.64	8.89	8.01	12.4	11.1	7.57	10.1	8.48	12.9	0 of 24
BENZO(A)ANTHRACENE	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
BENZO(A)PYRENE	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
BENZO(B)FLUORANTHENE	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
BENZO(G,H,I)PERYLENE	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
BENZO(K)FLUORANTHENE	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
BENZOIC ACID	7.17	7.06	7.26	7.3	7.2	7.64	8.89	8.01	12.4	11.1	7.57	10.1	8.48	12.9	0 of 24
BENZYL ALCOHOL	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	**27.4**	4.05	5.42	51.7	1 of 24
BIS(2-CHLOROETHOXY)METHANE	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
BIS(2-CHLOROETHYL)ETHER	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
BIS(2-ETHYLHEXYL)PHTHALATE	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
BUTYLBENZYLPHTHALATE	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
CARBAZOLE	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
CHRYSENE	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
DIBENZO(A,H)ANTHRACENE	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
DIBENZOFURAN	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
DIETHYLPHTHALATE	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
DIMETHYLPHTHALATE	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
DI-N-BUTYLPHTHALATE	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
DI-N-OCTYLPHTHALATE	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
FLUORANTHENE	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
FLUORENE	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
HEXACHLOROBENZENE	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
HEXACHLOROBUTADIENE	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
HEXACHLOROCYCLOPENTADIENE	7.17	7.06	7.26	7.3	7.2	7.64	8.89	8.01	12.4	11.1	7.57	10.1	8.48	12.9	0 of 24
HEXACHLOROETHANE	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
INDENO(1,2,3-CD)PYRENE	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
ISOPHORONE	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
NAPHTHALENE	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
N-DECANE	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24

Table A-13. Deer Island Influent Loadings (Low detection limit analyses; North System), July - December 2013

Semivolatile Organics (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
1,2,4-TRICHLOROBENZENE	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
1,2-DICHLOROBENZENE	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
1,2-DIPHENYLHYDRAZINE (AS AZOBENZENE)	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
1,3-DICHLOROBENZENE	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
1,4-DICHLOROBENZENE	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
2,2'-OXYBIS(1-CHLOROPROPANE)	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
2,4,5-TRICHLOROPHENOL	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
2,4,6-TRICHLOROPHENOL	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
2,4-DICHLOROPHENOL	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
2,4-DIMETHYLPHENOL	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
2,4-DINITROPHENOL	8.41	7.74	6.77	7.81	6.35	7.72	7.47	8.84	0 of 12
2,4-DINITROTOLUENE	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
2,6-DINITROTOLUENE	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
2-CHLORONAPHTHALENE	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
2-CHLOROPHENOL	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
2-METHYL-4,6-DINITROPHENOL	8.41	7.74	6.77	7.81	6.35	7.72	7.47	8.84	0 of 12
2-METHYLNAPHTHALENE	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
2-METHYLPHENOL	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
2-NITROANILINE	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
2-NITROPHENOL	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
3,3'-DICHLOROBENZIDINE	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
3-NITROANILINE	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
4-BROMOPHENYL PHENYL ETHER	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
4-CHLORO-3-METHYLPHENOL	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
4-CHLOROANILINE	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
4-CHLOROPHENYL PHENYL ETHER	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
4-METHYLPHENOL (INCLUDES 3-METHYLPHENOL)	3.37	**16.5**	**37.9**	**19.7**	**48.9**	**30.8**	26.2	68.8	7 of 12
4-NITROANILINE	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
4-NITROPHENOL	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
ACENAPHTHENE	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
ACENAPHTHYLENE	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
ANILINE	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
ANTHRACENE	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
BENZIDINE	8.41	7.74	6.77	7.81	6.35	7.72	7.47	8.84	0 of 12
BENZO(A)ANTHRACENE	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
BENZO(A)PYRENE	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
BENZO(B)FLUORANTHENE	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
BENZO(G,H,I)PERYLENE	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
BENZO(K)FLUORANTHENE	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
BENZOIC ACID	8.41	7.74	6.77	7.81	**36.3**	7.72	12.5	66.2	1 of 12
BENZYL ALCOHOL	3.37	3.1	**35.8**	3.12	**16.4**	3.09	10.8	42	3 of 12
BIS(2-CHLOROETHOXY)METHANE	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
BIS(2-CHLOROETHYL)ETHER	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
BIS(2-ETHYLHEXYL)PHTHALATE	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
BUTYLBENZYLPHTHALATE	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
CARBAZOLE	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
CHRYSENE	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
DIBENZO(A,H)ANTHRACENE	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
DIBENZOFURAN	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
DIETHYLPHTHALATE	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
DIMETHYLPHTHALATE	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
DI-N-BUTYLPHTHALATE	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
DI-N-OCTYLPHTHALATE	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
FLUORANTHENE	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
FLUORENE	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
HEXACHLOROBENZENE	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
HEXACHLOROBUTADIENE	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
HEXACHLOROCYCLOPENTADIENE	8.41	7.74	6.77	7.81	6.35	7.72	7.47	8.84	0 of 12
HEXACHLOROETHANE	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
INDENO(1,2,3-CD)PYRENE	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
ISOPHORONE	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
NAPHTHALENE	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
N-DECANE	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12

Table A-13. Deer Island Influent Loadings (Low detection limit analyses; North System), July 2012 - June 2013

Semivolatile Organics (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
NITROBENZENE	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
N-NITROSODIMETHYLAMINE (NDMA)	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
N-NITROSODI-N-PROPYLAMINE (NDPA)	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
N-NITROSODIPHENYLAMINE	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
N-OCTADECANE	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
PENTACHLOROPHENOL	7.17	7.06	7.26	7.3	7.2	7.64	8.89	8.01	12.4	11.1	7.57	10.1	8.48	12.9	0 of 24
PHENANTHRENE	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
PHENOL	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24
PYRENE	2.87	2.83	2.91	2.92	2.88	3.06	3.55	3.2	4.96	4.45	3.03	4.05	3.39	5.14	0 of 24

Polycyclic Aromatic Hydrocarbons (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
1-METHYLNAPHTHALENE	~	**0.128**	~	**0.403**	~	**0.257**	~	**0.188**	~	**0.0749**	~	**0.168**	0.203	0.465	11 of 12
1-METHYLPHENANTHRENE	~	**0.00965**	~	**0.232**	~	**0.0431**	~	**0.0428**	~	**0.0165**	~	**0.0522**	0.0661	0.332	11 of 12
2,3,5-TRIMETHYLNAPHTHYLENE	~	**0.0622**	~	**0.156**	~	**0.201**	~	**0.0896**	~	**0.0462**	~	**0.0755**	0.105	0.231	12 of 12
2,6-DIMETHYLNAPHTHALENE	~	**0.0708**	~	**0.223**	~	**0.199**	~	**0.109**	~	**0.0502**	~	**0.13**	0.13	0.232	12 of 12
2-METHYLNAPHTHALENE	~	**0.113**	~	**0.367**	~	**0.187**	~	**0.156**	~	**0.0691**	~	**0.129**	0.17	0.447	12 of 12
ACENAPHTHENE	~	**0.0779**	~	**0.26**	~	**0.0615**	~	**0.126**	~	**0.0367**	~	**0.105**	0.111	0.358	12 of 12
ACENAPHTHYLENE	~	**0.00691**	~	**0.069**	~	**0.0142**	~	**0.012**	~	**0.00548**	~	**0.0085**	0.0194	0.0945	11 of 12
ANTHRACENE	~	**0.0313**	~	**0.26**	~	**0.019**	~	**0.0577**	~	**0.0172**	~	**0.0686**	0.0757	0.377	12 of 12
BENZO(A)ANTHRACENE	~	**0.0606**	~	**0.4**	~	**0.0336**	~	**0.0924**	~	**0.0392**	~	**0.139**	0.127	0.533	12 of 12
BENZO(A)PYRENE	~	**0.0627**	~	**0.371**	~	**0.0342**	~	**0.0842**	~	**0.0433**	~	**0.13**	0.121	0.499	12 of 12
BENZO(B)FLUORANTHENE	~	**0.0845**	~	**0.355**	~	**0.0523**	~	**0.129**	~	**0.0686**	~	**0.184**	0.146	0.441	12 of 12
BENZO(E)PYRENE	~	**0.0481**	~	**0.229**	~	**0.0321**	~	**0.0671**	~	**0.0396**	~	**0.104**	0.0866	0.291	12 of 12
BENZO(G,H,I)PERYLENE	~	**0.0353**	~	**0.153**	~	**0.0252**	~	**0.0521**	~	**0.0292**	~	**0.106**	0.0668	0.181	12 of 12
BENZO(K)FLUORANTHENE	~	**0.0297**	~	**0.121**	~	**0.0143**	~	**0.039**	~	**0.0315**	~	**0.0693**	0.0508	0.152	12 of 12
BENZOTHIAZOLE	~	**0.238**	~	**0.0546**	~	**0.0452**	~	**0.0483**	~	**0.0185**	~	**0.106**	0.0851	0.243	12 of 12
BIPHENYL	~	**0.0406**	~	**0.103**	~	**0.0705**	~	**0.0671**	~	**0.0216**	~	**0.0645**	0.0613	0.107	11 of 12
C1-CHRYSENES	~	**0.0291**	~	**0.307**	~	**0.0217**	~	**0.0399**	~	**0.0144**	~	**0.123**	0.0891	0.446	11 of 12
C1-DIBENZOTHIOPHENES	~	**0.0561**	~	0.000751	~	**0.0917**	~	**0.0566**	~	**0.0251**	~	0.000951	0.0385	0.0924	8 of 12
C1-FLUORANTHENES/PYRENES	~	**0.0804**	~	**0.718**	~	**0.074**	~	**0.108**	~	**0.0582**	~	**0.0896**	0.188	0.999	12 of 12
C1-FLUORENES	~	**0.0878**	~	**0.256**	~	**0.18**	~	**0.169**	~	0.0011	~	**0.095**	0.132	0.33	10 of 12
C1-NAPHTHALENES	~	**0.17**	~	**0.548**	~	**0.326**	~	**0.26**	~	**0.104**	~	**0.309**	0.286	0.648	12 of 12
C1-PHENANTHRENES/ANTHRACENES	~	**0.0763**	~	**0.865**	~	**0.337**	~	**0.223**	~	**0.0954**	~	**0.355**	0.325	1.17	11 of 12
C2-CHRYSENES	~	0.00138	~	**0.151**	~	0.00156	~	**0.102**	~	0.0011	~	0.000951	0.043	0.302	3 of 12
C2-DIBENZOTHIOPHENES	~	0.00138	~	**0.166**	~	0.00156	~	**0.0341**	~	**0.0198**	~	0.000951	0.0373	0.332	3 of 12
C2-FLUORANTHENES/PYRENES	~	**0.0221**	~	**0.326**	~	**0.0485**	~	**0.0708**	~	**0.0349**	~	**0.0229**	0.0876	0.454	9 of 12
C2-FLUORENES	~	0.00138	~	**0.213**	~	0.00156	~	**0.101**	~	**0.0541**	~	0.000951	0.062	0.425	3 of 12
C2-NAPHTHALENES	~	**0.232**	~	**0.83**	~	**0.631**	~	**0.343**	~	**0.156**	~	**0.496**	0.448	0.897	12 of 12
C2-PHENANTHRENES/ANTHRACENES	~	0.00138	~	**0.58**	~	**0.283**	~	**0.186**	~	**0.108**	~	**0.301**	0.243	0.747	10 of 12
C3-CHRYSENES	~	0.00138	~	**0.118**	~	0.00156	~	0.000788	~	0.0011	~	0.000951	0.0206	0.234	1 of 12
C3-DIBENZOTHIOPHENES	~	0.00138	~	**0.0888**	~	0.00156	~	0.000788	~	0.0011	~	0.000951	0.0158	0.177	1 of 12
C3-FLUORANTHENES/PYRENES	~	0.00138	~	**0.139**	~	0.00156	~	0.000788	~	0.0011	~	0.000951	0.0241	0.178	2 of 12
C3-FLUORENES	~	0.00138	~	**0.16**	~	0.00156	~	0.000788	~	**0.0571**	~	0.000951	0.037	0.319	2 of 12
C3-NAPHTHALENES	~	**0.582**	~	**1.49**	~	**1.96**	~	**1.34**	~	**0.193**	~	**0.425**	0.998	2.05	12 of 12
C3-PHENANTHRENES/ANTHRACENES	~	0.00138	~	**0.39**	~	**0.369**	~	**0.119**	~	**0.0617**	~	**0.0702**	0.169	0.44	8 of 12
C4-CHRYSENES	~	0.00138	~	0.000751	~	0.00156	~	0.000788	~	0.0011	~	0.000951	0.00109	0.00167	0 of 12
C4-NAPHTHALENES	~	**0.192**	~	**0.484**	~	**0.552**	~	**0.245**	~	**0.158**	~	0.000951	0.272	0.597	10 of 12
C4-PHENANTHRENES/ANTHRACENES	~	0.00138	~	**0.168**	~	0.00156	~	0.000788	~	0.0011	~	**0.0242**	0.0328	0.335	2 of 12
CHRYSENE	~	**0.0742**	~	**0.413**	~	**0.0424**	~	**0.11**	~	**0.0556**	~	**0.191**	0.148	0.537	12 of 12
DIBENZO(A,H)ANTHRACENE	~	**0.00375**	~	**0.0248**	~	**0.00651**	~	**0.0123**	~	**0.0044**	~	**0.023**	0.0125	0.0489	9 of 12
DIBENZOFURAN	~	**0.031**	~	**0.0523**	~	**0.0317**	~	**0.0482**	~	**0.00441**	~	**0.0469**	0.0358	0.0658	11 of 12
DIBENZOTHIOPHENE	~	**0.0229**	~	**0.147**	~	**0.0274**	~	**0.0384**	~	**0.0123**	~	**0.0508**	0.0498	0.218	11 of 12
FLUORANTHENE	~	**0.135**	~	**0.734**	~	**0.103**	~	**0.231**	~	**0.122**	~	**0.423**	0.291	0.951	12 of 12
FLUORENE	~	**0.0581**	~	**0.214**	~	**0.0704**	~	**0.0847**	~	**0.0309**	~	**0.0834**	0.0902	0.297	12 of 12
INDENO(1,2,3-CD)PYRENE	~	**0.0373**	~	**0.162**	~	**0.0236**	~	**0.0641**	~	**0.0301**	~	**0.0292**	0.0577	0.189	11 of 12
NAPHTHALENE	~	**0.29**	~	**0.592**	~	**0.203**	~	**0.341**	~	**0.171**	~	**0.295**	0.315	0.725	12 of 12
PERYLENE	~	**0.0134**	~	**0.0571**	~	**0.00688**	~	**0.0158**	~	**0.00694**	~	**0.0276**	0.0213	0.0727	11 of 12
PHENANTHRENE	~	**0.208**	~	**1.22**	~	**0.202**	~	**0.311**	~	**0.113**	~	**0.386**	0.407	1.77	12 of 12
PYRENE	~	**0.14**	~	**0.944**	~	**0.107**	~	**0.222**	~	**0.117**	~	**0.343**	0.312	1.28	12 of 12

Table A-13. Deer Island Influent Loadings (Low detection limit analyses; North System), July - December 2013

Semivolatile Organics (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
NITROBENZENE	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
N-NITROSODIMETHYLAMINE (NDMA)	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
N-NITROSODI-N-PROPYLAMINE (NDPA)	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
N-NITROSODIPHENYLAMINE	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
N-OCTADECANE	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
PENTACHLOROPHENOL	8.41	7.74	6.77	7.81	6.35	7.72	7.47	8.84	0 of 12
PHENANTHRENE	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
PHENOL	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12
PYRENE	3.37	3.1	2.71	3.12	2.54	3.09	2.99	3.54	0 of 12

Polycyclic Aromatic Hydrocarbons (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
1-METHYLNAPHTHALENE	~	**0.0732**	~	**0.131**	~	**0.0274**	0.0773	0.174	6 of 6
1-METHYLPHENANTHRENE	~	**0.0224**	~	**0.0305**	~	**0.0191**	0.024	0.0492	6 of 6
2,3,5-TRIMETHYLNAPHTHYLENE	~	**0.0338**	~	**0.0932**	~	**0.023**	0.05	0.129	6 of 6
2,6-DIMETHYLNAPHTHALENE	~	**0.0341**	~	**0.0992**	~	**0.0408**	0.058	0.129	6 of 6
2-METHYLNAPHTHALENE	~	**0.0635**	~	**0.113**	~	**0.0267**	0.0677	0.141	6 of 6
ACENAPHTHENE	~	**0.0542**	~	**0.0893**	~	**0.0419**	0.0618	0.112	6 of 6
ACENAPHTHYLENE	~	**0.00294**	~	**0.00353**	~	**0.0134**	0.00661	0.0185	6 of 6
ANTHRACENE	~	**0.0239**	~	**0.0519**	~	**0.0233**	0.033	0.0714	6 of 6
BENZO(A)ANTHRACENE	~	**0.0343**	~	**0.0883**	~	**0.0486**	0.0571	0.115	6 of 6
BENZO(A)PYRENE	~	**0.0301**	~	**0.0839**	~	**0.0403**	0.0514	0.107	6 of 6
BENZO(B)FLUORANTHENE	~	**0.0422**	~	**0.109**	~	**0.0822**	0.0778	0.141	6 of 6
BENZO(E)PYRENE	~	**0.0237**	~	**0.0618**	~	**0.0343**	0.0399	0.079	6 of 6
BENZO(G,H,I)PERYLENE	~	**0.0195**	~	**0.0436**	~	**0.0117**	0.0249	0.0514	5 of 6
BENZO(K)FLUORANTHENE	~	**0.0196**	~	**0.0449**	~	**0.0215**	0.0286	0.0585	6 of 6
BENZOTHIAZOLE	~	**0.0186**	~	**0.0422**	~	**0.0372**	0.0327	0.0593	6 of 6
BIPHENYL	~	**0.0237**	~	**0.0496**	~	**0.00512**	0.0261	0.0589	6 of 6
C1-CHRYSENES	~	**0.0183**	~	**0.0559**	~	**0.0446**	0.0396	0.067	6 of 6
C1-DIBENZOTHIOPHENES	~	**0.112**	~	**0.0929**	~	0.000747	0.0686	0.16	4 of 6
C1-FLUORANTHENES/PYRENES	~	**0.0481**	~	**0.115**	~	**0.0688**	0.0773	0.15	6 of 6
C1-FLUORENES	~	**0.0541**	~	**0.129**	~	**0.0655**	0.0828	0.161	6 of 6
C1-NAPHTHALENES	~	**0.0941**	~	**0.174**	~	**0.0547**	0.108	0.227	6 of 6
C1-PHENANTHRENES/ANTHRACENES	~	**0.0967**	~	**0.228**	~	**0.138**	0.154	0.298	6 of 6
C2-CHRYSENES	~	**0.0227**	~	**0.378**	~	0.000747	0.134	0.583	3 of 6
C2-DIBENZOTHIOPHENES	~	**0.0297**	~	**0.071**	~	0.000747	0.0338	0.0917	4 of 6
C2-FLUORANTHENES/PYRENES	~	**0.0329**	~	**0.0773**	~	0.000747	0.037	0.0937	4 of 6
C2-FLUORENES	~	0.000755	~	0.000688	~	0.000747	0.00073	0.000772	0 of 6
C2-NAPHTHALENES	~	**0.0944**	~	**0.29**	~	**0.139**	0.175	0.398	6 of 6
C2-PHENANTHRENES/ANTHRACENES	~	**0.0723**	~	**0.162**	~	**0.0797**	0.105	0.216	6 of 6
C3-CHRYSENES	~	0.000755	~	0.000688	~	0.000747	0.00073	0.000772	0 of 6
C3-DIBENZOTHIOPHENES	~	0.000755	~	0.000688	~	0.000747	0.00073	0.000772	0 of 6
C3-FLUORANTHENES/PYRENES	~	0.000755	~	0.000688	~	0.000747	0.00073	0.000772	0 of 6
C3-FLUORENES	~	0.000755	~	0.000688	~	0.000747	0.00073	0.000772	0 of 6
C3-NAPHTHALENES	~	**0.382**	~	**1.04**	~	**0.0687**	0.496	1.14	5 of 6
C3-PHENANTHRENES/ANTHRACENES	~	0.000755	~	0.000688	~	0.000747	0.00073	0.000772	0 of 6
C4-CHRYSENES	~	0.000755	~	**0.642**	~	0.000747	0.214	1.28	1 of 6
C4-NAPHTHALENES	~	**0.0822**	~	**0.275**	~	0.000747	0.119	0.372	4 of 6
C4-PHENANTHRENES/ANTHRACENES	~	0.000755	~	0.000688	~	0.000747	0.00073	0.000772	0 of 6
CHRYSENE	~	**0.0436**	~	**0.101**	~	**0.0561**	0.0668	0.13	6 of 6
DIBENZO(A,H)ANTHRACENE	~	**0.00978**	~	**0.0157**	~	0.000747	0.00875	0.0194	4 of 6
DIBENZOFURAN	~	**0.0291**	~	**0.0477**	~	**0.0178**	0.0315	0.0613	6 of 6
DIBENZOTHIOPHENE	~	**0.0159**	~	**0.0324**	~	**0.0153**	0.0212	0.0423	6 of 6
FLUORANTHENE	~	**0.0989**	~	**0.232**	~	**0.0975**	0.143	0.314	6 of 6
FLUORENE	~	**0.0433**	~	**0.0841**	~	**0.0243**	0.0506	0.11	6 of 6
INDENO(1,2,3-CD)PYRENE	~	**0.0196**	~	**0.0502**	~	0.000747	0.0235	0.0611	4 of 6
NAPHTHALENE	~	**0.153**	~	**0.207**	~	**0.0675**	0.143	0.213	6 of 6
PERYLENE	~	**0.00644**	~	**0.0183**	~	**0.00761**	0.0108	0.0221	6 of 6
PHENANTHRENE	~	**0.139**	~	**0.311**	~	**0.132**	0.194	0.423	6 of 6
PYRENE	~	**0.0875**	~	**0.213**	~	**0.09**	0.13	0.28	6 of 6

Table A-13. Deer Island Influent Loadings (Low detection limit analyses; North System), July 2012 - June 2013

Organochlorine Pesticides and PCBs (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
2,4'-DDD	~	0.000584	~	0.000286	~	0.000294	~	0.000321	~	0.00046	~	0.000404	0.000391	0.00061	0 of 12
2,4'-DDE	~	0.000584	~	0.000286	~	0.000294	~	0.000321	~	0.00046	~	0.000404	0.000391	0.00061	0 of 12
2,4'-DDT	~	0.000584	~	0.000286	~	0.000294	~	0.000321	~	0.00046	~	0.000404	0.000391	0.00061	0 of 12
4,4'-DDD	~	0.000584	~	0.000286	~	**0.00147**	~	0.000321	~	**0.0061**	~	0.000404	0.00153	0.0118	2 of 12
4,4'-DDE	~	**0.00296**	~	0.000286	~	0.000294	~	0.000321	~	0.00046	~	**0.00252**	0.00114	0.00537	3 of 12
4,4'-DDT	~	0.000584	~	0.000286	~	0.000294	~	0.000321	~	0.00046	~	0.000404	0.000391	0.00061	0 of 12
ALDRIN	~	0.000584	~	0.000286	~	0.000294	~	0.000321	~	0.00046	~	0.000404	0.000391	0.00061	0 of 12
ALPHA-CHLORDANE	~	**0.00349**	~	**0.00202**	~	0.000294	~	**0.00278**	~	**0.00542**	~	**0.00317**	0.00286	0.0104	8 of 12
BZ 101 PENTACHLOROBIPHENYL	~	**0.00197**	~	**0.00132**	~	0.000294	~	0.000321	~	0.00046	~	**0.00134**	0.000951	0.00338	4 of 12
BZ 105 PENTACHLOROBIPHENYL	~	0.000584	~	0.000286	~	0.000294	~	0.000321	~	0.00046	~	0.000404	0.000391	0.00061	0 of 12
BZ 118 PENTACHLOROBIPHENYL	~	0.000584	~	**0.000725**	~	0.000294	~	0.000321	~	0.00046	~	**0.00132**	0.000618	0.0023	2 of 12
BZ 126 PENTACHLOROBIPHENYL	~	0.000584	~	0.000286	~	0.000294	~	0.000321	~	0.00046	~	0.000404	0.000391	0.00061	0 of 12
BZ 128 HEXACHLOROBIPHENYL	~	0.000584	~	0.000286	~	0.000294	~	0.000321	~	0.00046	~	0.000404	0.000391	0.00061	0 of 12
BZ 138 HEXACHLOROBIPHENYL	~	**0.0038**	~	**0.00123**	~	0.000294	~	**0.00151**	~	0.00046	~	**0.00258**	0.00165	0.00439	6 of 12
BZ 153 HEXACHLOROBIPHENYL	~	**0.00262**	~	**0.000974**	~	0.000294	~	0.000321	~	0.00046	~	**0.00132**	0.000999	0.00293	6 of 12
BZ 170 HEPTACHLOROBIPHENYL	~	0.000584	~	0.000286	~	0.000294	~	0.000321	~	0.00046	~	0.000404	0.000391	0.00061	0 of 12
BZ 18 TRICHLOROBIPHENYL	~	0.000584	~	0.000286	~	0.000294	~	0.000321	~	0.00046	~	0.000404	0.000391	0.00061	0 of 12
BZ 180 HEPTACHLOROBIPHENYL	~	**0.00126**	~	0.000286	~	0.000294	~	0.000321	~	0.00046	~	**0.00105**	0.000613	0.00192	2 of 12
BZ 187 HEPTACHLOROBIPHENYL	~	0.000584	~	**0.000394**	~	0.000294	~	0.000321	~	0.00046	~	0.000404	0.000409	0.00061	1 of 12
BZ 195 OCTACHLOROBIPHENYL	~	0.000584	~	0.000286	~	0.000294	~	0.000321	~	0.00046	~	0.000404	0.000391	0.00061	0 of 12
BZ 206 NONACHLOROBIPHENYL	~	0.000584	~	0.000286	~	0.000294	~	0.000321	~	0.00046	~	0.000404	0.000391	0.00061	0 of 12
BZ 209 DECACHLOROBIPHENYL	~	0.000584	~	0.000286	~	0.000294	~	0.000321	~	0.00046	~	0.000404	0.000391	0.00061	0 of 12
BZ 28 TRICHLOROBIPHENYL	~	0.000584	~	**0.000833**	~	0.000294	~	0.000321	~	0.00046	~	0.000404	0.000483	0.00138	1 of 12
BZ 44 TETRACHLOROBIPHENYL	~	0.000584	~	0.000286	~	0.000294	~	0.000321	~	0.00046	~	**0.000937**	0.00048	0.00153	1 of 12
BZ 52 TETRACHLOROBIPHENYL	~	**0.0016**	~	**0.00106**	~	0.000294	~	**0.00055**	~	0.00046	~	**0.00126**	0.000871	0.00265	4 of 12
BZ 66 TETRACHLOROBIPHENYL	~	0.000584	~	0.000286	~	0.000294	~	0.000321	~	0.00046	~	0.000404	0.000391	0.00061	0 of 12
BZ 77 TETRACHLOROBIPHENYL	~	0.000584	~	0.000286	~	0.000294	~	0.000321	~	0.00046	~	0.000404	0.000391	0.00061	0 of 12
BZ 8 DICHLOROBIPHENYL	~	0.000584	~	0.000286	~	0.000294	~	0.000321	~	0.00046	~	0.000404	0.000391	0.00061	0 of 12
CIS-NONACHLOR	~	0.000584	~	0.000286	~	0.000294	~	0.000321	~	0.00046	~	0.000404	0.000391	0.00061	0 of 12
DDMU	~	0.000584	~	0.000286	~	0.000294	~	0.000321	~	0.00046	~	0.000404	0.000391	0.00061	0 of 12
DIELDRIN	~	0.000584	~	0.000286	~	0.000294	~	0.000321	~	0.00046	~	0.000404	0.000391	0.00061	0 of 12
ENDRIN	~	0.000584	~	0.000286	~	0.000294	~	0.000321	~	0.00046	~	0.000404	0.000391	0.00061	0 of 12
GAMMA-BHC	~	0.000584	~	0.000286	~	0.000294	~	0.000321	~	0.00046	~	0.000404	0.000391	0.00061	0 of 12
GAMMA-CHLORDANE	~	**0.00444**	~	**0.00247**	~	**0.000911**	~	**0.00314**	~	**0.00456**	~	**0.00286**	0.00306	0.00833	10 of 12
HEPTACHLOR	~	0.000584	~	0.000286	~	0.000294	~	0.000321	~	0.00046	~	0.000404	0.000391	0.00061	0 of 12
HEPTACHLOR EPOXIDE	~	0.000584	~	0.000286	~	0.000294	~	0.000321	~	0.00046	~	0.000404	0.000391	0.00061	0 of 12
HEXACHLOROBENZENE	~	0.000584	~	0.000286	~	0.000294	~	0.000321	~	0.00046	~	**0.000489**	0.000406	0.00061	1 of 12
MIREX	~	0.000584	~	0.000286	~	0.000294	~	0.000321	~	0.00046	~	0.000404	0.000391	0.00061	0 of 12
OXYCHLORDANE	~	0.000584	~	0.000286	~	0.000294	~	0.000321	~	0.00046	~	0.000404	0.000391	0.00061	0 of 12
TOTAL AMP PCBS	~	**0.0104**	~	**0.00582**	~	0.000294	~	**0.00191**	~	0.00046	~	**0.00896**	0.00464	0.0158	7 of 12
TOTAL CHLORDANE	~	**0.00618**	~	**0.00307**	~	**0.000772**	~	**0.00381**	~	**0.00683**	~	**0.0049**	0.00426	0.0132	9 of 12
TOTAL DDT	~	**0.00296**	~	0.000286	~	**0.00147**	~	0.000321	~	**0.0061**	~	**0.00252**	0.00228	0.0118	5 of 12
TRANS-NONACHLOR	~	**0.00296**	~	**0.00105**	~	**0.000772**	~	**0.00103**	~	**0.00162**	~	**0.00173**	0.00153	0.00537	9 of 12

Table A-13. Deer Island Influent Loadings (Low detection limit analyses; North System), July - December 2013

Organochlorine Pesticides and PCBs (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
2,4'-DDD	~	0.000292	~	0.000281	~	**0.000698**	0.000424	0.00109	1 of 6
2,4'-DDE	~	0.000292	~	0.000281	~	0.000299	0.000291	0.000302	0 of 6
2,4'-DDT	~	0.000292	~	0.000281	~	0.000299	0.000291	0.000302	0 of 6
4,4'-DDD	~	0.000292	~	0.000281	~	0.000299	0.000291	0.000302	0 of 6
4,4'-DDE	~	**0.00131**	~	0.000281	~	**0.00102**	0.000873	0.00163	4 of 6
4,4'-DDT	~	0.000292	~	0.000281	~	0.000299	0.000291	0.000302	0 of 6
ALDRIN	~	0.000292	~	0.000281	~	0.000299	0.000291	0.000302	0 of 6
ALPHA-CHLORDANE	~	**0.00242**	~	**0.0019**	~	**0.000993**	0.00177	0.00305	6 of 6
BZ 101 PENTACHLOROBIPHENYL	~	**0.00119**	~	0.000281	~	**0.000649**	0.000707	0.00127	4 of 6
BZ 105 PENTACHLOROBIPHENYL	~	0.000292	~	0.000281	~	0.000299	0.000291	0.000302	0 of 6
BZ 118 PENTACHLOROBIPHENYL	~	**0.00132**	~	0.000281	~	**0.000582**	0.000728	0.00145	4 of 6
BZ 126 PENTACHLOROBIPHENYL	~	0.000292	~	0.000281	~	0.000299	0.000291	0.000302	0 of 6
BZ 128 HEXACHLOROBIPHENYL	~	0.000292	~	0.000281	~	0.000299	0.000291	0.000302	0 of 6
BZ 138 HEXACHLOROBIPHENYL	~	**0.00123**	~	**0.00128**	~	**0.000821**	0.00111	0.00141	6 of 6
BZ 153 HEXACHLOROBIPHENYL	~	**0.000723**	~	**0.000913**	~	**0.000643**	0.000759	0.00127	6 of 6
BZ 170 HEPTACHLOROBIPHENYL	~	0.000292	~	0.000281	~	0.000299	0.000291	0.000302	0 of 6
BZ 18 TRICHLOROBIPHENYL	~	0.000292	~	0.000281	~	0.000299	0.000291	0.000302	0 of 6
BZ 180 HEPTACHLOROBIPHENYL	~	**0.000567**	~	0.000281	~	0.000299	0.000383	0.000839	1 of 6
BZ 187 HEPTACHLOROBIPHENYL	~	**0.000394**	~	0.000281	~	0.000299	0.000325	0.000492	1 of 6
BZ 195 OCTACHLOROBIPHENYL	~	0.000292	~	0.000281	~	0.000299	0.000291	0.000302	0 of 6
BZ 206 NONACHLOROBIPHENYL	~	0.000292	~	0.000281	~	0.000299	0.000291	0.000302	0 of 6
BZ 209 DECACHLOROBIPHENYL	~	0.000292	~	0.000281	~	0.000299	0.000291	0.000302	0 of 6
BZ 28 TRICHLOROBIPHENYL	~	0.000292	~	0.000281	~	0.000299	0.000291	0.000302	0 of 6
BZ 44 TETRACHLOROBIPHENYL	~	0.000292	~	0.000281	~	0.000299	0.000291	0.000302	0 of 6
BZ 52 TETRACHLOROBIPHENYL	~	**0.00105**	~	0.000281	~	**0.000533**	0.000622	0.00106	3 of 6
BZ 66 TETRACHLOROBIPHENYL	~	0.000292	~	0.000281	~	0.000299	0.000291	0.000302	0 of 6
BZ 77 TETRACHLOROBIPHENYL	~	0.000292	~	0.000281	~	0.000299	0.000291	0.000302	0 of 6
BZ 8 DICHLOROBIPHENYL	~	0.000292	~	0.000281	~	0.000299	0.000291	0.000302	0 of 6
CIS-NONACHLOR	~	0.000292	~	0.000281	~	0.000299	0.000291	0.000302	0 of 6
DDMU	~	0.000292	~	0.000281	~	0.000299	0.000291	0.000302	0 of 6
DIELDRIN	~	0.000292	~	0.000281	~	0.000299	0.000291	0.000302	0 of 6
ENDRIN	~	0.000292	~	0.000281	~	0.000299	0.000291	0.000302	0 of 6
GAMMA-BHC	~	0.000292	~	0.000281	~	0.000299	0.000291	0.000302	0 of 6
GAMMA-CHLORDANE	~	**0.00237**	~	**0.00202**	~	**0.00133**	0.00191	0.00299	6 of 6
HEPTACHLOR	~	0.000292	~	0.000281	~	0.000299	0.000291	0.000302	0 of 6
HEPTACHLOR EPOXIDE	~	0.000292	~	0.000281	~	0.000299	0.000291	0.000302	0 of 6
HEXACHLOROBENZENE	~	0.000292	~	**0.000955**	~	**0.000217**	0.000488	0.000989	4 of 6
MIREX	~	0.000292	~	0.000281	~	0.000299	0.000291	0.000302	0 of 6
OXYCHLORDANE	~	0.000292	~	0.000281	~	0.000299	0.000291	0.000302	0 of 6
TOTAL AMP PCBS	~	**0.00618**	~	**0.00219**	~	**0.00308**	0.00382	0.00715	6 of 6
TOTAL CHLORDANE	~	**0.00359**	~	**0.00252**	~	**0.00151**	0.00254	0.0044	6 of 6
TOTAL DDT	~	**0.00131**	~	0.000281	~	**0.00157**	0.00106	0.0021	4 of 6
TRANS-NONACHLOR	~	**0.00117**	~	**0.000746**	~	**0.000522**	0.000813	0.00134	5 of 6

Table A-13. Deer Island Influent Loadings (Low detection limit analyses; North System), July 2012 - June 2013

Volatile Organics (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
1,1,1-TRICHLOROETHANE	0.653	0.678	0.658	0.693	0.767	0.686	0.841	0.743	1.19	0.901	0.823	0.767	0.783	1.21	0 of 24
1,1,2,2-TETRACHLOROETHANE	0.653	0.678	0.658	0.693	0.767	0.686	0.841	0.743	1.19	0.901	0.823	0.767	0.783	1.21	0 of 24
1,1,2-TRICHLOROETHANE	0.653	0.678	0.658	0.693	0.767	0.686	0.841	0.743	1.19	0.901	0.823	0.767	0.783	1.21	0 of 24
1,1-DICHLOROETHANE	0.653	0.678	0.658	0.693	0.767	0.686	0.841	0.743	1.19	0.901	0.823	0.767	0.783	1.21	0 of 24
1,1-DICHLOROETHENE	0.653	0.678	0.658	0.693	0.767	0.686	0.841	0.743	1.19	0.901	0.823	0.767	0.783	1.21	0 of 24
1,2-DICHLOROBENZENE	0.653	0.678	0.658	0.693	0.767	0.686	0.841	0.743	1.19	0.901	0.823	0.767	0.783	1.21	0 of 24
1,2-DICHLOROETHANE	0.653	0.678	0.658	0.693	0.767	0.686	0.841	0.743	1.19	0.901	0.823	0.767	0.783	1.21	0 of 24
1,2-DICHLOROPROPANE	0.653	0.678	0.658	0.693	0.767	0.686	0.841	0.743	1.19	0.901	0.823	0.767	0.783	1.21	0 of 24
1,3-DICHLOROBENZENE	0.653	0.678	0.658	0.693	0.767	0.686	0.841	0.743	1.19	0.901	0.823	0.767	0.783	1.21	0 of 24
1,4-DICHLOROBENZENE	0.653	0.678	0.658	0.693	0.767	0.686	0.841	0.743	1.19	0.901	0.823	0.767	0.783	1.21	0 of 24
2-BUTANONE	0.653	**4.27**	0.658	**8.97**	0.767	**10.3**	**4.66**	0.743	1.19	0.901	**4.17**	0.767	3.17	12.6	7 of 24
2-CHLOROETHYL VINYL ETHER	0.653	0.678	0.658	0.693	0.767	0.686	0.841	0.743	1.19	0.901	0.823	0.767	0.783	1.21	0 of 24
2-HEXANONE	0.653	0.678	0.658	0.693	0.767	0.686	0.841	0.743	1.19	0.901	0.823	0.767	0.783	1.21	0 of 24
4-METHYL-2-PENTANONE	0.653	0.678	0.658	0.693	0.767	0.686	0.841	0.743	1.19	0.901	0.823	0.767	0.783	1.21	0 of 24
ACETONE	**310**	**262**	**151**	**163**	**102**	**159**	**260**	**161**	**272**	**543**	**166**	**178**	227	947	24 of 24
ACROLEIN	1.31	1.36	1.32	1.39	1.53	1.37	1.68	1.49	2.38	1.8	1.65	1.53	1.57	2.41	0 of 24
ACRYLONITRILE	1.31	1.36	1.32	1.39	1.53	1.37	1.68	1.49	2.38	1.8	1.65	1.53	1.57	2.41	0 of 24
BENZENE	0.653	0.678	0.658	0.693	0.767	0.686	0.841	0.743	1.19	0.901	0.823	0.767	0.783	1.21	0 of 24
BROMODICHLOROMETHANE	0.653	0.678	0.658	0.693	0.767	0.686	0.841	0.743	1.19	0.901	0.823	0.767	0.783	1.21	0 of 24
BROMOFORM	0.653	0.678	0.658	0.693	0.767	0.686	0.841	0.743	1.19	0.901	0.823	0.767	0.783	1.21	0 of 24
BROMOMETHANE	0.653	0.678	0.658	0.693	0.767	0.686	0.841	0.743	1.19	0.901	0.823	0.767	0.783	1.21	0 of 24
CARBON DISULFIDE	0.653	0.678	0.658	0.693	0.767	**5.04**	0.841	0.743	1.19	0.901	0.823	0.767	1.15	9.39	1 of 24
CARBON TETRACHLORIDE	0.653	0.678	0.658	0.693	0.767	0.686	0.841	0.743	1.19	0.901	0.823	0.767	0.783	1.21	0 of 24
CHLOROBENZENE	0.653	0.678	0.658	0.693	0.767	0.686	0.841	0.743	1.19	0.901	0.823	0.767	0.783	1.21	0 of 24
CHLOROETHANE	0.653	0.678	0.658	0.693	0.767	0.686	0.841	0.743	1.19	0.901	0.823	0.767	0.783	1.21	0 of 24
CHLOROFORM	0.653	0.678	0.658	0.693	0.767	0.686	0.841	0.743	1.19	0.901	0.823	0.767	0.783	1.21	0 of 24
CHLOROMETHANE	0.653	0.678	0.658	0.693	0.767	0.686	0.841	0.743	1.19	0.901	0.823	0.767	0.783	1.21	0 of 24
CIS-1,2-DICHLOROETHENE	0.653	0.678	0.658	0.693	0.767	0.686	0.841	0.743	1.19	0.901	0.823	0.767	0.783	1.21	0 of 24
CIS-1,3-DICHLOROPROPENE	0.653	0.678	0.658	0.693	0.767	0.686	0.841	0.743	1.19	0.901	0.823	0.767	0.783	1.21	0 of 24
DIBROMOCHLOROMETHANE	0.653	0.678	0.658	0.693	0.767	0.686	0.841	0.743	1.19	0.901	0.823	0.767	0.783	1.21	0 of 24
ETHYLBENZENE	0.653	0.678	0.658	0.693	0.767	0.686	0.841	0.743	1.19	0.901	0.823	0.767	0.783	1.21	0 of 24
M,P-XYLENE	1.31	1.36	1.32	1.39	1.53	1.37	1.68	1.49	2.38	1.8	1.65	1.53	1.57	2.41	0 of 24
METHYLENE CHLORIDE	0.653	0.678	0.658	0.693	0.767	0.686	0.841	0.743	1.19	0.901	0.823	0.767	0.783	1.21	0 of 24
O-XYLENE	0.653	0.678	0.658	0.693	0.767	0.686	0.841	0.743	1.19	0.901	0.823	0.767	0.783	1.21	0 of 24
STYRENE	0.653	0.678	0.658	0.693	0.767	0.686	0.841	0.743	1.19	0.901	0.823	0.767	0.783	1.21	0 of 24
TETRACHLOROETHENE	0.653	0.678	0.658	0.693	0.767	0.686	0.841	0.743	1.19	0.901	0.823	0.767	0.783	1.21	0 of 24
TOLUENE	**7.88**	0.678	0.658	**3.9**	0.767	**6.95**	0.841	0.743	1.19	0.901	0.823	0.767	2.17	15.1	3 of 24
TRANS-1,2-DICHLOROETHENE	0.653	0.678	0.658	0.693	0.767	0.686	0.841	0.743	1.19	0.901	0.823	0.767	0.783	1.21	0 of 24
TRANS-1,3-DICHLOROPROPENE	0.653	0.678	0.658	0.693	0.767	0.686	0.841	0.743	1.19	0.901	0.823	0.767	0.783	1.21	0 of 24
TRICHLOROETHENE	0.653	0.678	0.658	0.693	0.767	0.686	0.841	0.743	1.19	0.901	0.823	0.767	0.783	1.21	0 of 24
TRICHLOROFLUOROMETHANE	0.653	0.678	0.658	0.693	0.767	0.686	0.841	0.743	1.19	0.901	0.823	0.767	0.783	1.21	0 of 24
VINYL ACETATE	0.653	0.678	0.658	0.693	0.767	0.686	0.841	0.743	1.19	0.901	0.823	0.767	0.783	1.21	0 of 24
VINYL CHLORIDE	0.653	0.678	0.658	0.693	0.767	0.686	0.841	0.743	1.19	0.901	0.823	0.767	0.783	1.21	0 of 24

Table A-13. Deer Island Influent Loadings (Low detection limit analyses; North System), July - December 2013

Volatile Organics (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
1,1,1-TRICHLOROETHANE	0.791	0.688	0.666	0.625	0.62	0.649	0.673	0.792	0 of 12
1,1,2,2-TETRACHLOROETHANE	0.791	0.688	0.666	0.625	0.62	0.649	0.673	0.792	0 of 12
1,1,2-TRICHLOROETHANE	0.791	0.688	0.666	0.625	0.62	0.649	0.673	0.792	0 of 12
1,1-DICHLOROETHANE	0.791	0.688	0.666	0.625	0.62	0.649	0.673	0.792	0 of 12
1,1-DICHLOROETHENE	0.791	0.688	0.666	0.625	0.62	0.649	0.673	0.792	0 of 12
1,2-DICHLOROBENZENE	0.791	0.688	0.666	0.625	0.62	0.649	0.673	0.792	0 of 12
1,2-DICHLOROETHANE	0.791	0.688	0.666	0.625	0.62	0.649	0.673	0.792	0 of 12
1,2-DICHLOROPROPANE	0.791	0.688	0.666	0.625	0.62	0.649	0.673	0.792	0 of 12
1,3-DICHLOROBENZENE	0.791	0.688	0.666	0.625	0.62	0.649	0.673	0.792	0 of 12
1,4-DICHLOROBENZENE	0.791	0.688	0.666	0.625	0.62	0.649	0.673	0.792	0 of 12
2-BUTANONE	**11.4**	**8.36**	**3.86**	**11**	0.62	0.649	5.98	12.7	7 of 12
2-CHLOROETHYL VINYL ETHER	0.791	0.688	0.666	0.625	0.62	0.649	0.673	0.792	0 of 12
2-HEXANONE	0.791	0.688	0.666	0.625	0.62	0.649	0.673	0.792	0 of 12
4-METHYL-2-PENTANONE	0.791	0.688	0.666	0.625	0.62	0.649	0.673	0.792	0 of 12
ACETONE	**870**	**172**	**172**	**217**	**106**	**125**	277	1440	12 of 12
ACROLEIN	1.58	1.38	1.33	1.25	1.24	1.3	1.35	1.58	0 of 12
ACRYLONITRILE	1.58	1.38	1.33	1.25	1.24	1.3	1.35	1.58	0 of 12
BENZENE	0.791	0.688	0.666	0.625	0.62	0.649	0.673	0.792	0 of 12
BROMODICHLOROMETHANE	0.791	0.688	0.666	0.625	0.62	0.649	0.673	0.792	0 of 12
BROMOFORM	0.791	0.688	0.666	0.625	0.62	0.649	0.673	0.792	0 of 12
BROMOMETHANE	0.791	0.688	0.666	0.625	0.62	0.649	0.673	0.792	0 of 12
CARBON DISULFIDE	0.791	0.688	0.666	0.625	0.62	0.649	0.673	0.792	0 of 12
CARBON TETRACHLORIDE	0.791	0.688	0.666	0.625	0.62	0.649	0.673	0.792	0 of 12
CHLOROBENZENE	0.791	0.688	0.666	0.625	0.62	0.649	0.673	0.792	0 of 12
CHLOROETHANE	0.791	0.688	0.666	0.625	0.62	0.649	0.673	0.792	0 of 12
CHLOROFORM	0.791	0.688	0.666	0.625	0.62	0.649	0.673	0.792	0 of 12
CHLOROMETHANE	0.791	0.688	0.666	0.625	0.62	0.649	0.673	0.792	0 of 12
CIS-1,2-DICHLOROETHENE	0.791	0.688	0.666	0.625	0.62	0.649	0.673	0.792	0 of 12
CIS-1,3-DICHLOROPROPENE	0.791	0.688	0.666	0.625	0.62	0.649	0.673	0.792	0 of 12
DIBROMOCHLOROMETHANE	0.791	0.688	0.666	0.625	0.62	0.649	0.673	0.792	0 of 12
ETHYLBENZENE	0.791	0.688	0.666	0.625	0.62	0.649	0.673	0.792	0 of 12
M,P-XYLENE	1.58	1.38	1.33	1.25	1.24	1.3	1.35	1.58	0 of 12
METHYLENE CHLORIDE	0.791	0.688	0.666	0.625	0.62	0.649	0.673	0.792	0 of 12
O-XYLENE	0.791	0.688	0.666	0.625	0.62	0.649	0.673	0.792	0 of 12
STYRENE	**7.32**	**6.69**	0.666	0.625	0.62	0.649	2.76	13.8	2 of 12
TETRACHLOROETHENE	0.791	0.688	0.666	0.625	0.62	0.649	0.673	0.792	0 of 12
TOLUENE	0.791	0.688	0.666	**7.61**	**3.52**	0.649	2.32	7.83	3 of 12
TRANS-1,2-DICHLOROETHENE	0.791	0.688	0.666	0.625	0.62	0.649	0.673	0.792	0 of 12
TRANS-1,3-DICHLOROPROPENE	0.791	0.688	0.666	0.625	0.62	0.649	0.673	0.792	0 of 12
TRICHLOROETHENE	0.791	0.688	0.666	0.625	0.62	0.649	0.673	0.792	0 of 12
TRICHLOROFLUOROMETHANE	0.791	0.688	0.666	0.625	0.62	0.649	0.673	0.792	0 of 12
VINYL ACETATE	0.791	0.688	0.666	0.625	0.62	0.649	0.673	0.792	0 of 12
VINYL CHLORIDE	0.791	0.688	0.666	0.625	0.62	0.26	0.608	0.792	0 of 12

Notes

DEC is the now-defunct Detailed Effluent Characterization project, which includes low-detection limit methods not approved by the EPA. DEC sampling is now carried out under the NP-EM project.

~: No data or no samples taken

Results in **bold** indicate one or more detects that month

Yearly averages are calculated from individual results collected during the reporting period and are flow-weighted.

Non-detected compounds are assumed to equal one half of the detection limit for metals and inorganics and one tenth of the reporting limit for organic compounds.

Table A-14. Deer Island Influent Characterization (Low detection limit analyses; South System), July 2012 - June 2013

Semivolatile Organics (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
1,2,4-TRICHLOROBENZENE	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
1,2-DICHLOROBENZENE	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
1,2-DIPHENYLHYDRAZINE (AS AZOBENZENE)	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
1,3-DICHLOROBENZENE	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
1,4-DICHLOROBENZENE	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
2,2'-OXYBIS(1-CHLOROPROPANE)	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
2,4,5-TRICHLOROPHENOL	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
2,4,6-TRICHLOROPHENOL	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
2,4-DICHLOROPHENOL	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
2,4-DIMETHYLPHENOL	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
2,4-DINITROPHENOL	5.46	5.35	6.1	5.47	5.2	5.2	5.28	5.3	5.64	5.44	5.07	5.2	5.4	6.95	0 of 24
2,4-DINITROTOLUENE	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
2,6-DINITROTOLUENE	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
2-CHLORONAPHTHALENE	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
2-CHLOROPHENOL	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
2-METHYL-4,6-DINITROPHENOL	5.46	5.35	6.1	5.47	5.2	5.2	5.28	5.3	5.64	5.44	5.07	5.2	5.4	6.95	0 of 24
2-METHYLNAPHTHALENE	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
2-METHYLPHENOL	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
2-NITROANILINE	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
2-NITROPHENOL	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
3,3'-DICHLOROBENZIDINE	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
3-NITROANILINE	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
4-BROMOPHENYL PHENYL ETHER	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
4-CHLORO-3-METHYLPHENOL	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
4-CHLOROANILINE	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
4-CHLOROPHENYL PHENYL ETHER	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
4-METHYLPHENOL (INCLUDES 3-METHYLPHENOL)	**34.4**	2.14	**12.6**	**14.9**	2.08	**29.6**	**14.2**	2.12	2.26	2.18	**53.3**	**12.9**	13.5	77.3	10 of 24
4-NITROANILINE	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
4-NITROPHENOL	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
ACENAPHTHENE	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
ACENAPHTHYLENE	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
ANILINE	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
ANTHRACENE	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
BENZIDINE	5.46	5.35	6.1	5.47	5.2	5.2	5.28	5.3	5.64	5.44	5.07	5.2	5.4	6.95	0 of 24
BENZO(A)ANTHRACENE	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
BENZO(A)PYRENE	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
BENZO(B)FLUORANTHENE	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
BENZO(G,H,I)PERYLENE	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
BENZO(K)FLUORANTHENE	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
BENZOIC ACID	5.46	5.35	6.1	5.47	5.2	5.2	5.28	5.3	5.64	5.44	5.07	5.2	5.4	6.95	0 of 24
BENZYL ALCOHOL	**25.1**	**48.7**	2.44	2.19	**28.4**	2.08	2.11	2.12	2.26	2.18	**15.5**	2.08	9.77	56.4	6 of 24
BIS(2-CHLOROETHOXY)METHANE	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
BIS(2-CHLOROETHYL)ETHER	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
BIS(2-ETHYLHEXYL)PHTHALATE	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
BUTYLBENZYLPHTHALATE	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
CARBAZOLE	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
CHRYSENE	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
DIBENZO(A,H)ANTHRACENE	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
DIBENZOFURAN	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
DIETHYLPHTHALATE	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
DIMETHYLPHTHALATE	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
DI-N-BUTYLPHTHALATE	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
DI-N-OCTYLPHTHALATE	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
FLUORANTHENE	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
FLUORENE	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
HEXACHLOROBENZENE	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
HEXACHLOROBUTADIENE	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
HEXACHLOROCYCLOPENTADIENE	5.46	5.35	6.1	5.47	5.2	5.2	5.28	5.3	5.64	5.44	5.07	5.2	5.4	6.95	0 of 24
HEXACHLOROETHANE	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
INDENO(1,2,3-CD)PYRENE	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
ISOPHORONE	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
NAPHTHALENE	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
N-DECANE	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24

Table A-14. Deer Island Influent Characterization (Low detection limit analyses; South System), July - December 2013

Semivolatile Organics (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
1,2,4-TRICHLOROBENZENE	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
1,2-DICHLOROBENZENE	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
1,2-DIPHENYLHYDRAZINE (AS AZOBENZENE)	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
1,3-DICHLOROBENZENE	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
1,4-DICHLOROBENZENE	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
2,2'-OXYBIS(1-CHLOROPROPANE)	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
2,4,5-TRICHLOROPHENOL	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
2,4,6-TRICHLOROPHENOL	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
2,4-DICHLOROPHENOL	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
2,4-DIMETHYLPHENOL	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
2,4-DINITROPHENOL	5.15	5.2	5.2	5.1	5.39	5.21	5.2	5.56	0 of 12
2,4-DINITROTOLUENE	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
2,6-DINITROTOLUENE	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
2-CHLORONAPHTHALENE	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
2-CHLOROPHENOL	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
2-METHYL-4,6-DINITROPHENOL	5.15	5.2	5.2	5.1	5.39	5.21	5.2	5.56	0 of 12
2-METHYLNAPHTHALENE	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
2-METHYLPHENOL	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
2-NITROANILINE	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
2-NITROPHENOL	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
3,3'-DICHLOROBENZIDINE	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
3-NITROANILINE	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
4-BROMOPHENYL PHENYL ETHER	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
4-CHLORO-3-METHYLPHENOL	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
4-CHLOROANILINE	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
4-CHLOROPHENYL PHENYL ETHER	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
4-METHYLPHENOL (INCLUDES 3-METHYLPHENOL)	2.06	2.08	2.08	**38.2**	**37.8**	**59.8**	22.1	70.3	6 of 12
4-NITROANILINE	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
4-NITROPHENOL	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
ACENAPHTHENE	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
ACENAPHTHYLENE	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
ANILINE	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
ANTHRACENE	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
BENZIDINE	5.15	5.2	5.2	5.1	5.39	5.21	5.2	5.56	0 of 12
BENZO(A)ANTHRACENE	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
BENZO(A)PYRENE	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
BENZO(B)FLUORANTHENE	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
BENZO(G,H,I)PERYLENE	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
BENZO(K)FLUORANTHENE	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
BENZOIC ACID	5.15	5.2	5.2	5.1	5.39	5.21	5.2	5.56	0 of 12
BENZYL ALCOHOL	2.06	2.08	2.08	**14.8**	2.15	18	6.62	33.4	2 of 12
BIS(2-CHLOROETHOXY)METHANE	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
BIS(2-CHLOROETHYL)ETHER	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
BIS(2-ETHYLHEXYL)PHTHALATE	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
BUTYLBENZYLPHTHALATE	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
CARBAZOLE	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
CHRYSENE	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
DIBENZO(A,H)ANTHRACENE	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
DIBENZOFURAN	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
DIETHYLPHTHALATE	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
DIMETHYLPHTHALATE	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
DI-N-BUTYLPHTHALATE	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
DI-N-OCTYLPHTHALATE	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
FLUORANTHENE	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
FLUORENE	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
HEXACHLOROBENZENE	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
HEXACHLOROBUTADIENE	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
HEXACHLOROCYCLOPENTADIENE	5.15	5.2	5.2	5.1	5.39	5.21	5.2	5.56	0 of 12
HEXACHLOROETHANE	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
INDENO(1,2,3-CD)PYRENE	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
ISOPHORONE	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
NAPHTHALENE	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
N-DECANE	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12

Table A-14. Deer Island Influent Characterization (Low detection limit analyses; South System), July 2012 - June 2013

Semivolatile Organics (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
NITROBENZENE	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
N-NITROSODIMETHYLAMINE (NDMA)	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
N-NITROSODI-N-PROPYLAMINE (NDPA)	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
N-NITROSODIPHENYLAMINE	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
N-OCTADECANE	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
PENTACHLOROPHENOL	5.46	5.35	6.1	5.47	5.2	5.2	5.28	5.3	5.64	5.44	5.07	5.2	5.4	6.95	0 of 24
PHENANTHRENE	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
PHENOL	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24
PYRENE	2.18	2.14	2.44	2.19	2.08	2.08	2.11	2.12	2.26	2.18	2.03	2.08	2.16	2.78	0 of 24

Polycyclic Aromatic Hydrocarbons (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
1-METHYLNAPHTHALENE	~	**0.0724**	~	**0.129**	~	**0.174**	~	**0.156**	~	**0.0335**	~	**0.0342**	0.0926	0.261	12 of 12
1-METHYLPHENANTHRENE	~	**0.0262**	~	**0.0325**	~	**0.036**	~	**0.0885**	~	**0.0149**	~	**0.0249**	0.0359	0.0911	11 of 12
2,3,5-TRIMETHYLNAPHTHYLENE	~	**0.0595**	~	**0.0782**	~	**0.122**	~	**0.143**	~	**0.0234**	~	**0.0263**	0.0705	0.176	12 of 12
2,6-DIMETHYLNAPHTHALENE	~	**0.0717**	~	**0.181**	~	**0.13**	~	**0.156**	~	**0.0296**	~	**0.0929**	0.103	0.187	12 of 12
2-METHYLNAPHTHALENE	~	**0.0649**	~	**0.105**	~	**0.136**	~	**0.126**	~	**0.0309**	~	**0.0265**	0.0759	0.198	12 of 12
ACENAPHTHENE	~	**0.0473**	~	**0.0546**	~	**0.0443**	~	**0.0892**	~	**0.0288**	~	**0.0283**	0.0472	0.11	12 of 12
ACENAPHTHYLENE	~	**0.00795**	~	**0.0162**	~	**0.0144**	~	**0.0186**	~	**0.0153**	~	**0.00506**	0.0131	0.0276	11 of 12
ANTHRACENE	~	**0.0318**	~	**0.0691**	~	**0.0231**	~	**0.0813**	~	**0.0252**	~	**0.0266**	0.0417	0.108	12 of 12
BENZO(A)ANTHRACENE	~	**0.0805**	~	**0.156**	~	**0.0551**	~	**0.171**	~	**0.0597**	~	**0.067**	0.0956	0.215	12 of 12
BENZO(A)PYRENE	~	**0.0921**	~	**0.156**	~	**0.0541**	~	**0.162**	~	**0.0671**	~	**0.0603**	0.0962	0.204	12 of 12
BENZO(B)FLUORANTHENE	~	**0.123**	~	**0.198**	~	**0.0819**	~	**0.207**	~	**0.0949**	~	**0.0856**	0.129	0.252	12 of 12
BENZO(E)PYRENE	~	**0.0781**	~	**0.106**	~	**0.0508**	~	**0.12**	~	**0.0444**	~	**0.0505**	0.0723	0.147	12 of 12
BENZO(G,H,I)PERYLENE	~	**0.0647**	~	**0.104**	~	**0.0376**	~	**0.0829**	~	**0.0476**	~	**0.0533**	0.0635	0.112	12 of 12
BENZO(K)FLUORANTHENE	~	**0.0437**	~	**0.0651**	~	**0.0236**	~	**0.0425**	~	**0.0512**	~	**0.0493**	0.0465	0.0847	12 of 12
BENZOTHIAZOLE	~	**0.169**	~	**0.0467**	~	**0.0292**	~	**0.0095**	~	**0.00621**	~	**0.0531**	0.0466	0.19	12 of 12
BIPHENYL	~	**0.035**	~	**0.0879**	~	**0.0694**	~	**0.0655**	~	**0.0102**	~	**0.0398**	0.0473	0.0889	12 of 12
C1-CHRYSENES	~	**0.0464**	~	**0.09**	~	**0.0423**	~	**0.1**	~	**0.0183**	~	**0.0495**	0.0548	0.129	12 of 12
C1-DIBENZOTHIOPHENES	~	**0.0694**	~	0.000548	~	**0.0769**	~	**0.128**	~	**0.0244**	~	0.00052	0.0478	0.152	8 of 12
C1-FLUORANTHENES/PYRENES	~	**0.118**	~	**0.209**	~	**0.114**	~	**0.248**	~	**0.056**	~	**0.0852**	0.131	0.319	12 of 12
C1-FLUORENES	~	**0.088**	~	**0.107**	~	**0.131**	~	**0.0586**	~	0.000535	~	**0.0416**	0.0628	0.167	9 of 12
C1-NAPHTHALENES	~	**0.104**	~	**0.171**	~	**0.23**	~	**0.203**	~	**0.0477**	~	**0.0637**	0.127	0.335	12 of 12
C1-PHENANTHRENES/ANTHRACENES	~	**0.207**	~	**0.18**	~	**0.287**	~	**0.416**	~	**0.0804**	~	**0.16**	0.211	0.439	11 of 12
C2-CHRYSENES	~	0.0011	~	**0.0593**	~	0.00107	~	**0.0743**	~	0.000535	~	0.00052	0.0214	0.15	2 of 12
C2-DIBENZOTHIOPHENES	~	0.0011	~	0.000548	~	**0.0898**	~	**0.14**	~	**0.0294**	~	0.00052	0.0432	0.185	6 of 12
C2-FLUORANTHENES/PYRENES	~	**0.0666**	~	**0.137**	~	**0.0864**	~	**0.156**	~	**0.0336**	~	0.00052	0.0751	0.193	10 of 12
C2-FLUORENES	~	0.0011	~	0.000548	~	0.00107	~	**0.23**	~	**0.0335**	~	0.00052	0.0469	0.248	3 of 12
C2-NAPHTHALENES	~	**0.226**	~	**0.426**	~	**0.426**	~	**0.449**	~	**0.0894**	~	**0.244**	0.29	0.621	12 of 12
C2-PHENANTHRENES/ANTHRACENES	~	**0.0682**	~	0.000548	~	**0.219**	~	**0.412**	~	**0.0807**	~	**0.101**	0.146	0.466	9 of 12
C3-CHRYSENES	~	0.0011	~	0.000548	~	0.00107	~	0.000609	~	0.000535	~	0.00052	0.000701	0.00119	0 of 12
C3-DIBENZOTHIOPHENES	~	0.0011	~	0.000548	~	0.00107	~	0.000609	~	0.000535	~	0.00052	0.000701	0.00119	0 of 12
C3-FLUORANTHENES/PYRENES	~	0.0011	~	**0.0296**	~	0.00107	~	0.000609	~	0.000535	~	0.00052	0.00484	0.0591	1 of 12
C3-FLUORENES	~	0.0011	~	0.000548	~	0.00107	~	0.000609	~	0.000535	~	0.00052	0.000701	0.00119	0 of 12
C3-NAPHTHALENES	~	**0.321**	~	**1.17**	~	**1.93**	~	**1.07**	~	**0.113**	~	**0.164**	0.715	2.38	12 of 12
C3-PHENANTHRENES/ANTHRACENES	~	0.0011	~	**0.238**	~	**0.413**	~	**0.358**	~	**0.115**	~	0.00052	0.179	0.48	7 of 12
C4-CHRYSENES	~	0.0011	~	0.000548	~	0.00107	~	0.000609	~	0.000535	~	0.00052	0.000701	0.00119	0 of 12
C4-NAPHTHALENES	~	**0.239**	~	**0.336**	~	**0.385**	~	**0.391**	~	**0.0945**	~	0.00052	0.223	0.528	10 of 12
C4-PHENANTHRENES/ANTHRACENES	~	0.0011	~	0.000548	~	0.00107	~	**0.124**	~	0.000535	~	0.00052	0.0212	0.25	1 of 12
CHRYSENE	~	**0.11**	~	**0.184**	~	**0.0745**	~	**0.194**	~	**0.077**	~	**0.0901**	0.118	0.243	12 of 12
DIBENZO(A,H)ANTHRACENE	~	**0.00998**	~	**0.014**	~	**0.00602**	~	**0.0175**	~	**0.0201**	~	0.00052	0.0121	0.0305	7 of 12
DIBENZOFURAN	~	**0.0272**	~	**0.0235**	~	**0.0222**	~	**0.0316**	~	**0.00399**	~	**0.0163**	0.0193	0.0362	12 of 12
DIBENZOTHIOPHENE	~	**0.0194**	~	**0.0377**	~	**0.0218**	~	**0.0462**	~	**0.00986**	~	**0.00794**	0.0226	0.0596	11 of 12
FLUORANTHENE	~	**0.188**	~	**0.333**	~	**0.152**	~	**0.383**	~	**0.141**	~	**0.196**	0.226	0.482	12 of 12
FLUORENE	~	**0.0465**	~	**0.0613**	~	**0.054**	~	**0.0825**	~	**0.0279**	~	**0.0277**	0.048	0.0903	12 of 12
INDENO(1,2,3-CD)PYRENE	~	0.0011	~	**0.0369**	~	**0.0326**	~	**0.0825**	~	**0.0488**	~	**0.0159**	0.0381	0.0957	10 of 12
NAPHTHALENE	~	**0.103**	~	**0.152**	~	**0.118**	~	**0.132**	~	**0.065**	~	**0.0441**	0.0978	0.197	12 of 12
PERYLENE	~	**0.016**	~	**0.0861**	~	**0.00996**	~	**0.0176**	~	**0.00673**	~	**0.0124**	0.0226	0.143	12 of 12
PHENANTHRENE	~	**0.195**	~	**0.342**	~	**0.176**	~	**0.404**	~	**0.105**	~	**0.151**	0.219	0.499	12 of 12
PYRENE	~	**0.186**	~	**0.332**	~	**0.157**	~	**0.396**	~	**0.127**	~	**0.161**	0.22	0.499	12 of 12

Table A-14. Deer Island Influent Characterization (Low detection limit analyses; South System), July - December 2013

Semivolatile Organics (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
NITROBENZENE	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
N-NITROSODIMETHYLAMINE (NDMA)	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
N-NITROSODI-N-PROPYLAMINE (NDPA)	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
N-NITROSODIPHENYLAMINE	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
N-OCTADECANE	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
PENTACHLOROPHENOL	5.15	5.2	5.2	5.1	5.39	5.21	5.2	5.56	0 of 12
PHENANTHRENE	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
PHENOL	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12
PYRENE	2.06	2.08	2.08	2.04	2.15	2.09	2.08	2.22	0 of 12

Polycyclic Aromatic Hydrocarbons (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
1-METHYLNAPHTHALENE	~	**0.0461**	~	**0.0683**	~	**0.0224**	0.0445	0.0756	6 of 6
1-METHYLPHENANTHRENE	~	**0.0182**	~	**0.0356**	~	**0.0165**	0.0228	0.0394	6 of 6
2,3,5-TRIMETHYLNAPHTHYLENE	~	**0.0361**	~	**0.0735**	~	**0.0238**	0.043	0.0749	6 of 6
2,6-DIMETHYLNAPHTHALENE	~	**0.0338**	~	**0.0695**	~	**0.0416**	0.0471	0.0753	6 of 6
2-METHYLNAPHTHALENE	~	**0.0399**	~	**0.0651**	~	**0.0191**	0.0402	0.0754	6 of 6
ACENAPHTHENE	~	**0.0312**	~	**0.0646**	~	**0.0252**	0.0391	0.0757	6 of 6
ACENAPHTHYLENE	~	**0.00363**	~	**0.0049**	~	**0.00484**	0.00443	0.00644	6 of 6
ANTHRACENE	~	**0.0194**	~	**0.0523**	~	**0.0168**	0.0283	0.0632	6 of 6
BENZO(A)ANTHRACENE	~	**0.0446**	~	**0.11**	~	**0.0288**	0.0587	0.119	6 of 6
BENZO(A)PYRENE	~	**0.0448**	~	**0.102**	~	**0.0217**	0.0539	0.11	6 of 6
BENZO(B)FLUORANTHENE	~	**0.0611**	~	**0.137**	~	**0.045**	0.0781	0.144	6 of 6
BENZO(E)PYRENE	~	**0.0343**	~	**0.0784**	~	**0.0202**	0.0425	0.0823	6 of 6
BENZO(G,H,I)PERYLENE	~	**0.0307**	~	**0.0663**	~	0.000515	0.0308	0.0704	4 of 6
BENZO(K)FLUORANTHENE	~	**0.0293**	~	**0.0548**	~	**0.0047**	0.0283	0.0608	5 of 6
BENZOTHIAZOLE	~	**0.0145**	~	**0.0252**	~	**0.0151**	0.0179	0.0316	6 of 6
BIPHENYL	~	**0.0189**	~	**0.0374**	~	**0.00827**	0.0207	0.0393	6 of 6
C1-CHRYSENES	~	**0.0297**	~	**0.0689**	~	**0.0224**	0.0388	0.0703	6 of 6
C1-DIBENZOTHIOPHENES	~	**0.145**	~	**0.0805**	~	0.000515	0.0754	0.186	4 of 6
C1-FLUORANTHENES/PYRENES	~	**0.0634**	~	**0.139**	~	**0.0417**	0.0785	0.146	6 of 6
C1-FLUORENES	~	**0.0503**	~	**0.102**	~	**0.05**	0.0656	0.103	6 of 6
C1-NAPHTHALENES	~	**0.0623**	~	**0.0961**	~	**0.0423**	0.0654	0.105	6 of 6
C1-PHENANTHRENES/ANTHRACENES	~	**0.0856**	~	**0.232**	~	**0.122**	0.142	0.241	6 of 6
C2-CHRYSENES	~	**0.0337**	~	**0.3**	~	0.000515	0.101	0.48	4 of 6
C2-DIBENZOTHIOPHENES	~	**0.043**	~	**0.0783**	~	0.000515	0.0388	0.0844	4 of 6
C2-FLUORANTHENES/PYRENES	~	**0.043**	~	**0.0903**	~	**0.00681**	0.0445	0.0976	5 of 6
C2-FLUORENES	~	0.000525	~	0.00051	~	0.000515	0.000517	0.00054	0 of 6
C2-NAPHTHALENES	~	**0.0867**	~	**0.173**	~	**0.111**	0.121	0.185	6 of 6
C2-PHENANTHRENES/ANTHRACENES	~	**0.0957**	~	**0.195**	~	**0.103**	0.128	0.197	6 of 6
C3-CHRYSENES	~	0.000525	~	0.00051	~	0.000515	0.000517	0.00054	0 of 6
C3-DIBENZOTHIOPHENES	~	0.000525	~	0.00051	~	0.000515	0.000517	0.00054	0 of 6
C3-FLUORANTHENES/PYRENES	~	0.000525	~	**0.0244**	~	0.000515	0.00764	0.0484	1 of 6
C3-FLUORENES	~	0.000525	~	0.00051	~	0.000515	0.000517	0.00054	0 of 6
C3-NAPHTHALENES	~	**0.561**	~	**1.57**	~	**0.0917**	0.699	1.61	6 of 6
C3-PHENANTHRENES/ANTHRACENES	~	**0.0848**	~	**0.332**	~	0.000515	0.129	0.43	3 of 6
C4-CHRYSENES	~	0.000525	~	**0.875**	~	0.000515	0.261	0.954	2 of 6
C4-NAPHTHALENES	~	**0.105**	~	**0.224**	~	0.000515	0.104	0.238	4 of 6
C4-PHENANTHRENES/ANTHRACENES	~	0.000525	~	0.00051	~	0.000515	0.000517	0.00054	0 of 6
CHRYSENE	~	**0.0616**	~	**0.127**	~	**0.0358**	0.0721	0.133	6 of 6
DIBENZO(A,H)ANTHRACENE	~	**0.0154**	~	**0.0177**	~	0.000515	0.0109	0.0194	4 of 6
DIBENZOFURAN	~	**0.0191**	~	**0.0429**	~	**0.0153**	0.0249	0.0514	6 of 6
DIBENZOTHIOPHENE	~	**0.0123**	~	**0.027**	~	**0.0106**	0.0161	0.0307	6 of 6
FLUORANTHENE	~	**0.12**	~	**0.272**	~	**0.0624**	0.145	0.294	6 of 6
FLUORENE	~	**0.0301**	~	**0.0697**	~	**0.0196**	0.0382	0.0813	6 of 6
INDENO(1,2,3-CD)PYRENE	~	**0.0275**	~	**0.0605**	~	**0.0454**	0.0435	0.0889	5 of 6
NAPHTHALENE	~	**0.059**	~	**0.0969**	~	**0.0315**	0.0608	0.106	6 of 6
PERYLENE	~	**0.0083**	~	**0.0189**	~	**0.00204**	0.0093	0.02	5 of 6
PHENANTHRENE	~	**0.12**	~	**0.295**	~	**0.0938**	0.163	0.344	6 of 6
PYRENE	~	**0.11**	~	**0.251**	~	**0.0587**	0.134	0.268	6 of 6

Table A-14. Deer Island Influent Characterization (Low detection limit analyses; South System), July 2012 - June 2013

Organochlorine Pesticides and PCBs (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
2,4'-DDD	~	0.000448	~	0.000208	~	0.000214	~	0.00021	~	0.000209	~	0.000203	0.000242	0.000476	0 of 12
2,4'-DDE	~	0.000448	~	0.000208	~	0.000214	~	0.00021	~	0.000209	~	0.000203	0.000242	0.000476	0 of 12
2,4'-DDT	~	0.000448	~	0.000208	~	0.000214	~	0.00021	~	0.000209	~	0.000203	0.000242	0.000476	0 of 12
4,4'-DDD	~	0.000448	~	0.000208	~	0.000214	~	0.00021	~	0.000209	~	**0.00173**	0.000503	0.00334	1 of 12
4,4'-DDE	~	**0.00466**	~	0.000208	~	0.000214	~	**0.00134**	~	0.000209	~	**0.00279**	0.00146	0.00474	5 of 12
4,4'-DDT	~	0.000448	~	0.000208	~	0.000214	~	0.00021	~	0.000209	~	0.000203	0.000242	0.000476	0 of 12
ALDRIN	~	0.000448	~	0.000208	~	0.000214	~	0.00021	~	0.000209	~	0.000203	0.000242	0.000476	0 of 12
ALPHA-CHLORDANE	~	**0.0134**	~	**0.00196**	~	**0.00147**	~	**0.00707**	~	**0.00586**	~	**0.00508**	0.00583	0.015	12 of 12
BZ 101 PENTACHLOROBIPHENYL	~	**0.004**	~	**0.00883**	~	0.000214	~	0.00021	~	0.000209	~	**0.0012**	0.00214	0.0165	6 of 12
BZ 105 PENTACHLOROBIPHENYL	~	0.000448	~	**0.00128**	~	0.000214	~	0.00021	~	0.000209	~	0.000203	0.000395	0.00233	1 of 12
BZ 118 PENTACHLOROBIPHENYL	~	**0.00217**	~	**0.0107**	~	0.000214	~	0.00021	~	0.000209	~	**0.000387**	0.00201	0.0202	4 of 12
BZ 126 PENTACHLOROBIPHENYL	~	0.000448	~	0.000208	~	0.000214	~	0.00021	~	0.000209	~	0.000203	0.000242	0.000476	0 of 12
BZ 128 HEXACHLOROBIPHENYL	~	0.000448	~	**0.0018**	~	0.000214	~	0.00021	~	0.000209	~	0.000203	0.000469	0.00336	1 of 12
BZ 138 HEXACHLOROBIPHENYL	~	**0.00262**	~	**0.0109**	~	0.000214	~	**0.00348**	~	0.000209	~	**0.00219**	0.00296	0.0207	8 of 12
BZ 153 HEXACHLOROBIPHENYL	~	**0.00243**	~	**0.013**	~	0.000214	~	**0.00103**	~	0.000209	~	**0.00106**	0.00263	0.0248	8 of 12
BZ 170 HEPTACHLOROBIPHENYL	~	0.000448	~	**0.00626**	~	0.000214	~	0.00021	~	0.000209	~	0.000203	0.00111	0.0122	1 of 12
BZ 18 TRICHLOROBIPHENYL	~	0.000448	~	0.000208	~	0.000214	~	0.00021	~	0.000209	~	0.000203	0.000242	0.000476	0 of 12
BZ 180 HEPTACHLOROBIPHENYL	~	**0.00181**	~	**0.0118**	~	0.000214	~	0.00021	~	0.000209	~	**0.000854**	0.0022	0.0225	6 of 12
BZ 187 HEPTACHLOROBIPHENYL	~	**0.00092**	~	**0.00705**	~	0.000214	~	0.00021	~	0.000209	~	**0.000473**	0.00133	0.0134	5 of 12
BZ 195 OCTACHLOROBIPHENYL	~	0.000448	~	**0.00152**	~	0.000214	~	0.00021	~	0.000209	~	0.000203	0.000429	0.00281	1 of 12
BZ 206 NONACHLOROBIPHENYL	~	0.000448	~	**0.00168**	~	0.000214	~	0.00021	~	0.000209	~	0.000203	0.000452	0.00312	1 of 12
BZ 209 DECACHLOROBIPHENYL	~	0.000448	~	0.000208	~	0.000214	~	0.00021	~	0.000209	~	0.000203	0.000242	0.000476	0 of 12
BZ 28 TRICHLOROBIPHENYL	~	0.000448	~	**0.0106**	~	0.000214	~	0.00021	~	0.000209	~	0.000203	0.00172	0.0208	1 of 12
BZ 44 TETRACHLOROBIPHENYL	~	0.000448	~	0.000208	~	0.000214	~	0.00021	~	0.000209	~	0.000203	0.000242	0.000476	0 of 12
BZ 52 TETRACHLOROBIPHENYL	~	**0.00298**	~	**0.00465**	~	0.000214	~	0.00021	~	0.000209	~	**0.000961**	0.00136	0.00747	6 of 12
BZ 66 TETRACHLOROBIPHENYL	~	0.000448	~	**0.00585**	~	0.000214	~	0.00021	~	0.000209	~	0.000203	0.00105	0.0114	1 of 12
BZ 77 TETRACHLOROBIPHENYL	~	0.000448	~	0.000208	~	0.000214	~	0.00021	~	0.000209	~	0.000203	0.000242	0.000476	0 of 12
BZ 8 DICHLOROBIPHENYL	~	0.000448	~	0.000208	~	0.000214	~	0.00021	~	0.000209	~	0.000203	0.000242	0.000476	0 of 12
CIS-NONACHLOR	~	0.000448	~	0.000208	~	0.000214	~	0.00021	~	0.000209	~	**0.000512**	0.000295	0.000838	1 of 12
DDMU	~	0.000448	~	0.000208	~	0.000214	~	0.00021	~	0.000209	~	0.000203	0.000242	0.000476	0 of 12
DIELDRIN	~	0.000448	~	0.000208	~	0.000214	~	0.00021	~	0.000209	~	0.000203	0.000242	0.000476	0 of 12
ENDRIN	~	0.000448	~	0.000208	~	0.000214	~	0.00021	~	0.000209	~	0.000203	0.000242	0.000476	0 of 12
GAMMA-BHC	~	0.000448	~	0.000208	~	0.000214	~	0.00021	~	0.000209	~	0.000203	0.000242	0.000476	0 of 12
GAMMA-CHLORDANE	~	**0.0134**	~	**0.00222**	~	**0.00172**	~	**0.00558**	~	**0.00662**	~	**0.00487**	0.00579	0.0141	12 of 12
HEPTACHLOR	~	0.000448	~	0.000208	~	0.000214	~	0.00021	~	0.000209	~	0.000203	0.000242	0.000476	0 of 12
HEPTACHLOR EPOXIDE	~	0.000448	~	0.000208	~	0.000214	~	0.00021	~	0.000209	~	0.000203	0.000242	0.000476	0 of 12
HEXACHLOROBENZENE	~	**0.00116**	~	**0.000693**	~	0.000214	~	**0.000518**	~	0.000209	~	0.000203	0.000463	0.00121	5 of 12
MIREX	~	0.000448	~	0.000208	~	0.000214	~	0.00021	~	0.000209	~	0.000203	0.000242	0.000476	0 of 12
OXYCHLORDANE	~	0.000448	~	0.000208	~	0.000214	~	0.00021	~	0.000209	~	0.000203	0.000242	0.000476	0 of 12
TOTAL AMP PCBS	~	**0.0165**	~	**0.0954**	~	0.000214	~	**0.00451**	~	0.000209	~	**0.00703**	0.018	0.182	8 of 12
TOTAL CHLORDANE	~	**0.0183**	~	**0.00269**	~	**0.00255**	~	**0.00922**	~	**0.00805**	~	**0.00722**	0.00801	0.02	12 of 12
TOTAL DDT	~	**0.00466**	~	0.000208	~	0.000214	~	**0.00134**	~	0.000209	~	**0.00442**	0.00174	0.00724	5 of 12
TRANS-NONACHLOR	~	**0.00483**	~	**0.000725**	~	**0.00108**	~	**0.00215**	~	**0.00219**	~	**0.00214**	0.00218	0.005	12 of 12

Table A-14. Deer Island Influent Characterization (Low detection limit analyses; South System), July - December 2013

Organochlorine Pesticides and PCBs (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
2,4'-DDD	~	0.000208	~	0.000206	~	0.000206	0.000207	0.000212	0 of 6
2,4'-DDE	~	0.000208	~	0.000206	~	0.000206	0.000207	0.000212	0 of 6
2,4'-DDT	~	0.000208	~	0.000206	~	0.000206	0.000207	0.000212	0 of 6
4,4'-DDD	~	0.000208	~	0.000206	~	0.000206	0.000207	0.000212	0 of 6
4,4'-DDE	~	**0.00127**	~	**0.000608**	~	**0.00136**	0.00111	0.00178	5 of 6
4,4'-DDT	~	0.000208	~	0.000206	~	0.000206	0.000207	0.000212	0 of 6
ALDRIN	~	0.000208	~	0.000206	~	0.000206	0.000207	0.000212	0 of 6
ALPHA-CHLORDANE	~	**0.00276**	~	**0.00314**	~	**0.00277**	0.00287	0.00372	6 of 6
BZ 101 PENTACHLOROBIPHENYL	~	**0.000928**	~	0.000206	~	**0.000929**	0.000714	0.00109	4 of 6
BZ 105 PENTACHLOROBIPHENYL	~	0.000208	~	0.000206	~	0.000206	0.000207	0.000212	0 of 6
BZ 118 PENTACHLOROBIPHENYL	~	0.000208	~	0.000206	~	**0.000704**	0.00038	0.000793	2 of 6
BZ 126 PENTACHLOROBIPHENYL	~	0.000208	~	0.000206	~	0.000206	0.000207	0.000212	0 of 6
BZ 128 HEXACHLOROBIPHENYL	~	0.000208	~	0.000206	~	0.000206	0.000207	0.000212	0 of 6
BZ 138 HEXACHLOROBIPHENYL	~	**0.000679**	~	**0.00122**	~	**0.00089**	0.000913	0.00128	6 of 6
BZ 153 HEXACHLOROBIPHENYL	~	**0.000368**	~	**0.000716**	~	**0.00074**	0.000601	0.000876	6 of 6
BZ 170 HEPTACHLOROBIPHENYL	~	0.000208	~	0.000206	~	0.000206	0.000207	0.000212	0 of 6
BZ 18 TRICHLOROBIPHENYL	~	0.000208	~	0.000206	~	0.000206	0.000207	0.000212	0 of 6
BZ 180 HEPTACHLOROBIPHENYL	~	0.000208	~	0.000206	~	**0.000431**	0.000285	0.000525	2 of 6
BZ 187 HEPTACHLOROBIPHENYL	~	0.000208	~	0.000206	~	**0.000299**	0.000239	0.00033	2 of 6
BZ 195 OCTACHLOROBIPHENYL	~	0.000208	~	0.000206	~	0.000206	0.000207	0.000212	0 of 6
BZ 206 NONACHLOROBIPHENYL	~	0.000208	~	0.000206	~	0.000206	0.000207	0.000212	0 of 6
BZ 209 DECACHLOROBIPHENYL	~	0.000208	~	0.000206	~	0.000206	0.000207	0.000212	0 of 6
BZ 28 TRICHLOROBIPHENYL	~	0.000208	~	0.000206	~	0.000206	0.000207	0.000212	0 of 6
BZ 44 TETRACHLOROBIPHENYL	~	0.000208	~	0.000206	~	0.000206	0.000207	0.000212	0 of 6
BZ 52 TETRACHLOROBIPHENYL	~	**0.000513**	~	0.000206	~	**0.00075**	0.000504	0.000917	4 of 6
BZ 66 TETRACHLOROBIPHENYL	~	0.000208	~	0.000206	~	0.000206	0.000207	0.000212	0 of 6
BZ 77 TETRACHLOROBIPHENYL	~	0.000208	~	0.000206	~	0.000206	0.000207	0.000212	0 of 6
BZ 8 DICHLOROBIPHENYL	~	0.000208	~	0.000206	~	0.000206	0.000207	0.000212	0 of 6
CIS-NONACHLOR	~	0.000208	~	0.000206	~	**0.000407**	0.000276	0.000433	2 of 6
DDMU	~	0.000208	~	0.000206	~	0.000206	0.000207	0.000212	0 of 6
DIELDRIN	~	0.000208	~	0.000206	~	0.000206	0.000207	0.000212	0 of 6
ENDRIN	~	0.000208	~	0.000206	~	0.000206	0.000207	0.000212	0 of 6
GAMMA-BHC	~	0.000208	~	0.000206	~	0.000206	0.000207	0.000212	0 of 6
GAMMA-CHLORDANE	~	**0.00246**	~	**0.00338**	~	**0.0031**	0.00296	0.00362	6 of 6
HEPTACHLOR	~	0.000208	~	0.000206	~	0.000206	0.000207	0.000212	0 of 6
HEPTACHLOR EPOXIDE	~	0.000208	~	0.000206	~	0.000206	0.000207	0.000212	0 of 6
HEXACHLOROBENZENE	~	0.000208	~	**0.00169**	~	**0.0012**	0.000993	0.0019	4 of 6
MIREX	~	0.000208	~	0.000206	~	0.000206	0.000207	0.000212	0 of 6
OXYCHLORDANE	~	0.000208	~	0.000206	~	0.000206	0.000207	0.000212	0 of 6
TOTAL AMP PCBS	~	**0.00249**	~	**0.00194**	~	**0.00474**	0.00311	0.00551	6 of 6
TOTAL CHLORDANE	~	**0.00385**	~	**0.00409**	~	**0.00421**	0.00404	0.0052	6 of 6
TOTAL DDT	~	**0.00127**	~	**0.000608**	~	**0.00136**	0.00111	0.00178	5 of 6
TRANS-NONACHLOR	~	**0.00109**	~	**0.000952**	~	**0.00144**	0.00117	0.00159	6 of 6

Table A-14. Deer Island Influent Characterization (Low detection limit analyses; South System), July 2012 - June 2013

Volatile Organics (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
1,1,1-TRICHLOROETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
1,1,2,2-TETRACHLOROETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
1,1,2-TRICHLOROETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
1,1-DICHLOROETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
1,1-DICHLOROETHENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
1,2-DICHLOROBENZENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
1,2-DICHLOROETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
1,2-DICHLOROPROPANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
1,3-DICHLOROBENZENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
1,4-DICHLOROBENZENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
2-BUTANONE	**3.18**	**12.5**	**5.56**	**11.6**	0.5	**13.4**	**4.71**	**3.54**	**2.98**	**25.2**	**10.9**	**6.63**	8.41	26.4	17 of 24
2-CHLOROETHYL VINYL ETHER	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
2-HEXANONE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
4-METHYL-2-PENTANONE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
ACETONE	**67.9**	**217**	**105**	**153**	**77.9**	**83.3**	**83.9**	**89.3**	**71.6**	**78.9**	**83.5**	**66.8**	93.6	228	24 of 24
ACROLEIN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0 of 24
ACRYLONITRILE	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0 of 24
BENZENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
BROMODICHLOROMETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
BROMOFORM	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
BROMOMETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
CARBON DISULFIDE	0.5	0.5	0.5	**5.72**	0.5	0.5	0.5	0.5	0.5	0.5	**4.74**	0.5	1.18	9.07	3 of 24
CARBON TETRACHLORIDE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
CHLOROBENZENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
CHLOROETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
CHLOROFORM	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
CHLOROMETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
CIS-1,2-DICHLOROETHENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
CIS-1,3-DICHLOROPROPENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
DIBROMOCHLOROMETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
ETHYLBENZENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
M,P-XYLENE	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0 of 24
METHYLENE CHLORIDE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
O-XYLENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
STYRENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	**8.54**	1.12	16.3	1 of 24
TETRACHLOROETHENE	0.5	0.5	**26.4**	0.5	**4.37**	0.5	**37.4**	0.5	0.5	0.5	0.5	0.5	5.99	74.1	3 of 24
TOLUENE	**2.88**	0.5	0.5	0.5	0.5	**4.1**	0.5	0.5	0.5	0.5	0.5	0.5	0.9	7.67	2 of 24
TRANS-1,2-DICHLOROETHENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
TRANS-1,3-DICHLOROPROPENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
TRICHLOROETHENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
TRICHLOROFLUOROMETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
VINYL ACETATE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24
VINYL CHLORIDE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 24

Table A-14. Deer Island Influent Characterization (Low detection limit analyses; South System), July - December 2013

Volatile Organics (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
1,1,1-TRICHLOROETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
1,1,2,2-TETRACHLOROETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
1,1,2-TRICHLOROETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
1,1-DICHLOROETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
1,1-DICHLOROETHENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
1,2-DICHLOROBENZENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
1,2-DICHLOROETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
1,2-DICHLOROPROPANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
1,3-DICHLOROBENZENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
1,4-DICHLOROBENZENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
2-BUTANONE	**12.7**	**15.6**	**11.9**	**9.99**	**5.86**	**7.88**	10.9	17.5	12 of 12
2-CHLOROETHYL VINYL ETHER	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
2-HEXANONE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
4-METHYL-2-PENTANONE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
ACETONE	**144**	**155**	**141**	**207**	**87.7**	**88.8**	137	256	12 of 12
ACROLEIN	1	1	1	1	1	1	1	1	0 of 12
ACRYLONITRILE	1	1	1	1	1	1	1	1	0 of 12
BENZENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
BROMODICHLOROMETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
BROMOFORM	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
BROMOMETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
CARBON DISULFIDE	0.5	**10.3**	**12**	**4.4**	**88.9**	0.5	17.2	177	5 of 12
CARBON TETRACHLORIDE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
CHLOROBENZENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
CHLOROETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
CHLOROFORM	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
CHLOROMETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
CIS-1,2-DICHLOROETHENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
CIS-1,3-DICHLOROPROPENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
DIBROMOCHLOROMETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
ETHYLBENZENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
M,P-XYLENE	1	1	1	1	1	1	1	1	0 of 12
METHYLENE CHLORIDE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
O-XYLENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
STYRENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
TETRACHLOROETHENE	0.5	0.5	0.5	0.5	**6.4**	0.5	1.34	7.08	2 of 12
TOLUENE	**3.54**	0.5	0.5	**2.89**	0.5	0.5	1.48	6.55	2 of 12
TRANS-1,2-DICHLOROETHENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
TRANS-1,3-DICHLOROPROPENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
TRICHLOROETHENE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
TRICHLOROFLUOROMETHANE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
VINYL ACETATE	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0 of 12
VINYL CHLORIDE	0.5	0.5	0.5	0.5	0.5	0.2	0.449	0.5	0 of 12

Notes

DEC is the now-defunct Detailed Effluent Characterization project, which includes low-detection limit methods not approved by the EPA. DEC sampling is now carried out under the NP-EM project.

~: No data or no samples taken

Results in **bold** indicate one or more detects that month

Yearly averages are calculated from individual results collected during the reporting period and are flow-weighted.

Non-detected compounds are assumed to equal one half of the detection limit for metals and inorganics and one tenth of the reporting limit for organic compounds.

Table A-15. Deer Island Influent Loadings (Low detection limit analyses; South System), July 2012 - June 2013

Semivolatile Organics (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
1,2,4-TRICHLOROBENZENE	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
1,2-DICHLOROBENZENE	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
1,2-DIPHENYLHYDRAZINE (AS AZOBENZENE)	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
1,3-DICHLOROBENZENE	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
1,4-DICHLOROBENZENE	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
2,2'-OXYBIS(1-CHLOROPROPANE)	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
2,4,5-TRICHLOROPHENOL	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
2,4,6-TRICHLOROPHENOL	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
2,4-DICHLOROPHENOL	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
2,4-DIMETHYLPHENOL	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
2,4-DINITROPHENOL	3.87	3.69	4.03	3.84	4.11	3.55	5.27	4.35	9.26	6.42	4.04	4.36	4.73	9.91	0 of 24
2,4-DINITROTOLUENE	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
2,6-DINITROTOLUENE	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
2-CHLORONAPHTHALENE	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
2-CHLOROPHENOL	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
2-METHYL-4,6-DINITROPHENOL	3.87	3.69	4.03	3.84	4.11	3.55	5.27	4.35	9.26	6.42	4.04	4.36	4.73	9.91	0 of 24
2-METHYLNAPHTHALENE	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
2-METHYLPHENOL	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
2-NITROANILINE	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
2-NITROPHENOL	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
3,3'-DICHLOROBENZIDINE	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
3-NITROANILINE	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
4-BROMOPHENYL PHENYL ETHER	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
4-CHLORO-3-METHYLPHENOL	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
4-CHLOROANILINE	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
4-CHLOROPHENYL PHENYL ETHER	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
4-METHYLPHENOL (INCLUDES 3-METHYLPHENOL)	**24.4**	1.48	**8.36**	**10.4**	1.64	**20.2**	**14.2**	1.74	3.71	2.57	**42.5**	**10.8**	11.8	61.7	10 of 24
4-NITROANILINE	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
4-NITROPHENOL	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
ACENAPHTHENE	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
ACENAPHTHYLENE	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
ANILINE	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
ANTHRACENE	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
BENZIDINE	3.87	3.69	4.03	3.84	4.11	3.55	5.27	4.35	9.26	6.42	4.04	4.36	4.73	9.91	0 of 24
BENZO(A)ANTHRACENE	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
BENZO(A)PYRENE	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
BENZO(B)FLUORANTHENE	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
BENZO(G,H,I)PERYLENE	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
BENZO(K)FLUORANTHENE	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
BENZOIC ACID	3.87	3.69	4.03	3.84	4.11	3.55	5.27	4.35	9.26	6.42	4.04	4.36	4.73	9.91	0 of 24
BENZYL ALCOHOL	**17.8**	**33.6**	1.61	1.54	**22.5**	1.42	2.11	1.74	3.71	2.57	**12.3**	1.74	8.55	38.7	6 of 24
BIS(2-CHLOROETHOXY)METHANE	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
BIS(2-CHLOROETHYL)ETHER	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
BIS(2-ETHYLHEXYL)PHTHALATE	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
BUTYLBENZYLPHTHALATE	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
CARBAZOLE	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
CHRYSENE	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
DIBENZO(A,H)ANTHRACENE	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
DIBENZOFURAN	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
DIETHYLPHTHALATE	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
DIMETHYLPHTHALATE	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
DI-N-BUTYLPHTHALATE	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
DI-N-OCTYLPHTHALATE	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
FLUORANTHENE	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
FLUORENE	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
HEXACHLOROBENZENE	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
HEXACHLOROBUTADIENE	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
HEXACHLOROCYCLOPENTADIENE	3.87	3.69	4.03	3.84	4.11	3.55	5.27	4.35	9.26	6.42	4.04	4.36	4.73	9.91	0 of 24
HEXACHLOROETHANE	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
INDENO(1,2,3-CD)PYRENE	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
ISOPHORONE	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
NAPHTHALENE	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
N-DECANE	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24

Table A-15. Deer Island Influent Loadings (Low detection limit analyses; South System), July - December 2013

Semivolatile Organics (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
1,2,4-TRICHLOROBENZENE	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
1,2-DICHLOROBENZENE	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
1,2-DIPHENYLHYDRAZINE (AS AZOBENZENE)	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
1,3-DICHLOROBENZENE	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
1,4-DICHLOROBENZENE	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
2,2'-OXYBIS(1-CHLOROPROPANE)	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
2,4,5-TRICHLOROPHENOL	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
2,4,6-TRICHLOROPHENOL	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
2,4-DICHLOROPHENOL	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
2,4-DIMETHYLPHENOL	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
2,4-DINITROPHENOL	4.47	3.66	3.36	3.01	3.09	3.59	3.53	4.56	0 of 12
2,4-DINITROTOLUENE	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
2,6-DINITROTOLUENE	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
2-CHLORONAPHTHALENE	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
2-CHLOROPHENOL	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
2-METHYL-4,6-DINITROPHENOL	4.47	3.66	3.36	3.01	3.09	3.59	3.53	4.56	0 of 12
2-METHYLNAPHTHALENE	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
2-METHYLPHENOL	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
2-NITROANILINE	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
2-NITROPHENOL	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
3,3'-DICHLOROBENZIDINE	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
3-NITROANILINE	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
4-BROMOPHENYL PHENYL ETHER	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
4-CHLORO-3-METHYLPHENOL	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
4-CHLOROANILINE	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
4-CHLOROPHENYL PHENYL ETHER	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
4-METHYLPHENOL (INCLUDES 3-METHYLPHENOL)	1.79	1.46	1.34	**22.6**	**21.7**	**41.2**	15	47.7	6 of 12
4-NITROANILINE	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
4-NITROPHENOL	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
ACENAPHTHENE	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
ACENAPHTHYLENE	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
ANILINE	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
ANTHRACENE	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
BENZIDINE	4.47	3.66	3.36	3.01	3.09	3.59	3.53	4.56	0 of 12
BENZO(A)ANTHRACENE	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
BENZO(A)PYRENE	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
BENZO(B)FLUORANTHENE	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
BENZO(G,H,I)PERYLENE	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
BENZO(K)FLUORANTHENE	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
BENZOIC ACID	4.47	3.66	3.36	3.01	3.09	3.59	3.53	4.56	0 of 12
BENZYL ALCOHOL	1.79	1.46	1.34	**8.74**	1.23	12.4	4.49	23.3	2 of 12
BIS(2-CHLOROETHOXY)METHANE	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
BIS(2-CHLOROETHYL)ETHER	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
BIS(2-ETHYLHEXYL)PHTHALATE	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
BUTYLBENZYLPHTHALATE	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
CARBAZOLE	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
CHRYSENE	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
DIBENZO(A,H)ANTHRACENE	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
DIBENZOFURAN	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
DIETHYLPHTHALATE	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
DIMETHYLPHTHALATE	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
DI-N-BUTYLPHTHALATE	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
DI-N-OCTYLPHTHALATE	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
FLUORANTHENE	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
FLUORENE	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
HEXACHLOROBENZENE	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
HEXACHLOROBUTADIENE	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
HEXACHLOROCYCLOPENTADIENE	4.47	3.66	3.36	3.01	3.09	3.59	3.53	4.56	0 of 12
HEXACHLOROETHANE	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
INDENO(1,2,3-CD)PYRENE	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
ISOPHORONE	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
NAPHTHALENE	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
N-DECANE	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12

Table A-15. Deer Island Influent Loadings (Low detection limit analyses; South System), June 2012 - June 2013

Semivolatile Organics (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
NITROBENZENE	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
N-NITROSODIMETHYLAMINE (NDMA)	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
N-NITROSODI-N-PROPYLAMINE (NDPA)	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
N-NITROSODIPHENYLAMINE	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
N-OCTADECANE	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
PENTACHLOROPHENOL	3.87	3.69	4.03	3.84	4.11	3.55	5.27	4.35	9.26	6.42	4.04	4.36	4.73	9.91	0 of 24
PHENANTHRENE	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
PHENOL	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24
PYRENE	1.55	1.48	1.61	1.54	1.64	1.42	2.11	1.74	3.71	2.57	1.62	1.74	1.89	3.97	0 of 24

Polycyclic Aromatic Hydrocarbons (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
1-METHYLNAPHTHALENE	~	**0.0499**	~	**0.0903**	~	**0.119**	~	**0.127**	~	**0.0395**	~	**0.0287**	0.0758	0.178	12 of 12
1-METHYLPHENANTHRENE	~	**0.0181**	~	**0.0228**	~	**0.0246**	~	**0.0725**	~	**0.0176**	~	**0.0209**	0.0294	0.0736	11 of 12
2,3,5-TRIMETHYLNAPHTHYLENE	~	**0.041**	~	**0.0549**	~	**0.0834**	~	**0.117**	~	**0.0276**	~	**0.0221**	0.0577	0.135	12 of 12
2,6-DIMETHYLNAPHTHALENE	~	**0.0495**	~	**0.127**	~	**0.0889**	~	**0.128**	~	**0.0348**	~	**0.078**	0.0844	0.152	12 of 12
2-METHYLNAPHTHALENE	~	**0.0447**	~	**0.0735**	~	**0.0927**	~	**0.103**	~	**0.0364**	~	**0.0222**	0.0621	0.135	12 of 12
ACENAPHTHENE	~	**0.0326**	~	**0.0383**	~	**0.0303**	~	**0.0731**	~	**0.0339**	~	**0.0238**	0.0386	0.0889	12 of 12
ACENAPHTHYLENE	~	**0.00549**	~	**0.0113**	~	**0.00983**	~	**0.0153**	~	**0.018**	~	**0.00425**	0.0107	0.0284	11 of 12
ANTHRACENE	~	**0.0219**	~	**0.0484**	~	**0.0158**	~	**0.0666**	~	**0.0297**	~	**0.0223**	0.0341	0.0873	12 of 12
BENZO(A)ANTHRACENE	~	**0.0555**	~	**0.109**	~	**0.0377**	~	**0.14**	~	**0.0703**	~	**0.0562**	0.0783	0.174	12 of 12
BENZO(A)PYRENE	~	**0.0636**	~	**0.109**	~	**0.037**	~	**0.133**	~	**0.079**	~	**0.0506**	0.0787	0.165	12 of 12
BENZO(B)FLUORANTHENE	~	**0.0849**	~	**0.139**	~	**0.056**	~	**0.17**	~	**0.112**	~	**0.0718**	0.105	0.204	12 of 12
BENZO(E)PYRENE	~	**0.0538**	~	**0.074**	~	**0.0347**	~	**0.0981**	~	**0.0523**	~	**0.0424**	0.0592	0.119	12 of 12
BENZO(G,H,I)PERYLENE	~	**0.0446**	~	**0.0727**	~	**0.0257**	~	**0.0679**	~	**0.0561**	~	**0.0448**	0.052	0.0799	12 of 12
BENZO(K)FLUORANTHENE	~	**0.0301**	~	**0.0456**	~	**0.0162**	~	**0.0349**	~	**0.0604**	~	**0.0414**	0.0381	0.0731	12 of 12
BENZOTHIAZOLE	~	**0.117**	~	**0.0327**	~	**0.0199**	~	**0.00779**	~	**0.00732**	~	**0.0446**	0.0381	0.13	12 of 12
BIPHENYL	~	**0.0241**	~	**0.0616**	~	**0.0474**	~	**0.0537**	~	**0.012**	~	**0.0334**	0.0387	0.0618	12 of 12
C1-CHRYSENES	~	**0.032**	~	**0.0631**	~	**0.0289**	~	**0.0823**	~	**0.0216**	~	**0.0415**	0.0449	0.104	12 of 12
C1-DIBENZOTHIOPHENES	~	**0.0479**	~	0.000384	~	**0.0526**	~	**0.105**	~	**0.0288**	~	0.000436	0.0391	0.123	8 of 12
C1-FLUORANTHENES/PYRENES	~	**0.0815**	~	**0.147**	~	**0.0776**	~	**0.203**	~	**0.066**	~	**0.0714**	0.108	0.258	12 of 12
C1-FLUORENES	~	**0.0607**	~	**0.075**	~	**0.0892**	~	**0.048**	~	0.00063	~	**0.0349**	0.0514	0.114	9 of 12
C1-NAPHTHALENES	~	**0.0717**	~	**0.12**	~	**0.157**	~	**0.166**	~	**0.0562**	~	**0.0534**	0.104	0.228	12 of 12
C1-PHENANTHRENES/ANTHRACENES	~	**0.143**	~	**0.126**	~	**0.196**	~	**0.341**	~	**0.0947**	~	**0.134**	0.173	0.355	11 of 12
C2-CHRYSENES	~	0.000762	~	**0.0416**	~	0.000731	~	**0.0609**	~	0.00063	~	0.000436	0.0175	0.121	2 of 12
C2-DIBENZOTHIOPHENES	~	0.000762	~	0.000384	~	**0.0614**	~	**0.115**	~	**0.0346**	~	0.000436	0.0354	0.149	6 of 12
C2-FLUORANTHENES/PYRENES	~	**0.0459**	~	**0.0962**	~	**0.0591**	~	**0.128**	~	**0.0396**	~	0.000436	0.0615	0.156	10 of 12
C2-FLUORENES	~	0.000762	~	0.000384	~	0.000731	~	**0.189**	~	**0.0395**	~	0.000436	0.0384	0.206	3 of 12
C2-NAPHTHALENES	~	**0.156**	~	**0.298**	~	**0.291**	~	**0.368**	~	**0.105**	~	**0.204**	0.237	0.47	12 of 12
C2-PHENANTHRENES/ANTHRACENES	~	**0.047**	~	0.000384	~	**0.15**	~	**0.337**	~	**0.0951**	~	**0.085**	0.119	0.377	9 of 12
C3-CHRYSENES	~	0.000762	~	0.000384	~	0.000731	~	0.000499	~	0.00063	~	0.000436	0.000574	0.000817	0 of 12
C3-DIBENZOTHIOPHENES	~	0.000762	~	0.000384	~	0.000731	~	0.000499	~	0.00063	~	0.000436	0.000574	0.000817	0 of 12
C3-FLUORANTHENES/PYRENES	~	0.000762	~	**0.0207**	~	0.000731	~	0.000499	~	0.00063	~	0.000436	0.00397	0.0411	1 of 12
C3-FLUORENES	~	0.000762	~	0.000384	~	0.000731	~	0.000499	~	0.00063	~	0.000436	0.000574	0.000817	0 of 12
C3-NAPHTHALENES	~	**0.222**	~	**0.819**	~	**1.32**	~	**0.88**	~	**0.133**	~	**0.138**	0.585	1.62	12 of 12
C3-PHENANTHRENES/ANTHRACENES	~	0.000762	~	**0.167**	~	**0.283**	~	**0.293**	~	**0.136**	~	0.000436	0.147	0.397	7 of 12
C4-CHRYSENES	~	0.000762	~	0.000384	~	0.000731	~	0.000499	~	0.00063	~	0.000436	0.000574	0.000817	0 of 12
C4-NAPHTHALENES	~	**0.165**	~	**0.236**	~	**0.263**	~	**0.32**	~	**0.111**	~	0.000436	0.183	0.36	10 of 12
C4-PHENANTHRENES/ANTHRACENES	~	0.000762	~	0.000384	~	0.000731	~	**0.101**	~	0.00063	~	0.000436	0.0174	0.202	1 of 12
CHRYSENE	~	**0.0759**	~	**0.129**	~	**0.0509**	~	**0.159**	~	**0.0908**	~	**0.0756**	0.097	0.196	12 of 12
DIBENZO(A,H)ANTHRACENE	~	**0.00689**	~	**0.00984**	~	**0.00412**	~	**0.0143**	~	**0.0237**	~	0.000436	0.00988	0.0367	7 of 12
DIBENZOFURAN	~	**0.0187**	~	**0.0165**	~	**0.0152**	~	**0.0259**	~	**0.0047**	~	**0.0137**	0.0158	0.0292	12 of 12
DIBENZOTHIOPHENE	~	**0.0134**	~	**0.0264**	~	**0.0149**	~	**0.0378**	~	**0.0116**	~	**0.00666**	0.0185	0.0482	11 of 12
FLUORANTHENE	~	**0.13**	~	**0.234**	~	**0.104**	~	**0.314**	~	**0.166**	~	**0.164**	0.185	0.389	12 of 12
FLUORENE	~	**0.0321**	~	**0.043**	~	**0.0369**	~	**0.0676**	~	**0.0329**	~	**0.0233**	0.0393	0.073	12 of 12
INDENO(1,2,3-CD)PYRENE	~	0.000762	~	**0.0259**	~	**0.0223**	~	**0.0676**	~	**0.0575**	~	**0.0133**	0.0312	0.0773	10 of 12
NAPHTHALENE	~	**0.0714**	~	**0.107**	~	**0.0805**	~	**0.108**	~	**0.0766**	~	**0.037**	0.0801	0.139	12 of 12
PERYLENE	~	**0.011**	~	**0.0604**	~	**0.00681**	~	**0.0144**	~	**0.00794**	~	**0.0104**	0.0185	0.101	12 of 12
PHENANTHRENE	~	**0.135**	~	**0.24**	~	**0.12**	~	**0.331**	~	**0.123**	~	**0.126**	0.179	0.403	12 of 12
PYRENE	~	**0.128**	~	**0.233**	~	**0.107**	~	**0.325**	~	**0.15**	~	**0.135**	0.18	0.403	12 of 12

Table A-15. Deer Island Influent Loadings (Low detection limit analyses; South System), July - December 2013

Semivolatile Organics (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
NITROBENZENE	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
N-NITROSODIMETHYLAMINE (NDMA)	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
N-NITROSODI-N-PROPYLAMINE (NDPA)	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
N-NITROSODIPHENYLAMINE	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
N-OCTADECANE	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
PENTACHLOROPHENOL	4.47	3.66	3.36	3.01	3.09	3.59	3.53	4.56	0 of 12
PHENANTHRENE	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
PHENOL	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12
PYRENE	1.79	1.46	1.34	1.2	1.23	1.44	1.41	1.82	0 of 12

Polycyclic Aromatic Hydrocarbons (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
1-METHYLNAPHTHALENE	~	**0.0324**	~	**0.0403**	~	**0.0154**	0.0294	0.0446	6 of 6
1-METHYLPHENANTHRENE	~	**0.0128**	~	**0.021**	~	**0.0114**	0.0151	0.0232	6 of 6
2,3,5-TRIMETHYLNAPHTHYLENE	~	**0.0254**	~	**0.0434**	~	**0.0164**	0.0284	0.0442	6 of 6
2,6-DIMETHYLNAPHTHALENE	~	**0.0238**	~	**0.041**	~	**0.0286**	0.0312	0.0444	6 of 6
2-METHYLNAPHTHALENE	~	**0.0281**	~	**0.0385**	~	**0.0132**	0.0266	0.0445	6 of 6
ACENAPHTHENE	~	**0.0219**	~	**0.0381**	~	**0.0174**	0.0258	0.0447	6 of 6
ACENAPHTHYLENE	~	**0.00255**	~	**0.00289**	~	**0.00334**	0.00293	0.00429	6 of 6
ANTHRACENE	~	**0.0136**	~	**0.0309**	~	**0.0116**	0.0187	0.0373	6 of 6
BENZO(A)ANTHRACENE	~	**0.0313**	~	**0.0653**	~	**0.0199**	0.0388	0.0702	6 of 6
BENZO(A)PYRENE	~	**0.0315**	~	**0.0604**	~	**0.0149**	0.0356	0.0649	6 of 6
BENZO(B)FLUORANTHENE	~	**0.043**	~	**0.0809**	~	**0.031**	0.0516	0.085	6 of 6
BENZO(E)PYRENE	~	**0.0241**	~	**0.0463**	~	**0.0139**	0.0281	0.0486	6 of 6
BENZO(G,H,I)PERYLENE	~	**0.0216**	~	**0.0391**	~	0.000355	0.0204	0.0416	4 of 6
BENZO(K)FLUORANTHENE	~	**0.0206**	~	**0.0324**	~	**0.00324**	0.0187	0.0359	5 of 6
BENZOTHIAZOLE	~	**0.0102**	~	**0.0149**	~	**0.0104**	0.0118	0.0187	6 of 6
BIPHENYL	~	**0.0133**	~	**0.0221**	~	**0.00569**	0.0137	0.0232	6 of 6
C1-CHRYSENES	~	**0.0209**	~	**0.0407**	~	**0.0154**	0.0257	0.0415	6 of 6
C1-DIBENZOTHIOPHENES	~	**0.102**	~	**0.0475**	~	0.000355	0.0498	0.132	4 of 6
C1-FLUORANTHENES/PYRENES	~	**0.0446**	~	**0.0824**	~	**0.0287**	0.0519	0.0861	6 of 6
C1-FLUORENES	~	**0.0354**	~	**0.0602**	~	**0.0344**	0.0434	0.0608	6 of 6
C1-NAPHTHALENES	~	**0.0438**	~	**0.0568**	~	**0.0291**	0.0432	0.0619	6 of 6
C1-PHENANTHRENES/ANTHRACENES	~	**0.0602**	~	**0.137**	~	**0.0838**	0.0936	0.143	6 of 6
C2-CHRYSENES	~	**0.0237**	~	**0.177**	~	0.000355	0.067	0.284	4 of 6
C2-DIBENZOTHIOPHENES	~	**0.0303**	~	**0.0463**	~	0.000355	0.0256	0.0499	4 of 6
C2-FLUORANTHENES/PYRENES	~	**0.0303**	~	**0.0534**	~	**0.00469**	0.0294	0.0576	5 of 6
C2-FLUORENES	~	0.000369	~	0.000301	~	0.000355	0.000342	0.000384	0 of 6
C2-NAPHTHALENES	~	**0.0609**	~	**0.102**	~	**0.0764**	0.0798	0.109	6 of 6
C2-PHENANTHRENES/ANTHRACENES	~	**0.0673**	~	**0.115**	~	**0.0709**	0.0845	0.116	6 of 6
C3-CHRYSENES	~	0.000369	~	0.000301	~	0.000355	0.000342	0.000384	0 of 6
C3-DIBENZOTHIOPHENES	~	0.000369	~	0.000301	~	0.000355	0.000342	0.000384	0 of 6
C3-FLUORANTHENES/PYRENES	~	0.000369	~	**0.0144**	~	0.000355	0.00505	0.0286	1 of 6
C3-FLUORENES	~	0.000369	~	0.000301	~	0.000355	0.000342	0.000384	0 of 6
C3-NAPHTHALENES	~	**0.395**	~	**0.927**	~	**0.0632**	0.462	0.952	6 of 6
C3-PHENANTHRENES/ANTHRACENES	~	**0.0596**	~	**0.196**	~	0.000355	0.0854	0.254	3 of 6
C4-CHRYSENES	~	0.000369	~	**0.517**	~	0.000355	0.173	0.563	2 of 6
C4-NAPHTHALENES	~	**0.0737**	~	**0.133**	~	0.000355	0.0689	0.14	4 of 6
C4-PHENANTHRENES/ANTHRACENES	~	0.000369	~	0.000301	~	0.000355	0.000342	0.000384	0 of 6
CHRYSENE	~	**0.0433**	~	**0.075**	~	**0.0247**	0.0477	0.0785	6 of 6
DIBENZO(A,H)ANTHRACENE	~	**0.0109**	~	**0.0105**	~	0.000355	0.00722	0.0115	4 of 6
DIBENZOFURAN	~	**0.0135**	~	**0.0254**	~	**0.0106**	0.0165	0.0303	6 of 6
DIBENZOTHIOPHENE	~	**0.00868**	~	**0.0159**	~	**0.00732**	0.0106	0.0181	6 of 6
FLUORANTHENE	~	**0.0844**	~	**0.161**	~	**0.043**	0.096	0.173	6 of 6
FLUORENE	~	**0.0211**	~	**0.0412**	~	**0.0135**	0.0253	0.048	6 of 6
INDENO(1,2,3-CD)PYRENE	~	**0.0193**	~	**0.0357**	~	**0.0312**	0.0288	0.0621	5 of 6
NAPHTHALENE	~	**0.0415**	~	**0.0572**	~	**0.0217**	0.0402	0.0625	6 of 6
PERYLENE	~	**0.00584**	~	**0.0112**	~	**0.00141**	0.00614	0.0118	5 of 6
PHENANTHRENE	~	**0.0847**	~	**0.174**	~	**0.0646**	0.108	0.203	6 of 6
PYRENE	~	**0.0773**	~	**0.148**	~	**0.0405**	0.0887	0.158	6 of 6

Table A-15. Deer Island Influent Loadings (Low detection limit analyses; South System), June 2012 - June 2013

Organochlorine Pesticides and PCBs (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
2,4'-DDD	~	0.000309	~	0.000146	~	0.000146	~	0.000172	~	0.000246	~	0.00017	0.000198	0.000327	0 of 12
2,4'-DDE	~	0.000309	~	0.000146	~	0.000146	~	0.000172	~	0.000246	~	0.00017	0.000198	0.000327	0 of 12
2,4'-DDT	~	0.000309	~	0.000146	~	0.000146	~	0.000172	~	0.000246	~	0.00017	0.000198	0.000327	0 of 12
4,4'-DDD	~	0.000309	~	0.000146	~	0.000146	~	0.000172	~	0.000246	~	**0.00145**	0.000411	0.00272	1 of 12
4,4'-DDE	~	**0.00321**	~	0.000146	~	0.000146	~	**0.0011**	~	0.000246	~	**0.00234**	0.0012	0.00325	5 of 12
4,4'-DDT	~	0.000309	~	0.000146	~	0.000146	~	0.000172	~	0.000246	~	0.00017	0.000198	0.000327	0 of 12
ALDRIN	~	0.000309	~	0.000146	~	0.000146	~	0.000172	~	0.000246	~	0.00017	0.000198	0.000327	0 of 12
ALPHA-CHLORDANE	~	**0.00927**	~	**0.00138**	~	**0.00101**	~	**0.00579**	~	**0.00691**	~	**0.00426**	0.00477	0.0103	12 of 12
BZ 101 PENTACHLOROBIPHENYL	~	**0.00276**	~	**0.00619**	~	0.000146	~	0.000172	~	0.000246	~	**0.001**	0.00175	0.0117	6 of 12
BZ 105 PENTACHLOROBIPHENYL	~	0.000309	~	**0.000896**	~	0.000146	~	0.000172	~	0.000246	~	0.00017	0.000323	0.00165	1 of 12
BZ 118 PENTACHLOROBIPHENYL	~	**0.00149**	~	**0.00751**	~	0.000146	~	0.000172	~	0.000246	~	**0.000324**	0.00165	0.0143	4 of 12
BZ 126 PENTACHLOROBIPHENYL	~	0.000309	~	0.000146	~	0.000146	~	0.000172	~	0.000246	~	0.00017	0.000198	0.000327	0 of 12
BZ 128 HEXACHLOROBIPHENYL	~	0.000309	~	**0.00126**	~	0.000146	~	0.000172	~	0.000246	~	0.00017	0.000384	0.00238	1 of 12
BZ 138 HEXACHLOROBIPHENYL	~	**0.0018**	~	**0.00767**	~	0.000146	~	**0.00285**	~	0.000246	~	**0.00184**	0.00243	0.0146	8 of 12
BZ 153 HEXACHLOROBIPHENYL	~	**0.00168**	~	**0.00909**	~	0.000146	~	**0.000843**	~	0.000246	~	**0.000892**	0.00215	0.0175	8 of 12
BZ 170 HEPTACHLOROBIPHENYL	~	0.000309	~	**0.00439**	~	0.000146	~	0.000172	~	0.000246	~	0.00017	0.000905	0.00863	1 of 12
BZ 18 TRICHLOROBIPHENYL	~	0.000309	~	0.000146	~	0.000146	~	0.000172	~	0.000246	~	0.00017	0.000198	0.000327	0 of 12
BZ 180 HEPTACHLOROBIPHENYL	~	**0.00125**	~	**0.00827**	~	0.000146	~	0.000172	~	0.000246	~	**0.000717**	0.0018	0.0159	6 of 12
BZ 187 HEPTACHLOROBIPHENYL	~	**0.000635**	~	**0.00494**	~	0.000146	~	0.000172	~	0.000246	~	**0.000397**	0.00109	0.00948	5 of 12
BZ 195 OCTACHLOROBIPHENYL	~	0.000309	~	**0.00107**	~	0.000146	~	0.000172	~	0.000246	~	0.00017	0.000352	0.00199	1 of 12
BZ 206 NONACHLOROBIPHENYL	~	0.000309	~	**0.00118**	~	0.000146	~	0.000172	~	0.000246	~	0.00017	0.00037	0.00221	1 of 12
BZ 209 DECACHLOROBIPHENYL	~	0.000309	~	0.000146	~	0.000146	~	0.000172	~	0.000246	~	0.00017	0.000198	0.000327	0 of 12
BZ 28 TRICHLOROBIPHENYL	~	0.000309	~	**0.00743**	~	0.000146	~	0.000172	~	0.000246	~	0.00017	0.00141	0.0147	1 of 12
BZ 44 TETRACHLOROBIPHENYL	~	0.000309	~	0.000146	~	0.000146	~	0.000172	~	0.000246	~	0.00017	0.000198	0.000327	0 of 12
BZ 52 TETRACHLOROBIPHENYL	~	**0.00206**	~	**0.00326**	~	0.000146	~	0.000172	~	0.000246	~	**0.000807**	0.00111	0.00528	6 of 12
BZ 66 TETRACHLOROBIPHENYL	~	0.000309	~	**0.0041**	~	0.000146	~	0.000172	~	0.000246	~	0.00017	0.000858	0.00806	1 of 12
BZ 77 TETRACHLOROBIPHENYL	~	0.000309	~	0.000146	~	0.000146	~	0.000172	~	0.000246	~	0.00017	0.000198	0.000327	0 of 12
BZ 8 DICHLOROBIPHENYL	~	0.000309	~	0.000146	~	0.000146	~	0.000172	~	0.000246	~	0.00017	0.000198	0.000327	0 of 12
CIS-NONACHLOR	~	0.000309	~	0.000146	~	0.000146	~	0.000172	~	0.000246	~	**0.00043**	0.000242	0.000683	1 of 12
DDMU	~	0.000309	~	0.000146	~	0.000146	~	0.000172	~	0.000246	~	0.00017	0.000198	0.000327	0 of 12
DIELDRIN	~	0.000309	~	0.000146	~	0.000146	~	0.000172	~	0.000246	~	0.00017	0.000198	0.000327	0 of 12
ENDRIN	~	0.000309	~	0.000146	~	0.000146	~	0.000172	~	0.000246	~	0.00017	0.000198	0.000327	0 of 12
GAMMA-BHC	~	0.000309	~	0.000146	~	0.000146	~	0.000172	~	0.000246	~	0.00017	0.000198	0.000327	0 of 12
GAMMA-CHLORDANE	~	**0.00924**	~	**0.00156**	~	**0.00118**	~	**0.00457**	~	**0.0078**	~	**0.00409**	0.00474	0.00968	12 of 12
HEPTACHLOR	~	0.000309	~	0.000146	~	0.000146	~	0.000172	~	0.000246	~	0.00017	0.000198	0.000327	0 of 12
HEPTACHLOR EPOXIDE	~	0.000309	~	0.000146	~	0.000146	~	0.000172	~	0.000246	~	0.00017	0.000198	0.000327	0 of 12
HEXACHLOROBENZENE	~	**0.0008**	~	**0.000486**	~	0.000146	~	**0.000424**	~	0.000246	~	0.00017	0.000379	0.000831	5 of 12
MIREX	~	0.000309	~	0.000146	~	0.000146	~	0.000172	~	0.000246	~	0.00017	0.000198	0.000327	0 of 12
OXYCHLORDANE	~	0.000309	~	0.000146	~	0.000146	~	0.000172	~	0.000246	~	0.00017	0.000198	0.000327	0 of 12
TOTAL AMP PCBS	~	**0.0114**	~	**0.0669**	~	0.000146	~	**0.00369**	~	0.000246	~	**0.0059**	0.0147	0.129	8 of 12
TOTAL CHLORDANE	~	**0.0126**	~	**0.00189**	~	**0.00174**	~	**0.00755**	~	**0.00949**	~	**0.00606**	0.00656	0.0137	12 of 12
TOTAL DDT	~	**0.00321**	~	0.000146	~	0.000146	~	**0.0011**	~	0.000246	~	**0.00371**	0.00143	0.0059	5 of 12
TRANS-NONACHLOR	~	**0.00333**	~	**0.000508**	~	**0.000738**	~	**0.00176**	~	**0.00258**	~	**0.0018**	0.00179	0.00343	12 of 12

Table A-15. Deer Island Influent Loadings (Low detection limit analyses; South System), July - December 2013

Organochlorine Pesticides and PCBs (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
2,4'-DDD	~	0.000146	~	0.000122	~	0.000142	0.000137	0.000147	0 of 6
2,4'-DDE	~	0.000146	~	0.000122	~	0.000142	0.000137	0.000147	0 of 6
2,4'-DDT	~	0.000146	~	0.000122	~	0.000142	0.000137	0.000147	0 of 6
4,4'-DDD	~	0.000146	~	0.000122	~	0.000142	0.000137	0.000147	0 of 6
4,4'-DDE	~	**0.000895**	~	**0.000359**	~	**0.000938**	0.000731	0.00127	5 of 6
4,4'-DDT	~	0.000146	~	0.000122	~	0.000142	0.000137	0.000147	0 of 6
ALDRIN	~	0.000146	~	0.000122	~	0.000142	0.000137	0.000147	0 of 6
ALPHA-CHLORDANE	~	**0.00194**	~	**0.00185**	~	**0.00191**	0.0019	0.00265	6 of 6
BZ 101 PENTACHLOROBIPHENYL	~	**0.000653**	~	0.000122	~	**0.00064**	0.000472	0.000776	4 of 6
BZ 105 PENTACHLOROBIPHENYL	~	0.000146	~	0.000122	~	0.000142	0.000137	0.000147	0 of 6
BZ 118 PENTACHLOROBIPHENYL	~	0.000146	~	0.000122	~	**0.000485**	0.000251	0.000538	2 of 6
BZ 126 PENTACHLOROBIPHENYL	~	0.000146	~	0.000122	~	0.000142	0.000137	0.000147	0 of 6
BZ 128 HEXACHLOROBIPHENYL	~	0.000146	~	0.000122	~	0.000142	0.000137	0.000147	0 of 6
BZ 138 HEXACHLOROBIPHENYL	~	**0.000477**	~	**0.000721**	~	**0.000613**	0.000604	0.000757	6 of 6
BZ 153 HEXACHLOROBIPHENYL	~	**0.000259**	~	**0.000423**	~	**0.00051**	0.000397	0.000595	6 of 6
BZ 170 HEPTACHLOROBIPHENYL	~	0.000146	~	0.000122	~	0.000142	0.000137	0.000147	0 of 6
BZ 18 TRICHLOROBIPHENYL	~	0.000146	~	0.000122	~	0.000142	0.000137	0.000147	0 of 6
BZ 180 HEPTACHLOROBIPHENYL	~	0.000146	~	0.000122	~	**0.000297**	0.000188	0.000356	2 of 6
BZ 187 HEPTACHLOROBIPHENYL	~	0.000146	~	0.000122	~	**0.000206**	0.000158	0.000224	2 of 6
BZ 195 OCTACHLOROBIPHENYL	~	0.000146	~	0.000122	~	0.000142	0.000137	0.000147	0 of 6
BZ 206 NONACHLOROBIPHENYL	~	0.000146	~	0.000122	~	0.000142	0.000137	0.000147	0 of 6
BZ 209 DECACHLOROBIPHENYL	~	0.000146	~	0.000122	~	0.000142	0.000137	0.000147	0 of 6
BZ 28 TRICHLOROBIPHENYL	~	0.000146	~	0.000122	~	0.000142	0.000137	0.000147	0 of 6
BZ 44 TETRACHLOROBIPHENYL	~	0.000146	~	0.000122	~	0.000142	0.000137	0.000147	0 of 6
BZ 52 TETRACHLOROBIPHENYL	~	**0.000361**	~	0.000122	~	**0.000516**	0.000333	0.000623	4 of 6
BZ 66 TETRACHLOROBIPHENYL	~	0.000146	~	0.000122	~	0.000142	0.000137	0.000147	0 of 6
BZ 77 TETRACHLOROBIPHENYL	~	0.000146	~	0.000122	~	0.000142	0.000137	0.000147	0 of 6
BZ 8 DICHLOROBIPHENYL	~	0.000146	~	0.000122	~	0.000142	0.000137	0.000147	0 of 6
CIS-NONACHLOR	~	0.000146	~	0.000122	~	**0.00028**	0.000183	0.000294	2 of 6
DDMU	~	0.000146	~	0.000122	~	0.000142	0.000137	0.000147	0 of 6
DIELDRIN	~	0.000146	~	0.000122	~	0.000142	0.000137	0.000147	0 of 6
ENDRIN	~	0.000146	~	0.000122	~	0.000142	0.000137	0.000147	0 of 6
GAMMA-BHC	~	0.000146	~	0.000122	~	0.000142	0.000137	0.000147	0 of 6
GAMMA-CHLORDANE	~	**0.00173**	~	**0.00199**	~	**0.00214**	0.00195	0.00234	6 of 6
HEPTACHLOR	~	0.000146	~	0.000122	~	0.000142	0.000137	0.000147	0 of 6
HEPTACHLOR EPOXIDE	~	0.000146	~	0.000122	~	0.000142	0.000137	0.000147	0 of 6
HEXACHLOROBENZENE	~	0.000146	~	**0.000995**	~	**0.000828**	0.000656	0.0012	4 of 6
MIREX	~	0.000146	~	0.000122	~	0.000142	0.000137	0.000147	0 of 6
OXYCHLORDANE	~	0.000146	~	0.000122	~	0.000142	0.000137	0.000147	0 of 6
TOTAL AMP PCBS	~	**0.00175**	~	**0.00114**	~	**0.00327**	0.00205	0.00374	6 of 6
TOTAL CHLORDANE	~	**0.0027**	~	**0.00241**	~	**0.0029**	0.00267	0.0037	6 of 6
TOTAL DDT	~	**0.000895**	~	**0.000359**	~	**0.000938**	0.000731	0.00127	5 of 6
TRANS-NONACHLOR	~	**0.000766**	~	**0.000562**	~	**0.000991**	0.000773	0.00108	6 of 6

Table A-15. Deer Island Influent Loadings (Low detection limit analyses; South System), June 2012 - June 2013

Volatile Organics (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
1,1,1-TRICHLOROETHANE	0.351	0.335	0.333	0.346	0.404	0.342	0.492	0.403	0.78	0.57	0.402	0.401	0.43	0.791	0 of 24
1,1,2,2-TETRACHLOROETHANE	0.351	0.335	0.333	0.346	0.404	0.342	0.492	0.403	0.78	0.57	0.402	0.401	0.43	0.791	0 of 24
1,1,2-TRICHLOROETHANE	0.351	0.335	0.333	0.346	0.404	0.342	0.492	0.403	0.78	0.57	0.402	0.401	0.43	0.791	0 of 24
1,1-DICHLOROETHANE	0.351	0.335	0.333	0.346	0.404	0.342	0.492	0.403	0.78	0.57	0.402	0.401	0.43	0.791	0 of 24
1,1-DICHLOROETHENE	0.351	0.335	0.333	0.346	0.404	0.342	0.492	0.403	0.78	0.57	0.402	0.401	0.43	0.791	0 of 24
1,2-DICHLOROBENZENE	0.351	0.335	0.333	0.346	0.404	0.342	0.492	0.403	0.78	0.57	0.402	0.401	0.43	0.791	0 of 24
1,2-DICHLOROETHANE	0.351	0.335	0.333	0.346	0.404	0.342	0.492	0.403	0.78	0.57	0.402	0.401	0.43	0.791	0 of 24
1,2-DICHLOROPROPANE	0.351	0.335	0.333	0.346	0.404	0.342	0.492	0.403	0.78	0.57	0.402	0.401	0.43	0.791	0 of 24
1,3-DICHLOROBENZENE	0.351	0.335	0.333	0.346	0.404	0.342	0.492	0.403	0.78	0.57	0.402	0.401	0.43	0.791	0 of 24
1,4-DICHLOROBENZENE	0.351	0.335	0.333	0.346	0.404	0.342	0.492	0.403	0.78	0.57	0.402	0.401	0.43	0.791	0 of 24
2-BUTANONE	**2.23**	**8.34**	**3.7**	**8.04**	0.404	**9.14**	**4.63**	**2.85**	**4.65**	**28.8**	**8.73**	**5.31**	7.23	29.7	17 of 24
2-CHLOROETHYL VINYL ETHER	0.351	0.335	0.333	0.346	0.404	0.342	0.492	0.403	0.78	0.57	0.402	0.401	0.43	0.791	0 of 24
2-HEXANONE	0.351	0.335	0.333	0.346	0.404	0.342	0.492	0.403	0.78	0.57	0.402	0.401	0.43	0.791	0 of 24
4-METHYL-2-PENTANONE	0.351	0.335	0.333	0.346	0.404	0.342	0.492	0.403	0.78	0.57	0.402	0.401	0.43	0.791	0 of 24
ACETONE	**47.7**	**145**	**69.8**	**106**	**63**	**56.9**	**82.5**	**72**	**112**	**90.1**	**67.1**	**53.5**	80.5	149	24 of 24
ACROLEIN	0.702	0.67	0.666	0.692	0.809	0.683	0.983	0.806	1.56	1.14	0.804	0.801	0.86	1.58	0 of 24
ACRYLONITRILE	0.702	0.67	0.666	0.692	0.809	0.683	0.983	0.806	1.56	1.14	0.804	0.801	0.86	1.58	0 of 24
BENZENE	0.351	0.335	0.333	0.346	0.404	0.342	0.492	0.403	0.78	0.57	0.402	0.401	0.43	0.791	0 of 24
BROMODICHLOROMETHANE	0.351	0.335	0.333	0.346	0.404	0.342	0.492	0.403	0.78	0.57	0.402	0.401	0.43	0.791	0 of 24
BROMOFORM	0.351	0.335	0.333	0.346	0.404	0.342	0.492	0.403	0.78	0.57	0.402	0.401	0.43	0.791	0 of 24
BROMOMETHANE	0.351	0.335	0.333	0.346	0.404	0.342	0.492	0.403	0.78	0.57	0.402	0.401	0.43	0.791	0 of 24
CARBON DISULFIDE	0.351	0.335	0.333	**3.96**	0.404	0.342	0.492	0.403	0.78	0.57	**3.81**	0.401	1.02	7.22	3 of 24
CARBON TETRACHLORIDE	0.351	0.335	0.333	0.346	0.404	0.342	0.492	0.403	0.78	0.57	0.402	0.401	0.43	0.791	0 of 24
CHLOROBENZENE	0.351	0.335	0.333	0.346	0.404	0.342	0.492	0.403	0.78	0.57	0.402	0.401	0.43	0.791	0 of 24
CHLOROETHANE	0.351	0.335	0.333	0.346	0.404	0.342	0.492	0.403	0.78	0.57	0.402	0.401	0.43	0.791	0 of 24
CHLOROFORM	0.351	0.335	0.333	0.346	0.404	0.342	0.492	0.403	0.78	0.57	0.402	0.401	0.43	0.791	0 of 24
CHLOROMETHANE	0.351	0.335	0.333	0.346	0.404	0.342	0.492	0.403	0.78	0.57	0.402	0.401	0.43	0.791	0 of 24
CIS-1,2-DICHLOROETHENE	0.351	0.335	0.333	0.346	0.404	0.342	0.492	0.403	0.78	0.57	0.402	0.401	0.43	0.791	0 of 24
CIS-1,3-DICHLOROPROPENE	0.351	0.335	0.333	0.346	0.404	0.342	0.492	0.403	0.78	0.57	0.402	0.401	0.43	0.791	0 of 24
DIBROMOCHLOROMETHANE	0.351	0.335	0.333	0.346	0.404	0.342	0.492	0.403	0.78	0.57	0.402	0.401	0.43	0.791	0 of 24
ETHYLBENZENE	0.351	0.335	0.333	0.346	0.404	0.342	0.492	0.403	0.78	0.57	0.402	0.401	0.43	0.791	0 of 24
M,P-XYLENE	0.702	0.67	0.666	0.692	0.809	0.683	0.983	0.806	1.56	1.14	0.804	0.801	0.86	1.58	0 of 24
METHYLENE CHLORIDE	0.351	0.335	0.333	0.346	0.404	0.342	0.492	0.403	0.78	0.57	0.402	0.401	0.43	0.791	0 of 24
O-XYLENE	0.351	0.335	0.333	0.346	0.404	0.342	0.492	0.403	0.78	0.57	0.402	0.401	0.43	0.791	0 of 24
STYRENE	0.351	0.335	0.333	0.346	0.404	0.342	0.492	0.403	0.78	0.57	0.402	**6.84**	0.966	13.3	1 of 24
TETRACHLOROETHENE	0.351	0.335	**17.6**	0.346	**3.53**	0.342	**36.7**	0.403	0.78	0.57	0.402	0.401	5.15	73	3 of 24
TOLUENE	**2.02**	0.335	0.333	0.346	0.404	**2.8**	0.492	0.403	0.78	0.57	0.402	0.401	0.774	5.26	2 of 24
TRANS-1,2-DICHLOROETHENE	0.351	0.335	0.333	0.346	0.404	0.342	0.492	0.403	0.78	0.57	0.402	0.401	0.43	0.791	0 of 24
TRANS-1,3-DICHLOROPROPENE	0.351	0.335	0.333	0.346	0.404	0.342	0.492	0.403	0.78	0.57	0.402	0.401	0.43	0.791	0 of 24
TRICHLOROETHENE	0.351	0.335	0.333	0.346	0.404	0.342	0.492	0.403	0.78	0.57	0.402	0.401	0.43	0.791	0 of 24
TRICHLOROFLUOROMETHANE	0.351	0.335	0.333	0.346	0.404	0.342	0.492	0.403	0.78	0.57	0.402	0.401	0.43	0.791	0 of 24
VINYL ACETATE	0.351	0.335	0.333	0.346	0.404	0.342	0.492	0.403	0.78	0.57	0.402	0.401	0.43	0.791	0 of 24
VINYL CHLORIDE	0.351	0.335	0.333	0.346	0.404	0.342	0.492	0.403	0.78	0.57	0.402	0.401	0.43	0.791	0 of 24

Table A-15. Deer Island Influent Loadings (Low detection limit analyses; South System), July - December 2013

Volatile Organics (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
1,1,1-TRICHLOROETHANE	0.422	0.344	0.326	0.292	0.289	0.344	0.336	0.424	0 of 12
1,1,2,2-TETRACHLOROETHANE	0.422	0.344	0.326	0.292	0.289	0.344	0.336	0.424	0 of 12
1,1,2-TRICHLOROETHANE	0.422	0.344	0.326	0.292	0.289	0.344	0.336	0.424	0 of 12
1,1-DICHLOROETHANE	0.422	0.344	0.326	0.292	0.289	0.344	0.336	0.424	0 of 12
1,1-DICHLOROETHENE	0.422	0.344	0.326	0.292	0.289	0.344	0.336	0.424	0 of 12
1,2-DICHLOROBENZENE	0.422	0.344	0.326	0.292	0.289	0.344	0.336	0.424	0 of 12
1,2-DICHLOROETHANE	0.422	0.344	0.326	0.292	0.289	0.344	0.336	0.424	0 of 12
1,2-DICHLOROPROPANE	0.422	0.344	0.326	0.292	0.289	0.344	0.336	0.424	0 of 12
1,3-DICHLOROBENZENE	0.422	0.344	0.326	0.292	0.289	0.344	0.336	0.424	0 of 12
1,4-DICHLOROBENZENE	0.422	0.344	0.326	0.292	0.289	0.344	0.336	0.424	0 of 12
2-BUTANONE	**10.7**	**10.7**	**7.73**	**5.84**	**3.38**	**5.43**	7.31	13.8	12 of 12
2-CHLOROETHYL VINYL ETHER	0.422	0.344	0.326	0.292	0.289	0.344	0.336	0.424	0 of 12
2-HEXANONE	0.422	0.344	0.326	0.292	0.289	0.344	0.336	0.424	0 of 12
4-METHYL-2-PENTANONE	0.422	0.344	0.326	0.292	0.289	0.344	0.336	0.424	0 of 12
ACETONE	**122**	**107**	**91.8**	**121**	**50.7**	**61.2**	92.1	177	12 of 12
ACROLEIN	0.844	0.687	0.652	0.585	0.577	0.689	0.672	0.849	0 of 12
ACRYLONITRILE	0.844	0.687	0.652	0.585	0.577	0.689	0.672	0.849	0 of 12
BENZENE	0.422	0.344	0.326	0.292	0.289	0.344	0.336	0.424	0 of 12
BROMODICHLOROMETHANE	0.422	0.344	0.326	0.292	0.289	0.344	0.336	0.424	0 of 12
BROMOFORM	0.422	0.344	0.326	0.292	0.289	0.344	0.336	0.424	0 of 12
BROMOMETHANE	0.422	0.344	0.326	0.292	0.289	0.344	0.336	0.424	0 of 12
CARBON DISULFIDE	0.422	**7.11**	**7.83**	**2.57**	**51.3**	0.344	11.6	102	5 of 12
CARBON TETRACHLORIDE	0.422	0.344	0.326	0.292	0.289	0.344	0.336	0.424	0 of 12
CHLOROBENZENE	0.422	0.344	0.326	0.292	0.289	0.344	0.336	0.424	0 of 12
CHLOROETHANE	0.422	0.344	0.326	0.292	0.289	0.344	0.336	0.424	0 of 12
CHLOROFORM	0.422	0.344	0.326	0.292	0.289	0.344	0.336	0.424	0 of 12
CHLOROMETHANE	0.422	0.344	0.326	0.292	0.289	0.344	0.336	0.424	0 of 12
CIS-1,2-DICHLOROETHENE	0.422	0.344	0.326	0.292	0.289	0.344	0.336	0.424	0 of 12
CIS-1,3-DICHLOROPROPENE	0.422	0.344	0.326	0.292	0.289	0.344	0.336	0.424	0 of 12
DIBROMOCHLOROMETHANE	0.422	0.344	0.326	0.292	0.289	0.344	0.336	0.424	0 of 12
ETHYLBENZENE	0.422	0.344	0.326	0.292	0.289	0.344	0.336	0.424	0 of 12
M,P-XYLENE	0.844	0.687	0.652	0.585	0.577	0.689	0.672	0.849	0 of 12
METHYLENE CHLORIDE	0.422	0.344	0.326	0.292	0.289	0.344	0.336	0.424	0 of 12
O-XYLENE	0.422	0.344	0.326	0.292	0.289	0.344	0.336	0.424	0 of 12
STYRENE	0.422	0.344	0.326	0.292	0.289	0.344	0.336	0.424	0 of 12
TETRACHLOROETHENE	0.422	0.344	0.326	0.292	**3.7**	0.344	0.904	4.08	2 of 12
TOLUENE	**2.99**	0.344	0.326	**1.69**	0.289	0.344	0.997	5.56	2 of 12
TRANS-1,2-DICHLOROETHENE	0.422	0.344	0.326	0.292	0.289	0.344	0.336	0.424	0 of 12
TRANS-1,3-DICHLOROPROPENE	0.422	0.344	0.326	0.292	0.289	0.344	0.336	0.424	0 of 12
TRICHLOROETHENE	0.422	0.344	0.326	0.292	0.289	0.344	0.336	0.424	0 of 12
TRICHLOROFLUOROMETHANE	0.422	0.344	0.326	0.292	0.289	0.344	0.336	0.424	0 of 12
VINYL ACETATE	0.422	0.344	0.326	0.292	0.289	0.344	0.336	0.424	0 of 12
VINYL CHLORIDE	0.422	0.344	0.326	0.292	0.289	0.138	0.302	0.424	0 of 12

Notes

DEC is the now-defunct Detailed Effluent Characterization project, which includes low-detection limit methods not approved by the EPA. DEC sampling is now carried out under the NP-EM project.

~: No data or no samples taken

Results in **bold** indicate one or more detects that month

Yearly averages are calculated from individual results collected during the reporting period and are flow-weighted.

Non-detected compounds are assumed to equal one half of the detection limit for metals and inorganics and one tenth of the reporting limit for organic compounds.

Table A-16. Deer Island Effluent Characterization (Low detection limit analyses), July 2012 - June 2013

Organochlorine Pesticides and PCBs (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
2,4'-DDD	0.000106	0.000107	0.000108	0.000104	0.000108	0.000108	0.000111	0.000107	0.000128	0.000109	0.000141	0.000108	0.000113	0.00021	0 of 48
2,4'-DDE	0.000106	0.000107	0.000108	0.000104	0.000108	0.000108	0.000111	0.000107	0.000128	0.000109	0.000141	0.000108	0.000113	0.00021	0 of 48
2,4'-DDT	0.000106	0.000107	0.000108	0.000104	0.000108	0.000108	0.000111	0.000107	0.000128	0.000109	0.000141	0.000108	0.000113	0.00021	0 of 48
4,4'-DDD	0.000106	0.000107	0.000108	0.000104	0.000108	0.000108	0.000111	0.000107	0.000128	0.000109	0.000141	0.000108	0.000113	0.00021	0 of 48
4,4'-DDE	**0.000119**	0.000107	0.000108	0.000104	**0.000205**	0.000108	0.000111	0.000107	0.000128	0.000109	0.000141	**0.00013**	0.000124	0.000489	3 of 48
4,4'-DDT	0.000106	0.000107	0.000108	0.000104	0.000108	0.000108	0.000111	0.000107	0.000128	0.000109	0.000141	0.000108	0.000113	0.00021	0 of 48
ALDRIN	0.000106	0.000107	0.000108	0.000104	0.000108	0.000108	0.000111	0.000107	0.000128	0.000109	0.000141	0.000108	0.000113	0.00021	0 of 48
ALPHA-CHLORDANE	**0.000398**	**0.000487**	**0.000474**	**0.000323**	0.000108	0.000108	0.000111	**0.00025**	**0.000959**	0.000109	**0.000843**	**0.000402**	0.000412	0.00192	19 of 48
BZ 101 PENTACHLOROBIPHENYL	0.000106	0.000107	**0.000171**	0.000104	0.000108	0.000108	0.000111	0.000107	0.000128	0.000109	0.000141	0.000108	0.000118	0.000357	1 of 48
BZ 105 PENTACHLOROBIPHENYL	0.000106	0.000107	0.000108	0.000104	0.000108	0.000108	0.000111	0.000107	0.000128	0.000109	0.000141	0.000108	0.000113	0.00021	0 of 48
BZ 118 PENTACHLOROBIPHENYL	0.000106	0.000107	0.000108	0.000104	0.000108	0.000108	0.000111	0.000107	0.000128	0.000109	0.000141	0.000108	0.000113	0.00021	0 of 48
BZ 126 PENTACHLOROBIPHENYL	0.000106	0.000107	0.000108	0.000104	0.000108	0.000108	0.000111	0.000107	0.000128	0.000109	0.000141	0.000108	0.000113	0.00021	0 of 48
BZ 128 HEXACHLOROBIPHENYL	0.000106	0.000107	0.000108	0.000104	0.000108	0.000108	0.000111	0.000107	0.000128	0.000109	0.000141	0.000108	0.000113	0.00021	0 of 48
BZ 138 HEXACHLOROBIPHENYL	0.000106	**0.000139**	**0.000196**	**0.000131**	0.000108	0.000108	0.000111	0.000107	0.000128	0.000109	**0.000205**	0.000108	0.000129	0.00041	5 of 48
BZ 153 HEXACHLOROBIPHENYL	0.000106	**0.000149**	**0.000279**	**0.000148**	**0.000152**	0.000108	0.000111	0.000107	0.000128	0.000109	**0.000174**	0.000108	0.000138	0.00036	10 of 48
BZ 170 HEPTACHLOROBIPHENYL	0.000106	0.000107	0.000108	0.000104	0.000108	0.000108	0.000111	0.000107	0.000128	0.000109	0.000141	0.000108	0.000113	0.00021	0 of 48
BZ 18 TRICHLOROBIPHENYL	0.000106	0.000107	0.000108	0.000104	0.000108	0.000108	0.000111	0.000107	0.000128	0.000109	0.000141	0.000108	0.000113	0.00021	0 of 48
BZ 180 HEPTACHLOROBIPHENYL	0.000106	**0.000188**	0.000108	**0.000123**	0.000108	0.000108	0.000111	**0.000676**	0.000128	0.000109	0.000141	0.000108	0.000167	0.00177	4 of 48
BZ 187 HEPTACHLOROBIPHENYL	0.000106	0.000107	0.000108	0.000104	0.000108	0.000108	0.000111	**0.000109**	0.000128	0.000109	0.000141	0.000108	0.000114	0.00021	1 of 48
BZ 195 OCTACHLOROBIPHENYL	0.000106	0.000107	0.000108	0.000104	0.000108	0.000108	0.000111	0.000107	0.000128	0.000109	0.000141	0.000108	0.000113	0.00021	0 of 48
BZ 206 NONACHLOROBIPHENYL	0.000106	0.000107	0.000108	0.000104	0.000108	0.000108	0.000111	0.000107	0.000128	0.000109	0.000141	0.000108	0.000113	0.00021	0 of 48
BZ 209 DECACHLOROBIPHENYL	0.000106	0.000107	0.000108	0.000104	0.000108	0.000108	0.000111	0.000107	0.000128	0.000109	0.000141	0.000108	0.000113	0.00021	0 of 48
BZ 28 TRICHLOROBIPHENYL	0.000106	0.000107	0.000108	0.000104	0.000108	0.000108	0.000111	0.000107	0.000128	0.000109	0.000141	0.000108	0.000113	0.00021	0 of 48
BZ 44 TETRACHLOROBIPHENYL	0.000106	0.000107	0.000108	0.000104	0.000108	0.000108	0.000111	0.000107	0.000128	0.000109	0.000141	0.000108	0.000113	0.00021	0 of 48
BZ 52 TETRACHLOROBIPHENYL	**0.000154**	**0.000168**	0.000108	0.000104	0.000108	0.000108	0.000111	0.000107	0.000128	0.000109	0.000141	0.000108	0.000121	0.000352	2 of 48
BZ 66 TETRACHLOROBIPHENYL	0.000106	0.000107	0.000108	0.000104	0.000108	0.000108	0.000111	0.000107	0.000128	0.000109	0.000141	0.000108	0.000113	0.00021	0 of 48
BZ 77 TETRACHLOROBIPHENYL	0.000106	0.000107	0.000108	0.000104	0.000108	0.000108	0.000111	0.000107	0.000128	0.000109	0.000141	0.000108	0.000113	0.00021	0 of 48
BZ 8 DICHLOROBIPHENYL	0.000106	0.000107	0.000108	0.000104	0.000108	0.000108	0.000111	0.000107	0.000128	0.000109	0.000141	0.000108	0.000113	0.00021	0 of 48
CIS-NONACHLOR	0.000106	0.000107	0.000108	0.000104	0.000108	0.000108	0.000111	0.000107	0.000128	0.000109	0.000141	0.000108	0.000113	0.00021	0 of 48
DDMU	0.000106	0.000107	0.000108	0.000104	0.000108	0.000108	0.000111	0.000107	0.000128	0.000109	0.000141	0.000108	0.000113	0.00021	0 of 48
DIELDRIN	0.000106	0.000107	0.000108	0.000104	0.000108	0.000108	0.000111	0.000107	0.000128	0.000109	0.000141	0.000108	0.000113	0.00021	0 of 48
ENDRIN	0.000106	0.000107	0.000108	0.000104	0.000108	0.000108	0.000111	0.000107	0.000128	0.000109	0.000141	0.000108	0.000113	0.00021	0 of 48
GAMMA-BHC	0.000106	0.000107	0.000108	0.000104	0.000108	0.000108	0.000111	0.000107	0.000128	0.000109	0.000141	0.000108	0.000113	0.00021	0 of 48
GAMMA-CHLORDANE	**0.000513**	**0.000198**	**0.000227**	**0.00031**	0.000108	0.000108	**0.00034**	0.000107	**0.00077**	0.000109	**0.000576**	**0.00039**	0.00034	0.0016	18 of 48
HEPTACHLOR	0.000106	0.000107	0.000108	0.000104	0.000108	0.000108	0.000111	0.000107	0.000128	0.000109	0.000141	0.000108	0.000113	0.00021	0 of 48
HEPTACHLOR EPOXIDE	0.000106	0.000107	0.000108	0.000104	0.000108	0.000108	0.000111	0.000107	0.000128	0.000109	0.000141	0.000108	0.000113	0.00021	0 of 48
HEXACHLOROBENZENE	0.000106	0.000107	0.000108	0.000104	0.000108	0.000108	0.000111	0.000107	0.000128	0.000109	**0.000212**	0.000108	0.00012	0.00035	2 of 48
MIREX	0.000106	0.000107	0.000108	0.000104	0.000108	0.000108	0.000111	0.000107	0.000128	0.000109	0.000141	0.000108	0.000113	0.00021	0 of 48
OXYCHLORDANE	0.000106	0.000107	0.000108	0.000104	0.000108	0.000108	0.000111	0.000107	0.000128	0.000109	0.000141	0.000108	0.000113	0.00021	0 of 48
TOTAL AMP PCBS	**0.000154**	**0.000401**	**0.00051**	**0.000221**	**0.000152**	0.000108	0.000111	**0.000703**	0.000128	0.000109	**0.000299**	0.000108	0.000239	0.00177	14 of 48
TOTAL CHLORDANE	**0.000577**	**0.000487**	**0.00053**	**0.000323**	**0.000131**	0.000108	0.000111	**0.00025**	**0.00133**	**0.000185**	**0.000931**	**0.000402**	0.000497	0.00277	21 of 48
TOTAL DDT	**0.000119**	0.000107	0.000108	0.000104	**0.000205**	0.000108	0.000111	0.000107	0.000128	0.000109	0.000141	**0.00013**	0.000124	0.000489	3 of 48
TRANS-NONACHLOR	**0.00023**	0.000107	**0.000135**	0.000104	**0.000131**	0.000108	0.000111	0.000107	**0.000446**	**0.000185**	**0.000205**	0.000108	0.000183	0.000852	8 of 48

Semivolatile Organics (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
1,2,4-TRICHLOROBENZENE	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
1,2-DICHLOROBENZENE	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
1,2-DIPHENYLHYDRAZINE (AS AZOBENZENE)	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
1,3-DICHLOROBENZENE	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
1,4-DICHLOROBENZENE	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
2,2'-OXYBIS(1-CHLOROPROPANE)	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
2,4,5-TRICHLOROPHENOL	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
2,4,6-TRICHLOROPHENOL	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
2,4-DICHLOROPHENOL	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
2,4-DIMETHYLPHENOL	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
2,4-DINITROPHENOL	6.25	5.69	5.35	5.17	5.36	5.54	5.47	6.3	5.49	5.78	6.04	5.17	5.66	8.2	0 of 25
2,4-DINITROTOLUENE	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
2,6-DINITROTOLUENE	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
2-CHLORONAPHTHALENE	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
2-CHLOROPHENOL	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25

Table A-16. Deer Island Effluent Characterization (Low detection limit analyses), July - December 2013

Organochlorine Pesticides and PCBs (ug/L)

	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
2,4'-DDD	0.00014	0.000132	0.000112	0.000111	**0.000161**	0.000105	0.000127	0.000307	1 of 24
2,4'-DDE	0.00014	0.000132	0.000112	0.000111	0.000106	0.000105	0.000119	0.000218	0 of 24
2,4'-DDT	0.00014	0.000132	0.000112	0.000111	0.000106	0.000105	0.000119	0.000218	0 of 24
4,4'-DDD	0.00014	0.000132	0.000112	0.000111	0.000106	0.000105	0.000119	0.000218	0 of 24
4,4'-DDE	**0.000289**	**0.000151**	**0.000126**	**0.000131**	**0.000235**	**0.000183**	0.000188	0.00038	16 of 24
4,4'-DDT	0.00014	0.000132	0.000112	0.000111	0.000106	0.000105	0.000119	0.000218	0 of 24
ALDRIN	0.00014	0.000132	0.000112	0.000111	0.000106	0.000105	0.000119	0.000218	0 of 24
ALPHA-CHLORDANE	**0.000671**	**0.000413**	**0.00122**	**0.000264**	**0.000283**	**0.000389**	0.000553	0.00247	22 of 24
BZ 101 PENTACHLOROBIPHENYL	**0.000165**	0.000132	0.000112	0.000111	**0.000187**	**0.000122**	0.000138	0.000312	9 of 24
BZ 105 PENTACHLOROBIPHENYL	0.00014	0.000132	0.000112	0.000111	0.000106	**0.000104**	0.000118	0.000218	1 of 24
BZ 118 PENTACHLOROBIPHENYL	**0.000162**	0.000132	0.000112	0.000111	**0.000111**	**0.0000862**	0.00012	0.000218	9 of 24
BZ 126 PENTACHLOROBIPHENYL	0.00014	0.000132	0.000112	0.000111	0.000106	0.000105	0.000119	0.000218	0 of 24
BZ 128 HEXACHLOROBIPHENYL	0.00014	0.000132	0.000112	0.000111	0.000106	0.000105	0.000119	0.000218	0 of 24
BZ 138 HEXACHLOROBIPHENYL	**0.000184**	**0.000137**	**0.0002**	**0.000118**	**0.000178**	**0.00016**	0.000164	0.000259	21 of 24
BZ 153 HEXACHLOROBIPHENYL	**0.000137**	**0.0000993**	**0.000153**	**0.000102**	**0.000179**	**0.000121**	0.000132	0.00027	21 of 24
BZ 170 HEPTACHLOROBIPHENYL	0.00014	0.000132	0.000112	0.000111	0.000106	0.000105	0.000119	0.000218	0 of 24
BZ 18 TRICHLOROBIPHENYL	0.00014	0.000132	0.000112	0.000111	**0.0000992**	0.000105	0.000118	0.000218	2 of 24
BZ 180 HEPTACHLOROBIPHENYL	0.00014	0.000132	0.000112	0.000111	0.000106	0.000105	0.000119	0.000218	0 of 24
BZ 187 HEPTACHLOROBIPHENYL	0.00014	0.000132	0.000112	0.000111	0.000106	0.000105	0.000119	0.000218	0 of 24
BZ 195 OCTACHLOROBIPHENYL	0.00014	0.000132	0.000112	0.000111	0.000106	0.000105	0.000119	0.000218	0 of 24
BZ 206 NONACHLOROBIPHENYL	0.00014	0.000132	0.000112	0.000111	0.000106	0.000105	0.000119	0.000218	0 of 24
BZ 209 DECACHLOROBIPHENYL	0.00014	0.000132	0.000112	0.000111	0.000106	0.000105	0.000119	0.000218	0 of 24
BZ 28 TRICHLOROBIPHENYL	0.00014	0.000132	0.000112	0.000111	**0.000133**	0.000105	0.000123	0.000218	1 of 24
BZ 44 TETRACHLOROBIPHENYL	**0.000137**	**0.00012**	0.000112	0.000111	**0.000161**	**0.000119**	0.000126	0.000218	11 of 24
BZ 52 TETRACHLOROBIPHENYL	**0.00021**	**0.000138**	0.000112	0.000111	**0.00019**	**0.000158**	0.000154	0.00028	15 of 24
BZ 66 TETRACHLOROBIPHENYL	**0.000127**	0.000132	0.000112	0.000111	**0.000114**	0.000105	0.000117	0.000218	5 of 24
BZ 77 TETRACHLOROBIPHENYL	0.00014	0.000132	0.000112	0.000111	0.000106	0.000105	0.000119	0.000218	0 of 24
BZ 8 DICHLOROBIPHENYL	0.00014	0.000132	0.000112	0.000111	0.000106	0.000105	0.000119	0.000218	0 of 24
CIS-NONACHLOR	0.00014	0.000132	0.000112	0.000111	0.000106	0.000105	0.000119	0.000218	0 of 24
DDMU	0.00014	0.000132	0.000112	0.000111	0.000106	0.000105	0.000119	0.000218	0 of 24
DIELDRIN	0.00014	0.000132	0.000112	0.000111	0.000106	0.000105	0.000119	0.000218	0 of 24
ENDRIN	0.00014	0.000132	0.000112	0.000111	0.000106	0.000105	0.000119	0.000218	0 of 24
GAMMA-BHC	0.00014	0.000132	0.000112	**0.00223**	0.000106	0.000105	0.000447	0.00335	3 of 24
GAMMA-CHLORDANE	**0.000745**	**0.000319**	**0.0011**	**0.000324**	**0.000302**	**0.000387**	0.000544	0.00236	24 of 24
HEPTACHLOR	0.00014	0.000132	0.000112	0.000111	0.000106	0.000105	0.000119	0.000218	0 of 24
HEPTACHLOR EPOXIDE	0.00014	0.000132	0.000112	0.000111	0.000106	0.000105	0.000119	0.000218	0 of 24
HEXACHLOROBENZENE	**0.000201**	0.000132	**0.000156**	**0.000121**	**0.000126**	**0.000112**	0.000144	0.000272	15 of 24
MIREX	0.00014	0.000132	0.000112	0.000111	0.000106	0.000105	0.000119	0.000218	0 of 24
OXYCHLORDANE	0.00014	0.000132	0.000112	0.000111	0.000106	0.000105	0.000119	0.000218	0 of 24
TOTAL AMP PCBS	**0.000736**	**0.000289**	**0.000354**	**0.000192**	**0.00123**	**0.000764**	0.000588	0.00196	22 of 24
TOTAL CHLORDANE	**0.000992**	**0.000478**	**0.00171**	**0.000264**	**0.000421**	**0.000601**	0.000766	0.00361	22 of 24
TOTAL DDT	**0.000289**	**0.000151**	**0.000126**	**0.000131**	**0.00032**	**0.000183**	0.000201	0.000651	16 of 24
TRANS-NONACHLOR	**0.000318**	**0.000168**	**0.000522**	0.000111	**0.000138**	**0.000213**	0.000251	0.00114	16 of 24

Semivolatile Organics (ug/L)

	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
1,2,4-TRICHLOROBENZENE	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
1,2-DICHLOROBENZENE	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
1,2-DIPHENYLHYDRAZINE (AS AZOBENZENE)	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
1,3-DICHLOROBENZENE	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
1,4-DICHLOROBENZENE	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
2,2'-OXYBIS(1-CHLOROPROPANE)	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
2,4,5-TRICHLOROPHENOL	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
2,4,6-TRICHLOROPHENOL	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
2,4-DICHLOROPHENOL	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
2,4-DIMETHYLPHENOL	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
2,4-DINITROPHENOL	5.49	5.37	5.98	5.42	5.58	5.66	5.58	6.85	0 of 12
2,4-DINITROTOLUENE	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
2,6-DINITROTOLUENE	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
2-CHLORONAPHTHALENE	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
2-CHLOROPHENOL	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12

Table A-16. Deer Island Effluent Characterization (Low detection limit analyses), July 2012 - June 2013

Semivolatile Organics (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
2-METHYL-4,6-DINITROPHENOL	6.25	5.69	5.35	5.17	5.36	5.54	5.47	6.3	5.49	5.78	6.04	5.17	5.66	8.2	0 of 25
2-METHYLNAPHTHALENE	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
2-METHYLPHENOL	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
2-NITROANILINE	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
2-NITROPHENOL	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
3,3'-DICHLOROBENZIDINE	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
3-NITROANILINE	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
4-BROMOPHENYL PHENYL ETHER	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
4-CHLORO-3-METHYLPHENOL	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
4-CHLOROANILINE	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
4-CHLOROPHENYL PHENYL ETHER	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
4-METHYLPHENOL (INCLUDES 3-METHYLPHENOL)	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
4-NITROANILINE	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
4-NITROPHENOL	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
ACENAPHTHENE	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
ACENAPHTHYLENE	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
ANILINE	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
ANTHRACENE	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
BENZIDINE	6.25	5.69	5.35	5.17	5.36	5.54	5.47	6.3	5.49	5.78	6.04	5.17	5.66	8.2	0 of 25
BENZO(A)ANTHRACENE	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
BENZO(A)PYRENE	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
BENZO(B)FLUORANTHENE	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
BENZO(G,H,I)PERYLENE	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
BENZO(K)FLUORANTHENE	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
BENZOIC ACID	6.25	5.69	5.35	5.17	5.36	5.54	5.47	6.3	5.49	5.78	6.04	5.17	5.66	8.2	0 of 25
BENZYL ALCOHOL	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
BIS(2-CHLOROETHOXY)METHANE	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
BIS(2-CHLOROETHYL)ETHER	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
BIS(2-ETHYLHEXYL)PHTHALATE	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
BUTYLBENZYLPHTHALATE	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
CARBAZOLE	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
CHRYSENE	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
DIBENZO(A,H)ANTHRACENE	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
DIBENZOFURAN	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
DIETHYLPHTHALATE	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
DIMETHYLPHTHALATE	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
DI-N-BUTYLPHTHALATE	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
DI-N-OCTYLPHTHALATE	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
FLUORANTHENE	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
FLUORENE	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
HEXACHLOROBENZENE	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
HEXACHLOROBUTADIENE	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
HEXACHLOROCYCLOPENTADIENE	6.25	5.69	5.35	5.17	5.36	5.54	5.47	6.3	5.49	5.78	6.04	5.17	5.66	8.2	0 of 25
HEXACHLOROETHANE	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
INDENO(1,2,3-CD)PYRENE	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
ISOPHORONE	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
NAPHTHALENE	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
N-DECANE	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
NITROBENZENE	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
N-NITROSODIMETHYLAMINE (NDMA)	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
N-NITROSODI-N-PROPYLAMINE (NDPA)	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
N-NITROSODIPHENYLAMINE	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
N-OCTADECANE	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
PENTACHLOROPHENOL	6.25	5.69	5.35	5.17	5.36	5.54	5.47	6.3	5.49	5.78	6.04	5.17	5.66	8.2	0 of 25
PHENANTHRENE	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
PHENOL	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25
PYRENE	2.5	2.28	2.14	2.07	2.14	2.22	2.19	2.52	2.2	2.31	2.41	2.07	2.26	3.28	0 of 25

Table A-16. Deer Island Effluent Characterization (Low detection limit analyses), July - December 2013

Semivolatile Organics (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
2-METHYL-4,6-DINITROPHENOL	5.49	5.37	5.98	5.42	5.58	5.66	5.58	6.85	0 of 12
2-METHYLNAPHTHALENE	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
2-METHYLPHENOL	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
2-NITROANILINE	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
2-NITROPHENOL	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
3,3'-DICHLOROBENZIDINE	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
3-NITROANILINE	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
4-BROMOPHENYL PHENYL ETHER	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
4-CHLORO-3-METHYLPHENOL	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
4-CHLOROANILINE	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
4-CHLOROPHENYL PHENYL ETHER	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
4-METHYLPHENOL (INCLUDES 3-METHYLPHENOL)	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
4-NITROANILINE	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
4-NITROPHENOL	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
ACENAPHTHENE	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
ACENAPHTHYLENE	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
ANILINE	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
ANTHRACENE	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
BENZIDINE	5.49	5.37	5.98	5.42	5.58	5.66	5.58	6.85	0 of 12
BENZO(A)ANTHRACENE	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
BENZO(A)PYRENE	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
BENZO(B)FLUORANTHENE	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
BENZO(G,H,I)PERYLENE	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
BENZO(K)FLUORANTHENE	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
BENZOIC ACID	5.49	5.37	5.98	5.42	5.58	5.66	5.58	6.85	0 of 12
BENZYL ALCOHOL	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
BIS(2-CHLOROETHOXY)METHANE	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
BIS(2-CHLOROETHYL)ETHER	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
BIS(2-ETHYLHEXYL)PHTHALATE	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
BUTYLBENZYLPHTHALATE	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
CARBAZOLE	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
CHRYSENE	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
DIBENZO(A,H)ANTHRACENE	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
DIBENZOFURAN	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
DIETHYLPHTHALATE	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
DIMETHYLPHTHALATE	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
DI-N-BUTYLPHTHALATE	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
DI-N-OCTYLPHTHALATE	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
FLUORANTHENE	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
FLUORENE	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
HEXACHLOROBENZENE	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
HEXACHLOROBUTADIENE	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
HEXACHLOROCYCLOPENTADIENE	5.49	5.37	5.98	5.42	5.58	5.66	5.58	6.85	0 of 12
HEXACHLOROETHANE	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
INDENO(1,2,3-CD)PYRENE	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
ISOPHORONE	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
NAPHTHALENE	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
N-DECANE	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
NITROBENZENE	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
N-NITROSODIMETHYLAMINE (NDMA)	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
N-NITROSODI-N-PROPYLAMINE (NDPA)	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
N-NITROSODIPHENYLAMINE	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
N-OCTADECANE	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
PENTACHLOROPHENOL	5.49	5.37	5.98	5.42	5.58	5.66	5.58	6.85	0 of 12
PHENANTHRENE	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
PHENOL	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12
PYRENE	2.19	2.15	2.39	2.17	2.23	2.26	2.23	2.74	0 of 12

Table A-16. Deer Island Effluent Characterization (Low detection limit analyses), July 2012 - June 2013

Polycyclic Aromatic Hydrocarbons (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
1-METHYLNAPHTHALENE	**0.00103**	**0.00288**	**0.00217**	**0.00243**	**0.00246**	**0.00286**	**0.00182**	**0.00841**	**0.00124**	**0.0176**	**0.005**	**0.000939**	0.00424	0.0642	42 of 48
1-METHYLPHENANTHRENE	**0.00157**	**0.00225**	**0.00276**	**0.00444**	**0.00408**	**0.00684**	**0.00249**	**0.00586**	**0.00351**	**0.011**	**0.00343**	**0.00115**	0.00423	0.0239	47 of 48
2,3,5-TRIMETHYLNAPHTHYLENE	**0.00176**	**0.0044**	**0.00361**	**0.00434**	**0.00678**	**0.0136**	**0.00369**	**0.00885**	**0.00486**	**0.0142**	**0.00115**	**0.00149**	0.00581	0.0371	42 of 48
2,6-DIMETHYLNAPHTHALENE	**0.0015**	**0.00229**	**0.00108**	**0.00371**	**0.00225**	**0.00381**	**0.00109**	**0.0119**	**0.00409**	**0.011**	**0.00671**	**0.00291**	0.00458	0.0359	42 of 48
2-METHYLNAPHTHALENE	**0.00135**	**0.00317**	**0.00319**	**0.00409**	**0.00594**	**0.00714**	**0.00244**	**0.0147**	**0.00762**	**0.0182**	**0.0147**	**0.00139**	0.00745	0.0596	46 of 48
ACENAPHTHENE	**0.00138**	**0.00133**	**0.00218**	**0.00524**	**0.00636**	**0.00468**	**0.00522**	**0.00978**	**0.00628**	**0.0131**	**0.0153**	**0.00276**	0.00652	0.0384	42 of 48
ACENAPHTHYLENE	**0.000765**	0.000525	0.000529	0.000546	0.000563	0.000547	0.000562	**0.00224**	**0.00161**	**0.0033**	**0.00116**	0.00053	0.00117	0.00679	12 of 48
ANTHRACENE	**0.00199**	**0.00245**	**0.00258**	**0.00365**	**0.00275**	**0.00244**	**0.00186**	**0.00465**	**0.00295**	**0.00725**	**0.00325**	**0.000937**	0.00315	0.0181	44 of 48
BENZO(A)ANTHRACENE	**0.0035**	**0.00329**	**0.00297**	**0.00483**	**0.00367**	**0.0039**	**0.00419**	**0.00935**	**0.00984**	**0.0191**	**0.00576**	**0.0026**	0.00666	0.0552	48 of 48
BENZO(A)PYRENE	**0.0025**	**0.00212**	**0.00177**	**0.0033**	**0.0026**	**0.00289**	**0.00447**	**0.00829**	**0.0113**	**0.0246**	**0.00344**	**0.00165**	0.00657	0.0732	48 of 48
BENZO(B)FLUORANTHENE	**0.00371**	**0.00319**	**0.0028**	**0.00497**	**0.00367**	**0.00442**	**0.00559**	**0.0132**	**0.0198**	**0.0411**	**0.00657**	**0.00304**	0.0108	0.127	48 of 48
BENZO(E)PYRENE	**0.00155**	**0.00192**	**0.00156**	**0.0028**	**0.00229**	**0.0025**	**0.00368**	**0.00691**	**0.0109**	**0.0205**	**0.0037**	**0.00164**	0.00577	0.0695	48 of 48
BENZO(G,H,I)PERYLENE	**0.00173**	**0.002**	**0.00151**	**0.00242**	**0.00191**	**0.00231**	**0.00332**	**0.00614**	**0.0105**	**0.0221**	**0.00301**	**0.00157**	0.00564	0.0542	47 of 48
BENZO(K)FLUORANTHENE	**0.00201**	**0.00113**	**0.000913**	**0.00248**	**0.00217**	**0.00205**	**0.00237**	**0.00601**	**0.00932**	**0.0245**	**0.00173**	**0.00155**	0.00544	0.0466	42 of 48
BENZOTHIAZOLE	**0.0106**	**0.197**	**0.11**	**0.00808**	**0.0532**	**0.034**	**0.0215**	**0.00923**	**0.0117**	**0.0102**	**0.00985**	**0.0494**	0.0393	0.468	47 of 48
BIPHENYL	**0.00156**	**0.00178**	**0.00216**	**0.00203**	**0.00184**	**0.00323**	**0.00137**	**0.0034**	**0.00235**	**0.00517**	**0.00154**	0.00053	0.0023	0.0167	41 of 48
C1-CHRYSENES	**0.0013**	**0.00139**	**0.00114**	**0.0024**	**0.00182**	**0.00231**	**0.00234**	**0.00337**	**0.00154**	**0.00918**	**0.00469**	**0.00181**	0.00288	0.02	40 of 48
C1-DIBENZOTHIOPHENES	**0.00756**	**0.01**	**0.00975**	**0.00761**	**0.00987**	**0.0126**	**0.00686**	**0.00854**	**0.00301**	**0.0135**	0.000564	0.00053	0.00721	0.0274	37 of 48
C1-FLUORANTHENES/PYRENES	**0.00508**	**0.00793**	**0.00693**	**0.0106**	**0.00798**	**0.0102**	**0.0108**	**0.0166**	**0.0144**	**0.025**	**0.00744**	**0.00522**	0.0113	0.058	48 of 48
C1-FLUORENES	**0.00676**	**0.00873**	**0.00979**	**0.00907**	**0.0146**	**0.0219**	**0.0131**	**0.0338**	0.000529	**0.00799**	**0.0019**	**0.00107**	0.0101	0.0472	36 of 48
C1-NAPHTHALENES	**0.00252**	**0.0059**	**0.00473**	**0.00664**	**0.00697**	**0.00808**	**0.00468**	**0.0176**	**0.00757**	**0.0265**	**0.0191**	**0.00252**	0.00986	0.0878	47 of 48
C1-PHENANTHRENES/ANTHRACENES	**0.00747**	**0.0113**	**0.01**	**0.0154**	**0.0145**	**0.0251**	**0.0138**	**0.0243**	**0.0155**	**0.0512**	**0.0202**	**0.00816**	0.0188	0.102	47 of 48
C2-CHRYSENES	0.000521	0.000525	0.000529	0.000546	0.000563	0.000547	0.000562	0.000542	0.000529	0.000534	0.000564	0.00053	0.000541	0.000695	0 of 48
C2-DIBENZOTHIOPHENES	**0.00361**	**0.00813**	**0.00664**	**0.00503**	**0.00851**	**0.0113**	**0.00756**	**0.0114**	**0.00735**	**0.0236**	0.000564	0.00053	0.00812	0.0558	35 of 48
C2-FLUORANTHENES/PYRENES	0.000521	**0.00555**	**0.00463**	**0.00343**	**0.00415**	**0.00668**	**0.00559**	**0.00533**	**0.00243**	**0.0177**	**0.00275**	0.00053	0.00505	0.038	30 of 48
C2-FLUORENES	**0.0125**	**0.0272**	**0.0212**	**0.00522**	**0.0174**	**0.0283**	**0.0153**	**0.0213**	0.000529	**0.0241**	0.000564	0.00053	0.0135	0.0579	31 of 48
C2-NAPHTHALENES	**0.00535**	**0.00855**	**0.00754**	**0.00683**	**0.00787**	**0.0191**	**0.0118**	**0.0284**	**0.0112**	**0.0407**	**0.0322**	**0.00794**	0.0163	0.135	48 of 48
C2-PHENANTHRENES/ANTHRACENES	**0.0108**	**0.0149**	**0.0122**	**0.0138**	**0.0174**	**0.0332**	**0.0171**	**0.0308**	**0.0211**	**0.0626**	**0.0133**	**0.00447**	0.0219	0.138	47 of 48
C3-CHRYSENES	0.000521	0.000525	0.000529	0.000546	0.000563	0.000547	0.000562	0.000542	0.000529	0.000534	0.000564	0.00053	0.000541	0.000695	0 of 48
C3-DIBENZOTHIOPHENES	0.000521	**0.0045**	0.000529	0.000546	**0.00149**	**0.00746**	0.000562	0.000542	0.000529	**0.0197**	0.000564	0.00053	0.00323	0.0743	7 of 48
C3-FLUORANTHENES/PYRENES	0.000521	0.000525	0.000529	0.000546	0.000563	0.000547	0.000562	0.000542	0.000529	**0.00903**	0.000564	0.00053	0.00137	0.0333	1 of 48
C3-FLUORENES	**0.0161**	**0.0284**	**0.014**	**0.0108**	**0.0206**	**0.0317**	**0.0135**	**0.0181**	0.000529	**0.0262**	0.000564	0.00053	0.0141	0.0776	27 of 48
C3-NAPHTHALENES	**0.00499**	**0.0159**	**0.0147**	**0.00902**	**0.03**	**0.0372**	**0.0157**	**0.0394**	**0.0239**	**0.128**	**0.0464**	**0.0111**	0.0335	0.426	46 of 48
C3-PHENANTHRENES/ANTHRACENES	**0.00193**	**0.0219**	**0.0193**	**0.0145**	**0.0226**	**0.0312**	**0.0168**	**0.045**	**0.00248**	**0.046**	0.000564	0.00053	0.0181	0.131	31 of 48
C4-CHRYSENES	0.000521	0.000525	0.000529	0.000546	0.000563	0.000547	0.000562	0.000542	0.000529	0.000534	0.000564	0.00053	0.000541	0.000695	0 of 48
C4-NAPHTHALENES	**0.0159**	**0.0398**	**0.0299**	**0.0144**	**0.0336**	**0.0603**	**0.0239**	**0.0323**	**0.019**	**0.0402**	0.000564	0.00053	0.0253	0.094	38 of 48
C4-PHENANTHRENES/ANTHRACENES	0.000521	0.000525	0.000529	0.000546	0.000563	0.000547	0.000562	0.000542	0.000529	**0.0216**	0.000564	0.00053	0.00259	0.0818	1 of 48
CHRYSENE	**0.00457**	**0.005**	**0.00465**	**0.00644**	**0.00539**	**0.00563**	**0.00747**	**0.0142**	**0.0182**	**0.0342**	**0.00843**	**0.0042**	0.011	0.0957	48 of 48
DIBENZO(A,H)ANTHRACENE	**0.00113**	0.000525	0.000529	**0.000713**	**0.000703**	0.000547	**0.000723**	**0.00238**	**0.00348**	**0.00855**	0.000564	**0.000829**	0.00199	0.0224	16 of 48
DIBENZOFURAN	**0.00368**	**0.00831**	**0.00743**	**0.00412**	**0.00905**	**0.00867**	**0.00481**	**0.00317**	**0.00131**	**0.00683**	**0.0103**	**0.00256**	0.0056	0.0152	47 of 48
DIBENZOTHIOPHENE	**0.00104**	**0.00192**	**0.00223**	**0.00335**	**0.00282**	**0.00306**	**0.00173**	**0.00335**	**0.000956**	**0.00566**	**0.00398**	**0.000932**	0.00257	0.0154	41 of 48
FLUORANTHENE	**0.0113**	**0.0143**	**0.0153**	**0.0201**	**0.0168**	**0.0168**	**0.0157**	**0.0364**	**0.0347**	**0.0614**	**0.0231**	**0.0093**	0.0247	0.194	48 of 48
FLUORENE	**0.00346**	**0.00571**	**0.00682**	**0.00814**	**0.00871**	**0.0106**	**0.00517**	**0.00996**	**0.00363**	**0.0115**	**0.0107**	**0.00183**	0.00709	0.0275	46 of 48
INDENO(1,2,3-CD)PYRENE	**0.0018**	**0.00142**	**0.00114**	**0.00208**	**0.00168**	**0.00199**	**0.00213**	**0.00544**	**0.00925**	**0.0209**	**0.00336**	**0.00169**	0.00511	0.0575	45 of 48
NAPHTHALENE	**0.00364**	**0.00737**	**0.00687**	**0.0057**	**0.00997**	**0.00966**	**0.00619**	**0.0421**	**0.0226**	**0.0595**	**0.0648**	**0.00167**	0.0219	0.152	46 of 48
PERYLENE	0.000521	**0.000671**	**0.000646**	0.000546	**0.000678**	0.000547	0.000562	**0.000871**	**0.00104**	**0.00316**	0.000564	0.00053	0.000922	0.011	7 of 48
PHENANTHRENE	**0.00559**	**0.00778**	**0.00893**	**0.0162**	**0.013**	**0.0136**	**0.00688**	**0.0252**	**0.0144**	**0.0495**	**0.0212**	**0.00355**	0.0163	0.138	48 of 48
PYRENE	**0.0145**	**0.02**	**0.0184**	**0.0225**	**0.0192**	**0.0209**	**0.0202**	**0.0365**	**0.0342**	**0.0555**	**0.0224**	**0.0112**	0.026	0.158	48 of 48

Table A-16. Deer Island Effluent Characterization (Low detection limit analyses), July - December 2013

Polycyclic Aromatic Hydrocarbons (ug/L)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
1-METHYLNAPHTHALENE	**0.00233**	**0.0031**	**0.00307**	**0.00302**	**0.0017**	**0.00198**	0.00254	0.0039	24 of 24
1-METHYLPHENANTHRENE	**0.00255**	**0.00181**	**0.00236**	**0.00328**	**0.00397**	**0.00384**	0.00293	0.00572	24 of 24
2,3,5-TRIMETHYLNAPHTHYLENE	**0.00564**	**0.00254**	**0.00374**	**0.00565**	**0.00655**	**0.00436**	0.00472	0.0112	24 of 24
2,6-DIMETHYLNAPHTHALENE	**0.00189**	**0.000833**	**0.00152**	**0.00146**	**0.00489**	**0.00276**	0.00217	0.00709	22 of 24
2-METHYLNAPHTHALENE	**0.00252**	**0.00218**	**0.00202**	**0.00228**	**0.00326**	**0.00292**	0.00251	0.00473	23 of 24
ACENAPHTHENE	**0.00451**	**0.00442**	**0.00379**	**0.00529**	**0.00637**	**0.00601**	0.00501	0.00842	22 of 24
ACENAPHTHYLENE	0.000571	**0.00105**	**0.00138**	**0.00132**	0.000263	**0.000614**	0.000867	0.00272	10 of 24
ANTHRACENE	**0.0032**	**0.00269**	**0.00274**	**0.00492**	**0.00303**	**0.0036**	0.00334	0.00681	24 of 24
BENZO(A)ANTHRACENE	**0.00536**	**0.00468**	**0.00422**	**0.0068**	**0.00329**	**0.00324**	0.00462	0.00833	24 of 24
BENZO(A)PYRENE	**0.00369**	**0.00358**	**0.00299**	**0.00497**	**0.00166**	**0.00173**	0.00313	0.00579	24 of 24
BENZO(B)FLUORANTHENE	**0.00668**	**0.00546**	**0.0045**	**0.00666**	**0.0038**	**0.00388**	0.00521	0.00776	24 of 24
BENZO(E)PYRENE	**0.00361**	**0.00242**	**0.00188**	**0.00255**	**0.002**	**0.00186**	0.00242	0.00395	23 of 24
BENZO(G,H,I)PERYLENE	**0.00291**	**0.00281**	**0.00237**	**0.00383**	**0.0012**	**0.000995**	0.00238	0.00522	24 of 24
BENZO(K)FLUORANTHENE	**0.00256**	**0.0027**	**0.00239**	**0.00404**	**0.00123**	**0.000614**	0.00227	0.00545	21 of 24
BENZOTHIAZOLE	**0.114**	**0.0112**	**0.02**	**0.0293**	**0.0144**	**0.0284**	0.0387	0.241	24 of 24
BIPHENYL	**0.00135**	**0.00138**	**0.0027**	**0.0015**	**0.00101**	**0.000903**	0.00148	0.00476	21 of 24
C1-CHRYSENES	**0.00263**	**0.00177**	**0.00177**	**0.00189**	**0.00154**	**0.0017**	0.00191	0.00349	21 of 24
C1-DIBENZOTHIOPHENES	**0.0138**	**0.00668**	**0.02**	**0.034**	**0.000995**	**0.00206**	0.013	0.0535	22 of 24
C1-FLUORANTHENES/PYRENES	**0.0115**	**0.00783**	**0.00762**	**0.011**	**0.00737**	**0.00749**	0.00887	0.0133	24 of 24
C1-FLUORENES	**0.033**	**0.0079**	**0.0087**	**0.0161**	**0.0145**	**0.0131**	0.016	0.0599	24 of 24
C1-NAPHTHALENES	**0.00465**	**0.00499**	**0.00574**	**0.00503**	**0.00544**	**0.005**	0.00513	0.00739	24 of 24
C1-PHENANTHRENES/ANTHRACENES	**0.0122**	**0.00785**	**0.0125**	**0.017**	**0.0229**	**0.0223**	0.0155	0.0331	24 of 24
C2-CHRYSENES	0.000571	0.000539	0.000557	**0.00073**	**0.00314**	0.000262	0.000919	0.00565	4 of 24
C2-DIBENZOTHIOPHENES	**0.00729**	**0.00613**	**0.00867**	**0.0102**	0.000263	**0.000425**	0.00561	0.0119	17 of 24
C2-FLUORANTHENES/PYRENES	**0.00805**	**0.00438**	**0.00612**	**0.00709**	**0.000931**	0.000262	0.00462	0.00918	18 of 24
C2-FLUORENES	**0.0224**	**0.0131**	**0.0261**	**0.0316**	0.000263	0.000262	0.016	0.0526	16 of 24
C2-NAPHTHALENES	**0.00816**	**0.00385**	**0.00694**	**0.00692**	**0.0153**	**0.00872**	0.00819	0.0228	24 of 24
C2-PHENANTHRENES/ANTHRACENES	**0.0172**	**0.0113**	**0.015**	**0.0186**	**0.0216**	**0.0127**	0.016	0.034	24 of 24
C3-CHRYSENES	0.000571	0.000539	0.000557	0.000553	0.000263	0.000262	0.000464	0.000615	0 of 24
C3-DIBENZOTHIOPHENES	0.000571	0.000539	0.000557	**0.008**	0.000263	0.000262	0.00162	0.00841	4 of 24
C3-FLUORANTHENES/PYRENES	0.000571	0.000539	0.000557	0.000553	0.000263	0.000262	0.000464	0.000615	0 of 24
C3-FLUORENES	**0.0357**	**0.0111**	**0.029**	**0.0343**	0.000263	0.000262	0.0191	0.0523	15 of 24
C3-NAPHTHALENES	**0.0112**	**0.0111**	**0.0173**	**0.0243**	**0.0262**	**0.0247**	0.0187	0.0444	24 of 24
C3-PHENANTHRENES/ANTHRACENES	**0.0259**	**0.0128**	**0.0259**	**0.0331**	0.000263	0.000262	0.0168	0.0395	14 of 24
C4-CHRYSENES	0.000571	0.000539	0.000557	0.000553	0.000263	0.000262	0.000464	0.000615	0 of 24
C4-NAPHTHALENES	**0.0306**	**0.00954**	**0.0148**	**0.032**	0.000263	0.000262	0.0151	0.0513	16 of 24
C4-PHENANTHRENES/ANTHRACENES	0.000571	0.000539	0.000557	0.000553	0.000263	0.000262	0.000464	0.000615	0 of 24
CHRYSENE	**0.00758**	**0.0065**	**0.00582**	**0.0084**	**0.00456**	**0.00467**	0.0063	0.00975	24 of 24
DIBENZO(A,H)ANTHRACENE	0.000571	**0.00149**	**0.000976**	**0.00244**	0.000263	**0.000582**	0.00104	0.00391	11 of 24
DIBENZOFURAN	**0.0106**	**0.00807**	**0.00858**	**0.0124**	**0.00814**	**0.00675**	0.00912	0.0152	24 of 24
DIBENZOTHIOPHENE	**0.00175**	**0.00117**	**0.00185**	**0.00259**	**0.00332**	**0.00428**	0.00244	0.00551	22 of 24
FLUORANTHENE	**0.0182**	**0.0139**	**0.0132**	**0.0217**	**0.0127**	**0.0141**	0.0157	0.026	24 of 24
FLUORENE	**0.00662**	**0.00496**	**0.00663**	**0.0098**	**0.00843**	**0.00751**	0.00725	0.0138	24 of 24
INDENO(1,2,3-CD)PYRENE	**0.00281**	**0.00252**	**0.00218**	**0.0036**	**0.000773**	**0.00101**	0.00218	0.00513	23 of 24
NAPHTHALENE	**0.0235**	**0.0153**	**0.0124**	**0.0103**	**0.012**	**0.0124**	0.0147	0.0558	24 of 24
PERYLENE	0.000571	0.000539	0.000557	**0.000727**	0.000263	0.000262	0.000491	0.00116	1 of 24
PHENANTHRENE	**0.00833**	**0.006**	**0.00744**	**0.013**	**0.0145**	**0.0162**	0.0107	0.0221	24 of 24
PYRENE	**0.0228**	**0.0176**	**0.0168**	**0.0233**	**0.0121**	**0.013**	0.0178	0.0286	24 of 24

Notes

DEC is the now-defunct Detailed Effluent Characterization project, which includes low-detection limit methods not approved by the EPA. DEC sampling is now carried out under the NP-EM project.

~: No data or no samples taken

Results in **bold** indicate one or more detects that month

Yearly averages are calculated from individual results collected during the reporting period and are flow-weighted.

Non-detected compounds are assumed to equal one half of the detection limit for metals and inorganics and one tenth of the reporting limit for organic compounds.

Table A-17. Deer Island Effluent Loadings (Low detection limit analyses), July 2012 - June 2013

Organochlorine Pesticides and PCBs (lbs/day)

	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
2,4'-DDD	0.00021	0.000221	0.000216	0.000213	0.000266	0.000221	0.000291	0.000263	0.000534	0.000315	0.000364	0.000252	0.00028	0.000825	0 of 48
2,4'-DDE	0.00021	0.000221	0.000216	0.000213	0.000266	0.000221	0.000291	0.000263	0.000534	0.000315	0.000364	0.000252	0.00028	0.000825	0 of 48
2,4'-DDT	0.00021	0.000221	0.000216	0.000213	0.000266	0.000221	0.000291	0.000263	0.000534	0.000315	0.000364	0.000252	0.00028	0.000825	0 of 48
4,4'-DDD	0.00021	0.000221	0.000216	0.000213	0.000266	0.000221	0.000291	0.000263	0.000534	0.000315	0.000364	0.000252	0.00028	0.000825	0 of 48
4,4'-DDE	**0.000236**	0.000221	0.000216	0.000213	**0.000506**	0.000221	0.000291	0.000263	0.000534	0.000315	0.000364	**0.000303**	0.000307	0.00123	3 of 48
4,4'-DDT	0.00021	0.000221	0.000216	0.000213	0.000266	0.000221	0.000291	0.000263	0.000534	0.000315	0.000364	0.000252	0.00028	0.000825	0 of 48
ALDRIN	0.00021	0.000221	0.000216	0.000213	0.000266	0.000221	0.000291	0.000263	0.000534	0.000315	0.000364	0.000252	0.00028	0.000825	0 of 48
ALPHA-CHLORDANE	**0.000788**	**0.00101**	**0.00095**	**0.000663**	0.000266	0.000221	0.000291	**0.000611**	**0.00399**	0.000315	**0.00218**	**0.000936**	0.00102	0.00865	19 of 48
BZ 101 PENTACHLOROBIPHENYL	0.00021	0.000221	**0.000342**	0.000213	0.000266	0.000221	0.000291	0.000263	0.000534	0.000315	0.000364	0.000252	0.000291	0.000825	1 of 48
BZ 105 PENTACHLOROBIPHENYL	0.00021	0.000221	0.000216	0.000213	0.000266	0.000221	0.000291	0.000263	0.000534	0.000315	0.000364	0.000252	0.00028	0.000825	0 of 48
BZ 118 PENTACHLOROBIPHENYL	0.00021	0.000221	0.000216	0.000213	0.000266	0.000221	0.000291	0.000263	0.000534	0.000315	0.000364	0.000252	0.00028	0.000825	0 of 48
BZ 126 PENTACHLOROBIPHENYL	0.00021	0.000221	0.000216	0.000213	0.000266	0.000221	0.000291	0.000263	0.000534	0.000315	0.000364	0.000252	0.00028	0.000825	0 of 48
BZ 128 HEXACHLOROBIPHENYL	0.00021	0.000221	0.000216	0.000213	0.000266	0.000221	0.000291	0.000263	0.000534	0.000315	0.000364	0.000252	0.00028	0.000825	0 of 48
BZ 138 HEXACHLOROBIPHENYL	0.00021	**0.000287**	**0.000392**	**0.00027**	0.000266	0.000221	0.000291	0.000263	0.000534	0.000315	**0.000529**	0.000252	0.000319	0.00129	5 of 48
BZ 153 HEXACHLOROBIPHENYL	0.00021	**0.000308**	**0.000559**	**0.000305**	**0.000375**	0.000221	0.000291	0.000263	0.000534	0.000315	**0.000451**	0.000252	0.00034	0.000976	10 of 48
BZ 170 HEPTACHLOROBIPHENYL	0.00021	0.000221	0.000216	0.000213	0.000266	0.000221	0.000291	0.000263	0.000534	0.000315	0.000364	0.000252	0.00028	0.000825	0 of 48
BZ 18 TRICHLOROBIPHENYL	0.00021	0.000221	0.000216	0.000213	0.000266	0.000221	0.000291	0.000263	0.000534	0.000315	0.000364	0.000252	0.00028	0.000825	0 of 48
BZ 180 HEPTACHLOROBIPHENYL	0.00021	**0.000388**	0.000216	**0.000252**	0.000266	0.000221	0.000291	**0.00165**	0.000534	0.000315	0.000364	0.000252	0.000413	0.00406	4 of 48
BZ 187 HEPTACHLOROBIPHENYL	0.00021	0.000221	0.000216	0.000213	0.000266	0.000221	0.000291	**0.000266**	0.000534	0.000315	0.000364	0.000252	0.000281	0.000825	1 of 48
BZ 195 OCTACHLOROBIPHENYL	0.00021	0.000221	0.000216	0.000213	0.000266	0.000221	0.000291	0.000263	0.000534	0.000315	0.000364	0.000252	0.00028	0.000825	0 of 48
BZ 206 NONACHLOROBIPHENYL	0.00021	0.000221	0.000216	0.000213	0.000266	0.000221	0.000291	0.000263	0.000534	0.000315	0.000364	0.000252	0.00028	0.000825	0 of 48
BZ 209 DECACHLOROBIPHENYL	0.00021	0.000221	0.000216	0.000213	0.000266	0.000221	0.000291	0.000263	0.000534	0.000315	0.000364	0.000252	0.00028	0.000825	0 of 48
BZ 28 TRICHLOROBIPHENYL	0.00021	0.000221	0.000216	0.000213	0.000266	0.000221	0.000291	0.000263	0.000534	0.000315	0.000364	0.000252	0.00028	0.000825	0 of 48
BZ 44 TETRACHLOROBIPHENYL	0.00021	0.000221	0.000216	0.000213	0.000266	0.000221	0.000291	0.000263	0.000534	0.000315	0.000364	0.000252	0.00028	0.000825	0 of 48
BZ 52 TETRACHLOROBIPHENYL	**0.000304**	**0.000348**	0.000216	0.000213	0.000266	0.000221	0.000291	0.000263	0.000534	0.000315	0.000364	0.000252	0.000299	0.000825	2 of 48
BZ 66 TETRACHLOROBIPHENYL	0.00021	0.000221	0.000216	0.000213	0.000266	0.000221	0.000291	0.000263	0.000534	0.000315	0.000364	0.000252	0.00028	0.000825	0 of 48
BZ 77 TETRACHLOROBIPHENYL	0.00021	0.000221	0.000216	0.000213	0.000266	0.000221	0.000291	0.000263	0.000534	0.000315	0.000364	0.000252	0.00028	0.000825	0 of 48
BZ 8 DICHLOROBIPHENYL	0.00021	0.000221	0.000216	0.000213	0.000266	0.000221	0.000291	0.000263	0.000534	0.000315	0.000364	0.000252	0.00028	0.000825	0 of 48
CIS-NONACHLOR	0.00021	0.000221	0.000216	0.000213	0.000266	0.000221	0.000291	0.000263	0.000534	0.000315	0.000364	0.000252	0.00028	0.000825	0 of 48
DDMU	0.00021	0.000221	0.000216	0.000213	0.000266	0.000221	0.000291	0.000263	0.000534	0.000315	0.000364	0.000252	0.00028	0.000825	0 of 48
DIELDRIN	0.00021	0.000221	0.000216	0.000213	0.000266	0.000221	0.000291	0.000263	0.000534	0.000315	0.000364	0.000252	0.00028	0.000825	0 of 48
ENDRIN	0.00021	0.000221	0.000216	0.000213	0.000266	0.000221	0.000291	0.000263	0.000534	0.000315	0.000364	0.000252	0.00028	0.000825	0 of 48
GAMMA-BHC	0.00021	0.000221	0.000216	0.000213	0.000266	0.000221	0.000291	0.000263	0.000534	0.000315	0.000364	0.000252	0.00028	0.000825	0 of 48
GAMMA-CHLORDANE	**0.00101**	**0.00041**	**0.000455**	**0.000638**	0.000266	0.000221	**0.000892**	0.000263	**0.00321**	0.000315	**0.00149**	**0.000908**	0.00084	0.00721	18 of 48
HEPTACHLOR	0.00021	0.000221	0.000216	0.000213	0.000266	0.000221	0.000291	0.000263	0.000534	0.000315	0.000364	0.000252	0.00028	0.000825	0 of 48
HEPTACHLOR EPOXIDE	0.00021	0.000221	0.000216	0.000213	0.000266	0.000221	0.000291	0.000263	0.000534	0.000315	0.000364	0.000252	0.00028	0.000825	0 of 48
HEXACHLOROBENZENE	0.00021	0.000221	0.000216	0.000213	0.000266	0.000221	0.000291	0.000263	0.000534	0.000315	**0.000549**	0.000252	0.000296	0.0011	2 of 48
MIREX	0.00021	0.000221	0.000216	0.000213	0.000266	0.000221	0.000291	0.000263	0.000534	0.000315	0.000364	0.000252	0.00028	0.000825	0 of 48
OXYCHLORDANE	0.00021	0.000221	0.000216	0.000213	0.000266	0.000221	0.000291	0.000263	0.000534	0.000315	0.000364	0.000252	0.00028	0.000825	0 of 48
TOTAL AMP PCBS	**0.000304**	**0.000829**	**0.00102**	**0.000454**	**0.000375**	0.000221	0.000291	**0.00172**	0.000534	0.000315	**0.000773**	0.000252	0.000591	0.00406	14 of 48
TOTAL CHLORDANE	**0.00114**	**0.00101**	**0.00106**	**0.000663**	**0.000323**	0.000221	0.000291	**0.000611**	**0.00553**	**0.000533**	**0.00241**	**0.000936**	0.00123	0.0125	21 of 48
TOTAL DDT	**0.000236**	0.000221	0.000216	0.000213	**0.000506**	0.000221	0.000291	0.000263	0.000534	0.000315	0.000364	**0.000303**	0.000307	0.00123	3 of 48
TRANS-NONACHLOR	**0.000454**	0.000221	**0.00027**	0.000213	**0.000323**	0.000221	0.000291	0.000263	**0.00186**	**0.000533**	**0.000532**	0.000252	0.000453	0.00384	8 of 48

Semivolatile Organics (lbs/day)

	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
1,2,4-TRICHLOROBENZENE	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
1,2-DICHLOROBENZENE	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
1,2-DIPHENYLHYDRAZINE (AS AZOBENZENE)	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
1,3-DICHLOROBENZENE	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
1,4-DICHLOROBENZENE	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
2,2'-OXYBIS(1-CHLOROPROPANE)	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
2,4,5-TRICHLOROPHENOL	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
2,4,6-TRICHLOROPHENOL	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
2,4-DICHLOROPHENOL	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
2,4-DIMETHYLPHENOL	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
2,4-DINITROPHENOL	12.5	11.6	10.6	10.8	12.6	11.4	14.6	15.7	21.6	17	14.8	12.1	13.9	23.2	0 of 25
2,4-DINITROTOLUENE	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
2,6-DINITROTOLUENE	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
2-CHLORONAPHTHALENE	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
2-CHLOROPHENOL	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25

Table A-17. Deer Island Effluent Loadings (Low detection limit analyses), July - December 2013

Organochlorine Pesticides and PCBs (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
2,4'-DDD	0.000337	0.000278	0.000236	0.000215	**0.000298**	0.000213	0.000263	0.000627	1 of 24
2,4'-DDE	0.000337	0.000278	0.000236	0.000215	0.000195	0.000213	0.000246	0.00053	0 of 24
2,4'-DDT	0.000337	0.000278	0.000236	0.000215	0.000195	0.000213	0.000246	0.00053	0 of 24
4,4'-DDD	0.000337	0.000278	0.000236	0.000215	0.000195	0.000213	0.000246	0.00053	0 of 24
4,4'-DDE	**0.000694**	**0.000319**	**0.000268**	**0.000254**	**0.000433**	**0.00037**	0.000389	0.000955	16 of 24
4,4'-DDT	0.000337	0.000278	0.000236	0.000215	0.000195	0.000213	0.000246	0.00053	0 of 24
ALDRIN	0.000337	0.000278	0.000236	0.000215	0.000195	0.000213	0.000246	0.00053	0 of 24
ALPHA-CHLORDANE	**0.00161**	**0.000871**	**0.00257**	**0.000509**	**0.000523**	**0.000787**	0.00115	0.00651	22 of 24
BZ 101 PENTACHLOROBIPHENYL	**0.000396**	0.000278	0.000236	0.000215	**0.000345**	**0.000246**	0.000286	0.000637	9 of 24
BZ 105 PENTACHLOROBIPHENYL	0.000337	0.000278	0.000236	0.000215	0.000195	**0.00021**	0.000245	0.00053	1 of 24
BZ 118 PENTACHLOROBIPHENYL	**0.000389**	0.000278	0.000236	0.000215	**0.000204**	**0.000175**	0.000249	0.00053	9 of 24
BZ 126 PENTACHLOROBIPHENYL	0.000337	0.000278	0.000236	0.000215	0.000195	0.000213	0.000246	0.00053	0 of 24
BZ 128 HEXACHLOROBIPHENYL	0.000337	0.000278	0.000236	0.000215	0.000195	0.000213	0.000246	0.00053	0 of 24
BZ 138 HEXACHLOROBIPHENYL	**0.000443**	**0.000288**	**0.000424**	**0.000227**	**0.000329**	**0.000324**	0.000339	0.00057	21 of 24
BZ 153 HEXACHLOROBIPHENYL	**0.000328**	**0.00021**	**0.000325**	**0.000198**	**0.00033**	**0.000245**	0.000273	0.000556	21 of 24
BZ 170 HEPTACHLOROBIPHENYL	0.000337	0.000278	0.000236	0.000215	0.000195	0.000213	0.000246	0.00053	0 of 24
BZ 18 TRICHLOROBIPHENYL	0.000337	0.000278	0.000236	0.000215	**0.000183**	0.000213	0.000244	0.00053	2 of 24
BZ 180 HEPTACHLOROBIPHENYL	0.000337	0.000278	0.000236	0.000215	0.000195	0.000213	0.000246	0.00053	0 of 24
BZ 187 HEPTACHLOROBIPHENYL	0.000337	0.000278	0.000236	0.000215	0.000195	0.000213	0.000246	0.00053	0 of 24
BZ 195 OCTACHLOROBIPHENYL	0.000337	0.000278	0.000236	0.000215	0.000195	0.000213	0.000246	0.00053	0 of 24
BZ 206 NONACHLOROBIPHENYL	0.000337	0.000278	0.000236	0.000215	0.000195	0.000213	0.000246	0.00053	0 of 24
BZ 209 DECACHLOROBIPHENYL	0.000337	0.000278	0.000236	0.000215	0.000195	0.000213	0.000246	0.00053	0 of 24
BZ 28 TRICHLOROBIPHENYL	0.000337	0.000278	0.000236	0.000215	**0.000246**	0.000213	0.000254	0.00053	1 of 24
BZ 44 TETRACHLOROBIPHENYL	**0.000329**	**0.000254**	0.000236	0.000215	**0.000298**	**0.00024**	0.000262	0.00053	11 of 24
BZ 52 TETRACHLOROBIPHENYL	**0.000504**	**0.000291**	0.000236	0.000215	**0.000351**	**0.00032**	0.000319	0.000661	15 of 24
BZ 66 TETRACHLOROBIPHENYL	**0.000304**	0.000278	0.000236	0.000215	**0.00021**	0.000213	0.000243	0.00053	5 of 24
BZ 77 TETRACHLOROBIPHENYL	0.000337	0.000278	0.000236	0.000215	0.000195	0.000213	0.000246	0.00053	0 of 24
BZ 8 DICHLOROBIPHENYL	0.000337	0.000278	0.000236	0.000215	0.000195	0.000213	0.000246	0.00053	0 of 24
CIS-NONACHLOR	0.000337	0.000278	0.000236	0.000215	0.000195	0.000213	0.000246	0.00053	0 of 24
DDMU	0.000337	0.000278	0.000236	0.000215	0.000195	0.000213	0.000246	0.00053	0 of 24
DIELDRIN	0.000337	0.000278	0.000236	0.000215	0.000195	0.000213	0.000246	0.00053	0 of 24
ENDRIN	0.000337	0.000278	0.000236	0.000215	0.000195	0.000213	0.000246	0.00053	0 of 24
GAMMA-BHC	0.000337	0.000278	0.000236	**0.0043**	0.000195	0.000213	0.000927	0.00618	3 of 24
GAMMA-CHLORDANE	**0.00179**	**0.000672**	**0.00233**	**0.000625**	**0.000557**	**0.000784**	0.00113	0.00622	24 of 24
HEPTACHLOR	0.000337	0.000278	0.000236	0.000215	0.000195	0.000213	0.000246	0.00053	0 of 24
HEPTACHLOR EPOXIDE	0.000337	0.000278	0.000236	0.000215	0.000195	0.000213	0.000246	0.00053	0 of 24
HEXACHLOROBENZENE	**0.000483**	0.000278	**0.000331**	**0.000235**	**0.000233**	**0.000227**	0.000298	0.00068	15 of 24
MIREX	0.000337	0.000278	0.000236	0.000215	0.000195	0.000213	0.000246	0.00053	0 of 24
OXYCHLORDANE	0.000337	0.000278	0.000236	0.000215	0.000195	0.000213	0.000246	0.00053	0 of 24
TOTAL AMP PCBS	**0.00177**	**0.000609**	**0.000749**	**0.000371**	**0.00226**	**0.00155**	0.00122	0.004	22 of 24
TOTAL CHLORDANE	**0.00238**	**0.00101**	**0.00362**	**0.000509**	**0.000777**	**0.00122**	0.00159	0.00952	22 of 24
TOTAL DDT	**0.000694**	**0.000319**	**0.000268**	**0.000254**	**0.00059**	**0.00037**	0.000416	0.00133	16 of 24
TRANS-NONACHLOR	**0.000763**	**0.000354**	**0.00111**	0.000215	**0.000255**	**0.000431**	0.00052	0.00301	16 of 24

Semivolatile Organics (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
1,2,4-TRICHLOROBENZENE	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
1,2-DICHLOROBENZENE	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
1,2-DIPHENYLHYDRAZINE (AS AZOBENZENE)	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
1,3-DICHLOROBENZENE	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
1,4-DICHLOROBENZENE	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
2,2'-OXYBIS(1-CHLOROPROPANE)	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
2,4,5-TRICHLOROPHENOL	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
2,4,6-TRICHLOROPHENOL	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
2,4-DICHLOROPHENOL	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
2,4-DIMETHYLPHENOL	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
2,4-DINITROPHENOL	13.3	11.1	11.9	10.1	10.1	11.2	11.3	13.8	0 of 12
2,4-DINITROTOLUENE	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
2,6-DINITROTOLUENE	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
2-CHLORONAPHTHALENE	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
2-CHLOROPHENOL	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12

Table A-17. Deer Island Effluent Loadings (Low detection limit analyses), July 2012 - June 2013

Semivolatile Organics (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
2-METHYL-4,6-DINITROPHENOL	12.5	11.6	10.6	10.8	12.6	11.4	14.6	15.7	21.6	17	14.8	12.1	13.9	23.2	0 of 25
2-METHYLNAPHTHALENE	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
2-METHYLPHENOL	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
2-NITROANILINE	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
2-NITROPHENOL	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
3,3'-DICHLOROBENZIDINE	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
3-NITROANILINE	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
4-BROMOPHENYL PHENYL ETHER	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
4-CHLORO-3-METHYLPHENOL	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
4-CHLOROANILINE	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
4-CHLOROPHENYL PHENYL ETHER	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
4-METHYLPHENOL (INCLUDES 3-METHYLPHENOL)	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
4-NITROANILINE	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
4-NITROPHENOL	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
ACENAPHTHENE	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
ACENAPHTHYLENE	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
ANILINE	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
ANTHRACENE	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
BENZIDINE	12.5	11.6	10.6	10.8	12.6	11.4	14.6	15.7	21.6	17	14.8	12.1	13.9	23.2	0 of 25
BENZO(A)ANTHRACENE	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
BENZO(A)PYRENE	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
BENZO(B)FLUORANTHENE	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
BENZO(G,H,I)PERYLENE	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
BENZO(K)FLUORANTHENE	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
BENZOIC ACID	12.5	11.6	10.6	10.8	12.6	11.4	14.6	15.7	21.6	17	14.8	12.1	13.9	23.2	0 of 25
BENZYL ALCOHOL	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
BIS(2-CHLOROETHOXY)METHANE	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
BIS(2-CHLOROETHYL)ETHER	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
BIS(2-ETHYLHEXYL)PHTHALATE	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
BUTYLBENZYLPHTHALATE	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
CARBAZOLE	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
CHRYSENE	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
DIBENZO(A,H)ANTHRACENE	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
DIBENZOFURAN	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
DIETHYLPHTHALATE	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
DIMETHYLPHTHALATE	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
DI-N-BUTYLPHTHALATE	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
DI-N-OCTYLPHTHALATE	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
FLUORANTHENE	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
FLUORENE	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
HEXACHLOROBENZENE	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
HEXACHLOROBUTADIENE	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
HEXACHLOROCYCLOPENTADIENE	12.5	11.6	10.6	10.8	12.6	11.4	14.6	15.7	21.6	17	14.8	12.1	13.9	23.2	0 of 25
HEXACHLOROETHANE	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
INDENO(1,2,3-CD)PYRENE	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
ISOPHORONE	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
NAPHTHALENE	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
N-DECANE	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
NITROBENZENE	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
N-NITROSODIMETHYLAMINE (NDMA)	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
N-NITROSODI-N-PROPYLAMINE (NDPA)	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
N-NITROSODIPHENYLAMINE	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
N-OCTADECANE	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
PENTACHLOROPHENOL	12.5	11.6	10.6	10.8	12.6	11.4	14.6	15.7	21.6	17	14.8	12.1	13.9	23.2	0 of 25
PHENANTHRENE	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
PHENOL	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25
PYRENE	5.02	4.66	4.24	4.3	5.02	4.55	5.83	6.28	8.65	6.81	5.92	4.83	5.54	9.28	0 of 25

Table A-17. Deer Island Effluent Loadings (Low detection limit analyses), July - December 2013

Semivolatile Organics (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
2-METHYL-4,6-DINITROPHENOL	13.3	11.1	11.9	10.1	10.1	11.2	11.3	13.8	0 of 12
2-METHYLNAPHTHALENE	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
2-METHYLPHENOL	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
2-NITROANILINE	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
2-NITROPHENOL	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
3,3'-DICHLOROBENZIDINE	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
3-NITROANILINE	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
4-BROMOPHENYL PHENYL ETHER	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
4-CHLORO-3-METHYLPHENOL	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
4-CHLOROANILINE	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
4-CHLOROPHENYL PHENYL ETHER	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
4-METHYLPHENOL (INCLUDES 3-METHYLPHENOL)	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
4-NITROANILINE	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
4-NITROPHENOL	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
ACENAPHTHENE	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
ACENAPHTHYLENE	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
ANILINE	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
ANTHRACENE	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
BENZIDINE	13.3	11.1	11.9	10.1	10.1	11.2	11.3	13.8	0 of 12
BENZO(A)ANTHRACENE	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
BENZO(A)PYRENE	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
BENZO(B)FLUORANTHENE	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
BENZO(G,H,I)PERYLENE	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
BENZO(K)FLUORANTHENE	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
BENZOIC ACID	13.3	11.1	11.9	10.1	10.1	11.2	11.3	13.8	0 of 12
BENZYL ALCOHOL	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
BIS(2-CHLOROETHOXY)METHANE	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
BIS(2-CHLOROETHYL)ETHER	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
BIS(2-ETHYLHEXYL)PHTHALATE	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
BUTYLBENZYLPHTHALATE	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
CARBAZOLE	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
CHRYSENE	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
DIBENZO(A,H)ANTHRACENE	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
DIBENZOFURAN	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
DIETHYLPHTHALATE	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
DIMETHYLPHTHALATE	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
DI-N-BUTYLPHTHALATE	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
DI-N-OCTYLPHTHALATE	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
FLUORANTHENE	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
FLUORENE	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
HEXACHLOROBENZENE	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
HEXACHLOROBUTADIENE	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
HEXACHLOROCYCLOPENTADIENE	13.3	11.1	11.9	10.1	10.1	11.2	11.3	13.8	0 of 12
HEXACHLOROETHANE	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
INDENO(1,2,3-CD)PYRENE	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
ISOPHORONE	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
NAPHTHALENE	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
N-DECANE	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
NITROBENZENE	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
N-NITROSODIMETHYLAMINE (NDMA)	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
N-NITROSODI-N-PROPYLAMINE (NDPA)	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
N-NITROSODIPHENYLAMINE	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
N-OCTADECANE	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
PENTACHLOROPHENOL	13.3	11.1	11.9	10.1	10.1	11.2	11.3	13.8	0 of 12
PHENANTHRENE	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
PHENOL	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12
PYRENE	5.33	4.44	4.74	4.04	4.05	4.49	4.52	5.5	0 of 12

Table A-17. Deer Island Effluent Loadings (Low detection limit analyses), July 2012 - June 2013

Polycyclic Aromatic Hydrocarbons (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Maximum	Times Detected
1-METHYLNAPHTHALENE	**0.00203**	**0.00596**	**0.00434**	**0.005**	**0.00608**	**0.00585**	**0.00479**	**0.0206**	**0.00515**	**0.0508**	**0.0129**	**0.00219**	0.0105	0.186	42 of 48
1-METHYLPHENANTHRENE	**0.0031**	**0.00466**	**0.00554**	**0.00913**	**0.0101**	**0.014**	**0.00654**	**0.0143**	**0.0146**	**0.0318**	**0.00887**	**0.00269**	0.0104	0.0713	47 of 48
2,3,5-TRIMETHYLNAPHTHYLENE	**0.00348**	**0.00909**	**0.00724**	**0.00892**	**0.0168**	**0.0279**	**0.00969**	**0.0216**	**0.0202**	**0.041**	**0.00297**	**0.00346**	0.0144	0.108	42 of 48
2,6-DIMETHYLNAPHTHALENE	**0.00297**	**0.00474**	**0.00216**	**0.00762**	**0.00557**	**0.00781**	**0.00286**	**0.0292**	**0.017**	**0.0316**	**0.0174**	**0.00678**	0.0113	0.104	42 of 48
2-METHYLNAPHTHALENE	**0.00267**	**0.00655**	**0.0064**	**0.00841**	**0.0147**	**0.0146**	**0.00642**	**0.0359**	**0.0317**	**0.0523**	**0.038**	**0.00323**	0.0184	0.173	46 of 48
ACENAPHTHENE	**0.00273**	**0.00275**	**0.00436**	**0.0108**	**0.0157**	**0.00958**	**0.0137**	**0.0239**	**0.0261**	**0.0376**	**0.0397**	**0.00643**	0.0161	0.111	42 of 48
ACENAPHTHYLENE	**0.00151**	0.00109	0.00106	0.00112	0.00139	0.00112	0.00148	**0.00547**	**0.00669**	**0.0095**	**0.003**	0.00123	0.00289	0.0203	12 of 48
ANTHRACENE	**0.00393**	**0.00506**	**0.00517**	**0.0075**	**0.00679**	**0.00499**	**0.00489**	**0.0114**	**0.0123**	**0.0209**	**0.00841**	**0.00218**	0.00779	0.0525	44 of 48
BENZO(A)ANTHRACENE	**0.00691**	**0.0068**	**0.00595**	**0.00992**	**0.00907**	**0.00798**	**0.011**	**0.0229**	**0.041**	**0.0551**	**0.0149**	**0.00605**	0.0165	0.16	48 of 48
BENZO(A)PYRENE	**0.00494**	**0.00438**	**0.00354**	**0.00678**	**0.00642**	**0.00592**	**0.0118**	**0.0203**	**0.0472**	**0.0709**	**0.0089**	**0.00386**	0.0162	0.212	48 of 48
BENZO(B)FLUORANTHENE	**0.00733**	**0.00659**	**0.00561**	**0.0102**	**0.00907**	**0.00905**	**0.0147**	**0.0324**	**0.0824**	**0.118**	**0.017**	**0.00707**	0.0266	0.369	48 of 48
BENZO(E)PYRENE	**0.00307**	**0.00397**	**0.00312**	**0.00575**	**0.00565**	**0.00513**	**0.00966**	**0.0169**	**0.0455**	**0.059**	**0.00959**	**0.00382**	0.0143	0.202	48 of 48
BENZO(G,H,I)PERYLENE	**0.00343**	**0.00414**	**0.00303**	**0.00498**	**0.00472**	**0.00472**	**0.00872**	**0.015**	**0.0435**	**0.0635**	**0.0078**	**0.00365**	0.0139	0.157	47 of 48
BENZO(K)FLUORANTHENE	**0.00397**	**0.00233**	**0.00183**	**0.0051**	**0.00535**	**0.0042**	**0.00622**	**0.0147**	**0.0388**	**0.0707**	**0.00447**	**0.00361**	0.0134	0.135	42 of 48
BENZOTHIAZOLE	**0.0209**	**0.408**	**0.221**	**0.0166**	**0.132**	**0.0696**	**0.0566**	**0.0226**	**0.0488**	**0.0293**	**0.0255**	**0.115**	0.0971	0.969	47 of 48
BIPHENYL	**0.00308**	**0.00368**	**0.00432**	**0.00418**	**0.00454**	**0.00662**	**0.0036**	**0.00832**	**0.00978**	**0.0149**	**0.00399**	0.00123	0.00569	0.0485	41 of 48
C1-CHRYSENES	**0.00258**	**0.00288**	**0.00228**	**0.00493**	**0.0045**	**0.00472**	**0.00614**	**0.00825**	**0.0064**	**0.0264**	**0.0122**	**0.00422**	0.00712	0.058	40 of 48
C1-DIBENZOTHIOPHENES	**0.0149**	**0.0207**	**0.0195**	**0.0156**	**0.0244**	**0.0257**	**0.018**	**0.0209**	**0.0125**	**0.0389**	0.00146	0.00123	0.0178	0.0818	37 of 48
C1-FLUORANTHENES/PYRENES	**0.01**	**0.0164**	**0.0139**	**0.0218**	**0.0197**	**0.0208**	**0.0285**	**0.0406**	**0.06**	**0.0719**	**0.0193**	**0.0122**	0.0279	0.168	48 of 48
C1-FLUORENES	**0.0134**	**0.0181**	**0.0196**	**0.0186**	**0.036**	**0.0447**	**0.0343**	**0.0826**	0.0022	**0.023**	**0.00492**	**0.00248**	0.025	0.109	36 of 48
C1-NAPHTHALENES	**0.00497**	**0.0122**	**0.00949**	**0.0137**	**0.0172**	**0.0165**	**0.0123**	**0.043**	**0.0315**	**0.0763**	**0.0494**	**0.00586**	0.0244	0.255	47 of 48
C1-PHENANTHRENES/ANTHRACENES	**0.0148**	**0.0234**	**0.0201**	**0.0317**	**0.0359**	**0.0513**	**0.0364**	**0.0594**	**0.0644**	**0.148**	**0.0523**	**0.019**	0.0464	0.304	47 of 48
C2-CHRYSENES	0.00103	0.00109	0.00106	0.00112	0.00139	0.00112	0.00148	0.00133	0.0022	0.00154	0.00146	0.00123	0.00134	0.00234	0 of 48
C2-DIBENZOTHIOPHENES	**0.00714**	**0.0168**	**0.0133**	**0.0103**	**0.021**	**0.0231**	**0.0199**	**0.0278**	**0.0306**	**0.068**	0.00146	0.00123	0.0201	0.167	35 of 48
C2-FLUORANTHENES/PYRENES	0.00103	**0.0115**	**0.00927**	**0.00704**	**0.0102**	**0.0137**	**0.0147**	**0.013**	**0.0101**	**0.0508**	**0.00712**	0.00123	0.0125	0.113	30 of 48
C2-FLUORENES	**0.0246**	**0.0563**	**0.0425**	**0.0107**	**0.043**	**0.0579**	**0.0401**	**0.0521**	0.0022	**0.0694**	0.00146	0.00123	0.0335	0.173	31 of 48
C2-NAPHTHALENES	**0.0106**	**0.0177**	**0.0151**	**0.014**	**0.0194**	**0.0391**	**0.0309**	**0.0695**	**0.0466**	**0.117**	**0.0834**	**0.0185**	0.0402	0.392	48 of 48
C2-PHENANTHRENES/ANTHRACENES	**0.0214**	**0.0309**	**0.0244**	**0.0285**	**0.043**	**0.0679**	**0.0448**	**0.0753**	**0.088**	**0.18**	**0.0344**	**0.0104**	0.0541	0.412	47 of 48
C3-CHRYSENES	0.00103	0.00109	0.00106	0.00112	0.00139	0.00112	0.00148	0.00133	0.0022	0.00154	0.00146	0.00123	0.00134	0.00234	0 of 48
C3-DIBENZOTHIOPHENES	0.00103	**0.0093**	0.00106	0.00112	**0.00367**	**0.0153**	0.00148	0.00133	0.0022	**0.0566**	0.00146	0.00123	0.00798	0.222	7 of 48
C3-FLUORANTHENES/PYRENES	0.00103	0.00109	0.00106	0.00112	0.00139	0.00112	0.00148	0.00133	0.0022	**0.026**	0.00146	0.00123	0.00338	0.0994	1 of 48
C3-FLUORENES	**0.0317**	**0.0587**	**0.0282**	**0.0223**	**0.0509**	**0.065**	**0.0354**	**0.0443**	0.0022	**0.0755**	0.00146	0.00123	0.0347	0.232	27 of 48
C3-NAPHTHALENES	**0.00986**	**0.0329**	**0.0295**	**0.0185**	**0.0743**	**0.0762**	**0.0412**	**0.0964**	**0.0993**	**0.369**	**0.12**	**0.0257**	0.0828	1.24	46 of 48
C3-PHENANTHRENES/ANTHRACENES	**0.00382**	**0.0453**	**0.0387**	**0.0298**	**0.0559**	**0.0638**	**0.044**	**0.11**	**0.0103**	**0.133**	0.00146	0.00123	0.0448	0.391	31 of 48
C4-CHRYSENES	0.00103	0.00109	0.00106	0.00112	0.00139	0.00112	0.00148	0.00133	0.0022	0.00154	0.00146	0.00123	0.00134	0.00234	0 of 48
C4-NAPHTHALENES	**0.0314**	**0.0822**	**0.0599**	**0.0296**	**0.0831**	**0.123**	**0.0627**	**0.079**	**0.0793**	**0.116**	0.00146	0.00123	0.0624	0.273	38 of 48
C4-PHENANTHRENES/ANTHRACENES	0.00103	0.00109	0.00106	0.00112	0.00139	0.00112	0.00148	0.00133	0.0022	**0.0622**	0.00146	0.00123	0.00639	0.244	1 of 48
CHRYSENE	**0.00904**	**0.0103**	**0.00931**	**0.0132**	**0.0133**	**0.0115**	**0.0196**	**0.0346**	**0.0759**	**0.0984**	**0.0218**	**0.00978**	0.0272	0.278	48 of 48
DIBENZO(A,H)ANTHRACENE	**0.00223**	0.00109	0.00106	**0.00146**	**0.00174**	0.00112	**0.0019**	**0.00583**	**0.0145**	**0.0246**	0.00146	**0.00193**	0.00491	0.0669	16 of 48
DIBENZOFURAN	**0.00727**	**0.0172**	**0.0149**	**0.00846**	**0.0224**	**0.0177**	**0.0126**	**0.00774**	**0.00544**	**0.0197**	**0.0266**	**0.00597**	0.0138	0.0463	47 of 48
DIBENZOTHIOPHENE	**0.00206**	**0.00398**	**0.00448**	**0.00689**	**0.00696**	**0.00625**	**0.00453**	**0.00818**	**0.00398**	**0.0163**	**0.0103**	**0.00217**	0.00634	0.0447	41 of 48
FLUORANTHENE	**0.0223**	**0.0296**	**0.0306**	**0.0413**	**0.0415**	**0.0343**	**0.0412**	**0.0889**	**0.144**	**0.177**	**0.0598**	**0.0217**	0.061	0.563	48 of 48
FLUORENE	**0.00685**	**0.0118**	**0.0137**	**0.0167**	**0.0215**	**0.0218**	**0.0136**	**0.0243**	**0.0151**	**0.033**	**0.0276**	**0.00426**	0.0175	0.0798	46 of 48
INDENO(1,2,3-CD)PYRENE	**0.00356**	**0.00293**	**0.00229**	**0.00428**	**0.00415**	**0.00406**	**0.0056**	**0.0133**	**0.0385**	**0.0601**	**0.00871**	**0.00395**	0.0126	0.167	45 of 48
NAPHTHALENE	**0.00719**	**0.0152**	**0.0138**	**0.0117**	**0.0246**	**0.0198**	**0.0163**	**0.103**	**0.0939**	**0.171**	**0.168**	**0.00389**	0.054	0.441	46 of 48
PERYLENE	0.00103	**0.00139**	**0.00129**	0.00112	**0.00167**	0.00112	0.00148	**0.00213**	**0.00432**	**0.00909**	0.00146	0.00123	0.00228	0.0319	7 of 48
PHENANTHRENE	**0.011**	**0.0161**	**0.0179**	**0.0332**	**0.0321**	**0.0278**	**0.0181**	**0.0616**	**0.0598**	**0.143**	**0.0548**	**0.00827**	0.0403	0.4	48 of 48
PYRENE	**0.0287**	**0.0413**	**0.0369**	**0.0463**	**0.0475**	**0.0428**	**0.0529**	**0.0891**	**0.142**	**0.16**	**0.0579**	**0.0261**	0.0643	0.458	48 of 48

Table A-17. Deer Island Effluent Loadings (Low detection limit analyses), July - December 2013

Polycyclic Aromatic Hydrocarbons (lbs/day)	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
1-METHYLNAPHTHALENE	**0.00559**	**0.00653**	**0.00649**	**0.00583**	**0.00313**	**0.00401**	0.00526	0.0103	24 of 24
1-METHYLPHENANTHRENE	**0.00613**	**0.00381**	**0.005**	**0.00633**	**0.00732**	**0.00779**	0.00606	0.0104	24 of 24
2,3,5-TRIMETHYLNAPHTHYLENE	**0.0135**	**0.00537**	**0.00793**	**0.0109**	**0.0121**	**0.00883**	0.00978	0.0209	24 of 24
2,6-DIMETHYLNAPHTHALENE	**0.00454**	**0.00176**	**0.00322**	**0.00283**	**0.00903**	**0.00559**	0.00449	0.0129	22 of 24
2-METHYLNAPHTHALENE	**0.00605**	**0.00459**	**0.00428**	**0.00441**	**0.00601**	**0.00592**	0.00521	0.01	23 of 24
ACENAPHTHENE	**0.0108**	**0.00933**	**0.00803**	**0.0102**	**0.0118**	**0.0122**	0.0104	0.0153	22 of 24
ACENAPHTHYLENE	0.00137	**0.00221**	**0.00291**	**0.00256**	0.000486	**0.00124**	0.0018	0.00502	10 of 24
ANTHRACENE	**0.00768**	**0.00567**	**0.0058**	**0.00951**	**0.00559**	**0.0073**	0.00692	0.0124	24 of 24
BENZO(A)ANTHRACENE	**0.0129**	**0.00986**	**0.00894**	**0.0131**	**0.00607**	**0.00656**	0.00957	0.0161	24 of 24
BENZO(A)PYRENE	**0.00886**	**0.00754**	**0.00632**	**0.00959**	**0.00307**	**0.00351**	0.00648	0.0108	24 of 24
BENZO(B)FLUORANTHENE	**0.016**	**0.0115**	**0.00952**	**0.0129**	**0.00701**	**0.00785**	0.0108	0.0184	24 of 24
BENZO(E)PYRENE	**0.00866**	**0.0051**	**0.00398**	**0.00493**	**0.00369**	**0.00377**	0.00502	0.00993	23 of 24
BENZO(G,H,I)PERYLENE	**0.00699**	**0.00593**	**0.00501**	**0.0074**	**0.00221**	**0.00202**	0.00493	0.00964	24 of 24
BENZO(K)FLUORANTHENE	**0.00614**	**0.0057**	**0.00507**	**0.0078**	**0.00227**	**0.00124**	0.0047	0.00994	21 of 24
BENZOTHIAZOLE	**0.275**	**0.0237**	**0.0424**	**0.0565**	**0.0266**	**0.0575**	0.0803	0.585	24 of 24
BIPHENYL	**0.00324**	**0.00291**	**0.00571**	**0.0029**	**0.00187**	**0.00183**	0.00308	0.0126	21 of 24
C1-CHRYSENES	**0.00632**	**0.00374**	**0.00375**	**0.00364**	**0.00284**	**0.00344**	0.00395	0.00737	21 of 24
C1-DIBENZOTHIOPHENES	**0.0332**	**0.0141**	**0.0423**	**0.0657**	**0.00184**	**0.00417**	0.0269	0.119	22 of 24
C1-FLUORANTHENES/PYRENES	**0.0276**	**0.0165**	**0.0161**	**0.0213**	**0.0136**	**0.0152**	0.0184	0.0334	24 of 24
C1-FLUORENES	**0.0792**	**0.0167**	**0.0184**	**0.031**	**0.0267**	**0.0266**	0.0331	0.151	24 of 24
C1-NAPHTHALENES	**0.0112**	**0.0105**	**0.0121**	**0.00971**	**0.01**	**0.0101**	0.0106	0.0185	24 of 24
C1-PHENANTHRENES/ANTHRACENES	**0.0292**	**0.0166**	**0.0265**	**0.0329**	**0.0422**	**0.0451**	0.0321	0.0601	24 of 24
C2-CHRYSENES	0.00137	0.00114	0.00118	**0.00141**	**0.0058**	0.000531	0.0019	0.0115	4 of 24
C2-DIBENZOTHIOPHENES	**0.0175**	**0.0129**	**0.0184**	**0.0196**	0.000486	**0.000861**	0.0116	0.0277	17 of 24
C2-FLUORANTHENES/PYRENES	**0.0193**	**0.00925**	**0.013**	**0.0137**	**0.00172**	0.000531	0.00958	0.0231	18 of 24
C2-FLUORENES	**0.0538**	**0.0276**	**0.0553**	**0.0611**	0.000486	0.000531	0.0331	0.139	16 of 24
C2-NAPHTHALENES	**0.0196**	**0.00813**	**0.0147**	**0.0134**	**0.0283**	**0.0177**	0.017	0.0414	24 of 24
C2-PHENANTHRENES/ANTHRACENES	**0.0412**	**0.0239**	**0.0318**	**0.0359**	**0.0399**	**0.0257**	0.0331	0.0694	24 of 24
C3-CHRYSENES	0.00137	0.00114	0.00118	0.00107	0.000486	0.000531	0.000962	0.00155	0 of 24
C3-DIBENZOTHIOPHENES	0.00137	0.00114	0.00118	**0.0155**	0.000486	0.000531	0.00336	0.0172	4 of 24
C3-FLUORANTHENES/PYRENES	0.00137	0.00114	0.00118	0.00107	0.000486	0.000531	0.000962	0.00155	0 of 24
C3-FLUORENES	**0.0857**	**0.0234**	**0.0615**	**0.0662**	0.000486	0.000531	0.0396	0.131	15 of 24
C3-NAPHTHALENES	**0.0268**	**0.0234**	**0.0366**	**0.047**	**0.0483**	**0.05**	0.0387	0.0806	24 of 24
C3-PHENANTHRENES/ANTHRACENES	**0.0623**	**0.0271**	**0.0549**	**0.064**	0.000486	0.000531	0.0349	0.0905	14 of 24
C4-CHRYSENES	0.00137	0.00114	0.00118	0.00107	0.000486	0.000531	0.000962	0.00155	0 of 24
C4-NAPHTHALENES	**0.0735**	**0.0201**	**0.0313**	**0.0619**	0.000486	0.000531	0.0313	0.103	16 of 24
C4-PHENANTHRENES/ANTHRACENES	0.00137	0.00114	0.00118	0.00107	0.000486	0.000531	0.000962	0.00155	0 of 24
CHRYSENE	**0.0182**	**0.0137**	**0.0123**	**0.0162**	**0.00842**	**0.00945**	0.0131	0.0217	24 of 24
DIBENZO(A,H)ANTHRACENE	0.00137	**0.00314**	**0.00207**	**0.00471**	0.000486	**0.00118**	0.00216	0.00722	11 of 24
DIBENZOFURAN	**0.0255**	**0.017**	**0.0182**	**0.024**	**0.015**	**0.0137**	0.0189	0.0352	24 of 24
DIBENZOTHIOPHENE	**0.0042**	**0.00246**	**0.00391**	**0.005**	**0.00613**	**0.00866**	0.00506	0.0102	22 of 24
FLUORANTHENE	**0.0437**	**0.0292**	**0.028**	**0.0419**	**0.0234**	**0.0285**	0.0324	0.0616	24 of 24
FLUORENE	**0.0159**	**0.0105**	**0.014**	**0.0189**	**0.0156**	**0.0152**	0.015	0.0251	24 of 24
INDENO(1,2,3-CD)PYRENE	**0.00674**	**0.00531**	**0.00462**	**0.00696**	**0.00143**	**0.00205**	0.00452	0.00947	23 of 24
NAPHTHALENE	**0.0565**	**0.0322**	**0.0263**	**0.02**	**0.0221**	**0.025**	0.0304	0.14	24 of 24
PERYLENE	0.00137	0.00114	0.00118	**0.0014**	0.000486	0.000531	0.00102	0.00252	1 of 24
PHENANTHRENE	**0.02**	**0.0127**	**0.0158**	**0.0251**	**0.0268**	**0.0328**	0.0222	0.0401	24 of 24
PYRENE	**0.0547**	**0.0372**	**0.0355**	**0.045**	**0.0224**	**0.0263**	0.0369	0.0719	24 of 24

Notes

DEC is the now-defunct Detailed Effluent Characterization project, which includes low-detection limit methods not approved by the EPA. DEC sampling is now carried out under the NP-EM project.

~: No data or no samples taken

Results in **bold** indicate one or more detects that month

Yearly averages are calculated from individual results collected during the reporting period and are flow-weighted.

Non-detected compounds are assumed to equal one half of the detection limit for metals and inorganics and one tenth of the reporting limit for organic compounds.

Appendix B. Cottage Farm CSO Facility

Appendix B-1. Cottage Farm CSO Facility Operations Summary, July 2012 - December 2013

Date	Rainfall (inches)	Discharge Duration (hours)	Total Volume (MG)	Peak Flow (MG)	Effluent pH (S.U.)	Effluent BOD (mg/L)	Effluent TSS (mg/L)	Effluent Fecal coliform (col/100 mL)	Effluent TCR (mg/L)
July									
18	1.74	2.23	8.7	116	6.6	70	134	757	<0.02
							173	2100	<0.02
							82	135	<0.02
August									
	NA								
September									
19	0.61	2.55	6.40	145.00	6.5	53.9	106	18	1.76
							94	1120	<0.02
							92	1050	<0.02
October									
29	1.06	2.40	8.70	152.00					
November									
	NA								
December									
27	1.67	4.75	26.40	172.00	8.5	60.0	113	<10	0.69
							98	2000	<0.02
							98	200	<0.02
							112	370	<0.02
							139	560	<0.02
							158	3000	<0.02
							115	1050	<0.02
							116	480	<0.02
							100	180	<0.02
							78	27	<0.02
January									
	NA								
February									
	NA								
March									
	NA								
April									
	NA								
May									
	NA								
June									
7	3.07	6.06	22.50	214.00	6.7	65.0	85	892	<0.02
							83	3000	<0.02
							77	380	<0.02
							79	2100	<0.02
							62	81	<0.02
							43	10	<0.02
							40	27	<0.02
							36	9	<0.02
							35	72	<0.02
July									
23	1.76	3.5	3.2	36.4	6.7	61	77	9	<0.02
							45	99	<0.02
August									
	NA								
September									
	NA								
October									
	NA								
November									
	NA								
December									
29	1.32	1.66	4.50	69.00	6.8	79.0	78	54	<0.02
Total		23.15	80.40						
Average	1.60	3.31	11.49	129.20	6.97	64.82	89.78	145	0.12
Minimum	0.61	1.66	3.20	36.40	6.50	53.90	60.00	30	0.01
Maximum*	3.07	6.06	26.40	214.00	8.50	79.00	129.67	599	1.76
Number of CSO events			7						

NA = No activation
* = Per the NPDES permit, maximum chlorine residual is the highest single sample.
Boxed dates indicate a single event spread out over multiple days.

Table B-2. Cottage Farm CSO Facility Effluent Characterization, July 2012 - December 2013

	Jul-12	Aug	Sep	Oct	Nov	Dec	Jan-13	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
Metals (ug/L)																					
ALUMINUM	**1620**	NA	**1050**	~	NA	**1030**	NA	NA	NA	NA	NA	**868**	~	NA	NA	NA	NA	~	1142	1620	4 of 4
CADMIUM	**0.638**	NA	**0.191**	~	NA	**0.618**	NA	NA	NA	NA	NA	**0.6025**	~	NA	NA	NA	NA	~	0.512	0.638	4 of 7
CALCIUM	**10100**	NA	**7700**	~	NA	**10700**	NA	NA	NA	NA	NA	**14000**	~	NA	NA	NA	NA	~	10625	14000	4 of 4
CHROMIUM	**7.28**	NA	**4.96**	~	NA	**46**	NA	NA	NA	NA	NA	**9.71**	~	NA	NA	NA	NA	~	16.9875	46	4 of 4
COPPER	**60.7**	NA	**47**	~	NA	**38.8**	NA	NA	NA	NA	NA	**39.7**	~	NA	NA	NA	NA	~	46.6	60.7	4 of 4
LEAD	**49.5**	NA	**36.4**	~	NA	**30.4**	NA	NA	NA	NA	NA	**18.05**	~	NA	NA	NA	NA	~	33.6	49.5	4 of 5
MAGNESIUM	**2080**	NA	**1620**	~	NA	**2430**	NA	NA	NA	NA	NA	**2560**	~	NA	NA	NA	NA	~	2172.5	2560	4 of 4
MERCURY	**0.199**	NA	**0.649**	~	NA	**0.158**	NA	NA	NA	NA	NA	**0.236**	~	NA	NA	NA	NA	~	0.3105	0.649	4 of 4
NICKEL	**5.8**	NA	**6.51**	~	NA	2.5	NA	NA	NA	NA	NA	**3.23**	~	NA	NA	NA	NA	~	4.51	6.51	2 of 5
SILVER	**0.354**	NA	~	~	NA	~	NA	NA	NA	NA	NA	~	~	NA	NA	NA	NA	~	0.354	0.354	1 of 1
ZINC	**144**	NA	**108**	~	NA	**98**	NA	NA	NA	NA	NA	**88.3**	~	NA	NA	NA	NA	~	109.6	144	4 of 4
Surfactants and Total Organic Carbon (mg/L)																					
SURFACTANTS	**1.52**	NA	**0.968**	~	NA	~	NA	NA	NA	NA	NA	~	~	NA	NA	NA	NA	~	1.244	1.52	2 of 2
TOTAL ORGANIC CARBON	**23.8**	NA	**20.2**	~	NA	**13.7**	NA	NA	NA	NA	NA	**16.7**	~	NA	NA	NA	NA	~	18.6	23.8	4 of 4

Table B-3. Cottage Farm CSO Facility Effluent Loadings, July 2012 - December 2013

	Jul-12	Aug	Sep	Oct	Nov	Dec	Jan-13	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
Metals (lbs/day)																					
ALUMINUM	**117.54**	NA	**56.04**	~	NA	**226.78**	NA	NA	NA	NA	NA	**162.88**	~	NA	NA	NA	NA	~	140.81	226.78	4 of 4
CADMIUM	**0.05**	NA	**0.01**	~	NA	**0.14**	NA	NA	NA	NA	NA	**0.11**	~	NA	NA	NA	NA	~	0.08	0.14	4 of 7
CALCIUM	**732.84**	NA	**411.00**	~	NA	**2355.88**	NA	NA	NA	NA	NA	**2627.10**	~	NA	NA	NA	NA	~	1531.70	2627.10	4 of 4
CHROMIUM	**0.53**	NA	**0.26**	~	NA	**10.13**	NA	NA	NA	NA	NA	**1.82**	~	NA	NA	NA	NA	~	3.19	10.13	4 of 4
COPPER	**4.40**	NA	**2.51**	~	NA	**8.54**	NA	NA	NA	NA	NA	**7.45**	~	NA	NA	NA	NA	~	5.73	8.54	4 of 4
LEAD	**3.59**	NA	**1.94**	~	NA	**6.69**	NA	NA	NA	NA	NA	**3.39**	~	NA	NA	NA	NA	~	3.90	6.69	4 of 5
MAGNESIUM	**150.92**	NA	**86.47**	~	NA	**535.03**	NA	NA	NA	NA	NA	**480.38**	~	NA	NA	NA	NA	~	313.20	535.03	4 of 4
MERCURY	**0.01**	NA	**0.03**	~	NA	**0.03**	NA	NA	NA	NA	NA	**0.04**	~	NA	NA	NA	NA	~	0.03	0.04	4 of 4
NICKEL	**0.42**	NA	**0.35**	~	NA	0.55	NA	NA	NA	NA	NA	**0.61**	~	NA	NA	NA	NA	~	0.48	0.61	2 of 5
SILVER	**0.03**	NA	~	~	NA	~	NA	NA	NA	NA	NA	~	~	NA	NA	NA	NA	~	0.03	0.03	1 of 1
ZINC	**10.45**	NA	**5.76**	~	NA	**21.58**	NA	NA	NA	NA	NA	**16.57**	~	NA	NA	NA	NA	~	13.59	21.58	4 of 4
Surfactants and Total Organic Carbon (lbs/day)																					
SURFACTANTS	**110.29**	NA	**51.67**	~	NA	~	NA	NA	NA	NA	NA	~	~	NA	NA	NA	NA	~	80.98	110.29	2 of 2
TOTAL ORGANIC CARBON	**1726.88**	NA	**1078.20**	~	NA	**3016.41**	NA	NA	NA	NA	NA	**3133.76**	~	NA	NA	NA	NA	~	2238.81	3133.76	4 of 4

NA = No activation

~ = Activation that month, but no data or no sample taken

Results in bold indicate one or more detects in the month.

Yearly averages are calculated from individual results collected in the fiscal year.

Non-detected compounds are assumed to equal one half of the detection limit for metals and inorganics and one tenth of the reporting limit for organic compounds.

Appendix C. Prison Point CSO Facility

Appendix C-1. Prison Point CSO Facility Operations Summary,
July 2012 - December 2013

Date	Rainfall (inches)	Discharge Duration (hours)	Total Volume (MG)	Peak Flow (MG)	pH (S.U.)	BOD (mg/L)	Effluent TSS (mg/L)	Effluent Fecal coliform (col/100 mL)	Effluent TCR (mg/L)
July									
18	1.74	3.96	21.8	337.0					
28	0.87	4.08	8.2	84.0					
August									
1	0.80	1.20	1.90	70.00					
10	1.17	2.55	6.00	144.0					
15	0.83	1.80	6.60	240.0					
September									
5	0.66	2.25	9.36	214.0					
7	0.43	2.92	9.00	218.0					
8	0.71	1.90	0.55	37.0					
19	0.61	3.38	17.90	223.0	6.7	25.7	61	9	1.38
							36	1310	0.14
							44	748	<0.02
							42	250	<0.02
							41	240	0.06
							39	9	<0.02
October									
20	0.02	2.45	7.70	105.0					
29	1.06	8.66	27.40	241.0					
30	0.49	2.85	5.40	92.0					
November									
	NA								
December									
18	0.86	2.05	6.10	0.9	6.4	40.8	136	200	0.05
							73	200	0.03
							49	126	<0.02
21	0.65	2.10	5.90	116.0					
27	1.67	8.50	54.50	268.0	6.5	19.0	106	703	<0.02
							155	739	<0.02
							124	919	<0.02
							91	1000	<0.02
							81	5600	<0.02
							72	27000	<0.02
							62	39000	<0.02
							48	22000	<0.02
							72	1020	<0.02
							66	490	<0.02
							47	874	<0.02
							49	580	<0.02
							84	230	<0.02
							58	420	<0.02
							72	390	<0.02
January									
	NA								
February									
27	1.37	5.53	20.0	217.00					
March									
	NA								
April									
	NA								
May									
9	0.61	2.41	6.5	136.90	6.2	69.8	497	3400	<0.02
							748	1060	<0.02
							267	81	<0.02
							180	10	<0.02
							164	10	<0.02
24	0.57	2.56	10.4	160.00					
29	0.84	1.90	5.9	114.00					
June									
7	3.07	13.96	69.8	284.00					
11	1.38	11.70	25.8	194.00					
14	1.02	10.25	24.5	95.80					
18	0.63	2.50	6.0	100.00					
28	0.45	2.50	6.0	150.00					
July									
23	1.76	6.16	25.24	160.0					
26	1.00	3.43	10	167.0					
August									
9	1.62	5.95	21.00	207.00	6.7	19.3	90	500	<0.02
							18	1440	<0.02
							40	3100	<0.02
							50	1140	0.05
							46	500	<0.02
							36	300	<0.02
							59	171	<0.02
							41	207	<0.02
							30	108	<0.02
September									
1	0.38	1.48	2.67	104.0					
13	0.39	2.91	8.38	156.0	6.5	26.6	80	622	<0.02
							98	99	<0.02
							82	36	<0.02
October									
	NA								
November									
27	1.79	6.71	17.83	129.7	6.6	SR	94	200	<0.02
							124	210	<0.02
							184	500	<0.02
							62	117	<0.02
							72	72	<0.02
							56	<10	<0.02
							108	5100	<0.02
							142	2300	<0.02
							56	658	<0.02
							75	210	<0.02
							146	9	<0.02
							70	27	<0.02
December									
29	1.32	4.85	21.50	206.5					
Total		135.45	469.68						
Average	0.99	4.37	15.15	160.38	6.51	33.53	115.91	234	0.05
Minimum	0.02	1.20	0.55	0.90	6.20	19.00	43.75	124	0.01
Maximum*	3.07	13.96	69.78	337.00	6.70	69.80	371.20	1530	1.38
Number of CSO events			31						

NA = No activation

* = Per the NPDES permit, maximum chlorine residual is the highest single sample.

Boxed dates indicate a single event spread out over multiple days.

Table C-2. Prison Point CSO Facility Effluent Characterization, July 2012 - December 2013

	Jul-12	Aug	Sep	Oct	Nov	Dec	Jan-13	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
Metals (ug/L)																					
ALUMINUM	~	~	**981**	~	NA	**1210**	NA	~	NA	NA	~	~	~	**787**	**876**	NA	~	~	963.5	1210	4 of 4
CADMIUM	~	~	**0.401**	~	NA	**0.473**	NA	~	NA	NA	~	~	~	**0.286**	**0.732**	NA	~	~	0.473	0.732	4 of 4
CHROMIUM	~	~	**23**	~	NA	**12.3**	NA	~	NA	NA	~	~	~	**11.8**	**12.6**	NA	~	~	14.925	23	4 of 4
COPPER	~	~	**56.4**	~	NA	**56.7**	NA	~	NA	NA	~	~	~	**31.3**	**58.7**	NA	~	~	50.8	58.7	4 of 4
LEAD	~	~	**44.9**	~	NA	**49.2**	NA	~	NA	NA	~	~	~	**42.3**	**41.8**	NA	~	~	44.6	49.2	4 of 4
MAGNESIUM	~	~	**2710**	~	NA	**1860**	NA	~	NA	NA	~	~	~	**1460**	**2340**	NA	~	~	2092.5	2710	4 of 4
MERCURY	~	~	**0.107**	~	NA	**0.24**	NA	~	NA	NA	~	~	~	**0.0618**	**0.131**	NA	~	~	0.13495	0.24	4 of 4
NICKEL	~	~	**16.3**	~	NA	2.5	NA	~	NA	NA	~	~	~	**2.84**	**5.495**	NA	~	~	6.78375	16.3	4 of 6
ZINC	~	~	**156**	~	NA	**175**	NA	~	NA	NA	~	~	~	**96.5**	**163**	NA	~	~	147.6	175	4 of 4
Surfactants and Total Organic Carbon (mg/L)																					
SURFACTANTS	~	~	**0.215**	~	NA	~	NA	~	NA	NA	~	~	~	~	~	NA	~	~	0.215	0.215	1 of 1
TOTAL ORGANIC CARBON	~	~	**11.2**	~	NA	**11.7**	NA	~	NA	NA	~	~	~	**10.4**	**11.1**	NA	~	~	11.1	11.7	4 of 4

Table C-3. Prison Point CSO Facility Effluent Loadings, July 2012 - December 2013

	Jul-12	Aug	Sep	Oct	Nov	Dec	Jan-13	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
Metals (lbs/day)																					
ALUMINUM	~	~	**146.45**	~	NA	**61.56**	NA	~	NA	NA	~	~	~	**137.84**	**61.22**	NA	~	~	101.77	146.45	4 of 4
CADMIUM	~	~	**0.06**	~	NA	**0.02**	NA	~	NA	NA	~	~	~	**0.05**	**0.05**	NA	~	~	0.05	0.06	4 of 4
CHROMIUM	~	~	**3.43**	~	NA	**0.63**	NA	~	NA	NA	~	~	~	**2.07**	**0.88**	NA	~	~	1.75	3.43	4 of 4
COPPER	~	~	**8.42**	~	NA	**2.88**	NA	~	NA	NA	~	~	~	**5.48**	**4.10**	NA	~	~	5.22	8.42	4 of 4
LEAD	~	~	**6.70**	~	NA	**2.50**	NA	~	NA	NA	~	~	~	**7.41**	**2.92**	NA	~	~	4.88	7.41	4 of 4
MAGNESIUM	~	~	**404.57**	~	NA	**94.63**	NA	~	NA	NA	~	~	~	**255.70**	**163.54**	NA	~	~	229.61	404.57	4 of 4
MERCURY	~	~	**0.02**	~	NA	**0.01**	NA	~	NA	NA	~	~	~	**0.01**	**0.01**	NA	~	~	0.01	0.02	4 of 4
NICKEL	~	~	**2.43**	~	NA	0.13	NA	~	NA	NA	~	~	~	**0.50**	**0.38**	NA	~	~	0.86	2.43	4 of 6
ZINC	~	~	**23.29**	~	NA	**8.90**	NA	~	NA	NA	~	~	~	**16.90**	**11.39**	NA	~	~	15.12	23.29	4 of 4
Surfactants and Total Organic Carbon (lbs/day)																					
SURFACTANTS	~	~	**32.10**	~	NA	~	NA	~	NA	NA	~	~	~	~	~	NA	~	~	32.10	32.10	1 of 1
TOTAL ORGANIC CARBON	~	~	**1672.00**	~	NA	**595.23**	NA	~	NA	NA	~	~	~	**1821.46**	**775.77**	NA	~	~	1216.11	1821.46	4 of 4

NA = No activation

~ = Activation that month, but no data or no sample taken

Results in bold indicate one or more detects in the month.

Yearly averages are calculated from individual results collected in the fiscal year.

Non-detected compounds are assumed to equal one half of the detection limit for metals and inorganics and one tenth of the reporting limit for organic compounds.

Appendix D. Somerville Marginal CSO Facility

Appendix D-1. Somerville Marginal CSO Facility Operations Summary, July 2012 - December 2013

Date	Rainfall (inches)	Discharge Duration (hours)	Total Volume (MG)	Peak Flow (MG)	Effluent pH (S.U.)	Effluent BOD (mg/L)	Effluent TSS (mg/L)	Effluent Fecal coliform (col/100 mL)	Effluent TCR (mg/L)
July									
18	1.74	2.7	5.62	112					
24	0.55	0.58	0.82	17.4					
28	0.87	6.05	2.21	37					
August									
1	0.80	1.23	0.81	39.60					
10	1.17	1.96	0.74	62.00					
15	0.83	1.28	0.76	108.60					
September									
5	0.66	2.50	4.09	138.0	7.4	28.7	260.0	36	<0.02
							242.0	273	<0.02
							147.0	91	<0.02
							96.5	1180	<0.02
7	0.43	0.95	0.50	31.2					
8	0.71	0.98	0.70	46.6	8.1	ND	150.0	27	<0.02
19	0.61	3.87	4.70	150.0	7.0	8.6	217.0	72	<0.02
							98.5	72	<0.02
							85.5	9	<0.02
							49.0	10	0.02
							39.5	10	0.02
							30.5	10	<0.02
							37.0	10	<0.02
28	0.79	2.72	0.48	16.0	8.6	21.8	134.0	220	<0.02
							59.0	10	<0.02
							54.0	10	<0.02
							35.5	10	<0.02
							28.0	10	<0.02
October									
20	0.16	2.53	2.19	100.7	8.5	6.8	112.0	280	<0.02
							139.0	9	<0.02
							143.0	550	<0.02
29	1.06	6.08	5.37	106.0					
November									
	NA								
December									
18	0.86	5.38	2.27	36.10					
21	0.65	1.65	1.41	51.30					
27	0.23	8.96	14.20	131.00					
January									
31	0.31	1.06	0.55	31.0					
February									
27	1.37	8.62	6.69	66.1					
March									
	NA								
April									
	NA								
May									
9	0.61	2.13	0.73	33.0					
24	0.57	2.08	2.30	76.6					
29	0.84	2.01	2.30	64.0					
June									
7	3.07	12.91	14.86	129.0					
10	0.88	1.28	5.12	33.6					
11	1.38	9.31	4.52	83.0					
14	1.02	10.83	5.07	30.0					
17	0.43	2.10	0.11	24.0					
18	0.63	3.13	0.63	28.0					
28	0.45	1.38	0.64	74.0					
July									
23	1.76	4.7	3.53	69					
25	0.27	1.5	0.85	107					
26	1	2.41	2.99	62					
August									
9	1.62	5.46	3.37	72.00					
September									
12	0.57	2.60	3.24	114.8	5.3	9.1	90.0	<10	0.00
							36.0	<10	0.00
22	0.37	1.81	1.12	41.5					
October									
	NA								
November									
27	1.79	5.50	3.93	68.0					
December									
29	1.32	5.51	4.03	71.00	6.9	21.7	244.0	560	<0.02
Total		135.75	113.45						
Average	0.90	3.77	3.15	68.36	7.40	16.11	129.20	40	0.01
Minimum	0.16	0.58	0.11	16.00	5.31	6.77	62.10	1	0.00
Maximum*	3.07	12.91	14.86	150.00	8.60	28.70	244.00	560	0.02
Number of CSO events			35						

NA = No activation

* = Per the NPDES permit, maximum chlorine residual is the highest single sample.

Boxed dates indicate a single event spread out over multiple days.

Table D-2. Somerville Marginal CSO Facility Effluent Characterization, July 2012 - December 2013

	Jul-12	Aug	Sep	Oct	Nov	Dec	Jan-13	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
Metals (ug/L)																					
ALUMINUM	~	~	**2790**	~	NA	~	~	~	NA	NA	~	**566**	~	~	~	NA	~	**1321.5**	1866.88	3900.00	6 of 6
CADMIUM	~	~	**0.46**	~	NA	~	~	~	NA	NA	~	**0.59**	~	~	~	NA	~	**0.22**	0.43	0.68	6 of 8
CALCIUM	~	~	**5920**	~	NA	~	~	~	NA	NA	~	**9360**	~	~	~	NA	~	**7385**	7146.25	9360.00	6 of 6
CHROMIUM	~	~	**11.62**	~	NA	~	~	~	NA	NA	~	**7.0**	~	~	~	NA	~	**12.0**	10.56	15.30	6 of 6
COPPER	~	~	**36.53**	~	NA	~	~	~	NA	NA	~	**6.34**	~	~	~	NA	~	**24.4**	25.95	50.40	6 of 7
LEAD	~	~	**67.48**	~	NA	~	~	~	NA	NA	~	**12.2**	~	~	~	NA	~	**29.57**	44.18	104.00	6 of 9
MAGNESIUM	~	~	**2022.5**	~	NA	~	~	~	NA	NA	~	**1530**	~	~	~	NA	~	**1960**	1883.75	2145.00	6 of 6
MERCURY	~	~	**0.099**	~	NA	~	~	~	NA	NA	~	**0.043**	~	~	~	NA	~	**0.046**	0.07	0.14	6 of 6
NICKEL	~	~	**5.57**	~	NA	~	~	~	NA	NA	~	**1.43**	~	~	~	NA	~	**2.46**	3.76	6.05	4 of 8
ZINC	~	~	**147.3**	~	NA	~	~	~	NA	NA	~	**39.3**	~	~	~	NA	~	**119.9**	113.45	202.00	6 of 6
Surfactants and Total Organic Carbon (mg/L)																					
SURFACTANTS	~	~	**0.072**	~	NA	~	~	~	NA	NA	~	~	~	~	~	NA	~	~	0.07	0.14	1 of 3
TOTAL ORGANIC CARBON	~	~	**9.18**	~	NA	~	~	~	NA	NA	~	**5.52**	~	~	~	NA	~	**11.07**	8.74	11.07	6 of 6

Table D-3. Somerville Marginal CSO Facility Effluent Loadings, July 2012 - December 2013

	Jul-12	Aug	Sep	Oct	Nov	Dec	Jan-13	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
Metals (lbs/day)																					
ALUMINUM	~	~	**99.44**	~	NA	~	~	~	NA	NA	~	**70.15**	~	~	~	NA	~	**44.42**	78.36	133.03	6 of 6
CADMIUM	~	~	**0.02**	~	NA	~	~	~	NA	NA	~	**0.07**	~	~	~	NA	~	**0.01**	0.03	0.07	6 of 8
CALCIUM	~	~	**214.91**	~	NA	~	~	~	NA	NA	~	**1160.01**	~	~	~	NA	~	**248.21**	459.51	1160.01	6 of 6
CHROMIUM	~	~	**0.42**	~	NA	~	~	~	NA	NA	~	**0.87**	~	~	~	NA	~	**0.40**	0.53	0.87	6 of 6
COPPER	~	~	**1.30**	~	NA	~	~	~	NA	NA	~	**0.79**	~	~	~	NA	~	**0.82**	1.05	1.72	6 of 7
LEAD	~	~	**2.38**	~	NA	~	~	~	NA	NA	~	**1.51**	~	~	~	NA	~	**0.99**	1.82	3.55	6 of 9
MAGNESIUM	~	~	**74.44**	~	NA	~	~	~	NA	NA	~	**189.62**	~	~	~	NA	~	**65.88**	101.10	189.62	6 of 6
MERCURY	~	~	**0.004**	~	NA	~	~	~	NA	NA	~	**0.01**	~	~	~	NA	~	**0.002**	0.00	0.01	6 of 6
NICKEL	~	~	**0.20**	~	NA	~	~	~	NA	NA	~	**0.18**	~	~	~	NA	~	**0.08**	0.17	0.21	4 of 8
ZINC	~	~	**5.26**	~	NA	~	~	~	NA	NA	~	**4.87**	~	~	~	NA	~	**4.03**	4.86	6.89	6 of 6
Surfactants and Total Organic Carbon (lbs/day)																					
SURFACTANTS	~	~	**2.45**	~	NA	~	~	~	NA	NA	~	~	~	~	~	NA	~	~	2.45	4.78	1 of 3
TOTAL ORGANIC CARBON	~	~	**332.37**	~	NA	~	~	~	NA	NA	~	**684.11**	~	~	~	NA	~	**371.90**	430.18	684.11	6 of 6

NA = No activation

~ = Activation that month, but no data or no sample taken

Results in bold indicate one or more detects in the month.

Yearly averages are calculated from individual results collected in the fiscal year.

Non-detected compounds are assumed to equal one half of the detection limit for metals and inorganics and one tenth of the reporting limit for organic compounds.

Appendix E. Union Park CSO Facility

Appendix E-1. Union Park CSO Facility Operations Summary, July 2012 - December 2013

Date	Rainfall (inches)	Discharge Duration (hours)	Total Volume (MG)	Peak Flow (MG)	pH (S.U.)	BOD (mg/L)	TSS (mg/L)	Effluent Fecal coliform (col/100 mL)	*Enterococcus* (col/100 mL)	TCR (mg/L)
July										
18	1.74	1.6	1.8	62.9						
August										
	NA									
September										
19	0.61	1.5	0.9	29.4	5.85	ND	ND	99	30	0.01
					5.9			198	90	0.03
October										
29	1.06	1.9	3.6	95.7	6.19	39	33	10	10	0.06
					5.23			10	10	0.01
November										
	NA									
December										
27	1.67	5.4	7.6	74.1	4.98	43	53	793	354	0.01
					5.02			10	227	0.01
					5.46			10	36	0.01
					5.02			45	291	0.01
					5.18			10	218	0.01
January										
	NA									
February										
	NA									
March										
	NA									
April										
	NA									
May										
	NA									
June										
7	3.07	9.98	17.8	145.9	6.16	20	30	<10	36	0
					6.1			<10	<10	0
					6			120	198	0
					6.1			30	40	0
					6.5			218	676	0
					6.5			10	<10	0
					6.2			<10	<10	0
					6.2			40	209	0
					6.1			<10	64	0
					6.4			324	380	0
11	1.38	2.45	2.5	72.6	3.8	20	19	<10	<10	0
					4			18	<10	0
					6.4			45	<10	0
14	1.02	5.13	2.6	30	5	10	11	<10	<10	0
					5.8		10	9	<10	0.02
					5.2			<10	18	0.1
					5.4			<10	9	0
					6			<10	9	0.03
July										
23	1.76	4.58	5.4	74	5.3	35	82	<10	<0.02	0
					5.1		80	18	<0.02	0
					6			27	<10	0
					6.1			<10	18	0.11
					6.1			27	<10	0
August										
9	1.62	2.66	6.3	111.3						
September										
	NA									
October										
	NA									
November										
27	1.79	1.88	0.8	28.8						
December										
29	1.32	1.88	2.2	97.4						
Total		38.96	51.50							
Average	1.55	3.54	4.68	74.74	5.67	27.83	37.75	15	17	0.01
Minimum	0.61	1.50	0.80	28.80	3.80	10.00	10.50	3	2	0.00
Maximum*	3.07	9.98	17.80	145.90	6.50	43.00	81.00	140	676	0.11
Number of CSO events			11							

NA = No activation

* = Per the NPDES permit, maximum chlorine residual is the highest single sample.

Boxed dates indicate a single event spread out over multiple days.

Table E-2. Union Park CSO Facility Effluent Characterization, July 2012 - December 2013

	Jul-12	Aug	Sep	Oct	Nov	Dec	Jan-13	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
Metals (ug/L)																					
ALUMINUM	~	NA	~	**520**	NA	~	NA	NA	NA	NA	NA	**0.34**	~	~	NA	NA	~	~	260.17	520.00	3 of 3
ANTIMONY	~	NA	~	1	NA	~	NA	NA	NA	NA	NA	0.001	~	~	NA	NA	~	~	0.50	1.00	0 of 3
ARSENIC	~	NA	~	**4**	NA	~	NA	NA	NA	NA	NA	**0.0035**	~	~	NA	NA	~	~	2.00	4.00	3 of 3
BERYLLIUM	~	NA	~	1	NA	~	NA	NA	NA	NA	NA	0.001	~	~	NA	NA	~	~	0.50	1.00	0 of 3
CADMIUM	~	NA	~	0.25	NA	~	NA	NA	NA	NA	NA	0.0014	~	~	NA	NA	~	~	0.13	0.25	0 of 6
CALCIUM	~	NA	~	**7700**	NA	~	NA	NA	NA	NA	NA	**0.05**	~	~	NA	NA	~	~	3850.03	7700.00	3 of 3
CHROMIUM	~	NA	~	**3.0**	NA	~	NA	NA	NA	NA	NA	**0.0025**	~	~	NA	NA	~	~	1.50	3.00	6 of 6
COPPER	~	NA	~	**39.5**	NA	~	NA	NA	NA	NA	NA	**0.039**	~	~	NA	NA	~	~	19.77	39.50	6 of 6
LEAD	~	NA	~	**24**	NA	~	NA	NA	NA	NA	NA	**0.015**	~	~	NA	NA	~	~	12.01	24.00	6 of 6
MAGNESIUM	~	NA	~	**7400**	NA	~	NA	NA	NA	NA	NA	**0.05**	~	~	NA	NA	~	~	3700.03	7400.00	3 of 3
MERCURY	~	NA	~	**0.023**	NA	~	NA	NA	NA	NA	NA	**0.017**	~	~	NA	NA	~	~	0.02	0.02	2 of 3
NICKEL	~	NA	~	**1.5**	NA	~	NA	NA	NA	NA	NA	0.001	~	~	NA	NA	~	~	0.75	1.50	1 of 6
SELENIUM	~	NA	~	1	NA	~	NA	NA	NA	NA	NA	0.00075	~	~	NA	NA	~	~	0.50	1.00	0 of 3
SILVER	~	NA	~	0.5	NA	~	NA	NA	NA	NA	NA	0.0005	~	~	NA	NA	~	~	0.25	0.50	0 of 3
THALLIUM	~	NA	~	0.5	NA	~	NA	NA	NA	NA	NA	0.0005	~	~	NA	NA	~	~	0.25	0.50	0 of 3
ZINC	~	NA	~	**92.5**	NA	~	NA	NA	NA	NA	NA	**0.047**	~	~	NA	NA	~	~	46.27	92.50	6 of 6
Surfactants and Total Organic Carbon (mg/L)																					
SURFACTANTS	~	NA	~	**0.73**	NA	~	NA	NA	NA	NA	NA	**0.65**	~	~	NA	NA	~	~	0.69	0.73	3 of 3
TOTAL ORGANIC CARBON	~	NA	~	**12**	NA	~	NA	NA	NA	NA	NA	**6.85**	~	~	NA	NA	~	~	9.43	12.00	3 of 3

Table E-3. Union Park CSO Facility Effluent Loadings, July 2012 - December 2013

	Jul-12	Aug	Sep	Oct	Nov	Dec	Jan-13	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average	Maximum	Times Detected
Metals (lbs/day)																					
ALUMINUM	~	NA	~	**15.61**	NA	~	NA	NA	NA	NA	NA	**0.03**	~	~	NA	NA	~	~	7.82	15.61	3 of 3
ANTIMONY	~	NA	~	0.03	NA	~	NA	NA	NA	NA	NA	0.0001	~	~	NA	NA	~	~	0.02	0.03	0 of 3
ARSENIC	~	NA	~	**0.12**	NA	~	NA	NA	NA	NA	NA	**0.0003**	~	~	NA	NA	~	~	0.06	0.12	3 of 3
BERYLLIUM	~	NA	~	0.03	NA	~	NA	NA	NA	NA	NA	0.0001	~	~	NA	NA	~	~	0.02	0.03	0 of 3
CADMIUM	~	NA	~	0.01	NA	~	NA	NA	NA	NA	NA	0.0000	~	~	NA	NA	~	~	0.00	0.01	0 of 6
CALCIUM	~	NA	~	**231.18**	NA	~	NA	NA	NA	NA	NA	**0.0042**	~	~	NA	NA	~	~	115.59	231.18	3 of 3
CHROMIUM	~	NA	~	**0.09**	NA	~	NA	NA	NA	NA	NA	**0.0002**	~	~	NA	NA	~	~	0.05	0.09	6 of 6
COPPER	~	NA	~	**1.19**	NA	~	NA	NA	NA	NA	NA	**0.0030**	~	~	NA	NA	~	~	0.59	1.19	6 of 6
LEAD	~	NA	~	**0.72**	NA	~	NA	NA	NA	NA	NA	**0.0014**	~	~	NA	NA	~	~	0.36	0.72	6 of 6
MAGNESIUM	~	NA	~	**222.18**	NA	~	NA	NA	NA	NA	NA	**0.0042**	~	~	NA	NA	~	~	111.09	222.18	3 of 3
MERCURY	~	NA	~	**0.00**	NA	~	NA	NA	NA	NA	NA	**0.0010**	~	~	NA	NA	~	~	0.001	0.001	2 of 3
NICKEL	~	NA	~	**0.05**	NA	~	NA	NA	NA	NA	NA	0.0001	~	~	NA	NA	~	~	0.02	0.05	1 of 6
SELENIUM	~	NA	~	0.03	NA	~	NA	NA	NA	NA	NA	0.00005	~	~	NA	NA	~	~	0.02	0.03	0 of 3
SILVER	~	NA	~	0.02	NA	~	NA	NA	NA	NA	NA	0.00004	~	~	NA	NA	~	~	0.01	0.02	0 of 3
THALLIUM	~	NA	~	0.02	NA	~	NA	NA	NA	NA	NA	0.00004	~	~	NA	NA	~	~	0.01	0.02	0 of 3
ZINC	~	NA	~	**2.78**	NA	~	NA	NA	NA	NA	NA	**0.0042**	~	~	NA	NA	~	~	1.39	2.78	6 of 6
Surfactants and Total Organic Carbon (lbs/day)																					
SURFACTANTS	~	NA	~	**0.02**	NA	~	NA	NA	NA	NA	NA	**0.06**	~	~	NA	NA	~	~	0.04	0.11	3 of 3
TOTAL ORGANIC CARBON	~	NA	~	**0.36**	NA	~	NA	NA	NA	NA	NA	**0.54**	~	~	NA	NA	~	~	0.45	0.94	3 of 3

NA = No activation

~ = Activation that month, but no data or no sample taken

Results in bold indicate one or more detects in the month.

Yearly averages are calculated from individual results collected in the fiscal year.

Non-detected compounds are assumed to equal one half of the detection limit for metals and inorganics and one tenth of the reporting limit for organic compounds.

Appendix F. NPDES Monitoring Requirements

Overview

The Environmental Protection Agency (EPA) mandates that any discharge to a body of water must be permitted through the National Pollutant Discharge Elimination System (NPDES). The EPA and the Massachusetts Department of Environmental Protection (DEP) jointly issued a NPDES permit to MWRA for the Deer Island treatment plant and six CSO treatment facilities: Cottage Farm, Prison Point, Somerville Marginal, Constitution Beach, Fox Point, and Commercial Point. The Union Park CSO facility operates under a separate NPDES permit jointly issued to the MWRA and the Boston Water and Sewer Commission (BWSC).

The limits set in the MWRA NPDES permit are limitations for secondary treatment plants. In March 2001, secondary Battery C underwent start-up at Deer Island, substantially finishing the construction process at the plant. Before the completion of Battery C, though, plant effluent was already largely in compliance with the new permit. Additionally, in September of 2000, Constitution Beach, one of the CSO facilities, shut down, leaving five permitted and operational CSO facilities. Union Park came on-line in July 2007. In November 2007, the Fox Point and Commercial Point facilities were decommissioned following the completion of a sewer separation project in the Dorchester area.

In addition, MWRA monitors the influent quality of wastewater. Those monitoring results provide the basis for determining the adequacy of existing local limits to protect the treatment plants and Boston Harbor. Local Limits, enforced by MWRA's Toxic Reduction and Control (TRAC) department, allow the discharge of toxic chemicals from industrial sources to be regulated. The MWRA submitted proposed local limits in 2000 reflecting the new secondary treatment requirements. Regulators approved the new local limits and they became effective in June 2003. Under the pretreatment program requirements, local limits must be re-evaluated every five years.

MWRA not only monitors to comply with the NPDES effluent requirements, but also has its own monitoring programs, including monitoring at DITP, Boston Harbor, and Massachusetts Bay. These monitoring programs serve to assure appropriate control of discharges to the system, to assure the most cost-effective wastewater treatment while meeting water quality standards, and to assure the quality of life of the organisms and health of the animal communities living in the receiving waters.

MWRA's current NPDES permit for DITP and the non-Union Park CSO facilities expired in August 2005. MWRA has applied for a new permit. However, as of December 2013, EPA has not issued a new NPDES permit. In lieu of a new permit, the limits of the old permit remain in force.

NPDES Permit

Under the NPDES permit, "in compliance with the provisions of the Clean Water Act, as amended, 33 U.S.C. §§ 1251 et seq., and the Massachusetts Clean Water Act, as amended, Mass. Gen. Laws, ch. 21, §§ 26-53, Massachusetts Water Resources Authority is authorized to discharge from MWRA Publicly Owned Treatment Works, Deer Island Treatment Plant, Deer Island, Boston, MA 02152 (Discharge serial number T01), which discharges to receiving waters

located in Massachusetts Bay, which is adjacent to Cape Cod Bay, and a part of the Gulf of Maine; and from Combined Sewer Overflow Outfalls, which discharge to the Charles River, Inner Harbor, Mystic River, Boston Harbor, Dorchester Bay, Alewife Brook; in accordance with effluent limitations, monitoring requirements and other conditions set in the permit…"

Monitoring Requirements and Effluent Limitations

The NPDES permit establishes monitoring requirements for the new Deer Island outfall tunnel (T01). The permit also regulates CSO treatment facility outfalls at Cottage Farm (MWR201), Prison Point (MWR203), Somerville Marginal (which has two outfalls from a single facility, the primary outfall, MWR205, and the relief outfall, MWR205A), Constitution Beach (MWR207, now closed), Fox Point (MWR209, now closed), and Commercial Point (MWR211, now closed). The permit also establishes a comprehensive receiving water monitoring plan, the Ambient Monitoring Plan, in Massachusetts Bay. MWRA's joint permit with BWSC for Union Park regulates the outfall for the Union Park CSO facility (MWR215).

Reporting Requirements

In addition to Deer Island and CSO monitoring requirements, the NPDES permit requires numerous reports on the state of MWRA sewerage and operational systems. These include reports on infiltration/inflow, CSO facilities and collection systems maintenance and inspection, operational upsets, dry weather and sanitary sewer overflows, operational bypasses, monthly Discharge Monitoring Reports (DMRs), and reporting on the effects of discharges through the Ambient Monitoring Plan. In addition, the Contingency Plan mandates a number of additional thresholds and stipulates actions needed if they are exceeded. Table F-1 presents a summary of the permit limits and monitoring requirements for Deer Island and Table F-2 does the same for the CSOs.

Table F-1. Effluent Limitations and Monitoring Requirements for DITP Outfall T01

Effluent Characteristic	Discharge Limitation		
	Average Monthly	Average Weekly	Maximum Daily
Flow	Report*	N/A	Report
Dry Day Flow	436 MGD	N/A	Report
cBOD	25 mg/L	40 mg/L	Report
TSS	30 mg/L	45 mg/L	Report
pH	Not less than 6.0 nor greater than 9.0 at any time.		
Fecal Coliform[a]	N/A	14,000 colonies/100mL	14,000 colonies/100mL
Chlorine, Total Residual	456 μg/L	N/A	631 μg/L
PCBs, Arochlors: 1016, 1221, 1232, 122, 1248, 1254, 1260	0.000045 μg/L	N/A	Report
Settleable Solids	N/A	Report	Report
Chlorides, Influent	N/A	N/A	Report
Mercury	Report	N/A	Report
Chlordane	Report	N/A	Report
4,4-DDT	Report	N/A	Report
Dieldrin	Report	N/A	Report
Heptachlor	Report	N/A	Report
Ammonia-Nitrogen	Report	N/A	N/A
Total Kjeldahl Nitrogen	Report	N/A	N/A
Total Nitrate	Report	N/A	N/A
Total Nitrite	Report	N/A	N/A
Cyanide, Total	Report	N/A	Report
Copper, Total	Report	N/A	Report
Arsenic, Total	Report	N/A	Report
Hexachlorobenzene	Report	N/A	Report
Aldrin	Report	N/A	Report
Heptachlor Epoxide	Report	N/A	Report
PCBs, Total	Report	N/A	Report
Volatile Organic Compounds	Report	N/A	Report
LC50[b]	Tests involve using mysid shrimp (*Mysidopsis bahia*) and inland silverside (*Menidia beryllina*) in 48 hour acute toxicity tests. LC50 must be achieved in a solution that is 50% effluent.		
C-NOEC[c]	C-NOEC tests involve larval inland silverside (*Menidia beryllina*) and sea urchin (*Arbacia punctulata*). *Menidia* tests involve a week's worth of exposure to various effluent concentrations. The *Arbacia* toxicity test tests fertilization in the test organism. In both cases, no chronic effects must be observed in a solution composed of 1.5% effluent.		
Footnotes *, a, b, and c are listed underneath Table G-2.			

Table F-2. Effluent Limitations and Monitoring Requirements for CSO Outfalls

Effluent Characteristic	Discharge Limitation	
	Average Monthly	Average Weekly
Rainfall	Report*	Report
Flow	Report	Report
TSS	Report	Report
BOD	Report	Report
Chlorine, Total Residual	0.1 mg/L	0.25 mg/L max hourly
pH	Not less than 6.5 nor greater than 8.3 or 8.5[†]	
Fecal Coliform	Must meet Massachusetts Water Quality Standards	
LC50[b]	Since Cottage Farm and Somerville Marginal's relief outfall both discharge in freshwater, acute toxicity tests are required with daphnids (Ceriodaphnia dubia) and fathead minnows (Pimpephales promelas). There is no limit to effluent concentration used to determine LC50, but results are reportable.	
	All other CSO facilities discharge to marine waters, so the acute test organisms are mysid shrimp (Mysidopsis bahia) and inland silverside (Menidia beryllina). LC50 results are reportable.	

* No limit, but values reported to EPA and DEP.
[†] 8.3 S.U. is the limit for facilities discharging to freshwater (Cottage Farm and the Somerville Marginal relief outfall). 8.5 S.U. is the limit for saltwater discharge (Prison Point, Somerville Marginal, and Union Park).
[a] There are two other fecal coliform limits. The first is that not more than 10% of the individual samples collected in a month can have a count higher than 14,000 colonies/100mL. Typically, given 3 samples a day, this means no more than 9 samples can have a count higher than 14,000 in a given month. The second limit is that no more than 3 consecutive samples can exceed 14,000 colonies/100mL.
[b] LC50: the concentration of effluent in a sample that causes mortality in 50% of the test population at a specific time of observation.
[c] C-NOEC: Chronic No Observed Effect Concentration is the highest concentration of effluent to which organisms are exposed in a life cycle or partial life cycle test which has no adverse effects (on growth, survival and reproduction).

Monitoring Programs

During the report period, MWRA conducted several monitoring programs. However, this report presents only the influent and effluent monitoring programs. The receiving water monitoring programs are too complex to cover in a single document. More information on monitoring in Massachusetts Bay and Boston Harbor can be found at:
http://www.mwra.com/harbor/html/bhrecov.htm

Treatment Plant Monitoring

Monitoring at DITP has two main components: influent monitoring and effluent monitoring.

Influent monitoring characterizes the influent to the Deer Island Treatment Plant. Monitoring for conventional parameters is necessary for some parameters to meet NPDES reporting requirements, but monitoring many other parameters is critical for process control to ensure optimal plant functioning. Influent monitoring data provides influent loading rates and the basis for determining treatment plant efficiency. Influent monitoring for non-conventional parameters is an important part of MWRA's source reduction and Local Limits program run by TRAC.

Effluent monitoring characterizes the quality of the effluent discharged to Massachusetts Bay. With the addition of whole effluent toxicity (WET) testing, the parameters measured in the effluent are similar to those measured in the influent. The NPDES permit requires effluent monitoring and imposes permit limits on both conventional and priority pollutants to ensure the health of the receiving water. Additionally, the permit also requires the reporting of non-priority pollutants such as nutrients, although no limits are set on them.

Table F-3 lists the treatment plant monitoring program parameters, including sample type, sampling frequency and analytical procedures used.

Combined Sewer Overflow Facilities Monitoring Program

The CSO Monitoring Program includes influent and effluent monitoring at the three operational CSO facilities (Constitution Beach was closed in September 2000 and Fox Point and Commercial Point were closed in November 2007) as well as Union Park. Influent and effluent samples are collected and tested for conventional parameters at all CSO facilities. Selected priority pollutants and metals are also analyzed in the effluent. Table F-4 lists the CSO monitoring program parameters, including sample type, sampling frequency and analytical procedures used.

Sewer System Monitoring Program

The sewer system monitoring program, which attempts to identify Sanitary Sewer Overflows (SSOs), involves conducting visual inspections of areas in the separate sewer system that have a history of discharging during or shortly after a heavy rainfall event. Because of the hydraulics of the South System, discharges occur in manholes or other low-lying areas, while discharges in the North System are the result of combined sewage overwhelming sewage system capacity.

Treatment of Results

It can be difficult to interpret laboratory results to ensure that they are representative of the sample, especially when the results are at or below method detection levels. For the conventional parameters measured in these monitoring programs, calculating the average concentration of a particular parameter is straightforward: the arithmetic average is used. However, the concentrations of metals, pesticides and organics are frequently below method detection levels, and data are manipulated. Appendix H gives a brief description of method detection limits and how measurements below detection limits are treated in this report.

Daily loadings (in lbs/day) were calculated using the formula:

$$Loading = Q \times C \times 8.34$$

Q = flow (mgd)
C = concentration (mg/L)
8.34 = unit conversion factor

To calculate monthly average concentrations for priority pollutants (metals, cyanide, pesticides/PCBs and organic compounds), the loadings of the pollutant during each sampling event for that month were added and then divided by the total flow during those events.

Average annual concentrations were calculated using the same method, taking each individual sampling event into account in the calculation.

It should be kept in mind that with the large flows going through the Deer Island Treatment Plant, taking one small sample might not always be truly representative. It is also important to keep in

mind that certain parameters (conventional) were analyzed daily while other parameters (priority pollutants) were analyzed only two or three times per month.

Table F-3. POTW Monitoring Program

Parameter	Sample Type[1]	Sampling Frequency		Analytical Method[2]
		Influent	Effluent	
Metals				
Aluminum	Composite	2 x month	Weekly	200.7
Antimony	Composite	2 x month	2 x month	200.7
Arsenic	Composite	2 x month	2 x month	200.7, 206.2
Beryllium	Composite	2 x month	2 x month	200.7
Boron	Composite	2 x month	2 x month	200.7
Cadmium	Composite	2 x month	Weekly	200.7, 213.2
Chromium	Composite	2 x month	Weekly	200.7, 218.2
Chromium (Hexavalent)	Composite	2 x month	2 x month	3500-CRD3
Copper	Composite	2 x month	Weekly	200.7, 200.8, 220.2
Iron	Composite	2 x month	2 x month	200.7
Lead	Composite	2 x month	Weekly	200.7, 239.2
Mercury	Composite	2 x month	Weekly	245.2, 1631
Molybdenum	Composite	2 x month	Weekly	200.7, 246.2
Nickel	Composite	2 x month	Weekly	200.7, 249.2
Selenium	Composite	2 x month	2 x month	200.7, 270.2
Silver	Composite	2 x month	Weekly	200.7, 272.2
Thallium	Composite	2 x month	2 x month	200.7, 279.2
Zinc	Composite	2 x month	Weekly	200.7
Organics and Other Compounds				
Cyanide	Grab	2 x month	4 x month	335.2
Fats, Oils, and Grease	Grab	2 x month	Weekly	1664
MBAS	Composite	2 x month	2 x month	425.1
PAHs	Composite	2 x month	Weekly	
PCBs	Composite	2 x month	Weekly	8080 MOD
Pesticides	Composite	2 x month	Weekly	608
Petroleum Hydrocarbons	Grab	2 x month	Weekly	418.1
Phenol	Composite	2 x month	Weekly	420.2 MO
Semi-volatile Organics	Composite	2 x month	2 x month	625
Sulfate	Composite	2 x month	*	300.0
Total Organic Carbon	Composite	*	2 x month	415.1
Volatile Organics	Grab	2 x month	2 x month	624
Whole Effluent Toxicity	Composite	*	1 x month	WET Test Protocols
Conventional				
Biochemical O2 Demand	Composite	Daily	Daily	5210 B3
Carbonaceous BOD	Composite	Daily	Daily	5210 B3
Chemical O2 Demand	Composite	Daily	Daily	HACH 8000
Chlorides	Composite	Daily	Daily	300.0
Enterococci	Grab	*	Daily	9230 C3
Fecal Coliform	Grab	*	3 x Daily	9222 D3
pH	Grab	Daily	Daily	150.1
Settleable Solids	Grab	Daily	Daily	160.5
Temperature	Grab	Daily	Daily	170.1
Total Chlorine Residual	Grab	*	3 x Daily	330.5
Total Coliform	Grab	*	3 x Daily	9222 B[3]
Total Suspended Solids	Composite	Daily	Daily	160.2
Nutrients				
Alkalinity	Composite	Weekly	*	310.1
Ammonia	Composite	Weekly	Weekly	350.1
Nitrates	Composite	Weekly	Weekly	353.2
Nitrate/Nitrite	Composite	*	Weekly	353.2
Nitrites	Composite	Weekly	Weekly	353.2
Orthophosphorus	Composite	Weekly	*	365.1
Total Kjeldahl Nitrogen	Composite	Weekly	Weekly	351.2
Total Phosphorus	Composite	Weekly	*	365.1

* No sampling.
[1] Influent and effluent composite samples are 24-hour time composite samples.
[2] EPA Methods.
[3] Standard Methods.

Table F-4. CSO Monitoring Program

Parameter	Sample Type	Sampling Frequency	Analytical Method[1]
Biochemical O_2 Demand	Grab/Composite[3]	4 x year	5210 B[2]
Fecal Coliform	Grab[4]	4 x year	9222 D[2]
pH	Grab	4 x year	150.1
Total Chlorine Residual	Grab[3]	4 x year	330.5
Total Suspended Solids	Grab[3]	4 x year	160.2
Whole Effluent Toxicity	Composite[5]	2 x year	WET Test Protocols

[1] EPA Methods.
[2] Standard Methods.
[3] A grab sample must be collected within the first 2 hours of activation (30 minutes for Somerville Marginal in the first permit year) and then hourly samples are to be taken for the duration of the overflow, for not longer than 24 hours. All BOD samples are then composited.
[4] A grab sample must be collected within the first 2 hours of activation (30 minutes for Somerville Marginal in the first permit year) and then hourly samples are to be taken for the duration of the overflow, for not longer than 24 hours. During the first permit year, the first sample is held and subsampled hourly for fecal coliforms.
[5] Cottage Farm and the Somerville Marginal relief outfall discharge to freshwater so the organisms used for toxicity testing are the daphnid Ceriodaphnia dubia and the fathead minnow Pimpephales promelas. The other facilities discharge to marine waters, so the test organisms are the inland silverside Menidia beryllina and the mysid shrimp Mysidopsis bahia.

Appendix G. An Overview of the MWRA Sewerage System and Facilities

Overview

The MWRA is responsible for the collection, transport, pumping, treatment, and disposal of sewage in Boston and the greater Boston area. In addition to the Deer Island Treatment Plant, the MWRA operates another treatment plant, serving the town of Clinton and the Lancaster Sewer District, under special arrangements that originated when the Metropolitan District Commission (MDC) acquired land in Clinton for the Wachusett Reservoir. The Clinton Treatment Plant operates under a separate permit from the Boston NPDES permit and is not discussed in this report.

The MWRA serves 43 communities with a total population of about two million people, 5,500 businesses, and 1,400 industries. More than 5,400 miles of town- and city-owned local sewers connect at over 1,800 points to over 230 miles of MWRA interceptor sewers. Also included in the vast sewerage system are sixteen pumping stations, five headworks, over 80 combined sewer relief overflows and four operational CSO treatment facilities. Table G-1 lists the MWRA treatment facilities and relevant information pertaining to each facility.

The Deer Island Treatment Plant in Winthrop serves the 43 communities in the metropolitan Boston sewerage system and is allowed to discharge under the Boston NPDES Permit. The sewerage system is divided into two major regions: the North and the South Systems. Table G-2 lists the sewerage service area population by community.

Table G-1. List of CSO Treatment Facilities and Discharge Locations

Facility	Location	First Year of Operation	Treatment Process	Design Flow (mgd)	Interceptors / Sewer Lines In	Receiving Water	Outfall Number
Cottage Farm	Memorial Dr. near Boston University bridge, Cambridge, MA	1971	Screening Settling Chlorination	233	N. Charles Relief S. Charles Relief Brookline Connection	Charles River	MWR201
		2001	Dechlorination				
Prison Point	Near Museum of Science bridge, Cambridge, MA	1980	Screening Settling Chlorination	385	Cambridge Marginal	Boston Inner Harbor	MWR203
		2001	Dechlorination				
Somerville Marginal	McGrath Highway under I-93, Somerville, MA	1973	Screening Chlorination	245	Somerville-Medford Branch	Mystic River	MWR205
		2001	Dechlorination				
Union Park	Malden St., South End, Boston, MA	2007	Screening Settling Chlorination Dechlorination	330	BWSC New Albany St. BWSC Malden St.	Fort Point Channel, Boston Harbor	MWR215

Table G-2. Sewerage Service Area Population by Community

Town	Population[1]		MWRA Sewerage System	
	Total Community	Sewered	North	South
Arlington	41,144	40,733	x	
Ashland	15,796	11,847		x
Bedford	13,146	12,357	x	
Belmont	23,356	22,912	x	
Boston	608,352	607,744	x	x
Braintree	34,422	34,388		x
Brookline	54,809	54,699	x	x
Burlington	25,034	25,009	x	
Cambridge	101,388	101,287	x	
Canton	21,916	14,355		x
Chelsea	38,203	38,203	x	
Dedham	24,132	22,684		x
Everett	37,269	37,269	x	
Framingham	64,786	59,603		x
Hingham	7,555	6,869		x
Holbrook	10,663	8,991		x
Lexington	30,332	30,211	x	
Malden	55,712	55,656	x	
Medford	55,565	55,509	x	
Melrose	26,782	26,755	x	
Milton	26,272	24,433	x	x
Natick	31,975	27,786		x
Needham	28,263	27,246		x
Newton	83,271	82,022	x	x
Norwood	28,172	27,665		x
Quincy	91,622	91,613		x
Randolph	30,168	30,138		x
Reading	23,129	22,158	x	
Revere	55,341	55,286	x	
Somerville	74,405	74,405	x	
Stoneham	21,508	21,121	x	
Stoughton	26,951	17,922		x
Wakefield	24,706	23,965	x	
Walpole	23,086	16,391		x
Waltham	60,325	60,265	x	
Watertown	32,521	32,521	x	
Wellesley	26,985	26,364		x
Westwood	14,010	13,310		x
Weymouth	53,272	51,088		x
Wilmington	21,679	4,032	x	
Winchester	21,137	21,116	x	
Winthrop	20,154	20,154	x	
Woburn	37,042	35,190	x	
TOTAL	**2,146,356**	**2,073,272**		

[1] Community population data are from MWRA's I/I program, August 2011 report.

North System

The North System serves a population of about 1.3 million and is located to the north and west of Boston. It covers an area of about 168 square miles. Most of the North System is a separate system – different conduits carry sanitary wastewater and storm water. However, portions of Boston, Cambridge, Somerville, and Chelsea still have combined sewers, where the same conduits carry sanitary and storm water. Combined sewers serve about 20 percent of the North System service area. Community sewer lines tie into the MWRA system through interceptor lines that feed into the four headworks facilities in the North System.

Two deep rock tunnels, the Boston Main Drainage Tunnel (BMDT) and the North Facilities Metropolitan Relief Tunnel (North Metro Relief), connect the three remote headworks to the North Main Pump Station (NMPS) on Deer Island. The seven-mile BMDT originates at the Ward Street Headworks, continues to the Columbus Park Headworks, and runs under Boston Harbor to the NMPS. The four-mile North Metro Relief Tunnel connects the Chelsea Creek Headworks to the NMPS. The two tunnels combined can handle approximately 800 mgd, matching the combined peak flow capacity of 788 mgd from the three remote headworks.

A fourth headworks facility, the Winthrop Terminal, is located on Deer Island and receives flows from the city of Winthrop and the East Boston (Caruso) Pump Station through the North Metro Trunk Sewer. Figure G-1 on the next page shows the North System schematics.

North System Pump Stations

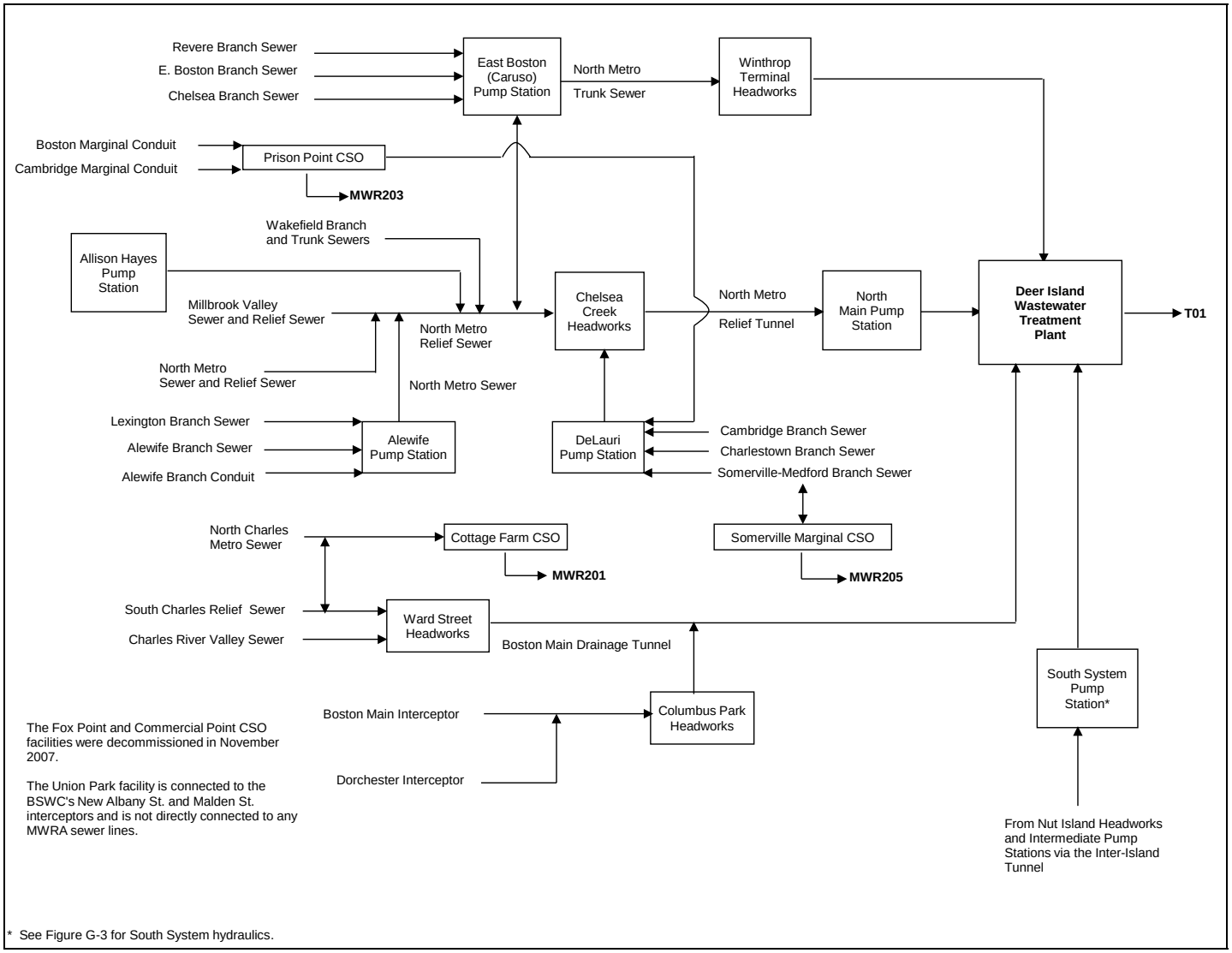
The MWRA North System has four pump stations. The Alewife Brook (64 mgd), Caruso (110 mgd), DeLauri (90 mgd), and Allison Hayes (11 mgd) pump stations convey wastewater to the headworks facilities. The four pump stations receive flow from interceptor lines as follows in Table G-3.

Table G-3. Relationship Between North System Pump Stations and Interceptors

Pump Station	Interceptor
Alewife Brook Pump Station	Lexington Branch Sewer Alewife Branch Sewer Alewife Branch Conduit
Caruso Pump Station	Revere Branch Sewer East Boston Branch Sewer North Metro Relief Sewer*
DeLauri Pump Station	Cambridge Branch Sewer Charlestown Branch Sewer Medford-Somerville Branch Sewer Prison Point Pump Station Somerville Marginal CSO Overflow**
Allison Hayes Pump Station	Wakefield Branch Sewer

*: When flow to the Chelsea Creek Headworks is held back, wastewater is diverted to the Caruso Pump Station.
**: During low-intensity rainfall when line capacity is not exceeded, the combined wastewater is pumped back to the trunk sewers and ultimately to the DeLauri station.

Figure G-1. North System Pump Stations, Headworks, CSOs and Tunnel Hydraulic Schematic



* See Figure G-3 for South System hydraulics.

North System Headworks

The Deer Island Treatment Plant receives North System flow from three remote headworks and the Winthrop Terminal headworks. The three remote headworks: Ward Street Headworks (256 mgd) located in Roxbury, Columbus Park Headworks (182 mgd) in South Boston, and Chelsea Creek Headworks (350 mgd) in Chelsea, have a combined pumping capacity of 788 mgd. The Winthrop Terminal Headworks (125 mgd) is located on Deer Island. The four North System headworks receive flows from interceptor lines or pump stations as follows:

Table G-4. Sources of Flow for North System Headworks

Headworks	Source
Ward Street Headworks	South Charles Relief Sewer Charles River Valley Sewer North Charles Metro Sewer* Cottage Farm CSO*
Columbus Park Headworks	Boston Main Interceptor Dorchester Interceptor
Chelsea Creek Headworks	Alewife Pump Station North Metro Relief Sewer DeLauri Pump Station Caruso Pump Station Overflow
Winthrop Terminal Headworks	Winthrop Sewer Caruso Pump Station**
*: During low intensity rainfall when line or holding capacity is not exceeded, the combined wastewater is pumped back to the trunk sewers and ultimately to the Ward Street Headworks. **: Overflow from the Caruso Pump Station.	

Combined Sewer Overflow Facilities

The conditions for discharge of effluent from six CSO chlorination facilities are also included in MWRA's Boston NPDES permit. Over time, some of these facilities have been closed due to improvement projects in the MWRA system. Constitution Beach in East Boston, was closed in September 2000, and Fox Point and Commercial Point in Boston, were closed in autumn 2007, leaving three active permitted CSO facilities. These three facilities, Cottage Farm and Prison Point in Cambridge, and Somerville Marginal in Somerville, discharge to the Charles River, the Inner Harbor, and the Mystic River, respectively.

Also included in this section is the Union Park CSO facility, which opened in July 2007. The Union Park facility is permitted jointly with the Boston Water and Sewer Commission and discharges to the Fort Point Channel in Boston.

Discharge of combined wastewater from a CSO treatment facility outfall to a receiving body of water is defined in this report as a CSO activation. Discharge of combined wastewater to a non-facility CSO outfall pipe is defined as a CSO overflow. CSO overflows will not be discussed in this report. In general, CSO activations occur as a result of heavy rain, snowmelt, or choking at the headworks.

Choking is the process by which the headworks restrict the flow to Deer Island. During wet weather, when the wastewater volume exceeds the hydraulic capacity of the treatment plant, the headworks "choke" the flow and hold the wastewater in the lines. As a result, the combined wastewater backs up into the system, forcing the combined wastewater to overflow to CSO treatment facilities and non-facility CSO outfall pipes, resulting in potential CSO activations and overflow as well as potential SSOs. In addition to choking in response to hydraulic demand on the system, the headworks may choke so that emergency repairs, system testing, or maintenance

work can be performed at the treatment plant. Choking at Ward Street and Columbus Park Headworks influences Cottage Farm activations. Backups at the DeLauri Pumping Station brought about by choking at the Chelsea Headworks can activate the Somerville Marginal CSO.

At the CSO facilities, the combined wastewater is screened and chlorinated prior to discharge. Of the four active (as of December 2013) CSO facilities, Cottage Farm, Prison Point, and Union Park have tank storage capacity. This allows the wastewater to be held at these facilities. The facility only discharges when the storage capacity is exceeded; when that happens, the treated wastewater overflows and is discharged to the river. Somerville Marginal is a gravity CSO facility, which mean that combined wastewater arrives and leaves the CSO facility by gravity. This type of facility provides disinfection and allows the chlorinated combined wastewater to overflow to the receiving water as quickly as the wastewater arrives at the facility.

The CSO facilities provide treatment for approximately 73% of the CSO volume.

Cottage Farm CSO Facility

During dry weather conditions, wastewater arrives at the Ward Street Headworks where it is pumped to the Deer Island Plant. Under storm conditions, wastewater backs up into sewer lines and into the Cottage Farm CSO facility. Cottage Farm detains wastewater up to a volume of 1.3 MG. Any excess flow is screened, settled, chlorinated, and discharged to the Charles River through outfall MWR201. Combined wastewater that is held back is pumped back to the Ward Street Headworks. This facility, on-line since 1971, has a design pumping capacity of 233 mgd. An upgrade completed in 2001 added a dechlorination system for the effluent.

Prison Point CSO Facility

Prison Point is both a dry weather and storm water pumping station. The dry weather phase is a five-mgd capacity sewer pumping station that receives flow from the Boston Marginal Conduit and the Cambridge Marginal Conduit. Prison Point feeds into the DeLauri Pumping Station.

The storm water phase has a maximum pumping capacity of 385 mgd. Treatment includes screening, disinfection, and detention. During wet weather, if the dry pumping capacity is exceeded, the combined flow is screened, chlorinated, and held in detention basins. Once the basins fill, treated flow is discharged downstream below the Charles River Dam at outfall MWR203. Combined wastewater volume that is held back, up to 1.2 MG, is pumped back to the DeLauri Station. This facility came on-line in 1980 and was upgraded with a dechlorination system in 2001.

Somerville Marginal CSO Facility

Somerville Marginal CSO is an unmanned gravity facility with a design capacity of 245 mgd. It receives wet weather flow from the northeast portion of Somerville and part of Medford. Normally, dry weather flow from these areas arrives at the DeLauri Station via the Somerville-Medford trunk sewers. During wet weather, combined sewer flow backs up to the Somerville CSO facility. Unlike Cottage Farm or Prison Point, this facility does not provide any large-scale detention capacity during storm conditions. Treatment consists of screening and chlorination. Effluent is discharged to the lower Mystic River basin at outfall numbers MWR205. The relief outfall, MWR205A, discharges to freshwater above the dam. MWR205A only activates under specific conditions and the vast majority of discharges are released through MWR205. During low-intensity rainfall when line capacity is not exceeded, the combined wastewater is pumped back from a wet well to the DeLauri Station. This facility came on-line in 1973 and was upgraded in 2001 with a dechlorination system.

Figure G-2 on the following page shows a representative gravity CSO schematic applicable to Somerville Marginal as well as the now decommissioned Fox Point and Commercial Point facilities.

Fox Point CSO Facility

Fox Point is an unmanned gravity facility with a design capacity of 119 mgd. It receives wet weather flows from the Dorchester Interceptor sewer line. Operation of this facility parallels that of the Somerville Marginal CSO; treatment includes screening and disinfection. Effluent is discharged to Dorchester Bay through outfall number MWR209. This facility came on-line in 1989, and a dechlorination system was added in 2001. Fox Point was decommissioned in December 2008 following the completion of a sewer separation project in the south Dorchester tributary area.

Commercial Point CSO Facility

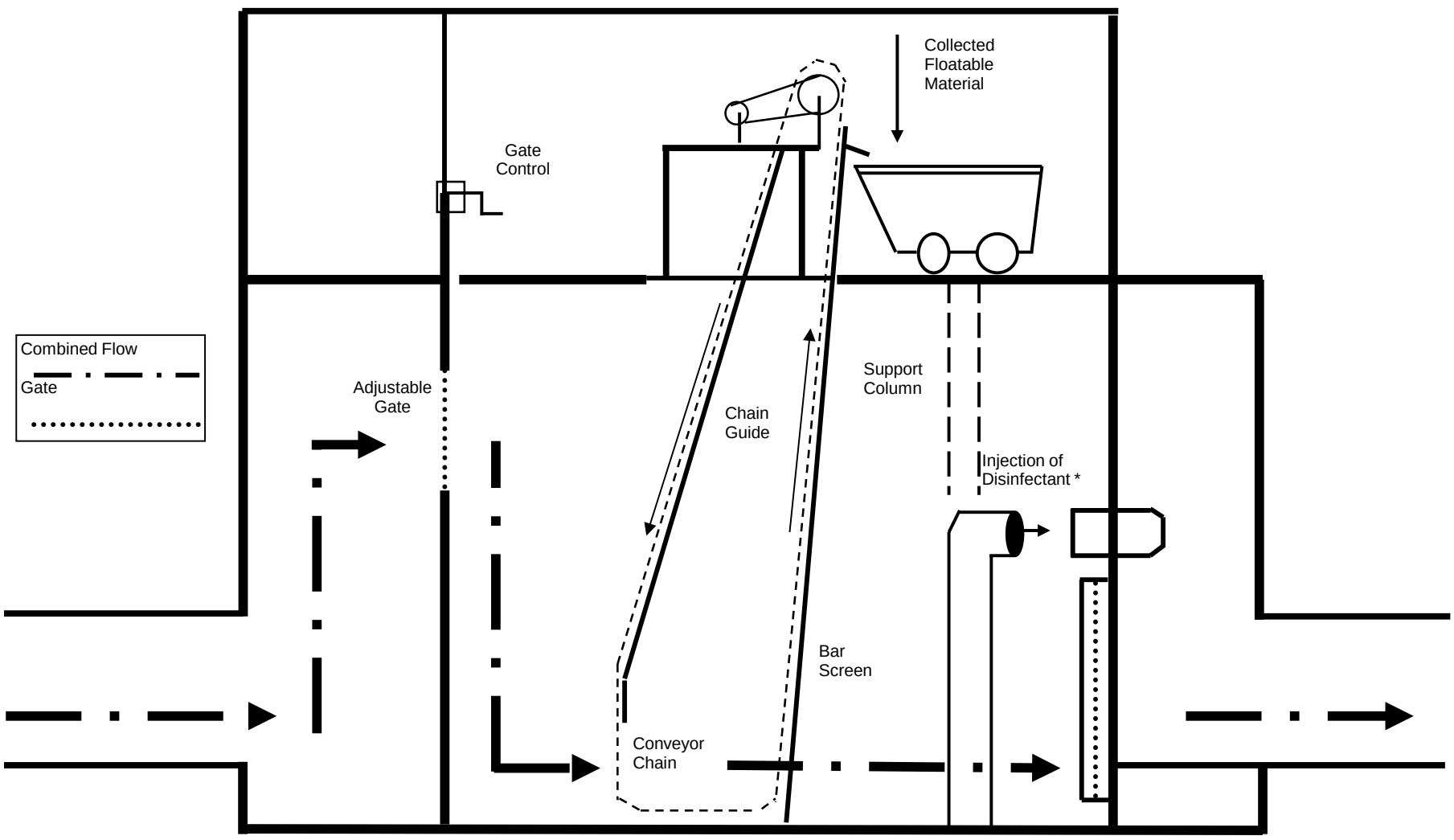
Commercial Point is an unmanned gravity CSO with a design capacity of 194 mgd. This facility also receives wet weather backups from the Dorchester Interceptor. Treatment includes screening and disinfection. Effluent is discharged to Dorchester Bay through outfall number MWR211. This facility came on-line in 1991 and was upgraded in 2001 with a dechlorination system. Like Fox Point, Commercial Point was also decommissioned in December 2008 following the completion of a sewer separation project in the south Dorchester tributary area.

Union Park CSO Facility

The Union Park Facility enables flow which was previously discharged untreated to outfall BOS070 (a CSO overflow) and the Fort Point Channel to be routed to a 2.2 million gallon detention/treatment facility. Flow is treated by high-rate sedimentation, screening, and disinfection followed by dechlorination. Any stored volume is pumped back to the interceptor system at the end of the storm. This project was completed in April 2007, and the first recorded discharge was in June 2007.

The operation and maintenance of the new Union Park CSO facility at present is contracted to Woodard & Curran. MWRA is ultimately responsible for permit compliance and thus reviews operational data, and retains the authority to conduct facility inspections and environmental audits.

Figure G-2. Typical Gravity Combined Sewer Overflow Treatment Facility



* At Somerville Marginal, injection occurs at the influent gate.

South System

The South System serves a population of about 700,000 people and is located to the south and southwest of Boston. The South System covers an area of approximately 237 square miles. Figure G-3 illustrates the South System hydraulic schematic. Community sewer lines tie into the South System through MWRA interceptor lines. The Framingham Extension Sewer, Wellesley Extension Sewer, Upper Neponset Valley Sewer, Wellesley Extension Relief Sewer, Neponset Valley Sewer, Walpole Extension Sewer, Stoughton Extension Sewer, Braintree-Randolph Trunk Sewer, and several other branch sewers discharge to the South System High Level Sewer. The High Level Sewer has a capacity of 360 mgd. Pump stations move the wastewater through the High Level Sewer to the Nut Island Headworks for preliminary treatment and grit removal. The South System flows are then conveyed to the South System Pump Station at Deer Island through the 4.7-mile Inter-Island Tunnel for treatment at the Deer Island Treatment Plant.

In 2004 the MWRA completed the Braintree-Weymouth Intermediate Pump Station (IPS) in North Weymouth. The IPS pumps sewage from the North Weymouth Relief Interceptor directly into the Inter-Island Tunnel, bypassing Nut Island. The IPS also acts as a headworks with bar screens and grit collectors. The IPS was designed to increase South System capacity, helping to alleviate some of the overflows in the South System. Additionally, the IPS will pump by-products between the fertilizer pelletizing plant in Quincy and Deer Island. Sewage sludge will flow from Deer Island to Quincy for conversion to fertilizer and centrate from the fertilizer production process will return to Deer Island via the IPS and Inter-Island Tunnel.

Once at Deer Island, the South System flow can be pumped to one of two locations. The South System flow is normally discharged to the effluent channel of the Grit Facility, where it is combined with the North System and recycle flows, then split between Primary Clarifier Batteries A through D. The alternate discharge location is directly to the Primary Clarifier Battery D influent channel, which allows the South System flow to be isolated.

South System Pump Stations

Eight MWRA pump stations move wastewater from low-lying areas to the High Level Sewer: Hingham Pump Station (16.5 mgd), Braintree-Weymouth Pump Station (60 mgd), Braintree-Weymouth IPS (45 mgd), Squantum Pump Station (12 mgd), Houghs Neck Lift Station (2.8 mgd), Neponset Pump Station (90 mgd), Framingham Pump Station (48 mgd) and Quincy Pump Station (52 mgd).

The eight pumping stations receive flow from interceptor or community lines as follows:

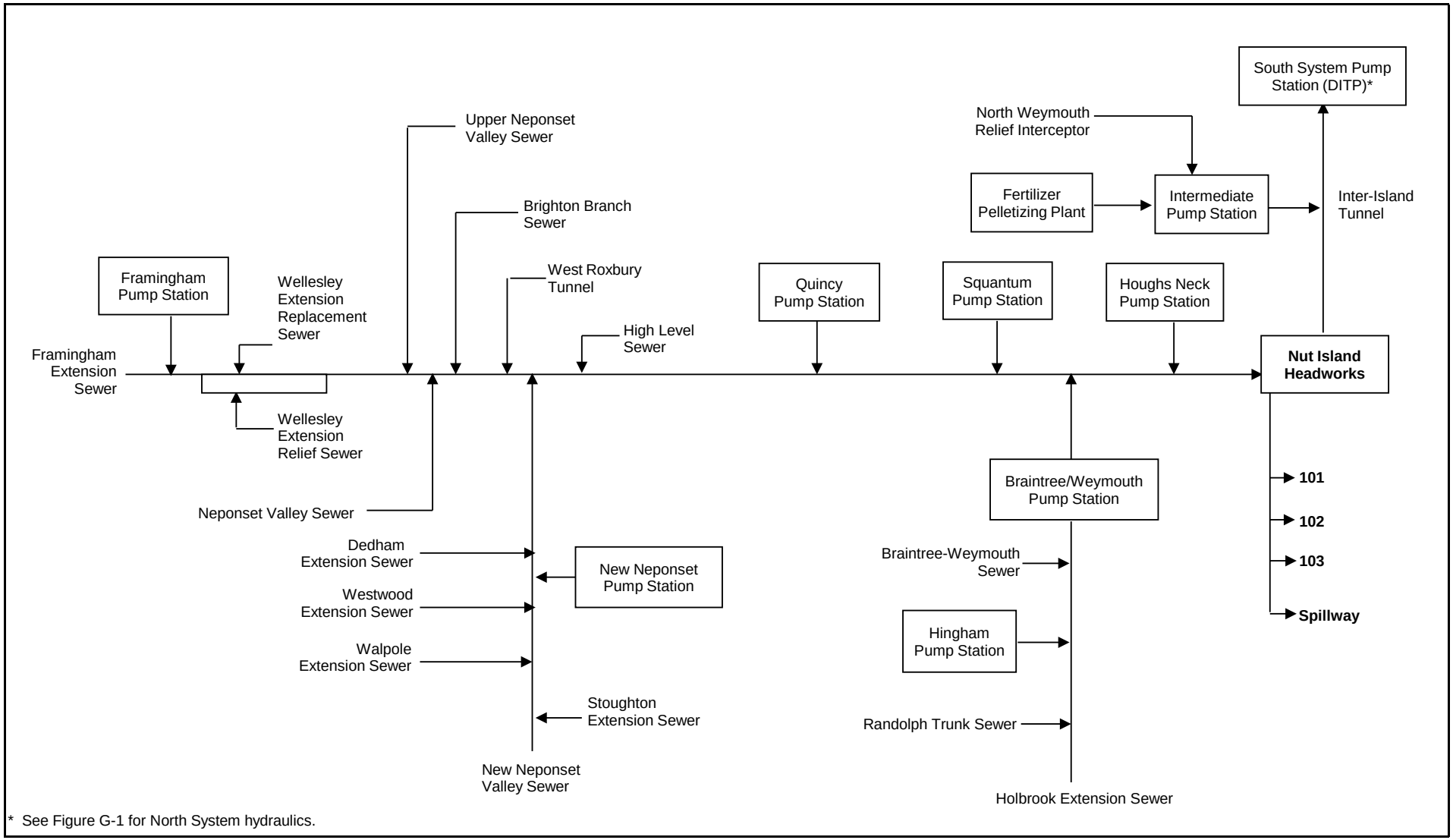
Table G-5. Relationship Between North System Pump Stations and Interceptors

Pump Station	Interceptor
Hingham Pump Station	Weymouth-Hingham Sewer Lines
Braintree-Weymouth Pump Station	Braintree-Randolph Trunk Sewer Braintree-Weymouth Extension Sewer Holbrook Extension Sewer Hingham Pump Station
Braintree-Weymouth IPS	North Weymouth Relief Interceptor Quincy Pelletizing Plant (see Chapter 4)
Squantum Pump Station	Squantum Sewers
Houghs Neck Lift Station	Houghs Neck Sewer
Neponset Pump Station	Neponset Valley Sewer
Framingham Pump Station	Framingham Sewers
Quincy Pump Station	Quincy and Upstream Sewers

South System Headworks

The Deer Island Treatment Plant receives South System flow from the Nut Island Headworks. The Nut Island Headworks went on-line on July 7, 1998. It is located in Quincy and has a capacity of 360 mgd. Vortex grit separators similar to those used on Deer Island in the North System Grit Facility provide grit removal for South System flows.

Figure G-3. South System Pump Station, Headworks, and Tunnel Hydraulic Schematic



* See Figure G-1 for North System hydraulics.

Deer Island Treatment Plant

Until July 8, 1998, wastewater flows from the North System were treated at the Deer Island Treatment Plant and flows from the South System were treated at the Nut Island Treatment Plant. In July 1998, the Nut Island Treatment Plant was decommissioned and all flows were treated at Deer Island.

Four lines convey sewage to the Deer Island Treatment Plant. North System wastewater is delivered to the plant via the Boston Main Drainage Tunnel (from the Ward Street and Columbus Park Headworks), the North Metropolitan Relief Tunnel (from the Chelsea Creek Headworks), and the North Metropolitan Trunk Sewer. South System wastewater is transferred to the plant from the Nut Island Headworks and Braintree-Weymouth Intermediate Pump Station via the Inter-Island Tunnel.

The Deer Island Treatment Plant receives wastewater at the North Main Pump Station (NMPS), the Winthrop Terminal, and the South System Pump Station (SSPS). The North Metro Relief Tunnel and the Boston Main Drainage Tunnel connect to the NMPS, which consists of ten pumps, each rated at 110 mgd, for a total pumping capacity of 1,100 mgd. The North Metro Trunk Sewer connects to the Winthrop Terminal. The Inter-Island Tunnel connects to the SSPS, which consists of eight pumps, each rated at 66.7 mgd, for a total capacity of 534 mgd.

Grit removal and screening (preliminary treatment), which remove heavy particles and debris, is provided at the remote headworks and on-site at Deer Island. Flow from the South System receives preliminary treatment at the Nut Island Headworks. Grit and screenings are landfilled off-site.

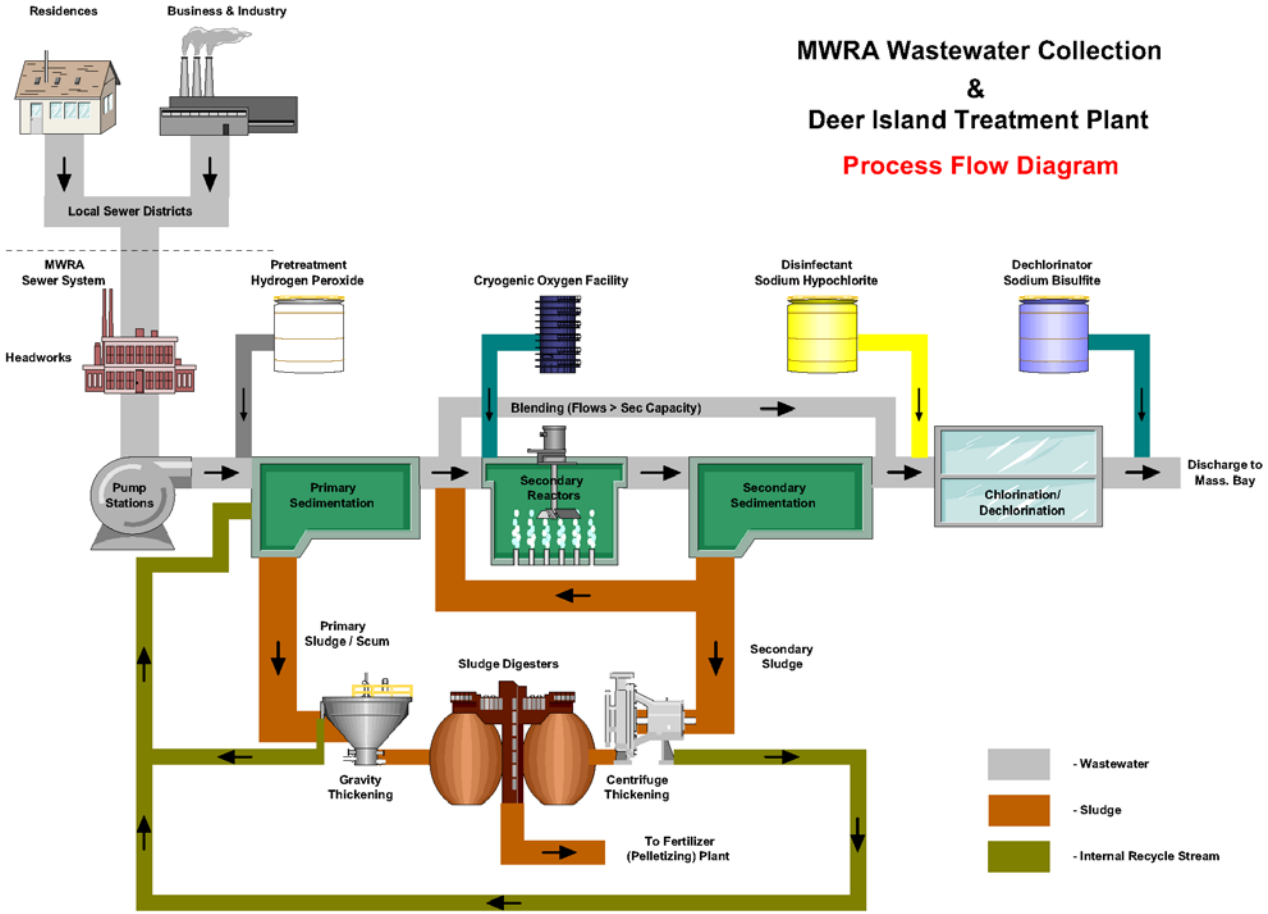
The upgraded primary treatment plant came on-line on January 21, 1995. The first battery of secondary treatment was initiated at Deer Island on August 1, 1997. Battery B came on-line on March 1, 1998, and the third and final secondary treatment battery, Battery C, started up on March 8, 2001.

Wastewater from the North System flows through the grit chambers for additional grit removal. It, along with South System wastewater, then flows to the primary settling tanks where floatables, consisting mainly of oil, grease, and plastics rise to the surface while the sludge of heavy solid particles settles to the bottom. The majority of the primary effluent (the allowable capacity for secondary treatment) is sent to secondary treatment, while any remaining portion from high flow conditions due to rainfall bypasses secondary and is sent directly to the disinfection basins to be treated with sodium hypochlorite. Effluent from secondary treatment is then, if necessary, blended with primary effluent that bypassed secondary, and then sent to the disinfection basins, where it is chlorinated, detained, and then dechlorinated before discharge.

The scum (floatables) is skimmed off the top of the primary and secondary settling tanks while the sludge (settled solids) is scraped from the bottom of the tanks. Primary scum is pumped to the scum concentrator while the primary sludge is pumped to the gravity sludge thickeners. Scum and sludge from the secondary batteries are concentrated using centrifuges. After the scum and sludge are concentrated and thickened, they are conveyed to the anaerobic digesters for further treatment. The digested sludge/scum is sent via the Inter-Island Tunnel to the Fore River Pelletizing Plant, where it is converted into fertilizer. Methane from the digestion process is stored and used to generate power and heat for DITP.

Figure G-4 on the following page presents the Deer Island plant process flow diagram.

Figure G-4. Deer Island Treatment Plant Process Flow



Deer Island Treatment Plant Outfalls

On September 6, 2000, effluent from Deer Island was diverted to the new 9.5 mile outfall tunnel into Massachusetts Bay. Effluent is discharged through 53 operational risers over the last 1.25 miles of the tunnel. The tunnel has a capacity of 1,270 mgd, slightly greater than the old harbor outfall system. Before the effluent enters the outfall it is used to run a hydroelectric facility linked to the Deer Island power grid. Although sealed and non-operational, the old Deer Island harbor outfalls are subject to periodic inspections and remain available for emergency use. If opened for emergency use, effluent would be channeled through a common conduit to four potential outfall pipes: 001, 002, 004, and 005

Nut Island Outfalls

The former Nut Island Treatment Plant discharged treated wastewater through four outfalls. Although the Nut Island Treatment Plant no longer exists, outfalls 101, 102 and 103 remain operational in case of emergency at the Nut Island Headworks. These outfalls discharge to Boston Harbor; the new emergency spillway built concurrently with the new headworks discharges to Hingham Bay.

Collection and Transport Systems

An issue of concern in both the North System and the South System is the occurrence of Sanitary Sewer Overflows (SSOs). These occur during extreme rainfall events, when inflow and infiltration from heavy rains exceeds the capacity of the pipes, causing certain areas to become inundated. Whenever there is a high amount of rainfall, a crew from the Transport Department investigates a number of critical areas to visually monitor potential overflow sites. While some of these critical areas are the MWRA's responsibility, most of them are the responsibility of the local communities. A list of these areas belonging to the MWRA is included in Table G-6. Not all of these areas are checked during every rainfall, and some are monitored by the MWRA only during extreme storm events. Table G-7 shows areas identified by MWRA staff as having the potential to overflow under certain conditions. SSOs have not, as of yet, occurred in these areas.

Table G-6. Known MWRA Sanitary Sewer Overflow Locations*

System	Location	Description
North	Arlington, Section 80 (Station 3+89)	Dudley St., manual plug
	Arlington, Section 80 (Station 19+73)	Brattle Court, manual plug
	Arlington, Section 152 (Station 56+54)	Manhole on Mystic Valley Pkwy., west easement
	Charlestown, Section 25.5 (Station 0+61)	Manhole
	East Boston, 477 Meridian Street	
	Malden, Section 20A (Station 15+22)	20 Pearl St., Edgeworth Branch upstream manhole
	Medford, Section 19 (Station 4+25)	Malden River siphon, upstream headhouse
	Medford, Section 107 (Station 1+00)	Overflow weir, Mystic River Pkwy., near James St.
	Medford, Section 152 (Station 31+24)	Section 91B: downstream headhouse off Lakeview Rd.
	Melrose, Section 51 (Station 10+75)	Brunswick Park, Roosevelt School
	Melrose, Section 60 (Station 15+91)	Tremont St. @ Ell Pond, west side
	Somerville, Section 155 (Station 9+12)	Section 43.5: Boston Ave. (upstream headhouse)
	Somerville, Section 176A (Station 131+21)	Section C: manhole weir, Auburn St. between curb and Mystic River
	Somerville, Section 176C (Station 0+35)	Alewife Brook pump station
	Stoneham, Section 42 (Station 30+50)	Manhole on West Wyoming Ave. @ town boundary
	Waltham, Section 212 (Station 401+78)	Old Section 4A: Elm St. @ Charles River
	Winchester, Section 45 (Station 35+00)	Manhole off Cross St.
	Winchester, Section 113B (Station 2+06)	Wedgemere siphon, downstream headhouse @ T station
	Winchester, Section 113B (Station 3+24)	Wedgemere siphon, upstream headhouse @ Bacon St.
South	Boston/Roslindale, Section 570 (Station 10+89)	High Level Sewer: overflow relief structure @ Bradeen St., north gates
	Boston/Roslindale, Section 570 (Station 10+89)	High Level Sewer: overflow relief structure @ Bradeen St., south gates
	Boston/Roslindale, Section 571 (Station 13+51)	High Lever Sewer @ Arboretum, South St.
	Braintree, Section 626 (Station 54+06)	Smelt Brook siphon, upstream headhouse
	Braintree, Section 628 (Station 13+73)	Pearl St. siphon, new manhole with gate
	Braintree, Section 628 (Station 16+30)	Pearl St. siphon, pump out manhole
	Braintree, Section 628 (Station 17+07)	Pearl St. siphon, downstream headhouse
	Braintree, Section 628 (Station 17+64)	Pearl St. siphon, upstream headhouse
	Braintree, Section 655 (Station 84+28)	Randolph Trunk siphon, downstream headhouse
	Newton, Section 530 (Station 52+13)	Upper Neponset Valley Sewer @ Vine and Hollywood Sts.
	Quincy, Section 543B (Station 3+15)	Nut Island Headworks emergency outfall: gates 17//18
	Quincy, Section 680 (Station 0+40)	Nut Island Headworks emergency spillway
	Randolph, Section 655 (Station 85+14)	Randolph Trunk siphon (upstream headhouse)
	Squantum, Section 539A	Force main
	Section 669 (Station 42+55)	Manhole

* Known SSOs occurring in MWRA lines from January 1, 1996 onwards.

Table G-7. Potential MWRA Sanitary Sewer Overflow Locations

System	Location	Description
South	Boston, Section 564	High Level Sewer, Neponset River at Monponset St.
	Canton, Section 614	New Neponset Valley Relief Sewer Pump Station
	Hingham, Section 562	Hingham Pump Station
	Quincy, Section 543	Nut Island emergency outfall
	Quincy, Section 543	Nut Island emergency spillway
	Quincy, Section 551B	Quincy Pump Station
	Quincy, Section 621	Braintree-Weymouth Pump Station influent
	Squantum, Section 550B	Squantum Pump Station
	West Roxbury, Section 637A	West Roxbury Tunnel and High Level Sewer junction
	West Roxbury, Section 637A	West Roxbury Tunnel and High Level Sewer junction

Appendix H. Instrument Detection Limits, Method Detection Limits, and Quantitation Limits

Overview

An understanding of the detection limits of analysis is essential to reviewing the data from chemical analyses. There are three different types of detection limits that are most often encountered:

- Instrument Detection Limits
- Method Detection Limits
- Quantitation Limits, also known as Reporting Limits.

Instrument Detection Limits

Instrument detection limits (IDL) reflect the capability of the instrument. This limit will be the lowest of the three detection limits. The IDL will not take into account the losses of the pollutant associated with the matrix (soil or wastewater) and extraction procedure. This discrepancy is known as matrix interference.

Method Detection Limits

Method detection limits (MDL) are the smallest amount of a substance that can be detected above background noise using a particular method. The MDL is statistically determined by running a series of analyses using various low concentrations of a pollutant. Using a Student's “T” test, the smallest concentration that has a 99% probability of being detected above the background is designated the MDL for that pollutant. The EPA, using several private laboratories, has determined the MDLs for most priority pollutants using their approved methods. These are published in the 40 CFR.

Quantitation Limits

In general, if a plot is made of pollutant concentration versus instrument response, it will show a linear relationship. As the pollutant concentration approaches zero, the linearity of the relationship is lost. The point where the linearity is lost is called the Quantitation Limit (QL) or sometimes the Reporting Limit. In other words, the smallest concentration where the linear relationship holds is the smallest concentration that can be quantified. Generally, the QL is about five times the MDL. Quantitative limits are relevant to GC/MS analyses, that is, methods 608 (for pesticides), 624 (for volatile organics), and 625 (for semi-volatile organics). Specific limits are highly matrix-dependent.

Detection limits, Non-Detects, and Reporting

In short, the IDL is the lowest concentration that a particular instrument can detect. The MDL is the lowest concentration that can be detected using a particular method. The QL is the smallest concentration that can be confidently considered to be accurate.

Reported concentrations that are between the MDL and the QL indicate that a pollutant is present, but at a concentration too low to be accurately quantified. For example, using EPA method 624, chloroform has an MDL of 1.6 μg/L and a QL of 10 μg/L. If the concentration from an analysis is reported as 5 μg/L then it can be inferred that although the actual chloroform concentration in the wastewater is uncertain, 5 μg/L is a best guess. The EPA requires that these intermediate values be flagged with a "J" on any reports submitted to them. Therefore, these are sometimes simply called "J-values."

For non-detects in analyses of metals, cyanide, petroleum hydrocarbons, etc., it is customary for "less than the MDL" to be listed as a result. For a non-detect in the 608, 624, and 625 analyses, "less than the QL" is typically listed.

Often it becomes necessary to estimate a concentration for below detection limit values, specifically when calculating the average yearly concentration of a pollutant. A well-established method is to assume the actual concentration of a non-detected pollutant is simply one half of the MDL. While no scientific theory supports this assumption, it is more reasonable than assuming that the concentration is zero, or the MDL itself. The EPA and DEP also accept it as a standard practice that can be applied to any series of tests.

This technique is utilized in this report. For the organic compounds – methods 608, 624, and 625 – one tenth of the QL, or half the MDL, was assumed for all non-detects (i.e. values below QL). For all metals, cyanide, petroleum hydrocarbons, etc., half the MDL was assumed for all non-detects (i.e. values below MDL).

In Table H-1 is a list of the parameters regularly tested for in MWRA effluent. The required EPA method number, and the MDLs and reporting limits attained by the MWRA's Central Laboratory are included.

Table H-1. List of Parameters Tested

Parameter	EPA Method Number	MWRA MDL (μg/L)	MWRA QL (μg/L)
Metals			
Aluminum	200.7	90	<90
Antimony	200.7	0.8	<0.9
Arsenic	206.2	0.8	<0.8
	200.7	43.8	<45
Beryllium	200.7	0.3	<0.5
Boron	200.7	9.5	<250
Cadmium	200.7	1.1	<2
	213.2	.03	<0.03
Chromium	200.7	4.0	<4
	218.2	0.7	<0.7
Copper	200.7	10.5	<10
	220.2	0.6	<1
	200.8	[1]	[1]
Hexavalent Chromium	SM 3500-CR D[2]	1.8	<5
Iron	200.7	[3]	<30
Lead	200.7	12.0	<15
	239.2	2.4	<2.4
Mercury	245.2	0.01	<0.01
	1631	[1]	[1]
Molybdenum	200.7	3.4	<5
	246.2	1.2	<1
Nickel	200.7	3.0	<3
	249.2	0.7	<0.7
Selenium	200.7	48.2	<50
	270.2	0.9	<0.9
Silver	200.7	1.4	<2
	272.2	0.09	<0.09
Thallium	200.7	58.3	<60
	279.2	1.0	<1
Zinc	200.7	5.7	<6
Other Inorganic Chemicals[4]			
Cyanide	335.2	0.004	<0.01
Fats, Oil, and Grease (mg/L)	1664A	2.0	<7
Petroleum hydrocarbons (mg/L)		[1]	[1]
Phenol (mg/L)	420.2 MO	0.003	<0.01
Sulfate (mg/L)	300.0	0.2	<1
Total Organic Carbon (mg/L)	415.1	0.06	<0.3
Surfactants (mg/L)	425.1	0.03	<0.03
Pesticides (ng/L)			
4,4'-DDD	608	6.8	<20
4-4'-DDE	608	8.8	<20
4-4'-DDT	608	15.8	<20
Aldrin	608	3.5	<20
alpha-BHC	608	6.3	<20
alpha-Chlordane	608	3.6	<20
beta-BHC	608	6.3	<20
Chlordane (Technical)	608	[1]	[1]
delta-BHC	608	6.7	<20
Dieldrin	608	5.5	<20
Endosulfan I	608	5.3	<20
Endosulfan II	608	4.0	<20
Endosulfan sulfate	608	16.7	<20
Endrin	608	13.7	<20
Endrin aldehyde	608	9.1	<20
Endrin ketone	608	5.4	<20
gamma-BHC (Lindane)	608	4.2	<20
Heptachlor	608	9.7	<20
Heptachlor epoxide	608	8.8	<20
Hexachlorobenzene	612	[1]	[1]
Methoxychlor	608	52.0	<200
Toxaphene	608	[1]	[1]

Table H-1. List of Parameters Tested (cont.)

PCBs (all in ng/L)			
Arochlor-1016	608	31.0	<500
Arochlor-1221	608	21.0	<1000
Arochlor-1232	608	14.0	<500
Arochlor-1242	608	[1]	[1]
Arochlor-1248	608	[1]	[1]
Arochlor-1254	608	10.0	<500
Arochlor-1260	608	32.0	<500
Volatile Organics			
1,1,1-trichloroethane	624	1.0	<5
1,1,2,2-tetrachloroethane	624	1.3	<5
1,1,2-trichloroethane	624	0.6	<5
1,1-dichloroethane	624	0.8	<5
1,1-dichloroethene	624	1.3	<5
1,2-dichlorobenzene	624	0.4	<5
1,2-dichloroethane	624	0.6	<5
1,2-dichloropropane	624	0.4	<5
1,3-dichlorobenzene	624	0.5	<5
1,4-dichlorobenzene	624	0.4	<5
2-butanone	624	1.8	<5
2-chloroethylvinylether	624	0.8	<5
2-hexanone	624	1.5	<5
4-methyl-2-pentanone	624	1.3	<5
Acetone	624	16	<5
Acrolein	624	5.4	<5
Acrylonitrile	624	4.2	<5
Benzene	624	0.5	<5
Bromodichloromethane	624	0.4	<5
Bromoform	624	0.4	<5
Bromomethane	624	1.1	<5
Carbon disulfide	624	1.4	<5
Carbon tetrachloride	624	1.0	<5
Chlorobenzene	624	0.4	<5
Chloroethane	624	1.0	<5
Chloroform	624	0.5	<5
Chloromethane	624	0.7	<5
cis-1,2-dichloroethene	624	0.5	<5
cis-1,3-dichloropropane	624	0.3	<5
Dibromochloromethane	624	0.6	<5
Ethylbenzene	624	0.5	<5
m,p-xylene	624	1.4	<5
Methylene chloride	624	0.6	<5
o-xylene	624	0.5	<5
Styrene	624	0.4	<5
Tetrachloroethene	624	0.8	<5
Toluene	624	0.5	<5
trans-1,2-dichloroethene	624	1.1	<5
trans-1,3-dichloropropene	624	0.3	<5
Trichloroethene	624	1.0	<5
Trichlorofluoromethane	624	0.8	<5
Vinyl acetate	624	0.8	<5
Vinyl chloride	624	1.0	<5
Semi-Volatiles			
1,2,4-trichlorobenzene	625	6.1	<10
1,2-dichlorobenzene	625	3.7	<10
1,2-diphenylhydrazine	625	8.7	<10
1,3-dichlorobenzene	625	2.9	<10
1,4-dichlorobenzene	625	3.2	<10
2,2'-oxybis(1-chloropropane)	625	3.9	<10
2,4,5-trichlorophenol	625	8.4	<10
2,4,6-trichlorophenol	625	9.6	<10
2,4-dichlorophenol	625	9.0	<10
2,4-dimethylphenol	625	8.1	<10
2,4-dinitrophenol	625	12.4	<20

Table H-1. List of Parameters Tested (cont.)

Semi-Volatiles (cont.)			
2,4-dinitrotoluene	625	7.6	<10
2,6-dinitrotoluene	625	10.0	<10
2-chloronaphthalene	625	9.2	<10
2-chlorophenol	625	4.2	<10
2-methyl-4,6-dinitrophenol	625	7.9	<100
2-methylnaphthalene	625	4.5	<10
2-methylphenol	625	7.5	<10
2-nitroaniline	625	6.9	<10
2-nitrophenol	625	6.2	<10
3-3'-dichlorobenzidine	625	8.4	<20
3-nitroaniline	625	8.6	<10
4-bromophenyl phenyl ether	625	7.8	<10
4-chloro-3-methylphenol	625	7.4	<10
4-chloroaniline	625	8.2	<10
4-chlorophenyl phenyl ether	625	9.0	<10
4-methylohenol (includes 3-methylphenol)	625	7.2	<10
4-nitroaniline	625	8.0	<10
4-nitrophenol	625	6.3	<20
Acenaphthene	625	6.8	<10
Acenaphthylene	625	7.2	<10
Aniline	625	6.6	<10
Anthracene	625	5.8	<10
Benzindine	625	0.5	<10
Benzo(a)anthracene	625	5.4	<10
Benzo(a)pyrene	625	5.4	<10
Benzo(b)fluoranthene	625	7.8	<10
Benzo(ghi)perylene	625	5.2	<10
Benzo(k)fluoranthene	625	4.1	<10
Benzoic acid	625	7.2	<20
Benzyl alcohol	625	5.8	<10
bis(2-chloroethoxy) methane	625	6.7	<10
bis(2-chloroethyl) ether	625	4.1	<10
bis(2-ethylhexyl) phthalate	625	4.9	<10
Butyl benzyl phthalate	625	6.6	<10
Chrysene	625	6.2	<10
di-n-butylphthalate	625	5.4	<10
di-n-octylphthalate	625	4.6	<10
Dibenzo(a,h)anthracene	625	5.2	<10
Dibenzofuran	625	6.8	<10
Diethyl phthalate	625	9.1	<10
Dimethyl phthalate	625	9.9	<10
Fluoranthene	625	5.1	<10
Fluorene	625	8.1	<10
Hexachlorobenzene	625	8.8	<10
Hexachlorobutadiene	625	6.2	<10
Hexachlorocyclopentadiene	625	10.7	<50
Hexachoroethane	625	3.5	<10
Indeno(1,2,3-cd) pyrene	625	6.4	<10
Isophrone	625	7.5	<10
n-nitroso-di-n-propylamine	625	3.1	<10
n-nitrosodimethylamine	625	4.3	<10
n-nitrosodiphenylamine	625	7.9	<10
Naphthalene	625	5.7	<10
Nitrobenzene	625	6.3	<10
Pentachlorophenol	625	6.9	<30
Phenanthrene	625	5.8	<1
Phenol	625	2.2	<20
Pyrene	625	6.0	<10

[1] Data unavailable.
[2] Standard Methods.
[3] Native concentration too high for MDL determination.
[4] Some expressed in mg/L as noted.

Appendix I. Priority Pollutant List and Other Parameters

Table I-1. EPA List of 128 Priority Pollutants

Chlorinated Benzenes	**Chlorinated Ethanes**	**Chlorinated Phenols**
Chlorobenzene	Chloroethane	2-chlorophenol
1,2-dichlorobenzene	1,1-dichloroethane	2,4-dichlorophenol
1,3-dichlorobenzene	1,2-dichloroethane	2,4,6-trichlorophenol
1,4-dichlorobenzene	1,1,1-trichloroethane	Parametachlorocresol (4-chloro-3-methyl phenol)
1,2,4-trichlorobenzene	1,1,2,2-tetrachloroethane	
Hexachlorobenzene	Hexachloroethane	
DDT and Metabolites	**Haloethers**	**Halomethanes**
4,4-DDT	4-chlorophenyl phenyl ether	Methylene chloride (dichloromethane)
4,4-DDE (p,p-DDX)	2-bromophenyl phenyl ether	Methyl chloride (chloromethane)
4,4-DDD (p,p-DDE)	Bis(2-chloroisopropyl) ether	Methyl bromide (bromomethane)
		Bromoform (tribromomethane)
		Dichlorobromomethane
		Chlorodibromomethane
Inorganics	**Nitroamines**	**Pesticides and Metabolites**
Antimony	N-nitrosodimethylamine	Aldrin
Arsenic	N-nitrosodiphenylamine	Dieldrin
Asbestos	N-nitrosodi-n-propylamine	Chlordane (technical mixture and metabolites)
Beryllium		Alpha-endosulfan
Cadmium		Beta-endosulfan
Chromium (III)		Endosulfan sulfate
Chromium (VI)		Endrin
Copper		Endrin aldehyde
Cyanide, total		Heptachlor
Lead		Heptachlor epoxide (BHC-hexachlorocyclohexane)
Mercury		Alpha-BHC
Nickel		Beta-BHC
Selenium		Gamma-BHC (Lindane)
Silver		Delta-BHC
Thallium		Toxaphene
Zinc		
Phenols (other than chlorinated)	**Phthalate Esters**	**Polychlorinated Biphenyls (PCBs)**
2-nitrophenol	Bis(2-ethylhexyl)phthalate	PCB-1242 (Aroclor 1242)
4-nitrophenol	Butyl benzyl phthalate	PCB-1254 (Aroclor 1254)
2,4-dinitrophenol	Di-n-butyl phthalate	PCB-1221 (Aroclor 1221)
4,6-dinitro-o-cresol (4,6-dinitro-2-methylphenol)	Di-n-octyl phthalate	PCB-1232 (Aroclor 1232)
	Diethyl phthalate	PCB-1248 (Aroclor 1248)
Pentachlorophenol	Dimethyl phthalate	PCB-1260 (Aroclor 1260)
Phenol		PCB-1016 (Aroclor 1016)
2,4-dimethylphenol		
Polynuclear Aromatic Hydrocarbons (PAHs)	**Other Chlorinated Organics**	**Other Organics**
Acenaphthene	Chloroform (trichloromethane)	Acrolein
1,2-benzanthracene (benzo(a)anthracene)	Carbon tetrachloride (tetrachloromethane)	Acrylonitrile
Benzo(a)pyrene (3,4-benzo-pyrene)	Bis(2-chloroethoxy)methane	Benzene
3,4-benzofluoranthene (benzo(b)fluoranthene)	Bis(2-chloroethyl)ether	Benzidine
11,12-benzofluoranthene (benzo(k)fluoranthene)	2-chloroethyl vinyl ether (mixed)	2,4-dinitrotolulene
Chrysene	2-chloronaphthalene	2,6-dinitrotolulene
Acenaphthylene	3,3'-dichlorobenzidine	Ethylbenzene
Anthracene	1,1-dichlorethylene	Isophrone
1,12-benzoperylene (benzo(ghi)perylene)	1,2-trans-dichloroethylene	Naphthalene
Fluorene	1,2-dichloropropane	Nitrobenzene
Fluoranthene	1,2-dichloropropylene (1,3-dichloropropene)	Tolulene
Phenanthrene	Tetrachloroethylene	
1,2,5,6-dibenzanthracene (dibenzo(a,h)anthracene)	Trichloroethylene	
Indeno (1,2,3-cd) pyrene (2,3-o-phenylene pyrene)	Vinyl chloride (chloroethylene)	
Pyrene	Hexachlorobutadiene	
	Hexachlorocyclopentadiene	
	2,3,7,8-tetrachloro-dibenzo-p-dioxin (TCDD)	

Table I-2. NPDES Permit Application Testing Requirements
(40 CFR 122, Appendix D, Tables II and III)

Volatile Organics	**Organic Pesticides**	**Organic Base/Neutrals**
acrolein	aldrin	acenaphthene
acrylonitrile	alpha-BHC	acenaphthylene
benzene	beta-BHC	anthracene
bromoform	gamma-BHC	benzidine
carbon tetrachloride	delta-BHC	benzo(a)anthracene
chlorobenzene	chlordane	benzo(a)pyrene
chlorodibromomethane	4,4'-DDT	3,4-benzofluoranthracene
chloroethane	4,4'-DDE	benzo(ghi)perylene
2-chloroethylvinyl ether	4,4'-DDD	benzo(k)fluoranthene
chloroform	dieldrin	bis(2-chloroethoxy)methane
dichlorobromomethane	alpha-endosulfan	bis(2-chloroethyl)ether
1,1-dichloroethane	beta-endosulfan	bis(2-ethylhexyl)phthalate
1,2-dichloroethane	endosulfan sulfate	4-bromophenyl phenyl ether
1,1-dichloroethylene	endrin	butylbenzyl phthalate
1,2-dichloropropane	endrin aldehyde	2-chloronaphthalene
1,3-dichloropropylene	heptachlor	4-chlorophenyl phenyl ether
ethyl benzene	heptachlor epoxide	chrysene
methyl bromide	PCB-1242	dibenzo(a,h)anthracene
methyl chloride	PCB-1254	1,2-dichlorobenzene
methylene chloride	PCB-1221	1,3-dichlorobenzene
1,1,2,2-tetrachloroethane	PCB-1232	1,4-dichlorobenzene
tetrachloroethylene	PCB-1248	3-3'-dichlorobenzidine
toluene	PCB-1260	diethyl phthalate
1,2-trans-dichloroethylene	PCB-1016	dimethyl phthalate
1,1,1-trichloroethane	toxaphene	di-n-butyl phthalate
1,1,2-trichloroethane		2,4-dinitrotoluene
trichloroethylene		2,6-dinitrotoluene
vinyl chloride		di-n-octyl phthalate
		1,2-diphenylhydrazine
		fluoranthene
		fluorene
		hexachlorobenzene
		hexachlorobutadiene
		hexachlorocyclopentadiene
		hexachloroethane
		indeno(1,2,3-cd)pyrene
		isophorone
		napthalene
		nitrobenzene
		N-nitrosodimethylamine
		N-nitrosodi-n-propylamine
		N-nitrosodiphenylamine
		phenanthrene
		pyrene
		1,2,4-trichlorobenzene
Organic Acids	**Metals**	**Cyanide and Phenols**
2-chlorophenol	antimony, total	cyanide, total
2,4-dichlorophenol	arsenic, total	phenol, total
2,4-dimethylphenol	beryllium, total	
4,6-dinitro-o-cresol (2-methyl-4,6-dinitrophenol)	cadmium, total	
	chromium, total	
2,4-dinitrophenol	copper, total	
2-nitrophenol	lead, total	
4-nitrophenol	mercury, total	
p-chloro-m-cresol (4-chloro-m-cresol)	nickel, total	
	selenium, total	
pentachlorophenol	silver, total	
phenol	thallium, total	
2,4,6-trichlorophenol	zinc, total	
	cyanide, total	
	phenols, total	

Appendix J. Glossary, Abbreviations/Acronyms, and Units

Glossary

40 CFR Part 122 - Code of Federal Regulations: Protection of the Environment. Part 122 is Administered Permit Programs: The National Pollutant Discharge Elimination System. (Appendix D of 40 CFR 122 lists the Permit Application Requirements.)
Acid Base Neutrals (ABNs) - A category of organic chemical pollutants also called semi-volatile organics. See Appendix I.
Acute - A stimulus severe enough to rapidly induce an effect; in aquatic toxicity tests, an effect observed in 96 hours or less is typically considered acute. When referring to aquatic toxicology or human health, an acute effect is not always measured in terms of lethality.
Acute Criteria- The maximum concentration of a constituent in water that an organism may be exposed to for a total of one hour, once over three years, without dying.
Acute Static Toxicity Test - Test designed to measure water quality effect on mortality. It measures the effect of the whole effluent sample on an organism. Animals are put in a vial with effluent, and the fatal effects are monitored. To calculate water quality standards, the test is run on sensitive animals. The concentration that shows a 95% mortality rate is then multiplied by two.
Activation - An event when the wastewater flow exceeds the holding capacity of the sewer lines and the hydraulic capacity of the treatment plant, causing a diversion of flow to the CSO facilities.
Aeration - The process of adding air to a liquid (e.g. wastewater).
Aliquot - A measured portion of a sample.
Anaerobic Digester - The structure where organic material is broken down by organisms in the absence of oxygen.
Anoxia - The absence of oxygen.
Average Monthly Discharge Limitation - The highest allowable average of "daily discharge" over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured.
Average Weekly Discharge Limitation - The highest allowable average of "daily discharge" over a calendar week, calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.
Bar Screen - A screen made of bars designed to catch large debris (e.g. rags, wood, shoes) in waterways.
Below Detection Limit/Level (BDL) - Values below the Reporting or Quantitation Limit. For further explanation see Appendix H.
Bioaccumulation - The process in which industrial waste, toxic chemicals, and other pollutants gradually build up in living tissues and organs.
Biochemical - Having to do with a chemical change resulting from the metabolic activities of living organisms.
Biochemical Oxygen Demand (BOD) - The amount of oxygen needed to oxidize inorganic materials and to degrade organic materials by *biochemical reactions* in a certain time at a certain temperature. BOD is used as a measure of organic pollution.
Biomagnification - The process by which the concentration of a compound increases in species occupying successive trophic levels.
BDL - See Below Detection Limit
Bloom - A large mass of algae (microscopic and or macroscopic) in water.
BOD - See Biochemical Oxygen Demand.

Buffering Capacity - Measures the ability of certain water bodies to resist changes in pH from addition of acidic or caustic substances.
CFR- See Code of Federal Regulations
Chemical Oxygen Demand (COD) - The amount of oxygen needed for the *chemical oxidation* of chemicals in water. COD is used to measure the suitability of water for organisms that require oxygen.
Chlorination - The addition of chlorine or chlorine compounds to wastewater. Chlorination is most often done for disinfection purposes.
Choking - A process by which flows that cannot be handled by existing pumps are "choked back" into the sewer system, frequently leading to local overflows.
Chronic - A stimulus that lingers or continues for a relatively long period of time, often one-tenth of the life span or more. Chronic should be considered a relative term depending on the life span of an organism. The measurement of a chronic effect can be reduced growth, reduced reproduction, etc., in addition to lethality.
Chronic Criteria - The maximum concentration of a constituent in water that an organism may be exposed to for a total of four days over three years without showing long term, harmful effects, short of mortality. Chronic criteria involve sublethal effects on, among other things, the growth, reproductivity, and fertility of organisms.
Chronic Reproduction Test - A test designed to measure the chronic effects of wastewater on reproduction and fertility.
Chronic Survival and Growth Test - Test designed to see if any mortality occurs after the chronic criteria have been passed. After the organisms have survived, the size of the animals are measured after seven days and statistically compared to controls.
Clean Water Act (CWA) - Formally referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972. Pub. L. 92-500, as amended by Pub. L. 95-576, Pub. L. 96-483, and Pub. L. 97-117: 33 U.S.C. et seq.
COD - See Chemical Oxygen Demand
Code of Federal Regulations (CFR) - Codification of the general and permanent rules of the federal government. CFR 40 covers environmental protection.
Combined Sewer - A sewer receiving both sanitary wastewater and stormwater runoff.
Combined Sewer Overflow Facility - A place where overflow from combined sewers is screened, settled, and chlorinated before being discharged.
Combined Sewer Overflow Pipe - A pipe that discharges overflow from combined sewers in order to prevent back-ups in the sewerage system.
Composite Sample - A sample consisting of a minimum of eight grab samples collected at equal intervals during a 24-hour period (or lesser period if specified) and combined proportional to flow, or a sample continuously collected proportionally to flow over that same time period.
Conventional Parameters/Pollutants - Those pollutants and constituents that are removed from wastewater by conventional treatment. Generally these constituents are settleable solids, biochemical oxygen demand, total suspended solids, oil and grease, total coliform, fecal coliform, residual chlorine, and chlorides.
Conventional Treatment - Well-known or well-established water or wastewater treatment methods, usually consisting of primary and secondary processes and may include advanced or tertiary treatment.
Criteria - The numerical and or narrative elements of water quality standards.
Critical Dilution - Dilution of the effluent required to meet Water Quality Standards.
CWA - See Clean Water Act.
Daily Discharge - The discharge of a pollutant measured during a calendar day or any 24-hours period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of

measurements, the daily discharge is calculated as the average measurement of the pollutant over the day.
Designated Use - Specified use of a body of water included in state water quality standards.
Digester - A place where organic matter is broken down either with oxygen (aerobically) or without oxygen (anaerobically).
Disinfection - The destruction of pathogens (e.g. fecal coliform bacteria) in a water source or wastewater.
Effluent - The wastewater or other water coming out of a treatment facility or process.
Effluent Limitation - Any restriction imposed by the Director (the person authorized to sign NPDES permits by EPA and/or the State) on quantities, discharge rates, and concentrations of "pollutants" which are "discharged" from "point sources" into "waters of the United States," the waters of the "contiguous zone," or the ocean.
Eutrophication - The natural process by which a body of water ages. Nutrients stimulate plant growth and lakes, estuaries, and bays evolve into bogs or marshes. Effluents high in nutrients cause excessive plant growth that accelerates eutrophication.
Fecal Coliform - Bacteria found in the wastes of warm-blooded animals. Fecal coliform is used as an indicator that disease causing bacteria and viruses are present. It is a component of Total Coliform.
Floatables - Constituents of wastewater that rise to the surface in the settling process, consisting mainly of oil, grease, and plastics.
Grab Sample - An individual sample collected in a period of less than 15 minutes.
Gravity Facility - A combined sewer overflow facility that receives flows by gravity (descending gradients from source to outfall) and requires no pumping.
Grit - Heavy suspended mineral matter in wastewater like sand and gravel.
Grit Chamber - A detention tank were grit is separated by sedimentation (grit settles to the bottom). The settling is controlled by the velocity of the water.
Headworks - A structure where wastewater are screened out and grit and other solids are trapped before the wastewater is pumped to a treatment facility.
Human Health Criteria - Estimated concentrations or quantities of chemicals that can be expected to occur in the environment in water, sediment, or food and that are not likely to pose a significant risk to the exposed human population. Human health criteria are published under section 304(a) of the CWA and are based on the latest scientific information. This information is updated and issued to the states to serve as guidance for the development of criteria.
Hydrocarbons - Chemical compounds only containing hydrogen and carbon.
Hypochlorite - The chemical used for chlorine disinfection of wastewater (either calcium, sodium, or lithium hypochlorite).
Hypoxia - The state of very low oxygen concentration.
IDL - See Instrument Detection Limit.
I/I - Infiltration and Inflow. See separate entries for each.
Infiltration - Groundwater that enters sewer pipes through cracks.
Inflow - Water that enters sewer pipes through illegal connections and storm water runoff.
Inorganic - Not containing carbon.
Influent - Wastewater or other water going into treatment facility or process.
Instrument Detection Limit (IDL) - The smallest amount of a substance a particular instrument is capable of detecting. See Appendix H for further explanation.
Interceptor - A large sewerage line collecting water from smaller sewerage pipes.
J values - Values between the Method Detection Limit and the Quantitation (or Reporting) Limit. See Appendix H for further explanation.
Lethal Concentration 50% (LC50) - The concentration of effluent in a sample that causes mortality to 50% of the test population at a specific time of observation.

Limiting Nutrient - In a given ecosystem, the limiting nutritional factor that controls the growth of plants or animals. Usually the limiting nutrient for plant growth is nitrogen in the marine environment and phosphorus in the fresh water environment. The limiting nutrient can also be thought of as the specific nutrient that will have the most impact on a receiving body of water (for example, the accelerated eutrophication of fresh water bodies caused by phosphorus in wastewater effluent).
Local Limits - The development of specific limits as part of MWRA's General Pretreatment Program: "The permittee shall develop and enforce specific effluent limits for industrial users, and all other users, as appropriate, pursuant to 40 CFR 403.5."
Lowest Observed Effect Concentration (LOEC) - The lowest concentration of effluent to which organisms are exposed in a life cycle or partial life cycle test which contains an adverse effect (on survival, growth, and reproduction).
Maximum Acceptable Toxicant Concentration (MATC)- The effluent concentration that may be present in a receiving water body without causing significant harm to productivity or other uses. The MATC is determined by the results of chronic tests of either a partial life cycle with sensitive life stages or a full life cycle of the test organism. The MATC is the geometric mean of the No Observed Effect Concentration and the Lowest Observed Effect Concentration.
Maximum Daily Discharge Limitation - The highest allowable daily discharge.
MBAS - See Methylene Blue Anion Surfactant
MDL - See Method Detection Limit
Metals - A group of priority pollutants. See Appendix I for a complete list.
Method Detection Limit (MDL) - The smallest amount of a substance that can be detected above background noise by following a particular method of analysis. See Appendix H for further explanation.
Methylene Blue Anion Surfactant - A specific type of surfactant. See surfactant.
Mixing Zone - Area where discharged effluent is first diluted. The area is extended to cover the secondary mixing in the ambient water body. A mixing zone is an allocated impact zone where water quality criteria can be exceeded as long as toxic conditions are prevented.
National Pollutant Discharge Elimination System (NPDES) - The national program for issuing, modifying, revoking and reissuing, terminating, monitoring, and enforcing permits, and imposing and enforcing pretreatment requirements, under sections 307, 402, and 405 of the Clean Water Act (CWA). The term includes an "approved program."
Nine Minimum Controls - Part of the EPA's CSO Policy. The Nine Minimum Controls are:
1) Proper operation and regular maintenance (O&M) programs for the sewer system and combined sewer overflow points
2) Maximum use of the collection system for storage
3) Review and modification of the pretreatment programs to assure CSO impacts are minimized
4) Maximization of flow to the POTW for treatment
5) Prohibition of CSO discharges during dry weather
6) Control of solid and floatable materials in CSO discharges
7) Pollution prevention programs that focus on contaminant reduction activities
8) Public notification to ensure that the public receives adequate notification of CSO occurrences and CSO impacts
9) Monitoring to effectively characterize CSO impacts and the efficacy of CSO controls.
Nitrification - The conversion of ammonia and nitrite to nitrate.
No Observed Acute Level (NOAL) - The highest concentration of effluent to which organisms are exposed in a short-term test in which at least 90% of the test organisms survive.
No Observed Effect Concentration (NOEC) - The highest concentration of effluent to which organisms are exposed in a life cycle or partial life cycle test which contains no adverse effects (on growth, survival, and reproduction).
NPDES - See National Pollutant Discharge Elimination System

Nutrient - Any element or compound essential as raw material for organism growth and development. Examples: phosphorus and nitrogen.
Oil and Grease - Fats, oils, and grease from animal and plant derivation. Also called FOGs.
Organic Compounds - Volatiles, Acid Compounds, Base/Neutral, and Pesticides. Organics are listed in 40 CFR Ch. 1 Appendix D under CWA Section 307(a). See Appendix I for a complete list.
Orthophosphorus - A form of phosphorus, included in nutrients.
Outfall - the site of initial discharge
PAH - See Polynuclear Aromatic Hydrocarbon
Pesticides/PCBs - Subdivision of priority pollutants. See Appendix I for a complete list.
Petroleum Hydrocarbon (PHC) - Oil and grease from petroleum derivation.
pH - The negative log of the hydrogen ion concentration used to express acidity (<7) and alkalinity (>7).
PHC - See Petroleum Hydrocarbon.
Pollutant - Dredged soil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemicals wastes, biological materials, radioactive materials, (except those regulated under the Atomic Energy Act of 1954, as amended (42 U.S.C. et seq.)), heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water.
It does not mean: (a) Sewage from vessels; or (b) Water, gas, or other material which is injected into a well to facilitate production of oil or gas, or water derived in association with oil and gas production and disposed or in a well, if the well used either to facilitate production or for disposal purposes is approved by authority of the State in which the well is located, and if the State in which the well is located, and if the State determines that the injection or disposal will not result in the degradation of ground or surface water resources.
Polynuclear Aromatic Hydrocarbon (PAH) - A type of semi-volatile organic. Also known as polycyclic aromatic hydrocarbons.
POTW - See Publicly Owned Treatment Work.
Preaeration - The process by which air is added to primary influent to help in the removal of gases, floatation of grease, addition of oxygen, and in the settling or coagulation of wastewater.
Prechlorination - The addition of chlorine to primary influent at or near the beginning of the treatment facility/process.
Primary Settling - The detention of wastewater as part of primary treatment to settle out solids (sludge) and collect floatables (scum).
Primary Treatment - Screening and settling of wastewater.
Priority Pollutants - Refers to some of the chemicals listed in 40 CFR Ch. 1 Appendix D under Section 307(a) of the CWA. There are 65 compounds and families of compounds that are among the most persistent, prevalent, and toxic of chemicals know to man. These 65 compounds or families of compounds have been translated into 126 individual pollutants. See Appendix I, Table I-2 for the complete list.
Priority Pollutant Scan - A series of chemical analyses to identify the presence of priority pollutants.
Publicly Owned Treatment Work (POTW) - Any facility or system used in the treatment (including recycling and reclamation) of municipal sewage or industrial wastes of liquid nature that is owned by a "State" or a "municipality." This definition includes sewers, pipes, or other conveyances only if they convey wastewater to a POTW providing treatment.
Pumping Station - Structures where wastewater from low-lying areas is pumped.
Quantitation Limit - See Reporting Limit.
Removal Rate - or Percent Removal. Defined as the influent concentration minus the effluent concentration, divided by the influent concentration.

Reporting Limit - The smallest concentration that can be quantified. On a graph of pollutant concentration versus instrument response, the reporting limit is the smallest concentration where the linear relationship holds before starting to curve as the pollutant concentration goes to zero. Also called the Quantitation Limit. See Appendix H for further explanation.
Residuals - Matter left over by treatment processes including screenings, scum, and sludge.
Screening - The process by which sewage from interceptors first goes through headworks where grit and large objects like leaves, sticks, and hygiene products (like tampon applicators and condoms) are screened out.
Screenings - The objects that are collected by the process of screening.
Scum - Solids that float to the top of wastewater.
Secondary Treatment - The treatment of wastewater beyond solids and grit removal. The process decreases the organic load.
Sedimentation - The process by which solids are allowed to settle by gravity.
Sedimentation Tank - Tanks used to detain wastewater while the solids settle out.
Semi-Volatile Organics - Also known as Acid Base Neutrals (ABNs). A subcategory of organic pollutants. See Appendix I for a complete list.
Separate Sewer - A sewerage system divided into a storm sewer and a sanitary sewer.
Settleable Solids - The estimated amount of sludge that will settle by sedimentation. It is a fraction of the suspended-solids.
Settled Solids - Sludge. (See sludge.)
Sewage - Any wastes, including wastes from humans, households, commercial establishments, industries, and storm water runoff, that are discharged to or otherwise enter a POTW.
Sludge - Solids, residues, and precipitate separated from or created in sewage by the unit processes of a POTW.
SOP - See System Optimization Plan or Standard Operating Procedures
Stratification - The separation of water into layers characterized by thermal differences.
Standard Operating Procedures (SOP) - Documented protocols for plant operation, laboratory procedures, etc.
Surcharging - When the capacity of the sewer is insufficient and sewage escapes through a manhole.
Surfactant - Surface-active agent. Large organic molecules that cause foaming. They are usually found in detergents.
System Optimization Plan (SOP) - Hydraulic improvements that, in conjunction with ongoing programs of municipal sewerage agencies, might promote a balanced hydraulic system. The SOP may include optimization of the collector/interceptor system upstream of regulators, to ensure that the storage and transport capacity of the system is maximized within constraints unalterable except for major structural modifications.
Thickener - The structure where sludge is sent to be thickened by removing water.
TKN - See Total Kjeldahl Nitrogen.
Total Coliform - Bacteria found in decaying matter, feces, and soil. It used as an indicator of pathogens that are present in wastewater.
Total Kjeldahl Nitrogen (TKN) - The total organic and ammonia nitrogen.
Total Phosphorus - A measure of all the forms of phosphorus, a nutrient, found in water (orthophosphates, polyphosphates, and organic phosphates).
Total Suspended Solids (TSS) - The sum of insoluble solids that either float on the surface of, or are in suspension in water, wastewater, or other liquids.
Toxic Pollutant - Any pollutant listed as toxic in Appendix D of 40 CFR Part 122, under Section 307(a)(1) of CWA.
Toxics - Pollutants that have a toxic effect on living organisms. The “priority pollutants” of CWA Section 307(a) are a subset of this group of pollutants.

Toxicity Test - A procedure to determine the toxicity of a chemical or an effluent using living organisms. A toxicity test measures the degree of effect on exposed test organisms of a specific chemical or effluent.
TSS - See Total Suspended Solids.
Twelve Month Running Average - The monthly average computed using the specific month and the previous 11 months.
Unregulated Community - Dischargers not required to have Permits to discharge into MWRA sewerage system. They are not regulated or required to meet Local Limits, nor are they regulated under the Local Limits Discharge Program.
Vertical Mixing - The vertical movement of the water column caused by wind, and/or density and/or temperature differences.
Volatile Organic Acid (VOA) - Same as Volatile Organic Compound.
Volatile Organic Compound (VOC) - Same as Volatile Organic Acid.
Volatile Solids - Those solids of a suspended solid sample that are burned off in a muffle oven at 550±50 °C.
Water Quality - The chemical, biological, and physical conditions of a body of water.
Water Quality Criteria - Specific levels of pollutants that would make a body of water unsuitable for its designated use (i.e. harmful if used for drinking, swimming, farming, fishing, or industrial processes).
Water Quality Standard - A law or regulation that consists of: the beneficial designated use or uses of a water body; the numeric and narrative water quality criteria that are necessary to protect the use or uses of that particular water body; and an antidegradation statement.
Whole Effluent Toxicity (WET) - The total toxic effect of effluent, not chemical specific but rather the cumulative effect, whether it be synergistic or antagonistic, of the chemicals found in the effluent.

Abbreviations and Acronyms

ABNs - Acids Bases Neutrals
BDL - Below Detection Limit
BOD - Biochemical Oxygen Demand
BWSC - Boston Water and Sewer Commission
cBOD – Carbonaceous Biochemical Oxygen Demand
CFR - Code of Federal Regulations
CSO - Combined Sewer Overflow
CWA - Clean Water Act
DEP - Massachusetts Department of Environmental Protection
DITP - Deer Island Treatment Plant
EnQual - Environmental Quality, Water and Wastewater
EPA - United States Environmental Protection Agency
FY - Fiscal Year
IDL - Instrument Detection Level
I/I - Infiltration and Inflow
LC50 - Median Lethal Concentration
LD50 - Median Lethal Dose
LOAEL - Lowest Observed Adverse Effect Level
LOEC - Lowest Observed Effect Concentration
MATC - Maximum Acceptable Toxicant Concentration
MDC - Metropolitan District Commission
MDL - Method Detection Limit

MPN - Most Probable Number
MWRA - Massachusetts Water Resources Authority
NITP - Nut Island Treatment Plant
NOAL - No Observed Acute Level
NOEC - No Observed Effect Concentration
NPDES - National Pollutant Discharge Elimination System
PAH - Polycyclic (or Polynuclear) Aromatic Hydrocarbon
PCB - Polychlorinated Biphenyl
PHC - Petroleum Hydrocarbon
POTW - Publicly Owned Treatment Work
SD - Standard Deviation
SOP - Standard Operating Procedures or System Optimization Plan
SSO - Sanitary Sewer Overflow
TKN - Total Kjeldahl Nitrogen
TRAC - Toxic Reduction and Control Department
TSS - Total Suspended Solids
VOA - Volatile Organic Acid
VOC - Volatile Organic Compound
WET - Whole Effluent Toxicity [test]

Units of Measurement

in/yr - inches per year
L - liter
lbs - pounds
lbs/day - pounds per day
mL/L - milliliters per liter
MG - million gallons
mgd - million gallons per day
mg/L - milligrams per liter
μg/L (or ug/L) - micrograms per liter

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