Baltimore Inner Harbor Environmental Media Monitoring Plan Quarterly Report No. 107 Second Quarter 2016

Prepared for

Honeywell International Inc.

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Acronyms and Abbreviations

µg	microgram
EMMP	Environmental Media Monitoring Plan
EPA	U.S. Environmental Protection Agency
ERM	Environmental Resources Management Inc.
m^3	cubic meter
MDE	Maryland Department of the Environment
MES	Maryland Environmental Services
ppb	parts per billion
Site	Honeywell Baltimore Inner Harbor Site
SSMP	Surface Soil Monitoring Plan

SECTION 1

Introduction

1.1 Purpose

This document represents the partial fulfillment of the Consent Decree entered into by Honeywell (formerly AlliedSignal, Inc.), the U.S. Environmental Protection Agency (EPA), and the Maryland Department of the Environment (MDE) on September 29, 1989. Specifically, this document satisfies Section V.3 of the Consent Decree, Exhibit 4 (RCRA Correction Action Plan Task XV.A.9). This section requires that a progress report be submitted every calendar quarter during the life of the Consent Decree. This report provides the data required by the Environmental Media Monitoring Program, as set forth in the Environmental Media Monitoring Plan (EMMP) and the Surface Soil Monitoring Plan (SSMP), as submitted to MDE and EPA.

This report summarizes the data collected during the first quarter of 2016 as well as groundwater data from fourth quarter 2015.

1.2 Scope of Work

The scope of work outlined in the EMMP covers sampling and analysis of environmental media before, during, and after dismantlement of the former plant, and the completion of the corrective measures implementation activities at the Honeywell Baltimore Inner Harbor Site (Site). The environmental media sampled as part of the EMMP are air, surface water, groundwater, and sediment.

The scope of work outlined in the SSMP covers sampling and analysis of environmental media after completion of Corrective Measures Implementation activities at the Site. The only environmental medium sampled as part of the SMMP is the drainage layer effluent.

Media are sampled on varying frequencies as required by the EMMP and the SSMP (quarterly, twice annually, annually, and every 3 years). Only data for the media sampled during each quarter are reported in the associated quarterly report.

1.3 Sampling Conducted This Quarter

Surface water samples were collected during the second quarter of 2016. Appendix A provides data associated with surface water sampling performed during the second quarter of 2016. Groundwater samples were collected during the second quarter of 2016. Groundwater sample results are provided in Appendix B. Drainage layer sampling was conducted in the second quarter of 2016. Appendix C provides data associated with the annual drainage layer sampling. Air monitoring results for the first quarter of 2016 are described in Section 5.

All sampling data for the second quarter of 2016 were validated by Validata. The validation reports for the second quarter 2016 surface water, groundwater, and drainage layer sampling are presented in Appendix D. All data quality objectives were met for sample results reported herein.

1.4 Progress Report Organization

Progress reports prepared in accordance with the Consent Decree are organized by medium. The media section included in this document provides a summary of methodology, the current quarter's sampling plan, and a summary of results. Also provided in these sections are a discussion of the sampling event; explanations for any deviations from the EMMP or SSMP procedures; data summaries; and discussion of the data, quality control results, and pertinent data trends. Surface water monitoring details are

presented in Section 2. Groundwater sampling details are presented in Section 3. Drainage layer sampling data are presented in Section 4. Air monitoring details are provided in Section 5. Associated raw data and chain-of-custody records are provided in Appendixes A, B, and C. Validation results are presented in Appendix D.

SECTION 2

Surface Water Monitoring

2.1 Methodology

The surface water monitoring program provides information about surface water quality around the perimeter of the Site, at 18 predetermined stations, and at 2 stations upstream from the Site. Samples are collected at each station during each quarter and analyzed for total dissolved chromium.

Sampling is conducted within 1 hour of low tide and close to the predetermined sampling locations. The pH, temperature, specific conductance, and depth to the river bottom are measured before each sample is collected. A decontaminated Kemmerer sampler is used to collect the samples, which are placed in 500-milliliter plastic bottles. Two samples are collected—the first 1 foot below the water surface and the second 1 foot above the river bottom—at all locations except Station 20, where the water depth may be at or below 1 foot. When this is the case, only one sample is collected at Station 20. A mid-depth sample is required from sampling locations where the depth is more than 10 feet. The lateral placement of each sample location is about 5 feet from the bulkhead/shoreline. Laboratory sampling personnel record measurements and observations on sampling sheets, which are presented in Appendix A.

Surface water sample containers are placed on ice as soon as samples are collected. Field duplicate samples, field blanks, and rinsate blanks are also collected. At the end of the sample round, the samples are filtered and preserved. The samples are then transferred to the laboratory using documented chain-of-custody procedures and a dedicated courier. The samples are analyzed for total dissolved chromium using EPA SW-846 Method 6010B.

The results received from the laboratory are entered into a database in which data for each month are tabulated. When duplicate samples for a given station are taken, the average of the concentrations is used for that station. The analytical results, chain-of-custody documentation, and field sampling reports are presented in Appendix A.

2.2 Current Quarter Results

Surface water sampling for the second quarter of 2016 was performed by Maryland Environmental Services (MES) at all 20 surface water sampling locations on April 4, 2016. The surface water sampling locations are shown in Figure 2-1 (at the end of this section). Results for these surface water samples are included in this report.

All of the collected samples were transported to Lancaster Laboratories in Lancaster, Pennsylvania, for total dissolved chromium analysis. Summaries of the surface water data and average concentrations for April 4, 2016, including individual sample detection limits and validated data qualifiers, are presented in Tables 2-1 and 2-2.

2.3 Data Review

The surface water monitoring program is intended to provide information on surface water quality in the immediate vicinity of the waterside perimeter of the Site. This information is used to assess the performance of the corrective measures.

The Consent Decree, Section V, Part 12, establishes the Surface Water Performance Standard: “The surface water performance standard […] for total chromium shall be 50 parts per billion (ppb), calculated for each sample location by arithmetically averaging the samples taken at all depths over 4

consecutive days." In October 2002, the sample frequency was amended to be 1 day of sampling at each sampling location per quarter.

In addition, the EMMP states that Honeywell will review analytical data for results greater than 11 ppb of dissolved hexavalent chromium. The 11 ppb reporting level is based on the following:

- Code of Maryland Regulation 26.08.02.03-1B, which states that the numerical toxic substance criteria for freshwater shall be applied to the surface water near the Site; and
- National Recommended Water Quality Criteria Correction EPA 822-Z-99-001 (April 1999), which states that the chronic exposure level for dissolved hexavalent chromium in freshwater is 11 ppb.

Total dissolved chromium concentrations in surface water reported for the second quarter of 2016 are similar to the analytical values reported in the first quarter of 2016. All values reported for the sample event are at or below the sample detection of 15 ppb and most of the values are below the method detection limit of 2 ppb.

The percentages of actual or average surface water results meeting specific criteria (performance standard, chronic freshwater exposure, and detection limit) are listed in Table 2-1. Results of analyses for total dissolved chromium from each sampling location and each depth are presented in Table 2-2. The average analytical result from each sampling location is presented in Table 2-3.

Table 2-1. Percent of Average or Actual Surface Water Results below Specific Criteria

Table 2-2. Surface Water Sampling Data per Location

Table 2-3. Surface Water Sampling Data per Sampling Station

Figure 2-1. Surface Water Sample Locations

Table 2-1 Percent of Average or Actual Surface Water Results Below Specific Criteria				
Sample Event	**Performance Standard Actual Concentration < 50 ppb**	**Fresh Water Chronic Exposure Level Actual Concentration <11 ppb**	**Analytical Detection Limit† Actual Concentration <15 ppb**	**Method Detection Limit† Actual Concentration <2 ppb**
April	100%	100%	100%	76%

† The Analytical Detection Limit as determined by the Laboratory QC is 10 ppb

Table 2-2
Surface Water Sampling Data per Location
April 2016

Station Number	Detection Limit	Total Dissolved Chromium (mg/L) 4/4/2016
3B	0.01	0.005 U
3T	0.01	0.005 U
4B	0.01	0.005 U
4T	0.01	0.005 U
5B	0.01	0.005 U *
5T	0.01	0.002 J
6B	0.01	0.005 U
6T	0.01	0.005 U
7B	0.01	0.005 U
7T	0.01	0.005 U
8B	0.015	0.0075 U
8T	0.015	0.0075 U
9B	0.015	0.0075 U
9T	0.015	0.008 U
10B	0.015	0.0075 U
10T	0.0125	0.00625 U *
11B	0.01	0.005 U
11T	0.01	0.005 U
12B	0.01	0.005 U
12T	0.01	0.005 U
13B	0.01	0.005 U
13T	0.01	0.005 U
14B	0.0125	0.00625 U *
14T	0.01	0.0022 J
15B	0.01	0.005 U
15T	0.01	0.005 U
16B	0.015	0.008 U
16T	0.015	0.0075 U
17B	0.015	0.0075 U
17T	0.015	0.0075 U
18B	0.015	0.008 U
18M	0.015	0.008 U
18T	0.015	0.0075 U *
19B	0.01	0.003 J
19T	0.01	0.002 J
20B	0.01	0.003 J
20T	0.00	0.003 J
Cent B	0.01	0.0024 J
Cent T	0.01	0.002 J
LADY B	0.01	0.002 J
LADY T	0.01	0.003 J

NOTES
T - Sample collected 1 foot below the surface (TOP)
M - Sample collected from the measured middle of the TOP and BOTTOM measurements (MIDDLE)
B - Sample collected 1 foot from the bottom (BOTTOM)
* - Average of the sample and its Field Duplicate
J - Results was reported below the Report Dectection Limit
U - Result below the Method Detection Limit

Table 2-3
Surface Water Sampling Data per Sampling Station
April 2016

	Total Dissolved Chromium (mg/L)
Station Number	4/4/2016 Station Average of All Depths
3	0.005
4	0.005
5	0.004
6	0.005
7	0.005
8	0.008
9	0.008
10	0.006
11	0.005
12	0.005
13	0.005
14	0.004
15	0.005
16	0.008
17	0.008
18	0.008
19	< 0.002
20	< 0.003
Lady	< 0.002
Cent	< 0.002

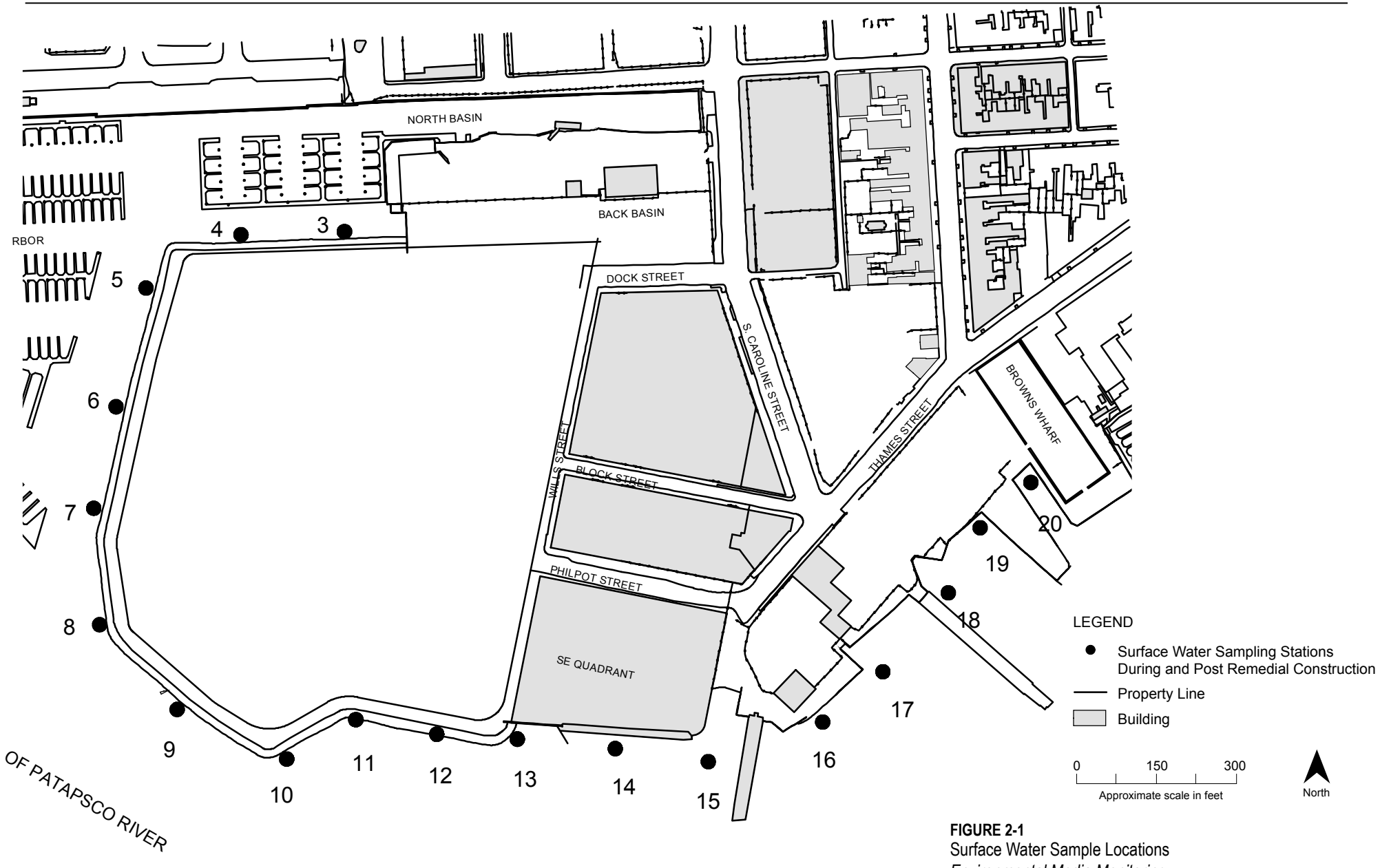

FIGURE 2-1
Surface Water Sample Locations
Environmental Media Monitoring

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SECTION 3

Groundwater Monitoring

3.1 Methodology

The Consent Decree requires monthly groundwater monitoring for the first 2 years following completion of remedial construction at nine locations around the perimeter of the Site and in three locations (OP-2, OP-11, and NWM-27) in offsite areas. Four of the perimeter locations (SW-06, SW-11, SW-13, and SW-15) are monitored by collecting surface water samples within 1 foot of the bottom, as described in Section 2.1. The other five perimeter locations (OP-3, OP-4, OP-5, OP-7, and OP-9) are monitored by collecting groundwater samples from onsite piezometers. The three offsite locations are monitored by collecting one sample from a conventional monitoring well (NWM-27) and one sample each from two piezometers (OP-2 and OP-11). All monitoring locations are shown in Figure 3-1.

As of January 2002, the groundwater-monitoring frequency was reduced from monthly to twice per year, as described in Sections 1.2.3 and 5.2.3 of the *Honeywell Baltimore Works Environmental Media Monitoring Plan*, which was approved by EPA and MDE.

Before the monitoring well and piezometers are purged and sampled, measurements of depth to water are recorded on a sampling summary sheet. All designated monitoring wells/piezometers are sampled in accordance with the low-flow sampling procedures detailed in the following documents:

- *Low-Flow (Minimal Drawdown) Groundwater Sampling Procedures* (EPA/540/S-95/504), April 1996, by Robert W. Puls and Michael J. Barcelona; and
- *Recommended Procedures for Low-Flow Purging and Sampling of Groundwater Monitoring Wells* (Bulletin No. QAD023), August 8, 1994, by EPA Region III.

During purging and before sample collection, field measurements—including conductivity, pH, temperature, reduction oxidation potential, dissolved oxygen, and turbidity—are measured until the well stabilizes. The sampling time is recorded. The collected samples are filtered, preserved, placed on ice, and then transferred to the laboratory according to chain-of-custody procedures. The samples are analyzed for total dissolved chromium by the laboratory using EPA SW-846 Method 6010B. Two of the samples (OP-3 and OP-2) are also analyzed for total dissolved cyanide using EPA SW-846 Method 9014. Field blanks, temperature blanks, and rinsate blanks are also collected and analyzed for the same parameters.

Results received from the laboratory are entered into a database. Data for each month, quarter, and year are tabulated, averaged, and compared to previous results.

3.2 Current Quarter Results

Groundwater samples were collected on April 20, 2016. MES performed all sample collection, and Lancaster Laboratories performed the sample analysis.

3.2.1 Chromium

Total dissolved chromium was detected in all of the groundwater samples collected from piezometers and monitoring wells. There was no significant difference in chromium concentrations between the second quarter 2016 monitoring data and the total dissolved chromium concentrations detected at the respective sampling stations during monitoring performed over the last 5 years.

Bottom surface water samples collected along the site perimeter from locations proximal to historical groundwater sampling well locations, had total dissolved chromium levels below the analytical method detection limit.

3.2.2 Cyanide

Total dissolved cyanide concentrations were within expected variations, based on a review of the historical concentrations. The analytical data report is provided in Appendix B-1.

3.3 Historical Results

3.3.1 Chromium

The second quarter 2016 results from groundwater sampling, averaged to represent two sampling events per year for data comparison for each groundwater monitoring location, are presented in Table 3-1. A statistical review of the analytical data, including the minimum, maximum, average, and standard deviation values for each well location, is presented in Table 3-2. Validated analytical groundwater monitoring results with data qualifiers from the second quarter of 2016, including annual averages for data collected during the last 5 years, are presented in Table 3-3.

The historical total dissolved chromium concentrations in groundwater for each monitoring location are shown in Figure 3-2. Trends for total dissolved chromium concentrations for each groundwater monitoring location are depicted in Figures 3-3 through 3-9. The historical data in these figures were averaged to allow current data to be compared to past sample rounds.

3.3.2 Cyanide

Groundwater samples were collected from two locations (OP-2 and OP-3) for cyanide analysis. The historical trend of cyanide levels is presented in Table 3-4.

Table 3-1
Total Dissolved Chromium Concentrations in Groundwater (mg/l)

Monitoring Wells	Elevation (ft) Top of Well Screen	Current Results mg/l	Sample Detection Limit mg/l	Sample Event Dates							
Outboard Piezometers		Apr, 2016		Dec, 2015	Nov, 2015	Apr, 2015	Oct, 2014	Apr, 2014	Oct, 2013	Apr, 2013	Oct, 2012
11B		0.0020	0.01		0.0026	0.0013	0.0015	0.0016	0.001	0.0011	0.001
13B		0.0020	0.01		0.002	0.0013	0.0022	0.0016	0.001	0.0011	0.001
15B		0.0020	0.01		0.002	0.0013	0.0016	0.0016	0.001	0.0011	0.001
6B		0.0020	0.01		0.002	0.0025	0.0025	0.0016	0.001	0.0011	0.001
NWM-27	32.68	2010	2	1300		1700	1820	2200	2280	2450	1910
OP11	44.47	0.008	0.01	0.0094		0.0111	0.019	1.520	0.889	0.869	0.751
OP2	64.31	4.80	0.01	4.78		5.42	5.34	5.52	5.09	5.77	5.14
OP3	68.53	121	0.1	116		123	127	146	141	137	140
OP4	69.14	285	0.2	320		329	298	376	400	3	323
OP5	60.7	1.67	0.01	3.53		3.51	3.90	3.93	4.04	3.95	2.96
OP7	55.42	0.006	0.01	0.0047		0.0332	0.026	0.021	0.002	0.002	0.002
OP9	47.13	1710	1	1450		1800	1660	1850	1840	1900	1870

Outboard Piezometers	Apr, 2012	Oct, 2011	Jun, 2011	Apr, 2010	Oct, 2009	Apr, 2009	Oct, 2008	Apr, 2008	Oct, 2007	Apr, 2007	Oct, 2006
11B	0.001	0.001	0.003	0.0034	0.003	0.003	0.003	0.002	0.002	0.015	0.015
13B	0.002	0.001	0.003	0.0034	0.003	0.003	0.003	0.002	0.002	0.015	0.015
15B	0.0011	0.001	0.003	0.0034	0.003	0.003	0.003		0.0023	0.015	0.015
6B	0.001	0.001	0.003	0.0034	0.004	0.003	0.003	0.003	0.004	0.015	0.015
NWM-27	2150	2310	1910	1840	1950	2240	174	2130	699	1690	710
OP11	0.507	0.210	0.390	0.470	0.201	0.368	0.192	0.483	0.033	0.122	0.015
OP2	5.20	5.82	5.79	6.31	6.36	6.05	7.12	5.77	7.34	6.33	6.39
OP3	126	142	144	146	153	165	6	189	166	202	199
OP4	17	457	504	503	533	548	616	601	526	684	584
OP5	1.89	2.84	4.61	5.030	6.520	5.36	7.7	7.7	8.1	7.8	.8
OP7	0.012	0.010	0.005	0.006	0.005	0.003	0.004	0.005	0.002	0.015	0.015
OP9	1950	2110	2200	2040	2150	2070	5020	4800	3020	3170	3050

Table 3-1
Total Dissolved Chromium Concentrations in Groundwater (mg/l)

Outboard Piezometers	**Apr, 2006**	**Oct, 2005**	**Apr, 2005**	**Oct, 2004**	**Apr, 2004**	**Oct, 2003**	**Apr, 2003**	**Oct, 2002**	**Apr, 2002**	**Jan, 2002**	**Dec, 2001**
11B	0.015	0.015	0.015	0.005	0.010	0.005	0.005	0.005	0.008	0.008	0.008
13B	0.015	0.015	0.015	0.005	0.010	0.005	0.005	0.005	0.008	0.008	0.008
15B	0.015	0.015	0.015			0.005	0.005	0.005	0.008	0.008	0.008
6B	0.015	0.015	0.015	0.005	0.010	0.005	0.005	0.005	0.008	0.009	0.008
NWM-27	1540	1010	874	744	422	603	603	550	930	1100	690
OP11	0.235	0.182	0.026	0.017	0.080	0.005	0.005	0.017	0.009	0.029	0.033
OP2	6.20	6.32	6.08	5.98	5.75	6.16	6.00	5.63	4.90	5.50	5.60
OP3	219	286	288	297	309	342	342	378	440	440	440
OP4	812	1020	1100	1150	1260	1290	1210	1620	1800	1400	1700
OP5	.3	8.7	11.5	11.9	11.9	13.3	15.4	16.9	21.0	19.5	18.5
OP7	0.015	0.015	0.005	0.005	0.010	0.004	0.006	0.005	0.008	0.008	0.008
OP9	2790	2810	2680	2780	2510	2480	2510	2410	2500	2200	2500

Outboard Piezometers	**Nov, 2001**	**Oct, 2001**	**Sep, 2001**	**Aug, 2001**	**Jul, 2001**	**Jun, 2001**	**May, 2001**	**Apr, 2001**	**Mar, 2001**	**Feb, 2001**	**Jan, 2001**
11B	0.008	0.008	0.008	0.008	0.008	0.010	0.010	0.010	0.011	0.010	0.010
13B	0.008	0.008	0.008	0.008	0.008	0.010	0.010	0.010	0.010	0.010	0.010
15B	0.008	0.008	0.008	0.008	0.008	0.010	0.010	0.010	0.010	0.010	0.010
6B	0.008	0.008	0.008	0.008	0.008	0.010	0.010	0.010	0.010	0.010	0.010
NWM-27	1300	830	1000	1500	1300	1600	1700	1300	1500	1600	1600
OP11	0.026	0.032	0.049	0.034	0.032	0.042	0.031	0.010	0.050	0.014	0.012
OP2	4.90	6.20	6.50	5.80	4.80	5.80	6.00	5.75	4.90	6.20	6.10
OP3	480	570	420	410	450	420	430	460	470	450	470
OP4	2000	1700	1800	1800	1800	1900	1800	1900	1900	2000	2000
OP5	20.0	20.5	21.0	17.5	23.5	23.0	23.0	24.0	25.0	25.5	26.0
OP7	0.008	0.012	0.008	0.008	0.008	0.010	0.010	0.010	0.010	0.010	0.010
OP9	2650	2500	2600	2400	2500	2500	2400	2400	2400	2300	2600

Table 3-1
Total Dissolved Chromium Concentrations in Groundwater (mg/l)

Outboard Piezometers	Dec, 2000	Nov, 2000	Oct, 2000	Sep, 2000	Aug, 2000	Jul, 2000	Jun, 2000	May, 2000	Apr, 2000	Mar, 2000	Feb, 2000
11B	0.010	0.010	0.010	0.010	0.010	0.01	0.01	0.01	0.01	0.01	0.002
13B	0.010	0.010	0.010	0.010	0.010	0.01	0.01	0.01	0.010125	0.0105	0.002
15B	0.010	0.010	0.010	0.010	0.010	0.01	0.01	0.01	0.01	0.01	0.002
6B	0.010	0.010	0.010	0.010	0.010	0.01	0.01	0.01	0.01	0.01	0.002
NWM-27	1600	1700	1700	1800	1700	1600	1700	1700	1800	3600	2600
OP11	0.015	0.022	0.011	0.010	0.011	0.01	0.01	0.010	0.010	0.004	0.047
OP2	6.00	5.90	6.10	5.85	5.90	3.15	3.6	3.70	5.40	8.00	4.40
OP3	480	500	490	500	510	530	540	580	570	1045	630
OP4	2100	2100	2400	2250	2400	2400	2400	2800	2500	3300	2300
OP5	25.0	26.0	28.0	25.0	24.0	18	34	27.0	33.0	47.0	44.0
OP7	0.010	0.010	0.010	0.013	0.010	0.012	0.041	0.050	0.051	0.002	0.002
OP9	2500	2400	2700	2500	2500	2400	2400	2800	2500	4500	2400

Outboard Piezometers	Dec, 1999	Aug, 1999	May, 1999	Mar, 1999	Dec, 1998	Sep, 1998	Jun, 1998	Mar, 1998	Dec, 1997
11B									
13B									
15B									
6B									
NWM-27	1800	2300	1900	1400	1000			610	
OP11	0.020	.01	0.01	0.03	0.01	2.7			
OP2	7.30	6.50	1.8	2.4	2.8	4.6			
OP3	670	800	670	690	750	780	890	2200	2400
OP4	2900	3800	2900	2000	3000	1900	2000	2500	3700
OP5	42.0	31.0	59.0	45	58	65	70	130	150
OP7	.02	.01	0.010	0.060	1.600	8.6	0.3	0.02	0.02
OP9	3200	2200	1800	3200	2200	2300	2800	3600	

Table 3-2
Current and Annual Total Dissolved Chromium Concentrations in Groundwater (mg/l)

Monitoring Wells	Elevation (ft) Top of Well Screen	Current Results ppm	Sample Detection Limit ppm	Last Sample Round Results ppm	Average						Notes
					2015	2014	2013	2012	2011	2010	
Outboard Piezometers											
OP-3	-53.5	121	0.1	116	119	137	139	133	139	145	4
OP-4	-57.1	285	0.2	320	325	337	201	170	457	504	4
OP-5	-51.3	1.72	0.01	3.545	3.55	3.92	4.00	2.43	3.10	4.82	4
OP-7	-47.6	0.0060	0.01	0.0047	0.019	0.0252	ND	ND	0.01	ND	4
OP-9	-37.8	1710	1.0	1450	1625	1755	1870	1910	2045	2120	4
Deep Surface Water											
SW-06	NA	0.002	0.01	0.0015	ND	ND	ND	ND	ND	ND	4
SW-11	NA	0.002	0.01	0.0026	ND	ND	ND	ND	ND	ND	4
SW-13	NA	0.002	0.01	0.0017	ND	ND	ND	ND	ND	ND	4
SW-15	NA	0.002	0.01	0.0035	ND	ND	ND	ND	ND	ND	4
Offsite Wells											
OP-2	-48.0	4.8	0.01	4.78	5.10	5.43	5.43	5.17	5.81	6.11	4
OP-11	-35.5	0.0079	0.01	0.0094	0.01	0.769	0.879	0.699	0.381	0.442	4
NWM-27	-24.7	2010	2.0	1300	1500	2010	2365	2030	2270	1875	4

NA - Not Applicable
ND - Not Detected
ERROR - Numerical data not reported for some portion of the referenced time period
U - Not detected validated results
B - Indicates that the calibration blank had some carryover contamination from these samples.

* - Average of the sample and its duplicate

1 - Consists of averages of monthly data
2 - Consists of averages of quarterly data
3 - Consists of twice annual data (single data point)
4 - Average consists of all available data

Table 3-3 - Groundwater Trend Analysis [1]

Wells	Sample Dates	Data Points	Minimum	Maximum	Average	Standard Deviation	Current Quarter Concentrations
Outboard Piezometers							
OP-3	December,31 1980 to June,30 2016	69	6	2400	448	398	121
OP-4	December,31 1980 to June,30 2016	68	3	3800	1507	939	285
OP-5	December,31 1980 to June,30 2016	83	0.27	150	21	24	1.72
OP-7	December,31 1980 to June,30 2016	67	0.002	9	0.170	1.064	0.006
OP-9	December,31 1980 to June,30 2016	63	1660	5020	2546	635	1710
Offsite Wells							
OP-2	December,31 1980 to June,30 2016	73	1.80	8.00	5.54	1.11	4.80
OP-11	December,31 1980 to June,30 2016	64	0.004	2.700	0.210	0.434	0.008
NWM-27	December,31 1980 to June,30 2016	59	174	3600	1534	637	2010

1 - Trend analysis based on Sample Event Results stored in central electronic database.

Table 3-4
Current and Annual Total Dissolved Cyanide Concentrations in Groundwater (ug/l)

Monitoring Wells	Elevation (ft) Top of Well Screen	Current Results ug/l	Sample Detection Limit ug/l	Sample Event Dates							
Outboard Piezometers		Apr, 2016		Dec, 2015	Apr, 2015	Oct, 2014	Apr, 2014	Oct, 2013	Apr, 2013	Oct, 2012	Apr, 2012
OP2	64.31	5.00	10	5.00	8.70	5.00	5.00	5.00	5.0	5.0	5.00
OP3	68.53	14.0	10	9.9	5.0	16.0	14.0	19.0	5.0	17.00	9.5

Outboard Piezometers	Oct, 2011	Jun, 2011	Sep, 2010	Apr, 2010	Oct, 2009	Apr, 2009	Oct, 2008	Apr, 2008	Oct, 2007	Apr, 2007	Oct, 2006
OP2	5.00	5.00	11.00	23.00	5.0	5.0	5.0	5.0	5.0	10.0	10.0
OP3	13.0	13.0	24.0	5.00	18.0	19.0	12.0	25.0	9.5	26.0	22.0

Outboard Piezometers	Apr, 2006	Oct, 2005	Apr, 2005	Oct, 2004	Apr, 2004	Oct, 2003	Apr, 2003	Oct, 2002	Apr, 2002	Jan, 2002	Nov, 2001
OP2	10.00	10.00	10.00	10.0	10.0	5.0	5.0	5.0	10.0	10.0	10.0
OP3	10.0	35.0	17.0	34.0	20.0	30.0	36.0	40.4	24.0	15.0	47.0

Outboard Piezometers	Aug, 2001	May, 2001	Feb, 2001	Nov, 2000	Aug, 2000	May, 2000	Feb, 2000	Dec, 1999	Aug, 1999	May, 1999	Mar, 1999
OP2	10.00	10.00	10.0	10.00	10.00	10.00	10.00	5.00	5.00	5.00	5.00
OP3	42.0	18.0	37	10	41.0	53.0	110.0	110.0	37.0	69.0	55.0

Outboard Piezometers	Dec, 1998	Sep, 1998	Jun, 1998	Mar, 1998
OP2	5.00			
OP3	29.0	9.0	14.00	1.00

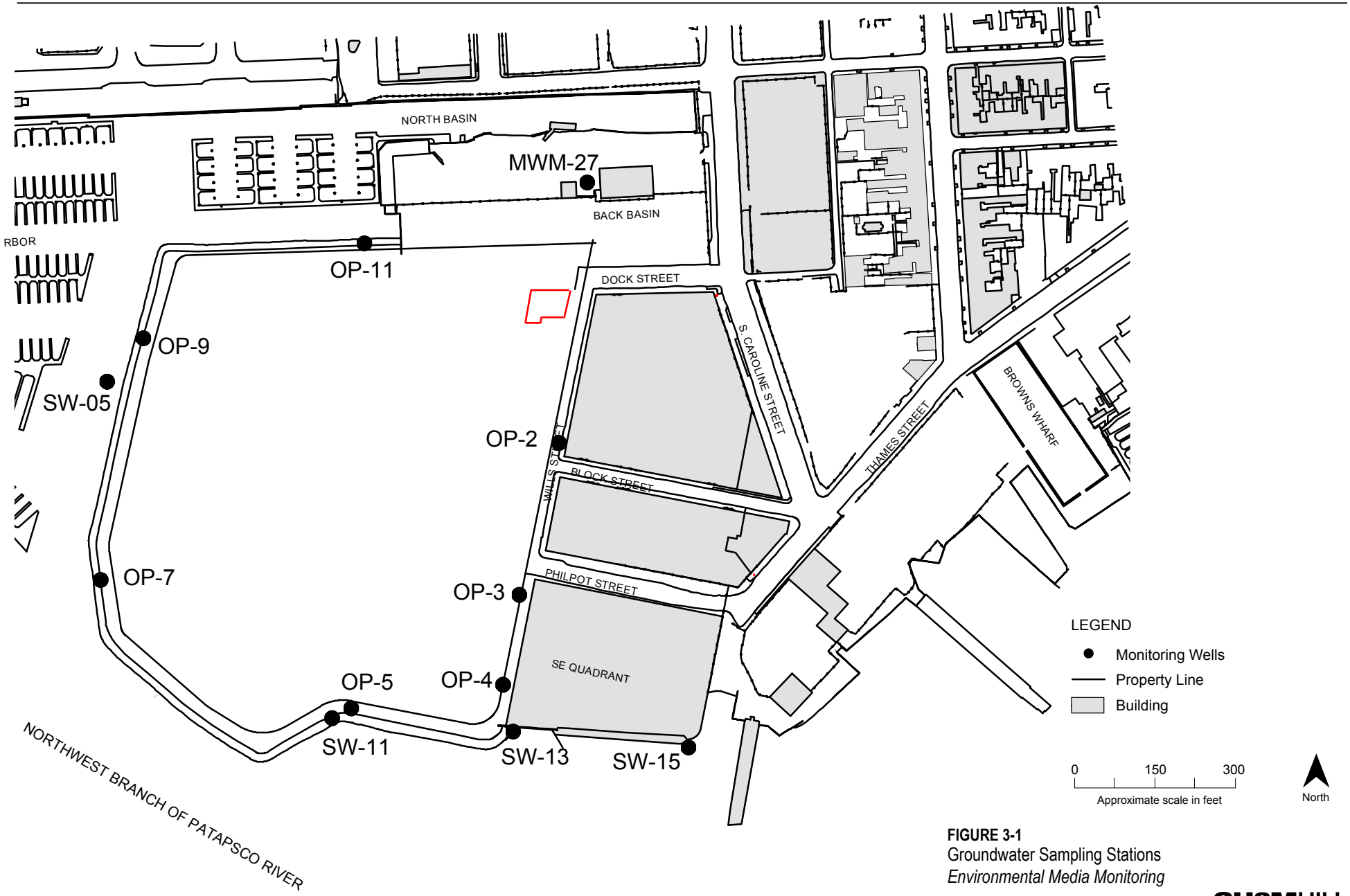

FIGURE 3-1
Groundwater Sampling Stations
Environmental Media Monitoring

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Figure 3-2
Historical Total Dissolved Chromium Concentrations in Groundwater

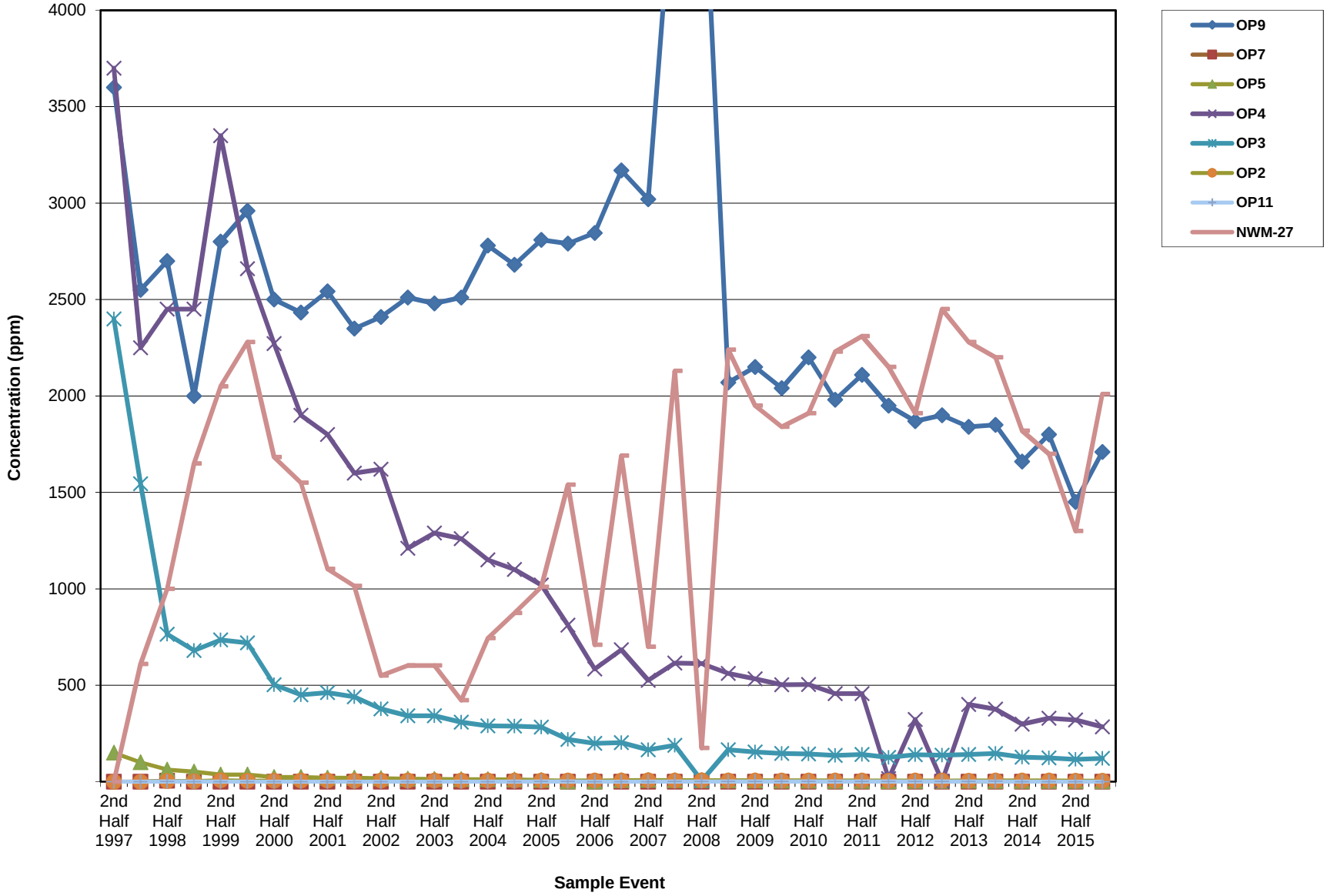


Figure 3-3
Total Dissolved Chromium Concentrations in Groundwater for OP- 3

(Values between 1998 and 2001 are averaged over a six month period. Subsequent values represent a individual sample results. See Table 3-1)

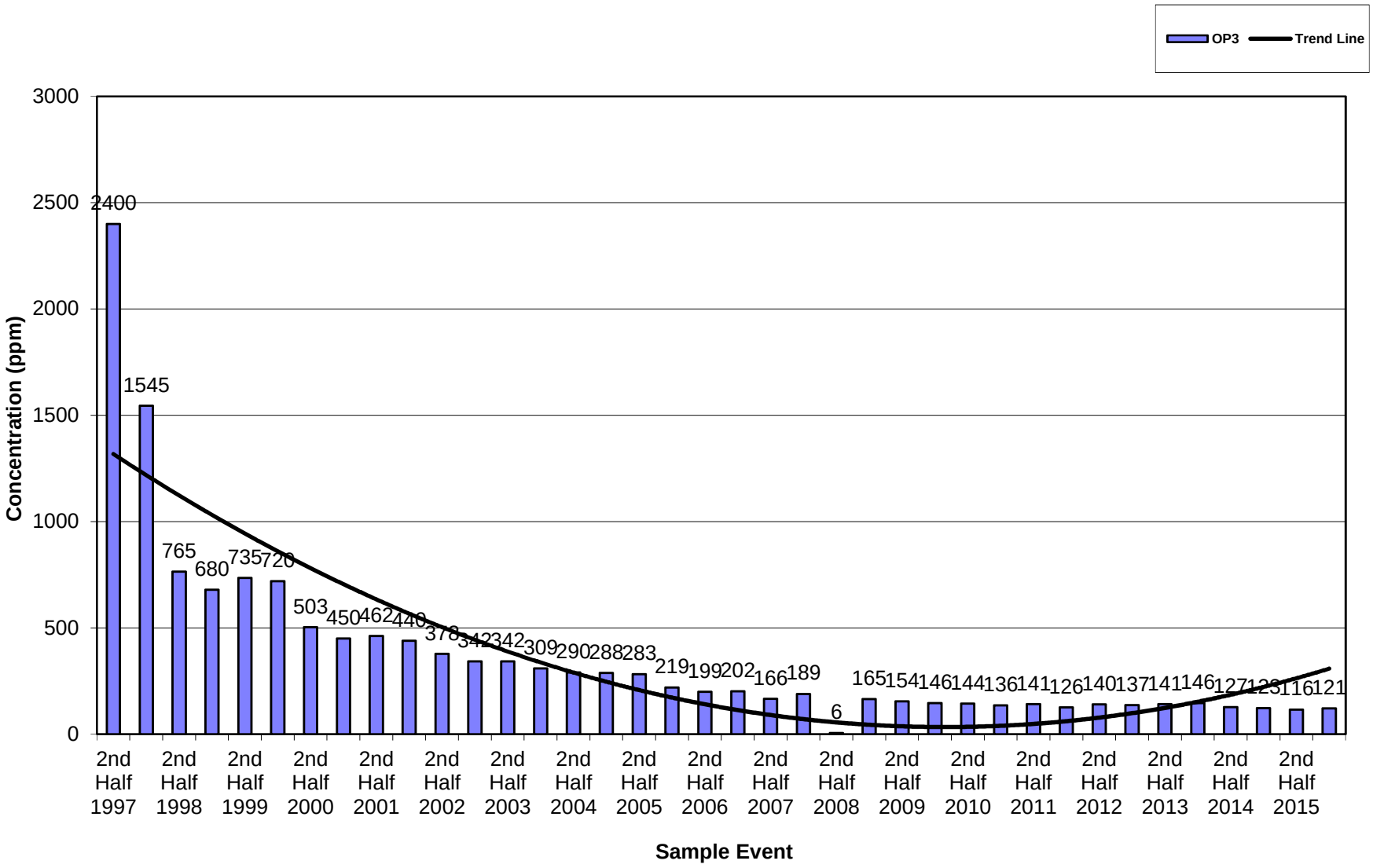


Figure 3-4
Total Dissolved Chromium Concentrations in Groundwater for OP-4

(Values between 1998 and 2001 are averaged over a six month period. Subsequent values represent a individual sample results. See Table 3-1)

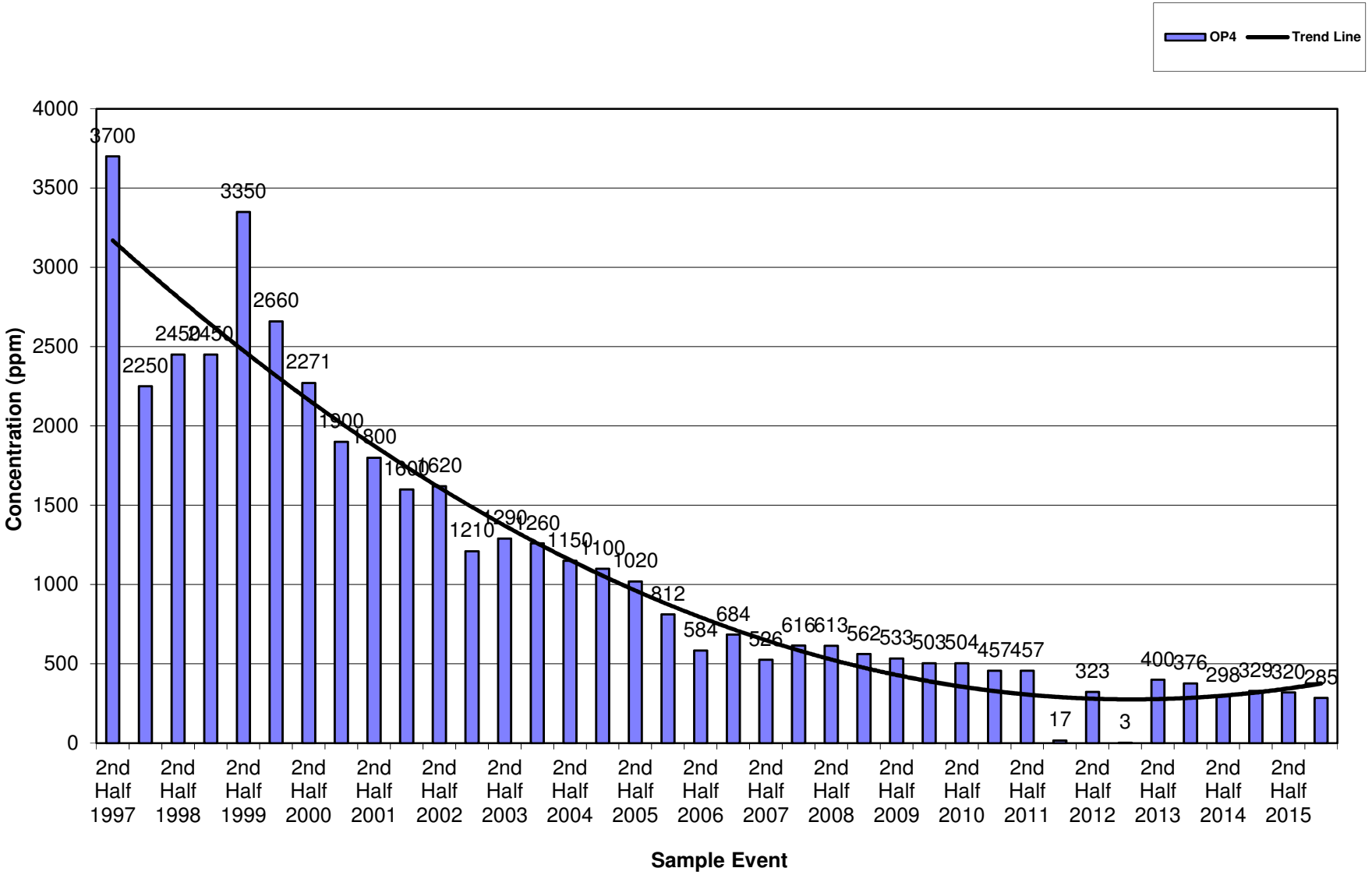


Figure 3-5
Total Dissolved Chromium Concentrations in Groundwater for OP-5

(Values between 1998 and 2001 are averaged over a six month period. Subsequent values represent a individual sample results. See Table 3-1)

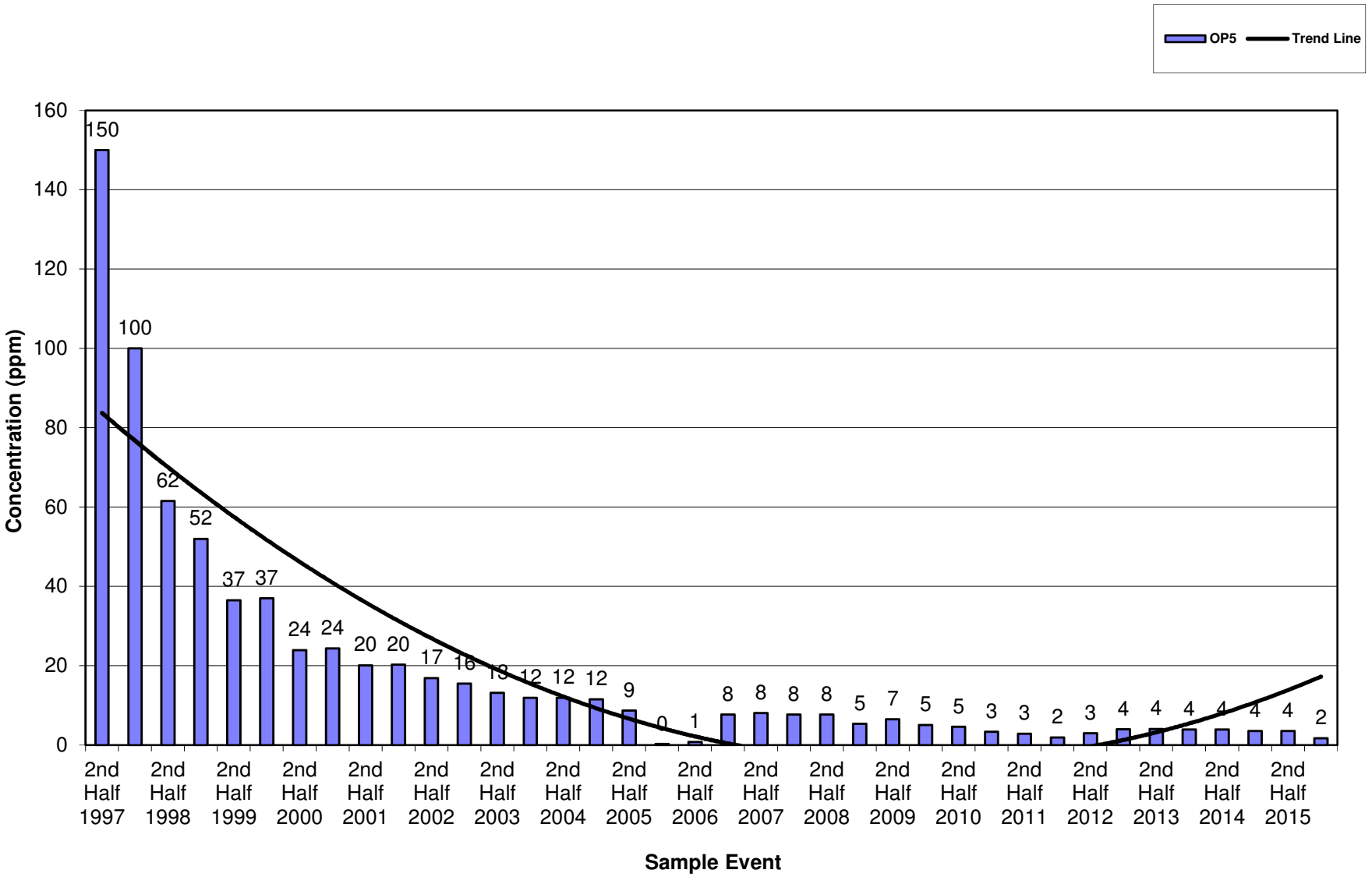


Figure 3-6
Total Dissolved Chromium Concentrations in Groundwater for OP-7

(Values between 1998 and 2001 are averaged over a six month period. Subsequent values represent a individual sample results. See Table 3-1)

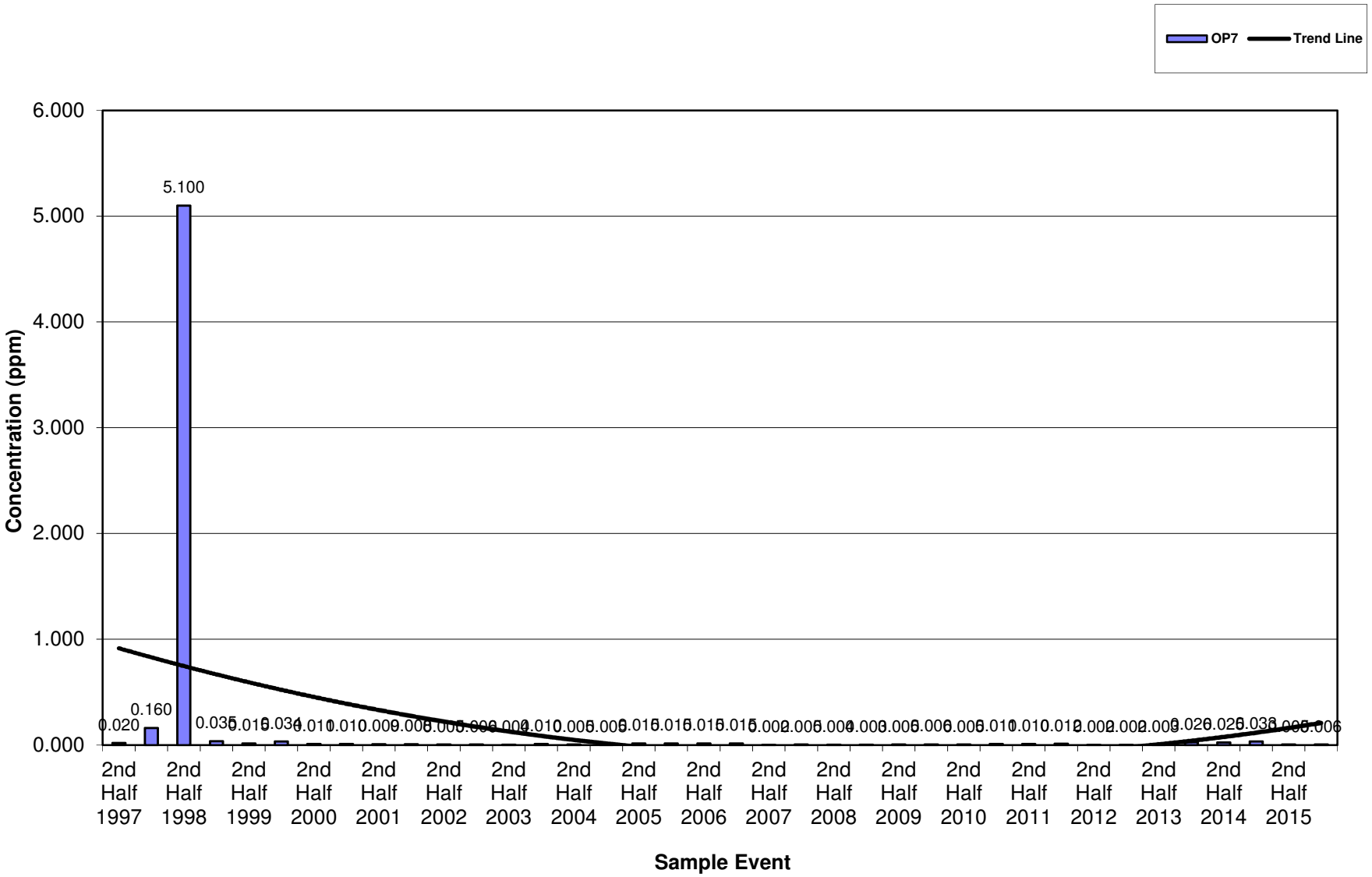


Figure 3-7
Total Dissolved Chromium Concentrations in Groundwater for OP-9

(Values between 1998 and 2001 are averaged over a six month period. Subsequent values represent a individual sample results. See Table 3-1)

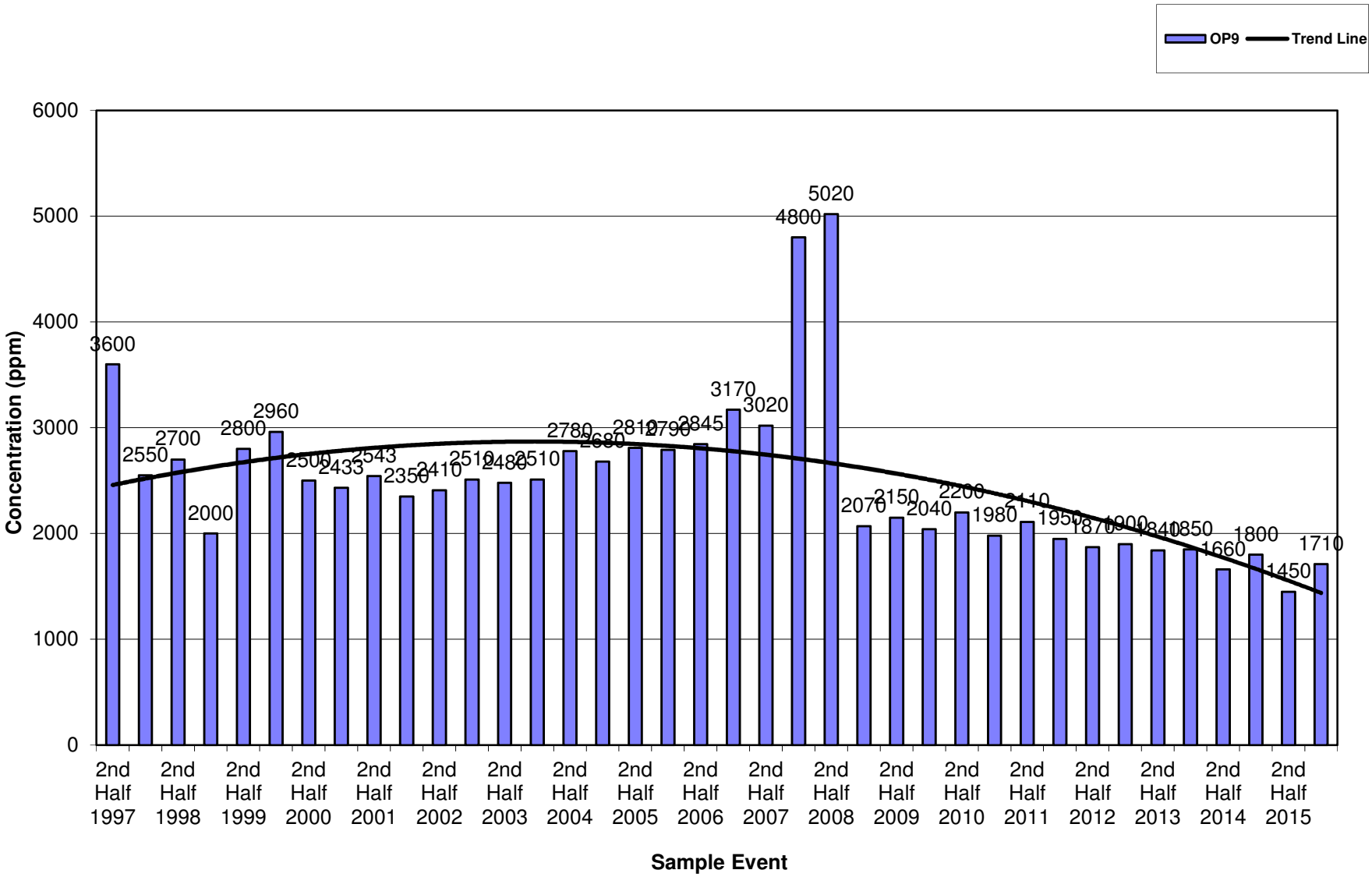


Figure 3-8
Total Dissolved Chromium Concentrations in Groundwater for OP- 2

(Values between 1998 and 2001 are averaged over a six month period. Subsequent values represent a individual sample results. See Table 3-1)

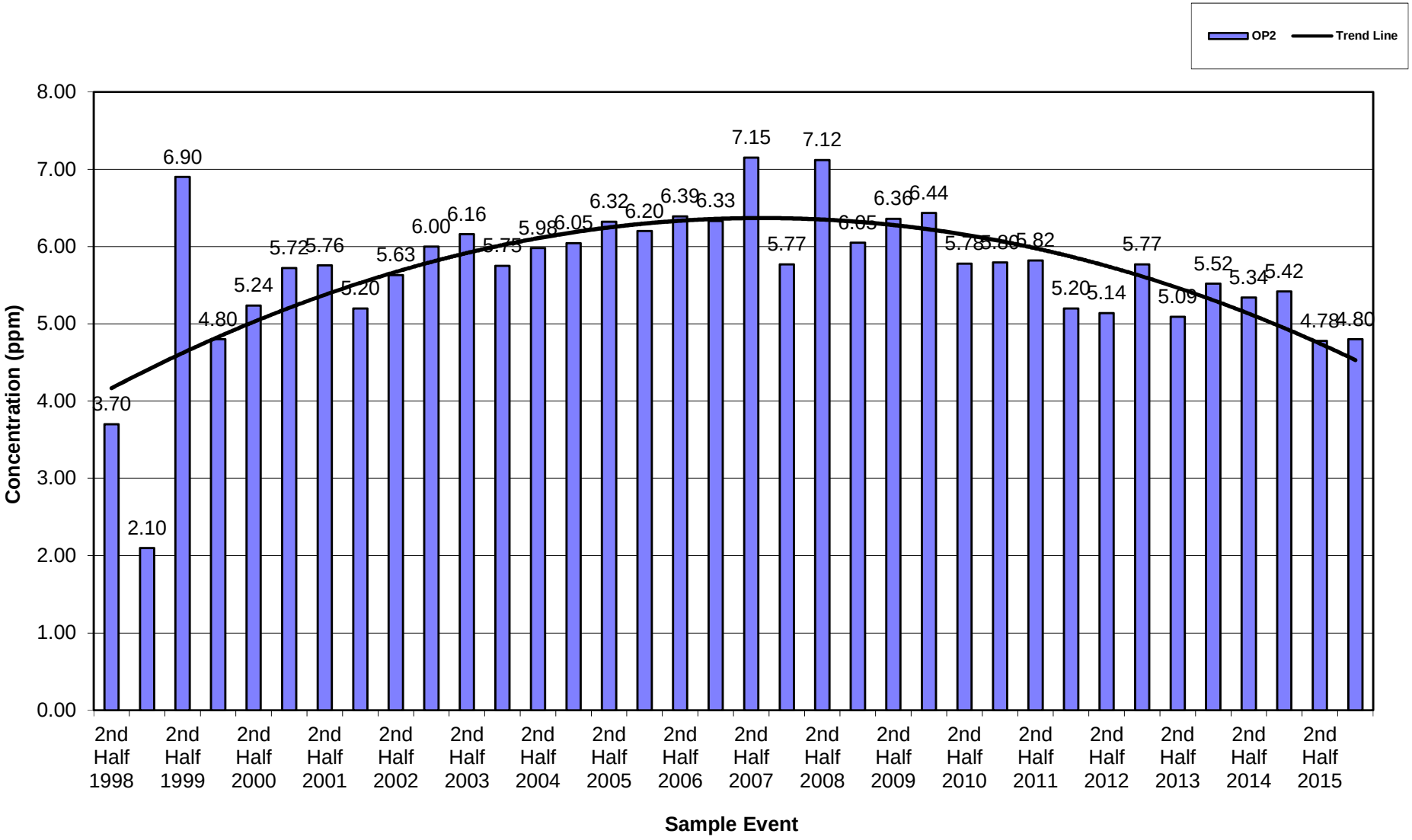


Figure 3-9
Total Dissolved Chromium Concentrations in Groundwater for OP-11

(Values between 1998 and 2001 are averaged over a six month period. Subsequent values represent a individual sample results. See Table 3-1)

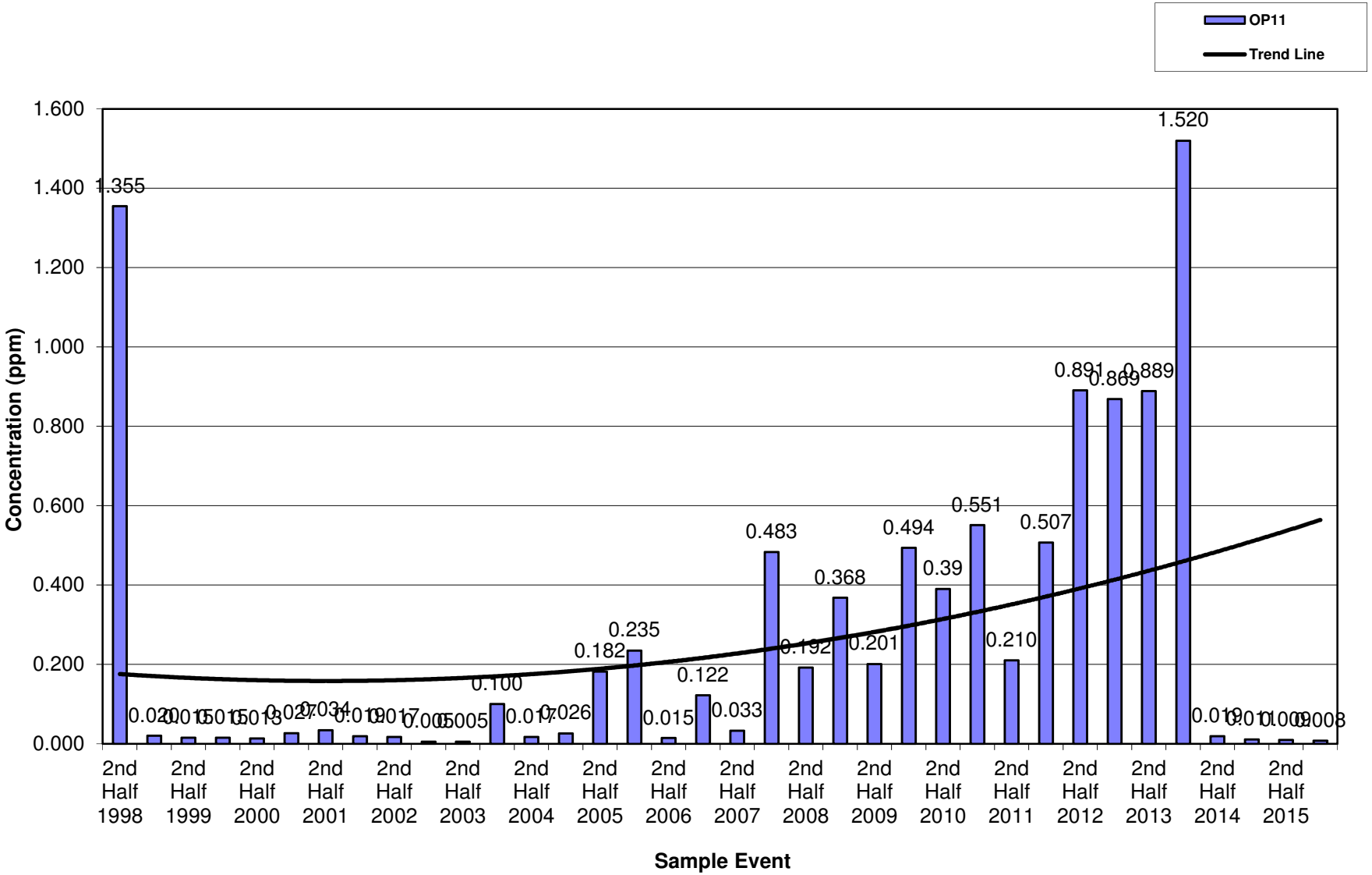


Figure 3-10
Total Dissolved Chromium Concentrations in Groundwater for NWM-27

(Values between 1998 and 2001 are averaged over a six month period. Subsequent values represent a individual sample results. See Table 3-1)

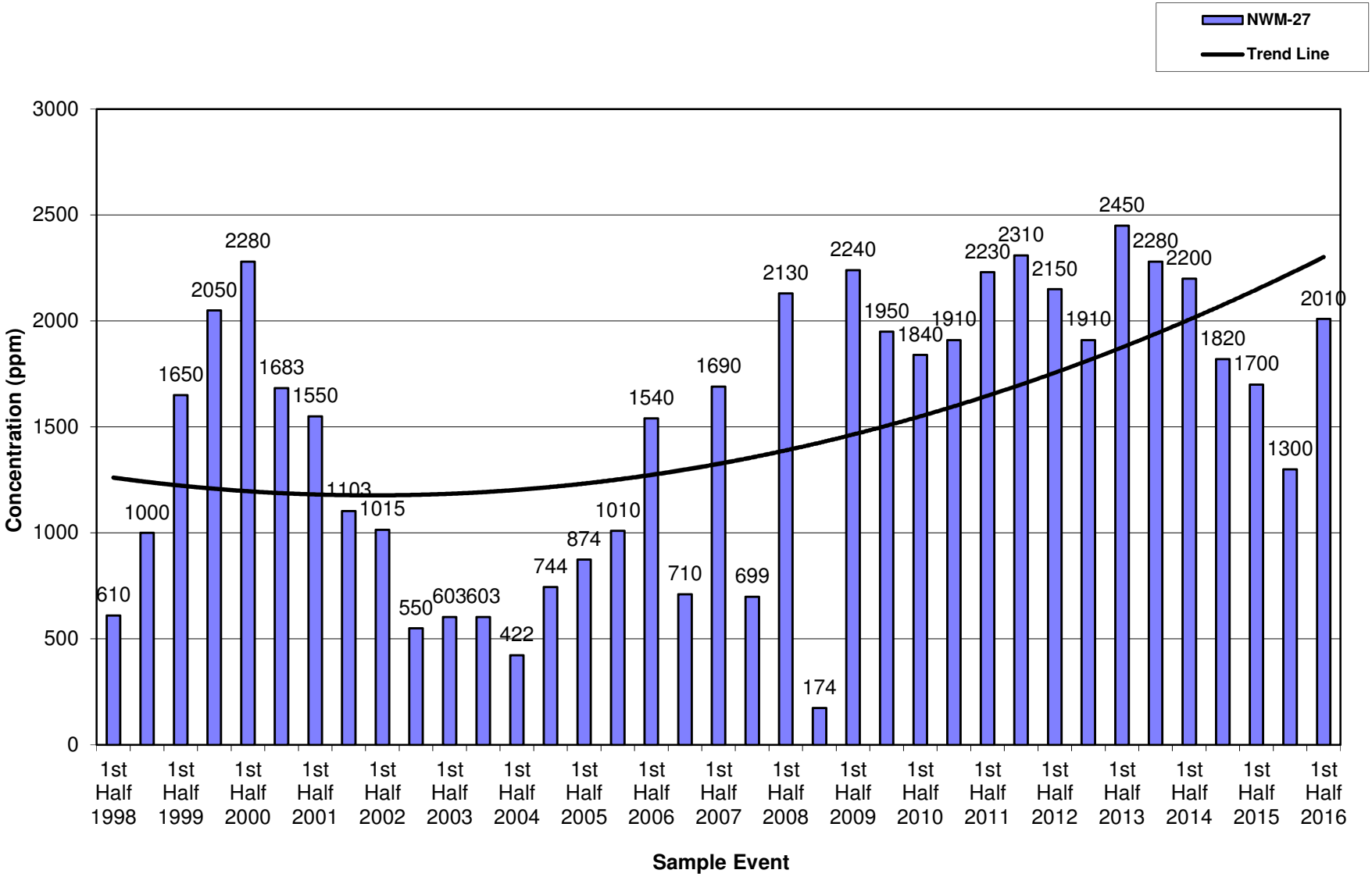


Figure 3-11
Total Dissolved Cyanide Concentrations in Groundwater OP-2

(Values between 1998 and 2001 are averaged over a six month period. Subsequent values represent a individual sample results. See Table 3-1)

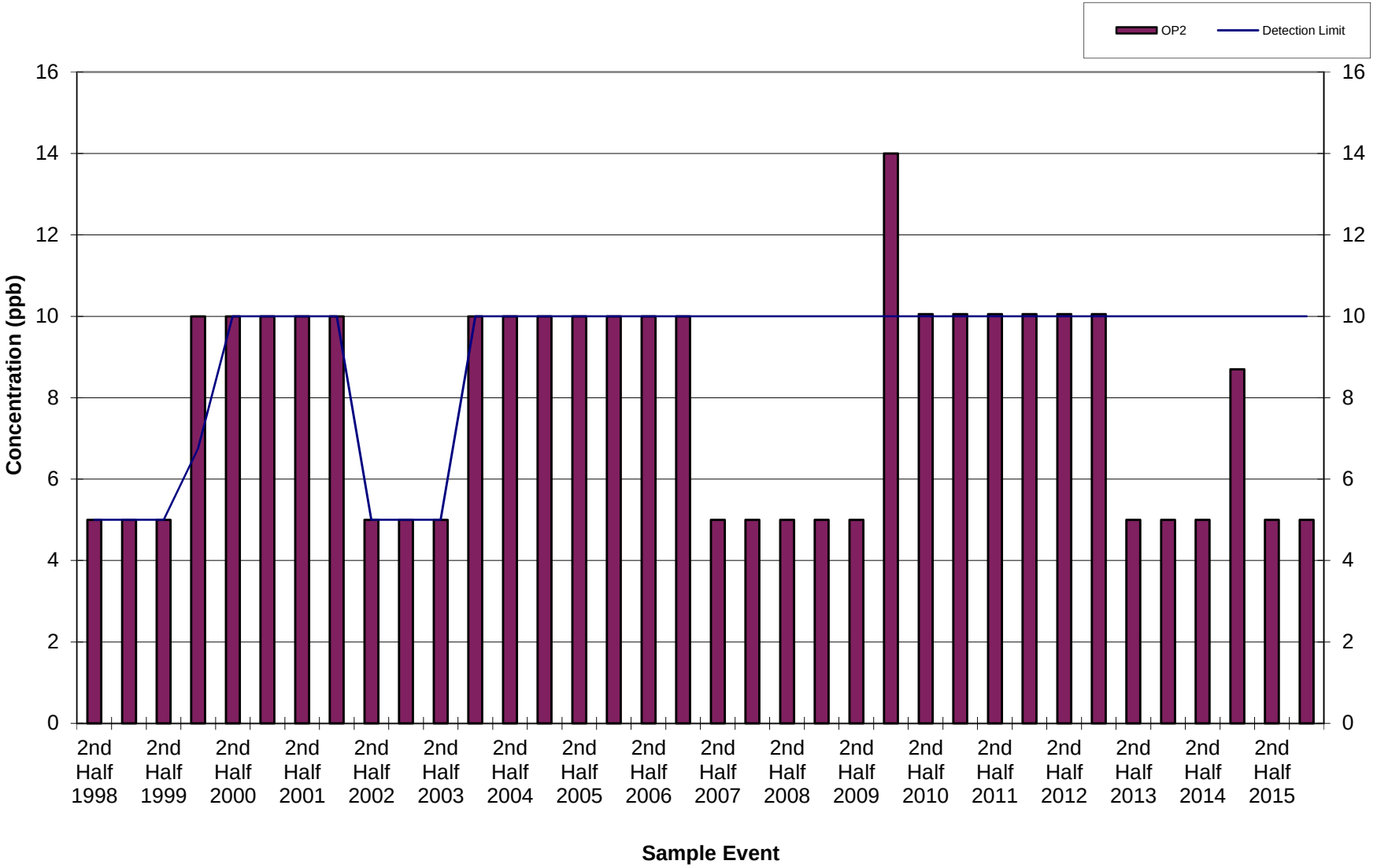
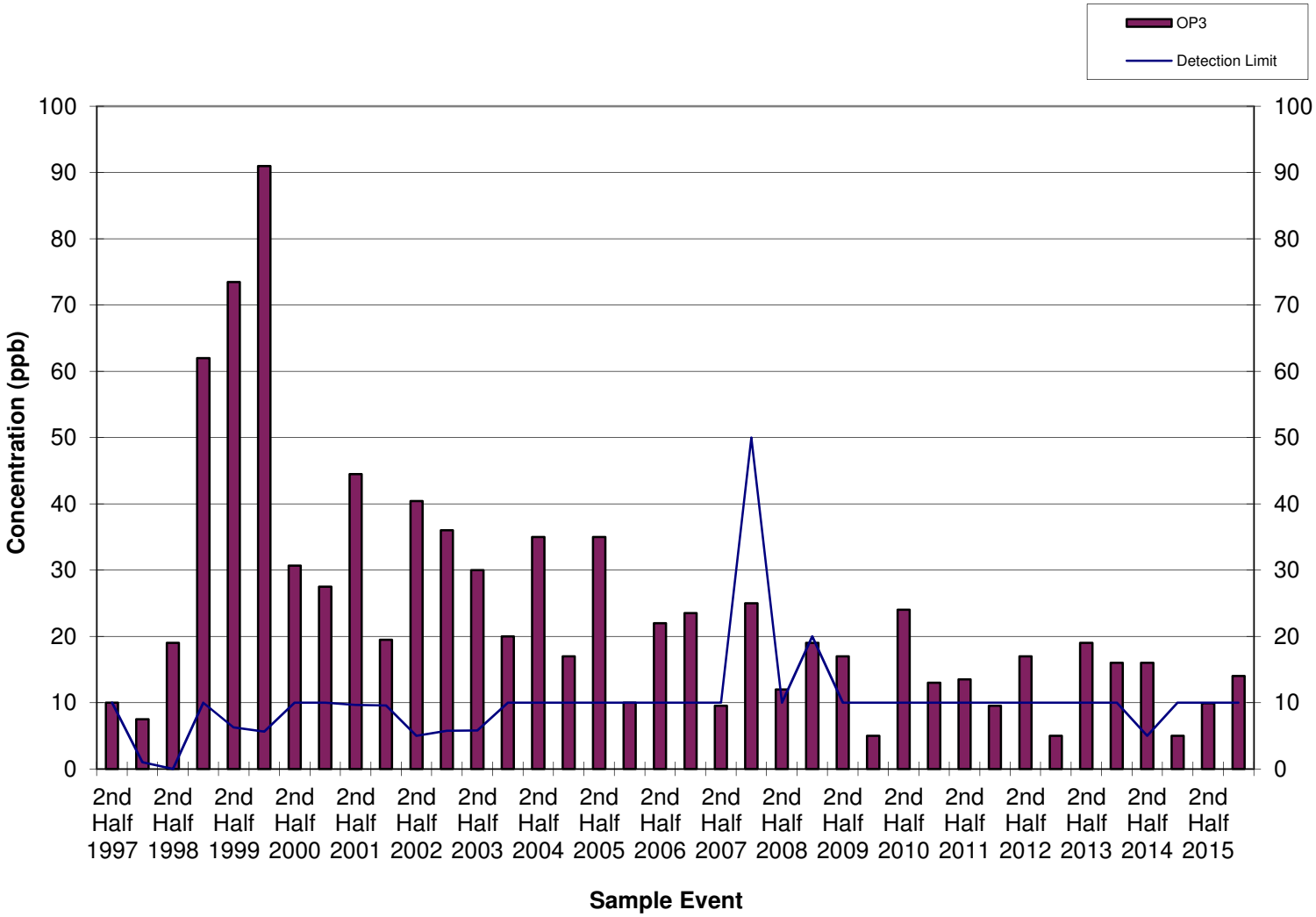


Figure 3-12
Total Dissolved Cyanide Concentrations in Groundwater OP-3
(Values between 1998 and 2001 are averaged over a six month period. Subsequent values represent a individual sample results. See Table 3-1)



SECTION 4

Drainage Layer Monitoring

4.1 Methodology

Section V, Paragraph 7(a) of the Consent Decree requires the promulgation of an SSMP to establish requirements to monitor the performance of the remedial action. Annual sampling of water passing though the drainage layer and infiltration trench is one of the methods used to evaluate this performance. Four perimeter locations, depicted in Figure 4-1, have been sampled for total chromium, filtered total chromium, and filtered total cyanide. As part of the Area 1, Phase 1 construction, one of the perimeter locations (SSMP4) was relocated, and an additional perimeter location (SSMP4A) was added. The relocated location and additional location were sampled during the April 8, 2015, sampling event. The depth to water in each sampling location is checked monthly to gauge the flow of water, if any, from the drainage layer into the sample point. Sample point SSSP1 is located at the end of a perforated pipe running within a toe drain along the landward perimeter of the site. Points SSMP2 and SSMP3 are located within an infiltration trench running along the harbor perimeter of the site. The other two locations, SSMP4 and SSMP4A, are located at the intersection of a pair of drain pipes located to the east and west of the Exelon Tower in a valley in the synthetic layers and the originally installed toe drain system. SSMP4 drains to the east around the site and out through SSMP1. SSMP4A connects to the original HDPE drain pipe located in the rip rap fill outboard of the hydraulic barrier.

Before sample collection begins, a volume of water is analyzed for temperature, dissolved oxygen, specific conductance, and redox potential. Three sample volumes are then withdrawn from the sample point using a peristaltic pump and dedicated tubing. The sampling time is recorded. Once the samples are collected, the appropriate samples are filtered; then all of the samples are preserved, placed on ice, and transferred to the laboratory using documented chain-of-custody procedures. The samples are analyzed for total chromium and total dissolved chromium by the laboratory using EPA SW-846 Method 6010B or for total dissolved cyanide using EPA SW-846 Method 9014, whichever method is stated on the chain-of-custody form for that particular sample. Field blanks, temperature blanks, and rinsate blanks are also collected.

MES performs all sampling. Lancaster Laboratories performs all analysis. Results received from the laboratory are entered into a database.

4.2 Current Quarter Results

Drainage layer samples were collected on May 23, 2016. The results from the event are attached to this report as Appendix C. Water elevations from each sample point, the tidal elevation when the water elevation was taken, and monthly rainfall totals are presented in Figure 4-2.

The validation report for the sampling event is included in Appendix D.

4.2.1 Chromium

The total chromium results for the current sample round, as well as historical results, are shown in Tables 4-1 through 4-5. With the exception of SSMP3, total chromium concentrations were elevated compared to samples taken prior to the beginning of site construction.

4.2.2 Dissolved Chromium

The total dissolved chromium results for the current sample round, as well as historical results, are shown in Tables 4-1 through 4-5. Dissolved chromium results were below the sample detection limit at

all locations except SSMP4 and SSMP4A. Concentrations above the method detection limit were reported for all SSMP sampling locations.

4.2.3 Cyanide

The total dissolved cyanide results, as well as historical results, for the sample points are shown in Tables 4-1 through 4-5. The total dissolved cyanide results were below the sample detection limit and were at or below the baseline results.

4.3 Trend Analysis

With the exception of the results from SSMP3, all SSMP sampling locations were either elevated or consistent with sampling from the 2015 drainage layer sampling. On March 23, 2016, a cleaning and inspection of SSMP4 was performed. The purpose of this cleaning and inspection was to remove residual concrete deposits discovered to be present as a result of site redevelopment. A follow-up monitoring plan for cleaning, inspecting and sampling of the drainage layer and sampling points will be prepared and implemented as part of post-construction activities. The results of any additional sampling will be reported in the corresponding reports.

Table 4-1

Drainage Layer Sampling Data SSMP1

Second Quarter 2016

Year	CR mg/L	CR (Filtered) Mg/L	Cyanide µg/l	Spec. Cond. ms/cm	pH S.U.	Temp. °C	D.O. mg/L	ORP mV
2016	0.0301	0.002	5	1.96	7.50	27.09	6.25	111
2015	0.0041	0.0013	5		6.46	9.55	4.85	206
2014	0.0027	0.0016	5	0.316	6.71	12.6	10.74	3
2013	0.0031	0.0018	5	0.75	6.98	21.19	5.14	146
2012	0.0046	0.0029	10	0.795	5.68	14.58	6.13	260
2011	0.0079	0.0034	5	0.901	6.62	19.7	0.37	9
2010	0.0061	0.0034	5	-	-	-	-	-
2009	0.0032	0.0095	5	0.704	-	13.5	8.95	-
2008	0.0289	0.0023	5	-	-	20	6.43	-
2007	0.0793	0.015	10	-	-	17.38	0	-
2006	0.0103	0.015	10	0.661	6.39	19.1	7.98	-
2005	0.0053	0.015	10	795	6.64	16.4	-	-
2004	0.01	0.01	10	1448	6.7	22.6	4.9	-
2003	0.0121	0.006	5	568	7.64	15.1	3.15	-
2002	0.008	0.008	10	0.63	7.16	11.1	9.26	-
2001	0.01	0.01	10	3.3	6.5	8.8	-	-
2000	0.011	0.01	10	-	-	-	-	-

Table 4-2

Drainage Layer Sampling Data SSMP2

Second Quarter 2016

Year	CR mg/L	CR (Filtered) mg/L	Cyanide µg/l	Spec. Cond. ms/cm	pH S.U.	Temp. °C	D.O. mg/L	ORP mV
2016	0.0439	0.002	5	1.64	7.90	25.47	4.53	18
2015	0.0038	0.0013	5	1.56	8.17	8.21	5.60	143
2014	0.0033	0.0017	5	1.35	6.93	13.43	9.64	-24
2013	0.0011	0.0011	5	1.20	6.90	21.65	3.86	78
2012	0.0028	0.0014	1	2.54	6.59	14.22	5.07	200
2011	0.0034	0.0034	5	2.01	6.5	20.1	0.88	34
2010	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-
2007	0.116	0.015	10	-	-	-	-	-
2006	0.015	0.015	10	20.1	2.59	19.4	7.84	-
2005	0.015	0.015	10	11360	7.27	18.3	-	-
2004	0.01	0.01	10	123.5	6.99	23.5	3.37	-
2003	0.005	0.005	5	360.8	7.92	15	5.16	-
2002	0.008	0.008	10	0.246	7.14	8.3	10.65	-
2001	0.01	0.01	10	66.4	7.23	6.7	-	-
2000	0.01	0.01	10	-	-	-	-	-

Table 4-3

Drainage Layer Sampling Data SSMP3

Second Quarter 2016

Year	CR mg/L	CR (Filtered) mg/L	Cyanide µg/l	Spec. Cond. ms/cm	pH S.U.	Temp. °C	D.O. mg/L	ORP mV
2016	0.0048	0.002	5	23.3	7.64	18.12	4.93	-9
2015	0.0049	0.0013	5	18.4	6.14	8.79	4.12	127
2014	0.0030	0.0020	5	19.3	6.69	10.98	7.30	-104
2013	0.0011	0.0012	5	18.9	7.00	22.54	8.05	-98
2012	0.0016	0.0019	10	13.8	7.14	14.79	8.82	167
2011	0.0034	0.0034	5	2.696	6.89	19.8	0.75	12
2010	0.0034	0.0034	5	-	-	-	-	-
2009	0.003	0.003	5	31.9	-	13.8	9.88	-
2008	0.0023	0.0023	5	-	-	19.1	3.26	-
2007	0.015	0.015	10	-	-	20.89	0	-
2006	0.015	0.015	10	12.9	6.71	20	4.11	-
2005	0.015	0.015	10	6460	6.35	19.5	-	-
2004	0.01	0.01	10	5750	7.45	23.8	4.9	-
2003	0.005	0.005	5	1919	7.38	15.1	3.35	-
2002	0.008	0.008	10	23.8	6.95	8.3	4.9	-
2001	0.01	0.01	10	23.55	7.21	6.8	-	-
2000	0.01	0.01	10	-	-	-	-	-

Table 4-4

Drainage Layer Sampling Data SSMP4(Relocated between 2014 and 2015)

Second Quarter 2016

Year	CR mg/L	CR (Filtered) mg/L	Cyanide µg	Spec. Cond. ms/cm	pH S.U.	Temp. °C	D.O. mg/L	ORP mV
2016	0.0169	0.0156	5	1.95	7.41	13.85	9.78	310
2015 [1]	0.0329	0.0173	5	0.793	8.82	9.50	5.64	85
2014	0.0033	0.0031	5	1.95	6.69	7.31	7.51	85
2013	0.0083	0.0069	5	1.83	6.51	20.05	8.64	218
2012	0.0106	0.0110	10	2.38	7.32	15.40	9.18	189
2011	0.0058	0.004	5	1.592	7.34	19.8	0.88	41
2010	0.0073	0.0069	5	-	-	-	-	-
2009	0.0093	0.0086	5	6.44	-	13.1	10.79	-
2008	0.0023	0.0023	5	-	-	19	3.1	-
2007	0.0049	0.0024	10	-	-	19.94	9.02	-
2006	0.015	0.015	10	1.46	7.19	18.7	5.82	-
2005	0.015	0.015	10	1215	7.01	19.1	-	-
2004	0.0043	0.0037	10	5756	7.44	21.1	6.14	-
2003	0.0031	0.0024	5	677	8.26	15	6.71	-
2002	0.008	0.008	10	1.62	7.3	9.7	10.27	-
2001	0.01	0.01	10	1376	7.78	7.2	-	-
2000	0.01	0.01	10	-	-	-	-	-

Note 1 – Sample was erroneously labelled SSMP4A rather than SSMP4 in the field

Table 4-5

Drainage Layer Sampling Data SSMP4A

Second Quarter 2016

Year	CR mg/L	CR (Filtered) mg/L	Cyanide µg/L	Spec. Cond. ms/cm	pH S.U.	Temp. °C	D.O. mg/L	ORP mV
2016	0.0458	0.0237	5	5.41	7.99	15.88	9.71	107
2015[1]	0.17	0.0354	5	0.793	8.64	9.31	5.99	62

Note 1 – This sample was labelled SSMP4 rather than SSMP4A in the field

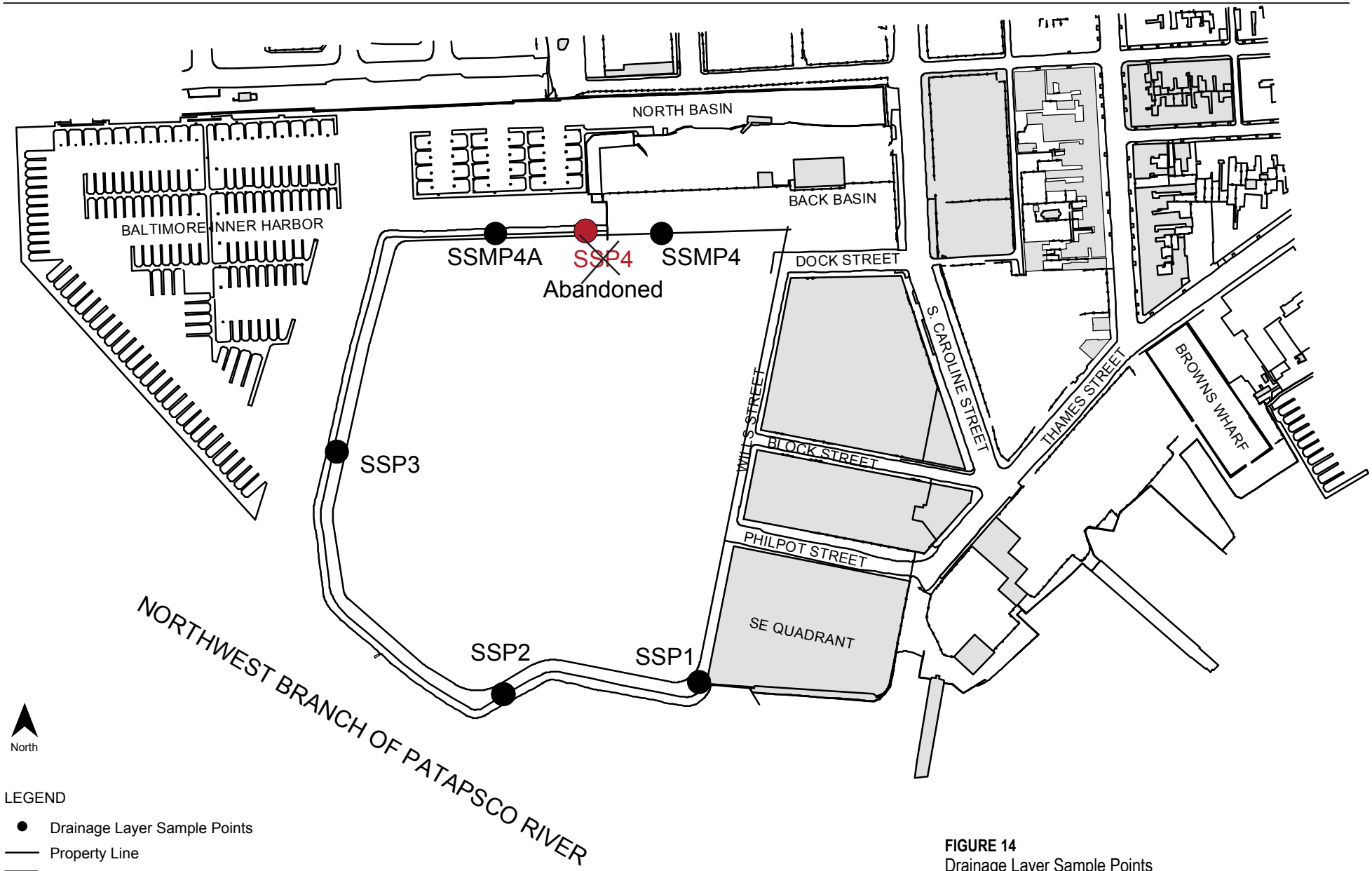
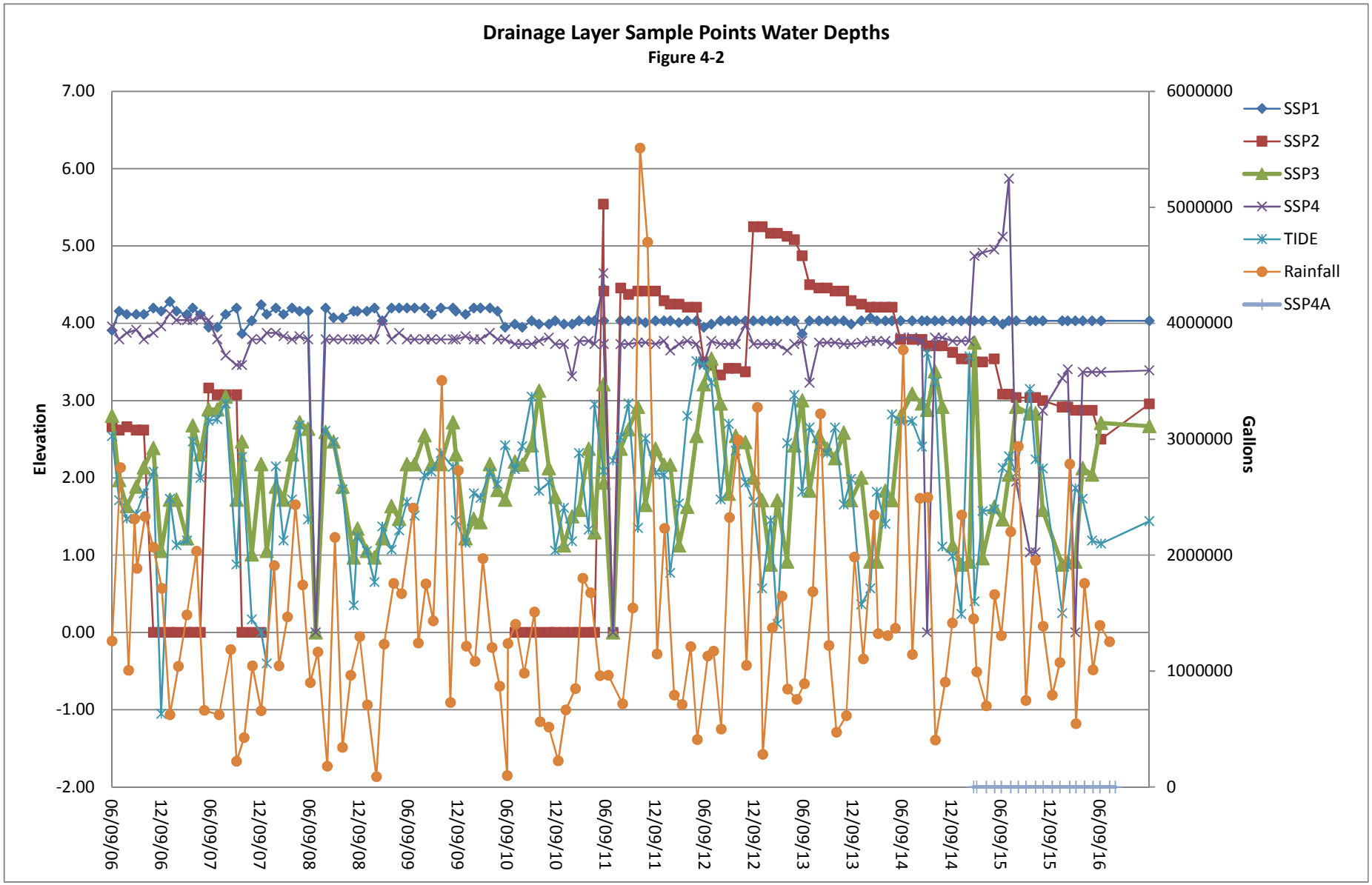


FIGURE 14
Drainage Layer Sample Points
Environmental Media Monitoring

CH2MHILL

Drainage Layer Sample Points Water Depths

Figure 4-2



SECTION 5

Air Monitoring Methodology and Reporting

5.1 Methodology

Per Section 1.2.1 of the Environmental Media Monitoring Plan, written in response to Exhibit 2 of the Consent Decree, Honeywell is required to prepare and implement an air emissions monitoring plan and submit the results on a quarterly basis in quarters during which dismantlement, corrective measures implementation, or any intrusive activity occurs after the completion of the installation of the remedial measure occur. The air monitoring program is intended to provide information on the degree of exposure to contaminants, if any, past the boundary of the defined intrusive limit of construction.

On March 21, 2014, a project specific air monitoring plan was accepted by the USEPA and MDE updating the requirements for both work zone and perimeter air monitoring to occur during Area 1/Phase 1 construction. On March 31, 2014, an action level for total dust for work zone monitoring was established at 68 $\mu g/m^3$, and a perimeter action level was set at 150 $\mu g/m^3$. On May 21, 2014, the Preconstruction Air Monitoring report which established a perimeter hexavalent chromium action level of 0.178 ng/m^3 was accepted.

Total dust levels are monitored using a DustTrak model 8534 real-time dust monitor which is zeroed and calibrated daily on days when monitoring is to occur. Hexavalent chromium levels are monitored using Modified CARB Method 039. This method defines specific types of filters, pumps, and calibration procedures to be used. The Construction Air Monitoring Plan defines the specific field documentation to be collected during air sampler setup and sample collection.

The information collected during the work zone and perimeter air monitoring was used to evaluate the effectiveness of the control of airborne emissions during intrusive activities, and to modify work practices when monitoring results exceed the established action level. The results from onsite real time dust monitors and those received from the laboratory are entered into an online database. Reporting of air monitoring results is provided by ERM pursuant to Section 5 of the Construction Air Monitoring Plan approved by EPA and MDE.

Air monitoring for the Exelon Tower construction ceased on May 15, 2015 with the closure of intrusive excavations. On January 11 2016, non-intrusive air monitoring began for the Point Street Apartments construction, located directly north of the Morgan Stanley building, at the southeast side of the property. Air monitoring for all nonintrusive construction was performed by GTA (Geo-Technology Associates) and is not included in this report but will be included in the Construction Completion Report.

Starting March 11, 2016, and ending on April 11, 2016, ERM provided air monitoring in accordance with the Revised Air Monitoring plan[1] approved by EPA and MDE for all intrusive work associated with sheet pile extension operations along the east side of the hydraulic barrier, south of the Exelon Tower Plaza Garage.

Additional air monitoring will begin with the start of the next phase of development which includes the Wills Wharf building, slated to begin in the fall of 2016.

[1] Air monitoring was performed in accordance with ERM's 16 December 2015 memorandum to the Beatty Development Group (BDG). The United States Environmental Protection Agency (EPA) and the Maryland Department of the Environment (MDE) approved the Work Plan in separate emails dated 23 December 2015.

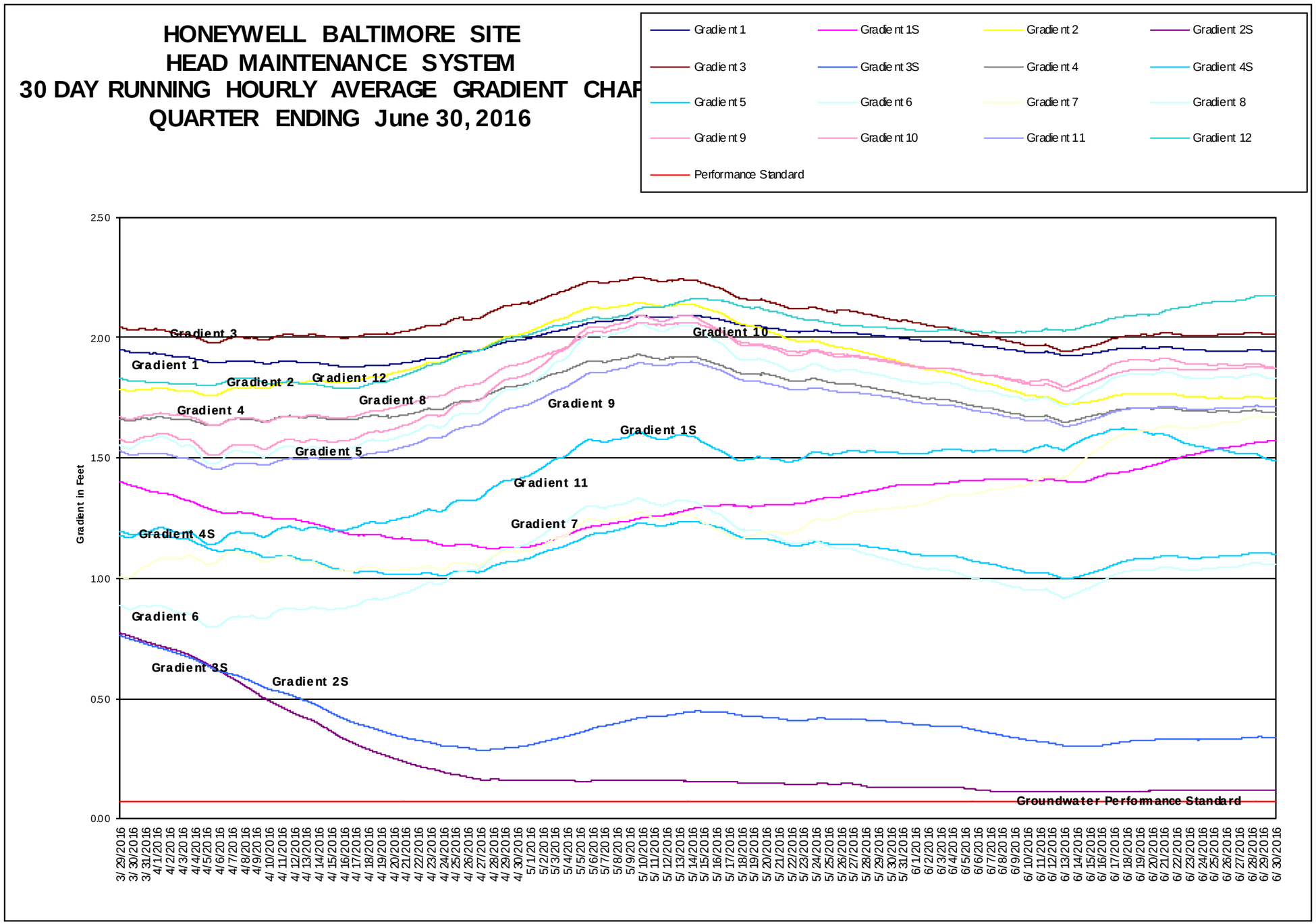
5.2 Current Quarter Results

Starting March 11, 2016, and ending on April 11, 2016, ERM performed air monitoring in accordance with the Revised Air Monitoring plan approved by EPA and MDE for all intrusive work associated with sheet pile extension operations along the east side of the hydraulic barrier, south of the Exelon Tower Plaza. Samples of particles in the air were collected from two fixed monitoring stations located approximately 100 feet east of the work area during each day of active work that required sampling. All of the total particulate and hexavalent chromium results were below the action levels established for the Area 1/Phase 1 development.

Appendix A
Surface Water Sampling Program Data

Appendix A-1
Raw Laboratory Data—April 2016

HONEYWELL BALTIMORE SITE
HEAD MAINTENANCE SYSTEM
30 DAY RUNNING HOURLY AVERAGE GRADIENT CHAR
QUARTER ENDING June 30, 2016



Appendix A-2
Chain-of-Custody Records—April 2016

10651 / 1647342 / 8318623-44

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425
(717) 656-2300

Honeywell — Chain Of Custody / Analysis Request

AESI Ref: 42461.4982
COC#: 30905-1104

Sampling Co.:	Maryland Environmental Service	Privileged & Confidential	N	Site Name:	Baltimore	Phase:	Lab Proj # (SDG):
Client Contact: (name, co., address)		EDD To:	matthew.gillis@ch2m.com	Location of Site:	BALTIMORE, MD	Sampling Program	Surface Water Sampling — Lab ID: LLI
Christopher French		Sampler:	Doug Griffith, Tim Maynard, Lien Vu				Site ID: BALTIMO
115 Tabor Rd		PO #	4500013806	Preservative	3		Lab Job #
Morris Plains, NJ 07950		Analysis Turnaround Time (TAT):	14				Authorized User: Honeyw
Preliminary Data To	matthew.gillis@ch2m.com; amy.klopper@critigen.com; bernice.kidd@ch2m.com;	Consultant	CH2M				Text & Excel File Drive / Excel & Text Order
Sample Receipt Acknowledgement To	matthew.gillis@ch2m.com; amy.klopper@critigen.com; bernice.kidd@ch2m.com;	Full Report TAT:	28				
Hard Copy To	Amy Klopper						
Invoice To:	Christopher French						

	Location ID	Start Depth (ft)	End Depth (ft)	Field Sample ID	Sample Date	Sample Time	Sample Type	Sample Matrix	Sample Purpose	# of Cont.	Composite/Grab	Field Filtered Sample ?	SW6010 Chromium	Sampling Method (code)	Lab Samp Number
											Units		ppb		
1	3T	7.33	1.0	30905-SW3T-040416	4/4/2016	10:01	W-SW	WATER	REG	1	grab	Y	X		
2	3M	—	—	30905-SW3M-040416	4/4/2016	—	W-SW	WATER	REG		grab				
3	3B	7.33	6.33	30905-SW3B-040416	4/4/2016	10:03	W-SW	WATER	REG	1	grab	Y	X		
4	4T	4.42	1.0	30905-SW4T-040416	4/4/2016	10:06	W-SW	WATER	REG	1	grab	Y	X		
5	4M	—	—	30905-SW4M-040416	4/4/2016	—	W-SW	WATER	REG		grab				
6	4B	4.42	3.42	30905-SW4B-040416	4/4/2016	10:08	W-SW	WATER	REG	1	grab	Y	X		
7	5T	4.33	1.0	30905-SW5T-040416	4/4/2016	10:09	W-SW	WATER	REG	1	grab	Y	X		
8	5M	—	—	30905-SW5M-040416	4/4/2016	—	W-SW	WATER	REG		grab				
9	5B	4.33	3.33	30905-SW5B-040416	4/4/2016	10:10	W-SW	WATER	REG	1	grab	Y	X		
10	6T	7.0	1.0	30905-SW6T-040416	4/4/2016	10:12	W-SW	WATER	REG	1	grab	Y	X		
11	6M	—	—	30905-SW6M-040416	4/4/2016	—	W-SW	WATER	REG		grab				
12	6B	7.0	6.0	30905-SW6B-040416	4/4/2016	10:13	W-SW	WATER	REG	1	grab	Y	X		

Relinquished by	Company: MES	Received by	Company: CH2M	Condition		Custody Seals Intact	
	Date/Time: 4/4/16 15:27		Date/Time: 4/4/16 1527	Cooler Temp.			
Relinquished by	Company: CH2M	Received by	Company:	Condition		Custody Seals Intact	
	Date/Time: 4/5/16 1324		Date/Time: 4/5/16 13:24	Cooler Temp.			

Preservatives: (Other; Specify):

0 (none); 1 (4 Deg C); 2 (HCl pH<2); 3 (HNO3 pH<2); 4 (H2SO4 pH<2); 5 (NaOH pH>12); 6 (NaOH, Zn Acetate); 7 (H2SO4 (pH<2), 4 Deg C)); 8 (HCl pH<2); 9 (HCl 4 Deg C); 10 (HNC (pH<2), 4Deg C); 11 (4C NaOH (pH>12) & Ascorbic Acid); 12 (4C H2SO4 (pH<2) & Na2S2O3); 13 (Zn Acetate); sp (special instructions)

Rel. 4/5/16 17:31 4/5/16 1735

10651 | 1647342 | 8318623-44

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425
(717) 656-2300

Honeywell — Chain Of Custody / Analysis Request

AESI Ref: 42461.499
COC#: 30905-110

Sampling Co.:	Maryland Environmental Service	Privileged & Confidential: N	Site Name: Baltimore
Client Contact: (name, co., address)		EDD To: matthew.gillis@ch2m.com	Location of Site: BALTIMORE, MD
Christopher French		Sampler: Doug Griffith, Tim Maynard, Lien Vu	Phase:
115 Tabor Rd		PO #: 4500013806	Sampling Program: Surface Water Sampling
Morris Plains, NJ 07950		Analysis Turnaround Time (TAT): 14	Preservative: 3
Preliminary Data To: matthew.gillis@ch2m.com; amy.klopper@arcadis.com; bernice.kidd@ch2m.com		Consultant: CH2M	Lab Proj # (SDG):
Sample Receipt Acknowledgement To: matthew.gillis@ch2m.com; amy.klopper@arcadis.com; bernice.kidd@ch2m.com			Lab ID: LLI
Hard Copy To: Amy Klopper		Full Report TAT: 28	Site ID: BALTIMO
Invoice To: Christopher French			Lab Job #:
			Authorized User: Honeyw
			Text & Excel File Drive: Excel & Text Order

	Location ID	Start Depth (ft)	End Depth (ft)	Field Sample ID	Sample Date	Sample Time	Sample Type	Sample Matrix	Sample Purpose	# of Cont.	Composite/Grab	Field Filtered Sample ?	SW6010 Chromium	Sampling Method (code)	Lab Samp Numbers
											Units		ug/L		
1	7T	7.67	1.0	30905-SW7T-040416	4/4/2016	10:15	W-SW	WATER	REG	1	grab	Y	X		
2	7M	—	—	30905-SW7M-040416	4/4/2016	—	W-SW	WATER	REG		grab				
3	7B	7.67	6.67	30905-SW7B-040416	4/4/2016	10:16	W-SW	WATER	REG	1	grab	Y	X		
4	8T	4.83	1.0	30905-SW8T-040416	4/4/2016	10:25	W-SW	WATER	REG	1	grab	Y	X		
5	8M	—	—	30905-SW8M-040416	4/4/2016	—	W-SW	WATER	REG		grab				
6	8B	4.83	3.83	30905-SW8B-040416	4/4/2016	10:26	W-SW	WATER	REG	1	grab	Y	X		
7	9T	6.17	1.0	30905-SW9T-040416	4/4/2016	10:28	W-SW	WATER	REG	1	grab	Y	X		
8	9M	—	—	30905-SW9M-040416	4/4/2016	—	W-SW	WATER	REG		grab				
9	9B	6.17	5.17	30905-SW9B-040416	4/4/2016	10:30	W-SW	WATER	REG	1	grab	Y	X		
10	10T	5.67	1.0	30905-SW10T-040416	4/4/2016	10:37	W-SW	WATER	REG	1	grab	Y	X		
11	10M	—	—	30905-SW10M-040416	4/4/2016	—	W-SW	WATER	REG		grab				
12	10B	5.67	4.67	30905-SW10B-040416	4/4/2016	10:41	W-SW	WATER	REG	1	grab	Y	X		

Relinquished by	Company: MES	Received by	Company: CH2M	Condition		Custody Seals Intact	
	Date/Time: 4/4/16 15:27		Date/Time: 4/4/16 1527	Cooler Temp.			
Relinquished by	Company: CH2M	Received by	Company:	Condition		Custody Seals Intact	
	Date/Time: 4-5-16 1328		Date/Time: 4/5/16 1:5	Cooler Temp.			
Preservatives: (Other; Specify):		0 (none); 1 (4 Deg C); 2 (HCl pH<2); 3 (HNO3 pH<2); 4 (H2SO4 pH<2); 5 (NaOH pH>12); 6 (NaOH, Zn Acetate); 7 (H2SO4 (pH<2), 4 Deg C)); 8 (HCl pH<2); 9 (HCl 4 Deg C); 10 (HNO3 (pH<2), 4Deg C); 11 (4C NaOH (pH>12) & Ascorbic Acid); 12 (4C H2SO4 (pH<2) & Na2S2O3); 13 (Zn Acetate); sp (special instructions)					

4/5/16 17:15

4/5/16 1735

10651 / 1647343 / 8318645-67

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425
(717) 656-2300

Honeywell — Chain Of Custody / Analysis Request

AESI Ref: 42461.500
COC#: 30905-110

Privileged & Confidential	N	Site Name:	Baltimore
EDD To:	matthew.gillis@ch2m.com	Location of Site:	BALTIMORE, MD
Sampler:	Doug Griffith, Tim Maynard, Lien Vu	Phase:	
PO #	4500013806	Sampling Program	Surface Water Sampling
Analysis Turnaround Time (TAT):	14	Lab Proj # (SDG):	
Consultant	CH2M	Lab ID	LLI
Preservative	3	Site ID	BALTIMC
Full Report TAT:	28	Lab Job #	
		Authorized User:	Honeyw

Sampling Co.: Maryland Environmental Service

Client Contact: (name, co., address)
Christopher French
115 Tabor Rd
Morris Plains, NJ 07950

Preliminary Data To	matthew.gillis@ch2m.com; amy.klopper@critigen.com; bernice.kidd@ch2m.com;
Sample Receipt Acknowledgement To	matthew.gillis@ch2m.com; amy.klopper@critigen.com; bernice.kidd@ch2m.com;
Hard Copy To	Amy Klopper
Invoice To:	Christopher French

Text & Excel File Drive | Excel & Tex Order

	Sample Identification				Sample Date	Sample Time	Sample Type	Sample Matrix	Sample Purpose	# of Cont.	Composite/Grab	Field Filtered Sample ?	SW6010 Chromium	Sampling Method (code)	Lab Sam Number
	Location ID	Start Depth (ft)	End Depth (ft)	Field Sample ID							Units				
1	11T	7.50	1.0	30905-SW11T-040416	4/4/2016	10:42	W-SW	WATER	REG	1	grab	Y	X		
2	11M	—	—	30905-SW11M-040416	4/4/2016	—	W-SW	WATER	REG		grab				
3	11B	7.50	6.50	30905-SW11B-040416	4/4/2016	10:43	W-SW	WATER	REG	1	grab	Y	X		
4	12T	4.0	1.0	30905-SW12T-040416	4/4/2016	10:46	W-SW	WATER	REG	1	grab	Y	X		
5	12M	—	—	30905-SW12M-040416	4/4/2016	—	W-SW	WATER	REG		grab				
6	12B	4.0	3.0	30905-SW12B-040416	4/4/2016	10:47	W-SW	WATER	REG	1	grab	Y	X		
7	13T	3.33	1.0	30905-SW13T-040416	4/4/2016	10:48	W-SW	WATER	REG	1	grab	Y	X		
8	13M	—	—	30905-SW13M-040416	4/4/2016	—	W-SW	WATER	REG		grab				
9	13B	3.33	2.33	30905-SW13B-040416	4/4/2016	10:49	W-SW	WATER	REG	1	grab	Y	X		
10	14T	7.17	1.0	30905-SW14T-040416	4/4/2016	10:51	W-SW	WATER	REG	1	grab	Y	X		
11	14M	—	—	30905-SW14M-040416	4/4/2016	—	W-SW	WATER	REG		grab				
12	14B	7.17	6.17	30905-SW14B-040416	4/4/2016	10:52	W-SW	WATER	REG	1	grab	Y	X		

Relinquished by	Company: MES	Received by	Company: CH2M	Condition		Custody Seals Intact	
[signature]	Date/Time: 4/4/16 15:27	[signature]	Date/Time: 4/4/16 1527	Cooler Temp.			
Relinquished by	Company: CH2M	Received by	Company	Condition		Custody Seals Intact	
Matt Gillis	Date/Time: 4/5/16 1324	[signature]	Date/Time: 4/5/16 1324	Cooler Temp.			

Preservatives: (Other; Specify)

0 (none); 1 (4 Deg C); 2 (HCl pH<2); 3 (HNO3 pH<2); 4 (H2SO4 pH<2); 5 (NaOH pH>12); 6 (NaOH, Zn Acetate); 7 (H2SO4 (pH<2), 4 Deg C)); 8 (HCl pH<2); 9 (HCl 4 Deg C); 10 (HN((pH<2), 4Deg C); 11 (4C NaOH (pH>12) & Ascorbic Acid); 12 (4C H2SO4 (pH<2) & Na2S2O3); 13 (Zn Acetate); sp (special instructions)

Rel by 4/5/16 17:30

4/5/16 1735

10651 | 1647343 | 8318645-67

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425
(717) 656-2300

Honeywell — Chain Of Custody / Analysis Request

AESI Ref: 42461.501
COC#: 30905-1-10

Sampling Co.:	Maryland Environmental Service	Privileged & Confidential: N	Site Name: Baltimore; Phase:
Client Contact: (name, co., address)		EDD To: matthew.gillis@ch2m.com	Location of Site: BALTIMORE, MD; Sampling Program: Surface Water Sampling
Christopher French		Sampler: Doug Griffith, Tim Maynard, Lien Vu	Lab Proj # (SDG):
115 Tabor Rd		PO # 4500013806	Lab ID: LLI
Morris Plains, NJ 07950		Analysis Turnaround Time (TAT): 14	Site ID: BALTIMO
Preliminary Data To	matthew.gillis@ch2m.com; amy.klopper@critigen.com; bernice.kidd@ch2m.com;	Consultant: CH2M	Lab Job #
Sample Receipt Acknowledgement To	matthew.gillis@ch2m.com; amy.klopper@critigen.com; bernice.kidd@ch2m.com;		Authorized User: Honeyw
Hard Copy To	Amy Klopper	Full Report TAT: 28	Text & Excel File Drive: Excel & Tox Order
Invoice To:	Christopher French		

Preservative: 3

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	Sample Identification				Sample Date	Sample Time	Sample Type	Sample Matrix	Sample Purpose	# of Cont.	Composite/Grab	Field Filtered Sample ?	SW6010 Chromium	Sampling Method (code)	Lab Sam Numbe
	Location ID	Start Depth (ft)	End Depth (ft)	Field Sample ID							Units				
1	15T	6.58	1.0	30905-SW15T-040416	4/4/2016	10:55	W-SW	WATER	REG	1	grab	Y	X		
2	15M	—	—	30905-SW15M-040416	4/4/2016	—	W-SW	WATER	REG		grab				
3	15B	6.58	5.58	30905-SW15B-040416	4/4/2016	10:56	W-SW	WATER	REG	1	grab	Y	X		
4	16T	7.33	1.0	30905-SW16T-040416	4/4/2016	10:58	W-SW	WATER	REG	1	grab	Y	X		
5	16M	—	—	30905-SW16M-040416	4/4/2016	—	W-SW	WATER	REG		grab	Y			
6	16B	7.33	6.33	30905-SW16B-040416	4/4/2016	10:59	W-SW	WATER	REG	1	grab	Y	X		
7	17T	6.83	1.0	30905-SW17T-040416	4/4/2016	11:01	W-SW	WATER	REG	1	grab	Y	X		
8	17M	—	—	30905-SW17M-040416	4/4/2016	—	W-SW	WATER	REG		grab				
9	17B	6.83	5.83	30905-SW17B-040416	4/4/2016	11:02	W-SW	WATER	REG	1	grab	Y	X		
10	18T	10.83	1.0	30905-SW18T-040416	4/4/2016	11:13	W-SW	WATER	REG	1	grab	Y	X		
11	18M	10.83	5.42	30905-SW18M-040416	4/4/2016	11:15	W-STW	WATER	REG		grab				
12	18B	10.83	9.83	30905-SW18B-040416	4/4/2016	11:16	W-SW	WATER	REG	1	grab	Y	X		

Relinquished by	Company: MES	Received by	Company: GLS-M	Condition		Custody Seals Intact	
	Date/Time: 4/4/16 15:27		Date/Time: 4/4/16 1527	Cooler Temp.			
Relinquished by: Ruth Gillis	Company: CH2M	Received by	Company	Condition		Custody Seals Intact	
	Date/Time: 4-5-16 1328		Date/Time: 4/5/16 13:30	Cooler Temp.			

Preservatives: (Other; Specify):

0 (none); 1 (4 Deg C); 2 (HCl pH<2); 3 (HNO3 pH<2); 4 (H2SO4 pH<2); 5 (NaOH pH>12); 6 (NaOH, Zn Acetate); 7 (H2SO4 (pH<2), 4 Deg C)); 8 (HCl pH<2); 9 (HCl 4 Deg C); 10 (HN (pH<2), 4Deg C); 11 (4C NaOH (pH>12) & Ascorbic Acid); 12 (4C H2SO4 (pH<2) & Na2S2O3); 13 (Zn Acetate); sp (special instructions)

Rel. 4/5/16 17:27

Rec'd 4/5/16 1735

10651 | 1647344 / 8318668-85

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425
(717) 656-2300

Honeywell — Chain Of Custody / Analysis Request

AESI Ref: 42461.503
COC#: 30905-110

Sampling Co.:	Maryland Environmental Service
Client Contact: (name, co., address)	Christopher French 115 Tabor Rd Morris Plains, NJ 07950
Preliminary Data To	matthew.gillis@ch2m.com; amy.klopper@critigen.com; bernice.kidd@ch2m.com;
Sample Receipt Acknowledgement To	matthew.gillis@ch2m.com; amy.klopper@critigen.com; bernice.kidd@ch2m.com;
Hard Copy To	Honeywell; 1000 Wills Street; Baltimore, MD 21231
Invoice To:	Christopher French

Privileged & Confidential	N
EDD To:	matthew.gillis@ch2m.com
Sampler:	Doug Griffith, Tim Maynard, Lien Vu
PO #	4500013806
Analysis Turnaround Time (TAT):	14
Consultant	CH2M
Full Report TAT:	28

Site Name:	Baltimore
Location of Site:	BALTIMORE, MD
Phase:	
Sampling Program	Surface Water Sampling
Preservative	3
Lab Proj # (SDG):	
Lab ID	LLI
Site ID	BALTIMC
Lab Job #	
Authorized User:	Honeyw
Text & Excel File Drive	Excel & Tex Order

	Sample Identification				Sample Date	Sample Time	Sample Type	Sample Matrix	Sample Purpose	# of Cont.	Composite/Grab	Field Filtered Sample ?	SW6010 Chromium	Sampling Method (code)	Lab Samp Number
	Location ID	Start Depth (ft)	End Depth (ft)	Field Sample ID							Units				
1	19T	6.0	1.0	30905-SW19T-040416	4/4/2016	11:18	W-SW	WATER	REG	1	grab	Y	X		
2	19M	—	—	30905-SW19M-040416	4/4/2016	—	W-SW	WATER	REG		grab				
3	19B	6.0	5.0	30905-SW19B-040416	4/4/2016	11:19	W-SW	WATER	REG	1	grab	Y	X		
4	20T	2.0	1.0	30905-SW20T-040416	4/4/2016	11:22	W-SW	WATER	REG	1	grab	Y	X		
5	20M	—	—	30905-SW20M-040416	4/4/2016	—	W-SW	WATER	REG		grab				
6	20B	2.0	1.0	30905-SW20B-040416	4/4/2016	11:21	W-SW	WATER	REG	1	grab	Y	X		
7	Cent T	3.58	1.0	30905-SWCentT-040416	4/4/2016	9:57	W-SW	WATER	REG	1	grab	Y	X		
8	Cent M	—	—	30905-SWCentM-040416	4/4/2016	—	W-SW	WATER	REG		grab				
9	Cent B	3.58	2.58	30905-SWCentB-040416	4/4/2016	9:58	W-SW	WATER	REG	1	grab	Y	X		
10	LADY T	1.83	1.0	30905-SWLadyT-040416	4/4/2016	9:52	W-SW	WATER	REG	1	grab	Y	X		
11	Lady M	—	—	30905-SWLadyM-040416	4/4/2016	—	W-SW	WATER	REG		grab				
12	LADY B	1.83	0.83	30905-SWLadyB-040416	4/4/2016	9:53	W-SW	WATER	REG	1	grab	Y	X		

Relinquished by	Company: MES	Received by	Company: CH2M	Condition		Custody Seals Intact	
	Date/Time: 4/4/16 15:27		Date/Time: 4/4/16 1527	Cooler Temp.			
Relinquished by	Company: CH2M	Received by	Company:	Condition		Custody Seals Intact	
	Date/Time: 4/5/16 1329		Date/Time: 4/5/16	Cooler Temp.			

Preservatives: (Other; Specify):

0 (none); 1 (4 Deg C); 2 (HCl pH<2); 3 (HNO3 pH<2); 4 (H2SO4 pH<2); 5 (NaOH pH>12); 6 (NaOH, Zn Acetate); 7 (H2SO4 (pH<2), 4 Deg C)); 8 (HCl pH<2); 9 (HCl 4 Deg C); 10 (HNC (pH<2), 4Deg C); 11 (4C NaOH (pH>12) & Ascorbic Acid); 12 (4C H2SO4 (pH<2) & Na2S2O3); 13 (Zn Acetate); sp (special instructions)

Rel. 4/5/16 17:30

4/5/16 1735

10651 | 1647344 | 8318668-85

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425
(717) 656-2300

Honeywell — Chain Of Custody / Analysis Request

AESI Ref: 42461.503(
COC#: 30905-110

Sampling Co.:	Maryland Environmental Service	Privileged & Confidential: N	Site Name: Baltimore
Client Contact: (name, co., address)		EDD To: matthew.gillis@ch2m.com	Location of Site: BALTIMORE, MD
Christopher French		Sampler: Doug Griffith, Tim Maynard, Lien Vu	Phase: / Sampling Program: Surface Water Sampling
115 Tabor Rd		PO #: 4500013806	Preservative: 3
Morris Plains, NJ 07950		Analysis Turnaround Time (TAT): 14	Lab Proj # (SDG):
Preliminary Data To	matthew.gillis@ch2m.com; amy.klopper@eriigen.com; bernice.kidd@ch2m.com;	Consultant: CH2M	Lab ID: LLI
Sample Receipt Acknowledgement To	matthew.gillis@ch2m.com; amy.klopper@eriigen.com; bernice.kidd@ch2m.com;		Site ID: BALTIMO
Hard Copy To	Amy Klopper	Full Report TAT: 28	Lab Job #:
Invoice To:	Christopher French		Authorized User: Honeyw

Text & Excel File Drive | Excel & Text Order

	Sample Identification: Location ID	Start Depth (ft)	End Depth (ft)	Field Sample ID	Sample Date	Sample Time	Sample Type	Sample Matrix	Sample Purpose	# of Cont.	Composite/Grab	Field Filtered Sample ?	SW6010 Chromium	Sampling Method (code)	Lab Sample Number
											Units		ug/L		
1	14B SB DUP	4.33	3.33	30905-SWD1-040416	4/4/2016	10:11	W-SW	WATER	FD	1	grab	Y	X		
2	10T DUP	5.67	1.0	30905-SWD2-040416	4/4/2016	16:40	W-SW	WATER	FD	1	grab	Y	X		
3	14B DUP	7.17	6.17	30905-SWD3-040416	4/4/2016	10:53	W-SW	WATER	FD	1	grab	Y	X		
4	18T 10T DUP	10.83	1.0	30905-SWD4-040416	4/4/2016	11:14	W-SW	WATER	FD	1	grab	Y	X		
5	FIELDQC	—	—	30905-SW-FB1-040416	4/4/2016	10:34	BLKWATER	WATER	FB	1	grab	N	X		
6	FIELDQC	—	—	30905-SW-RB1-040416	4/4/2016	10:35	BLKWATER	WATER	EB	1	grab	N	X		
7	FIELDQC	—	—	30905-SW-RB2-040416	4/4/2016	11:08	BLKWATER	WATER	EB	1	grab	N	X		
8	FIELDQC			30905-SW-RB3-040416	4/4/2016		BLKWATER	WATER	EB		grab	N			
9															
10															
11															
12															

Relinquished by	Company: MES	Received by	Company: CH2M	Condition		Custody Seals Intact	
Date/Time: 4/4/16 15:27			Date/Time: 4/4/16 1527	Cooler Temp.			
Relinquished by	Company: CH2M	Received by	Company	Condition		Custody Seals Intact	
Date/Time: 1328 4/5/16			Date/Time: 4/5/16 13:28	Cooler Temp.			

Preservatives: (Other; Specify):

0 (none); 1 (4 Deg C); 2 (HCl pH<2); 3 (HNO3 pH<2); 4 (H2SO4 pH<2); 5 (NaOH pH>12); 6 (NaOH, Zn Acetate); 7 (H2SO4 (pH<2), 4 Deg C)); 8 (HCl pH<2); 9 (HCl 4 Deg C); 10 (HN((pH<2), 4Deg C); 11 (4C NaOH (pH>12) & Ascorbic Acid); 12 (4C H2SO4 (pH<2) & Na2S2O3); 13 (Zn Acetate); sp (special instructions)

Rel 4/5/16 17:30

4/5/16 1735

Appendix A-3
Field Report—April 2016

BALTIMORE INNER HARBOR

SURFACE WATER MONITORING

2nd Quarter 2016

April 4, 2016

Honeywell

MARYLAND ENVIRONMENTAL SERVICE

METER CALIBRATION LOG

Date	TIME	Meter	Buffer	Comments
5/20/15	7:15	YSI 63	7,10,4	ATS - BS
5/20/15	7:15	YSI 55	Auto cal	ATS - BS
6/4/15	10:20	YSI 63	7,10,4	ATS - BS
6/4/15	10:20	YSI 55	Auto	ATS - BS
6/11/15	7:30	YSI 63	7 10 4	ATS - BS
6/11/15	7:30	YSI 55	Auto	ATS - BS
6/18/15	7:25	YSI 63	7 10 4	ATS - BS
6/18/15	7:25	YSI 55	Auto	"
6/29/15	8:27	YSI 63	7,4,10	RSD Dry weather
7/2/15	7:20			
7/2/15	7:20			
7/7/15	6:53	HORIBA 1	AUTO CAL	WDG (BH SED.
7/9/15	7:05	YSI 63	7,10,4	ATS-JS
7/9/15	7:05	YSI 55	Auto	ATS - JS
8/4/15	10:30	YSI 63		
8/10/15	7:45	YSI 63	7,4,10	NPDES
8/11/15	7:30	YSI 63	7,4,10	NPDES
8/12/15	7:00	YSI 63	7,4,10	NPDES
8/24/15	6:31	HORIBA 1	AUTO CAL	WDG - BH SURFACE WATER
9/10/15	8:45	YSI 63	7,4,10	wet weather NPDES
9/11/15	1315	YSI 63	7,4,10	wet weather NPDES
10/23/15	7:14	HORIBA 1	AUTO CAL	BH GROUNDWATER
10/27/2015	11:30	YSI 63	7,4,10	Dry weather NPDES
11/23/2015	8:24	HORIBA 2	AUTO CAL	BH SURFACE WATER CMPG
12/18/2015	1130	Fisher Scientific	6.94, 3.95, 10.06	NPDES wet-weather
12/29/2015	6:49	HORIBA 2	AUTO CAL	BH GROUNDWATER
1/5/2016	10:22	Fisher Scientific	4, 7, 10	NPDES Dry
1/16/2016	8:00am	Fisher Scientific	6.98, 3.65, 10.85	NPDES wet
2/17/2016	11:00PM	FisherScientific	4, 7, 10	NPDES wet ACP
2/29/2016	10:00am	Fisher Scientific	4, 7, 10.2	NPDES wet weather
3/8/2016	10:00AM	Fisher Scientific	4, 7, 10	NPDES Dry weather ASP
3/18/16	7:45 AM	Horiba	Auto Cal	BH Surface
4/4/16	8:32 AM	HORIBA 1	AUTO CAL	BH SURFACE WATER

Continued on Page

Read and Understood By

Signed Date Signed Date

FIELD NOTES

BIH SURFACE WATER SAMPLING — 4/4/2016

DOUGLAS GRIFFITH
TIM MAYNARD
LIEU VU
JAMES COOPER

WEATHER CONDITIONS: 50°, PART SUN, WINDY

LOW TIDE: 11:01 A.M.

SAMPLING WINDOW 10:01 – 12:01

SAMPLE ID	DEPTH TO BOTTOM (FT)	SAMPLE DEPTH (FT)	TIME (HRS)	pH (UNITS)	TEMP °C	SP. COND (MS/CM)	INITIALS
LadyT	1'10"	0	952	6.13	11.67	10.8	LV
LadyB	1'10"	10"	953	6.53	11.02	10.7	LV
CentT	3'7"	0	957	6.67	11.97	11.7	LV
CentB	3'7"	3'7"	958	6.72	11.44	14.5	LV
3T	7'4"	0	1001	6.89	10.83	13.6	LV
3B	7'4"	6'4"	1003	6.92	10.94	15.9	LV
4T	4'5"	0	1006	7.04	10.97	13.7	LV
4B	4'5"	3'5"	1008	7.03	10.85	16.0	LV
5T	4'4"	0	1009	7.16	10.93	12.7	LV
5B	4'4"	3'4"	1010	7.15	10.88	15.4	LV
* 5B (DUP)	4'4"	3'4"	1011	7.15	10.88	15.4	LV
6T	7'	0	1012	7.28	11.03	10.3	LV
6B	7'	6'	1013	7.15	10.85	16.0	LV
7T	7'8"	0	1015	7.40	11.14	8.35	LV
7B	7'8"	6'8"	1016	7.22	10.86	15.7	LV

pH

Scale: 1 square = _____

BIH SURFACE WATER 4/4/16 DG, TM, LV, JC

SAMPLE ID	DEPTH TO BOTTOM (FT)	SAMPLE DEPTH (FT)	TIME (HRS)	pH (UNITS)	TEMP (°C)	SP. COND (MS/CM)	INITIALS
9T	4'10"	0	1025	7.54	11.~~47~~31	8.~~69~~73	LV
9B	4'10"	3'10"	1026	7.44	11.24	11.1	LV
9T	6'2"	0	1028	7.57	11.30	7.84	LV
9B	6'2"	5'2"	1030	7.37	11.18	11.8	LV
⁂ FB	—	—	1034	8.58	16.09	0.111	LV
⁂ RBI	—	—	1035	8.44	14.85	0.017	LV
10T ~~DUP~~	5'8"	0	1039	7.09	12.14	11.6	LV
10T DUP	5'8"	0	1040	7.09	12.14	11.6	LV
10B	5'8"	4'8"	1041	7.23	11.45	16.1	LV
11T	7'6"	0	1042	7.39	11.17	12.6	LV
11B	7'6"	6'6"	1043	7.32	10.78	16.1	LV
12T	4'11	0	1046	7.47	10.96	12.1	LV
12B	4'11	3''	1047	7.40	10.82	14.5	LV
13T	3'4"	0	1048	7.48	10.97	12.3	LV
13B	3'4"	2'4"	1049	7.43	10.95	16.2	LV
14T	7'2"	0	1051	7.53	11.03	12.0	LV
14B	7'2"	6'2"	1052	7.45	10.~~82~~88	15.8	LV
⁂ 14B DUP	7'2"	6'2"	1053	7.45	10.88	15.8	LV
15~~B~~T	6'7"	0	1055	7.54	11.06	12.6	LV
15B	6'7"	5'7"	1056	7.48	10.94	16.2	LV

Scale: 1 square = _____

BIM SURFACE WATER 4/4/16 DG, TM, LV, JC

SAMPLE ID	DEPTH TO BOTTOM (FT)	SAMPLE DEPTH (FT)	TIME (HRS)	pH (UNITS)	TEMP (°C)	SP COND (MS/CM)	INITIALS
16T	7'4"	0	1058	7.55	10.84	13.5	LV
16B	7'4"	6'4"	1059	7.50	10.87	16.6	LV
17T	6'10"	0	1101	7.52	10.74	16.6	LV
17B	6'10"	5'10"	1102	7.53	10.78	16.6	LV
RB2	—	—	1108	8.54	12.04	0.237	LV
18T	10'10"	0	1113	7.24	11.37	16.0	LV
18T(DUP)	10'10"	0	1114	7.24	11.37	16.0	LV
18M	10'10"	5'5"	1115	7.37	11.35	16.4	LV
18B	10'10"	9'10"	1116	7.45	10.99	16.8	LV
19T	6½	0	1118	7.48	10.80	16.6	LV
19B	6½	5"	1119	7.49	10.99	16.5	LV
20T	2½	0	1120	7.51	10.83	16.4	LV
20B	2'	1'	1121	7.52	10.78	16.5	LV

Scale: 1 square = _____

CHAIN of CUSTODY

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425
(717) 656-2300

Honeywell — Chain Of Custody / Analysis Request

AESI Ref: 42461.49820
COC#: 30905-110414-1

Privileged & Confidential	N		Site Name:	Baltimore	Phase:		Lab Proj # (SDG):
Sampling Co.:	Maryland Environmental Service	EDD To:	matthew.gillis@ch2m.com	Location of Site:	BALTIMORE, MD	Sampling Program	Surface Water Sampling	Lab ID: LLI
Client Contact: (name, co., address)		Sampler:	Doug Griffith, Tim Maynard, Lien Vu					Site ID: BALTIMORE
Christopher French		PO #	4500013806	Preservative	3			Lab Job #
115 Tabor Rd		Analysis Turnaround Time (TAT):	14					Authorized User: Honeywell
Morris Plains, NJ 07950		Consultant	CH2M					
Preliminary Data To	matthew.gillis@ch2m.com; amy.klopper@critigen.com; bernice.kidd@ch2m.com;							Text & Excel File Drive / Excel & Text File Order
Sample Receipt Acknowledgement To	matthew.gillis@ch2m.com; amy.klopper@critigen.com; bernice.kidd@ch2m.com;							
Hard Copy To	Amy Klopper	Full Report TAT:	28					
Invoice To:	Christopher French							

	Sample Identification				Sample Date	Sample Time	Sample Type	Sample Matrix	Sample Purpose	# of Cont.	Composite/Grab	Field Filtered Sample ?	SW6010 Chromium										Sampling Method (code)	Lab Sample Numbers
	Location ID	Start Depth (ft)	End Depth (ft)	Field Sample ID																				
											Units		ppb											
1	3T	7.33	1.0	30905-SW3T-040416	4/4/2016	10:01	W-SW	WATER	REG	1	grab	Y	X											
2	3M	—	—	30905-SW3M-040416	4/4/2016	—	W-SW	WATER	REG		grab													
3	3B	7.33	6.33	30905-SW3B-040416	4/4/2016	10:03	W-SW	WATER	REG	1	grab	Y	X											
4	4T	4.42	1.0	30905-SW4T-040416	4/4/2016	10:06	W-SW	WATER	REG	1	grab	Y	X											
5	4M	—	—	30905-SW4M-040416	4/4/2016	—	W-SW	WATER	REG		grab													
6	4B	4.42	3.42	30905-SW4B-040416	4/4/2016	10:08	W-SW	WATER	REG	1	grab	Y	X											
7	5T	4.33	1.0	30905-SW5T-040416	4/4/2016	10:09	W-SW	WATER	REG	1	grab	Y	X											
8	5M	—	—	30905-SW5M-040416	4/4/2016	—	W-SW	WATER	REG		grab													
9	5B	4.33	3.33	30905-SW5B-040416	4/4/2016	10:10	W-SW	WATER	REG	1	grab	Y	X											
10	6T	7.0	1.0	30905-SW6T-040416	4/4/2016	10:12	W-SW	WATER	REG	1	grab	Y	X											
11	6M	—	—	30905-SW6M-040416	4/4/2016	—	W-SW	WATER	REG		grab													
12	6B	7.0	6.0	30905-SW6B-040416	4/4/2016	10:13	W-SW	WATER	REG	1	grab	Y	X											

Relinquished by	Company: MES	Received by	Company: CH2M	Condition		Custody Seals Intact	
	Date/Time: 4/4/16 15:27		Date/Time: 4/4/16 1527	Cooler Temp.			
Relinquished by	Company:	Received by	Company:	Condition		Custody Seals Intact	
	Date/Time:		Date/Time:	Cooler Temp.			

Preservatives: (Other; Specify):

0 (none); 1 (4 Deg C); 2 (HCl pH<2); 3 (HNO3 pH<2); 4 (H2SO4 pH<2); 5 (NaOH pH>12); 6 (NaOH, Zn Acetate); 7 (H2SO4 (pH<2), 4 Deg C)); 8 (HCl pH<2); 9 (HCl 4 Deg C); 10 (HNO3 (pH<2), 4Deg C); 11 (4C NaOH (pH>12) & Ascorbic Acid); 12 (4C H2SO4 (pH<2) & Na2S2O3); 13 (Zn Acetate); sp (special instructions)

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425
(717) 656-2300

Honeywell — Chain Of Custody / Analysis Request

AESI Ref: 42461.49924
COC#: 30905-110414-2

Sampling Co.:	Maryland Environmental Service	Privileged & Confidential	N	Site Name:	Baltimore	Phase:	Lab Proj # (SDG):
Client Contact: (name, co., address)		EDD To:	matthew.gillis@ch2m.com	Location of Site:	BALTIMORE, MD	Sampling Program: Surface Water Sampling	Lab ID: LLI
Christopher French		Sampler:	Doug Griffith, Tim Maynard, Lien Vu				Site ID: BALTIMORE
115 Tabor Rd		PO #	4500013806	Preservative	3		Lab Job #:
Morris Plains, NJ 07950		Analysis Turnaround Time (TAT):	14				Authorized User: Honeywell
Preliminary Data To	matthew.gillis@ch2m.com; amy.klopper@critigen.com; bernice.kidd@ch2m.com	Consultant	CH2M				
Sample Receipt Acknowledgement To	matthew.gillis@ch2m.com; amy.klopper@critigen.com; bernice.kidd@ch2m.com						Text & Excel File Drive: Excel & Text File Order
Hard Copy To	Amy Klopper	Full Report TAT:	28				
Invoice To:	Christopher French						

	Sample Identification				Sample Date	Sample Time	Sample Type	Sample Matrix	Sample Purpose	# of Cont.	Composite/Grab	Field Filtered Sample ?	SW6010 Chromium	Sampling Method (code)	Lab Sample Numbers
	Location ID	Start Depth (ft)	End Depth (ft)	Field Sample ID							Units		ug/L		
1	7T	7.67	1.0	30905-SW7T-040416	4/4/2016	10:15	W-SW	WATER	REG	1	grab	Y	X		
2	7M	—	—	30905-SW7M-040416	4/4/2016	—	W-SW	WATER	REG		grab				
3	7B	7.67	6.67	30905-SW7B-040416	4/4/2016	10:16	W-SW	WATER	REG	1	grab	Y	X		
4	8T	4.83	1.0	30905-SW8T-040416	4/4/2016	10:25	W-SW	WATER	REG	1	grab	Y	X		
5	8M	—	—	30905-SW8M-040416	4/4/2016	—	W-SW	WATER	REG		grab				
6	8B	4.83	3.83	30905-SW8B-040416	4/4/2016	10:26	W-SW	WATER	REG	1	grab	Y	X		
7	9T	6.17	1.0	30905-SW9T-040416	4/4/2016	10:28	W-SW	WATER	REG	1	grab	Y	X		
8	9M	—	—	30905-SW9M-040416	4/4/2016	—	W-SW	WATER	REG		grab				
9	9B	6.17	5.17	30905-SW9B-040416	4/4/2016	10:30	W-SW	WATER	REG	1	grab	Y	X		
10	10T	5.67	1.0	30905-SW10T-040416	4/4/2016	10:39	W-SW	WATER	REG	1	grab	Y	X		
11	10M	—	—	30905-SW10M-040416	4/4/2016	—	W-SW	WATER	REG		grab				
12	10B	5.67	4.67	30905-SW10B-040416	4/4/2016	10:41	W-SW	WATER	REG	1	grab	Y	X		

Relinquished by		Company	MES	Received by		Company	CH2M
		Date/Time	4/4/16 15:27			Date/Time	4/4/16 1527
Relinquished by		Company		Received by		Company	
		Date/Time				Date/Time	

Condition | Cooler Temp. | Custody Seals Intact

Preservatives: (Other; Specify):

0 (none); 1 (4 Deg C); 2 (HCl pH<2); 3 (HNO3 pH<2); 4 (H2SO4 pH<2); 5 (NaOH pH>12); 6 (NaOH, Zn Acetate); 7 (H2SO4 (pH<2), 4 Deg C)); 8 (HCl pH<2); 9 (HCl 4 Deg C); 10 (HNO3 (pH<2), 4Deg C); 11 (4C NaOH (pH>12) & Ascorbic Acid); 12 (4C H2SO4 (pH<2) & Na2S2O3); 13 (Zn Acetate); sp (special instructions)

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425
(717) 656-2300

Honeywell — Chain Of Custody / Analysis Request

AESI Ref: 42461.50006
COC#: 30905-110414-3

Privileged & Confidential	N		Site Name:	Baltimore	Phase:		Lab Proj # (SDG):
Sampling Co.:	Maryland Environmental Service	EDD To:	matthew.gillis@ch2m.com	Location of Site:	BALTIMORE, MD	Sampling Program	Surface Water Sampling	Lab ID: LLI
Client Contact: (name, co., address)		Sampler:	Doug Griffith, Tim Maynard, Lien Vu					Site ID: BALTIMORE
Christopher French		PO #	4500013806	Preservative	3			Lab Job #:
115 Tabor Rd		Analysis Turnaround Time (TAT):	14					Authorized User: Honeywell
Morris Plains, NJ 07950		Consultant	CH2M					
Preliminary Data To	matthew.gillis@ch2m.com; amy.klopper@critigen.com; bernice.kidd@ch2m.com							Text & Excel File Drive / Excel & Text File Order
Sample Receipt Acknowledgement To	matthew.gillis@ch2m.com; amy.klopper@critigen.com; bernice.kidd@ch2m.com							
Hard Copy To	Amy Klopper	Full Report TAT:	28					
Invoice To:	Christopher French							

	Sample Identification: Location ID	Start Depth (ft)	End Depth (ft)	Field Sample ID	Sample Date	Sample Time	Sample Type	Sample Matrix	Sample Purpose	# of Cont.	Composite/Grab	Field Filtered Sample ?	SW6010 Chromium	Sampling Method (code)	Lab Sample Numbers
	Units										grab	Y	X		
1	11T	7.50	1.0	30905-SW11T-040416	4/4/2016	10:42	W-SW	WATER	REG	1	grab	Y	X		
2	11M	—	—	30905-SW11M-040416	4/4/2016	—	W-SW	WATER	REG		grab				
3	11B	7.50	6.50	30905-SW11B-040416	4/4/2016	10:43	W-SW	WATER	REG	1	grab	Y	X		
4	12T	4.0	1.0	30905-SW12T-040416	4/4/2016	10:46	W-SW	WATER	REG	1	grab	Y	X		
5	12M	—	—	30905-SW12M-040416	4/4/2016	—	W-SW	WATER	REG		grab				
6	12B	4.0	3.0	30905-SW12B-040416	4/4/2016	10:47	W-SW	WATER	REG	1	grab	Y	X		
7	13T	3.33	1.0	30905-SW13T-040416	4/4/2016	10:48	W-SW	WATER	REG	1	grab	Y	X		
8	13M	—	—	30905-SW13M-040416	4/4/2016	—	W-SW	WATER	REG		grab				
9	13B	3.33	2.33	30905-SW13B-040416	4/4/2016	10:49	W-SW	WATER	REG	1	grab	Y	X		
10	14T	7.17	1.0	30905-SW14T-040416	4/4/2016	10:51	W-SW	WATER	REG	1	grab	Y	X		
11	14M	—	—	30905-SW14M-040416	4/4/2016	—	W-SW	WATER	REG		grab				
12	14B	7.17	6.17	30905-SW14B-040416	4/4/2016	10:52	W-SW	WATER	REG	1	grab	Y	X		

Relinquished by	Company: MES	Received by	Company: CH2M	Condition		Custody Seals Intact	
Date/Time: 4/4/16 15:27		Date/Time: 4/4/16 1527		Cooler Temp.			
Relinquished by	Company	Received by	Company	Condition		Custody Seals Intact	
	Date/Time		Date/Time	Cooler Temp.			

Preservatives: (Other; Specify):

0 (none); 1 (4 Deg C); 2 (HCl pH<2); 3 (HNO3 pH<2); 4 (H2SO4 pH<2); 5 (NaOH pH>12); 6 (NaOH, Zn Acetate); 7 (H2SO4 (pH<2), 4 Deg C)); 8 (HCl pH<2); 9 (HCl 4 Deg C); 10 (HNO3 (pH<2), 4Deg C); 11 (4C NaOH (pH>12) & Ascorbic Acid); 12 (4C H2SO4 (pH<2) & Na2S2O3); 13 (Zn Acetate); sp (special instructions)

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425
(717) 656-2300

Honeywell — Chain Of Custody / Analysis Request

AESI Ref: 42461.50167
COC# 30905-110414-4

Privileged & Confidential	N		Site Name:	Baltimore	Phase:		Lab Proj # (SDG):
Sampling Co.:	Maryland Environmental Service	EDD To:	matthew.gillis@ch2m.com	Location of Site:	BALTIMORE, MD	Sampling Program	Surface Water Sampling	Lab ID: LLI
Client Contact: (name, co., address)		Sampler:	Doug Griffith, Tim Maynard, Lien Vu					Site ID: BALTIMORE
Christopher French		PO #	4500013806	Preservative	3			Lab Job #
115 Tabor Rd		Analysis Turnaround Time (TAT):	14					Authorized User: Honeywell
Morris Plains, NJ 07950		Consultant	CH2M					
Preliminary Data To	matthew.gillis@ch2m.com; amy.klopper@critigen.com; bernice.kidd@ch2m.com;							Text & Excel File Drive / Excel & Text File Order
Sample Receipt Acknowledgement To	matthew.gillis@ch2m.com; amy.klopper@critigen.com; bernice.kidd@ch2m.com;							
Hard Copy To	Amy Klopper	Full Report TAT:	28					
Invoice To:	Christopher French							

	Sample Identification				Sample Date	Sample Time	Sample Type	Sample Matrix	Sample Purpose	# of Cont.	Composite/Grab	Field Filtered Sample ?	SW6010 Chromium											Sampling Method (code)	Lab Sample Numbers
	Location ID	Start Depth (ft)	End Depth (ft)	Field Sample ID							Units														
1	15T	6.58	1.0	30905-SW15T-040416	4/4/2016	10:55	W-SW	WATER	REG	1	grab	Y	X												
2	15M	—	—	30905-SW15M-040416	4/4/2016	—	W-SW	WATER	REG		grab														
3	15B	6.58	5.58	30905-SW15B-040416	4/4/2016	10:56	W-SW	WATER	REG	1	grab	Y	X												
4	16T	7.33	1.0	30905-SW16T-040416	4/4/2016	10:58	W-SW	WATER	REG	1	grab	Y	X												
5	16M	—	—	30905-SW16M-040416	4/4/2016	—	W-SW	WATER	REG		grab	Y													
6	16B	7.33	6.33	30905-SW16B-040416	4/4/2016	10:59	W-SW	WATER	REG	1	grab	Y	X												
7	17T	6.83	1.0	30905-SW17T-040416	4/4/2016	11:01	W-SW	WATER	REG	1	grab	Y	X												
8	17M	—	—	30905-SW17M-040416	4/4/2016	—	W-SW	WATER	REG		grab														
9	17B	6.83	5.83	30905-SW17B-040416	4/4/2016	11:02	W-SW	WATER	REG	1	grab	Y	X												
10	18T	10.83	1.0	30905-SW18T-040416	4/4/2016	11:13	W-SW	WATER	REG	1	grab	Y	X												
11	18M	10.83	5.42	30905-SW18M-040416	4/4/2016	11:15	W-STW	WATER	REG		grab														
12	18B	10.83	9.83	30905-SW18B-040416	4/4/2016	11:16	W-SW	WATER	REG	1	grab	Y	X												

Relinquished by	Company	MES	Received by	Company	Gram	Condition	Custody Seals Intact
	Date/Time	4/4/16 15:27		Date/Time	4/4/16 1527	Cooler Temp.	
Relinquished by	Company		Received by	Company		Condition	Custody Seals Intact
	Date/Time			Date/Time		Cooler Temp.	

Preservatives: (Other; Specify):

0 (none); 1 (4 Deg C); 2 (HCl pH<2); 3 (HNO3 pH<2); 4 (H2SO4 pH<2); 5 (NaOH pH>12); 6 (NaOH, Zn Acetate); 7 (H2SO4 (pH<2), 4 Deg C)); 8 (HCl pH<2); 9 (HCl 4 Deg C); 10 (HNO3 (pH<2), 4Deg C); 11 (4C NaOH (pH>12) & Ascorbic Acid); 12 (4C H2SO4 (pH<2) & Na2S2O3); 13 (Zn Acetate); sp (special instructions)

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425
(717) 656-2300

Honeywell — Chain Of Custody / Analysis Request

AESI Ref: 42461.50307
COC#: 30905-110414-5

Privileged & Confidential	N		Site Name:	Baltimore	Phase:		Lab Proj # (SDG):	
Sampling Co.:	Maryland Environmental Service	EDD To:	matthew.gillis@ch2m.com	Location of Site:	BALTIMORE, MD	Sampling Program	Surface Water Sampling	Lab ID: LLI
Client Contact: (name, co., address)		Sampler:	Doug Griffith, Tim Maynard, Lien Vu					Site ID: BALTIMORE
Christopher French		PO #	4500013806	Preservative	3			Lab Job #:
115 Tabor Rd		Analysis Turnaround Time (TAT):	14					Authorized User: Honeywell
Morris Plains, NJ 07950		Consultant	CH2M					
Preliminary Data To	matthew.gillis@ch2m.com; amy.klopper@critigen.com; bernice.kidd@ch2m.com;							Text & Excel File Drive / Excel & Text File Order
Sample Receipt Acknowledgement To	matthew.gillis@ch2m.com; amy.klopper@critigen.com; bernice.kidd@ch2m.com;							
Hard Copy To	Honeywell; 1000 Wills Street; Baltimore, MD 21231	Full Report TAT:	28					
Invoice To:	Christopher French							

	Sample Identification				Sample Date	Sample Time	Sample Type	Sample Matrix	Sample Purpose	# of Cont.	Composite/Grab	Field Filtered Sample ?	SW6010 Chromium	Sampling Method (code)	Lab Sample Numbers
	Location ID	Start Depth (ft)	End Depth (ft)	Field Sample ID							Units				
1	19T	6.0	1.0	30905-SW19T-040416	4/4/2016	11:18	W-SW	WATER	REG	1	grab	Y	X		
2	19M	—	—	30905-SW19M-040416	4/4/2016	—	W-SW	WATER	REG		grab				
3	19B	6.0	5.0	30905-SW19B-040416	4/4/2016	11:19	W-SW	WATER	REG	1	grab	Y	X		
4	20T	2.0	1.0	30905-SW20T-040416	4/4/2016	11:20	W-SW	WATER	REG	1	grab	Y	X		
5	20M	—	—	30905-SW20M-040416	4/4/2016	—	W-SW	WATER	REG		grab				
6	20B	2.0	1.0	30905-SW20B-040416	4/4/2016	11:21	W-SW	WATER	REG	1	grab	Y	X		
7	Cent T	3.58	1.0	30905-SWCentT-040416	4/4/2016	9:57	W-SW	WATER	REG	1	grab	Y	X		
8	Cent M	—	—	30905-SWCentM-040416	4/4/2016	—	W-SW	WATER	REG		grab				
9	Cent B	3.58	2.58	30905-SWCentB-040416	4/4/2016	9:58	W-SW	WATER	REG	1	grab	Y	X		
10	LADY T	1.83	1.0	30905-SWLadyT-040416	4/4/2016	9:52	W-SW	WATER	REG	1	grab	Y	X		
11	Lady M	—	—	30905-SWLadyM-040416	4/4/2016	—	W-SW	WATER	REG		grab				
12	LADY B	1.83	0.83	30905-SWLadyB-040416	4/4/2016	9:53	W-SW	WATER	REG	1	grab	Y	X		

Relinquished by	Company: MES	Received by	Company: CH2M	Condition		Custody Seals Intact	
	Date/Time: 4/4/16 15:27		Date/Time: 4/4/16 1527	Cooler Temp.			
Relinquished by	Company	Received by	Company	Condition		Custody Seals Intact	
	Date/Time		Date/Time	Cooler Temp.			

Preservatives: (Other; Specify):

0 (none); 1 (4 Deg C); 2 (HCl pH<2); 3 (HNO3 pH<2); 4 (H2SO4 pH<2); 5 (NaOH pH>12); 6 (NaOH, Zn Acetate); 7 (H2SO4 (pH<2), 4 Deg C)); 8 (HCl pH<2); 9 (HCl 4 Deg C); 10 (HNO3 (pH<2), 4Deg C); 11 (4C NaOH (pH>12) & Ascorbic Acid); 12 (4C H2SO4 (pH<2) & Na2S2O3); 13 (Zn Acetate); sp (special instructions)

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425
(717) 656-2300

Honeywell — Chain Of Custody / Analysis Request

AESI Ref: 42461.50307
COC#: 30905-110414-6

Privileged & Confidential	N		Site Name:	Baltimore	Phase:		Lab Proj # (SDG):
EDD To:	matthew.gillis@ch2m.com		Location of Site:	BALTIMORE, MD	Sampling Program	Surface Water Sampling	Lab ID: LLI
Sampler:	Doug Griffith, Tim Maynard, Lien Vu						Site ID: BALTIMORE
PO #	4500013806		Preservative	3			Lab Job #
Analysis Turnaround Time (TAT):	14						Authorized User: Honeywell
Consultant	CH2M						
Full Report TAT:	28						

Sampling Co.: Maryland Environmental Service

Client Contact: (name, co., address)
Christopher French
115 Tabor Rd
Morris Plains, NJ 07950

Preliminary Data To: matthew.gillis@ch2m.com; amy.klopper@critigen.com; bernice.kidd@ch2m.com;
Sample Receipt Acknowledgement To: matthew.gillis@ch2m.com; amy.klopper@critigen.com; bernice.kidd@ch2m.com;
Hard Copy To: Amy Klopper
Invoice To: Christopher French

Text & Excel File Drive: Excel & Text File Order

	Sample Identification				Sample Date	Sample Time	Sample Type	Sample Matrix	Sample Purpose	# of Cont.	Composite/Grab	Field Filtered Sample ?	SW6010 Chromium												Sampling Method (code)	Lab Sample Numbers
	Location ID	Start Depth (ft)	End Depth (ft)	Field Sample ID																						
											Units		ug/L													
1	5B DUP 4B	4.33	3.33	30905-SWD1-040416	4/4/2016	10:11	W-SW	WATER	FD	1	grab	Y	X													
2	10T DUP	5.67	1.0	30905-SWD2-040416	4/4/2016	10:40	W-SW	WATER	FD	1	grab	Y	X													
3	14B DUP	7.17	6.17	30905-SWD3-040416	4/4/2016	10:53	W-SW	WATER	FD	1	grab	Y	X													
4	18T DUP	10.83	1.0	30905-SWD4-040416	4/4/2016	11:14	W-SW	WATER	FD	1	grab	Y	X													
5	FIELDQC	—	—	30905-SW-FB1-040416	4/4/2016	10:34	BLKWATER	WATER	FB	1	grab	N	X													
6	FIELDQC	—	—	30905-SW-RB1-040416	4/4/2016	10:35	BLKWATER	WATER	EB	1	grab	N	X													
7	FIELDQC	—	—	30905-SW-RB2-040416	4/4/2016	11:08	BLKWATER	WATER	EB	1	grab	N	X													
8	FIELDQC			30905-SW-RB3-040416	4/4/2016		BLKWATER	WATER	EB		grab	N														
9																										
10																										
11																										
12																										

Relinquished by: WD	Company: MES	Received by: Matt G. LVS	Company: LVM	Condition		Custody Seals Intact	
	Date/Time: 4/4/16 15:27		Date/Time: 4/4/16 1537	Cooler Temp.			
Relinquished by	Company	Received by	Company	Condition		Custody Seals Intact	
	Date/Time		Date/Time	Cooler Temp.			

Preservatives: (Other; Specify):

0 (none); 1 (4 Deg C); 2 (HCl pH<2); 3 (HNO3 pH<2); 4 (H2SO4 pH<2); 5 (NaOH pH>12); 6 (NaOH, Zn Acetate); 7 (H2SO4 (pH<2), 4 Deg C)); 8 (HCl pH<2); 9 (HCl 4 Deg C); 10 (HNO3 (pH<2), 4Deg C); 11 (4C NaOH (pH>12) & Ascorbic Acid); 12 (4C H2SO4 (pH<2) & Na2S2O3); 13 (Zn Acetate); sp (special instructions)

Appendix B
Groundwater Sampling Program Data

Appendix B-1
Raw Laboratory Data—April 2016

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Honeywell International, Inc.
115 Tabor Road
Morris Plains NJ 07950

Report Date: May 02, 2016

Project: Baltimore, MD

Submittal Date: 04/21/2016
Group Number: 1653002
PO Number: 45000108077
State of Sample Origin: MD

Client Sample Description	Lancaster Labs (LL) #
30905-GW-OP7-042016 Grab Groundwater	8344200
30905-GW-OP11-042016 Grab Groundwater	8344201
30905-GW-OP5-042016 Grab Groundwater	8344202
30905-GW-OP2-042016 Grab Groundwater	8344203
30905-GW-OP3-042016 Grab Groundwater	8344204
30905-GW-OP4-042016 Grab Groundwater	8344205
30905-GW-OP9-042016 Grab Groundwater	8344206
30905-GW-NWM27-042016 Grab Groundwater	8344207
30905-GWD1-042016 Grab Groundwater	8344208
30905-GWD2-042016 Grab Groundwater	8344209
30905-GW-FB1-042016 Grab Water	8344210
30905-GW-RB1-042016 Grab Water	8344211

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ .

Electronic Copy To	CH2M Hill, Inc.	Attn: Bernice Kidd
Electronic Copy To	Honeywell International, Inc.	Attn: Honeywell HTS
Electronic Copy To	Honeywell	Attn: Katherine Beach
Electronic Copy To	CH2M Hill, Inc.	Attn: Robert Steele
Electronic Copy To	CH2M Hill	Attn: Matt Gillis

Respectfully Submitted,

Kay Hower
Manager

(510) 672-3979

Sample Description: 30905-GW-OP7-042016 Grab Groundwater
Baltimore, MD

LL Sample # WW 8344200
LL Group # 1653002
Account # 10651

Project Name: Baltimore, MD

Collected: 04/20/2016 10:24 by DG

Submitted: 04/21/2016 16:15
Reported: 05/02/2016 02:01

Honeywell International, Inc.
115 Tabor Road
Morris Plains NJ 07950

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		mg/l	mg/l	mg/l	
07051	**Chromium**	7440-47-3	**0.0060 J**	0.0020	0.0100	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	2	161131848001	04/27/2016 01:14	Matthew Machtinger	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	161131848001	04/26/2016 07:51	James L Mertz	1

*=This limit was used in the evaluation of the final result

Sample Description: 30905-GW-OP11-042016 Grab Groundwater
Baltimore, MD

LL Sample # WW 8344201
LL Group # 1653002
Account # 10651

Project Name: Baltimore, MD

Collected: 04/20/2016 09:43 by DG

Submitted: 04/21/2016 16:15
Reported: 05/02/2016 02:01

Honeywell International, Inc.
115 Tabor Road
Morris Plains NJ 07950

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		mg/l	mg/l	mg/l	
07051	**Chromium**	7440-47-3	**0.0079 J**	0.0020	0.0100	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	2	161131848001	04/27/2016 01:18	Matthew Machtinger	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	161131848001	04/26/2016 07:51	James L Mertz	1

*=This limit was used in the evaluation of the final result

Sample Description: 30905-GW-OP5-042016 Grab Groundwater
Baltimore, MD

LL Sample # WW 8344202
LL Group # 1653002
Account # 10651

Project Name: Baltimore, MD

Collected: 04/20/2016 10:58 by DG

Submitted: 04/21/2016 16:15
Reported: 05/02/2016 02:01

Honeywell International, Inc.
115 Tabor Road
Morris Plains NJ 07950

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		mg/l	mg/l	mg/l	
07051	**Chromium**	7440-47-3	**1.67**	0.0020	0.0100	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	2	161131848001	04/27/2016 01:28	Matthew Machtinger	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	161131848001	04/26/2016 07:51	James L Mertz	1

*=This limit was used in the evaluation of the final result

Sample Description: 30905-GW-OP2-042016 Grab Groundwater
Baltimore, MD

LL Sample # WW 8344203
LL Group # 1653002
Account # 10651

Project Name: Baltimore, MD

Collected: 04/20/2016 12:01 by DG

Submitted: 04/21/2016 16:15
Reported: 05/02/2016 02:01

Honeywell International, Inc.
115 Tabor Road
Morris Plains NJ 07950

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		mg/l	mg/l	mg/l	
07051	**Chromium**	7440-47-3	**4.80**	0.0020	0.0100	1
Wet Chemistry	**SW-846 9012A**		mg/l	mg/l	mg/l	
08255	Total Cyanide (water)	57-12-5	N.D.	0.0050	0.010	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	2	161131848001	04/27/2016 01:31	Matthew Machtinger	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	161131848001	04/26/2016 07:51	James L Mertz	1
08255	Total Cyanide (water)	SW-846 9012A	1	16119117101A	04/29/2016 11:28	Brianna A White	1
08256	Cyanide Water Distillation	SW-846 9012A	1	16119117101A	04/28/2016 10:55	Nancy J Shoop	1

*=This limit was used in the evaluation of the final result

Sample Description: 30905-GW-OP3-042016 Grab Groundwater
Baltimore, MD

LL Sample # WW 8344204
LL Group # 1653002
Account # 10651

Project Name: Baltimore, MD

Collected: 04/20/2016 12:58 by DG

Submitted: 04/21/2016 16:15
Reported: 05/02/2016 02:01

Honeywell International, Inc.
115 Tabor Road
Morris Plains NJ 07950

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		mg/l	mg/l	mg/l	
07051	**Chromium**	7440-47-3	**121**	0.0200	0.100	10
Wet Chemistry	**SW-846 9012A**		mg/l	mg/l	mg/l	
08255	**Total Cyanide (water)**	57-12-5	**0.014**	0.0050	0.010	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	161131848001	04/27/2016 17:40	Suzanne M Will	10
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	161131848001	04/26/2016 07:51	James L Mertz	1
08255	Total Cyanide (water)	SW-846 9012A	1	16119117101A	04/29/2016 11:30	Brianna A White	1
08256	Cyanide Water Distillation	SW-846 9012A	1	16119117101A	04/28/2016 10:55	Nancy J Shoop	1

*=This limit was used in the evaluation of the final result

Sample Description: 30905-GW-OP4-042016 Grab Groundwater
Baltimore, MD

LL Sample # WW 8344205
LL Group # 1653002
Account # 10651

Project Name: Baltimore, MD

Collected: 04/20/2016 14:22 by DG

Submitted: 04/21/2016 16:15
Reported: 05/02/2016 02:01

Honeywell International, Inc.
115 Tabor Road
Morris Plains NJ 07950

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		mg/l	mg/l	mg/l	
07051	**Chromium**	7440-47-3	**285**	0.0400	0.200	20

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	161131848001	04/27/2016 17:43	Suzanne M Will	20
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	161131848001	04/26/2016 07:51	James L Mertz	1

*=This limit was used in the evaluation of the final result

Sample Description: 30905-GW-OP9-042016 Grab Groundwater
Baltimore, MD

LL Sample # WW 8344206
LL Group # 1653002
Account # 10651

Project Name: Baltimore, MD

Collected: 04/20/2016 15:21 by DG

Submitted: 04/21/2016 16:15
Reported: 05/02/2016 02:01

Honeywell International, Inc.
115 Tabor Road
Morris Plains NJ 07950

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		mg/l	mg/l	mg/l	
07051	**Chromium**	7440-47-3	**1,710**	0.200	1.00	100

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	161131848001	04/27/2016 17:57	Suzanne M Will	100
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	161131848001	04/26/2016 07:51	James L Mertz	1

*=This limit was used in the evaluation of the final result

Sample Description: 30905-GW-NWM27-042016 Grab Groundwater
Baltimore, MD

LL Sample # WW 8344207
LL Group # 1653002
Account # 10651

Project Name: Baltimore, MD

Collected: 04/20/2016 16:45 by DG

Submitted: 04/21/2016 16:15
Reported: 05/02/2016 02:01

Honeywell International, Inc.
115 Tabor Road
Morris Plains NJ 07950

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		mg/l	mg/l	mg/l	
07051	**Chromium**	7440-47-3	**2,010**	0.400	2.00	200

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	161131848001	04/27/2016 18:18	Suzanne M Will	200
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	161131848001	04/26/2016 07:51	James L Mertz	1

*=This limit was used in the evaluation of the final result

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2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: 30905-GWD1-042016 Grab Groundwater
Baltimore, MD

LL Sample # WW 8344208
LL Group # 1653002
Account # 10651

Project Name: Baltimore, MD

Collected: 04/20/2016 10:59 by DG

Submitted: 04/21/2016 16:15
Reported: 05/02/2016 02:01

Honeywell International, Inc.
115 Tabor Road
Morris Plains NJ 07950

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		mg/l	mg/l	mg/l	
07051	**Chromium**	7440-47-3	**1.76**	0.0020	0.0100	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	2	161131848001	04/27/2016 01:50	Matthew Machtinger	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	161131848001	04/26/2016 07:51	James L Mertz	1

*=This limit was used in the evaluation of the final result

Sample Description: 30905-GWD2-042016 Grab Groundwater
Baltimore, MD

LL Sample # WW 8344209
LL Group # 1653002
Account # 10651

Project Name: Baltimore, MD

Collected: 04/20/2016 12:02 by DG

Submitted: 04/21/2016 16:15
Reported: 05/02/2016 02:01

Honeywell International, Inc.
115 Tabor Road
Morris Plains NJ 07950

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SW-846 9012A**		mg/l	mg/l	mg/l	
08255	Total Cyanide (water)	57-12-5	N.D.	0.0050	0.010	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08255	Total Cyanide (water)	SW-846 9012A	1	16119117101A	04/29/2016 11:32	Brianna A White	1
08256	Cyanide Water Distillation	SW-846 9012A	1	16119117101A	04/28/2016 10:55	Nancy J Shoop	1

*=This limit was used in the evaluation of the final result

Sample Description: 30905-GW-FB1-042016 Grab Water
Baltimore, MD

LL Sample # WW 8344210
LL Group # 1653002
Account # 10651

Project Name: Baltimore, MD

Collected: 04/20/2016 13:05 by DG

Submitted: 04/21/2016 16:15
Reported: 05/02/2016 02:01

Honeywell International, Inc.
115 Tabor Road
Morris Plains NJ 07950

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		mg/l	mg/l	mg/l	
07051	**Chromium**	7440-47-3	**0.0278**	0.0020	0.0100	1
Wet Chemistry	**SW-846 9012A**		mg/l	mg/l	mg/l	
08255	Total Cyanide (water)	57-12-5	N.D.	0.0050	0.010	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	2	161131848001	04/27/2016 01:53	Matthew Machtinger	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	161131848001	04/26/2016 07:51	James L Mertz	1
08255	Total Cyanide (water)	SW-846 9012A	1	16119117101A	04/29/2016 11:34	Brianna A White	1
08256	Cyanide Water Distillation	SW-846 9012A	1	16119117101A	04/28/2016 10:55	Nancy J Shoop	1

*=This limit was used in the evaluation of the final result

Sample Description: 30905-GW-RB1-042016 Grab Water
Baltimore, MD

LL Sample # WW 8344211
LL Group # 1653002
Account # 10651

Project Name: Baltimore, MD

Collected: 04/20/2016 13:12 by DG

Submitted: 04/21/2016 16:15
Reported: 05/02/2016 02:01

Honeywell International, Inc.
115 Tabor Road
Morris Plains NJ 07950

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/l**	**mg/l**	**mg/l**	
07051	Chromium	7440-47-3	N.D.	0.0020	0.0100	1
Wet Chemistry	**SW-846 9012A**		**mg/l**	**mg/l**	**mg/l**	
08255	Total Cyanide (water)	57-12-5	N.D.	0.0050	0.010	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	161131848001	04/28/2016 17:37	Suzanne M Will	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	161131848001	04/26/2016 07:51	James L Mertz	1
08255	Total Cyanide (water)	SW-846 9012A	1	16119117101A	04/29/2016 11:40	Brianna A White	1
08256	Cyanide Water Distillation	SW-846 9012A	1	16119117101A	04/28/2016 10:55	Nancy J Shoop	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: Honeywell International, Inc. Group Number: 1653002
Reported: 05/02/2016 02:01

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	mg/l	mg/l	mg/l
Batch number: 161131848001	Sample number(s): 8344200-8344208,8344210-8344211		
Chromium	N.D.	0.0020	0.0150
Batch number: 16119117101A	Sample number(s): 8344203-8344204,8344209-8344211		
Total Cyanide (water)	N.D.	0.0050	0.010

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	mg/l	mg/l	mg/l	mg/l					
Batch number: 161131848001	Sample number(s): 8344200-8344208,8344210-8344211								
Chromium	0.200	0.196			98		80-120		
	mg/l	mg/l	mg/l	mg/l					
Batch number: 16119117101A	Sample number(s): 8344203-8344204,8344209-8344211								
Total Cyanide (water)	0.200	0.205			102		90-110		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc	MS Spike Added	MS Conc	MSD Spike Added	MSD Conc	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
	mg/l	mg/l	mg/l	mg/l	mg/l					
Batch number: 161131848001	Sample number(s): 8344200-8344208,8344210-8344211 UNSPK: P344229									
Chromium	N.D.	0.200	0.196	0.200	0.195	98	97	75-125	1	20
	mg/l	mg/l	mg/l	mg/l	mg/l					
Batch number: 16119117101A	Sample number(s): 8344203-8344204,8344209-8344211 UNSPK: P338734									
Total Cyanide (water)	N.D.	0.200	0.206			103		72-114		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Honeywell International, Inc. Group Number: 1653002
Reported: 05/02/2016 02:01

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	mg/l	mg/l		
Batch number: 161131848001	Sample number(s): 8344200-8344208,8344210-8344211 BKG: P344229			
Chromium	N.D.	N.D.	0 (1)	20
	mg/l	mg/l		
Batch number: 16119117101A	Sample number(s): 8344203-8344204,8344209-8344211 BKG: P338734			
Total Cyanide (water)	N.D.	N.D.	0 (1)	20

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

10651 | 1653002 | 8344200-11

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425
(717) 656-2300

Honeywell — Chain Of Custody / Analysis Request

AESI Ref: 42479.47375
COC#: 30905-122915-01

Privileged & Confidential	N		Site Name:	Baltimore	Phase:
EDD To:	Locus Focus(matthew.gillis@ch2m.com)		Location of Site:	BALTIMORE, MD	Sampling Program
Sampler:	D. Griffith, M. Kennedy, L. Vu, M. Morris, J. Jett				
PO #	4500108077		Preservative	3	5
Analysis Turnaround Time (TAT):	5				
Consultant	CH2M				
Full Report TAT:	28				

Lab Proj # (SDG):
Lab ID: LLI
Site ID: BALTIMORE
Lab Job #:
Authorized User: Honeywell

Text & Excel File Drive | Excel & Text File Order

Sampling Co.: Maryland Environmental Service

Client Contact: (name, co., address)
Christopher French
101 Columbia Road Meyer 3
Morristown, NJ 07962

Preliminary Data To: matthew.gillis@ch2m.com
Sample Receipt Acknowledgement To: matthew.gillis@ch2m.com
Hard Copy To: Christina Jensen
Invoice To: Christopher French

	Sample Identification											Composite/Grab	Field Filtered Sample ?	SW6010 Chromium	SW9010/9012 Total Cyanide (auto)															Sampling Method (code)	Lab Sample Numbers
	Location ID	Start Depth (ft)	End Depth (ft)	Field Sample ID	Sample Date	Sample Time	Sample Type	Sample Matrix	Sample Purpose	# of Cont.	Units			ppm	ppb																
1	OP7	6.55	6.75	30905-GW-OP7-042016	4/20/2016	1024	GW-GWS	WATER	REG	1	grab	Y	X																	BladPump	
2	OP11	17.22	18.82	30905-GW-OP11-042016	4/20/2016	0943	GW-GWS	WATER	REG	1	grab	Y	X																	BladPump	
3	OP5	6.06	6.26	30905-GW-OP5-042016	4/20/2016	1058	GW-GWS	WATER	REG	1	grab	Y	X																	BladPump	
4	OP2	10.50	11.03	30905-GW-OP2-042016	4/20/2016	1201	GW-GWS	WATER	REG	2	grab	Y	X	X																BladPump	
5	OP3	13.21	13.30	30905-GW-OP3-042016	4/20/2016	1258	GW-GWS	WATER	REG	2	grab	Y	X	X																BladPump	
6	OP4	9.39	9.32	30905-GW-OP4-042016	4/20/2016	1422	GW-GWS	WATER	REG	1	grab	Y	X																	BladPump	
7	OP9	6.48	6.49	30905-GW-OP9-042016	4/20/2016	1521	GW-GWS	WATER	REG	1	grab	Y	X																	BladPump	
8	NWM-27	6.75	>8.40	30905-GW-NWM27-042016	4/20/2016	1645	GW-GWS	WATER	REG	1	grab	Y	X																	BladPump	
9	OP5 DUP	-	-	30905-GWD1-042016	4/20/2016	1059	GW-GWS	WATER	FD	1	grab	Y	X																	BladPump	
10	OP2 DUP	-	-	30905-GWD2-042016	4/20/2016	1202	GW-GWS	WATER	FD	1	grab	Y		X																BladPump	
11	FIELDQC	-	-	30905-GW-FB1-042016	4/20/2016	1305	BLKWATER	WATER	FB	2	grab	Y	X	X																	
12	FIELDQC	-	-	30905-GW-RB1-042016	4/20/2016	1312	BLKWATER	WATER	EB	2	grab	Y	X	X																	

Relinquished by	MES Company		Received by	Company	CH2M	Condition	Custody Seals Intact
	4/20/16 5:25 Date/Time			Date/Time	4/20/16 5:25	Cooler Temp.	
Relinquished by	Company CH2M		Received by	Company		Condition	Custody Seals Intact
	Date/Time 4/21/16 0920			Date/Time 4/21/16 09:20		Cooler Temp.	

Preservatives: (Other; Specify):

0 (none); 1 (4 Deg C); 2 (HCl pH<2); 3 (HNO3 pH<2); 4 (H2SO4 pH<2); 5 (NaOH pH>12); 6 (NaOH, Zn Acetate); 7 (H2SO4 (pH<2), 4 Deg C)); 8 (HCl pH<2); 9 (HCl 4 Deg C); 10 (HNO3 (pH<2), 4Deg C); 11 (4C NaOH (pH>12) & Ascorbic Acid); 12 (4C H2SO4 (pH<2) & Na2S2O3); 13 (Zn Acetate); sp (special instructions)

Relinquished 4/21/16 16:10

4/21/16 1615

eurofins | Lancaster Laboratories Environmental

Sample Administration Receipt Documentation Log

Doc Log ID: 143808

Group Number(s): 1653002

Client: MES

Delivery and Receipt Information

Delivery Method:	ELLE Courier	Arrival Timestamp:	04/21/2016 16:15
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	MD		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	No	Sample Date/Times match COC:	Yes
Samples Chilled:	Yes	VOA Vial Headspace ≥ 6mm:	N/A
Paperwork Enclosed:	Yes	Total Trip Blank Qty:	0
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Patrick Engle (3472) at 16:35 on 04/21/2016

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT121	1.7	DT	Wet	Y	Loose/Bag	N

2425 New Holland Pike
Lancaster, PA 17605-2425

T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
µg	microgram(s)	**mg**	milligram(s)
mL	milliliter(s)	**L**	liter(s)
m3	cubic meter(s)	**µL**	microliter(s)
		pg/L	picogram/liter

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Laboratory Data Qualifiers:

B - Analyte detected in the blank
C - Result confirmed by reanalysis
E - Concentration exceeds the calibration range
J (or G, I, X) - estimated value ≥ the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P - Concentration difference between the primary and confirmation column >40%. The lower result is reported.
U - Analyte was not detected at the value indicated
V - Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference…

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Appendix B-2
Chain-of-Custody Records—April 2016

10651 | 1653002 | 8344200-11

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425
(717) 656-2300

Honeywell — Chain Of Custody / Analysis Request

AESI Ref: 42479.47375
COC#: 30905-122915-01

Sampling Co.:	Maryland Environmental Service	Privileged & Confidential: N	Site Name: Baltimore
Client Contact: (name, co., address)		EDD To: Locus Focus(matthew.gillis@ch2m.com)	Location of Site: BALTIMORE, MD
Christopher French		Sampler: D. Griffith, M. Kennedy, L. Vu, M. Morris, J. Jett	Phase: / Sampling Program:
101 Columbia Road Meyer 3		PO #: 4500108077	Lab Proj # (SDG):
Morristown, NJ 07962		Analysis Turnaround Time (TAT): 5	Lab ID: LLI
Preliminary Data To: matthew.gillis@ch2m.com		Consultant: CH2M	Site ID: BALTIMORE
Sample Receipt Acknowledgement To: matthew.gillis@ch2m.com			Lab Job #:
Hard Copy To: Christina Jensen		Full Report TAT: 28	Authorized User: Honeywell
Invoice To: Christopher French			Text & Excel File Drive / Excel & Text File Order

Preservative: 3 = Composite/Grab; 5 = Field Filtered Sample ?

	Sample Identification				Sample Date	Sample Time	Sample Type	Sample Matrix	Sample Purpose	# of Cont.	Composite/Grab	Field Filtered Sample ?	SW6010 Chromium	SW9010/9012 Total Cyanide (auto)	Sampling Method (code)	Lab Sample Numbers
	Location ID	Start Depth (ft)	End Depth (ft)	Field Sample ID							Units		ppm	ppb		
1	OP7	6.55	6.75	30905-GW-OP7-042016	4/20/2016	1024	GW-GWS	WATER	REG	1	grab	Y	X		BladPump	
2	OP11	17.22	18.82	30905-GW-OP11-042016	4/20/2016	0943	GW-GWS	WATER	REG	1	grab	Y	X		BladPump	
3	OP5	6.06	6.26	30905-GW-OP5-042016	4/20/2016	1058	GW-GWS	WATER	REG	1	grab	Y	X		BladPump	
4	OP2	10.50	11.03	30905-GW-OP2-042016	4/20/2016	1201	GW-GWS	WATER	REG	2	grab	Y	X	X	BladPump	
5	OP3	13.21	13.30	30905-GW-OP3-042016	4/20/2016	1258	GW-GWS	WATER	REG	2	grab	Y	X	X	BladPump	
6	OP4	9.39	9.32	30905-GW-OP4-042016	4/20/2016	1422	GW-GWS	WATER	REG	1	grab	Y	X		BladPump	
7	OP9	6.48	6.49	30905-GW-OP9-042016	4/20/2016	1521	GW-GWS	WATER	REG	1	grab	Y	X		BladPump	
8	NWM-27	6.75	>8.90	30905-GW-NWM27-042016	4/20/2016	1645	GW-GWS	WATER	REG	1	grab	Y	X		BladPump	
9	OP5 DUP	-	-	30905-GWD1-042016	4/20/2016	1059	GW-GWS	WATER	FD	1	grab	Y	X		BladPump	
10	OP2 DUP	-	-	30905-GWD2-042016	4/20/2016	1202	GW-GWS	WATER	FD	1	grab	Y		X	BladPump	
11	FIELDQC	-	-	30905-GW-FB1-042016	4/20/2016	1305	BLKWATER	WATER	FB	2	grab	Y	X	X		
12	FIELDQC	-	-	30905-GW-RB1-042016	4/20/2016	1312	BLKWATER	WATER	EB	2	grab	Y	X	X		

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Relinquished by	MES Company		Received by	Company CH2M	Condition	Custody Seals Intact
	Date/Time 4/20/16 5:25			Date/Time 4/20/16 5:25	Cooler Temp.	
Relinquished by	Company CH2M		Received by	Company	Condition	Custody Seals Intact
	Date/Time 4/21/16 0920			Date/Time 4/21/16 09:20	Cooler Temp.	

Preservatives: (Other; Specify):

0 (none); 1 (4 Deg C); 2 (HCl pH<2); 3 (HNO3 pH<2); 4 (H2SO4 pH<2); 5 (NaOH pH>12); 6 (NaOH, Zn Acetate); 7 (H2SO4 (pH<2), 4 Deg C)); 8 (HCl pH<2); 9 (HCl 4 Deg C); 10 (HNO3 (pH<2), 4Deg C); 11 (4C NaOH (pH>12) & Ascorbic Acid); 12 (4C H2SO4 (pH<2) & Na2S2O3); 13 (Zn Acetate); sp (special instructions)

Relinquished 4/21/16 16:10 — 4/21/16 1615

Appendix B-3
Field Report—April 2016

BALTIMORE INNER HARBOR

GROUNDWATER WELL MONITORING

April 20, 2016

Honeywell

MARYLAND ENVIRONMENTAL SERVICE

METER CALIBRATION LOG

PROJECT _____ Continued From Page _____

DATE	Time	Meter	Buffer	Initials comments
4/8/16	8:00am	YSI 63	4, 7, 10	NPDES wet/V/B
4/20/16	6:52 AM	HORIBA 1	AUTO CAL	BH GROUNDWATER

Continued on Page

Read and Understood By

Signed Date Signed Date

FIELD NOTES

BIH GW WELL SAMPLING 4/20/2016

DOUGLAS GRIFFITH, MEGAN KENNEDY, MAURA MORRIS, JIM JETT, LIEN VU

WELL OP-11 30905-GW-OP11-042016 WEATHER CONDITIONS: SUNNY, WARM, BREEZY, 70's (F)

ARRIVAL TIME: 9:10
FINISH TIME: 9:53

WELL DIAMETER 4"
BEGINNING H_2O LEVEL: 17.22' FT
ENDING H_2O LEVEL: 18.82 FT

SAMPLE COLLECTION TIME: 9:43

TIME (HRS)	TEMP. (°C)	pH (UNITS)	COND. (mS/cm)	D.O. (mg/L)	TURB. (NTU)	ORP (mV)	WATER LEVEL (FT)
9:31	15.72	6.04	3.60	6.73	13.9	104	17.29
9:33	15.52	6.07	4.52	5.67	8.7	72	17.50
9:35	15.46	6.09	4.90	4.99	9.3	57	17.51
9:37	15.49	6.11	5.01	4.43	9.2	47	17.55
9:39	15.34	6.10	5.04	4.14	10.9	44	17.57
9:41	15.50	6.11	5.06	3.98	9.9	41	17.59

D.O

Scale: 1 square = _____

BIH GW SAMPLING 4/20/2016

DG, MK, MM, JJ, LV

WEATHER CONDITIONS: SUNNY, 70's, BREEZY

WELL: OP-7 30905-GW-OP7-042016

ARRIVAL TIME: 10:03
FINISH TIME: 10:33

WELL DIAMETER: 4"
BEGINNING ~~TIME~~ H_2O LEVEL 6.55 FT
ENDING ~~TIME~~ H_2O LEVEL 6.75 FT

SAMPLE COLLECTION TIME: 10:24

TIME (HRS)	TEMP (°C)	pH (UNITS)	COND (MS/CM)	D.O. (MG/L)	TURB (NTU)	ORP (MV)	WATER LEVEL (FT)
10:12	14.09	7.04	9.52	7.93	2.6	8	6.67
10:14	13.71	7.54	10.3	7.64	0.9	-8	6.70
10:16	13.66	7.96	10.7	7.66	0.5	-37	6.69
10:18	13.66	8.18	11.0	7.23	0.2	-52	6.70
10:20	13.56	8.31	11.4	6.85	0.2	-66	6.72
10:22	13.58	8.40	12.1	6.61	0.0	-71	6.70

D.S.

Scale: 1 square = _____

BIH GW SAMPLING — 4/20/2016

DG, MK, MM, JJ, LV

WEATHER CONDITIONS: SUNNY, BREEZY, 70s

WELL OP-5 30905-GW-OP5-042019 & 30905-GWDI042016
DUP (CHROMIUM)

NOTE: TUBING ~10' TOO LONG

ARRIVAL TIME: 10:36
~~FINISH~~ TIME: 11:11

WELL DIAMETER 4"
BEGINNING ~~TIME~~ H_2O LEVEL: 6.06
ENDING ~~TIME~~ H_2O LEVEL: 6.26

SAMPLE COLLECTION TIME: 10:58 Dup: 1059

TIME (HRS)	TEMP (°C)	pH (UNITS)	COND. (MS/CM)	D.O. (MG/L)	TURB (NTU)	ORP (MV)	WATER LEVEL (FT)
D.G 10:49	18.79	8.02	21.8	6.36	1.0	37	6.11
10:51	16.28	8.15	19.1	7.04	1.2	26	6.16
10:53	15.04	7.68	14.3	6.95	0.5	23	6.20
10:55	14.90	7.50	14.6	6.68	0.2	22	6.25
10:57	14.88	7.43	15.1	6.50	0.8	21	6.30

D.G.

Scale: 1 square =

BSH GW SAMPLING 4/20/2016

DG, MK, MM, JJ, LV

WEATHER CONDITIONS: Sunny, 70°(F)

(NOTE = TUBING 10-12' TOO LONG)

WELL: OP-2 30905-GW-OP2-042016 & 30905-GWD2-042016
DUP (CYANIDE)

ARRIVAL TIME: 11:40

FINISH TIME: 12:20

(NOTE = FLUSH FITTING LEAKS DURING PUMPING

WELL DIAMETER: 6"

BEGINNING H_2O LEVEL: 10.50 FT

ENDING H_2O LEVEL: 11.03 FT

SAMPLE COLLECTION TIME: 12:01 DUP 12:02

TIME (HRS)	TEMP. (°C)	pH (UNITS)	COND. (MS/CM)	D.O. (mg/L)	TURB (NTU)	ORP (mV)	WATER LEVEL (FT)
11:51	18.67	7.80	6.82	9.33	2.7	57	11.02
11:53	18.18	~~7.00~~ 7.09	6.76	7.67	1.7	74	11.02
11:55	17.75	6.50	6.77	6.68	0.9	101	11.00
11:57	17.45	6.32	6.76	6.03	0.2	113	11.00
11:59	17.29	6.28	6.74	5.50	0.4	121	11.00

D.G.

Scale: 1 square = _____

B|H GW SAMPLING 4/20/2016

DG, MK, MM, JT, LV

WEATHER CONDITIONS: Sunny. 70's(F)

WELL OP-3 30905-GW-OP3-042016, 30905-GW-FB1-042016, & 30905-GW-RB1-042016

ARRIVAL TIME : 12:35

FINISH TIME : ~~13:05~~ D.G. 13:30

RB 13:12

FB 13:05

WELL DIAMETER : 6"

BEGINNING H_2O LEVEL : 13.21

ENDING H_2O LEVEL : 13.30

SAMPLE COLLECTION TIME : 12:58

TIME (HRS)	TEMP (°C)	PH (UNITS)	COND. (ms/cm)	D.O. (mg/L)	TURB (NTU)	ORP (mV)	WATER LEVEL (FT)
12:50	20.84	6.68	7.98	5.62	34.0	125	13.30
12:52	19.45	6.07	8.00	4.55	0.0	167	13.30
12:54	18.59	5.86	7.94	5.58	0.0	199	13.32
12:56	18.39	5.83	7.93	5.21	0.0	210	13.32

D.G

B/H GW SAMPLING

4/20/2016

DG, MK, MM, JJ, LV

WEATHER CONDITIONS: Sunny, 70's (F)

WELL: OP-4 30905-GW-OP4-042016

ARRIVAL TIME: [redacted] 13:35 *Please see note below

FINISH TIME: 14:39

WELL DIAMETER: 6"

BEGINNING H2O LEVEL: 9.39

ENDING H2O LEVEL: 9.32

SAMPLE COLLECTION TIME: 1422

TIME (HRS)	TEMP (°C)	PH (UNITS)	COND. (MS/CM)	D.O. (MG/L)	TURB. (NTU)	ORP (MV)	WATER LEVEL (FT)
13:49	20.43	6.32	3.70	9.16	1.3	200	9.32
13:51	18.90	6.39	1.33	7.11	0.0	198	9.32
13:53	18.43	6.53	0.52	6.46	0.0	189	9.32
13:55	17.99	6.78	0.25	6.11	0.0	180	9.32
13.57	17.77	6.99	0.15	5.83	0.0	169	9.32
Stopped due to Flow issues							
14:08	18.70	7.30	0.092	5.28	0.0	156	9.32
14:10	18.16	5.76	2.76	3.77	2.0	230	9.32
14:12	18.14	5.77	5.06	2.84	4.7	236	9.32
14:14	18.14	5.78	6.84	2.38	6.2	240	9.32
14:16	17.99	5.79	7.41	2.22	6.8	253	9.32
14:18	17.99	5.79	7.63	2.16	11.0	258	9.32
14:20	17.96	5.81	7.69	2.06	10.0	262	9.32

MM

Scale: 1 square = _____

BIH GW SAMPLING 4/20/2016

DG, MK, MM, JJ, LV

WEATHER CONDITIONS: Sunny, 70's (F)

WELL: OP-9 30905-GW-OP9-042016

ARRIVAL TIME: 15:02
FINISH TIME: 15:27

WELL DIAMETER: 4"
BEGINNING H_2O LEVEL: 6.48
ENDING H_2O LEVEL: 6.49

SAMPLE COLLECTION TIME: 15:21

TIME (HRS)	TEMP (°C)	pH (UNITS)	COND. (MS/CM)	D.O. (mg/L)	TURB (NTU)	ORP (mV)	WATER LEVEL (FT)
15:09	17.41	6.56	17.2	6.26	5.1	229	6.50
15:11	16.57	6.46	19.2	4.45	4.1	236	6.50
15:13	15.96	6.40	20.3	3.71	4.8	243	6.51
15:15	15.62	6.38	21.2	3.10	4.2	249	6.50
15:17	15.38	6.37	21.5	2.75	3.2	256	6.49
15:19	15.51	6.37	21.6	2.58	2.6	260	6.49

D.G

Scale: 1 square = _____

BH GW SAMPLING

4/20/2016
Sunny, 70's (F)

DG, MK, MM, JJ, LV

WELL: NUM 27 30905 GW-NWM27-042016

ARRIVAL TIME: 16:25
FINISH TIME: 17:00

WELL DIAMETER: 2"
BEGINNING H_2O LEVEL: 6.75
ENDING H_2O LEVEL: >8.40

SAMPLE COLLECTION TIME: 16:45

TIME (HRS)	TEMP (°C)	pH (UNITS)	COND. (MS/CM)	D.O. (mg/L)	TURB (NTU)	ORP (mV)	WATER LEVEL (FT)
16:40	16.53	10.91	22.9	9.22	501	130	>8.40
16:42	16.16	11.13	23.0	8.24	694	98	>8.40
16:44	15.93	11.19	23.1	7.53	1000	76	>8.40

* TOOK SAMPLE DUE TO WATER LEVEL DRAWDOWN *

DG

Scale: 1 square = _____

CHAIN of CUSTODY

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425
(717) 656-2300

Honeywell — Chain Of Custody / Analysis Request

AESI Ref: 42479.47375
COC#: 30905-122915-01

Privileged & Confidential	N		Site Name:	Baltimore	Phase:		Lab Proj # (SDG):
EDD To:	Locus Focus(matthew.gillis@ch2m.com)		Location of Site:	BALTIMORE, MD	Sampling Program		Lab ID: LLI
Sampler:	D. Griffith, M. Kennedy, L. Vu, M. Morris, J. Jett						Site ID: BALTIMORE
PO #	4500108077		Preservative	3	5		Lab Job #:
Analysis Turnaround Time (TAT):	5						Authorized User: Honeywell
Consultant	CH2M						
							Text & Excel File Drive: Excel & Text File Order
Full Report TAT:	28						

Sampling Co.: Maryland Environmental Service

Client Contact: (name, co., address)
Christopher French
101 Columbia Road Meyer 3
Morristown, NJ 07962

Preliminary Data To: matthew.gillis@ch2m.com
Sample Receipt Acknowledgement To: matthew.gillis@ch2m.com
Hard Copy To: Christina Jensen
Invoice To: Christopher French

	Sample Identification				Sample Date	Sample Time	Sample Type	Sample Matrix	Sample Purpose	# of Cont.	Composite/Grab	Field Filtered Sample ?	SW6010 Chromium	SW9010/9012 Total Cyanide (auto)	Sampling Method (code)	Lab Sample Numbers
	Location ID	Start Depth (ft)	End Depth (ft)	Field Sample ID							Units		ppm	ppb		
1	OP7	6.55	6.75	30905-GW-OP7-042016	4/20/2016	1024	GW-GWS	WATER	REG	1	grab	Y	X		BladPump	
2	OP11	17.22	18.82	30905-GW-OP11-042016	4/20/2016	0943	GW-GWS	WATER	REG	1	grab	Y	X		BladPump	
3	OP5	6.06	6.26	30905-GW-OP5-042016	4/20/2016	1058	GW-GWS	WATER	REG	1	grab	Y	X		BladPump	
4	OP2	10.50	11.03	30905-GW-OP2-042016	4/20/2016	1201	GW-GWS	WATER	REG	2	grab	Y	X	X	BladPump	
5	OP3	13.21	13.30	30905-GW-OP3-042016	4/20/2016	1258	GW-GWS	WATER	REG	2	grab	Y	X	X	BladPump	
6	OP4	9.39	9.32	30905-GW-OP4-042016	4/20/2016	1422	GW-GWS	WATER	REG	1	grab	Y	X		BladPump	
7	OP9	6.48	6.49	30905-GW-OP9-042016	4/20/2016	1521	GW-GWS	WATER	REG	1	grab	Y	X		BladPump	
8	NWM-27	6.75	>8.40	30905-GW-NWM27-042016	4/20/2016	1645	GW-GWS	WATER	REG	1	grab	Y	X		BladPump	
9	OP5 DUP	-	-	30905-GWD1-042016	4/20/2016	1059	GW-GWS	WATER	FD	1	grab	Y	X		BladPump	
10	OP2 DUP	-	-	30905-GWD2-042016	4/20/2016	1202	GW-GWS	WATER	FD	1	grab	Y		X	BladPump	
11	FIELDQC	-	-	30905-GW-FB1-042016	4/20/2016	1305	BLKWATER	WATER	FB	2	grab	Y	X	X		
12	FIELDQC	-	-	30905-GW-RB1-042016	4/20/2016	1312	BLKWATER	WATER	EB	2	grab	Y	X	X		

Relinquished by	MES Company		Received by	Company CH2M	Condition	Custody Seals Intact
	4/20/16 5:25 p.m. Date/Time			4/20/16 5:25 Date/Time	Cooler Temp.	
Relinquished by	Company		Received by	Company	Condition	Custody Seals Intact
	Date/Time			Date/Time	Cooler Temp.	

Preservatives: (Other; Specify):

0 (none); 1 (4 Deg C); 2 (HCl pH<2); 3 (HNO3 pH<2); 4 (H2SO4 pH<2); 5 (NaOH pH>12); 6 (NaOH, Zn Acetate); 7 (H2SO4 (pH<2), 4 Deg C)); 8 (HCl pH<2); 9 (HCl 4 Deg C); 10 (HNO3 (pH<2), 4Deg C); 11 (4C NaOH (pH>12) & Ascorbic Acid); 12 (4C H2SO4 (pH<2) & Na2S2O3); 13 (Zn Acetate); sp (special instructions)

Appendix C
Drainage Layer Sampling Program Data

Appendix C-1
Raw Laboratory Data—April 2016

eurofins | Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Honeywell International, Inc.
115 Tabor Road
Morris Plains NJ 07950

Report Date: May 06, 2016

Project: Baltimore Inner Harbor, MD

Submittal Date: 04/26/2016
Group Number: 1654389
SDG: BHP58
PO Number: 4400025014
State of Sample Origin: MD

Client Sample Description	Lancaster Labs (LL) #
30905_DLF_1_042516 Grab Water	8351438
30905_DL_1_042516 Grab Water	8351439
30905_DLF_2_042516 Grab Water	8351440
30905_DL_2_042516 Grab Water	8351441
30905_DLF_3_042516 Grab Water	8351442
30905_DL_3_042516 Grab Water	8351443
30905_DLF_4_042516 Grab Water	8351444
30905_DL_4_042516 Grab Water	8351445
30905_DLF_4A_042516 Grab Water	8351446
30905_DL_4A_042516 Grab Water	8351447
30905_DLDF_042516 Grab Water	8351448
30905_DLD_042516 Grab Water	8351449
30905_FBF_1_042516 Grab Water	8351450
30905_EBF_1_042516 Grab Water	8351451
30905_FB_1_042516 Grab Water	8351452
30905_EB_1_042516 Grab Water	8351453

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ .

Electronic Copy To	CH2M Hill, Inc.	Attn: Bernice Kidd
Electronic Copy To	Honeywell International, Inc.	Attn: Honeywell HTS
Electronic Copy To	Honeywell	Attn: Katherine Beach
Electronic Copy To	CH2M Hill, Inc.	Attn: Robert Steele
Electronic Copy To	CH2M Hill	Attn: Matt Gillis

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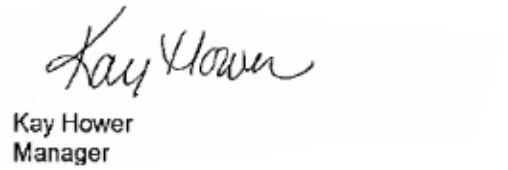
Respectfully Submitted,



Kay Hower
Manager

(510) 672-3979

Sample Description: 30905_DLF_1_042516 Grab Water
Baltimore Inner Harbor

LL Sample # WW 8351438
LL Group # 1654389
Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 04/25/2016 12:05 by DG

Submitted: 04/26/2016 16:43
Reported: 05/06/2016 01:42

Honeywell International, Inc.
115 Tabor Road
Morris Plains NJ 07950

58B01 SDG#: BHP58-01

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals Dissolved	**SW-846 6010B**		**ug/l**	**ug/l**	**ug/l**	
07051	Chromium	7440-47-3	N.D.	2.0	10.0	1
Wet Chemistry	**SW-846 9012A**		**ug/l**	**ug/l**	**ug/l**	
08255	Total Cyanide (water)	57-12-5	N.D.	5.0	10	1

Sample Comments

This sample was field filtered for dissolved metals and cyanide.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	2	161201848006	05/03/2016 08:48	Joanne M Gates	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	161201848006	05/02/2016 07:08	James L Mertz	1
08255	Total Cyanide (water)	SW-846 9012A	1	16119117101A	04/29/2016 11:42	Brianna A White	1
08256	Cyanide Water Distillation	SW-846 9012A	1	16119117101A	04/28/2016 10:55	Nancy J Shoop	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: 30905_DL_1_042516 Grab Water
Baltimore Inner Harbor

LL Sample # WW 8351439
LL Group # 1654389
Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 04/25/2016 12:05 by DG

Submitted: 04/26/2016 16:43
Reported: 05/06/2016 01:42

Honeywell International, Inc.
115 Tabor Road
Morris Plains NJ 07950

58B02 SDG#: BHP58-02

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		ug/l	ug/l	ug/l	
07051	**Chromium**	7440-47-3	**30.1**	2.0	10.0	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	2	161201848006	05/03/2016 09:09	Joanne M Gates	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	161201848006	05/02/2016 07:08	James L Mertz	1

*=This limit was used in the evaluation of the final result

Sample Description: 30905_DLF_2_042516 Grab Water
Baltimore Inner Harbor

LL Sample # WW 8351440
LL Group # 1654389
Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 04/25/2016 11:15 by DG

Submitted: 04/26/2016 16:43
Reported: 05/06/2016 01:42

Honeywell International, Inc.
115 Tabor Road
Morris Plains NJ 07950

58B03 SDG#: BHP58-03

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals Dissolved	**SW-846 6010B**		**ug/l**	**ug/l**	**ug/l**	
07051	Chromium	7440-47-3	N.D.	2.0	10.0	1
Wet Chemistry	**SW-846 9012A**		**ug/l**	**ug/l**	**ug/l**	
08255	Total Cyanide (water)	57-12-5	N.D.	5.0	10	1

Sample Comments

This sample was field filtered for dissolved metals and cyanide.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	2	161201848006	05/03/2016 09:12	Joanne M Gates	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	161201848006	05/02/2016 07:08	James L Mertz	1
08255	Total Cyanide (water)	SW-846 9012A	1	16119117101A	04/29/2016 11:44	Brianna A White	1
08256	Cyanide Water Distillation	SW-846 9012A	1	16119117101A	04/28/2016 10:55	Nancy J Shoop	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: 30905_DL_2_042516 Grab Water
Baltimore Inner Harbor

LL Sample # WW 8351441
LL Group # 1654389
Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 04/25/2016 11:15 by DG

Submitted: 04/26/2016 16:43
Reported: 05/06/2016 01:42

Honeywell International, Inc.
115 Tabor Road
Morris Plains NJ 07950

58B04 SDG#: BHP58-04

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		ug/l	ug/l	ug/l	
07051	**Chromium**	7440-47-3	**43.9**	2.0	10.0	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	2	161201848006	05/03/2016 09:22	Joanne M Gates	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	161201848006	05/02/2016 07:08	James L Mertz	1

*=This limit was used in the evaluation of the final result

Sample Description: 30905_DLF_3_042516 Grab Water
Baltimore Inner Harbor

LL Sample # WW 8351442
LL Group # 1654389
Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 04/25/2016 10:45 by DG

Submitted: 04/26/2016 16:43
Reported: 05/06/2016 01:42

Honeywell International, Inc.
115 Tabor Road
Morris Plains NJ 07950

58B05 SDG#: BHP58-05

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals Dissolved	**SW-846 6010B**		**ug/l**	**ug/l**	**ug/l**	
07051	Chromium	7440-47-3	N.D.	2.0	10.0	1
Wet Chemistry	**SW-846 9012A**		**ug/l**	**ug/l**	**ug/l**	
08255	Total Cyanide (water)	57-12-5	N.D.	5.0	10	1

Sample Comments

This sample was field filtered for dissolved metals and cyanide.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	2	161201848006	05/03/2016 09:25	Joanne M Gates	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	161201848006	05/02/2016 07:08	James L Mertz	1
08255	Total Cyanide (water)	SW-846 9012A	1	16119117101A	04/29/2016 11:46	Brianna A White	1
08256	Cyanide Water Distillation	SW-846 9012A	1	16119117101A	04/28/2016 10:55	Nancy J Shoop	1

*=This limit was used in the evaluation of the final result

Sample Description: 30905_DL_3_042516 Grab Water
Baltimore Inner Harbor

LL Sample # WW 8351443
LL Group # 1654389
Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 04/25/2016 10:45 by DG

Submitted: 04/26/2016 16:43
Reported: 05/06/2016 01:42

Honeywell International, Inc.
115 Tabor Road
Morris Plains NJ 07950

58B06 SDG#: BHP58-06

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		ug/l		ug/l	ug/l	
07051	**Chromium**	7440-47-3	**4.8**	**J**	2.0	10.0	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	2	161201848006	05/03/2016 09:29	Joanne M Gates	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	161201848006	05/02/2016 07:08	James L Mertz	1

*=This limit was used in the evaluation of the final result

Sample Description: 30905_DLF_4_042516 Grab Water
Baltimore Inner Harbor

LL Sample # WW 8351444
LL Group # 1654389
Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 04/25/2016 08:42 by DG

Submitted: 04/26/2016 16:43
Reported: 05/06/2016 01:42

Honeywell International, Inc.
115 Tabor Road
Morris Plains NJ 07950

58B07 SDG#: BHP58-07

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals Dissolved	**SW-846 6010B**		ug/l	ug/l	ug/l	
07051	**Chromium**	7440-47-3	**15.6**	2.0	10.0	1
Wet Chemistry	**SW-846 9012A**		ug/l	ug/l	ug/l	
08255	Total Cyanide (water)	57-12-5	N.D.	5.0	10	1

Sample Comments

This sample was field filtered for dissolved metals and cyanide.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	2	161201848006	05/03/2016 09:33	Joanne M Gates	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	161201848006	05/02/2016 07:08	James L Mertz	1
08255	Total Cyanide (water)	SW-846 9012A	1	16124117101A	05/05/2016 13:20	Brianna A White	1
08256	Cyanide Water Distillation	SW-846 9012A	1	16124117101A	05/03/2016 09:15	Nancy J Shoop	1

*=This limit was used in the evaluation of the final result

Sample Description: 30905_DL_4_042516 Grab Water
Baltimore Inner Harbor

LL Sample # WW 8351445
LL Group # 1654389
Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 04/25/2016 08:42 by DG

Submitted: 04/26/2016 16:43
Reported: 05/06/2016 01:42

Honeywell International, Inc.
115 Tabor Road
Morris Plains NJ 07950

58B08 SDG#: BHP58-08

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		ug/l	ug/l	ug/l	
07051	**Chromium**	7440-47-3	**16.9**	2.0	10.0	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	2	161201848006	05/03/2016 09:36	Joanne M Gates	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	161201848006	05/02/2016 07:08	James L Mertz	1

*=This limit was used in the evaluation of the final result

Sample Description: 30905_DLF_4A_042516 Grab Water
Baltimore Inner Harbor

LL Sample # WW 8351446
LL Group # 1654389
Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 04/25/2016 09:50 by DG

Submitted: 04/26/2016 16:43
Reported: 05/06/2016 01:42

Honeywell International, Inc.
115 Tabor Road
Morris Plains NJ 07950

58B09 SDG#: BHP58-09

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals Dissolved	**SW-846 6010B**		ug/l	ug/l	ug/l	
07051	**Chromium**	7440-47-3	**23.7**	2.0	10.0	1
Wet Chemistry	**SW-846 9012A**		ug/l	ug/l	ug/l	
08255	Total Cyanide (water)	57-12-5	N.D.	5.0	10	1

Sample Comments

This sample was field filtered for dissolved metals and cyanide.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	2	161201848006	05/03/2016 09:40	Joanne M Gates	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	161201848006	05/02/2016 07:08	James L Mertz	1
08255	Total Cyanide (water)	SW-846 9012A	1	16124117101A	05/05/2016 13:22	Brianna A White	1
08256	Cyanide Water Distillation	SW-846 9012A	1	16124117101A	05/03/2016 09:15	Nancy J Shoop	1

*=This limit was used in the evaluation of the final result

Sample Description: 30905_DL_4A_042516 Grab Water
Baltimore Inner Harbor

LL Sample # WW 8351447
LL Group # 1654389
Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 04/25/2016 09:50 by DG

Submitted: 04/26/2016 16:43
Reported: 05/06/2016 01:42

Honeywell International, Inc.
115 Tabor Road
Morris Plains NJ 07950

58B10 SDG#: BHP58-10

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		ug/l	ug/l	ug/l	
07051	**Chromium**	7440-47-3	**45.8**	2.0	10.0	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	2	161201848006	05/03/2016 09:43	Joanne M Gates	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	161201848006	05/02/2016 07:08	James L Mertz	1

*=This limit was used in the evaluation of the final result

Sample Description: 30905_DLDF_042516 Grab Water
Baltimore Inner Harbor

LL Sample # WW 8351448
LL Group # 1654389
Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 04/25/2016 11:20 by DG

Submitted: 04/26/2016 16:43
Reported: 05/06/2016 01:42

Honeywell International, Inc.
115 Tabor Road
Morris Plains NJ 07950

58B11 SDG#: BHP58-11FD

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals Dissolved	**SW-846 6010B**		**ug/l**	**ug/l**	**ug/l**	
07051	Chromium	7440-47-3	N.D.	2.0	10.0	1
Wet Chemistry	**SW-846 9012A**		**ug/l**	**ug/l**	**ug/l**	
08255	Total Cyanide (water)	57-12-5	N.D.	5.0	10	1

Sample Comments

This sample was field filtered for dissolved metals and cyanide.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	161231848003	05/03/2016 20:46	Suzanne M Will	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	161231848003	05/03/2016 07:48	James L Mertz	1
08255	Total Cyanide (water)	SW-846 9012A	1	16124117101A	05/05/2016 13:24	Brianna A White	1
08256	Cyanide Water Distillation	SW-846 9012A	1	16124117101A	05/03/2016 09:15	Nancy J Shoop	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: 30905_DLD_042516 Grab Water
Baltimore Inner Harbor

LL Sample # WW 8351449
LL Group # 1654389
Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 04/25/2016 11:20 by DG

Submitted: 04/26/2016 16:43
Reported: 05/06/2016 01:42

Honeywell International, Inc.
115 Tabor Road
Morris Plains NJ 07950

58B12 SDG#: BHP58-12FD

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		ug/l	ug/l	ug/l	
07051	**Chromium**	7440-47-3	**20.6**	2.0	10.0	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	161231848003	05/03/2016 20:56	Suzanne M Will	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	161231848003	05/03/2016 07:48	James L Mertz	1

*=This limit was used in the evaluation of the final result

Sample Description: 30905_FBF_1_042516 Grab Water
Baltimore Inner Harbor

LL Sample # WW 8351450
LL Group # 1654389
Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 04/25/2016 08:54 by DG

Submitted: 04/26/2016 16:43
Reported: 05/06/2016 01:42

Honeywell International, Inc.
115 Tabor Road
Morris Plains NJ 07950

58B13 SDG#: BHP58-13FB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals Dissolved	**SW-846 6010B**		**ug/l**	**ug/l**	**ug/l**	
07051	Chromium	7440-47-3	N.D.	2.0	10.0	1
Wet Chemistry	**SW-846 9012A**		**ug/l**	**ug/l**	**ug/l**	
08255	Total Cyanide (water)	57-12-5	N.D.	5.0	10	1

Sample Comments

This sample was field filtered for dissolved metals and cyanide.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	161231848003	05/03/2016 20:59	Suzanne M Will	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	161231848003	05/03/2016 07:48	James L Mertz	1
08255	Total Cyanide (water)	SW-846 9012A	1	16124117101A	05/05/2016 13:26	Brianna A White	1
08256	Cyanide Water Distillation	SW-846 9012A	1	16124117101A	05/03/2016 09:15	Nancy J Shoop	1

*=This limit was used in the evaluation of the final result

Sample Description: 30905_EBF_1_042516 Grab Water
Baltimore Inner Harbor

LL Sample # WW 8351451
LL Group # 1654389
Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 04/25/2016 10:10 by DG

Submitted: 04/26/2016 16:43
Reported: 05/06/2016 01:42

Honeywell International, Inc.
115 Tabor Road
Morris Plains NJ 07950

58B14 SDG#: BHP58-14EB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals Dissolved	**SW-846 6010B**		**ug/l**	**ug/l**	**ug/l**	
07051	Chromium	7440-47-3	N.D.	2.0	10.0	1
Wet Chemistry	**SW-846 9012A**		**ug/l**	**ug/l**	**ug/l**	
08255	Total Cyanide (water)	57-12-5	N.D.	5.0	10	1

Sample Comments

This sample was field filtered for dissolved metals and cyanide.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	161231848003	05/03/2016 21:02	Suzanne M Will	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	161231848003	05/03/2016 07:48	James L Mertz	1
08255	Total Cyanide (water)	SW-846 9012A	1	16124117101A	05/05/2016 13:28	Brianna A White	1
08256	Cyanide Water Distillation	SW-846 9012A	1	16124117101A	05/03/2016 09:15	Nancy J Shoop	1

*=This limit was used in the evaluation of the final result

Sample Description: 30905_FB_1_042516 Grab Water
Baltimore Inner Harbor

LL Sample # WW 8351452
LL Group # 1654389
Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 04/25/2016 08:54 by DG

Submitted: 04/26/2016 16:43
Reported: 05/06/2016 01:42

Honeywell International, Inc.
115 Tabor Road
Morris Plains NJ 07950

58B15 SDG#: BHP58-15FB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		ug/l	ug/l	ug/l	
07051	Chromium	7440-47-3	N.D.	2.0	10.0	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	161231848003	05/03/2016 21:05	Suzanne M Will	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	161231848003	05/03/2016 07:48	James L Mertz	1

*=This limit was used in the evaluation of the final result

Sample Description: 30905_EB_1_042516 Grab Water
Baltimore Inner Harbor

LL Sample # WW 8351453
LL Group # 1654389
Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 04/25/2016 10:10 by DG

Submitted: 04/26/2016 16:43
Reported: 05/06/2016 01:42

Honeywell International, Inc.
115 Tabor Road
Morris Plains NJ 07950

58B16 SDG#: BHP58-16EB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		ug/l	ug/l	ug/l	
07051	Chromium	7440-47-3	N.D.	2.0	10.0	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	161231848003	05/03/2016 21:08	Suzanne M Will	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	161231848003	05/03/2016 07:48	James L Mertz	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: Honeywell International, Inc. Group Number: 1654389
Reported: 05/06/2016 01:42

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: 161201848006	Sample number(s): 8351438-8351447		
Chromium	N.D.	2.0	10.0
Batch number: 161231848003	Sample number(s): 8351448-8351453		
Chromium	N.D.	2.0	10.0
Batch number: 16119117101A	Sample number(s): 8351438,8351440,8351442		
Total Cyanide (water)	N.D.	5.0	10
Batch number: 16124117101A	Sample number(s): 8351444,8351446,8351448,8351450-8351451		
Total Cyanide (water)	N.D.	5.0	10

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: 161201848006	Sample number(s): 8351438-8351447								
Chromium	200	196.16			98		80-120		
Batch number: 161231848003	Sample number(s): 8351448-8351453								
Chromium	200	205.89			103		80-120		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 16119117101A	Sample number(s): 8351438,8351440,8351442								
Total Cyanide (water)	200	204.7			102		90-110		
Batch number: 16124117101A	Sample number(s): 8351444,8351446,8351448,8351450-8351451								
Total Cyanide (water)	200	194.5			97		90-110		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc	MS Spike Added	MS Conc	MSD Spike Added	MSD Conc	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 161201848006	Sample number(s): 8351438-8351447 UNSPK: 8351438									

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Honeywell International, Inc. Group Number: 1654389
Reported: 05/06/2016 01:42

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc	MS Spike Added	MS Conc	MSD Spike Added	MSD Conc	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l	ug/l					
Chromium	N.D.	200	195.83	200	195.61	98	98	75-125	0	20
Batch number: 161231848003	Sample number(s): 8351448-8351453 UNSPK: P351736									
Chromium	2.04	200	199.76	200	201.9	99	100	75-125	1	20
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 16119117101A	Sample number(s): 8351438,8351440,8351442 UNSPK: P338734									
Total Cyanide (water)	N.D.	200	206.2			103		72-114		
Batch number: 16124117101A	Sample number(s): 8351444,8351446,8351448,8351450-8351451 UNSPK: P351566									
Total Cyanide (water)	N.D.	200	186			93		72-114		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	ug/l	ug/l		
Batch number: 161201848006	Sample number(s): 8351438-8351447 BKG: 8351438			
Chromium	N.D.	N.D.	0 (1)	20
Batch number: 161231848003	Sample number(s): 8351448-8351453 BKG: P351736			
Chromium	2.04	2.11	3 (1)	20
	ug/l	ug/l		
Batch number: 16119117101A	Sample number(s): 8351438,8351440,8351442 BKG: P338734			
Total Cyanide (water)	N.D.	N.D.	0 (1)	20
Batch number: 16124117101A	Sample number(s): 8351444,8351446,8351448,8351450-8351451 BKG: P351566			
Total Cyanide (water)	N.D.	N.D.	0 (1)	20

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

10651 / 1654389 / 8351438-53

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425
(717) 656-2300

Honeywell — Chain Of Custody / Analysis Request

AESI Ref: 42485.46959
COC#: 30905-040815-01

Sampling Co.:	Maryland Environmental Service	Privileged & Confidential	N	Site Name:	Baltimore	Phase:	Lab Proj # (SDG):
Client Contact: (name, co., address)		EDD To:	Locus Focus EIM	Location of Site:	BALTIMORE, MD	Sampling Program	Lab ID: LLI
Christopher French		Sampler:	Doug Griffith, Lien Vu, A. Peñafiel				Site ID: BALTIMORE
115 Tabor Rd		PO #	4400025014	Preservative	3	5	Lab Job #:
Morris Plains, NJ 07950		Analysis Turnaround Time (TAT):	14				Authorized User: Honeywell
Preliminary Data To	matthew.gillis@ch2m.com	Consultant	CH2M				
Sample Receipt Acknowledgement To	matthew.gillis@ch2m.com						Text & Excel File Drive / Excel & Text File Order
Hard Copy To	Matt Gillis	Full Report TAT:	28				
Invoice To:	Christopher French						

	Sample Identification				Sample Date	Sample Time	Sample Type	Sample Matrix	Sample Purpose	# of Cont.	Composite/Grab	Field Filtered Sample ?	SW6010 Chromium	SW9010/9012 Total Cyanide (auto)	Sampling Method (code)	Lab Sample Numbers
	Location ID	Start Depth (ft)	End Depth (ft)	Field Sample ID							Units		ug/L	ug/L		
1	SSMP1	4.52	4.60	30905_DLF_1_042516	4/25/2016	12:05	W-SW	WATER	REG	2	grab	Y	X	X		
2	SSMP1	4.52	4.60	30905_DL_1_042516	4/25/2016	12.05	W-SW	WATER	REG	1	grab	N	X			
3	SSMP2	4.67	4.95	30905_DLF_2_042516	4/25/2016	11:15	W-SW	WATER	REG	2	grab	Y	X	X		
4	SSMP2	4.67	4.95	30905_DL_2_042516	4/25/2016	11:15	W-SW	WATER	REG	1	grab	N	X			
5	SSMP3	2.50	2.55	30905_DLF_3_042516	4/25/2016	10:45	W-SW	WATER	REG	2	grab	Y	X	X		
6	SSMP3	2.50	2.55	30905_DL_3_042516	4/25/2016	10:45	W-SW	WATER	REG	1	grab	N	X			
7	SSMP4	7.89	7.87	30905_DLF_4_042516	4/25/2016	8:42	W-SW	WATER	REG	2	grab	Y	X	X		
8	SSMP4	7.89	7.87	30905_DL_4_042516	4/25/2016	8:42	W-SW	WATER	REG	1	grab	N	X			
9	SSMP4A	7.31	7.29	30905_DLF_4A_042516	4/25/2016	9:50	W-SW	WATER	REG	2	grab	Y	X	X		
10	SSMP4A	7.39	7.29	30905_DL_4A_042516	4/25/2016	9:50	W-SW	WATER	REG	1	grab	N	X			
11	SSMP2	4.67	4.95	30905_DLDF_042516	4/25/2016	11:20	W-SW	WATER	FD	2	grab	Y	X	X		
12	SSMP2	4.67	4.95	30905_DLD_042516	4/25/2016	11:20	W-SW	WATER	FD	1	grab	N	X			

Relinquished by	Company: MES	Received by	Company: CARM	Condition		Custody Seals Intact	
Amanda Peñafiel	Date/Time: 4/25/16 12:50		Date/Time: 4/25/16 1250	Cooler Temp.			
Relinquished by	Company: CARM	Received by	Company:	Condition		Custody Seals Intact	
	Date/Time: 4/26/16 1042		Date/Time: 4/26/16 1042	Cooler Temp.			

Preservatives: (Other; Specify):

0 (none); 1 (4 Deg C); 2 (HCl pH<2); 3 (HNO3 pH<2); 4 (H2SO4 pH<2); 5 (NaOH pH>12); 6 (NaOH, Zn Acetate); 7 (H2SO4 (pH<2), 4 Deg C)); 8 (HCl pH<2); 9 (HCl 4 Deg C); 10 (HNO3 (pH<2), 4Deg C); 11 (4C NaOH (pH>12) & Ascorbic Acid); 12 (4C H2SO4 (pH<2) & Na2S2O3); 13 (Zn Acetate); sp (special instructions)

Relinquished By [signature] 4/26/16 @ 1643

[signature] 4/26/16 1643

10651 | 1654389 | 8351438-53

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425
(717) 656-2300

Honeywell — Chain Of Custody / Analysis Request

AESI Ref: 42485.47071
COC#: 30905-40815-02

Sampling Co.:	Maryland Environmental Service	Privileged & Confidential: N	Site Name: Baltimore; Phase:
Client Contact: (name, co., address)		EDD To: Locus Focus EIM	Location of Site: BALTIMORE, MD; Sampling Program
Christopher French		Sampler: Doug Griffith, Lien Vu, Amanda Pentifel	Lab Proj # (SDG):
115 Tabor Rd		PO # 4400025014	Lab ID: LLI
Morris Plains, NJ 07950		Analysis Turnaround Time (TAT): 14	Site ID: BALTIMORE
Preliminary Data To: matthew.gillis@ch2m.com		Consultant: CH2M	Lab Job #:
Sample Receipt Acknowledgement To: matthew.gillis@ch2m.com			Authorized User: Honeywell
Hard Copy To: Matt Gillis		Full Report TAT: 28	Text & Excel File Drive: Excel & Text File Order
Invoice To: Christopher French			

Preservative: 3 = 5 = 0

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	Location ID	Start Depth (ft)	End Depth (ft)	Field Sample ID	Sample Date	Sample Time	Sample Type	Sample Matrix	Sample Purpose	# of Cont.	Composite/Grab	Field Filtered Sample ?	SW6010 Chromium	SW9010/9012 Total Cyanide (auto)	Sampling Method (code)	Lab Sample Numbers
											Units		ug/L	ug/L		
1	FIELD QC	—	—	30905_FBF_1_042516	4/25/2016	8:54	BLKWATER	WATER	FB	2	grab	Y	X	X		
2	FIELD QC	—	—	30905_EBF_1_042516	4/25/2016	10:10	BLKWATER	WATER	EB	2	grab	Y	X	X		
3	FIELDQC	—	—	30905_FB_1_042516	4/25/2016	8:54	BLKWATER	WATER	FB	1	grab	N	X			
4	FIELDQC	—	—	30905_EB_1_042516	4/25/2016	10:10	BLKWATER	WATER	EB	1	grab	N	X			
5																
6																
7																
8																
9																
10																
11																
12																

Relinquished by: Amanda Pentifel	Company: MES	Received by:	Company: CH2M	Condition:		Custody Seals Intact:	
	Date/Time: 4/25/16 12:50		Date/Time: 4/25/16 1250	Cooler Temp.			
Relinquished by:	Company: CH2M	Received by:	Company:	Condition:		Custody Seals Intact:	
	Date/Time: 4/26/16 1043		Date/Time: 4/26/16 1043	Cooler Temp.			

Preservatives: (Other; Specify):

0 (none); 1 (4 Deg C); 2 (HCl pH<2); 3 (HNO3 pH<2); 4 (H2SO4 pH<2); 5 (NaOH pH>12); 6 (NaOH, Zn Acetate); 7 (H2SO4 (pH<2), 4 Deg C)); 8 (HCl pH<2); 9 (HCl 4 Deg C); 10 (HNO3 (pH<2), 4Deg C); 11 (4C NaOH (pH>12) & Ascorbic Acid); 12 (4C H2SO4 (pH<2) & Na2S2O3); 13 (Zn Acetate); sp (special instructions)

Relinquished By 4/26/16 @ 1643

4/26/16 1643

eurofins | Lancaster Laboratories Environmental

Sample Administration Receipt Documentation Log

Doc Log ID: 144304

Group Number(s): 1654389

Client: Honeywell

Delivery and Receipt Information

Delivery Method:	ELLE Courier	Arrival Timestamp:	04/26/2016 16:43
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	MD		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	No	Sample Date/Times match COC:	Yes
Samples Chilled:	Yes	VOA Vial Headspace ≥ 6mm:	N/A
Paperwork Enclosed:	Yes	Total Trip Blank Qty:	0
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Patrick Engle (3472) at 18:36 on 04/26/2016

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT121	0.4	DT	Wet	Y	Loose/Bag	N

2425 New Holland Pike
Lancaster, PA 17605-2425

T 717-656-2300
F 717-656-2681
www.LancasterLabs.com

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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
µg	microgram(s)	**mg**	milligram(s)
mL	milliliter(s)	**L**	liter(s)
m3	cubic meter(s)	**µL**	microliter(s)
		pg/L	picogram/liter

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Laboratory Data Qualifiers:

B - Analyte detected in the blank
C - Result confirmed by reanalysis
E - Concentration exceeds the calibration range
J (or G, I, X) - estimated value ≥ the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P - Concentration difference between the primary and confirmation column >40%. The lower result is reported.
U - Analyte was not detected at the value indicated
V - Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference…

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Appendix C-2
Chain-of-Custody Records—April 2016

16651 / 1654389 / 8351438-53

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425
(717) 656-2300

Honeywell — Chain Of Custody / Analysis Request

AESI Ref: 42485.46959
COC#: 30905-040815-01

Sampling Co.:	Maryland Environmental Service	Privileged & Confidential	N	Site Name:	Baltimore	Phase:	Lab Proj # (SDG):
Client Contact: (name, co., address)		EDD To:	Locus Focus EIM	Location of Site:	BALTIMORE, MD	Sampling Program	Lab ID: LLI
Christopher French		Sampler:	Doug Griffith, Lien Vu, A. Peñahel				Site ID: BALTIMORE
115 Tabor Rd		PO #	4400025014	Preservative	3	5	Lab Job #:
Morris Plains, NJ 07950		Analysis Turnaround Time (TAT):	14				Authorized User: Honeywell
Preliminary Data To	matthew.gillis@ch2m.com	Consultant	CH2M				
Sample Receipt Acknowledgement To	matthew.gillis@ch2m.com						Text & Excel File Drive / Excel & Text File Order
Hard Copy To	Matt Gillis	Full Report TAT:	28				
Invoice To:	Christopher French						

	Sample Identification				Sample Date	Sample Time	Sample Type	Sample Matrix	Sample Purpose	# of Cont.	Composite/Grab	Field Filtered Sample ?	SW6010 Chromium	SW9010/9012 Total Cyanide (auto)	Sampling Method (code)	Lab Sample Numbers
	Location ID	Start Depth (ft)	End Depth (ft)	Field Sample ID							Units		ug/L	ug/L		
1	SSMP1	4.52	4.60	30905_DLF_1_042516	4/25/2016	12:05	W-SW	WATER	REG	2	grab	Y	X	X		
2	SSMP1	4.52	4.60	30905_DL_1_042516	4/25/2016	12.05	W-SW	WATER	REG	1	grab	N	X			
3	SSMP2	4.67	4.95	30905_DLF_2_042516	4/25/2016	11:15	W-SW	WATER	REG	2	grab	Y	X	X		
4	SSMP2	4.67	4.95	30905_DL_2_042516	4/25/2016	11:15	W-SW	WATER	REG	1	grab	N	X			
5	SSMP3	2.50	2.55	30905_DLF_3_042516	4/25/2016	10:45	W-SW	WATER	REG	2	grab	Y	X	X		
6	SSMP3	2.50	2.55	30905_DL_3_042516	4/25/2016	10:45	W-SW	WATER	REG	1	grab	N	X			
7	SSMP4	7.89	7.87	30905_DLF_4_042516	4/25/2016	8:42	W-SW	WATER	REG	2	grab	Y	X	X		
8	SSMP4	7.89	7.87	30905_DL_4_042516	4/25/2016	8:42	W-SW	WATER	REG	1	grab	N	X			
9	SSMP4A	7.31	7.29	30905_DLF_4A_042516	4/25/2016	9:50	W-SW	WATER	REG	2	grab	Y	X	X		
10	SSMP4A	7.39	7.29	30905_DL_4A_042516	4/25/2016	9:50	W-SW	WATER	REG	1	grab	N	X			
11	SSMP2	4.67	4.95	30905_DLDF_042516	4/25/2016	11:20	W-SW	WATER	FD	2	grab	Y	X	X		
12	SSMP2	4.67	4.95	30905_DLD_042516	4/25/2016	11:20	W-SW	WATER	FD	1	grab	N	X			

Relinquished by	Company: MES	Received by	Company: CARM	Condition		Custody Seals Intact	
Amanda Peñafiel	Date/Time: 4/25/16 12:50		Date/Time: 4/25/16 1245	Cooler Temp.			
Relinquished by	Company: CARM	Received by	Company:	Condition		Custody Seals Intact	
	Date/Time: 4/26/16 1642		Date/Time: 4/26/16 1642	Cooler Temp.			

Preservatives: (Other; Specify):

0 (none); 1 (4 Deg C); 2 (HCl pH<2); 3 (HNO3 pH<2); 4 (H2SO4 pH<2); 5 (NaOH pH>12); 6 (NaOH, Zn Acetate); 7 (H2SO4 (pH<2), 4 Deg C)); 8 (HCl pH<2); 9 (HCl 4 Deg C); 10 (HNO3 (pH<2), 4Deg C); 11 (4C NaOH (pH>12) & Ascorbic Acid); 12 (4C H2SO4 (pH<2) & Na2S2O3); 13 (Zn Acetate); sp (special instructions)

Relinquished by [signature] 4/26/16 @ 1643

[signature] 4/26/16 1643

10651 | 1654389 | 8351438-53

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425
(717) 656-2300

Honeywell — Chain Of Custody / Analysis Request

AESI Ref: 42485.47071
COC#: 30905-40815-02

Privileged & Confidential	N		Site Name:	Baltimore	Phase:
EDD To:	Locus Focus EIM		Location of Site:	BALTIMORE, MD	Sampling Program
Sampler:	Doug Griffith, Lien Vu, Amanda Pentifel				
PO #	4400025014		Preservative	3	5	0
Analysis Turnaround Time (TAT):	14				
Consultant	CH2M				
Full Report TAT:	28				

Lab Proj # (SDG):
Lab ID: LLI
Site ID: BALTIMORE
Lab Job #:
Authorized User: Honeywell
Text & Excel File Drive: Excel & Text File Order

Sampling Co.: Maryland Environmental Service

Client Contact: (name, co., address)
Christopher French
115 Tabor Rd
Morris Plains, NJ 07950

Preliminary Data To: matthew.gillis@ch2m.com
Sample Receipt Acknowledgement To: matthew.gillis@ch2m.com
Hard Copy To: Matt Gillis
Invoice To: Christopher French

	Location ID	Start Depth (ft)	End Depth (ft)	Field Sample ID	Sample Date	Sample Time	Sample Type	Sample Matrix	Sample Purpose	# of Cont.	Composite/Grab	Field Filtered Sample ?	SW6010 Chromium	SW9010/9012 Total Cyanide (auto)	Sampling Method (code)	Lab Sample Numbers
	Sample Identification										Units		ug/L	ug/L		
1	FIELD QC	—	—	30905_FBF_1_042516	4/25/2016	8:54	BLKWATER	WATER	FB	2	grab	Y	X	X		
2	FIELD QC	—	—	30905_EBF_1_042516	4/25/2016	10:10	BLKWATER	WATER	EB	2	grab	Y	X	X		
3	FIELDQC	—	—	30905_FB_1_042516	4/25/2016	8:54	BLKWATER	WATER	FB	1	grab	N	X			
4	FIELDQC	—	—	30905_EB_1_042516	4/25/2016	10:10	BLKWATER	WATER	EB	1	grab	N	X			
5																
6																
7																
8																
9																
10																
11																
12																

Relinquished by: Amanda Pentifel	Company: MES	Received by:	Company: CHAM	Condition:		Custody Seals Intact:	
	Date/Time: 4/25/16 12:50		Date/Time: 4/25/16 1250	Cooler Temp.			
Relinquished by:	Company: CH2M	Received by:	Company:	Condition:		Custody Seals Intact:	
	Date/Time: 4/26/16 1042		Date/Time: 4/26/16 1042	Cooler Temp.			

Preservatives: (Other; Specify):

0 (none); 1 (4 Deg C); 2 (HCl pH<2); 3 (HNO3 pH<2); 4 (H2SO4 pH<2); 5 (NaOH pH>12); 6 (NaOH, Zn Acetate); 7 (H2SO4 (pH<2), 4 Deg C)); 8 (HCl pH<2); 9 (HCl 4 Deg C); 10 (HNO3 (pH<2), 4Deg C); 11 (4C NaOH (pH>12) & Ascorbic Acid); 12 (4C H2SO4 (pH<2) & Na2S2O3); 13 (Zn Acetate); sp (special instructions)

Relinquished By 4/26/16 @ 1643

4/26/16 1643

Appendix C-3
Field Report—April 2016

BALTIMORE INNER HARBOR

DRAINAGE LAYER MONITORING

April 25, 2016

Honeywell

MARYLAND ENVIRONMENTAL SERVICE

METER CALIBRATION LOG

PROJECT _____ Continued From Page _____

DATE	Time	Meter	Buffer	Initials Comments
4/8/16	8:00am	YSI 63	4, 7, 10	NPDES wet/WB
4/20/16	6:52 AM	HORIBA 1	AUTO CAL	BH GROUNDWATER
4/25/16	7:03 AM	HORIBA 1	AUTO CAL	BH DRAINAGE LAYER

Continued on Page

Read and Understood By

Signed Date Signed Date

FIELD NOTES

BIM DRAINAGE LAYER SAMPLING — 4/25/2016

WEATHER CONDITIONS: ~~50's~~ D.G 70's, SUNNY

DOUGLAS GRIFFITH
~~AARON MORRIS~~ AMANDA PEQUIGNOT
LEN VU

SSMP 1

SAMPLE # 30905_DLF_1_~~4001G~~ 042516
30905_DL_1_~~4616~~ 042516

SAMPLE COLLECTION TIME:
BEGINNING H_2O LEVEL: ~~4.51~~ D.G 4.52
ENDING H_2O LEVEL: 4.60'
DEPTH TO BOTTOM: ~~4.65~~ D.G 4.60'
pH: 7.50
D.O.: 6.25 mg/L
SP. COND.: 1.96 ms/cm
TURB.: 170 NTU
ORP: 111 mV
TEMP: 27.09°C

SSMP 2

SAMPLE # 30905_DLF_2_~~4001G~~ 042516
30905_DL_2_~~4001G~~ 042516

SAMPLE COLLECTION TIME: 1115
BEGINNING H_2O LEVEL: ~~4.68~~ D.G 4.67'
ENDING H_2O LEVEL: 4.95'
DEPTH TO BOTTOM: ~~4.90~~ D.G 4.95'
pH: 7.90
D.O.: 4.53 mg/L
SP. COND.: 1.64 ms/cm
TURB.: 272 NTU
ORP: 18 mV
TEMP: 25.47°C

SSMP 2 - DUP - Sample collection time 11:20
Sample # 30905_DLDF_042516
30905_DLD_042516

BSH DRAINAGE LAYER ~~4/6/16~~ 4/25/16
AP

SSMP 3

SAMPLE # 30905_DL_3_042516
30905_DLF_3_042516

SAMPLE COLLECTION TIME AP 1045
BEGINNING H_2O LEVEL ~~7.16'~~ 2.50'
ENDING H_2O LEVEL 2.55'
DEPTH TO BOTTOM 7.16'
PH 7.64
D.O 4.93 mg/L
SP COND 23.3 ms/cm
TURB 7.2 NTU
ORP -9 mv
TEMP 18.12°C

SSMP 4

SAMPLE # 30905_DLF_~~4~~4_042516
30905_DL_4_042516
SAMPLE COLLECTION TIME 8:42
BEGINNING H_2O LEVEL 7.89 FT
ENDING H_2O LEVEL 7.87 FT
DEPTH TO BOTTOM 9.61 FT
PH 7.41
D.O. 9.78 mg/L
SP COND 1.95 ms/cm
TURB 19.7 NTU
ORP 310 mv
TEMP 13.85°C

Scale: 1 square = _____

BIH DRAINAGE LAYER ~~4/6/16~~ 4/25/16
AP

SSMP 4A

SAMPLE # 30905_DLF_4A_042516
30905_DUP_4A_042516

SAMPLE COLLECTION TIME 9:30

BEGINNING H_2O LEVEL ~~7.89 ft~~ D.G 7.39'

ENDING H_2O LEVEL 7.29'

DEPTH TO BOTTOM ~~9.61 ft~~ D.G 9.65'

pH 7.99

D.O. 9.71 mg/L

SP. COND 5.41 MS/cm

TURB 8.65 NTU

ORP 107 mV

TEMP 15.88°C

EQUIPMENT BLANK

SAMPLE # 30905_FBF_1_042516
30905_FB_1_042516

SAMPLE COLLECTION TIME 1010

pH 9.0

D.O 6.21 mg/L

SP COND 0.013

TURB ~~14.0 NTU~~ 0.0 NTU

ORP 15 mV

TEMP 16.19°C

BIH DRAINAGE LAYER 4/6/16

FIELD BLANK

SAMPLE ~~#~~ 30905_FBF-1-042516
30905_FB-1_042516

SAMPLE COLLECTION TIME 854

pH 9.594
D.O. 5.80 mg/L
SP COND 0.011 mS/cm
TURB 2.4 1.5 NTU
ORP 106 mV
TEMP 17.76 °C

Scale: 1 square = _____

CHAIN of CUSTODY

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425
(717) 656-2300

Honeywell — Chain Of Custody / Analysis Request

AESI Ref: 42485.46959
COC#: 30905-040815-01

Sampling Co.:	Maryland Environmental Service	Privileged & Confidential: N	Site Name: Baltimore; Phase:
Client Contact: (name, co., address)		EDD To: Locus Focus EIM	Location of Site: BALTIMORE, MD; Sampling Program
Christopher French		Sampler: Doug Griffith, Lien Vu, A. Penichet	Lab Proj # (SDG):
115 Tabor Rd		PO #: 4400025014	Lab ID: LLI
Morris Plains, NJ 07950		Analysis Turnaround Time (TAT): 14	Site ID: BALTIMORE
Preliminary Data To: matthew.gillis@ch2m.com		Consultant: CH2M	Lab Job #:
Sample Receipt Acknowledgement To: matthew.gillis@ch2m.com			Authorized User: Honeywell
Hard Copy To: Matt Gillis		Full Report TAT: 28	Text & Excel File Drive / Excel & Text File Order
Invoice To: Christopher French			

Preservative: 3 (Composite/Grab); 5 (Field Filtered Sample ?)

	Sample Identification: Location ID	Start Depth (ft)	End Depth (ft)	Field Sample ID	Sample Date	Sample Time	Sample Type	Sample Matrix	Sample Purpose	# of Cont.	Composite/Grab	Field Filtered Sample ?	SW6010 Chromium (ug/L)	SW9010/9012 Total Cyanide (auto) (ug/L)	Sampling Method (code)	Lab Sample Numbers
1	SSMP1	4.52	4.60	30905_DLF_1_042516	4/25/2016	12:05	W-SW	WATER	REG	2	grab	Y	X	X		
2	SSMP1	4.52	4.60	30905_DL_1_042516	4/25/2016	12.05	W-SW	WATER	REG	1	grab	N	X			
3	SSMP2	4.67	4.95	30905_DLF_2_042516	4/25/2016	11:15	W-SW	WATER	REG	2	grab	Y	X	X		
4	SSMP2	4.67	4.95	30905_DL_2_042516	4/25/2016	11:15	W-SW	WATER	REG	1	grab	N	X			
5	SSMP3	2.50	2.55	30905_DLF_3_042516	4/25/2016	10:45	W-SW	WATER	REG	2	grab	Y	X	X		
6	SSMP3	2.50	2.55	30905_DL_3_042516	4/25/2016	10:45	W-SW	WATER	REG	1	grab	N	X			
7	SSMP4	7.89	7.87	30905_DLF_4_042516	4/25/2016	9:42	W-SW	WATER	REG	2	grab	Y	X	X		
8	SSMP4	7.89	7.87	30905_DL_4_042516	4/25/2016	8:42	W-SW	WATER	REG	1	grab	N	X			
9	SSMP4A	7.31	7.27	30905_DLF_4A_042516	4/25/2016	9:50	W-SW	WATER	REG	2	grab	Y	X	X		
10	SSMP4A	7.31	7.29	30905_DL_4A_042516	4/25/2016	9:50	W-SW	WATER	REG	1	grab	N	X			
11	SSMP2	4.67	4.95	30905_DLDF_042516	4/25/2016	11:20	W-SW	WATER	FD	2	grab	Y	X	X		
12	SSMP2	4.67	4.95	30905_DLD_042516	4/25/2016	11:20	W-SW	WATER	FD	1	grab	N	X			

Relinquished by: Amanda Penichet	Company: MES	Received by:	Company: CARM	Condition:		Custody Seals Intact:	
	Date/Time: 4/25/16 12:50		Date/Time: 4/25/16 1250	Cooler Temp.:			
Relinquished by:	Company:	Received by:	Company:	Condition:		Custody Seals Intact:	
	Date/Time:		Date/Time:	Cooler Temp.:			

Preservatives: (Other; Specify):

0 (none); 1 (4 Deg C); 2 (HCl pH<2); 3 (HNO3 pH<2); 4 (H2SO4 pH<2); 5 (NaOH pH>12); 6 (NaOH, Zn Acetate); 7 (H2SO4 (pH<2), 4 Deg C)); 8 (HCl pH<2); 9 (HCl 4 Deg C); 10 (HNO3 (pH<2), 4Deg C); 11 (4C NaOH (pH>12) & Ascorbic Acid); 12 (4C H2SO4 (pH<2) & Na2S2O3); 13 (Zn Acetate); sp (special instructions)

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425
(717) 656-2300

Honeywell — Chain Of Custody / Analysis Request

AESI Ref: 42485.47071
COC#: 30905-40815-02

Sampling Co.:	Maryland Environmental Service	Privileged & Confidential	N	Site Name:	Baltimore	Phase:	Lab Proj # (SDG):
Client Contact: (name, co., address)		EDD To:	Locus Focus EIM	Location of Site:	BALTIMORE, MD	Sampling Program	Lab ID: LLI
Christopher French		Sampler:	Doug Griffith, Lian Vu, Amanda Pentecost				Site ID: BALTIMORE
115 Tabor Rd		PO #	4400025014	Preservative	3	5	0	Lab Job #:
Morris Plains, NJ 07950		Analysis Turnaround Time (TAT):	14					Authorized User: Honeywell
Preliminary Data To	matthew.gillis@ch2m.com	Consultant	CH2M					
Sample Receipt Acknowledgement To	matthew.gillis@ch2m.com							Text & Excel File Drive / Excel & Text File Order
Hard Copy To	Matt Gillis	Full Report TAT:	28					
Invoice To:	Christopher French							

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	Sample Identification: Location ID	Start Depth (ft)	End Depth (ft)	Field Sample ID	Sample Date	Sample Time	Sample Type	Sample Matrix	Sample Purpose	# of Cont.	Composite/Grab	Field Filtered Sample ?	SW6010 Chromium	SW9010/9012 Total Cyanide (auto)															Sampling Method (code)	Lab Sample Numbers
											Units		ug/L	ug/L																
1	FIELD QC	—	—	30905_FBF_1_042516	4/25/2016	8:54	BLKWATER	WATER	FB	2	grab	Y	X	X																
2	FIELD QC	—	—	30905_EBF_1_042516	4/25/2016	10:10	BLKWATER	WATER	EB	2	grab	Y	X	X																
3	FIELDQC	—	—	30905_FB_1_042516	4/25/2016	8:54	BLKWATER	WATER	FB	1	grab	N	X																	
4	FIELDQC	—	—	30905_EB_1_042516	4/25/2016	10:10	BLKWATER	WATER	EB	1	grab	N	X																	
5																														
6																														
7																														
8																														
9																														
10																														
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Relinquished by	Company: MES	Received by	Company: CHASM	Condition		Custody Seals Intact	
Amanda Pentecost	Date/Time: 4/25/16 12:50		Date/Time: 4/25/16 1250	Cooler Temp.			
Relinquished by	Company:	Received by	Company:	Condition		Custody Seals Intact	
	Date/Time:		Date/Time:	Cooler Temp.			

Preservatives: (Other; Specify):

0 (none); 1 (4 Deg C); 2 (HCl pH<2); 3 (HNO3 pH<2); 4 (H2SO4 pH<2); 5 (NaOH pH>12); 6 (NaOH, Zn Acetate); 7 (H2SO4 (pH<2), 4 Deg C)); 8 (HCl pH<2); 9 (HCl 4 Deg C); 10 (HNO3 (pH<2), 4Deg C); 11 (4C NaOH (pH>12) & Ascorbic Acid); 12 (4C H2SO4 (pH<2) & Na2S2O3); 13 (Zn Acetate); sp (special instructions)

Appendix D
Current Quarterly Validation Report

Appendix D-1
Quality Control Summary—Second Quarter 2016

QUALITY CONTROL SUMMARY

This section is a summary of the quality control (QC) review results for samples collected on April 4, 2016, for the Honeywell, Baltimore Inner Harbor project. Lancaster Laboratories of Lancaster, Pennsylvania performed the chemical analyses for all samples. The samples were verified in accordance with National Functional Guidelines for Inorganic Review (U.S. EPA 2002) as applicable to the specification contained in SW-846 methodologies, and the project specific requirements set forth in the Work Plan. One sample delivery group (SDG) was associated with this data set: BHP55. All field samples and associated QC samples were analyzed for dissolved chromium by SW-846 6010B.

The quality of the data was assessed according to the U.S. EPA's PARCC (precision, accuracy, representativeness, completeness, and comparability) parameters. These criteria were used to identify unacceptable or biased data that could result in corrective actions being implemented or otherwise require qualification of the data. The following is a brief summary of PARCC criteria that were reviewed during verification of the data.

PRECISION AND ACCURACY

Precision and accuracy were evaluated based on the QC results generated from laboratory matrix spike and matrix spike duplicate (MS/MSD) samples, laboratory control samples (LCS), laboratory control duplicate (LCSD) samples, and laboratory duplicate samples. In addition, initial and continuing calibration results were used to assess accuracy.

REPRESENTATIVENESS

Representativeness was evaluated through the analysis of method blank samples, field blank samples, and calibration blank samples. Analysis of these types of samples is important to distinguish between ambient sampling and analytical levels, and actual site contamination.

COMPLETENESS

Data completeness was evaluated based on the samples requested on the chain-of-custody documentation and the samples reported by the laboratory.

COMPARABILITY

Comparability was achieved by analyzing the samples according to the specified standard methods. Lancaster laboratory used U.S. EPA methods for the analysis of the samples. The reporting limits were elevated if the sample was analyzed at a dilution.

The following paragraphs summarize the review of data based on the PARCC criteria.

FIELD DUPLICATES

Four field duplicate samples were collected during this sampling event and analyzed. Precision criteria were met.

LABORATORY REPLICATES

Two dissolved chromium replicates were analyzed during this sampling round. All acceptance criteria for precision were met.

LABORATORY BLANKS

Dissolved chromium was not detected in the calibration or laboratory method blanks. The acceptance criteria was met.

FIELD BLANKS

One field blank and two rinse blanks were collected during this sampling event. Chromium was not detected in the field blanks.

MATRIX SPIKE/MATRIX SPIKE DUPLICATES

Two chromium MS/MSD sets were analyzed (batch data) during this sampling event. All acceptance criteria for precision were met.

SAMPLE RECEIPT, HOLDING TIMES AND PRESERVATION

The samples were received slightly below the recommended temperature range of 4±2°C at 1.4 and 1.3 °C. Data were not qualified due to low temperatures. All samples were prepared and analyzed within holding time criteria.

SUMMARY OF DATA QUALITY AND RELIABILITY

The evaluation of the data against PARCC criteria provided information on the data quality and reliability. All data are of known and acceptable quality based on the laboratory-established acceptance control limits or U.S. EPA guidance.

QUALITY CONTROL SUMMARY

This section is a summary of the quality control (QC) review results for samples collected on April 4, 2016, for the Honeywell, Baltimore Inner Harbor project. Lancaster Laboratories of Lancaster, Pennsylvania performed the chemical analyses for all samples. The samples were verified in accordance with National Functional Guidelines for Inorganic Review (U.S. EPA 2002) as applicable to the specification contained in SW-846 methodologies, and the project specific requirements set forth in the Work Plan. One sample delivery group (SDG) was associated with this data set: BHP56. All field samples and associated QC samples were analyzed for dissolved chromium by SW-846 6010B.

The quality of the data was assessed according to the U.S. EPA's PARCC (precision, accuracy, representativeness, completeness, and comparability) parameters. These criteria were used to identify unacceptable or biased data that could result in corrective actions being implemented or otherwise require qualification of the data. The following is a brief summary of PARCC criteria that were reviewed during verification of the data.

PRECISION AND ACCURACY

Precision and accuracy were evaluated based on the QC results generated from laboratory matrix spike and matrix spike duplicate (MS/MSD) samples, laboratory control samples (LCS), laboratory control duplicate (LCSD) samples, and laboratory duplicate samples. In addition, initial and continuing calibration results were used to assess accuracy.

REPRESENTATIVENESS

Representativeness was evaluated through the analysis of method blank samples, field blank samples, and calibration blank samples. Analysis of these types of samples is important to distinguish between ambient sampling and analytical levels, and actual site contamination.

COMPLETENESS

Data completeness was evaluated based on the samples requested on the chain-of-custody documentation and the samples reported by the laboratory.

COMPARABILITY

Comparability was achieved by analyzing the samples according to the specified standard methods. Lancaster laboratory used U.S. EPA methods for the analysis of the samples. The reporting limits were elevated if the sample was analyzed at a dilution.

The following paragraphs summarize the review of data based on the PARCC criteria.

FIELD DUPLICATES

Four field duplicate samples were collected during this sampling event and analyzed. Precision criteria were met.

LABORATORY REPLICATES

Two dissolved chromium replicates were analyzed during this sampling round. All acceptance criteria for precision were met.

LABORATORY BLANKS

Dissolved chromium was not detected in the calibration or laboratory method blanks. The acceptance criteria was met.

FIELD BLANKS

One field blank and two rinse blanks were collected during this sampling event. Chromium was not detected in the field blanks.

MATRIX SPIKE/MATRIX SPIKE DUPLICATES

Two chromium MS/MSD sets were analyzed during this sampling event. All acceptance criteria for precision were met.

SAMPLE RECEIPT, HOLDING TIMES AND PRESERVATION

The samples were received slightly below the recommended temperature range of 4±2°C at 1.4 and 1.3 °C. Data were not qualified due to low temperatures. All samples were prepared and analyzed within holding time criteria.

SUMMARY OF DATA QUALITY AND RELIABILITY

The evaluation of the data against PARCC criteria provided information on the data quality and reliability. All data are of known and acceptable quality based on the laboratory-established acceptance control limits or U.S. EPA guidance.

QUALITY CONTROL SUMMARY

This section is a summary of the quality control (QC) review results for samples collected on April 4, 2016, for the Honeywell, Baltimore Inner Harbor project. Lancaster Laboratories of Lancaster, Pennsylvania performed the chemical analyses for all samples. The samples were verified in accordance with National Functional Guidelines for Inorganic Review (U.S. EPA 2002) as applicable to the specification contained in SW-846 methodologies, and the project specific requirements set forth in the Work Plan. One sample delivery group (SDG) was associated with this data set: BHP57. All field samples and associated QC samples were analyzed for dissolved chromium by SW-846 6010B.

The quality of the data was assessed according to the U.S. EPA's PARCC (precision, accuracy, representativeness, completeness, and comparability) parameters. These criteria were used to identify unacceptable or biased data that could result in corrective actions being implemented or otherwise require qualification of the data. The following is a brief summary of PARCC criteria that were reviewed during verification of the data.

PRECISION AND ACCURACY

Precision and accuracy were evaluated based on the QC results generated from laboratory matrix spike and matrix spike duplicate (MS/MSD) samples, laboratory control samples (LCS), laboratory control duplicate (LCSD) samples, and laboratory duplicate samples. In addition, initial and continuing calibration results were used to assess accuracy.

REPRESENTATIVENESS

Representativeness was evaluated through the analysis of method blank samples, field blank samples, and calibration blank samples. Analysis of these types of samples is important to distinguish between ambient sampling and analytical levels, and actual site contamination.

COMPLETENESS

Data completeness was evaluated based on the samples requested on the chain-of-custody documentation and the samples reported by the laboratory.

COMPARABILITY

Comparability was achieved by analyzing the samples according to the specified standard methods. Lancaster laboratory used U.S. EPA methods for the analysis of the samples. The reporting limits were elevated if the sample was analyzed at a dilution.

The following paragraphs summarize the review of data based on the PARCC criteria.

FIELD DUPLICATES

Four field duplicate samples were collected during this sampling event and analyzed. Precision criteria were met.

LABORATORY REPLICATES

Two dissolved chromium replicates were analyzed during this sampling round. All acceptance criteria for precision were met.

LABORATORY BLANKS

Dissolved chromium was not detected in the calibration or laboratory method blanks. The acceptance criteria was met.

FIELD BLANKS

One field blank and two rinse blanks were collected during this sampling event. Chromium was not detected in the field blanks.

MATRIX SPIKE/MATRIX SPIKE DUPLICATES

Two chromium MS/MSD sets were analyzed during this sampling event. All acceptance criteria for precision were met.

SAMPLE RECEIPT, HOLDING TIMES AND PRESERVATION

The samples were received slightly below the recommended temperature range of 4±2°C at 1.4 and 1.3 °C. Data were not qualified due to low temperatures. All samples were prepared and analyzed within holding time criteria.

SUMMARY OF DATA QUALITY AND RELIABILITY

The evaluation of the data against PARCC criteria provided information on the data quality and reliability. All data are of known and acceptable quality based on the laboratory-established acceptance control limits or U.S. EPA guidance.

QUALITY CONTROL SUMMARY

This section is a summary of the quality control (QC) review results for samples collected on April 25, 2016, for the Honeywell, Baltimore Inner Harbor project. Lancaster Laboratories of Lancaster, Pennsylvania performed the chemical analyses for all samples. The samples were verified in accordance with National Functional Guidelines for Inorganic Review (U.S. EPA 2002) as applicable to the specification contained in SW-846 methodologies, and the project specific requirements set forth in the Work Plan. One sample delivery group (SDG) was associated with this data set: BHP58. All field samples and associated QC samples were analyzed for chromium by SW-846 6010B. Samples were also analyzed for cyanide by SW-846 9012.

The quality of the data was assessed according to the U.S. EPA's PARCC (precision, accuracy, representativeness, completeness, and comparability) parameters. These criteria were used to identify unacceptable or biased data that could result in corrective actions being implemented or otherwise require qualification of the data. The following is a brief summary of PARCC criteria that were reviewed during verification of the data.

PRECISION AND ACCURACY

Precision and accuracy were evaluated based on the QC results generated from laboratory matrix spike and matrix spike duplicate (MS/MSD) samples, laboratory control samples (LCS), laboratory control duplicate (LCSD) samples, and laboratory duplicate samples. In addition, initial and continuing calibration results were used to assess accuracy.

REPRESENTATIVENESS

Representativeness was evaluated through the analysis of method blank samples, field blank samples, and calibration blank samples. Analysis of these types of samples is important to distinguish between ambient sampling and analytical levels, and actual site contamination.

COMPLETENESS

Data completeness was evaluated based on the samples requested on the chain-of-custody documentation and the samples reported by the laboratory.

COMPARABILITY

Comparability was achieved by analyzing the samples according to the specified standard methods. Lancaster laboratory used U.S. EPA methods for the analysis of the samples. The reporting limits were elevated if the sample was analyzed at a dilution.

The following paragraphs summarize the review of data based on the PARCC criteria.

FIELD DUPLICATES

Two chromium and one cyanide field duplicate samples were collected during this sampling event and analyzed. All acceptance criteria for precision were met.

LABORATORY REPLICATES

One chromium replicates were analyzed during this sampling round. Batch QC for the cyanide was not provided in the data package. All acceptance criteria for precision were.

LABORATORY BLANKS

Chromium and TOC were not detected in the calibration or laboratory method blanks. The acceptance criteria was met.

FIELD BLANKS

Two equipment rinsate blanks and two field blank sample were collected for chromium, and one each for cyanide during this sampling event. All blank results were acceptable.

MATRIX SPIKE/MATRIX SPIKE DUPLICATES

Two chromium MS/MSD sets were analyzed during this sampling event per matrix. All acceptance criteria for precision were met. The laboratory did not submit spike results for cyanide.

SAMPLE RECEIPT, HOLDING TIMES AND PRESERVATION

The samples were received below the recommended temperature of 4±2°C. There is no data qualification for lower temperatures. All samples were prepared and analyzed within holding time criteria.

SUMMARY OF DATA QUALITY AND RELIABILITY

The evaluation of the data against PARCC criteria provided information on the data quality and reliability. All data are of known and acceptable quality based on the laboratory-established acceptance control limits or U.S. EPA guidance.

QUALITY CONTROL SUMMARY

This section is a summary of the quality control (QC) review results for samples collected on April 20, 2016, for the Honeywell, Baltimore Inner Harbor project. Lancaster Laboratories of Lancaster, Pennsylvania performed the chemical analyses for all samples. The samples were verified in accordance with National Functional Guidelines for Inorganic Review (U.S. EPA 2002) as applicable to the specification contained in SW-846 methodologies, and the project specific requirements set forth in the Work Plan. One sample delivery group (SDG) was associated with this data set: BHP59. All field samples and associated QC samples were

analyzed for total chromium by SW-846 6010B. Samples were also analyzed for cyanide by SW-846 9012A.

The quality of the data was assessed according to the U.S. EPA's PARCC (precision, accuracy, representativeness, completeness, and comparability) parameters. These criteria were used to identify unacceptable or biased data that could result in corrective actions being implemented or otherwise require qualification of the data. The following is a brief summary of PARCC criteria that were reviewed during verification of the data.

PRECISION AND ACCURACY

Precision and accuracy were evaluated based on the QC results generated from laboratory matrix spike and matrix spike duplicate (MS/MSD) samples, laboratory control samples (LCS), laboratory control duplicate (LCSD) samples, and laboratory duplicate samples. In addition, initial and continuing calibration results were used to assess accuracy.

REPRESENTATIVENESS

Representativeness was evaluated through the analysis of method blank samples, field blank samples, and calibration blank samples. Analysis of these types of samples is important to distinguish between ambient sampling and analytical levels, and actual site contamination.

COMPLETENESS

Data completeness was evaluated based on the samples requested on the chain-of-custody documentation and the samples reported by the laboratory.

COMPARABILITY

Comparability was achieved by analyzing the samples according to the specified standard methods. Lancaster laboratory used U.S. EPA methods for the analysis of the samples. The reporting limits were elevated if the sample was analyzed at a dilution.

The following paragraphs summarize the review of data based on the PARCC criteria.

FIELD DUPLICATES

One chromium and one cyanide field duplicate sample were collected during this sampling event and analyzed. All acceptance criteria for precision were met.

LABORATORY REPLICATES

One cyanide and one chromium laboratory replicate were analyzed during this sampling round. All acceptance criteria for precision were met.

LABORATORY BLANKS

Chromium was detected at a low level in two calibration blanks, however data were not qualified since associated results are sufficiently elevated.

FIELD BLANKS

One equipment rinsate blank and one field blank sample were collected during this sampling event. Chromium was detected in the field blank at a concentration of 0.278 mg/L which was used to qualify data summarized in Table 1 below.

MATRIX SPIKE/MATRIX SPIKE DUPLICATES

One chromium and one cyanide MS/MSD sets were analyzed during this sampling event. All acceptance criteria for precision were met.

SAMPLE RECEIPT, HOLDING TIMES AND PRESERVATION

The samples were received slightly below the recommended temperature of 4±2°C at 1.7 °C. Samples were not qualified due to lower cooler temperatures. The pH of sample 30905_GW-NWM27-042016 was received by the laboratory at a pH greater than 2, therefore, the laboratory added preservative to the sample to bring the sample within the acceptable pH range. All samples were prepared and analyzed within holding time criteria.

SUMMARY OF DATA QUALITY AND RELIABILITY

The evaluation of the data against PARCC criteria provided information on the data quality and reliability. All data are of known and acceptable quality based on the laboratory-established acceptance control limits or U.S. EPA guidance.

Table 1 – Data Qualification Summary

Field Sample ID	Method	Analyte	Result	Units	Final Flag	Reason
30905-GW-OP7-042016	SW6010	Chromium	0.006	ug/L	U	FBH
30905-GW-OP11-042016	SW6010	Chromium	0.079	ug/L	U	FBH